

ORIGINAL INSTRUCTIONS - according to Directive 2006/42/EC, Annex I, 1.7.4.1

CX85D SR
Crawler Excavator

OPERATOR'S MANUAL

Part number 51606329

1st edition English

March 2019



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

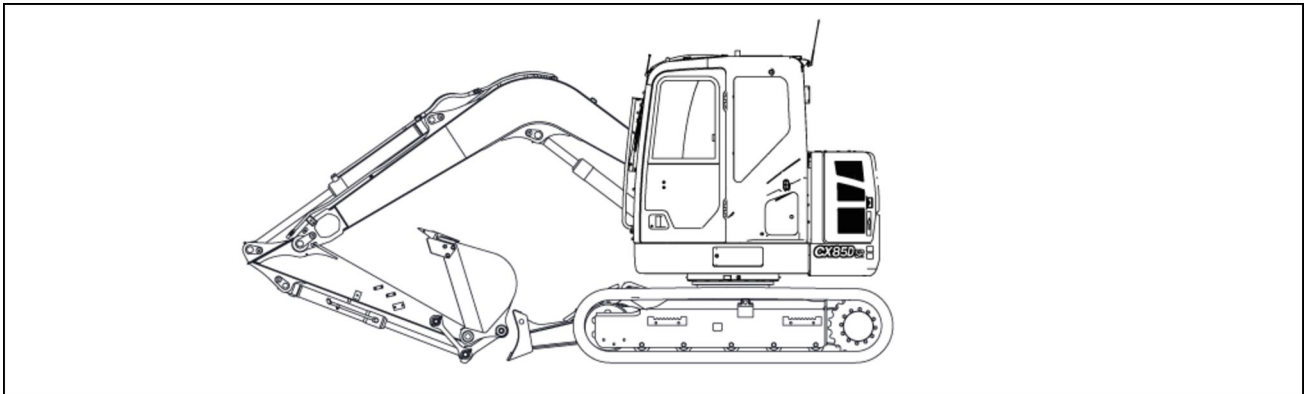


- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

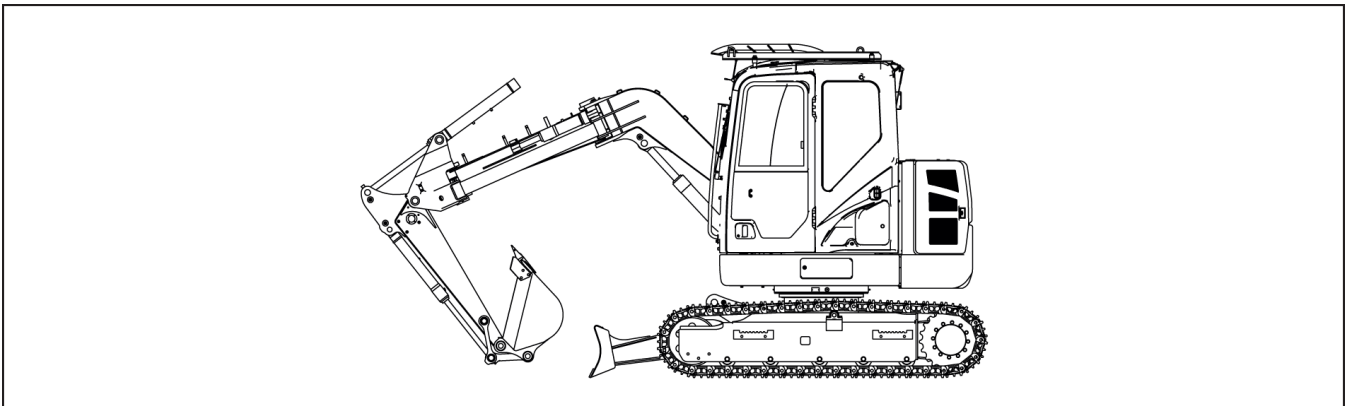
Product identification

The CX85D SR is a crawler hydraulic excavator. It consists of an undercarriage fitted with tracks and a turntable bearing which supports the upperstructure frame. The upperstructure frame supports the attachment, at the front end of the machine, plus the engine, hydraulics and cab. When the operator works the controls, the engine-driven pump delivers hydraulic fluid to the control valves. The control valves distribute the hydraulic fluid to the various cylinders and hydraulic motors employed. A cooling system maintains the hydraulic fluid at normal operating temperature.



SMIL19CEX0611EA 1

CX85D SR with blade



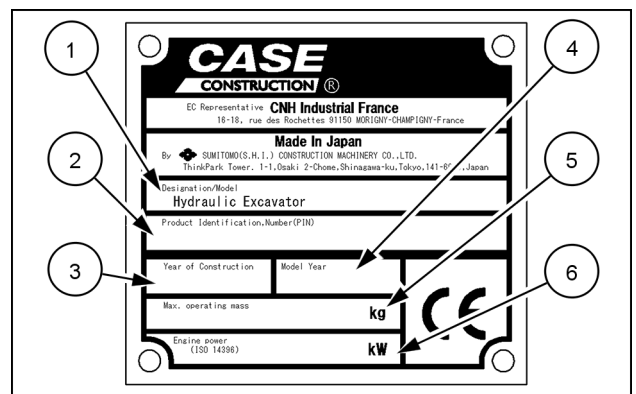
SMIL18CEX4819EA 2

CX85D SR Offset boom with blade

When ordering parts, obtaining information or assistance, always supply your CASE CONSTRUCTION Dealer with the type and serial number of your machine or accessories. Write the following in the spaces below: the type, serial number and year of manufacture of your machine, accessories and the serial numbers of the various hydraulic and mechanical components.

Machine

- (1) Designation/Model
Hydraulic Excavator CX85D SR
- (2) Product Identification Number (PIN)
- (3) Year of Construction
- (4) Model Year
- (5) Maximum operating mass
(the weight shown on the manufacturer's plate is the value using the heaviest configuration and that it does not always correspond to the transport configuration)
- (6) Engine power ISO 14396



SMIL15CEX3307AA 3



SUMITOMO (S.H.I) CONSTRUCTION MACHINERY CO. Ltd

"EC" DECLARATION OF CONFORMITY

The undersigned declare that the machine described below has been designed and manufactured in compliance with the following European Directives, as amended, and the regulations transposing them into national laws:

1. 2006/42/EC "Safety of machinery"

1.1 European Harmonised standards under which conformity is declared: **EN 474-1:2006+A4:2013; EN 474-5:2006+A3:2013**

- | 1.2 Main safety components installed and supplied with the machine | Yes | No |
|---|-------------------------------------|-------------------------------------|
| 1.2.1 Falling Object Protective Structure (F.O.P.S.) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1.2.2 Object handling application kit (EN 474-5 §5.6.4; EN 474-1 Annex E) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 1.2.3 Roll Over Protective Structure (R.O.P.S.) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1.2.4 Cab front guard | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 1.2.7 ### | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1

1.4 Name and address of the person authorised to compile the technical file:
CNH Industrial France - Route Nationale 330, Penchard, 77122 MONTHYON - France

2. 2000/14/EC "Noise emission"

- 2.1 Conformity assessment procedure followed: Annex XXXXXXXXXXXX
- 2.2 Name and address of the Notified Body involved: XXXXXXXXXXXX
- 2.3 Measured sound power level LWA (ref. 1 pW): 0 dB(A)
- 2.4 Guaranteed sound power level LWA (ref. 1 pW): 0 dB(A)
- 2.5 Engine power (as defined by ISO 14396): 0 kW
- 2.6 Holder of the technical documentation: XXXXXXXXXXXX

2

3. 2004/108/EC "Electromagnetic compatibility"

3.1 European Harmonised standards under which conformity is declared: **EN 13309:2010**

4. Other applicable Directive/s: ###

5. Manufacturer: SUMITOMO (S.H.I) C.M. CO. Ltd
ThinkPark Tower 1-1, Osaki 2-Chome,
Shinagawa-ku, Tokyo 141-6025 - JAPAN

6. Category: Hydraulic excavator

7. Type: CX85D SR

8. Serial n°: 3

9. EC Representative: CNH Industrial France
16-18, Rue des Rochettes – 91150 Morigny-Champigny – France

4

Chiba, Japan 07/01/2019

Signature
(Name and Function) 5

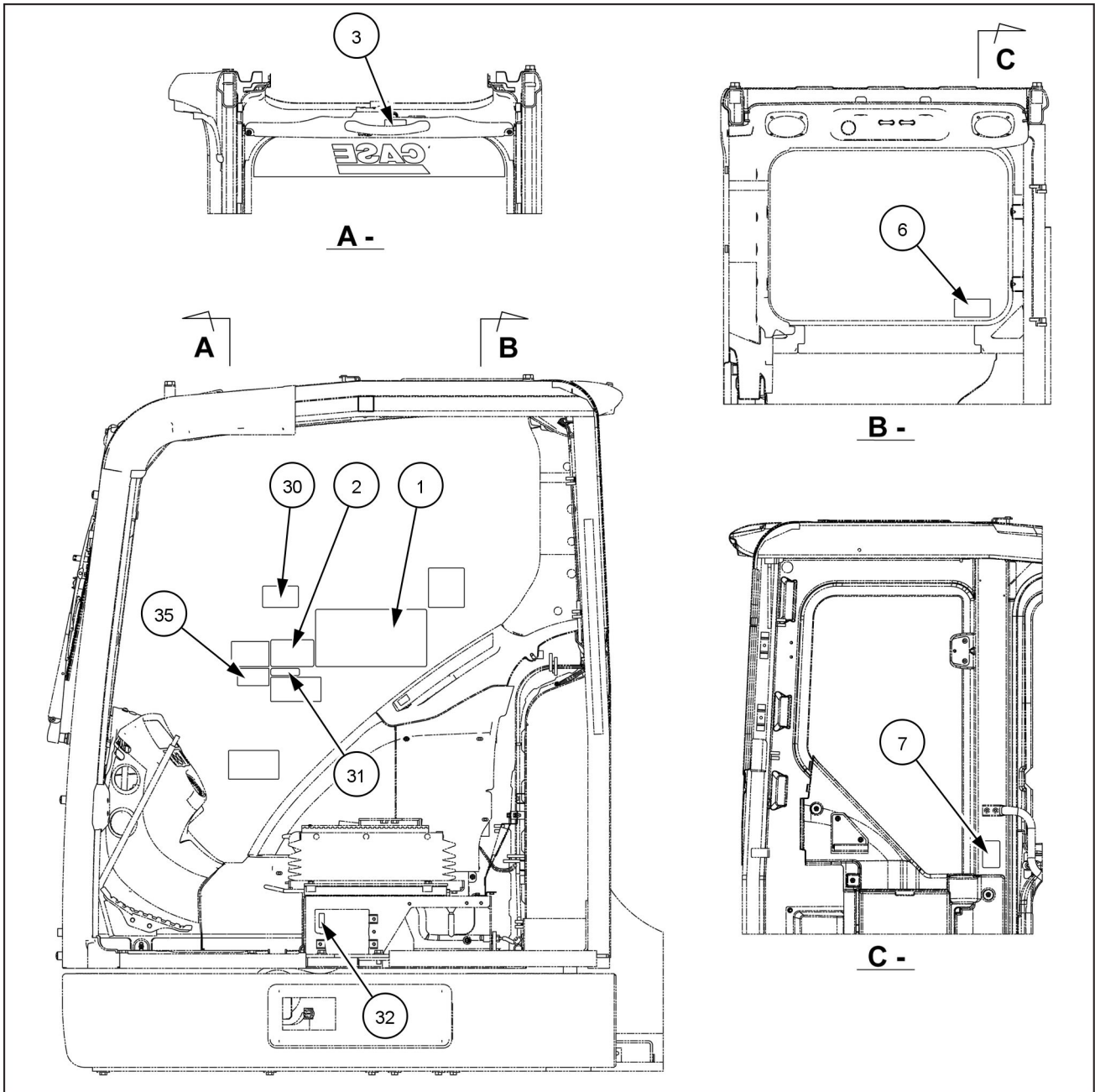
7. Make sure that the hoods and doors are properly latched.
8. Check that no part of the machine is encroaching on the highway. If this cannot be avoided, install the necessary regulation signaling equipment.

Maintenance and adjustments

- Do not try to service this machine unless you have first read and perfectly understood the safety messages and instructions featuring in this manual.
 - When carrying out service work always wear suitable dress. Avoid loose-fitting clothing.
 - Release pressure completely in the hydraulic system before disconnecting the hydraulic piping. Hydraulic oil escaping under pressure can cause serious injury.
 - Before doing maintenance work on the machine, shut down the engine and allow it to cool down. Otherwise, you could be burned.
 - Before commencing any work on the machine, place a "Do not operate" tag on the right-hand control arm.
 - Always wear eye protection when using a tool that might project metal particles. Use a hammer with a soft face, such as copper, for installing pins.
 - Badly carried out maintenance or adjustments can cause serious injuries. If you do not understand a servicing or adjustment procedure, consult your CASE CONSTRUCTION Dealer.
 - If the attachment is raised or if the machine moves without an operator, serious injury can result. Before carrying out maintenance on this machine, proceed as follows:
Park the machine on flat, level ground.
Lower the attachment until it is resting on the ground.
Lower the dozer blade (if equipped) until it rests on the ground.
Stop the engine and remove the ignition key.
Lock the tracks to prevent any machine movement.
 - Any unauthorized modifications made to this machine can cause serious injury. Do not undertake any modifications without first consulting your CASE CONSTRUCTION Dealer. Any modifications made must be in conformity with the technical specifications of the machine and any current safety legislation requirements.
 - Certain components of the machine are subject to type approval. When replacing such components, it is mandatory to make sure that they conform to regulations. For safety's sake, use genuine CASE CONSTRUCTION parts.
 - Pressurized hydraulic fluid or grease which penetrates the skin can cause serious injury. Take the necessary safety precautions (safety clothing and protection for face and hands) to avoid such risks. Also, before using these products, read the manufacturer's instructions concerning their use. If hydraulic fluid penetrates the skin, call a doctor immediately.
 - Coolant solution is toxic.
- Avoid contact with skin, eyes and clothing.
Antidote:
External: rinse thoroughly with water and remove soiled clothes.
Internal: do not induce vomiting. Rinse the mouth out with water. Seek medical advice.
Eyes: rinse thoroughly with water and seek medical advice.
- The pressure in the track tension cylinders is high. Follow the procedure described in this manual carefully for increasing or reducing track tension.
 - When carrying out a welding operation on the undercarriage or upperstructure carriage as authorized by the manufacturer and in accordance with his instructions, disconnect the batteries, disconnect the alternator B+ and D+ terminal wires and connect the welding apparatus earth cable to the component on which the welding operation is to be performed. Never connect the welding apparatus to the undercarriage when welding on the upperstructure (or vice-versa). Never connect the welding apparatus earth to a component of the hydraulic system.
 - When using compressed air, take the necessary precautions to protect your face.
 - Clean the machine regularly. Accumulations of grease, dirt and debris can cause injuries or damage the machine.
 - Periodically inspect the fastening of the main components, as part of the machine maintenance programme: counterweight, turntable bearing and operator's compartment. In the event of problems, consult your CASE CONSTRUCTION Dealer.
 - If the accumulator is not functioning correctly, consult your CASE CONSTRUCTION Dealer. Never try to carry out any servicing operation on the accumulator. If this instruction is not followed serious injury can result.
 - The accumulator is charged with nitrogen under high pressure. Do not weld or allow flames to come near to the accumulator.
 - There is high pressure fuel in the feed pipe when the engine is running and immediately after it has been shut down. Wait for 2 minutes after engine shut down before you do any maintenance or inspections to allow the pressure to drop in the pipe.
 - High-voltage is charged to the controller and/or to the injector while the engine is running and immediately after it has been shut down.
Do not touch the controller or the injector.
If it is necessary to touch them for maintenance purposes, consult your CASE CONSTRUCTION Dealer.

Decal positions

When replacing a decal, make sure it is located as shown below.



SML18CEX3241GA 1

(21) Keep out of work range of upper structure

Part number: KHP35820

Always make sure to keep the working range of the machine upper structure clear from obstacles and from bystanders.

Always sound the horn before start operating the machine.

The machine upper structure may hit or crush the bystanders causing serious injuries.

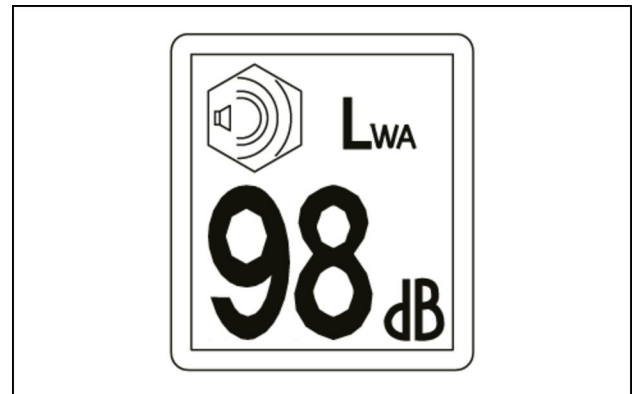


KHP35820 30

(22) Noise level

Part number: KHP11120

Sound power level guaranteed, determined in compliance with European Directive **2000/14/EC**.



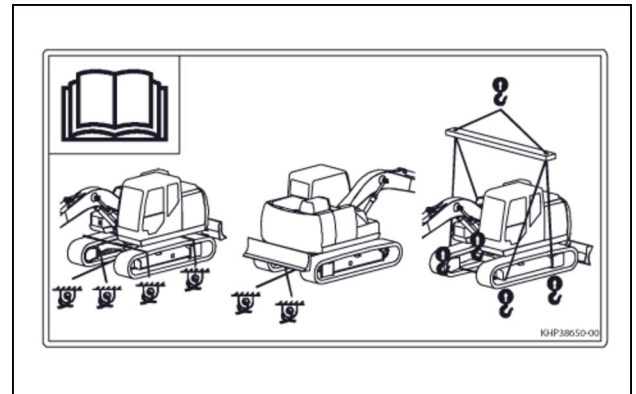
KHP11120 31

(23) Instruction decal for restraint and lifting

Part number: KHP38650

Reference sketches mapping the layout of devices for transport and lifting of the machine.

Make sure to read operator's manual to understand proper procedures for transport and lifting of the machine.

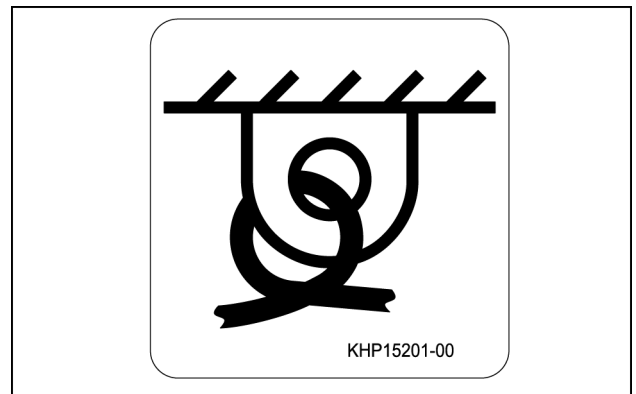


KHP38650 32

(24) Lashing point decal

Part number: KHP15201

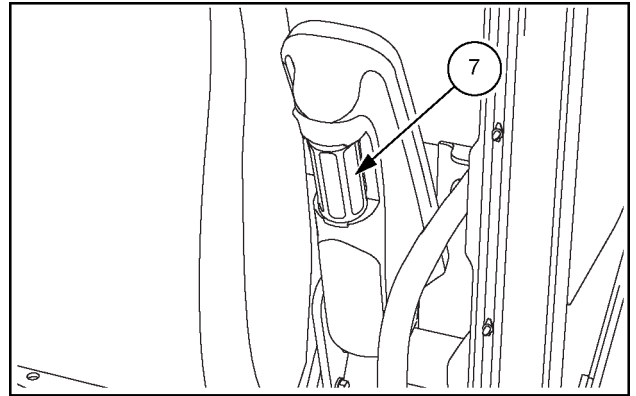
Point on machine structure for securing the machine during transport.



SMIL15CEX0447AA 33

Armrest angle adjustment

- Raise the armrest.
- Adjust the armrest to the desired angle using the knob (7).
- Lower the armrest.

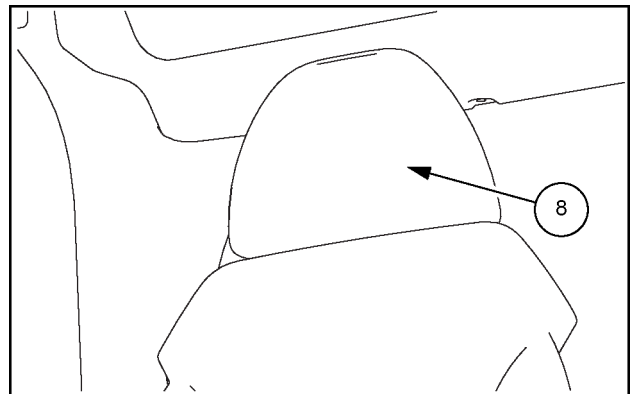


SMIL14CEX1660AB 7

Headrest adjustment

- The headrest (8) can be adjusted upwards and downwards and backwards and forwards.

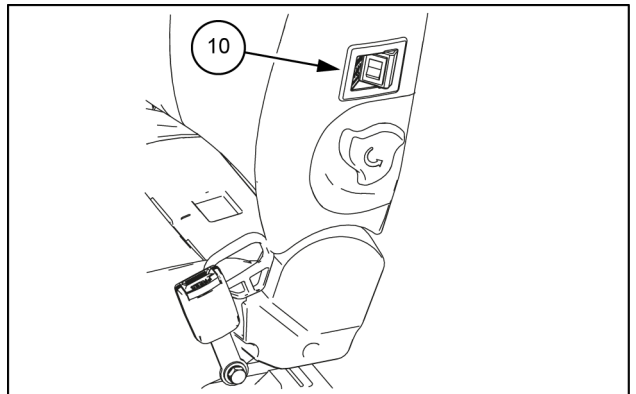
NOTE: to make the headrest return to its initial position (to the rear), tilt it completely forwards and then release it.



SMIL14CEX1661AB 8

Seat heater (optional)

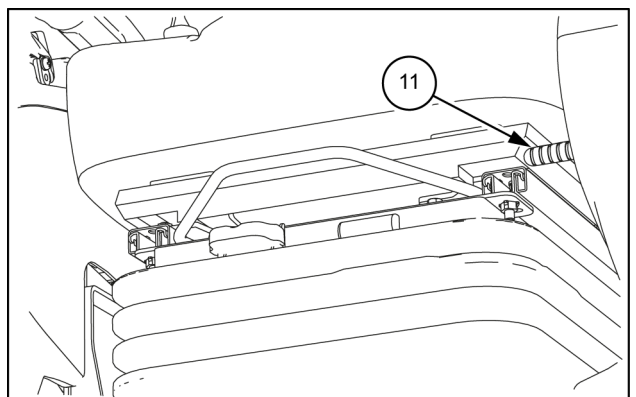
- When the switch (10) is turned on, both the backrest and the seat area will be warmed.



SMIL14CEX1662AB 9

Seat angle adjustment section (optional)

- Pull up the lever (11) to adjust the inclination of the seat.
- Release the lever at an appropriate angle.



SMIL14CEX1663AB 10

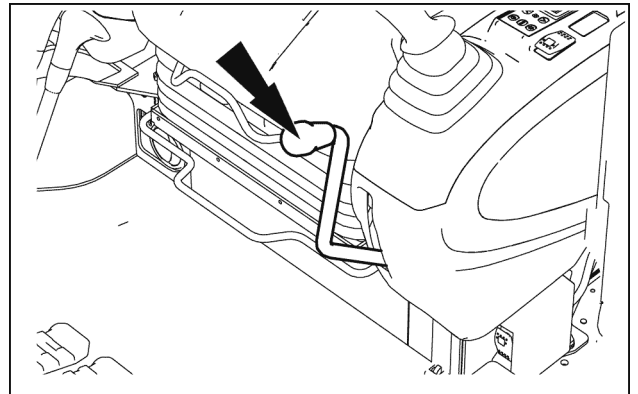
Gate lock lever

⚠ WARNING

Unexpected machine movement!
When the machine is not in operation, the gate lock lever must be in the LOCK position.
Failure to comply could result in death or serious injury.

W1487A

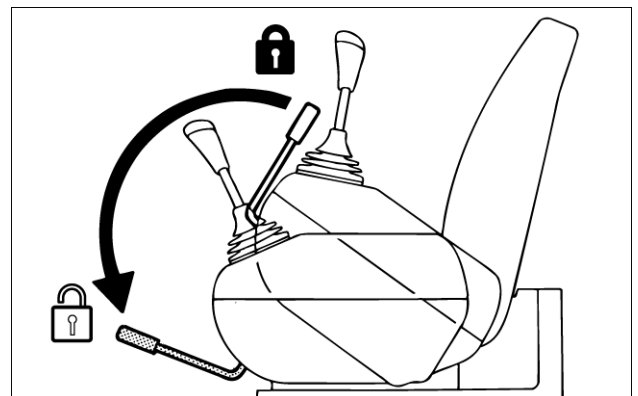
The gate lock lever allows to cancel the functioning of the control levers and pedals.



SMIL17CEX0199AA 1

The gate lock lever has two positions:

Unlock position: when the gate lock lever is in unlock position, the attachment, the travel functions and the swing functions can be operated.

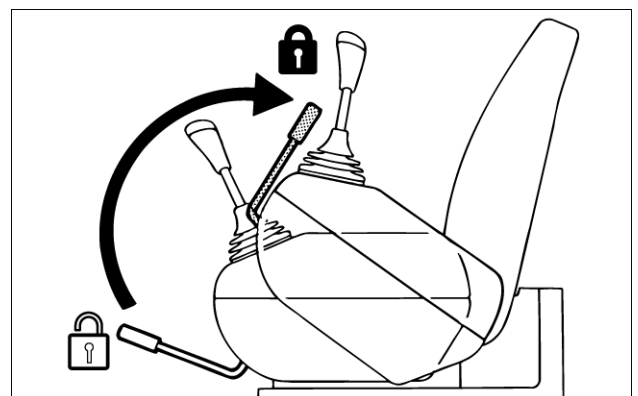


NH0003 2

Lock position: when the gate lock lever is in lock position, all the functions are disabled and the left hand console is fully raised. The operator can thus easily get off the cab.

NOTE: Set the gate lock lever to lock position when ending machine operation and leaving the machine.

NOTE: the engine must be started with the gate lock lever in lock position. If the gate lock lever is in unlock position, the engine does not start.



NH0002 3

Instrument cluster

(1) Ambient sensor

NOTE: Do not place any object on the ambient sensor: the climate control system may not correctly control the temperature inside the cab.

(2) Display

(3) Control buttons

(4) Air vents

NOTE: The air vents should be manually set. Make sure to set the opening and the direction of the air vents in order to grant the desired condition into the cab environment.

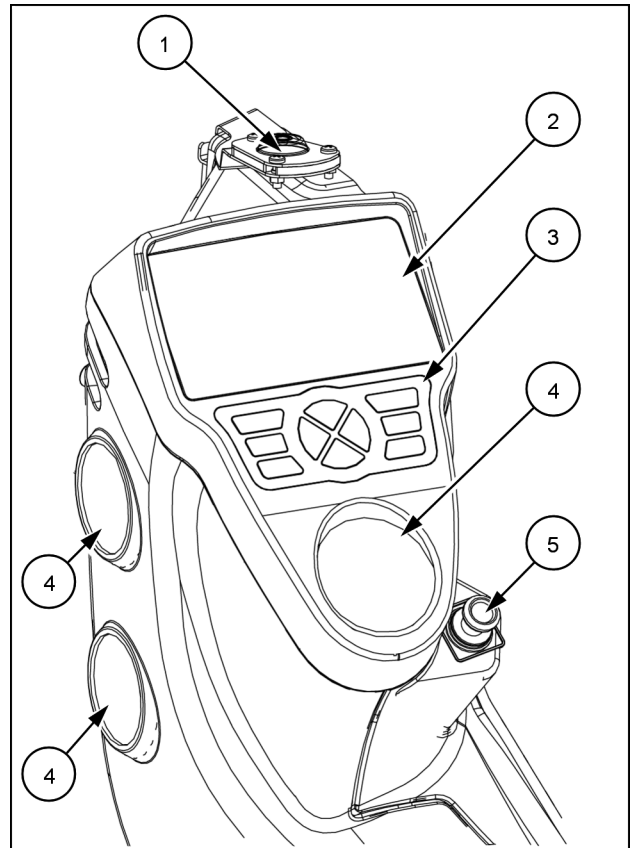
NOTICE: If water gets inside the instrument cluster, it can be seriously damaged. Make sure to keep the instrument cluster protected from water and from any kind of fluid. Use only a soft, dry cloth to clean the instrument cluster.

(5) Cigarette lighter and 24 V power supply socket: the device is active with the starter key in ON position, or while the engine is running. To operate the cigarette lighter, push it down to engage its heating position.

NOTICE: keep pushing the cigarette lighter can cause serious damages to the device and to the machine electrical system.

NOTICE: the electrical system may be damaged if the cigarette lighter does not return to its original position after 30 s. Pull it out manually and consult the CASE CONSTRUCTION dealer.

NOTICE: connect only 24 V devices to the socket. Connecting devices functioning at different voltage can cause damages to the device itself and to the electrical system.



SMIL17CEX0139BA 1

Hour meter button

Hour meter

- The hour meter indicates the total engine operating hours in units of **0.1 h (6 min)**. The hour meter cannot be reset.




⌚ 12345.0hr

SMIL14CEX1717AA 9

Trip meter

- The trip meter allows to set a partial operating hour counter, which can be reset to **0 h** at any time. The hours are indicated in units of **0.1 h (6 min)**.

To reset the trip meter press and hold the hour meter button while the trip meter is displayed. The displayed engine operating hours will be reset to **0 h**.

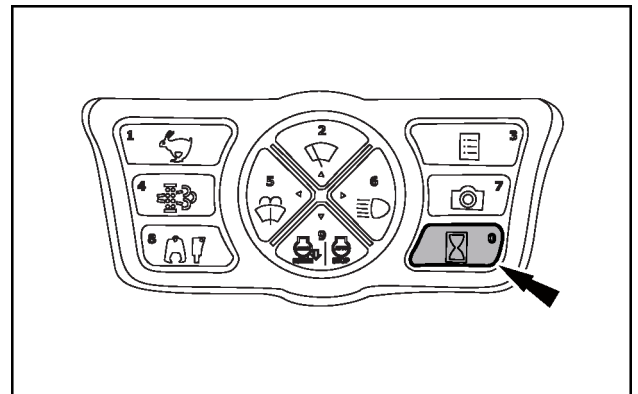


TRIP 12345.0hr

SMIL14CEX1718AA 10

The hour meter is displayed by default. To display the trip meter, press the hour meter button: the trip meter will be thus displayed for approximately **1 min**, after which the hour meter will be displayed again.

NOTE: the display disappears when the starter key is turned to **OFF** position. The hour meter can be anyway displayed for **20 s** by pressing the hour meter button.



SMIL14CEX1719AA 11

Fuel consumption history



Fuel consumption (fuel economy) over the past 7 days can be checked.

Select the Fuel consumption history tab from **(1)**.

Daily average fuel consumption over the past 7 days can be checked in a simple graph in **(2)**.

By selecting a day in **(2)**, the fuel consumption, the operating hours, and the average fuel consumption of the specified day is displayed in **(3)**.

Explanation of the icons in the fuel consumption history screen:



Year/month/day of cursor specified date is displayed.



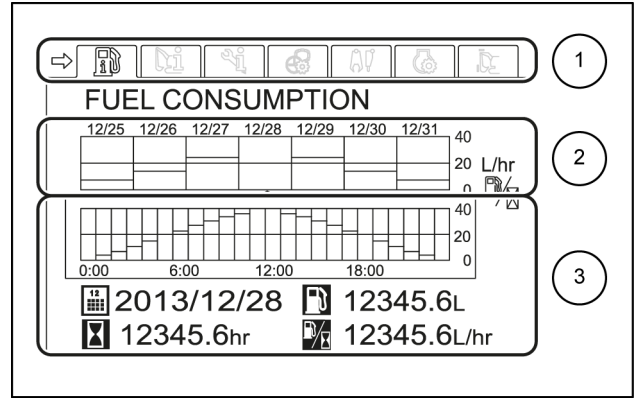
Fuel consumption of cursor specified date is displayed.



Operating hour of cursor specified date is displayed.



Fuel cost (fuel consumption / operating hour) of cursor specified date is displayed.

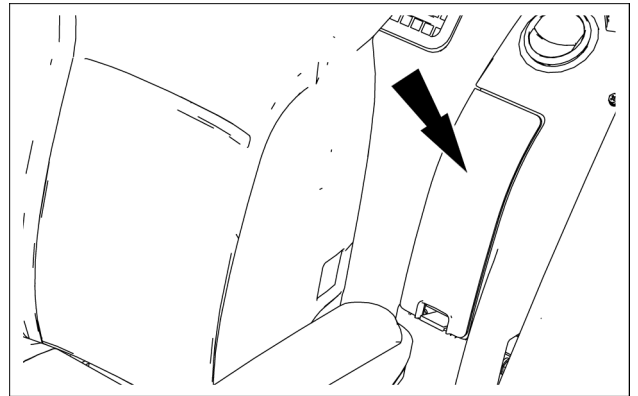


SMIL14CEX1797AB 28

Rearward controls

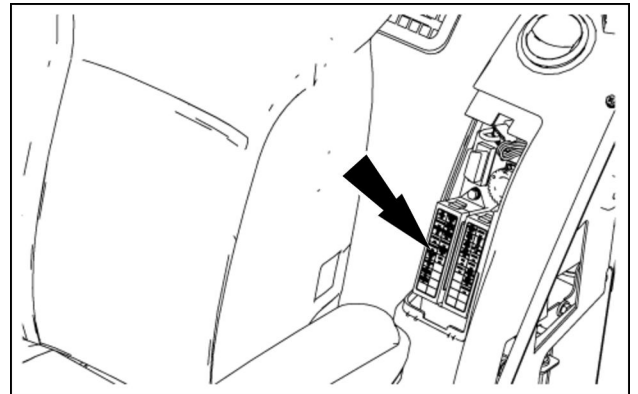
Fuse box

Located on the left-hand side, behind the operator's seat.



SML17CEX5125AA 1

The fuse box can be readily accessed by removing the protective cover.

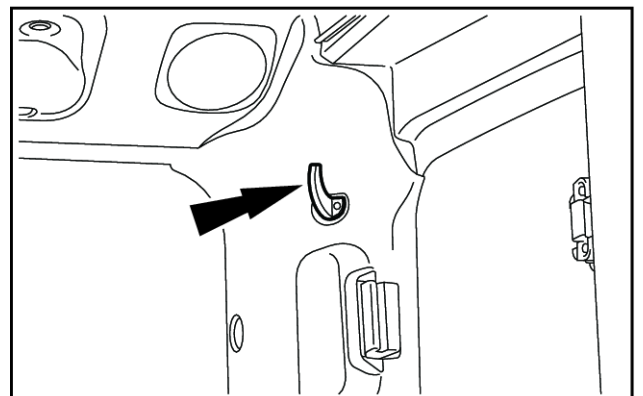


SML19CEX0607AA 2

Coat hanger hook

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

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

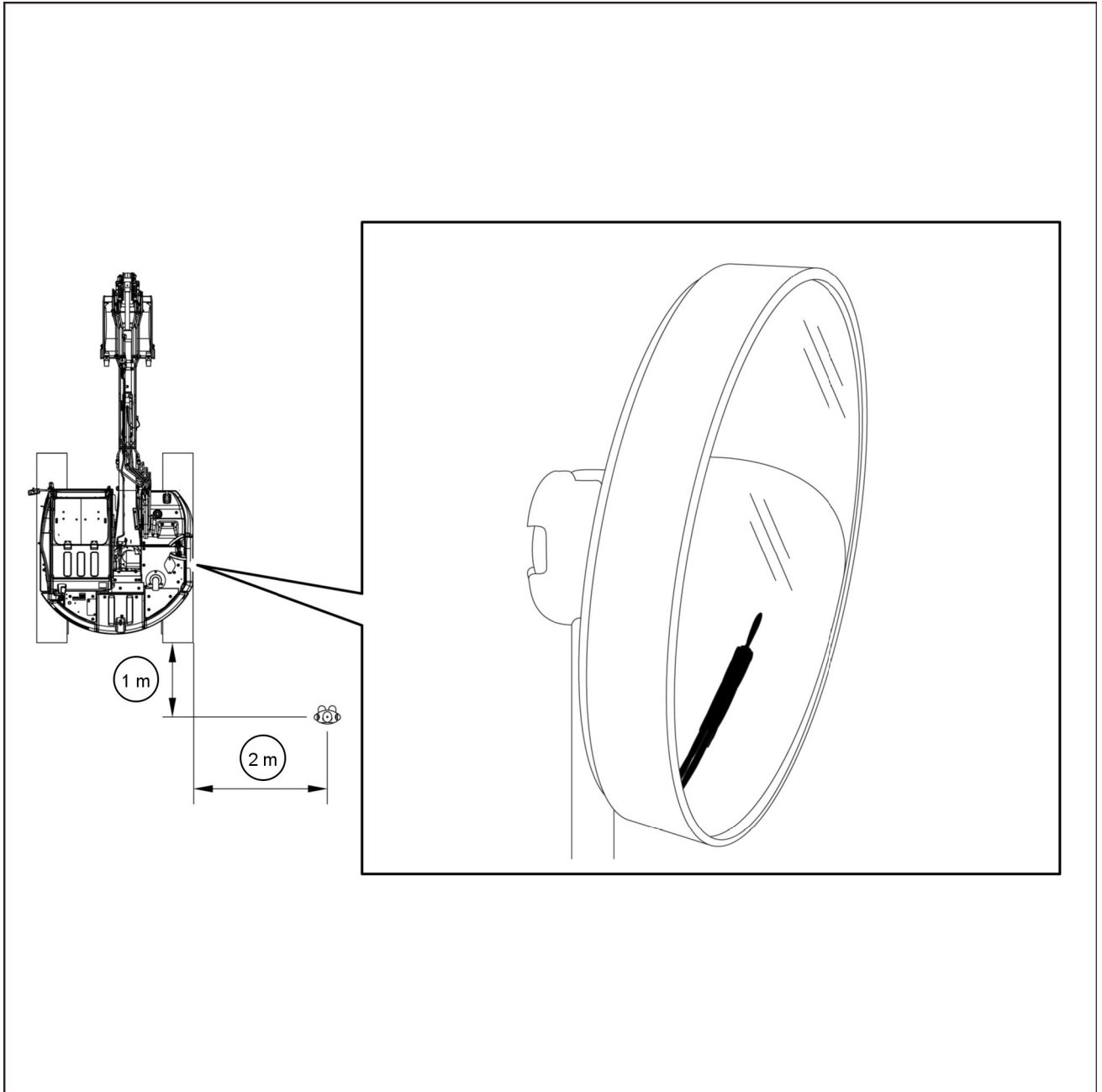


SML13CEX2626AB 1

The mirror shall be positioned according to the references shown in picture:

The side on the front right of the machine shall be visible.

The area around a reference body positioned **1 m (39.4 in)** back from the edge of the right track and **2 m (39.4 in)** rightward the machine shall be visible.



SMIL17CEX7954GA 8

NOTICE: After installing and positioning all the mirrors, the visibility around the machine shall be checked from the operator's seat. Set the seat into the desired position, and make sure to confirm all the reference views in the mirrors. If necessary, fine tune the positioning of the mirrors in order to ensure proper visibility around the machine.

Front storage box

⚠ WARNING

Moving parts!

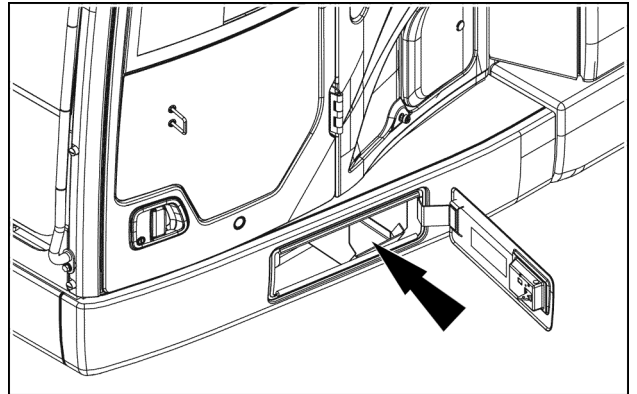
**Make sure the storage box cover is closed properly before driving the machine.
Failure to comply could result in death or serious injury.**

W0288A

The storage compartment is located on the left of the upperstructure, below the cab. It is intended for storage of emergency tools and of small spare parts.

Open the compartment cover with the starter key.

NOTICE: Make sure to close and lock the compartment before starting machine operation. Leaving the compartment open can cause serious damages to the machine, and may cause serious injuries to the bystanders.



SML17CEX0897AA 1

Fire extinguisher

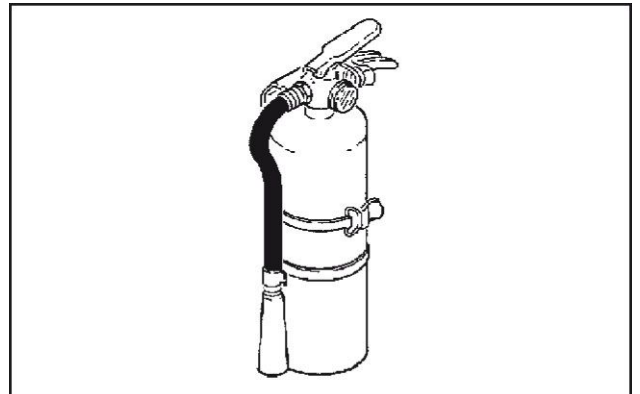
It is strongly recommended to have a fire extinguisher available and to keep it inside the front storage box.

Service specifications:

Every month: examine the fire extinguisher and make sure it is not damaged.

Every six months: have an approved specialist empty and refill the powder in the fire extinguisher.

Every year: have an approved specialist examine the fire extinguisher.



CS98M573TBP1 1

4 - OPERATING INSTRUCTIONS

Starting the unit

Anti-theft protection

A security function can be set up in order to prevent an undesired usage of the machine, or even the theft of the machine. The security function locks the display by a password when the machine is started. Furthermore, the security function limits the machine functionality as the engine is started without entering the password.

The set up of the security function is indicated by a specific icon on the display:



The security function is set up.

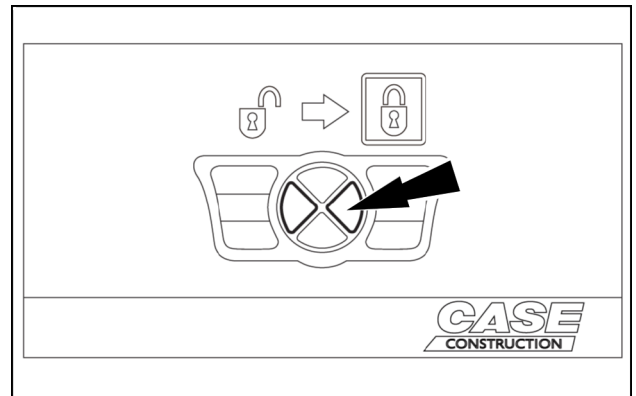
To set up the security function and the password, consult the CASE CONSTRUCTION dealer.

NOTICE: Consult the CASE CONSTRUCTION dealer in case of forgotten password.

Activation of the security function

Turning the starter key to OFF position, the option for activating the security function is displayed. Press the right button to activate the security function.

At the next machine start, the request for entering the password will be displayed.



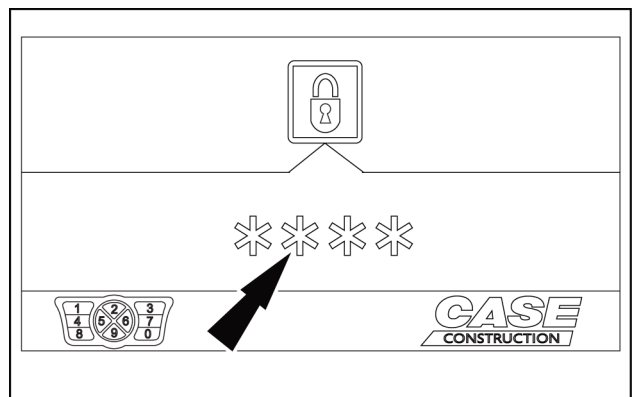
SMIL14CEX2877AA 1

As the key is turned to ON position, the request for entering the password is displayed. Enter the password using the buttons on the cluster as a numeric keypad.

As the password is properly entered, the display is unlocked, and the machine can be started.

If the password is wrongly entered for 3 times, or if the engine is started up without entering the password, the machine goes into an immobilized state:

1. A warning buzzer, and the travel alarm if equipped, sound continuously.
2. The engine speed is limited to low idle.
3. The swing function is disabled.
4. If any lever or pedal is operated, the engine stops automatically.

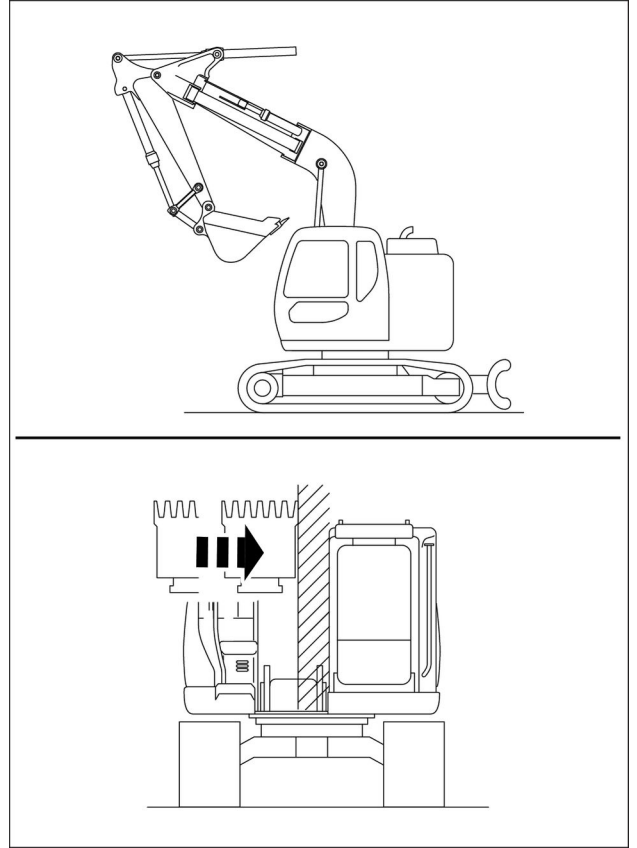


SMIL14CEX2878AA 2

4 - OPERATING INSTRUCTIONS

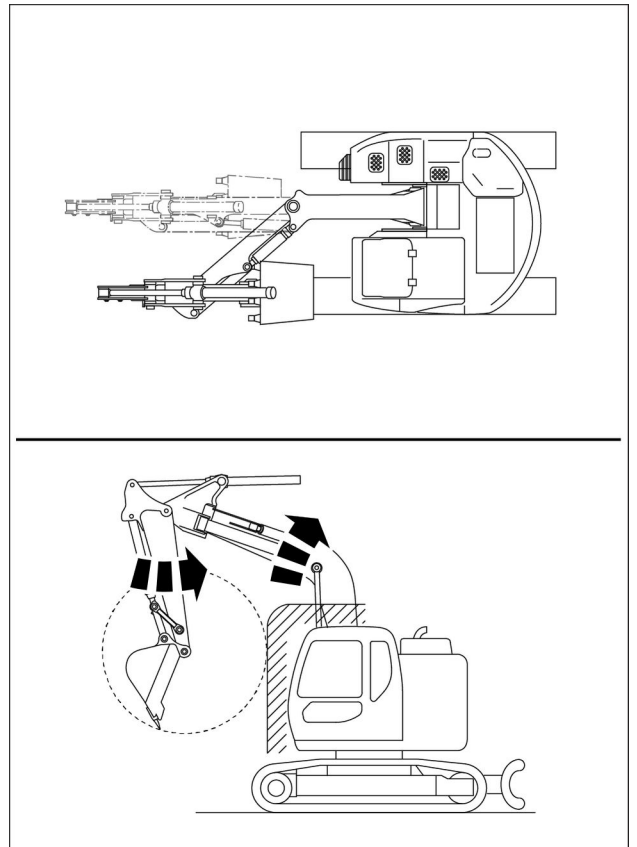
The cab interference prevention system acts against all movements of the front equipment that might cause a collision between the attachment and the cab.

As the boom is raised and straight, and the arm is retracted, the interference prevention system acts against a leftward offset movement that brings the attachment too close to the cab.



SML18CEX0297BA 2

As the arm is offset leftward from the boom, the interference prevention system acts against any movement of the boom or of the arm that brings the attachment too close to the cab.



SML18CEX0298BA 3

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.

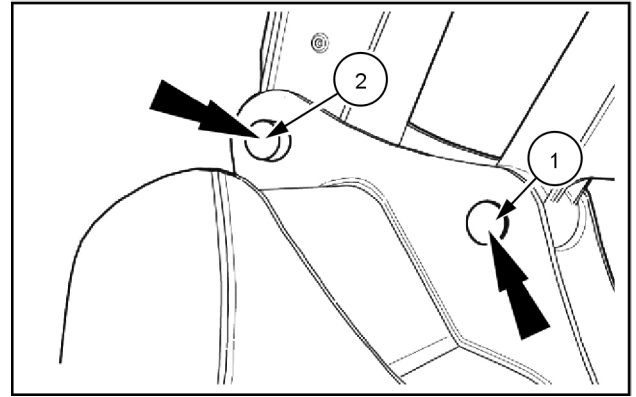
CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

To mount the bucket to the linkage, proceed as follows:

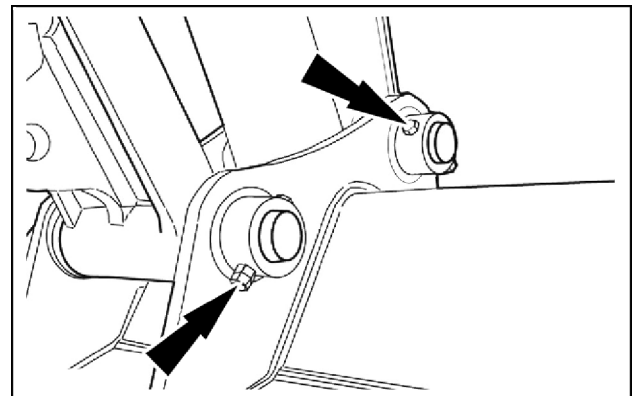
1. Make sure that the machine and the bucket stand both onto a hard and level ground. The bucket should stand on its bottom side.
2. Place the O-ring seals onto the inner bosses of the bucket.
3. Position the machine close to the bucket, and gently operate the boom and arm controls in order to align the arm top between the respective bosses on the bucket.
4. Place the gate lock lever in central position, stop the engine and remove the starter key.
5. Position the mounting spacers if required. Place a punch on the flat edge of the pin **(2)**, and push it in using a hammer.

NOTICE: Make sure to insert the pin by its chamfered edge. Make sure to insert the pin from the bucket side opposite to the locking boss.

6. Push the pin until the locking hole on the pin is aligned to the locking hole on the bucket boss. Install either the retaining pin or the locking bolt.
7. Get into the cab, start the engine and place the gate lock lever in the forward position.
8. Gently extend the bucket cylinder to align the bucket connecting rod between the respective bosses on the bucket.
9. Place the gate lock lever in central position, stop the engine and remove the starter key.
10. Insert the pin **(1)** and lock it as described for the pin **(2)**.
11. Slide down the O-ring seals. Grease the bucket pins.



S MIL13CEX2828AB 4



S MIL13CEX2827AB 5

NOTICE: *when using wide shoes avoid traveling on rough ground. Wider shoes tend to cause deformation or crack of the shoes.*

4. Travel with decreased traveling speed on rough ground.
5. Encourage a large turn for changing direction and avoid abrupt pivoting turns or spinning turns as much as possible.
6. Check the route to travel in advance.
7. Prepare a personnel to signal operator whenever moving the machine in a location with poor visibility.
Pay attention to permissible weight of bridge when crossing the bridge.
8. Take necessary measure such as placing plates so as not to damage surface of paved road.
9. Slow down and loosen tension of the track shoes when traveling on place with gravels and cobbles.

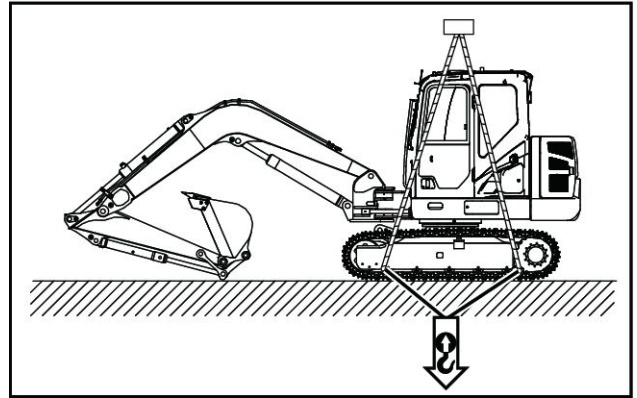
5 - TRANSPORT OPERATIONS

Retract the attachment, bucket and dipper cylinders fully extended then place the attachment on the ground. Shut-down the engine and leave the operator's compartment.

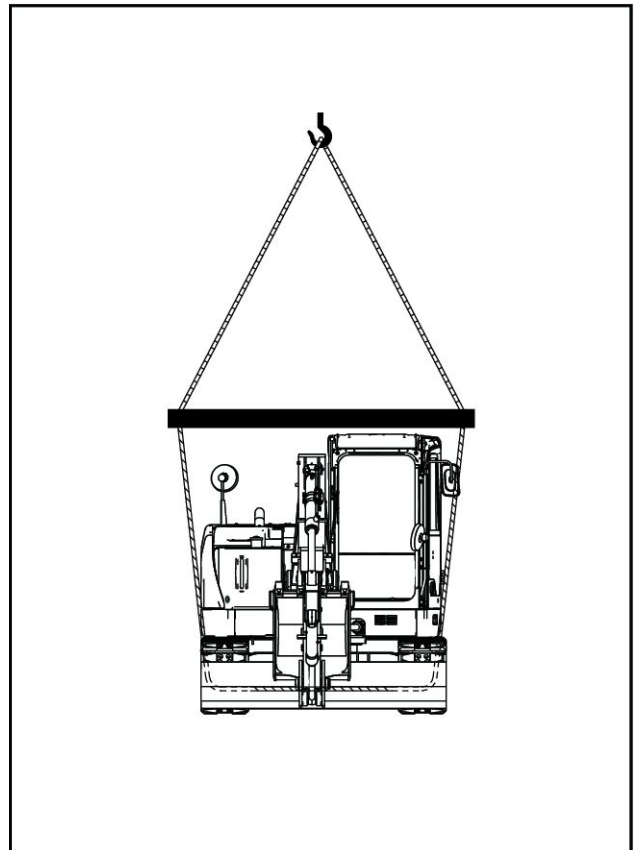
NOTICE: before handling the machine, make sure the slings are in perfect condition and that they are capable of supporting the weight of the machine. Refer to Chapter 8.

NOTICE: it is imperative to use the sling points indicated on the machine decals.

NOTICE: the machine must be handled very slowly and horizontally.



SMIL13CEX2953AB 1



SMIL13CEX2954BB 2

Engine oil recommended operating temperature range

	(H)	0W-40 CJ-4 UNITEK to MAT3521										
	(H)	API CJ-4 0W-40										
		(H)	10W-40 CJ-4 UNITEK to CNH MAT3521									
		(H)	API CJ-4 10W-40									
			(H)	15W-40 CJ-4 UNITEK to CNH MAT3521								
			(H)	API CJ-4 15W-40								
-40 °C -40 °F	-30 °C -22 °F	-20 °C -4 °F	-10 °C 14 °F	0 °C 32 °F	10 °C 50 °F	20 °C 68 °F	30 °C 86 °F	40 °C 104 °F	50 °C 122 °F			
(H) Engine oil pan or coolant block heater recommended in this range												

Fuel prefilter

Check the water deposit at the bottom of the fuel pre-filter body every **10 h** or every day.

NOTICE: A dedicated message *DRAIN WATER IN FUEL FILTER* appears on the top of the display if the water deposit gets too high during machine operation. Make sure to stop machine operation and to drain water from the fuel prefilter body. Failing to comply may cause severe damages to the fuel supply line.

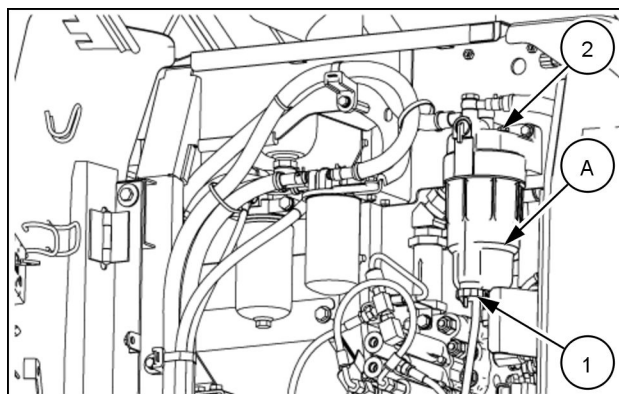
When the floating ring reaches the level indicated by the line **(A)**:

1. Place a container with an appropriate capacity under the pre-filter.
2. Loosen the drain plug **(1)** and the air bleed screw **(2)**, and then drain water and sediment.
3. When the floating ring reaches the bottom, tighten the drain plug **(1)** and the air bleed screw **(2)** to the torque of **2 – 3 N·m (1.48 – 2.21 lb ft)** and of **7.9 – 11.7 N·m (5.83 – 8.63 lb ft)** respectively.

NOTICE: Overtightening can damage the seal.

4. Check for any signs of leaks.

NOTICE: In cold weather, water may freeze on top of the pre-filter body. Wait until ice melts before drainage.



SMIL19CEX0615AA 1

Fan and alternator drive belt

Visually check the fan and alternator drive belt every **10 h** or every day

1. Refer to page **6-39**.

NOTICE: Operating the engine with loosened belt may cause over heat of the engine or insufficient charging of the battery due to slipping belt in its housing.

Track tension

⚠ WARNING

Tip-over hazard!
Only raise the track as little as necessary.
Failure to comply could result in death or serious injury.

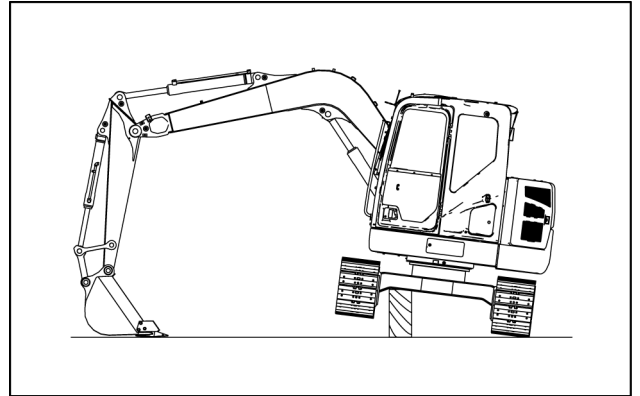
W0276A

Check the track tension periodically

NOTICE: if the tracks are too tight, they wear quickly. If tracks are not tight enough, they wear quickly and the links can catch on the sprocket wheel or slide off the idler wheel or the sprocket wheel. Clean the tracks after work.

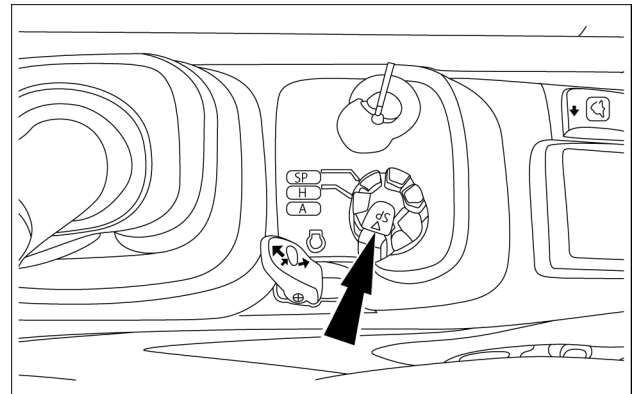
To check the tracks tension, proceed as follows:

1. Swing the upper structure perpendicular to the undercarriage. Lower the attachment to the ground, then lower the boom until the track is raised off the ground. Place a block under the undercarriage and raise the attachment off the ground.



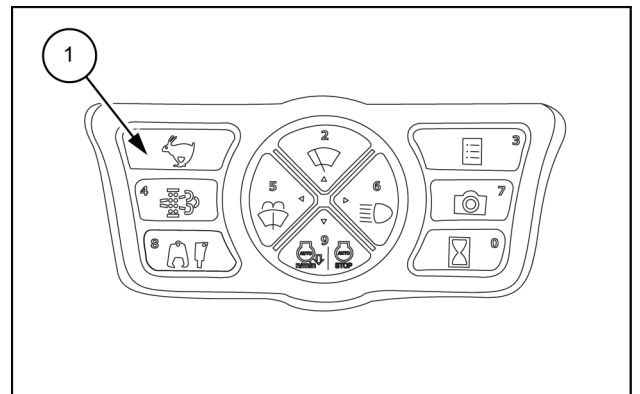
SMIL19CEX0300AA 1

2. Turn the engine speed throttle to the maximum speed position.



SMIL18CEX3641AA 2

3. Press the travel mode selector button (1) to set the "Rabbit" mode.



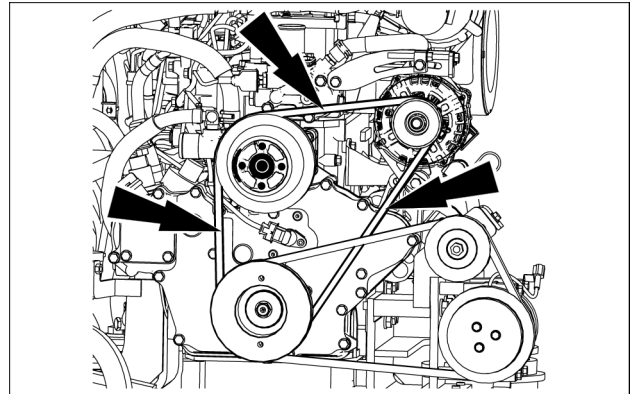
SMIL14CEX2853AB 3

Fan and alternator drive belt

Check the belt tension every **250 h**.

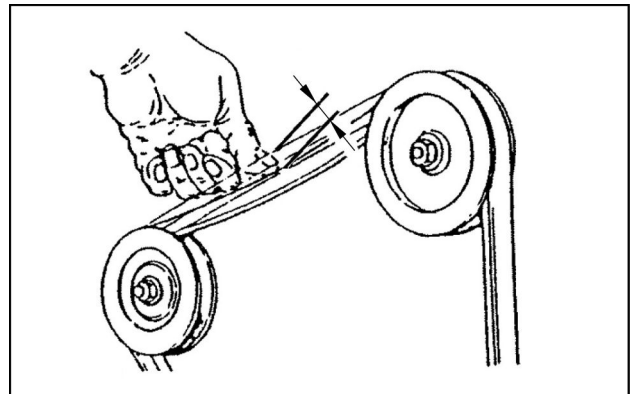
Inspection of tension

NOTICE: Operating the engine with loosened belt may cause over heat of the engine or insufficient charging of the battery due to slipping belt in its housing.



SMIL18CEX3645AA 1

Apply finger pressure of about **10 kg (22.0 lb)** center of the belt while the engine is shut down and the starter key is removed.



SMIL14CEX2789AA 2

Loose of tension for a new belt should be about

(1) 8 – 12 mm (0.315 – 0.472 in),

(2) 5 – 8 mm (0.197 – 0.315 in),

(3) 7 – 11 mm (0.276 – 0.433 in).

Loose of tension for a used belt should be about

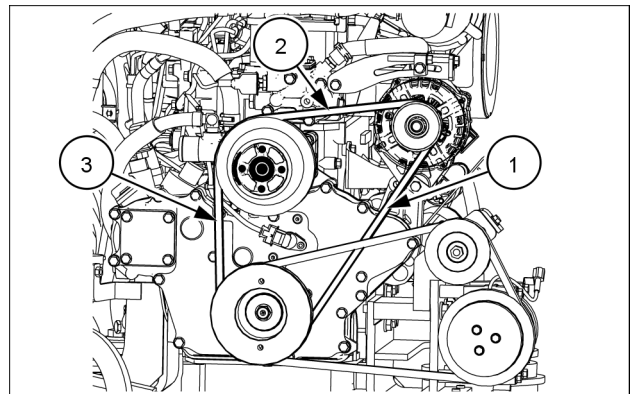
(1) 10 – 14 mm (0.394 – 0.551 in),

(2) 7 – 10 mm (0.276 – 0.394 in),

(3) 9 – 13 mm (0.354 – 0.512 in).

NOTE: The "used belt" refers to the belt on the engine that has run 5 minutes or more.

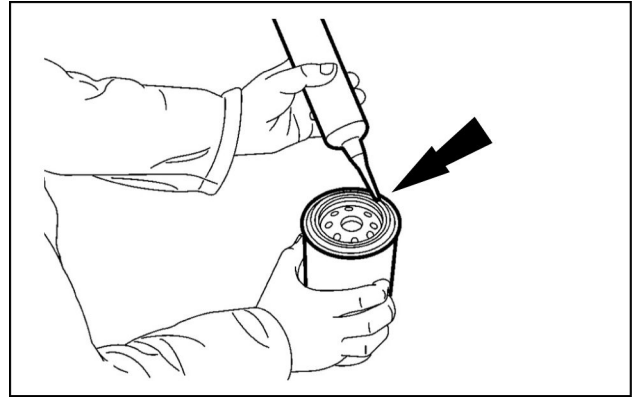
NOTE: Check any indication of damage on the pulley or belt due to wear. Check thoroughly to make sure that the belt is correctly engaged to groove of the pulley. The belt must be replaced if it is elongated, it has cracks or it is worn out.



SMIL18CEX3645AA 3

8. Apply an oil film finely to the seal of a new filter.
9. Attach a new filter. Turn the filter until the seal touches the filter head, and then tighten it further a half turn by hand.

NOTE: Do not use a filter wrench for tightening the filter. Overtightening can damage the filter and its seal.

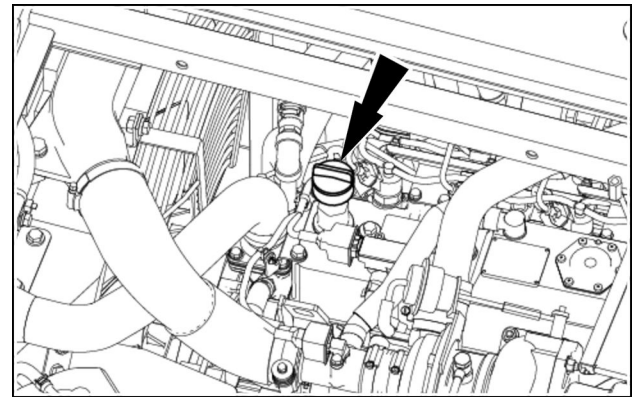


SML14CEX2751AA 4

10. Add new engine oil to the engine. Attach the filling plug.
11. Run the engine for several minutes to check that there is no leak.

Recheck the level, and add oil if necessary.

NOTE: always wait **15 min** to allow the oil to return to the sump before checking the oil level.



SML18CEX3328AA 5

Travel reduction units oil

Replace the travel reduction units oil every **1000 h** (After **250 h** of operation in run-in period)

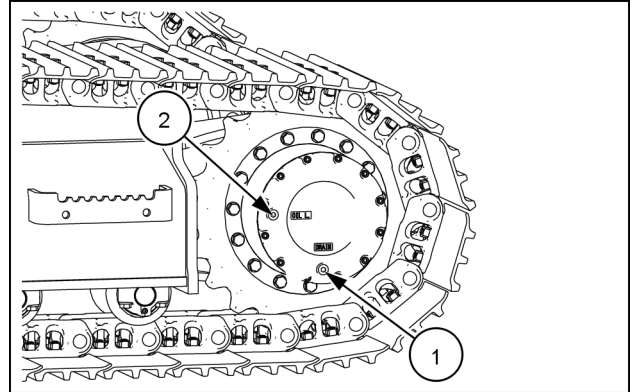
Lubricant: **CASE AKCELA GEAR LUBE 135 H EP 80W-90**

Quantity: **1.1 L (0.3 US gal)** (per travel reduction gear)

1. Park the machine on flat, horizontal ground.
2. Move the machine so that the drain plug **(1)** comes down to the lowest position.
3. Stop the engine, and remove the starter key.
4. Place a container with an appropriate capacity under the travel reduction gear.
5. Remove the level plug **(2)**.
6. Remove the drain plug **(1)**.

NOTE: Check the condition of the drained oil. If there are pieces of metal or foreign objects in the oil, consult the **CASE CONSTRUCTION** dealer.

7. Replace the O-ring seal of the drain plug **(1)**. Insert the drain plug **(1)** with seal tape wrapped around it. Add oil through port **(2)** until the oil comes up to the bottom edge of the port.
8. Replace the O-ring seal of the level plug **(2)**. Insert the level plug **(2)** with seal tape wrapped around it.
9. Repeat steps **2** to **8** for the other travel reduction gear.
10. Run the machine slowly to check that there are no leaks.



SMIL15CEX9565AA 1

Pump outlet hoses

Check the outlet hose of main pump: Every 2 years or every **4000 h** (whichever comes first)

Checking the hydraulic system piping

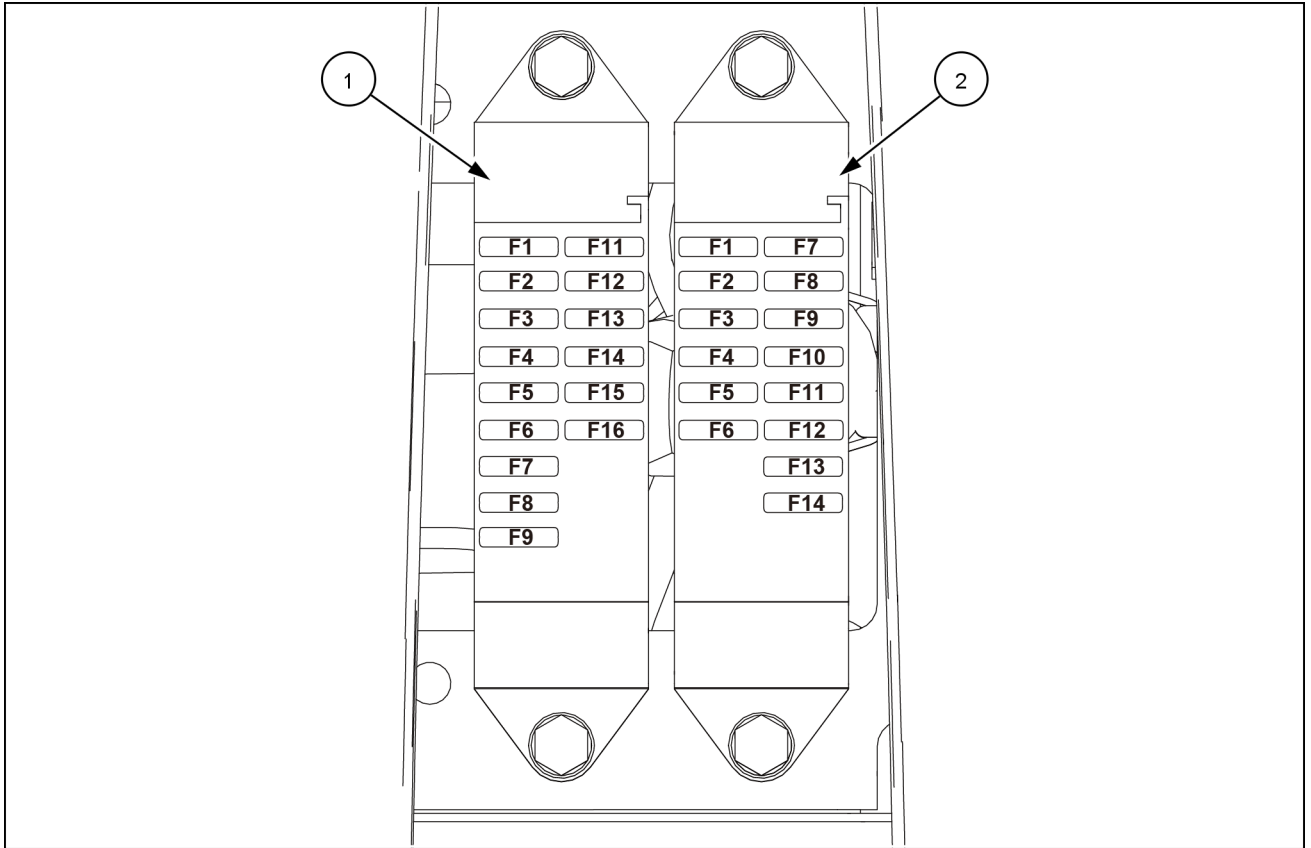
Make sure there are no leaks from the hydraulic system hoses, pipes, plugs, connections and fittings and check that all nuts and screws are correctly tightened. In the event of problems, repair, change or tighten the component (s) concerned.

Hydraulic hoses

Check the boom, arm, and bucket cylinder hose: Every 2 years or every **4000 h** (whichever comes first)

Checking the hydraulic system piping

Make sure there are no leaks from the hydraulic system hoses, pipes, plugs, connections and fittings and check that all nuts and screws are correctly tightened. In the event of problems, repair, change or tighten the component (s) concerned.



SML17CEX0556FA 3

Fuse functions

Fuse box (1)	Fuse box (2)
(F1) Key switch 10 A	(F1) Seat heater 10 A
(F2) Accessories 10 A	(F2) Wiper and washer 15 A
(F3) GPS controller 10 A	(F3) Cigar lighter 10 A
(F4) Monitor 10 A	(F4) DC converter 10 A
(F5) Controller 10 A	(F5) Field view monitor 10 A
(F6) Gate lock lever 10 A	(F6) Spare 10 A
(F7) Air conditioner unit 5 A	(F7) Beacon 10 A
(F8) Air conditioner blower motor 15 A	(F8) Lamp (cab) 15 A
(F9) Air conditioner compressor 5 A	(F9) Lamp (boom, housing) 15 A
(F11) Engine controller 20 A	(F10) Option line 10 A
(F12) Backup (monitor) 10 A	(F11) Spare 10 A
(F13) Backup (radio) 10 A	(F12) Indicator 10 A
(F14) Solenoid 15 A	(F13) Optional controller 10 A
(F15) Proportional solenoid 15 A	(F14) Backup switch 5 A
(F16) Horn 10 A	

NOTE: if CASE CONSTRUCTION SiteWatch™ Telematics system is equipped, a dedicated 5 A fuse is added outside of the main fuse box. The fuse connector is located underneath the panels behind the operator's seat.

Fuel

Use only Ultra-Low Sulfur Diesel (S10) that meets **EN 590** specifications.

Using other types of fuel may lead to stalled engine output or deterioration in fuel economy.

NOTICE: *The warranty should be invalid if any serious defect is caused by usage of any other fuel. Using any fuel other than the prescribed type will cause damages to the fuel supply system, to the fuel injection system, to the engine block, and to the exhaust after treatment system. CASE CONSTRUCTION will not be responsible to any of such damages.*

If the temperature drops below the fuel cloud point, output deficiency or engine start problems may occur due to wax crystals.

NOTICE: *If operating in severe winter climate, consult the fuel supplier or the CASE CONSTRUCTION dealer for specific diesel fuel according to the **EN 590** to be used.*

The diesel fuel to be used on the machine should:

- be free from dust particles, even minute ones.
- have the proper viscosity.
- have a high cetane number.
- present great fluidity at low temperatures.
- have low sulfur content.
- have very little residual carbon.

NOTICE: *Never use a mix of diesel fuel and old engine oil. The fuel injection system and the exhaust after treatment system will be severely damaged.*

NOTICE: *consult the fuel supplier or the CASE CONSTRUCTION Dealer regarding appropriate use of fuel additives.*

NOTICE: *in order to prevent condensation during cold weather, fill the fuel tank to full after completing the day's work.*

Fuel storage:

Long storage can lead to the accumulation of impurities and condensation in the fuel. Engine trouble can often be traced to the presence of water in the fuel. The storage tank must be placed outside and the temperature of the fuel should be kept as low as possible. Drain off water and impurities regularly.

Disposal of fluids, lubricants, and spare parts

Fluids, lubricants and spare parts used on the machine are not fully compatible with the environment. Make sure to carry out all maintenance operations using appropriate tools, in order to avoid any risk of damaging the environment.

NOTE: *for example, make sure that the receptacle for collecting oil to be replaced is not leaking.*

Never spread fluids or lubricants on the ground or into water. Consult the CASE CONSTRUCTION Dealer or the Local Environmental Agency in order to obtain information on the correct method of disposing fluids and lubricants used on the machine.

Never throw away spare parts as filters or batteries. Consult the CASE CONSTRUCTION Dealer or the Local Environmental Agency in order to obtain information on the correct method of disposing filters, batteries or other spare parts used on the machine.

9 - ACCESSORIES

Direct fit buckets

Direct fit buckets application as function of the arm (CX85D SR with blade)

General Purpose buckets			Arm	
Capacity ISO 7451 (Heaped)	Width	Mass	1.69 m (66.54 in)	2.19 m (86.22 in)
0.10 m ³ (0.13 yd ³)	300 mm (12 in)	125 kg (276 lb)	○	○
0.12 m ³ (0.16 yd ³)	350 mm (14 in)	130 kg (287 lb)	○	○
0.15 m ³ (0.20 yd ³)	400 mm (16 in)	140 kg (309 lb)	○	○
0.17 m ³ (0.22 yd ³)	450 mm (18 in)	145 kg (320 lb)	○	○
0.19 m ³ (0.25 yd ³)	500 mm (20 in)	150 kg (331 lb)	○	○
0.24 m ³ (0.31 yd ³)	600 mm (24 in)	170 kg (375 lb)	○	○
0.32 m ³ (0.42 yd ³)	750 mm (30 in)	200 kg (441 lb)	○	○
0.37 m ³ (0.48 yd ³)	850 mm (33 in)	220 kg (485 lb)	●	●
0.44 m ³ (0.58 yd ³) (*)	1000 mm (39 in)	260 kg (573 lb)	■	■

Ditch cleaning buckets			Arm	
Capacity ISO 7451 (Heaped)	Width	Mass	1.69 m (66.54 in)	2.19 m (86.22 in)
0.27 m ³ (0.35 yd ³)	1200 mm (47 in)	170 kg (375 lb)	○	○
0.35 m ³ (0.46 yd ³)	1500 mm (59 in)	200 kg (441 lb)	○	●

(*) Not suitable for digging application

- Density of material up to 2 t/m³
- Density of material up to 1.6 t/m³
- Density of material up to 1.2 t/m³

Auxiliary hydraulic circuits pressure release

⚠ WARNING

Escaping fluid!

Hydraulic fluid 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 or performing work on the hydraulic system. Before applying pressure, make sure all connections are tight and all 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.

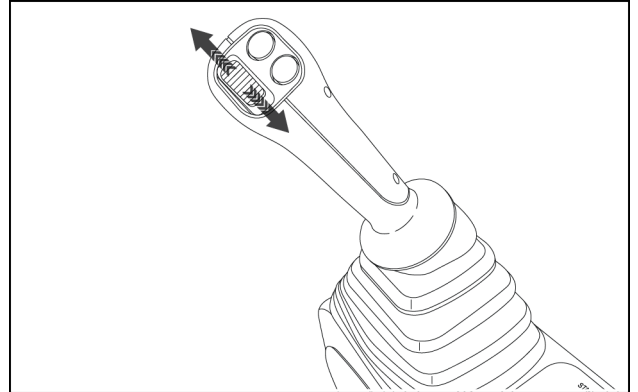
Failure to comply could result in death or serious injury.

W0178A

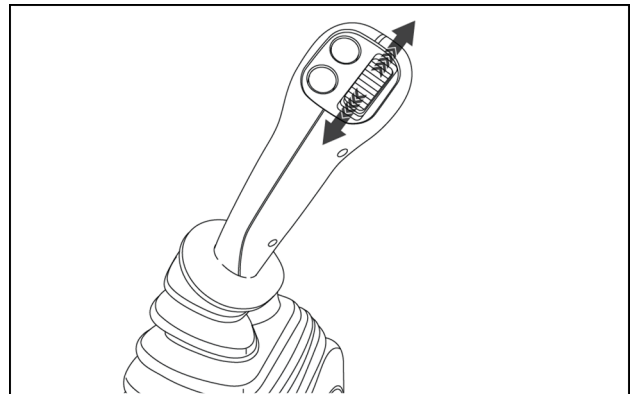
Auxiliary hydraulic circuits are high pressure hydraulic systems. Always release the pressure before connecting or disconnecting the hydraulic hoses between the machine and the attachment.

If the proportional switches are equipped, proceed as follows:

1. Place the machine on flat and level ground.
2. Lower the attachment to the ground and stop the engine.
3. Turn the starter key to ON position.
4. Set the gate lock lever in unlock position.
5. Slide the right proportional switch and the left proportional switch up and down three times approximately to release the pressure.
6. Turn the starter key to OFF position.



SMIL15CEXY965AB 13



SMIL15CEXY964AB 14

When operating the crusher up high with the boom fully raised, be careful of falling objects.



NH0214 38

Servicing instructions

⚠ WARNING

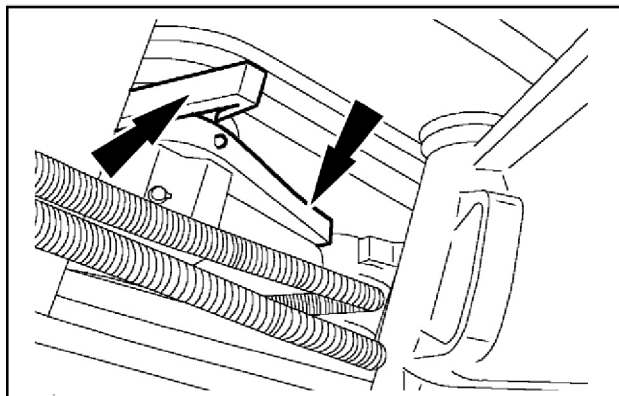
**Improper operation or service of this machine can result in an accident.
If you do not understand a maintenance procedure, or doubt your ability to perform a maintenance procedure correctly, see your authorized dealer.
Failure to comply could result in death or serious injury.**

W0157A

Modification of the quick coupler without prior authorization can cause serious injury. Do not carry out any modification without authorization. Consult your CASE CONSTRUCTION Dealer.

Daily checks:

- Check that the locking bar functions correctly and that it is not fouled by foreign matter.
- Check the quick coupler cylinder hoses for free movement.
- Check for any signs of cracks.



SMIL13CEX2822AB 2

Incorrect functioning

NOTICE: *make sure that the attachment is in full contact with the ground before carrying out the following checks.*

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

- That no pin is broken, bent or lost.
- That no foreign matter is fouling the safety device.
- That the cylinder is not damaged or bent.
- That there are no leaks from hydraulic hoses, etc.

If the problem persists after all these checks, consult your CASE CONSTRUCTION Dealer.

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