

Instruction manual

Operating & Maintenance

4812159501_D.pdf

Vibratory roller
CC424CHF/524CHF
CC4200C/5200C

Engine
Cummins QSB 4.5 (IIIA/T3)
Cummins QSB 4.5 (IIIB/T4i)

Serial number
10000321xxA009398 - 020128
10000346xxA011450 - 020102

10000323xxA013269 - 015081
10000348xxA011737 - 018007



Translation of original instruction

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

Engine	
Replacing oil filter.....	135
The engine fuel filter - replacement/cleaning	136
Fuel tank	
- Cleaning.....	136
Drum - Oil change.....	137
Drum gear - Oil change.....	137
Drum gear - Checking the oil level	138
Wheel gear - Oil change	138
Wheel gear - Checking the oil level/Filling the oil.....	139
Hydraulic filter	
Change.....	139
Hydraulic reservoir	
Fluid change.....	140
Watering system	
- Draining.....	141
Water tank - Cleaning	141
Steering joint - Check.....	142
Cab	
Fresh air filter - Replacing.....	142
Air conditioning (Optional)	
- Overhaul	143
Air conditioning (Optional)	
Drying filter - Inspection	143
Pivot bearing (Optional) - Lubrication.....	144
Steering hitch - Tightening	144

Safety (Optional)

Air conditioning

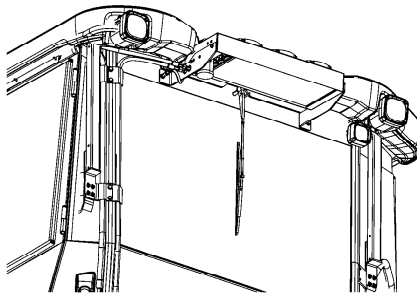


Fig. Air conditioning (ACC)



The system contains pressurized refrigerant. It is forbidden to release refrigerants into the atmosphere.



Work on the refrigerant circuit is only to be carried out by authorized companies.



The cooling system is pressurized. Incorrect handling can result in serious personal injury. Do not disconnect or undo the hose couplings.



The system must be re-filled with an approved refrigerant by authorized personnel when necessary. See decal on or in the vicinity of the installation.

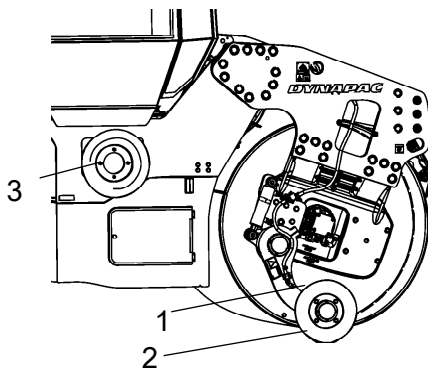


Fig. Edge cutter/compactor
 1. Transport position
 2. Operating position
 3. Holder for cutter/compactor wheel.

Edge cutter/compactor



The operator must make sure that nobody is in the area of operation while the machine is in use.



The edge cutter consists of rotating components and there is a risk of being crushed.



The tool must be returned to the transport position (raised position) (1) every time it has been used.



If the edge cutter and its parts are dismantled, make sure that it is set in a relieved position and resting on the ground.

Centrifugal force	High amplitude	High amplitude (CE-2006)	Low amplitude	Low amplitude (CE-2006)
CC424CHF, CC4200C	142	99	93	54 (kN)
	31 950	22 275	20 925	12 150 (lb)
CC524CHF, CC5200C	157	107	101	56 (kN)
	35 325	24 075	22 725	12 600 (lb)

Propulsion

Speed range	0-12 km/h	0-7.5 mph
Climbing capacity (theoretical)		
CC424CHF, CC4200C	39 %	
CC524CHF, CC5200C	35 %	

General

Engine

Manufacturer/Model	Cummins QSB 4.5	Water-cooled turbo diesel
Power output (SAE J1995), 2200 rpm	82 kW (IIIA/T3, IIIB/T4i)	110 hp
	93 kW (IIIA/T3)	125 hp
	97 kW (IIIB/T4i)	130 hp
	113 kW (IIIA/T3)	152 hp
	119 kW (IIIB/T4i)	160 hp
Engine speed		
- idling	900 rpm	
- loading/unloading	1600 rpm	
- work/transport	2 200 rpm	



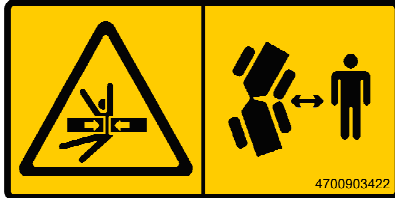
Tier 4i/Stage IIIB Cummins engines require the use of Ultra Low Sulphur Diesel (ULSD) fuel, which has a sulphur content of 15 ppm (parts per million) or less. A higher sulphur content will cause operating problems and put the useful life of components at risk, which can lead to engine trouble.

Tires

Tire dimensions	11,00 R20, 13/80 R20
Air pressure (kPa)	200
	29 psi

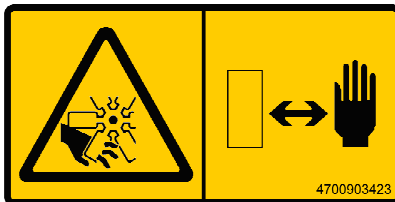
Safety decals

Always make sure that all safety decals are completely legible, and remove dirt or order new decals if they have become illegible. Use the part number specified on each decal.



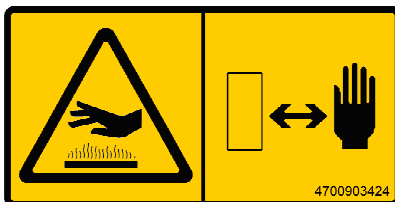
4700903422
Warning - Crush zone, articulation/drum.

Maintain a safe distance from the crush zone.
(Two crush zones on machines fitted with pivotal steering)



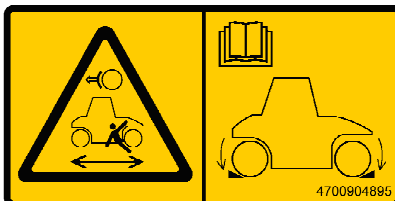
4700903423
Warning - Rotating engine components.

Keep your hands at a safe distance.



4700903424
Warning - Hot surfaces in the engine compartment.

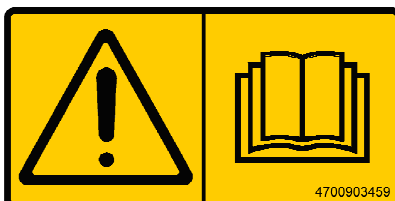
Keep your hands at a safe distance.



4700904895
Warning - Brake disengagement

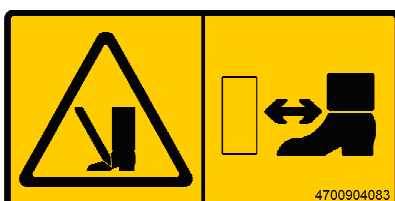
Study the towing chapter before disengaging the brakes.

Danger of being crushed.



4700903459
Warning - Instruction manual

The operator must read the safety, operation and maintenance instructions before operating the machine.



4700904083
Warning - Edge cutter (option)

Warning of rotating parts.

Maintain a safe distance from the crush zone.



Fig. Status screen

A status screen provides information on the fuel level, water level in the sprinkler tank, machine hours and voltage level. Fuel and water levels are specified in per cent (%).

This screen is active until the Diesel engine is started or an active screen choice is made via the function buttons below the display.



Fig. Main screen/Working screen

If the engine is started before any active screen choice is made the display will switch over to main screen.

This screen gives an overview and is kept during work:

- The speed is shown in the middle of the screen.
- The engine speed, vibration frequencies for forward and reverse (Option), strokes/meter - Impactometer (Option), and asphalt temperature (Option), are shown in the corner.













Fig. Main screen/Working screen with menu selection buttons (1)

A menu field is shown by pressing one of the menu select buttons. The field is visible for a short while, if no selection is made the field fades out. Menu field will appear again upon pressing either one of the selection buttons (1).

Example of menu field.



Function description of instruments and controls in the cab

No	Designation	Symbol	Function
1	Heater control		Turn to the right to increase heating. Turn to the left to reduce heating.
2	Ventilation fan, switch		In the left position, the fan is off. Turning the knob to the right increases the volume of air entering the cab.
3	Air conditioning, switch		Starts and stops the air conditioning.
4	Cab air recirculation, switch	 	Pressing the top opens the air damper so that fresh air comes into the cab. Pressing the bottom closes the damper so that the air recirculates inside the cab.
5	Front wiper, switch		Press to operate the front screen wiper.
6	Front and rear window screen washers, switch		Press the upper edge to activate the front screen washers. Press the lower edge to activate the rear screen washers.
7	Rear wiper, switch		Press to operate the rear screen wiper.
8	Fuse box		Contains fuses for the electrical system in the cab.
14	Defroster nozzle		Turn the nozzle to direct the flow of air.
15	Hammer for emergency exit		To escape from the cab in an emergency, release the hammer and break the opening windows on the right-hand side.

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

Interlock

The roller is equipped with Interlock.

The diesel engine will switch off after 7 seconds if the operator gets off the seat when going forwards/backwards.

If the control is in neutral when the operator stands up a buzzer will go on until the parking brake is activated.

If the parking brake is activated, the diesel engine will not stop if the forward/reverse lever is moved out of neutral.

The diesel engine will switch off immediately if for any reason the forward/reverse lever is moved out of neutral when the operator is not sitting down and the parking brake has not been activated.



Sit down for all operations!

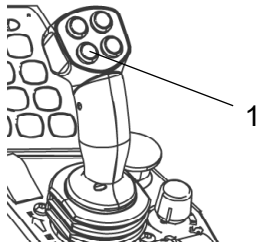


Fig. F/R lever
1. Vibration ON/OFF

Manual vibration - Switching on

! Never activate vibration when the roller is stationary. This can damage both the surface and the machine.

Engage and disengage vibration using the switch (1) on the front of the forward/reverse lever.

Always switch off vibration before the roller comes to a standstill.

When compacting thin layers of asphalt up to approx. 50 mm (2 inches) thick, the best results are achieved with low amplitude/high frequency.

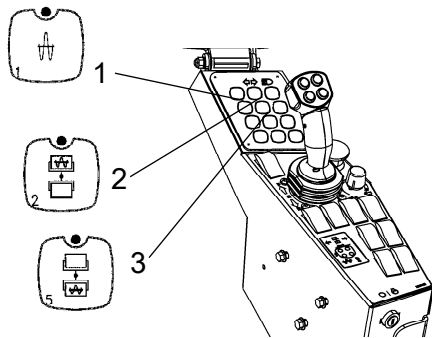


Fig. Control panel
1. High amplitude
2. Vibration front drum
3. Vibration rear drum

Amplitude/frequency - Changeover

! The amplitude setting must not be change when vibration is in operation
Switch the vibration off and wait until vibration stops before changing amplitude.

By pressing button (1) high amplitude is achieved.

The buttons (2) and (3) are used to get vibrations either on front or rear drum or on both.

- (2) vibration on front drum.

- (3) vibration on rear drum.

Braking

Normal braking

Press the switch (1) to switch off the vibration.

Move the forward/reverse lever (2) to the neutral position to stop the roller.

Always activate the parking brake (3), before leaving the operator platform.

! *When starting and driving a machine that is cold, remember that the hydraulic fluid is also cold and that braking distances can be longer than normal until the machine reaches the working temperature.*

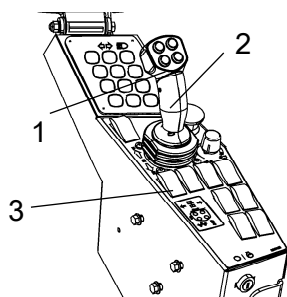


Fig. Control panel
1. Vibration On/Off switch
2. Forward/Reverse lever
3. Parking brake

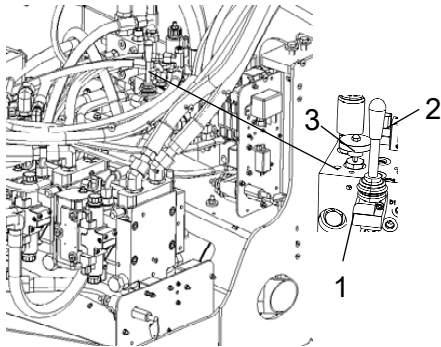


Fig. Brake disengagement valve
 1. Valve
 2. Pump arm
 3. Knob

Short distance towing when the engine is inoperative.

 **Chock the drums to prevent the roller from moving when the brakes are hydraulically disengaged.**


Open both towing valves as described earlier.


The brake disengagement pump is located behind the left door of the engine compartment.

Make sure that the valve (1) is closed, this is done by tightening clockwise with the knob (3). Pump with the pump arm (2) until the brakes are disengaged.

Ensure that the valve is reset into open position after finished towing. This is done by turning the knob counter clockwise to full extracted position.

Towing the roller

 **When towing/recovering, the roller must be braked by the towing vehicle. A towing bar must be used as the roller has no brakes.**

 The roller must be towed slowly, max. 3 km/h (2 mph) and only towed short distances, max. 300 m (330 yards).

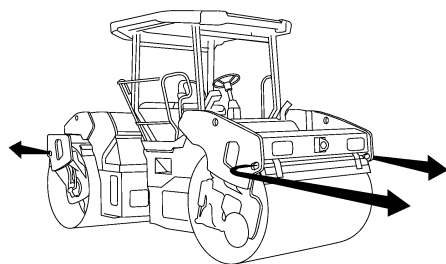


Fig. Towing

When towing/retrieving a machine, the towing device must be connected to both lifting holes in the diagram.

The load is uniformly divided between the two lugs.

The pulling forces should act parallel to the machine's longitudinal axis, as shown in the figure. See table below for maximum permitted pulling force.

Model	kN	lbf
CC224-384, CC2200-3800	140	31 500
CC424-624, CC4200-6200	190	42 750

 Reverse the towing preparations made to the hydraulic pump and/or the motor.

Maintenance - Maintenance schedule

Service and maintenance points

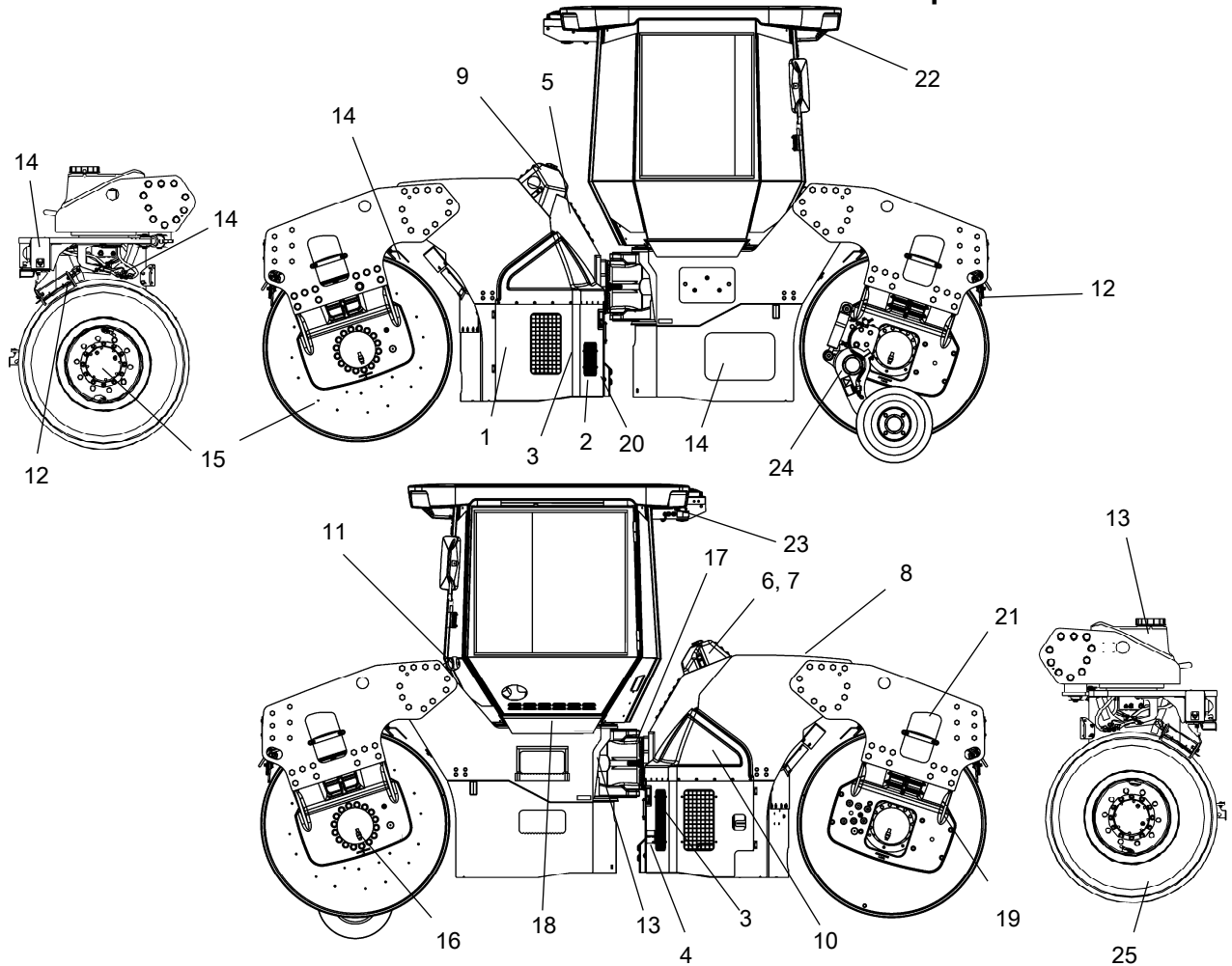


Fig. Service and maintenance points

- | | | |
|-----------------------------|----------------------------|---------------------|
| 1. Engine oil | 9. Coolant | 17. Steering joint |
| 2. Oil filter | 10. Air cleaner | 18. Seat bearing |
| 3. Fuel filter | 11. Refueling point | 19. Rubber element |
| 4. Hydraulic filter | 12. Scrapers | 20. Battery |
| 5. Hydraulic fluid level | 13. Water tank(s), filling | 21. Pivot bearing |
| 6. Hydraulic fluid, filling | 14. Watering system | 22. Cab, air filter |
| 7. Hydraulic tank cap | 15. Drum gear/Wheel gear | 23. Cab, AC |
| 8. Hydraulic fluid cooler | 16. Drum oil | 24. Edge cutter |
| | | 25. Wheel |

General

Periodic maintenance should be carried out after the number of hours specified. Use the daily, weekly etc. periods where number of hours cannot be used.

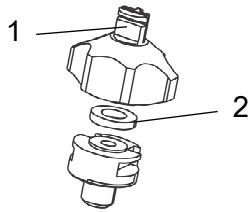


Figure. Nozzle
 1. Sleeve, nozzle, filter
 2. Packing

Sprinkler system/Drum
Cleaning of sprinkler nozzle

Dismantle the blocked nozzle by hand.

Blow the nozzle and fine filter (1) clean using compressed air. Alternatively, fit replacement parts and clean the blocked parts later on.

Nozzle	Colour	Ø (mm)	l/min (2.0 bar)	gal/min (40 psi)
Standard	yellow	0.8	0.63	0.20
Option	blue	1.0	1.00	0.31
Option	red	1.2	1.25	0.39
Option	brown	1.3	1.63	0.50

After inspecting and carrying out any necessary cleaning, start the system and check that it works.



Wear protective goggles when working with compressed air.

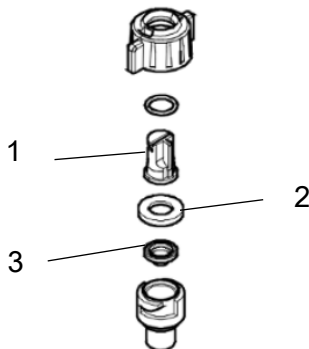


Figure. Nozzle
 1. Nozzle
 2. Gasket
 3. Filter

Sprinkler system/Drum
Cleaning of sprinkler nozzle

Dismantle the blocked nozzle by hand.

Blow the nozzle (1) and fine filter (3) clean using compressed air. Alternatively, fit replacement parts and clean the blocked parts later on.

Nozzle	Colour	l/min (at 2.0 bar)	gal/min (at 40 psi)
Standard	yellow	0.63	0.20
Option	blue	0.98	0.30
Option	red	1.31	0.40
Option	brown	1.63	0.50

After inspecting and carrying out any necessary cleaning, start the system and check that it works.



Wear protective goggles when working with compressed air.



Tires - Tire pressure

Check the tire pressure with a pressure gauge.

Make sure that the tires have the same pressure.

Recommended pressure: See Technical Specifications.

The figure shows the position of the air valve on the outer tires.

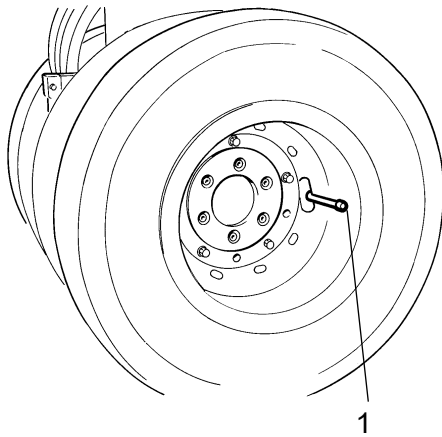


Fig. Outer wheels
1. Air valve

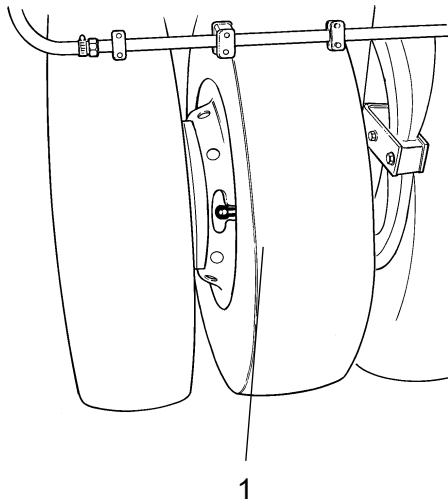


Fig. Inner wheels
1. Air valve

The figure shows the position of the air valve on the inner tires.



Check the Safety Manual that accompanies the roller before filling the tires with air.



The engine fuel filter - replacement/cleaning

The fuel filter is placed on the left side of the engine compartment.

Unscrew the bottom and drain off any water, and then replace the filter unit.

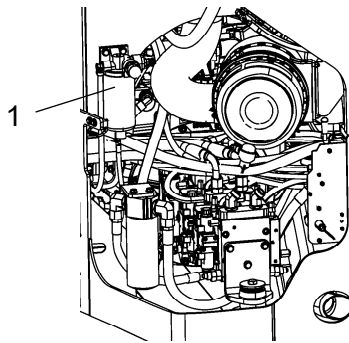


Figure. Engine compartment, left side
1. Prefilter

Replace the fuel filter, located on the right side of the engine compartment.

Start the engine and check that the filter is well sealed.

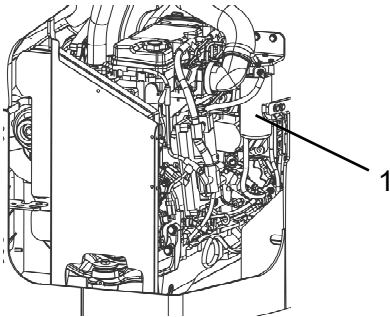


Figure. Engine compartment, right side.
1. Fuel filter



Drum - oil level Inspection - filling

Position the roller with the filler plug (1), the large plug, at the highest point in its rotation.

Wipe clean around the level plug (2), the small plug, and remove the plug.

Make sure that the oil level is up to the lower edge of the hole. Top off with fresh oil if the level is low. Use oil as specified in the lubricants specification.

When removing the filler plug, wipe any metal accumulated on the plug magnet off. Make sure that plug seals are intact and replace with new seals if not.

Refit the plugs and check that they are tight by driving the roller and then rechecking.

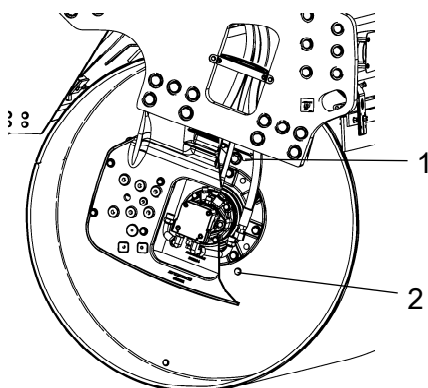


Fig. Drum, vibration side
1. Filler plug
2. Level plug

Rubber elements and attachment screws Check

Check all rubber elements (1). Replace all elements if 25% or more than 25% of the number on one side of the drum have cracks deeper than 10-15 mm (0.4-0.6 in).

Check using a knife blade or pointed object.

Check also that the attachment screws (2) are tightened.

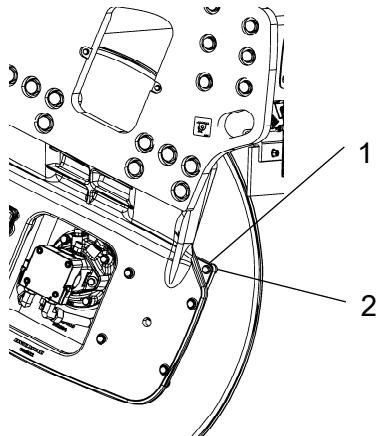


Fig. Drum, vibration side
1. Rubber element
2. Attachment screws



Seat bearing - Lubrication



Keep in mind that the chain is a vital part of the steering mechanism.

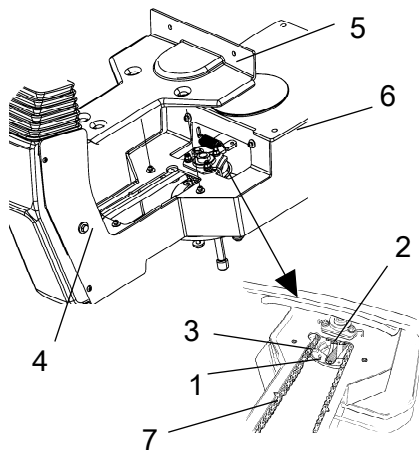


Figure. Seat bearing
1. Grease nipple
2. Gearwheel
3. Steering chain
4. Adjusting screw
5. Cover
6. Slide rails
7. Marking

Remove the cover (5) to access the lubrication nipple (1). Lubricate the operator seat slew bearing with three strokes of a hand-operated grease gun.

Clean and grease the chain (3) between the seat and the steering column.

Also grease the seat slide rails (6).

If the chain is slack on the sprocket (2), loosen the screws (4) and move the steering column forward. Tighten the screws and check chain tension.

Do not tension the chain too tightly. It should be possible to move the chain about 10 mm (0.4 in) to the side with a forefinger/thumb at the marking (7) in seat frame. Fit the chain lock at the bottom.



If the seat starts to be stiff when adjusting, it should be lubricated more often than specified here.

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