

ORIGINAL INSTRUCTIONS

**CX500C**  
Crawler Excavator

**OPERATOR'S MANUAL**

**Part number 48016882**  
1<sup>st</sup> edition English  
May 2016



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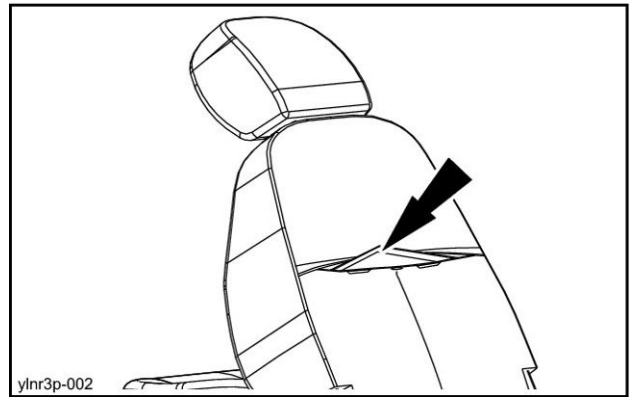


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## Operator's manual storage on the machine

Always keep the manual in the location provided for that purpose (behind the operator's seat). Make sure it is always complete and in good condition. If you wish to obtain extra copies, or copies in languages other than that of the country of use, consult your CASE CONSTRUCTION Dealer.



ylnr3p-002

YLN3P-002 1

## **Operating the machine**

- When working on a public highway, use standard traffic signs and take into consideration the working range of the upperstructure and its attachments. Local or national regulations stipulate the number, type and location of reflector strips.
- Avoid running the engine in a confined space. If there is no alternative, proper ventilation must be provided at all times.
- Do not allow anyone else on the machine. The passenger could fall or cause an accident.
- Never operate the working or travel controls unless you are properly seated in the operator's seat with the seat belt correctly fastened.
- Before starting the engine, check the direction of travel (in forward drive, the reduction gears should be to the rear of the machine).
- Do not work near overhead high-voltage electric lines without checking beforehand that all necessary measures have been taken to respect the minimum distances:  
Less than 57000 volts: **4 m (13.12 ft)**.  
More than 57000 volts: **5 m (16.4 ft)**.
- Study the position of any existing pipelines or conduits before starting work. Electrical cables, gas and water pipes and other underground installations can cause serious injury.
- Always make allowance for working conditions (sloping or rough ground), the site and weather conditions when driving the machine.
- Do not allow anyone to stand in the machine working area. Accidental operation of the upperstructure swing control or of an attachment control could cause an accident. Stop all operations until everyone has moved away.
- Before operating the dozer blade (if equipped) make sure that there is no one in the working area of the latter.
- Operate all controls gradually to ensure smooth machine operation.
- Whenever load handling operations are to be carried out, it is imperative to adhere strictly to the instructions given in this manual and local legislation.
- It is forbidden to use the machine to carry out tasks other than those for which it is intended. Never use the equipment for sweeping the ground to level out rubble or push objects (transversal stress on the attachment).
- Stop the engine and remove the ignition key when the machine is not in use, even for short periods of time.
- The working area of the end attachment that is mounted may interfere with the machine. Interference may be caused due to the type of end attachment or installation of parts such as a cab guard. Always maintain a safe margin of distance. (Be careful of tool swing or accidental operations.)
- To access or exit the operator's compartment, the left-hand control arm must be in the raised position. Never forget this basic requirement.
- Never leave the operator's compartment while the engine is running.
- To get in or out of the cab, it is imperative that the upperstructure frame is in line with the undercarriage.
- Dust, smoke or mist can reduce visibility and cause an accident. Reduce speed or come to a complete halt until visibility has improved.
- Never jump down from the machine. When alighting from the machine or the upperstructure, always face the machine and use the steps and access handles.
- In the event of an operating problem or failure, move the machine to a safe place, lower the attachment to the ground, shut down the engine and remove the ignition key. Locate the problem, report it if necessary and take the necessary steps to warn others not to attempt to operate the machine.
- Before tilting the seat back forward, it is mandatory to raise the armrests to avoid any accidental operation of the control levers.
- Never turn the key of the battery master switch in "OFF" position when engine is running, the electrical systems can be damaged.
- When the engine is stopped, always wait one minute minimum before to place the key of the battery master switch in "OFF" position, otherwise the computer program of the hydraulic will not exit successfully.

## **Preventing risks caused by vibrations**

The machine's vibration affects the comfort and in some cases the health and safety of the operator. To reduce vibration risks to a minimum:

1. Make sure that the machine, the equipment and the tool are suitable for the work to be carried out.
2. Make sure that the machine is in good condition and that servicing intervals are complied with.
3. Check the track tension adjustment and the play in equipment linkages.
4. Make sure that the operator's seat and its adjustment controls are in good condition and then adjust the seat to suit the operator's size and weight. The operator's seat complies with the ISO 7096, 2000 standard, EM 6 class.

During work:

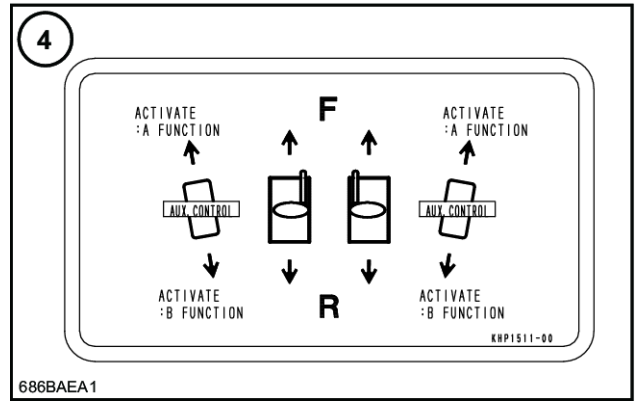
1. Operate all controls gradually to ensure smooth machine operation.

## 2 - SAFETY INFORMATION

### Function of the levers and pedals

Part number: KHP1511 (with right and left-hand options)

This decal shows the function of the travel control levers and pedals.

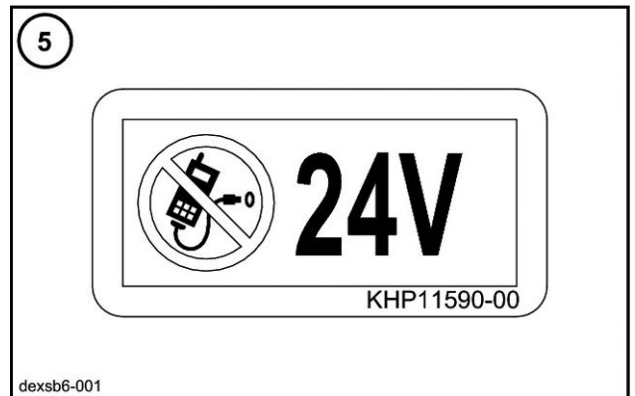


686BAEA1 14

### Cigarette lighter socket (24 volts)

Part number: KHP11590

This decal shows the location and the voltage of the cigarette lighter socket. It is strictly prohibited to connect devices of a different voltage.



DEXSB6-001 15

### Emergency exit

Part number: KHP1247

This decal shows the location and way how to use the emergency exit (rear window).



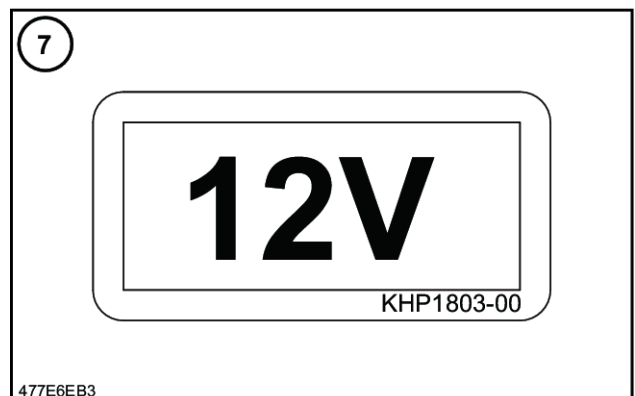
Y6JWU1-001 16

### Power Socket

Part number: KHP1803

This power socket is only for 12 VDC equipment.

Do not use as a power supply for 24 VDC equipment.



477E6EB3 17

## Position of the operator's compartment controls and accessories

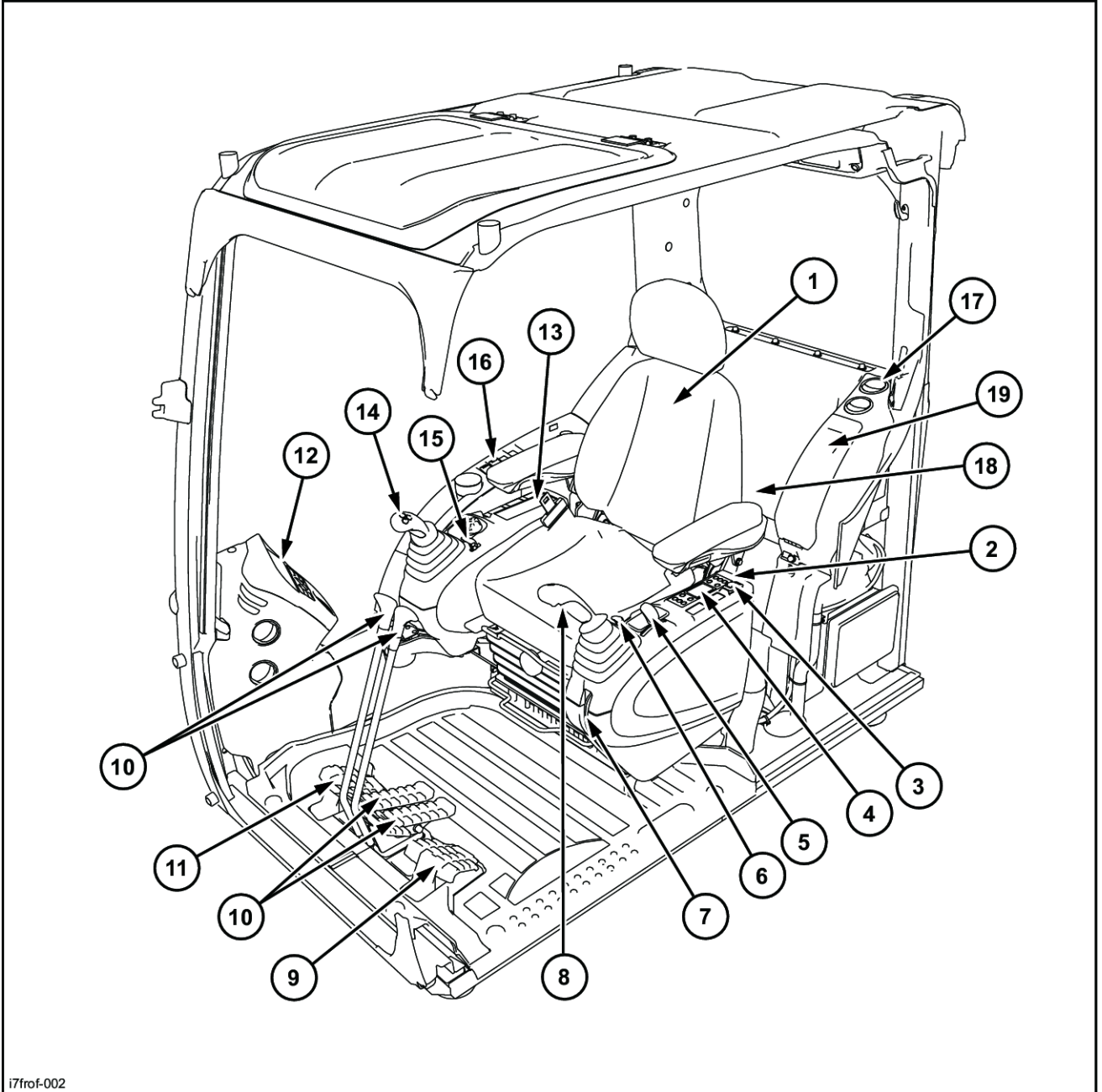
### **⚠ WARNING**

#### **Misuse hazard!**

Before starting the engine, make sure you are fully aware of the location and the function of each control.

Failure to comply could result in death or serious injury.

W0226A

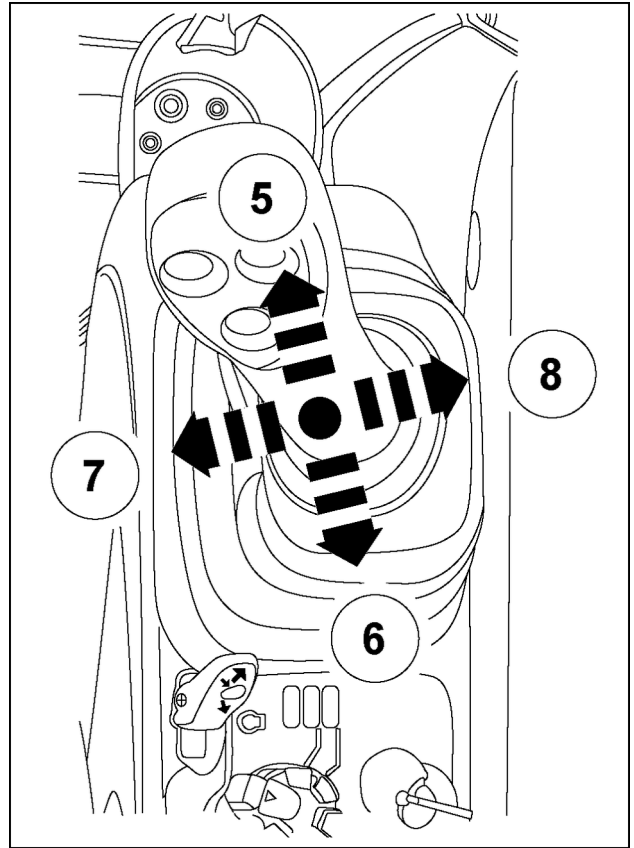


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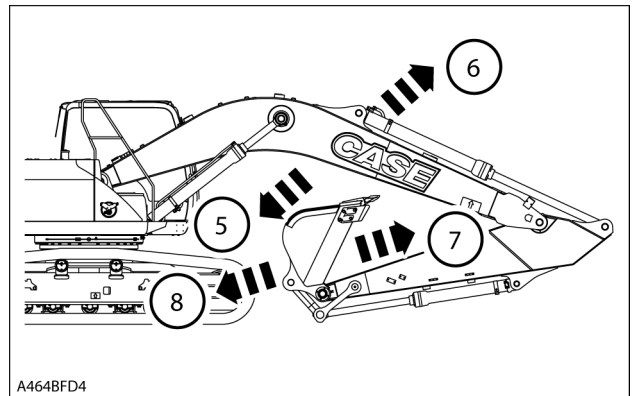
### Right-hand control lever

The speed of movement of the boom or the bucket depends on the control lever tilt angle. In the intermediate position two movements can be obtained simultaneously.



SML16CEX0506AB 3

- (5) The boom lowers.
- (6) The boom raises.
- (7) The bucket retracts (filling).
- (8) The bucket extends (dumping).



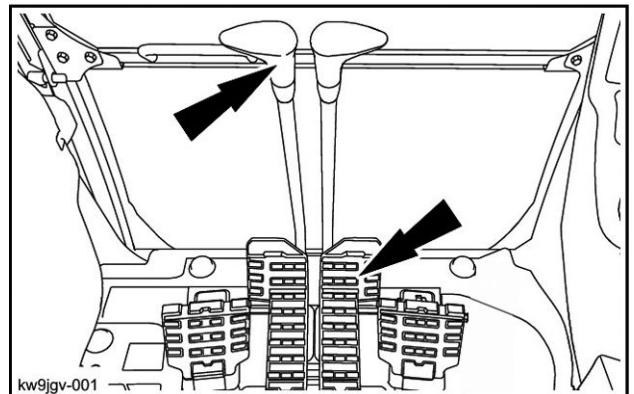
A464BFD4

A464BFD4 4

### Travel control levers and pedals

These levers and pedals are used to move the machine. (Refer to page **Machine travel**).

**NOTE:** Travel speed either forward or in reverse depends on the position of the travel speed selector. (Refer to page 3-24).



KW9JGV-001C 5



Indicates that the engine is idling because engine idling is selected.



Displayed before the engine is stopped with engine auto stop.

- Auto warm up



Indicates that auto warm up is operating.

- Idle shut down

- Fan reversing



Indicates that the fan rotation reversal switch is activated. The audible alarm device will sound. It is necessary to stop the engine to cancel this function. (Refer to pages **3-38** and **4-24**).

3. Press the option pedal for the “Breaker/crusher’s” completely, or slide the proportional switch to maximum.

**NOTE:** Make adjustments before connecting to an attachment.



lmlxlb3-005

LMXLB3-005 21

4. Hold the switch until “Pressure adjusting complete” is displayed on the screen.



lmlxlb3-006

LMXLB3-006 22

5. Operation complete.



lmlxlb3-007

LMXLB3-007 23

6. Returns automatically.



lmlxlb3-008

LMXLB3-008 24

## Function cancellation lever and safety bar

### **⚠ WARNING**

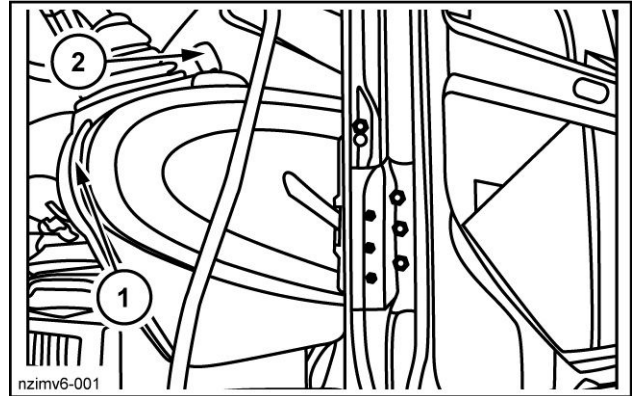
**Unexpected machine movement!**  
**Before leaving the operator's compartment, the function cancellation lever must be in the central position and the safety bar must be in the inward position.**  
**Failure to comply could result in death or serious injury.**

W0223A

The safety bar (1) is designed to prevent the operator from leaving the operator's compartment without first having retracted the safety bar into the left-hand control arm.

The lever (2) operates the safety bar (1) and cancels the functioning of the control levers and pedals. When the lever (2) is in central position, the safety bar (1) is in inward position in the control arm and the attachment, travel and swing functions cannot be operated.

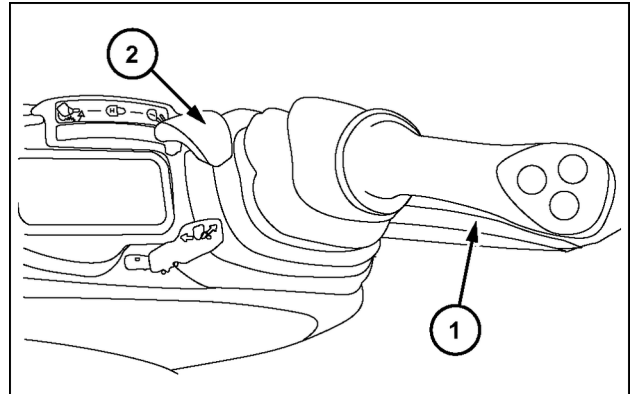
**NOTICE:** the engine must be started with the safety bar retracted. If the safety bar is extended, it is not possible to start the engine.



NZIMV6-001 1

To make the attachment, travel and swing functions operational once more, push the lever (2) forward for the safety bar (1) to come out of the control arm.

**NOTE:** It is also possible to cancel all controls by completely raising the left-hand control arm. Pull the lever (2) backward.

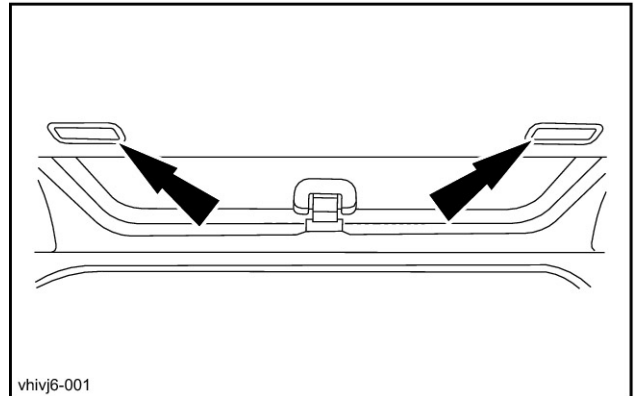


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## Overhead controls

### Roof curtain

To open the roof curtain, slide it toward the rear using the handles. To close the curtain slide it toward the front.



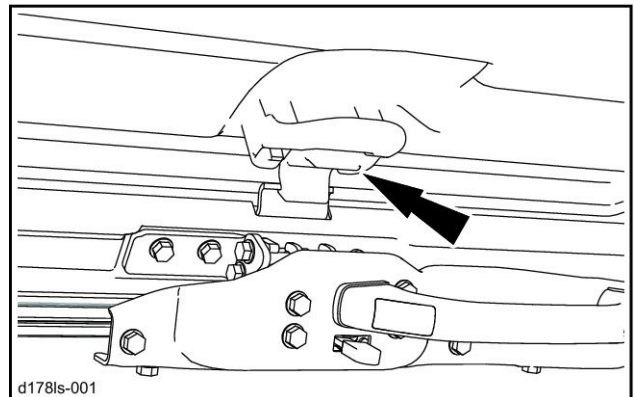
VHIVJ6-001A 1

### Roof hatch

To open the roof hatch, operate the handle and push the handle.

To close the roof hatch, pull the handle until engagement.

**NOTICE:** Since roof hatch opening is assisted by two gas struts, simply follow through the closing movement without pulling or trying to hold it back. Risk of hand trapping.

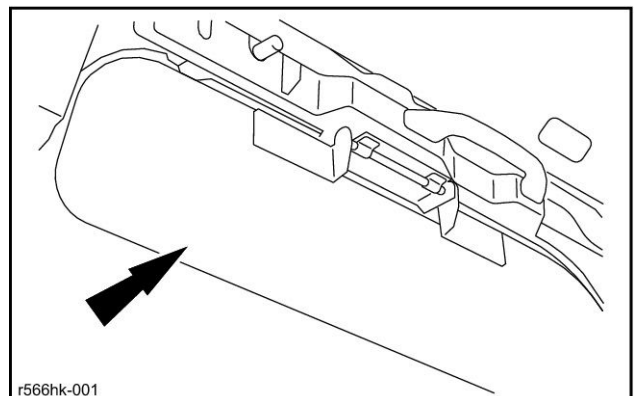


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### Sun shield

The sun shield is fixed to the windshield and can easily be positioned as required.

**NOTICE:** risk of hand trapping.



R566HK-001A 1

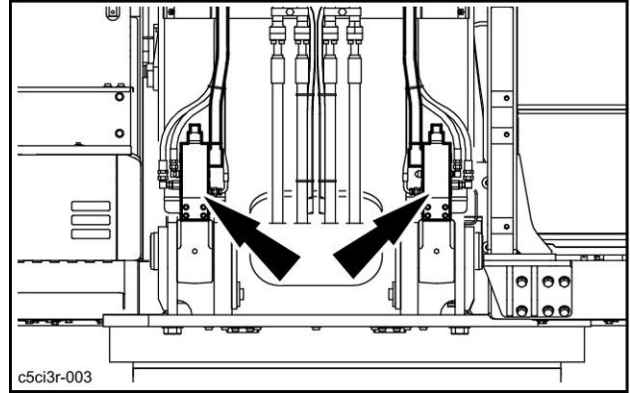
## Safety valves (optional)

### Service specifications

Check by your CASE CONSTRUCTION Dealer: Every 6 months

The role of the safety valve is to stop the attachment from dropping due to valve spool leakage in neutral position or in the event of a line or hose accidentally breaking. In the latter event, they also ensure that the attachment may be lowered gently to the ground.

### Under the boom cylinders



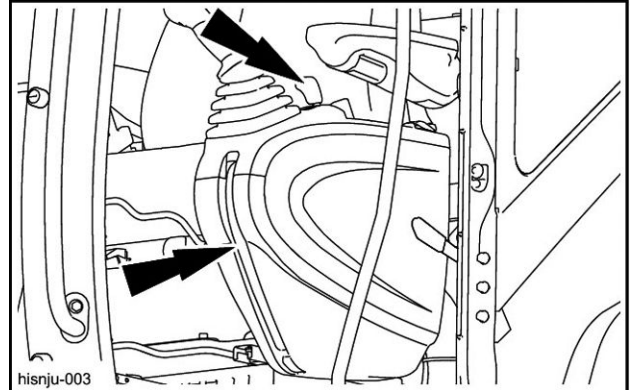
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## Starting the engine

**NOTE:** If the machine has been out of use for some time. (Refer to page **6-94** ).

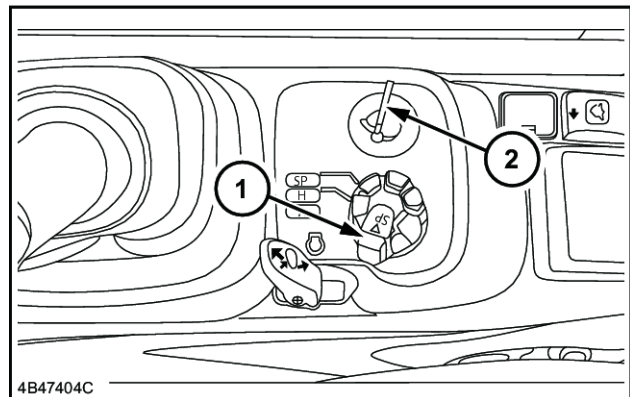
**NOTE:** Refer to page **6-82** if you have to start the engine using booster batteries.

1. Take up position correctly in the operator's seat with the seat belt correctly fastened. (Refer to page **3-5** ).
2. Make sure the function cancellation lever is in the central position (safety bar in inward position).



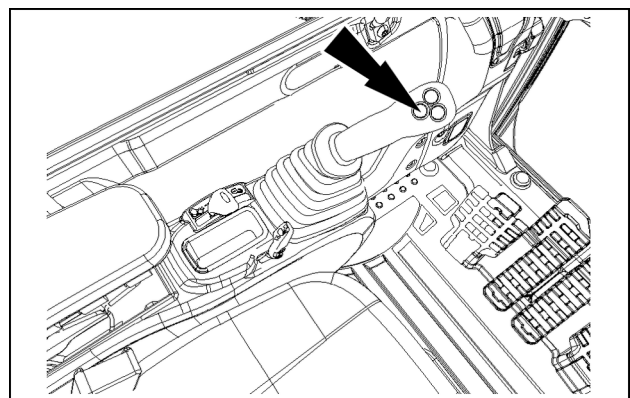
HISNJU-003 1

3. Make sure the engine throttle button (1) is in low idle position. In cold weather, leave it in half-way position.
4. Turn the ignition key (2) to "On" position.
5. If necessary, enter the anti-theft code. (Refer to page **4-4** ).  
In cold weather, the "Engine pre heat" icon appears on the systems display panel.



4B47404C 2

6. Sound the horn button on the left-hand control lever to give warning of your intention to start the machine.



SML16CEX0502AA 3

## Handling the machine

### **⚠ WARNING**

Improper operation or service of this machine can result in an accident.

Assign a supervisor to direct worksite operations. Agree on all safety measures, procedures, and suitable hand signals.

Failure to comply could result in death or serious injury.

W0287A

### **⚠ WARNING**

Crushing hazard!

The lifting systems must be operated by qualified personnel who are aware of the correct procedures to follow. Make sure all lifting equipment is in good condition, and all hooks are equipped with safety latches.

Failure to comply could result in death or serious injury.

W0256A

### **⚠ WARNING**

Crushing hazard!

This operation may be dangerous. You are advised to wear suitable clothing and respect all relevant safety messages.

Failure to comply could result in death or serious injury.

W0283A

### **⚠ WARNING**

Hazard to bystanders!

**ALWAYS** make sure the work area is clear of bystanders and domestic animals before starting this procedure. Know the full area of movement of the machine. Do not permit anyone to enter the area of movement during this procedure.

Failure to comply could result in death or serious injury.

W0245A

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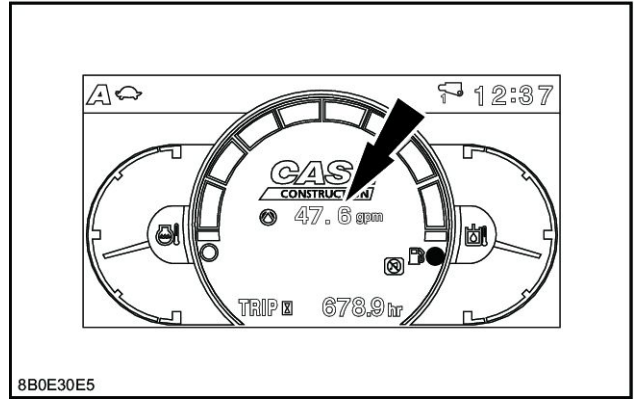


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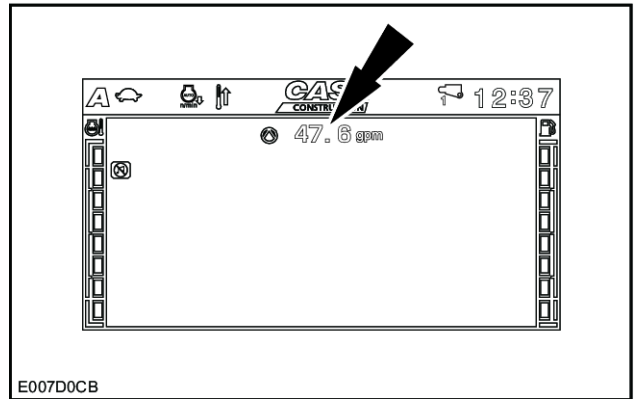
## 4 - OPERATING INSTRUCTIONS

4. After switch (1) has been operated, the set flow will be displayed for a set amount of time.



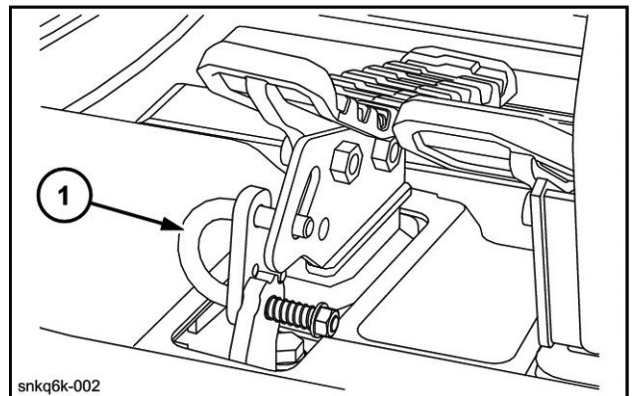
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**NOTE:** To prevent failure or damage to the tool, make sure that you select the correct circuit configuration and flow rate and pressure for the tool.



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5. Unlock the pedal and engage the locking pin (1).

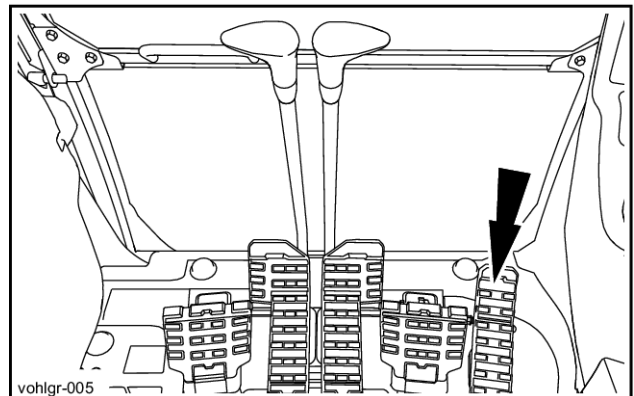


SNKQ6K-002 6

6. Use the control pedal to operate the hydraulic breaker.

**NOTICE:** In Bucket mode, do not carry out operation using auxiliary line. If you do that the warning message "Auxiliary set-up required" will be displayed with alarm sound. Stop operation immediately and carry out auxiliary set-up.

**NOTICE:** In order to prevent breakdown of and damage to the tool, always select the circuit configuration, flow, and pressure that are correct for the tool.



VOHLGR-005 7

## On a trailer

### ⚠ WARNING

#### Transport hazard!

The machine can slip or fall from a ramp or trailer. Make sure the ramp and trailer are not slippery. Remove all oil, grease, ice, etc. Move the machine on or off the trailer with machine centered on the trailer or ramp.

Failure to comply could result in death or serious injury.

W0152A

### ⚠ WARNING

#### Tip-over hazard!

The counterweight **MUST** be removed before transporting the machine without an attachment. Consult your dealer.

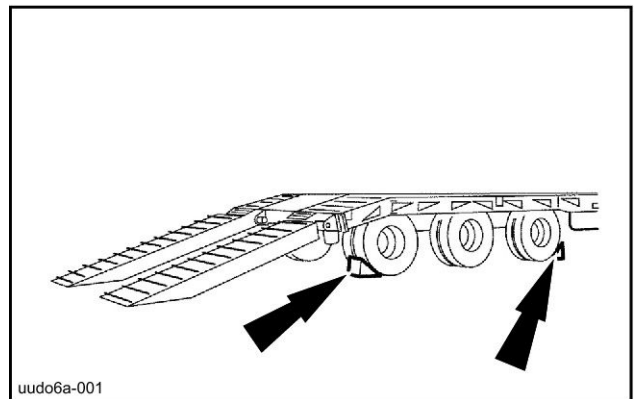
Failure to comply could result in death or serious injury.

W0260A

**NOTICE:** make sure you know the safety rules and regulations before transporting the machine. Make sure both trailer and machine are fitted with the right safety equipment.

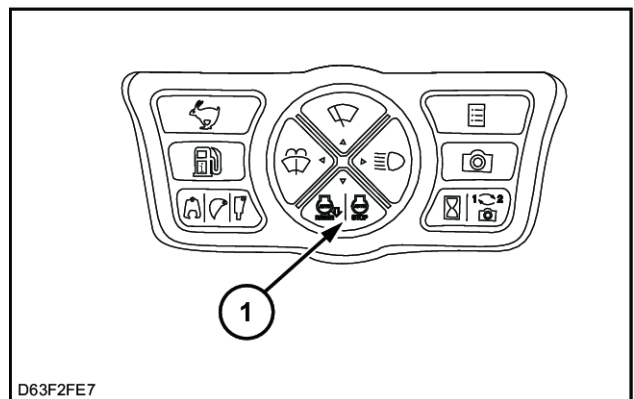
### Loading

1. Place a block behind the trailer wheels. Install the trailer side extensions (if equipped).



UUDO6A-001A 1

2. Select the automatic engine idle function (1). The idling display on the monitor goes off.



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- Check the cylinders are not leaking oil.
- Check the condition of all lines.
- Check the condition of the bucket teeth.

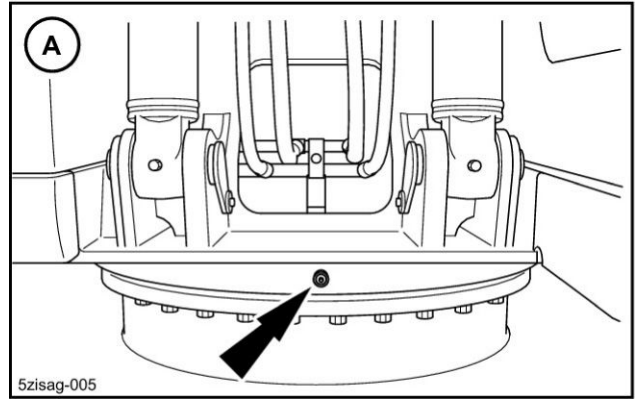
After starting the engine

- Did the engine start correctly? Are the exhaust fumes normal? Any strange noises?
- Check for abnormal noise on the hydraulic components.
- Check the components for signs of leaking oil or water.
- Check the audible alarm devices, working lights and windshield wipers.
- Check that all circuits (travel, swing and tool) are functioning correctly.

**NOTICE:** *if the slightest defect is found, repair it immediately before using the machine or consult your CASE CONSTRUCTION Dealer.*

**Every 500 hours**

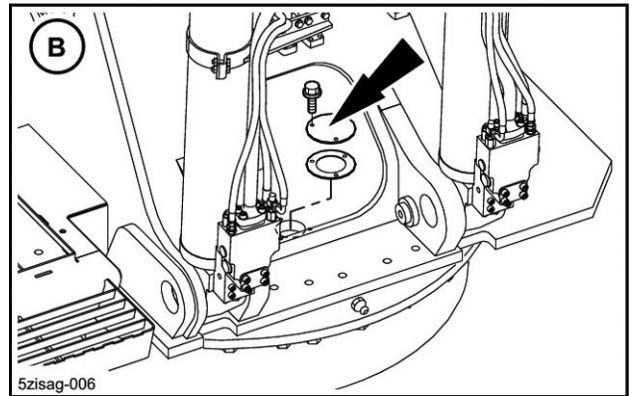
Turntable: (1)



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Turntable teeth: (1)

See "Greasing the turntable teeth".



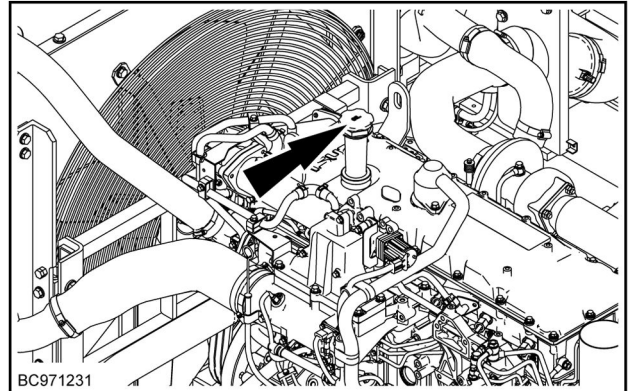
5ZISAG-006 3

## Draining, changing the oil filter and filling

**NOTE:** Change the oil while the engine is still warm. The oil will flow more easily.

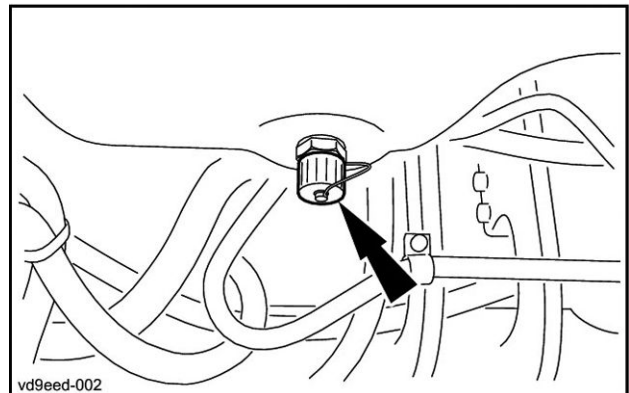
Use the extension drain hose from the front boot.

1. Place the machine on flat, level ground. Stop the engine, remove the ignition key then open the hatch under the engine.
2. Raise and lock the engine hood, remove the filling plug.



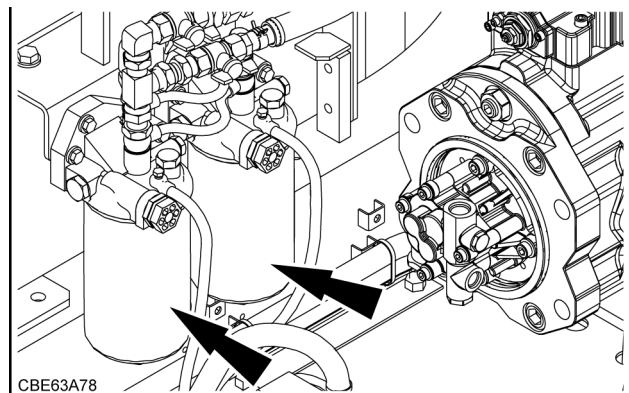
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3. Remove the protective cap from the engine housing drain valve.
4. Screw the end of the extension drain hose onto the engine check valve, place the other end in a container of suitable capacity and allow the oil to flow out.
5. Remove the extension drain hose and install the protective cap on the housing check valve. Place the extension drain hose in the front storage compartment.



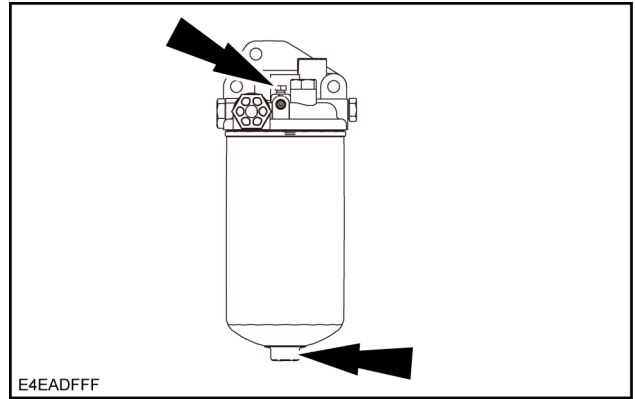
VD9EED-002 5

6. Clean the area around the filters located in the rear right-hand compartment, remove them using a filter wrench.



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Proceed in the same manner as for the pre-filter. See "Replacing the pre-filter element".



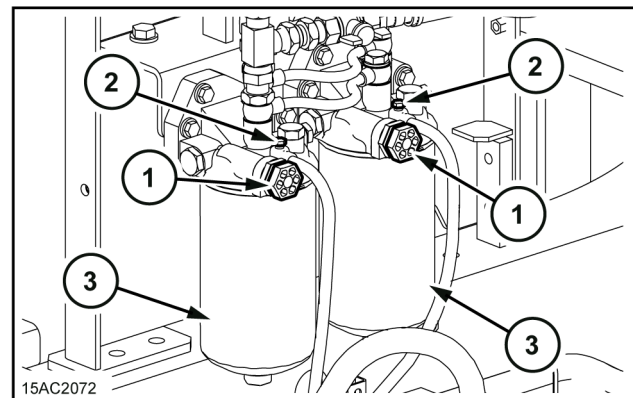
E4EADFFF

E4EADFFF 9

### Fuel system air bleed

**NOTICE:** When the fuel tank has been emptied after replacement and/or draining water of the pre-fuel filter or the fuel filter (3) has been carried out, be sure to bleed air as this may prevent fuel flow because of air entering inside.

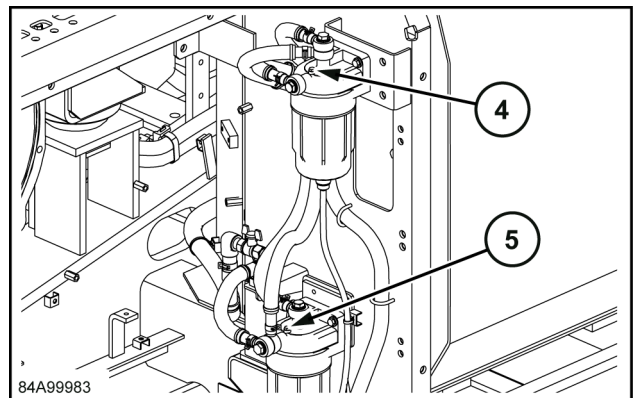
- (1) Priming pump
- (2) Air bleed plug
- (3) Fuel filter



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15AC2072 10

- (4) Air bleed plug
- (5) Air bleed plug

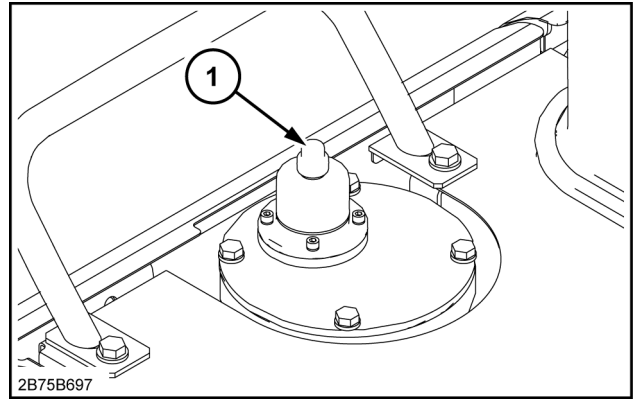


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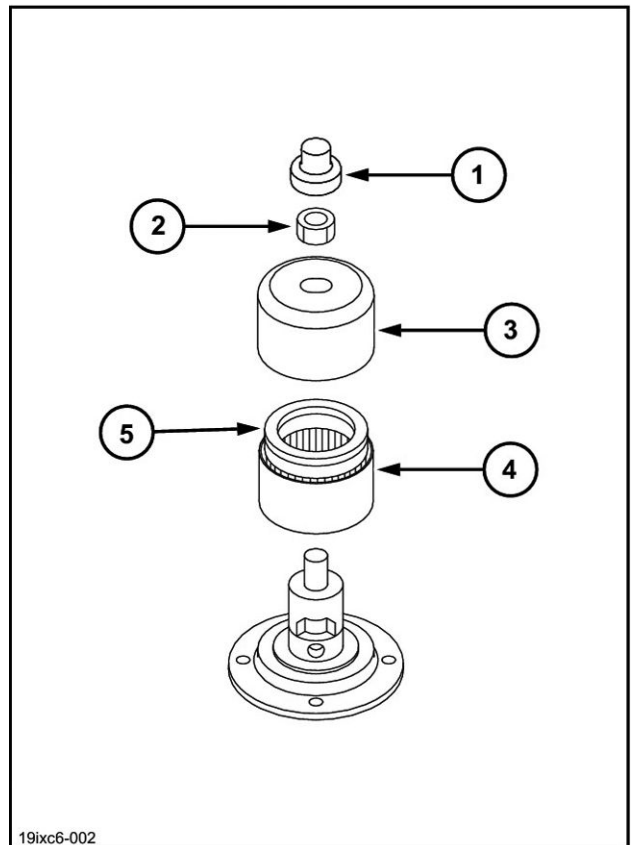
1. Place a receiving container under the end of fuel drain hose.

## Replacing the reservoir breather filter element



2B75B697 10

1. Press the button **(1)** to release all pressure in the hydraulic reservoir.
2. Remove the nut **(2)** and the cover **(3)** from the breather.
3. Remove and discard the used filter element **(4)**.
4. Install a new element **(4)**, making sure the seal **(5)** is facing upwards.
5. Install the cover **(3)** as well as the nut **(2)**.



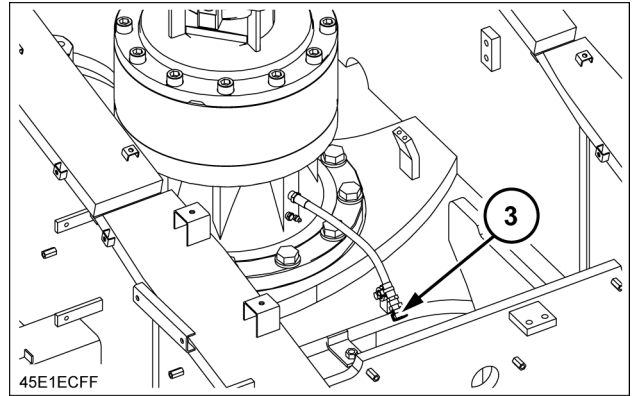
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- Place a receptacle of a suitable capacity under the upperstructure frame, remove the oil drain plug (3) and allow the oil to flow out.

**NOTE:** The oil takes a relatively long time to drain.

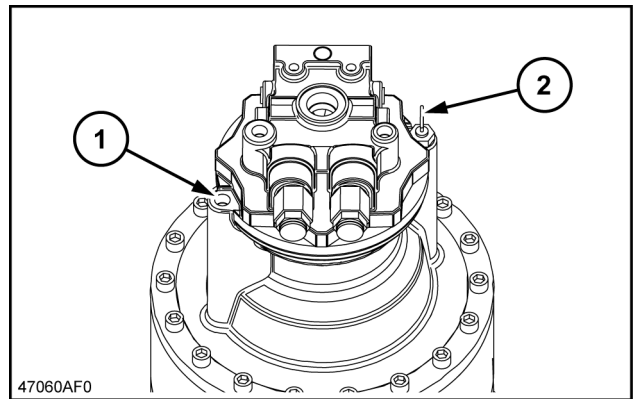
**NOTICE:** check the condition of the drained oil. If it contains metal filings or foreign matter, consult your CASE CONSTRUCTION Dealer.

- Install the drain plug (3).



45E1ECFF 3

- Add oil through the filler hole (1) until the level is correct.
- Install the dipstick (2).
- Wait ten minutes and then use the dipstick (2) to check the oil level again. If necessary, add more oil through the filler hole (1).



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## Adjustment of engine valve rocker clearances

### Service specifications

Check: Every 1000 hours

**NOTE:** Ask your CASE CONSTRUCTION Dealer to check this.

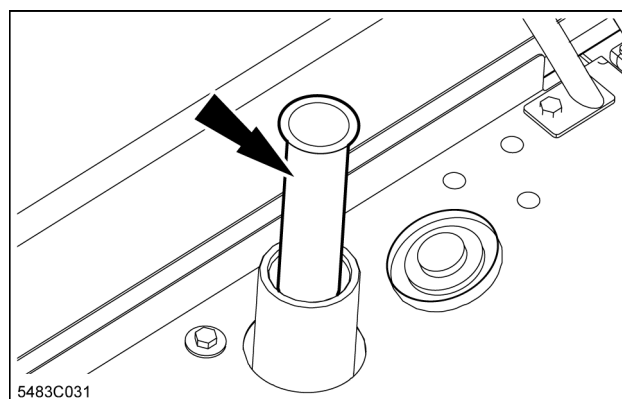
## Fuel tank filter

### Service specifications

Clean filter: Periodically

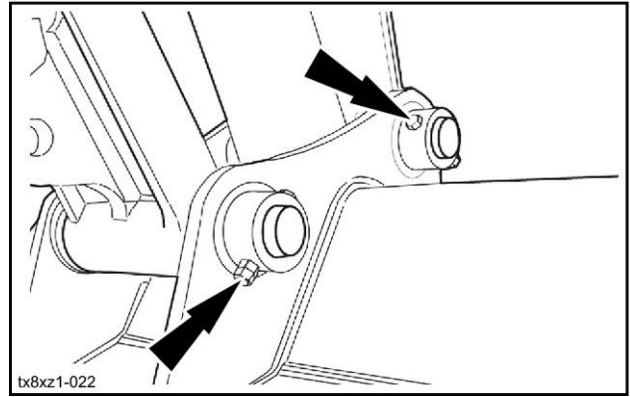
Remove the filter and clean it in diesel oil.

**NOTE:** Use suitable fuel to refill the fuel tank (refer to page 6-4).



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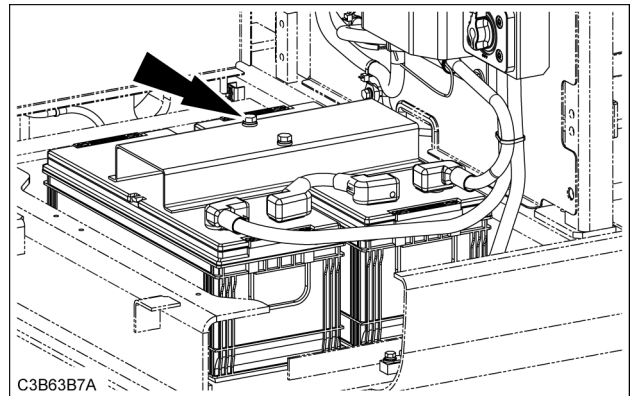
6. Install the arm/bucket linkage pin and its hardware.
7. Start the engine.
8. Bring the bucket rod into its housing.
9. Stop the engine and remove the ignition key.
10. Install the linkage seals between the rod and the bucket. Change them if necessary.
11. Install the rod/bucket linkage pin and its hardware.
12. Grease the linkage pins.



TX8XZ1-022 3

## Batteries access

To access the batteries, open the left-hand rear door then remove the skid plate.



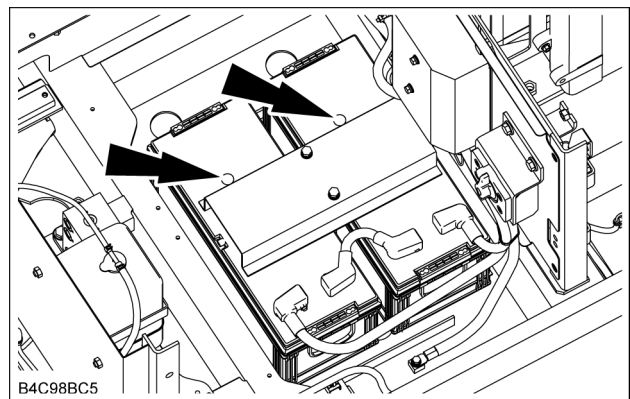
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## Checking the charge state of a maintenance-free battery

The charge indicator on the battery shows the state of charge of the battery.

If the colour is:

- Green; the charge is correct.
- Black; insufficient charge. Recharge the battery until the indicator turns green.
- Transparent (colourless); replace the battery as soon as possible.



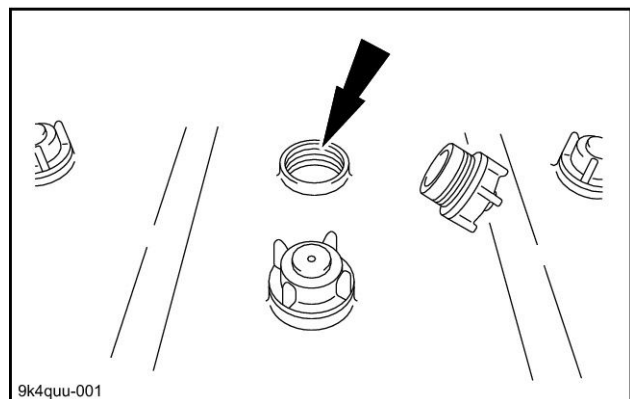
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## Checking the electrolyte level of a maintenance-type battery

Remove the cell caps and check the level in each batteries cell. The level should be between **10 mm (0.4 in)** and **15 mm (0.6 in)** above the plates. Add distilled water if necessary, then install the cell caps.

**NOTICE:** when adding distilled water at temperatures below **0 °C (32.0 °F)**, the batteries must be charged or the engine run for two hours approximately in order to ensure that the distilled water and the electrolyte are properly mixed.

**NOTE:** Make sure the battery terminals are clean and coated with grease and that the cables are properly tightened.



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## Periodic checks

### **⚠ WARNING**

**Inhalation hazard! Risk to operators and bystanders.  
Avoid running the engine in confined areas. Make sure there is adequate ventilation at all times.  
Failure to comply could result in death or serious injury.**

W0156A

Every month, check:

1. The battery charge and recharge the batteries if required.
2. The levels and top up if necessary.
3. The condition of all lines, connectors and clamps (rust). Grease if necessary.
4. The condition of the paintwork. Apply a coat of anti-rust treatment where necessary.
5. Unplug the air filter inlet and the exhaust pipe.
6. Run the engine at low speed following the starting up procedure and operate the attachment, swing and travel controls.
7. The grease on the cylinder rods.
8. Plug the air filter inlet and the exhaust pipe.

If long storage periods are necessary, the engine must run on Diesel Fuel for 20 hours to flush the Biodiesel Fuel out of the engine fuel system prior to storage.

**NOTICE:** Biodiesel Fuel must not be stored in on-site storage tanks for more than three months.

Any spillage of Biodiesel Fuel must be cleaned up immediately before it can cause damage to the environment and the paint finish of the machine.

Before using Biodiesel Fuel blends you should consult with your CASE CONSTRUCTION Dealer to receive full information about the approved blend for your machine and any detailed conditions of its usage.

**NOTICE:** Be aware that not fulfilling the requirements and conditions of Biodiesel Fuel usage will void your machine's CASE CONSTRUCTION Warranty coverage.

**Anti-freeze/anti-corrosion**

Use anti-freeze in all seasons to protect the cooling system from corrosion and all risk of freezing with a temperature until **-10 °C (14.0 °F)**.

**CASE AKCELA PREMIUM ANTI-FREEZE (MS 1710)**

When the temperature is below **-10 °C (14.0 °F)** refer to the following anti-freeze mixture percentage chart and adjust the concentration. It is recommended that the mixture ratio be controlled by coolant concentration gauge.

Temperature	<b>-12 °C</b> <b>10.4 °F</b>	<b>-16 °C</b> <b>3.2 °F</b>	<b>-20 °C</b> <b>-4.0 °F</b>	<b>-25 °C</b> <b>-13.0 °F</b>	<b>-30 °C</b> <b>-22.0 °F</b>	<b>-36 °C</b> <b>-32.8 °F</b>	<b>-43 °C</b> <b>-45.4 °F</b>
Anti-freeze	<b>30 %</b>	<b>35 %</b>	<b>40 %</b>	<b>45 %</b>	<b>50 %</b>	<b>55 %</b>	<b>60 %</b>
Water	<b>70 %</b>	<b>65 %</b>	<b>60 %</b>	<b>55 %</b>	<b>50 %</b>	<b>45 %</b>	<b>40 %</b>

**NOTICE:** Do not mix products of a different origin or brand. The same product must be used when topping up the system.

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