

ORIGINAL INSTRUCTIONS

CX130C
Crawler Excavator

OPERATOR'S MANUAL

Part number 47797595

1st edition English

October 2014

Replaces part number 47728322



CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

Electro-magnetic interference (EMC)

Interference may arise as a result of add-on equipment which may not necessarily meet the required standards. As such interference can result in serious malfunction of the unit and/or create unsafe situations, you must observe the following:

- The maximum power of emission equipment (radio, telephones, etc.) must not exceed the limits imposed by the national authorities of the country where you use the machine.
- The electro-magnetic field generated by the add-on system should not exceed **24 V/m** at any time and at any location in the proximity of electronic components.
- The add-on equipment must not interfere with the functioning of the on board electronics.

Failure to comply with these rules will render the CASE CONSTRUCTION warranty null and void.

Telematics

NOTE: the CASE CONSTRUCTION **SiteWatch**™ website (www.casesitewatch.com) will not be accessible until the CASE CONSTRUCTION **SiteWatch**™ subscription for this machine is registered by an authorized CASE CONSTRUCTION dealer. Contact an authorized CASE CONSTRUCTION for details.

This machine is equipped with a telematics system. This is an asset-monitoring system that combines Internet, cellular, and GPS technologies. A transponder unit is mounted on the equipment that wirelessly communicates with the user interface CASE CONSTRUCTION **SiteWatch**™ at www.casesitewatch.com. Using cellular technology, the transponder can send equipment data, including location, on/off status, usage and production metrics, diagnostic data, movement alarms, and unauthorized usage to the interface. The system will help cut costs and keep accurate records. See the furnished guide for operating your telematics system.

Always make sure that working area is clear of tools, parts, other persons and pets before you start operating the machine.

Unsupported hydraulic cylinders can lose pressure and drop the equipment, causing a crushing hazard. Do not leave equipment in a raised position while parked or during service, unless the equipment is securely supported.

Jack or lift the machine only at jack or lift points indicated in this manual.

Incorrect towing procedures can cause accidents. When you tow a disabled machine follow the procedure in this manual. Use only rigid tow bars.

Stop the engine, remove the key, and relieve pressure before you connect or disconnect fluid lines.

Stop the engine and remove the key before you connect or disconnect electrical connections.

Fire and explosion prevention

Fuel or oil that is leaked or spilled on hot surfaces or electrical components can cause a fire.

Crop materials, trash, debris, bird nests, or flammable material can ignite on hot surfaces.

Always have a fire extinguisher on or near the machine.

Make sure that the fire extinguisher(s) is maintained and serviced according to the manufacturer's instructions.

At least once each day and at the end of the day, remove all trash and debris from the machine especially around hot components such as the engine, transmission, exhaust, battery, etc. More frequent cleaning of your machine may be necessary depending on the operating environment and conditions.

At least once each day, remove debris accumulation around moving components such as bearings, pulleys, belts, gears, cleaning fans, etc. More frequent cleaning of your machine may be necessary depending on the operating environment and conditions.

General battery safety

Always wear eye protection when you work with batteries.

Do not create sparks or have open flame near a battery.

Ventilate the area when you charge a battery or use a battery in an enclosed area.

Disconnect the negative — terminal first and reconnect the negative — terminal last.

When you weld on the machine, disconnect both terminals of the battery.

Scalding can result from incorrect removal of coolant caps. Cooling systems operate under pressure. Hot coolant can spray out if you remove a cap while the system is hot. Allow the system to cool before you remove the cap. When you remove the cap, turn it slowly to allow pressure to escape before you completely remove the cap.

Replace damaged or worn tubes, hoses, electrical wiring, etc.

The engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when you service such components. Allow surfaces to cool before you handle or disconnect hot components. Wear protective equipment when appropriate.

When welding, follow the instructions in the manual. Always disconnect the battery before you weld on the machine. Always wash your hands after you handle battery components.

Inspect the electrical system for loose connections and frayed insulation. Repair or replace loose or damaged parts.

Do not store oily rags or other flammable material on the machine.

Do not weld or flame cut any items that contain flammable material. Clean items thoroughly with non-flammable solvents before welding or flame-cutting.

Do not expose the machine to flames, burning brush, or explosives.

Promptly investigate any unusual smells or odors that may occur during operation of the machine.

Before performing maintenance for electrical systems or electric welding, always place the key of the battery master switch in "O" (Off) position or disconnect the negative — terminal of the batteries, in order to cut off the electric circuit.

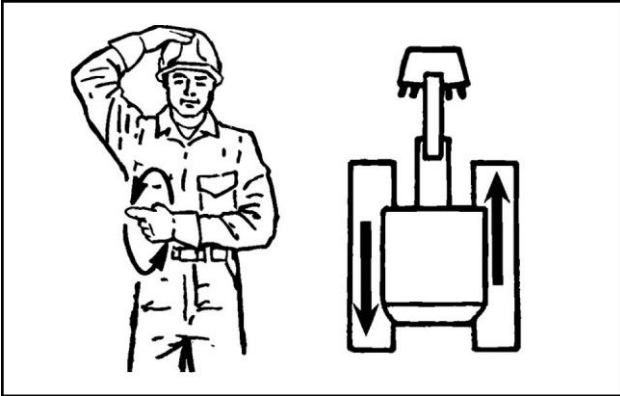
Do not weld, grind, or smoke near a battery.

When you use auxiliary batteries or connect jumper cables to start the engine, use the procedure shown in the operator's manual. Do not short across terminals.

Follow the manufacturer's instructions when you store and handle batteries.

Battery post, terminals, and related accessories contain lead and lead compounds. Wash hands after handling. This is a California Proposition 65 warning.

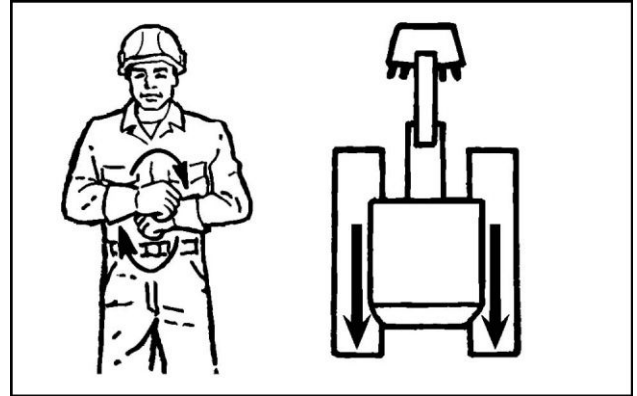
Counter rotate left



DC08E048 11

Face machine operator, place right hand on top of hard hat, bend left arm at elbow to the right, make a fist with left hand with index finger pointing out and rotate hand in a reverse circular motion.

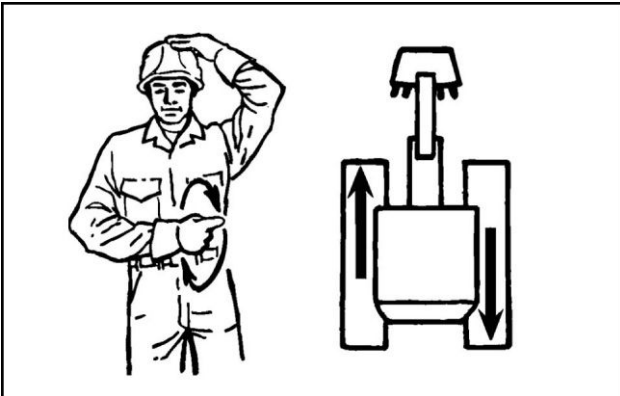
Travel reverse



DC08E051 14

Face machine operator, bend both elbows in, make fists and rotate fists one over the other in a forward circular motion.

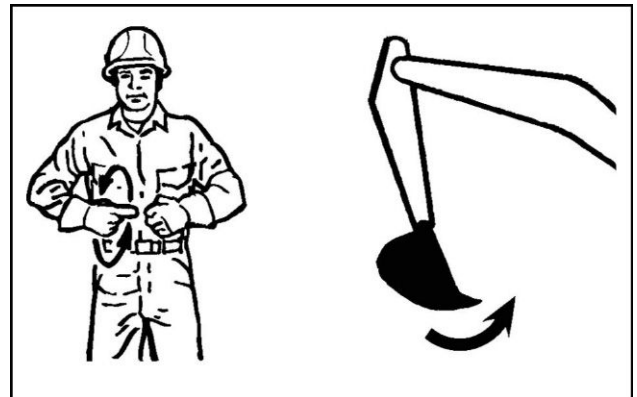
Counter rotate right



DC08E049 12

Face machine operator, place left hand on top of hard hat, bend right arm at elbow to the left, make a fist with right hand with index finger pointing out and rotate hand in a forward circular motion.

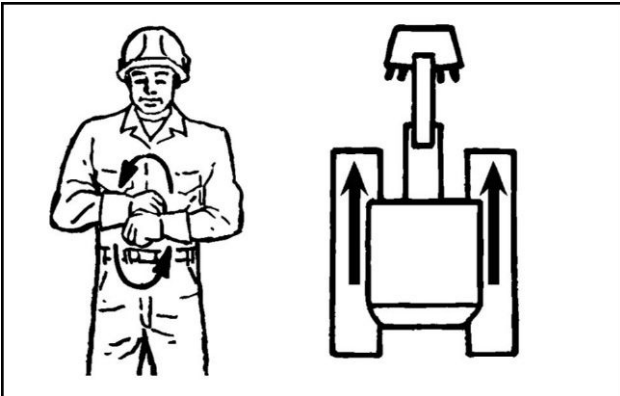
Close bucket (Bucket in or dig)



DC08E052 15

Face machine operator, hold left hand in, closed and stationary, hold right hand in, make a fist with index finger pointing toward left hand and move right hand in a small forward circular motion.

Travel forward



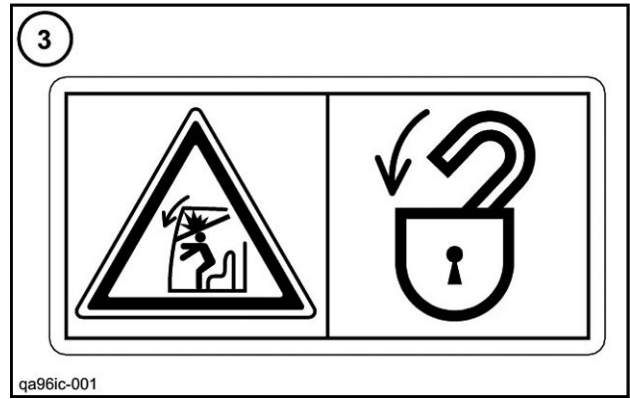
DC08E050 13

Face machine operator, bend both elbows in, make fists and rotate fists one over the other in a reverse circular motion.

Windshield locking

Part number: KHP12540

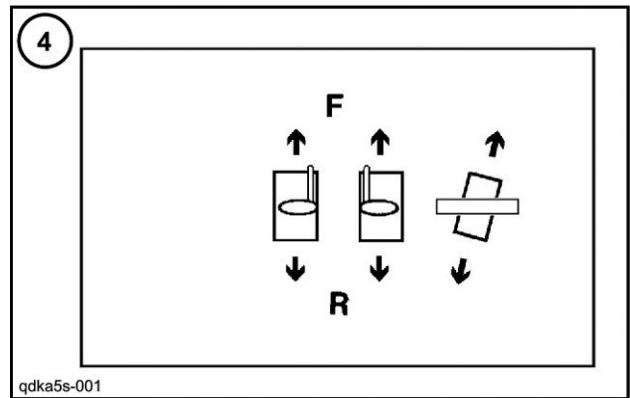
This decal shows that the windshield must be correctly locked in open position, in order to prevent it from tipping.



Function of the levers and pedals

Part number:
 KHP1498 (standard)
 KHP1484 (with right-hand option)
 KHP1510 (with left-hand option)
 KHP1511 (with right and left-hand options)
 KHP1572 (with dozer blade, if equipped)
 KHP1573 (with option and dozer blade, if equipped)

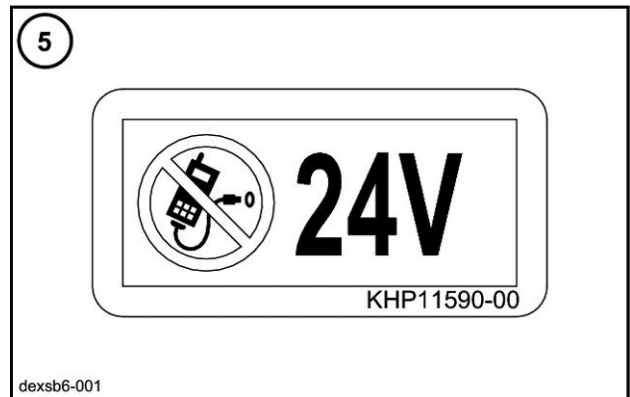
This decal shows the function of the travel control levers and pedals.



Cigarette lighter socket (24 volts)

Part number: KHP11590

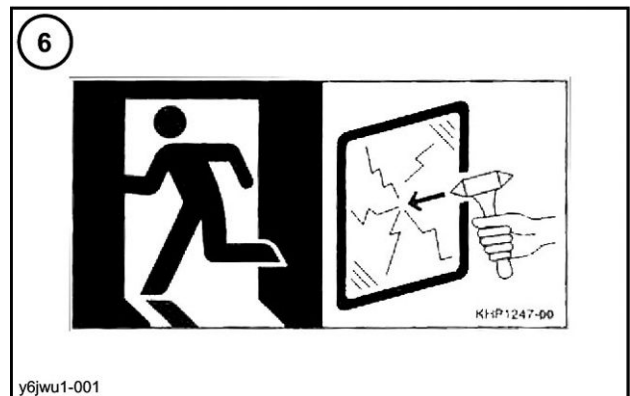
This decal shows the location and the voltage of the cigarette lighter socket. It is strictly prohibited to connect devices of a different voltage.



Emergency exit

Part number: KHP1247

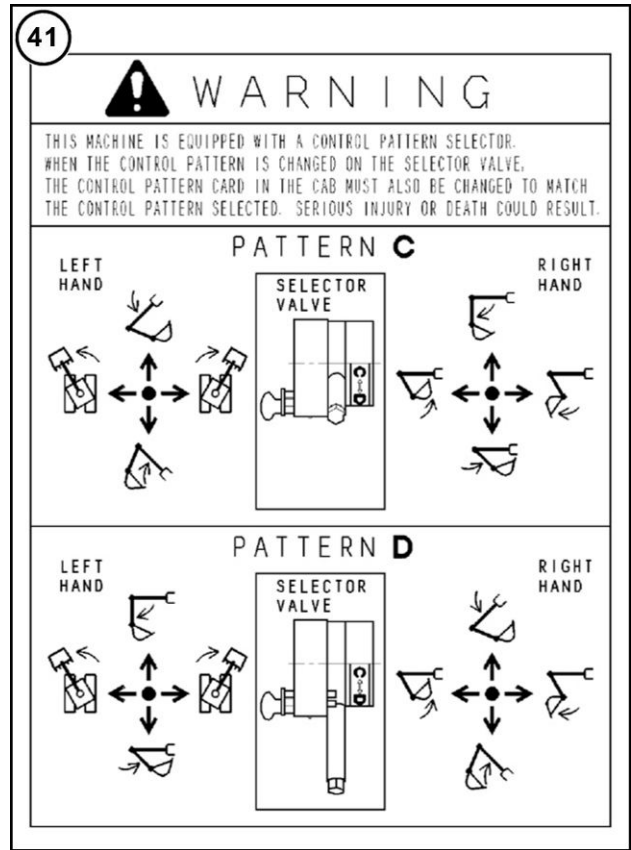
This decal shows the location and way how to use the emergency exit (rear window).



Control pattern selection (if equipped)

Part number: KHP12300

This decal shows the two different types of configuration of the control levers and the instructions to be observed.

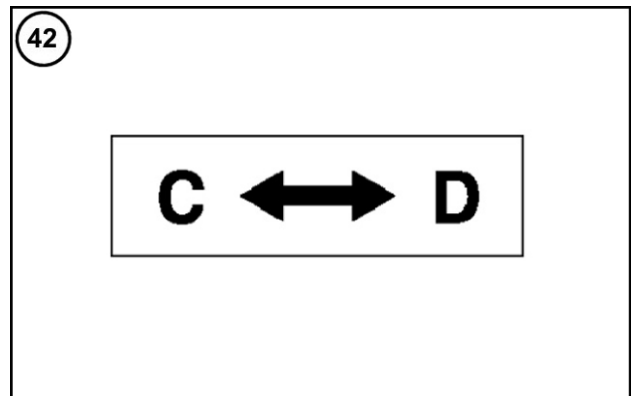


KHP12300-B00A 54

Control pattern selector (if equipped)

Part number: KHP1757

This decal shows the position in which the selector must be placed according to the selected configuration type of the control levers. See "Control pattern selection" decal (41).

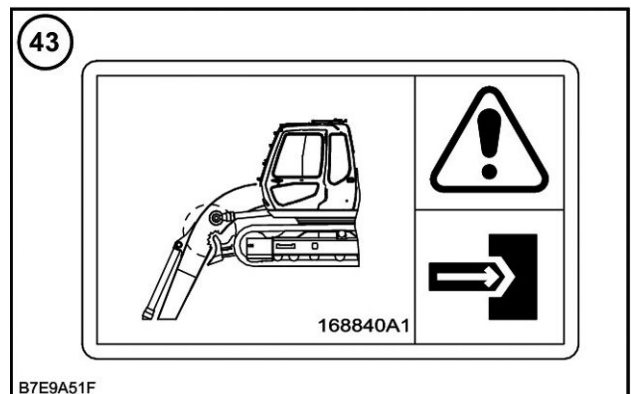


KHP1757-00A 55

Dozer blade interference (standard machine only)

Part number: KHP1384

This decal draws attention to the fact that, in certain positions, there can be interference between the boom and the dozer blade. Always observe a minimum safety distance between the boom and the dozer blade (accidental movements).



7C37A1FDA 56

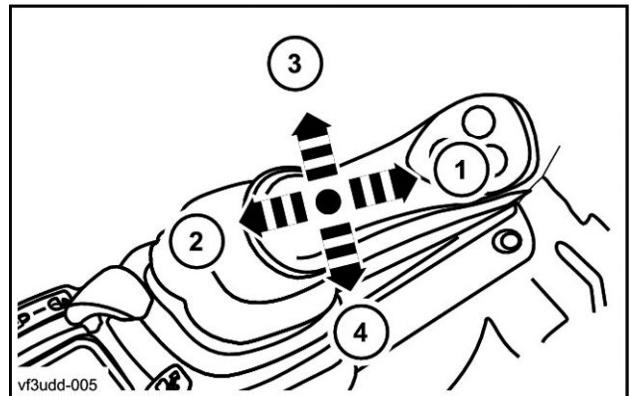
FORWARD CONTROLS

Hand control levers and pedals

Arm and upperstructure swing left-hand control lever

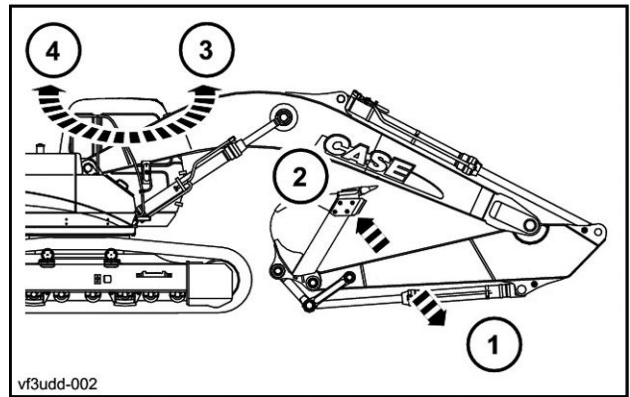
The speed of movement of the arm or the upperstructure swing depends on the control lever tilt angle. In the intermediate position two movements can be obtained simultaneously.

NOTE: When the upperstructure swing control is released, the upperstructure may continue to rotate due to the force of inertia. In this event, make allowance for the extra movement by releasing the control slightly earlier.



VF3UDD-005 1

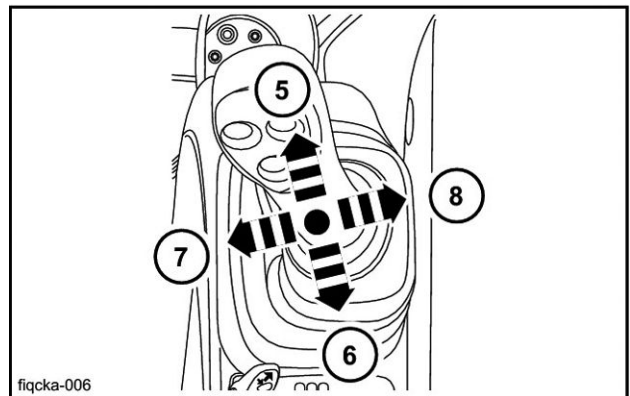
- (1) The arm extends.
- (2) The arm retracts.
- (3) The upperstructure turns to the left.
- (4) The upperstructure turns to the right.



VF3UDD-002 2

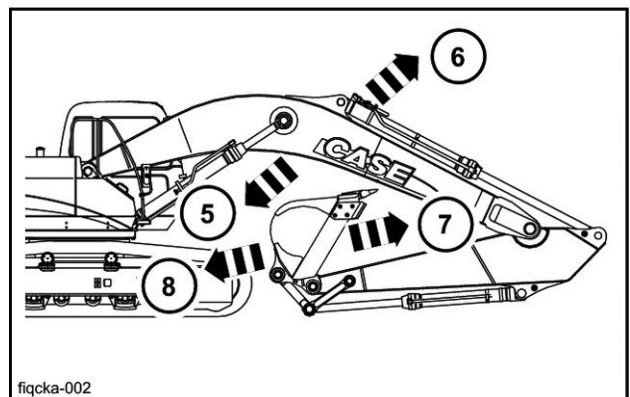
Boom and bucket right-hand control lever

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.



FIQCKA-006 3

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



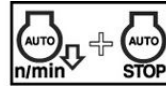
FIQCKA-002 4

1. Engine coolant temperature gauge
Displays the temperature of the engine coolant. The lower zone indicates that the engine coolant temperature is low. When the temperature gauge display reaches the upper zone, an alarm sounds and "Over heat" is displayed (see "Message screens"). Lower the engine speed. If the temperature does not go down, stop the engine, remove the ignition key, and investigate the cause.



Displayed when auto stop is selected. "Auto idle stop".

2. Hydraulic oil temperature gauge
Displays the temperature of the hydraulic oil. The lower zone indicates that the hydraulic oil temperature is low. When the temperature gauge display reaches the upper zone, an alarm sounds and "Over heat" is displayed (see "Message screens"). Lower the engine speed. If the temperature does not go down, stop the engine, remove the ignition key, and investigate the cause.



Displayed when auto idling and auto stop are selected. "Auto n/min" and "Auto idle stop".

3. Fuel gauge
Displays the remaining amount of fuel by the number of lit segments. When all are lit, it indicates that the fuel tank is full. When only 1 is lit, an alarm sounds and "Low fuel" is displayed (see "Message screens").

8. Free swing, swing parking and anti-theft protection



Displayed when swing parking is operating (for service use only).



Displayed when the anti-theft protection function is operating.



Displayed when free swing is operating.

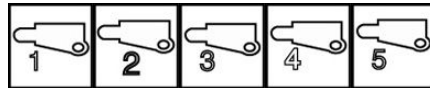
NOTE: It is not necessary to wait until the fuel tank is empty before filling with fuel. If the tank becomes empty, air bleeding of the fuel system is required.

4. Work mode icon



These indicators display the initial work mode and the engine speed that was selected with the engine acceleration button and work mode selector.

9. Displays the selected attachment



Hydraulic breaker

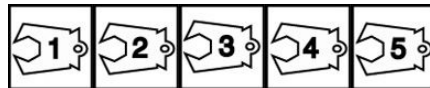
5. Travel mode icon



At low speed, is displayed.



At high speed, is displayed.



Crusher grapple

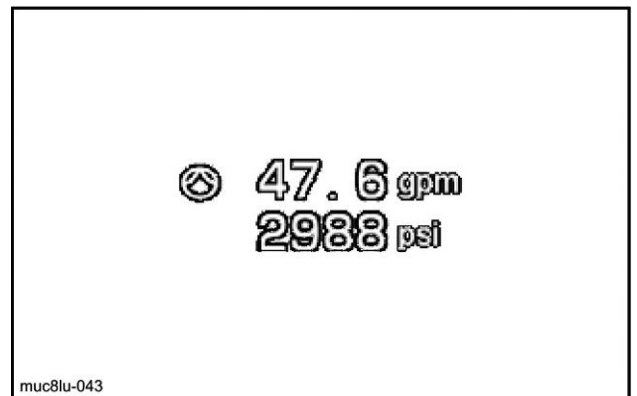
6. Working light



Displayed when the light is on.

10. Clock display
(Refer to page 3-44).

11. Auxiliary setting display
When an option circuit is mounted, the selected flow and pressure are displayed.



Icon display

The setting that the wiper, idling and glow switches are switched to are displayed largely in the middle of display.

- Wiper operation

7. Engine auto idling and stop selection display



Displayed when auto idling is selected. "Auto n/min".

Pattern 2

1. Long-push button (1).
Attachment select switch



KS1YPB-001Z 11

2. The auxiliary hydraulics screen is displayed by carrying out operation 1.

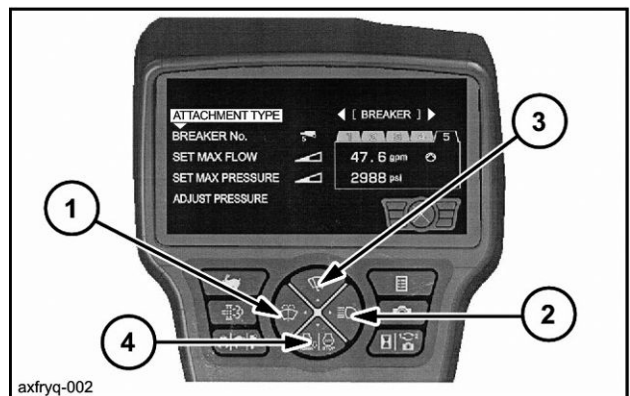


KS1YPB-002 12

Breaker or crusher selection

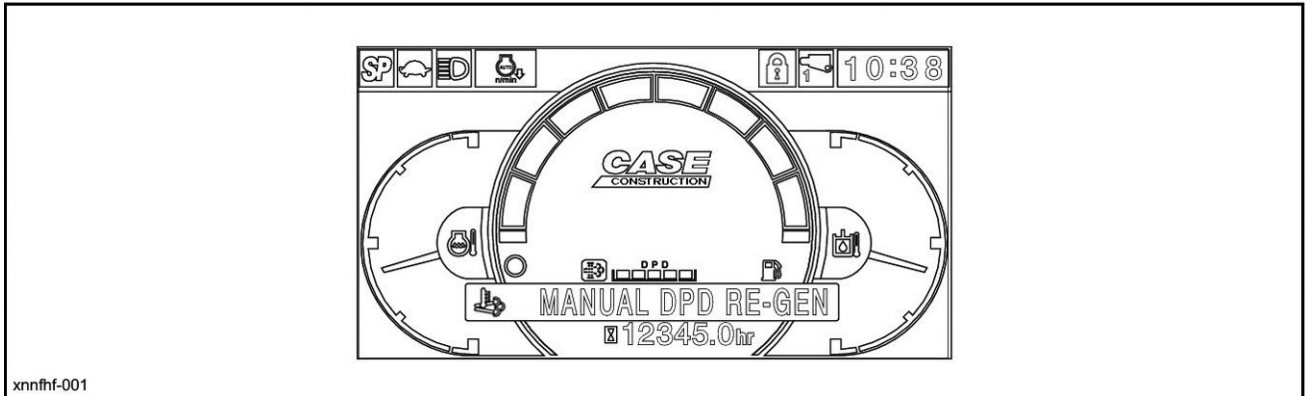
1. Push button (3) or (4) and select item "Attachment type".
2. Push button (1) or (2) and choose attachment type "Breaker" or "Crusher".

NOTE: The display screen is different when a proportional valve is attached.



AXFRYQ-002 13

Manual regeneration



XNNFHF-001Z 5

Normal operation is disabled in manual regeneration.

When manual regeneration starts, engine revolutions are reduced automatically and the engine sound and hydraulic operation sound change.

These do not imply any problems.

If operation continues when the orange lamp blinks, the diffuser may be faulty.

Move to a safe place as quickly as possible and execute regeneration.

ATTENTION: If the switch is not pressed for a long time, the orange lamp changes from slow to fast blinking. If the switch is not pressed at this time, the engine problem warning lamp goes on and the diffuser needs to be repaired.

NOTE: Consult your CASE CONSTRUCTION Dealer if a red DPD icon is displayed.

Manual regeneration finishes earlier immediately after the machine runs than when the engine is cool.

The water temperature may rise during manual regeneration.

1. The orange lamp blinks.
 - The buzzer sounds for 2 seconds.
 - The following message is displayed.



Push DPD switch to activate

2. Move the machine to a safe place with no combustible objects.
 - Set the function cancellation lever to the lock position (safety bar retracted).
 - Press the switch.

3. Manual regeneration starts.
 - The orange lamp is lit.
 - The buzzer sounds for 2 seconds.
 - The following messages are displayed cyclically.

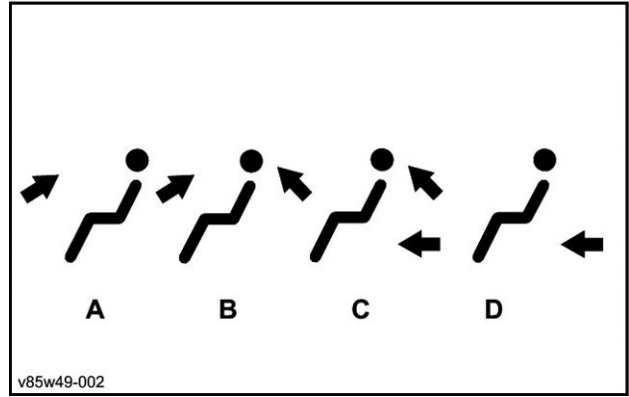


Manual DPD Re-gen



Do not operate

- (A) Upper front distribution.
- (B) Upper rear distribution.
- (C) High force upper distribution and low force rear distribution.
- (D) Lower rear distribution (feet) and windshield.

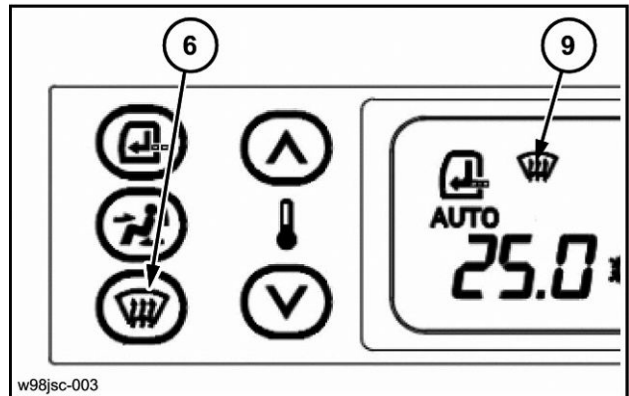


V85W49-002 7

Windshield defroster

This button (6) allows the windshield to be defrosted. Press the button to defrost the windshield. The display screen will show that the defroster is working (9). To turn the defroster off, press the button again and the indication on the display screen will disappear.

NOTICE: When this button is used, the control (7) is deactivated.



W98JSC-003 8

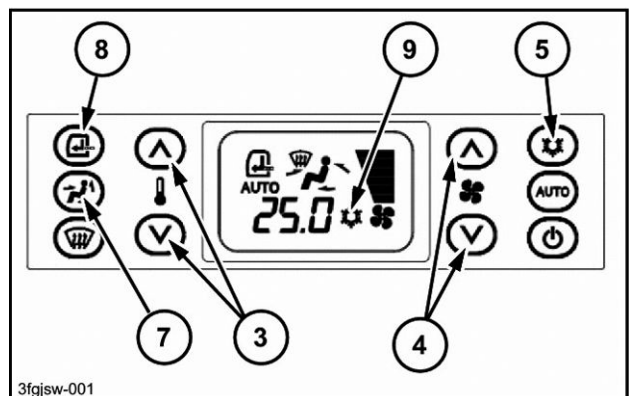
Air conditioning

ATTENTION: When using the air conditioning, it is essential for all the operator's compartment windows, the windshield and the cab door to be kept closed. The air vents must be kept in open position.

The air conditioning can be used in two different ways: manual or automatic air conditioning.

Manual:

This button (5) is used to turn the air conditioning on and off. When the air conditioning is running, confirmation is given on the display screen (9). Manual adjustments can be made using controls (3), (4), (7) and (8).

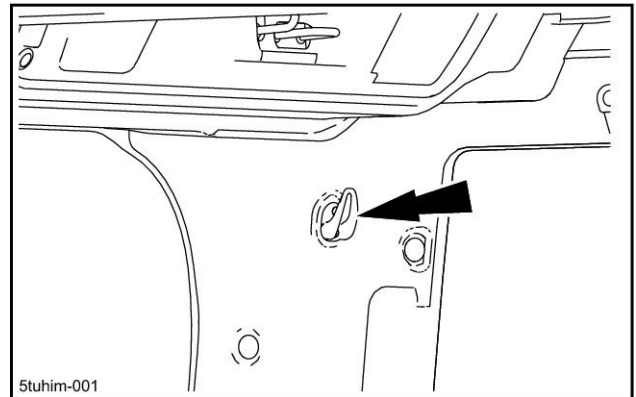


6CSC9W-001 9

Coat hanger hook

The hook is on the rear right-hand cab upright.

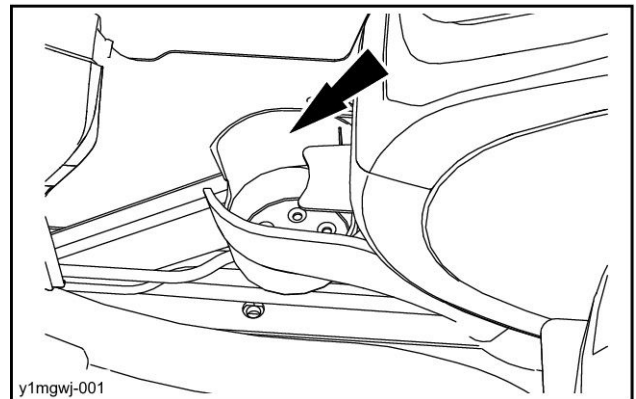
NOTICE: Take care not to obscure the view with clothes that are too bulky.



5TUHIM-001A 1

Cup holder

Located on the front right-hand side of the operator's seat, the cup holder is designed to hold a beverage container.

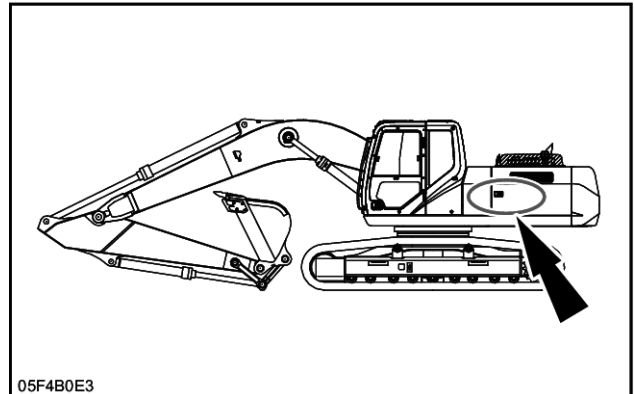


Y1MGWJ-001A 1

Battery master switch (if equipped)

ATTENTION: The battery master switch must be used only for electrical repair and welding on the machine.

Located near the batteries, open the left-hand door.



05F4B0E3 1

When the key of the battery master switch is in "I" (On) position, all electrical circuits are connected.

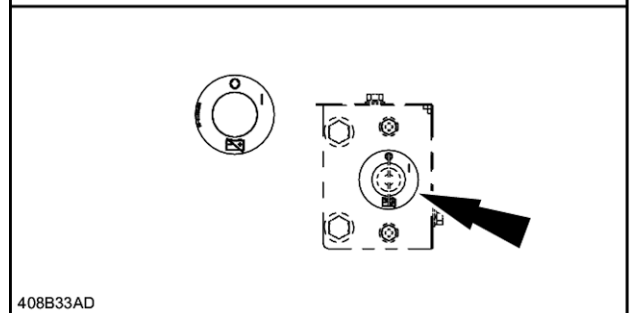
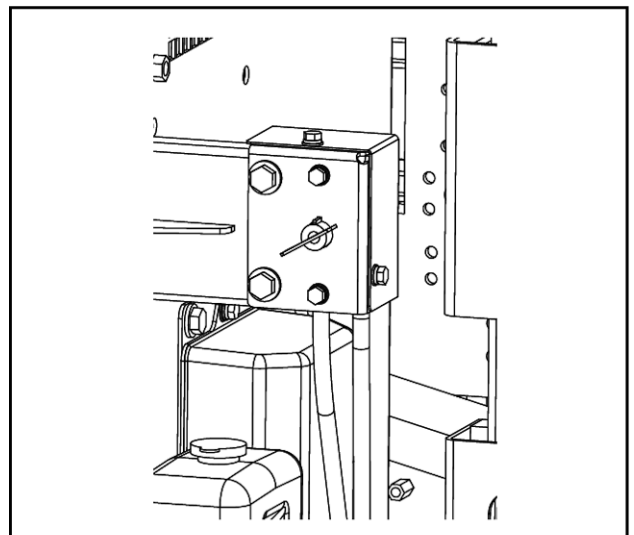
When the key of the battery master switch is in "O" (Off) position, the electrical circuits are disconnected.

NOTICE: Never turn the key of the battery master switch in "O" (Off) position when engine is running, the electrical systems can be damage.

NOTICE: When the engine is stopped, always wait one minute minimum before to place the key of the battery master switch in "O" (Off) position, otherwise the computer program of the hydraulic will not exit successfully.

NOTE: When the key of the battery master switch is in "O" (Off) position, the stations stored on the radio presets and the time set for the clock will be all cleared.

NOTE: The key can be remove from the battery master switch.



408B33AD 2

4 - OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT

Cab - Operating

Before using the machine

▲ DANGER

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

Do not operate this machine or perform any lubrication, maintenance, or repair on it until you have read and understood the operation, lubrication, maintenance, and repair information.

Failure to comply will result in death or serious injury.

D0010A

Before operating this machine, be sure to do the following:

1. Check the level of all fluids (engine oil, hydraulic fluid and coolant) and make sure that the fluids and lubricants are suitable for prevailing conditions. (Refer to pages **6-5** and **4-10**).
2. Carry out the daily maintenance operations. (Refer to page **6-1**).
3. Inspect the machine, look for any signs of possible leakage and check the hoses. Tighten or replace as necessary.
4. If the machine is new or if the engine has been reconditioned refer to the Maintenance Chart — Break-in period.
5. Check the track assemblies. (Refer to page **6-16**).
6. Clean the steps and access handles. Grease, oil, mud or ice (in winter) on the steps and access handles can cause accidents. Make sure they are kept clean at all times.
7. Clean or replace any decals which are illegible. (Refer to page **2-16**).
8. Make sure that the engine hood and the side doors are properly closed and latched.
9. Secure the cab door in either fully closed or fully opened position. (Refer to page **3-1**).
10. Remove any obstructions which hinder visibility. Clean the windshield, the windows and the rear view mirrors.
11. Check that no tools or other items have been left on the machine (be it on the undercarriage or the upperstructure) or in the operator's compartment.
12. Make sure nobody is on or under the machine. The operator must be alone on the machine.
13. Make sure nobody is standing in the machine working area.
14. Find out about current safety measures in use on the work site.
15. Work out a convenient means of escape from the machine (emergency exit via the windshield, the rear window glass) in the event of the machine turning over or tipping over or the cab door being jammed.
16. Before undertaking any travel or working operations during hours of darkness, make sure the lighting and signalling equipment is fully operative.

Operating the machine

▲ WARNING

Driving hazard!

Check all controls and safety devices in a safe, open area before starting work.

Failure to comply could result in death or serious injury.

W0248A

When operating the machine, be sure to do the following:

1. When starting the engine, be sure to use the correct procedure for the prevailing weather conditions. (Refer to page **4-6**).
2. Regularly consult the hourmeter to ensure that all servicing operations are carried out punctually.
3. If you use your machine in particularly harsh conditions (dusty or corrosive atmosphere), the servicing intervals should be reduced accordingly.
4. Take note of the locations of pipes/cables before starting work.
5. 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 57 000 volts: **3 m (9.8 ft)**
More than 57 000 volts: **5 m (16.4 ft)**
6. When working on a public highway, use standard traffic signs and take into consideration the working range of the upperstructure and its attachments. Local regulations stipulate the number, type and location of reflector strips.
7. Never operate the working or travel controls unless you are properly seated in the operator's seat with the seat belt correctly fastened.
8. Modify your driving to suit the type of work and working conditions.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

Machine operation

Operating instructions

▲ WARNING

Misuse hazard!

Follow the operating instructions in this chapter. Any other practice that has not received the prior approval of the manufacturer is considered to be strictly forbidden. Failure to comply could result in death or serious injury.

W0281A

Watch carefully and make sure you are aware of places where other people are working in your work area. Keep all other people away from the machine. Serious injury can result if these instructions are not followed.

Take note of the locations of pipes/cables before starting work. Electrical cables, gas and water pipes and other underground installations can cause serious injury.

Modify your driving to suit working conditions (sloping or rough ground), the nature of the ground and weather conditions.

On steeply sloping ground, keep engine at maximum speed.

When travelling at right angles to the slope, move on to the slope at low speed. Never reduce engine speed when travelling down slopes.

Holes, obstacles, debris and other danger risks in the working area can cause serious injury. Inspect and note all possible risks before driving the machine in a new working area.

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 57 000 volts: **3 m (9.8 ft)**.
More than 57 000 volts: **5 m (16.4 ft)**.

Never hit or push material with the sides of the bucket.

Never sweep the ground with the bucket to level rubble.

When operating the control levers, a whistling sound will be heard if the control lever is held in position while the corresponding cylinder is at the end of its stroke. In this case release the control lever.

If earth or mud stays stuck inside the bucket, open and close the bucket several times so as to loosen the earth or the mud.

After work, remove any mud and clean the machine.

When operating the attachment, take care that the bucket does not hit the dozer blade (if equipped).

Take care not to hit the dozer blade (if equipped) against rocks.

When using the upperstructure swing, never change the direction of swing too suddenly.

If the operation of the dozer blade (if equipped) is not necessary, always make sure that it is in maximum raised position.

During filling in operations, operate the two travel levers with your left hand while operating the dozer blade control lever (if equipped) with your right hand.

When climbing up a slope, place the bucket about **40 cm (15.7 in)** above the ground. When travelling down a slope it is recommended to place the bucket on the ground to prevent the machine from sliding.

Avoid turning the machine on steep slopes.

Never swing the upperstructure on slopes of **15 °** in the direction of travel or **10 °** at right angles to the direction of travel.

The following operations are likely to damage the machine. You are therefore advised to avoid them:

- Excavation using the weight of the machine as a force of impact.
- Excavation using the machine's travel force.

Operation

ATTENTION: Do not operate the engine with the machine at **35 °**. The engine or hydraulic devices may be damaged.

The maximum slope climbing ability is **35 ° 70 %**. This value varies depending on the track type and the road surface, limit travelling to slopes of **30 °** or less.

1. Sit in the operator's seat and adjust it so that all the controls are readily accessible then fasten your safety belt.
2. Make sure the cab door is firmly latched in the open or closed position.
3. Sound the horn.
4. Start the engine, taking into consideration the prevailing weather conditions.
5. Check all indicator lamps and gauges are operating correctly.

Quick coupler (optional)

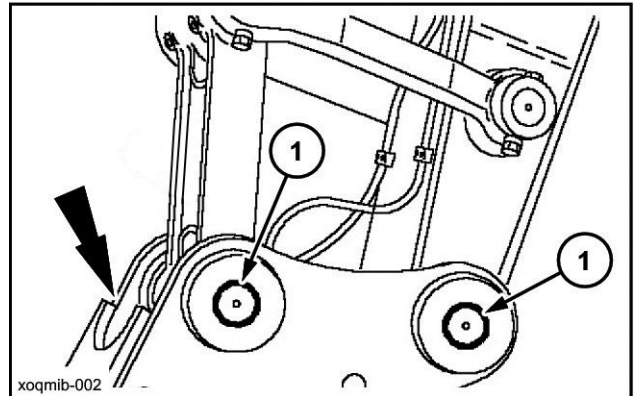
⚠ WARNING

Crushing hazard!
Never put your hands inside the quick coupler when the engine is running. Turn off the engine and wait for all movement to stop.
Failure to comply could result in death or serious injury.

W0252A

Install the quick coupler on the arm and on the connecting rod using the CASE CONSTRUCTION linkage pins (1) supplied and then make the supply line connections.

NOTICE: The quick coupler can be used in conjunction with hydraulic breakers, but is not designed to withstand excessive vibration over long periods of the time. It is therefore recommended to remove the quick coupler, to reduce the risk of premature wear, failures or breakage. If you do decide to use a hydraulic breaker, always orientate the breaker towards the machine and never use it as a lever, as the stress would be borne by the quick coupler cylinder.



xoqmib-002

XOQMIB-002 1

Quick tool installation and removal

⚠ 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

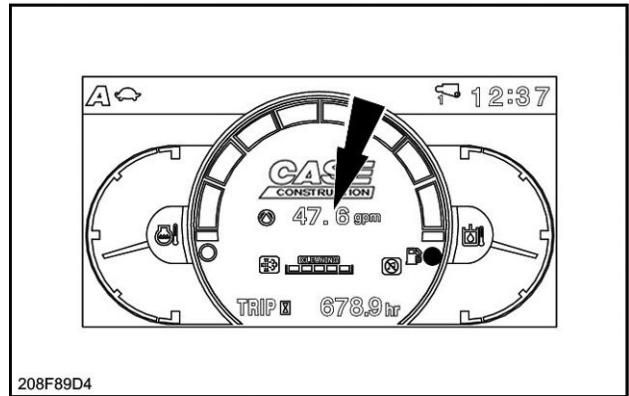
NOTICE: This quick coupler is designed to be used with CASE CONSTRUCTION buckets. This being said, other buckets may be used, provided the diameter of the pins and the width between the bucket lugs are modified to meet the dimensions needed to fit the quick coupler (pins, washers, bushings, etc.). Consult your CASE CONSTRUCTION Dealer.

Installation

1. Make sure the tool to be installed is laying safely on flat, level ground and that it is fitted with the pins supplied with the quick coupler.

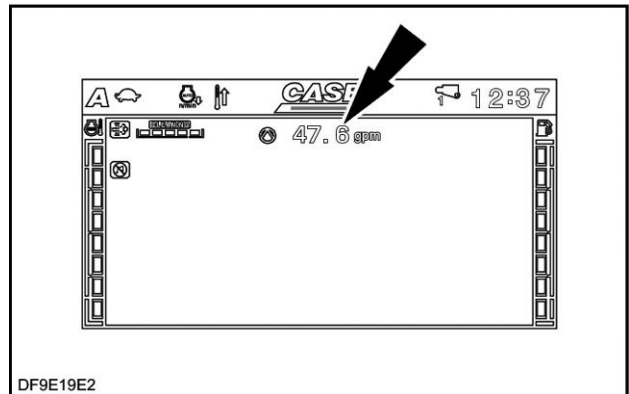
4 - OPERATING INSTRUCTIONS

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



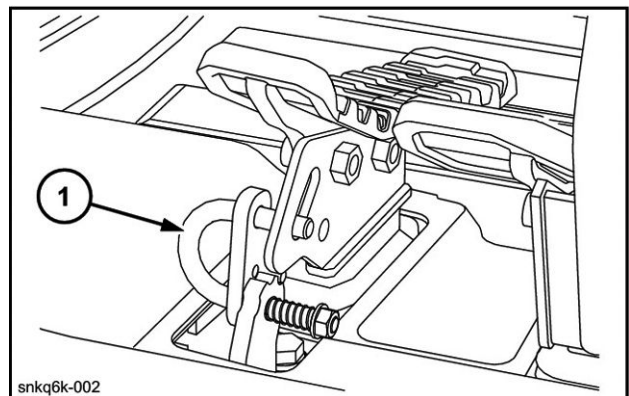
208F89D4Z 4

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.



DF9E19E2 5

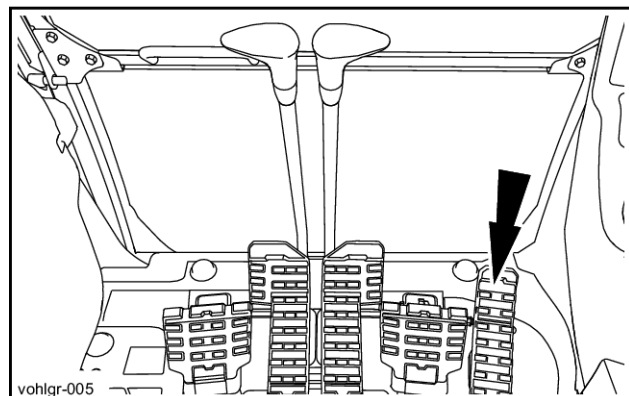
5. Unlock the pedal and engage the locking pin (1).



SNKQ6K-002 6

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

ATTENTION: 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.

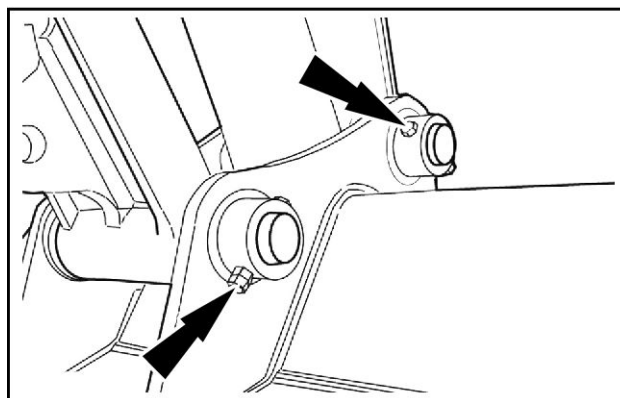


VOHLGR-005 7

Bucket replacement

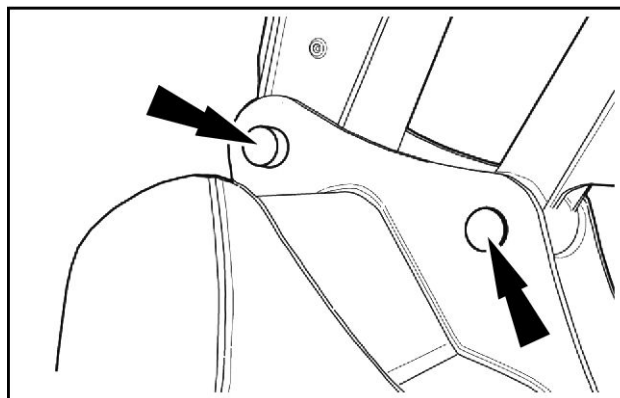
Removal

1. Place the bucket flat on flat, horizontal ground.
2. Operate the attachment controls so that the arm/bucket linkage pin is not gripped by the weight of the arm.
3. Stop the engine and remove the ignition key.
4. Remove the pins hardware.



SMIL13CEX2827AB 1

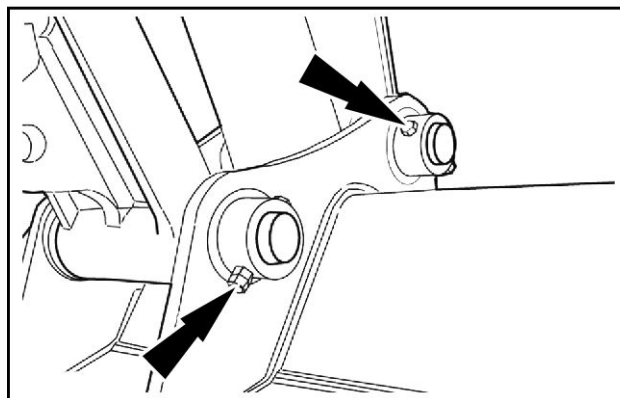
5. Remove the bucket pins.
6. Start the engine.
7. Disengage the attachment from the bucket and save the linkage seals for re-use.



SMIL13CEX2828AB 2

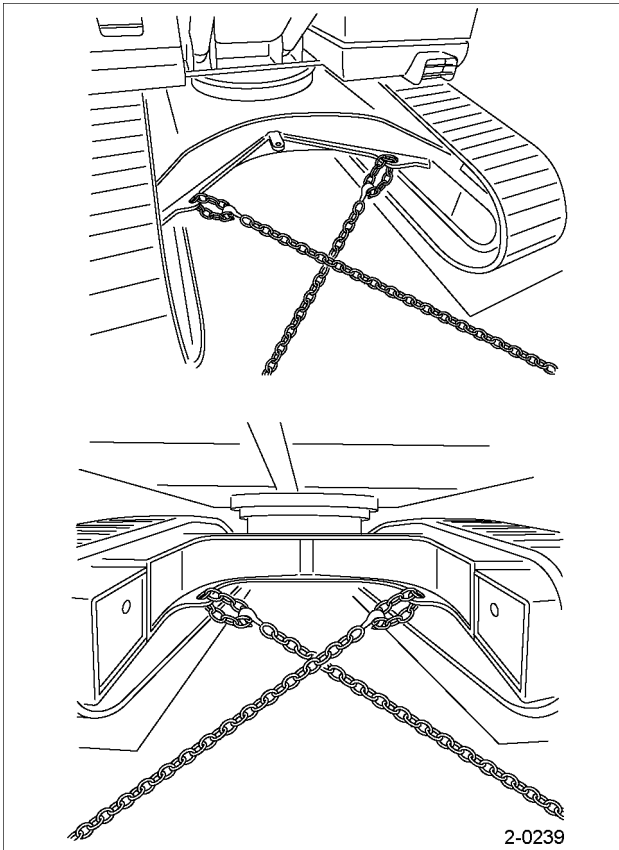
Installation

1. Make sure the bucket is in a stable position.
2. Start the engine.
3. Bring the arm into its housing.
4. Stop the engine and remove the ignition key.
5. Install the linkage seals between the arm and the bucket. Change them if necessary.
6. Start the engine.
7. Bring the bucket rod into its housing.
8. Stop the engine and remove the ignition key.
9. Install the linkage seals between the rod and the bucket. Change them if necessary.
10. Install the rod/bucket linkage pin and its hardware.
11. Grease the linkage pins.

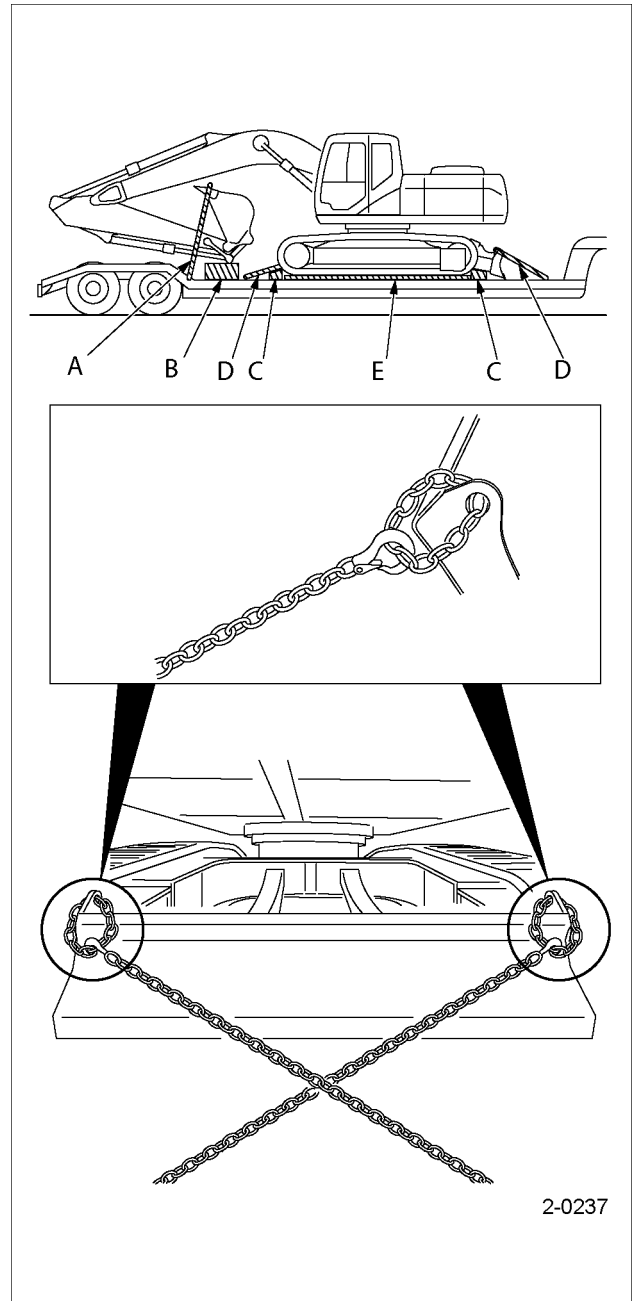


SMIL13CEX2827AB 3

6. To secure the lower frame, install chains to the installation holes for transporting the lower. Cross and tightly pull the chains to attach the other ends of chains to the trailer. Also, secure the front and rear of lower with chains.



7. For machines with blade, install chains to the installation holes at the top ends of blade, cross and tightly pull the chains to attach the other ends of chains to the trailer.



- A. Wire rope
- B. Block
- C. Stop block
- D. Chain
- E. Rubber mat

8. Verify that everything is blocked and tied down before transporting the machine.

NOTICE: Movement of the machine during transportation is dangerous. Secure the machine firmly with wire rope or the like so that it won't move from vibration.

Consumables

Lubricants must have the correct properties for each application.

NOTICE: *The conditions of use for individual fluids and lubricants must be respected.*

NOTICE: *When using the machine in a hot or cold region, consult your CASE CONSTRUCTION Dealer.*

Hydraulic fluid

CASE AKCELA HYDRAULIC EXCAVATOR FLUID is specially designed for high pressure applications and for the CASE CONSTRUCTION hydraulic system. The type of fluid to be used depends on the ambient temperature.

Temperate climates:

-20 °C (-4.0 °F) to 40 °C (104.0 °F).

CASE AKCELA HYDRAULIC EXCAVATOR FLUID
(MS1230. ISO VG 46. DIN 51524 PART 2 HV)

Hot climates:

0 °C (32.0 °F) to 50 °C (122.0 °F).

CASE AKCELA HYDRAULIC EXCAVATOR FLUID "HOT CLIMATE"
(MS 1216. ISO VG 68. DIN 51524 PART 3 CATEGORY HVLP)

Cold climates:

-25 °C (-13.0 °F) to 20 °C (68.0 °F).

CASE AKCELA HYDRAULIC EXCAVATOR FLUID "COLD CLIMATE"
(MS 1216. ISO VG 32. DIN 51524 PART 2)

Biodegradable fluid:

-30 °C (-22.0 °F) to 40 °C (104.0 °F).

This yellow-coloured fluid is miscible with standard fluid. If used to change standard fluid, it is advisable to drain the circuit completely before refilling with this fluid.

CASE AKCELA HYDRAULIC EXCAVATOR FLUID BIO
(MS 1230. ISO VG 46. DIN 51524 PART 2 HV)

Transmission component oil

Extreme pressure oil used for enclosed transmission components.

CASE AKCELA GEAR 135 H EP 80W-90
(SAE 80W-90. API GL 5. MIL-L-2105 D. MS 1316. ZF TE-ML 05A)

Grease

CASE AKCELA 251H EP MULTI-PURPOSE GREASE (NLGI 2)

"Extreme Pressure" multipurpose grease with lithium soap and calcium.

Engine oil

The **CASE AKCELA UNITEK NO. 1™ SBL CJ-4** is recommended for your engine. This oil ensures correct lubrication of your engine in all working conditions.

If the **CASE AKCELA UNITEK NO. 1™ SBL CJ-4** cannot be obtained, use the oil corresponding to one of the following categories: ACEA E7/E9. API CJ-4.

6 - MAINTENANCE

Maintenance action	Replace				Drain fluid			
	Change fluid				Grease			
	Check				Cleaning			
	Page no.							
Engine valve rocker clearance adjustment								6-66
Hydraulic fluid analyse								6-66
Every 2000 hours								
Hydraulic suction filter								6-67
Hydraulic return filter								6-21
Pilot line filter								6-22
Every 4000 hours								
Hydraulic hoses								6-70
Pump outlet hose								6-70
Every 4500 hours								
Diesel particulate diffuser (DPD)								6-70
Every 5000 hours								
Air conditioner filters								6-70
Hydraulic oil and filters								6-71
Hydraulic suction filter								6-74
When necessary								
Plastic and resin parts								6-75
Cylinders								6-75
Bucket teeth								6-75
Bucket teeth								6-76
Gas spring inspection								6-77
Fuel tank filter								6-78
Fuel pre-filter								6-78
Feed pump								6-79
Air conditioning system								6-80
Lamps and bulbs								6-81
Quick coupler								6-84
Fuses								6-85
Protecting the electronic and electrical systems during battery charging or welding								6-87
Tracks								6-88
Machine inspection and cleaning								6-90
Checking the machine settings								6-90
Fire extinguisher								6-90

Hydraulic oil level

⚠ WARNING

Burn hazard!

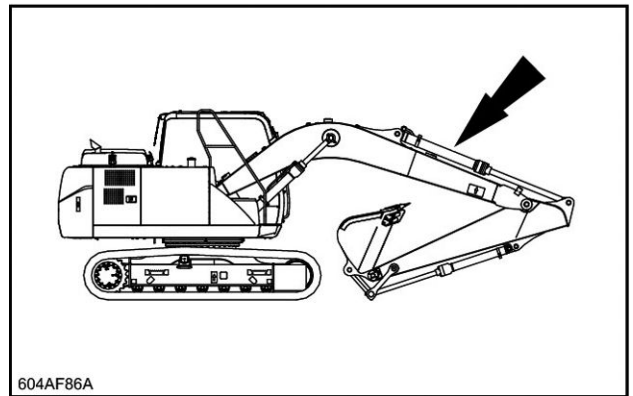
Before performing any service on the hydraulic system, you must allow it to cool. Hydraulic fluid temperature should not exceed 40 °C (104 °F).

Failure to comply could result in death or serious injury.

W0241A

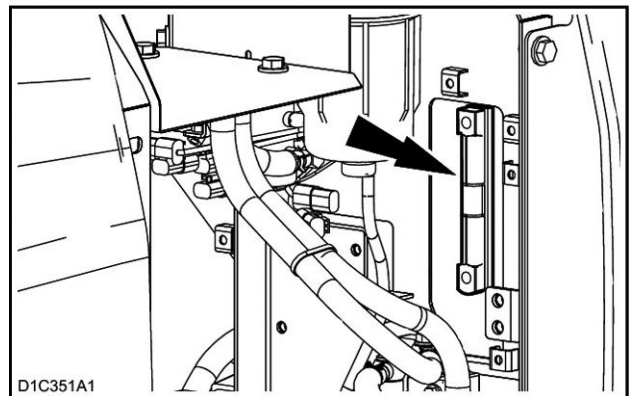
To check the hydraulic oil level proceed as follows:

1. Place the machine on flat, level ground and place the attachment in the position shown. Raise the dozer blade (if equipped). Stop the engine and remove the ignition key.
2. The oil should be in the middle of the indicator. Add more oil if necessary.



604AF86A

604AF86A 1



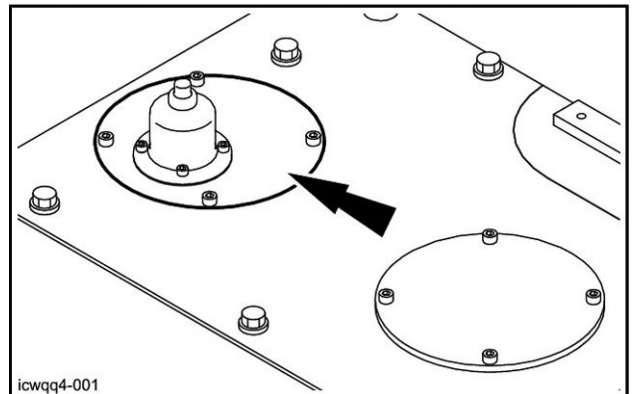
D1C351A1

D1C351A1 2

Filling the hydraulic tank

1. Release all pressure in the hydraulic reservoir. Refer to page 6-11.
2. Clean the cover plate and the area around the plate. Remove the cover plate and add hydraulic fluid to the reservoir as required.
3. Replace the cover plate seal if required and install the cover plate.

NOTICE: make sure that no contaminant (water, sand etc.) enters the reservoir during filling.
Use only the prescribed hydraulic oil. Refer to page 6-5



icwqq4-001

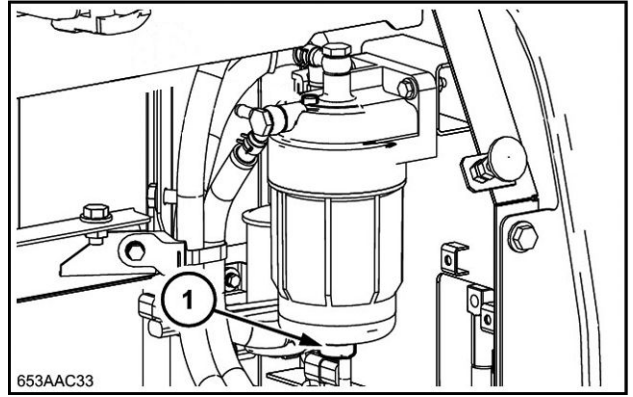
ICWQQ4-001 3

8. Replace the drain plug (1) seal, then tighten the drain plug (1).
Drain plug tightening torque:
8.0 - 12.0 N·m (5.9 - 8.9 lb ft)

NOTICE: overtightening can damage the seal.

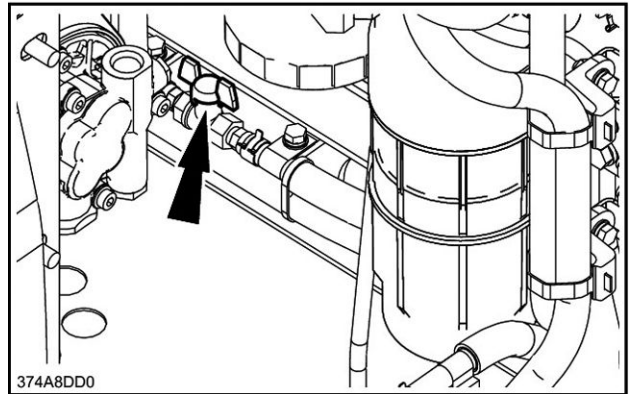
NOTICE: never reuse the seal of the filter case or the drain plug (1), they must always be replaced with new seals.

NOTICE: tighten no more than the specified torque.



653AAC33A 4

9. Open the valve on the supply line.
10. Perform air bleeding for the fuel line.



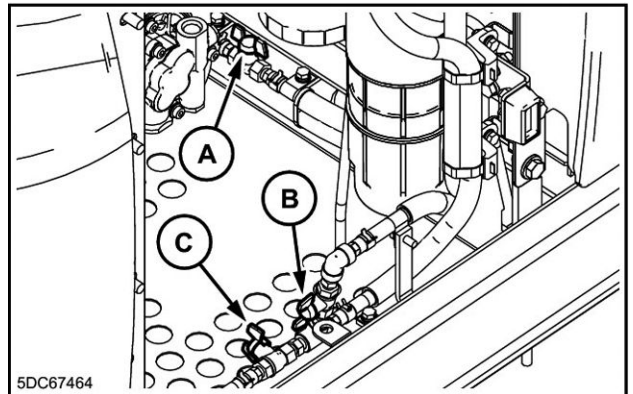
374A8DD0 5

NOTICE: when the fuel pre-filter or the fuel main filter has been replaced and/or the fuel tank has been drained and is empty of fuel, air in the tank could interfere with the flow of the fuel. Therefore, always bleed the air from the fuel line.

To bleed the air from the fuel line, proceed as follows:

1. Place a receiving container under the end of fuel drain hose.
2. Set the valve (A) (fuel tank) in open position.
3. Set the valve (B) (engine) in close position.
4. Set the valve (C) (drain) in open position.

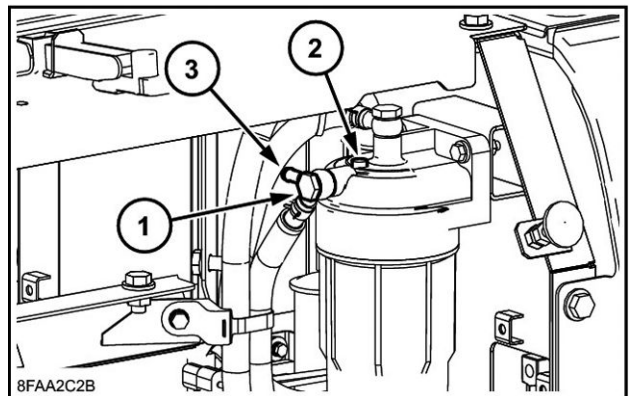
NOTE: do not loosen the air bleed screw of the fuel prefilter.



5DC67464 6

5. Loosen the air bleeding plug (2) on fuel filter.
6. Insert the key into the starter switch and turn to the ON position. This makes the electromagnetic feed pump operate.
7. Turn the handle of the feed pump (1) to the left and it will spring up due to the spring inside the handle.

NOTICE: if the air bleeding is not complete, do not leave the starter switch ON for longer than **5 min**. This could cause damage to the electromagnetic feed pump.



8FAA2C2B 7

Batteries

⚠ WARNING

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

Before working on any component(s) of the electrical circuit, put the ignition key in the off (shut down) position. When disconnecting batteries, always disconnect the negative (-) cable first. When reconnecting batteries, always connect the negative (-) cable last.

Failure to comply could result in death or serious injury.

W0943A

⚠ WARNING

Battery acid causes burns. Batteries contain sulfuric acid.

Avoid contact with skin, eyes or clothing. Antidote (external): Flush with water. Antidote (eyes): flush with water for 15 minutes and seek medical attention immediately. Antidote (internal): Drink large quantities of water or milk. Do not induce vomiting. Seek medical attention immediately.

Failure to comply could result in death or serious injury.

W0111A

⚠ WARNING

Battery gas can explode!

To prevent an explosion: 1. Always disconnect the negative (-) battery cable first. 2. Always connect the negative (-) battery cable last. 3. Do not short circuit the battery posts with metal objects. 4. Do not weld, grind, or smoke near a battery.

Failure to comply could result in death or serious injury.

W0011A

⚠ WARNING

Explosive gas!

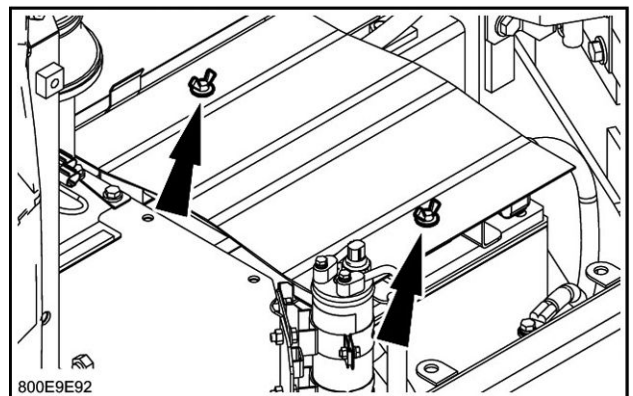
Batteries emit explosive hydrogen gas and other fumes while charging. Ventilate the charging area. Keep the battery away from sparks, open flames, and other ignition sources. Never charge a frozen battery.

Failure to comply could result in death or serious injury.

W0005A

To check the charge state of the batteries, proceed as follows:

- Reach the battery by opening the door on the left rear and removing the skid plate there.



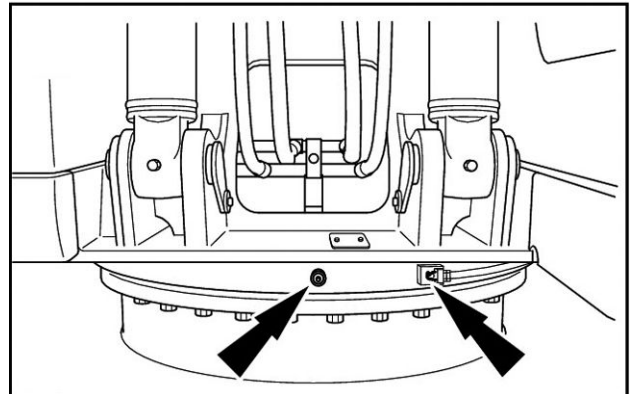
800E9E92

800E9E92 1

Swing bearing

To grease the turntable proceed as follows:

1. Using a grease gun, inject grease of the specified type in the grease points shown in figures



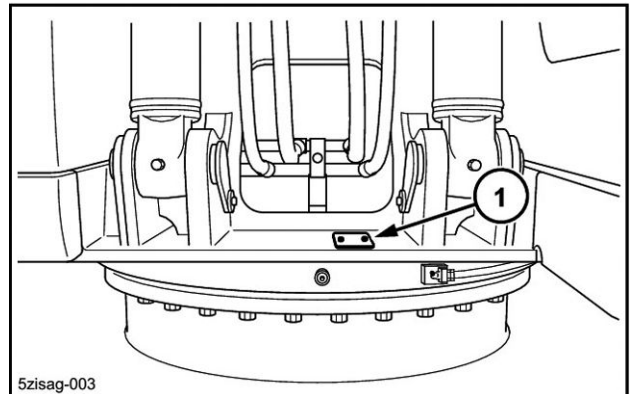
SMIL14CEX0112AA 1

To grease the turntable teeth proceed as follows:

1. Remove the inspection cover (1) and visually check the condition of the gear surface and for any damage.

NOTE: Grease capacity: **9.9 kg (21.8 lb)**.

NOTE: If the gear surface is not well greased, add grease. If the grease is white due to moisture content, etc. replace it with new grease.

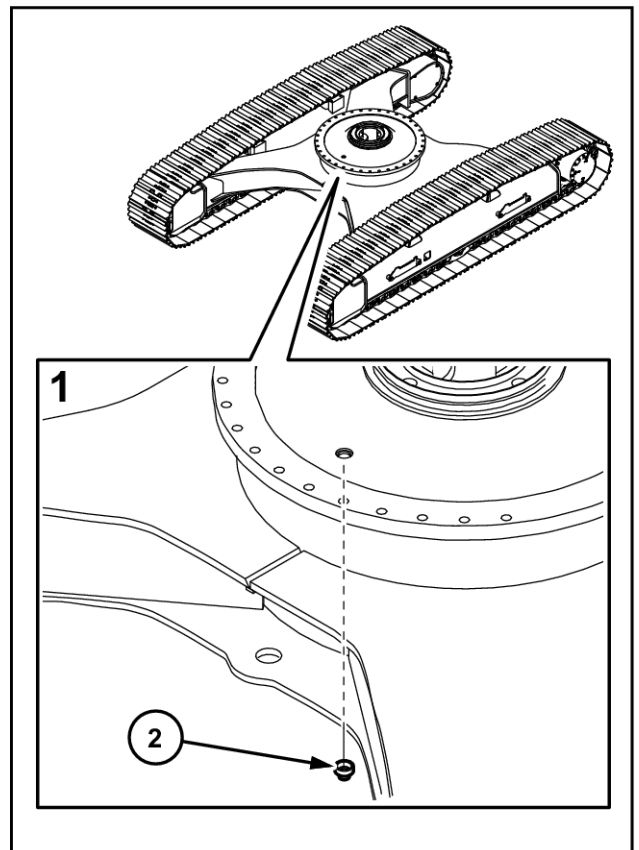


5zisag-003

5ZISAG-003 2

If the presence of water is detected, remove the plug (2) and drain off the water:

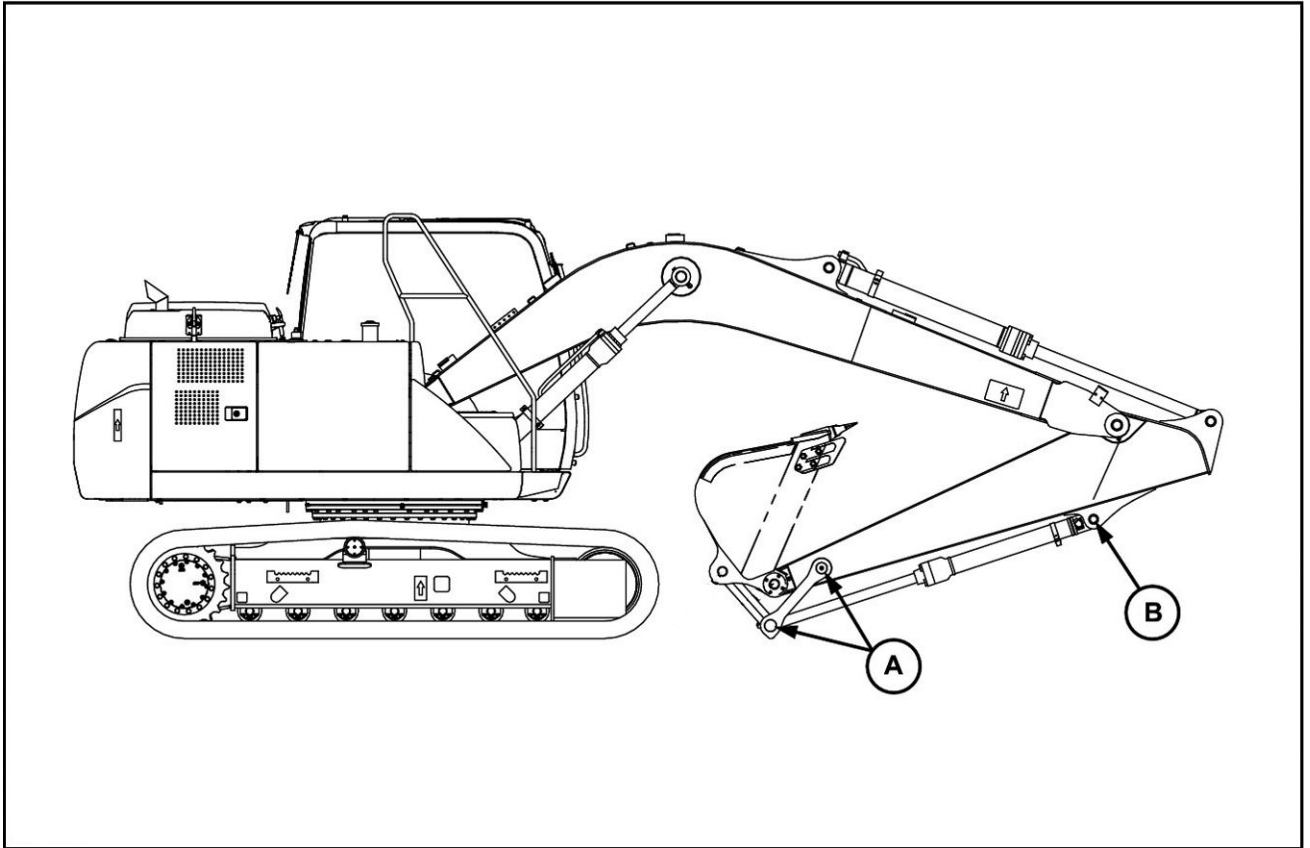
1. Remove the protective panel from the lower central area.
2. Remove plug (2).
3. Discharge the water or contaminated grease.
4. Install plug (2).
5. Inject new grease through the port and install the inspection cover (1).



SMIL13CEX2808BB 3

Grease points — Dipper/backhoe bucket

NOTICE: if the following linkage points are not equipped with original parts, these points must be greased every 50 hours.

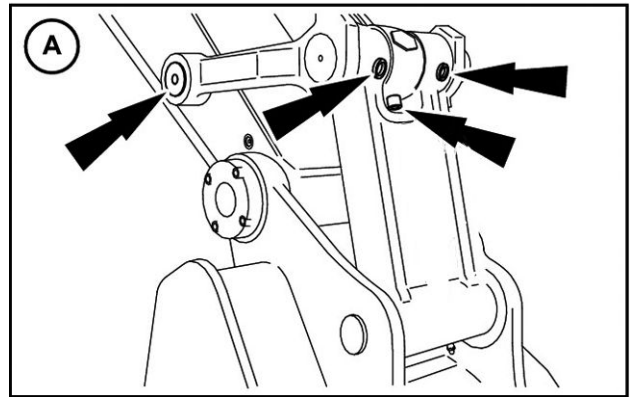


SMIL14CEX0108AF 1

Using a grease gun, inject grease of the specified type in the grease points shown in figures:

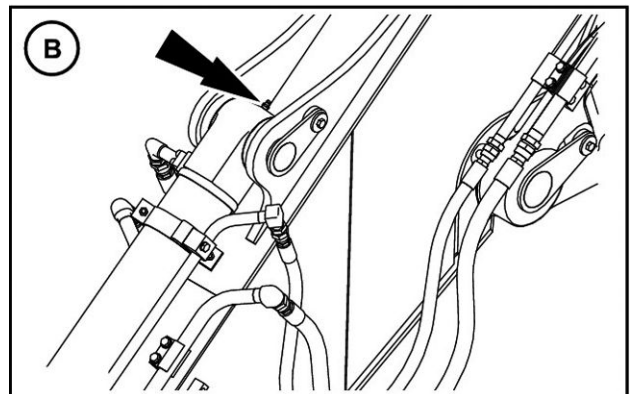
- Yoke/connecting rod linkages.

NOTICE: If an accessory other than the bucket is installed, (hydraulic hammer, etc.) these points must be lubricated every 10 hours.



SMIL14CEX0111AA 2

- Bucket cylinder bottom pin.



SMIL14CEX0110AA 3

When necessary

Plastic and resin parts

When cleaning the plastic windows, the console, the instrument panel, the indicators, etc. do not use gasoline, kerosene, paint solvents, etc. Only use water, soap and a soft cloth. The use of gasoline, kerosene, paint solvents, etc. will cause discoloration, cracks or deformation of these parts.©

Cylinders

A cylinder rod should be slightly oily. Check that there are no leaks after a period of work, when the whole hydraulic system is at normal operating temperature.

1. Wipe clean the rod and bearing on the cylinder to be cleaned.
2. Operate normally for **5 - 10 min.**
3. Extend the cylinder rod.
4. Carry out the leak test.

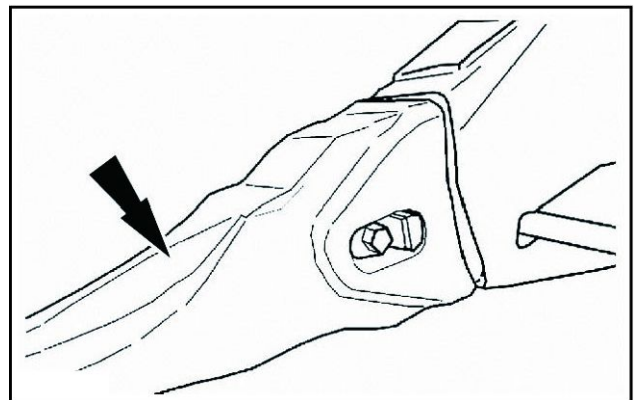
ROD APPEARANCE	TEST	CONCLUSION
Dry	Slight traces of oil when a piece of paper is wiped over 20 cm (7.9 in) of the rod.	Normal
Slightly greasy	Paper remains stuck to rod when run over rod.	Normal
Oily	Paper remains stuck when placed on rod.	Normal
Very oily or weeping	Each time the cylinder rod is extended, a ring of oil can be seen on the rod.	Consult your CASE CONSTRUCTION Dealer
Leakage	Each time the rod retracts, the excess oil drips from the gland.	

Bucket teeth

Visually evaluate the degree of wear of teeth and tooth tips. The service life of teeth and tooth tips that are wearing unevenly or asymmetrically can be extended. Periodically swap teeth and reverse them. Also reverse the locking pin.

NOTICE: replace teeth and tooth tips before they wear out completely.

NOTICE: never attempt to work without tooth tips or with tooth tips that are completely worn. The nose of the adapter could be seriously damaged.



SMIL13CEX2820AB 1

If the quick coupler does not work correctly, check the following items:

1. That no pin is broken, bent or lost.
2. That the cylinder is not damaged or bent.
3. That there are no leaks from hydraulic hoses, etc.

If the problem persists after all these checks, consult your CASE CONSTRUCTION Dealer. Modification of the quick coupler without prior authorization can cause serious injury. Do not carry out any modification without authorization from your CASE CONSTRUCTION Dealer.

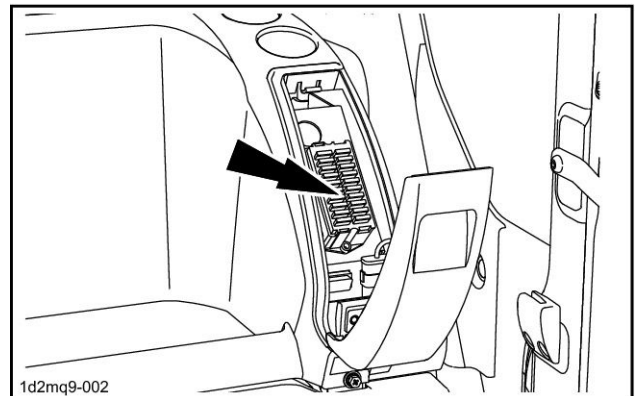
NOTICE: if you use your quick coupler in particularly harsh conditions (dusty or corrosive atmosphere, etc.), the servicing intervals should be reduced accordingly.

Fuses

- To access the fuse box, open the cover located behind the operator's seat.

NOTICE: before changing fuses or relays, turn the ignition key to the OFF position, wait one minute minimum and place the key of the battery master switch in O (off) position.

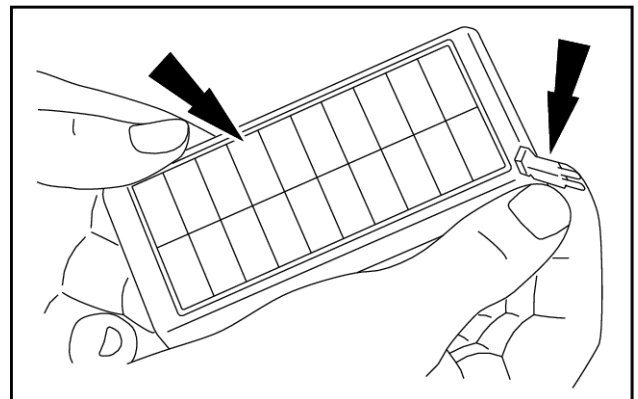
NOTICE: never replace a fuse with a fuse of a different amperage.



1D2MQ9-002A 1

- To access the fuses, remove the cover on the box. A notice on the cover gives the function and amperage of each fuse.

NOTE: to remove or install a fuse, use the notch in the upper right-hand corner of the cover.



SMIL13CEX2814AB 2

7 - TROUBLESHOOTING

FAULT CODE RESOLUTION

Engine troubleshooting

NOTE: This chapter shows how to easily diagnose problems relating to the engine and describes the solutions to be adopted. If you are unable to determine the cause of the failure, or if the latter is difficult to rectify, consult your CASE CONSTRUCTION Dealer.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Engine does not start. Starter does not rotate or rotation is weak.	Battery master switch in "O" (Off) position (if equipped)	Place the battery master switch in "I" (On) position (if equipped)
	Battery is running out	Charge or replace
	Disconnection, looseness, or corrosion of the battery terminals	Repair the corroded area, and then tighten securely
	Starter ground wire terminal detached, loose, or corroded	Repair the corroded area, and then tighten securely
	Engine oil viscosity is too high	Replace it with oil with appropriate viscosity
	Starter or electrical system faulty	Consult your CASE CONSTRUCTION Dealer
Engine does not start. Starter turns over.	Battery master switch in "O" (Off) position (if equipped)	Place the battery master switch in "I" (On) position (if equipped)
	No fuel in fuel tank	Check that there is no fuel leakage and refuel
	Air intrusion in the fuel system	Remove the air
	Clogging of the fuel filter	Remove moisture and replace the element
	Fuel is frozen	Warm up the fuel pipe with hot water, or wait until the air temperature rises
	Failure of the supply pump	Consult your CASE CONSTRUCTION Dealer
	Clogging of the supply pump strainer	Clean the strainer
	Failure of the engine control system	Consult your CASE CONSTRUCTION Dealer
	Preheating system faulty	Consult your CASE CONSTRUCTION Dealer
Overflow valve remains open	Clean or replace the supply pump, fuel filter or fuel port overflow valve	
The engine starts, but stops immediately.	Clogging of the fuel filter	Remove moisture and replace the element
	Clogging of the pre-fuel filter	Clean or replace the element
	Failure of the engine control system	Consult your CASE CONSTRUCTION Dealer
	Clogging of the air cleaner	Clean or replace the element
	Failure of the supply pump	Consult your CASE CONSTRUCTION Dealer
	Clogging of the supply pump strainer	Clean the strainer
Engine revolution is unstable.	Failure of the fuel system	Consult your CASE CONSTRUCTION Dealer
	Water or air intrusion in the fuel system	Remove the air
	Failure of the engine control system	Consult your CASE CONSTRUCTION Dealer
Engine rotation does not increase.	Clogging of the fuel filter	Remove moisture and replace the element

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL