

## Introduction

### The machine

Dynapac CC1100 VI - CC1400 VI are four vibratory tandem rollers in the 2 to 4-tonnes class with 1100 - 1400 mm wide drums. They feature power drive, brakes, and vibration on both drums.

### Intended use

The rollers are mainly intended for compaction of thin layers and soft asphalt masses for minor construction work, such as small streets, pavements, cycle paths and garage drives. It has sufficient capacity to follow a small asphalt paver.

### Training

The purpose of operator training is to impart the operator the knowledge and skills necessary for proper operation and routine maintenance of the roller according to this manual.

Note to trainer: Further information on operator training can be found in ISO 7130.

### Signal symbols and meaning



**WARNING ! Indicates potential hazardous situation/procedure which, if not avoided, could result in death or serious injury.**



**CAUTION ! Indicates potential hazardous situation/procedure which, if not avoided, could result in minor or moderate injury, damage to the machine or property.**

### 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.***



***Replace immediately the instruction manuals if lost, damaged or unreadable.***



***Ensure good ventilation (extraction of air by fan) where the engine is run indoors.***

CALIFORNIA

### **Proposition 65**

Decal and location of decal shown in section Machine description.

**⚠ WARNING:** Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to [www.P65warnings.ca.gov/diesel](http://www.P65warnings.ca.gov/diesel).

### **General**

This manual contains instructions for machine operation and maintenance.

The machine must be correctly maintained for maximal performance.

The machine should be kept clean so that any leakages, loose bolts and loose connections are discovered at as early a point in time as possible.

Do not spray with high-pressure cleaner directly onto gaskets and bearing spacings in steering hitch and drum, and electronics.

Inspect the machine every day, before starting. Inspect the entire machine so that any leakages or other faults are detected.

Check the ground under the machine. Leakages are more easily detected on the ground than on the machine itself.



**THINK ENVIRONMENT !** Do not release oil, fuel and other environmentally hazardous substances into the environment. Always send used filters, drain oil and fuel remnants to environmentally correct disposal.

This manual contains instructions for periodic maintenance, where maintenance after every 10 and 50 hours of operation can be performed by the machine operator. Other maintenance intervals must be carried out by accredited (Dynapac) service personnel.



Additional instructions for the engine can be found in the manufacturer's engine manual.

Specific maintenance and checks on diesel engines must be performed by engine supplier authorized personnel.

### **CE marking and Declaration of conformity**

(Applies to machines marketed in EU/EEC)

This machine is CE marked. This shows that on delivery it complies with the basic health and safety directives applicable for the machine in accordance with machinery directive 2006/42/EC and that it also complies with other regulations and directives applicable for this machine.

A "Declaration of conformity" is supplied with this machine, which specifies the applicable regulations and directives with supplements, as well as the harmonized standards and other regulations that are applied and according to the regulations must be declared in writing.



**Safety - General instructions**

(Also read the safety manual)



- **The operator must be familiar with the contents of the OPERATION section before starting the roller.**
- **Ensure that all instructions in the MAINTENANCE section are followed.**
- **Only the operator is allowed to be on the roller. Remain seated at all times when operating the roller.**
- **Never use the roller if it is in need of adjustment or repair.**
- **Only ascend and descend the roller when it is stationary. Use the intended footsteps, grips and rails. Always use the three-point grip (both feet and one hand, or one foot and both hands) when ascending or descending the machine. Never jump down from the machine.**
- **Dynapac always recommends mounted ROPS (Roll Over Protective Structure), or a ROPS-approved cab and seat belt usage.**
- **Drive slowly in sharp bends.**
- **Avoid driving across slopes. Drive straight up or straight down the slope.**
- **Never operate with the drum outside the edge, the substrate might not have full bearing strength or the edge is close to a slope. Avoid operating close to edges and ditches and the like as well as on poor ground conditions that jeopardizes the bearing strength and capacity to support the roller.**
- **Make sure that there are no obstacles in the direction of travel, on the ground, in front of or behind the roller, or overhead.**
- **Drive particularly carefully on uneven ground.**
- **Keep the roller clean. Clean any dirt or grease that accumulates on the footsteps or operator platform to avoid slipping risk. Keep all signs and decals clean and legible.**
- **Safety measures before refueling:**
  - **Stop the engine**
  - **Do not smoke.**
  - **No naked flames in the vicinity of the roller.**
  - **Earth the filling equipment nozzle by keeping it in contact to the tank opening to avoid sparks.**
- **Before repairs or service:**
  - **Chock the drums/wheels.**
  - **Lock the articulation if necessary.**
  - **Place blocks under overhanging equipment, such as strike-off blade, edge cutter/compactor and chip spreader.**

- **Hearing protection is recommended if the noise level exceeds 80 dB(A). The noise level can vary depending on the equipment on the machine and the surface the machine is being used on.**
- **Modifications to the roller, including the use of any attachment/equipment, not approved by Dynapac that might compromise safety (including visibility) are not allowed. Any modifications are only to be made after written approval has been given by Dynapac.**
- **Avoid using the roller before the hydraulic fluid has reached its normal working temperature. Braking distances can be longer than normal when the fluid is cold.**
- **For your own protection always wear:**
  - working boots with steel toecaps
  - ear protectors
  - reflecting clothing/high visibility jacket**Also wear:**
  - helmet if no cab or FOPS, or if required by worksite management
  - working gloves if no cab and for work outside operator's platform.
- **If the machine seems to be responding abnormally during travel, stop and check it.**

### Safety - when operating



**Prevent persons from entering or remaining in the risk zone, i.e. a distance of at least 7 m (23 ft) in all directions from operating machines. The operator may allow a person to remain in the risk zone, however he/she must be attentive and operate the machine only when the person is fully visible or has given a clear indication of where he or she is.**



**Avoid driving across a slope. Drive straight up and down sloping ground.**

### Work driving



**Dynapac always recommends mounted ROPS (Roll Over Protective Structure) and seat belt usage.**

**On machines with foldable ROPS, make sure that the ROPS is correctly mounted in the upright position during all operation.**

Avoid operating close to edges and ditches and the like as well as on poor ground conditions that jeopardizes the bearing strength and capacity to support the roller. Pay attention to potential obstacles above the machine, such as overhead cables and the branches of trees etc.

Pay particular attention to the stability of the substrate when compacting close to edges and holes. Do not compact with a large overlap from the previous track in order to maintain roller stability. Consider other compaction methods such as remote-control or a walk-behind roller close to steep slopes or where the bearing strength of the substrate is unknown.

### Driving near edges



***Never operate with the drum outside the edge, the substrate might not have full bearing strength or the edge is close to a slope.***



***Keep in mind that the machine's center of gravity moves outwards when steering. For example, the center of gravity moves to the right when you steer to the left.***





Safety (Optional)

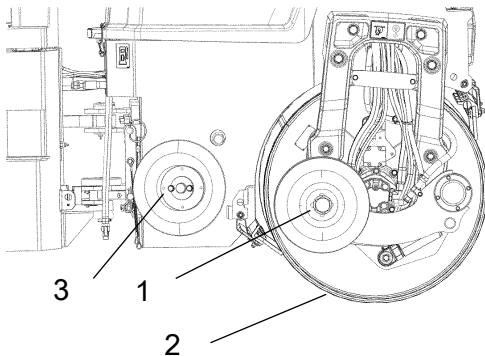
Edge cutter/compactor

 **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.**

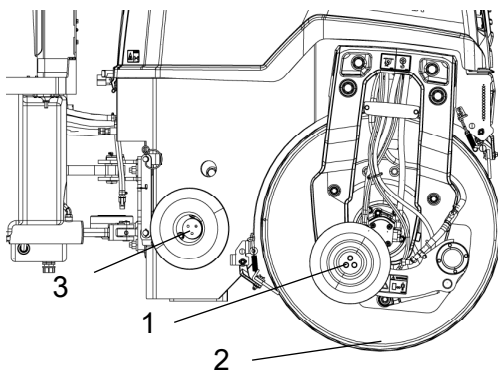
 **The tool must be returned to the transport position (raised position) (1) every time it has been used.**

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



**Fig. Edge cutter/compactor (CC1100/C VI - CC1200/C VI)**

- 1. Transport position**
- 2. Operating position**
- 3. Holder for cutter/compactor wheel.**



**Fig. Edge cutter/compactor (CC1300/C VI - CC1400/C VI)**

- 1. Transport position**
- 2. Operating position**
- 3. Holder for cutter/compactor wheel.**

### Chip spreader



*The machine must not be lifted or transported on another vehicle with chips in the chip spreader. The weight for the chip spreader is specified on the unit rating plate. This weight is not included in the machine weight specified on the lifting plate.*



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



*The machine must NOT be lifted from a single-point lift if the chip spreader is fitted. (CC1100 VI - CC1200 VI only)*



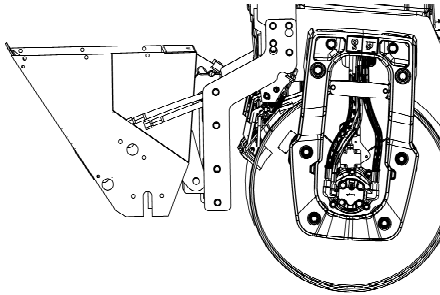
*Risk of crushing and pinch injuries. The chip spreader has rotating parts.*



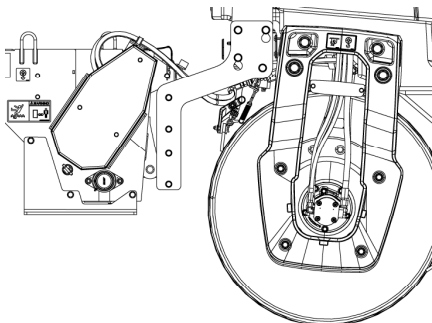
*The chip spreader must be reset in transport mode after it has been used.*



*Fitting the chip spreader changes the total length of the machine.*



*Fig. Chip spreader (CC1100 VI - CC1200 VI)*



*Fig. Chip spreader (CC1300 VI - CC1400 VI)*

## Special instructions

### Standard lubricants and other recommended oils and fluids

Before leaving the factory, the systems and components are filled with the oils and fluids specified in the lubricant specification. These are suitable for ambient temperatures in the range -15°C to +40°C (5°F - 105°F).



The maximum ambient temperature for biological hydraulic fluid is +35°C (95°F).

### Higher ambient temperatures, above +40°C (104°F)

For operation of the machine at higher ambient temperatures, however maximum +50°C (122°F), the following recommendations apply:

The diesel engine can be run at this temperature using normal oil. However, the following fluids must be used for other components:

Hydraulic system - mineral oil Shell Tellus S2V100 or similar.

### Lower ambient temperature - Freeze risk

Make sure that the watering system is empty/drained of water (sprinkler, hoses, tank/s) or that anti-freeze has been added, to prevent the system freezing.

Close the ball valve and draw up the anti-freeze liquid through the filter. See the chapter dealing with Sprinkler system.

### Temperatures

The temperature limits apply to standard versions of rollers.

Rollers equipped with additional equipment, such as noise suppression, may need to be more carefully monitored in the higher temperature ranges.

### high pressure cleaning

Do not spray water directly onto electrical components or the instrument panels.

Place a plastic bag over the fuel filler cap and secure with a rubber band. This is to avoid high pressure water entering the vent hole in the filler cap. This could cause malfunctions, such as the blocking of filters.

Do not spray with high-pressure cleaner directly onto gaskets and bearing spacings in steering hitch and drum, and electronics.



Never aim the water jet directly at the fuel tank cap, or into exhaust pipe. This is particularly important when using a high-pressure cleaner.

### Fire fighting

If the machine catches fire, use an ABC-class powder fire extinguisher.

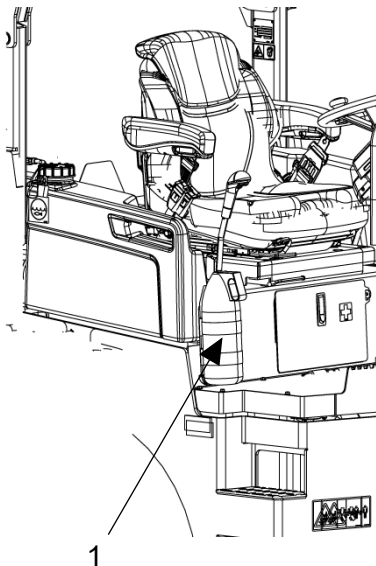
A BE-class carbon dioxide fire extinguisher can also be used.

### Fire extinguisher

A fire extinguisher can be ordered as an option. Though, different standards are used around the world.

If not using the original fire extinguisher, place your extinguisher as in the picture. A 4 kg extinguisher is recommended.

Mount it appropriately and make sure it does not create any hazards.



**Fig. Plarform**  
**1. Fire extinguisher**

### Roll Over Protective Structure (ROPS)



**Never carry out any welding or drilling in the Roll Over Protective Structure (ROPS).**



**Never repair a damaged ROPS structure, it must be replaced with a new one.**

### Battery handling


 **When removing batteries, always disconnect the negative cable first.**

 **When fitting batteries, always connect the positive cable first.**

 Dispose of old batteries in an environmentally friendly way. Batteries contain toxic lead.

 Do not use a quick-charger for charging the battery. This may shorten battery life.

### 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.**

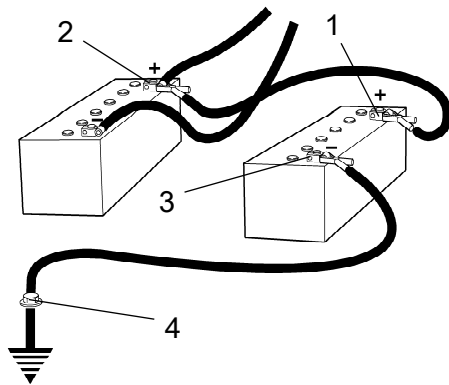


Fig. Jump starting

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.

