DYNAPAC
FAYAT GROUP

Instruction manual

Operating & Maintenance
4812161501_C.pdf

Vibratory roller
CC900S

Engine
Kubota D1105-E4B
Kubota D1105-E4B T4f /Stage V

Serial number
10000359xxA013639 -
10000442xxA023521 -

Translation of original instruction

Reservation for changes
Printed in Sweden

EN

Introduction

The machine

Dynapac CC900S is a self-propelled vibratory tandem roller in the 1,6 metric tonnes class featuring 900 mm wide drums. The machine is equipped with drive, brakes, and vibration on both drums.

Intended use

CC900S is primarily used for smaller compaction works, such as minor roads, sidewalks, cycle ways and minor parking places.

Warning symbols

WARNING ! Marks a danger or a hazardous procedure that can result in life threatening or serious injury if the warning is ignored.

CAUTION ! Marks a danger or hazardous procedure that can result in damage to the machine or property if the warning is ignored.

Safety information

It is recommended to at least train operators in handling and daily maintenance of the machine in accordance with the instruction manual. Passengers are not allowed on the machine, and you must sit in the seat when operating the machine.

The safety manual supplied with the machine must be read by all roller operators. Always follow the safety instructions. Do not remove the manual from the machine.

We recommend that the operator reads the safety instructions in this manual carefully. Always follow the safety instructions. Ensure that this manual is always easily accessible.

Read the entire manual before starting the machine and before carrying out any maintenance.

Jump starting

Do not connect the negative cable to the negative terminal on the dead battery. A spark can ignite the oxy-hydrogen gas formed around the battery.

Check that the battery used for jump starting has the same voltage as the dead battery.

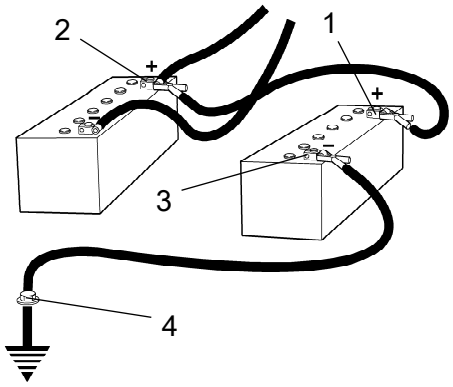


Fig. Jump starting

Turn the ignition and all power consuming equipment off. Switch off the engine on the machine which is providing jump start power.

First connect the jump start battery's positive terminal (1) to the flat battery's positive terminal (2).Then connect the jump start battery's negative terminal (3) to, for example, a bolt (4) or the lifting eye on the machine with the flat battery.

Start the engine on the power providing machine. Let it run for a while. Now try to start the other machine. Disconnect the cables in the reverse order.

Machine description

Diesel engine

The machine is equipped with a water-cooled, straight three cylinder, four-stroke, turbocharged diesel engine.

Electrical system

The machine has the following control units (ECU, Electronic Control Unit) and electronic units.

- Main ECU (for the machine)

Propulsion system/Transmission

The propulsion system is a hydrostatic system with a hydraulic pump supplying two motors connected in parallel.
The motors drive the front and rear drums.

The speed of the machine is proportional to the deflection/angle of the control lever from neutral.

Brake system

The brake system consists of a service brake, secondary brake and parking brake.
The service brake is hydrostatisc and is activated by moving the control lever to neutral.

Secondary/Parking brake

The secondary and parking brake system consists of sprung multiple disc brakes in the motors. The brakes are released with hydraulic pressure and are operated with a switch on the instrument panel.

Steering system

The steering system is a hydrostatic system.
The control value on the steering column distributes the flow to the control cylinder, which actuates the articulation.
The steering angle is proportional to the deflection of the steering wheel.

ROPS

ROPS is the abbreviation for "Roll Over Protective Structure".

If any part of the ROPS structure's protective construction displays plastic deformation or cracks, the ROPS structure must be replaced immediately.

Never perform unauthorized modifications on the ROPS structure without first having discussed the modification with Dynapac's production unit. Dynapac

Locations - Control panel and controls

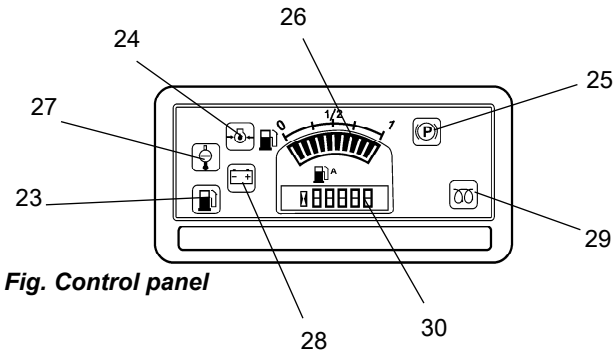


Fig. Control panel

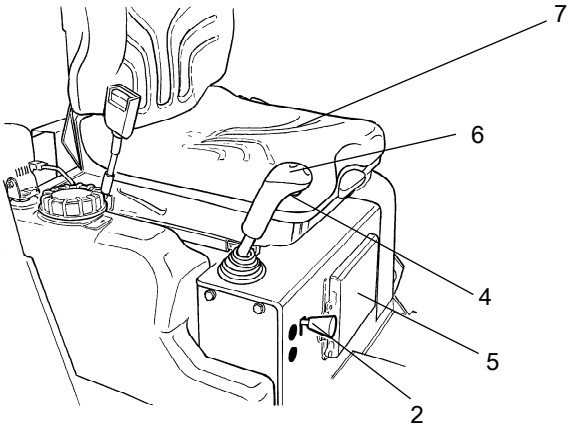


Fig. Operator position

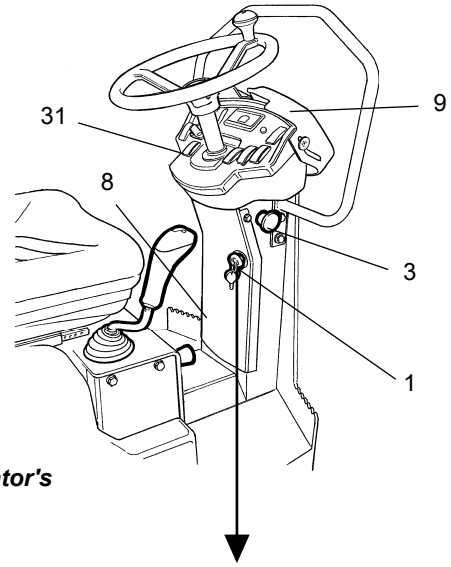
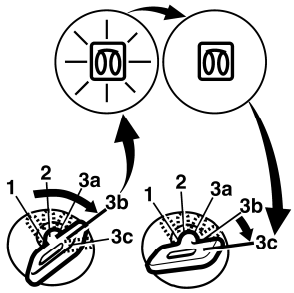


Fig. Operator's station



1	Starter switch	23	Low fuel level
2	Engine speed control	24	Oil pressure, engine
3	Emergency stop	25	Parking brake lamp
4	Vibration On/Off	26	Fuel level
5	Handbook compartment	27	Water temperature, engine
6	Forward/reverse lever	28	Battery/charging
7	Seat switch	29	Glow plug
8	Fuse box	30	Hourmeter
9	Instrument cover	31	Parking brake

Starting

Starting the engine

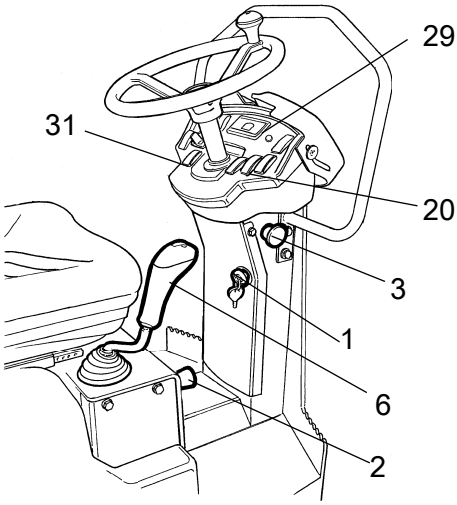


Figure. Control panel
1. Starter switch
2. Engine speed control
3. Emergency stop
6. Forward/Reverse lever
20. Vibration switch man/auto
29. Glow lamp
31. Parking brake

The operator must remain seated when starting.

Make sure that the emegency stop (3) is pulled out and the parking brake (31) is activated.

Set the forward/reverse lever (6) in neutral. The engine can only be started when the lever is in neutral.

Set the vibration switch (20) for manual/automatic vibration in (position O).

Do not run the starter motor for too long. If the engine does not start, wait a minute or so before trying again.

At high ambient temperatures, set the speed control (2) to the position just over idling.

Set the speed control to full speed when starting a cold engine. Preheating: Turn key to position II. When the glow lamp (29) goes off: Turn the starter switch (1) to the right. As soon as the engine starts, release the starter switch and reduce the engine speed to just over idling (because high revs can damage a cold engine). As soon as the engine is running smoothly, reduce the revs down to idling.

Warm up the engine at idling speed for a few minutes, although longer if ambient temperature is below +10°C (50°F).

Miscellaneous

Lifting

Locking the articulation

Before lifting the roller the steering joint must be locked to prevent it turning.

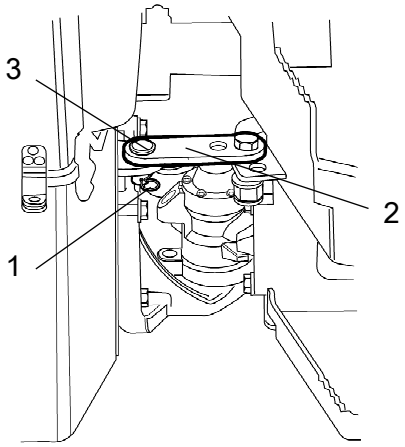


Fig. Steering joint
1. Cotter pin
2. Locking arm
3. Locking bolt

Turn the steering wheel to the straight ahead position.

Switch off the machine. Apply the parking brake.

Pull out the locking pin (1), turn the locking arm (2) to the front frame, secure the locking arm to the front frame half by inserting the locking bolt (3) through the bracket in the front frame and the locking arm.

Secure the position of the locking arm by refitting the locking pin (1).

Lifting the roller

The machine's gross weight is specified on the hoisting plate (1). Refer also to the Technical specifications.

Weight: refer to the hoisting plate on the roller

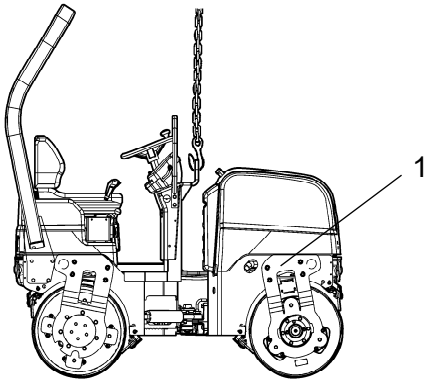


Fig. Roller prepared for lifting
1. Hoisting plate

Lifting gear such as chains, steel wires, straps, and lifting hooks must be dimensioned and used in accordance with the applicable safety regulations for lifting devices.

Stand well clear of the hoisted machine! Make sure that the lifting hooks are properly secured.

Maintenance - Lubricants and symbols

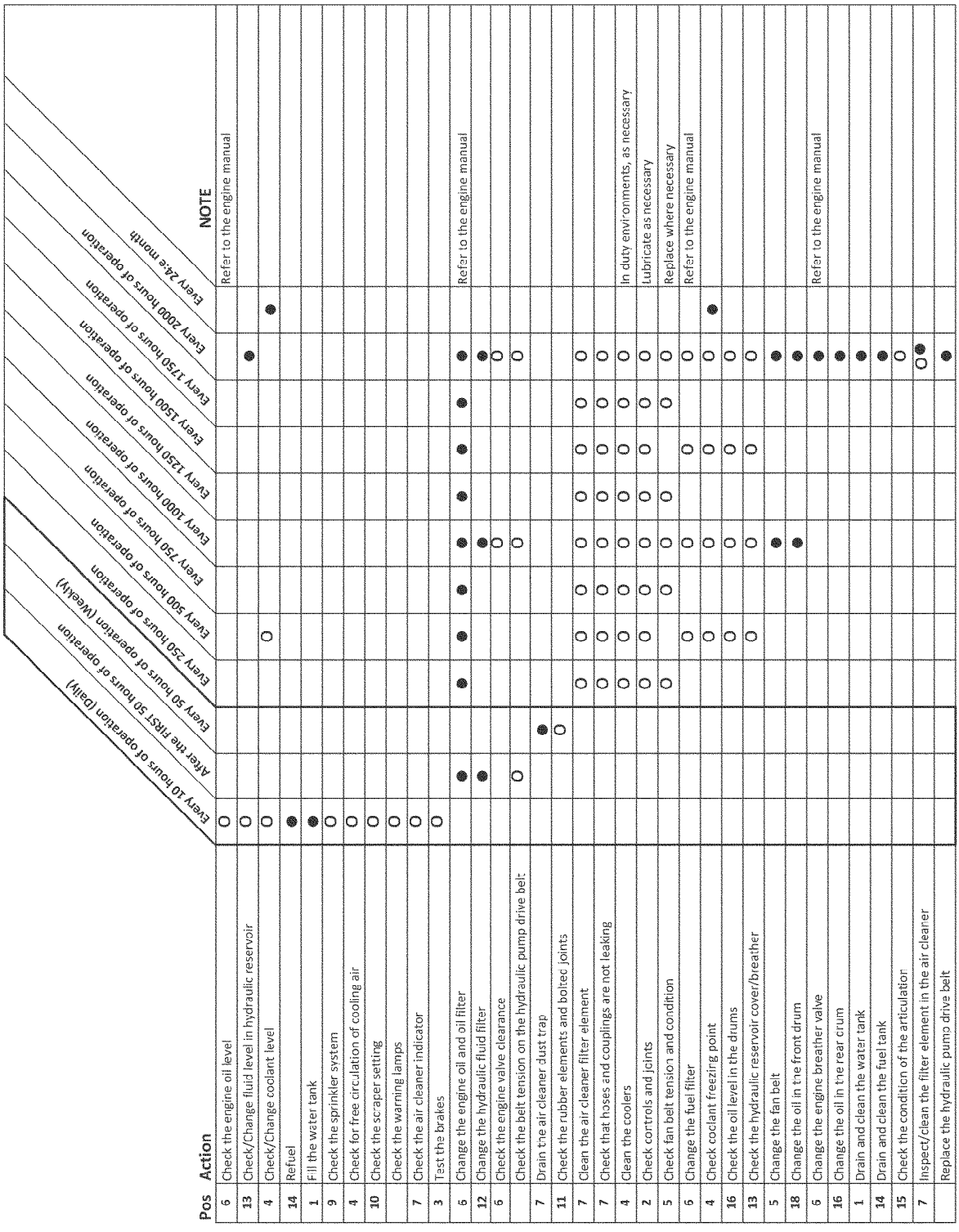
Fluid volumes

Hydraulic reservoir	12 liters	3,2 gal
Engine	5,1 liters	5.4 qts
Front drum	0,5 liters	0,53 qts
Rear drum	3,5 liters	3,7 qts

Always use high-quality lubricants and the amounts recommended. Too much grease or oil can cause overheating, resulting in rapid wear.

Other fuel and lubricants are required when operating in areas with extremely high or extremely low ambient temperatures. See the ‘Special instructions’ chapter, or consult Dynapac.

Service - Checklist



Pos	Action	Every 10 hours of operation (Daily)	After the FIRST 50 hours of operation (Weekly)	Every 50 hours of operation (Weekly)	Every 250 hours of operation	Every 500 hours of operation	Every 750 hours of operation	Every 1000 hours of operation	Every 1250 hours of operation	Every 1500 hours of operation	Every 1750 hours of operation	Every 2000 hours of operation	Every 24 month	NOTE
6	Check the engine oil level	O												Refer to the engine manual
13	Check/Change fluid level in hydraulic reservoir	O										●		
4	Check/Change coolant level	O			O								●	
14	Refuel	●												
1	Fill the water tank	●												
9	Check the sprinkler system	O												
4	Check for free circulation of cooling air	O												
10	Check the scraper setting	O												
	Check the warning lamps	O												
7	Check the air cleaner indicator	O												
3	Test the brakes	O												
6	Change the engine oil and oil filter		●		●	●	●	●	●	●	●	●		Refer to the engine manual
12	Change the hydraulic fluid filter		●				●					●		
6	Check the engine valve clearance						O					O		
	Check the belt tension on the hydraulic pump drive belt	O					O					O		
7	Drain the air cleaner dust trap			●										
11	Check the rubber elements and bolted joints			O										
7	Clean the air cleaner filter element				O	O	O	O	O	O	O	O		
7	Check that hoses and couplings are not leaking				O	O	O	O	O	O	O	O		
4	Clean the coolers				O	O	O	O	O	O	O	O		In duty environments, as necessary
2	Check controls and joints				O	O	O	O	O	O	O	O		Lubricate as necessary
5	Check fan belt tension and condition				O		O	O	O		O	O		Replace where necessary
6	Change the fuel filter					O		O		O		O		Refer to the engine manual
4	Check coolant freezing point					O		O		O		O	●	
16	Check the oil level in the drums					O		O		O		O		
13	Check the hydraulic reservoir cover/breather					O		O		O		O		
5	Change the fan belt							●				●		
18	Change the oil in the front drum							●				●		
6	Change the engine breather valve											●		Refer to the engine manual
16	Change the oil in the rear drum											●		
1	Drain and clean the water tank											●		
14	Drain and clean the fuel tank											●		
15	Check the condition of the articulation											O		
7	Inspect/clean the filter element in the air cleaner											O	●	
	Replace the hydraulic pump drive belt											●		

O Check ● Change

Maintenance - 50h

Every 50 hours of operation (Weekly)

Park the roller on a level surface. The engine must be switched off and the parking brake activated when checking or adjusting the roller, unless otherwise specified.

Ensure that there is good ventilation (air extraction) if the engine is run indoors. Risk of carbon monoxide poisoning.

Ensure that the engine cover is fully open when work is being carried out under it

After the first 50 hours of operation, the oil filters should be changed.

Air cleaner - emptying

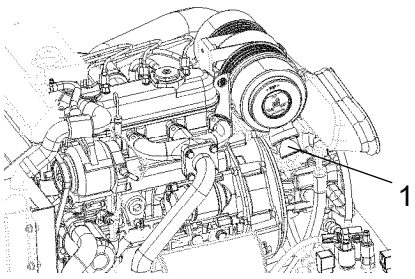


Fig. Air cleaner
1. Dust trap

Empty the air cleaner dust trap (1) through pressing the rubber bellows using the fingers. Check also that the air hoses are intact.

Clean the air cleaner when operated in extremely dusty environments .

Refer also to the section in the manual on operation.

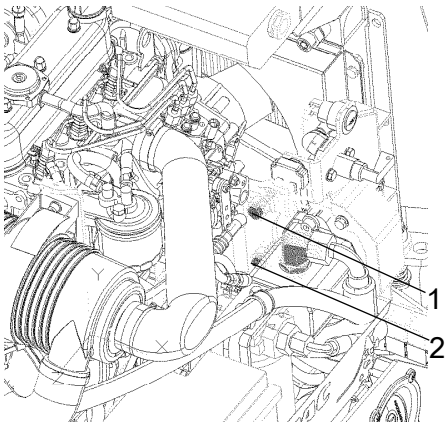


Fig. Engine compartment
1. Screw
2. Screw

Belt tension on the hydraulic pump drive belt - Check

If the hydraulic pump drive belt can be pressed in 5-6 mm between the pulleys with a force of 50 Nm, then the belt is correctly tensioned.

Do as follows to tension the belt:

- Undo the screws (1) and (2).

- Press over the hydraulic pump so that the belt tensions to the specified extent.

- Tighten screw (1) and then screw (2).

- Check that the belt still has the correct tension after tightening.

Replace the belt when necessary, or after 2000 h.

Maintenance - 2000h

Performed after 2000 operating hours (every two years)

Park the roller on a level surface. The engine must be switched off and the parking brake activated when checking or adjusting the roller, unless otherwise specified.

Ensure that there is good ventilation (air extraction) if the engine is run indoors. Risk of carbon monoxide poisoning.

Ensure that the engine cover is fully open when work is being carried out under it

Hydraulic fluid cooler - Cleaning

Clean the hydraulic fluid cooler's cooling flanges, ideally with compressed air. Blow the cooler clean by blowing air from the inside outwards.

Wear gloves and eye protectors when working with compressed air.

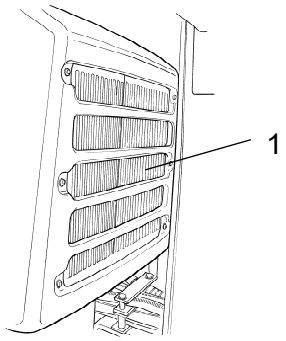


Fig. Engine compartment
1. Hydraulic fluid cooler