

Instruction manual

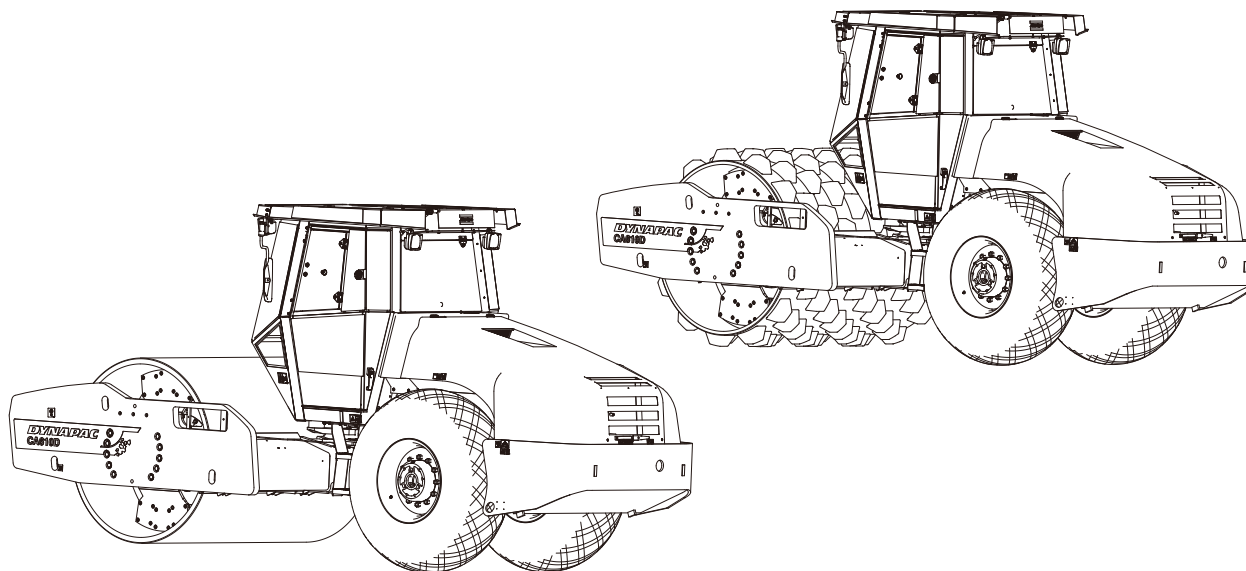
Operating & Maintenance

4812273257-EN.pdf

**Vibratory roller
CA610**

**Engine
Cummins 6BTAA5.9-C170**

**Serial number
10000128x0C004239 -**



The Dynapac CA610 is a roller in the 18-ton class. CA610 is available in D (smooth drum) and PD (padfoot drum) versions. CA610D is intended for the compaction of rockfill. The main area of application for the CA610PD is on cohesive material and weathered stone material.

All types of base courses and subbase courses can be compacted deeper and the interchangeable drums, D to PD, and vice versa, facilitate even greater variety in the range of application.

The cab and safety-related accessories are described in this manual.

Translation of original instruction

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Safety - General instructions

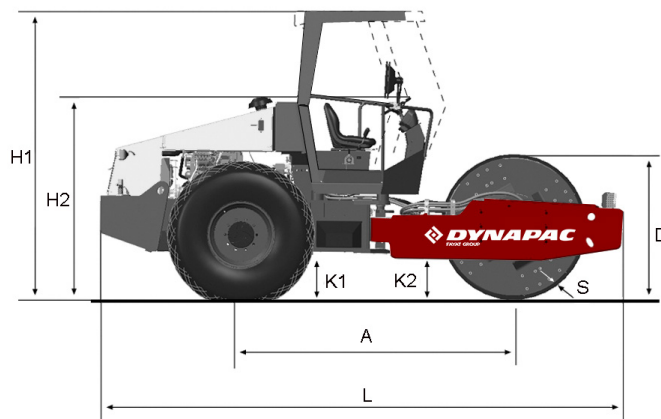
(Also read the safety manual)



1. The operator must be familiar with the contents of the OPERATION section before starting the roller.
2. Ensure that all instructions in the MAINTENANCE section are followed.
3. Only trained and/or experienced operators are to operate the roller. Passengers are not permitted on the roller. Remain seated at all times when operating the roller.
4. Never use the roller if it is in need of adjustment or repair.
5. Only mount and dismount the roller when it is stationary. Use the intended grips and rails. Always use the three-point grip (both feet and one hand, or one foot and both hands) when mounting or dismounting the machine. Never jump down from the machine.
6. The ROPS (Roll Over Protective Structure) should always be used when the machine is operated on unsafe ground.
7. Drive slowly in sharp bends.
8. Avoid driving across slopes. Drive straight up or straight down the slope.
9. When driving close to edges, ditches or holes, make sure that at least 2/3 of the drum width is on previously compacted material (solid surface).
10. Make sure that there are no obstacles in the direction of travel, on the ground, in front of or behind the roller, or overhead.
11. Drive particularly carefully on uneven ground.
12. Use the safety equipment provided. The seat belt must be worn on machines fitted with ROPS/ROPS-cab.
13. Keep the roller clean. Clean any dirt or grease that accumulates on the operator platform immediately. Keep all signs and decals clean and legible.
14. Safety measures before refueling:
 - Stop the engine
 - Do not smoke.
 - No naked flames in the vicinity of the roller.
 - Earth the filling equipment nozzle to the tank opening to avoid sparks.
15. Before repairs or service:
 - Chock the drums/wheels and under the strike-off blade.
 - Lock the articulation if necessary

Technical specifications - Dimensions

Dimensions, side view



	Dimensions	mm	in
A	Wheelbase, drum and wheel	2992	118
L	Length, standard equipped roller	6180	244
H1	Height, with ROPS (D)	2921	115
H1	Height, with ROPS (PD)	2989	117,6
H1	Height, with cab (D)	2961	116,5
H1	Height, with cab (PD)	3008	118,4
H2	Height, without ROPS (D)	2186	86
H2	Height, without ROPS (PD)	2238	88
D	Diameter, drum (D)	1573	61,9
D	Diameter, drum (PD)	1543	60,75
S	Thickness, drum shell, Nominal (D)	50	1,97
S	Thickness, drum shell, Nominal (PD)	35	1,38
P	Height, pads (PD)	100	4
K1	Clearance, tractor frame (D)	450	17,7
K1	Clearance, tractor frame (PD)	450	17,7
K2	Clearance, drum frame (D)	460	18,1
K2	Clearance, drum frame (PD)	460	18,1

Machine plate - Identification

Product identification number on the frame

The machine PIN (product identification number) (1) is punched on the right edge of the front frame or the upper edge of the right frameside.

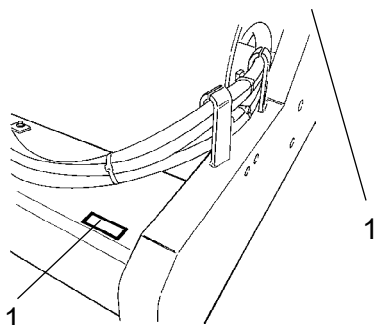


Fig. Front frame
1. PIN

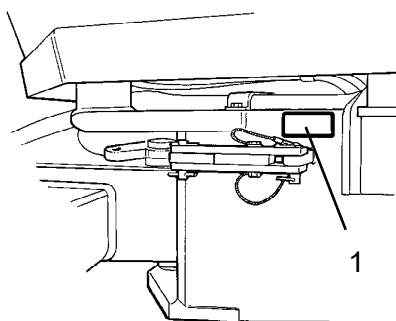


Fig. Operator platform
1. Machine plate

Machine plate

The machine type plate (1) is attached to the front left side of the frame, beside the steering joint.

The plate specifies the manufacturers name and address, the type of machine, the PIN product identification number (serial number), operating weight, engine power and year of manufacture. (If the machine is supplied to outside the EU, there are no CE markings and in some cases no year of manufacture.)

 Dynapac (China) Compaction & Paving Equipment Co., Ltd. 38, Quansheng Rd, Wuzheng High Tech Ind. Park, Tianjin, China 301700			
Product Identification Number			
Designation	Type	Rated Power	Max axle load front / rear
		kW	kg
Gross machinery mass	Operating mass	Max ballast	[Date of Mfg]
kg	kg	kg	
Made in China			
4812 1128 14			

Fig. Machine plate

Please state the machine's PIN when ordering spares.

Function description of instruments and controls in the cab

No	Designation	Symbol	Function
1	Front wiper, switch		Press to operate the front screen wiper.
2	Rear wiper, switch (Optional)		Press to operate the rear screen wiper.
3	Front and rear window screen washers, switch		Press at the top to spray the windshield.
			Press at the bottom to spray the rear windshield.
4	Hammer for emergency exit		To escape from the cab in an emergency, release the hammer and break the REAR window.
5	Control, temperature (Optional)		In the left position, the heating is OFF. In the right position, maximum heating.
6	Control, circulation (Optional)		In the left position, the circulation is OFF. In the right position, maximum circulation
7	Control, fan (Optional)		In the left position, the fan is OFF. In the right position, maximum fan.
8	AC, switch (Optional)		
9	Cab lighting, switch (Optional)		Push in to turn on cab lighting
10	Windscreen wiper fluid container (Optional)		Fill with screenwash as required.
11	Handbook compartment		Stowage space for safety manual and instruction books.

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Starting

Starting the engine

Set the forward/reverse lever (20) in neutral. The engine can only be started when the lever is in neutral.

Set the amplitude selector (13) for Low/High vibration to position O.

Set the engine speed control (16) to the idling mode.

Turn the starter switch (2) to the right to position I. Then activate the starter motor by turning one position further.



Do not run the starter motor for more than 30 sec. If the engine does not start immediately, wait for 2 minutes to start the engine.

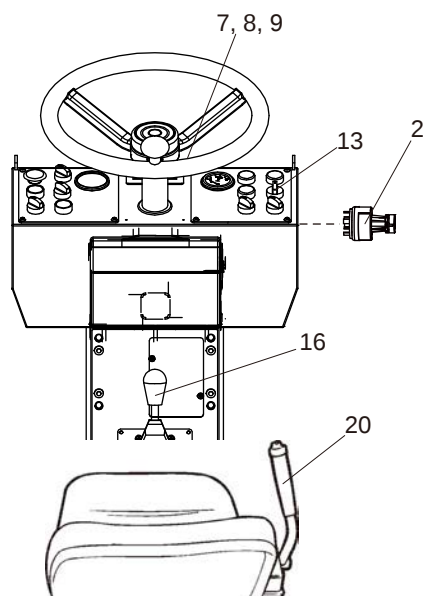


Fig. Instrument panel

- 2. Starter switch
- 7. Charging lamp
- 8. Brake warning lamp
- 9. Oil pressure/ temperature lamp
- 13. Amplitude selector
- 16. Speed control
- 20. Forward/reverse lever

Let the engine idle for 2-5 minutes to warm, longer if the ambient temperature is below +10°C (50°F).

While the engine is warming up, check that the warning lamps for oil pressure (9) and charging (7) are turned off. The warning lamp (8) for the reserve/parking brake should still be lit.



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



When starting up and driving a cold machine, which implies cold hydraulic fluid, the braking distance will be longer than normal until the machine reaches working temperature.

Miscellaneous

Lifting

Locking the articulation



Articulation must be locked to prevent inadvertent turning before lifting the roller.

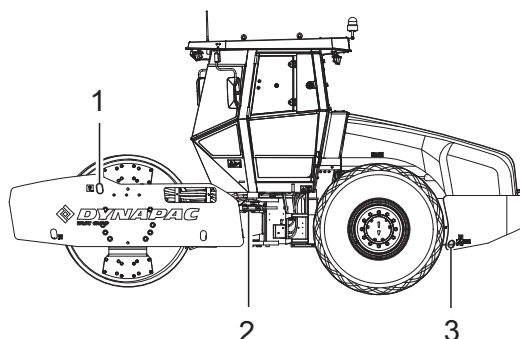


Fig. Articulation in the locked position

- 1. Locking arm**
- 2. Locking pin**
- 3. Locking stud**

Turn the steering wheel to the straight ahead position. Push in the emergency/parking brake knob.

Pull out the lowermost locking pin (2), which has a wire attached. Pull up the locking dowel (3) which also has a wire attached.

Fold out the locking arm (1) and secure it.

Fit the locking stub (3) in the holes through the locking arm (1) and locking lug (4) and secure the stud in position with the locking pin (2).

Weight: refer to the hoisting plate on the roller

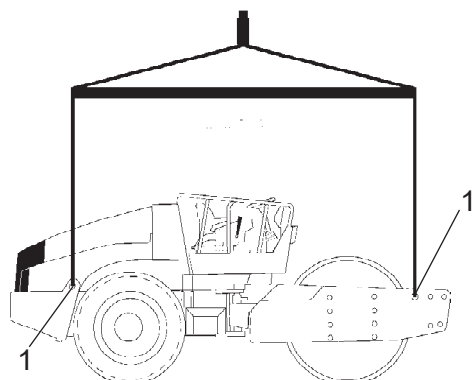


Fig. Roller prepared for lifting
1. Hoisting plate

Lifting the roller



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



Lifting equipment such as chains, steel wires, straps and lifting hooks must be dimensioned in accordance with the relevant safety regulations for the lifting equipment.



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

	ENGINE OIL	Air temperature -15°C - +50°C (5°F-122°F) P/N: 5580020624 (5 liters); 5501522700 (20 liters)
	HYDRAULIC FLUID	Air temperature -15°C-+40°C (5°F-104°F) P/N: 9106230330 (20 liters), 9106230331 (209 liters) Air temperature above +40°C (104°F) Shell Tellus T100 or equivalent.
 Bio-Hydr.	BIOLOGICAL HYDRAULIC FLUID	BP Biohyd SE-S46 When it leaves the factory, the machine may be filled with biodegradable fluid. The same type of fluid must be used when changing or topping up.
	BIOLOGICAL HYDRAULIC FLUID, PANOLIN	PANOLIN HLP Synth 46 When it leaves the factory, the machine may be filled with biologically degradable fluid. The same type of fluid must be used when changing or topping up. (www.panolin.com)
	TRANSMISSION OIL	Air temperature -15°C - +40°C (5°F-104°F) P/N: 4812008274 (5 liters), 4812008275 (20 liters) Air temperature 0°C (32°F) - above +40°C (104°F) Shell Spirax AX 85W-140, API GL-5 or equivalent.
	DRUM OIL	P/N: 4812156456
	GREASE	SKF LGHB2 (NLGI-Klass 2) or equivalent for the articulated joint. Dynapac Roller Grease; P/N: 4812030096 or equivalent for other grease points.
	FUEL	See engine manual.
	COOLANT	GlycoShell or equivalent, (mixed 50/50 with water). Anti-freeze protection down to about -37°C (-34.6°F). Coolant 150, P/N: 2658449097 (5 gal)



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.



Fuel tank - Filling

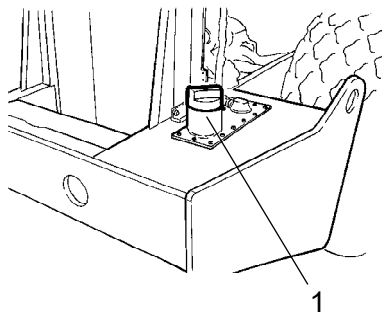


Fig. Fuel tank
1. Filler pipe

Refuel daily with diesel fuel up to the lower edge of the filler pipe (1). Follow the engine manufacturer's specification with regard to the quality of diesel fuel.



Stop the engine. Short-circuit (press) the filler gun against a non-insulated part of the roller before refuelling, and against the filler pipe (1) while refuelling.



Never refuel while the engine is running. Do not smoke and avoid spilling fuel.

The tank holds 320 liters (84.5 gal) of fuel.



Hydraulic reservoir - Check fluid level

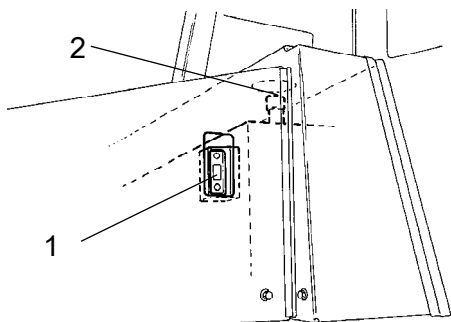


Fig. Sight glass hydraulic reservoir
1. Sight glass

The sight glass is located on the right-hand side of the roller behind the operator's seat.

Place the roller on a flat surface and check the fluid level in the sight glass (1). If the level is too low, top up with the type of hydraulic fluid specified in the lubricant specification.



Drum gearbox - Checking the oil level

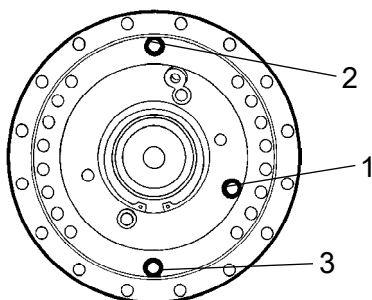


Fig. Oil level check - drum gearbox

- 1. Level plug
- 2. Filler plug
- 3. Drain plug

Position the drum so that the filler plug (2) is straight up.

Wipe clean the area around the level plug (1) and then undo the plug.

Ensure that the oil level reaches up to the lower edge of the plug hole.

Top off with oil to the right level if the level is low. Use transmission oil according to the lubricant specification.

Clean and refit the plugs.



Drum cartridge - Checking the oil level

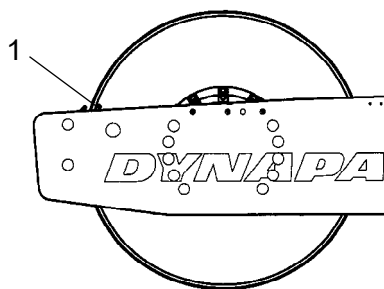


Fig. Left drum side

- 1. Indicator pin

Position the machine level so that the indicator pin (1) on the inside of the drum is aligned with the top of the drum frame.

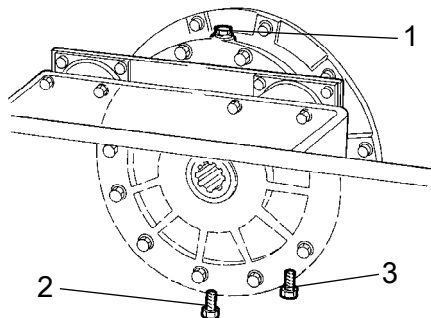


Fig. Right drum side

- 1. Filler plug
- 2. Drain plug
- 3. Level plug

Wipe clean the filler plug (1) and level plug (3).

Unscrew the filler plug (1).

Apply a thin coat of fresh hydraulic fluid to the seal on the new filter. Screw tight the filter by hand.



First tighten the filter until its seal is in contact with the filter attachment. Then turn an additional half revolution. Do not tighten the filter too hard as this could damage the seal.

Start the engine and check that there is no leakage of hydraulic fluid from the filter. Check level of fluid in the sight glass (3) and top up as required.



Fuel tank - Drainage

Water and sediment in the fuel tank are removed via the drainage plug (1) in the bottom of the fuel tank.



Be very careful during draining. Do not drop the plug or else all the fuel will flow out.

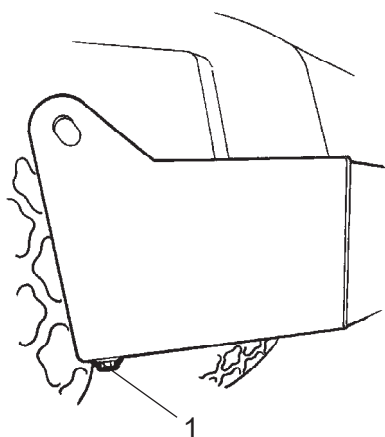


Fig. Fuel tank
1. Drainage plug

Drainage must be performed when the roller has been stationary for an extended period, e.g. after being stationary overnight. The fuel level should be as low as possible.

The roller should preferably have been standing with this side slightly lower, so that water and sediment have gathered near the drainage plug (1).



Save the condensate and sediment and hand it in to an environment-friendly waste disposal station.

Drain as follows:

- Place a container under the plug (1).
- Remove the plug (1).
- Drain out the condensate and sediment until only pure fuel emerges at the plug.
- Screw in the plug again.

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