

**A8000**  
**A8800**

# Operator's Manual

**Cod. No. 84158982**  
4th edition  
English 06/10



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**A8800**  
Cane Harvesters

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## General

This Manual has been prepared to assist you in the correct procedure for driving, operating and for the maintenance of your new harvester.

Read this Manual carefully and keep it in a convenient place for future references. If at any time you require advice concerning your machine, do not hesitate to contact your Authorized Case IH Dealer. He has company trained personnel, genuine manufacturers' parts and the necessary equipment to carry out all your service requirements.

Your harvester has been designed and built to give maximum performance, economy and ease of operation under a wide variety of operating conditions. Prior to delivery, the harvester was carefully inspected, both at the factory and by your dealer to ensure that it reaches you in optimum condition. To maintain this condition and trouble-free operation, it is important that the routine services, as specified in this manual, are carried out at the recommended intervals.

"Left" and "right" used throughout this Manual are determined from the seated in the operator's seat, facing forward.

### NOTE:

- *As this publication is distributed throughout our international network, the equipment illustrated, either as standard or as an accessory, may vary according to the country in which the equipment is to be used.*
- *Several figures in this Manual show the safety guarding or the additional guards, legally required by certain countries, open or removed to illustrate better a particular feature or adjustment. The machine must not be used in this condition. For your own safety, ensure that all guards are closed or replaced before operating the machine.*

## Keeping harvester clean

When cleaning the harvester, particularly if using a high pressure washing machine. Precaution has to be taken to safeguard electrical components and connections. The pressure generated by some of these machines is such that complete protection against water ingress cannot be guaranteed.

When washing the harvester with a high pressure machine, do not operate the cleaner close to the harvester and avoid directing the water jet at the electrical connections, vents, fences, filling covers, etc. Never direct a jet of cold water at the engine or hot exhaust.

Before proceeding to wash the machine, refer to the description of Operation 70 in Section 5 of this manual.

## Safety

The following pages, include the list of precautions to be noted to ensure your safety and the safety of others. Read the safety precautions and follow the advice offered before operating the harvester.

## The first 50 hours service

Your Authorized Dealer should be contacted to accomplish the 50 hour service recommended by the manufacturer. Ensure the completion of the coupon and signature of Service Manager/ Dealer.

## Service parts

It should be pointed out that genuine parts have been examined and approved by the Factory. The installation and/or usage of 'non-genuine' products could have negative effects upon the design characteristics of your harvester and thereby affect its safety. The Company is not liable for any damage caused by the use of "non-genuine" parts and accessories.

Only Genuine Case IH replacement parts should be used. The use of non-genuine parts may invalidate legal approvals associated with this product.

It is prohibited to carry out any modifications to the harvester unless specifically authorized, in writing, by the After Sales Service department of the factory.

## Warranty

Your harvester is warranted according to the current legislation in our country and with contractual agreements reached with the dealer at the time of sale. However, the warranty is no longer valid if the rules and instructions for the use and maintenance of the harvester described in this manual are not noted.

For more details on warranty, please refer Warranty Booklet supplied along with this Manual.

## Storage

### AT THE END OF SEASONS

CLEAN the machine completely, removing all dirt. Take care not to subject bearings and retainers (seals) to high pressure from hoses or cleaning vapour.

INSPECT all the machine meticulously.

CORRECT any wear, damage or defect which could impair the performance or reliability of the machine during the coming harvest.

CARRY OUT all maintenance routines.

APPLY rust inhibitor oil to all unpainted metal parts.

RETRACT all the hydraulic cylinders and cover their exposed shafts with either grease or corrosion inhibitor (AKCELA Multi-Purpose Grease) to protect them against damages.

### DURING THE PERIOD BETWEEN SEASONS

RUN the machine for a minimum of 1 Hour at least once every month, operating all drives and controls.

KEEP the battery charged when not in use.

PROTECT the tires from exposure to sunlight.

REST the front suspension frame on a block of wood.

INSPECT all spare parts and tools. Replace the stocks if necessary. Consult your Authorized Case IH Austoft Dealer.

## TO THE OWNER

This manual contains important information about the safe operation, adjustment and routine servicing of your Case IH Austoft A8000 and A8800 Cane Harvesters. Refer to the general table of contents at the front of this manual for locating specific items about your harvester.

DO NOT operate or permit anyone to operate or service this machine until you or the other persons have read this manual. Use only trained operator's who have demonstrated the ability to operate and service this machine correctly and safely.

This Operators Manual is to be stored in the manual compartment equipped on this machine. Make sure this manual is kept complete and in good condition. Contact your dealer to obtain additional manuals. Contact your dealer for any further information or assistance about your machine. Your Case IH Austoft dealer can supply approved spare parts. Your dealer has factory trained technicians that know the best methods of repair and maintenance for your harvester.

## RECOMMENDATION OF HARVESTER USAGE

The Case IH Austoft A8000 and A8800 cane harvesters, with the standard and authorized accessory equipment, is to be used in jobs related to normal agriculture in the field, farms and level ground. DO NOT USE this machine for any other different purpose from described in this manual.

Consult an authorized dealer or Case IH about changes, additions or alterations that can be carried out on this machine with regard to safety regulations and requirements. Unauthorized modifications will cause serious injury or death. Anyone making such unauthorized modifications is responsible for the consequences.

## COMPARTMENT TO STORE THE OPERATOR'S MANUAL (Below operator's seat)

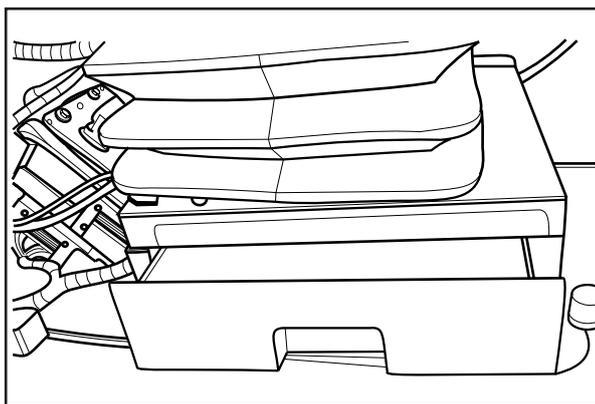


Figure 1

Store the operator's Manual in the storage compartment existing in your harvester, below the seat. The operator's manual must be available for use by all operators.

**NOTE:** The right and left sides of harvester indicated in this manual are the same right and left sides when seated on the operator's seat looking forward.

## PRODUCT IDENTIFICATION AND SERIAL NUMBERS

### Harvester model and product identification number

The product identification plate is mounted on the front of the engine box on the left hand side of the machine.

These numbers will need to be supplied to your dealer when ordering spare parts.

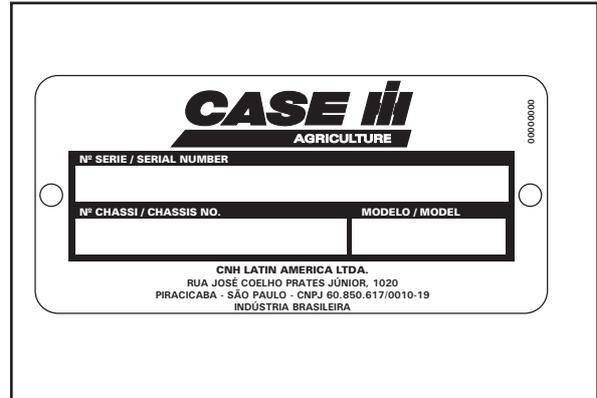


Figure 2

### Chassis Number

The chassis number is stamped on the right hand side of the machine.

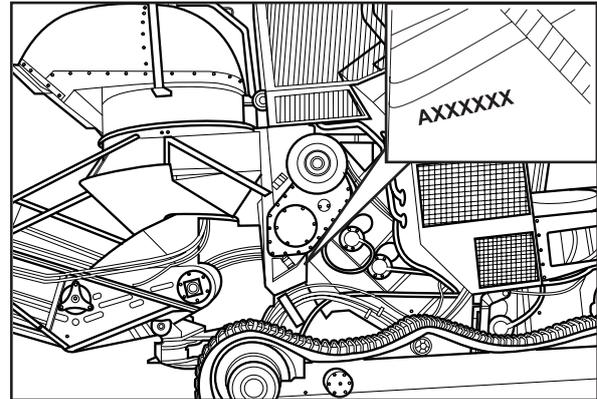


Figure 3

### Engine serial number of Case IH 9L and nameplate

The serial number (1) of the engine is located in the left side of the front part of the engine

The nameplates (2) of the engine are located at the top and front part of the engine.

IVECO	IVECO N.V.	EMISSION CONTROL LABEL	
IMPORTANT ENGINE INFORMATION		Serial N°	3574
		Build date:	31/07/07
SPR Family code	7VEXL 08 7TR3	This engine conforms to	65R-021207*
Eng. no. Model	F20E9684H-E300	2010 E.P.A. and CA/TIER 4	24R-031201*
Disp. (cc/min)	6,7 Liters	Eng. no. Model	97/68/HA*2004/26*1024*
Bore x stroke	260(349)/162(100) mm	Eng. no. Model	
Peak rate @ Rev./Min	170mm/3 Stroke	EMISSION CONTROL	
Initial injection timing	N/A	65R-021207	
Max. rate @ Cal. @ 1020rpm	0.4 + - 0.05mm	This engine is designed	When using oil, use only the brand and
Injection	0.6 + - 0.05mm	to meet	brand marks. Adjust the speed with the oil
High idle speed	2100 + 50rpm		speed according to manufacturer's instructions and
Low idle speed	800 + 50rpm		read the oil and transformer's manual.
Control system	ECU/TC/CAC		

Figure 4

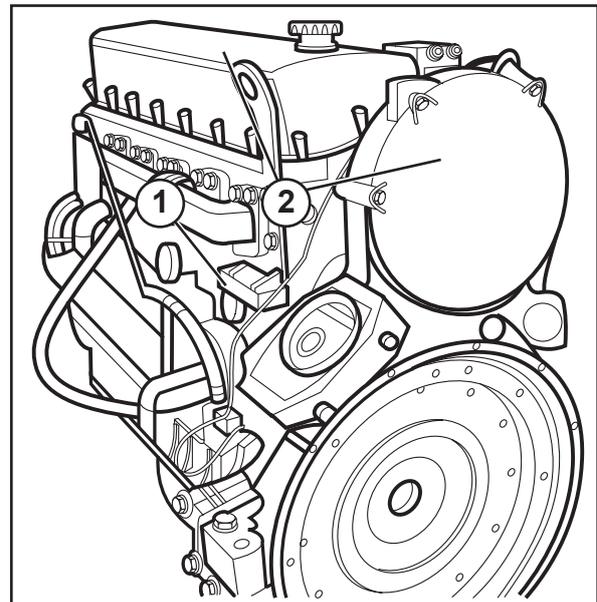


Figure 5

## GENERAL LOCATION

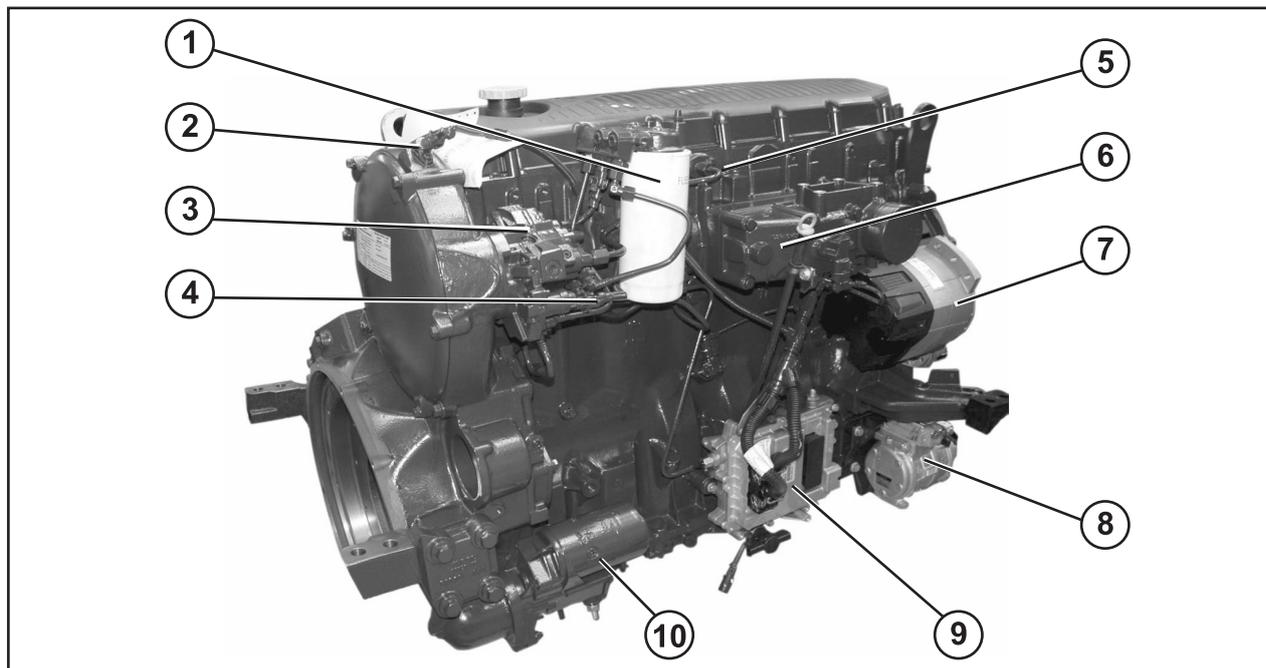


Figura 6

- |   |  |
|---|--|
| 1 - Fuel filter   | 5 - High pressure tube for the "common rail" |
| 2 - Phonic wheel sensor   | 6 - High pressure pump                       |
| 3 - High pressure pump  | 7 - Alternator                               |
| 4 - Flow high pressure regulator - controlled by PWM, it acts as a throttle-type device controlling the pressure of "rail" in a effective way by adjusting the quantity of available fuel for the high pressure plungers in the high pressure pump. | 8 - Air conditioning compressor              |
|   | 9 - Engine controller                        |
|   | 10 - Starter motor                           |

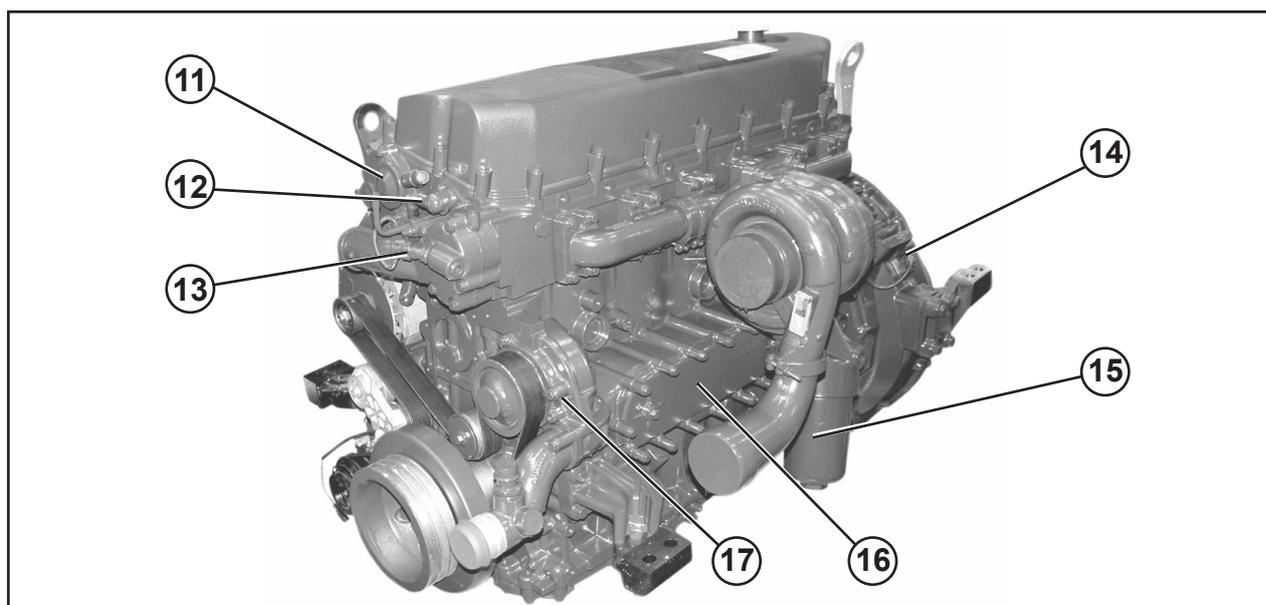
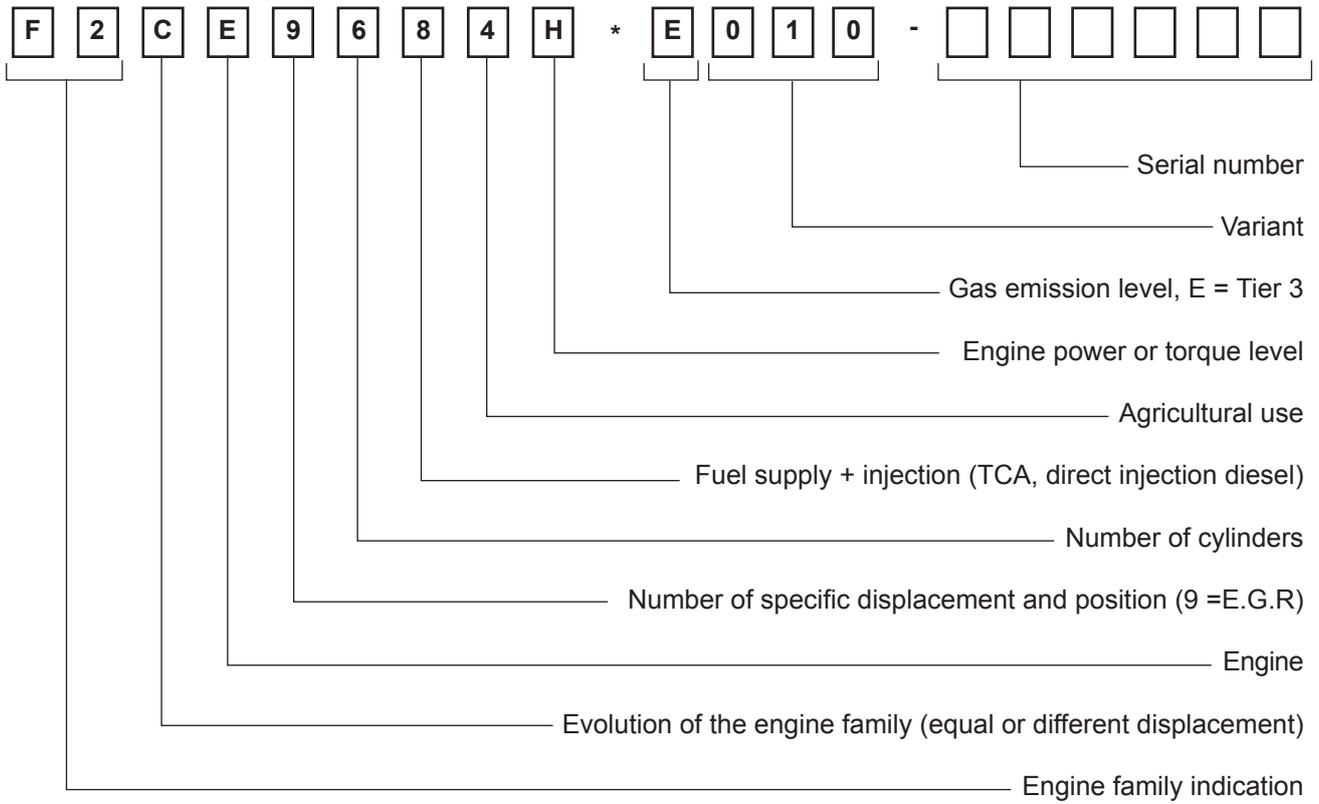


Figura 7

- |   |                      |
|---|----------------------|
| 11 - Blow-by Valve  | 14 - Flywheel sensor |
| 12 - Wiring to the rail pressure sensor and to each individual injector | 15 - Oil filter      |
| 13 - Coolant sensor   | 16 - Heat exchanger  |
|   | 17 - Water pump      |



**Scania engine serial number and nameplate**

The engine identification code indicates the engine type, capacity, use to which is intended, etc.

The identification code and the engine serial number are stamped on the right side of the engine block.

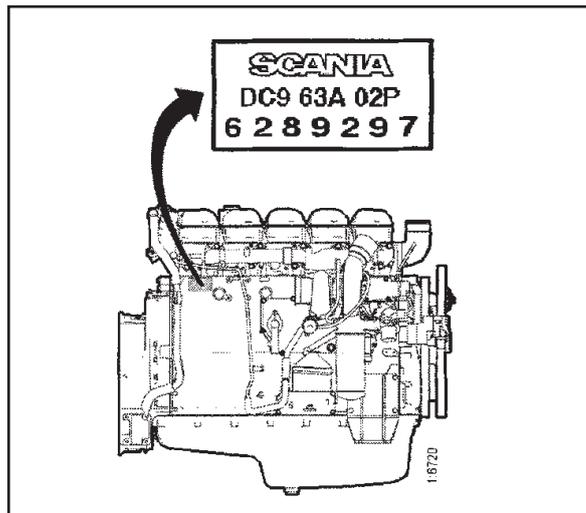
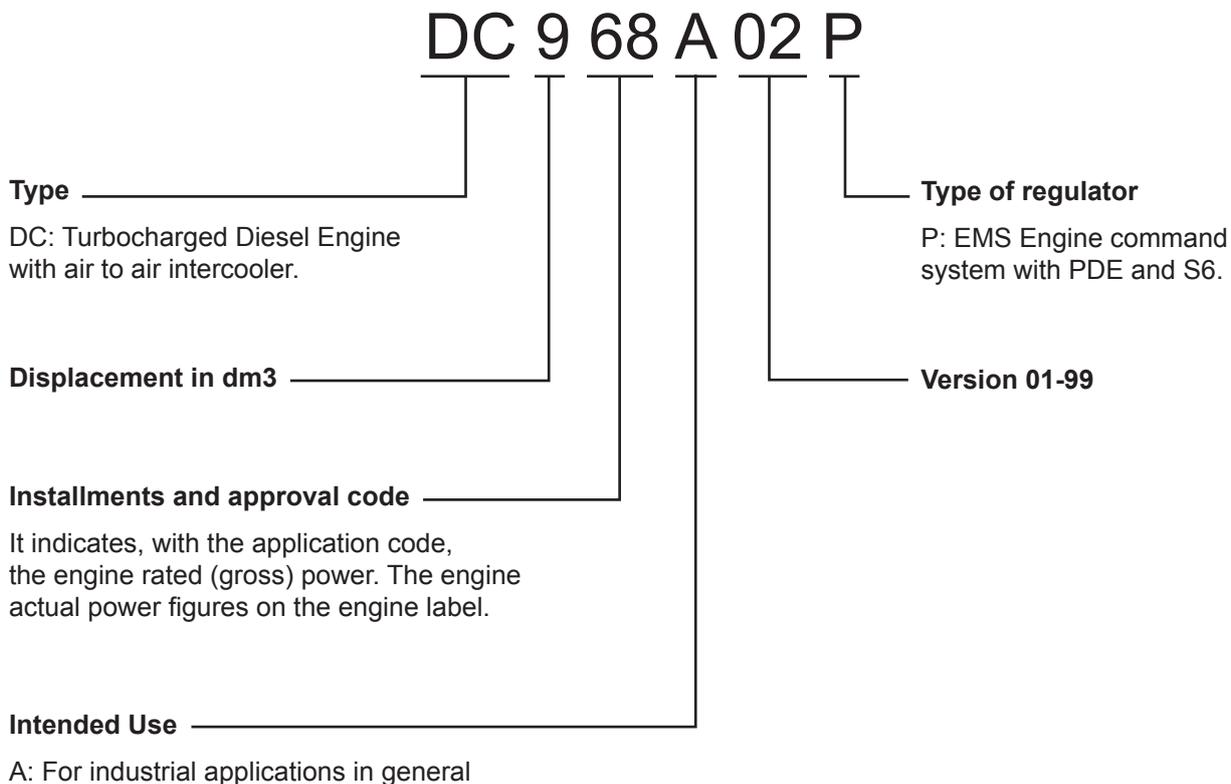


Figure 8



## GENERAL LOCATION

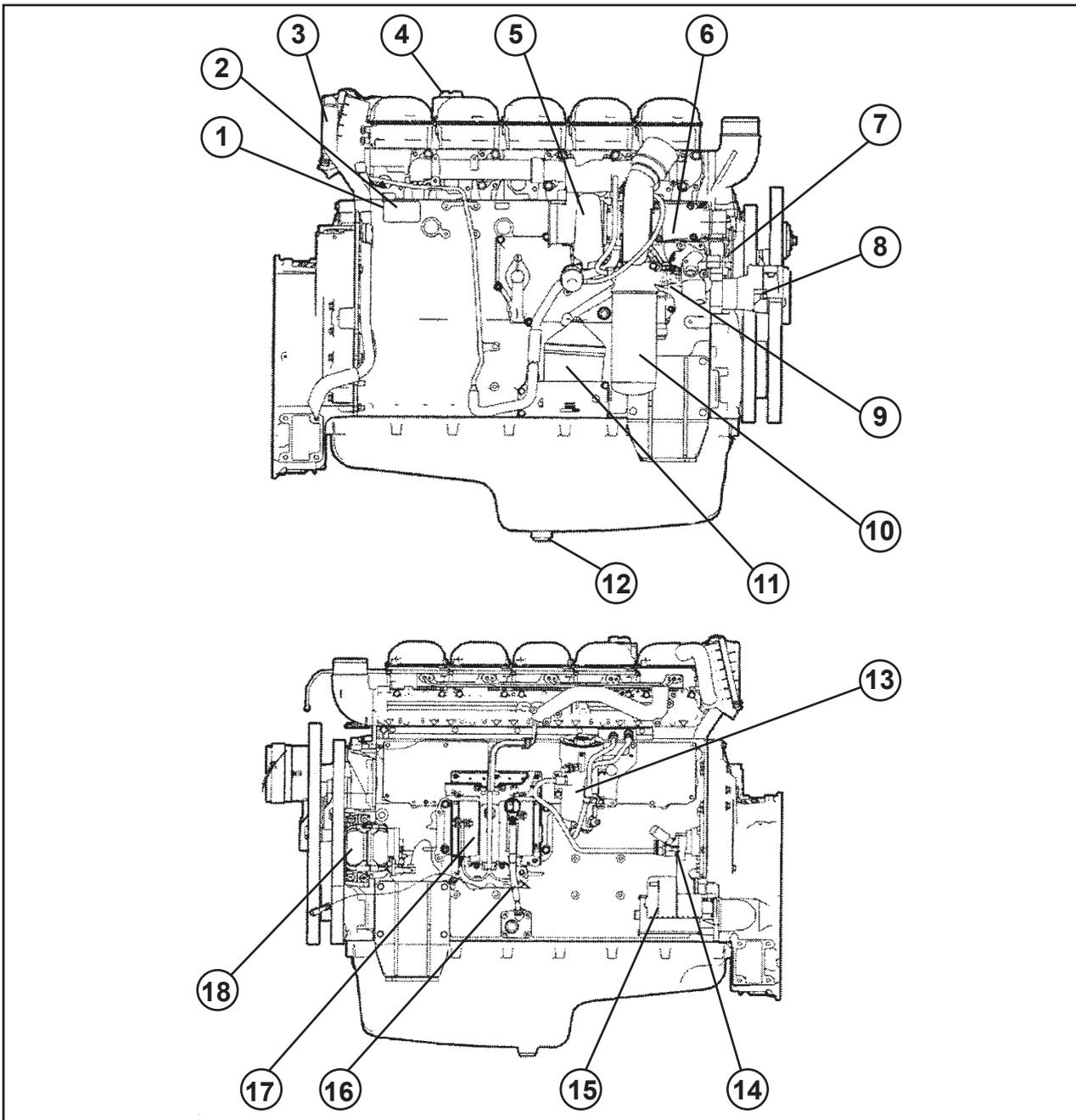


Figure 9

- |  |                        |
|--|------------------------|
| 1. Type designation, printed in the engine block | 10. Oil filter         |
| 2. Engine number, printed in the engine block    | 11. Oil filter         |
| 3. Crankcase ventilation                         | 12. Drain, engine oil  |
| 4. Oil level filler                              | 13. Fuel filter        |
| 5. Turbocharger                                  | 14. Manual fuel pump   |
| 6. Oil radiator                                  | 15. Starter engine     |
| 7. Coolant pump                                  | 16. Oil level dipstick |
| 8. Automatic belt tensioner                      | 17. S6 Command unit    |
| 9. Drain, coolant                                | 18. Alternator         |

**NOTE:** The illustration shows a normal version of a DC9 engine. Your engine can have different equipments from shown in illustration.

MACHINE COMPONENTS

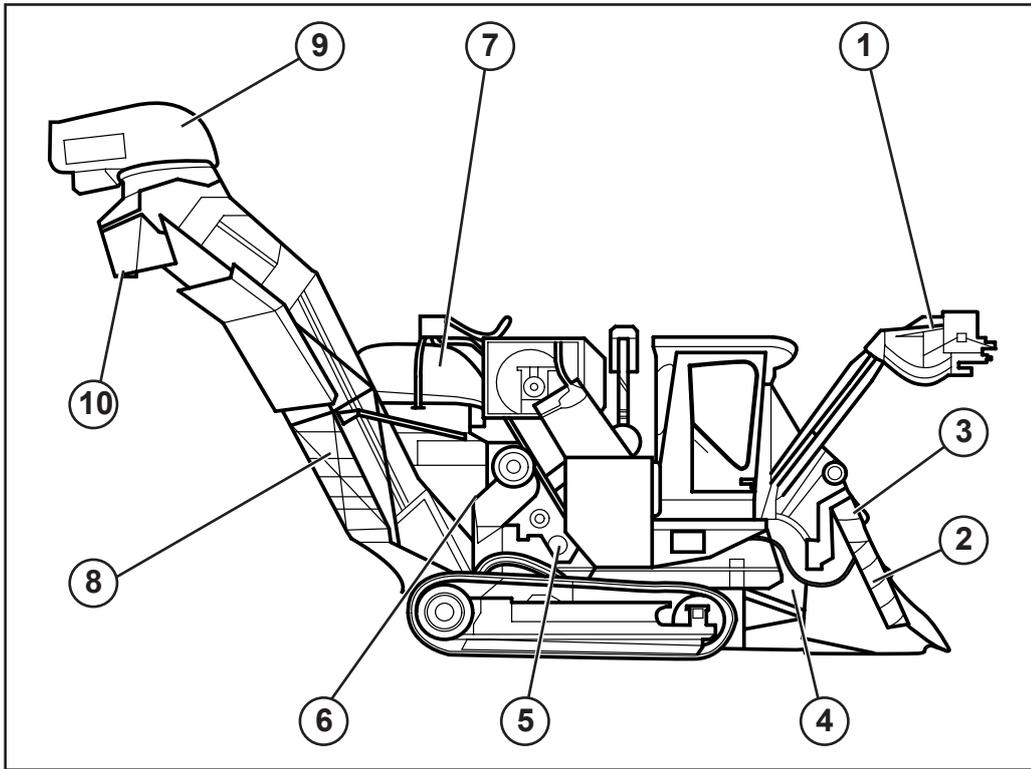


Figura 10

- |                               |                      |                      |                        |
|-------------------------------|----------------------|----------------------|------------------------|
| 1. Standard / Shredder Topper | 3. Side Trim Knives  | 6. Chopper           | 9. Secondary Extractor |
| 2. Cropdividers               | 4. Basecutter Box    | 7. Primary Extractor | 10. Exhaust Flap       |
|                               | 5. Roller Feed Train | 8. Elevator          |                        |

**Topper**

Cuts off and discards the leafy tops of the cane to the side selected by the operator.

- The height is controlled by the operator.

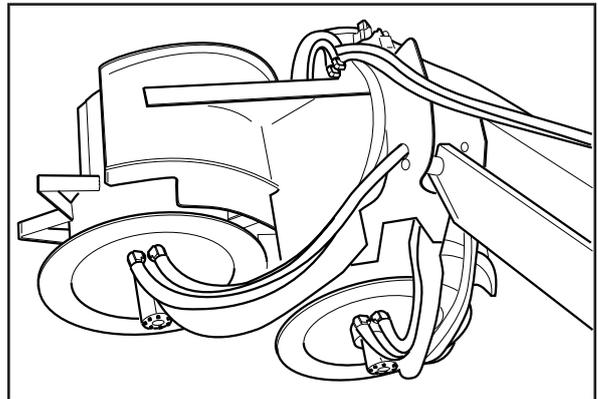


Figure 11

**Shredder Topper**

Cuts off and discards in small billets (100 mm) and throws them to the side selected by the operator.

- The height is controlled by the operator.

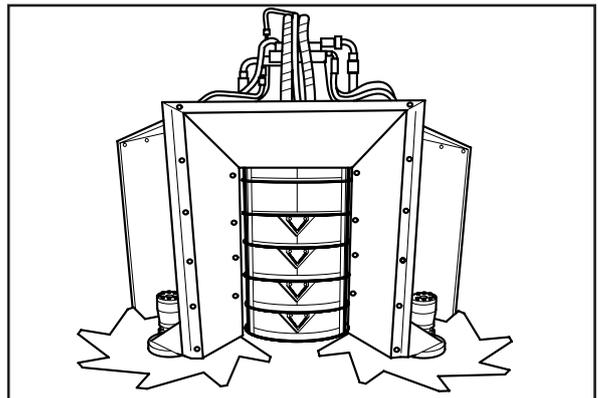


Figure 12

### Crop dividers

Lifts the fallen cane and severed stalks from adjacent rows. The height is controlled by the operator.

- Hydraulic tilt controlled by the operator.

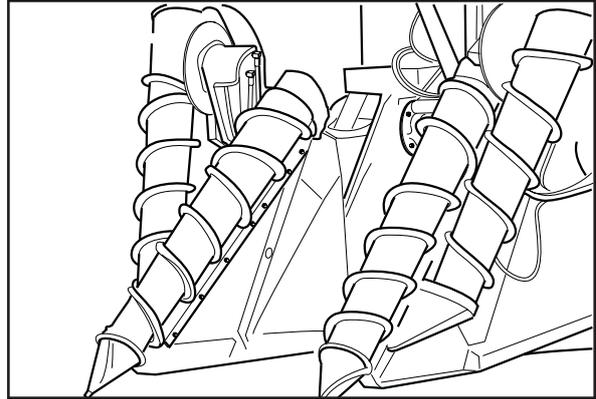


Figure 13

### Side Trim Knives

They assist in harvesting and lodged raw cane by severing stalks from adjacent rows. The height is adjusted manually or (optional) controlled by the operator from the cabin.

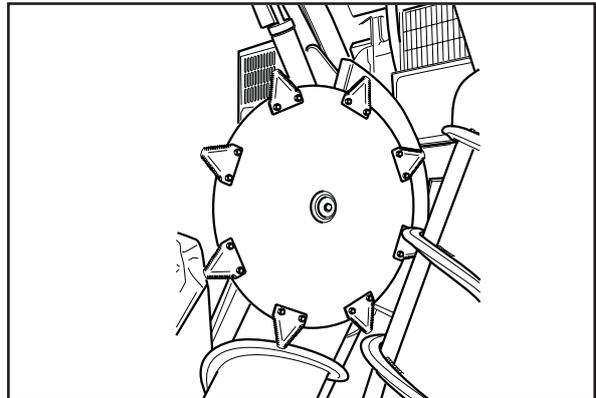
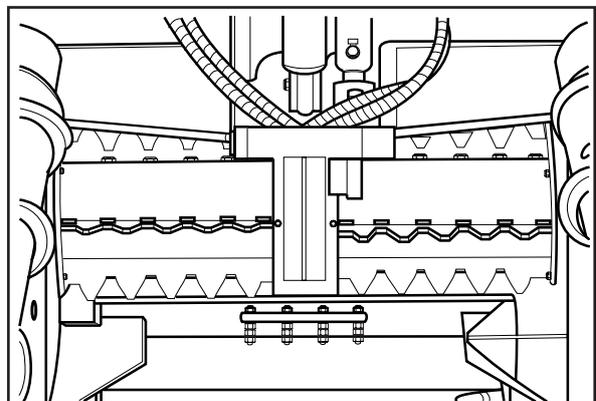


Figure 14

### PKD Roller

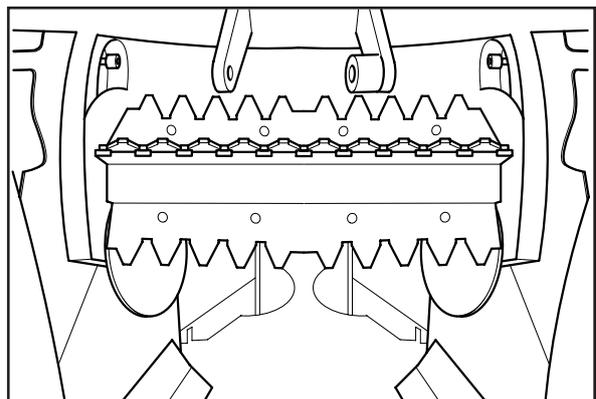
Adjust to assist the feeding of fallen cane.

- Hydraulic or mechanical activation (optional).



Hydraulic

Figure 15



Mechanical

Figure 16

**Finned roller**

Feed the cane butt first to the base cutter.

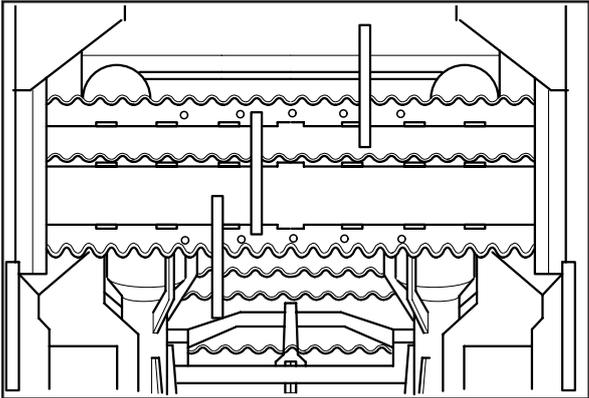


Figure 17

**Crop divider floating sidewalls**

Direct recumbent stalks to the base cutter, thus reducing cane loss.

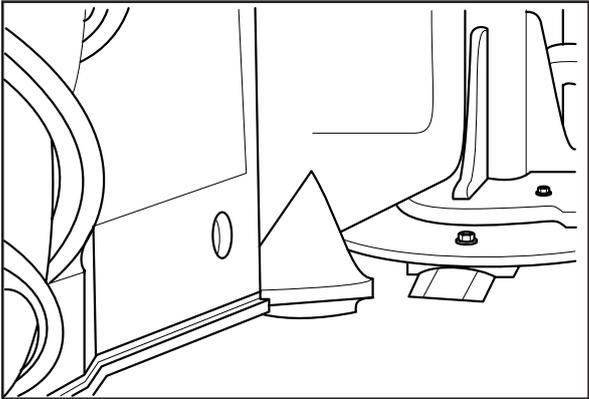


Figure 18

**Base cutter**

Cut the cane at ground level and directs it to the roller feed train: The height is controlled by the operator.

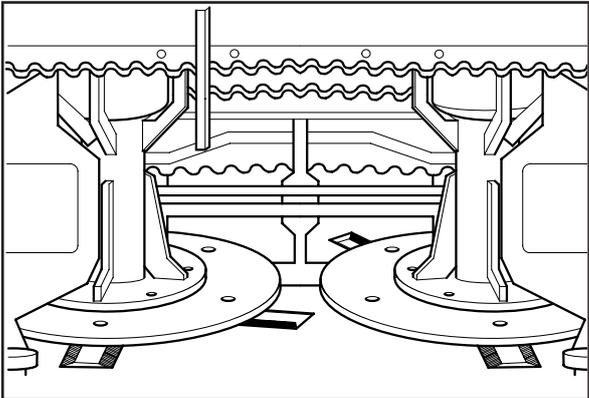


Figure 19

**Butt lifter**

Lift the cane to the feed roller train.

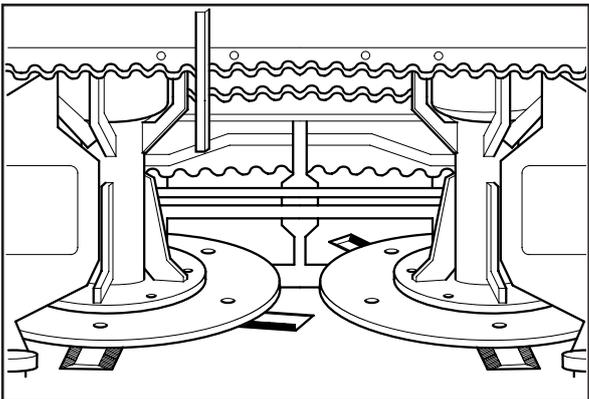
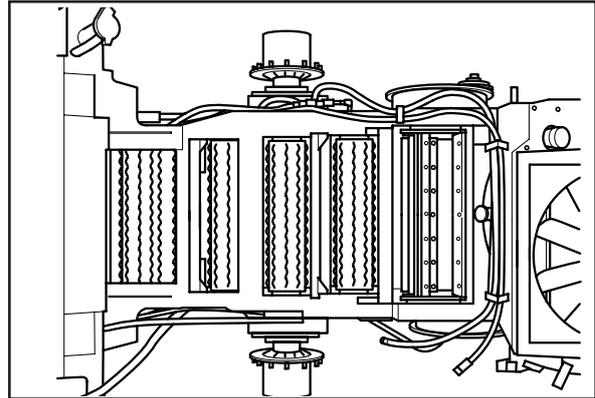


Figure 20

### Roller feed train assembly (Roller Feed Train)

Handle the cut cane butt first to the choppers and allows the trash and dirt to fall clear.



Top view

Figure 21

### Primary Extractor

Causes strong upwards currents of air which separate trash from the cane billets as they pass through the air flow from the choppers.

- Variable rotation, controlled by operator according to the need.

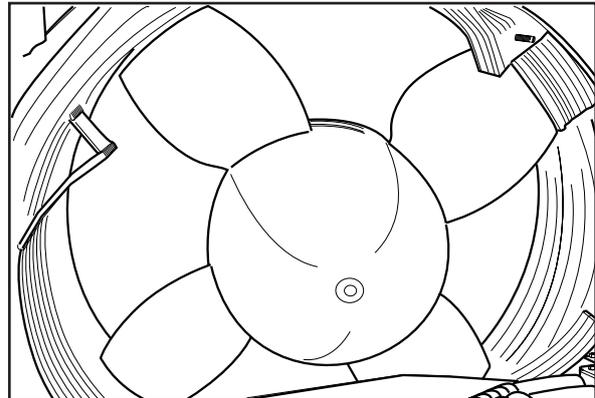


Figure 22

### Primary extractor hood

Feed the trash away from transport and the field to be cut. Hydraulic or mechanical slew.

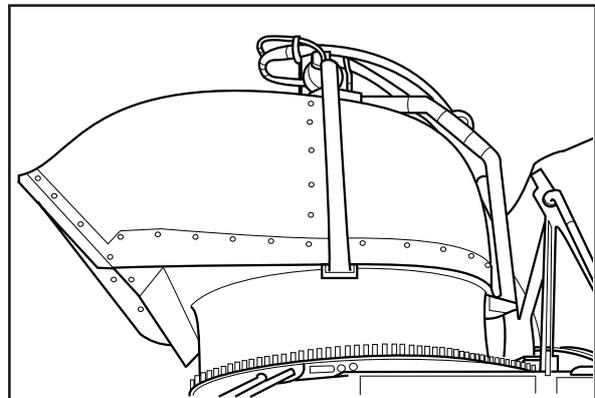


Figure 23

### Chopper

Rotating drums fitted with chopping blades.

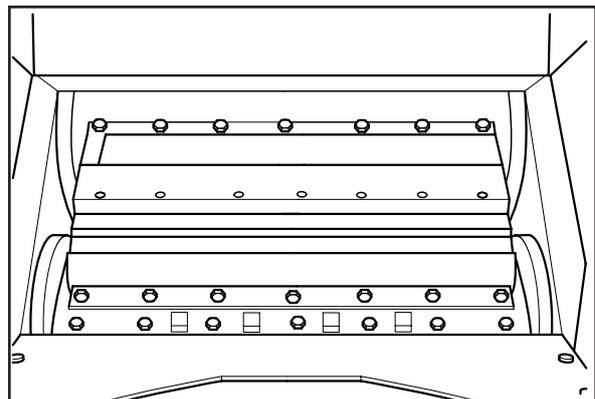


Figure 24

**Elevator**

Conveys the cut cane to the transfer and allows dirt to fall clear. The slew is controlled by the operator.

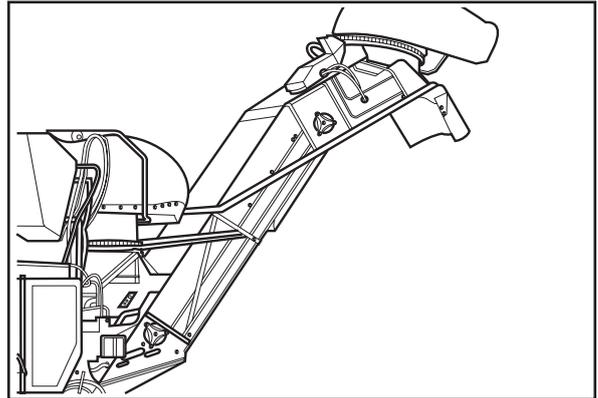


Figura 25

**Secondary Extractor**

Causes strong upwards current of air which separate trash from the cane billet as they pass through the air flow from the overflow.

- Fixed rotation.

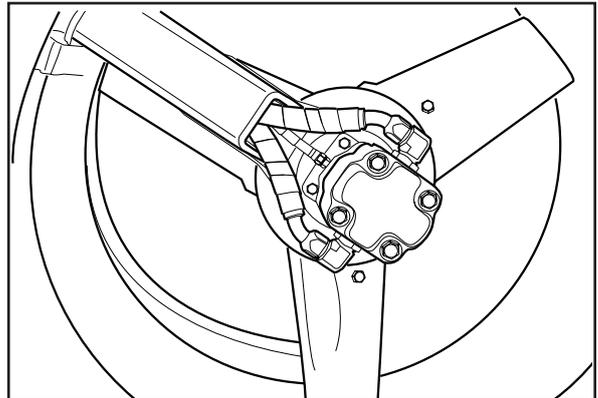


Figure 26

**Secondary extractor hood**

It redirects the trash flow away from transport and other areas.

- Hydraulic slew.

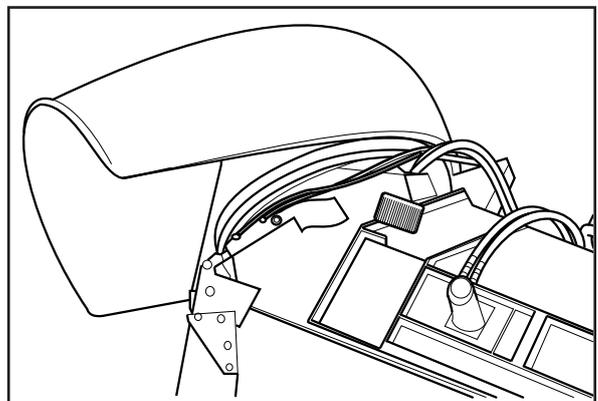


Figure 27

## ECOLOGY AND THE ENVIRONMENT

Soil, air and water are vital factors of agriculture and life in general. Where legislation does not yet regulate the treatment of some of the substances which are required by advanced technology, common sense should govern the use and disposal of products of a chemical and petrochemical nature.

The following are recommendations which may be of assistance:

- Become acquainted with and ensure that you understand the relative legislation applicable to your country.
- Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, cleaning agents, etc., with regard to their effect on man and nature and how to safely store, use and dispose off these substances.

### Helpful hints

1. Avoid filling tanks using open containers or inappropriate pressurized fuel delivery systems which may cause excessive spillage.
2. In general, avoid contact of the skin with all the fuels, oils, acid, solvent, etc. Most of them contain substances that can be harmful to the health.
3. Modern oils contain additives. Do not burn contaminated fuels and/or waste oils in ordinary heating systems.
4. Avoid spills when draining engine coolant mixtures, hydraulic oils and of the gearbox and of the engine, brake fluid, etc. Do not mix brake fluids or drained fuel with lubricants. Store them safely until they can be disposed off in a proper way to comply with local legislation and available resources.
5. Modern coolant mixtures, i.e. antifreeze and other additives, should be replaced in the intervals stated in the operator's Manual. You should not allow them to contaminate the soil, they should be collected and discarded correctly with due care to the environment.
6. Repair any leaks or defects in the engine cooling or hydraulic system immediately.
7. Do not increase the pressure in a pressurized circuit as this may lead to the component exploding.
8. Protect hoses during welding as penetrating weld splatter may burn a hole or weaken them, causing the loss of oils, coolant, etc.

This section supplies safety information important for your harvester.

## SAFETY

Understand that your safety and that of other people depends on you as you maintain and operate this machine. Learn about the positions and operation of all the controls before trying to operate it. **MAKE SURE YOU CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.**

READ THIS MANUAL COMPLETELY and make sure that you understood the controls. All equipment has a limit. Make sure you understand the speed, brakes, steering stability, and load characteristics of this machine before you start to operate this machine.

The safety information given in this manual does not replace safety rules, insurance requisites, federal, state and local laws. Check that your machine has the necessary equipment required by the local laws and regulations.

We continue to work for your safety by manufacturing harvesters with better protection and supplying these rules for correct operation.



**WARNING:** THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.



**WARNING:** PLACE A BLOCK OF TIMBER UNDER THE CENTRE OF THE BASECUTTER DISCS OR UNDER THE FRONT OF THE MACHINE BEFORE WORKING UNDER THE MACHINE. MACHINES MUST HAVE THE ENGINE RUNNING FOR CYLINDER FUNCTIONS TO OPERATE.



### SAFETY RULES



- Do not jack up the machine unless the jack and the machine are on very firm ground. Make sure there is a firm foundation under the jack. Never work under the machine unless adequate safety blocks are in place.
- Operate controls only when seated in the operator's seat.
- A frequent cause of personal injury or death is persons falling off and being run over. Do not permit others to ride on the machine. Only one person - the operator - should be on the machine when it is in operation. See topic "Instructors seat" further on.
- **IMPORTANT:** During prolonged road travel, of the "A8000" rubber tired harvester, the operator must stop every 20 to 30 minutes and turn the steering from lock to lock to realign the toe-in on the front wheels.
- Travel speed should be such that complete control and machine stability is maintained at all times. Care must be taken when operating near ditches, embankments and holes. Reduce speed when turning, operating on slopes and on rough or muddy surfaces.
- Collision of high speed road traffic and slow moving machines can cause personal injury or death. Always use flashing lights during road travel, oversize vehicle signs, and any local laws must be followed. Pull over and let faster traffic pass. Slow down and signal before turning off.
- Always insure that brakes are operational.
- Never operate the engine in a closed building. Proper ventilation is required under all circumstances.
- Never operate the machine with shields removed.

- The “heated coolant “ under pressure can spray out if the expansion tank cap is removed. Before removing the expansion tank cover wait for the system to cool.
- Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin and cause infection or other injury. To Prevent Personal Injury:
  - Relieve all pressure before disconnecting fluid lines.
  - Before applying pressure, make sure all connections are tight and components are in good condition.
  - Never use your hand to check for suspected leaks under pressure. - Use a piece of cardboard or wood for this purpose.
  - If injured by leaking fluid, see your doctor immediately.
- Battery explosion and/or damage to electrical components can result from improper connection of booster batteries or charger. Connect positive to positive and negative to negative. Externally, battery acid can cause burns and blindness and taken internally it is poison.
- It is good practice to carry two fire extinguishers on the machine. Be sure that the extinguishers are properly maintained and be familiar with their proper use.
- Due to the flammable nature of the crop materials encountered by harvesters, fire risks are high. This risk can be minimized by frequent removal of accumulated crop material from the machine and checking for overheated machine components. If oil leaks appear, retorque bolts or replace gaskets and seals as necessary.
- It is advisable to check all safety devices on the harvester on a weekly basis to ensure the full protection of all components.
- The cane harvester Case IH Austoft A8000/ A8800, has systems that should be tested periodically to ensure its correct operation.
  - Operator’s seat: if not used, it turns off the harvesting functions and applies the parking brake.
  - Door beside the belts (right side): if opened, it shuts the diesel engine down and/or it will not allow the engine to start.
  - Level of hydraulic oil of the header tank: if below the minimum level it shuts down the diesel engine.
  - Button that inhibits the harvest functions (Yellow button).
  - Button that inhibits the operation of the diesel engine - emergency stop - (Red button).
  - Low engine oil pressure: it de-rates the diesel engine.
  - High engine temperature: it de-rates the diesel engine and shuts the engine down.
- Always insure that the battery isolator switch is turned off while working on the harvester; e.g., changing chopper blades, basecutter blades. Before welding and cleaning procedures on the machine, disconnect the battery cables.
- Always wear suitable clothing when operating or working on the machine.
- Always look above to ensure adequate clearance for elevator and topper.



**WARNING:** *It is possible to disable the system safety for 2 min. holding the deceleration button and starting the engine. This procedure shall be used in case of emergency only, and it is the responsibility of the machine operator.*

*As instances of emergency situations, we can cite: crop fire cases; loading and unloading the harvester for transporting; personal injuries cases.*



**WARNING:** *The harvester has an inbuilt safety system that also inhibits the start up during certain types of maintenance.*

**PERSONAL SAFETY**

Throughout this manual and in the safety decals of the machine, you will find caution recommendations: **DANGER, WARNING or CAUTION** followed by specific instructions or two safety ISO pictorial symbols. These cautions are for your personal safety.

If the DANGER WARNING or CAUTION instructions, are not followed correctly, the result may be serious injury or death.

**DANGER, WARNING or CAUTION** are defined as follows:

- **DANGER:** Indicates an immediate risk situation which, if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates a potentially risk situation which, if not avoided, will result in death or serious injury. The color associated with Warning is ORANGE.

- **CAUTION:** Indicates a potentially risk situation which, if not avoided, will result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

The **two safety ISO pictorial symbols** are defined as follows:

- The first symbol indicates the nature of the risk.
- The second symbol indicates the procedure appropriated of avoiding the risk.
- Background color is YELLOW.

Prohibition symbols, such as



If used, is RED

**INSTRUCTION SEAT SAFETY**

- Third parties, especially children, are not allowed in the machine.
- The Instruction Seat should be only used for training of a new operator or when a technician is diagnosing a mechanical problem.
- DO NOT ALLOW other people in the machine, except in the designated instructors seat, when in training.
- When the Instruction Seat is occupied, the following cautions should be taken:
  - A. Drive the machine in a lower speed and on level ground.
  - B. Avoid driving on highways or public roads.
  - C. Avoid sudden starts and stops.
  - D. Avoid sharp turns.
  - E. Always use the seat-belt (when available on the instruction seat).
  - F. Keep the cab door closed at all times.



**WARNING:** Before starting the engine make sure that the seat-belt is properly fitted. The seat belt can help to insure your safety if it is used and properly maintained. Never wear a seat belt that is not adjusted correctly. Never use a seat belt that is twisted or trapped in the seat frame.



**WARNING:** *DO NOT ALLOW other people in the machine, except in the designated instructors seat.*



## SAFETY IN MAINTENANCE



- Always keep safety and information decals clean and visible. Replace decals that are damaged, lost, painted over or can not be read.
- When assembling, operating or servicing the machine, wear protective clothing and personal safety devices that are necessary for the particular procedure. Some safety equipments that may be necessary are protective shoes, face and/or eye protection, hard hat, heavy gloves, filter mask and hearing protection.
- DO NOT wear jewelry or loose fitting clothing that may get caught in moving parts. Always wear clothing that will not catch on objects. Keep hands, feet, clothing and hair away from moving parts.
- Never attempt to clear obstructions or objects from the machine while the engine is running.
- Always switch off the engine and remove the ignition switch when going out from the operator's seat or of the machine.
- To carry out maintenance on the machine, always position it on a flat, firm surface. When you remove or open guards for maintenance, always put them back before operating the machine. Never operate the machine with the guards opened, or without them.
- Keep the area used to maintenance clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.



**WARNING:** *PLACE A BLOCK OF TIMBER UNDER THE CENTRE OF THE BASECUTTER DISCS OR UNDER THE FRONT OF THE MACHINE BEFORE WORKING UNDER THE MACHINE. MACHINES MUST HAVE THE ENGINE RUNNING FOR CYLINDER FUNCTIONS TO OPERATE.*



## SAFETY AGAINST FIRE



- Fire risks can be minimized by the frequent cleaning of material accumulated of the harvest or residues of the machine.
- Remove daily material of the harvest or residues of the machine. Especially check the engine area and exhaust system.
- Engine fuel can cause an explosion or fire. DO NOT FILL the tank with the engine running, if you are near an open fire; or if you are welding, smoking, etc.

Refer to the Prevention Against Fire in the Maintenance Section of this manual for additional information.

**BATTERIES SAFETY**

- DO NOT CREATE sparks or flame next to the battery.
- When disconnecting battery terminals, remove the Negative (-) cable first; then remove the Positive (+). When connecting the cables, connect first the Positive (+), then the Negative (-).
- Disconnect the battery (both terminals) before welding on any part of the machine. Not taking this precaution can cause damage to sensitive electric components.
- BATTERY ACID CAUSES SERIOUS BURNS. Batteries contain sulfuric acid. Avoid contact with the skin, eyes or clothing. Treatment: EXTERNAL - flush with water. INTERNAL - Drink large quantities of water or milk. DO NOT induce vomiting. Immediately seek medical attention. EYES - Wash with water for 15 minutes and immediately seek a doctor. BATTERIES PRODUCE EXPLOSIVE GASES. Keep all open flames, sparks and cigarettes away. Ventilate when loading or using in enclosed space. Always use eye protection when working near batteries. Wash hands after handling. KEEP OUT OF REACH OF CHILDREN.
- When working near stored batteries, remember that exposed parts of metal are conductors. Never place a metal object on the terminals because it can cause a spark, short circuit, explosion or personal injury.
- Battery posts, terminals and other related accessories contain lead and lead compounds. Wash hands after handling.

**SAFETY IN MACHINERY OPERATION**

- DO NOT allow other persons to ride on the machine These people can fall or cause an accident.
- DO NOT operate the machine while under the influence of alcohol or drugs.
- Be alert and always know the location of all the workers in your area. Keep other people out of the way of your machine. Injury or death can result if you do not follow these instructions.
- Keep away of dangerous areas as ditches and inclines. Walk through the working location before starting and note the dangers.



## DANGEROUS CHEMICAL PRODUCTS



- Whether you are exposed or come into contact with dangerous chemical products, you can be seriously injured. The fluids, lubricants, paints, adhesives, coolants, etc., used in your machine can be hazardous.
- Material Safety Data Sheets (MSDS) provide information about the chemical substances within a product, safe handling procedures, first aid measures and procedures to be taken when the product is accidentally leaked. MSDS are available in your Case IH Dealer.
- Before carrying out maintenance or service on your machine, check MSDS for each fluid, lubricant, etc., used. This information indicates the risks and how to carry out the maintenance in a safe manner. Follow this information when servicing the machine.
- Before servicing in this machine and before discarding fluid and lubricants used, always remember the environment. DO NOT put oil or fluids into the ground or into containers that can leak.
- Check with the local authority of environmental protection or recycling, or with your dealer, the correct procedure for disposal.



## SAFETY PRECAUTIONS



Most farm machinery accidents can be avoided by observing a few simple precautions. To avoid accidents, read carefully the instructions below before you operate the harvester. Farm machinery should only be operated by responsible, mature and skilled people.

### Operation

- The machine should be operated by trained personnel who are familiar with all the controls, and techniques of the harvester and in fields with up to 10% of inclination for tire harvesters (A8000) and 15% to track harvesters (A8800). Operation of equipment you are not familiar with may lead to a serious accident.
- When driving on public roads:
  - Note traffic regulations.
  - Adapt your speed to road and traffic conditions and ensure that all lights and other safety mechanisms on the machine (if they are required) are fitted and work properly.
  - Ensure that both brake pedals are locked together when traveling on public roads. (A8000)
- Do not permit anyone other than the operator to ride on the harvester.
- Do not brake abruptly to avoid tipping of the machine.
- Before moving the machine, check if all the shields are closed and locked in the position.
- Before starting the engine, ensure everyone is clear of the harvester.
- Keep children away from and off the harvester at all times.
- Check, daily, the torque of the front and rear wheels (A8000) and of the drive sprockets (A8800).
- Do not attempt to clean, lubricate or carry out any adjustments on the harvester while it is in motion or while the engine is running.
- For safety's sake never leave the operator's platform without first disengaging the harvester drive mechanism, stopping the engine, applying the parking brake and removing the starting key.
- Do not climb under the machine without safety stays in the suspension cylinders.
- Do not work around the machine in loose clothing that might catch in any of the moving parts.
- Keep hands away from moving parts of the machine
- Keep the loaded fire extinguisher within reach of the operator and inside the validity period.
- Do not try to go up over the cab.

## Engine

- Keep engine area clean of dust, trash and straw to prevent the possibility of fires.
- Never idle the harvester in an enclosed area as harmful exhaust gases may build up and cause death.
- Exercise care when removing the radiator cap while the engine is hot. If you cannot wait until the engine has cooled, cover the cap with a rag and turn it slowly to the first stop to allow the pressure to escape before removing the cap completely. NEVER add cold water to a hot radiator. In case of cover loss of the expansion tank, replace it always for a Case IH genuine cap. A non-approved cap may not be safe.
- The fuel oil in the injection system is under high pressure and fuel oil leaks can penetrate the skin. Do not attempt to remove or adjust a fuel injection pump, injectors or nozzles.
- Prolonged contact with used engine oil may affect your skin. Protect your skin by wearing rubber gloves.
- Be very careful to avoid contact with hot engine oil. If the engine oil is extremely hot, allow the oil to cool to a moderately warm temperature for safe removal.
- Do not handle a hot oil filter with bare hands.

## Diesel fuel

- Never remove the fuel tank cap or refuel with the engine running or hot.
- Do not smoke or use a naked flame when refueling or when standing near fuel tanks.
- Do not fill the fuel tank to capacity. Allow room for expansion.
- Wipe up spilled fuel immediately.
- Always tighten the fuel tank cap securely.
- If the original fuel tank cap is lost, replace it with a CASE IH approved cap. A non-approved, proprietary cap may not be safe.
- Never use fuel for cleaning purposes.
- Keep equipment clean and properly maintained.
- Do not drive the harvester near open fires.
- Keep the screen (filter) inside the filler neck during the fueling.



## LEGAL OBLIGATIONS



Your harvester may be equipped with special guarding or other devices in compliance with local legislation. Some of these require active use by the operator. Therefore, check local legislation on the usage of these harvesters.

## FIRE EXTINGUISHER

It is recommended maintaining a fire extinguisher in the harvesters when it is operating to help to control fires.

### **WARNING**

*It is essential that the extinguishers receive adequate maintenance and that the operator receives instructions of how to use it.*

### Every month, check:

1. Check if the extinguisher is in the validity period.
2. Check if the pressure indicator is in the green band.
3. Check that the seals are intact.
4. Check if there is the INMETRO conformity mark.
5. Check if the durability and validity terms of the hydrostatic test are not expired.
6. Check if the external general appearance is in good condition (without any corrosion, dents and other damages).

**ATTENTION:** *If any of the items above are not correct, replace the extinguisher.*

### Safety Precautions

1. Do not test the extinguisher, any use will cause pressure loss, making it inoperative.
2. Involuntary contact with residue of the extinguisher agent can cause irritation to the skin, eyes and breathing passages.
3. If you are in physical discomfort, seek medical attention.
4. Content under pressure. Never perforate, dent or expose it to flame, after discharged.

#### Extinguisher specification

Part number Case: 00943470  
 Extinguisher capacity: 2A: 20-B: C  
 Fire class: ABC  
 Charge: 4 kg  
 Extinguisher agent: Monoammonic Phosphate

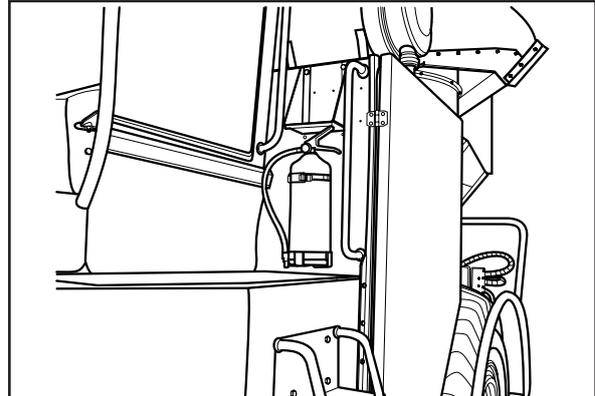


Figure 1

### Operation and use instructions

The user should have minimum knowledge for the correct utilization of the product. The basic sequence of operation is shown in the instructions chart (label) of the extinguisher.

The information to follow is complementary and can be used for users' training:

1. Remove the extinguisher from the fixing bracket.
2. Press the trigger and move the jet in an arc. If the fuel is liquid, do not apply the jet directly over the surface to avoid increasing the burning area.
3. When the fire is extinguished, be alert to a possible reigniting. Only ABC powders can provide reasonable assurance in preventing inflammable solids from reigniting.
4. Evacuate and ventilate the area. The smoke is always toxic and could cause irritation to the respiratory system or even lead to the loss of consciousness.

#### IMPORTANT:

- a) The discharge time of the powder type KIDDE extinguisher is small. Due to the short duration of the discharge, the operator should be alert regarding wasting extinguisher agent.
- b) Combating fires in liquid fuels (Class B) should be accomplished with continuous discharge of the spray.
- c) For solid fuels (Class A), depending on the proportions of the fire, the use of intermittent discharge may be necessary.

### SAFETY DECALS

**IMPORTANT:** If the old decals are damaged, lost, painted or can't be read replace them. When replacing components that have decals fitted, make sure to place a new decal in each new part. Keep the decals clean. When you clean the decals, use only a cloth, water and soap. Do not use solvents, gasoline, etc.

**NOTE:** New decals are available in your Case IH Dealer.



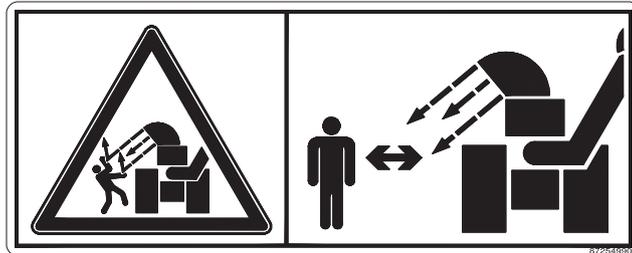
IMPORTANT	LOWER BASECUTTERS WHEN PARKING MACHINE.
ATENCION	BAJAR CORTADORAS DE BASE AL ESTACIONAR LA MAQUINA.

87254723





<b>CAUTION</b>	MACHINES FITTED WITH CABIN HEATER
RADIATOR FILL PROCEDURE	AT INITIAL FILL OR AFTER DRAINING RADIATOR FILL AND BLEED HEATER COIL IN CAB ROOF WITH ENGINE RUNNING TO REMOVE AIR FROM SYSTEM
	87235680



### UNIVERSAL SYMBOLS

As guides for the operation of your harvester, they are used on the instruments, controls, switches and fuseboxes. These symbols are indicated below, as well as the respective meaning.

	Thermostat of the starting auxiliary system		Brake lights		Unobstructed air filter		Transmission oil pressure
	Alternator charge		Beacon		Parking brake		Caution !
	Fuel level		Radio		Brakes oil level		Emergency signal
	Automatic Fuel shut-off	<b>KAM</b>	Emergency memory		Trailer brake		Variator control
	Engine RPM (rpm x 100)		Indicator lights		Flashing Beacon		Pressurized ! Open carefully
	Working hrs		Turn signals - one trailer		Caution ! Corrosive substance		Chain auxiliary receptacle
	Engine oil pressure		Turn signals - two trailers		Power Take off (P.T.O)		Hydraulic and transmission filters
	Engine cooling system temperature		Windshield Wiper	<b>N</b>	Neutral transmission		Fault ! See the Operator's Manual
	Cooling system level		Heating temperature command		Differential lock		Fault ! (alternative symbol)
	Harvester lights		Heating fan		Rear axle oil temperature		
	High beam		Air-Conditioning				
	Low Beam						
	Plough lamps						



## CONTROLS AND INSTRUMENTS

### Before starting operation

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**⚠ WARNING ⚠**

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*Before driving or operating the harvester, study the safety precautions at the beginning of this Manual.*

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Read with attention this section. It details the location and operation of the various instruments, switches and controls on your harvester. Even if you operate other harvesters, you should thoroughly read this section of the manual and ensure that you are familiar with the location and function of all the features of the harvester.

Do not start the engine or attempt to drive or operate the harvester until you are fully accustomed with all the controls. It is too late to learn once the harvester is moving. If in doubt about any aspect of operation of harvester, consult your CASE IH Dealer.

Pay particular attention to the recommendations for running-in to ensure that your harvester will give the long and dependable service for which it was designed.

## OPERATOR'S SEAT

Before operating the harvester, it is important to regulate the seat in the most comfortable position. See the text and the following illustrations for more details.

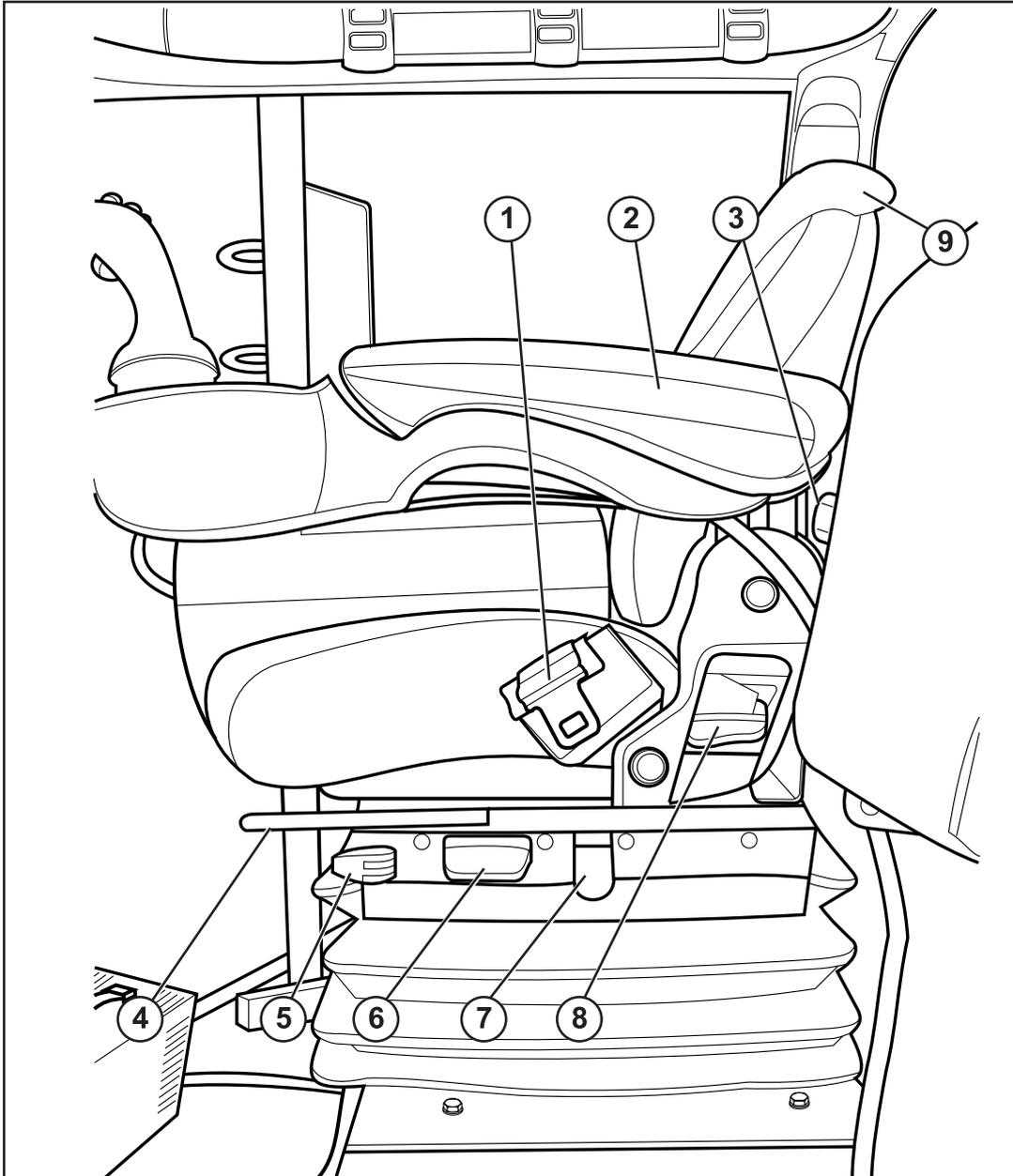


Figure 1

1. Seatbelt
2. Armrest
3. Lumbar adjust
4. Horizontal adjust
5. Suspension horizontal adjust (TRANSPORT MODE)
6. Seat height pneumatic adjust
7. Weight indicating tape
8. Seat back rest adjust
9. Head back rest

- To prevent damage, it is essential that the seat works very well and is fitting to your weight and stature. For this, keep your seat in perfect state.

**NOTE:** At least, the maintenance controls should coincide with the maintenance intervals of the vehicle.

### Safety precautions

- In order to avoid injury, do not place objects in the cab that may interfere with the seat adjustments.
- Before the addition in operator's seat service, it should remove the materials eventually existing in the packing in the seat back rest and seat.
- To avoid the risk of accidents, the seat adjustments should not be carried out when driving.

If the back rest upholstery has been removed, the respective adjustment device should only be activated when the backrest is restrained. Failure to comply with this recommendation may cause great risk of injury when moving the back rest abruptly to the front.

- If the seat back cushion had been removed, the respective adjusting device should only be activated in the case the seat back is being held with the hand. Not doing that, there is a great risk of injury as the seat back is moved suddenly to the front.
- Periodically check the mounting screws for tightness. Movement in the operator's seat can be a symptom of loose screws or other type of fault.
- Before operating the vehicle, make sure that the switches that are on the operator's seat (for the suspension or driver recognition safety switch) work correctly. If faulty do not operate the vehicle.

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### WARNING

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*Do not place objects on the operators seat to override the driver recognition safety switch.*

*When the driver vacates the seat, the vehicle stops.*

*During the operation, with operator's seat supporting load, do not press the bellows to inside.*

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### WARNING

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*Avoid any object or liquid coming in contact with the operator's seat.*

*The operator's seat is not waterproof and it must not be wet.*

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## INSTRUMENT PANEL - RIGHT SIDE CONSOLE

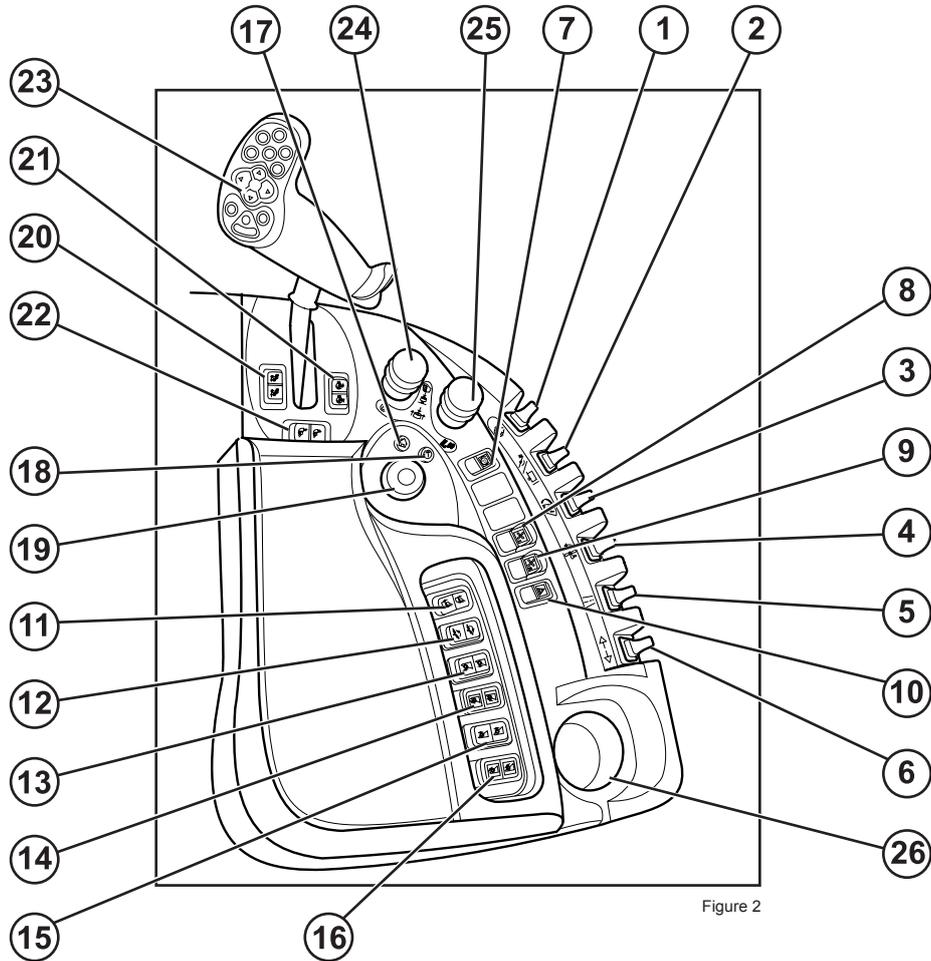
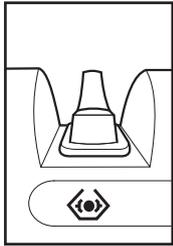


Figure 2

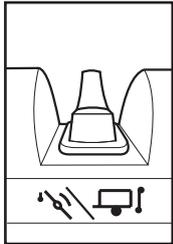
- |  |  |
|--|--|
| 1. Positive Traction Control (only on A8000 models)        | 13. Left Side Trim (Raise/Lower)                 |
| 2. Rear Transporter / Fold up Topper (Optional, EC models) | 14. Left Side Trim (On/Off)                      |
| 3. Primary Extractor Hood Slew (Right/Left)                | 15. Right Side Trim (Raise/Lower)                |
| 4. Primary Extractor Fan Speed                             | 16. Right Side Trim (On/Off)                     |
| 5. Transport Mode/Harvest Mode                             | 17. Home (Main screen electronic monitor return) |
| 6. Direction Turn Indicators (Left/Right)                  | 18. Exit (Escape) from electronic monitor        |
| 7. Parking Brake   | 19. Electronic monitor navigation button         |
| 8. Primary Extractor On/Off                                | 20. PKD Roller (Raise/Lower)                     |
| 9. Secondary Extractor (On/Off)                            | 21. Engine Speed (Raise/Lower)                   |
| 10. Hazard Flashers  | 22. Secondary Hood Slew (Right/Left)             |
| 11. Elevator (Raise/Lower)                                 | 23. Multi Function Lever                         |
| 12. Basecutter Tilt Option                                 | 24. Emergency Stop                               |
|  | 25. Harvest Functions                            |
|  | 26. Cup Holder                                   |

## Switches



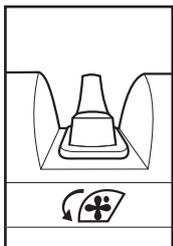
### Position (1) - Positive Traction Control (Only on A8000 models)

- One touch turns on.
- One touch turns off.



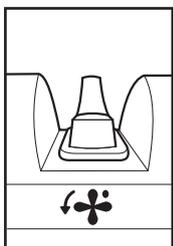
### Position (2) - Transporter / Fold Up Topper for EC Markets

- For transporter
  - Push forward to raise transporter
  - Pull back to lower transporter
- For fold up topper
  - Push to fold topper up.
  - Pull to fold topper out.



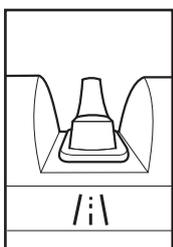
### Position (3) - Primary Extractor Hood Slew

- Push to turn right.
- Pull to turn left.



### Position (4) - Primary Extractor Fan Speed

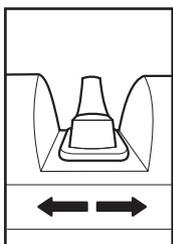
- Push forward to increase speed.
- Pull back to reduce speed.



### Position (5) - Transport Mode/ Field Mode

- One touch transport mode.
- One touch field mode.

**NOTE:** Viewed at top left of display. All motors and cylinder functions disabled.



### Position (6) - Turn Signal

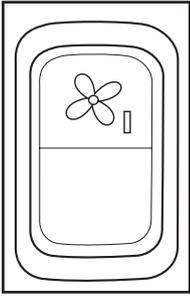
- Push for turn right.
- Pull for turn left.

**NOTE:** When turn signal is operating, alarm sounds.

**Position (7) - Parking Brake**

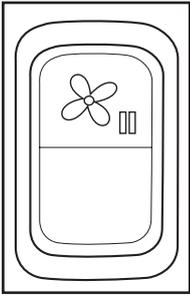
- One touch to release brake.
- One touch to active brake.

**NOTE:** When the parking brake is activated, the symbol (P) will be highlighted in the display and the transmission pumps are disabled.

**Position (8) - Primary Extractor On/Off**

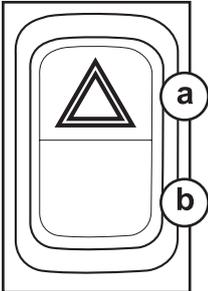
- One touch turns the primary extractor on.
- One touch turns the primary extractor off.

**NOTE:** Do not actuate with Diesel engine running at high speed.

**Position (9) - Secondary Extractor On/Off**

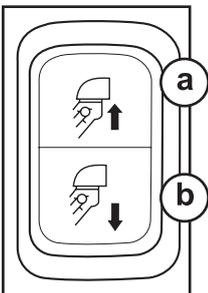
- One touch turns the secondary extractor on.
- One touch turns the secondary extractor off.

**NOTE:** Do not actuate with Diesel engine running at high speed.

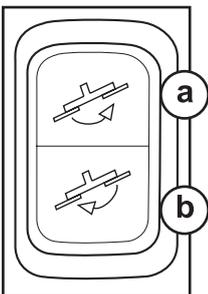
**Position (10) - Hazard Warning Lights**

- a. Turns hazard warning lights on.
- b. Turns hazard warning lights off.

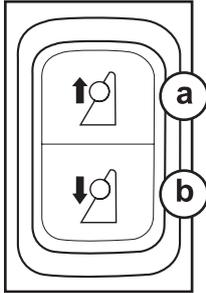
**NOTE:** When driving with the hazard warning lights flashing, the intermittent alarm will sound inside the cab.

**Position (11) - Elevator Raise/Lower**

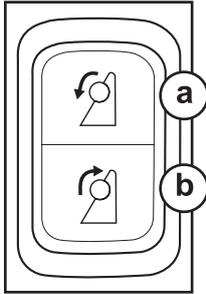
- a. Raise the elevator.
- b. Lower the elevator.

**Position (12) - Basecutter Tilt (Option)**

- a. Increase basecutter angle.
- b. Decrease basecutter angle.

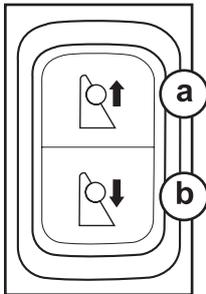
**Position (13) - Left Sidetrim Raise/Lower (Extend/Retract)**

- a. Raises (extend) left hand side trim.
- b. Lowers (retract) left hand side trim.

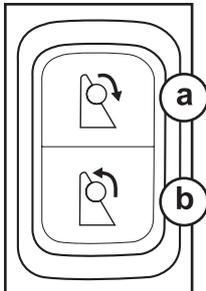
**Position (14) - Left Hand Side Trim On/Off/Reverse**

- a. Side trim forward on (one touch turns on, one touch turns off).
- b. Side trim reverse (one touch turns on, one touch turns off).

**NOTE:** If the operator tries to change direction of the side knife without waiting, the system will automatically select neutral, wait a few seconds then select the opposite direction.

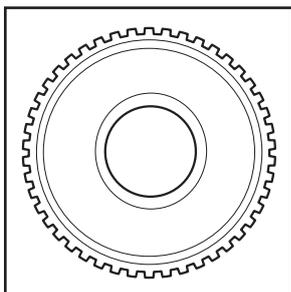
**Position (15) - Right Sidetrim Raise/Lower**

- a. Raises (extend) right hand side trim.
- b. Lowers (retract) right hand side trim.

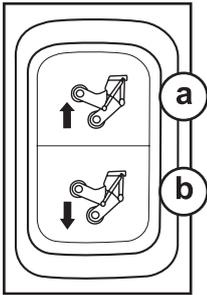
**Position (16) - Right Hand Side Trim On/Off/Reverse**

- a. Side trim forward on (one touch turns on, one touch turns off).
- b. Side trim reverse (one touch turns on, one touch turns off).

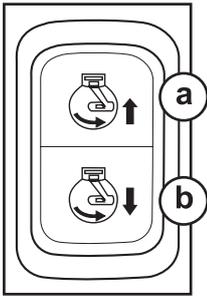
**NOTE:** If the operator tries to change direction of the side knife without waiting, the system will automatically select neutral, wait a few seconds then select the opposite direction.

**Position (17) - Back to main screen electronic monitor****Position (18) - Back to previous screen****Position (19) - Electronic Monitor Navigation Button**

- Rotate the button to navigate the display.
- Press the button to confirm the function selected on the display.

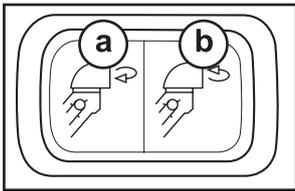
**Position (20) - PKD Roller Raise/ Lower**

- a. Raise the knock down roller.
- b. Lower the knock down roller

**Position (21) - Engine Speed**

- a. Increases engine speed.
- b. Decreases engine speed.

**NOTE:** The engine has three speed settings, low, intermediate and high. Each touch of the switch will increase/decrease the speed of the engine to one of these three speed settings.

**Position (22) - Secondary Hood Slew**

- a. Turn secondary extractor hood to the right.
- b. Turn secondary extractor hood to the left.

Position (23) - Multi-function Lever (Front Side)

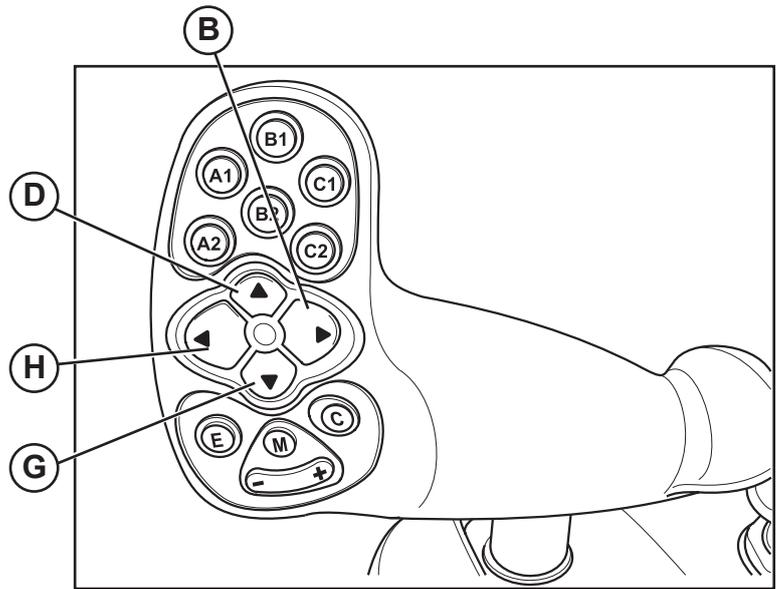


Figure 3

Position (23) - Multi-function Lever (Rear Side)

- a. Shift function
- b. Manual actuation of cooling system fan inversion
- c. Horn

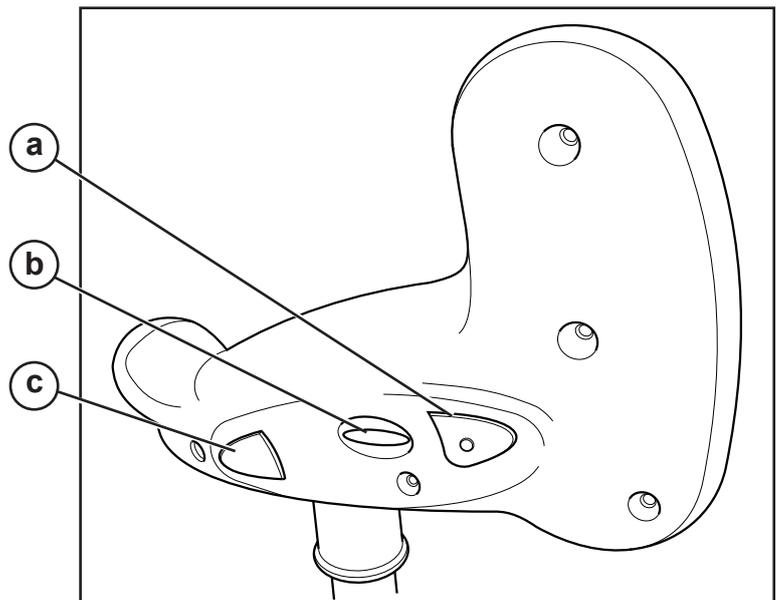
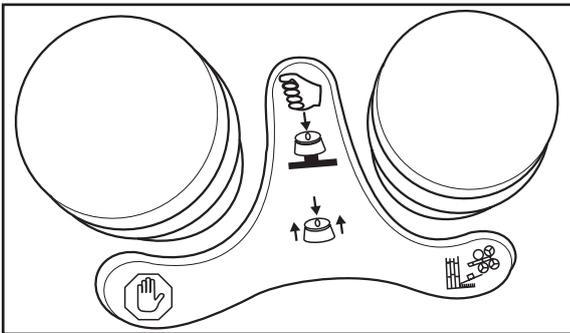


Figure 4

**NOTE:** Preferably actuate the inversion of the cooling package propeller at high engine speed.

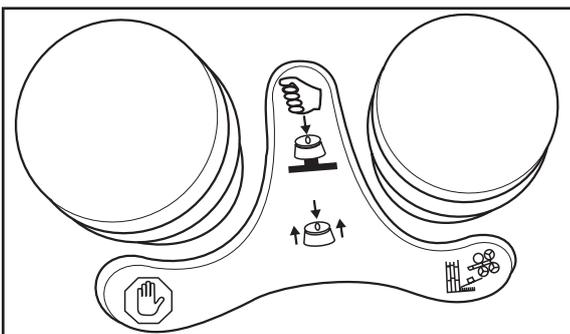
Command	Function
A1	Cropdivider - Left hand - raise
Shift + A1	Cropdivider - Left hand - tilt forward
A2	Cropdivider - Left hand - lower
Shift + A2	Cropdivider - Left hand - tilt back
B1	Cropdivider - Right hand - raise
Shift + B1	Cropdivider - Right hand -tilt forward
B2	Cropdivider - Right hand - lower
Shift + B2	Cropdivider - Right hand - tilt back
C1	Basecutter lift

Command	Function
Shift + C1	Raise both cropdividers together
C2	Basecutter lower
Shift + C2	Lower both cropdividers together
D	Topper lift
G	Topper lower
H	Topper on to the left
B	Topper on to the right
E	Elevator chain - forward on/off
Shift + E	Elevator chain reverse on/off
C	Harvest functions - on/off (Cropdividers, basecutter, feed rollers and choppers)
Shift + C	Harvest functions - reverse - on/off
Shift + M	Shift M (1X) - > Activate pressure and height Shift M (2X) - > Disable height
M (1X)	Set the machine at the preset cut height in the auto-tracker. (Make sure the cut height is pre-set)
M (2X)	Set the machine to the pre-set maneuver height in the auto-tracker
+	Bin Flap - extend
-	Bin Flap - retract



#### Position (24) - Emergency stop (Red button)

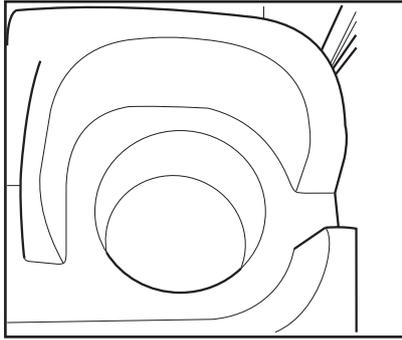
**NOTE:** When activating the emergency stop the engine will be turned off immediately. This function should only be used in extreme circumstances. If the ignition key is turned on when the emergency button is depressed, the engine will not start and the horn does not activate. An error message will appear on the monitor.



#### Position (25) - Harvest functions (Yellow button)

- Button up - harvest functions - enabled.
- Button down - harvest functions - disabled.

**NOTE:** When the disable button is down, harvest functions, topper, side trims, cylinder functions, primary extractor, secondary extractor and elevator will be disabled.



Position (26) - Cup Holder

## HEADLIGHTS

1. External headlight
2. Intermediate headlight
3. Internal headlight

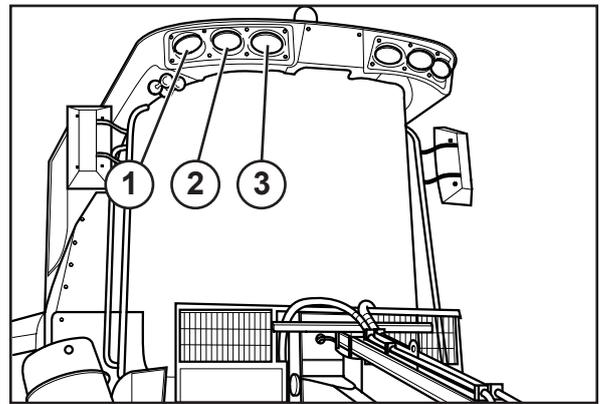


Figure 4a

TOP RIGHT-HAND PANEL

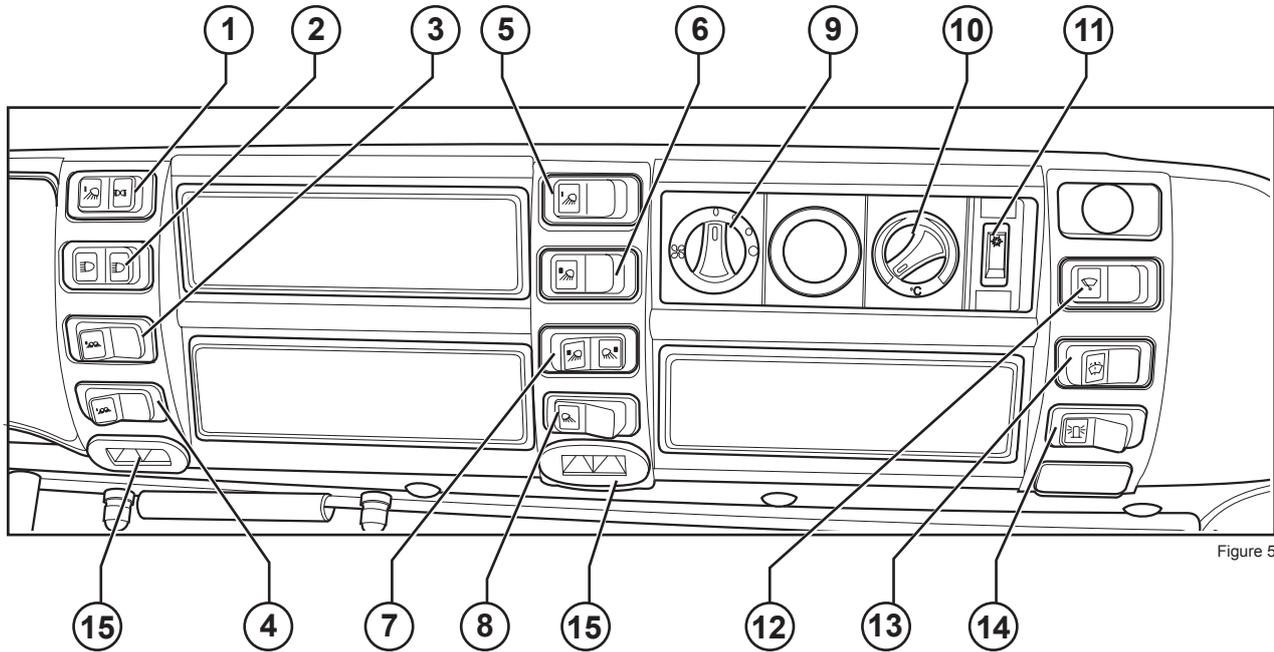
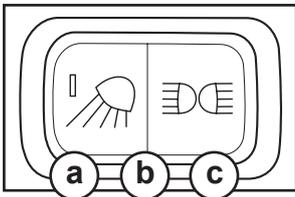


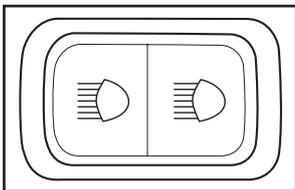
Figure 5



**Position (1)**

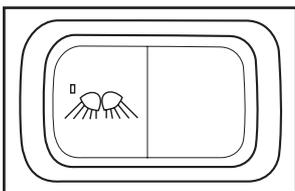
- a. Two internal working lights on and enables the other working lights and traffic warning switches.
- b. Internal working lights off.
- c. Enable the working lights and traffic warning switches.

**NOTE:** In position a or c the right console lamp will be illuminated and the brightness of the display will be reduced.



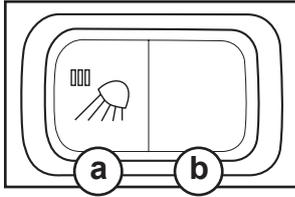
**Position (2)**

Optional



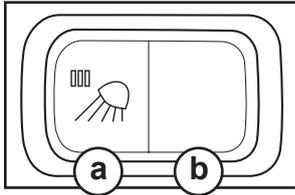
**Position (3) and (4)**

Optional

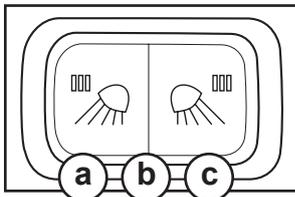
**Position (5) - Turns on two front intermediate headlights**

- a. Turn on.
- b. Turn off.

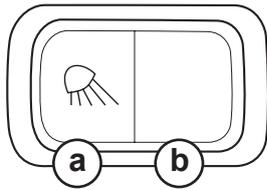
**NOTE:** Switch 1 should be activated.

**Position (6) - Enables switch (7)**

- a. Enables switch (7).
- b. Turned off.

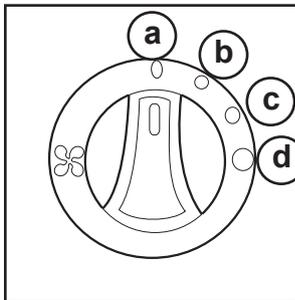
**Position (7) - Left and right external working light direction selector**

- a. Turns on left working light and turns off right working light
- b. Turns on both working lights, left and right
- c. Turns on right working light and turns off left working light

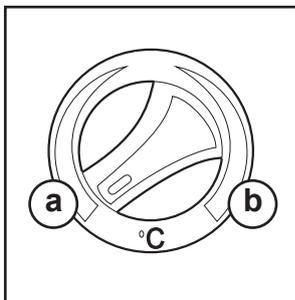
**Position (8) - Activates rear working lights (Elevator and Cab)**

- a. Turn rear working lights on.
- b. Turned off.

**NOTE:** Switch 1 should be enabled.

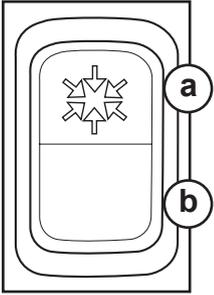
**Position (9) - Fan 3 speed**

- a. Turned off
- b. Low speed
- c. Intermediate speed
- d. High speed

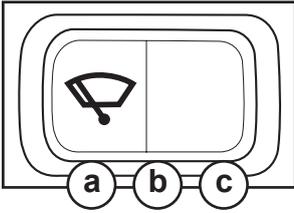
**Position (10) - Air-conditioning temperature control**

- a. Totally to the left: minimum temperature (cold).
- b. Totally to the right: maximum temperature (hot).

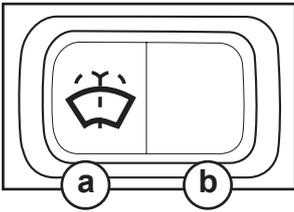
**NOTE:** With air conditioner switch (11) turned on, it does not position the button (10) in the red indicator (band).

**Position (11) - Activates air conditioner compressor**

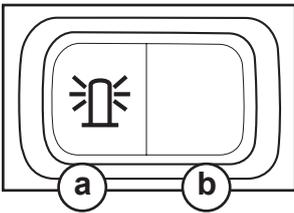
- a. Turns the air conditioner compressor on.
- b. Turns the air conditioner compressor off.

**Position (12) - Activates the Windshield Wiper**

- a. High speed
- b. Intermittent
- c. Off

**Position (13) - Activates the Windshield Washer**

- a. Washer on.
- b. Washer off.

**Position (14) - Activates the emergency flashing light**

- a. Emergency light on.
- b. Emergency light off.

**Position (15) - Panel light**

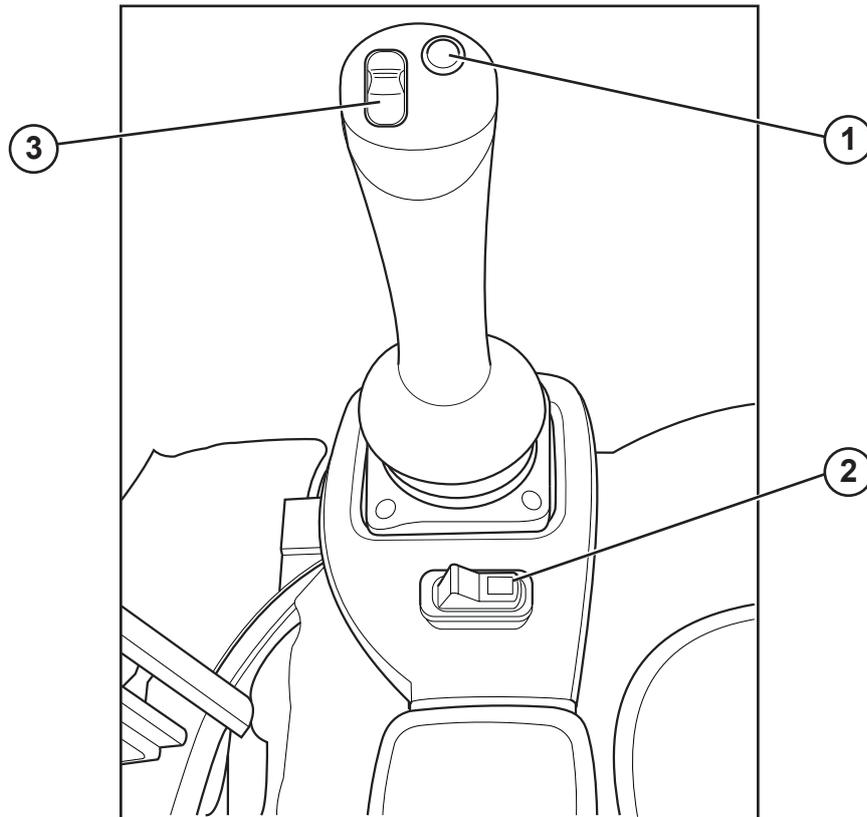
**ELECTRONIC TRACTION CONTROL**

Figure 6

1. Engages last programmed speed
2. Activates maneuvering option:  
maneuver/manual option
3. Vehicle speed: forward to increase speed,  
backward to reduce speed

**OTHER CABIN CONTROLS****Elevator Slew Pedals**

- a. Turns elevator to the left.
- b. Turns elevator to the right.

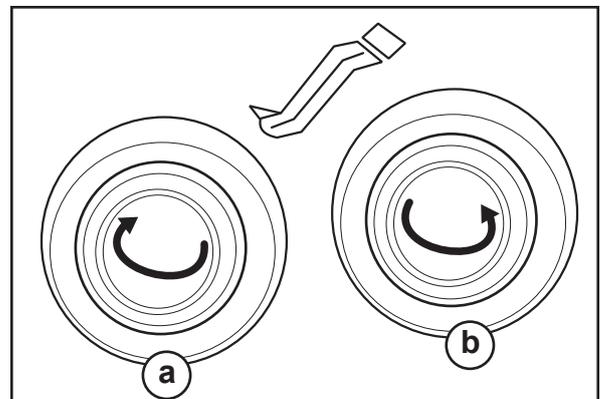


Figure 7

**Door handle (1)**

Left side door handle.

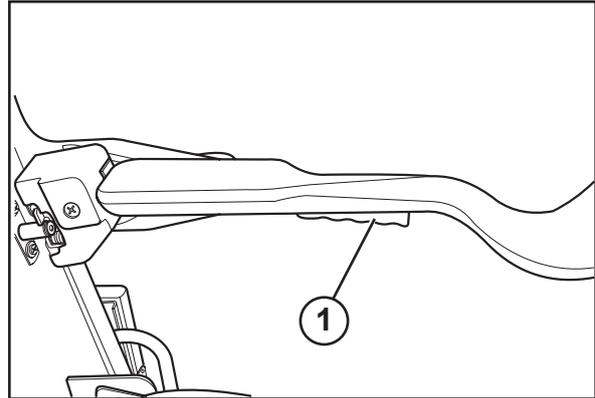


Figure 8

**Glove compartment**

Compartment used to keep objects. It is refrigerated.

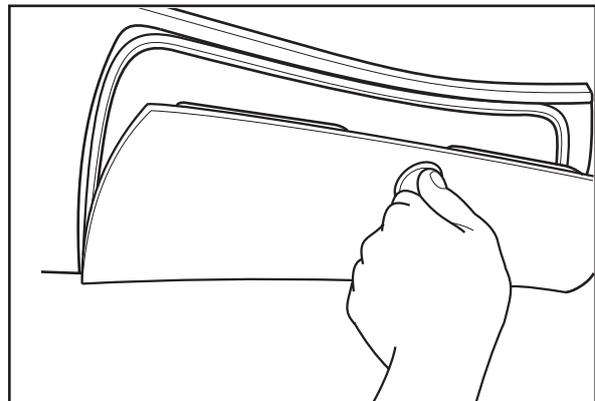


Figure 9

**Ashtray**

Compartment used to place ash.

**NOTE:** It is not recommended smoking inside the operator's cab.

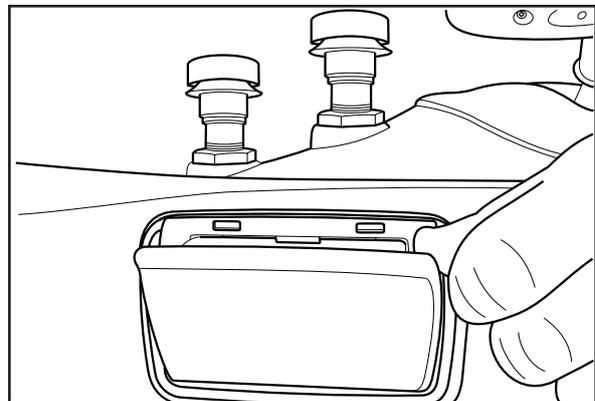


Figure 10

**Lever (1)**

Lever used to horizontal adjust the right side console. Pull to operate.

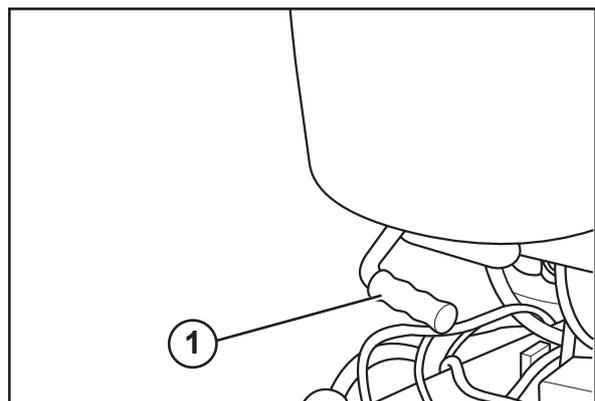


Figure 11

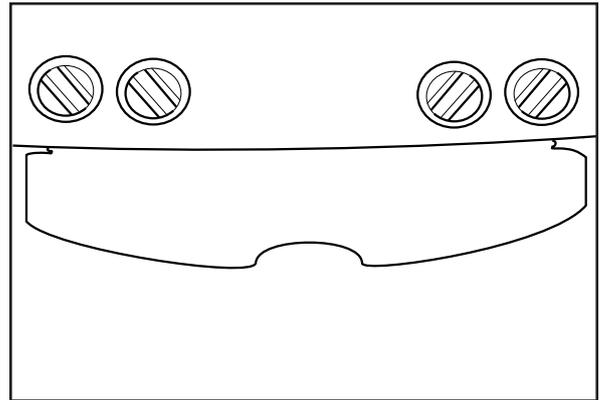
**Sun-Visor**

Figure 12

**Roof lamp 3 position**

- a. Turned off
- b. Lights with the door opened
- c. Interior light on

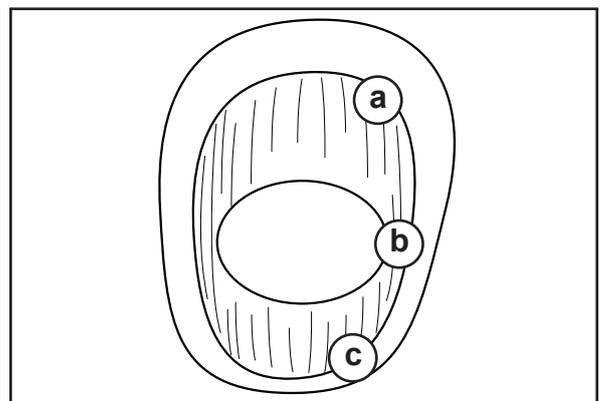


Figure 13

**Brake pedals**

Pedals available only in the machine A8000. The right pedal brakes the right wheel; the left pedal brakes the left wheel.

**NOTE:** The brake pedal Interlock should be disengaged.

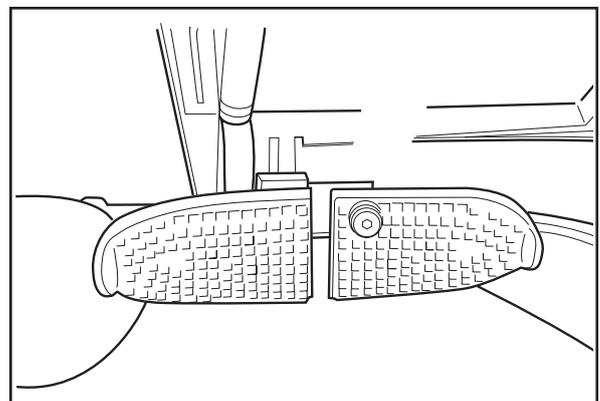


Figure 14

**Brake pedal lock**

Pedals available only in the 8000 machine. When this lock is in the interlock position of the pedals, it enables to brake both wheels at the same time.

The right pedal brakes the right wheel motor, the left pedal brakes the left wheel motor.

**NOTE:** If the machine is in travel mode the brake pedals should be interlocked. If not, braking can cause instability of the harvester.

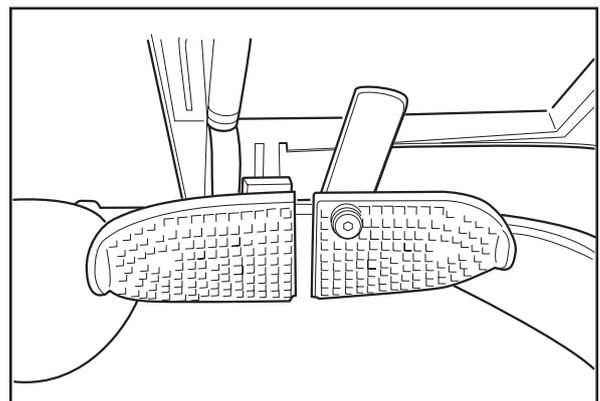


Figure 15

## RIGHT SIDE CONSOLE LOCATED IN RIGHT HAND REAR CAB COLUMN

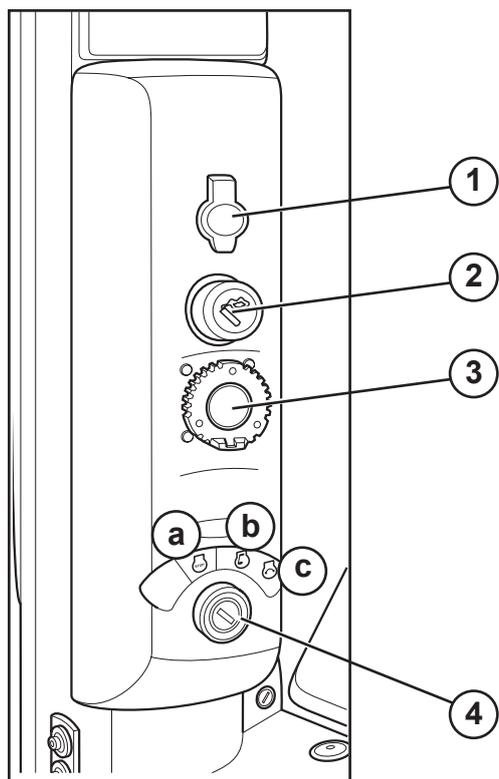


Figure 16

1. Outlet 12V, 120 W and 10 A
2. Cigarette lighter
3. Diagnostics outlet
4. Ignition key
  - a. Off
  - b. Run position
  - c. Start position

**NOTE:** The starter key has a lock system that prevents rotating the key after it has been taken to the start position (C). In case the harvester does not start in the first attempt, return the key to the turned off position (A), wait about 30 seconds and try again.

**IMPORTANT**

- The red button in the operator's console, next to the multi-function lever, is the button that when pressed, activates the emergency stop. This button will turn off the engine and all the functions of the machine and only should be used in extreme cases of urgency. To reset this button, lift the lock ring (directly below the red button) and at the same time pull the red button upwards. Then, turn off the ignition key, If the operator attempts to start the engine with the red button in the activated position, a message will appear on the display. It will be necessary to turn the key off, release the button and restart the engine.
- The yellow button, when pressed, shuts down the harvest functions: Topper, Side Trim, Harvesting System, Primary Extractor, Secondary Extractor and Elevator. When activated, will stop or prevent all these functions operating. To release this button, lift the lock ring (directly below the yellow button) and at the same time pull the yellow button upwards.
- Elevator slew controls. Caution regarding the elevator pedals, be sure that your left foot is not resting on the controls that are in the floor. The controls are very sensitive, only one touch can cause unintentional and dangerous movement of the elevator.
- Be sure that the Basecutter is not too low before moving the harvester. You can lift the Basecutter by raising the front of the machine through the control C1 in the multi-function lever (C2 is the control to go down).
- The transmission control of the machine is very sensitive. Move the joystick very carefully when you operate the machine for the first time.
- The transmission is controlled by joystick, which is activated by the operator's left hand. The operator only will be able to move the machine when he is in the seat and if the parking brake is not activated. The application or release of the parking brake can be done through the button (7) (page 30) of the right side console. Press once to release and it press again to apply. The time delay for the parking brake to be applied is about 2 seconds. The status of the parking brake is shown on the display.

The cane harvester illustration with a “P”, indicates that the parking brake is applied (Figure 15).

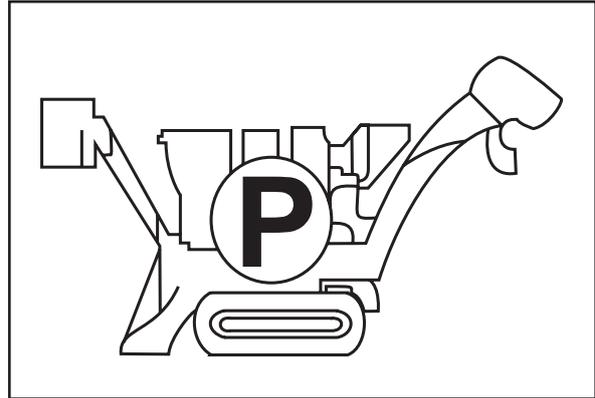


Figure 17

The same illustration, however with a “M”, or with no letter, indicates that the harvester is enabled to be driven in the manual mode, being thus controlled by joystick, located in the left side of the 's seat. The parking brake is not activated. In this case, therefore, the machine is ready to move (Figures 18 and 19).

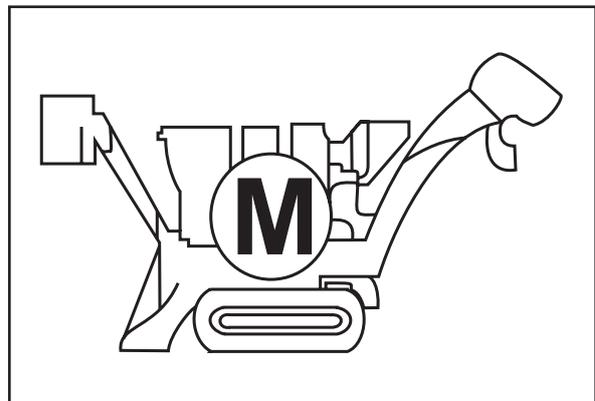


Figure 18

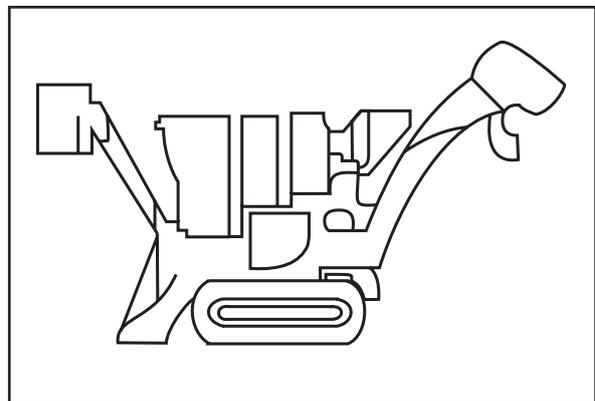


Figure 19

### Manoeuvre Mode

In the Manoeuvre mode the operator uses the joystick to control both direction and speed of the harvester. In this mode, it is not possible to enable the Cruiser Control (Automatic mode), that is, the speed control buttons will not work. Must be used for loading the harvester for shipment or for maneuvering in confined spaces, for instance in sheds.

### Manual Harvest Mode

In the harvest Manual mode the operator uses the joystick to control both direction and speed of the harvester. In this mode, it is possible to enable the Cruise Control (Automatic mode), so making the harvest operation easier.

### Automatic Harvest Mode

In the Automatic Harvest Mode the speed of the Harvester is established by a speed preset made by the operator. The operator moves joystick forward to reach the desired speed and presses the button to speed up or the button Confirm button, automatically, reach the last preset speed.

In the Automatic Harvest Mode the operator can activate the buttons to increase speed, or to slow down as the need arises and then activate the Confirm button, storing the last adjustment.

To exit the Automatic Harvest Mode the operator activates the switch that enables the joystick functions - this makes it return to the Manoeuvre Mode - or move the joystick in the opposite direction to the action - which makes it to return to the Manual Harvest Mode.

In both cases the joystick will take over control. The control signal will then change according to the new position of the joystick.

For shipment, the harvester must not be in the Cruiser mode.

Sequence of icons that appear on the Controller's screen:

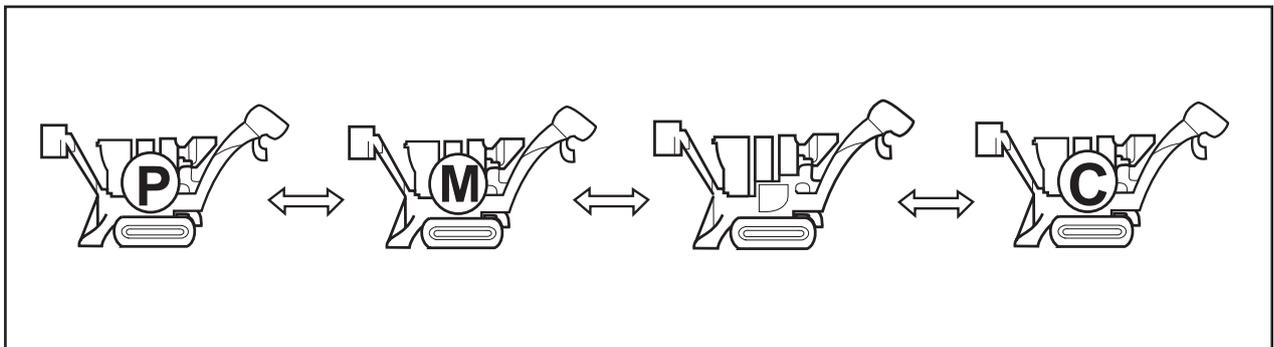


Figure 20

The Harvest Control (Cruise) only works in the forward direction of the machine.

### Transmission safety system

The Transmission system has sensors that when activated, will return the pump to the neutral position or will not allow the pump to leave this neutral position. This system includes the parking brake key release and the presence sensor on the operator's seat.

COMPONENTS LOCATIONS, CONNECTORS AND HARNESSES

Harness location

Lower cab: right-hand side

Main cab harness that connects to 3 SCM modules, being:

- left n° 26
- intermediate n° 27
- right n° 28

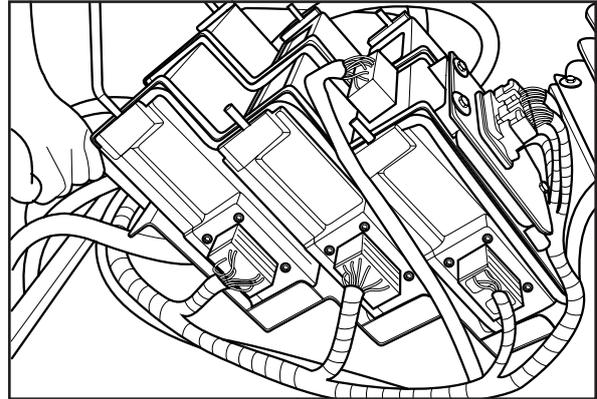


Figure 21

Location and identification of the fuses and relays

The compartment is located of the right side, behind the operator's seat. To access the compartment, remove the cover.

**NOTE:** To access the components in the compartment, rotate both adjustment buttons of the top buttons.

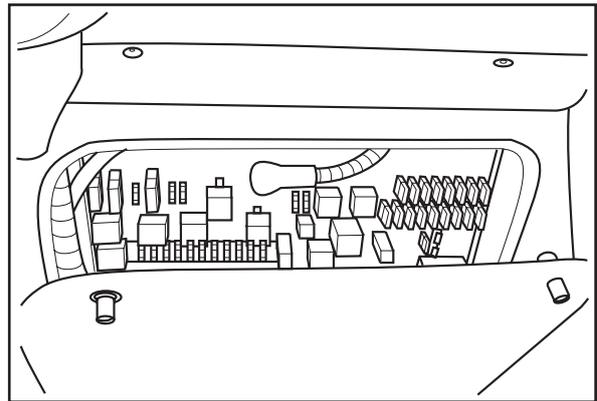


Figure 22

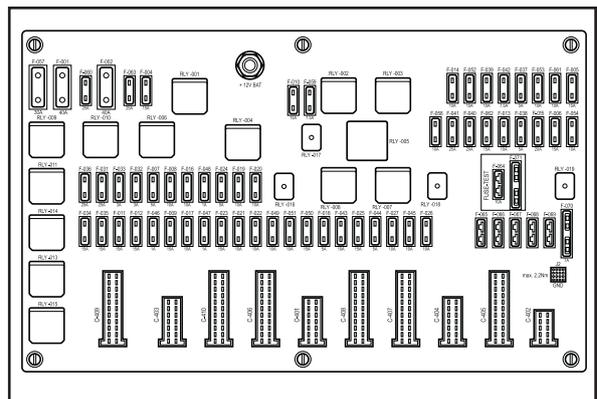


Figure 23

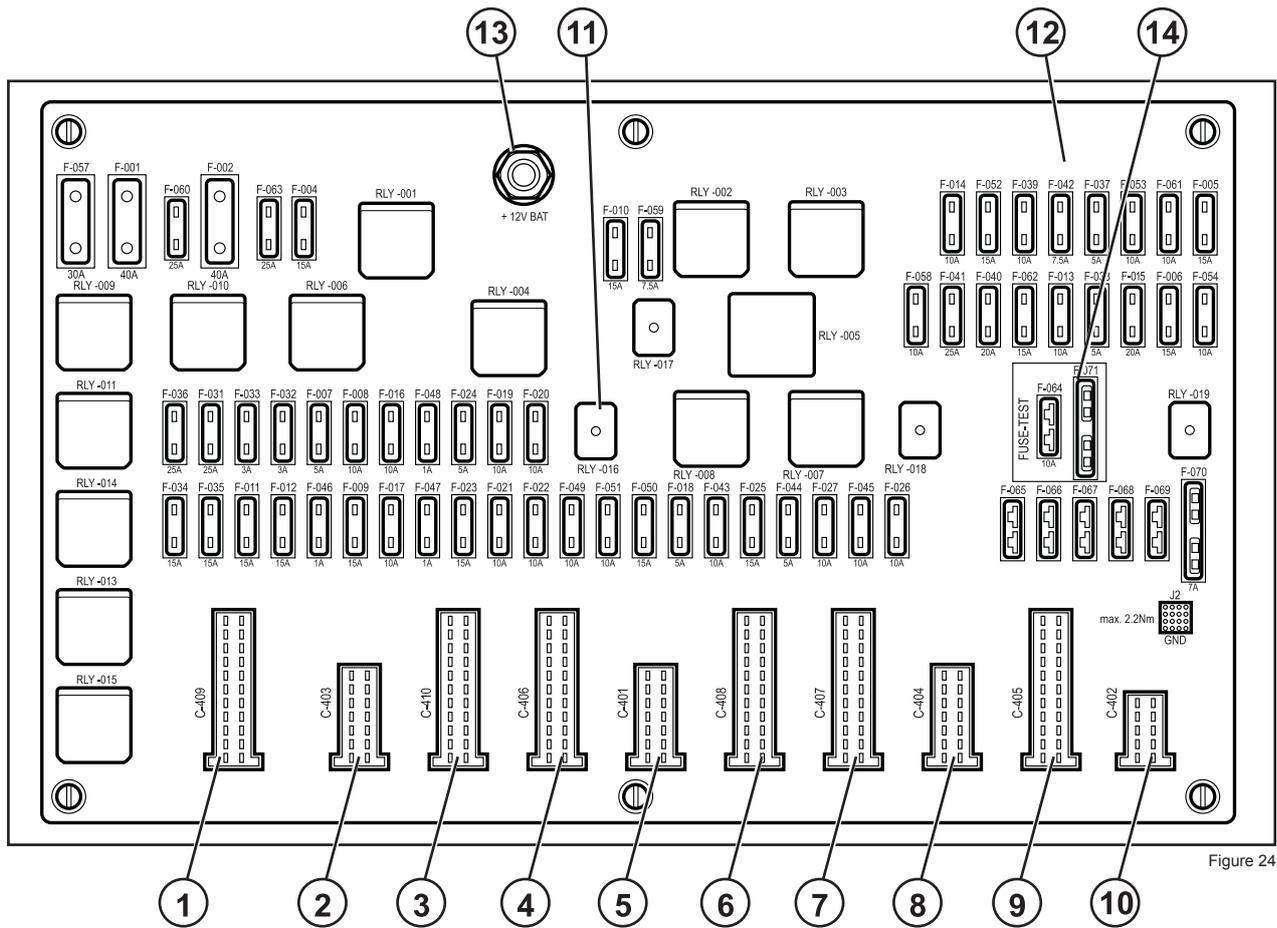


Figure 24

- |                           |                               |                        |
|---------------------------|-------------------------------|------------------------|
| 1. Cab connector C-409    | 6. Cab connector C-408        | 11. Relays 001 to 019  |
| 2. Front connector C-403  | 7. Cab connector C-407        | 12. Fuses F001 to F070 |
| 3. Cab connector C-410    | 8. Front connector C-404      | 13. 12V Battery Supply |
| 4. Engine connector C-406 | 9. Engine connector C-405     | 14. Test point         |
| 5. Connector GPS C-401    | 10. Auxiliary Connector C-402 |                        |

### Fuse Identification

**NOTE:** When replacing fuses, they should be replaced by another of the same amperage, never of higher amperage.

Fuses location	Amperage	Fuses identification
F-001	40A	Work lamps power relay supply
F-002	40A	Work lamps power relay supply
F-003	—	
F-004	15A	Standby
F-005	15A	PKD Roller
F-006	15A	Relay coil supply 12 / 24V
F-007	5A	Brake light
F-008	10A	Pilot valve 1 / pilot 2 / Topper articulation / Transporter
F-009	15A	Topper direction LH / RH

it continues...

Fuses location	Amperage	Fuses identification
F-010	15A	Transport tail Light (optional)
F-011	15A	Transport front lights (optional)
F-012	15A	Transport front lights (optional)
F-013	10A	Cigar lighter
F-014	10A	Outlet 12V
F-015	20A	Windshield Washer
F-016	10A	Basecutter Up/Down / Topper Up/Down
F-017	10A	Cropdivider right/left (up/down)
F-018	5A	Reverse alarm / Horn / Safety start switch
F-019	10A	Ignition switch supply for radio/CD and air conditioning module
F-020	10A	Ignition switch supply of the elevator yield monitor (optional)
F-021	10A	Ignition switch supply of the windscreen wiper motor
F-022	10A	Ignition switch supply of the GPS
F-023	15A	Operator seat engine activation
F-024	5A	Ignition switch supply of the RH console switches
F-025	15A	Forward/reverse rotation of right/left sidetrim
F-026	10A	Extend/retract right/left sidetrim
F-027	10A	Cropdivider tilt forward/back
F-028	–	
F-029	–	
F-030	–	
F-031	25A	Tail lights
F-032	3A	Front and rear lights (optional)
F-033	3A	Front and rear lights (optional)
F-034	15A	Headlights (outer)
F-035	15A	Headlights (inner)
F-036	25A	Basecutter and topper headlights (optional)
F-037	5A	Ignition key
F-038	5A	SCM 1 module supply
F-039	10A	Giroflex / cab roof light
F-040	20A	Radio/CD and two way radio
F-041	25A	Working lights
F-042	7.5A	Display / diagnosis connector / console RH
F-043	10A	Basecutter / chopper harvest neutral and reverse
F-044	5A	Standby
F-045	10A	Basecutter tilt forward/back
F-046	3A	SCM 1 module supply
F-047	3A	Ignition switch supply of the SCM 2 module
F-048	3A	Ignition switch supply of the SCM 3 module
F-049	10A	Billet length valve PWM / Primary extractor / Primary extractor PWM
F-050	15A	Elevator up/down bin Flap/ Secondary extractor / Pilot block / Elevator Chain

it continues...

<b>Fuses location</b>	<b>Amperage</b>	<b>Fuses identification</b>
F-051	15A	Elevator slew right/left Lock / Parking brake
F-052	15A	Turn signal light right/left
F-053	10A	Secondary extractor hood slew right/left
F-054	10A	Primary extractor hood slew right/left
F-055	–	
F-056	–	
F-057	30A	Relays supply for the 1st 2nd 3rd blowers' air speed
F-058	10A	Relays supply to the traction module (conductor)
F-059	7.5A	Air conditioning compressor coil supply
F-060	25A	Horn relay supply
F-061	10A	Rotary brush actuator
F-062	15A	Standby
F-063	25A	Standby
F-064	5A	Fuses test
F-065	Empty	Spare
F-066	Empty	Spare
F-067	Empty	Spare
F-068	Empty	Spare
F-069	Empty	Spare
F-070	Empty	Spare
F-071	Empty	Fuse Test
F-100	40A	IVECO Module

**Relay Identification**

<b>Relay</b>	<b>Description</b>
RLY-001	SCM 1 module safety
RLY-002	SCM 2 module safety
RLY-003	SCM 3 module safety / control traction module
RLY-004	Master relay
RLY-005	Display timer
RLY-006	SCM 1 module supply
RLY-007	SCM 2 module supply
RLY-008	SCM 3 module supply
RLY-009	Work lamps activation
RLY-010	Work lamps activation
RLY-011	Horn
RLY-012	–
RLY-013	2nd fan speed
RLY-014	3rd fan speed
RLY-015	1st fan speed
RLY-016	Tail lights (Optional)
RLY-017	Air conditioning compressor
RLY-018	Control traction module activation
RLY-019	Starting system

## AFS 200 MONITOR

### Introduction

AFS 200 should be used as an operator's interface:

- To the AFS's Software 200
- For precise applications in the harvest
- For specific applications in the vehicle A8000
- Virtual terminal for vehicles, implements and systems in conformity with the ISO 11783 rule.

### Architecture made by layers

AFS 200 uses an architecture applied in layers to simplify substantially the learning of any operator. Each layer inherits the capacities of the previous layer. This creates resources, tools and screens standardized for all the applications.

### Frame

The resources, tools and partitioned screens means less time for learning and more time to use programs in AFS 200.

The partitioned resources should be the operator's preferences, descriptions of the implement, types of harvests, producer-tillage-field task structure, etc.

Once is introduced, this information shares the data that is available in any vehicle and in any software application in the display.

Secondary keyboards and windows with options standardized are shared tool examples.

The same tools are used to create lists, select options and introduce names or values. Once stored, they are accessed and used in the same way for any application in the display.

The common icons and the main screen organization simplify the navigation in all software applications in the display.

### Vehicle

More and more, the AFS 200 monitor is being considered a powerful tool to interface with the vehicle, be it a tractor, a harvester, sprayer or planter. Nowadays, in some harvesters, the operator not barely manages, as controls the operations of harvesting straightly from the AFS 200. In some vehicles the user controls the automated steering with the AFS 200.

The vehicle uses the AFS 200 to communicate the operator its unique needs of control and managing, at the same time that provides a greater control of the productivity and efficiency.

### ISO 11783

Created by the International Organization for Standardization (ISO), the 11783 standard is a standard for electronic agricultural equipment.

The standard addresses every aspect of how to control and communicate with agricultural vehicles, monitors, implements, software, data storage, cables and even connectors that should be standardized and simplified to increase the utilization options of equipments for the farmers.

When used as a Virtual Keyboard in an implement that meets the ISO 11783 standard, the AFS 200 monitor receives the control functions and information coming from the implement. (The implement unloads its windows on the display). Those functions and windows are the responsibility of the implement manufacturer.

Read the operator's manual of the manufacturer of the implement before use. Obey all safety messages in the manual and decals on the implement when using the machine.

## MANUAL INCLUSION

The Case farming software available for AFS 200 provides supplemental advantage for its architecture by layers. There are vehicle applications, farming applications (for example, harvesting, planting, etc.) and applications with additional characteristics (for example, precision farming, laptop, etc.) which can be shown in your display.

These changes are reflected in the operator manual.

The basic manual for all the applications is the Display Manual. It is then available as an Applications Manual for any specific vehicle or software for farming functions.

The purpose of this Display Manual is :

- Explain the standard tools used in all AFS 200 Applications,
- Explain the software navigation for all the applications in the display,
- Introduce the screens for the common Tools used in each one of the applications in the display,
- Introduce the precision farming components used in all GPS Applications,
- Introduce the Common data management screens,
- Introduce the Common Diagnostics screens.

## DISPLAY

### USB external memory

A USB external memory in the industry standard to record and to recover information during the farming operations.

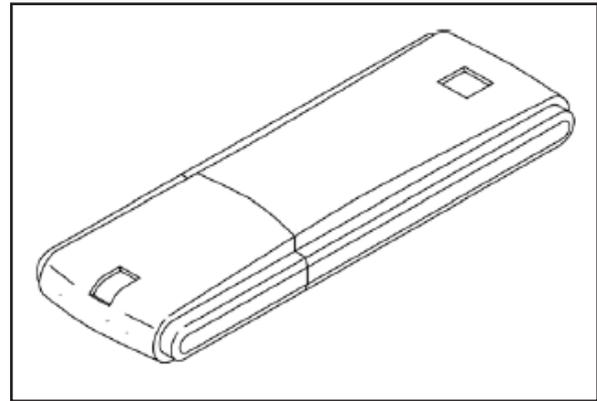


Figure 25

The USB access is located below the monitor.

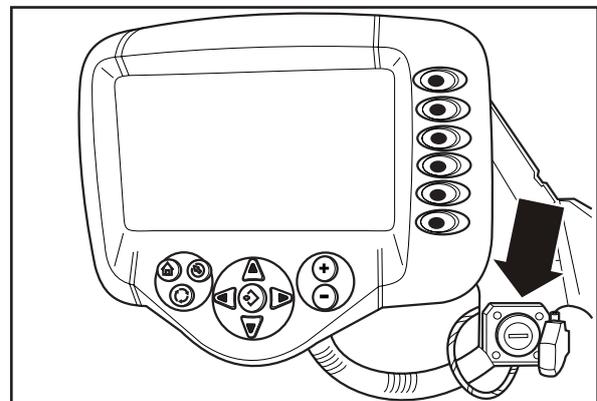


Figure 26

### Cautions with the screen

The screen area of the display should only be cleaned with a soft nonabrasive cloth and window cleaner. Do not use solvent cleaning products.



Figure 27

### Turn the Display on and off

When the ignition key is turned on, AFS 200 introduces its first screen and soon after a long beep to indicate that the display is ready for operation. If the display does not turn on, check the cable at the back of the display and then, check the fuses in the cab that power the display, or contact your CASE IH Dealer and ask for assistance. This problem should be resolved for the display to work properly.

When the ignition switch is turned off, there is a 5 second-delay before the screen goes blank. During these 5 seconds, AFS 200 uses the deactivation chain to record the current information and to close all the memory folders on the display or in USB external memory.

The screen introduces an icon “DO NOT REMOVE the external memory” until the display turns off completely. The data will be lost if the external memory is removed before all the folders are properly closed. The AFS 200 sounds three short beeps when the process is complete. The absence of these short beeps can indicate that the deactivation chain has not been completed. When this occurs, the information in USB external memory can be corrupt or lost.

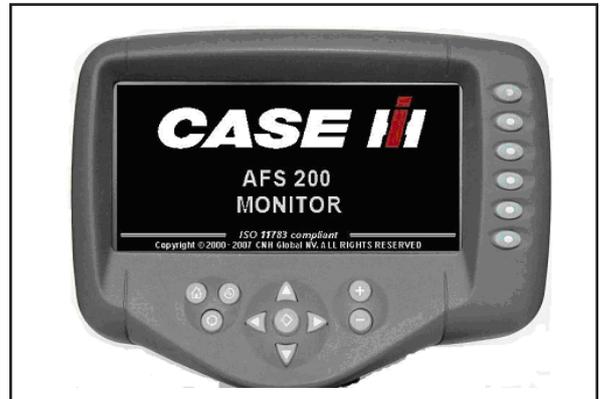


Figure 28



Figure 29

## INPUT AND NAVIGATION TOOLS

The AFS 200 has a rapid access keyboard (1) for the screen navigation bar (5), a navigation keyboard (3), a quick access keyboard (4), a keyboard for increments (2) and a screen with color display. A speaker and a connection for a video is installed on the rear of the screen.

All AFS 200 Keys are illuminated to facilitate the night operation. The illuminated keys also indicate that the display is powered.

### Soft keyboard (1, 5)

The six soft keys (1) provide instantaneous access to the screens that appear on the navigation bar (5). Navigation bar (5) is the vertical line for the screen icons, located immediately to the left of the soft keys (1). The farming applications in AFS 200 determine which icons appear on any screen.

If on any screen there is a text or an icon with a graph for a soft key, the key has a function. If no icon is present, the key does not have any function.

Pressing a soft key (1), the screen described by the icon to its left (5) is immediately displayed. The icon does not need to be selected for the soft key to activate.

### Navigation keys (2, 3)

The navigation keyboard (3) contains arrows and the *Enter* key.

### Keys for quick access (4)

This keyboard contains three keys for quick access to the main screen, for the following software application or to exit from the screen or action in which it is.

### Increments keys (2)

The increments keyboard (2) contains the keys *More* (+) and *Less* (-) to increase or decrease a value in a certain field.

**NOTE:** These keys can't be used for this incremental function in each AFS 200 available application.

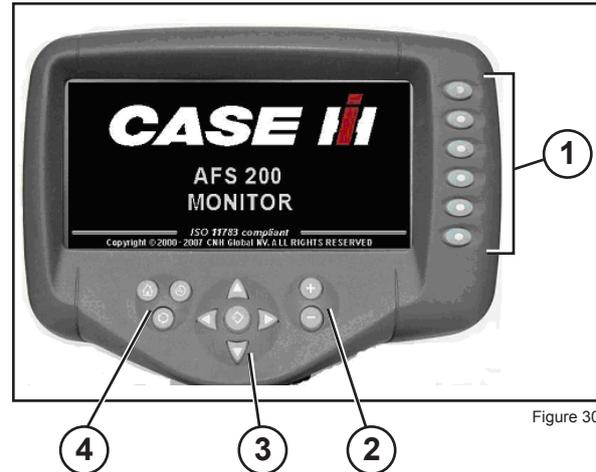


Figure 30

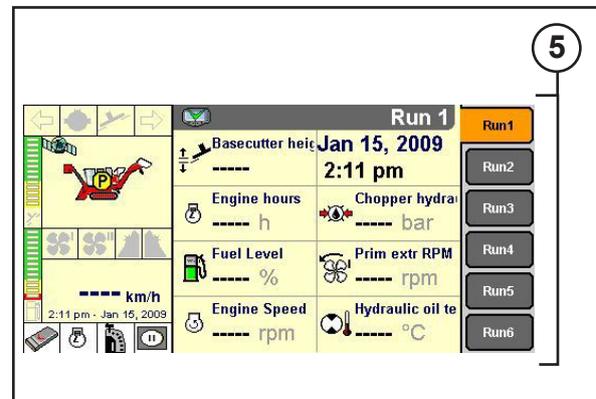


Figure 31

## ELECTRONIC PANEL USE

### 1 - Screens for the Toolbox

This chapter introduces the basic screens in the Toolbox that are common to all the applications in AFS200. The information that enters on these screens is a shared base for all the applications in the display.

The techniques here used to check IntelliViewII, operators, presentation of the working screen and the name of the vehicle can be used in any other application.

#### DISPLAY SETUP

Use the calibrating screen of the display:

- To introduce the date and the current hour in the display
- To select the format of the hour
- To select the language
- To select the interface level of the operator
- To adjust the brightness for all the applications
- To select the type of current vehicle.

On main screen, use the arrows keys to highlight the icon *Toolbox*.

Click on the *Enter* key to access the screens of the *Toolbox*.

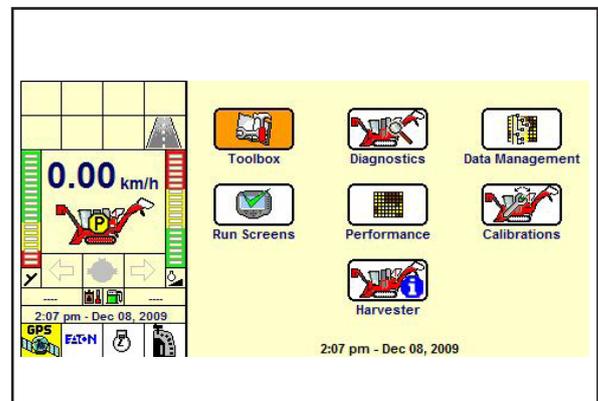


Figure 32

Click on the key regarding position *Disp (display)* to access the *Display Setup* screen.

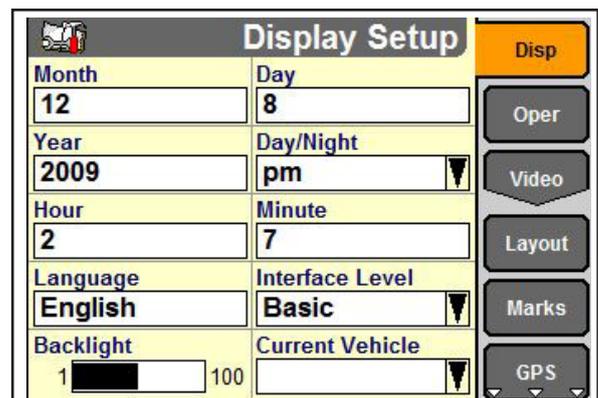


Figure 33

### Date (Month, Day, Year)

Use arrow key to highlight the *Month* field.

Click on the *Enter* key to select the field.

**NOTE:** The field, when selected, changes its color.

**NOTE:** The display should be set for the current date, once all the information is saved and recorded with the date and the hour.

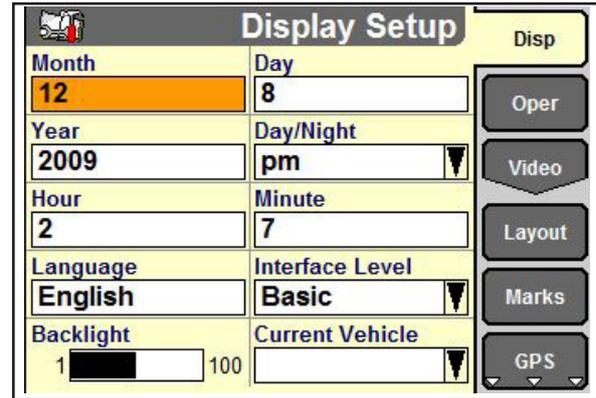


Figure 34

To change select the field and press *Enter*.

With the directional arrow, select desired number and press *Enter*.

When finished, click on *Enter*.

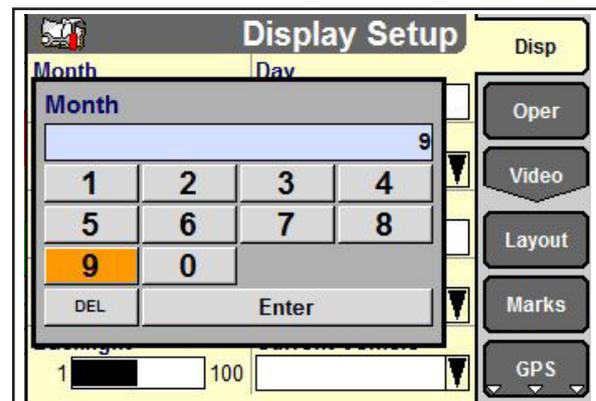


Figure 35

Use the same procedure to change the fields for the *Day* and *Year*, if necessary:

1. Highlight the field with the arrows keys
2. Click on the *Enter* key to select the field
3. Use the virtual keyboard, which is displayed to place the new text
4. Click on the *Enter* key to save the change.

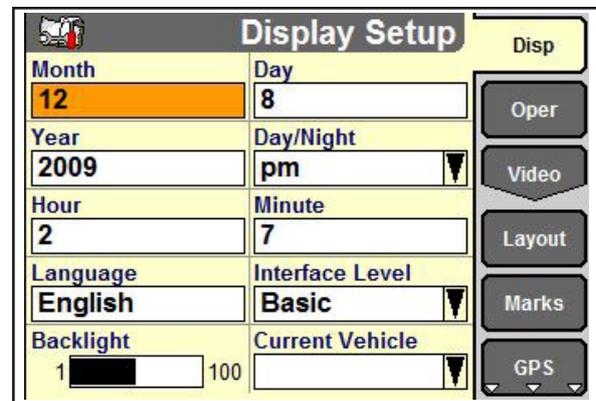


Figure 36

### Hours

Highlight the *Hours* field with arrows keys.

Click on the *Enter* key to select the field.

**NOTE:** The field, when selected, changes its color.

**NOTE:** The display should show the current hour, once all the information is recorded with the date and the hour.

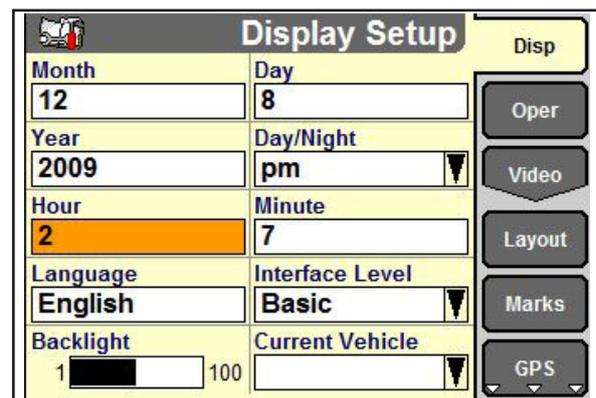


Figure 37

To change select the field and press *Enter*.

With the directional arrow, select desired number and press *Enter*.

When finished, click in *Enter*.

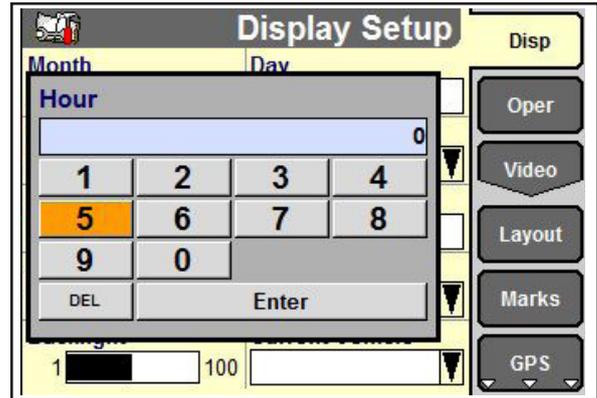


Figure 38

### Day/Night

Highlight the *Day/Night* field with the arrows keys.

Click on the *Enter* key to access the secondary window with options.

Use the arrows keys to highlight *AM* or *PM*.

Click on the *Enter* key to save the change.

Click *Esc* to exit the window without changing the value.

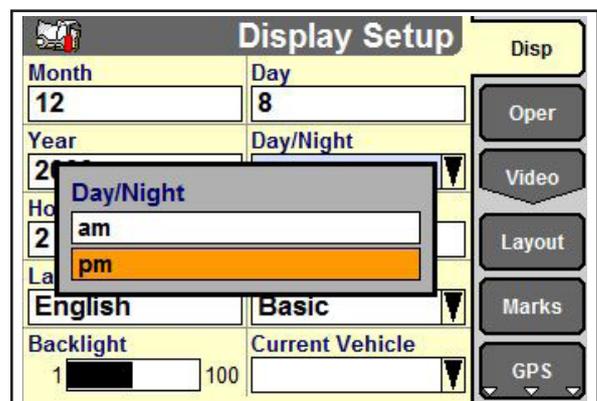


Figure 39

### Language

A language change on display adjustment screen makes the language change in all AFS200's Applications. If the selected language is not available in a software application, this will be used, by default, in an other language.

Highlight the *Language* field with the arrows keys.

Click on the *Enter* key to access the secondary window options.

Highlight the desired language.

Click on the *Enter* key to save the change.

Click in *Esc* to exit the secondary window without changing the language.

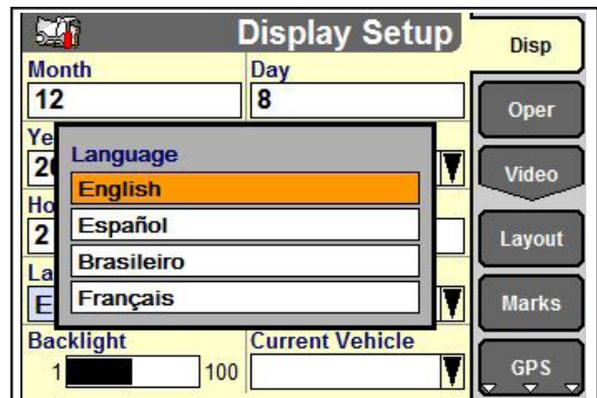


Figure 40

If a new language is selected, a message will appear to restart the process so that the new language will be memorized in the display.

Click on the *Enter* key with the button *Yes* highlighted to load the new language into the memory of the display.

Click on the *Enter* key with the button *No* highlighted to cancel the operation.

The new language remains active until it is changed.

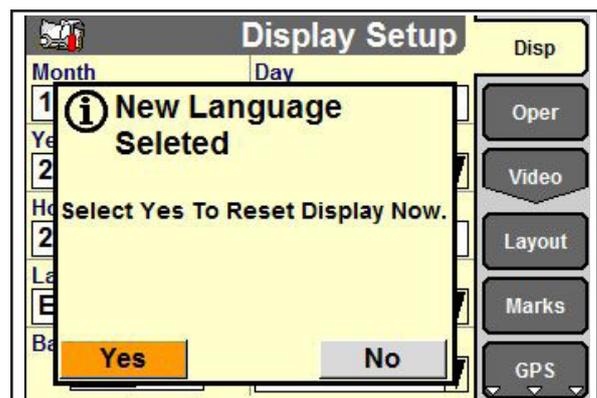


Figure 41

**Operator interface level**

The interface level window determines the precision farming structure portion that is visible to the operator.

The designation *Basic Mode* is used in this manual to describe the operation of the display when it is selected *Basic* in the interface level window. The designation *Advanced Mode* is used in this manual to describe the operation of the display when it is selected *Advanced* in the interface level window.

In the *Basic Mode*, the windows *Field*, *Task* and *Crop Type* and *Tag* for all the vehicles are the only windows available to the operator. The windows *Field*, *Task* and *Crop Type* should be completed with the production data. The *Label* window is optional.

The names *Field* and *Task* are generated by the software in the format shown. These names can be accepted by the operator or changed if needed.

*Field*, *Task*, *Crop Type* and *Tag*, together with any production data for all the vehicles, are only recorded in the memory of the display.

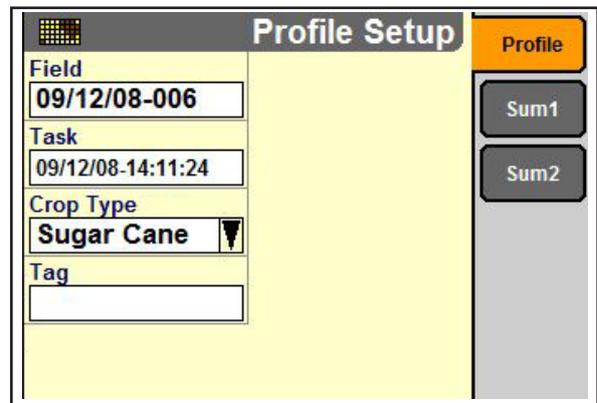


Figure 42

In the *Advanced Mode*, all the precision farming structure is visible to the operator. The *Grower* windows, *Farm*, *Field*, *Task* and *Crop Type* should be entered with the data of the production for all the vehicles. The *Tag* window is optional.

The *Task* name is generated by the software in the format shown. These names can be accepted by the operator or changed if needed.

*Field*, *Task*, *Crop Type* and *Tag*, together with any production data for all the vehicles, are recorded in the memory of the display.

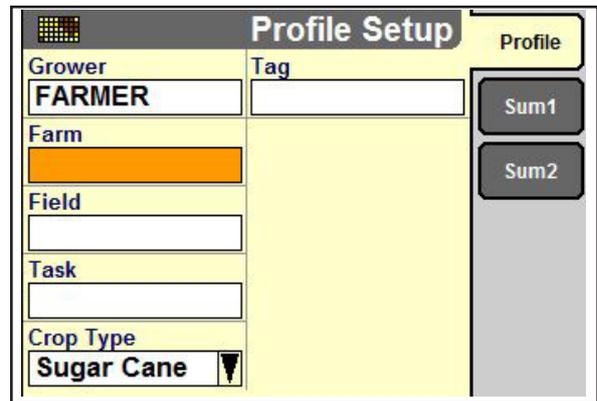


Figure 43

Highlight the *Interface Level* field with the arrows keys to select a mode.

Click on the *Enter* key to display the secondary optional window.

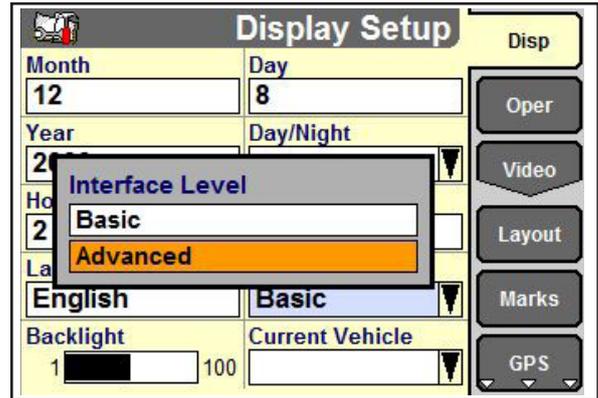


Figure 44

Use the arrows keys to highlight the desired level.

Click on the *Enter* key to save the change.

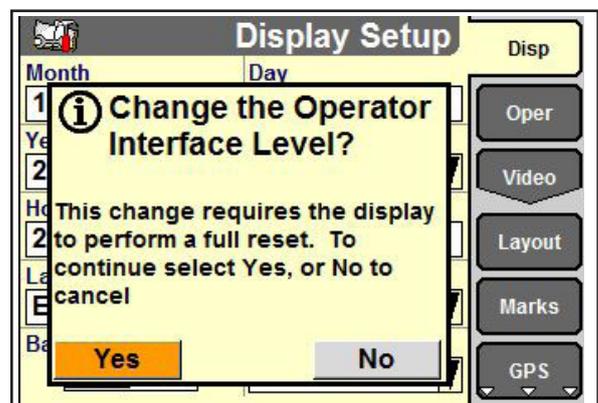


Figure 45

### Backlight (brightness)

Highlight the brightness bars graph to change the intensity of the display.

**IMPORTANT:** Some vehicles support both settings, the day and night hour for the brightness of the display. Turn off the lights and proceed to the day adjustment. Turn off the lights and proceed to the night adjustment.

Click on the *Enter* key to access the bars graph window.

Use the keys *More* (+) or *Less* (-) to increase or decrease the brightness of the screen, in increments of 5%.

The brightness of the screen immediately reflects the new adjustment as it is made.

Click on the *Enter* key to save the change.

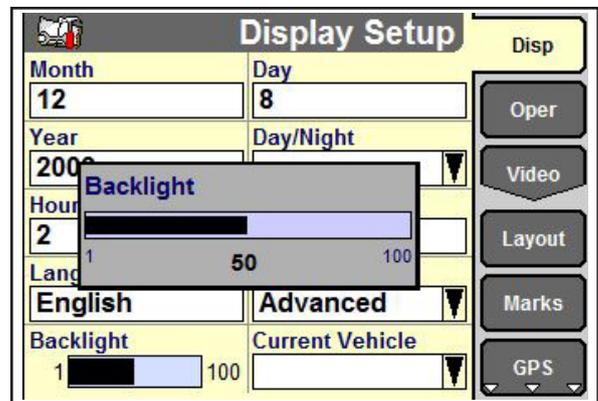


Figure 46

## OPERATOR SETUP

Use the calibrating screen for the display:

- To create a list for the operator of all the software applications in AFS200 or to select its name for the working route;
- To select preferences for each operator; any changes made in the windows while it is selected by the operator, these are automatically recorded in his name:
  - Units of measure
  - Display mode
  - Grid lines
  - Date format
  - Hour format
  - Decimal symbol
  - Display loud-speaker volume.

On main screen, use the arrows keys to select the icon *Toolbox*.

Click on the *Enter* key to access the screens for the Toolbox.

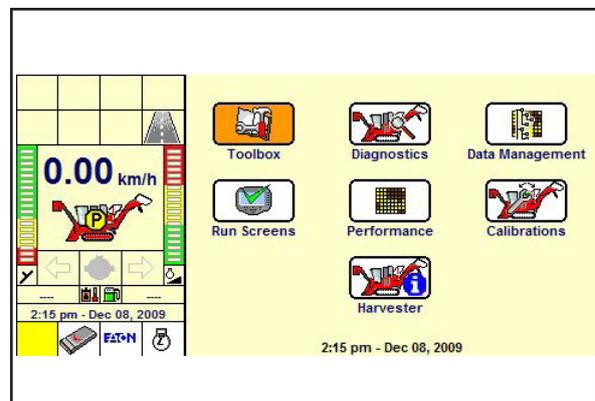


Figure 47

Click on the soft key *Oper* (*Operator*) in the navigation bar to display the *Operator Setup* screen.

Create or select an operator before changing the fields on this screen. An informative message will be displayed if a field is changed without it has been selected an operator.

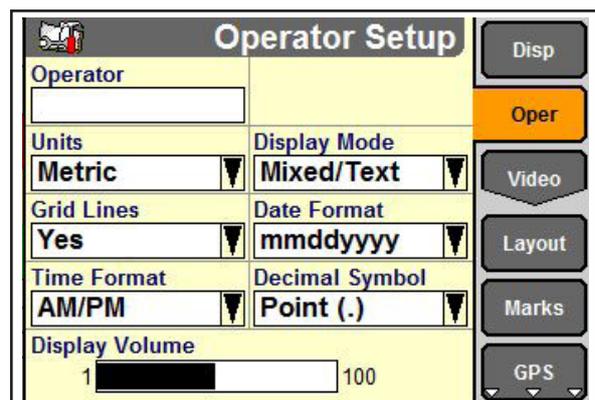


Figure 48

### Create an operator

It is only foreseen one ID (identification) for each operator to obtain reports based on the software. To share a common list of operators with multiple vehicles, create the list as being for one vehicle only and, then, transfer the list through the external memory to the other vehicles. This assures that the same internal ID for one operator is used on all vehicles.

There can be created a maximum of 20 operators.

Use the arrow key to the left to highlight *Operator's* field.

Click on the *Enter* key to display the secondary optional window.

If no operator is introduced, the only option is *New* to create a new operator.

Then, the options are *Select*, *Edit Name* or *New*.

Use *Select* to choose the name of the current list.

Use *Edit Name* to edit the spelling of an operator's name on the current list.

**NOTE:** Do not use *Edit Name* to replace the operator's name for another one: *Edit Name* does not change the ID attributed to obtain reports.

Use *New* to add a new name to the current list.

Use the arrows keys to highlight the desired option.

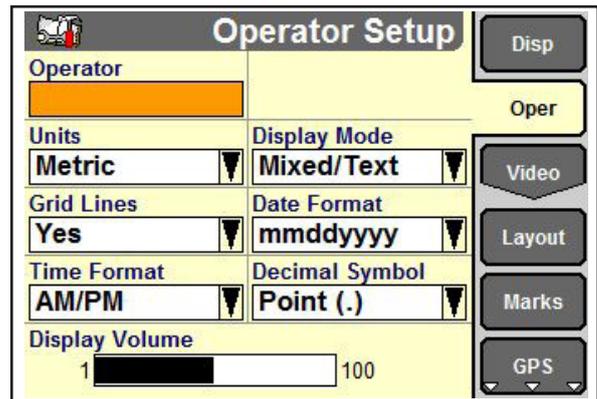


Figure 49

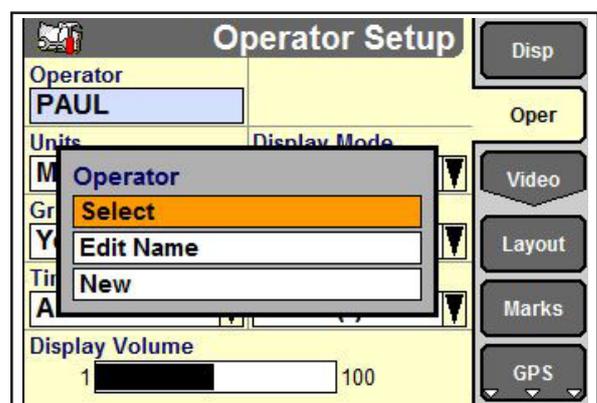


Figure 50

### Select an operator

If you highlight *Select*, click on the *Enter* key so that a current operators secondary window appears.

Use the keys *More (+)* or *Less (-)* to go up or to lower the page in the window.

Use the arrows keys to highlight your name in the list.

Click on the *Enter* key to confirm the change.

Any preferences in the display associated with operators' names take effect after the selection.

The screen is updated with the name of the new operator.

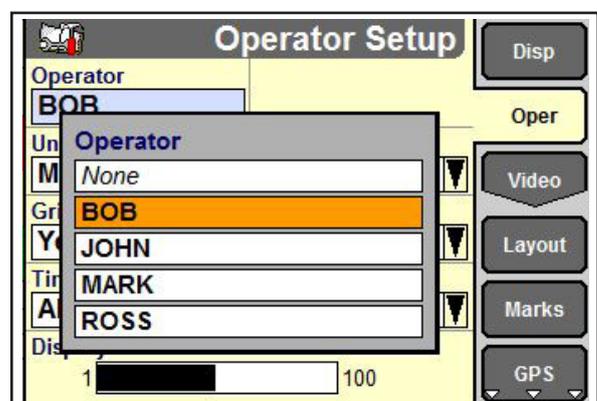


Figure 51

### Create / Edit an operator

Click on the *Enter* key to introduce the alphanumeric keyboard to *Edit Name* or *New*.

Use the arrows keys to highlight individual letters followed by the *Enter* key to create the name with the keyboard.

Highlight the *Enter* key in the keyboard and, then, click the *Enter* key to record the name.

**IMPORTANT:** Be consistent when adding operators' names, especially if AFS200 is used in different types of vehicles.

JOHN, John and john are three different operators in the software. Your capacity to measure productivity or to summarize results of production can be complicated if the tasks have been linked to an individual identified differently as JOHN, John and john.

Duplicate names are not allowed. An error appears if you save a name that already exists.

The message occurs when you click the *Enter* key to save the selection.

Click on the *Enter* key when recognizing the situation and erase the message.

Click on the *Esc* key to exit the keyboard without changing the original name or use the keyboard to modify or to select a variant to the name to continue.

### Operator preferences

The operator's preferences can be changed at any time by modifying the selections on the operator setup screen. The setup is immediately saved for the operator selected as the preferences are changed and the configurations are used in all resident applications in the display.

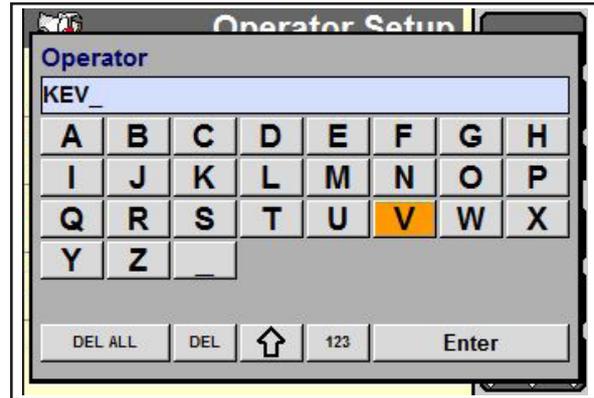


Figure 52

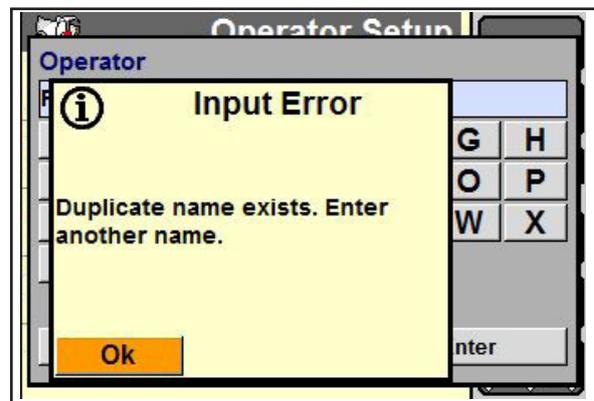


Figure 53

### Units of measure

Use the arrows keys to highlight the *Units* field and to select the units of preferred measure.

Click *Enter* to display the window for secondary options. The available selections are:

- Metric
- EUA (American)
- Imperial (United Kingdom)

Highlight your preference with the arrows keys.

Click the *Enter* key to save the change.

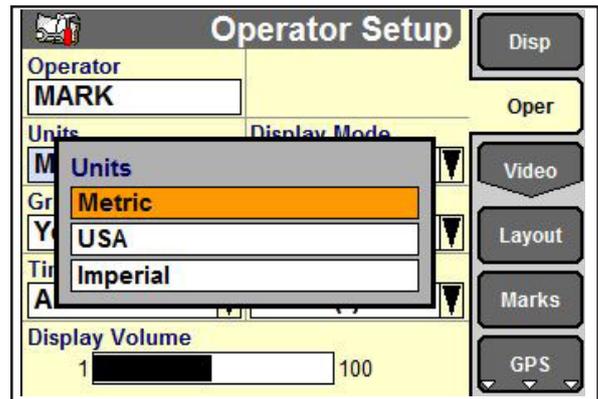


Figure 54

### Grid lines

The grid lines are the vertical and horizontal lines that separate the windows.

Highlight the *Grid Lines* field with the arrows keys.

Click *Enter* to display the secondary options window.

Highlight *No* or *Yes* to disable or enable the grid lines.

Click the *Enter* key to save the change.

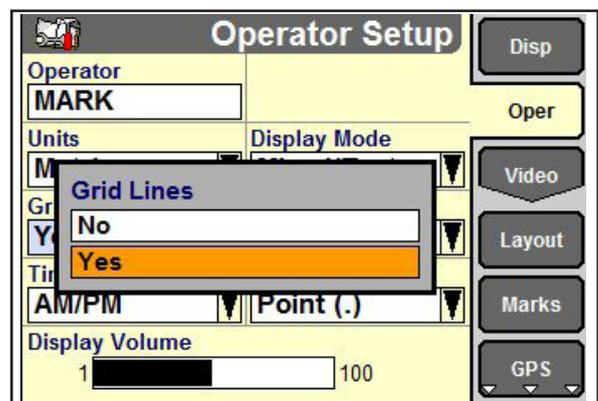


Figure 55

### Time format

Use the arrows keys to highlight the *Time Format* field and choose between *24 hours* or *AM/PM*.

Click *Enter* to display the secondary options window.

Highlight your preference with the arrows keys.

Click the *Enter* key to save the change.

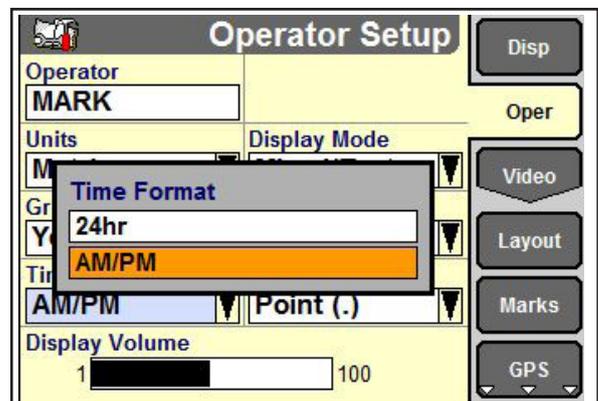


Figure 56

### Display volume

Use the arrows keys to highlight the *Display Volume* field.

Click the *Enter* key to access the Volume bar graph. This graph adjusts the volume for any warning or message beep that is activated.

Use the keys *More (+)* or *Less (-)* to increase or decrease the volume level in increments of 5%.

The loud-speaker will beep when each new adjustment is selected.

Click the *Enter* key to save the change.

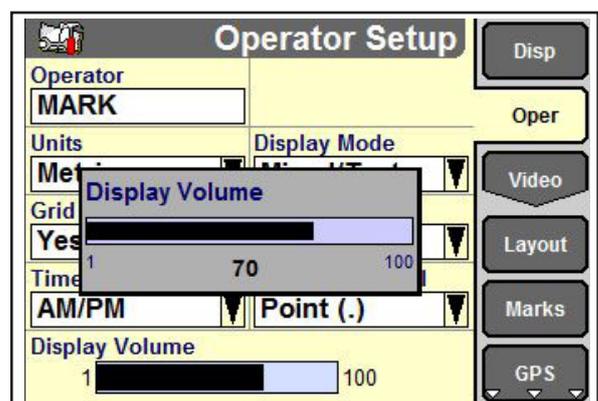


Figure 57

**Display mode**

Use the arrows keys to highlight the *Display Mode* field and to choose one of the four choices on the list: *Icon/Icon*, *Mixed/Icon*, *Mixed/Text* and *Text/Text*.

See the next illustrations to understand the differences between the four alternatives before making a choice.

**NOTE:** Each window does not change your appearance for all the four alternatives.

Click *Enter* to display the secondary options window.

Highlight your preference with the arrows keys.

Click the *Enter* key to save the change.

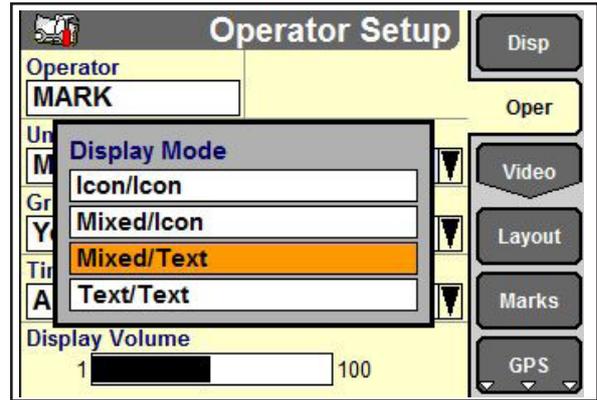


Figure 58

**Display modes**

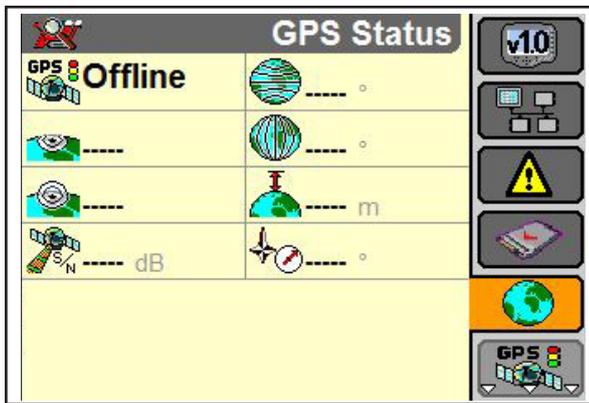


Figure 59

**Icon/Icon Mode**

In the *Icon/Icon* mode, the navigation bar and the windows only appear with icons - without any text labels.

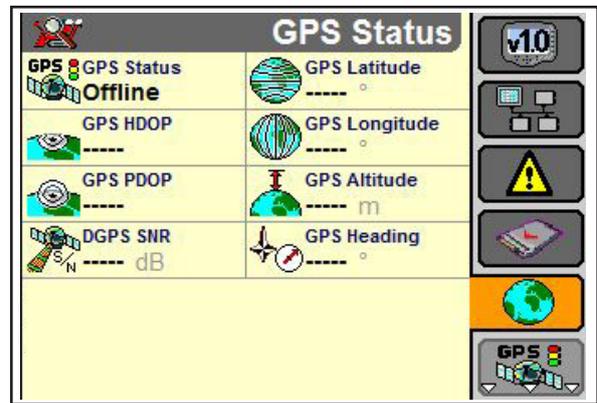


Figure 60

**Mixed/Icon Mode**

In the *Mixed/Icon* mode, the navigation bar appears with icons (without text labels) and the windows appear with icons and text labels.

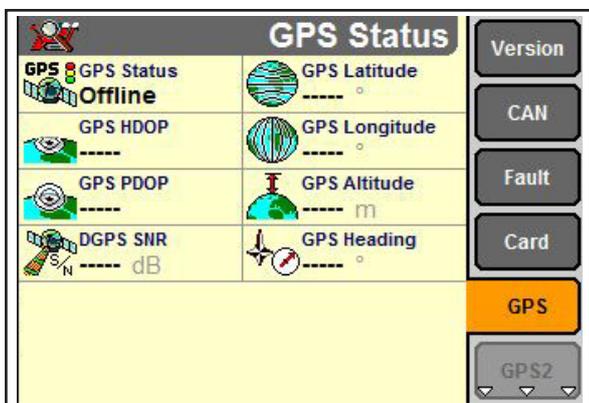


Figure 61

**Mixed/Text Mode**

In the *Mixed/Text* mode, the navigation bar appears with text labels (without icons) and the windows appear with text icons and labels.

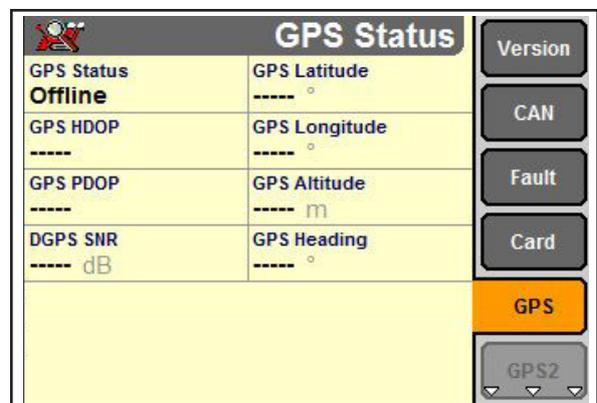


Figure 62

**Text/Text**

In the *Text/Text* mode, the navigation bar and the windows appear with text labels (without icons).

### Date format

Use the arrows keys to highlight the field for the desired *Date Format*.

Click *Enter* to display the secondary options window.

Highlight your preference with the arrows keys.

Click the *Enter* key to save the change.

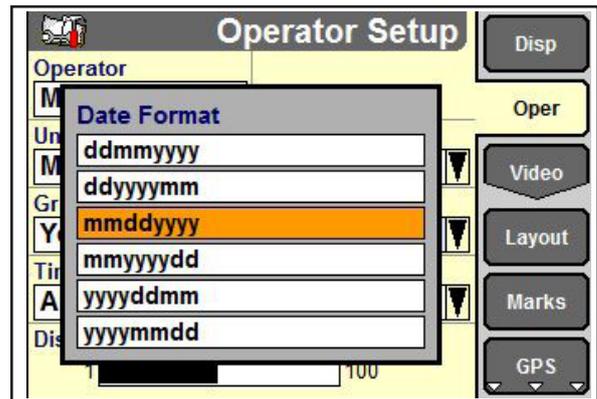


Figure 63

### Decimal symbol

Use the arrows keys to highlight the field for the desired *Decimal Symbol*. Use this field to select the symbol in the display so that a decimal value is necessary.

Click *Enter* to display the secondary options window.

Highlight your preference with the arrows keys.

Click the *Enter* key to save the change.

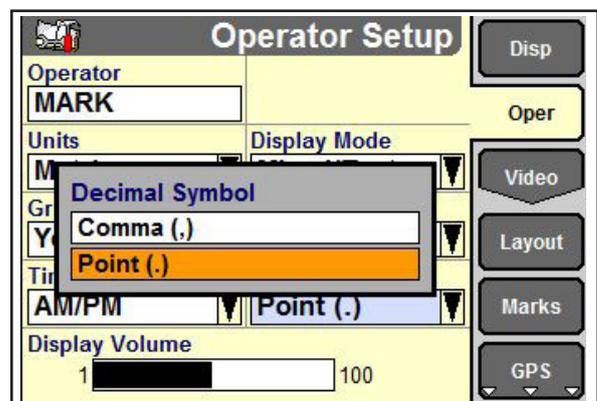


Figure 64

## RUN SCREENS SETUP (HOW TO SET THE SCREENS FOR VIEW DURING HARVEST)

For the setup of the *Run* screens, do the following:

Access the screen at the side, pressing *Home*.

With the arrows go to the *Toolbox* folder and click *Enter*.

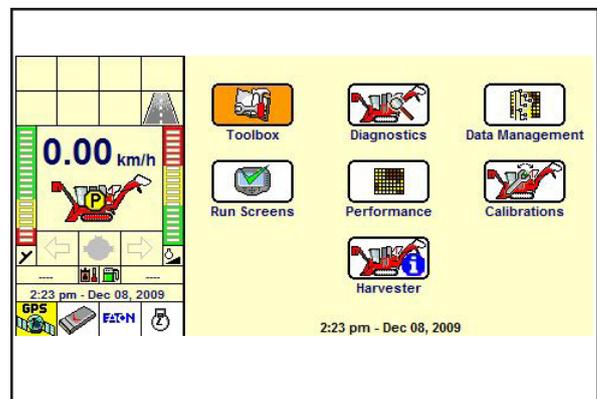


Figure 65

Select the *Layout* icon to view the windows of the *Run* screens.

- *Current Layout*: Setting Name
- Select *Run Screen*: This window shows which options is to be setup.
- *Number of Windows*: Provides the choice of the number of lines to be displayed on the *Run* screen.

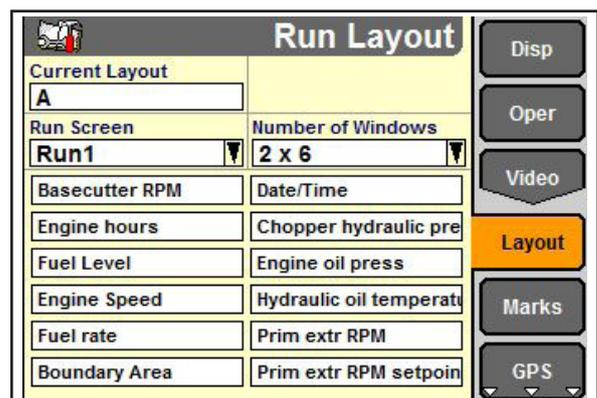


Figure 66

Select the *Current Layout* window, clicking *Enter* to confirm and access the options.

Three options are shown:

- Select one already existing;
- Edit the name of a layout already existing;
- Create a New layout;

Use the arrows and the *Enter* key to select the letter and repeat this procedure until the desired name is complete. On completing the desired name, go with the arrows until the virtual button *Insert* and click *Enter* to confirm.

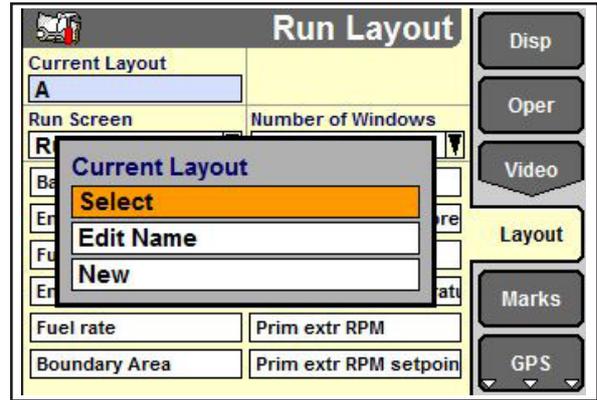


Figure 67

Go to the *Number of Windows* field using the arrows and click *Enter* to confirm.

With the arrows, select the desirable number of windows and columns for the screen to be setup. When highlighted, click *Enter* to confirm the selection. The options are from 1x4 to 1x6 and from 2x4 to 2x6.

In this case the choosen example is for 2 columns with 4 lines.

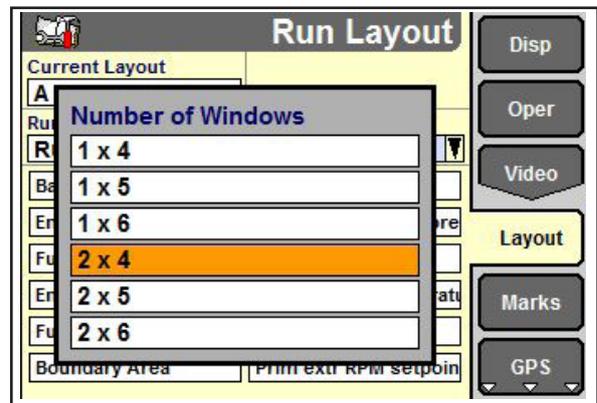


Figure 68

The windows in the indicated region will be displayed which can be blank or not. Go up to one of those windows and click *Enter*.

A window with the available options will be displayed.

Select the function to be viewed during the operation and click *Enter* to confirm.

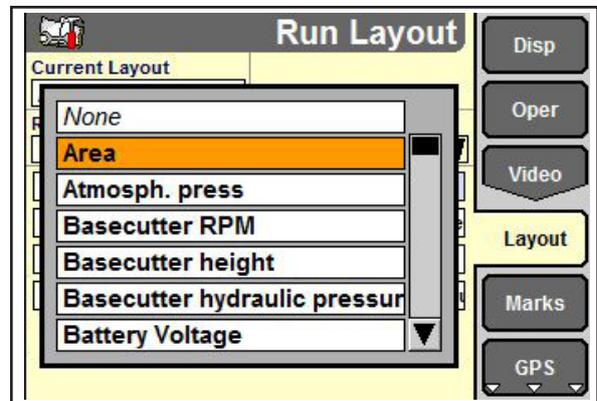


Figure 69

Select the *Basecutter RPM*, pass to the window below, using the arrows.

Click *Enter*, to confirm. Repeat the step above for the other windows until all the lines are complete. Thus we have the setup as shown in the illustration at the side.

The *Home* key returns the monitor to the initial screen.

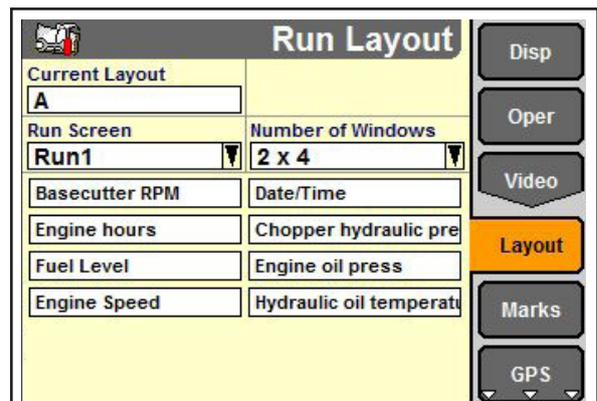


Figure 70

Return to the initial screen, to come back to the *Run Screens* used during the harvest.

Press *Enter* in the folder in orange, as illustration at the side. With that access the *Run* screen.

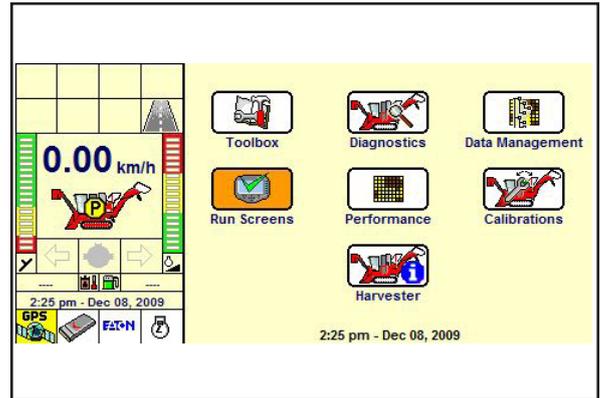


Figure 71

To set up the other *Run screens*, repeat the procedure above for each one of them, selecting the remaining *Run* screens from 1 to 6.

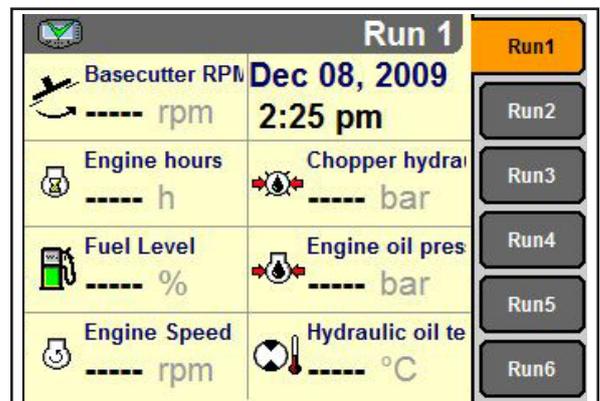


Figure 72

**Select run screens**

Use the arrows keys to highlight the *Run Screen* window.

Click *Enter* to show the secondary options window.

Use the keys *More (+)* or *Less (-)* to go up or to lower the page in the window.

Highlight the screen desired to activate the customer with the arrows keys.

Click on the *Enter* key to confirm the change.

The selected run screen presentation appears.

**NOTE:** The entries that appear on the options window depend on the vehicle and the application of the resident software in the display. The “left side Area” does not appear on the options window unless the vehicle supports the setup for the left side area.

The summary screens only appear on the options window if the Precision Farming application is installed in the display.

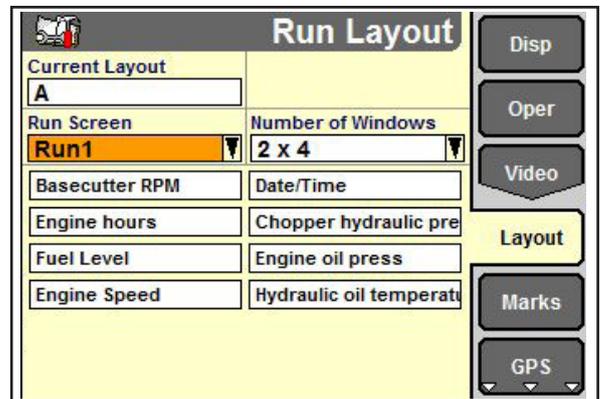


Figure 73

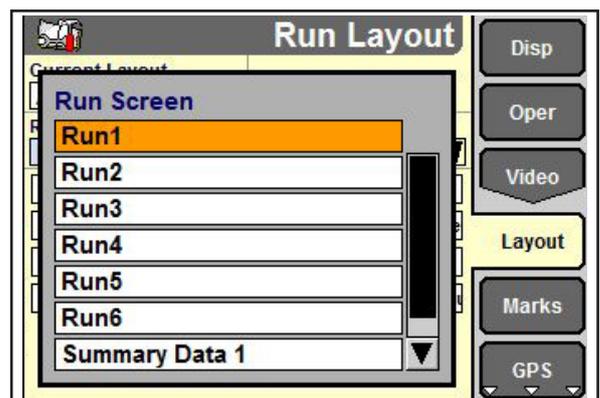


Figure 74

Use the arrows keys to highlight any window in the present screen.

**NOTE:** These examples are representative. They show the operation of the working presentation screen and don't document the available windows existing from a specific farming application.

Click *Enter* to show the secondary options window.

Use the keys *More (+)* or *Less (-)* to go up or to lower the page in the window, or the rotary control on the console.

With the arrows keys highlighting the desired window.

Click on the *Enter* key to confirm the change.

The window label appears on the location selected on the presentation screen.

To select more windows for addition, do the following:

1. Highlight a window.
2. Click *Enter* to show the secondary options window for all the farming applications.
3. Highlight the desired window for addition.
4. Click on the *Enter* key to confirm the change.

To check the working screen appearance adapted to the customer:

1. Click on the *Home* key (Initial) to come back to the main screen.
2. Select the *Run screen* icon with the arrows keys and, then, click on the *Enter* key to access the working screens.

3. Click on the soft key of the appropriated *Run screen* and check the presentation results

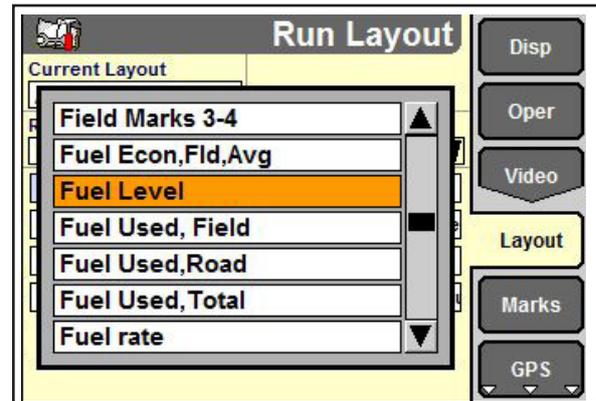


Figure 75

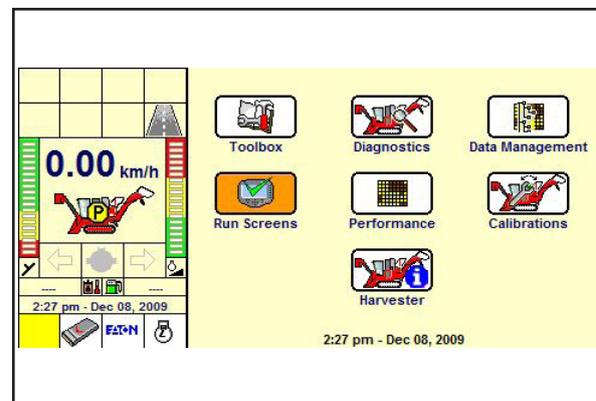


Figure 76

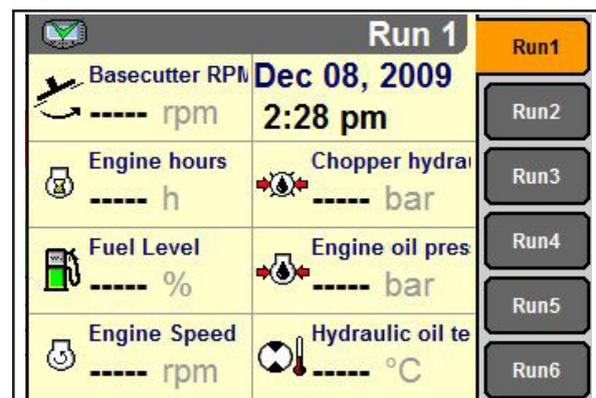


Figure 77

## GENERAL

Select the *General* option and press *Enter*.

The screenshot shows the 'General settings' window. The 'General' option on the right-hand side is highlighted in orange. The main menu items are: Error suppression (Medium), Country code (0), Machine type (Sugarcane), Machine model (A8800), Machine serial number (880153), and Row distance (150 cm). On the right, there are buttons for Data Log, Trnsprt, General (highlighted), Engine, Electrical, and Basecutter.

Figure 78

### Country code

In this field the operator enters in which country the machine is working.

To edit, use the directional keyboard to select the *Country code*, and press *Enter*.

**NOTE:** The window, when selected, changes by color.

The screenshot shows the 'General settings' window. The 'Country code' field is highlighted with a red border. The 'General' option on the right-hand side is highlighted in orange. The main menu items are: Error suppression (Medium), Country code (0), Machine type (Sugarcane), Machine model (A8800), Machine serial number (880153), and Row distance (150 cm). On the right, there are buttons for Data Log, Trnsprt, General (highlighted), Engine, Electrical, and Basecutter.

Figure 79

### Machine type

In this field the operator enters in which machine the software is installed.

To edit, use the directional keyboard to select the *Machine type*, and press *Enter*.

In the case of cane harvesters only the option Sugarcane is available to be chosen.

**NOTE:** The window, when selected, changes by color.

The screenshot shows the 'General settings' window. The 'Machine type' field is highlighted with a red border. The 'General' option on the right-hand side is highlighted in orange. The main menu items are: Error suppression (Medium), Country code (0), Machine type (Sugarcane), Machine model (A8800), Machine serial number (880153), and Row distance (150 cm). On the right, there are buttons for Data Log, Trnsprt, General (highlighted), Engine, Electrical, and Basecutter.

Figure 80

### Machine model

In this field the operator enters the machine model that the software installed.

To edit, use the directional keyboard to select the *Machine model*, and press *Enter*.

**NOTE:** The window, when selected, changes by color.

The screenshot shows the 'General settings' window. The 'Machine model' field is highlighted with a red border. The 'General' option on the right-hand side is highlighted in orange. The main menu items are: Error suppression (Medium), Country code (0), Machine type (Sugarcane), Machine model (A8800), Machine serial number (880153), and Row distance (150 cm). On the right, there are buttons for Data Log, Trnsprt, General (highlighted), Engine, Electrical, and Basecutter.

Figure 81

### Machine serial number

The operator is unable to edit this field, it is setup in the factory.

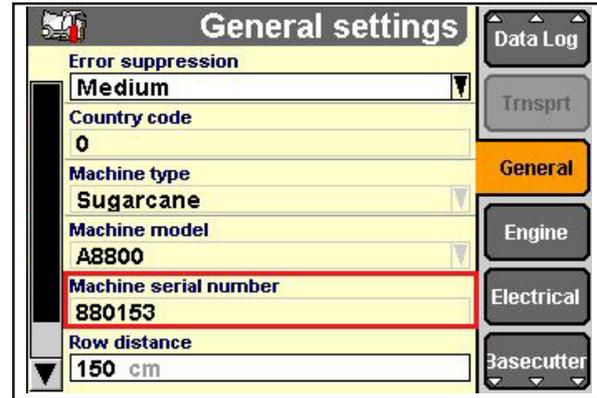


Figure 82

### Row distance

In this field the operator reports what is the distance between culture lines to be harvested.

To edit, use the directional keyboard to select the *Row distance*, and press *Enter*.

**NOTE:** The window, when selected, changes by color.

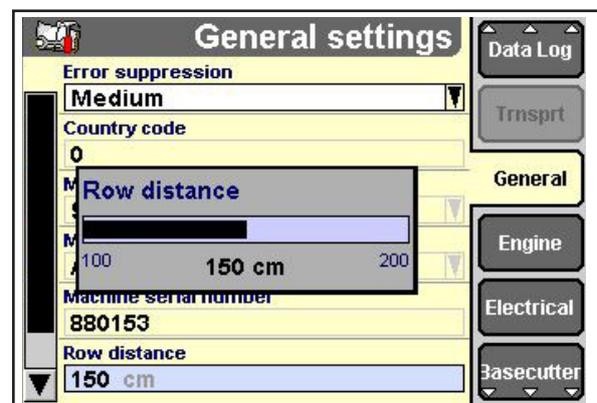


Figure 83

### Brush interval (optional)

In this field the operator sets how often and how long the internal brush of the rotary screen is activated.

To edit, use the directional keyboard to select the *Brush interval*, and press *Enter*.

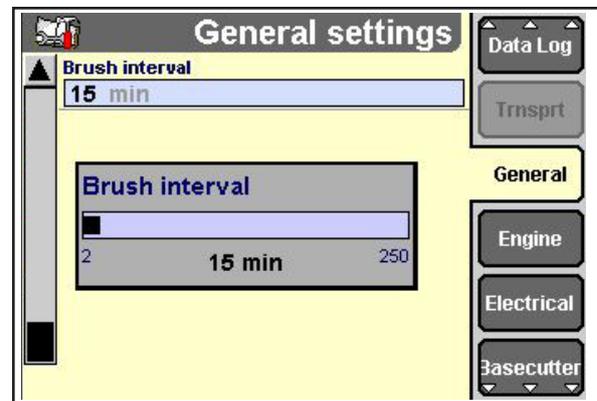


Figure 84

### Error suppression

The error messages are divided into two categories:

- The critical errors (red message): These errors stop the machine.
- The less critical errors (yellow message): These errors do not stop the machine operation.

When the operator overrides the error messages (off) the monitor will not show the yellow messages.

To override, use the directional keyboard to select the *Error suppression* field, and then press *Enter*.

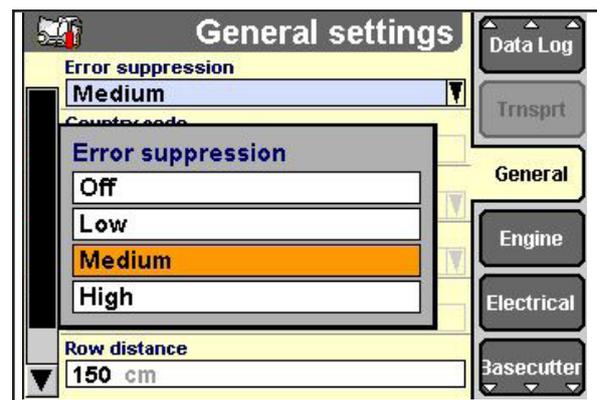


Figure 85

## ENGINE

Select the *Engine* option and press *Enter*.

### Engine Model

This is an option setup in the factory, the operator has only read access.

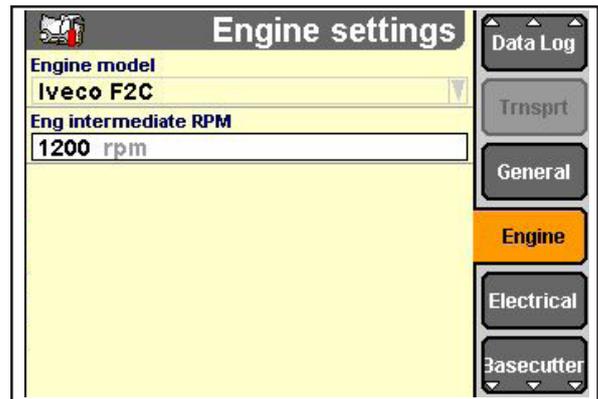


Figure 86

### Engine intermediary RPM

In this field the operator determines the engine intermediary rotation.

To edit this field select *Eng intermediate RPM* and press *Enter*.

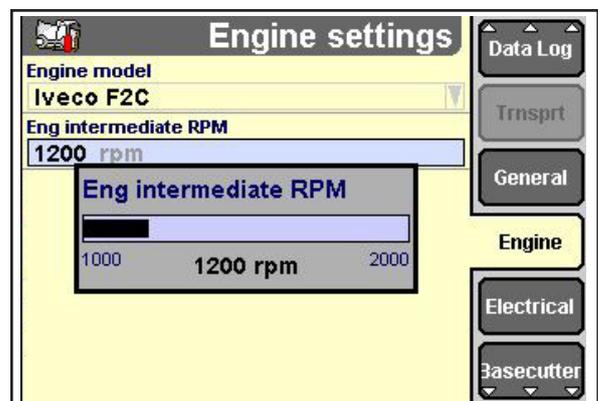


Figure 87

## BASECUTTER

HOME > TOOLS > BASECUTTER

In this option the operator configures the basecutter options.

### BaseC pressure no load

The field to set the pressure for the machine to raise for manouvering.

Every time the manouvering pressure is achieved, the machine height will be raised to the manouvering height value.

*Reference value: 380 PSI or 26,0 bar*

To edit this field select *BaseC pressure no load* and press *Enter*.

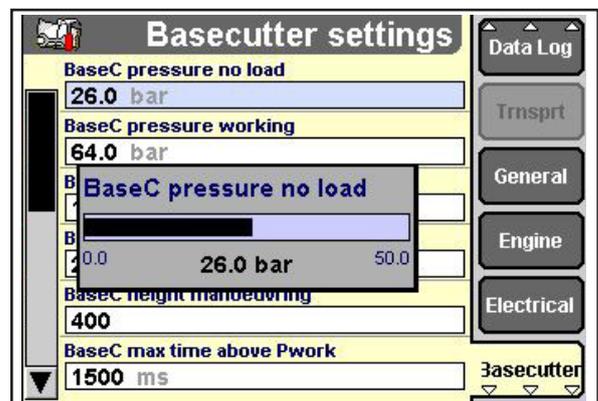


Figure 88

### BaseC pressure working

In this field set the pressure to the ideal value for basecutter during harvest operation.

*Reference value: 930 PSI or 64 bar*

To edit this field select *BaseC pressure working* and press *Enter*.

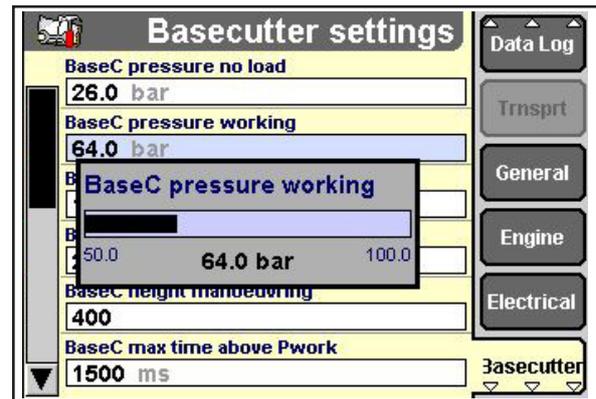


Figure 89

### BaseC pressure choke

Field which establishes the pressure limit from which the stall alarm will sound and the machine will lift the front suspension.

If the current pressure of the basecutter is above of the maximum pressure value for more than 03 seconds, the system turns of the harvest function and sounds the alarm.

*Reference value: 2600 PSI - 180 bar*

To edit this field select *BaseC pressure choke* and press *Enter*.

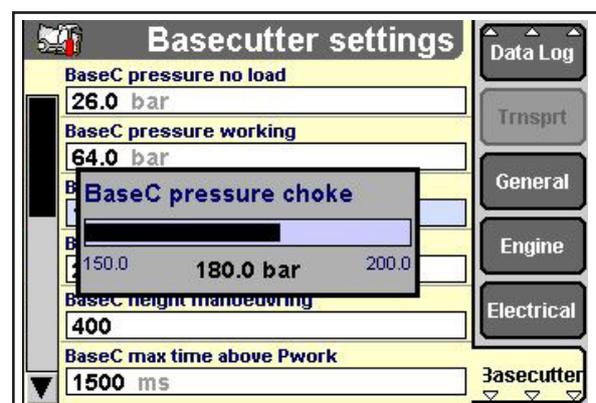


Figure 90

### BaseC height working

Field set to cut medium height. This is the height which the system will try to maintain during the harvest.

*Reference value: 200*

To edit this field select *BaseC height working* and press *Enter*.

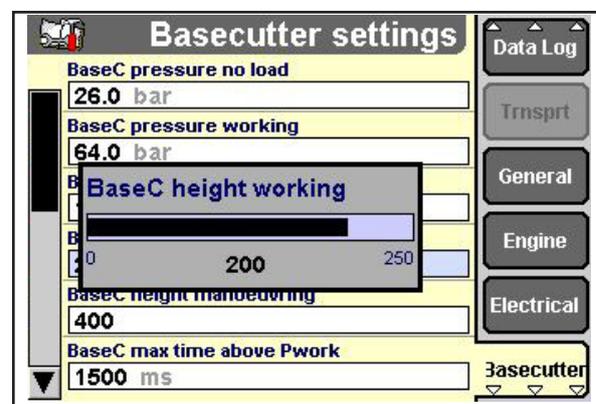


Figure 91

### BaseC height manoeuvring

Field to set up the maneuver height at the end of the line.

The height to which the machine will raise for manoeuvring. Used when the basecutter pressure reduces to the manoeuvring pressure. The maneuver height should always be greater than the cut height.

*Reference value: 400 UN*

To edit this field select it and press *Enter*.

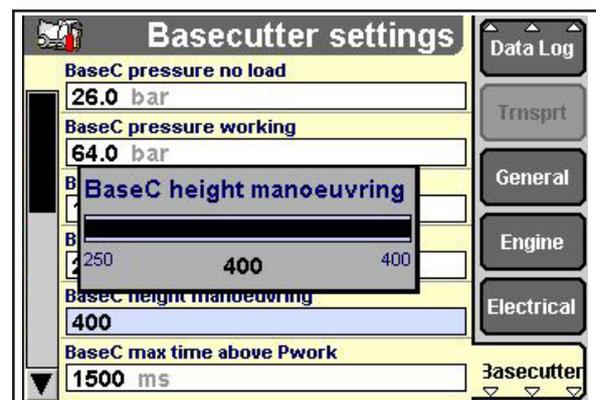


Figure 92

**BaseC maximum time above the pressure work**

Field to set the delay time for machine to raise when peak pressure occurs.

Reference value: 1500 ms

To edit this field select *BaseC max time above Pwo* and press *Enter*.

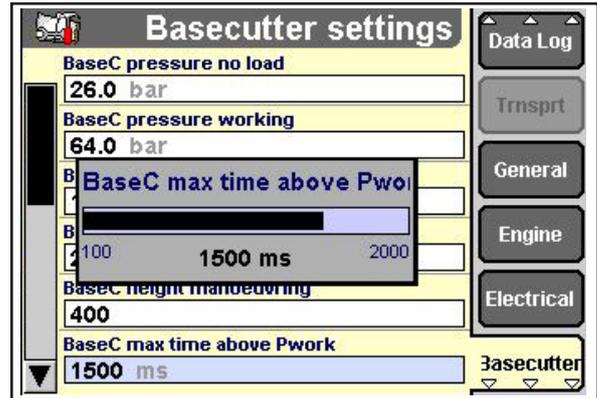


Figure 93

**BaseC minimum valve current**

In this field the operator programs the response time for the basecutter height control valve during the harvest.

To edit this field select *BaseC min valve current* and press *Enter*.

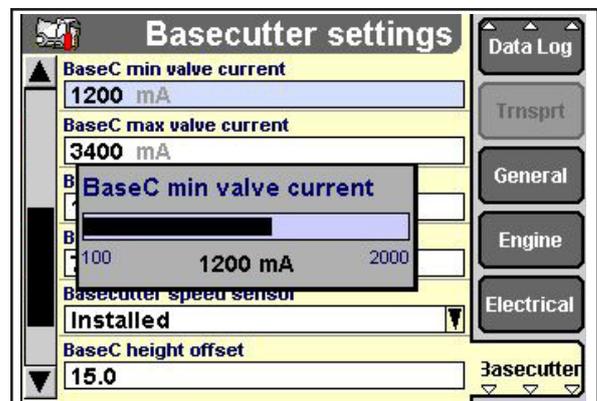


Figure 94

**BaseC maximum valve current**

In this field the operator programs the response time for the basecutter height control valve when the machine isn't harvesting.

To edit this field select *BaseC max valve current* and press *Enter*.

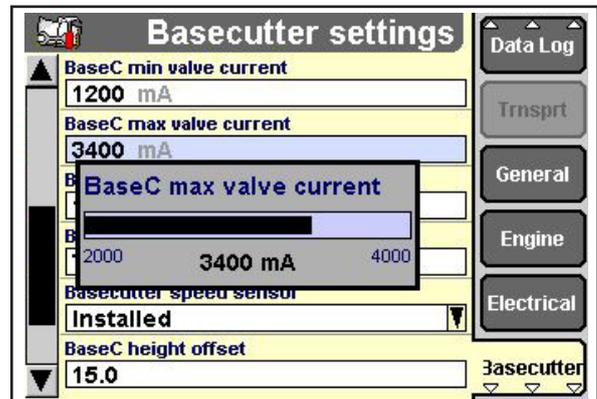


Figure 95

**BaseC units no control**

To edit this field select *BaseC units no control* and press *Enter*.

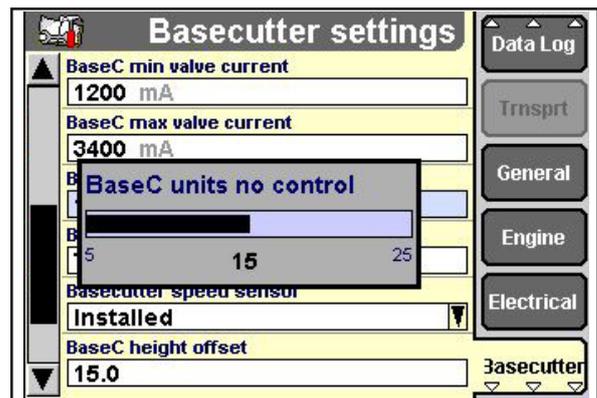


Figure 96

### BaseC units maximum PWM

Field to set the maximum front suspension cylinder speed.

*Reference value: 75 UN*

To edit this field select *BaseC units max PWM* and press *Enter*.

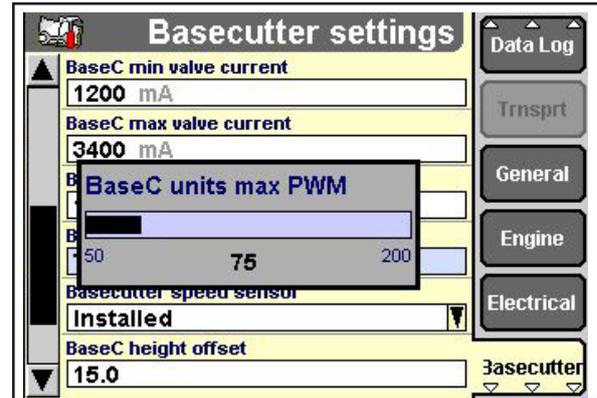


Figure 97

### Basecutter speed sensor

In this field the operator turns the basecutter speed sensor on or off.

To edit this field select *Basecutter speed sensor* and press *Enter*.

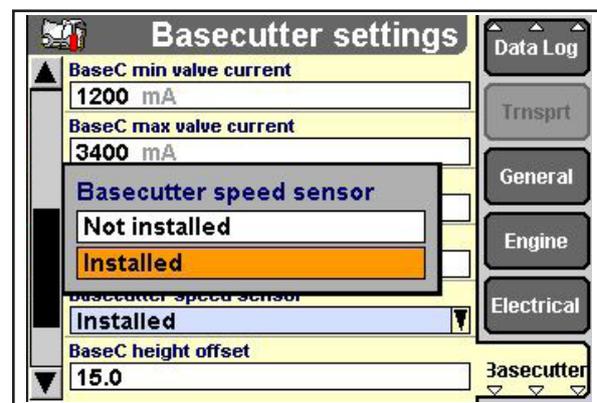


Figure 98

### Basecutter reduced height setup

Field to set reduced height of basecutter allowing quick setup of the basecutter height during harvest.

This allows cut height value to be reduced for a certain period. When there are areas of low stool height along the cane row.

*Reference value: 20 UN*

To edit this field select *BaseC height offset* and press *Enter*.

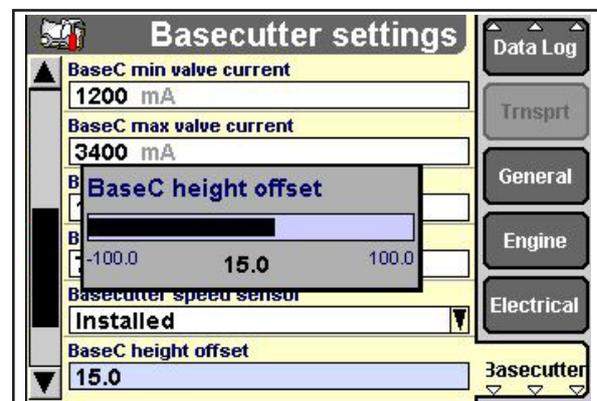


Figure 99

### BaseC pressure offset

Field to set extra pressure, without reprogram the pressure parameter.

The extra pressure allows a temporary increase in system working pressure.

Used, for example, in lodged cane, when there is change in cane density.

*Reference value: 10 bar or 145 PSI*

To edit this field select *BaseC pressure offset* and press *Enter*.

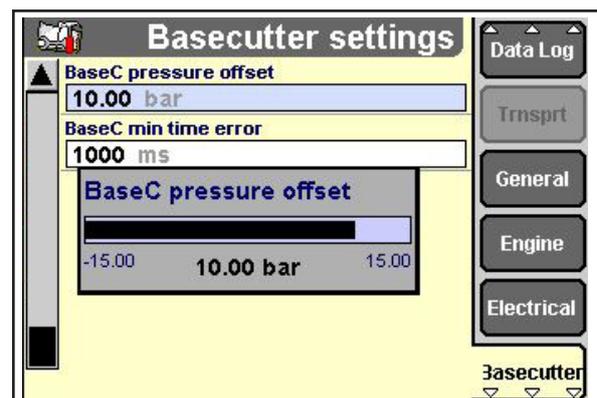


Figure 100

### Time to inform when an error occurs

In this field the operator defines the time that the system will take to notify an error.

To edit this field select *BaseC min time error* and press *Enter*.

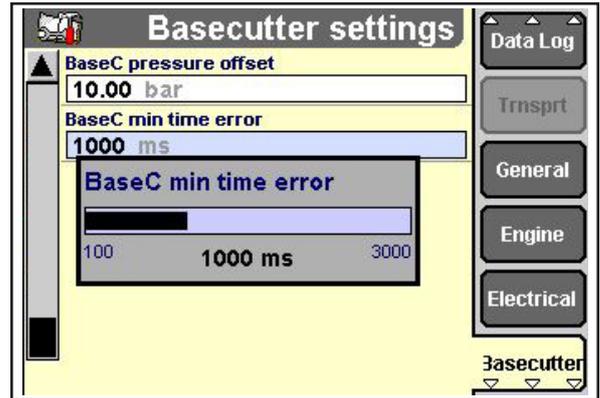


Figure 101

## CALIBRATION

This section the operator will use to do the auto tracker calibrations, the transmission system and the steering system.

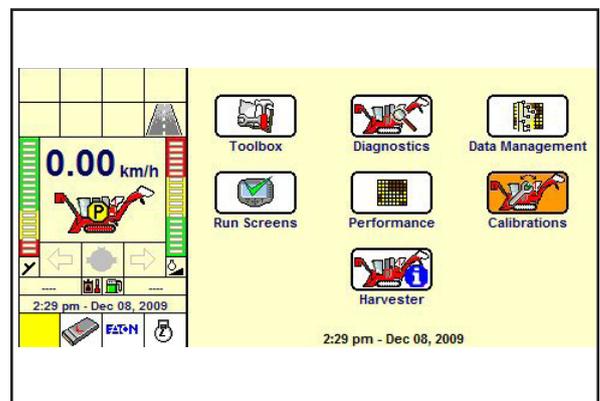


Figure 102

### Auto tracker calibration

To access, highlight the *Calibration* option.

Select the *Basecutter* option and press *Enter*.

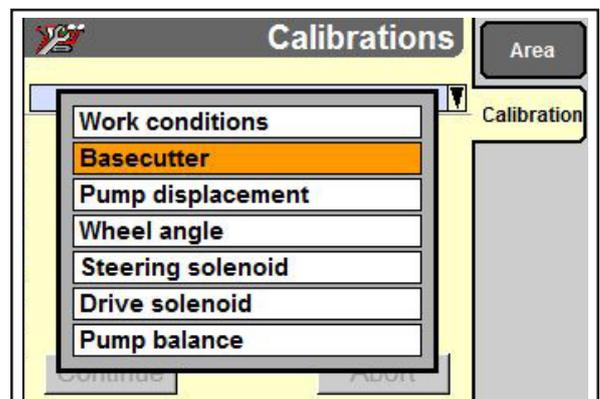


Figure 103

The AFS 200 will show the operator the instructions of how to proceed.

Firstly the software asks for the operator to park the machine with the engine running and press to continue.

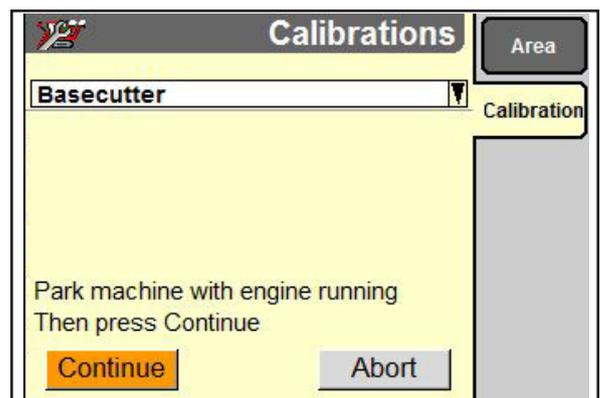


Figure 104

The software asks for the operator to lower the machine to calibrate the point 0. The display will show on the screen “Place de basecutter level to minimum”.

**NOTE:** When lowering the machine, press continue.

**NOTE:** Notice that the operations that were already accomplished the text appears without highlighting.

After place the basecutter to the minimum level, the software asks for the operator to place the machine at the maximum height to calibrate the point 400. It will appear on the display the message: “Place basecutter level to maximum height”.

After calibrating the points 0 and 400 the software confirms to the operator that the machine is calibrated. The display will show a message that the calibration was successful.

#### Calibration of the working conditions: Harvest pressure and working height

**NOTE:** The calibration for the working conditions is similar to the Auto calibration accomplished in the previous series machines to 8000, which were equipped with Auto tracker.

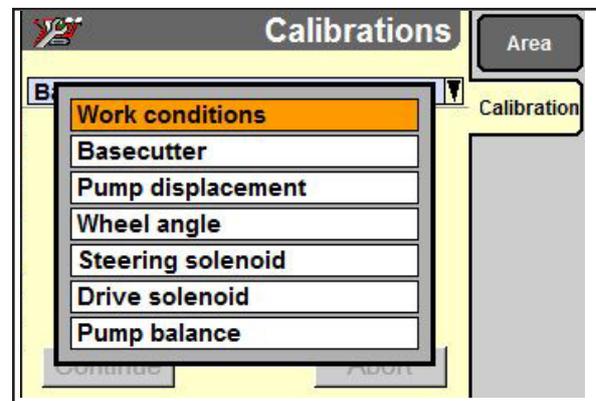


Figure 105

When clicking in working conditions the program will confirm that this calibration should be made, during normal harvest (cut height and cut pressure), for a period of at least 1 minute and maximum 10 minutes.

**NOTE:** *The operator can interrupt the calibration at any time from one minute.*

Initially must harvest 3 - 4 meters of the cane line and then click continue.

After clicking continue, the program will collect the harvest data of the cane row. After a minute of data collection, the operator will be able to stop for auto calibration, with that the program will retain the working pressure and height data, so that the operator accepts or aborts the collected values.

In the cases in which the operator does not stop for Autocalibration, after ten minutes, the program retains the data collected and introduces the working pressure and height values for harvesting, so that the operator can accept or abort.

**NOTE:** *The more data collected, the more control accurate height.*

**NOTE:** *In case some problem occurs during the data collection (cane line cut in the CALIBRATION mode), such as: stop due to transporter or truck missing or any other incident that causes the machine to stop then the operator has to resume the data collection in other line.*

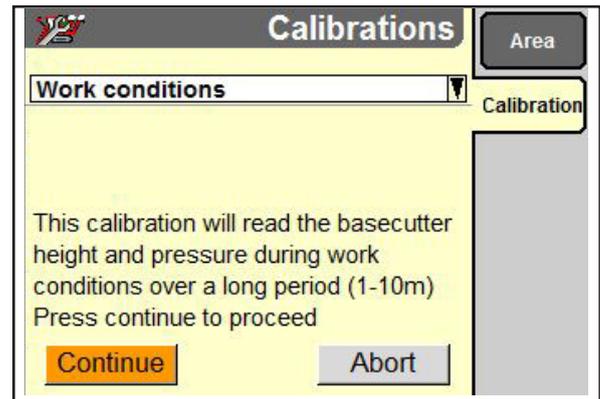


Figure 106

## OPTIONS

HOME > TOOLS > OPTIONS

Select the Engine option and press *Enter*.

### Trailer

In this field the operator acknowledges the software the machine is setup with rear trailer.

To edit this field select *Trailer* and press *Enter*.

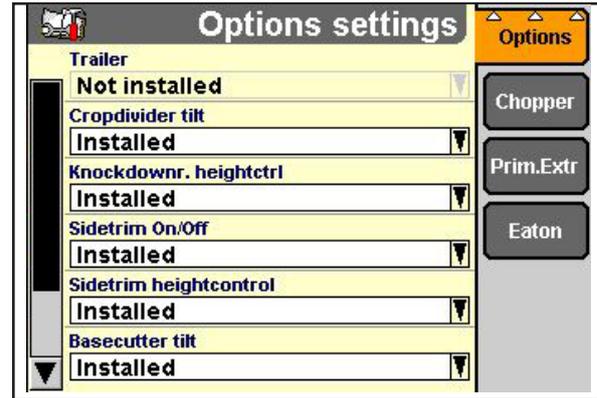


Figure 107

### Cropdivider tilt

In this field the operator acknowledges the software the machine is setup with cropdivider tilt.

To edit this field select *Cropdivider tilt* and press *Enter*.

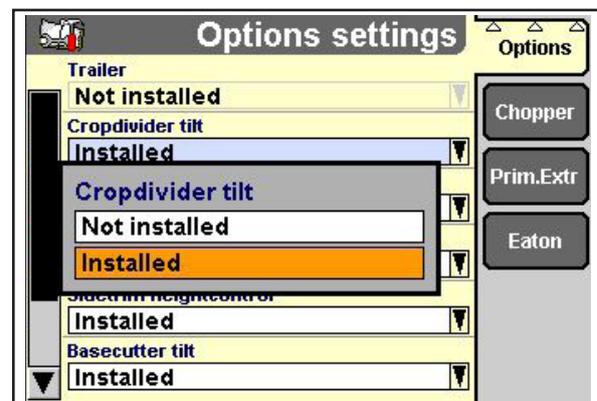


Figure 108

### Knockdownroller height

In this field the operator acknowledges the software the machine is setup with Power Knockdown Roller Hydraulic Raise and Lower.

To edit this field select *Knockdownr. heightctrl* and press *Enter*.

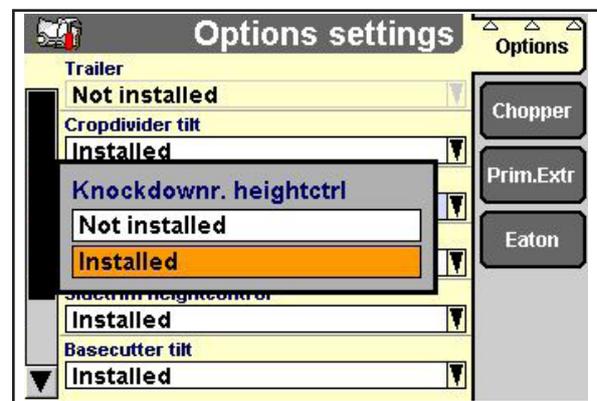


Figure 109

### Sidetrim On/Off

In this field the operator acknowledges the software the machine is setup with sidetrim discs.

To edit this field select *Sidetrim On/Off* and press *Enter*.

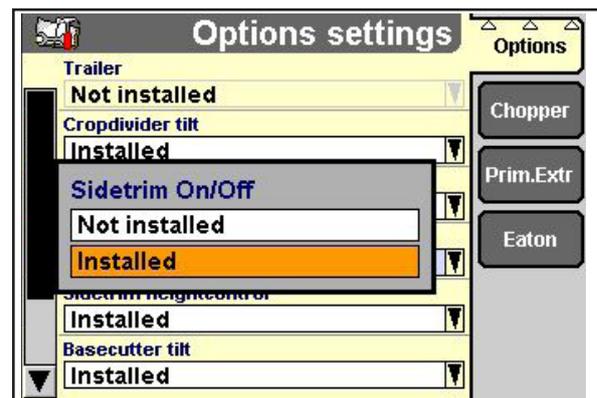


Figure 110

### Sidetrिम height control

In this field the operator acknowledges the software the machine is setup with sidetrिम discs height.

To edit this field select *Sidetrिम height control* and press *Enter*.

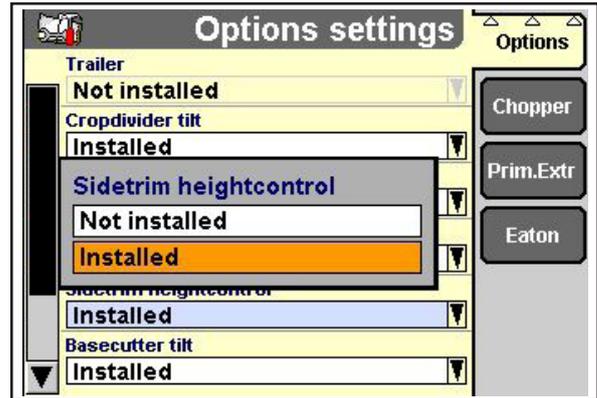


Figure 111

### Basecutter tilt

In this field the operator acknowledges the software the machine is setup with basecutter tilt.

To edit this field select *Basecutter tilt* and press *Enter*.

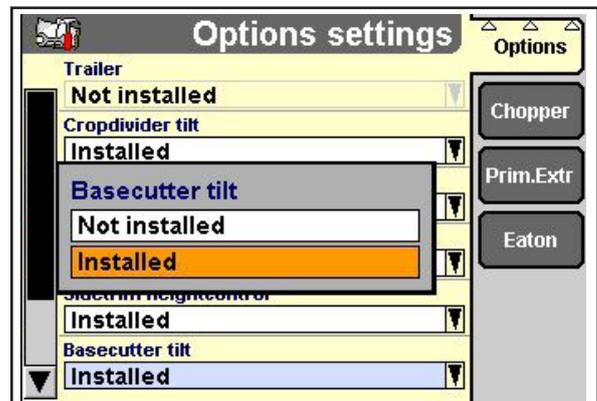


Figure 112

### Brush

In this field the operator acknowledges the software the machine is setup with internal cleaning brush in the rotary screen.

To edit this field select *Brush* and press *Enter*.

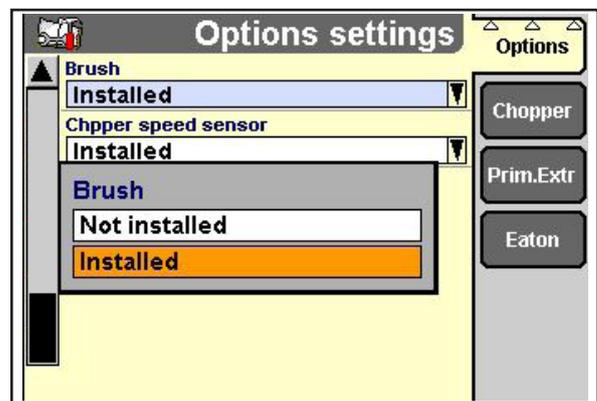


Figure 113

### Chopper speed sensor

In this field the operator acknowledges the software the machine is setup with chopper speed sensor.

To edit this field select *Chpper speed sensor* and press *Enter*.

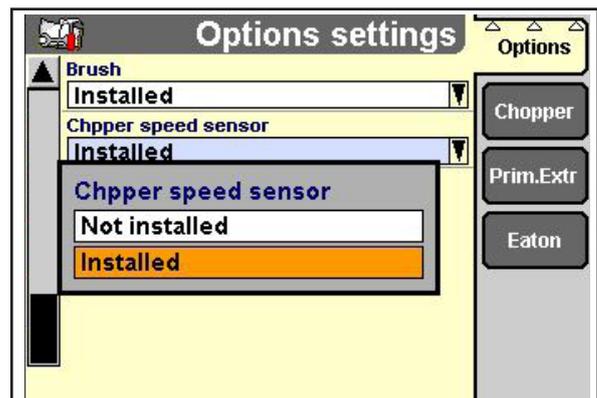


Figure 114

## CHOPPER

HOME > TOOLS > CHOPPER

In this option the operator configures the chopper options.

### Chopper speed percent

In this field the operator can set the length of cane billet to be cut.

Increase the percentage, the operator increases the conveyor roller speed and consequently increases the billet length.

To edit this field select it and press *Enter*.

### Chopper minimum current

In this field the operator can set the minimum electrical current for the roller valvistor.

*Reference value: 450 mA*

To edit this field select *Chopper min current* and press *Enter*.

### Chopper maximum current

In this field the operator can set the maximum electrical current for the chopper valvistor.

*Reference value: 1400 mA*

To edit this field select *Chopper max current* and press *Enter*.

## PRIMARY EXTRACTOR

HOME > TOOLS > PRIMARY EXTRACTOR

In this option the operator configures the primary extractor options.

### Primary extractor desired RPM

In this field the operator can set the primary extractor speed.

To edit this field select *Prim. extr. desired rpm* and press *Enter*.

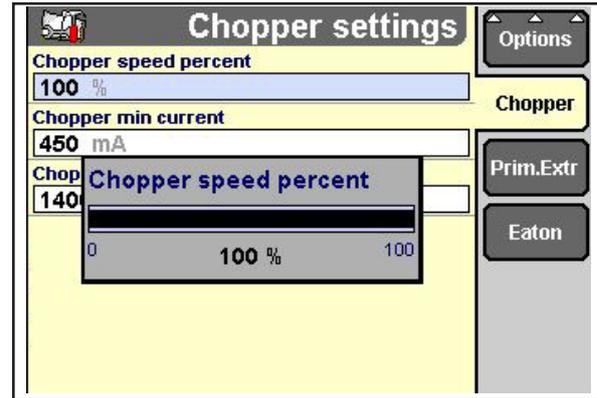


Figure 115

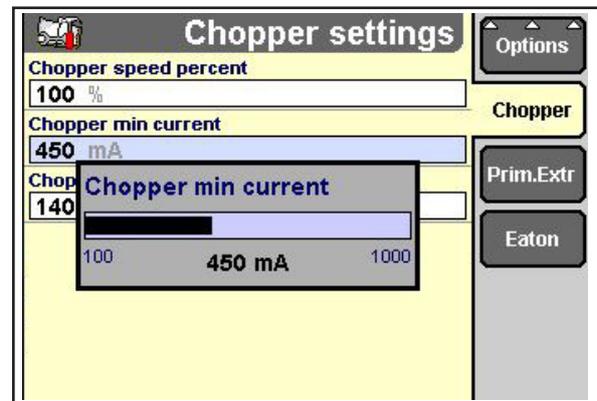


Figure 116

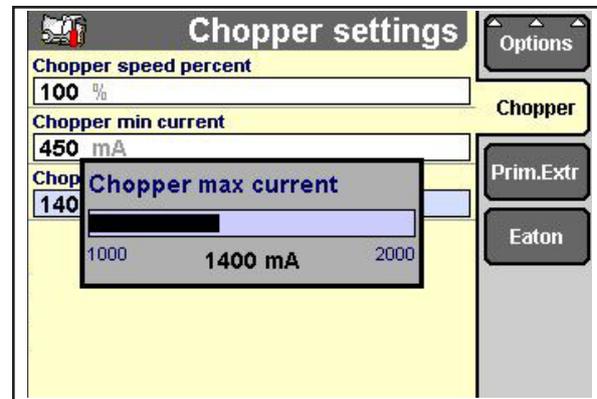


Figure 117

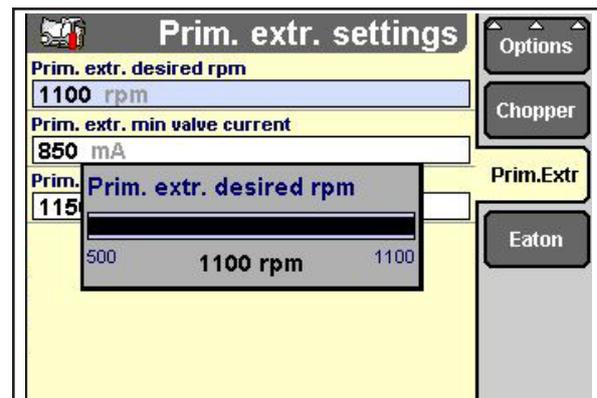


Figure 118

**Primary extractor minimum valve current**

In this field the operator can set the minimum electrical current for the primary extractor valvistor.

*Reference value: 850 mA*

To edit this field select *Prim. extr. min. valve current* and press *Enter*.

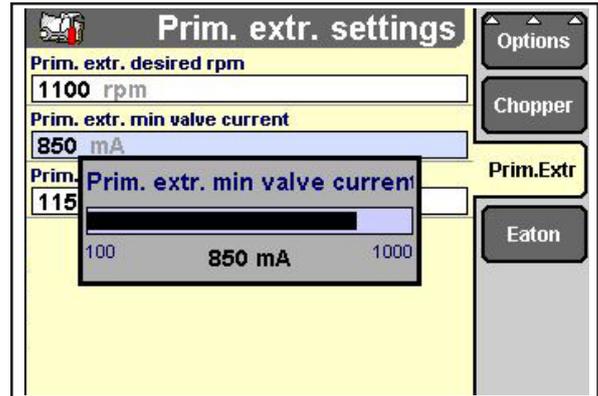


Figure 119

**Primary extractor maximum valve current**

In this field the operator can set the maximum electrical current for the primary extractor valvistor.

*Reference value: 1150 mA*

To edit this field select *Prim. extr. max. valve current* and press *Enter*.

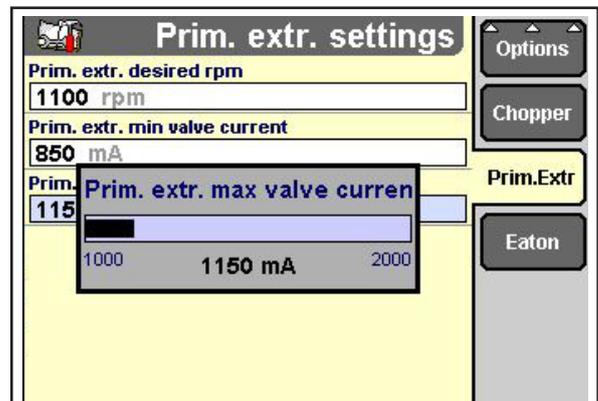


Figure 120

**Data summary screens**

The data summary screens, accessible through the Revenue icon, are also available to the customer with the presentation screen. The summary screens contain cost information related to the vehicle and their functions.

**NOTE:** This summary screen introduces the summary windows in the Advanced Mode. In the Basic Mode, only introduced summaries for windows of the Harvest, Field and Tasks.

To make the data summary screen available to the customer:

1. Select *Summary Data 1* or *Summary Data 2* in the working screen window.
2. Select your preferred presentation (number of columns and lines) with the window of the *Number of Windows*.
3. Select a location on presentation screen to access the secondary options window.
4. Select a window label for addition.
5. Repeat the steps 3 and 4 until the presentation is complete.

**NOTE:** They are available windows only for the data summary screens and are not available on working screens. Other windows are shared in common with the working screens.

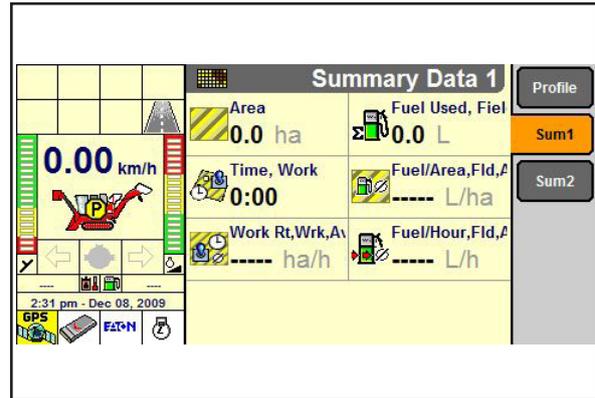


Figure 121

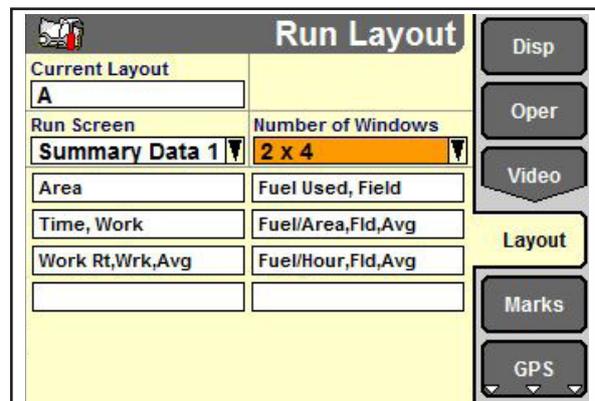


Figure 122

**FIELD MARK CREATION**

To create or edit the field mark, from the main screen, select the Toolbox icon to access toolbox screens.

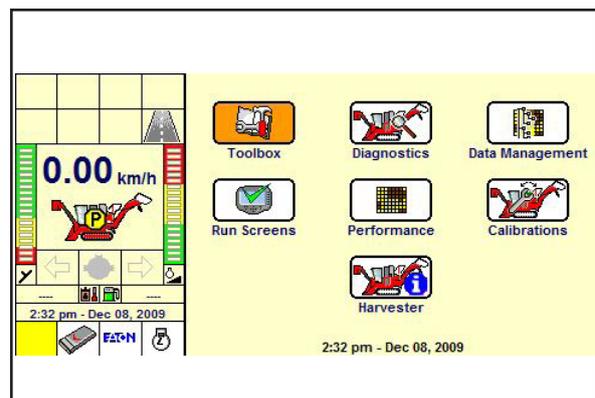


Figure 123

Click on the soft key of the *Marks* icon in the navigation bar to show the screen *Filed Mark Setup*.

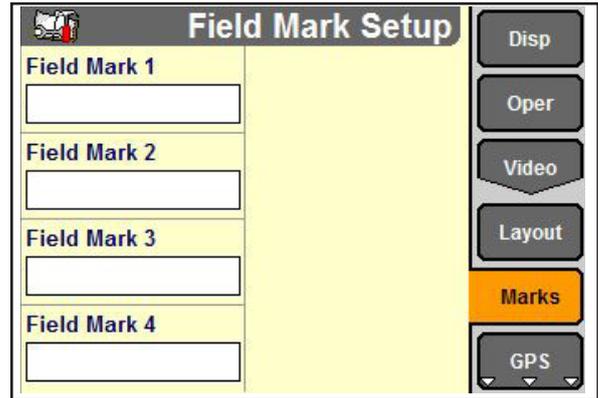


Figure 124

Use the arrows keys to highlight the *Field Mark* window. Click on the *Enter* key to access the secondary window options.

**NOTE:** The first time that the window is selected the only option is *New*. Later, the options are *Select*, *Edit Name* or *New*.

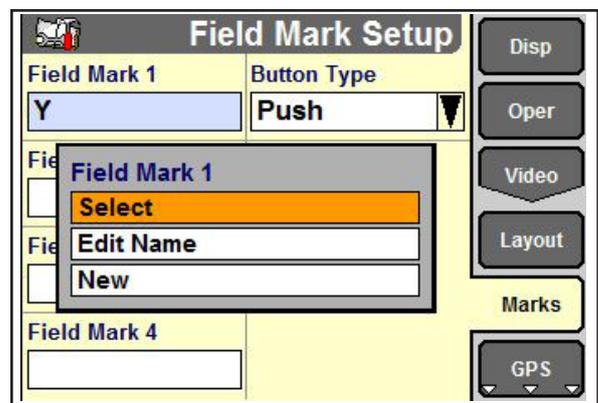


Figure 125

With *Select* highlighted, click on the *Enter* key to choose the desired field mark from the secondary options window of the field mark already created by the operator.

**NOTE:** The field mark identification also the save button type. When a field mark is selected to be used again, both the name and button type are activated.

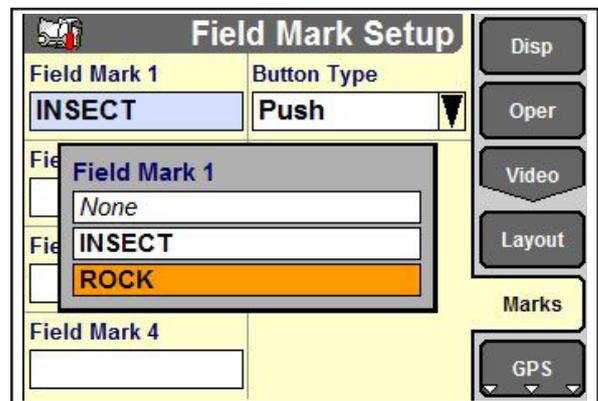


Figure 126

With *Edit Name* highlighted, click on the *Enter* key to access the alphanumeric keyboard and edit the mark name of an existing field.

Use the keyboard to edit or correct the name.

Highlight the *Enter* button in the keyboard and, then, click on the *Enter* key to save the name.



Figure 127

With *New* highlighted, click on the *Enter* key to access the alphanumeric keyboard and create the mark name for an existing field.

A maximum of 20 field markers can be used. Once created, the field markers are available for any of the windows 1 - 4 of the field Mark.

Use the keyboard to introduce the name.

Highlight the *Enter* button in the keyboard and, then, click on the *Enter* key to save the new field marker.

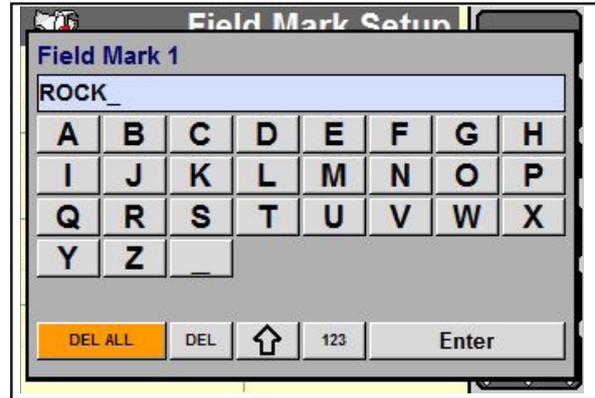


Figure 128

The *Button Type* window only appears after a field marker has been named.

Highlight the *Button Type* window and, then, click the *Enter* key to access the secondary options window.

Select *Latch* for the latch button.

Select *To load* button for loading momentarily, click on the *Enter* key to confirm the selection.

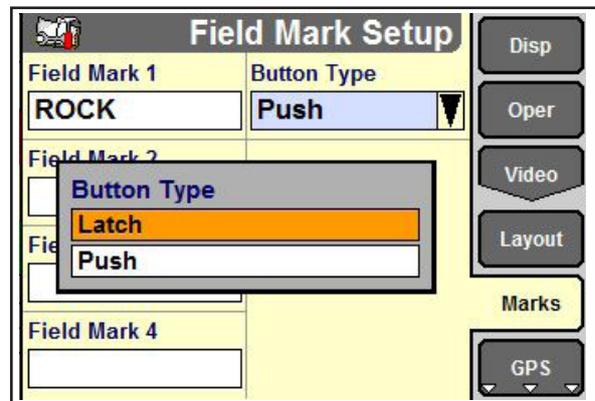


Figure 129

Repeat this procedure until all the field marks have been checked.

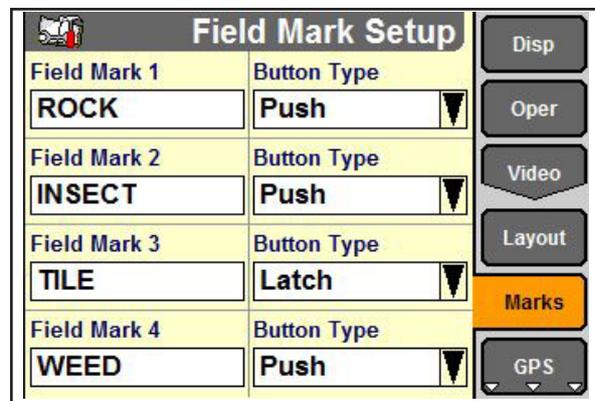


Figure 130

**GPS RECEIVER**

On main screen, highlight the *Toolbox* icon with the arrows keys.

Click on the *Enter* key to access the *Toolbox* screens.

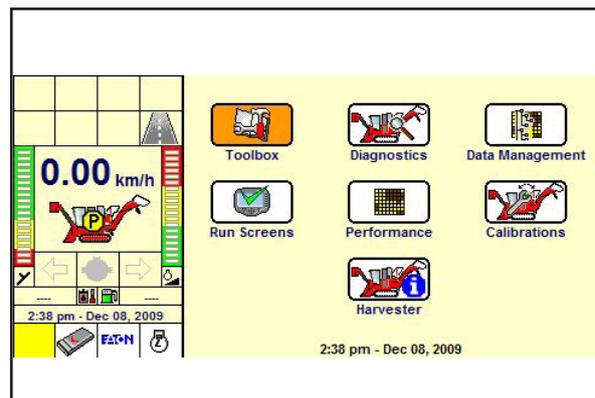


Figure 131

Click on the soft key for the GPS icon in the navigation bar to display the *GPS Setup*.

The position for the GPS receiver is, by default, *Not installed*. When it is selected *Not installed*, are not available on any receiver setup options neither of the GPS working screen windows until the situation has been changed.

**NOTE:** *The window Write to Card does not appear on the Precision farming basic mode.*



Figure 132

**YIELD (PERFORMANCE)**

**BASIC MODE**

The Basic mode is available for users that intend to access all the productivity characteristics and only some of the productivity reports existing for the different farming applications and for users that do not have a true interest to save or analyze information over a long time period.

The Basic mode offers an immediate use of the productivity tools in an environment of simplified working. At the same time, it offers a route of quick growth in the precision advanced farming.

In the Basic mode, all the information created by the user is only saved to appear on the memory; the information is not recorded of the external memory. This includes any field, tasks, labels, working screen presentations, summary data, GPS data, etc. When the display memory is full - exceeded the maximum number of tasks or fields, the user is alerted immediately to erase the data to allow continuation of work.

As the information is not recorded on the external memory, the information created by the user can't be filed in a computer for use with the analysis software.

The necessary calibrations of the vehicle are recorded on the external memory. This eliminates the need to come back to calibrate the vehicle in each working session.

On main screen, use the arrows keys to highlight the *Performance* icon.

Click on the *Enter* key to access the *Performance* screens.

Click on the soft key of the *Profile* icon to introduce the *Profile Setup* screen.

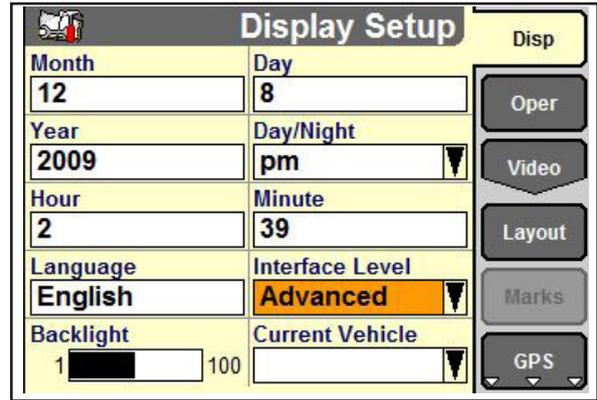


Figure 133

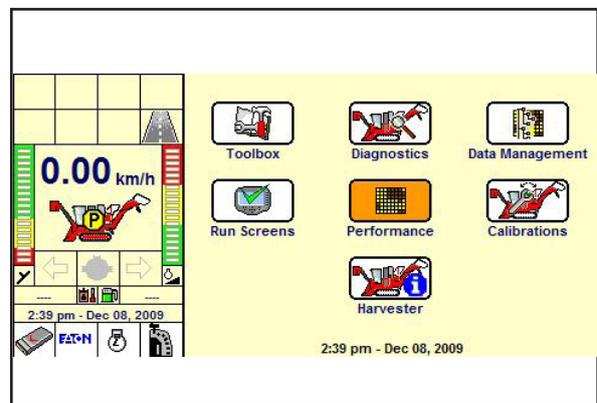


Figure 134

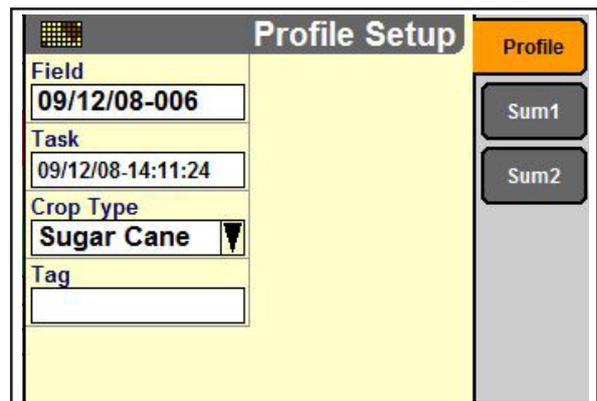


Figure 135

In the Basic Mode, only the windows *Field*, *Task*, *Crop Type* and *Tag* are visible to the operator for all vehicles. The windows *Field*, *Task* and *Crop Type* should be completed to accommodate the production data. The *Tag* window is optional.

The field names are generated through the software in this format: *yy/mm/dd-*nnn**. These names can be accepted by the operator or edited if needed.

yy = year

mm = month

dd = day

nnn = sequence: 001, 002, 003, etc.

**NOTE:** The field name format automatically generated can't be changed, not being influenced when selecting the Date format window on operator setup screen in the toolbox.

The task names are generated through the software in this format: *yy/mm/dd-hh:mm:ss*. These names can be accepted by the operator or edited if needed.

yy = year

mm = month

dd = day

hh = hour

mm = minutes

ss = seconds

**NOTE:** The task name format automatically generated can't be changed, not being influenced when selecting the Date format window on operator setup screen in the toolbox.

The screenshot shows the 'Profile Setup' window with a yellow background. On the left, there are four input fields: 'Field' containing '09/12/08-006', 'Task' containing '09/12/08-14:11:24', 'Crop Type' with a dropdown menu showing 'Sugar Cane', and 'Tag' which is empty. On the right, there is a 'Profile' button and two 'Sum' buttons labeled 'Sum1' and 'Sum2'.

Figure 136

This screenshot is identical to Figure 136, showing the 'Profile Setup' window with the same input fields and buttons.

Figure 137

## Field

A field is a geographical area where a harvest production task is accomplished in a type of specific harvest.

To create, edit or select a field, highlight *Field* window with the arrows keys.

Click on the *Enter* key to access the secondary options window.

If no field entry, the only option is *New*.

This screenshot shows the 'Profile Setup' window with the 'Field' input field highlighted in blue. A secondary options window is open over the 'Field' field, showing 'Field' and 'New' as options. The other input fields and buttons remain the same as in the previous figures.

Figure 138

Then, the options are *Select*, *Edit Name* or *New*.  
 Use *Select* to choose the field from the current list.  
 Use *Edit Name* to edit the name generated by the software.

**NOTE:** The function *Edit Name* should not be used to create a new field, because it does not change the exclusive ID for a single field.

Use *New* to choose the field of the current list.  
 Use the arrows keys to highlight the desired option and, then, click on the *Enter* key.

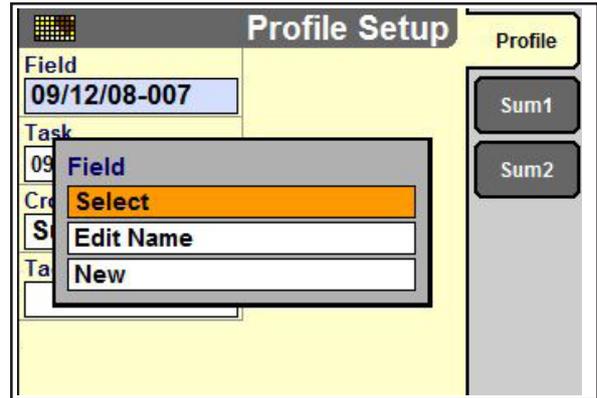


Figure 139

If you choose *Select* displays a window with secondary options.  
 Highlight the desired field with the arrows keys.  
 Click on the *Enter* key to select the field.

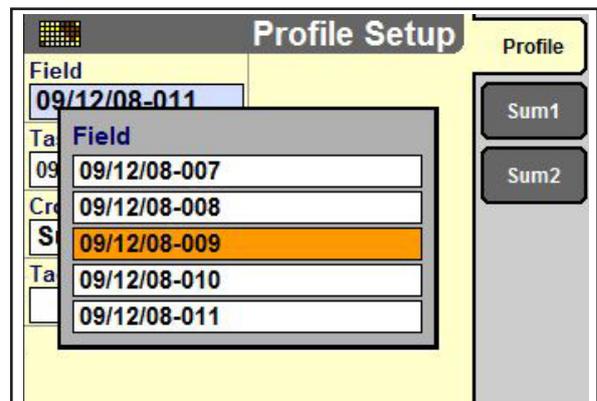


Figure 140

If you choose *New* the software immediately generates a new field name in this format: *yy/mm/dd-nnn*. The operator can accept this name or *Edit Name* to change the name.

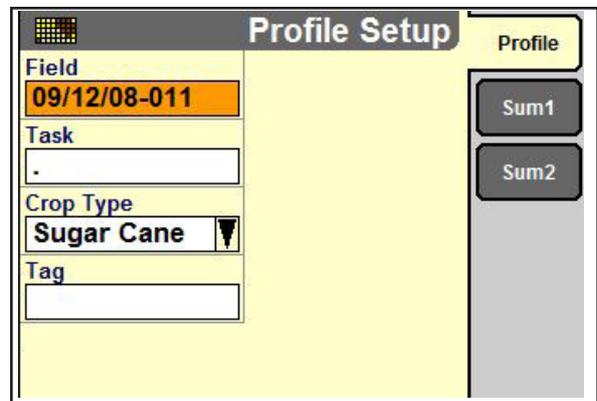


Figure 141

If you choose *Edit name* the alphanumeric keyboard appears.  
 Use the arrows to highlight individual characters in the keyboard followed by the *Enter* key to edit the name.  
 When completed, highlight the *Enter* button in the keyboard with the arrows keys.  
 Click on the *Enter* key to save the name.

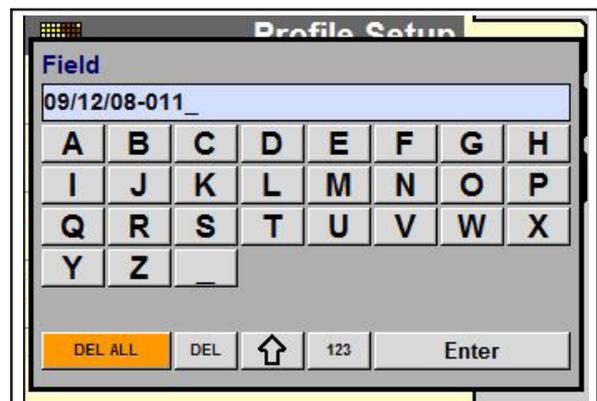


Figure 142

### Task

A task is the working revenue in a type of specific harvest and in a certain field. Whenever a new field is created, a task is automatically generated for that field. However, a new task can be created at any time and multiple tasks can be attributed to the same field.

To create, edit or select a task, highlight *Task* window with the arrows keys.

Click on the *Enter* key to access the secondary options window.

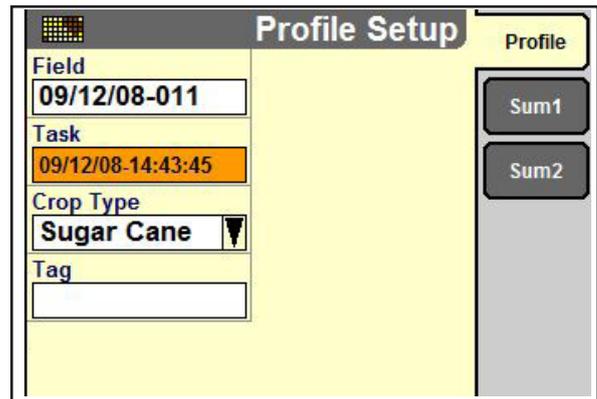


Figure 143

The task options are *Select*, *Edit Name* and *New*.

Use *Select* to choose the task from the current list.

Use *Edit Name* to edit the name generated by the software.

**NOTE:** The function *Edit Name* should not be used to create a new task, because it does not change the exclusive ID for a single task.

Use *New* to add the task to the current list.

Use the arrows keys to highlight the desired option and, then, click on the *Enter* key.

If you choose *Select* a window appears for secondary options.

Highlight the desired task with the arrows keys.

Click on the *Enter* key to select the task.

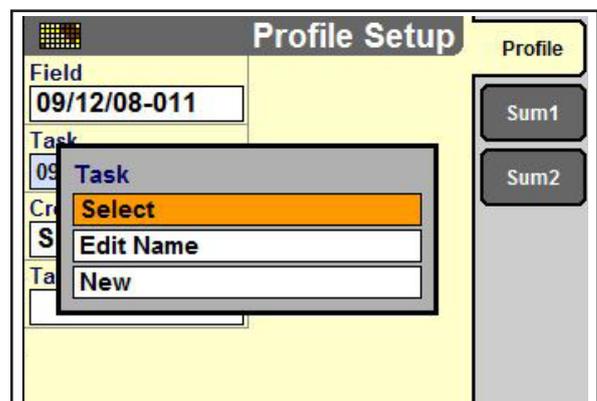


Figure 144

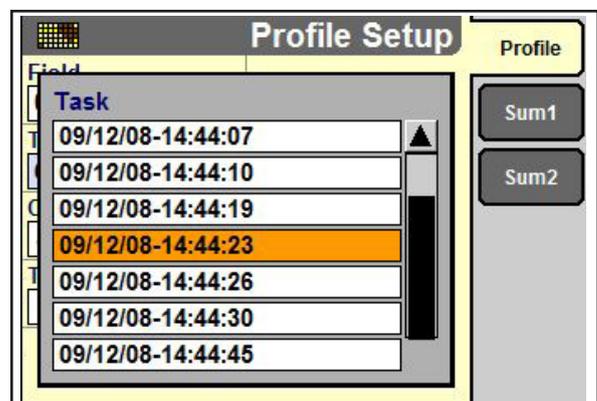


Figure 145

If you choose *New* the software immediately generates a new task name in this format: *yy/mm/dd- hh:mm:ss*. The operator can accept this name and use or "Edit name" to change the name.

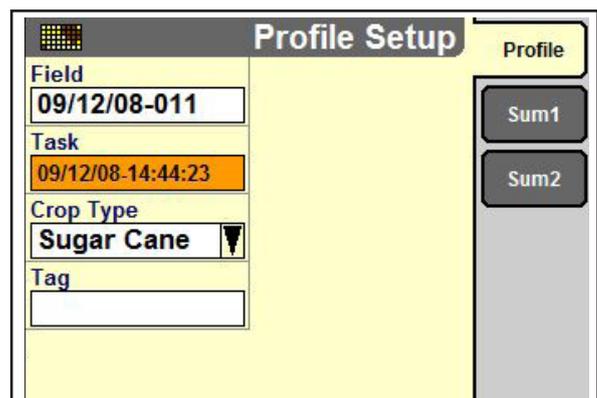


Figure 146

If you choose *Edit Name* the alphanumeric keyboard appears.

Use the arrows to highlight individual characters in the keyboard followed by the *Enter* key to edit the name.

When completed, highlight the *Enter* button in the keyboard with the arrows keys.

Click on the *Enter* key to save the name.

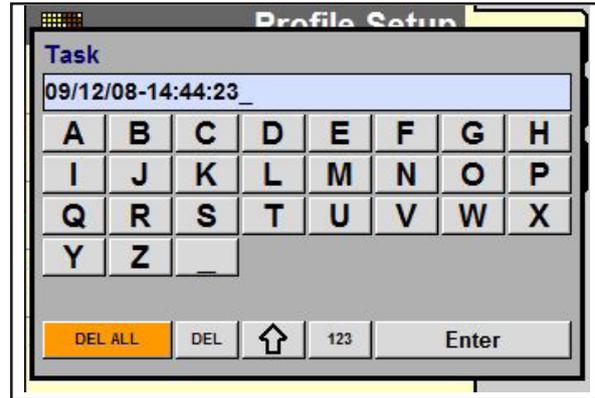


Figure 147

**Crop Type**

Crop type is associate to the task and, thus, to the field. The crop type can't be changed once the data was recorded for the selected task.

Highlight the *Crop Type* window with the arrows keys.

Click on the *Enter* key to select a harvest from the filtered list in the secondary window.

**IMPORTANT:** The harvest list content is controlled through the filter screen in the Data Management.

Highlight the necessary harvest with the arrows keys.

Click on the *Enter* key to save the setup.

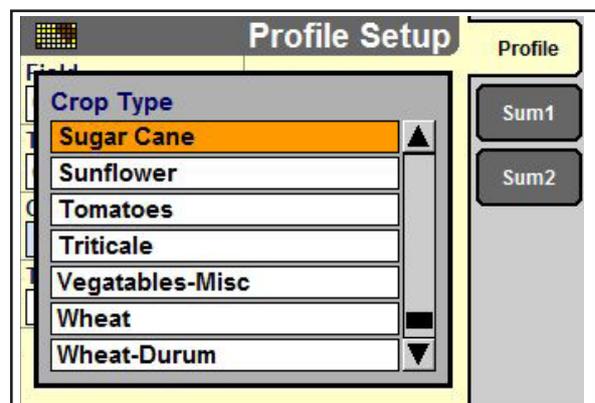


Figure 148

**Tag**

A tag acts, in the operation, as an electronic note to save other variables in the harvest process. The tags are optional. They can be useful to make revenue evaluations in the field, in fertilizers practices or in farming practices.

The tag is associated to a task. One tag only can be attributed to each task. A maximum of 20 tags can be created with one ID only associated to a single tag.

Highlight the *Tag* window with the arrows keys.

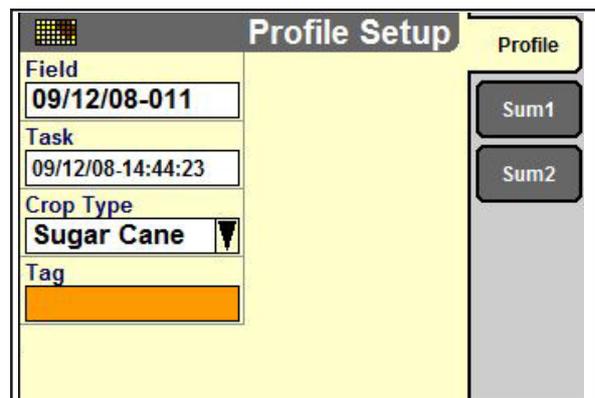


Figure 149

Click on the *Enter* key to access the secondary options window.

If no tag entry, the only option is *New*.

Then, the options are *Select*, *Edit Name* and *New*.

Use *Select* to choose the tag from the current list.

Use *Edit Name* to edit the tag name.

**NOTE:** The function *Edit Name* should not be used to create a new tag, because it does not change the exclusive ID for a single tag.

Use *New* to add the tag to the current list.

Use the arrows keys to highlight the desired option and, then, click on the *Enter* key.

Use *Select* to choose the desired label from the secondary window.

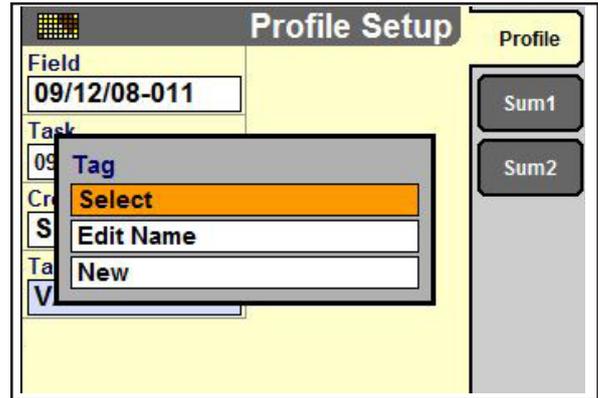


Figure 150

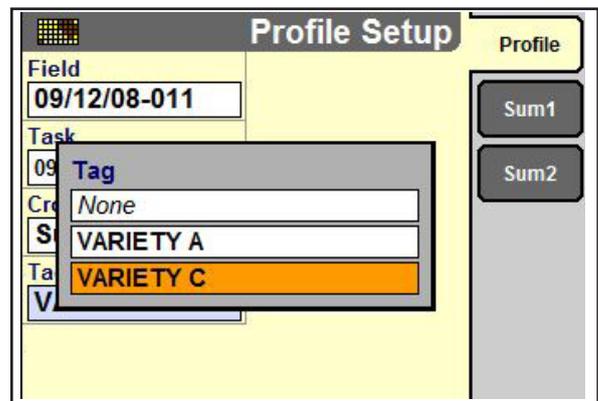


Figure 151

Use *Edit Name* to create tag name from the alphanumeric keyboard.

Use *New* to add a tag with the alphanumeric keyboard.

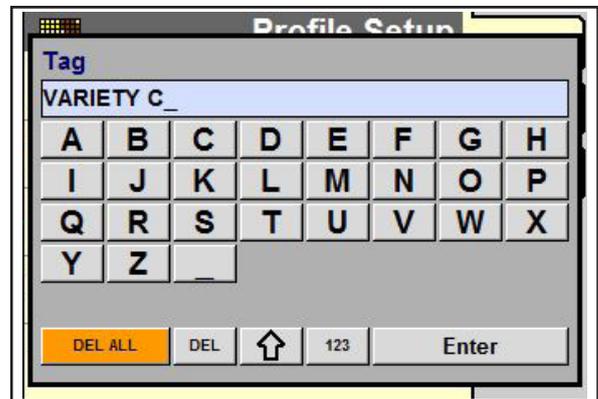


Figure 152

### Working condition, Operator and Operation

The individual farming applications determine if the windows for the Working condition, Operator and Operation are required or necessary. These windows are not part of the screen for the Profile in the Revenue. The windows can be added to any working screen by the operator or can appear on an exclusive screen on the vehicle.

**ADVANCED MODE**

The *Grower*, *Farm*, *Field*, *Task*, *Crop Type* and *Tag* are the blocks to build the advanced precision farming, being the primary filters for the production results view. Expect for the window on the label, these windows should be used whenever advanced precision is used in agriculture.

Except for the task, the information in the windows can be created in the display and be shared between vehicles. The information of the task is specific to the vehicle and can only be introduced into the display.

The selections in the windows on the Profile screen are the set of active data for which the production results are registered. The windows are grouped on Profile screens for operator's easy access. Any of the windows can be added to any working screen for operator's convenience.

The data set has a hierarchical structure:

For each grower there can be lots of farms. For each farm there can be lots of fields. For each field there can be lots of tasks. The task is the last level in which the data is recorded and, each task only has a crop type and a tag.

On the main screen, use the arrows keys to highlight the *Performance* icon.

Click on the *Enter* key to access the *Performance* screen.

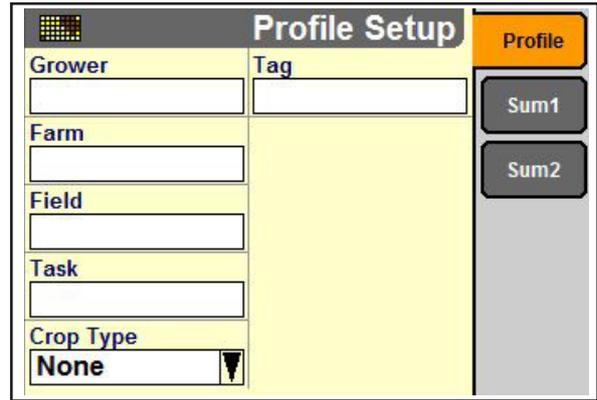


Figure 153

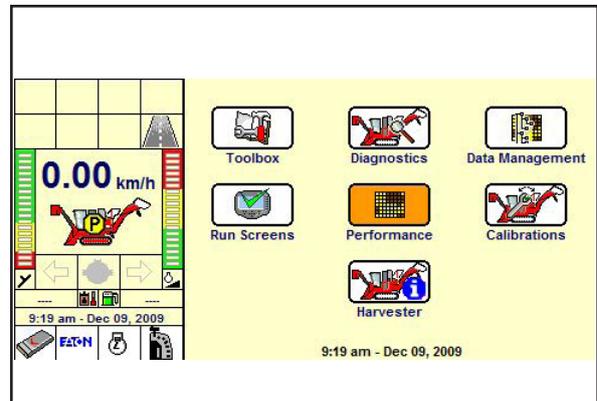


Figure 154

Click on the soft key of the *Profile* icon to show the *Profile* screen.

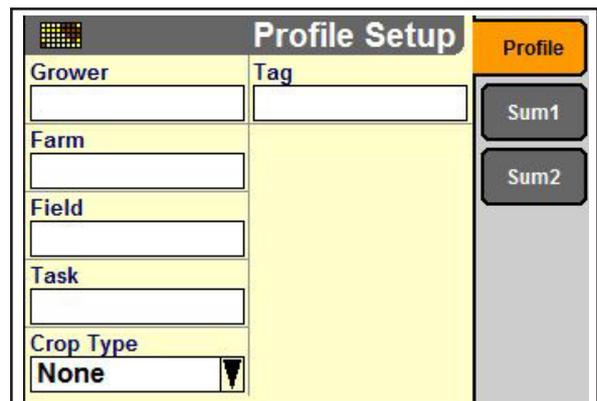


Figure 155

**Grower**

The data gathered on screen for their farming operations is organized by growers, farms, field, tasks and tags. 150 growers can be created and each one is associated a single ID.

A grower is an independent farming business.

To add, edit or create a grower, highlight the *Grower* window with the arrows keys.

Click on the *Enter* key to access the secondary options window.

If no grower entry, the only option is *New*.

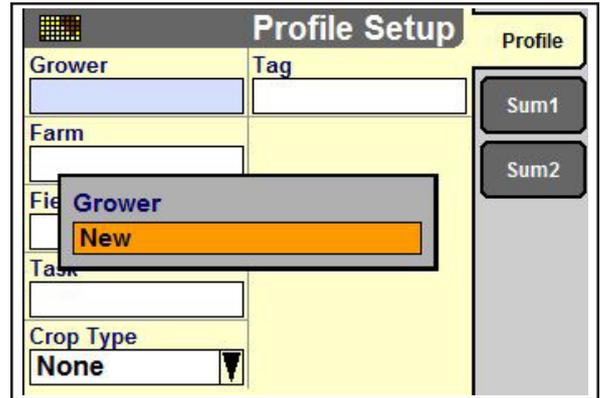


Figure 156

Then, the options are *Select*, *Edit Name* and *New*.

Use *Select* to gather a grower from the list defined by the operator.

Use *Edit Name* to change name.

**NOTE:** The function *Edit Name* should not be used to create a new grower, because it does not change the exclusive ID for a single grower.

Use *New* to add a grower of the current list.

Use the arrows keys to highlight the desired option and, then, click on the *Enter* key.

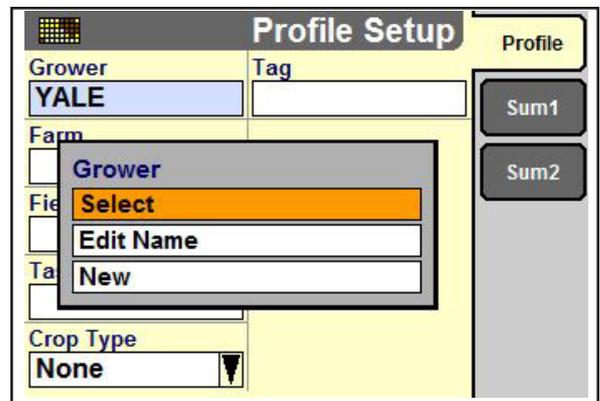


Figure 157

If you choose *Select* a window of secondary options is displayed.

Highlight the desired grower with the arrows keys.

Click on the *Enter* key to select the grower.

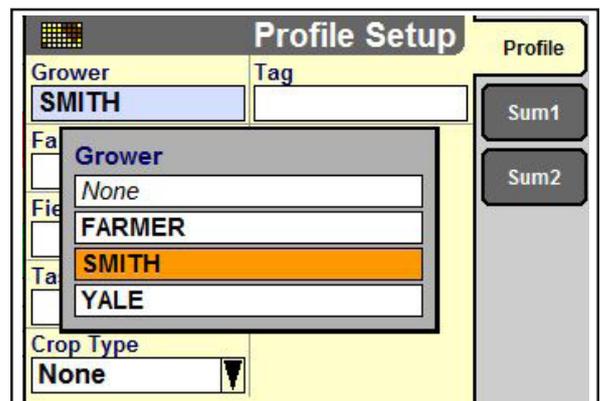


Figure 158

If you choose *Edit Name* or *New* the alphanumeric keyboard appears.

Use the arrows to highlight individual characters in the keyboard followed by the *Enter* key to create or edit the name.

When completed, highlight the *Enter* button in the keyboard with the arrows keys.

Click on the *Enter* key to save the name.

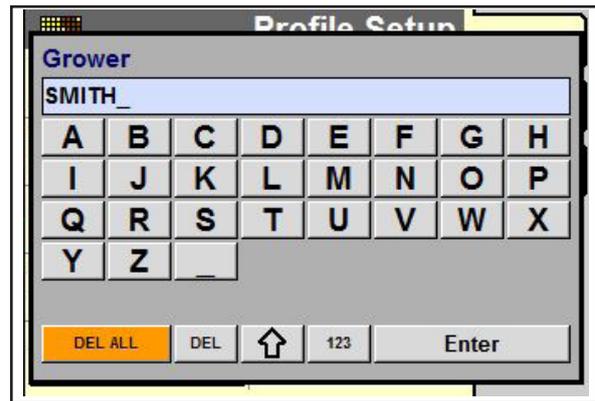


Figure 159

**Operative notes**

The farm and field windows are blank unless a farm and a field had previously been entered for this grower.

When the grower is changed, the *Farm* and *Field* windows show the last farm and the last field that the operator used for that grower.

If *None* is selected in the grower window, the *Farm* and *Field* windows are blank. The windows can't be edited until a grower is selected or created.

A message appears with instructions if such is tried.

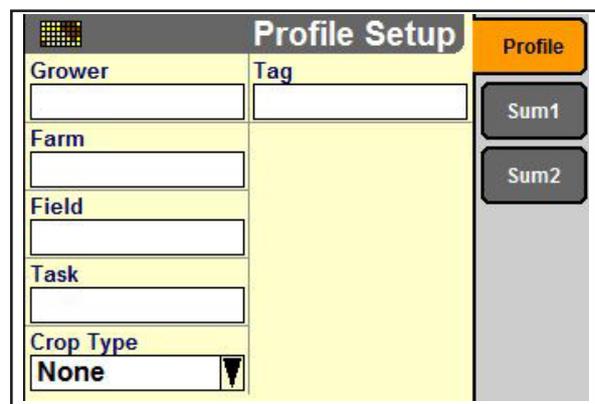


Figure 160

**Farm and Field**

For the display and computer software, a farm is a great geographical entity, composed by smaller entities called Field, all of them defined by GPS Coordinates. All the production tasks occur inside the field that, then, is part of a larger entity called Farm.

So, all the production tasks are linked to a field, and the field is linked to a farm.

A field is planted with a crop type this year. In the following year, the same field is planted with a different crop type. And, in zones where two crops can be typically grown at the same campaign, the same field can be planted with two different crop type in the same year.

The display and computer software treat field as a geographical container where the crop tasks and the production data are registered for this campaign or this year. These crop tasks and the results of their production have a life time relatively short when compared to the life time for a field or farm, whereby; *Field*, the *Task* and the *Crop Type* are independent.

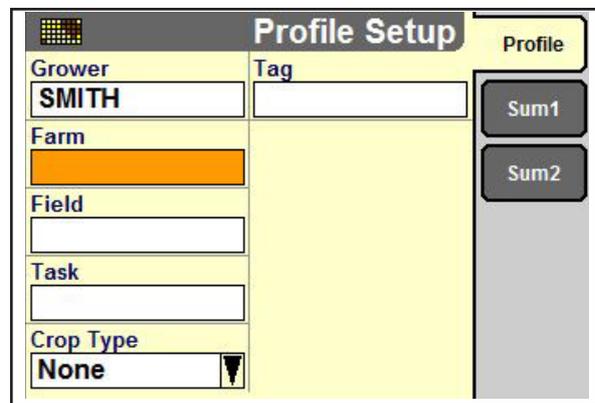


Figure 161

The windows options for a *Farm* or *Field* are the same that for a *Grower*.

Use *Select* to gather a farm from the list defined by the operator in crops:

1. Highlight *Select* with the arrows keys.
2. Click on the *Enter* key to access the secondary window with options for farms.
3. Highlight the necessary crop with the arrows keys.
4. Click on the *Enter* key to save the selection.

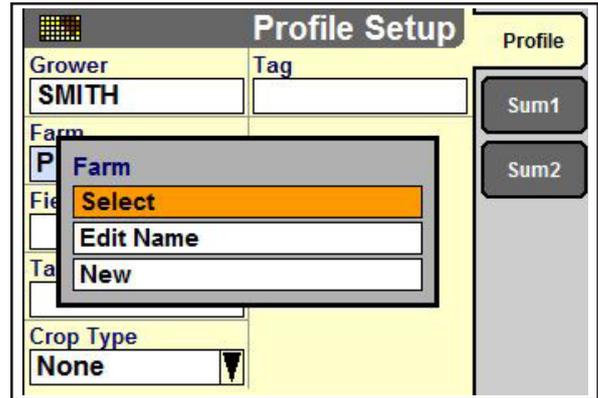


Figure 162

Use *Edit Name* to write correctly a name for a farm.

Use *New* to add a farm from the crop current list.

1. Use the arrows keys to highlight *Edit Name* or *New*.
2. Click on the *Enter* key to access the alphanumeric keyboard.
3. Use the arrows key to highlight individual characters in the keyboard followed by the *Enter* key to create or edit the name.
4. Highlight the *Enter* button in the keyboard with the arrows keys.
5. Click on the *Enter* key to save the name.

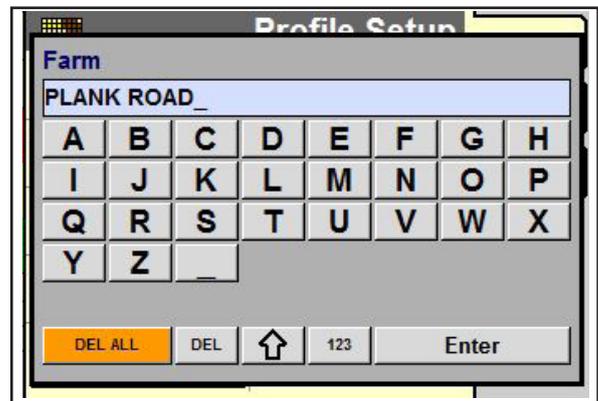


Figure 163

### Operative notes

A crop can't be created or selected unless *Grower* window is completed.

If this action is tried, a message will appear with instructions.

When a farm is changed, *Field* Window shows the last field that the operator used for that farm.

A farm can only be created or changed when the vehicle is not working - in other words, no data is being obtained.

A maximum of 150 crops can be created.

**Auto Field Select**

The optional window for a field adds an important selection that is not common neither to the grower nor to the farm: the *Auto Select*. As *Auto Select*, based on the current location of the vehicle in a field, the software researches all the limits for all the growers and farms in the external memory to locate the current field.

**NOTE:** *The vehicle should be equipped with an active GPS receiver, a limit should be created for the field so that the auto select function can work.*

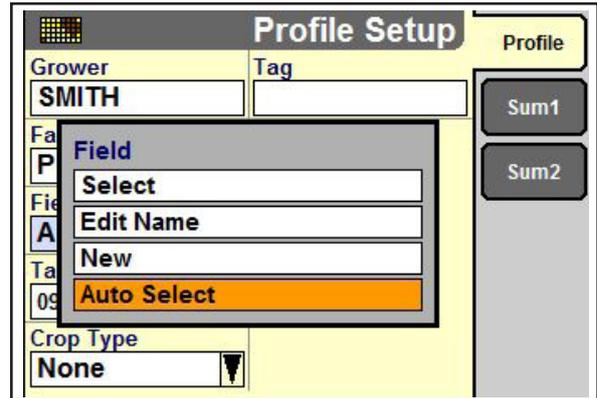


Figure 164

A brief message appears indicating that the research is underway.

Highlight the *Cancel* button, click on the *Enter* key if necessary, to erase the message and to return to other operations in the display.

When the field is located, a message appears to indicate that the current field is now active. The windows *Grower*, *Farm* and *Field* are automatically completed with the correct information for the field.

Highlight *OK* button, click on the *Enter* key to erase the message and to continue with the selection or creation of the task.

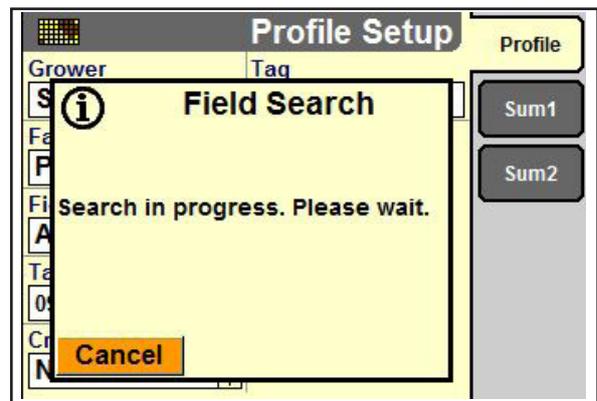


Figure 165

If the field can't be located, a message appears to indicate that the field should be selected manually by the operator.

This can occur if a limit does not exist in this field, whether the vehicle is not inside the limit of the field or the field is not in the external memory.

Highlight *OK* button, click on the *Enter* key to erase the message and to select a field manually.



Figure 166

The others selections in the options window for *Field* are identical to the *Grower* or *Farm*.

Use *Select* to capture a field from the field list defined by user:

1. Highlight *Select* with the arrows keys.
2. Click on the *Enter* key to access the secondary window with options for fields.
3. Use the arrows keys to highlight the necessary field.
4. Click on the *Enter* key to save the selection.

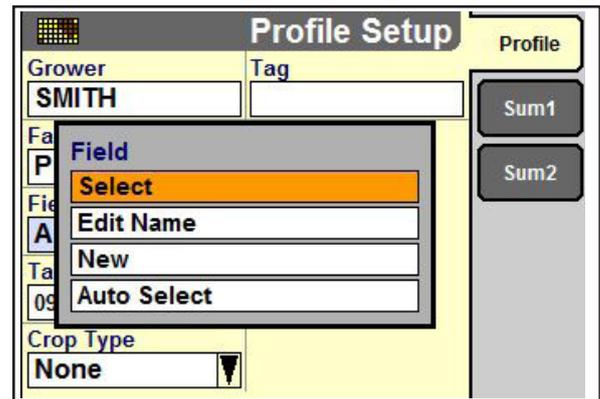


Figure 167

Use *Edit Name* to change a name for a field.

Use *New* to add a field to the field current list.

1. Use the arrows keys to highlight *Edit Name* or *New*.
2. Click on the *Enter* key to access the alphanumeric keyboard.
3. Use the arrows key to highlight individual characters in the keyboard followed by the *Enter* key to create or edit the name.
4. Highlight the *Enter* button in the keyboard with the arrows keys.
5. Click on the *Enter* key to save the name.

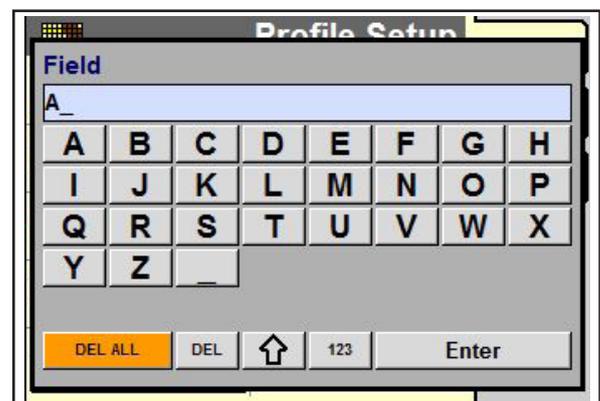


Figure 168

### Operative notes

A field can't be created or selected if *Farm* window is not completed.

If this action is tried, a message will appear with instructions.

A field can only be created or changed when the vehicle is not working - in other words, no data is being obtained.

A maximum of 350 fields can be created.

### Task

A task is the working revenue for a specific crop type harvest and in a certain field on a growers farm.

For example:

- When harvesting sugar cane an operator can make a certain mark (TAG) in field FD321 on Plank Road for grower AB Farms.

A new task is created automatically when a new field is created. The software creates the name of the task registers the day and the hour for this task - *yy/mm/dd-hh:mm:ss*.

yy = year

mm = month

dd = day

hh = hour

mm = minutes

ss = seconds

**NOTE:** The task name format is automatically generated and can't be changed, not influenced when selecting the Date format window on operator setup screen in the toolbox.

The operator can edit the name of the task if necessary. A new task can be created at any time.

Each task is limited to about 8 working hours (GPS data reserve system).

After that time period, a message appears to alert the operator that a new task was automatically created.

Then in some cases, depending on its duration, the work accomplished in the field can be composite for multiple tasks.

A maximum of 1200 tasks can be created.

Profile Setup		Profile
Grower	Tag	
SMITH		Sum1
Farm		Sum2
PLANK ROAD		
Field		
A		
Task		
09/12/09-09:26:50		
Crop Type		
None		

Figure 169

### Operative notes

All Summary and GPS data are recorded to the task level. For this information to be more useful:

- Only one tag should be associated to a task. When a different tag is necessary during the current harvest, a new task should be created. Change the task first and then change the tag.
- Only one operator should be associated to a task. When a different operator looks later at the current work, a new task should be created. Change the task first and then change the operator.
- Only one operation should be associated to a task. When a new operation is selected for the same field, a new task should be created. Change the task first and then change the operation.
- Only one vehicle should be associated to a task. The tasks should not be shared between vehicles. Highlight the *Task* window with the arrows keys.

Click on the *Enter* key to access the secondary options window.

If no task entry, the only option is *New*.

Then, the options are *Select*, *Edit Name* and *New*.

Use *Select* to choose the task of the current list.

Use *Edit Name* to edit the name for fault or change the name of a task.

Use *New* to add the task to the current list.

Use the arrows keys to highlight the desired option and, then, click on the *Enter* key.

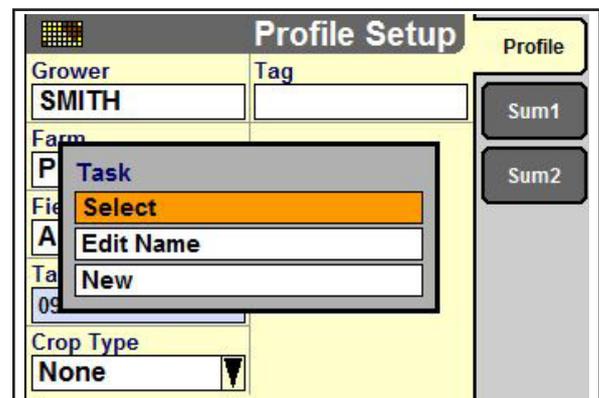


Figure 170

If you choose *Select* a window appears for secondary options of current tasks.

**NOTE:** The window with options can contain entries in italics. These entries can't be selected because they were created by different vehicles, in different farming applications or for a different sensor during the crop calibration.

Highlight the necessary task with the arrows keys.  
Click on the *Enter* key to select the task.

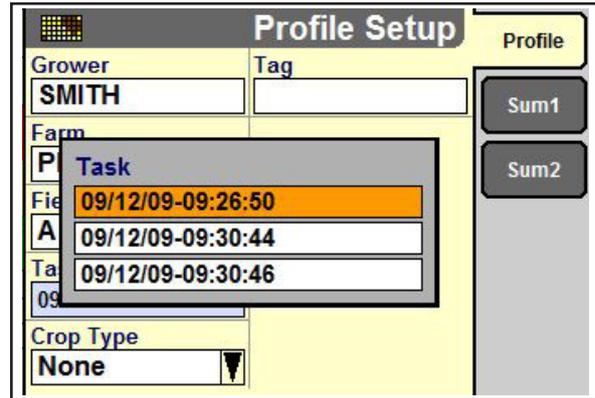


Figure 171

If you choose *New* the software automatically generates a new task name in this format: *yy/mm/dd-hh:mm:ss*.

The operator can accept this name for the task.

OR

The operator can edit the name:

1. Highlight again the *Task* window with the arrows keys.
2. Click on the *Enter* key to access the secondary options window.
3. Highlight *Edit Name* with the arrows keys.
4. Click on the *Enter* key to access the alphanumeric keyboard.

If you choose *Edit Name* the alphanumeric keyboard appears.

Use the arrows key to highlight individual characters in the keyboard followed by the *Enter* key to create or edit the name.

When finished, highlight the *Enter* button in the keyboard with the arrows keys.

Click on the *Enter* key to save the name.

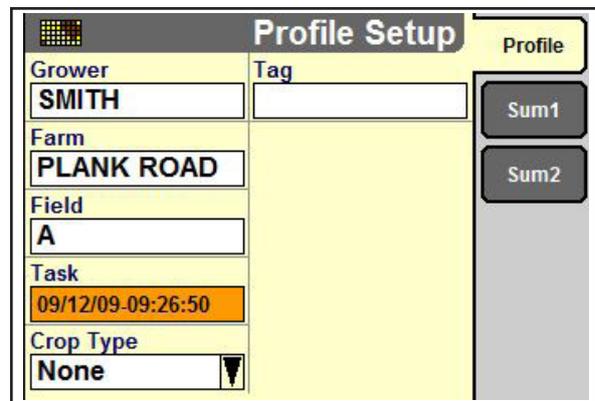


Figure 172



Figure 173

**Crop Type**

Crop type is linked to the task and, after to the field, farm and grower. The crop type can't be changed once the data was recorded for the task selected.

Highlight the *Crop Type* window with the arrows keys.

Click on the *Enter* key to select a harvest from the filtered list in the secondary window.

**IMPORTANT:** The harvest list content is controlled through the filter screen in the Data Management.

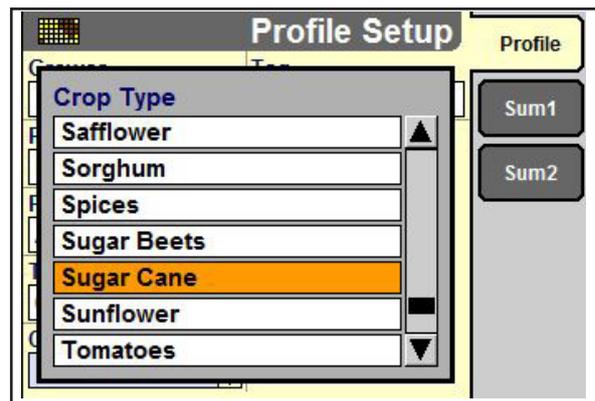


Figure 174

**Tag**

A tag acts as an electronic note for the grower or operator to save other variables in the crop production and to filter the production results of this variable. Can be useful to make revenue evaluations in the seeds variety ground, in fertilizers practices or in farming practices.

The tag is associated to the task. A tag can only be attributed to each task. A maximum of 20 tags can be created and only a single ID associated to each tag.

**NOTE:** First changes the task and, then, change the tag to assure that the data is kept for the previous and next tags.

When use many vehicles, the task must be created in a vehicle and, then, transferred through the external memory to the other vehicles. This ensures that the tasks are identified in an ID equivalent in all vehicles.

Highlight the *Tag* window with the arrows keys.

Click on the *Enter* key to access the secondary options window.

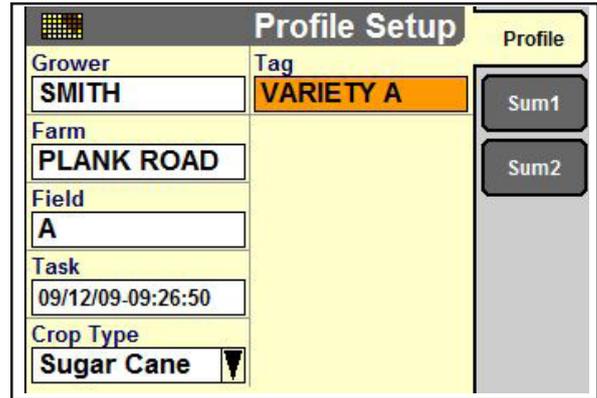


Figure 175

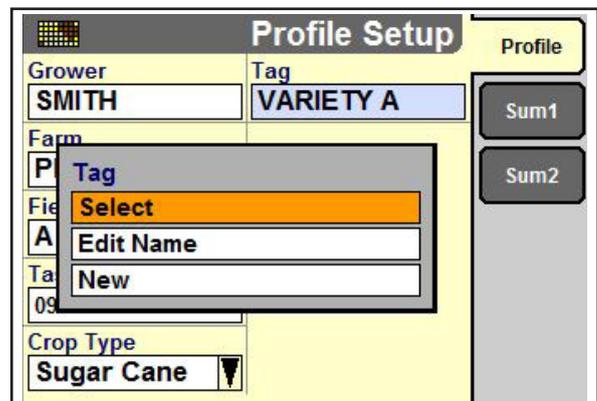


Figure 176

Use *Select* to choose the desired tag from the secondary window.

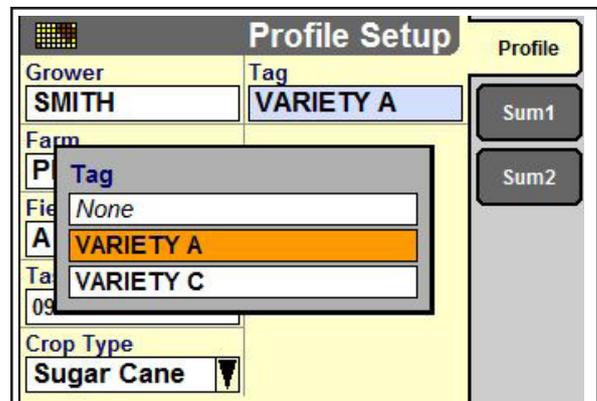


Figure 177

Use *Edit Name* to change name with the alphanumeric keyboard.

Use *New* to add a tag with the alphanumeric keyboard.

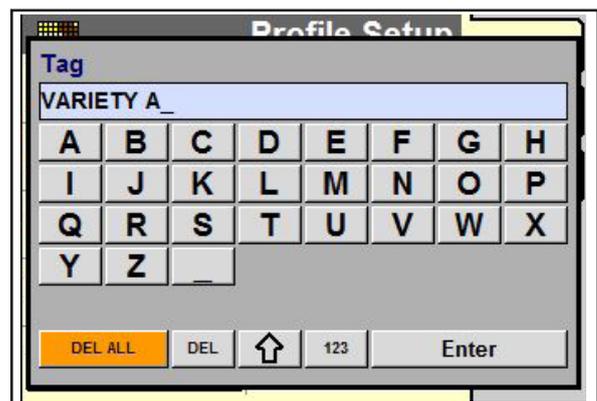


Figure 178

**Summary Data 1**

Select the option *SUM 1*.

In this screen the operator has access to the fuel consumption information during the harvest.

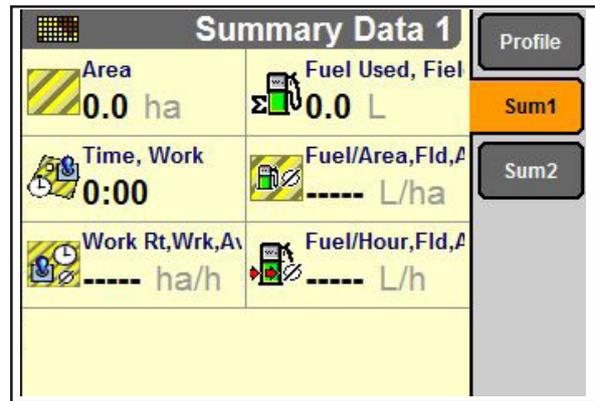


Figure 179

**Summary Data 2**

Select the option *SUM 2*.

In this screen the operator has access to the fuel consumption information during transport.

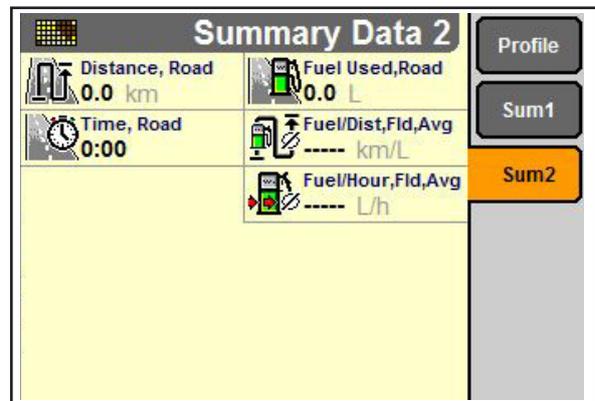


Figure 180

## DATA MANAGEMENT

This Chapter explains:

- How to import information from the computer or from an other vehicle
- How to filter information from crop type for all the applications
- How to erase the information from the display memory and from the USB external memory.

With AFS200 the information can be shared:

- Between farming applications
- Between vehicles of the same type (tractor with tractor)
- Between vehicles of different type (harvester with tractor and vice-versa)
- Between display and the computer software

The information change occurs when sharing the external memory between vehicles and / or the computer software. To get this, the display applications and the farming need a way to differentiate one vehicle from another. The information change through external memory does not apply in the precision farming Basic mode.

Each vehicle has already an exclusive identification number its product identification number (PIN) or the serial number. No other vehicle, be a harvester, a tractor or a sprayer, has the same PIN or serial number.

AFS200 identifies clearly the information originating for each vehicle using its PIN or serial number.

The window with the vehicle Name in the toolbox allows the operator to make an easier and representative name for the vehicle. This representative name for the vehicle, once created, will appear on the display and in the computer software.

**NOTE:** PIN or the vehicle serial number enters the installation of the software in the display. In the harvesters, the Harvester screen in the toolbox is the unique location where the serial number appears.

**NOTE:** The vehicle Name window can be placed on any working screen for operator convenience.

Any information that the grower needs to share with a vehicle is changed when inserting the external memory of a vehicle in the display of another vehicle.

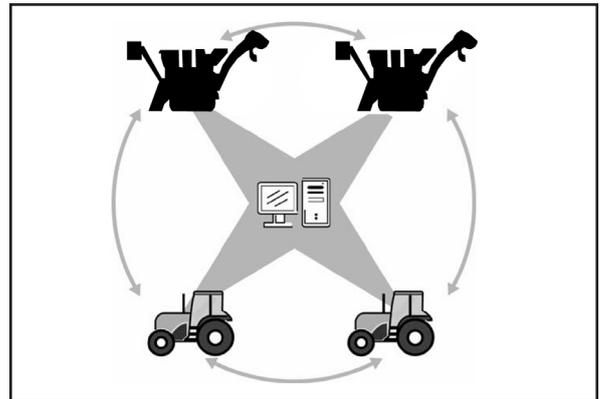


Figure 181

### Automatic share

Any information is automatically shared and does not need to be imported.

The structure Grower-Farm-Field can be shared only by inserting the external memory in the display at the same time that power to the monitor is turned on. For example, the vehicle A has the current structure Grower-Farm-Field for its farming business in its external memory, the vehicle B is new and doesn't have any structure. If the same external memory of Vehicle A is inserted in the Vehicle B display, the display reorganizes the new information which it doesn't have and loads it in the display memory.

**NOTE:** The information in the display memory is saved when the vehicle power supply is switched off.

When the external memory of the Vehicle B is inserted again in the display and the display is turned on, this registers the structure Grower-Farm-Field of the memory for his own external memory.

The types of data that are automatically shared between vehicles and/or the computer are:

- Grower
- Farm
- Field
- Operator
- Row lines (existing of the Auto Steering software)

**NOTE:** This is the method recommended to share this type of data, the ID's of the data remain identical in the vehicles. This simplifies substantially the data processing of the computer software.

### DATA IMPORT

On main screen, highlight the *Data Management* icon with the arrows keys. Click on the *Enter* key to access the data screens.

**IMPORTANT:** The external memory from which the data is going to be imported should be inserted before the monitor is turned on.

### Vehicle specific information

Not all information is shared between vehicles.

The vehicle specific calibrations are never shared. Any calibration that reflects the revenue specific properties of a vehicle can't be shared.

### Types of imported data

The data types analyzed in the Import Data in the next pages is the information that is not automatically shared between vehicles. In most cases, the data that is imported is added to the existing data in the display.

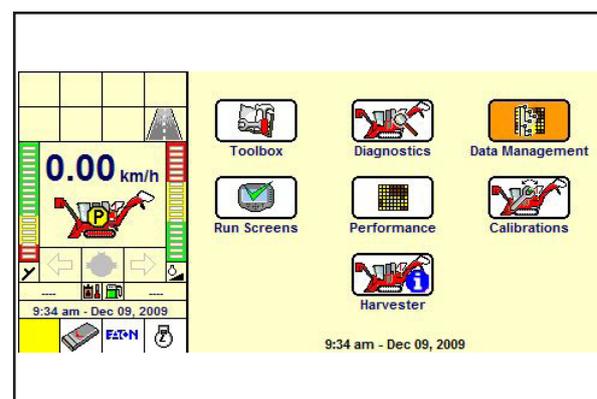


Figure 182

Click on the *Import* icon soft key in the navigation bar to introduce the import screen.

**NOTE:** The *Import* button remains disabled until the *Data Type* windows and *Vehicle Name* are completed.

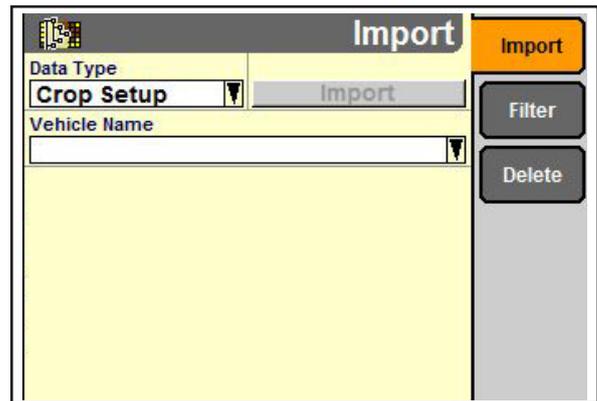


Figure 183

Highlight the *Data Type* window with the arrows keys.

Click on the *Enter* key to access the secondary window options.

The options that appear depend on the vehicle.

When it imports additional data that exceeds the maximum number allowed for the type of data, a message appears. To import additional data when the maximum number is reached, the current information in the display should be erased.

Highlight the desired selection with the arrows keys.

Click on the *Enter* key to save the selection.

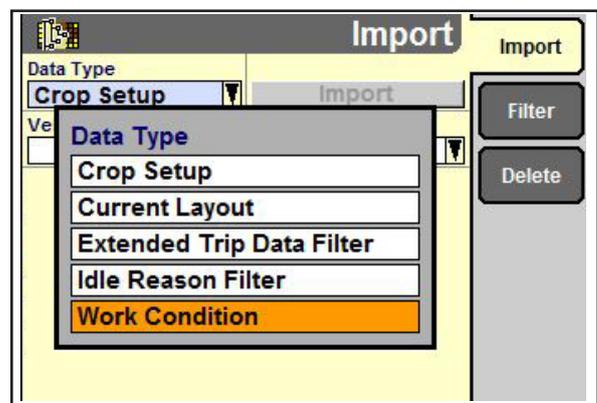


Figure 184

Highlight the *Vehicle Name* window with the arrows keys. Click on the *Enter* key to access the secondary options window.

Highlight the selected vehicle and click on the *Enter* key to record the selection.

**NOTE:** The current vehicle name never appears on the display: the current vehicle already has its own information. Only the other vehicles names appear.

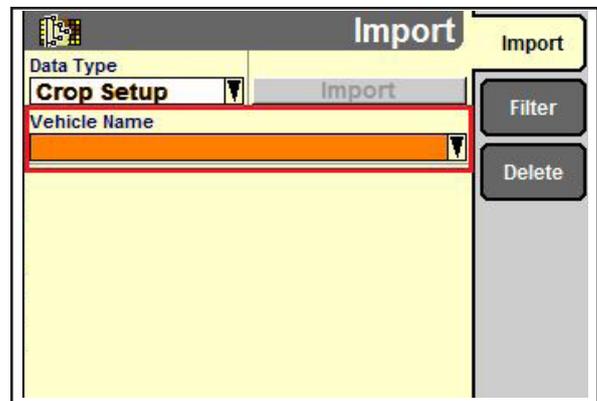


Figure 185

Highlight the *Import* button and, then, click on the *Enter* key to import the data selected.

A confirmation message appears.

Highlight the *Yes* button and, then, click on the *Enter* key to import the data selected.

Highlight the *No* button and, then, click on the *Enter* key to import the data selected.

Repeat this process to import the additional data types.

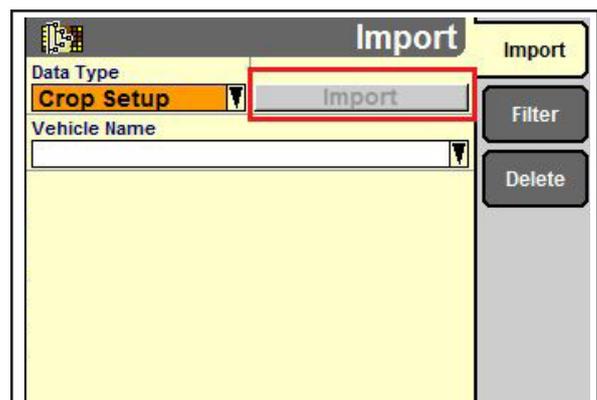


Figure 186

### Data filtering - Filter Crop List

In most farming operations the complete list of harvests is not necessary. The operator uses the filter screen to cancel the selection of the crop types that will not be used. The selection cancellation of a crop type without this filter removes crop types in all applications in the display, reducing the risk of selecting a wrong crop type.

The filtering list of the selected crops can be modified at any time, selecting or canceling the crop types as the farming operations change.

On the main screen, highlight the *Data Management* icon with the arrows keys. Click on the *Enter* key to access the data screens.

Click on the soft key of the *Filter* icon in the navigation bar to introduce the screen *Filter*.

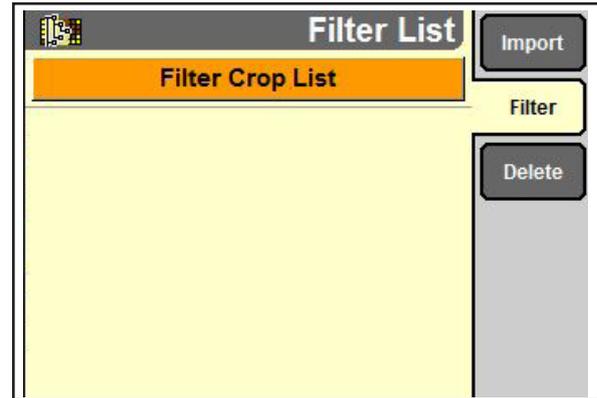


Figure 187

Highlight the *Filter* button the *Crops List* with the arrows keys.

The harvests list contains all the available crop types for the vehicle. Use this filter to limit crop types that appear on the crop types window for the ones that are used in your operation. This list can be changed at any time without affecting any of the recorded data.

**NOTE:** By default, are selected all crop types.

Click on the *Enter* key to access the window with options.

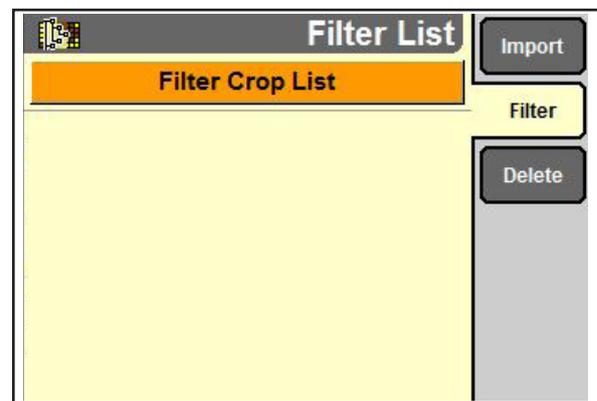


Figure 188

The crops selected in this list appear on the crop types window of the profile screen and on Working screens. If a crop is not selected from this list, it can't be selected in the crop type window.

**NOTE:** The selection list of the crop varies with the vehicle type - harvesters, tractors, etc.

Use the keys *More (+)* or *Less (-)* to go up or to lower the list.

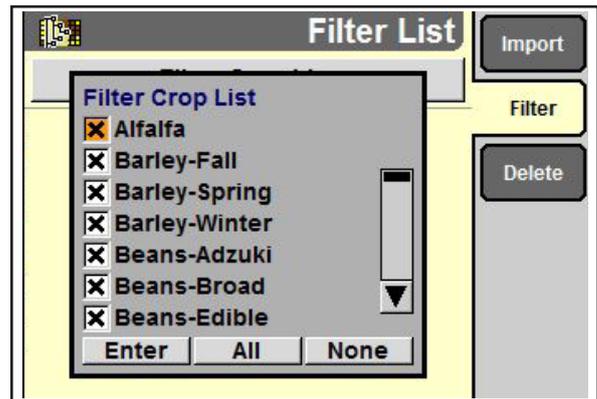


Figure 189

Highlight the box next to the crop name with the arrows keys and, then, click on the *Enter* key to select or to cancel the box, depending on its current state. A "X" indicates that the box is selected.

**NOTE:** The crop type names can't be edited.

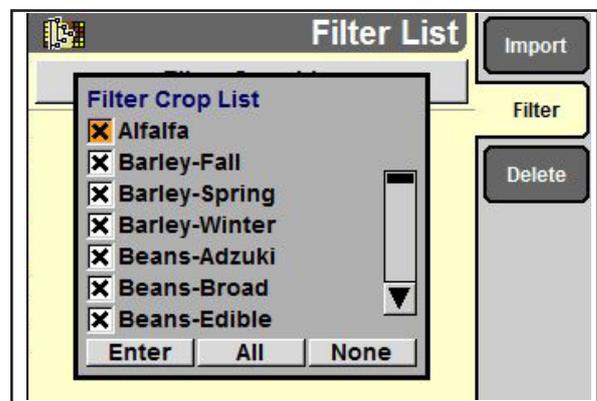


Figure 190

Or highlight the *None* button with the arrows keys and, then, click on the *Enter* key to cancel the selection of all the crops.

**IMPORTANT:** The *None* button only can be selected in the last page of the filtering list.

Proceed again to the list and select only the crops of interest for its farming business.

Highlight the *All* button with the arrows keys and, then, click on the *Enter* key to cancel the selection for all the crops.

**IMPORTANT:** The *All* button only can be selected in the last page of the filtering list.

When you are satisfied with the selected crops, highlight the *Enter* button with the arrows keys and, then, click on the *Enter* key to record the selection.

**IMPORTANT:** The *Enter* button can only be selected in the last page of the filtering list.



Figure 191

## DELETE DATA

Use the screen *Delete* to manage the information in the display memory and/or in the external memory.

In the Basic Mode, erase the data types - field, tag, working condition, etc. - erases the memory information in the display. This information can't be recovered after it has been erased.

The screens to erase are automatically adjusted to exclude data types (grower and farm, for example) which are not visible in the basic mode.

In the Advanced mode, delete the data types grower, farm, field, task, etc. - deletes the memory information in the display and on the external memory.

This information can't be recovered if it has not have been filed.

It is preferable that no information in the external memory is erased before it has been copied to your computer with the software. This practice avoids accidental erasing of the information that is needed.

There will be occasions where a "full card" message will try to create space by erasing recorded data so that you can continue to work.

Know what is to be erased and that a copy of the information has been archived before proceeding.

On main screen, highlight the data management icon with the arrows keys.

Click on the *Enter* key to access the data screens.

Click on the soft key of the *Delete* icon in the navigation bar to introduce the *Delete* screen.

**NOTE:** The Delete button and other windows are disabled and cancelled if the display memory or the external memory do not contain the type introduced in the Data Type window.

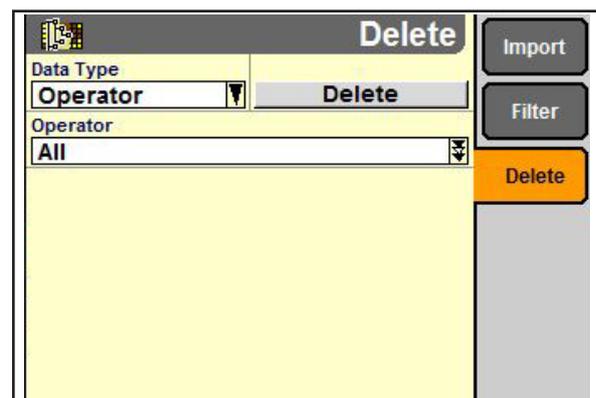


Figure 192

Highlight the *Data Type* window with the arrows keys.

Click on the *Enter* key to access the secondary options window.

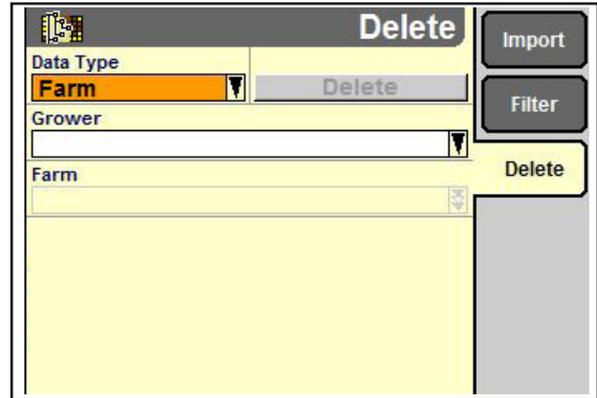


Figure 193

Use the keys *More (+)* or *Less (-)* to go up or to lower the window options.

Highlight the desired data with the arrows keys.

Click on the *Enter* key to select the data type.

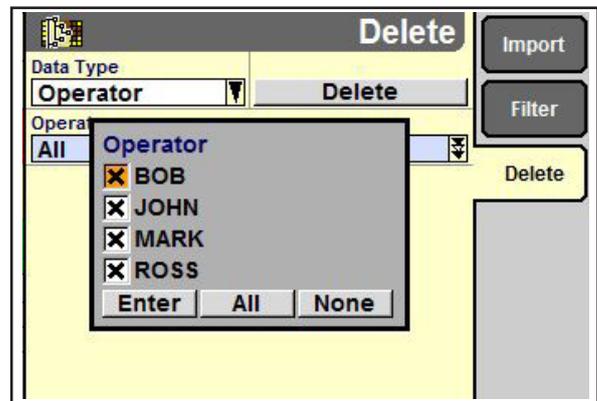


Figure 194

### Operator

Once each operator has an individual ID, do not erase an operator until you are certain this operator won't be used in the future. The recreation of the same operator later requires a new entry with a different ID which requires creater administration with the computer software.

The operators erase requires:

- The selection *Operator* in the *Data Type* window.
- The selection of *All* or of specific operators with *Operator* window.

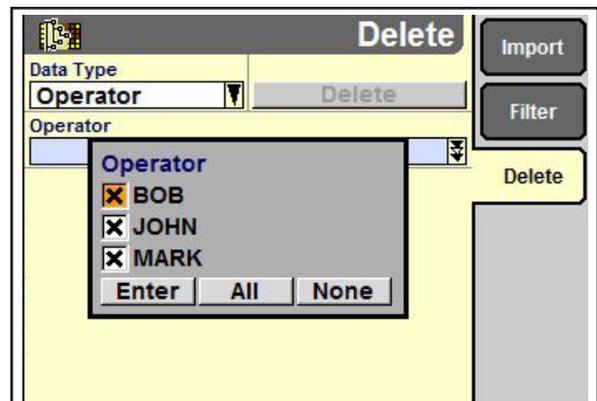


Figure 195

**DIAGNOSTICS**

The *Version* screens, *CAN Position* and *Fault Files* in *Diagnostics* are common in all applications of AFS200. The information in these screens can be required by the CaseIH Dealer personal to resolve a problem is your machine is not working correctly.

This Chapter explains:

- How to check the software versions
- How to check the Controller position
- How to probe fault codes.

**CHECK THE SOFTWARE VERSIONS**

On main screen, highlight the *Diagnostics* icon with the arrows keys.

Click on the *Enter* key to access the *Diagnostics* screens.

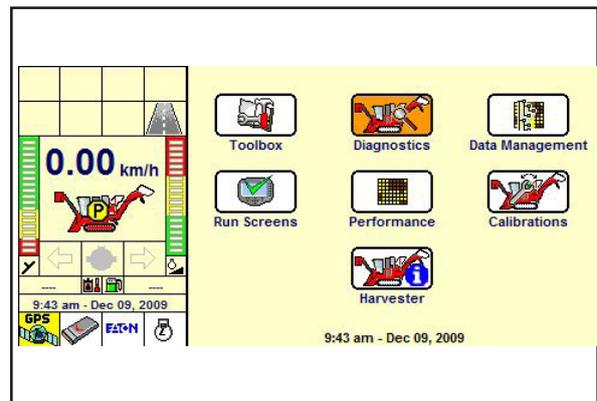


Figure 196

Click on the soft key of the *Version* icon in the navigation bar to introduce the *Version* screen.



Figure 197

The *Version* screen shows the part number (1) of 8 digits, the software (2) and the revision level (3) for each application that is available on the display.

The software includes the necessary display, the vehicle specification and the farming applications.

Only the farming applications for the vehicle in which the display is installed are introduced as active applications. If the display is installed in the harvester, only the appropriated harvester applications appear on the *Version* screen.



Figure 198

In the example, the working structure and BSP belong to the display. The larger harvesters are in the vehicle software. Precision Farm and Auto Steering are farming applications.



Figure 199

**CHECK CONTROLLER POSITION**

On main screen, highlight the *Diagnostics* icon with the arrows keys.

Click on the *Enter* key to access the *Diagnostics* screens.

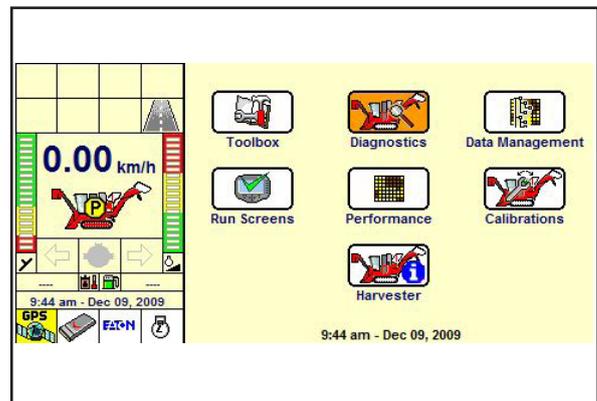


Figure 200

Click on the soft key of the *CAN* icon in the navigation bar to introduce the *CAN Position* screen.

The screen *CAN* reports the position and address of the source for each controller in CAN bus, including the controllers for the vehicle. This example shows GPS (receiver) and the controller Navigation II used in the Auto Steering.

The current position for each controller can be one of the five alternatives:

1. Online: The controller is usually working
2. Offline: The controller was detected, but there isn't any communication
3. Not detected: The controller is not detected in CAN bus
4. Degraded: The controller is working in a degraded state
5. Disabled: The controller is disabled and it is informing its deactivation condition

The vehicle determines if the serial number, hardware and software versions for the controller are communicated to the display.

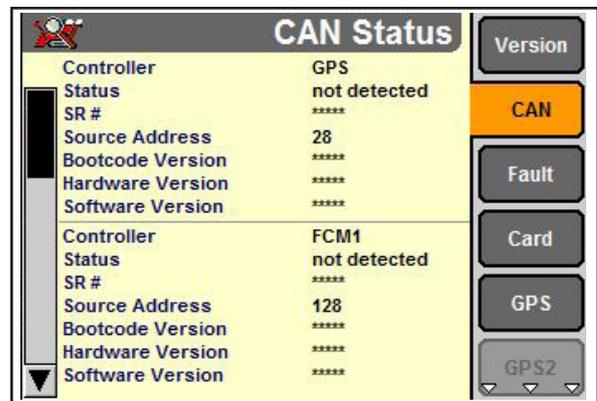


Figure 201

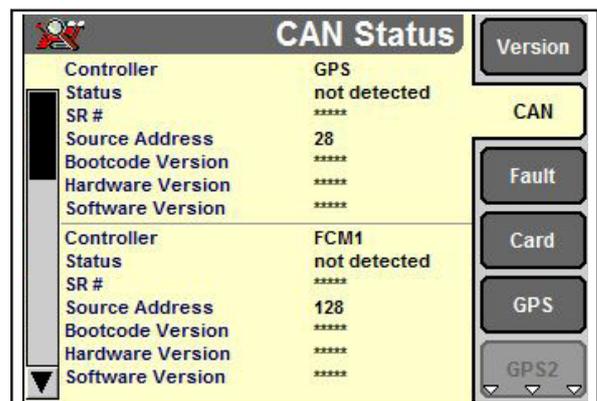


Figure 202

**INVESTIGATE FAULT CODES**

On main screen, highlight the *Diagnostics* icon with the arrows keys.

Click on the *Enter* key to access the *Diagnostics* screens.

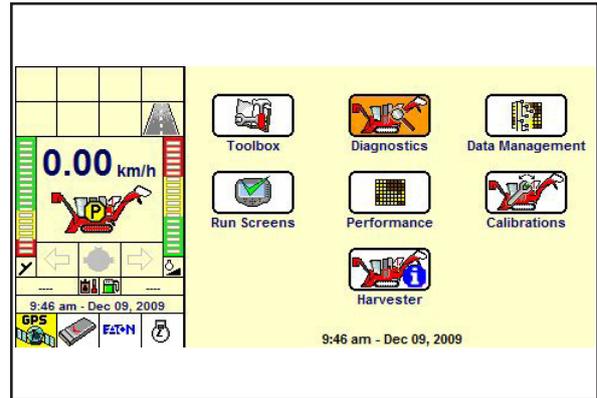


Figure 203

Click on the soft key for the *Fault* icon in the navigation bar to introduce the Fault archive screen.

By default, the fault file is introduced on the display. The fault codes display uses a prefix letter to identify the source of the information: for example,

- ”AG” for the Auto Guidance application
- ”PF” for the precision farming application (including the items related with the GPS receiver)
- ”NAV” for the Navigation controller for the Auto Steering.



Figure 204

To see the faults archive for other controllers, highlight the *Faults Archive* window with the arrows keys.

Click on the *Enter* key to access the secondary options window.

Highlight *Select List* with the arrows keys. Click on the *Enter* key to access the secondary options window.

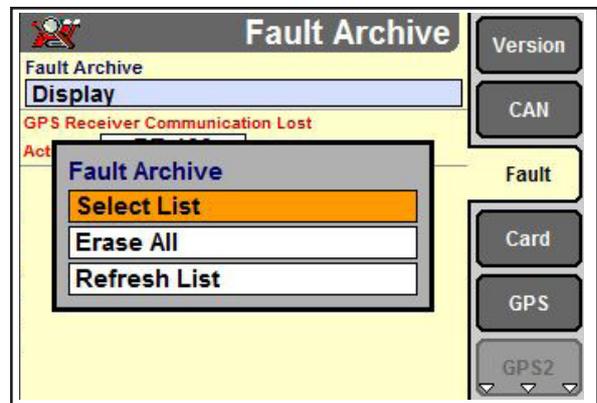


Figure 205

The window introduces fault archives that are available by controller name. If *Display* only appears no other controller in the vehicle has a fault to display.

If other controllers are listed, highlight the controller with the arrows keys and, then, click on the *Enter* key to see this archive.

The file for the controller is displayed on the screen.



Figure 206

For each fault the day and the hour appear, with the most recent faults appearing first.

Multiple occurrences of the same fault are considered in a code only with multiple “counting”. The faults are stored to record the number of occurrences in the past to help diagnose a current problem.

**NOTE:** *If all the faults codes cannot be visualized in a unique screen, a running bar will appear on the screen to show the faults file, if necessary.*

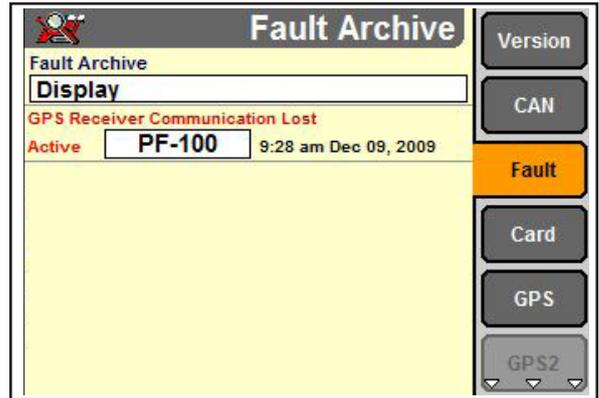


Figure 207

The text color of the fault on the file screen reflects your situation: red for activated, green for passed faults that are not already active or grayish (disabled) for faults checked and ignored. The operator can determine the situation by answering a secondary message.

Selecting **OK** button in the secondary message activates the fault detection for the problem.

The secondary message will reappear until the problem is resolved. The activated faults codes are red.

Selecting **Ignore** button in the secondary message deactivates the fault detection for the problem.

The fault condition remains but does not return as messages in the display until it is turned off and turned on again or until the situation is changed manually. The ignored or disabled faults codes are grayish.

If a fault condition is corrected - resolved by itself or has been resolved by the operator, the fault code remains idle and its color is green.



Figure 208

To change the fault situation, highlight the fault individual window with the arrows keys.

Click on the **Enter** key to access the secondary options window.



Figure 209

Highlight *Activate* and, then, click on the *Enter* key to change the fault situation from ignored to activated.

Highlight *Ignore* and, then, click on the *Enter* key to change the fault situation from activated to ignored.

**NOTE:** The option in the Fault Input window changes when the fault situation selected.

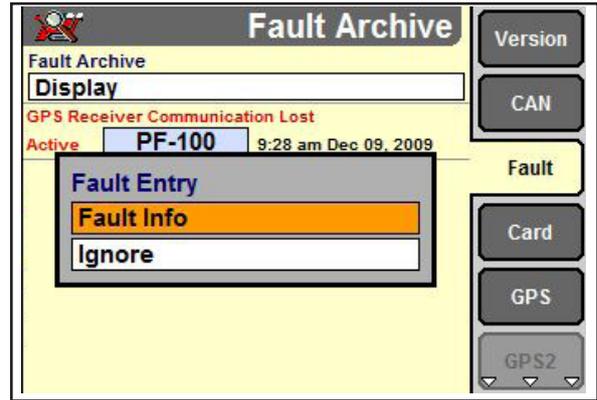


Figure 210

To see more information in a fault:

1. Highlight the individual window for the fault with the arrows keys
2. Click on the *Enter* key to access the secondary options window.
3. Highlight *Fault Info* with the arrows keys.
4. Click on the *Enter* key to access the Information window.

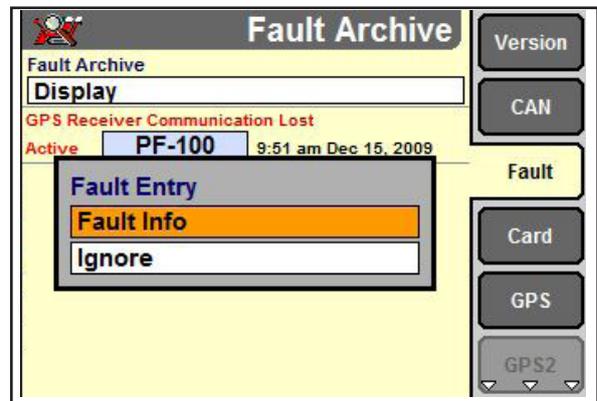


Figure 211

The information window contains:

- The fault title
- The fault number
- The consultive message.

Click on the *Less (-)* key to lower the page to obtain the remaining information.

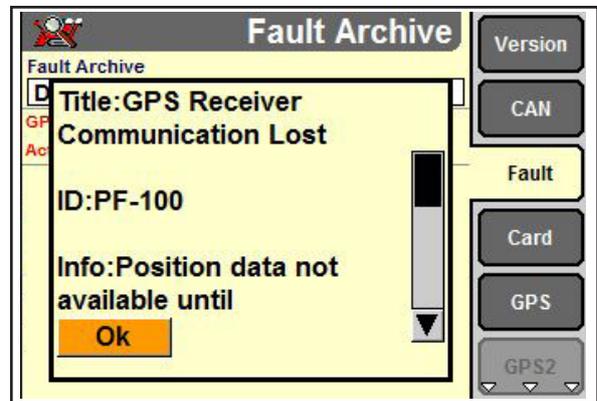


Figure 212

The information continues:

- The occurrence number of the same fault
- The last occurrence date and hour.

Click on the *Less (-)* key to lower the page to obtain the remaining information.

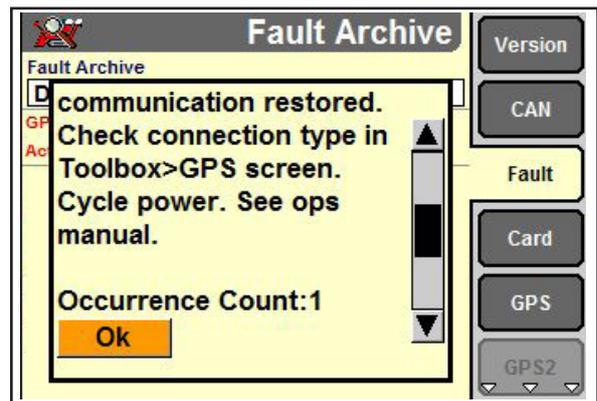


Figure 213

The information continues:

- The hour and date when the fault was erased the last time.

Click on the *Enter* key with the OK button to exit the information window.



Figure 214

### Erase the fault from precision farming

To erase all faults in a selected file.

1. Change the *Faults Archive* window to introduce the desired controller
2. Click on the *Enter* key to introduce the secondary options window.
3. Highlight *Erase All* in the *Faults Archive* window
4. Click on the *Enter* key to erase the faults archive for the selected controller.

**NOTE:** The faults with the prefix "AG" and "NAV" can only be deleted with the Delete screen in the Data Management.

**IMPORTANT:** Only the inactive faults (green) can be deleted.

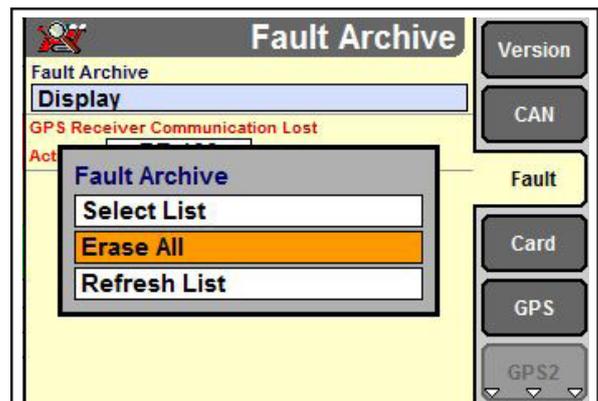


Figure 215

### Refresh the faults file

To refresh the selected file screen display:

1. Change the *Faults Archive* window to introduce the desired controller
2. Click on the *Enter* key to introduce the secondary options window.
3. Highlight *Refresh List* in the *Faults Archive* window
4. Click on the *Enter* key to restore screen display for the selected controller.



Figure 216

**GPS AND EXTERNAL MEMORY STATUS**

This Chapter informs the Precision Farming components and explains:

- The GPS and GPS RDI (Receiver Diagnostic Interface) status key in Diagnostics
- The screen Card status in Diagnostics.

**GPS STATUS**

The correction type(s) activated in the GPS receiver determines the content of the GPS status screen. For example, the Regulation HP/XP window is only present when the receiver is activated for this correction type.

The GPS status screen contains multiple report windows:

- To the GPS receiver and signal state
- To that vehicle status and initial phase
- To the subscription situation, if applicable.

The screens are grouped in the GPS status screen for operator’s easy access. Most windows can be added to any Working screen for operator’s convenience, with status for subscriptions and to restore HP/XP as the exceptions.

On main screen, highlight the *Diagnostics* icon with the arrows keys.

Click on the *Enter* key to access the Diagnostics screens.

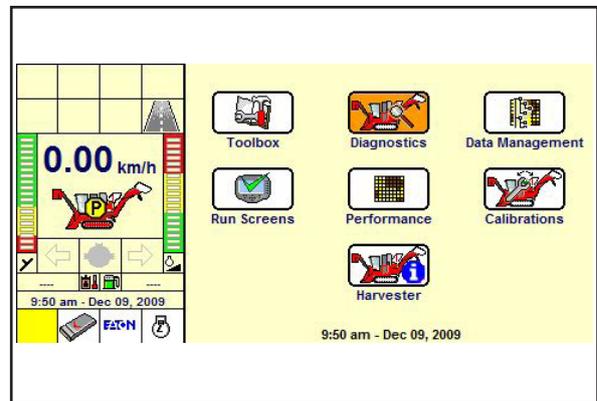


Figure 217

Click on the soft key for the *GPS* icon in the navigation bar to present the *GPS Status*.

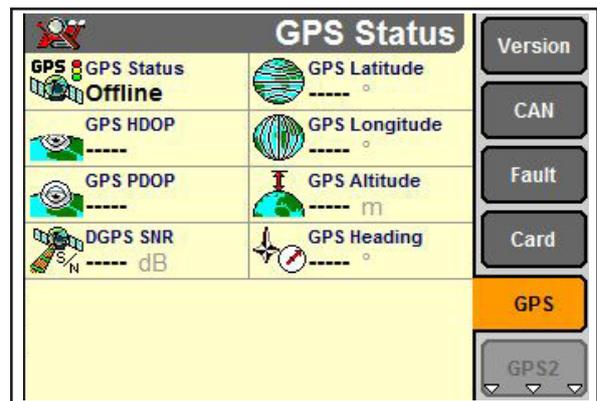


Figure 218

**(1) GPS Altitude**

*Tag application: GPS Altitude*

The *GPS Altitude* window reports the position in real time of the vehicle as elevation above sea level. The value is replaced in meters or feet, depending on the units of measure selected.

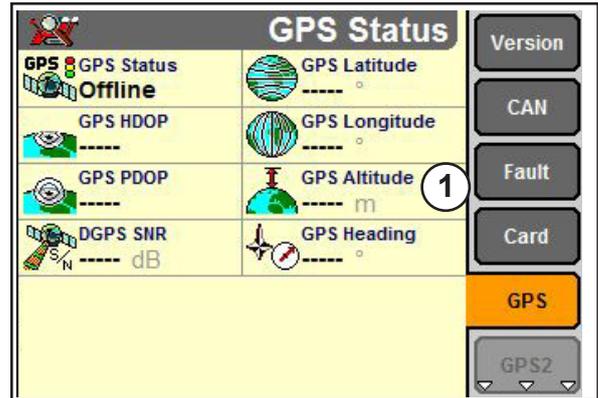


Figure 219

**(2) GPS HDOP**

*Tag application: GPS HDOP*

The *GPS HDOP* window for the dilution of the horizontal status (GPS PDOP) reports the GPS location signal quality in the vehicle. horizontal DOP indicates if an object in a horizontal plan between vehicle and the correction message source is a problem. (The object could be a grove, an elevation in the ground or mountains). In general, any value below 7 offers good results for working.

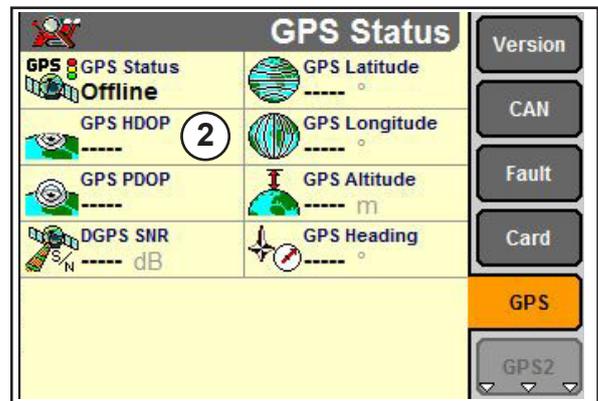


Figure 220

**(3) GPS heading**

*Tag application: GPS Heading*

The *GPS Heading* window reports the vehicles initial phase in degrees, in the 360° of direction of possible motion: 0° indicates the North, 90° indicates the East, 180° indicates the South, 270° indicates the West.

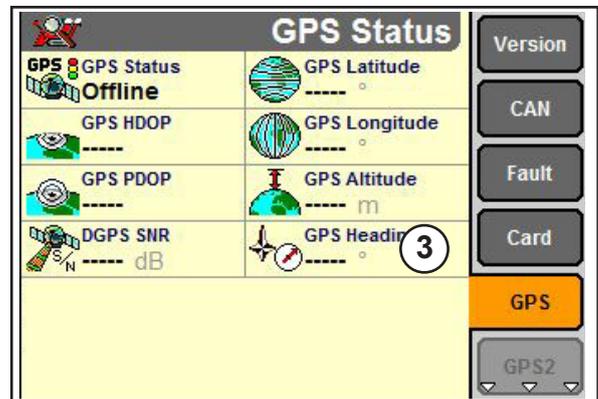


Figure 221

**(4) GPS Latitude**

*Tag application: GPS Latitude*

The *GPS Latitude* window reports the position in real time for the vehicle in angular distance North or South of the measured equator to 90°.

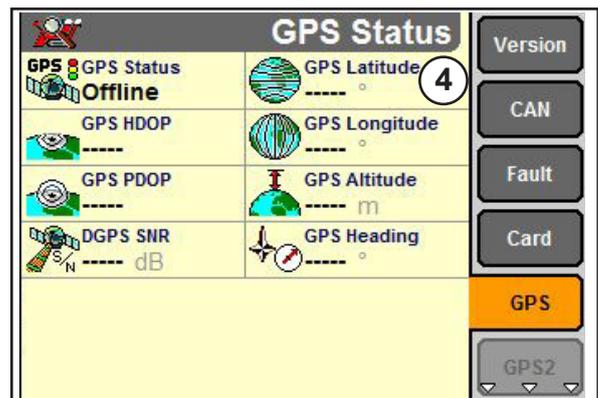


Figure 222

**(5) GPS Longitude**

*Tag application: GPS Longitude*

The *GPS Longitude* window reports the position in real time of the vehicle, in angular distance and expresses in degrees, in a reference circle from meridian zero.

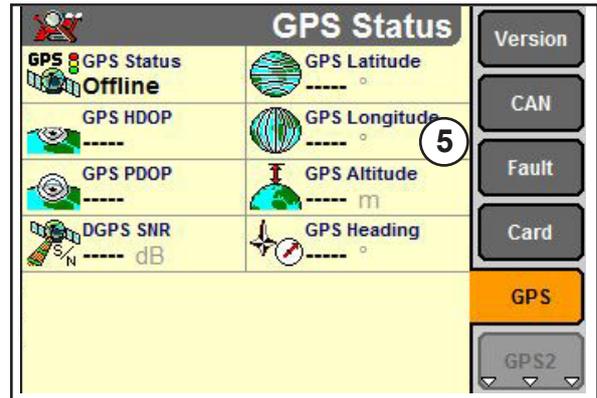


Figure 223

**(6) GPS PDOP**

*Tag application: GPS PDOP*

The *GPS PDOP* window of the status dilution reports the quality of the location GPS signal in the vehicle. The DOP status offers the best panoramic, once that reflects the geometry of the satellites above of the vehicle. A low PDOP means that the satellites status is good, being expected a good precision status. In general, any value below 7 offers good results of working.

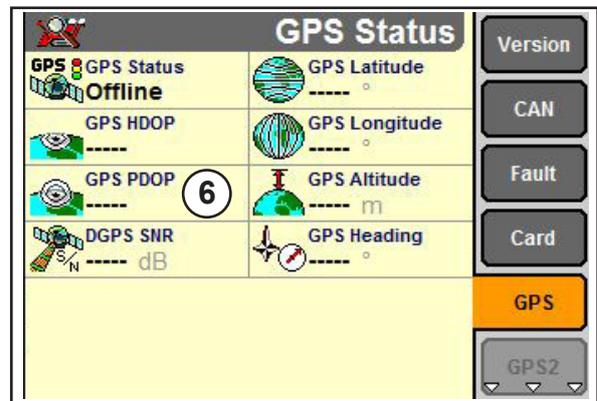


Figure 224

**Card Status**

On main screen, highlight the *Diagnostics* icon with the arrows keys.

Click on the *Enter* key to access the *Diagnostics* screens.

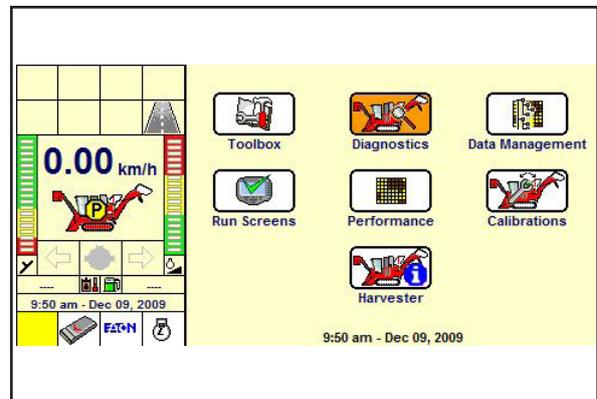


Figure 225

Click on the soft key of the *Card* icon in the navigation bar to introduce the *Card Status* screen.

Using the *Card Status* screen, the operator can determine if the current external memory is sufficient for the work planned for that day or will be necessary an additional card. The bar graph introduces the total storage available and the percentage used in the card installed.

The use windows of the *Grower*, *Farm*, *Field* and *Task* show both used storage as the remaining for each type. Each external memory can contain:

- 150 growers,
- 150 farms,
- 350 fields,
- and 1200 tasks.

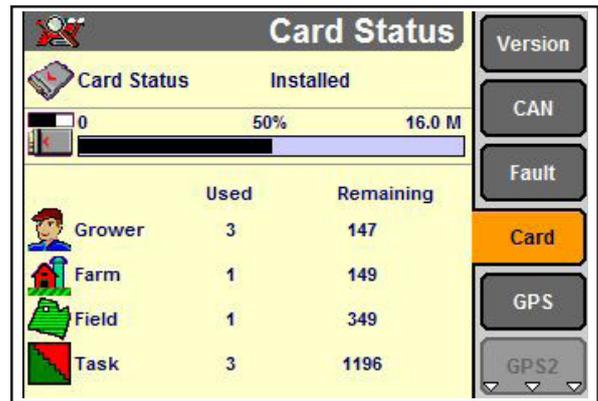


Figure 226

## DIAGNOSTICS

*DIAGNOSTICS > DIAG*

In this section is possible the operator arrive if the machine commands of are operating making it easier thus in a failure preanalysis.

### To access

Highlight the *Diag* guide.

Press *Enter*.

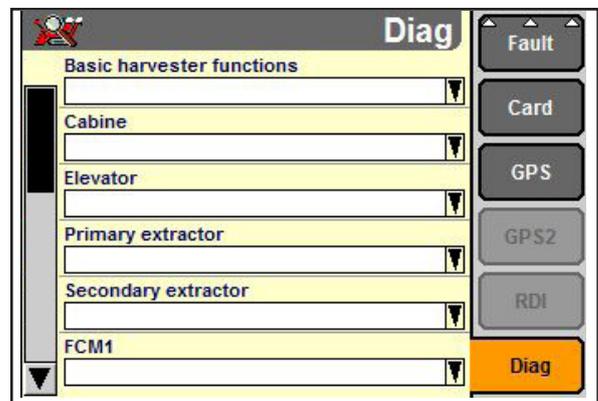


Figure 227

Highlight the option to test, as basecutter height for example.

Press *Enter*.

And without activating the selected command, note if the machine accomplishes the task chosen in the monitor.

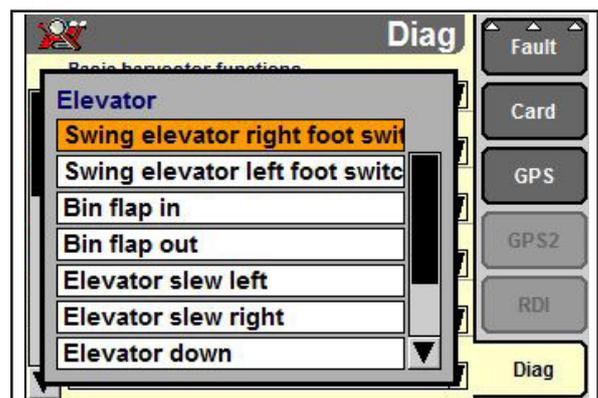


Figure 228

### HARVESTER

In this section the operator access the machine implements information.

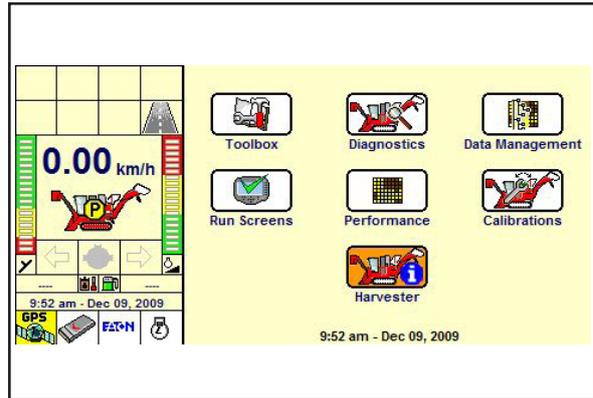


Figure 229

### Engine

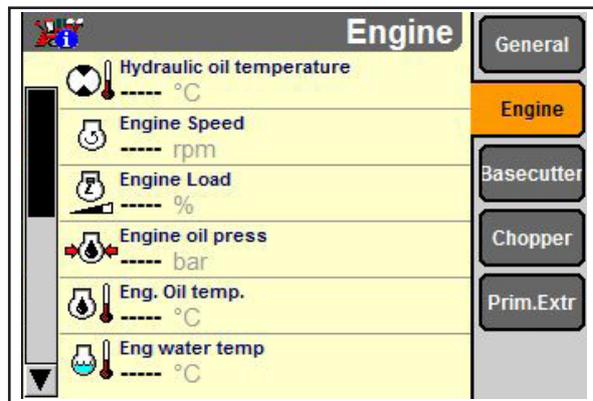


Figure 230

### General

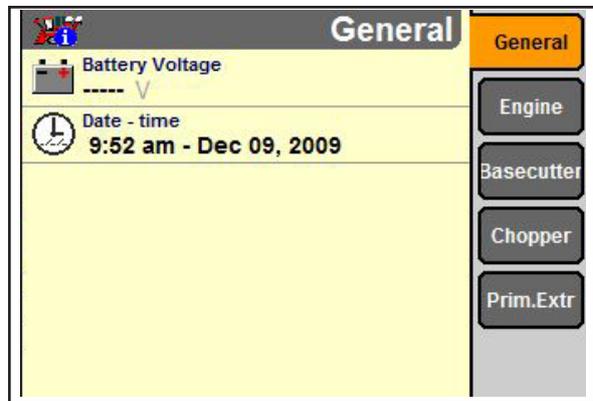


Figure 231

### Primary Extractor

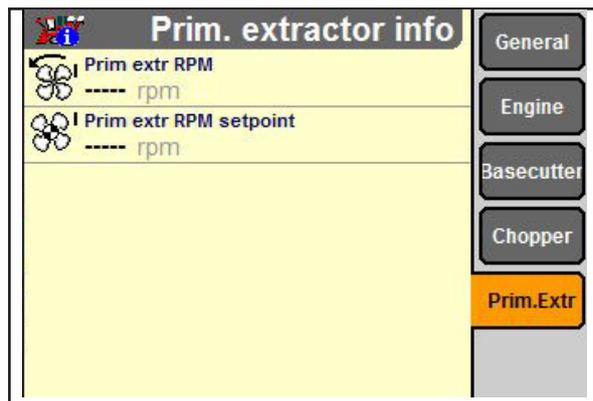


Figure 232

Basecutter

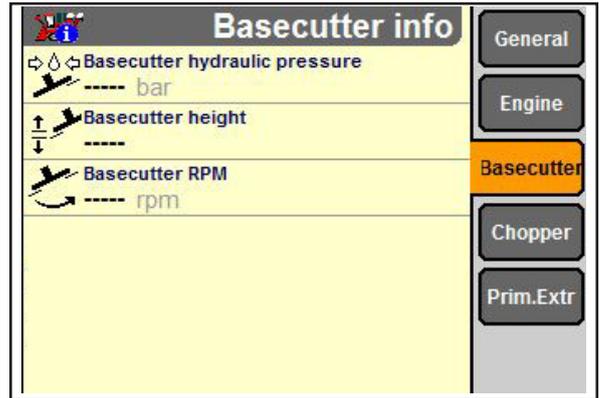


Figure 233

Chopper

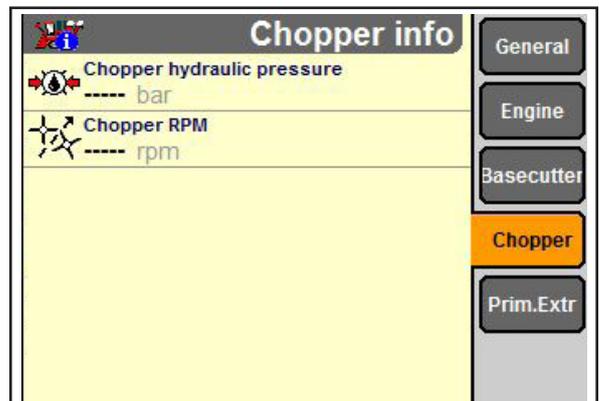


Figure 234

RUN SCREEN

Here shows to the operator the information that defined in the toolbox section.

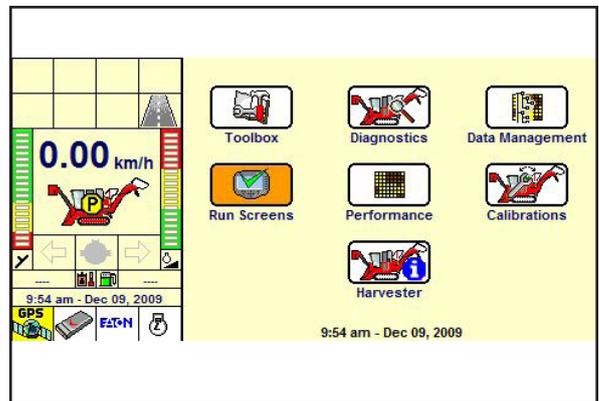


Figure 235

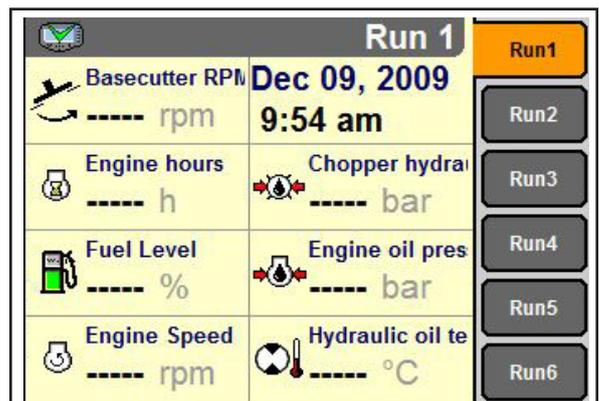


Figure 236

## TILTING THE CABIN

The harvester cab is able to be tilted to the right. This allows to access to the engine box and other functions under the cab.

To tilt the cabin, first remove the lynch pins (1) and lower the safety latches on the LH cab mounts (cab mounts can be accessed via the rubber skirt (2) around the lower cab).

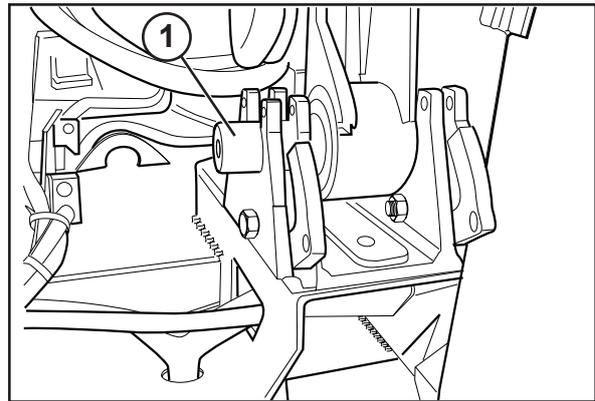


Figure 249

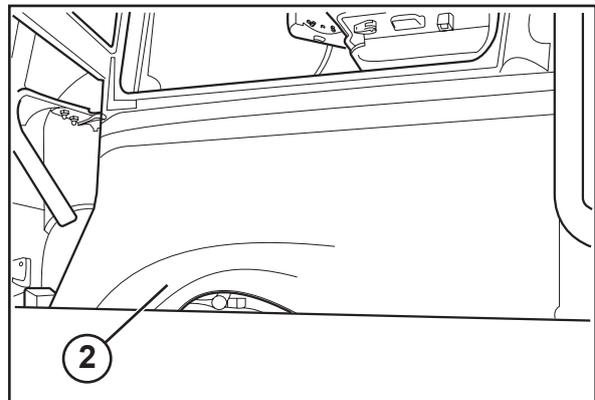


Figure 250

After the lifting the rubber skirt, removing the pins, and releasing the keepers, the lever should be inserted in the jack located under the cab.

The cabin has to be raised and lowered by jacking the handle.

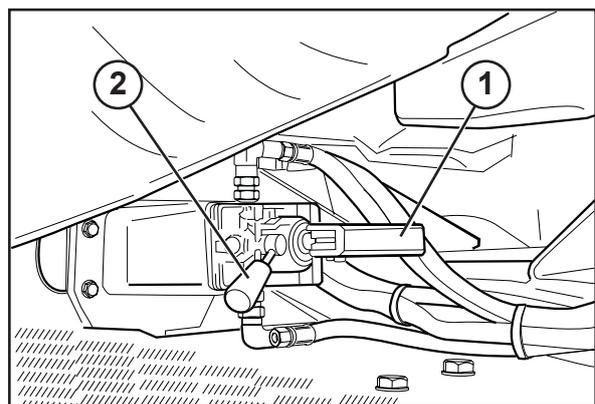


Figure 251

1 - Insert location of the lever for raise/ lower cab;  
2 - Valve lever in the lower position.

To raise the cab, move the valve lever (1) to the up position and operate the lever.

To lower the cab, move the valve lever (1) to the lower position and operate the lever.

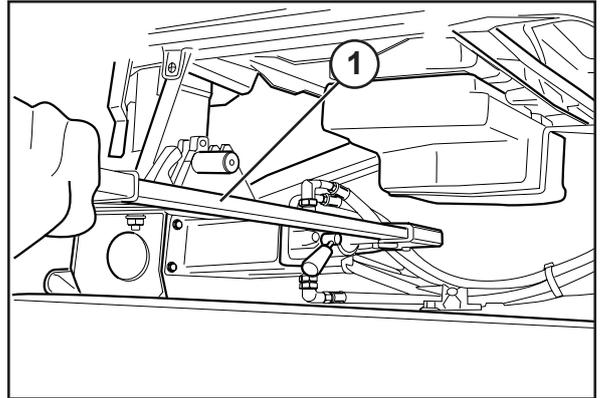


Figure 252

Cab raising.

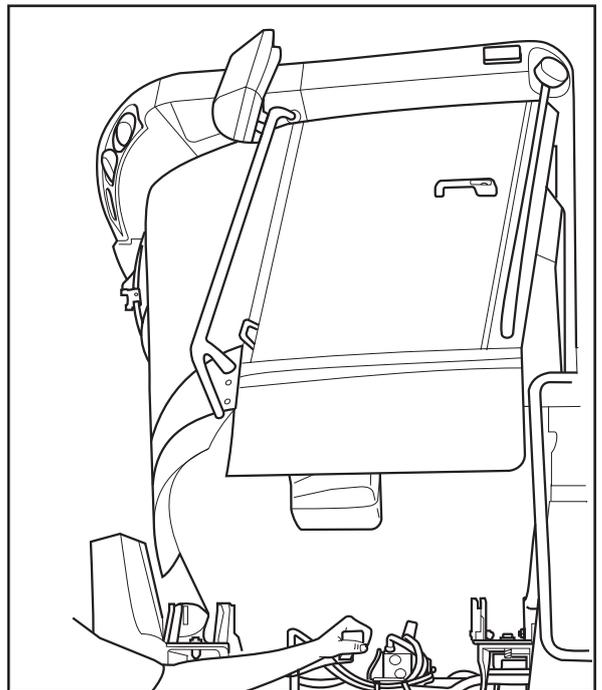


Figure 253

With the cab tilted is possible to access the engine box and also the functions under the cab.

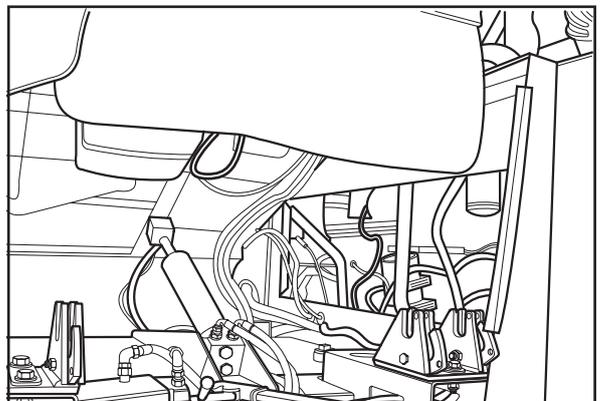


Figure 254

## RAISING THE CAB ROOF

Remove the screws (1) located in the external part of the roof.

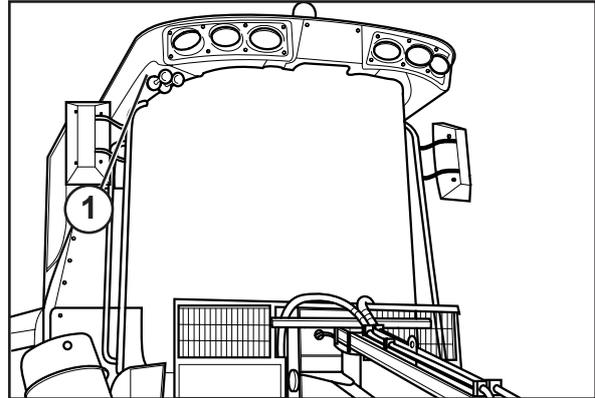


Figure 243

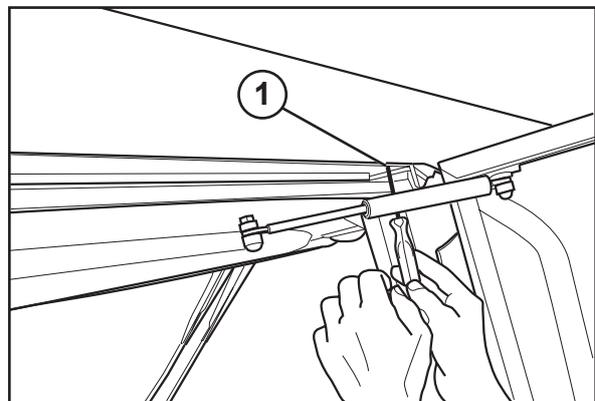


Figure 244

Loosen the screw (2) located inside the cab.

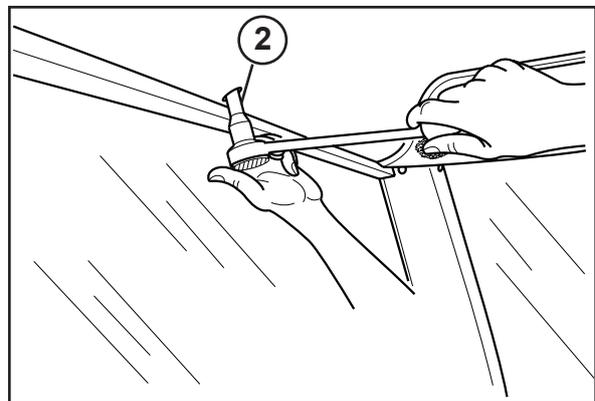


Figure 245

Tilt the roof of the cab and position the safety lock.

**NOTE:** Lower the roof slowly, taking care to not damage the seals.

**NOTE:** When closing the cab roof, all fixing screws must be replaced to their respective positions.

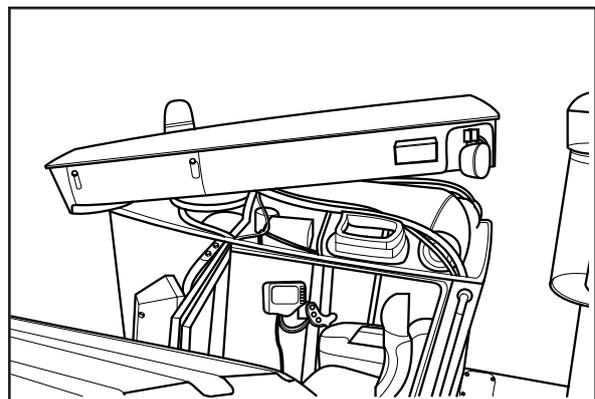


Figure 246





## Before starting operation

---

 **WARNING** 

---

*Before driving or operating the harvester, study the safety precautions at the beginning of this Manual.*

---

Read this section thoroughly. It contains important information that facilitate the operation and the necessary adjustments in the field for the best productivity of your harvester. Even though you have operated other harvesters, carefully read this section of the Manual and become familiarized with the location and the function of all the characteristics of the harvester.

Do not operate the harvester, do not drive, nor operate it while you aren't totally familiarized with all of the controls. It is too late to learn once the harvester is moving. If you have doubts about any aspect related to the operation of the harvester, consult your CASE IH Dealer.

## BEFORE STARTING THE ENGINE

To check oil levels, the harvester should be on level ground and be parallel to the ground.

Before starting the harvester for the first time and before each operating period after that, make these checks:

1. Make sure all persons that operate or do maintenance understand that clean fuel is important.
2. Walk around the machine and check for any trace of oil or water leakage. If any leakage is found, check for the cause and repair.

**NOTE:** Do not check leaks with hands and depressurize the system before doing maintenance

If any difficulty is experienced, consult your CASE IH Distributor.

3. Check all the lubrication points as shown in the "Lubrication Tables", in the Maintenance chapter in this manual.

4. Check and, if necessary, correct the oil level in the engine oil pan. Use the dipstick (2) to check if the oil level is between the upper and lower marks of the dipstick. Insert the dipstick twice and use only the second reading. If necessary, add oil at the filler (1). Do not mix different types of oils.

Check the oil level before starting the engine, or more than five minutes after stopping the engine.

To clean the dipstick, use a clean Lint free cloth.

Clean around the dipstick before removing it for inspection, and also the filler if adding oil.

5. Check and correct the coolant level in the expansion tank when the engine is cold. The level must reach the level indicator (2).

If the coolant level is too low, add coolant up in the surge tank (1).

Do not add coolant with hot engine.

**NOTE:** Never replace only with water. Prepare solution in a container before adding it to the system. The correct mixture is:

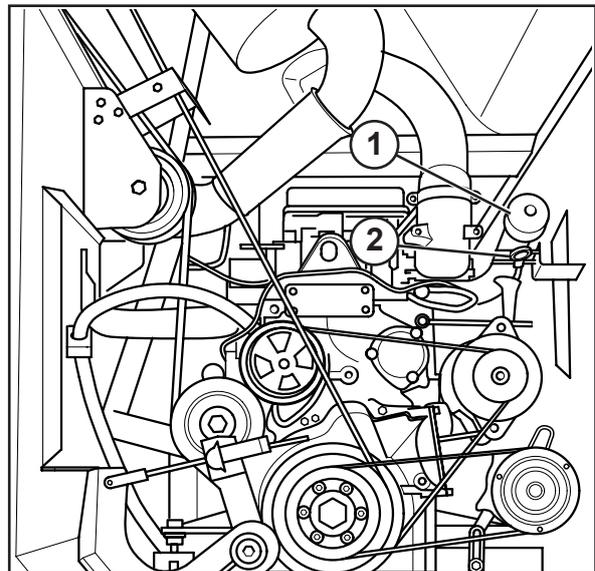


Figure 1

- For SCANIA DC9 engine: 7-12% Anti-corrosive + 93- 88% water
- For CASE IH 9L engine: 50% Anti-corrosive + 50% water

**⚠ WARNING ⚠**

Do not remove the cap while the coolant is hot. Hot water may spurt out.

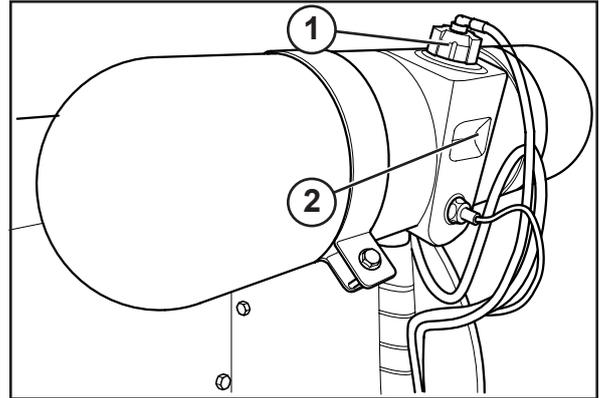


Figure 2

6. Check and correct the hydraulic oil level (2).

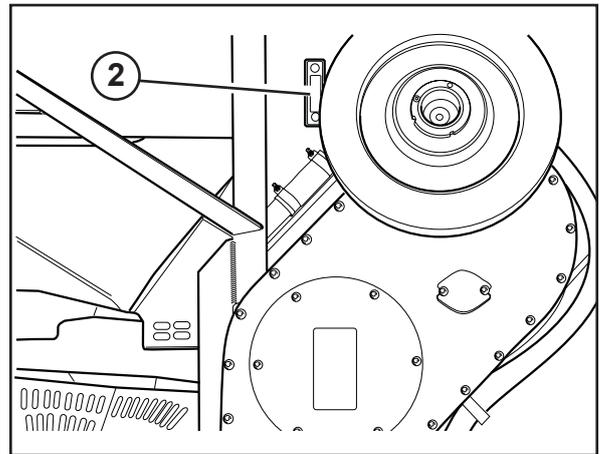


Figure 3

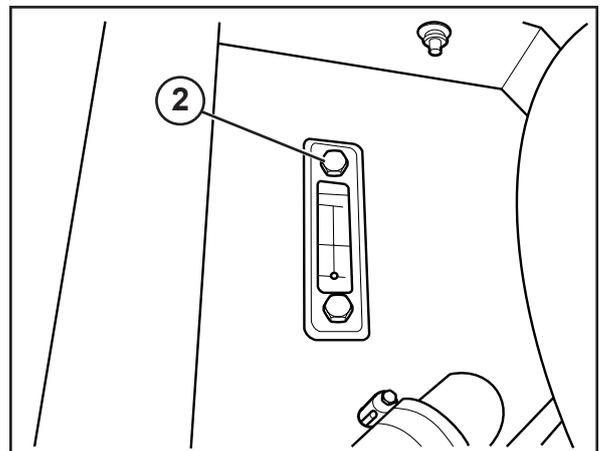


Figure 4

7. Check that the pump box oil level is correct. If needed, top up the oil level.

This sight gauge is located inside the engine box, in the left side.

**NOTE:** Excess oil in the pump box can damage the box and the pump seals.

Checking the pump box should be carried out prior to startup in the morning with the engine stopped and the machine level.

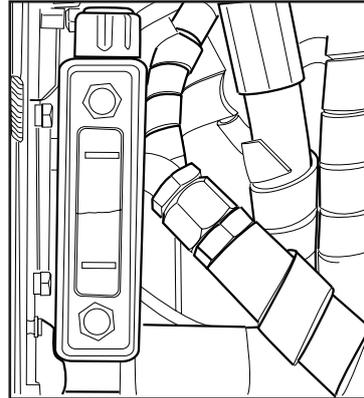


Figure 5

8. Check the fuel level on the cab monitor. Fill up the fuel tank after each day of operation.

**NOTE:** Clean around the fuel tank cap before you remove the cap.

In case the monitor indicates that there is water in the separator filter (1), drain the water.

If air is sucked in while draining the water, operate the feed pump of the fuel system to bleed the air, then start the engine.

Remove any water or sediment from the water separator filter.

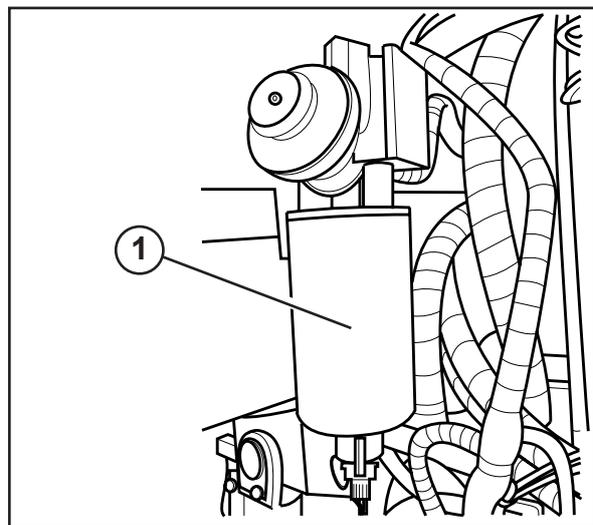


Figure 6

9. Verify if the doors of the engine box are properly closed.

**NOTE:** One switch (1) located in the engine box door (belt's side) will not allow the engine to be cranked, started or run if the door is not closed correctly. The distance between switch and the door should be between 2mm - 4mm.

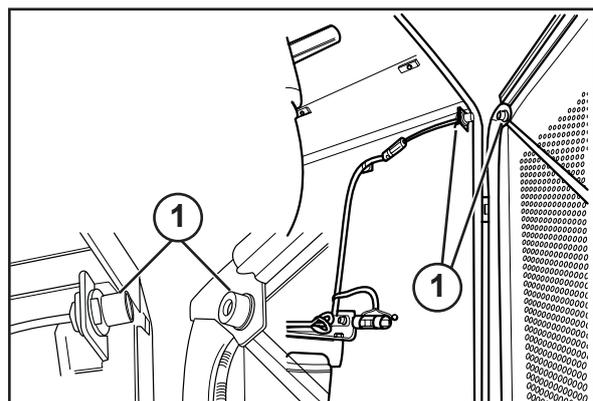


Figure 7

10. Check the air pressure of the tires (A8000).
11. Check the tightness of nuts and bolts, and retighten if required. Pay special attention to the air filter support, silencer and turbocharger.
12. Remove all accumulated crop material from the machine.
13. Check for broken electric wiring, short circuits and loose terminals.

14. Check the dust indicator (1). When the air cleaner element is choked, the red piston of the dust indicator reaches the service level and gets locked. An alert message will appear on the monitor screen.

In that case, clean the element. After cleaning the element, push the button to return the red piston to the original position.

15. Before the harvester is moved, be careful that the machine has no blocks or tools under it.
16. Before starting the engine, make sure if the valves between the header and main hydraulic tanks are OPEN.

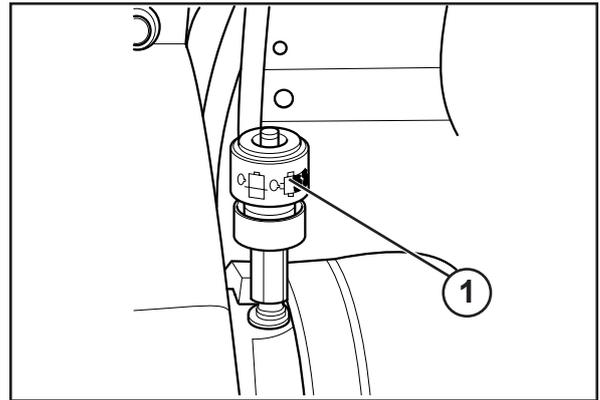


Figure 8

## NORMAL STARTING PROCEDURE

Do the pre-operational checks introduced in the Section "Before starting the engine" at the beginning of this section.

Check to make sure that all controls are in NEUTRAL.

Check if the stop emergency activation button (red button), located in the operator's console of the right hand, is activated. In case the button is activated lift the lock ring located below the red button.

Turn the isolation key on (1) located in the left side of the cabin floor.

Place the ignition key in the panel (2) of the right side of the cab.

Check if directional joystick (left hand) is in the neutral position.

Sound the horn several times.

Turn the ignition key and start the machine. When the engine starts, release the key which will return to the ON position.

**NOTE:** Do not leave the key in the START position for more than 20 secs. If the engine does not start, wait for about 2 minutes before starting again.

- After starting the engine raise the engine rpm. To the intermediate speed (1600 rpm) until the operational temperature of 80°C is reached.
- Start the harvesting functions to heat the hydraulic oil (working temperature of the hydraulic oil - 80 °C).

Check for exhaust gas color and abnormal noises.



*For all the checks carried out from within the cabin, the operator SHOULD be seated in the operator's seat.*

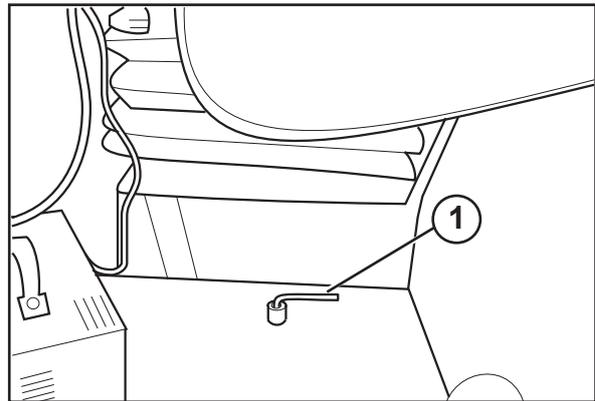


Figure 9

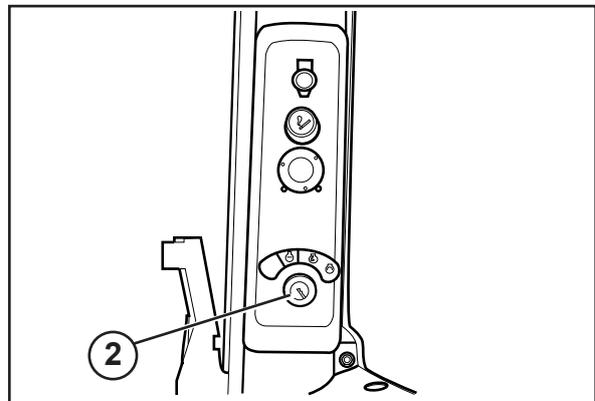


Figure 10

## ENGINE THROTTLE

When harvesting, set the engine throttle to the maximum position. If the engine speed on full throttle falls below 2100 rpm during harvesting, this indicates that the engine is overloaded and the traction speed must be reduced.

**Full throttle engine RPM while harvesting:** 2100 rpm full load.

**NOTE:** The accelerator button is programmed so that with two touches, it will reach maximum rpm. In the first touch, the speed goes to 1600 rpm; and in the second touch, the speed goes to 2100 rpm.

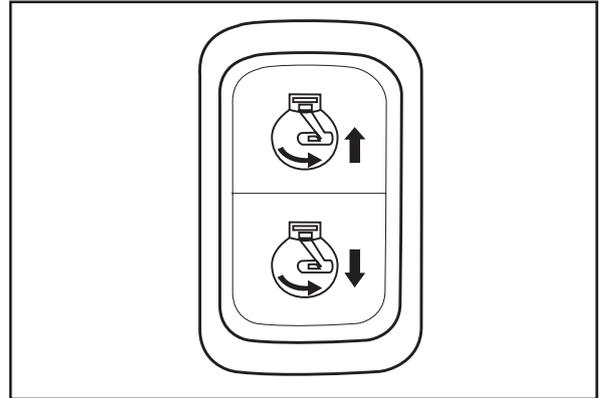


Figure 11

## ENGINE STOP PROCEDURE

Cool the engine gradually, placing the machine in intermediate speed (1600 rpm).

Let the engine run on intermediate rpm for 5 minutes and then in low rpm for 1 minute.

Return the starting key to the OFF position to stop the engine.

**NOTE:** NEVER stop the engine abruptly except in an emergency. Doing so will compromise the engine life.

## TOWING THE HARVESTER

**NOTE:** When towing the harvester backwards connect the towing chain to the rear tow hook located on the chassis.

When towing the harvester on public roads, activate the switch of the flashing amber light on the lower panel LH (check traffic laws).

The harvester is fitted with trafficators, which should be used to indicate when a turn is being negotiated. The trafficators are activated by a switch located on the right console.

**NOTE:** The Parking brakes on the harvesters A8000 and A8800 are automatically engaged once the engine is shut down. To enable the machine to be towed the engine needs to be running and the park brake switch OFF. If this is not possible, the pinions must be removed from the rear hubs to allow them to free wheel.

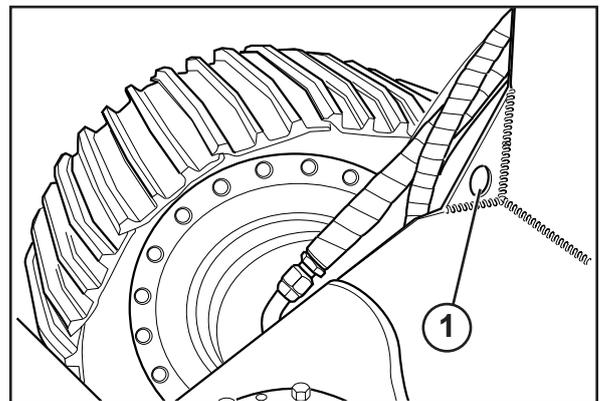


Figure 12

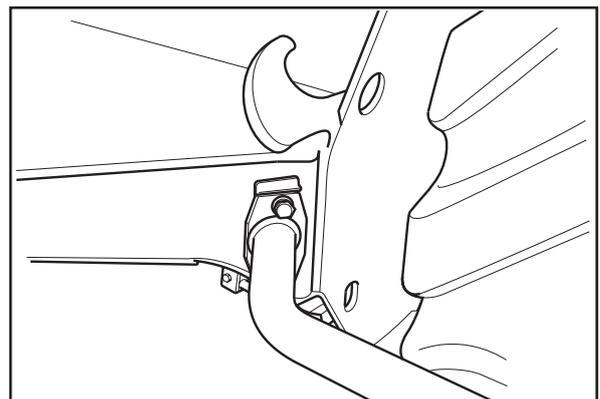


Figure 13

## DRIVING THE HARVESTER

### Before driving a cane harvester

- A. Look carefully ahead, behind and to each side of the harvester.
- B. Check that there is nobody on or near the machine.
- C. Start the engine as explained in the “Normal Starting Procedure” section.
- D. Check that the elevator is not slewed to one side, unless required for balance on a slope.
- E. Check that there is sufficient clearance above the machine for the topper and elevator.
- F. Check that the basecutter is well clear of the ground.
- G. Check that the cropdividers are well clear of the ground.
- H. Sound the horn to alert anybody close to the machine.

### Direction of the Harvester

Be sure the park brake is not applied.

1. Set the throttle to half throttle (1500 rpm)
2. To move the harvester forward, move joystick (left side) forward. This will cause the harvester to move forward.
3. To move the harvester back, move joystick back
4. Adjust the speed as necessary activating the acceleration button in joystick forward.
5. To stop the harvester, move joystick to the neutral position. If the harvester is running fast, slow it down first and then move joystick to neutral.

---

### **WARNING**

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*Do not change directly from forward to reverse or from reverse to forward. Always bring the harvester to a stop, with the traction joystick in neutral, before changing the direction of travel.*

---

6. To turn to the right, move joystick to the right. In case you want to turn to the left, move joystick to the left.
7. Do not operate the harvester at constant high speed. High speed accelerates link, track roller and idler wear.
8. Do not turn constantly in one direction as this will wear the tracks unevenly.
9. Always keep the correct adjustment of the tracks according to the ground conditions. Excessive track tension, increases the load and the wear of track components.

**ROAD TRAVEL (A8000)**

During prolonged road travel, the operator must stop every 20 to 30 minutes and turn the joystick from right to left, to re-align the toe-in on the front wheels. Failure to follow this procedure may result in premature wear of the front tires.

**DRIVING THE HARVESTER ON PUBLIC ROADS**

Before driving the harvester on public roads, ensure that the correct permits etc. have been obtained, and that the harvester is driven in accordance with The Transport Department regulations.

When driving the harvester on public roads, activate the switch on the right side console upper panel to turn the flashing light (beacon) on.

The harvester is fitted with trafficators which should be used to indicate right and left turns. The trafficators are activated by a switch located on the right console.

## GETTING THE BEST HARVEST

The operator must:

- Prepare the whole machine before the harvest and keep it in its best condition before, during and after the working period.
- Do the various harvesting adjustments and controls to get the most cane cleanly in the bin with the least trash and dirt.

### Preparing the machine

- Prepare the machine at the end of the day's work ready for the next day.
- Clear Away All trash and dirt.
- Inspect The machine thoroughly.
- Repair Any defects found during inspection.
- Fill Up Fuel, oil and water.
- Apply Grease and oil according to daily routine and any due weekly or monthly routine.

### Keep all blades sharp all the time

- Inspect the chopper blades every 2 hours, or whenever possible, for sharpness and freedom from damage. Replace if required.
- Check if there are badly cut cane billets.
- Inspect the basecutter knives every 2 hours, or whenever possible. Sharpen or replace if blunt or rounded on the corner.

**NOTE:** Maximum basecutter blade length is 3 1/2 Inches {89mm}. Failure to observe this limit can result in damage to the track.

- Inspect the topper knives every 2 hours, or whenever possible. Replace as needed.

### Keep the machine clear of trash

- Stop and remove all dirt and trash every 2 hours, or whenever possible.
- Make Sure All upper feed train rollers are free to move up and down.
- Clear Rollers of any accumulation of mud and trash.
- Examine the machine for oil leaks and correct if necessary.
- Always switch off the engine before working on the machine. Switch off safety switch in right hand console electric cabin. Keep the ignition key in your pocket.

### Cautions with the track

- The track tension adjustment should be always kept as specification, for better bushings and drive wheels life (also reducing load in the reduction hub and in the transmission). The tension adjustment should be carried out in the actual working environment of the machine.
- Do not operate in high speed.
- Carry out daily cleaning of the track roller system.
- Follow the standards for detecting uneven wear caused by operation or misalignment conditions.
- Do not turn constantly in one direction as this will wear the tracks unevenly.
- Do not skid the tracks during operation.
- Inspect lubricated components (rollers, idler wheels and lubricated tracks) for leaks.

## Topper

Cut in the last totally formed knot: below this cuts off good cane; above this puts trash in the bin.

Adjust the height of the topper to match the average height of the cane if this varies along the row.

Always use the topper, even with a lodged crop.

### Direction of rotation:

Set the direction of drum rotation so as to throw the cut tops away from the crop.

Cut the field, if possible, from the side towards which the wind is blowing so that the cut tops and other extraneous matter are carried away from the crop and machine by the wind.

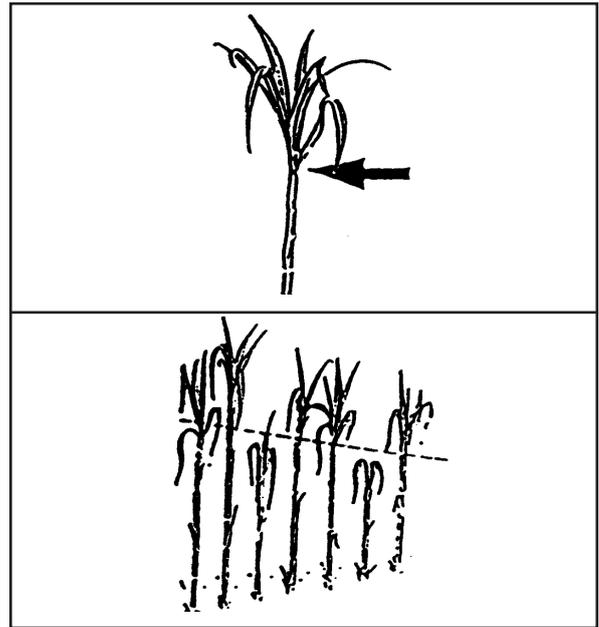


Figure 14

## Billet length

To establish the length of billet adjust the configuration in the display until the desired length is obtained.

## Basecutter

Adjust the basecutter to cut cane at ground level. To do this proceed as follows:

- Raise the harvester;
- Raise both left and right divisors to the maximum height;
- Lower the machine until the blades of the basecutter discs come into contact with the ground;
- Lower the dividers until their bases touch the ground;
- Adjust the tilt, as required.

Cutting below ground level increases loads on hydraulics {e.g. pump, motors, etc.} and gearboxes thus reducing their life expectancy. Also, the increased amount of dirt entering the machine will increase wear rates of basecutter blades, discs, feedrollers, chopper knives, extractor blades and all metal parts that come into contact with the cane.

Raise the basecutters only enough to clear the surface when working on harsh stony ground.

Check that the basecutters are set to the best height.

Stop, get out and examine the cut stools at the start of cutting and whenever the opportunity occurs.

Watch for signs of cutting too low (i.e. soil thrown out sideways by the basecutters or dust and dirt thrown out by the trash extractors).

Watch for signs of cutting too high (i.e. cane stumps visible on the cut stools or cane split and damaged at the cut due to lack of firm support).

**NOTE:** Adjusting the basecutter box angle to suit field conditions, improves the basecutter operation. Increase the angle for cane grow in a high stool and reduce the angle in flatter cultivation.

## Cropdivider

Adjust the cropdivider height so that the point just scrapes the ground and picks up fallen cane using the cropdivider tilt rams (optional).

Raise the cropdividers enough to clear the surface when working on harsh stony ground or in thick weeds.

Re-adjust the cropdivider height, if necessary, when the basecutter height is altered.

Replace the cropdivider point if it is not protruding lower than the bottom of the cropdivider.

There is the possibility to adjust the crop dividers for different row spacing, 1.50 meters (0.59 in) or 1.80 meters (70.86 in)

To place the crop dividers as necessary, do the following procedures:

### A - DISASSEMBLY

1. Lie down both crop dividers to the ground;
2. Take off the two pins (1 and 2) which hold the superior and the inferior wishbones;
3. Take off the pin (5) which holds the crop divider inclination cylinder;
4. Push over the crop dividers to easy the access to the wishbones;
5. Release the screw (8) which holds the Up/Down cylinder to the wishbone;
6. Disconnect the hose (6) of crop divider Up/Down cylinder. Close the hose and cylinder connections to avoid contamination to the hydraulic system;
7. Take off the pin (9) which holds the inferior wishbone to the chassis;
8. Take off the pin (7) which holds the superior wishbone to the chassis.

**NOTE:** All figures show the left side crop divider. Follow the same procedure to unassemble the right side crop divider, except the 6th step, which has no necessity to be done.

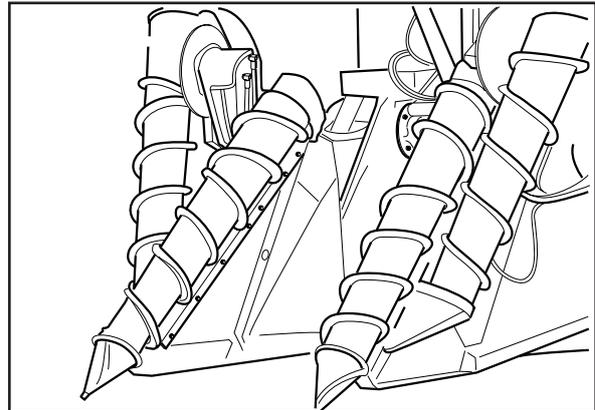


Figure 15

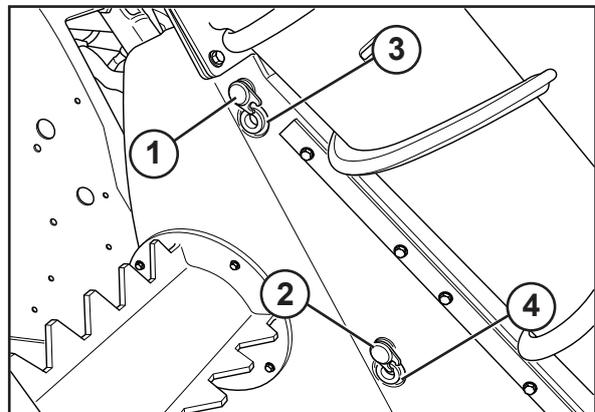


Figure 16

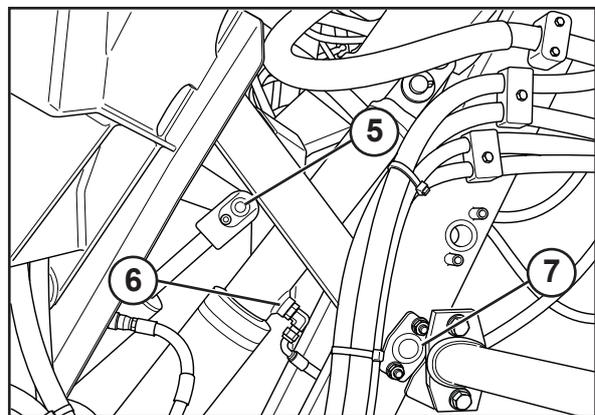


Figure 17

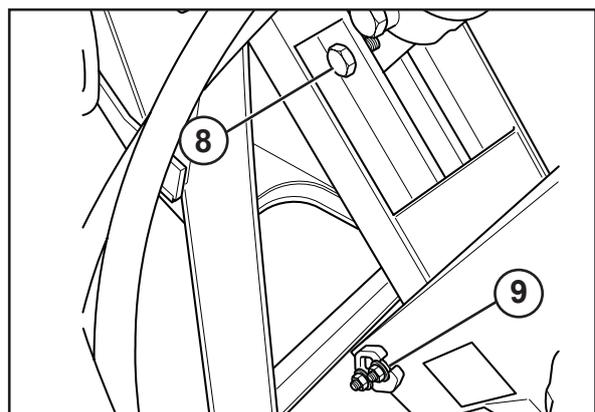


Figure 18

**B - CROP DIVIDER POSITIONING****1.50 meters of distance between crop rows (Standard)**

The pins (1 and 2) shall be placed on crop divider shoe superior holes, like shown on Figure 16.

The figure aside shows the assembly position which the wishbones should be. Attempt to, on the right side superior wishbone, the grease points (10) and the open surface (11) shall be faced to below.

The open surface of the right side inferior wishbone shall be faced to below (13). The smooth surface of the left side superior wishbone shall be faced to below (12). The smooth surface of the left side inferior wishbone shall be faced to below (14).

**1.80 meters of distance between crop rows**

The pins (3 and 4, Figure 16) shall be placed on crop divider shoe inferior holes.

For this distance all wishbones shall be placed on opposite position as for 1.50 meters distance. The smooth surface of the right side inferior wishbone shall be faced to below, like shown on figure aside (item 12). For the others wishbones, invert it following the same orientation.

**C - REASSEMBLY**

After positioning the wishbones on the wished position, the assembly is the reverse procedure of disassembly.

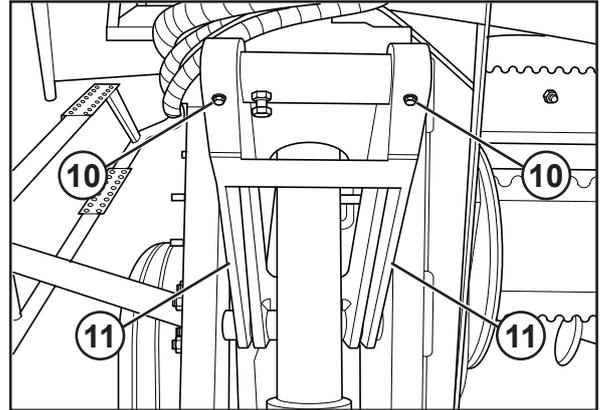


Figure 19

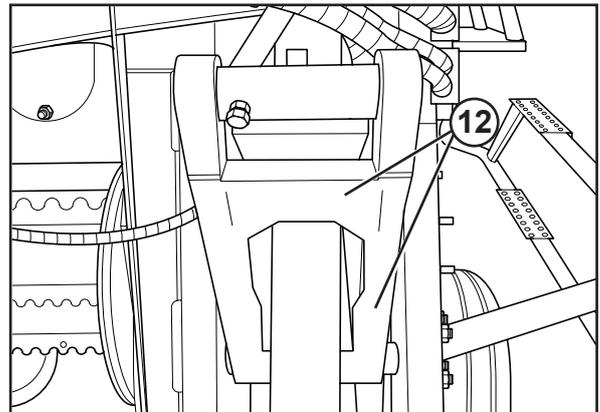


Figure 20

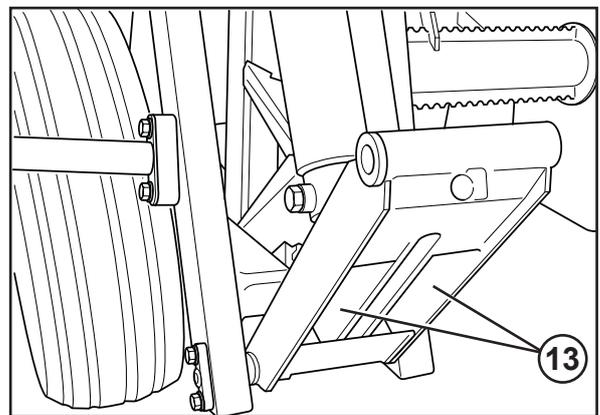


Figure 21

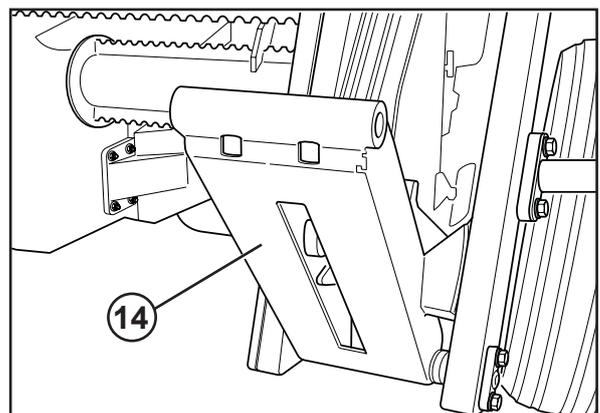


Figure 22

## D - AFS MONITOR SETTINGS

Verify if the setting of crop dividers distance on the AFS Monitor is correct. If it is not, adjust according to the crop divider assembled on the machine.

To verify, follow the steps below on the AFS Monitor:

1. On the main screen go to "Toolbox";
2. Select "General";
3. Select the field "Row distance".

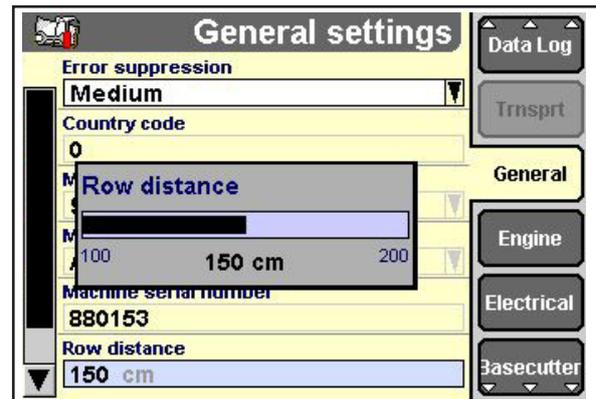


Figure 23

## Traction Speed

Control the rate at which the cane is cut by varying the traction speed for best results.

Set the engine throttle control to maximum speed and keep it there.

If the engine speed drops under load below rated rpm reduce the traction speed to avoid overloading.

Watch for signs of driving too fast i.e. engine speed dropping, roller train and chopper overloaded, jams and choking in the throat of the machine or cropdividers, breaking and uprooting fallen cane, or elevator balling with the cane.

Slow down when:

- Harvesting a lodged crop to allow the cropdividers to lift and separate the fallen cane without breaking it.
- Crop badly burned or green cane, for better performance of extractors.
- Reduce speed when turning corners on rough ground and whenever necessary to ensure machine stability.

## Steering

Drive as straight as you can right down the centre of the row so that the basecutters go over the centre of the cane.

Narrow cultivation may make it necessary to drive slightly to one side to avoid damaging cane in the adjoining row.

## Ground too wet and muddy

Watch for differing soil conditions in the field. Wet fields frequently have "soft" spots which require different settings of basecutters and cropdividers as well as traction speed.

Watch after flooding, for logs, tree stumps and similar debris frequently left behind in the cane fields when flood waters recede.

### Fallen cane

Avoid Cutting the cane from a direction which feeds the cane tops into the harvester before the butts as the roller train may then uproot the roots. Always approach the cane butt first.

When the cane is lying across the rows, enter the field from the side which allows the cropdividers to operate on the butts of the cane (with the tops lying away from the harvester towards the cane which has yet to be harvested).

Reduce speed to allow the cropdividers to separate the cane without breaking or uprooting it.

### Slopes hillsides

Drive cautiously so as not to endanger the stability of the machine. Slew the elevator to balance the machine, if possible.

Avoid overloading the engine. If necessary, cut downhill only.

Enter the field from the top side when the rows run across the slope. This will permit the elevator to be slewed to the uphill side to balance the machine.

### Stony ground

Raise the basecutters and cropdividers, if necessary, to avoid excessive wear on harsh and stony ground.

### Green cane

Reduce speed to improve the cleaning performance of the trash extractors. The extractors are better able to extract the larger amount of trash if the throughput of cane is reduced.

Set the topper to remove as much of the tops as possible and keep the blades very sharp.

Keep the chopper blades very sharp. This will help trash extraction by ensuring that leaf in the cane is cleanly cut into short lengths.

Constantly check the roller train, extractors and elevator floor for trash build up.

### Lines planted too closer

Steer as close as possible to the standing cane without running over it. Allow the basecutters to be slightly to one side of the row of stools being cut.

### Cane stools planted in deep furrows

Set the basecutter high enough to avoid ploughing the sides of the furrow, even if this means cutting the cane a little higher than usual. Cutting lower will only give dirty cane and excessive dirt and wear in the harvester.

### The Reason Why

The sugar mill determines the value of the crop and only wants good clean cane at the mill.

Cane is a living plant. It deteriorates as any other vegetable. When cut, it can lose quickly the value, because the cut cane deteriorates more quickly in the cut point, where is exposed to the air. A clean sharp cut will stay in good condition longer. Cane which is bruised, broken or badly cut with splayed or crushed ends will deteriorate very quickly. By the time it gets to the mill it may have lost much of its value.

Trash and dirt in the cane can be an expensive nuisance in the sugar mill.

The mill is therefore likely to assess the value of the crop according to the amount of trash and dirt it contains.

Burnt cane deteriorates quickly in the field once it has been burnt. If it is not harvested within a few days it starts to lose quality and value. By avoiding delays and by knowing how to operate under adverse conditions a skilled operator with a well prepared machine will often be able to save a crop which might otherwise be lost.

Failure to follow the instructions explained in the previous section "Getting The Best Harvest" can only lead to unnecessary costs and losses.

For example:

- **Machine not prepared beforehand**  
Dirt and trash in machine. Poor inspection. Poor lubrication. Defects not found. Oil leaks not found. Heavy wear. Overheating. Blunt blades. Dirty and damaged cane in the bin. Machine unreliable. Time lost in late starts and breakdowns.
- **Machine neglected during the day**  
Blades not sharp. Choked rollers. Choked extractors. Blocked elevator floor. Damaged cane. Dirty cane. Blocked cooling air screens. Overheating. Breakdowns. Increased fuel consumption.
- **Topper very high**  
Too much leaf in the bin. Leafy tops not cut cleanly. Topper gets choked.
- **Topper very low**  
Good cane thrown to waste.
- **Topper Blades Blunt**  
Too much leaf in the bin. Chokes in topper. Slow harvesting. Extra fuel consumption. Cane not cleanly cut.
- **Basecutter too high**  
Good cane left in the field.
- **Basecutter too low**  
Dirty cane. Blades not sharp. Damaged cane. Dirt in the machine. Increased fuel consumption.
- **Incorrect basecutter angle.**  
High wear on basecutter discs. Damaged stools. Cane left in field.
- **Basecutter blades not sharp**  
Damaged cane. Cane not gathered. Damaged stools.
- **Cropdividers too low**  
Dirt in the cane. Heavy wear on point. Increased fuel consumption.
- **Chopper blunt (“Dull”) - Chopper knives**  
Cane billets not cleanly cut. Cane liable to deteriorate before reaching the mill. Reduced weight of cane in a full container. Dirty sample in container.
- **Roller slats worn, bent or choked with dirt**  
Blockages. Damaged cane. Dirty cane. Short billets.
- **Speed too fast**  
Blockages. Damaged cane. Short billets. Poor trash extraction. Engine overloaded.
- **Speed too low**  
Harvesting takes too long.

## GENERAL INFORMATION

### Introduction

This section gives full details of the service procedures necessary to maintain your harvester at peak efficiency. The lubrication and maintenance chart on the following pages, provides a ready reference to these requirements.

Each operation being numbered for easy reference. If in doubt about any aspect of lubrication and maintenance, consult your Case IH Dealer.

### Safety Precautions

Read and note all safety precautions listed in Servicing the Harvester in the Introduction section of this Manual.

**NOTE:** *Dispose of used filters and fluids properly.*

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### **WARNING**

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*Do not check, lubricate, service or make adjustments to the harvester with the engine running.*

---

## DURING FIRST 50 HOURS OPERATION

**IMPORTANT:** *Items listed in first 50-hours service are important. If not performed, early component failure and reduced harvester life may result.*

---

### **WARNING**

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#### **PREVENTING SYSTEM CONTAMINATION**

*To prevent contamination when changing oils, filters, etc., always clean the area around the filler caps, level and drain plugs, dipsticks and filters prior to removal. To prevent dirt entry during greasing, wipe dirt from the grease fittings before greasing. Wipe excess grease from the fitting after greasing.*

---

### **Flexibility of maintenance intervals**

The intervals listed in the lubrication and maintenance chart are guide-lines to be used when operating in normal working conditions.

**NOTE:** *Refer Warranty Booklet*

### **Lubrication and maintenance chart**

The lubrication and maintenance chart, lists the intervals when the routine checks, lubrication, service and/or adjustments should be performed. Use the chart as a quick reference guide when servicing the harvester.

## HARVESTER FUEL



### WARNING

When handling diesel fuel, note the following:

Do not smoke around diesel fuel. Under no circumstances should petrol, alcohol or kerosene be added to diesel fuel because of increased fire or explosion risks. In a closed container such as fuel tank, they are more explosive than pure petrol. DO NOT use these blends.

- Clean the filler cap area and keep it free from debris
- The fuel tank should always be topped up at end of each day to reduce overnight condensation.
- Never take the cap off or refuel with engine running.
- Keep control of the fuel nozzle while filling the tank.
- Don't fill the tank to maximum capacity. Allow room for expansion. If the original fuel tank cap is lost, replace it with genuine original cap and tighten securely.
- Wipe up spilled fuel immediately.
- Keep/replace the sieve placed in the filler neck during the fueling.

## FUEL REQUIREMENTS

The quality of fuel used is an important factor for dependable performance and satisfactory engine life. Fuels must be clean, well-refined and non-corrosive to fuel system parts. Be sure to use fuel of a known quality from a reputable supplier.

- Use Number 2-D fuel at temperatures above -7° C (20° F)
- Use Number 1-D fuel at temperatures below -7° C (20° F)

To obtain optimum combustion and minimum engine wear, the fuel selected for use should conform to the application and property requirements outlined in the following chart.

## Selection chart of fuel diesel

General Fuel Classification	No. 1-D	No. 2-D
Final Boiling Point (Max.)	288° C (550° F)	357° C (675° F)
Cetane Rating (Min.)	45*	45
Sulphur Content (Max.)	0,3%	0,5%

\* When continually operating at low temperatures or high altitude, a minimum cetane rating of 45 is required.

**NOTE:** When long periods of idling or cold weather conditions below 0° C (32° F) are encountered or when continuously operating at an altitude above 1500 m (5.000 ft), use Number 1-D fuel.

**NOTE:** Using diesel fuel with sulphur content above 0.5% requires anticipated oil and filter changes as noted in the maintenance schedule.

The use of diesel fuel with a sulphur content above 1.3% is not recommended.

For the best fuel economy, use Number 2-D fuel whenever temperatures allow.

Do not use Number 2-D fuel at temperatures below -7° C (20° F). The cold temperatures will cause the fuel to thicken, which may prevent the engine from running. If this happens, contact your authorized Case IH dealer.

To be sure that a fuel meets the required properties, enlist the aid of a reputable fuel oil supplier.

The responsibility for clean fuel lies with the fuel supplier as well as the fuel user.

## Fuel storage

Take the following precautions to ensure that the stored fuel is kept free of dirt, water and other contaminants.

1. Store the fuel in black iron tanks, not galvanised tanks, as the zinc coating will react with the fuel and form compounds that will damage the injection pump and injectors.
2. The bulk storage tanks away from direct sunlight Fig. 1.

Keep the tank slightly tilted fig. 2 so that the sediments will settle away from the outlet pipe.

3. To facilitate moisture and sediment removal provide a drain plug at the lowest point at the end opposite the outlet pipe.
4. If fuel is not filtered from the storage tank, put a funnel with a fine mesh screen in the fuel tank filler neck when refueling.
5. Organize the fuel purchase so that the fuels with classification for the summer do not be kept and used in the winter, in other words, do not store diesel for a long period (>6 months).

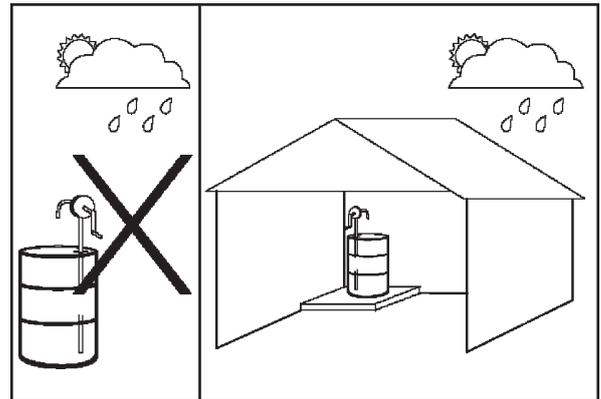
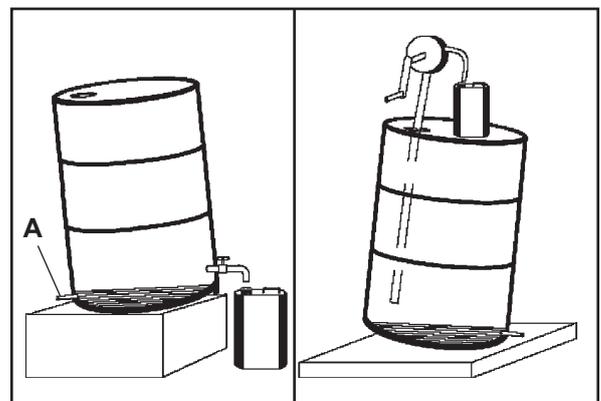


Figure 1



A - Drain plug

Figure 2

## Fuel tank filling

1. Clean the area around the fuel filler cap to prevent dirt from entering tank and contaminating the fuel.
2. Remove the cap and place in a clean area during refueling.
3. After filling the tank, replace and tighten the fuel cap.

**IMPORTANT:** Always replace a lost or damaged cap with a genuine, original equipment replacement cap.

4. Supply with the sieve (filter) which is inside the filling filler neck.

**CAPACITIES****Engine Fuel - Diesel**

- 480 Liters (106 Imperial Gallons) nominal

**Engine Oil**

- SCANIA DC9 Engine: 27 to 34 liters
- Case IH 9L Engine: 27 to 24 liters

**Engine Water - Treated**

- SCANIA DC9 Engine: 53 liters
- Case IH 9L Engine: 44 liters

**Hydraulic System Oil**

- 480 Liters (106 Imperial Gallons) nominal capacity in the hydraulic oil reservoir and approximately 120 Liters (26 Imperial Gallons) in the rest of the system, totaling 600 Liters (132 Imperial Gallons).

**Pump drive gear box oil**

- 1,6 liters - hydraulic oil (AKCELA AW100)

**Basecutter gear box oil**

- 9,5 liters - gears oil SAE 85W-140, API GL-5, AKCELA GEAR 135H EP

**Chopper gear box oil**

- 7.5 liters - gears oil SAE 85W-140, AKCELA GEAR 135H EP

**Rear Wheel Hub Oil**

- 6 liters - gears oil SAE 85W-140, AKCELA GEAR 135H EP

**Air Conditioning**

- Compressor: 285 +/- 15cc (P.A.G. SP15 Oil)
- Refrigerant: 3.700 grams (HFC R134A)

**Suspension Hydraulic System Oil (Autotracker)**

- TCH FLUID

**FLUID SPECIFICATIONS****Lubrication oil of the engine**

The use of quality engine lubricating oils, combined with appropriate oil drain and filter change intervals, is a critical factor in maintaining engine performance and durability.

- SCANIA DC9 Engine SAE 15W-40; API CI-4; ACEA E5; AKCELA N°1-Engine Oil
- Case IH 9L Engine: SAE 15W-40; API CI-4; ACEA E5; AKCELA N°1 - Engine Oil

**Oil, hydraulic**

The following specification is a petroleum based hydraulic oil containing anti-rust, antioxidant, anti-wear, anti-foam and viscosity index improvers.

If the oil meets the following specification, it is suitable for use in the hydraulic systems of Case IH Austoft harvesters.

*Factory initial filling: AKCELA AW100*

**Physical properties of the hydraulic oil**

Aspect .....	Clear and bright
Density to 15°C (IP 160).....	0.880 - 0.890 (Typ 0.882)
Viscosity - 40°C cSt (IP 71).....	66 - 100
Viscosity - 100°C cSt (IP 71).....	11 minimum
Viscosity on maximum working temperature.....	13 minimum
Viscosity Index (IP 226)....	150 minimum
% Mass Alkyl Zinc.....	0.04
Aniline Point °C (IP2).....	100 minimum
Demulsibility (Grade ISO 68 - ASTM D1401).....	40/37/3 (30) - 54°C
Demulsibility (Grade ISO 100 - ASTM D1401).....	40/37/3 (30) - 82°C
Filterability (Denison TP-02100) .....	Pass
Rust Protection (ASTM D665).....	Use distilled water Use Synthetic Sea Water
Oxidation Stability .....	2500 minimum. Hours to 2.0 mg KOH/ gm ASTM D943
Pour Point °C (IP 15).....	-35 maximum
Flash Point.....	190 minimum - closed (IP34) °C. 210 minimum - open (IP35) °C
Fire Point °C (IP 35) .....	240 minimum
Air Release (IP 313) .....	660 Seconds maximum
Viscosity after 1000 hours - KV a 100° C.....	10.5 cSt minimum

**Gear Oil**

- AKCELA GEAR 135H EP, API GL-5, SAE 85W140

**Grease**

A lithium based grease of N.L.G.I. consistency number 2, which also contains extreme pressure additives, oxidation inhibitors and corrosion inhibitors (e.g. Lithium Hydroxy Sterate).

Manufacture AKCELA, Multi-Purpose Grease, 251H, EP

**Battery**

Use distilled water.

**Engine coolant****SCANIA DC9 Engine**

Engine coolant should contain anti-corrosive to protect the cooling system against corrosion. Should be cleaned and with pH of 6-9.

Engine coolant should be changed when cooling system is cleaned: every 4.800 hours or at least every 5 years.

Every 1000 hours check the corrosion inhibitor liquid of the engine coolant (contact your Scania dealer).

Every 2500 hours complete with 1,0% of anti-corrosive Scania by volume.

If there is danger of freezing the coolant should consist of Min. 30% - Max. 60% volume of Glycol. If there is no danger of freezing the coolant should consist of 7 - 12% by volume Scania Anti-corrosive.

For IVECO engine, use 50% / 50%.

SCANIA recommends a nitrile-free anti freeze - BASF G48 or BASF G542.

IVECO recommends the use of anti freeze use AKCELA Premium Anti-Freeze.



*DO NOT mix Scania Anti-corrosive with Glycol.*

## Air Conditioning

All machines are now fitted with A/C compressors designed for the use of R134a refrigerant, and Sanden P.A.G. SP15 Lubricant.

- R134a Refrigerant (Tetrafluoroethane CH<sub>2</sub>FCF<sub>3</sub>).

R134a is a stable, colorless, non-toxic, non-flammable, liquefied gas with a faint ethereal odor. It is an HFC and therefore does not contain the ozone depleting element chlorine, so it has an ODP (Ozone Depleting Potential) of zero. It does have a greenhouse potential but it is less than 10% that of R12.

Contact an authorized distributor to clean the A/C system once a year

Refrigerant	Ozone Depleting Potential	Green - House
R11	1	1
R12	1	3.0
R134a	0	0.29
Ternary Blend (HCFC22 + HFC152A + HCFC124)	0.02	0.15

## Safety

Safety, first aid and basic handling of R134a are similar to the requirements for R12 and the same general safety precautions should be taken at all times.

Do not mix R134a with air pressures in an air-conditioned system - under certain conditions it can become flammable.

## R134a Compatibility

R134a is totally incompatible with R12 and with the mineral oils (such as 5GS) currently used in an R12 system.

Mixtures of R134a and R12 in some proportions can form an azeotrope and vapour pressures can increase by up to 100%.

Using 5GS with R134a can cause gumming and oil drop-out. Compressor failure will result.

## R134a Driers/Desiccants

R134a requires a different desiccant and the following should be kept in mind.

- Desiccant XH5 - R12
- Desiccant XH7 - R12, R134a
- Desiccant XH9 - R12, R134a, Ternary Blends

### R134a TX Valves And Orifice Tubes

Normal TX valves and orifice tubes designed for R12 automotive systems are physically unaffected by R134a. However, the rating or value is altered because of the increased operating pressure of R134a.

- 1.0 tonne TX valve with R12 will become a 1.2 tonne valve R134a.
- 1.5 tonne TX valve with R12 will become a 1.8 tonne valve R134a.
- 2.0 tonne TX valve with R12 will become a 2.4 tonne valve R134a.

(one tonne refrigerant = 12,000 btu's)

### R134a Lubricants

R134a is totally incompatible with all of the mineral oils used in R12 systems. Any attempt to use 5GS with R134a will result in compressor failure.

PAG (Polyalkylene Glycol) oil has been developed especially for use with R134a and no other lubricant should be used. Types and grades of oils should not be mixed. Some mixtures will cause gumming, oil drop out and oil separation. In other words, compressor failure.

PAG oils are much more hygroscopic than 5GS, so good housekeeping and adequate evacuation time with a vacuum pump capable of pulling a vacuum of 200 microns (29.9 in HG or 101 KPA gauge) is essential with these lubricants.

**NOTE:** *PAG oil type may vary for different compressor makes and models. Check manufacturer's specifications.*

### Examples of mixture problems

- **R134a with 5GS**  
Incompatible. Will result in gumming, oil drop-out and compressor failure.
- **R134a with PAG/5GS mix**  
Incompatible. Will result in oil separation, gumming, oil drop-out and compressor failure.
- **R12 with PAG**  
Incompatible. PAG and R12 are not miscible, lack of lubrication will cause compressor failure.
- **R12 with PAG/5GS mix**  
Incompatible. Will result in oil separation and drop out causing compressor failure.

## LUBRICATION - OILS AND FILTERS

### Hydraulic System Oil

**NOTE:** The two taps between the header tank and main tank must be turned off so as to prevent loss of oil from the system when filters are being changed or if a hose is disconnected or removed. The machine should not run with the taps closed.

### Filling

Check level daily on the sight glass (1) located on the header tank. Ensure that the machine and topper are positioned parallel to the ground and that the oil is cold. The oil level should be maintained half way up the sight glass.

When checking the oil level on the sight glass, check also that the oil is clean and clear. If the oil has a milky white appearance this indicates water in the oil. If this occurs, drain and refill with fresh oil.

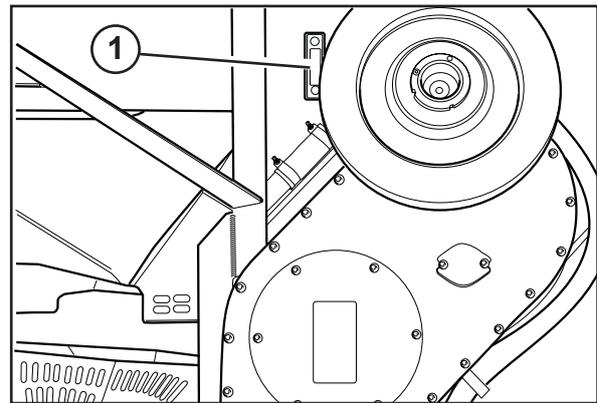


Figure 3

### Draining

Every year, immediately after the end of the season, drain the hydraulic tank. Fill the hydraulic oil tanks with new oil or that meets the Case IH specification.

**NOTE:** Access to the hydraulic oil tank drain and inspection plate cover (1) are located under the rear of the harvester.

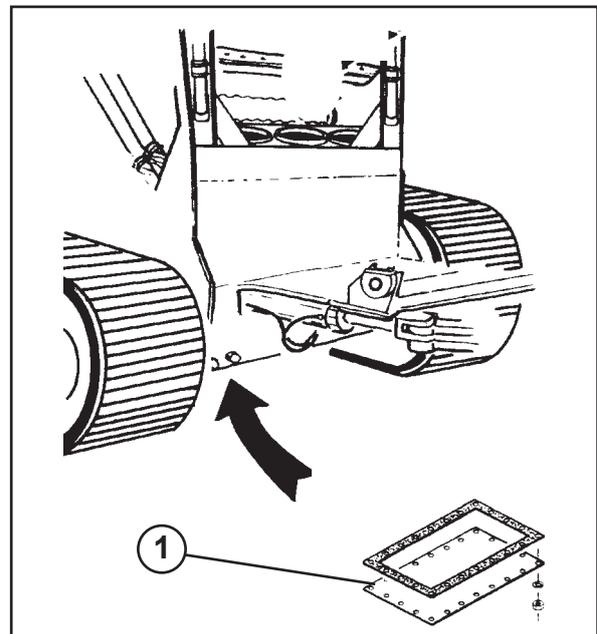


Figure 4

### Drain and refill procedure

1. Keep hand, tools and all fittings inside the hydraulic system completely clean at all times.
2. With all hydraulic cylinders in the fully retracted position, empty the tank by removing the drain plug at the bottom. Remove the inspection plate to gain access to the inside of the tank.
3. If necessary, clean the tank with low pressure steam or solvent.
4. Replace the return filter elements and suction filters.
5. Refit the inspection plate to the tank. Use a new gasket. Tighten the bolts evenly. Refill the tanks with new oil.

**NOTE:** *This procedure does not drain and replace the substantial of oil in the pumps, motors and hoses. If this needs to be replaced due to contamination of the oil with dirt or water, consult your Case IH Distributor.*

### Hydraulic Filters

**Location:** The suction filters are mounted on the outside of the engine box, on the rear wall. There are also three hydraulic return filters located in the top of the hydraulic oil tank.

**Change suction filters:** Every 250 hours replace the four suction filter elements.

**Important:** *Every day check the suction reading on the vacuum gauge fitted between the two filters or a warning lamp. With the engine running this gauge should read less than 7 Inches (180mm) Hg when the oil has reached normal operating temperature. If the reading is greater than this, replace the filter elements.*

## LUBRICATION AND MAINTENANCE PROGRAMME

Park the harvester on a flat surface, leaving it in a leveled condition. Wait about 1 minute and check the oil levels of both Basecutter and Chopper gearboxes. The oil on both should be at the plug level.

### ATTENTION

For the following activity, primarily proceed with the safety checks by using the proper PSE's (gloves, glasses, proper shoes and clothes). Only properly trained people shall carry out operating and maintenance jobs on this harvester. Follow the safety recommendations presented in this manual, refer to section 2.

### Daily Maintenance

Operation N°	Maintenance Requirement	C H E C K  A N D  S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
1	• Engine oil level	X	.	.	.	.	158
2	• Coolant level	X	.	.	.	.	158
3	• Hydraulic oil level (superior tank visor)	X	.	.	.	.	159
4	• Oil level of the pump drive (4-holes box), basecutter and chopper gearboxes (check / adjustment of basecutter legs play)	X	.	.	.	.	159
5	• Air cleaner	X	.	.	.	X	160
6	• Restriction indicator of the engine air filter*	X	.	.	.	X	161
7	• Air cleaner intake - hoses & clamps	X	.	.	.	.	162
8	• Water radiator, hydraulic oil cooler, air/air intercooler, alternator, A/C condenser and "Cooling package" screens and fins (use dry compressed air)	X	.	.	.	X	163
9	• Cropdivider bottom bearings	X	.	.	X	X	164
10	• Cropdivider upper and lower arms	X	.	.	X	X	164
11	• Topper post	X	.	.	X	X	165
12	• Primary / Secondary extractor slew	X	.	.	X	X	165
13	• Elevator slew cylinder	X	.	.	X	X	165
14	• PKD roller	X	.	.	X	X	166
15	• Finned roller	X	.	.	.	X	166
16	• Buttlifter roller	X	.	.	.	X	166
17	• Primary / Secondary extractor (cleaning and check / adjustment of extrator hub bearing play)	X	.	X	.	X	167
18	• Front suspension arms (A8000)	X	.	.	X	.	167
19	• Elevator floor	X	.	.	.	X	167
20	• Elevator hopper (Bowl)	X	.	.	.	X	168
21	• Hydraulic hoses (not rubbing)	X	.	.	.	X	168
22	• Basecutter blades	X	.	.	.	.	168
23	• Feed roller train	.	.	.	.	X	170
24	• Topper blades	X	.	.	.	.	170
25	• Chopper blades	X	.	.	.	X	171
26	• Vacuum gauges	X	.	.	.	.	173
27	• Fuel water separator filter	X	.	.	.	X	173
28	• Tire pressure	X	.	.	.	.	173

(\*) Clean the element if the indicator shows red mark. Maximum 4 cleanings.

continued...

## Daily maintenance (continued)

Operation N°	Maintenance Requirement	C H E C K A N D S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
29	• Floating rollers (stops height and free running)	X	.	.	.	X	174
30	• Track tensioning (track rollers)	X	.	.	.	X	174
31	• Operation of the harvester engine shut down system	X	.	.	.	.	175
32	• Functioning of all the cab controls	X	.	.	.	.	175
33	• Exhaust flap	X	.	.	.	.	176
34	• Alignment of the cooling system pulleys (fan pulley with the rotary screen shaft pulley and engine crankshaft pulley with the radiators fan pulley)	X	.	.	.	.	176
35	• Doors latches of the engine box, left and right side	X	.	.	.	.	177
36	• Engine box upper inspection doors	X	.	.	.	.	177
37	• Brushes of the rotary screen	X	.	.	.	.	177
38	• Functions of the electronic monitor	X	.	.	.	.	177
39	• Drive shaft of the rotary screen	.	.	.	X	X	178
39a	• Grease application to the cooling package propeller shaft	.	.	.	X	.	178
40	• Dirt built up on the machine structure, including engine box and cooling package	.	.	.	.	X	178
41	• Fan belt tension, alternator and air conditioning, play of the diesel engine pulleys and fan	X	.	X	.	.	179
42	• Leaks in the feed roller hydraulic hoses	X	.	.	.	.	180
43	• Elevator chain tension	X	.	.	.	.	180
44	• Conditions of hose protectors (change if necessary)	X	.	.	.	.	181
45	• Elevator slew mechanism stops	X	.	.	.	.	181
46	• Intercooler pipes and hoses	X	.	.	.	.	181
47	• Engine radiator pipes and hoses	X	.	.	.	.	181
48	• Pump box breathers	.	.	.	.	X	182
49	• Hydraulic oil tank breathers	.	.	.	.	X	182
50	• Basecutter and chopper gear box breathers	.	.	.	.	X	182
51	• Reduction hub breathers (A8000)	.	.	.	.	X	183
52	• Remove air from the reduction (A8800)	X	.	.	.	.	183
52a	• Autotracker oil tank level	X	.	.	.	.	183

(\*) Clean the element if the indicator shows red mark. Maximum 4 cleanings.

### 50 hour maintenance

All the items contained in this schedule should be repeated at 50 hours intervals, except for CHANGE items. Refer to the manufacturers operators manual.

Operation N°	Maintenance Requirement	C H E C K  A N D  S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
53	• Pump drive gearbox oil (4-holes box)*	.	X	.	.	.	184
54	• Basecutter gear box oil *	.	X	.	.	.	185
55	• Chopper gear box oil *	.	X	.	.	.	185
56	• Rear reduction hub oil * **	.	X	.	.	.	186
57	• Transmission suction filter elements *	.	X	.	.	.	187
58	• Transmission return line elements *	.	X	.	.	.	189
59	• Battery electrolyte level	X	.	.	.	.	190
60	• Tightening of wheel bolts (A8000)	.	.	X	.	.	191
61	• Tightening of track sprocket nuts (A8000)	.	.	X	.	.	191
62	• Feed roller bearings (with a hand pump)	.	.	.	X	.	191
63	• Standard / Shredder topper disc	.	.	.	X	.	191
64	• Standard / Shredder topper drums	.	.	.	X	.	192
65	• Primary extractor (bearing)	.	.	.	X	.	192
66	• Secondary extractor (bearing)	.	.	.	X	.	192
67	• Elevator top and bottom shaft bearings	.	.	.	X	.	193
68	• Track pivot axle	.	.	.	X	.	193
69	• Air conditioning filters (cab)	.	.	.	.	X	194
70	• Wash complete machine	.	.	.	.	X	195
71	• If there is clearance in the bearing of the radiators fan	X	.	.	.	.	195
72	• If there is clearance in the bearing of the radiators cleaning paddle	X	.	.	.	.	195

(\* ) First 50 hours operation, then as per schedule.

(\*\* ) It is recommended to check the oil level every 150h, for the A8800 model (from chassis 880081).

**250 hour maintenance**

All the items contained in this schedule should be repeated at 250 hour intervals, including 50 hours service items, they should be repeated at 250 hour intervals, refer to the manufacturers operators manual.

Operation N°	Maintenance Requirement	C H E C K  A N D  S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
73	• Pump drive gearbox (4-holes box) oil	.	X	.	.	.	195
74	• Basecutter gear box oil	.	X	.	.	.	196
75	• Chopper gear box oil	.	X	.	.	.	196
76	• Rear reduction hub oil	.	X	.	.	.	196
77	• Transmission suction filter elements	.	X	.	.	.	196
78	• Engine oil and filters*	.	X	.	.	.	197
79	• Fuel water separator filter	.	X	.	.	.	198
80	• Engine fuel filter	.	X	.	.	.	199
81	• Rotary filter DC9	.	.	.	.	X	199
82	• Installation of the retaining circlips of the elevator slew table pins	X	.	.	.	.	202
83	• Tightening of the engine mounting bolts	X	.	.	.	.	202
84	• Reposition elevator flights (not warranty)	X	.	.	.	.	202
85	• Preload of pivot axle shaft bearings (A8800)	.	.	X	.	.	203
86	• Chopper gearbox shaft seals (with a hand pump)	.	.	.	X	.	203
87	• Chopper motor housing bearings (with a hand pump)	.	.	.	X	.	203
88	• Engine air filter element	X	.	.	.	X	203
89	• Primary extractor bearing preload	X	.	.	.	.	204

(\* ) See NOTE in the Section 5 (diesel fuel selection chart), information about change intervals in regard to fuel quality.

### 500 hour maintenance

All the items contained in this schedule should be repeated at 500 hour intervals, including 250 hours service items, refer to the manufacturers operators manual.

Operation N°	Maintenance Requirement	C H E C K A N D S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
90	• Front wheel bearing preload (A8000)	X	.	.	.	.	204
91	• Remove one link from the elevator chain (if necessary) (not warranty)	X	.	.	.	.	204
92	• Scania DC9 engine valve clearance *	X	.	.	.	.	205
93	• Engine Diesel filter (Scania DC9 engine)	.	X	.	.	.	205
94	• Carry out a full track inspection on the field (not warranty). See a BERCO dealer if necessary.	X	.	.	.	.	208
95	• Case IH 9L and DC9 Blow-by filter change	.	X	.	.	.	208
95a	• Elevator chains, wear strips and sprocket wear (not warranty)	X	.	.	.	.	208

(\* ) Machines fitted with Scania DC9 engines, contact the Scania representative for the region to accomplish the first valve adjustment, after that the adjustment is made every 2500 hours

### 750 hour maintenance

All the items contained in this schedule should be repeated at 750 hour intervals, including 50, 250 and 500 hours service items, refer to the manufacturers operators manual.

Operation N°	Maintenance Requirement	C H E C K A N D S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
96	• Carry out a full track inspection on the field (not warranty). See a BERCO dealer if necessary.	.	X	.	.	.	210
97	• Hydraulic oil return filter elements	.	X	.	.	.	210
98	• Nitrogen pressure in the volume converter of the autotracker	X	.	.	.	.	210
99	• Suspension accumulator pressure* (not warranty)	X	.	.	.	.	211
100	• Suspension accumulator pressure - wide front* (without a warrantable failure)	X	.	.	.	.	211
101	• Topper accumulator pressure* (not warranty)	X	.	.	.	.	211

(\* ) As machine configuration (Refer to operator/service manual).

**1000 hour maintenance**

All the items contained in this schedule, including the 50, 250,500 and 750 hours, as noted, should be carried out at 1000 hour intervals, refer to the manufacturers operators manual.

Operation N°	Maintenance Requirement	C H E C K A N D S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
102	• Check the anti-corrosion level in coolant (contact Scania Dealer)	X	.	.	.	.	213
103	• Case IH 9L engine valve clearance	X	.	.	.	.	213

(\* ) As machine configuration (Refer to operator/service manual).

**1500 hour maintenance**

All the items contained in this schedule, including the 50, 250 and 500 hours, as noted, should be carried out at 1500 hour intervals, refer to the manufacturers operators manual.

Operation N°	Maintenance Requirement	C H E C K A N D S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
104	• Dismantle the reduction hubs, assess the wear on the thrust washers. Change the gear set from one side to the other	X	.	.	.	.	213

**2500 hour maintenance**

All the items contained in this schedule, including the 50, 250 and 500 hours, as noted, should be carried out at 2500 hour intervals, refer to the manufacturers operators manual.

Operation N°	Maintenance Requirement	C H E C K A N D S E T	C H A N G E	T O R Q U E	G R E A S E	C L E A N	Pg.
105	• Scania engine review - valve adjustment (contact dealer SCANIA)	X	.	.	.	.	213
106	• Add 1.0 % of Scania anti-corrosion additive by volume (not warranty)	.	X	.	.	.	214
107	• Wash the machine and evaluate the general condition of the equipment (Structures and hydraulic components)	.	.	.	.	X	214
108	• Checking / setting of injection units rocker arms (PDE)	X	.	.	.	.	214

## DAILY MAINTENANCE

### Operation 1

#### Checking the engine oil level (Daily)

**NOTE:** Before checking the oil level: Stop the engine, and wait for more than one minute.

- The oil will be at the correct level when it is between dipstick level marks (1). Top up when the oil level is below the upper mark.
- Top up with - CASE Engine Oil N°1 - SAE 15W-40, API CI-4, ACEA E3/E4/E5
- Remove the filler cap to release the pressure in the crankcase.
- Check the oil on the level dipstick. The oil must be 10 mm above the "min." mark or 10mm below the "max." mark. Correct it if necessary.

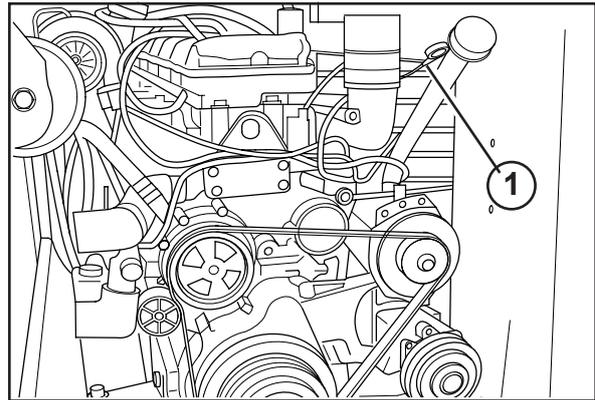


Figure 5

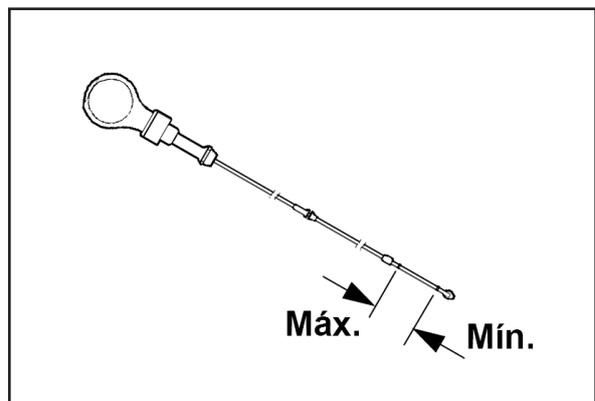


Figure 6

### Operation 2

#### Checking the coolant level (Daily)

- Open the expansion tank filler cap (1) and check the coolant level.
- **Cold engine:** the coolant level should be about 50 mm below the filling neck.
- **Hot engine:** the coolant level should be about 25 mm below the full tank line.
- Other types of expansion tank according to the instructions of installation.
- Top up with coolant as necessary.

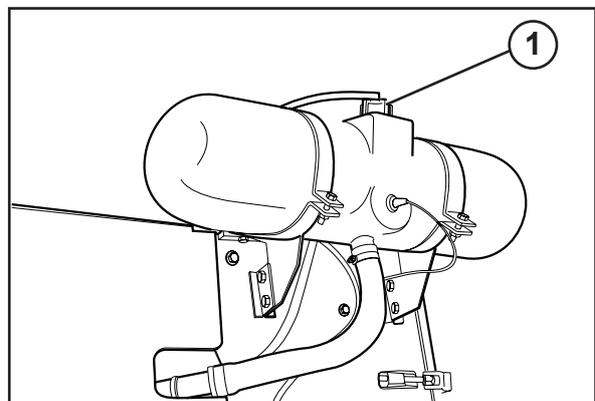


Figure 7

**NOTE:** When adding large amounts of coolant: Never introduce cold coolant into a hot engine. This can cause cracks in the cylinders block and in the cylinder head.

**⚠ WARNING ⚠**

Hot engine with pressurized cooling system: Open the cap carefully. Water and steam can blow out. There is a risk of being scalded.

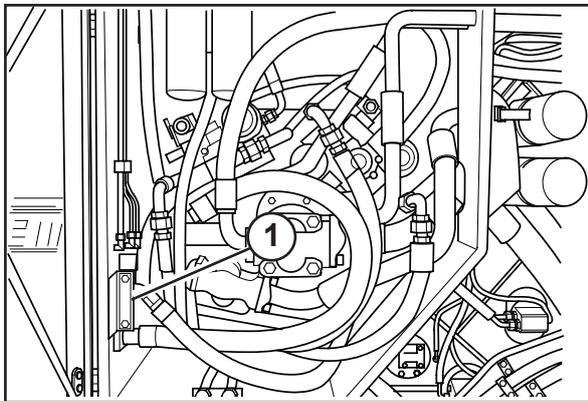
**IMPORTANT:** Always top up the system with ready mixed coolant.

### Operations 3 and 4

#### Checking the pump drive gearbox and hydraulic oil level

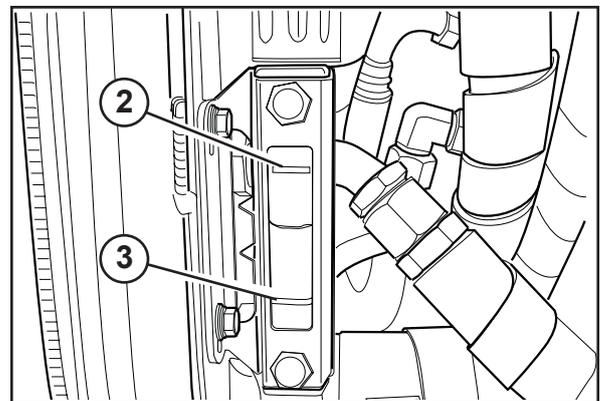
- Check the oil level (1) with the harvester parked on a level surface, with the engine turned off at least 5 minutes.

**NOTE:** Check that the oil level is between “Minimum” (3) and “Maximum” (2) indication of the sight glass.



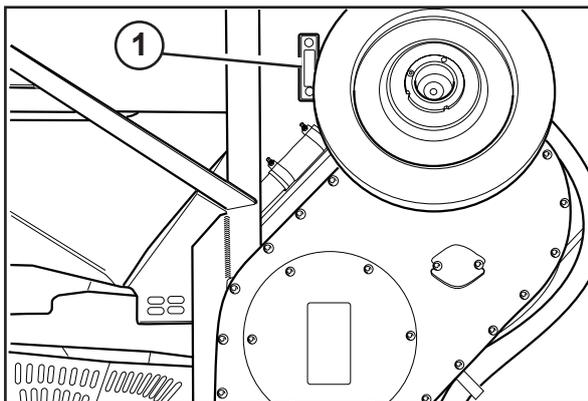
Pumps gearbox sight glass

Figure 8



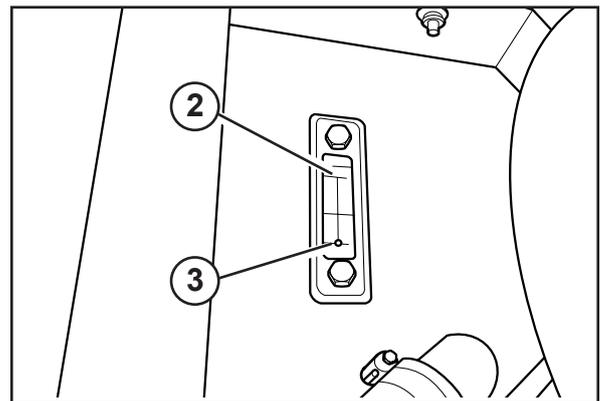
Pumps gearbox sight glass

Figure 9



Top tank sight glass

Figure 10



Top tank sight glass

Figure 11

### Checking chopper gear box oil level

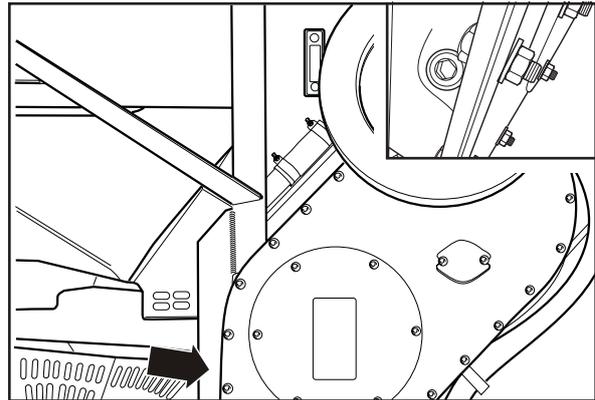


Figure 11a

### Checking basecutter oil level

### Checking/Adjusting the free play of chopper's flywheel clutch

- Hold with both hands two opposite sides of the flywheel and force it "inwards and outwards". If there is any free play, proceed with the adjustment.
- Loosen the locking screw (2) and also the nut (1).
- Tighten the nut (1) until the flywheel free play is eliminated and then mark the flywheel on this point.
- Then, tighten nut another 1/2 turn related to the mark made before.
- Check if there is still a free play. If there is not, accompany the harvester working and verify the flywheel's clutch work: it should slip in case of an overload situation.

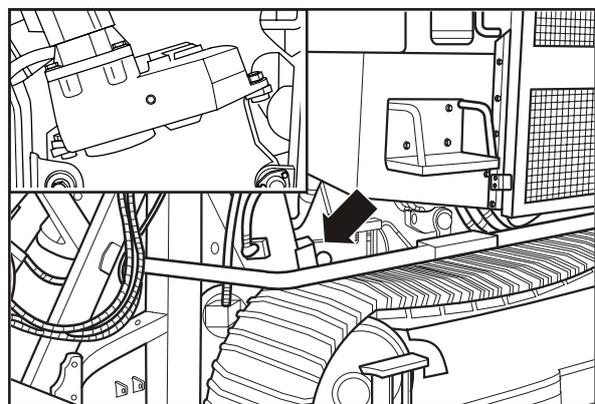


Figure 11b

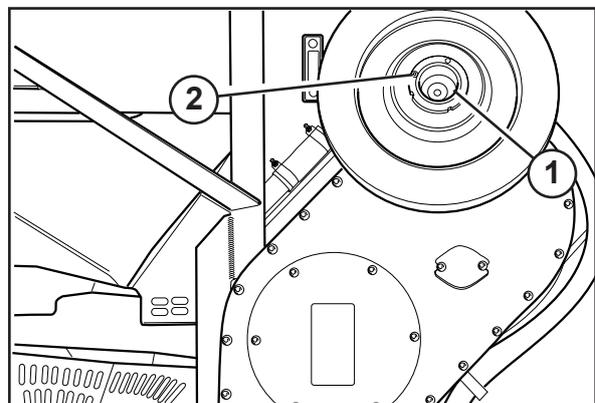


Figure 11c

## Operation 5

### Checking and cleaning the air cleaner

- When the dust volume reaches the indicated level, clean as indicated on the dust collector bowl.

**WARNING:** After checking and cleaning, make sure the pre-cleaner is correctly fastened and sealed to prevent water from entering.

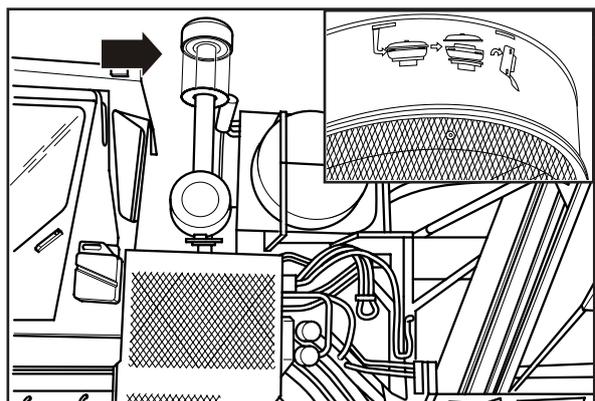


Figure 12

## Operation 6

### Engine air filter maintenance

Clean the external element when indicated on the monitor.

1. Loosen the lock (1), of the filter housing and remove the cap. Undo the wing nut and remove the external element (2) of the air filter assembly.

**IMPORTANT:** Do not remove nor touch the internal element (3), except to replace it.

2. Examine the inside of the external element, if it is damaged, the same should be replaced by a new one. The inner element should also be replaced at this time.

3. Clean the external element using either method A, or B, depending on the element condition.

**NOTE:** Replace the external filter element after it has been cleaned 4 times maximum by either method A or B, or when damaged.

**IMPORTANT:** The maintenance and the care with the air cleaning system, which includes the elements of the filter, is the owner's responsibility.

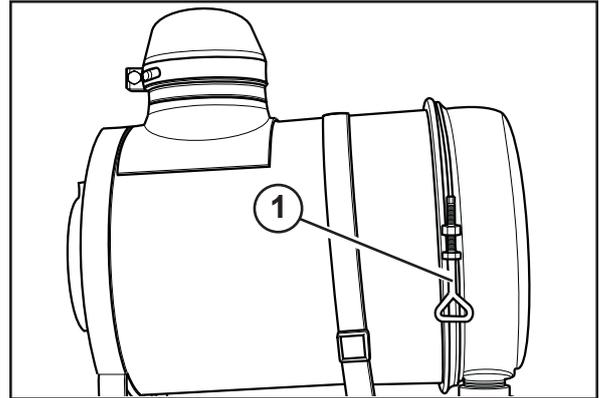


Figure 13

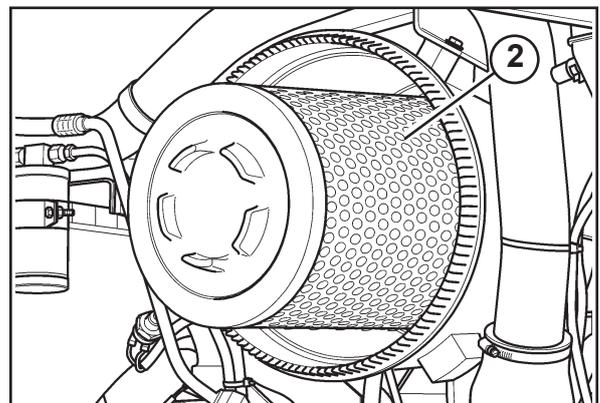


Figure 14

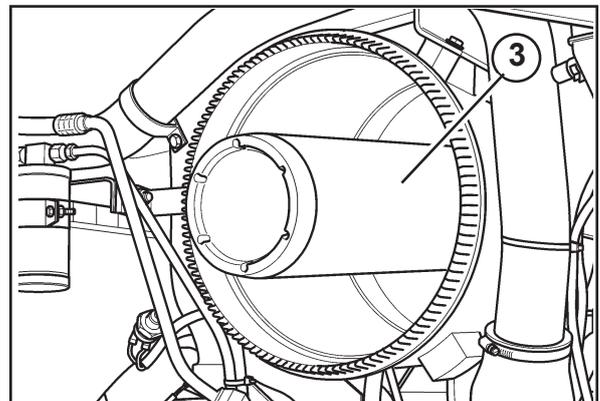


Figure 15

### Method A

- Beat the end of the element softly in the palm of hand.

**IMPORTANT:** To prevent damage to the element do not beat against hard surfaces.

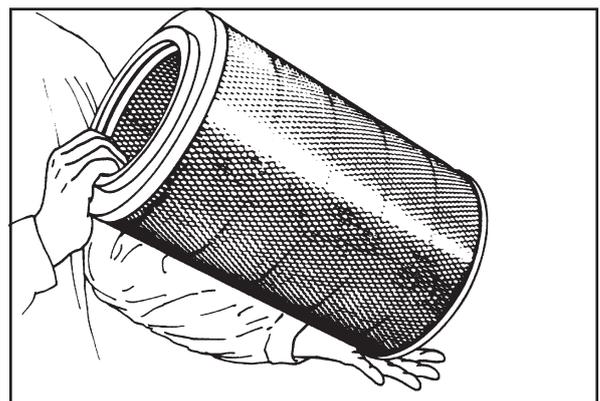


Figure 16

**Method B**

- Use compressed air that does not exceed 2 bar (30 psi): introduce the air hose nozzle inside the element keeping it 50 mm away, blowing the dust off the outside from the inside.

**⚠ WARNING ⚠**

*Use safety glasses when performing this operation.*

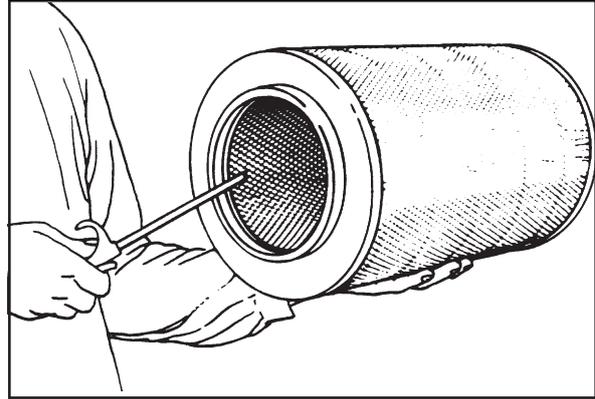


Figure 17

4. Examine for damage in the element by placing a lamp inside it. Replace the element if, when checking, the light is seen, indicating a hole, or if there are areas where the paper is thin.
5. Check for the existence of accumulation in the element, deformation in the housing and damage to the rubber gasket. Replace the filter element if it is damaged.
6. Clean the inside of the air filter housing, with a wet cloth: Do not damage the inside of the element. Check that the inner end of the housing is clean and flat, to guarantee a good seal of the element sealing rubber.
7. Install the cleaned outer element (1) or a new outer element.

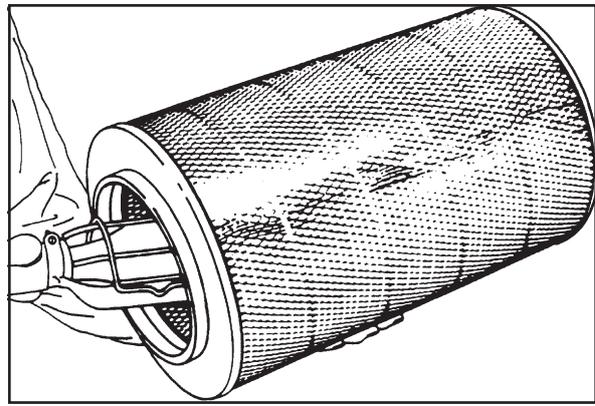


Figure 18

**NOTE:** *If the restriction indicator continues to indicate high restriction after cleaning, replace the inside and/or outside elements.*

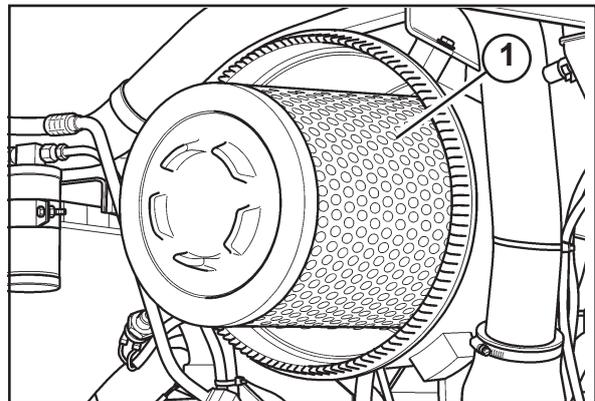


Figure 19

**Operation 7****Checking the hoses and clamps of air cleaner intake**

- Check that the clamps are not loose and that the hoses are not damaged.

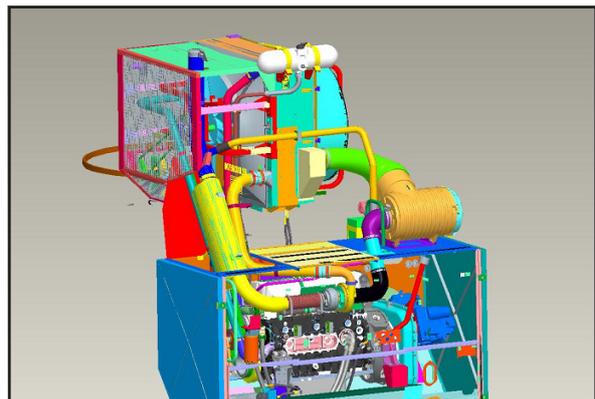


Figure 20

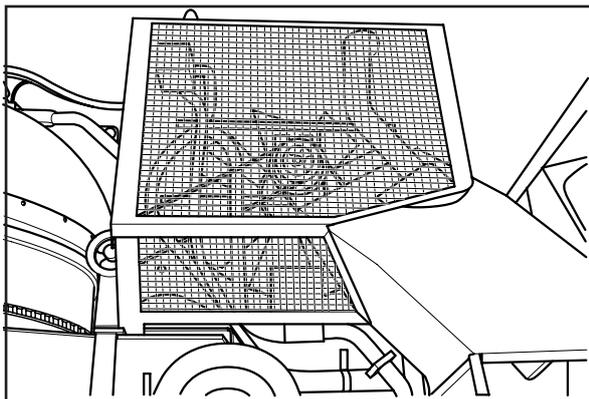
## Operation 8

### Checking and cleaning the screens and fins of the water radiator, hydraulic oil cooler, air/air intercooler, alternator and A/C condenser

- Always keep the cooling package screens clean. Use dry compressed air.

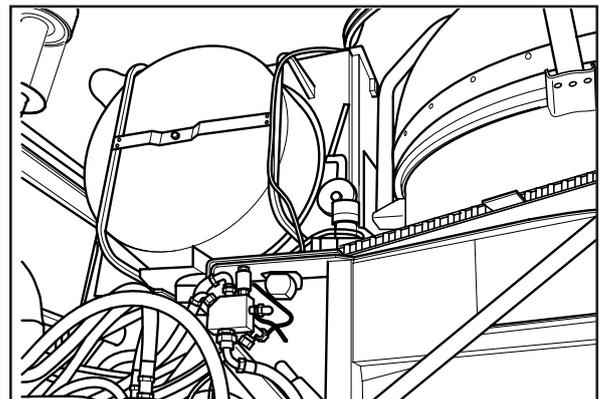
**NOTE:** The buildup of dirt in this region will restrict the passage of air and consequently can overheat the machine.

- Clean the cooling package screen with air at low pressure directing the air through the cooling package, from the inside out.



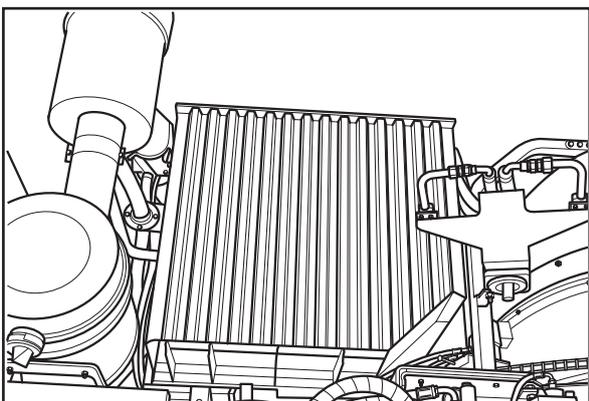
Machines equipped with ROTARY SCREEN

Figure 21



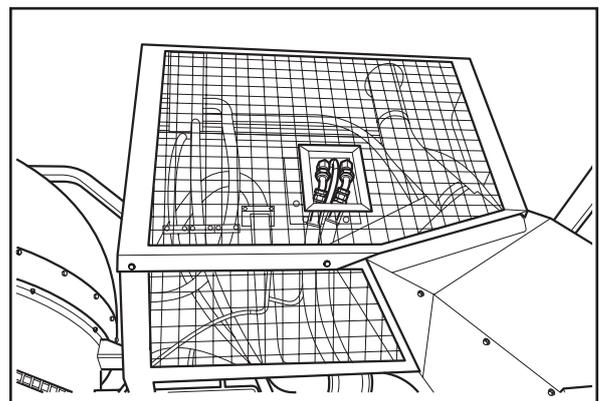
Machines equipped with ROTARY SCREEN

Figure 22



Machines equipped with FIXED SCREEN

Figure 22a

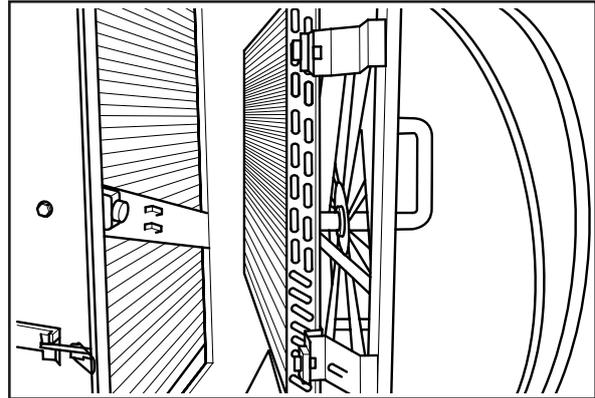


Machines equipped with FIXED SCREEN

Figure 22b

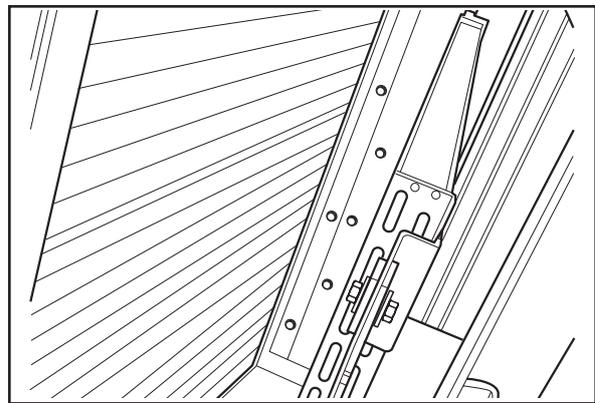
### Cleaning the radiators and condenser

- Clean the radiators and condenser with compressed air in low pressure in the opposite direction.



Machines equipped with ROTARY SCREEN

Figure 23



Machines equipped with FIXED SCREEN

Figure 23a

### Operation 9

#### Greasing the cropdivider bottom bearings

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

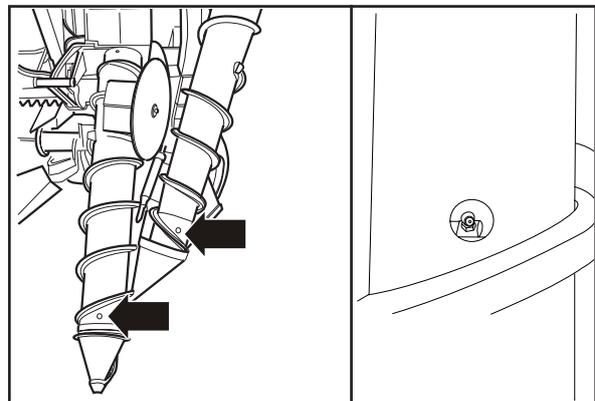


Figure 24

### Operation 10

#### Greasing the cropdivider upper and lower arms

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

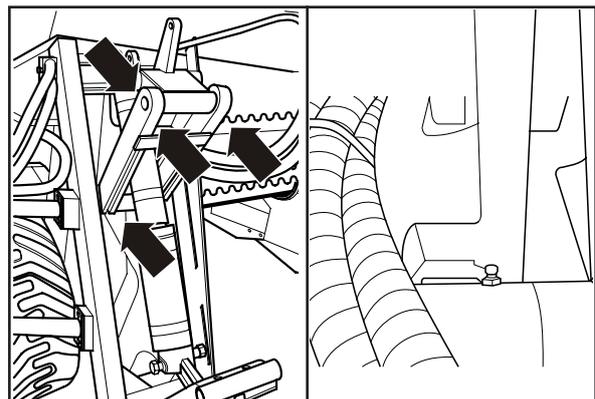


Figure 25

**Operation 11****Greasing the topper post**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

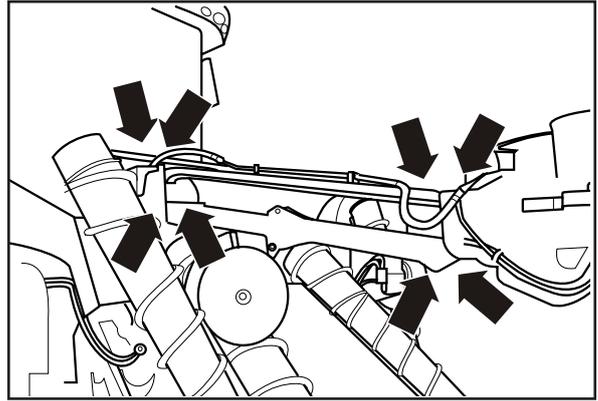


Figure 26

**Operation 12****Greasing the primary / secondary extractor slew**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

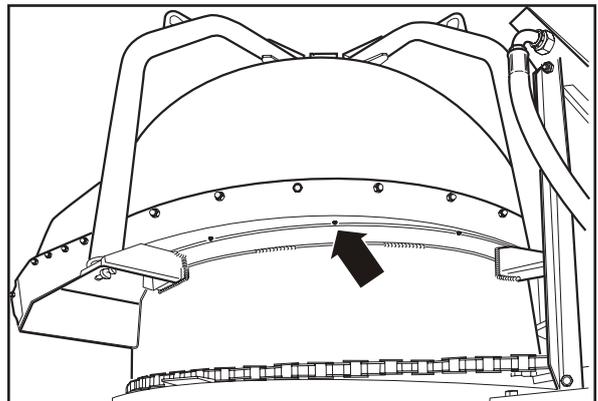


Figure 27

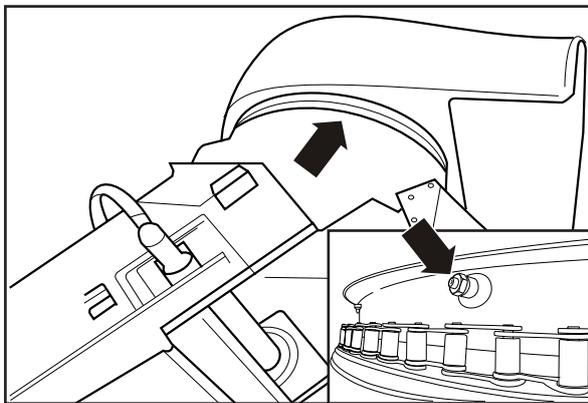


Figure 28

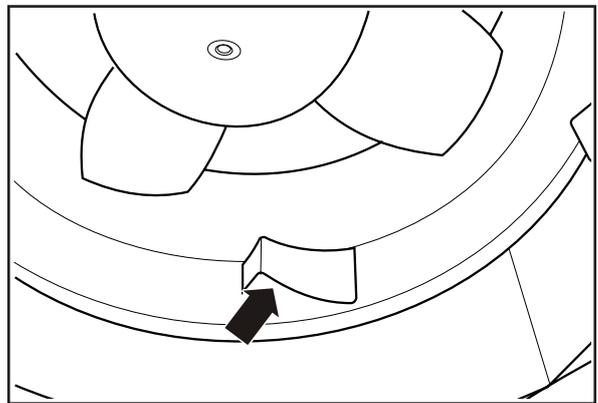


Figure 29

**Operation 13****Greasing the elevator slew cylinder**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

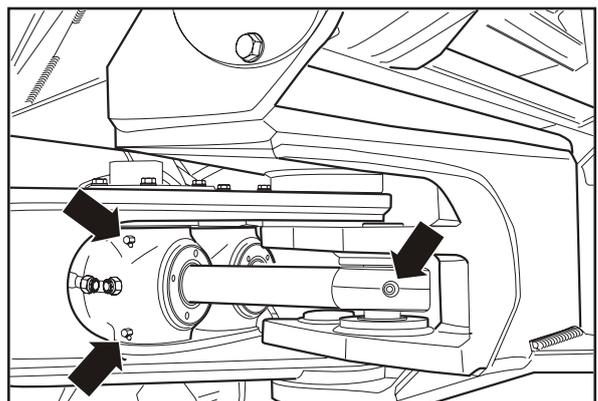


Figure 30

### Operation 14

#### Greasing the PKD roller

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

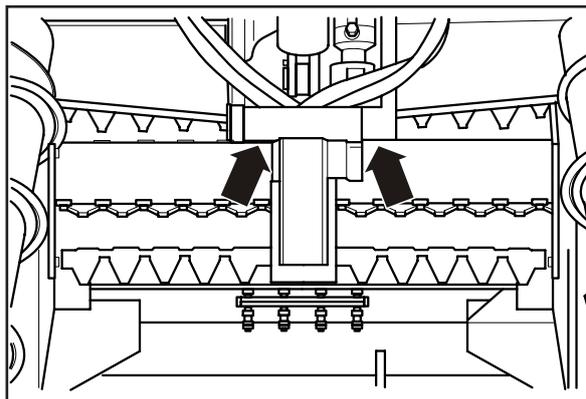


Figure 31

### Operation 15

#### Cleaning the finned roller

- Always keep the feeder roller clean, for better efficiency of the feeding system.

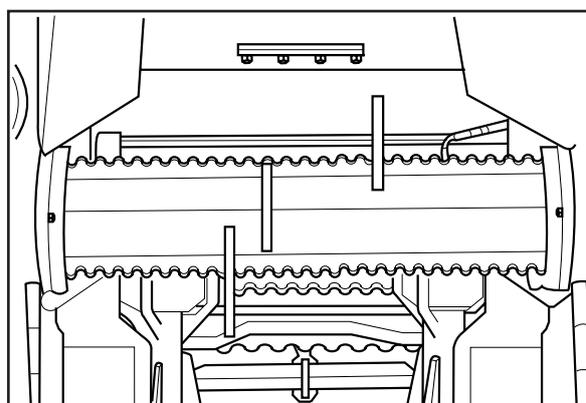


Figure 32

### Operation 16

#### Cleaning the buttlifter roller

- Always keep the buttlifter roller clean, for better efficiency of the roller.

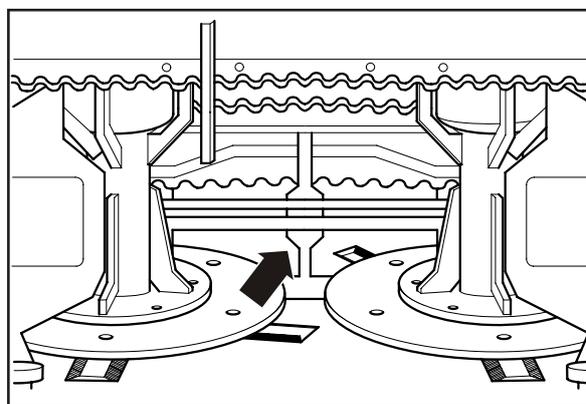


Figure 33

**Operation 17****Cleaning the Primary / Secondary extractor**

- Always keep the extractors clean, including the vertical shaft area.

**NOTE:** The accumulation of dirt in the extractor assemblies can cause imbalance to the assembly, resulting in efficiency loss, vibration on the machine and eventual breakage of the assembly.

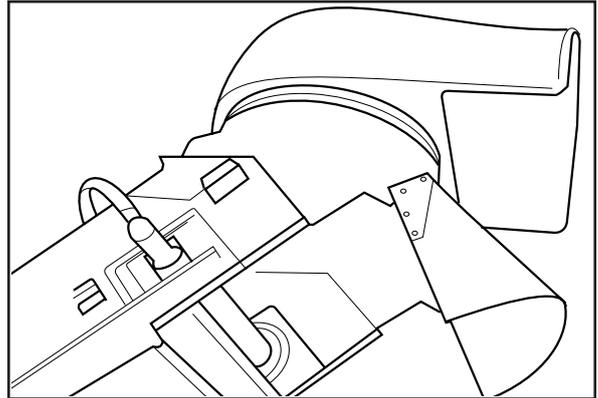


Figure 34

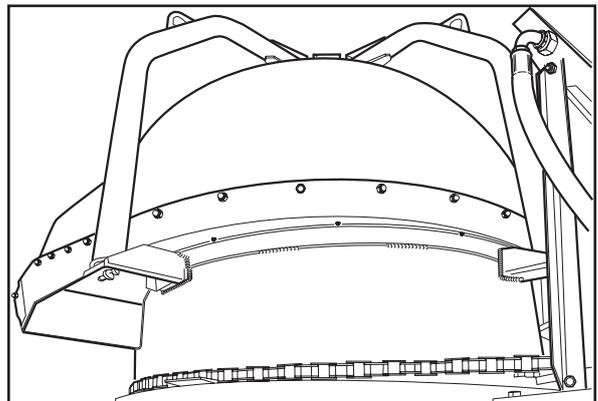


Figure 35

**Operation 18****Greasing the front suspension arms (A8000)**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

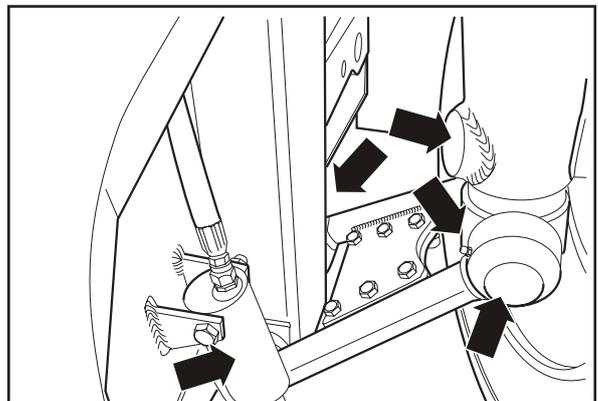


Figure 36

**Operation 19****Cleaning and adjustment the elevator floor**

- Always keep the elevator floor clean and adjust when necessary.

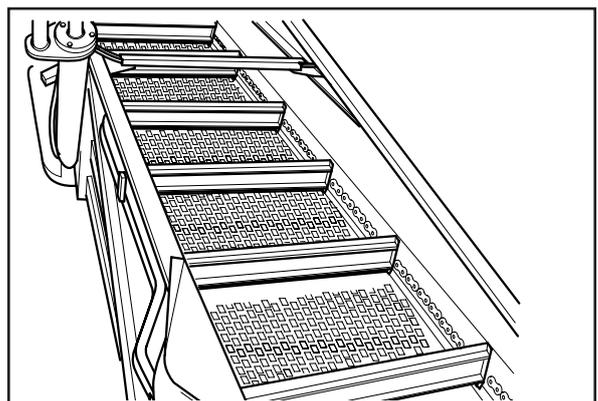


Figure 37

## Operation 20

### Cleaning the elevator hopper (Bowl)

- Always keep the elevator hopper clean.

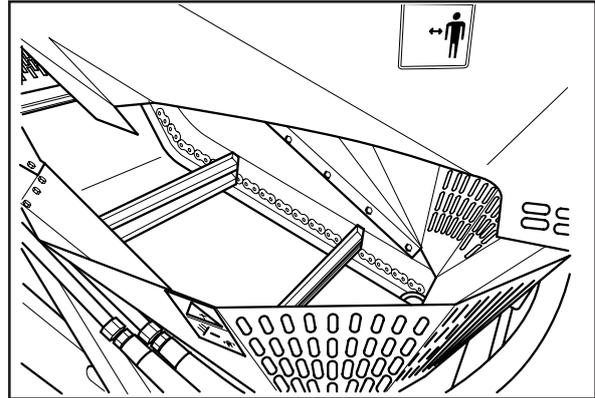


Figure 38

## Operation 21

### Checking the hydraulic hoses (not rubbing)

- Check if the hoses aren't wearing, which can cause eventual failure.

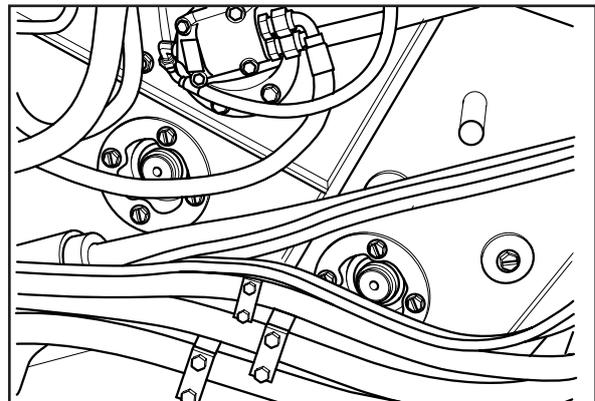


Figure 39

## Operation 22

### Checking the basecutter blades (follow the safety recommendations)

Inspect the following points, every day after the Harvest:

- Blades sharp on both edges.
- Corners not rounded.
- Blades not bent, nicked or broken.
- Bolts tight.
- Disc not worn. (Minimum diameter - 546mm).
- Blades full length.
- Gearbox breather not blocked.
- Hydraulic pipes and hoses not leaking; not damaged.

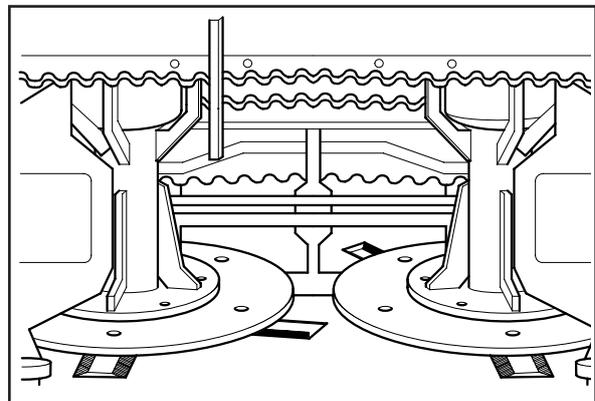


Figure 40



**WARNING:** ALWAYS PLACE A SUPPORT BELOW THE CENTER OF THE BASECUTTER DISCS OR BELOW THE FRONT PART OF THE MACHINE BEFORE WORKING UNDER THE MACHINE.

## Replacement of the basecutter blades

### Procedure

1. Remove the retaining bolt.
2. If the blade is badly worn or damaged, discard it.
3. Keep the nuts and bolts for re-use. Discard any that are worn or damaged. Use only the correct replacement parts.
4. Tighten the retaining bolt securely.

**IMPORTANT:** *Maximum basecutter blade length is 89 mm. Failure to note this limit will result in fault to the front tires or the blades to hit the track frame.*



**WARNING:** ALWAYS PLACE A SUPPORT BELOW THE CENTER OF THE BASECUTTER DISCS OR BELOW THE FRONT PART OF THE MACHINE BEFORE WORKING UNDER THE MACHINE.

## Replacement of the basecutter disc

The diameter of a new disc is 22 1/4 Inches {565mm}. Replace the disc when the diameter has worn to 21 1/2 Inches {546mm} at the narrowest point.

### Procedure

1. Remove the five 16mm mounting bolts holding the disc (1) to the basecutter gearbox leg. Remove the basecutter disc (1).
2. Mount the disc on the basecutter leg. Replace the mounting bolts and tighten.

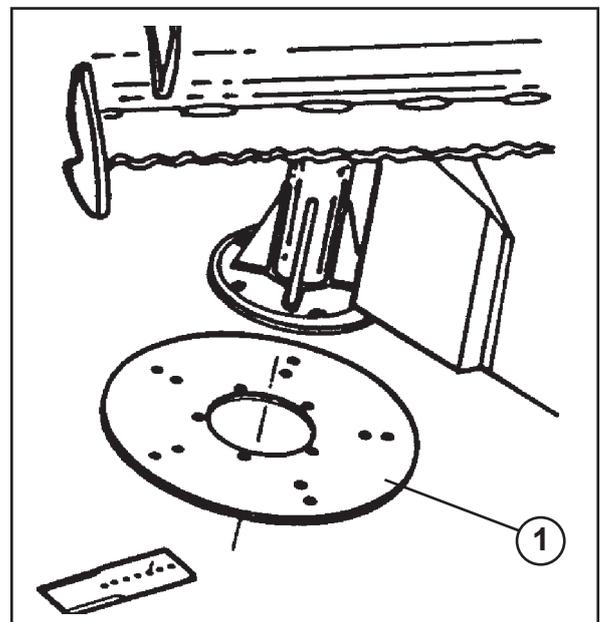


Figure 41



**WARNING:** ALWAYS PLACE A SUPPORT BELOW THE CENTER OF THE BASECUTTER DISCS OR BELOW THE FRONT PART OF THE MACHINE BEFORE WORKING UNDER THE MACHINE.

## Adjustment of the Basecutter disc angle

### Procedure

1. Support the basecutter gearbox with means of raising or lowering the front of the basecutter disc.
2. Remove the front bolts, on both sides of the machine, which mount the basecutter box. Pivot the gearbox to increase or decrease the angle of the gearbox. Replace the two front bolts in the new position. Tighten the two front bolts.

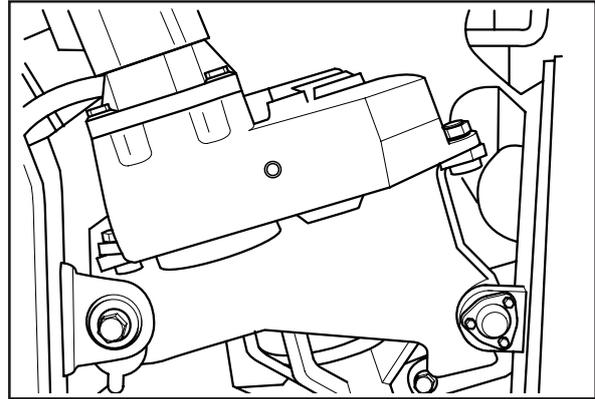


Figure 42

## Operation 23

### Cleaning the feed roller train

Keep the roller train free from dirt build-up and trash.

## Operation 24

### Checking the topper blades

Inspect the following points, every day after the harvests:

- Blades sharp on both edges.
- Bolts tight.
- No trash wrapped around parts.
- Hydraulic pipes and hoses not leaking; not damaged.

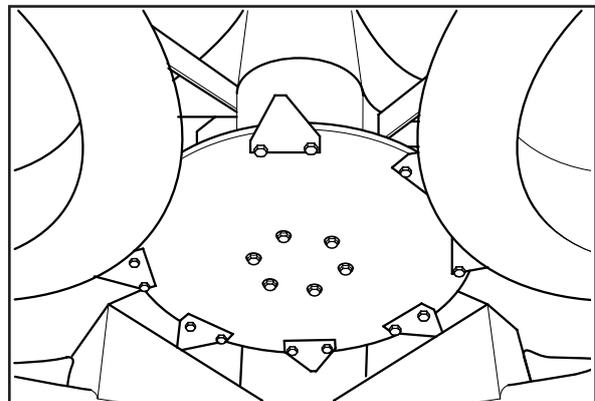
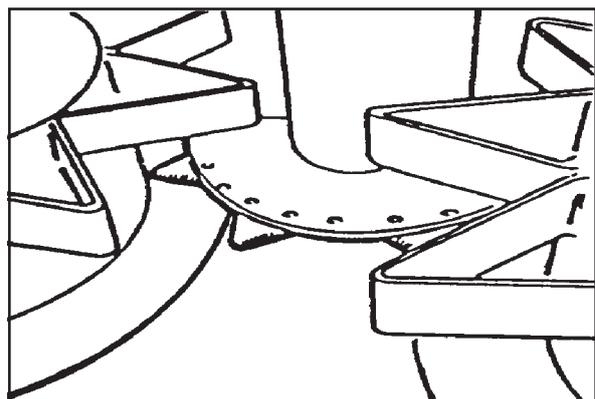


Figure 43

### Replacement of the topper blades

#### Procedure

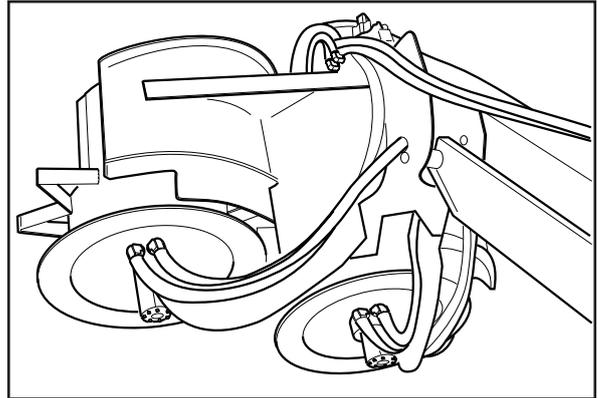
1. Remove the retaining bolts. Remove the old blade and clean the blade seating area.
2. New nyloc nuts should be fitted. Keep the CSK screws re-use. Discard any that are worn or damaged. Use only the correct replacement parts.



Topper Blades

Figure 44

3. Hold the replacement with the beveled face downwards and pointing away from the topper disc. Place the CSK screws down through the holes in the disc and through the blade which mounts below the disc. Fit the nyloc nut and tighten securely. Bolts which are too long must not be used as they will protrude through the nuts and cause trash build up on the topper.



Topper, Standard

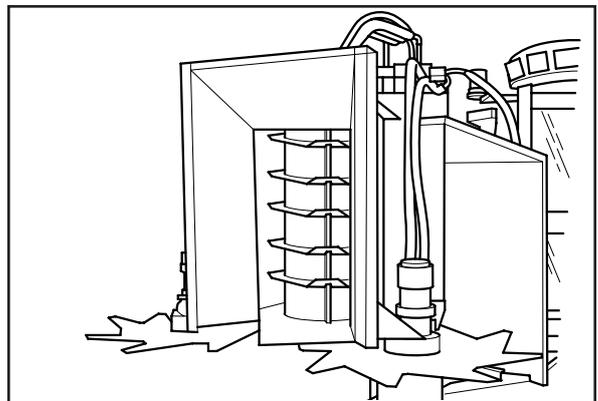
Figure 45

## Operation 25

### Checking the chopper blades

Inspect the following points, every day after the harvests:

- Blades sharp.
- Blades not damaged.
- Bolts tight.
- Gearbox breather not blocked.
- Hydraulic pipes and hoses not leaking; not damaged.
- Timing



Shredder Topper

Figure 46

## Replacement of the chopper blades

**NOTE:** The chopper blades are of the “throw away” type, 65 mm wide. They are held in the chopper drum by a clamping bar.

### Procedure

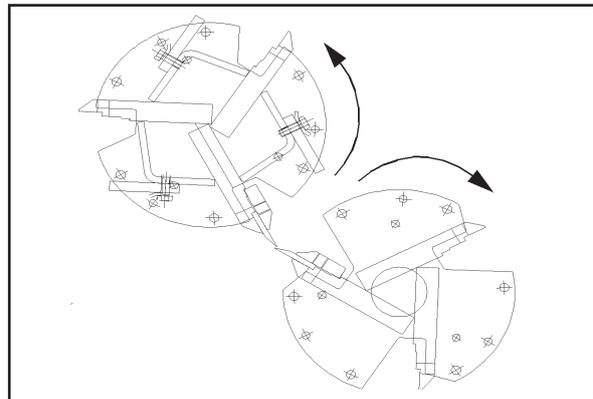
1. Turn the flywheel so that the blades are in an accessible position. Loosen the clamping bolts and withdraw the blade. Clean the seating area.
2. Fit the new blade in the top drum first to minimize the risk of injury from the bottom blade. The top blade is fitted with the bevel facing back down the roller train of the machine. The bottom blade is fitted with the bevel facing towards the primary extractor. The top blade should always be leading through the chop. Securely tighten the clamping bolts.
3. To tighten the mesh of the blades the bottom blades can be slid slightly out and retighten the clamp plate bolts.

**IMPORTANT:** Never tighten the mesh with old blades fitted by adjusting the timing of the chopper box, as damage to the bearings may cause premature failure of the chopper box and void warranty.

4. To check the blade timing put a mixture of red lead and grease, or bearing blue (Prussian Blue), on the blades on the bottom drum. Turn the flywheel and check the mark that consequently is left by the top drum knives on the bottom drum knives. The blades should mark the full length.

**NOTE:** The design of the differential chop promotes an increased wiping action and therefore extended contact time of the chopper blades. This leads to improved chopping and trash cutting capability. As the blade contact time is increased, the need for a heavy blade mesh as required in standard type rotary chop is reduced. Excessively tight blade contact can lead to premature gearbox component failure.

**NOTE:** Due to manufacturing tolerances in the blades a mark on the full length may not be obtained.



Chopper Drums And Blades

Figure 47

**OPERATION 26****Checking the vacuum gauges**

In the machines equipped with analogical vacuum gauges, check with the engine running and with the hydraulic oil at the working temperature (80° C) whether the vacuum gauge indicates less than 7 in of Hg or 180 mmHg. If the gauge indicate a higher value, replace the filters.

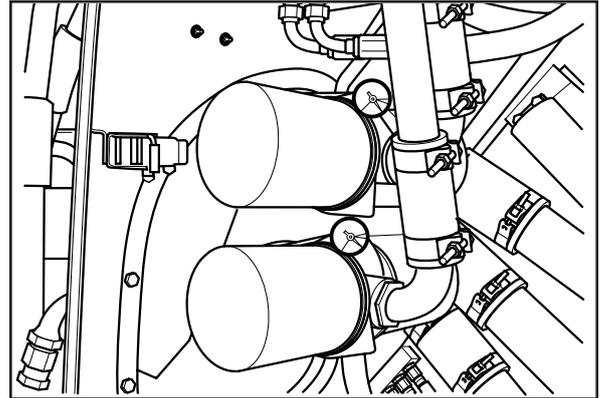


Figure 48

**OPERATION 27****Checking the fuel water separator filter**

1. Loosen the connector (1).
2. Loosen the nut (2), until all the water comes out

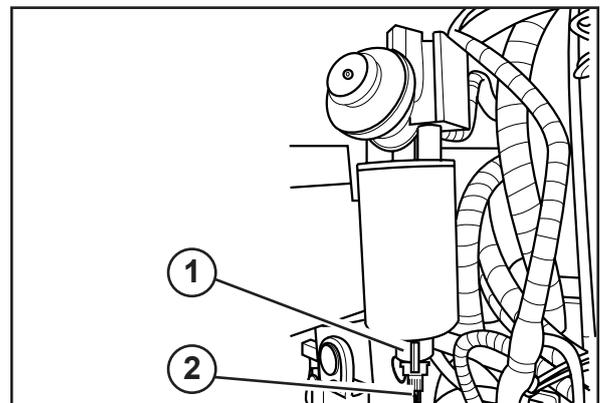


Figure 49

**OPERATION 28****Checking the tire pressure**

Tire	Size	Pressure
Front	400/60 - 15.5 14 ply	45 psi
Rear (industrial)	23.5 x 25 - 12 ply	40 to 45 psi
Rear (farming)	23.1 x 26 - 16 ply	45 to 47 psi

**OPERATION 29****Checking the floating rollers  
(stops height and free running)**

- Check if the distance from roller motor housing to the chassis (1) distance is 6mm. If is less, rotate the stop (2).

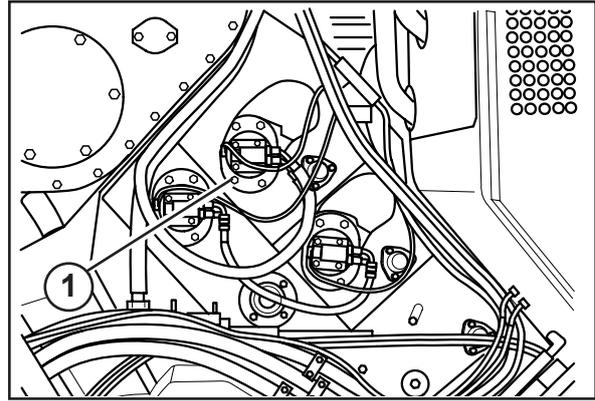


Figure 50

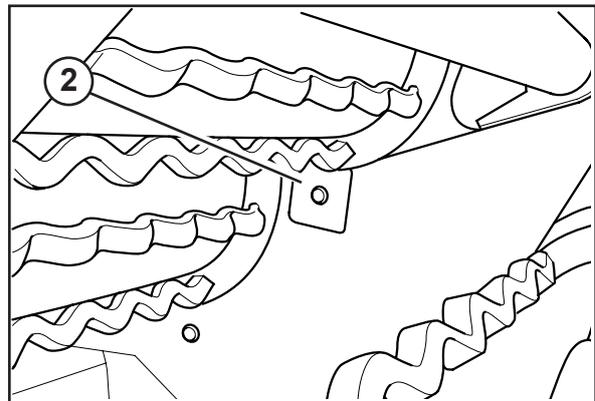


Figure 51

**OPERATION 30****Checking the track tensioning  
(track rollers)**

- Check the tension adjustment of the chains. The track clearance should be between 45 and 65 mm at the largest clearance (between idler wheel and top roller), measured on top of the grouser plate. Start the engine and operate one of the cylinder control functions until the piston reaches the end of its travel.

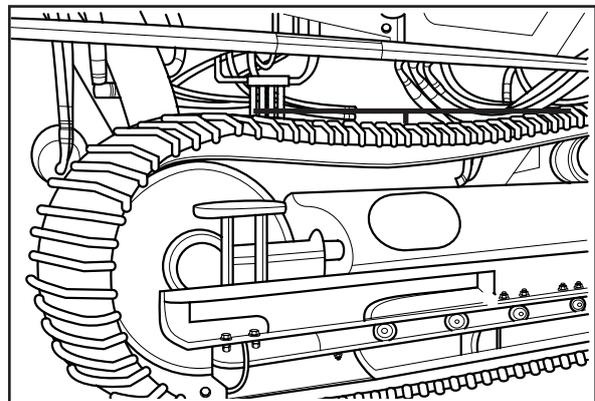


Figure 52

## Adjustment of the track chain

**NOTE:** Track chain should be adjusted when more than 2 3/4 Inches (65 mm) of slack movement occurs between the front idler and the top roller, with the engine running and the hydraulic chain tensioner activated. Minimum allowable slack movement is 1 3/4 Inch (45 mm).

## OPERATION 31

### Checking the operation of the harvester engine shut down system

- With the machine with the engine running, open the door beside the belts, the engine should stop.

## OPERATION 32

### Checking the functioning of all the cab controls

- Test the controls and activate the machine functions.

## OPERATION 33

### Checking the exhaust flap

- Check if the exhaust flap is free to move.

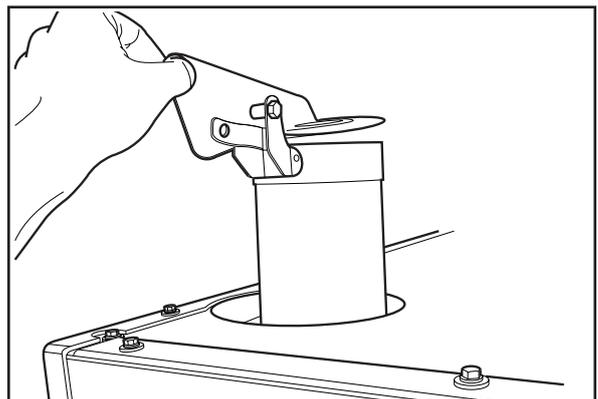


Figure 54

**OPERATION 34****Checking the alignment of the cooling system pulleys (fan pulley with the rotary screen shaft pulley and engine crankshaft pulley with the radiators fan pulley)**

1. Check the alignment of the belts and adjust, using a straight edge of 2m (1). Check if some belts are touching in some part of the mounting.
2. If needed, the reference position should ALWAYS be the engine pulley, because it does not have adjustment. Adjust the belts (as below).

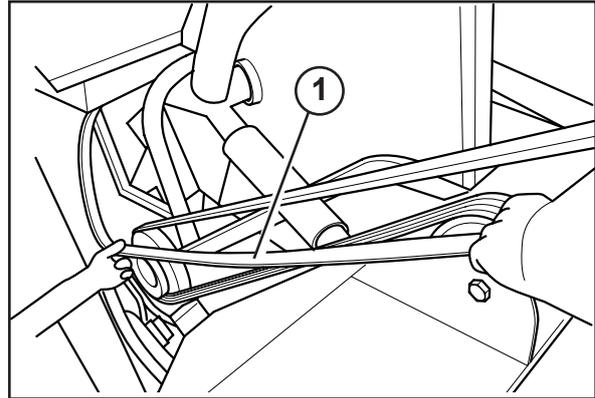


Figure 55

**Alignment of the rotary screen shaft pulley:**

1. Loosen the points A and B.
2. Move the bearings until the pulley is aligned.
3. Tighten the points (A and B) and adjust the belt.

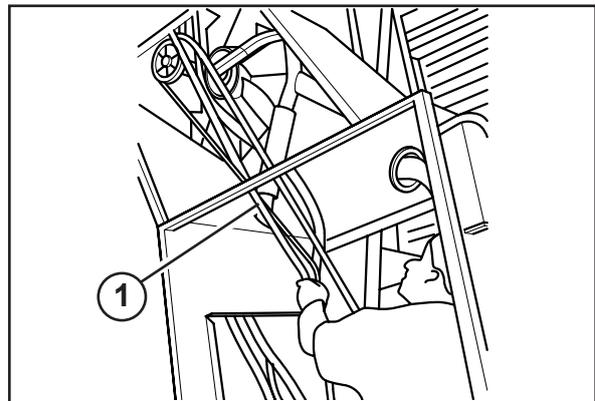


Figure 56

**Alignment of the fan pulley:**

4. Loosen the support (2) of the pulley.
5. Move the support until the pulley is aligned.
6. Tighten the supports and adjust the belt.

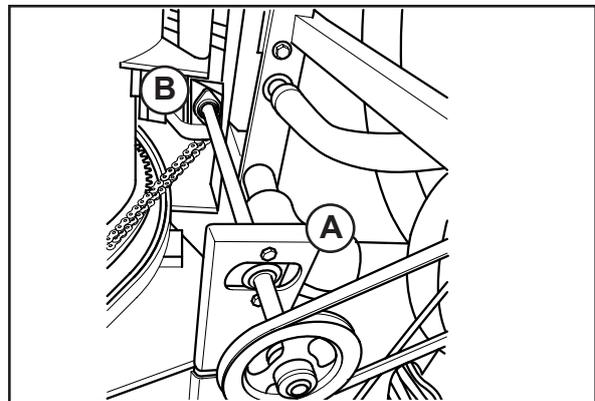


Figure 57

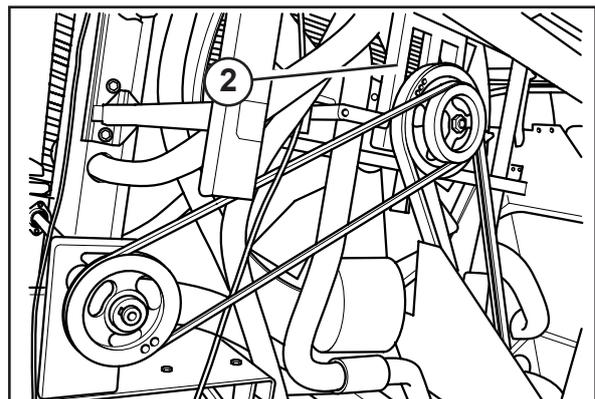


Figure 58

**OPERATION 35****Checking the doors latches of the engine box, left and right side**

- Check if the engine box doors are properly closed.

**NOTE:** If the engine box door beside the belts is opened, the safety system on machine will stop the engine or prevent the engine from starting.

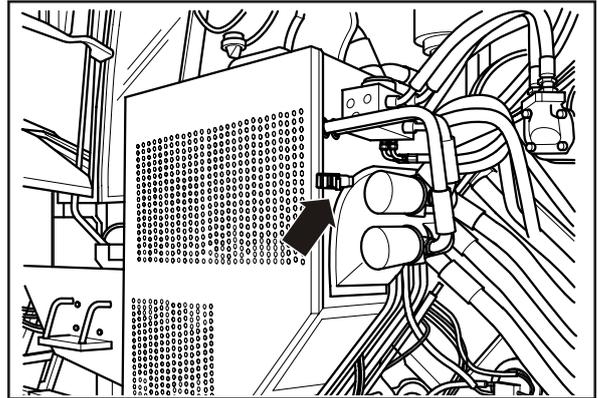


Figure 59

**OPERATION 36****Checking the engine box upper inspection doors**

- Check if the engine inspection door is properly closed.

**NOTE:** If the inspection door is open, it can allow trash entry to in the engine box.

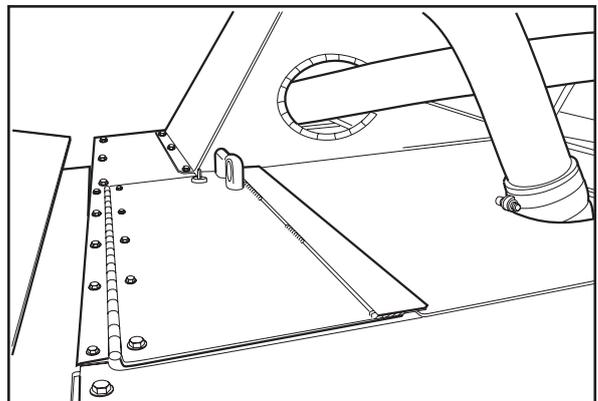


Figure 60

**OPERATION 37****Checking the rotary screen brushes**

- Check the rotary screen brushes, both the seal and screen cleaner, are not faulty.

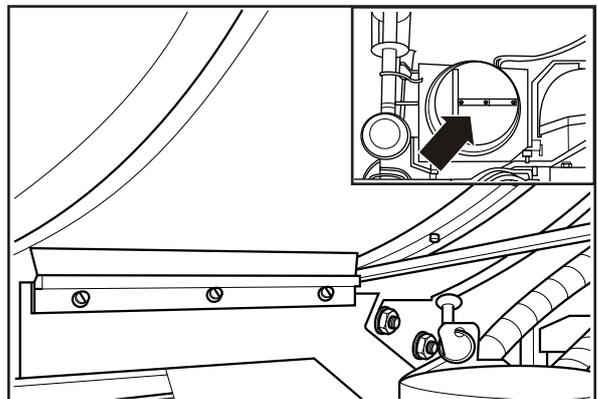


Figure 61

**OPERATION 38****Checking the functions of the electronic monitor**

- Check if the electronic monitor is operating correctly



Figure 62

**OPERATION 39****Greasing the drive shaft of the rotary screen**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

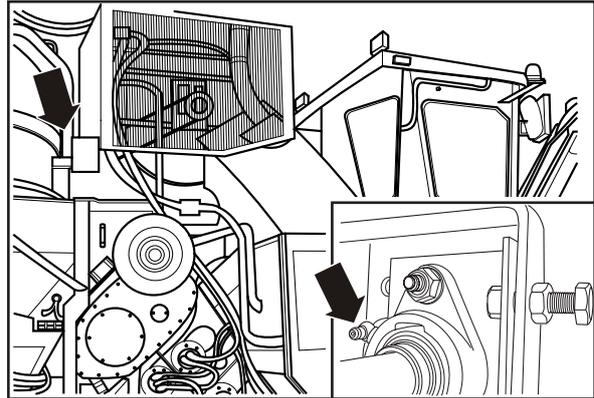


Figure 63

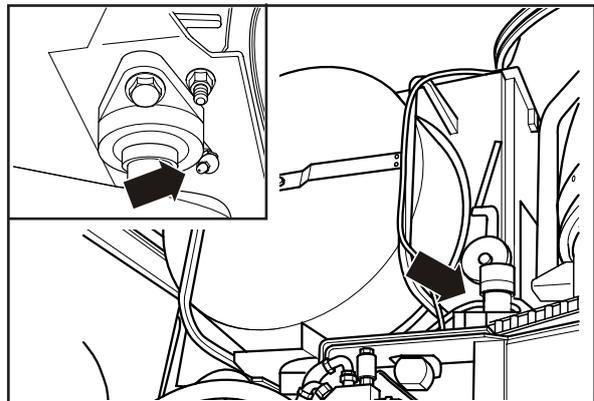


Figure 64

**OPERATION 39a****Grease application to the cooling package propeller shaft**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated point.

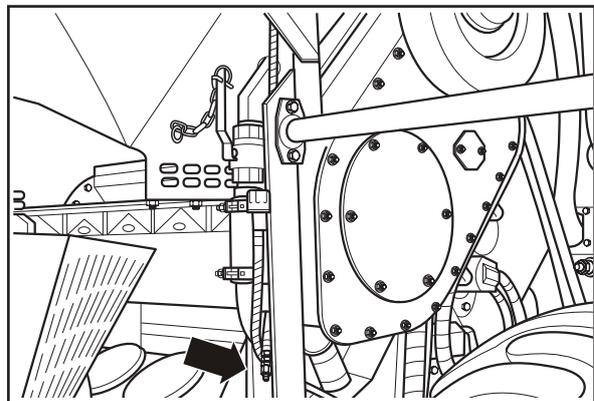


Figure 64a

**OPERATION 40****Cleaning the dirt built up on the machine structure, including engine box and cooling package**

- Always keep the machine clean to avoid possibility of fire.

## OPERATION 41

### Checking the fan belt tension, alternator and air conditioning

Before running the machine, check:

- The belts should work free of friction with foreign parts (that could cause cuts in the protective envelope of belt).
- Misalignment pulleys causes excessive wear and result the pulley belt “turning”. The speed vari-drive pulleys should not have a misalignment.
- Check periodically the channels. Inspect pulleys for wear and replace if necessary (the rubber is also an agent of metal wear).
- Tension. If a practicable tool is not available, use your common sense: use both your eyes and ears to detect if the belt slips when working by applying a force at the middle (between the pulleys) to check if the belt is either too tensioned or too slacked.

The best tensioning is the point where the transmission is with the lowest belt tensioner without slide.

If V-belts are under tensioned, they can slip. Slippage generates heat and will result in cracking and belt failure. If synchronous belts are under tensioned, they can jump teeth or ratchet. Ratcheting will damage the belt and result in premature belt.

When replacing the belts, make sure to not use tools with touch the belt or the pulley. Doing so, bearing life and belt can be in good condition.

**NOTE:** Do not lubricate the bushing taper, hub taper, bushing bore, or the shaft. Doing so could result in sprocket breakage. They aggregate dust and wear down the pulleys.

**In operation:** Avoid to the maximum “bumping” (loads of shock) on the machine, and avoid starts without start engine, etc.. So avoid premature rupture of belts. The belt acts as fuse, breaks itself before compromising other components (axles and bearing).

**Between seasons:** The harvester should always be stationed in fresh and covered local, and should be washed after use only with water jet. The use of derivatives of oil and other chemicals decrease the life of its components.

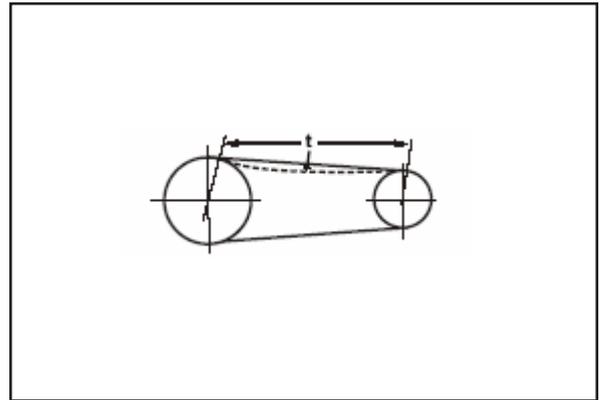


Figure 65

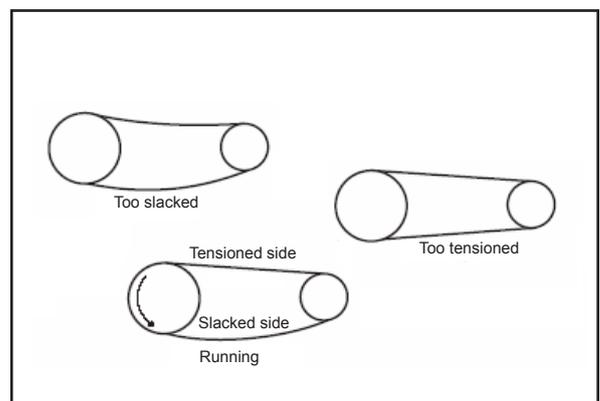


Figure 66

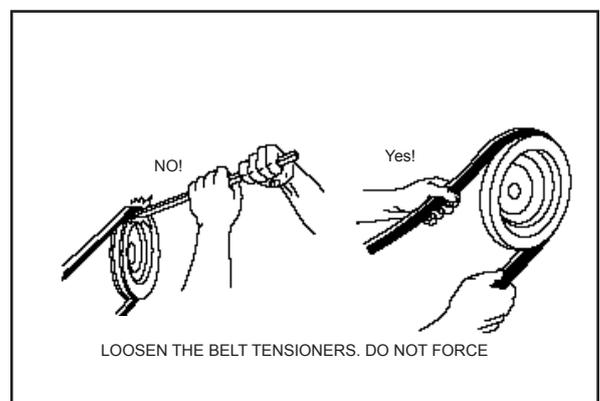


Figure 67

Do not spray with oil burned after washing. If possible loosen the belts.

**Storage:** Belts should be stored in a cool and dry environment with no direct sunlight.

**OPERATION 42****Checking for leaks in the feed roller hydraulic hoses**

Visually check if there are any oil leak in the hydraulic hoses and fittings, if leaks are detected repair them.

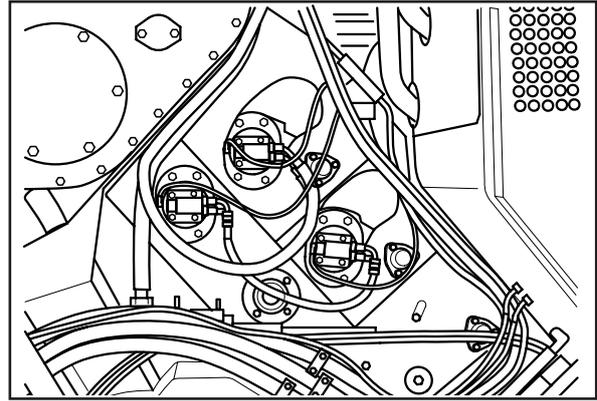


Figure 68

**OPERATION 43****Adjusting the elevator chain tension****Procedure**

1. Lower the elevator.
2. Loosen the four bearing housing mounting bolts each side of the elevator head shaft.
3. Loosen the three clamping bolts located across the elevator floor adjust panel.
4. Undo the locknuts on the adjust screws and gradually turn each screw clockwise to adjust the elevator chain. Tighten each chain until the slack movement on the lower section of the chain permits only approximately 1 Inch {25mm} total up and down movement.

**NOTE:** One chain may stretch more than the other thus one chain will have more slack movement when properly adjusted.

5. Check carefully that the head shaft remains parallel to the tail shaft. Measure from the bearing housing to the elevator frame.
6. Tighten the locknuts on the adjust screws, the four bearing housing mounting bolts and the clamping bolts across the elevator floor.

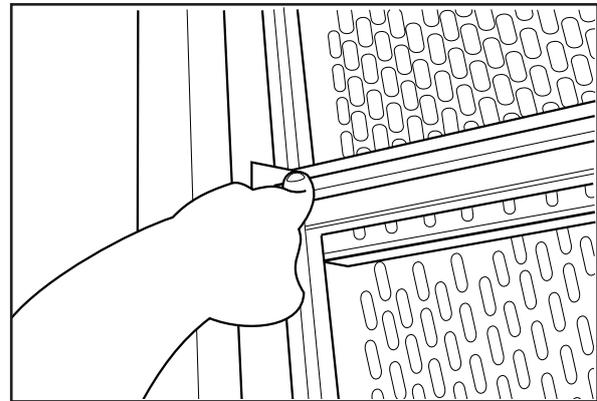


Figure 69

**OPERATION 44****Check the conditions of hose protector  
(change if necessary)**

- Visually check the condition of the protective covering of the hydraulic hoses. If they show signs of damage, replace them.

**OPERATION 45****Checking the elevator slew mechanism stops**

- Slew the elevator until the end of the cylinder and check that it touches the stop.

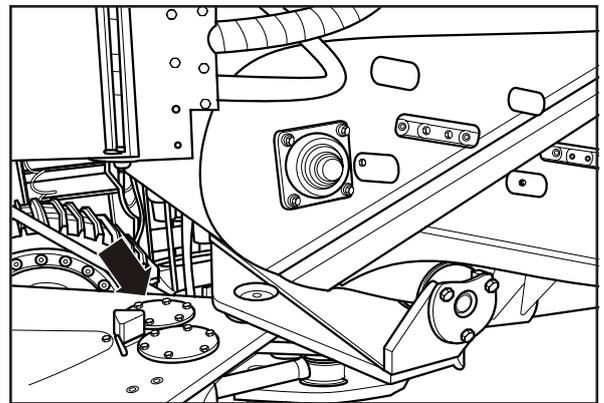


Figure 70

**OPERATION 46****Checking the intercooler pipes and hoses**

- Check that the intercooler pipes and hoses are not damaged or cracked.

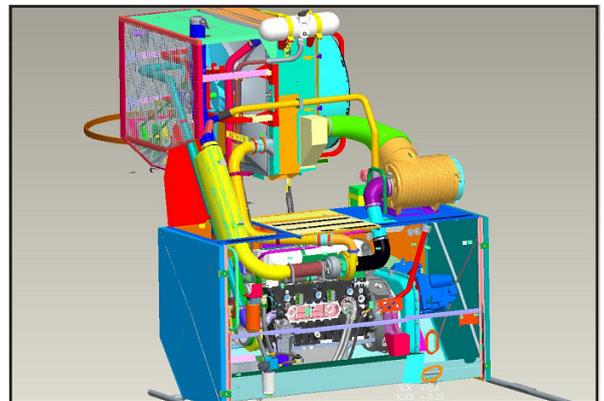


Figure 71

**OPERATION 47****Checking the engine radiator pipes and hoses**

- Check that there are not cracks or damage to the engine cooling system pipes and hoses.

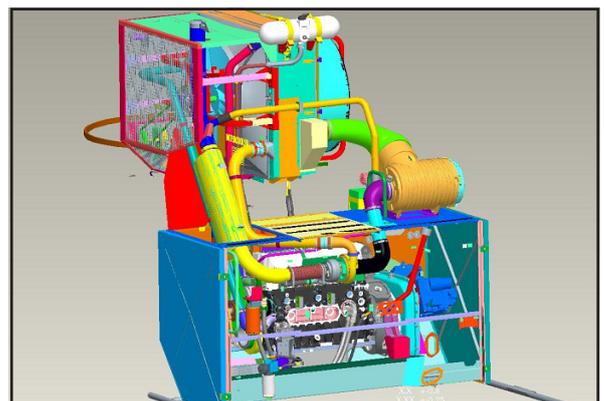


Figure 72

**OPERATION 48****Cleaning the pump box breathers**

- Check that there is not dirt built up on the pump drive gearbox breather.

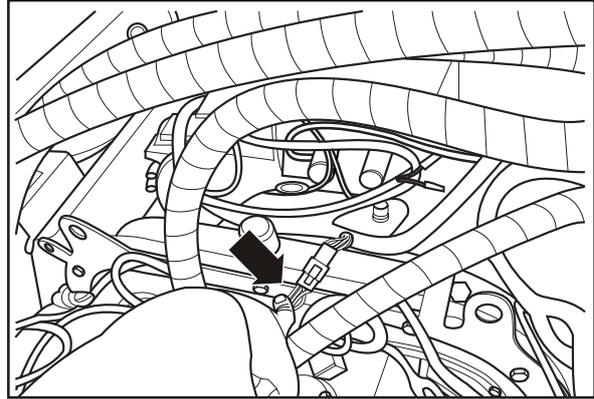


Figure 73

**OPERATION 49****Cleaning the hydraulic oil tank breathers**

- Check that there is not dirt build up on the hydraulic oil tank breather.

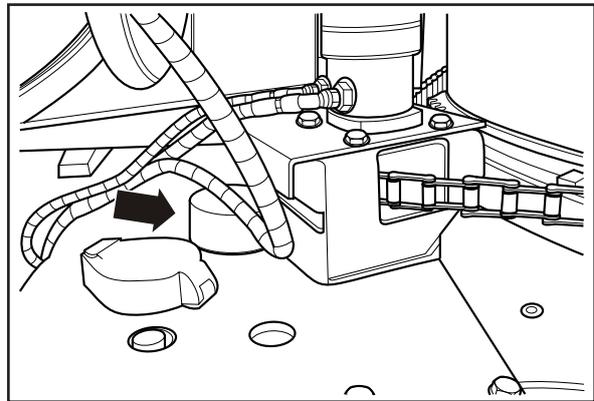


Figure 74

**OPERATION 50****Cleaning the gear box breathers****Basecutter gearbox breather**

- Located on the left hand side of the machine underneath the cabin.

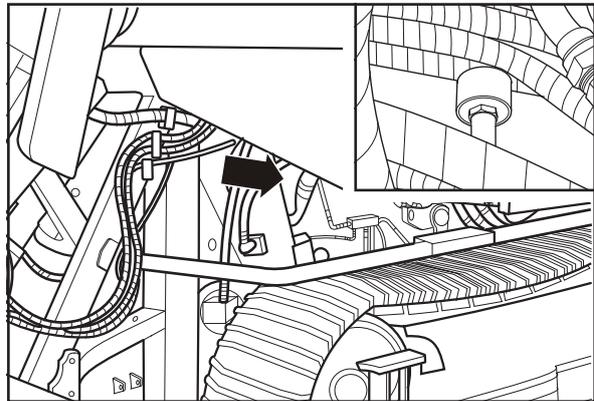


Figure 74a

**Chopper gearbox breather**

- Located on the left hand side of the machine behind the chopper flywheel.

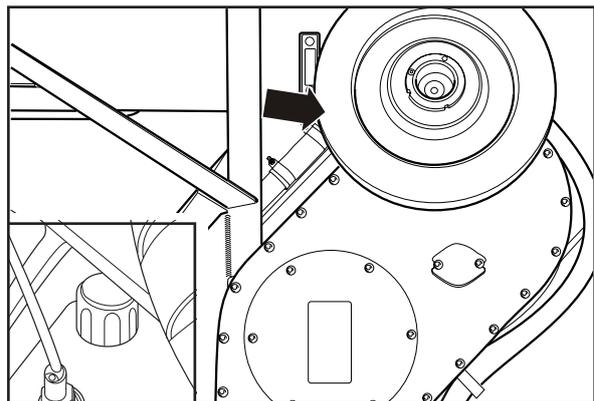


Figure 74b

**OPERATION 51****Cleaning the reduction hub breathers (A8000)**

- Check that there is not dirt build up on the reduction hub breathers.

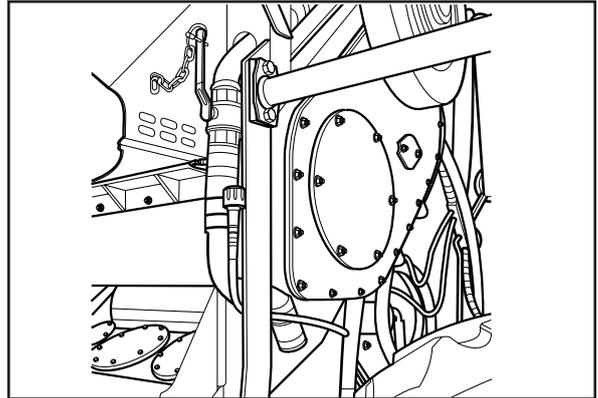


Figura 75

**OPERATION 52****Removing the air from the reduction (A8800)**

1. Loosen the indicated plug (1) to remove air from the hub.

**NOTE:** Be careful when loosening the hub plug as the system is pressurized and there is hot oil inside.

**NOTE:** For the A8800 model, operation valid until chassis 880080.

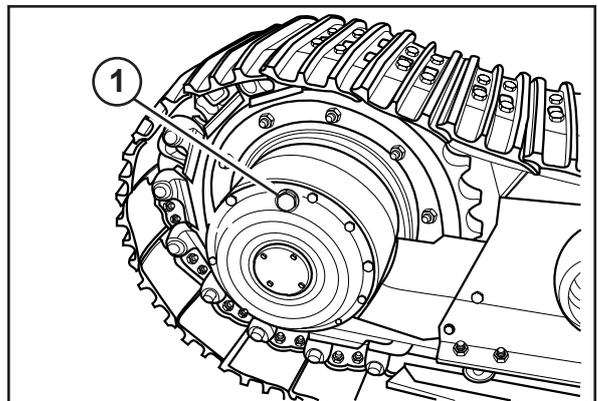


Figure 76

**OPERATION 52a****Checking the Autotracker oil tank level**

- Check daily.
1. With the machine on a flat surface, the level must be at the middle of the tank. If the level is below the proper level, check the assembly for leaks.
  2. Repair and fill to the proper level with the recommended oil (Case TCH Fluid).

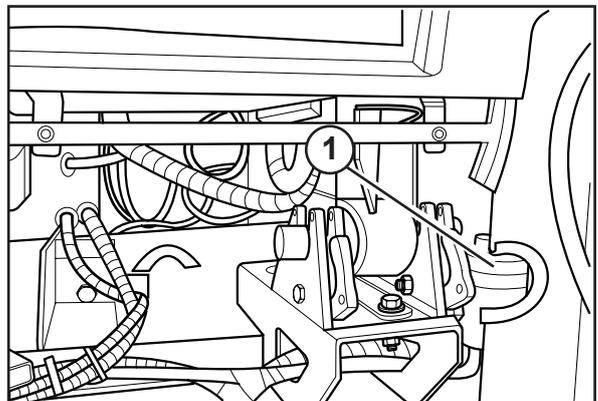


Figura 76a

### Opening and closing of autotracker hydraulic circuit tap

While operating the machine this tap must remain closed. It should be opened only in those cases requiring calibration, air bleeding and/or system disassembly.

To remove air from the system, open the tap, lower and raise the harvester 2 or 3 times, checking the tank until there are no air bubbles present.

**NOTE:** Before carrying out the above procedure ensure that the nitrogen charge in the cylinder is to specification.

**NOTE:** Stop the harvester in the fully raised position and then close the tap.

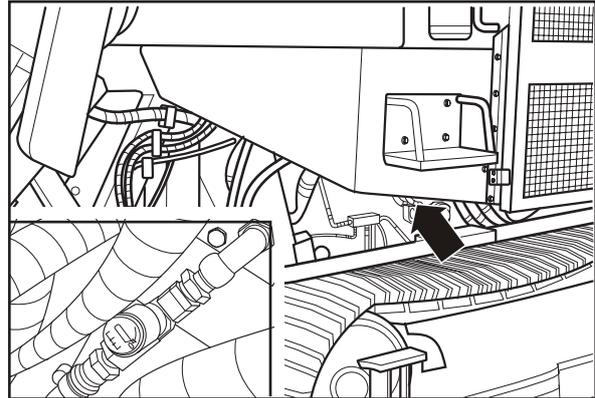


Figura 76b

## OPERATION 53

### Changing the pump drive gearbox oil (4-holes box)

1. Remove the gearbox filler plug, located at the top of the gearbox.
2. Remove the drain plug (1), located in the engine box beside the pumps and, using a suitable container to collect the oil quantity of the gears box, drain the oil.
3. After draining all of the oil, add 1.6 liters of hydraulic oil Akcela AW100, through the filler plug (2).

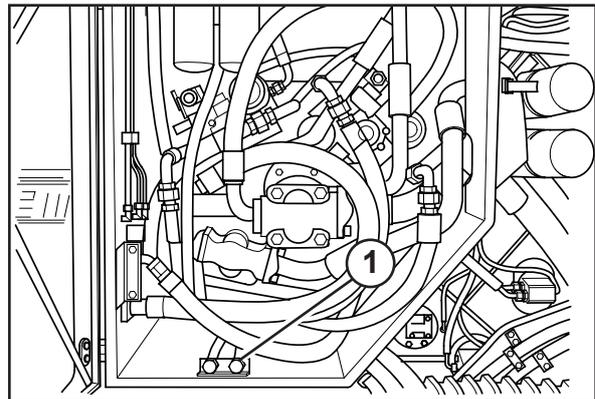


Figure 77

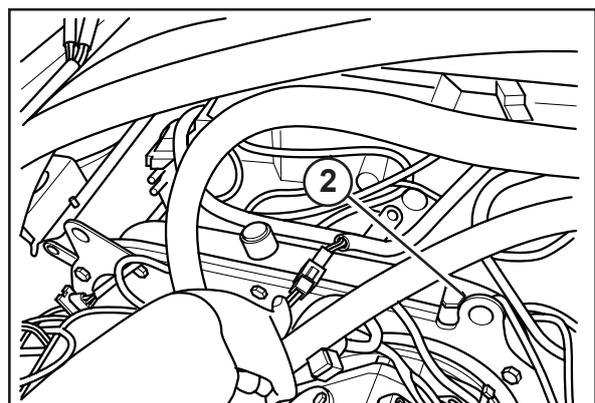


Figure 78

**OPERATION 54****Changing the basecutter gear box oil****Drain:**

1. To change the oil, drain the gearbox using both the drain plug in the front lower section between the basecutter gearbox legs, and the two plugs in the basecutter legs.

**NOTE:** This volume corresponds to 9.5 liters. Specification 85W140.

2. Open both plugs in the basecutter legs (one plug for each leg).
3. Refill the gearbox through the filler plug on the top left hand side of the gearbox, near the basecutter motor.

**Filling:**

1. Check oil level as recommended in the maintenance table of the Operator Manual. The oil level should be maintained at the level plug on the left hand side of the gearbox.

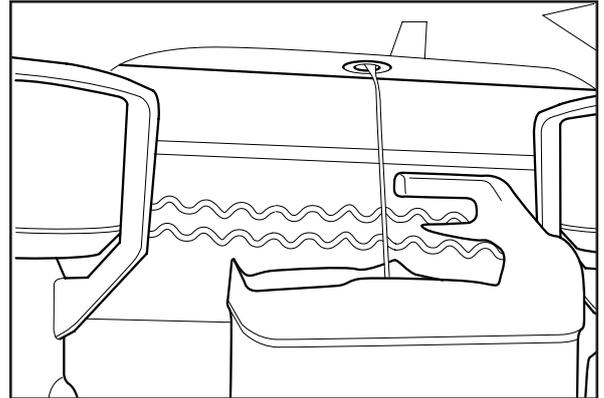


Figure 79

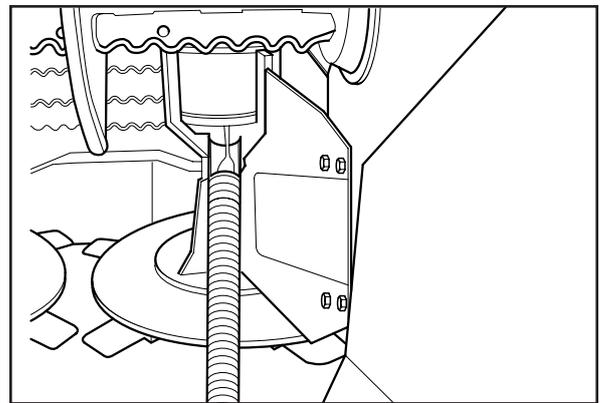


Figure 80

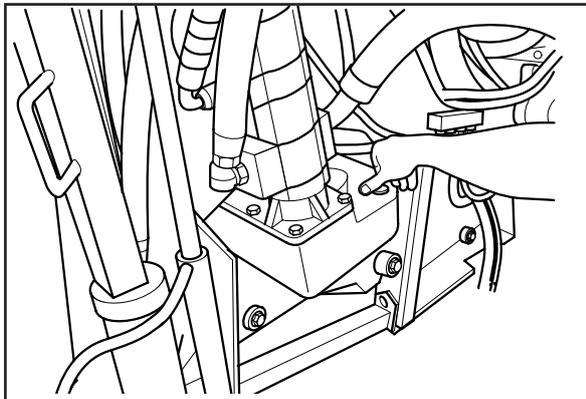


Figure 81

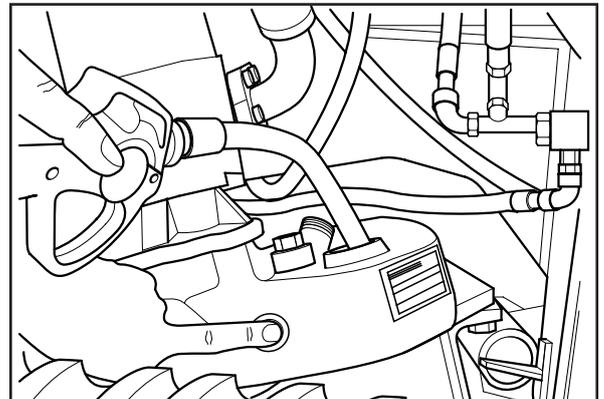
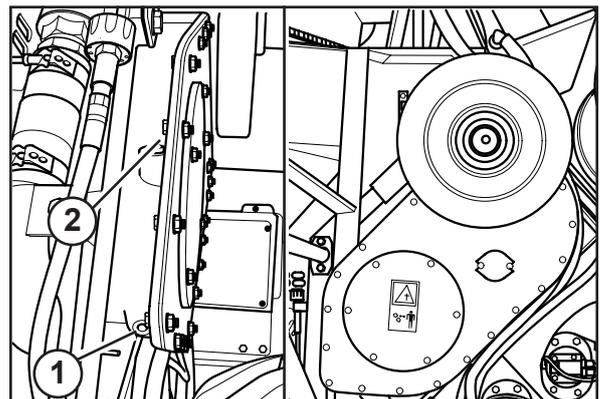


Figure 82

**OPERATION 55****Changing the chopper gear box oil**

- Remove the plug (1) of the gear box and drain all of the used oil. After draining, fill with 9.5 liters of gear oil 85W-140, through the filler plug (2).



2 - Open to see the level

Figure 83

## OPERATION 56

### Changing the rear reduction hub oil

- Remove the reduction hub plug and drain all used oil (1). After draining fill with 6 liters of gear oil (2) SAE 85W-140.

For the A8800 model (from chassis 880081), following is the procedure to check the oil and oil change:

- Put the machine on a flat surface.
- Leave the reducer hub aligned as shown in side figure, with the drain (3) to the bottom and the plug (2) just below the central horizontal line.
- Check the oil level in the plug (2).
- To change the oil, replace the plug back into hub (2).
- Use a container to collect the hub oil.
- Remove the plug (1) and then the plug (3). Remove carefully, since the hub may be pressurized.
- Wait a few minutes until all the oil is drained and then reinstall the plug (3).
- Remove the drain plug (2) and through the drain (1), fill oil as specified. Do this until you get the oil coming out of the level indicator (1), as shown in side figure.
- Close drains (1) and (2) and work with the machine for a few minutes and then check the oil level again, if necessary, add oil.

**NOTE:** With this hub it is not necessary to perform the inversion every 1500 hours of use and to open daily for relief of pressure. Check the oil level every 150 hours.

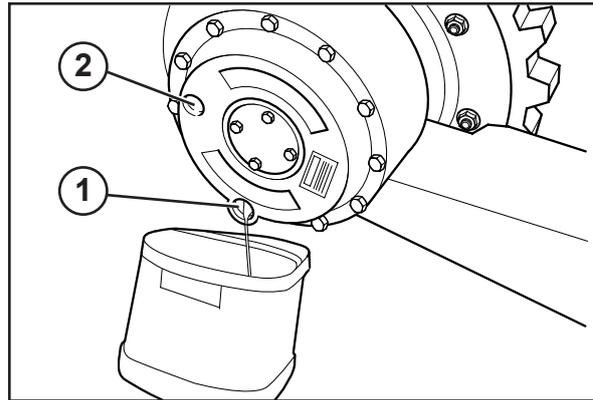


Figure 84

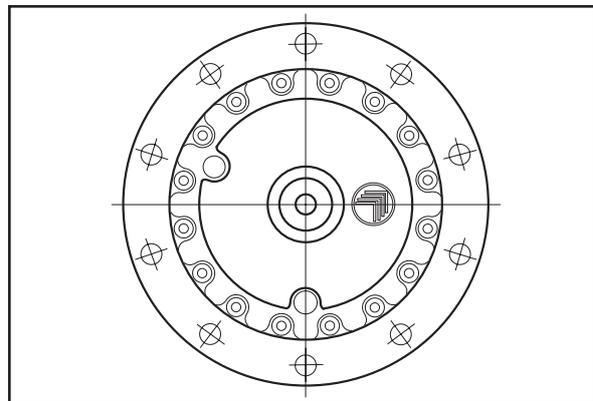


Figure 84a

**OPERATION 57****Changing the transmission suction filter elements**

Before changing the filters, clean the area around the filters and housings to avoid contamination of the hydraulic circuit and also of the oil that will be removed.

Procedure for changing the transmission suction filters.

1. Close both header tank taps (ball valves) (1) of the hydraulic tank. Both header tank taps between top and lower hydraulic tank are located at the rear part of the harvester.

**NOTE:** It is important to close the header tank taps (ball valves) of the hydraulic oil tank to avoid oil losses during the changing of the filters (elements).

During the changing of the filters, do not run the engine. Damage to the pumps will result.

2. Remove the suction hose (2) of the hydraulic pumps, inside the pumps box on the left side harvester.

**NOTE:** When removing the suction hose (2), connect a hose to collect all of the oil that will exit the hydraulic system in a container, returning the oil collected to the hydraulic tank via the filler. The container should have a capacity of about 40 liters (with the closed taps).

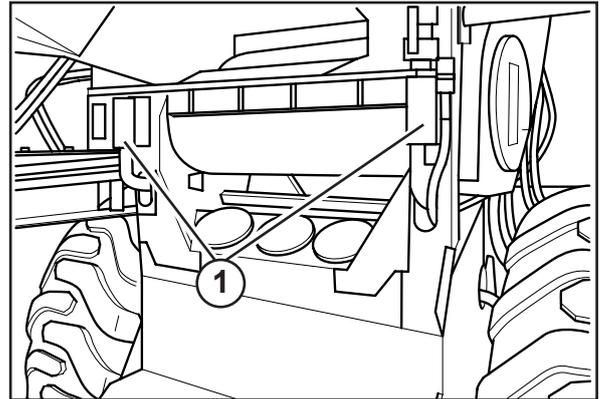


Figure 85

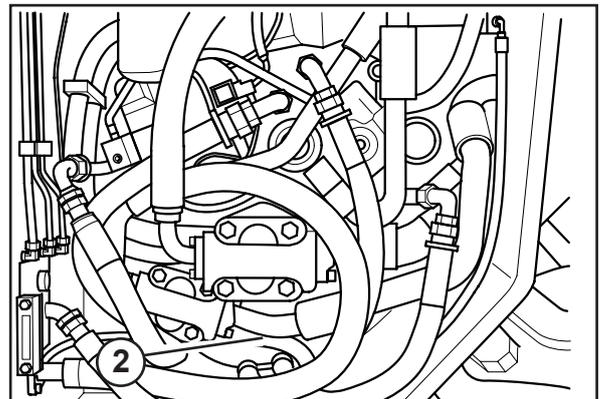


Figure 86

**IMPORTANT:** The container used to collect the oil should be clean and dry, without any dirt, contaminate and/or humidity. Any residue will contaminate the hydraulic oil, and it cannot be re-used.

3. After closing the header tank ball valves, remove the filters (elements), starting with the lower filters, using the tool supplied (Strap), place a clean container below the filters so that it can catch the oil that is going to leak due to the elements being removed from the filter heads (about 2 liters).
4. Check and clean the head where the filters are installed, in order to prevent contamination a lint free cloth should be used.
5. Install the new filters, remembering to lubricate the seal (3) located at the top of the filter with hydraulic oil (AKCELA AW 110). Tighten according to the recommendations written on the element.
6. Be sure the suction hose (2, previous figure) has been installed.
7. Open both ball valves (1, previous illustration) of the hydraulic tank.
8. Proceed to bleed the system. Firstly loosen the cap (4), wait until the air flow stops, and tighten. Then loosen the caps (5) and (6) and tighten after all of the air has been purged.
9. Check the hydraulic oil at sight glass (7) and if the indicator shows insufficient oil, fill up to recommend level (sight glass half).

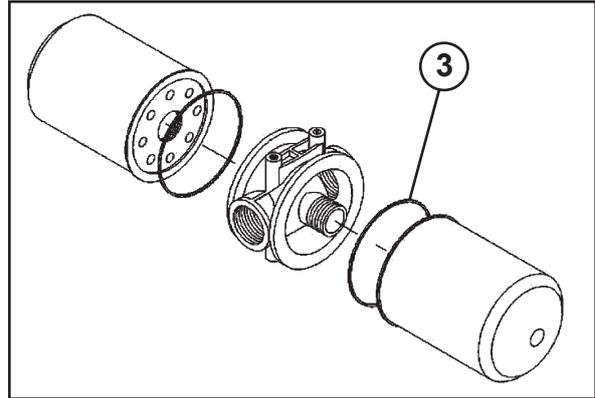


Figure 87

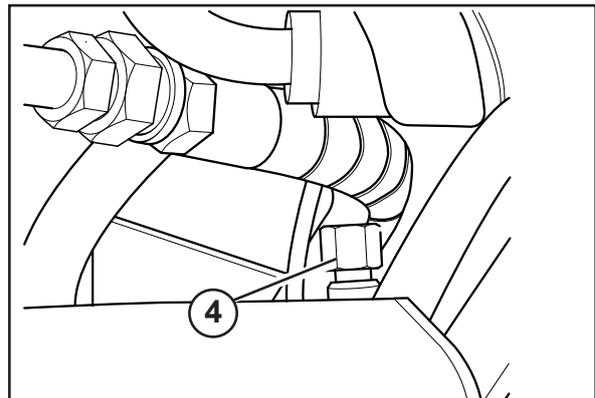


Figure 88

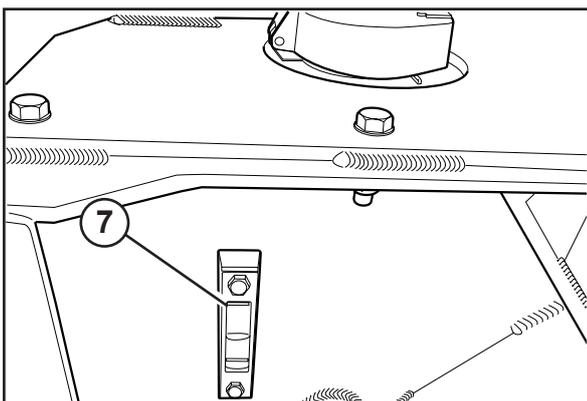


Figure 89

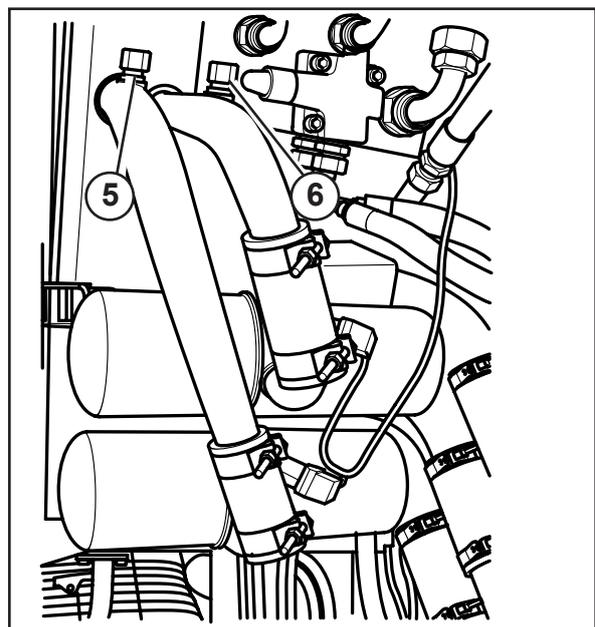


Figure 90

10. After changing the transmission filters and removing the air from the system, according to the recommendations above, Start the machine and check if vacuum gauge / filters restriction lamp is normal, and check if there are leaks at the filters and/or in the caps that were removed. If there are leaks, search for the cause and corrected it.

## OPERATION 58

### Changing the transmission return line elements

The three return filters in the hydraulic system are located at the rear of the cane harvester.

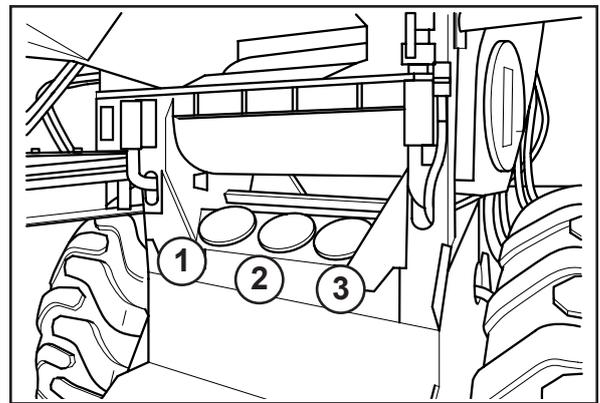


Figure 91

To change the return line filters, step 1 of the suction filter changing procedure should be carried out and then the following steps.

1. Place a clean container to collect the oil that will be removed via the drain hose, before commencing changing the return filters. There will be about 60 liters of oil.
2. Remove the three return filters covers.
3. With the access to the return filters, remove them.

**NOTE:** Only the filter element should be changed.

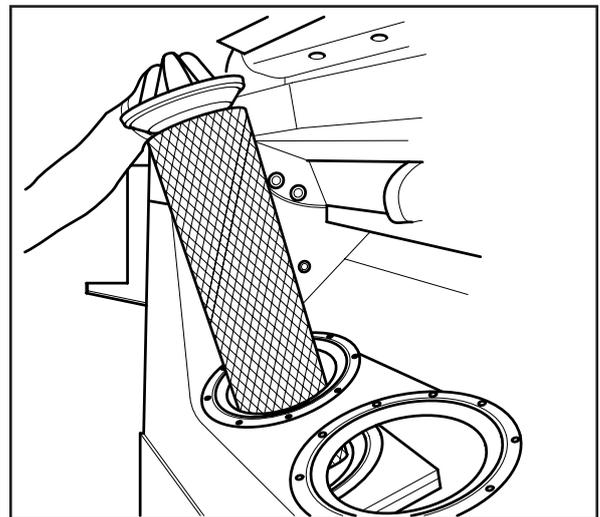


Figure 92

4. After removing the return filter assemblies, remove the filter element from the mount, clean the magnets to remove all foreign material, mount the new filter element and install the assembly. Replace the O rings as required.
5. Open both header tank taps between top and lower tank, check the hydraulic oil level sight glass and if the indicator shows a low quantity of oil, fill to the recommended level (half the sight glass).

**NOTE:** All changed filters should be placed in a container that does not leak and disposed of properly.

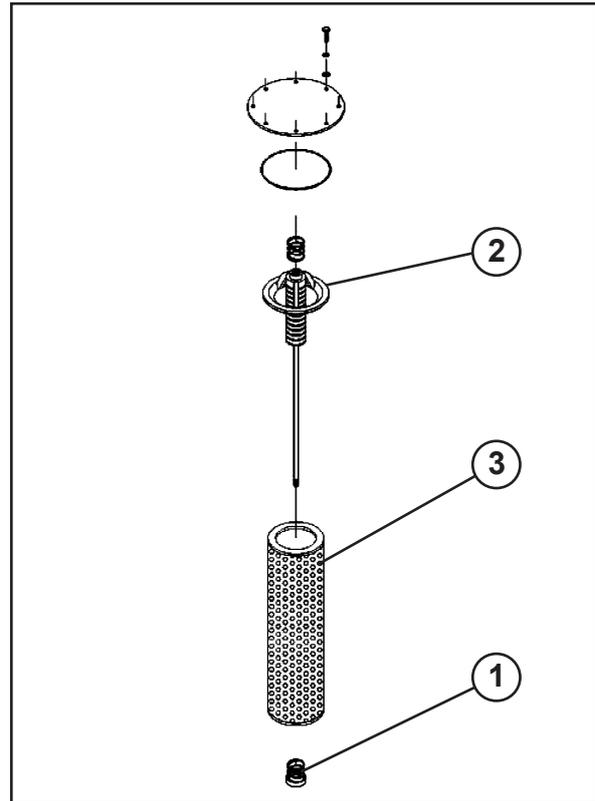


Figure 93

## OPERATION 59

### Checking the battery electrolyte level

Check if the electrolyte level is above the separators of each cell.

If necessary, top up with distilled or de-mineralized water until the level is correct, 10- 15 mm above plates . Never use tap water or water from rain tank or other source.

To prevent corrosion, the battery terminals should be cleaned and smeared with petroleum jelly (Vaseline) only. No grease should be applied.

**IMPORTANT:** If the battery is loaded and the voltage at the terminals is lower than 14 volts, recovery will require a special charging procedure. Consult your Authorized Case IH Dealer.

### ⚠ WARNING ⚠

Avoid the presence of flames or sparks close to the batteries. When the batteries are loaded, it is the oxyhydrogen gas, which is inflammable and explosive.

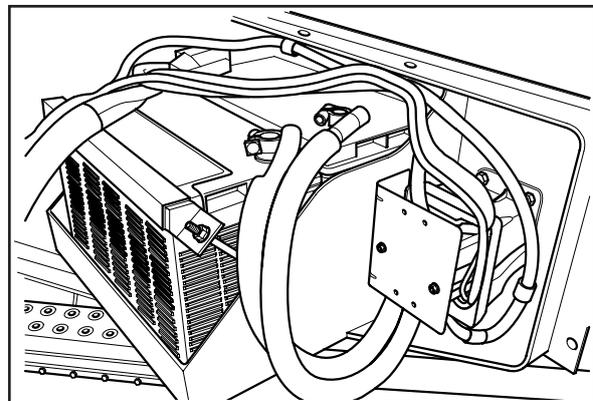


Figure 94

**OPERATION 60****Checking the tightening of wheel bolts (A8000)**

- Apply the torque in the front and rear wheel bolt of 339 Nm.

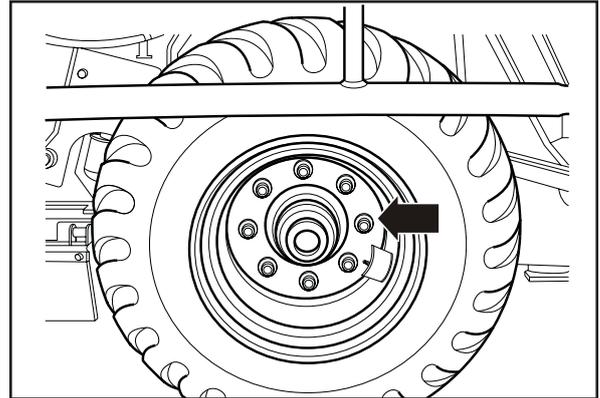


Figure 95

**OPERATION 61****Checking the tightening of track sprocket nuts (A8000)**

- Apply one torque in the drive wheel bolts of 380 - 400 Nm.

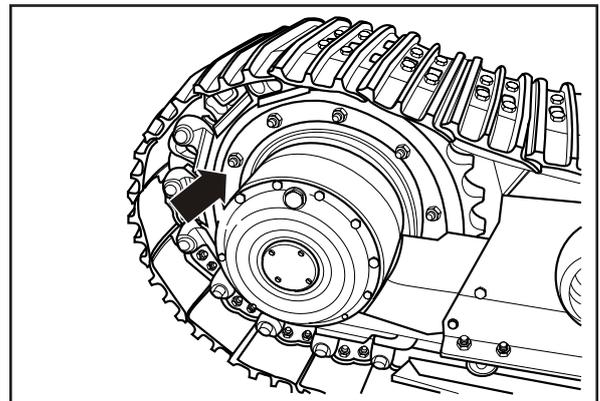


Figure 96

**OPERATION 62****Greasing the feed roller bearings (with a hand pump)**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the feed roller bearings using hand pump.

**NOTE:** There is a grease nipple for each feed roller bearing.

**NOTE:** Excess grease may cause damage to the bearing seals.

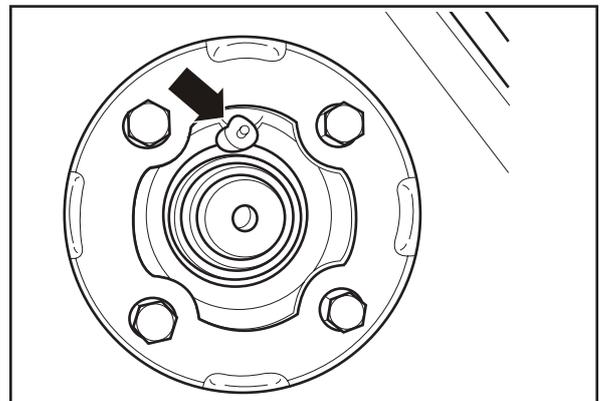


Figure 97

**OPERATION 63****Greasing the topper severing disc bearings**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

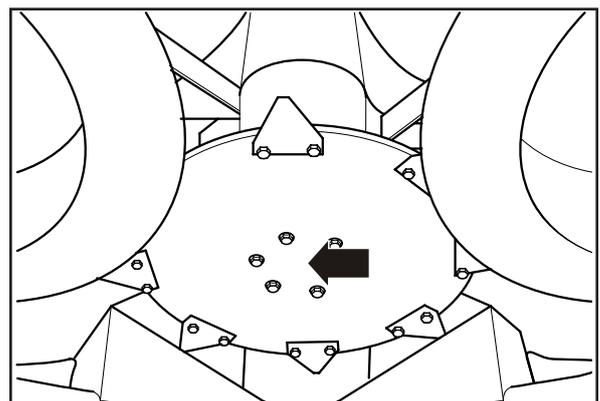


Figure 98

**OPERATION 64****Greasing the topper gathering drum bearings**

- Remove the housing cover.
- Apply grease CASE Multi-Purpose Grease, 251H, EP in the grease nipple of the topper gathering drum.

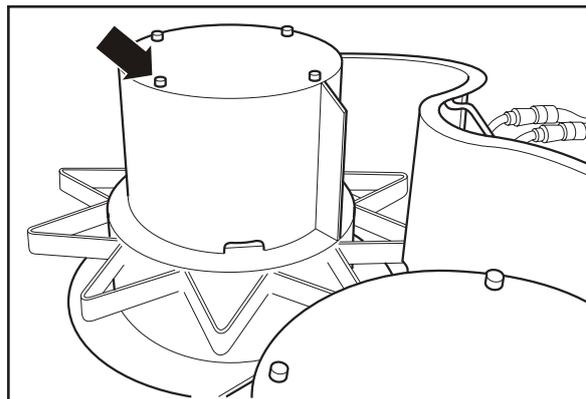


Figure 99

**OPERATION 65****Greasing the primary extractor (bearing)**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

**NOTE:** Excess grease may cause damage to the shaft seals.

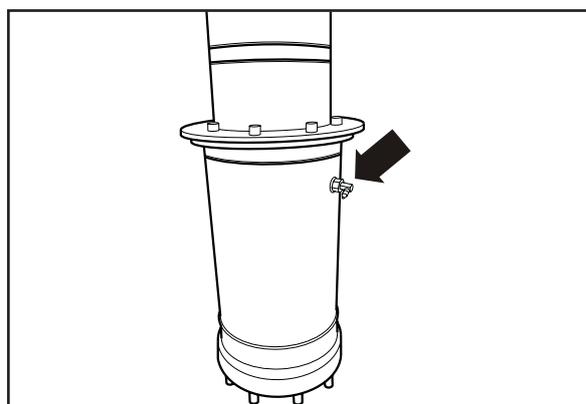


Figure 100

**OPERATION 66****Greasing the secondary extractor (bearing)**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

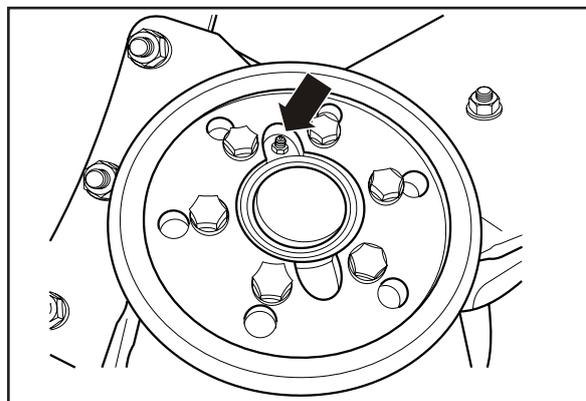
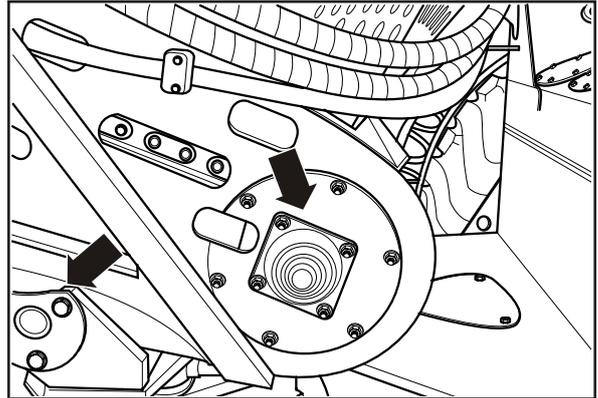


Figure 101

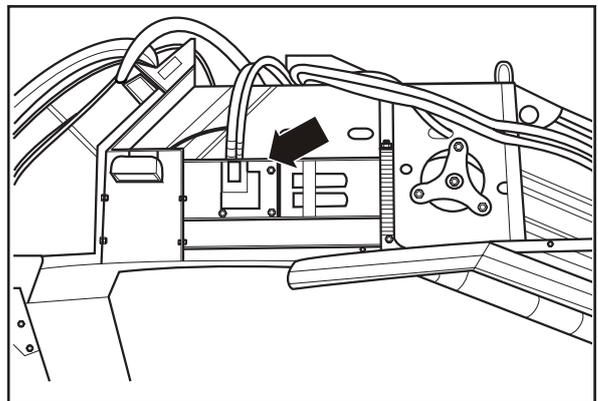
**OPERATION 67****Greasing the elevator top and bottom shaft bearings**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.



Lower shaft

Figure 102



Upper shaft

Figure 103

**OPERATION 68****Greasing the track pivot axle**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

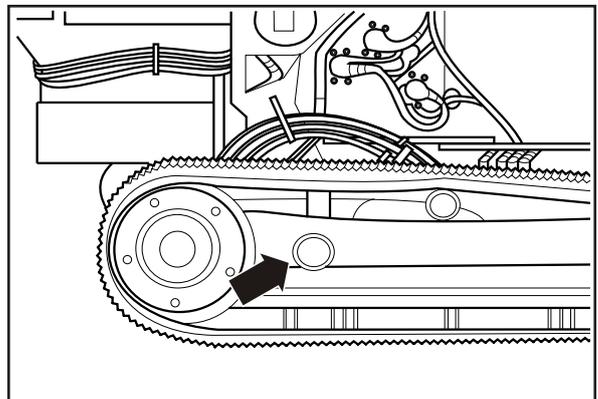


Figure 104

**OPERATION 69****Cleaning the air conditioning filters (cab)**

Before cleaning the filters, turn off the fan, close the roof, all the windows and a door. Forcibly close the other door. The resultant pressure, will dislodge the greater part of the dust through the lower part of the filters.

**NOTE:** In humid conditions, as in some mornings, do **not** turn on the fan before cleaning the filters. The dust particles will penetrate in the filter complicating their removal.

1. Loosen the cover screws (1) of access to the filters and remove the elements and clean them:

- Beat lightly in a level surface with the external face downwards;

or

- With compressed air to a pressure lower than 6.9 bar (about 100 psi).

2. Clean the filters base with a cloth. When refitting the elements, the identification arrow should be faced to the inside of cab.

**WARNING:** In severe conditions, the air conditioner filter must be cleaned more often.

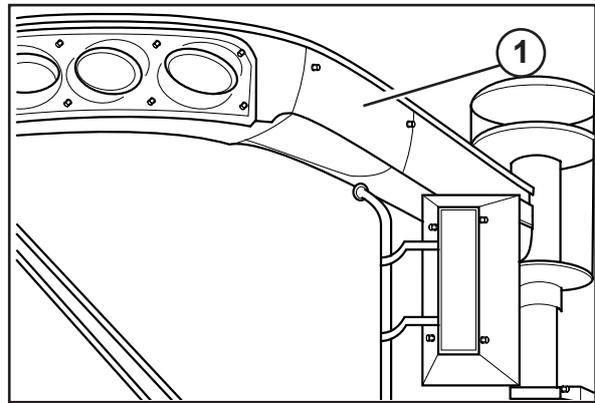


Figure 105

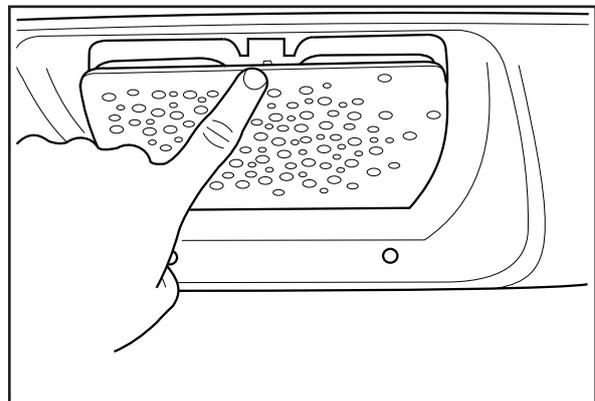


Figure 106

## OPERATION 70

### Washing the complete machine

- Wash complete machine using water jet.

**NOTE:** Avoid direct water jet in electric components, connectors or joints.

**NOTE:** Avoid directing high pressure water jets to the glass area close to the cab roof sealing gasket.

**NOTE:** It is not recommended to use water under pressure to wash the engine and it is also not recommended to submerge the ECU in water.

Recommendations for washing the engine:

- Do not use water under pressure
- Remove the ECU
- Never submerge the ECU in water

Carefully insulate the following components, using plastic film and/or plastic bags to keep them dry:

- ECU connectors
- All electrical engine components (starter motor, alternator, etc.)
- Air admission, exhaust, and fuel supply systems

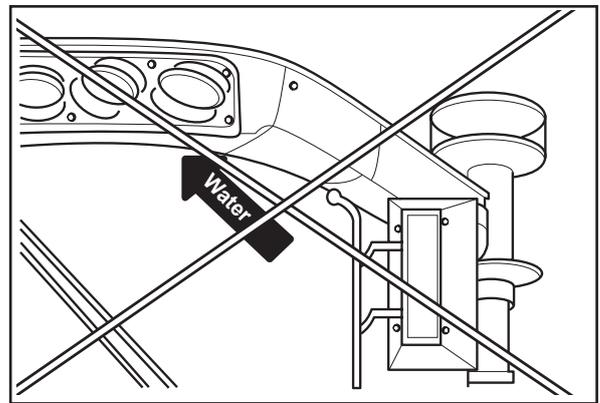


Figure 106a

## OPERATION 71

### Checking the play in the bearing of the radiator fan

- Check if there is play in the bearing of the fan shaft.

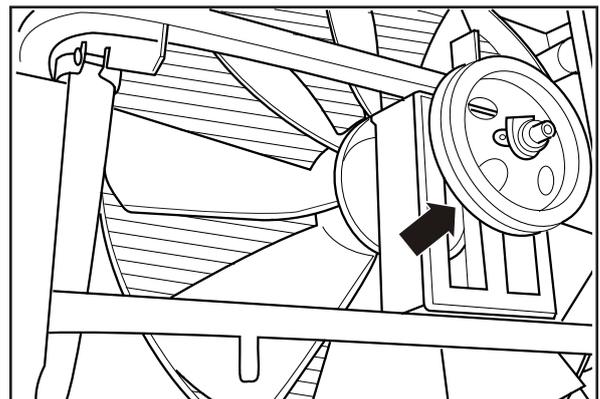


Figure 107

**OPERATION 72****Checking the play in the bearing of the radiator cleaning paddle**

- Check if the blade tightening torque is 28 NM.

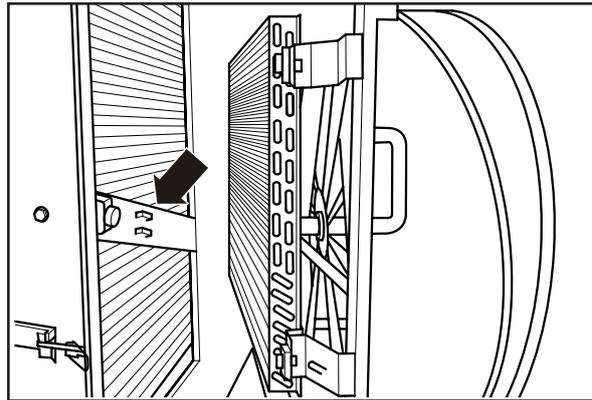


Figure 108

**OPERATION 73****Changing the pump drive gearbox oil (4-hole box)**

- Refer to *Operation 53*.

**OPERATION 74****Changing the basecutter gear box oil**

- Refer to *Operation 54*.

**OPERATION 75****Changing the chopper gear box oil**

- Refer to *Operation 55*.

**OPERATION 76****Changing the rear reduction hub oil**

- Refer to *Operation 56*.

**OPERATION 77****Changing the transmission suction filter elements**

- Refer to *Operation 57*.

## OPERATION 78

## Changing the diesel engine oil and filters

**NOTE:** If the engine is used in operations with high demand, especially in a dusty environment, or if the deposits in the centrifugal filter have more than 20 mm of thickness: change the oil in smaller intervals.

## Oil change

1. Unscrew the plug and drain the oil when the engine is hot.
2. Replace drain plug and top up with oil.
3. Check the level in the level dipstick.



Attention, the oil can be hot, use protective glasses and gloves.

## Maximum tilt angles of during the operation (SCANIA DC9 engine)

The maximum angles allowed during the operation vary according to the oil crankcase type.

**NOTE:** The specified angle can only occur in an intermittent manner.

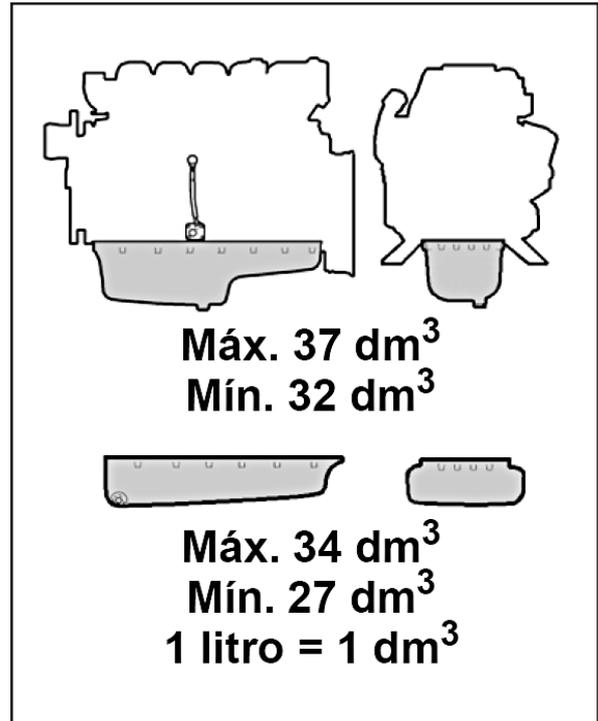
## Oil filter change (SCANIA DC9 engine)

1. Remove the oil filter.
2. Lubricate the sealing ring.
3. Install the new oil filter and tighten it by hand.

**NOTE:** Never use tools to tighten the filter. The filter can be damaged, obstructing the oil flow. Always use genuine filters.

4. Start the engine and check the oil filter for leaks.

**IMPORTANT:** If the deposits in the centrifugal filter have more than 20 mm of thickness, the oil filter should be replaced with larger frequency. The same should be done regarding the cleaning of the centrifugal filter and to the oil change.



For SCANIA DC9 engine

Figure 109

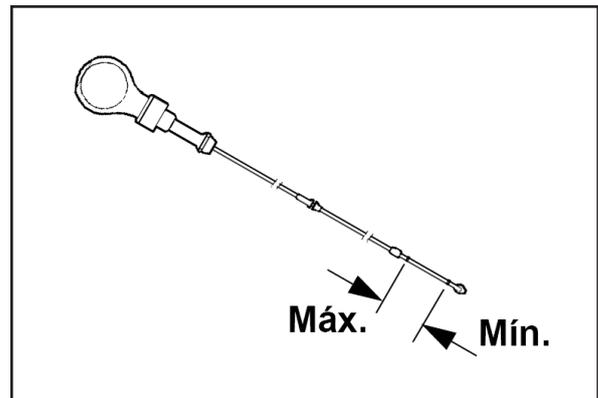


Figure 110

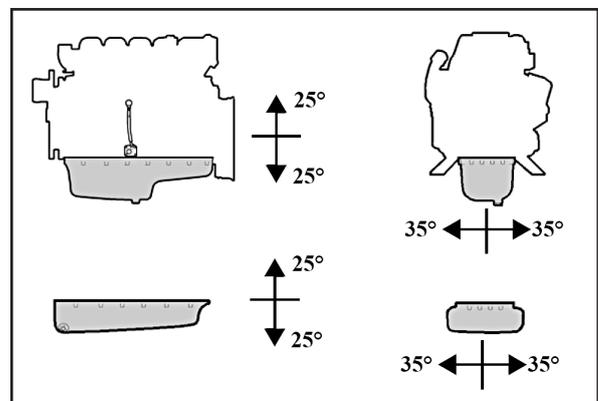


Figure 111

### Oil filter change (Case IH 9L engine)

For the oil and the filter change, proceed as follows:

1. Warm the engine to operating temperature.
2. Stop the engine, drain the oil through the hose and gather it in an adequate container.
3. Clean the area around the oil filter of the engine, and remove the disposable shielded oil filter ("spin-on") using a filter key.
4. Fill the new oil filter of the engine with clean oil and apply an oil film on the filter seal ring.
5. By hand, screw the filter in place. Tighten securely but do not use tools.
6. Reinstall the drain hose plug.
7. Remove the oil filler cap, and fill the engine with clean oil. Replace the filler cap.
8. Run the engine at low idle for about one minute, to circulate the oil, and then stop the engine. Check the oil filter for leaks.
9. Wait for a short period of time to allow the oil returns to the crankcase. Check the oil level as described in the previous paragraph "Oil level".

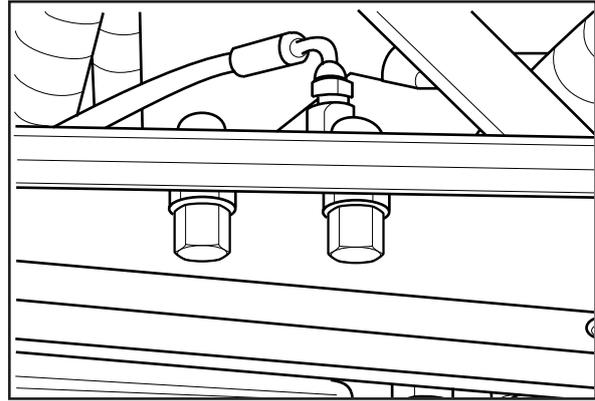


Figure 112

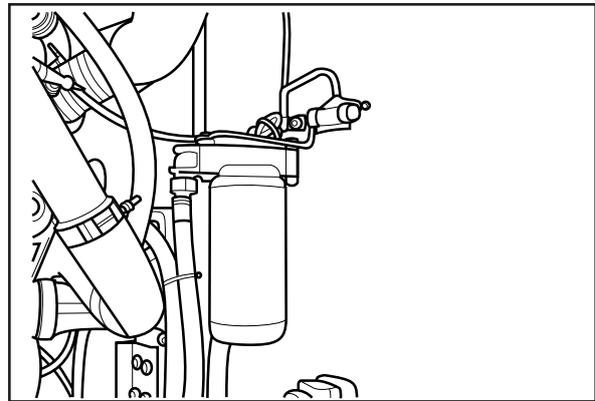


Figure 113

## OPERATION 79

### Changing the fuel water separator filter

Draining the water from the filter should be carried out during refueling.

**NOTE:** This filter should be changed at the same change intervals as to the main filter.

1. Loosen the cup and the drain valve (3).
2. Remove the filter (2). Lubricate the seal ring and install the new filter tightening by hand.

**NOTE:** Do not use tools for this operation.

3. Thread the cup and the drain valve (3) in place.
4. Bleed the fuel system after changing the two filters using the hand pump (1). Refer to section "Bleeding of the Fuel System".

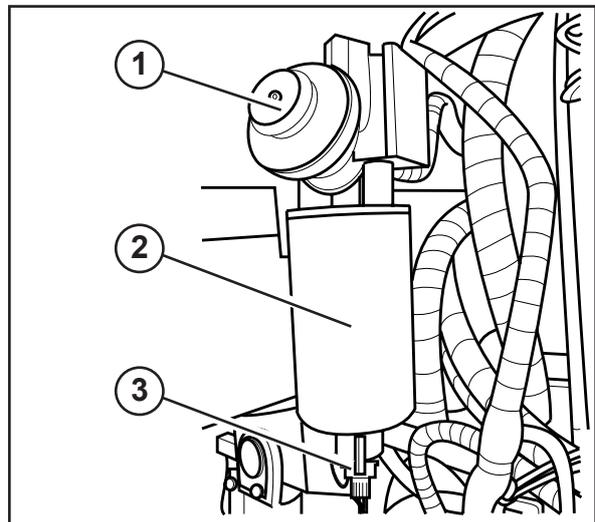


Figure 114

**OPERATION 80****Changing the diesel engine fuel filter**

- Refer to *Operation 93*.

**OPERATION 81****Cleaning the rotary filter DC9**

1. Unscrew the nut and remove the cover.

---

**⚠ WARNING ⚠**

---

*Open the cover carefully. The oil will be hot.*

---

2. Lift out the rotor and slacken the nut for the rotor bowl three (3) turns.
3. If the nut is stuck: Secure the nut, absolutely not the rotor, in a vise and turn the rotor three (3) turns by hand or using a screwdriver.
4. Gently tap the nut using your hand or a plastic hammer so that the rotor bowl becomes detached from the bottom plate.

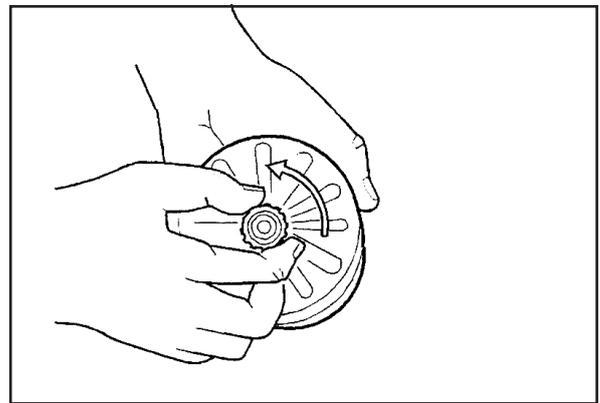


Figure 115

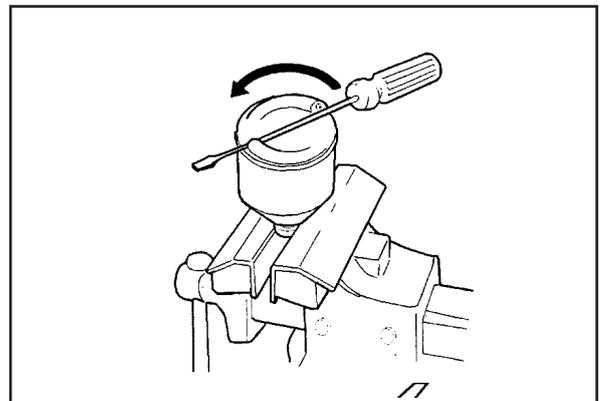


Figure 116

5. Undo the nut and remove the rotor bowl.
6. Carefully prise the strainer loose from the bottom plate.

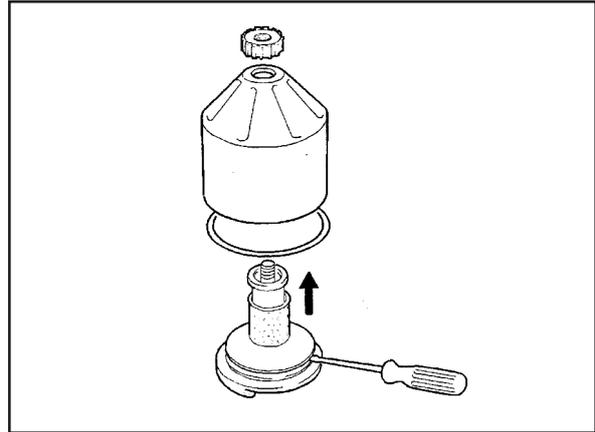


Figure 117

7. Scrape away deposits from the inside of the rotor bowl. If there are no deposits, this shows that the cleaner is not working.

- If the deposits are **thicker than 20 mm** clean the filter more often.

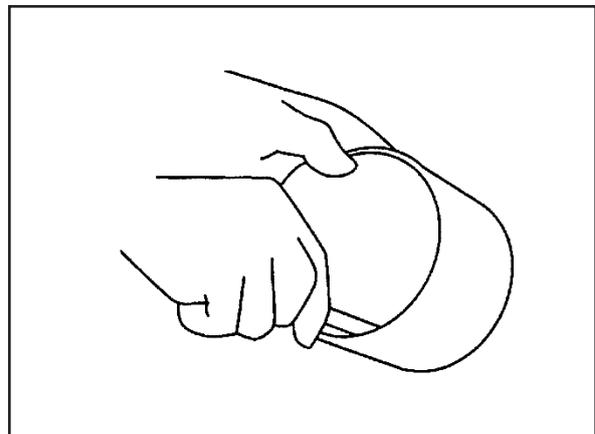


Figure 118

8. Wash all parts in diesel.
9. Place the O ring in position in the rotor bowl. This must not be damaged. Change if necessary.
10. Assemble the rotor.

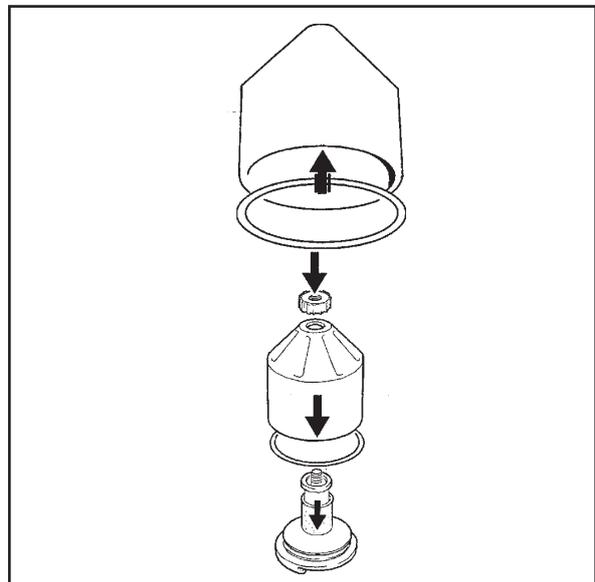


Figure 119

11. Tighten the rotor nut **by hand**.

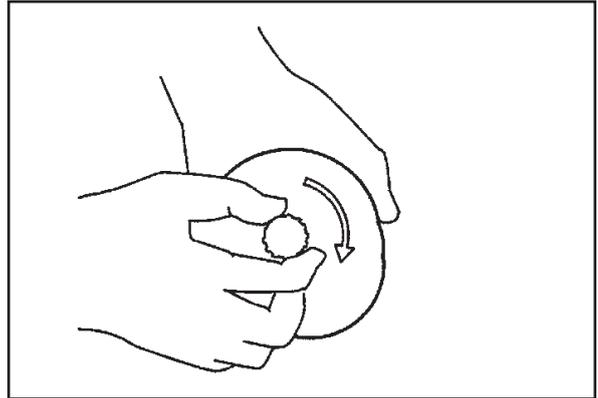


Figure 120

12. Refit the rotor.

13. Check that it turns freely.

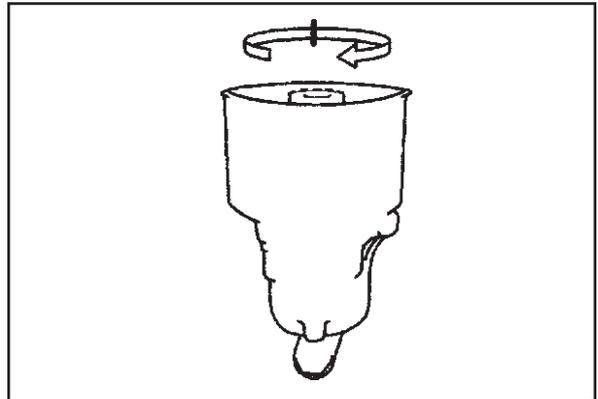


Figure 121

14. Check that the O ring in the bowl is not damaged. A hardened or damaged O ring should be replaced.

15. Screw down the bowl hard **by hand**.

**⚠ ATTENTION ⚠**

*IF THE NUT IS TIGHTENED USING A TOOL, THE ROTOR SHAFT NUT OR BOWL MAY BE DAMAGED.*

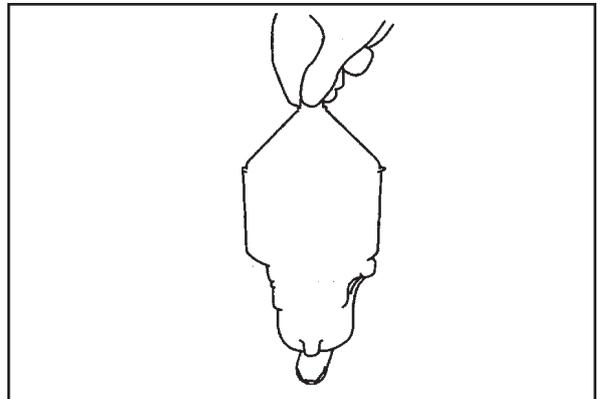


Figure 122

### Operational test

The rotor turns very quickly and should continue to rotate when the engine has stopped.

- Stop the engine when it is warm.
- Listen for the whirring from the rotor or feel whether the cleaner housing is vibrating.

The rotor normally rotates **30 - 60 seconds** after the engine has stopped. ***If not: Dismantle and check.***



Figure 123

**OPERATION 82****Checking the installation of the retaining circlips of the elevator slew table pins**

- Check if the circlips are properly installed. Replace if some of them have been lost.

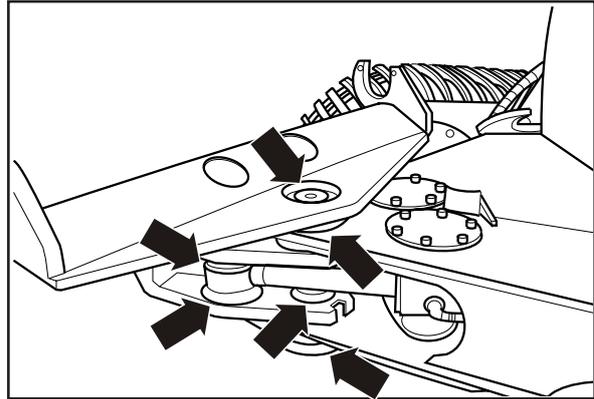


Figure 124

**OPERATION 83****Checking the tightening of the engine mounting bolts**

- Check the engine mountings, and tighten if necessary.

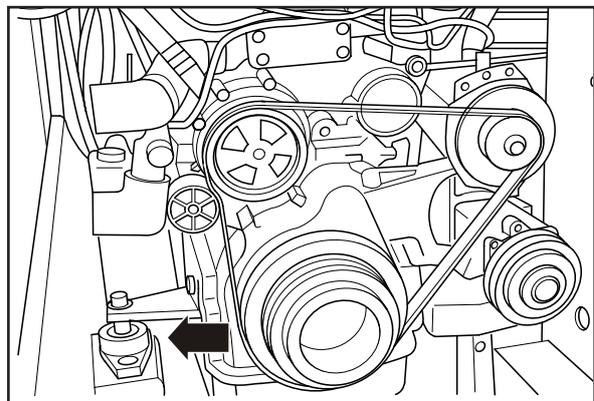


Figure 125

**OPERATION 84****Reposition elevator flights**

1. The links and rollers, in the elevator chain, to which the elevator slats are bolted wear more quickly than the rest of the chain. When wear on these links becomes noticeable shift each elevator flight one link further along the chain. Make sure that the original spacing between the elevator slats is maintained throughout.
2. Undo the bolts and self-locking nuts which secure the elevator slats to the elevator chain. Remove the elevator slat and reposition it on the elevator chain at the selected fresh link. Refit the self-locking nuts and bolts and tighten securely.

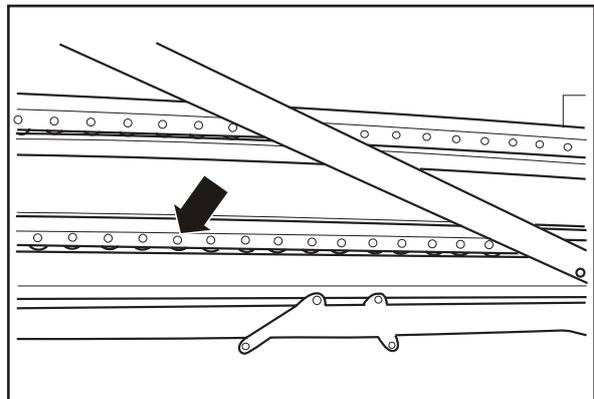


Figure 126

**NOTE:** The slats are not symmetrical and are not reversible.

**OPERATION 85****Checking the preload of pivot axle shaft bearings (A8800)**

1. Loosen the protection cover.
2. Remove the grease.
3. Raise the track of the ground.
4. Check the nut torque, this torque should be 1.200 Nm.

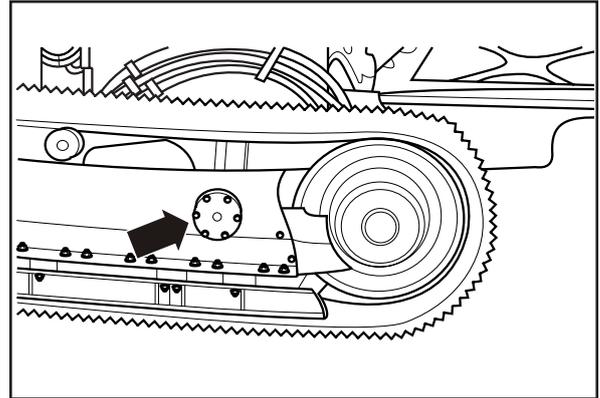


Figure 127

**OPERATION 86****Greasing the chopper gear box shaft seals (with a hand pump)**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

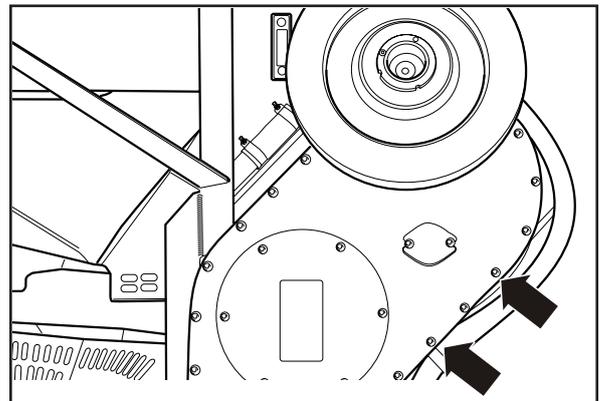


Figure 128

**OPERATION 87****Greasing the chopper motor housing bearings (with a hand pump)**

- Apply grease CASE Multi-Purpose Grease, 251H, EP in the indicated points.

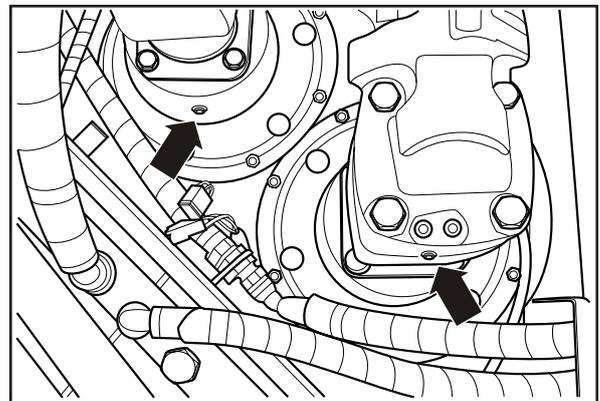


Figure 129

**OPERATION 88****Checking and cleaning the engine air filter element**

- Check the engine air filter elements and clean if necessary.

**OPERATION 89****Checking the primary extractor bearing preload**

1. Loosen the screw that holds the lower fairing to the extractor hub.
2. Remove the eight screws that hold the fan hub to the adaptor, and remove the fan.
3. Loosen the eight screws that hold the adapter in the shaft.
4. Remove the lock washer tab from the nut and tighten the nut until tight. Back of the nut 1/2 turn and lock the nut with the tab washer.

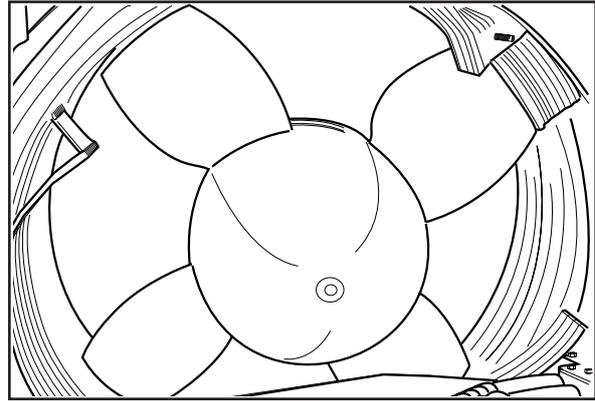


Figure 130

**OPERATION 90****Checking the front wheel bearing preload (A8000)**

1. Raise and block the front of the machine, release the load off the front suspension.
2. Remove the dust cover.
3. Remove the split pin.
4. Tighten the nut.
5. Liberate 1/2 turn.
6. Back the nut off 1/2 a turn and replace the split pin and dust cover.

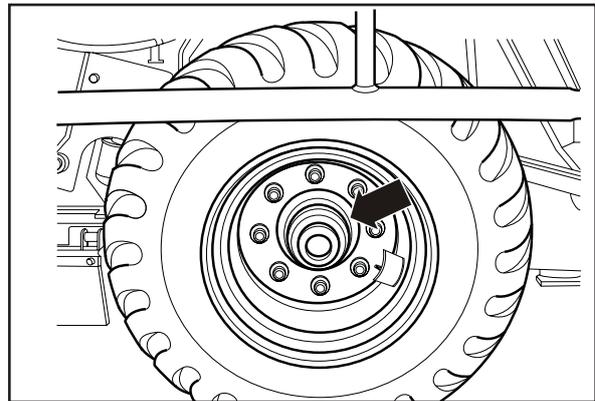


Figure 131

**OPERATION 91****Removing one link from the elevator chain (if necessary)**

1. Grind the peened edge of the link pin (1) from both pins where you wish "to break" the chain.
2. Remove the connection plate (2) and the link pins (3) which hold the chain.
3. To rejoin the chain the same connection plate can be used 2 1/4" x 3/8" screws and nuts [elevator screws (4)]. Placed through the connection pins to mount the side plate.

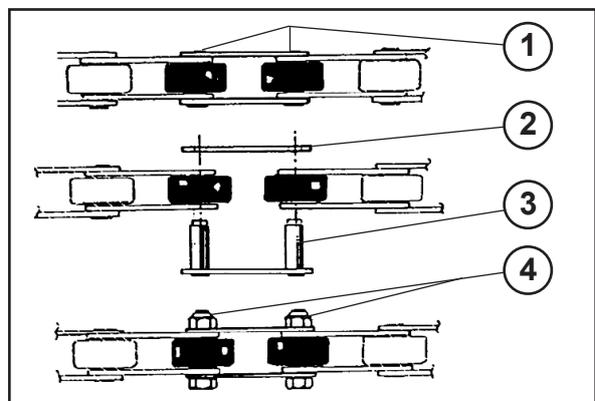


Figure 132

## OPERATION 92

### Checking the Scania DC9 engine valve clearance

- Contact your Case IH dealer so that checking the engine valves can be scheduled with a Scania representative.

## OPERATION 93

### Changing the engine diesel filter (Scania DC9 engine)

#### Fuel tank

1. Drain any water present in the fuel tank.

#### Main filter

1. Unscrew the filter cover with a **closed tool** with hex adapter, for example, a 587 637 socket, to not damage the cover.
2. Lift the cover and the filter element out. At the same time, the filter housing will drain automatically. That only applies to fuel tanks below the engine level. Otherwise, the fuel shut-off valve should be turned off before.
3. Release the filter element removed from the filter cover tilting it gently to the side. Dispose of filter in accordance with environmental requirements.
4. Replace the seal ring in the cover. Lubricate the new seal ring with a proper grease.
5. Check if the fuel was drained from the filter housing. If the drainage does not work, the contaminated fuel may enter the injectors.
6. Press a new filter element onto the pressure bracket in the cover.
7. Install the cover with the new filter element in the housing. Tighten the cover to 25 +/-5 Nm. Use a **closed tool** with hex adapter.
8. After changing the fuel filter, bleed the fuel system (refer to the section "Bleeding the Fuel System").

**IMPORTANT:** Use only genuine Scania fuel filters.

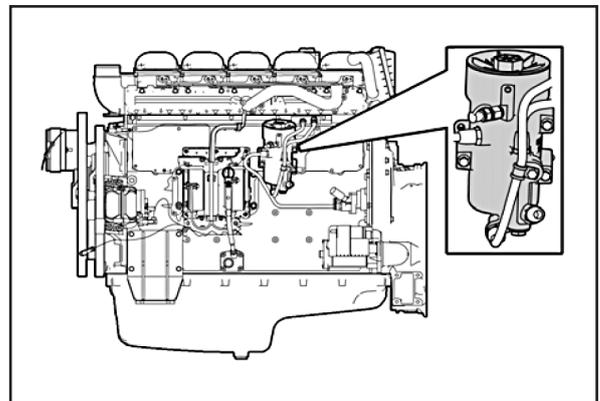


Figure 133

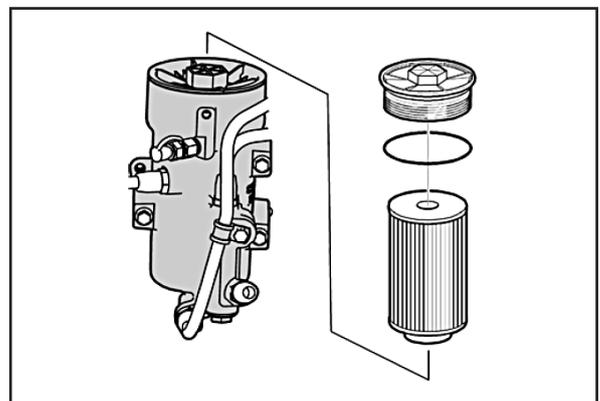


Figure 134

**Bleeding the fuel system (Scania DC9 engine)**

1. Connect the clear plastic hose to the bleed nipple (1) on the fuel filter housing to bring the fuel to the container.
2. Open the hand pump (2) and the bleed nipple. Operate the hand pump until the fuel flows out through the fuel hose. When the system is empty of fuel, it will need to pump about 100 times for the fuel to reach the bleed nipple.

**NOTE:** When bleeding or changing fuel system components, always use a container to avoid fuel spill.

3. Operate the hand pump until the fuel flows out freely without air bubbles, about 20 times.
4. Close the bleed nipple and remove the hose.
5. Connect the plastic hose to the bleed nipple in the fuel manifold (3).
6. Open the bleed nipple in the fuel manifold and operate the hand pump until the fuel flows without air bubbles (about 20 times).
7. Close the bleed nipple in the fuel manifold and remove the plastic hose.
8. Operate the hand pump about 20 times until the relief valve (4) is open. You should hear a wheezing sound when it is opened.

**NOTE:** If the engine fails to start after bleeding:

- Open the bleed nipple again and operate the hand pump until the fuel flows out without air bubbles.
- Tighten the bleed nipple. Start the engine and check for leaks.

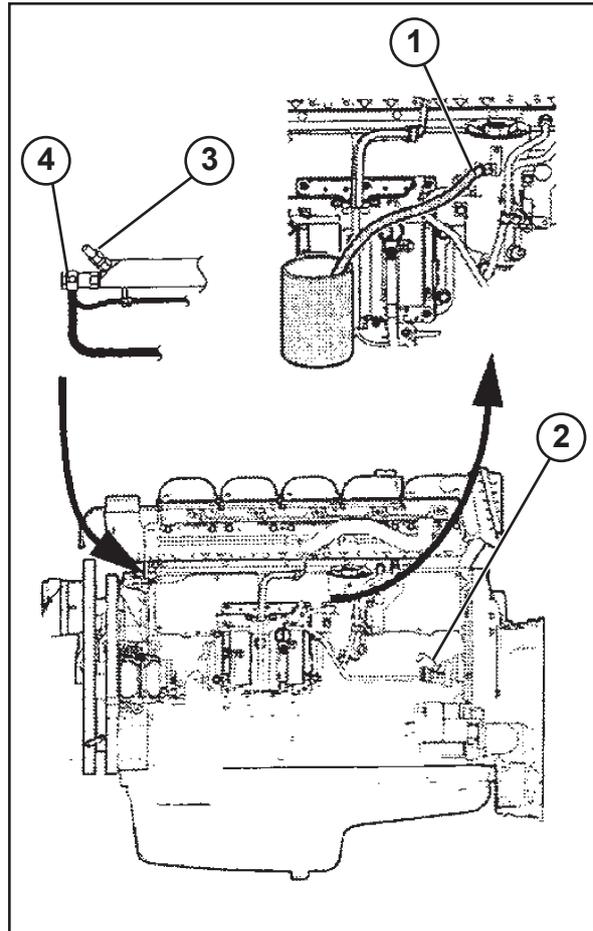


Figure 135

### Changing the engine diesel filter (Case IH 9L engine)

The fuel filter element and the fuel filter should be changed every 250 operating hours. Proceed as follows:

1. With a clean rag, wipe the top of the filter head clean.
2. Unscrew the fuel filter using a filter wrench.
3. Fill the new fuel filter with clean fuel, and coat a film of fuel to the seal ring of the new filter.
4. Screw the new filter on by hand and tighten it securely (firmly against the head and then an additional  $\frac{1}{4}$  to  $\frac{1}{2}$  turn). DO NOT USE TOOLS.
5. Bleed the fuel system, refer to the section headed "Bleeding the fuel system".

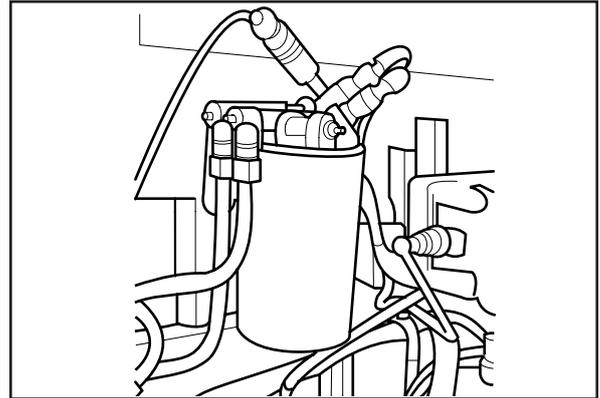


Figure 136

### Bleeding the Fuel System (Case IH 9L engine)

To bleed the fuel system, proceed as follows:

1. Ensure there is fuel in the tank.
2. Loosen the bleed screw (1), to allow the air to escape.
3. Crank the engine.
4. Tighten the bleed screw when fuel, free of air bubbles flows out.
5. Loosen the bleed screw (2), to allow the air to escape.
6. Crank the engine.
7. Tighten the bleed screw when fuel, free of air bubbles, flows out.
8. Start the engine at low idle until the engine runs smoothly.

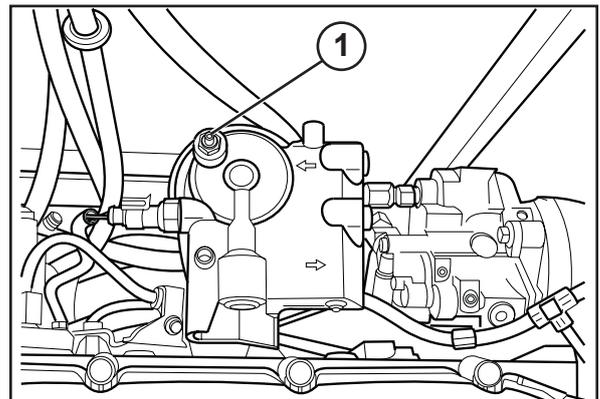


Figure 137

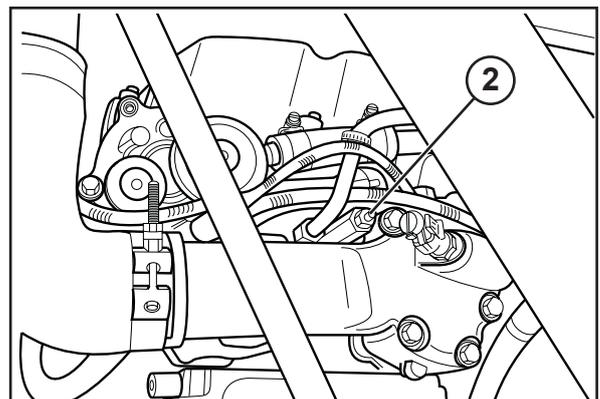


Figure 138

**OPERATION 94****Carry out a full track inspection on the field**

- See a BERCO dealer if necessary.

**OPERATION 95****Changing the blow-by filter****For Case IH 9L engine**

To replace the filter, proceed as follows:

1. Loosen the six screws (1) and remove the cover (2) which is located in the left side next to the exhaust pipe.
2. Loosen the three screws (3) and remove the filter (4).
3. Replace the filter (4) and tighten the bolts (3).
4. Install the cover (1) and tighten the six bolts (2).

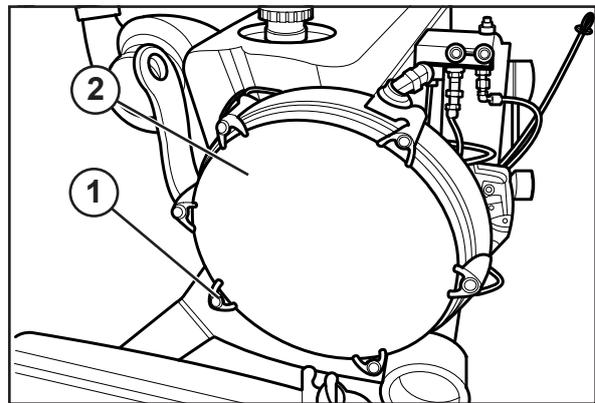


Figura 139

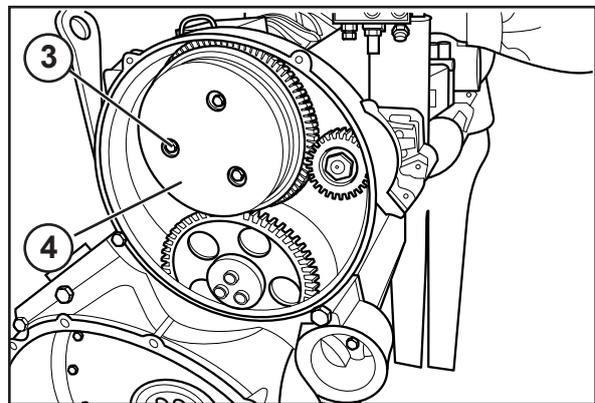


Figura 140

**For SCANIA DC9 engine**

For engines with opened and closed crankcase breathing, the filter element should be changed at the same moment in which the main oil filter is replaced, as described below:

1. Remove the quick mesh of the bleeding tube connection (1), which goes until the filter casing, and pull the cover tube of the filter casing.
2. Remove the filter casing cover (2) and remove the filter element (3).
3. Clean the cover and install a new filter element.

**NOTE:** Note that the filter element should be installed so that the way to the crankcase gases through the filter be longest. The text on the filter will run vertically.

4. Place about 1dl of oil in the filter casing oil exit, to assure that there is enough oil in the liquid seal.
5. Install the filter casing cover.
6. Check if there are an "O" seal ring in the bleeding tube connection. Pressure the tube and install the quick coupler.

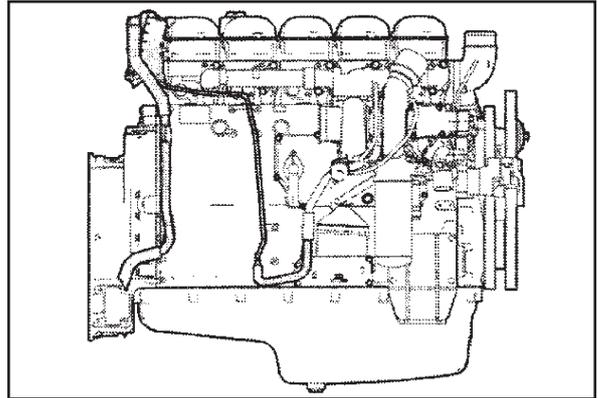


Figure 141

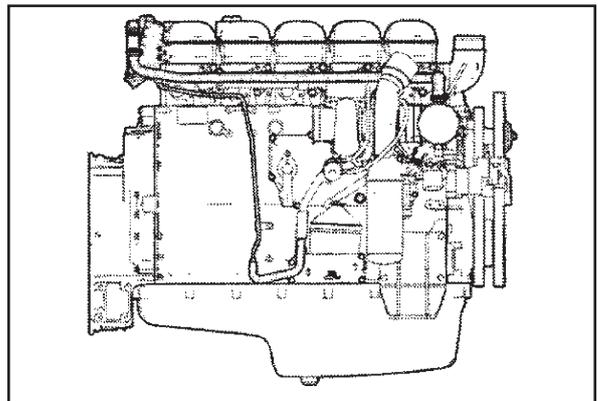


Figure 142

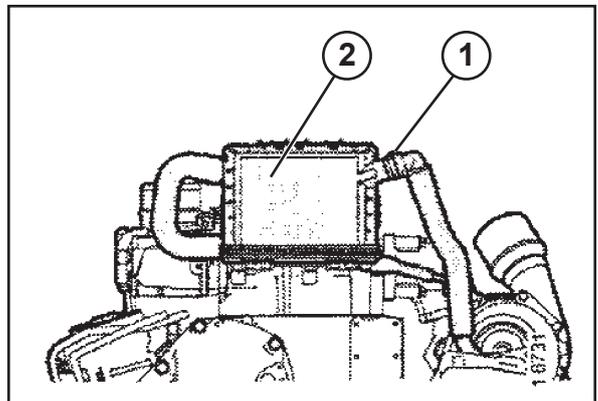


Figure 143

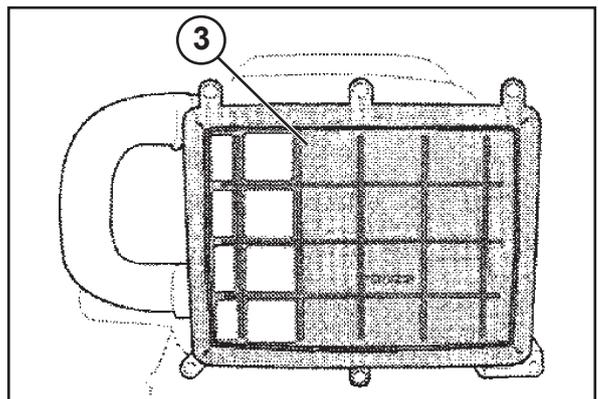


Figure 144

**OPERATION 96****Carry out a full track inspection on the field**

- See a BERCO dealer if necessary.

**OPERATION 97****Changing the hydraulic oil return filter elements**

- Refer to *Operation 58*.

**OPERATION 98****Checking the nitrogen (N<sub>2</sub>) pressure in the volume converter of the autotracker**

To supply or check N<sub>2</sub>'s charge you will need the 87463424 kit (special tool) and a Nitrogen reservoir (1) (accumulator not included in the kit). Always use N<sub>2</sub> with 99,9% of purity and free of humidity.

1. Connect the gauge hose (2) of the special tool to the test point of the volume converter without N<sub>2</sub> reservoir.
  2. The gauge should register from 29 to 36 PSI (200 - 250 kPa).
- **If the gauge registers above 36 PSI:** Release some of the charge by the gauge tap.
  - **If the gauge registers below 29 PSI:** Connect N<sub>2</sub> reservoir to the gauge. Open the reservoir and the gauge valves so that the nitrogen in the reservoir charges the cylinder until it reaches the value between 29 and 36 PSI.

**NOTE:** After checking N<sub>2</sub> charge, check the position of the height sensor.

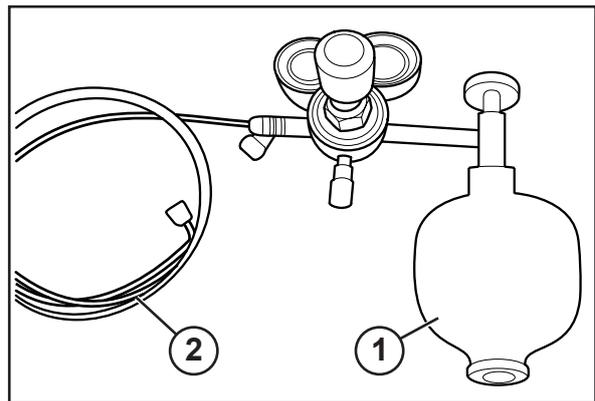


Figure 145

**OPERATIONS 99, 100 and 101****Checking the suspension and topper accumulator pressure****Accumulators**

The A8800 machine is equipped with two accumulators, one in the basecutter suspension circuit and another in the topper circuit, these absorb shocks in the hydraulic circuits.

The A8000 machine is equipped with an accumulator in the basecutter circuit only.

The following procedure shows the steps that should be carried out to check and to adjust the latest type of accumulator used in the CASE IH Austoft harvesters.

**Suspension Circuit of the topper /shredder**

1. Lower the topper completely. This will relieve any pressure in the circuit.

**Suspension Circuit of the basecutter**

1. Place a block under the basecutter legs and lower the machine until it is supported by the block. This will relieve any pressure in the circuit.
2. Remove the platform non-slip cover to access the accumulator area.
3. Remove the accumulator connector cover.
4. Release the charging valve slightly to allow the tool to be connected.

**IMPORTANT:** *Only loosed the valve 1/4 turn.*

5. Disconnect the accumulator inlet hose, in order to relieve totally any residual pressure.

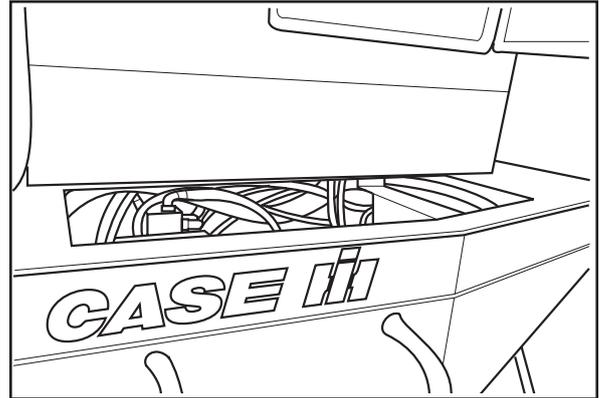


Figure 146

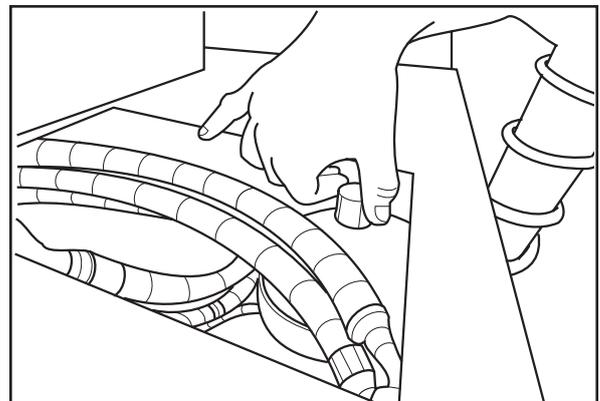


Figure 147

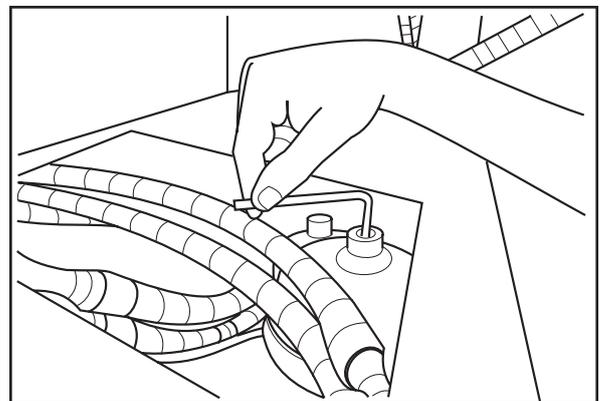


Figure 148

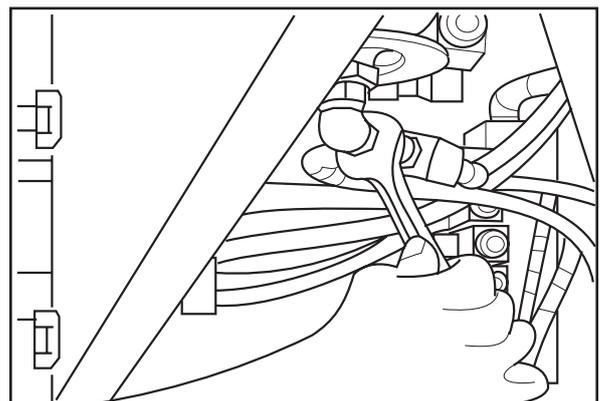


Figure 149

6. Loosen the accumulator support, in order to fit the gauge to the accumulator.

**NOTE:** If preferred, remove the accumulator completely and continue the test on the bench.

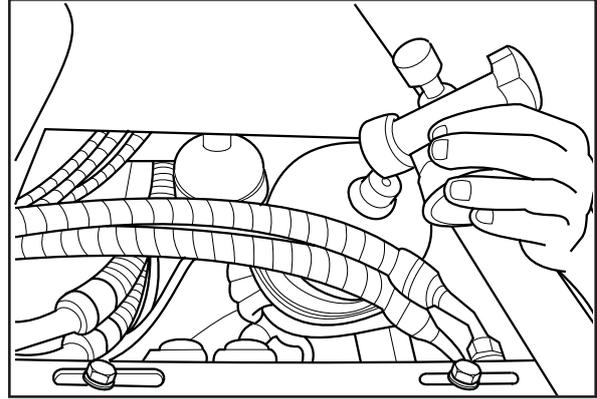


Figure 150

7. With the support loosened, position the accumulator to fit the gauge at the top of the accumulator. The Allen wrench should be placed in the accumulator valve (item 4), so that the gas can be released by rotating the tap (1).
8. With the gauge fitted and the tap (2) closed open the tap (1) and check the pressure indicated on the gauge.
9. After checking the pressure, adjust the pressure according to the correct calibration, adding or removing gas.

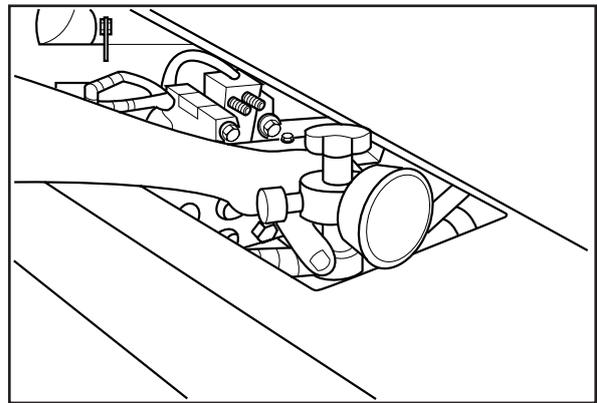


Figure 151

### Removal of the gas

10. To remove gas, open the tap (1) to obtain the correct gauge reading, then open the tap (2) slowly, to relieve the pressure. Closing the tap (2), the gauge will indicate the pressure. When the pressure is correct, close the tap (1) and remove the equipment.
11. To add gas, connect the nitrogen cylinder to the tool (with a hose). Open the tap (1), to obtain the pressure reading of the gas in the accumulator. Open the tap (2), to introduce nitrogen gas to the accumulator, when the pressure indicated on the gauge is correct, close the taps (2) and (1), disconnect the cylinder and remove the tool.
12. Replace the accumulator cover and replace the accumulator in the machine, following the reverse of the removal procedure.

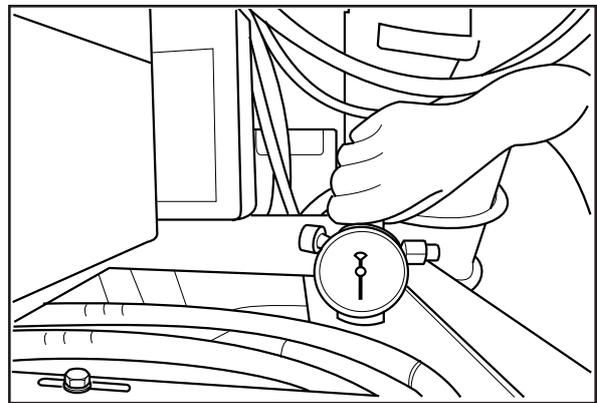
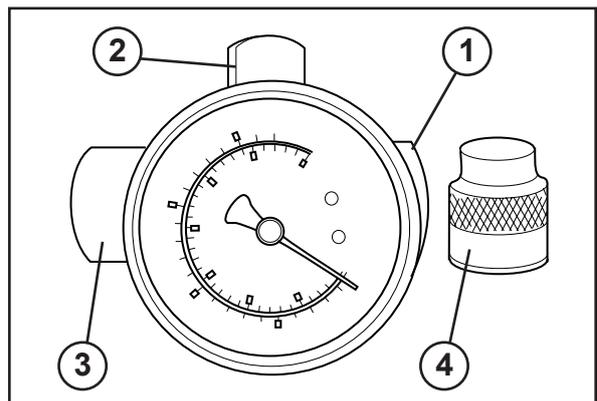


Figure 152



- (1) Button to relieve the valve  
 (2) Button to add / remove gas  
 (3) Connector for the accumulator  
 (4) Adapter for other accumulators

Figure 153

**OPERATION 102****Checking the anti-corrosive level in coolant (Scania engine)**

- Contact your Case IH dealer so that it can be scheduled with a Scania representative.

**OPERATION 103****Checking the valve clearance (Case IH 9L engine)**

- Contact your Case IH dealer for this operation.

**OPERATION 104****Dismantle the reduction hubs, assess the wear on the thrust washers. Change the gear set from one side to the other**

- Contact your Case IH dealer for this operation.

**NOTE:** For the A8800 model, operation valid until chassis 880080.

**OPERATION 105****Review Scania engine - valve adjustment**

- Refer to *Operation 92*.

**OPERATION 106****Add 1.0 % of Scania anti-corrosion additive by volume**

The topping up with 1,0% by volume of Scania corrosion inhibitor should be done after each 2500 hours operation.

- Never fill totally only with water or corrosion inhibitor! The fluid that is lost should always be replaced with mixed coolant: water + 10% of Scania corrosion inhibitor by volume.

**NOTE:** Engine coolant should be changed when cooling system is cleaned: every 4.800 hours or at least every 5 years.

**If the correct mixture of glycol or inhibitor in the Coolant is not used, excessive quantities of corrosion can cause residue formation and to the reduction of coolant capacity.**

**OPERATION 107****Checking the elevator chains, wear strips and sprocket wear**

- Refer to operations 99,100 and 101.

**OPERATION 108****Washing the machine and evaluate the general condition of the equipment (Structures and hydraulic components)**

- Refer to Operation 40.

**OPERATION 109****Checking / setting the injection units rocker arms (PDE)**

- Contact your Case IH dealer so that it can be scheduled with a Scania representative the engine valves verification.



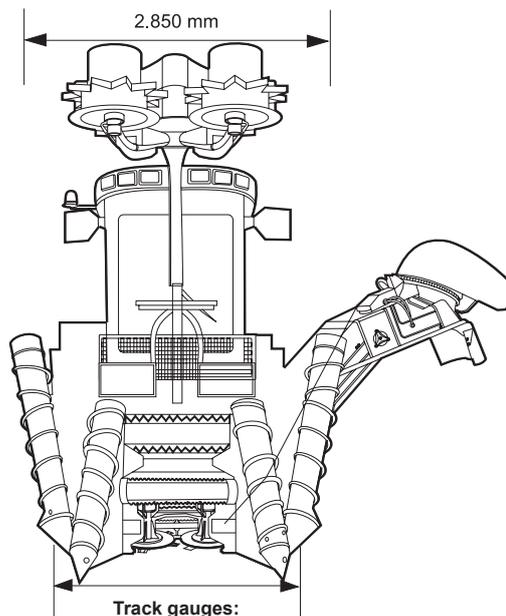
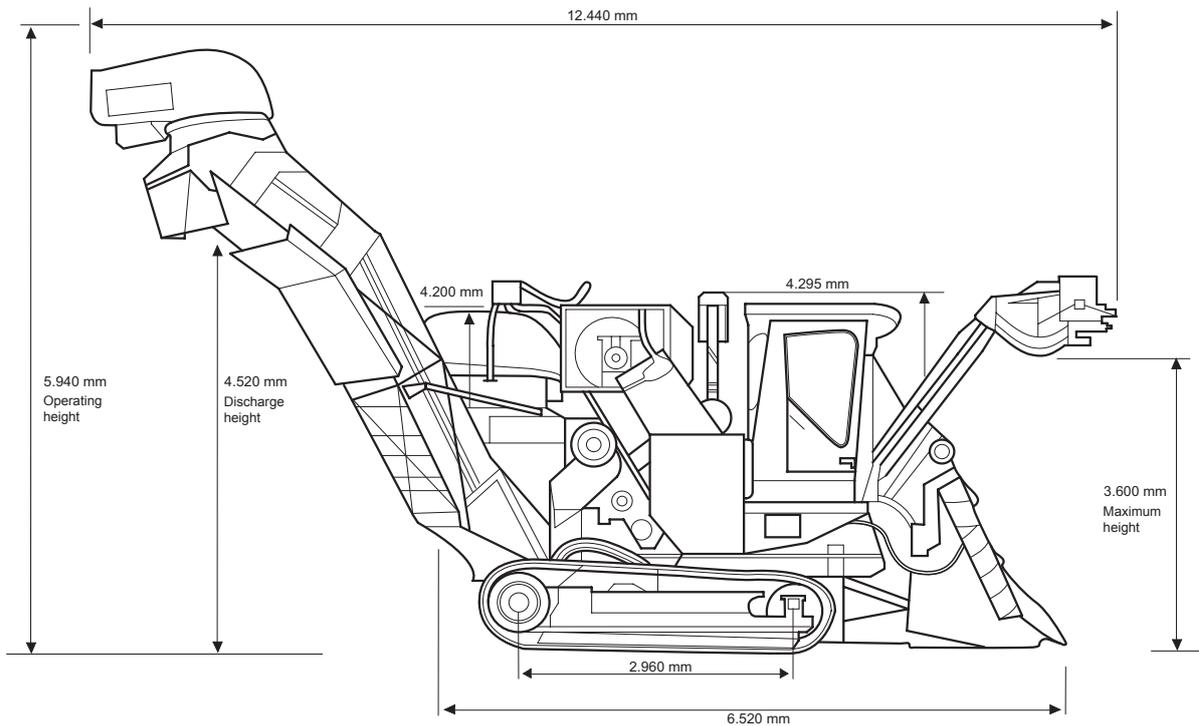


The specifications on the following pages are given for your information and guidance. For further information concerning your harvester, consult your Case IH Dealer.

All data given in this manual is subject to production variations. Dimensions and weight are approximate only and the illustrations do not necessarily show harvesters in standard condition. For exact information about any particular harvester, please consult your Case IH dealer.

Case IH policy is one of continuous improvement and the right to change prices, specification or equipment at any time without notice is reserved.

**GENERAL DIMENSIONS**



<b>ENGINE</b>		
Make	SCANIA	CASE IH
Type		
Power	330 hp (246 kW)	350 hp (260 kW)
Number of cylinders	5	6
Bore (mm)	127	117
Stroke (mm)	146	135
Volumetric capacity (liters)	8.87	8.71
Compression ratio	18:1	16:1
Firing order	1-2-4-5-3	1-4-2-6-3-5
Idle speed (rpm)	800	800
High idle speed (no-load) (rpm)	2100	2100
Rated speed (rpm)	2100	2100
Tappet clearances, cold (mm)		
- Intake / Exhaust	0.45 / 0.70	0.35 to 0.45 / 0.55 to 0.65
Oil Type	CASE n° 1 - SAE 15W40, API CI 4 ACEA E3, E4 e E5	
Oil capacity (liters)		
- Scania DC 9 engine	27 - 34	
- Case IH 9L engine	20 - 24	
Maximum temperature of the engine oil (°C)	120	
Engine oil pressure		
- Low idle (bar)	4	
- High idle (bar)	5	
<b>NOTE: Do not place, performance additive or another oil additive in engine crankcase.</b>		
<b>COOLING SYSTEM</b>		
Number of thermostats		
- SCANIA DC9	1 double	
- Case IH 9L	1	
Radiator pressure cap (bar / psi)	0.7 bar	
Quality of the water	Water should be clean and free of contamination with a pH from 6 to 9	
<b>For Scania DC 9 engine</b>		
Coolant volume (liters)	53	
Specification of the anti-corrosive	Scania corrosion inhibitors	
Opening of the thermostatic valve (°C)	83 - 95	
<b>For Case IH 9L engine</b>		
Coolant volume (liters)	44	
Anti-corrosive Specification	PARAFLU	
Opening of the thermostatic valve (°C)	83 - 95	

## For Scania DC 9 engine

Anti-corrosive (%)	Water System (liters)			Min/Max (liters) (Additive)
	Engine	System (radiator + tubes)	Total	
7	27	26	53	3.71
12	27	26	53	6.36

## For Case IH 9L engine

Anti-corrosive (%)	Water System (liters)	Min/Max (liters) (Additive)
	Total	
50	44	22
50	44	22

<b>FUEL SYSTEM</b>	
Type of fuel	Diesel
Alternative fuel	Diesel with 5% of biodiesel
Maxim capacity (liters)	480
<b>REDUCTION HUB</b>	
Oil specification	Gear 135 H EP (85 W 140) - SAE 85W140
Capacity	Until A880080 machine (Romanholi Reduction) - 6 liters From A880081 machine (Bonfiglioli Reduction) - 3.6 liters ± 10%
<b>BASECUTTER</b>	
Oil specification	Gear 135 H EP - SAE 85W140
Capacity (liters)	9.5
<b>PUMP DRIVE GEARBOX</b>	
Oil specification	AW Hydraulic Fluid 100 - ISO 100
Capacity (liters)	1.6
<b>CHOPPERS GEARBOX</b>	
Oil specification	Gear 135 H EP - SAE 85W140
Capacity (liters)	7.5
<b>HYDRAULIC SYSTEM</b>	
Oil specification	AW Hydraulic Fluid 100 - ISO 100
Capacity (liters)	600
<b>GREASE APPLICATION POINTS</b>	
Oil specification	MULTI-PURPOSE GREASE 251 H EP

<b>AUTOTRACKER TANK</b>	
Oil specification	TCH FLUID
Capacity (liters)	0.5 (tank) / A8800 (Narrow front) 0.9 / A8800 (Wide front) 0.3 / A8000 0.2
<b>WINDSHIELD WIPER TANK</b>	
Specification	Clean water
Capacity (liters)	9.0

**ROTATIONS IN RPM**

	<b>Maximum</b>	<b>Minimum</b>
Engine	2100	800
Topper (Discs)	1423	–
Topper (Drum)	189	–
Base cutter Discs	640	–
Choppers Drums	205	–
Primary Extractor	1100	600
Secondary Extractor	2200	–

**RELIEF PRESSURES**

<b>Description</b>	<b>RPM for Relief test</b>	<b>Oil Temperature (°C)</b>	<b>Pressure (psi)</b>
Topper / Shredder	1200	40	2650
Sidetrack Block	1200	40	2850 ± 100
Elevator valve block			2000
Vickers - Elev lift, Cylinders / Sec Hood	1200	40	1750
Bin Flap / Secondary Extractor			2500
Steering priority valve	1200	40	2300 a 2500 ±100
Main relief Vickers	1200	40	2200
Track Turnbuckle	1200	40	2500
Chopper Vickers block	1200	40	2750
Base cutter Vickers block	1200	40	2500
Oil cooler	1200	40	3500
Primary Extractor	1200	40	3500
Transmission pump Eaton - A8800	1500	40	5300 a 5500 ± 100
Transmission pump Eaton - A8000	1500	40	5300 a 5500 ± 100
Eaton pump low transmission pressure	1500	40	330 ± 25
Eaton engine low transmission pressure	1500	40	270 ± 25
Eaton engine high transmission pressure	1500	40	6500 - 100 / 250
Valve BA66 / Rollers and Crop divider	1200	40	2500 ± 25

**TYRES**

<b>Tyre</b>	<b>Size</b>	<b>Pressure</b>
Front	400/60 - 15.5 14 Ply	45 psi
Front narrow	10.5/80 - 18 Ply	64 psi
Rear (industrial)	23.5 x 25 - 12 Ply	40 to 45 psi
Rear (farming)	23.1 x 26 - 16 Ply	45 psi

<b>TORQUES</b>	
Wheel nuts torque ( front and rear)	339 Nm
Track sprocket nuts torque	380 - 400 Nm
Track pivot shaft nut torque	1200 Nm
Chopper flywheel fastening nut torque	Torque until firm, then apply additional ¾ turns
<b>BATTERY</b>	
Quantity	2
Amperage	100 A
Voltage	12 V
<b>ALTERNATOR</b>	
Amperage	185 A
Voltage	12 V
<b>AIR CONDITIONING</b>	
Gas charge	3.7 kg





