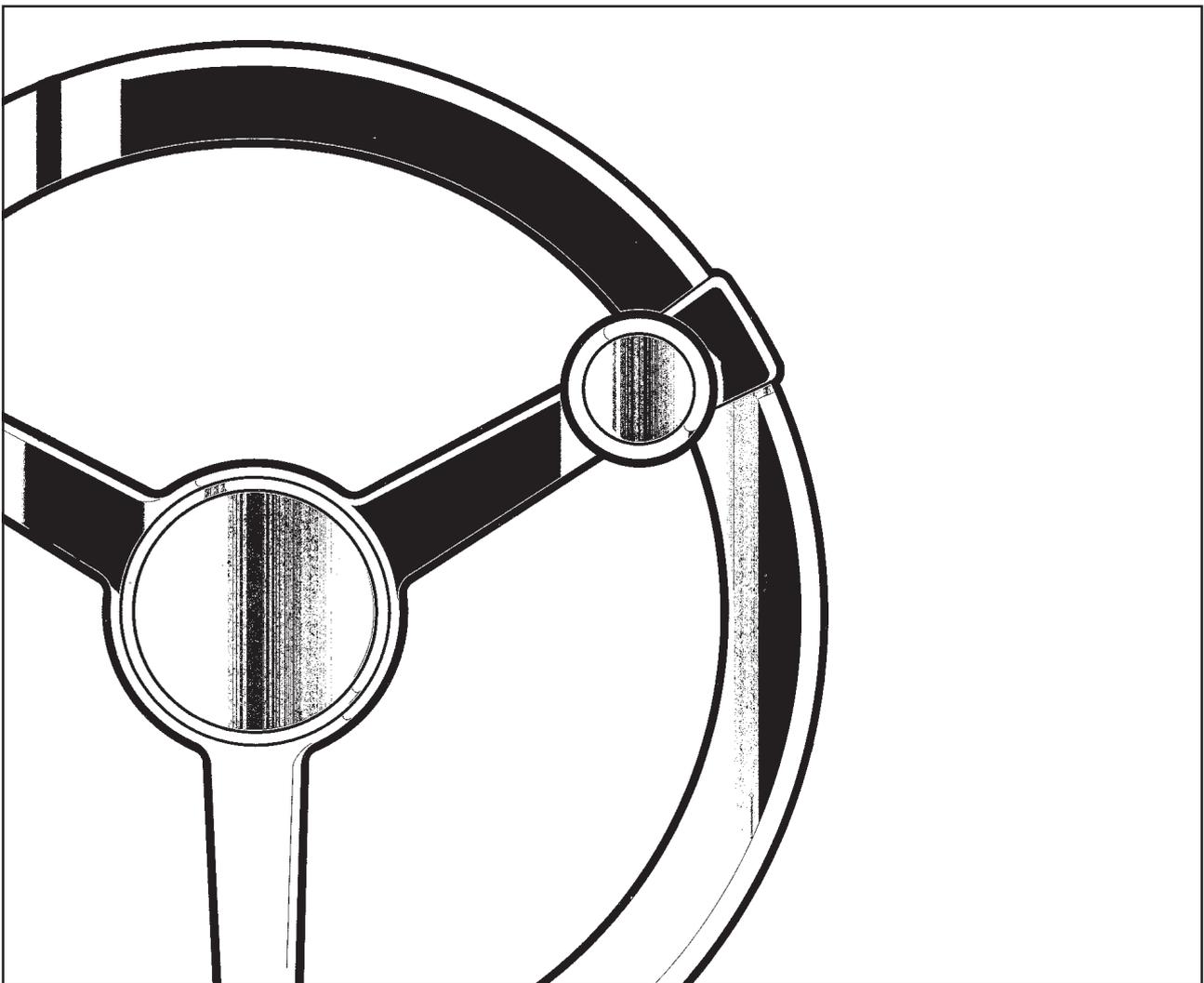


# DYNAPAC CP142 OPERATION

O142EN1



***DYNAPAC***

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Phone: +46 455 30 60 00, Fax: +46 455 30 60 30  
[www.dynapac.com](http://www.dynapac.com)



# **DYNAPAC**

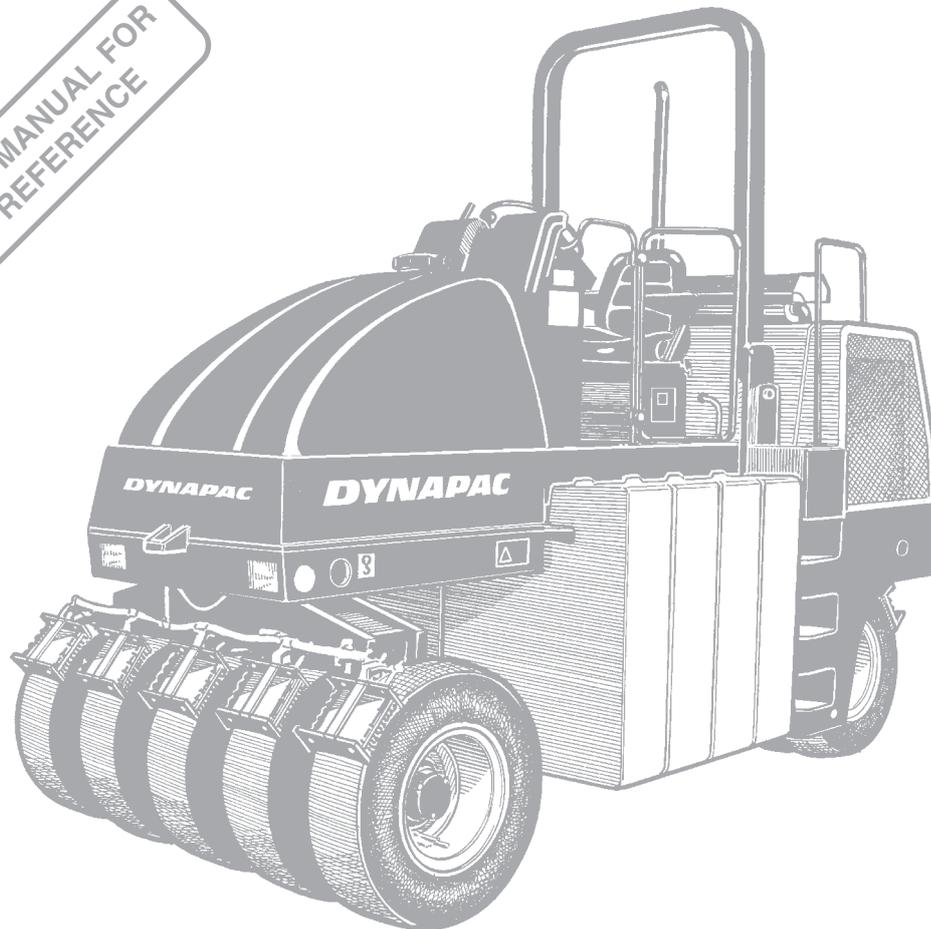
## **Pneumatic Tire Roller CP142**

### **Operation O142EN1, May 2004**

**Diesel engine:  
Cummins 4B4.5 - 99C**

**These instructions apply from:  
CP142      PIN (S/N) \*2163BR2000\***

**KEEP THIS MANUAL FOR  
FUTURE REFERENCE**



*The CP142 Pneumatic Tire Roller uses a modular ballast system which consists of bolt on ballast boxes that provide an accurate and uniform tire load. The roller is designed for compaction of roads, airfields, dams and similar constructions.*

*The CP142 compacts asphalt, concrete, base courses and subbase courses efficiently and at a high rate. Seperate information is available on request concerning accessories and optional equipment.*

*The illustrated machine in this manual can be equipped with optional equipment.*

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## WARNING SYMBOLS

WARNING



**Safety instructions – Personal safety**

CAUTION



**Special caution – Machine or component damage**

## SAFETY MANUAL

WARNING



**The safety manual, which accompanies each machine, must be studied by each operator of the roller. Always follow the safety rules and do not remove the manual from the roller.**

## GENERAL

This manual contains instructions for operation and use of the roller. For care and maintenance information, see the MAINTENANCE, CC142 manual.

WARNING



**Remember that when you start and drive a cold machine, the hydraulic fluid is cold and the braking distance will be longer than normal until the machine reaches normal working temperature.**

### CALIFORNIA

#### Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

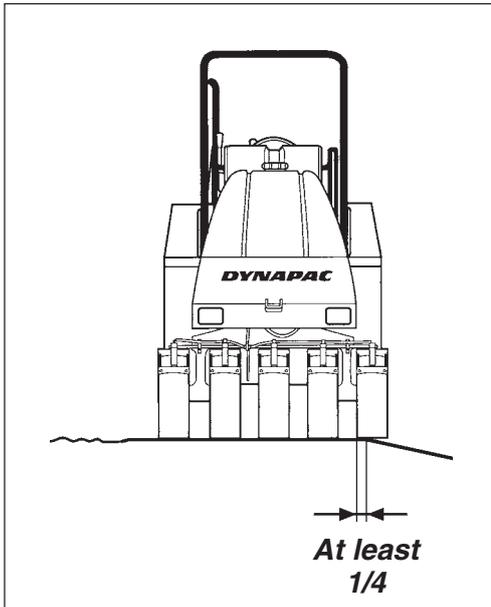
## SAFETY INSTRUCTIONS (Also read the safety manual)



1. The operator must be familiar with the contents of the OPERATION MANUAL before starting the roller.
2. Make sure that all instructions in the MAINTENANCE MANUAL are followed.
3. Only trained and/or experienced operators are allowed to drive the roller. Passengers are not allowed on the roller. Remain seated during all operation.
4. Never use the roller if it is in need of adjustment or repairs.
5. Board and leave the roller only when it is stationary. Use the grips and railings that are provided. A "three-point grip" is recommended whenever you board or leave the machine—both feet and one hand, or one foot and both hands in contact with the machine.
6. Always use the Roll Over Protective Structure (ROPS) when the machine is used on risky ground.
7. Drive slowly in sharp bends.
8. Avoid driving at an angle on slopes; drive straight up or down.
9. When driving close to unsafe edges or holes, make sure that at least 1/4 of the outer tire width is firmly on material that has already been compacted.
10. Make sure that there are no obstacles in the direction of travel, on the ground or overhead.
11. Drive extra carefully on uneven ground.
12. Use the safety equipment provided. The seat belt must be worn on machines fitted with ROPS.
13. Keep the roller clean. Clean dirt and grease from the operator's platform without delay. Keep all signs and decals clean and clearly legible.
14. Safety measures before refueling:
  - Stop the engine.
  - Don't smoke.
  - No naked flame in the vicinity.
  - Ground the nozzle of the filling device against the tank to prevent sparks.
15. Before repairs or service:
  - Place chocks against the drums/wheels and against the strike-off blade.
  - Lock the articulation if necessary.
16. Hearing protectors are recommended if the noise level is higher than 85 db(A). The noise level will vary depending on the surface being worked on by the machine.
17. Make no changes or modifications on the roller that could affect safety. Changes may only be made following written consent by Dynapac.
18. Do not use the roller until the hydraulic fluid has reached its normal working temperature. Braking distance can be longer than usual if the fluid is cold. See starting instructions in the OPERATION MANUAL.

## SAFETY WHEN DRIVING

### Driving near an edge



*Fig. 1 Wheel position when driving close to edge.*

When driving close to unsafe edges or holes, make sure that at least 1/4 of the outer tire width is firmly on material that has already been compacted.



**Remember that the machine's center of gravity is displaced outwards when steering to one side. For example, it moves to the right when steering to the left.**

## SAFETY WHEN DRIVING

### Slopes

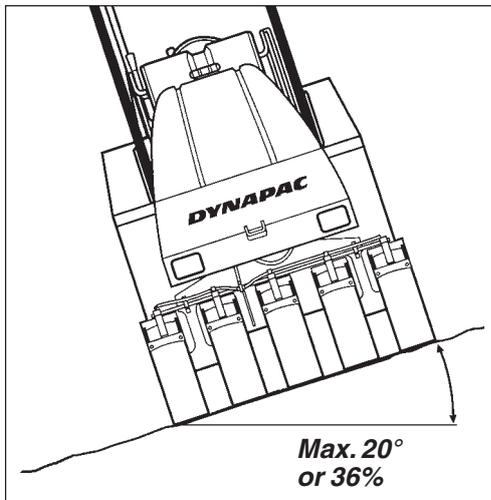


Fig. 2 Driving on slopes.

WARNING



The ROPS (Roll Over Protective Structure) is always recommended when driving on slopes or insecure ground.

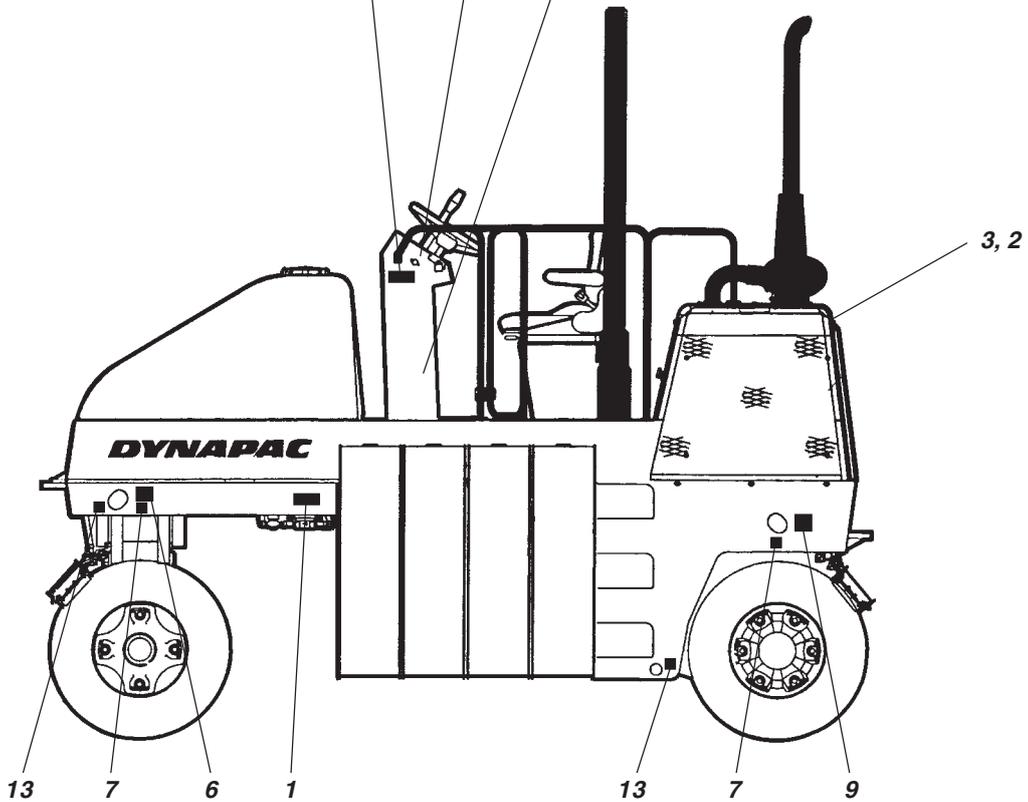
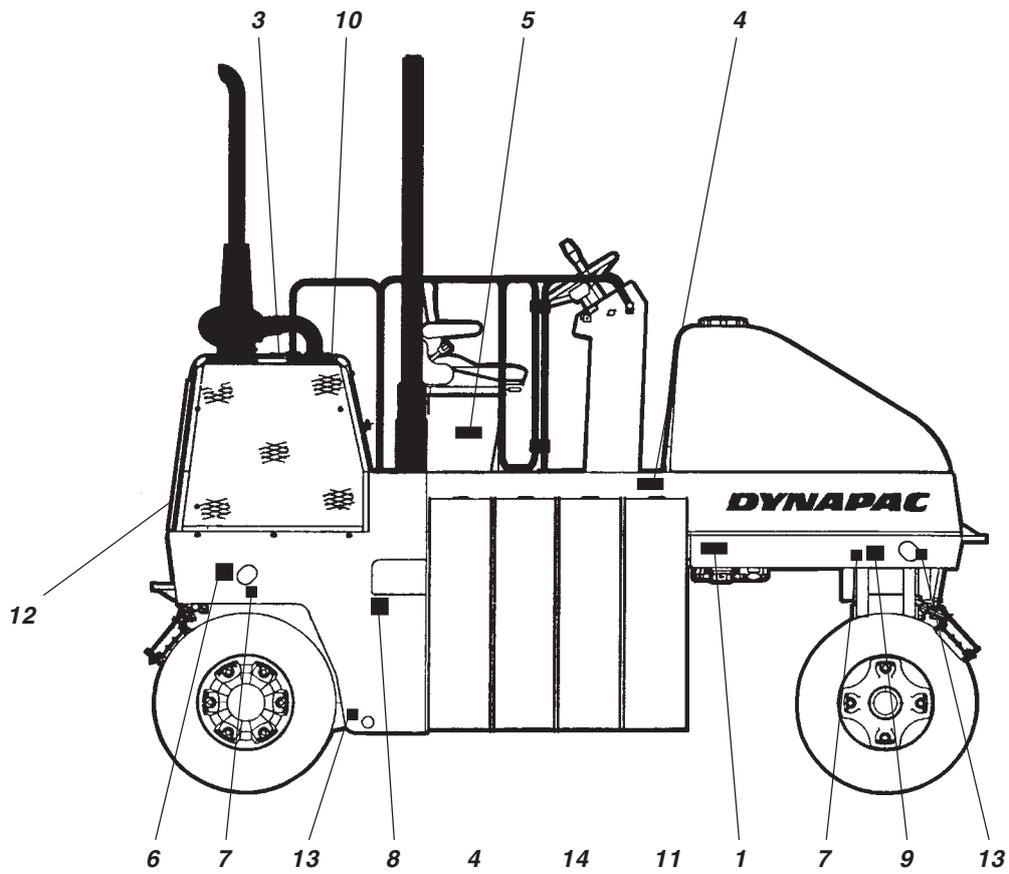
WARNING



Where possible, avoid all driving *across* a slope. Instead, drive up and down on sloping ground.

The tipping angle is measured on level, hard ground and a stationary machine without ballast. The steering angle is zero (machine moving straight forward) and all tanks full. Remember that loose ground, steering of the machine, driving speed and increase in height of the center of gravity (for example, with accessories) may cause the machine to topple even on a smaller slope than specified here.

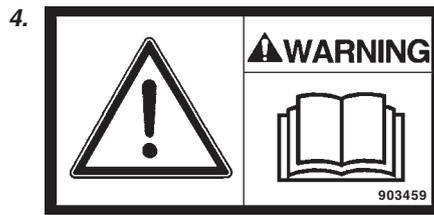
# SAFETY DECALS, LOCATION AND DESCRIPTION



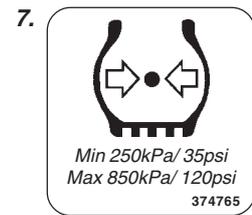
# SAFETY DECALS, LOCATION AND DESCRIPTION



**Crush zone, articulation.**  
Maintain a safe distance from the crush zone.



The operator is urgently requested to read the safety manual, and the operation and maintenance instructions before using the machine.



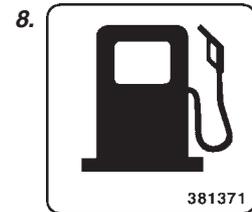
**Tire pressure**



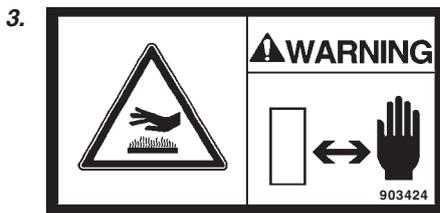
**Warning for rotating engine components.** Keep your hands at a safe distance from the danger zone.



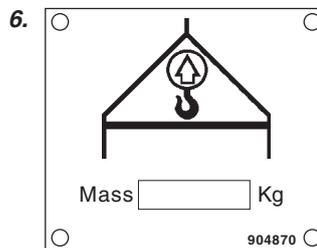
Study the chapter about towing before disengaging the brakes.  
Danger of being crushed.



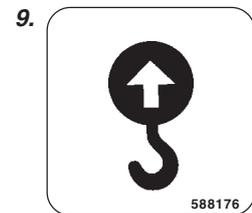
**Diesel fuel**



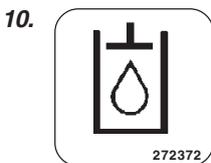
**Warning for hot surface.**  
The surface must not be touched.



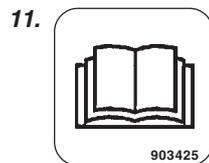
**Hoisting plate**



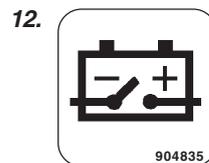
**Lifting point**



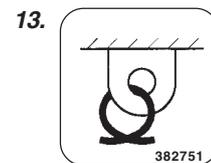
**Hydraulic fluid**



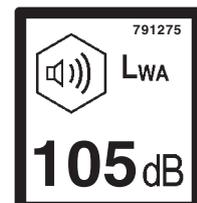
**Handbooks**



**Battery disconnecter**



**Securing point**



**Sound Power level**

# MACHINE AND ENGINE PLATES

## Machine plate

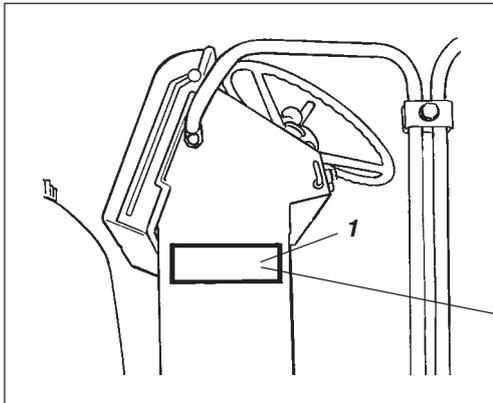
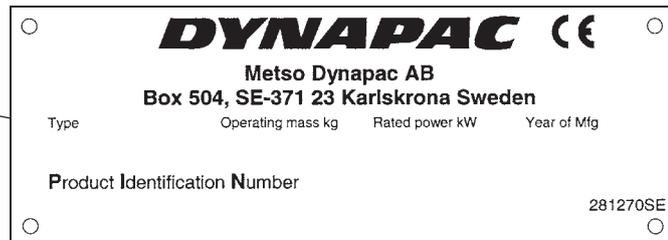


Fig. 3 Left hand side  
1. Machine plate

The machine type plate (1) is located on the left side of the steering column. The plate shows the manufacturer's name and address, type of machine, PIN "Part Identification Number" (serial number), weight in working order, engine power and year of manufacture. CE markings and the year of manufacture may be omitted on machines supplied to markets outside the EU.



Please state the machine's PIN when ordering spares.

## Serial number on frame

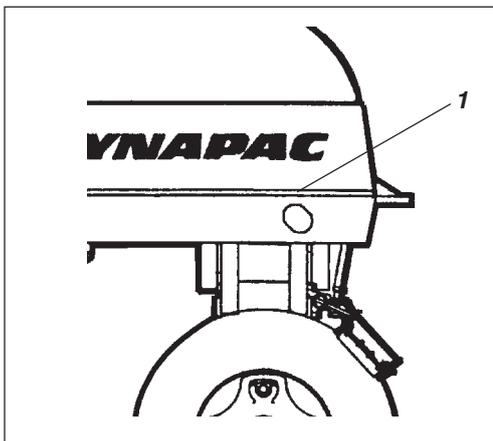


Fig. 4 Front frame  
1. Serial number

The serial number (1) of the machine is punched on the front right edge of the forward frame beam. This number is identical with the PIN (serial number) on the machine data plate.

## Engine plate

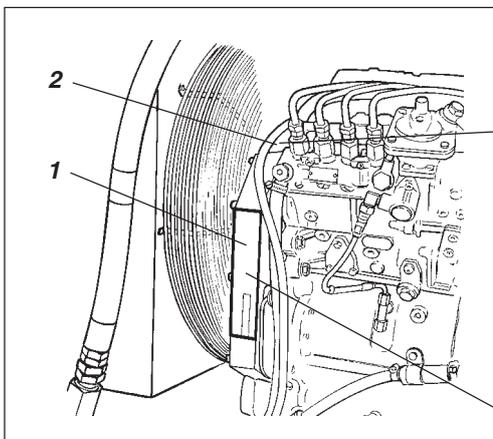
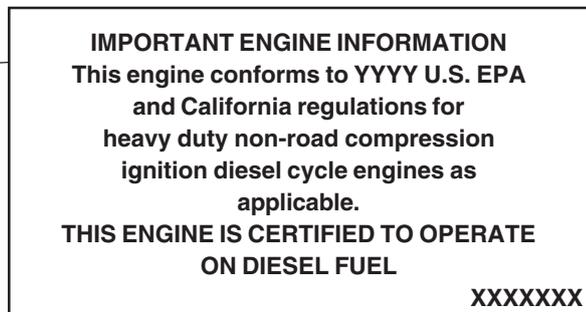


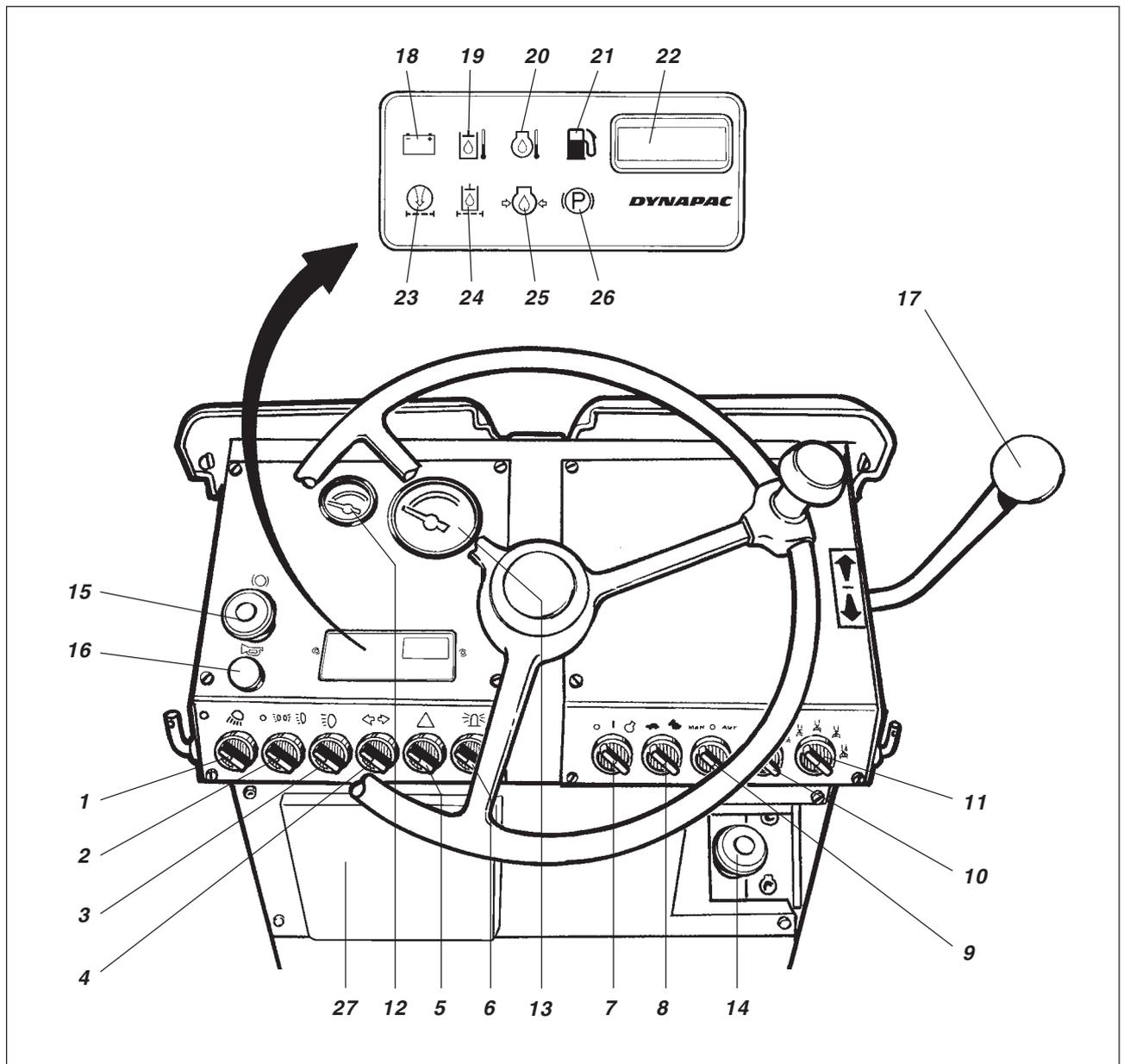
Fig. 5 Engine  
1. Type plate  
2. EPA sign (USA)

The engine type plate (1) on Cummins engines is located on the left side of the toothed-belt cover. The plate shows the type of engine, serial number and engine data. Please state the serial number of the engine when ordering spares. See also the engine manual.



Cummins Engine Company, Inc. Columbus, Indiana 47202-3005	CID/L		CPL		Engine Serial No.
	Family				Cust. Spec.
Warning: Injury may result and warranty is voided if fuel rate, rpm or altitude exceed published maximum values for this model and application.	#		Engine Model		
	Valve lash	Inch	Int.	Ext.	Timing-TDC
	cold	MM	Int.	Ext.	Fuel rate at rated HP
Date of MFG. Made in Great Britain.	Firing Order		FR		
XXXXXX	Rated HP/KW		at		RPM

## INSTRUMENTS AND CONTROLS

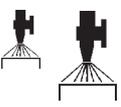


**Fig. 6 Instruments and control panel**

- |  |  |
|--|--|
| 1. Light switch, working lights <input type="checkbox"/>     | 15. Reserve/Parking brake knob                 |
| 2. Light switch, parking/headlights <input type="checkbox"/> | 16. Horn                                       |
| 3. Light switch, bright headlights <input type="checkbox"/>  | 17. Forward/Reverse lever                      |
| 4. Turning lights <input type="checkbox"/>                   | 18. Control light, charging                    |
| 5. Hazard flashers <input type="checkbox"/>                  | 19. Control light, hydraulic fluid temperature |
| 6. Hazard beacon <input type="checkbox"/>                    | 20. Control light, engine coolant temperature  |
| 7. Start/Stop switch   | 21. Control light, fuel level                  |
| 8. Gear selector, low/high                                   | 22. Hourmeter                                  |
| 9. Sprinkler switch, Man/Off/Auto                            | 23. Control light, air cleaner                 |
| 10. Water pump switch <input type="checkbox"/>               | 24. Control light, hydraulic filter            |
| 11. Sprinkler timer <input type="checkbox"/>                 | 25. Control light, engine oil pressure         |
| 12. Fuel gauge   | 26. Control light, brakes                      |
| 13. Tachometer <input type="checkbox"/>                      | 27. Handbook compartment                       |
| 14. RPM control  |  |

= Option

## INSTRUMENTS AND CONTROLS, FUNCTIONAL DESCRIPTION

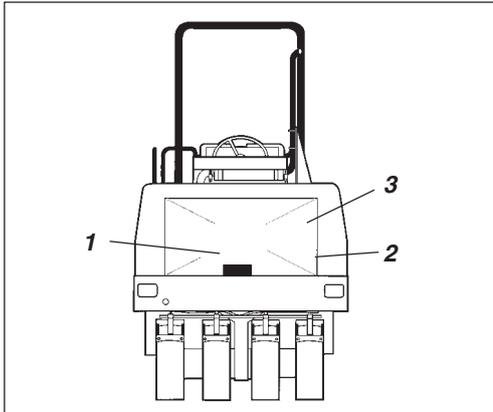
Item in fig. 6	Designation	Symbol	Function
1	Working lights, switch (Option)		Turn to the right to switch on the working lights.
2	Parking/headlights, switch (Option)		Turn right to switch on the parking lights and further right to switch on the headlights.
3	Bright headlights, switch (Option)		Turn right to switch on the main beam. In the left position, the dipped beam lights.
4	Turning lights, switch (Option)		Turn left to switch on the left direction indicator, etc. The flashing indicator is OFF in the middle position.
5	Warning flashers, switch (Option)		Turn right to switch on hazard flashers.
6	Hazard beacon, switch (Option)		Turn right to activate the hazard beacon.
7	Starter switch		In position ○, the electric circuit is broken. In position  , all instruments and electric controls are powered. In position ⦿, the start motor is activated.
8	Gear selector, low/high		Tortoise = Working speed, low. Hare = Transport speed, high.
9	Sprinkler, switch		The sprinkler system is on all the time in MAN mode. The sprinkler system is turned off in OFF mode. The sprinkler system is on in AUTO mode when the Forward/Reverse lever is not in neutral.
10	Water pump switch (Option)		Turn right to activate the other water pump, if any.
11	Sprinklertimer, switch		The switch has six different timer position to regulate the amount of water to the wheels. The left position gives least water. The right position gives most water.
12	Fuel gauge		Indicates level in the fuel tank.
13	Tachometer		Indicates engine speed in RPM. Multiply the meter value by 100.
14	RPM control		Release/lock with the centre button. Pull out the control to increase engine speed, push in to reduce. Turn/screw the handle to finely adjust the speed. Turn clockwise to increase, anticlockwise to reduce.

## INSTRUMENTS AND CONTROLS, FUNCTIONAL DESCRIPTION

Item in fig. 6	Designation	Symbol	Function
15	Reserve/Parking brake knob		Press to activate the reserve brake. Press when the machine is stationary to activate the parking brake. Pull out to release both brakes.
16	Horn, switch		Press to sound the horn.
17	Forward/Reverse lever	—	The lever must be in neutral to enable the engine to start; the engine will not start if the forward/reverse lever is in any other position. The forward/reverse lever controls the driving direction and speed of the roller. Move the lever forward to drive the roller forward, etc. The speed of the roller is proportional to the distance of the lever from the neutral position. The further from neutral the higher the speed.
18	Warning lamp, charging		The lamp lights when the alternator is not charging the battery. The lamp goes out when the alternator is charging the battery.
19	Warning lamp, hydraulic fluid temperature		If the light lights, the hydraulic fluid is too hot. Do not drive the roller; cool the fluid by allowing the engine to idle and locate the fault.
20	Warning lamp, engine coolant temperature		If the light lights, the engine is too hot. Stop the engine immediately and locate the fault. See also the engine manual.
21	Warning lamp, fuel level		When the lamp lights, there is only enough fuel left for a short distance. Refuel as soon as possible.
22	Hourmeter	—	Engine running time is indicated in hours.
23	Warning lamp, air cleaner		If the light lights while the engine is running at full RPM, the air cleaner needs cleaning or replacing.
24	Warning lamp, hydraulic filter		If the light lights while the engine is running at full RPM, the hydraulic filters need changing.
25	Warning lamp, engine oil pressure		Stop the engine immediately if the warning lamp lights and identify the cause. See engine instruction manual.
26	Warning lamp, brakes		The lamp lights when the reserve/parking brake knob (15) is pressed.
27	Handbook compartment		Storage space for the roller's operator and safety manuals.

## BEFORE STARTING

### Engine compartment cover



**Fig. 7 Access door**

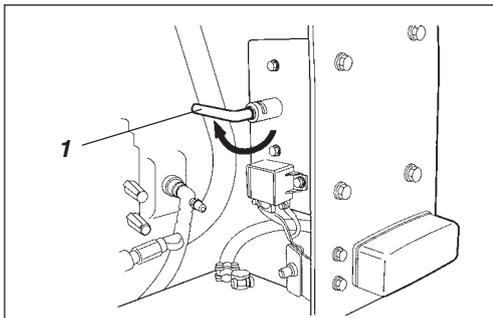
1. Engine oil dipstick
2. Battery disconnecter
3. Engine compartment

Remember to do daily service. See the maintenance manual.



**Ensure that the engine hood support is securely in position for all work in the engine compartment.**

### Battery disconnecter – Switching on



**Fig. 8 Engine compartment**

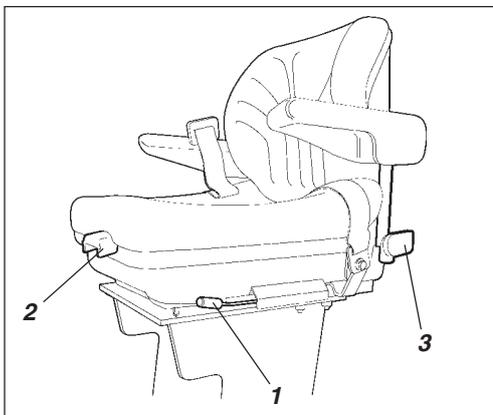
1. Battery disconnecter

The battery disconnecter is located in the engine compartment. Open the engine hood and set the key (1) to the ON position. All systems of the roller are connected to the battery.



**The engine hood must be unlocked during operation, so the battery power can be disconnected quickly if necessary.**

### Operator's seat – Setting



**Fig. 9 Operator's seat**

1. Length setting
2. Seat-back slope
3. Operator's weight

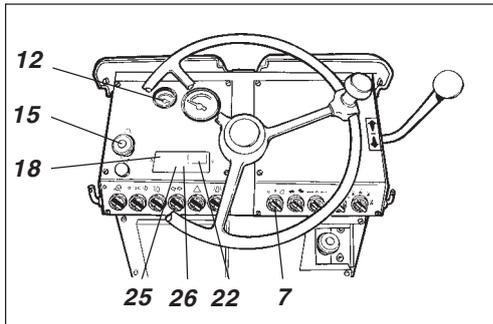
Set the operator's seat in a comfortable position and so that the controls are easily accessible.

The seat has the following adjustment capabilities:

- Length adjustment (1)
- Backrest slope (2)
- Weight adjustment (3)

## BEFORE STARTING

### Instruments and lights – Control



**Fig. 10** Instrument panel

- 7. Starter switch
- 12. Instrument, fuel level
- 15. Reserve/Parking brake knob
- 18. Control light, charging
- 22. Hourmeter
- 25. Control light, engine oil pressure
- 26. Brake lamp

Turn the starter switch (7) to position I. All warning lamps should light for about 5 seconds and the beeper should sound. Make sure that the warning lamps light.

Check that the warning lamps for charging (18), oil pressure (25) and parking brake (26) light.

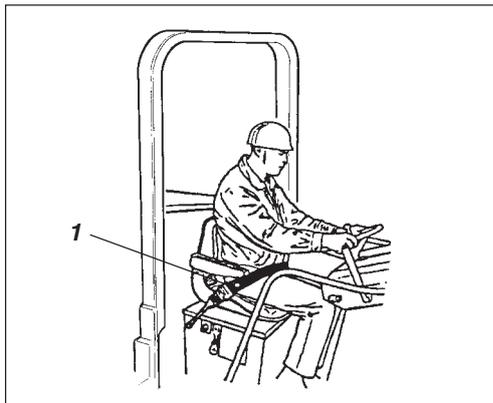
The hourmeter (22) records the number of hours so long as the engine is running.



WARNING

**Make sure that the reserve/parking brake knob (15) is pushed in. If the parking brake is not applied, the roller may start to roll when starting the engine on sloping ground.**

### Seat belt



**Fig. 11** Operator's seat

- 1. Seat belt

If the roller is equipped with a ROPS (Roll Over Protective Structure), always use the seat belt and wear a hard hat.



WARNING

**Replace the seat belt if it shows signs of wear or has been subjected to severe force.**



WARNING

**Ensure that the anti-slip on the platform is in good condition; replace with new anti-slip if friction is poor.**

## FÖRE START

### Bolt-on ballast boxes

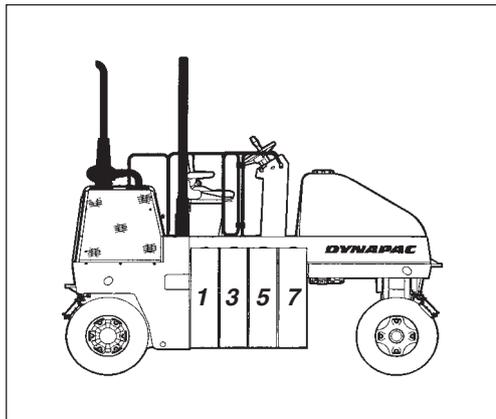


Fig. 12 Max. ballast, 8 boxes

The ballast boxes can be added or removed as necessary. To add bolt-on ballast boxes:

With 8 boxes (option)

1. Begin to fit ballast box (1) at the very rear right hand and then (2) at the very rear left hand. Continue in chronological order, see picture 13.

2. Securely fasten the screws.

With 6 boxes (STD):

1. Ignore ballast boxes (1) and (2) in figure 12 and 13, where the additional foot steps will be mounted. Start to fit the ballast box (3) and then (4) on respectively places. Continue in chronological order, see picture 13.

2. Securely fasten the screws.



**WARNING** The ballast boxes weight is approx. 1,02 tonnes (2.250 lbs) each. Use secure handling equipment to move the boxes.

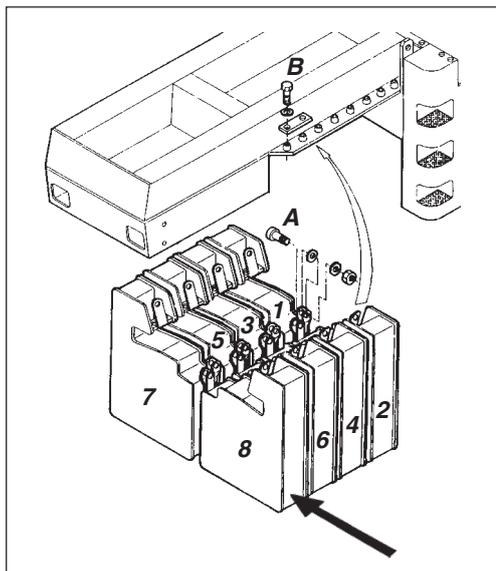


Fig. 13 Ballastboxar

A - Tapered screw connecting the pairs of boxes.

B - Mounting screw (2 per box)

To remove the bolt-on ballast boxes:

Push the left hand side ballast box in as shown by the arrow to reduce tension on screw "A".

Remove screw "A".

Hook lifting device to lifting eye of box.

Remove screws "B".

Lift and remove box.

To remove ballast boxes the two front most boxes have to be removed first to gain access to the second row.

To install ballast boxes the two on the rearmost position have to be installed first.

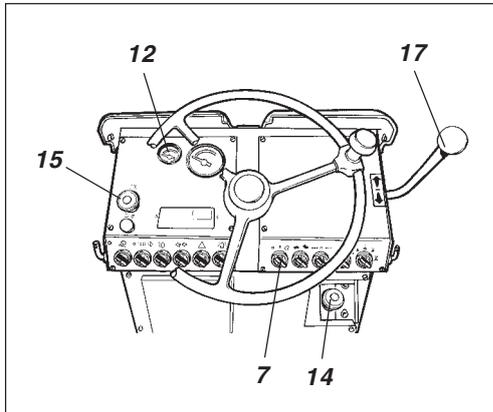
When using less than eight ballast boxes, the boxes must be installed on the front most possible position to achieve the best weight distribution possible.



**CAUTION** Always add/remove two boxes at a time. The weight must be evenly distributed on the roller.

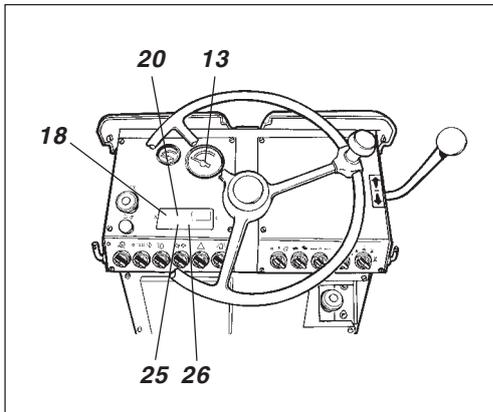
## STARTING

### Starting the engine



**Fig. 14 Instrument panel**

- 7. Start switch
- 12. Fuel gauge
- 14. RPM control
- 15. Reserve/Parking brake knob
- 17. Forward/Reverse lever



**Fig. 15 Instrument panel**

- 13. Tachometer
- 18. Control light, charging
- 20. Warning lamp, engine coolant temp.
- 25. Warning lamp, engine oil pressure
- 26. Warning lamp, parking brake

Set the forward/reverse lever (17) in neutral. The engine can only be started with the lever in neutral.



**Make sure that the reserve/parking brake knob (15) is definitely pushed in. If the parking brake is not applied, the roller may start to roll when starting the engine on sloping ground.**

Turn the start switch (7) to the position I. The switch lights until the required pre-heating is ready. Check the fuel gauge and make sure that all the warning lamps light.

Within 10 seconds after finished pre-heating: Turn the start switch to the starting position and release it immediately when the engine has started.



**Do not run the starter motor too long; preferably wait a minute or so if the engine does not start.**

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

Check while warming up that the warning lamps for oil pressure (25) and charging (18) are out. The warning lamp (26) for the parking brake should still light.



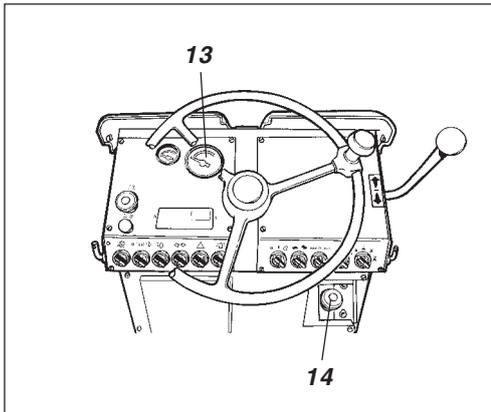
**Remember that when you start and drive a cold machine, the hydraulic fluid is cold and the braking distance will be longer than normal until the machine reaches normal working temperature.**



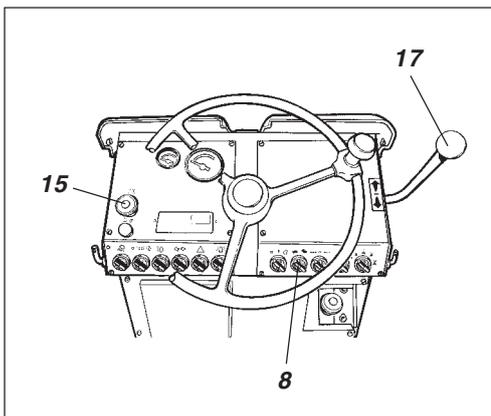
**Make sure that ventilation (extraction) is adequate if the engine is run indoors. Risk of carbon monoxide poisoning.**

## OPERATION

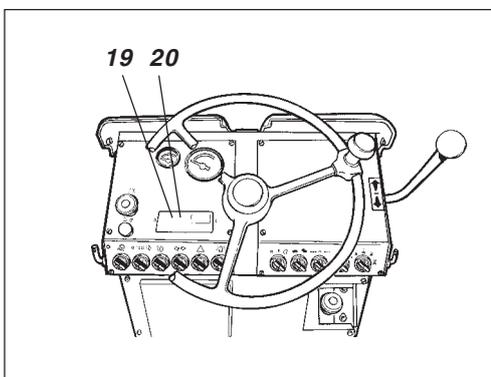
### Driving the roller



**Fig. 16 Instrument panel**  
13. Tachometer  
14. RPM control



**Fig. 17 Instrument panel**  
8. Gear selector  
15. Reserve/Parking brake knob  
17. Forward/reverse lever



**Fig. 18 Instrument panel**  
15. Reserve/Parking brake knob  
19. Warning lamp,  
hydraulic fluid temperature  
20. Warning lamp, engine coolant  
temp.

WARNING



**Under no circumstances may the machine be operated from the outside. The operator must remain seated inside the machine during all operation.**

Pull up the rev control (14) until the tachometer (13) (if any) shows 2200 r/min (for the CE machine, 1800 r/min). Turn the control knob (14) to adjust. Counter-clockwise = increase. Clockwise = reduce.

Check that the steering is working by turning the steering wheel once to the right and once to the left, while the roller is stationary.

WARNING



**Make sure that the area in front of and behind the roller is clear.**

Turn the gear selector (8) to the desired setting.

WARNING



**Pull up the reserve/parking brake knob and check that the warning lamp for the parking brake is out. When starting the roller on a slope, be prepared that it may begin to roll.**

Low mode (working speed) - 10 km/h (6 mph)  
High mode (travelling speed) - 19 km/h (12 mph)

WARNING



**The high mode may only be used for travelling driving on a smooth surface.**

Carefully move the forward/reverse lever (17) to the desired direction of travel. Speed increases as the lever is moved from the neutral position.

CAUTION



**Speed must always be regulated with the forward/reverse lever and not by changing speed of the engine.**

WARNING



**Test the reserve brake by pressing the reserve/parking brake knob (15) while the roller is running slowly forward.**

Check now and then while driving that the gauges show normal readings. In the event of abnormal values or if the beeper sounds, stop the roller and the engine immediately. Check and remedy any fault, see also the maintenance manual and the engine manual.

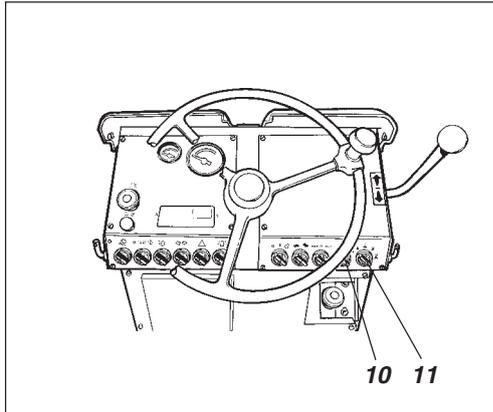
CAUTION



**Inspect the tire tread now and then to detect asphalt compound that has fastened—this is likely before the tires are sufficiently warm. Mixing 2-4% cutting fluid in the sprinkler water for the tires can prevent sticking.**

## OPERATION

### Instrument panel



**Fig. 19 Instrument panel**  
 10. Sprinkler switch  
 11. Sprinkler timer (option)

Drive toward the compaction area. Start spraying water on the tires before going on hot asphalt.

Turn on the sprinkler pump with switch (10).

When the tires reaches the normal working temperatur, the sprinkler timer (option) can be used to give an economic water consumption.

## GROUND CONTACT PRESSURE CHART (valid for 14 ply)

### kPa

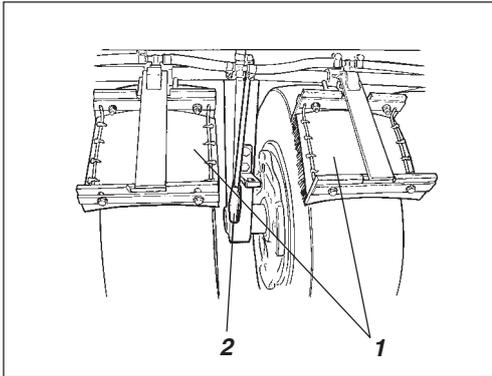
Wheel load kg	Tire inflation pressure, kg/cm <sup>2</sup>					
	240	350	480	620	720	830
	GROUND PRESSURE, kPa					
1130	350	400	430	460	510	590
1360	380	430	460	480	530	610
1585	400	450	470	510	560	630

### psi

Wheel load lbs	Tire inflation pressure, psi					
	35	50	70	90	105	120
	GROUND PRESSURE, psi					
2500	51	58	62	67	74	86
3000	55	62	67	70	77	88
3500	58	65	68	74	81	91

## SCRAPERS POSITIONS

### Operation



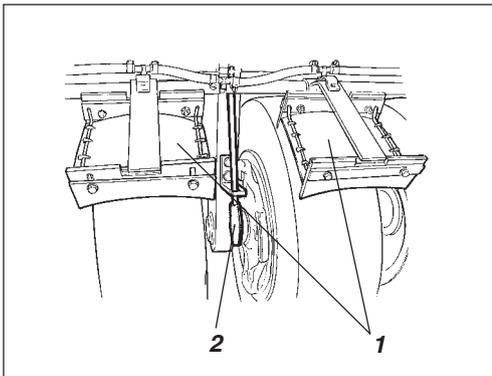
**Fig. 20 Operation position**

1. Coco mats
2. Lever

To set the scrapers and coco mats in operation position, release the lever (2) and let the coco mats rest on tires.

The rear wheels have individual levers for each scraper/mat.

### Disengaged



**Fig. 21 Disengaged position**

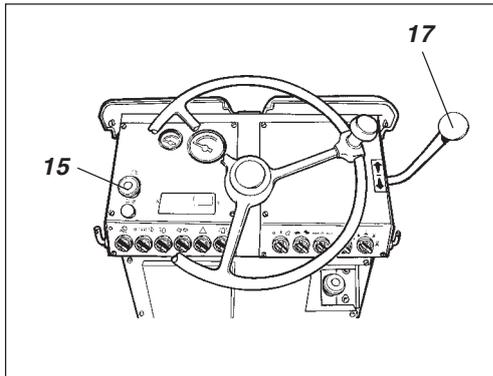
1. Coco mats
2. Lever

To disengage the coco mats on the front wheels pull the lever (2) and lock in off position.

The rear wheels have individual levers – lock each scraper/mat in off position.

## BRAKING

### Reserve brake



**Fig. 22 Instrument panel**

- 15. Reserve/parking brake knob
- 17. Forward/Reverse lever

Braking is normally done with the forward/reverse lever (17). The hydrostatic transmission brakes the roller when the lever is moved towards neutral.

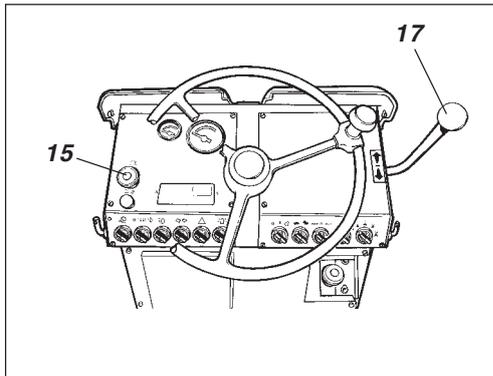
In addition, the multi-disc brakes on the wheel-drive motors work as parking brakes when the reserve/parking brake knob (15) is pressed in.



**To emergency brake, press the reserve/parking brake knob (38), hold the steering wheel firmly and be prepared for a sudden stop.**

After braking, restore the forward/reverse (17) lever to neutral and pull up the reserve/parking brake knob (15).

### Normal braking



**Fig. 23 Instrument panel**

- 15. Reserve/parking brake knob
- 17. Forward/Reverse lever

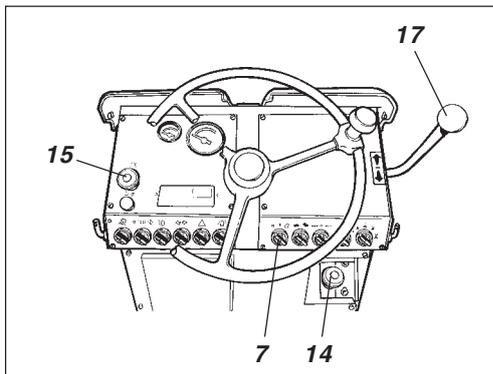
Move the forward/reverse lever (17) to neutral to stop the roller.

Always press the reserve/parking brake knob (15) even for brief stops when on sloping ground.



**When you start up and drive a cold machine, the hydraulic fluid is cold and the braking distance will be longer than normal until the machine reaches normal working temperature.**

### Switching off



**Fig. 24 Instrument panel**

- 7. Starter switch
- 14. RPM control
- 15. Reserve/parking brake knob
- 17. Forward/Reverse lever

Turn the speed control back to idling, allow the engine to idle a few minutes to cool down.

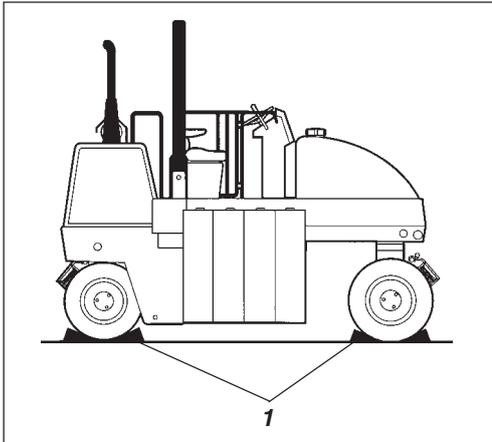
Check instruments and warning lamps to see if any faults are indicated, switch off all lights and other electrical functions.

Press down the reserve/parking brake knob (15).

Turn the starter switch (7) to mode **O**. Lower the instrument cover and lock it.

## PARKING

### Blocking the wheels



**Fig. 25 Blocking the wheels**  
1. Chock

WARNING



Never leave the roller with the engine running without first pressing the reserve/parking brake knob.

WARNING



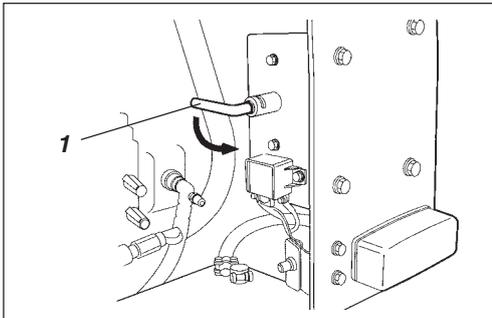
Make sure that the roller is parked in a safe place for traffic. Chock the drum and wheels if the roller is parked on sloping ground.

CAUTION



Remember the risk of freezing during the winter. Use antifreeze in the engine radiator and drain the water tanks, pumps and leads.

### Battery disconnecter



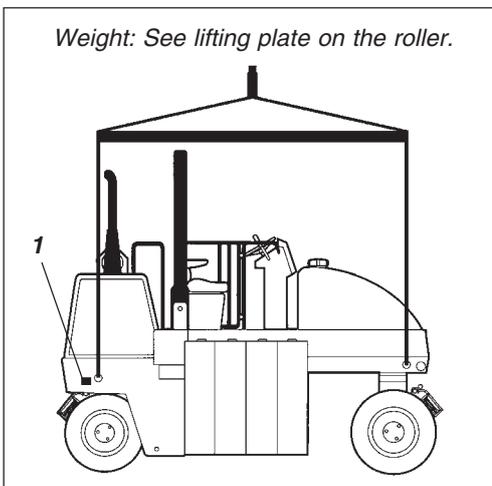
**Fig. 26 Engine compartment**  
1. Battery disconnecter

Turn off the battery disconnecter (1) and remove the key before leaving the roller.

This will prevent battery discharge and will also make it difficult for any unauthorized person to start and drive the machine. Also lock the doors to the engine compartment.

## INSTRUCTIONS FOR LIFTING

### Lifting the roller



**Fig. 27 Roller prepared for lifting**  
1. Lifting plates

Make sure that front wheels are parallel to body frame before lifting the roller.

Hook the lifting chains to the lifting eyes and ensure that no parts will be crushed by the chains when lifting.

WARNING



Maximum permitted weight of the roller and accessories is punched on the lifting data plate (1).

CAUTION



Lifting gear, such as chains, steel wires, straps, and lifting hooks must be dimensioned in conformance with current regulations.

WARNING



Do not walk under a suspended load. Ensure that the hooks of the lifting chains are fitted securely in their positions.

## INSTRUCTIONS FOR TOWING

### Towing a roller

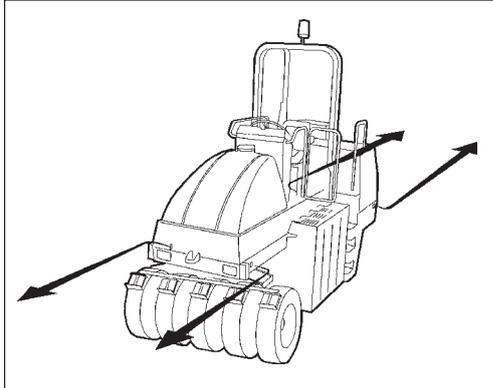


Fig. 28 Towing



**Check the tire. The machine can start to roll when the brakes are released.**



**Always use a tow bar. NEVER use chains or lines.**



While starting to tow the roller, rear drive motor may emit unblocking sound, this is normal for the type of traction motor in the roller.

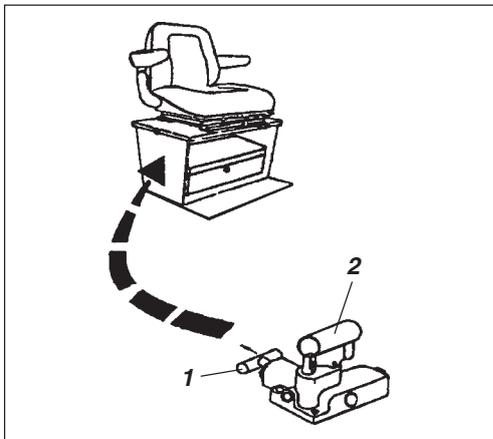


Fig. 29 Brake release pump  
1. Brake re-apply handle  
2. Pumping lever holder

Since the engine is not working the brakes must first be disengaged as follows:

Insert a steel bar in the pumping lever and pump by moving up and down until brakes are released or until hydraulic resistance can be felt.

The brakes are now disengaged and the roller can be towed at a **low** speed.



The roller must be towed slowly (max. 3 km/h /1.8 mph) and only a short distance (max.300 m /328 yds).



When you towing/retrieval a machine, the towing device must be connected to both lifting holes. Pulling forces should act longitudinally on the machine as illustrated. Maximum gross pulling force 58 kN (29 kN per lifting hole) (13,038 lbs—6,519 per lifting hole)



**After towing. Pull the handle (1) and the brake will app**



**Always lock the pump with a pad lock when not used.**

### Pulling eyelet

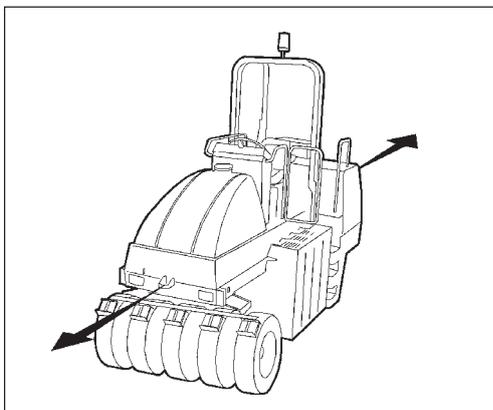
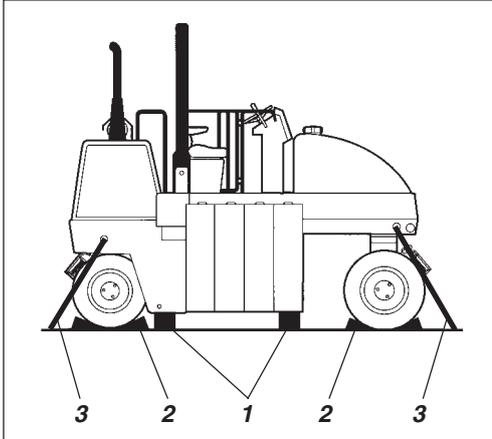


Fig. 30 Pulling eyelet

The roller can be fitted with a towing lug. The towing lug is for pulling objects that weigh no more than 2400 kg (5,395 lbs). The towing lug is not intended for towing/retrieval.

## TRANSPORTATION

### Roller prepared for transportation



**Fig. 31** *Transporting a roller*

1. *Chock*
2. *Block up*
3. *Lashing wire*

Chock the drums (2) and secure the chocks to the transport vehicle.

Block up under the drum frame (1) to avoid damage to the machine.

Clamp down the roller with lashing straps (3) at all four corners; decals indicate the fixing points.

## OPERATING INSTRUCTIONS – SUMMARY



1. **Follow the SAFETY INSTRUCTIONS in the Safety Manual.**
2. Make sure that all instructions in the maintenance manual are followed. Check that the reserve/parking brake knob (15) is pushed in.
3. Turn the battery disconnecter to ON.
4. Put the forward/reverse lever in neutral.
5. Set the RPM control to the idling mode.
6. Start the engine and allow it to warm up.
7. Set the RPM control in the operating mode.
8. Put the reserve/parking brake knob in the pulled-out position.



9. **Drive the roller. Operate the forward/reverse lever with care.**



10. **Test the brakes.**  
**Remember that the braking distance will be longer if the roller is cold.**

11. Make sure that the drums are watered sufficiently when needed.



12. **IN AN EMERGENCY:** - **Push in the reserve/parking brake knob**  
- **Hold the steering wheel firmly.**  
- **Brace yourself for a sudden stop.**

13. Parking: - Push in the reserve/parking brake knob.  
- Stop the engine and chock the wheels.

14. Towing: - See the instruction.

15. Lifting: - See the instruction.

16. Transport: - See the instruction.

17. Retrieval: - See the instruction.