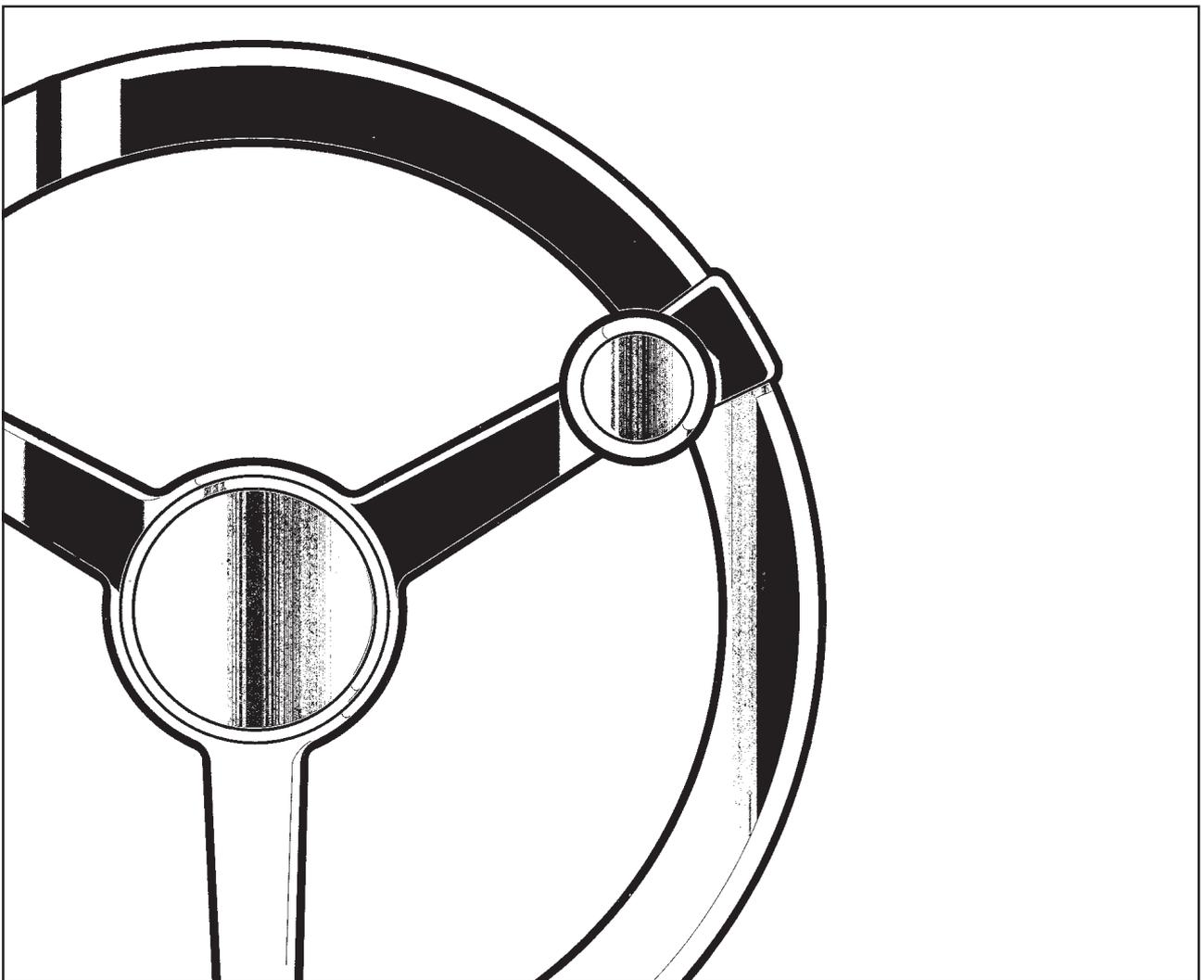


DYNAPAC CA 251

OPERATION

0251-1EN1



SVEDALA

 **DYNAPAC**
Svedala Compaction Equipment AB

Box 504, SE-371 23 Karlskrona, Sweden

Telephone +46 455 30 60 00

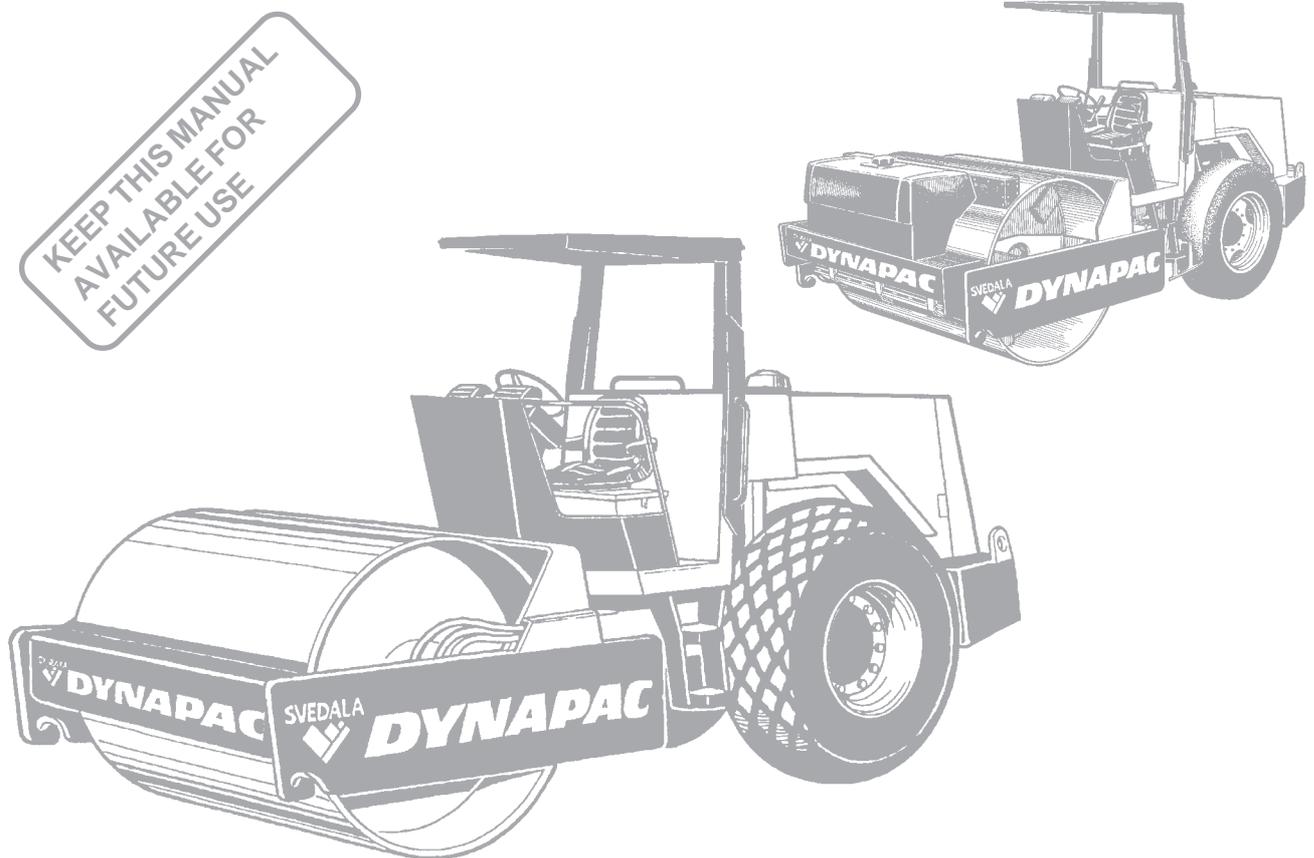
Telefax +46 455 30 60 30

Vibratory roller CA 251

Operation 0251-1EN1, November 1999

Diesel engine:
Cummins 6BT 5.9

These instructions apply from:
CA 251 PIN (S/N) *58313611*
CA 251A PIN (S/N) *58313688*



The CA 25-family consists of rollers CA 251, Std, D, PD and CA 251A. These rollers are designed for the compaction of roads, airfields, dams and similar constructions. The CA 251A compacts asphalt, roller concrete, base courses and sub-base courses efficiently and with high capacity.

Separate information is available on request concerning accessories and extra equipment.

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Safety instructions	3
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WARNING SYMBOLS



Safety instructions – Personal safety.



Special caution – Machine or component damage.

SAFETY MANUAL



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 concerning operation and use of the roller. For information regarding care and maintenance, see the manual, "MAINTENANCE, CA 251".



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 normal working temperature.

CALIFORNIA

Proposition 65 Warning

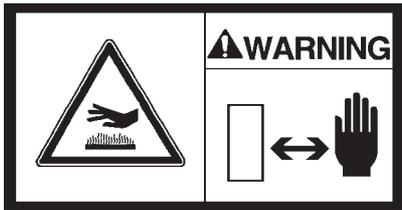
Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

SAFETY INSTRUCTIONS (Also read the safety manual)



1. The operator must be conversant with the contents of the OPERATION MANUAL before starting the roller.
2. Ensure 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.
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.
6. The ROPS (ie, Roll Over Protective Structure) should always be used when the machine is used on risky ground.
7. Drive slowly in sharp bends. Keep to the recommended driving speed.
8. Avoid driving at an angle on slopes; drive straight up or down.
9. When driving close to unsafe edges or holes, ensure that at least two thirds of the drum width is firmly on material that has already been compacted.
10. Ensure that there are no obstacles in the direction of travel, on the ground and 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 refuelling:
 - Stop the engine.
 - Don't smoke.
 - No naked flame in the vicinity.
 - Earth 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 required.
16. If the noise level is higher than 85 dB(A) on machines that have no cab:
 - Ear defenders are recommended. (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 Svedala 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.

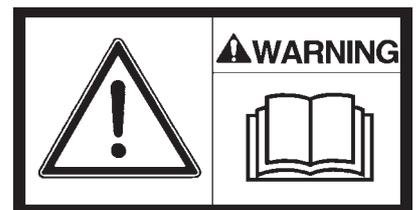
SAFETY DECALS, LOCATION AND DESCRIPTION



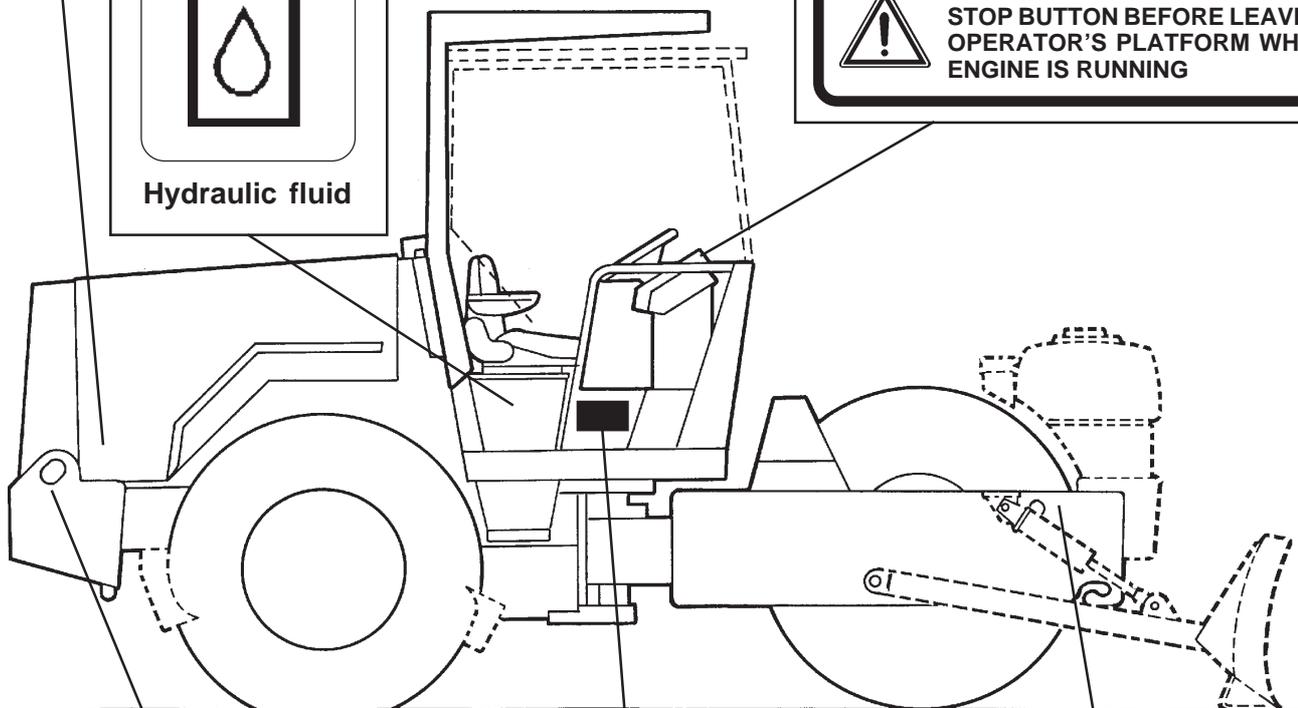
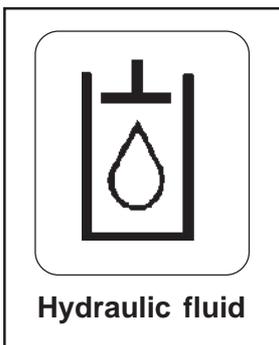
Warning for hot surface.
The surface must not be touched.



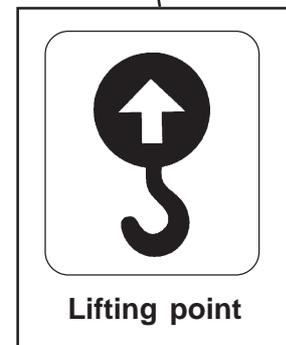
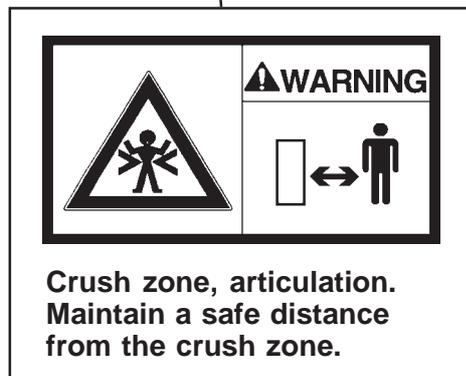
Warning for rotating engine components. Keep your hands at a safe distance from the danger zone.



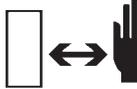
The operator is urgently requested to read the safety manual, and the operation and maintenance instructions before using the machine.

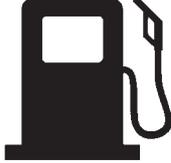


(The figure shows accessories.)



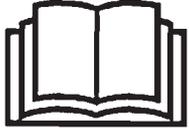
SAFETY DECALS, LOCATION AND DESCRIPTION

 <div data-bbox="427 271 612 309">WARNING</div> 	 <div data-bbox="892 271 1077 309">WARNING</div> 
<p>Warning for hot surface. The surface must not be touched.</p>	<p>Warning for rotating engine components. Keep your hands at a safe distance from the danger zone.</p>

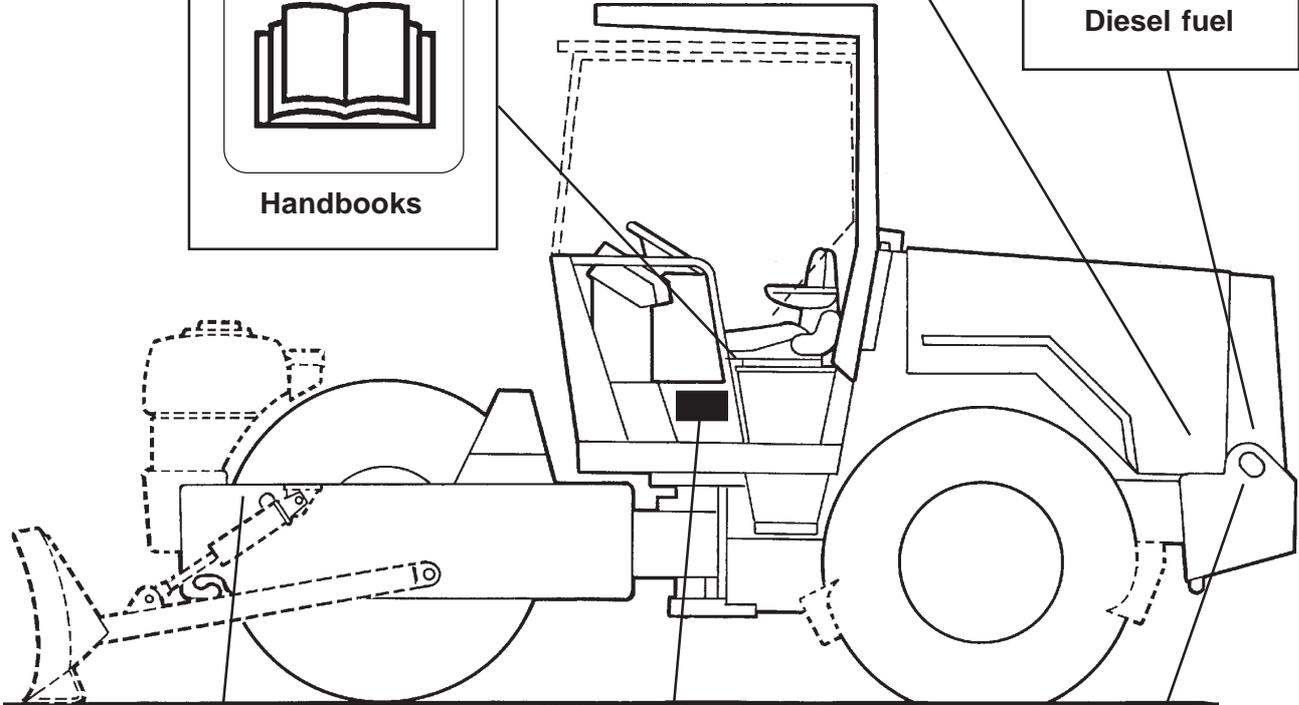


DIESEL

Diesel fuel



Handbooks

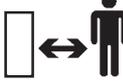




Lifting point



WARNING



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



Lifting point

MACHINE AND ENGINE PLATES

Machine plate

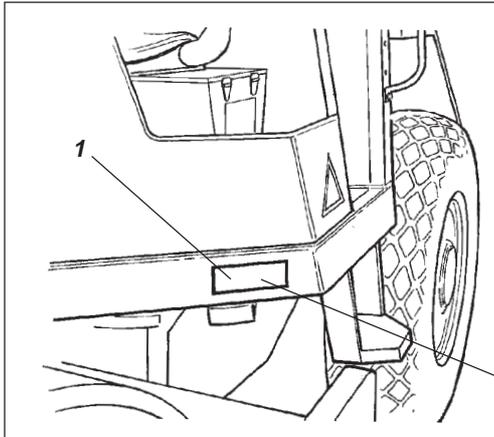


Fig. 1 Left step
1. Machine plate

The machine type plate (1) is affixed on the front left edge of the operator's platform. 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. Please state the PIN-number (serial number) of the roller when ordering spares.

On machines fitted with a cab there is a separate cab data plate. Use this data plate as identification when ordering spare parts for the cab.

<small>SVEDALA</small>   Svedala Compaction Equipment AB Karlskrona Sweden	
Type <input type="text"/>	Operating mass <input type="text"/> kg
Product Ident. <input type="text"/>	Rated power <input type="text"/> kW
Number <input type="text"/>	Year of Mfg <input type="text"/>

Serial number on frame

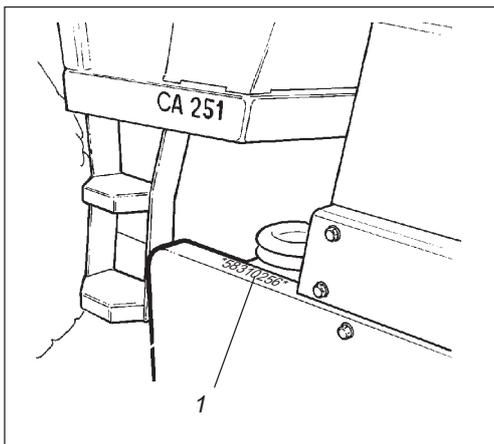


Fig. 2 Front frame
1. Serial number

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

Engine plate

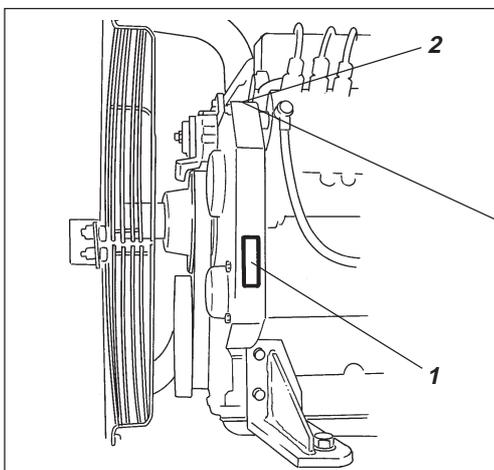


Fig. 3 Engine
1. Type plate
2. EPA sign (USA)

The engine data plate is on the right edge of the toothed-belt cover. The plate indicates the type of engine, serial number and engine data. Please state the engine serial number when ordering spares. See also the engine manual.

IMPORTANT ENGINE INFORMATION
 This engine conforms to 1999 U.S. EPA
 and California regulations for
 heavy duty non-road compression
 ignition diesel cycle engines as
 applicable.
**THIS ENGINE IS CERTIFIED TO OPERATE
 ON DIESEL FUEL**

3935108

INSTRUMENTS AND CONTROLS

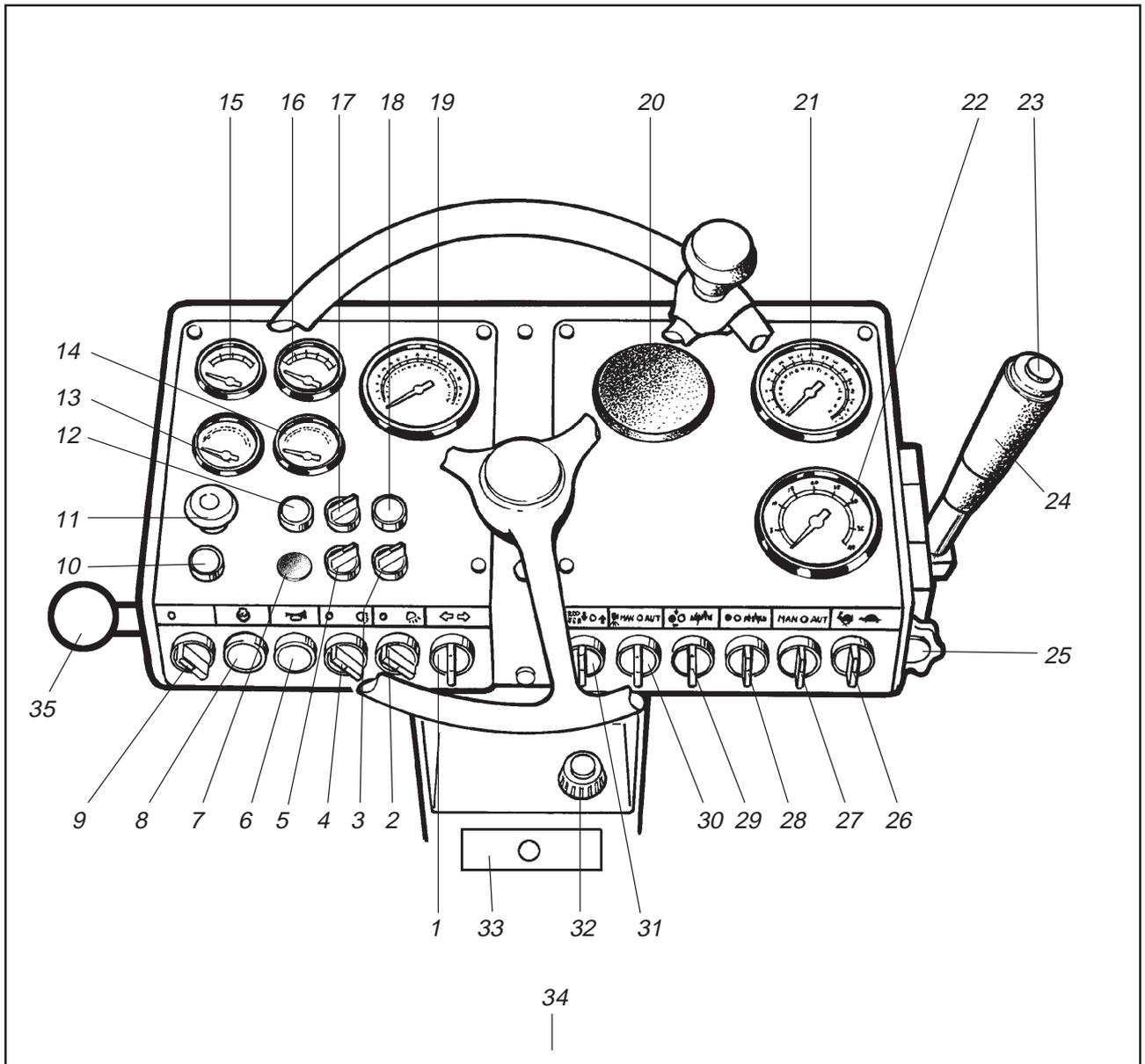


Fig. 4

- | | | |
|---------------------------------------|---------------------------------------|---------------------------------------|
| 1 Direction indicator switch * | 15 Hydraulic fluid, Temperature gauge | 27 Vibration selector Man/Aut.* |
| 2 Working lights * | 16 Engine, Temperature gauge | 28 Amplitude selector Low/0/High |
| 3 Hazard beacon * | 17 Main beam/Control lamp * | 29 Watering/Tyres (A) |
| 4 Driving lights * | 18 Warning lamp – air cleaner | 30 Watering Man/Aut/drum * |
| 5 Hazard flashers * | 19 Tachometer/hourmeter | 31 Frequency meter ON/OFF * |
| 6 Horn | 20 Compaction meter * | 32 Revs control |
| 7 Vacant | 21 Frequency meter * | 33 Fuse box |
| 8 Starter contact | 22 Speedometer * | 34 Handbook compartment |
| 9 Stop switch | 23 Vibration ON/OFF | 35 Lever – Strike-off blade Up/Down * |
| 10 Reserve brake knob | 24 Forward/reverse lever | |
| 11 Reservbromsreglage | 25 Speed limiting device * | |
| 12 Warning lamp – engine oil pressure | 26 Speed selector | |
| 13 Voltmeter | | |
| 14 Fuel gauge | | |

* Optional equipment

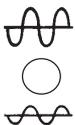
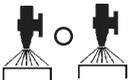
INSTRUMENTS AND CONTROLS, FUNCTIONAL DESCRIPTION

Items in fig.4	Designation	Symbol	Function
1	Direction indicator (optional equipment)		Turn left to switch on the left direction indicator, etc. The flashing indicator is OFF in the middle position.
2	Working lights (optional equipment)		Turn right to switch on the working lights.
3	Hazard beacon (optional equipment)		Turn right to switch on the hazard beacon.
4	Driving lights (optional equipment)		Turn right to switch on the parking lights and further right to switch on the dipped headlights.
5	Hazard flashers (optional equipment)		Turn right to switch on the flashing warning lights.
6	Horn		Press to sound the horn.
7	- (optional equipment)		
8	Starter contact		Press to run the starter motor.
9	Switch		In position O the electric circuit is broken. In position I all electric instruments and controls are powered.
10	Brake warning lamp		The lamp lights while the brake is applied. Lights while the parking brake is applied.
11	Reserve brake/ Parking brake (red knob)		Press to activate the reserve brake. Press when the machine is stationary to activate the parking brake. Pull out to release the brakes.
12	Warning lamp, oil pressure		The warning lamp lights if lubricating oil pressure is too low. Stop the engine immediately and remedy the cause.
13	Voltmeter		Indicates voltage of the electrical system. Normal indication is 12–15 Volt.
14	Fuel gauge		Indicates level of the fuel tank.
15	Temperature gauge hydraulic fluid		Indicates temperature of the hydraulic fluid. Normal temperature range 65°C–80°C (149°F–176°F). Stop the engine if the meter indicates more than 85°C (185°F) and remedy the cause.

INSTRUMENTS AND CONTROLS, FUNCTIONAL DESCRIPTION

Items in fig.4	Designation	Symbol	Function
16	Engine temperature gauge		Indicates engine working temperature. Normal temperature range 82°C–93°C (180°C–199°C). Stop the engine if the gauge indicates more than 103°C (217°F), remedy the cause. See engine manual.
17	Main and dipped beam control lamp, (optional)		Turn right to switch on the main beam.
18	Warning lamp – air cleaner		If the warning lamp lights at full engine revs it is an indication that the air cleaner needs cleaning or replacement.
19	Tachometer/hourmeter		Indicates current engine speed in revs per minute. Multiply the meter value by 100. The running time in hours is indicated digitally.
20	Compaction meter, (optional)		See separate instructions.
21	Speedometer (optional)		The outer scale indicates km/h, the inner mph.
22	Vibration/Frequency meter (optional equipment)		The inner scale indicates the current motor speed. The outer scale indicates the vibration frequency.
23	Vibration ON/OFF		Press to switch vibration on. Press again to switch vibration off. Applies when (27) is in the MAN mode.
24	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. Speed of the roller is proportional to movement of the lever from the neutral position. The further from neutral the higher the speed.
25	Speed control (optional equipment)		Limits movement of the F/R lever and thus the speed. The speed control can be bypassed.
26	Speed selector		Transportation speed (High) Working speed (Low)
27	Vibration setting (optional equipment)	MAN O AUT 	In the MAN mode the vibration is switched ON/OFF with (23). Vibration is OFF in the O mode. The AUT mode gives automatic switching of vibration ON/OFF while driving forward or reverse.

INSTRUMENTS AND CONTROLS, FUNCTIONAL DESCRIPTION

Items in fig.4	Designation	Symbol	Function
28	Amplitude selector		The left mode gives low amplitude. Vibration is OFF in the O mode. The right mode gives high amplitude.
29	Watering (A)		Controls the flow of water to the tyres. Continuous – Intermittent
30	Watering (A)	<p style="text-align: center;">MAN</p> <p style="text-align: center;">○</p> <p style="text-align: center;">AUTO</p> 	Controls the flow of water to the drum. MAN mode gives continuous watering. Watering is OFF in the O mode. The AUT mode gives automatic switching of watering ON/OFF while driving forward or reverse.
31	Vibration/Frequency meter (optional equipment)	<p style="text-align: center;">FREQ</p> <p style="text-align: center;">METER</p> 	Switches on the vibration/frequency meter.
32	Revs control (Diesel)		Released/engaged by the centre button. Pull out to increase engine revs. Push in to reduce. Turn/screw the handle to adjust. Anticlockwise = increase and clockwise = reduce.
33	Fuse box		Contains fuses for the electrical system. See under the heading “Electrical system” for description of function for the different fuses.
34	Handbook compartment		Manuals for safety, operating and maintenance that are not to be removed from the machine.
35	Lever, strike-off blade UP/Down (optional equipment)		Regulates movement of the strike-off blade Up/Down. Move the lever down to lower, and up to raise the blade.

INSTRUMENTS AND CONTROLS IN THE CAB

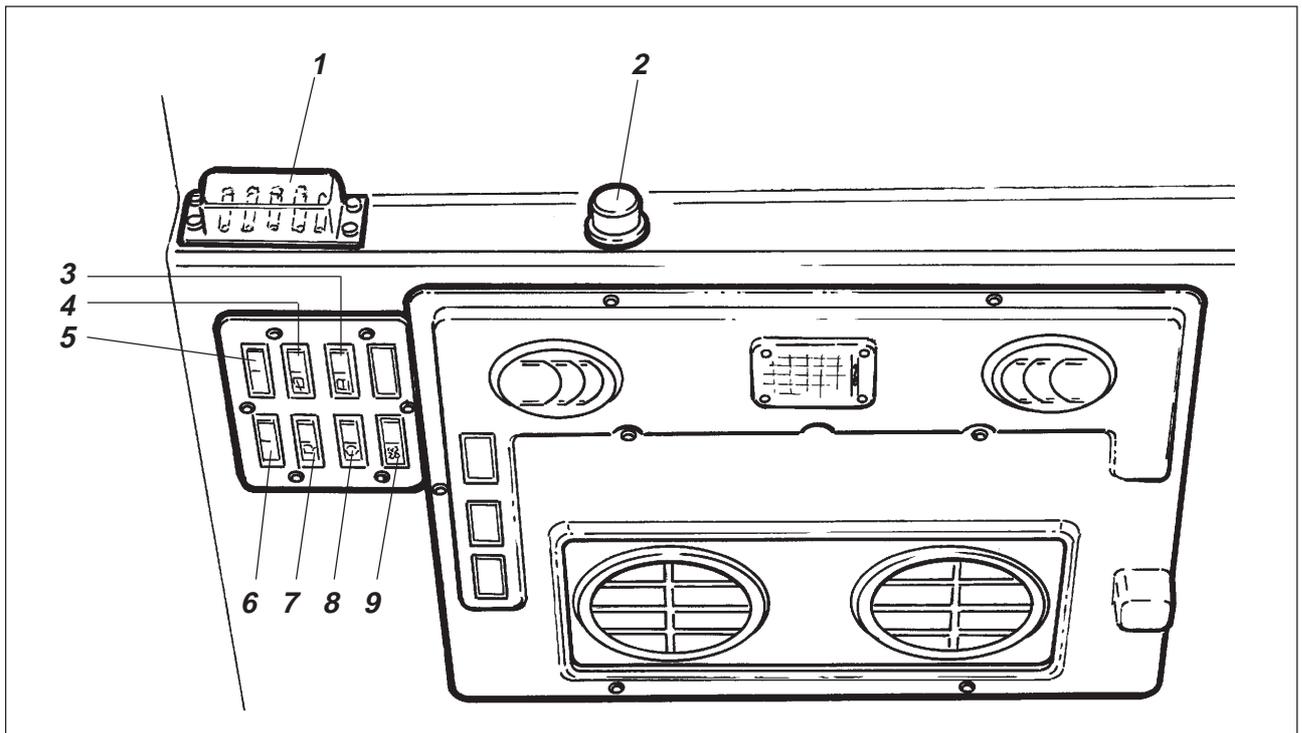


Fig. 5 Cab roof

Items in fig.5	Designation	Symbol	Function
1	Fuse box (cab)		Contains fuses for the electrical system. See under the heading "Electrical system" for description of function for the different fuses.
2	Heater control, knob		Turn clockwise to increase cab temperature.
3	Screenwash rear, switch		Press to operate the rear screenwash.
4	Wiper, rear, switch		Press to operate the rear screen wiper.
5	Working lights, rear, switch		Press to switch on the rear working lights.
6	Working lights, front, switch		Press to switch on the front working lights.
7	Wiper, front, switch		Press to operate the front screen wiper.
8	Screenwash front, switch		Press to operate the front screenwash.
9	Ventilation fan, switch		Press to start the cab ventilation fan.

BEFORE START

Battery disconnecter - Switching on

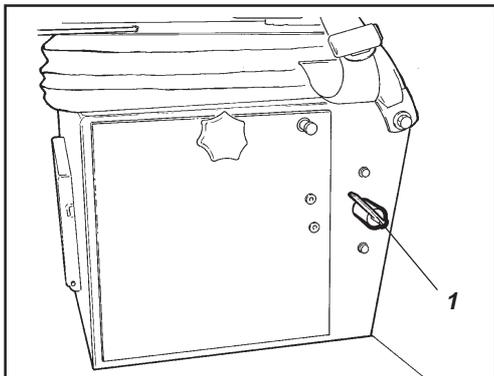


Fig. 6 Battery box
1. Battery disconnecter

Remember to carry out daily service, see Maintenance manual.

Set the battery disconnecter (1) to its ON mode.

Operator's seat - Setting

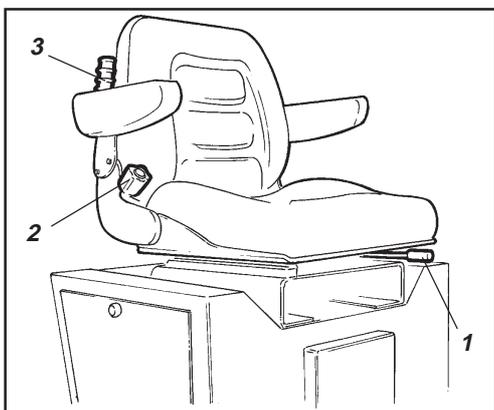


Fig. 7 Operator's seat
1. Lever - length adjustment
2. Knob - back slope
3. Lever - seat cushioning

Position the operator's seat so that the controls are easily accessible.

The seat can be adjusted as follows:

- Length adjustment (1)
- Back slope (2)
- Cushioning in relation to the operator's weight (3)



Ensure that the battery box is always closed while driving.

Comfort seat (Cab) - Setting

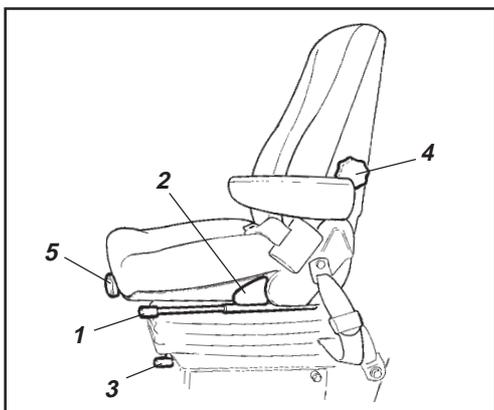


Fig. 8 Operator's seat
1. Lever - length adjustment
2. Lever - back slope
3. Lever - weight adjustment
4. Knob - lumbar adjustment
5. Knob - seat slope

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

The seat has the following adjustment facilities:

- Length adjustment (1)
- Back slope (2)
- Weight adjustment (3)
- Lumbar support (4)
- Seat slope (5)

BEFORE START (Contd.)

Instruments and lamps - Control

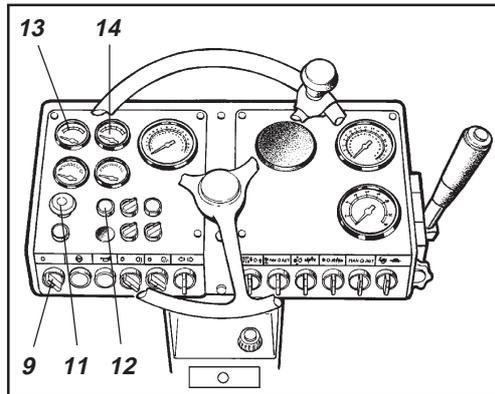


Fig. 9 Instrument panel

- 9. Starter switch
- 11. Parking brake knob
- 12. Oil pressure lamp
- 13. Voltmeter
- 14. Fuel gauge

Ensure that the EMERGENCY STOP knob (11) is pulled out.

Turn the starter switch (9) to position I.

Check that the voltmeter (13) goes up to at least 12 volt.

Check that the fuel gauge (14) gives a reading.

Check that the oil pressure lamp (12) lights.

Parking brake - Control

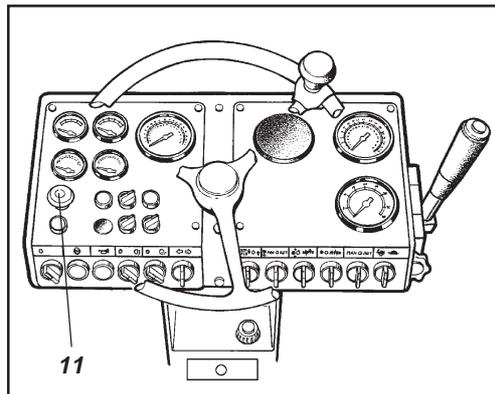


Fig. 10 Instrument panel

- 11. Parking brake knob



Ensure that the parking brake knob (11) is pressed down.

WARNING: If the parking brake is not applied the roller may start to roll when starting the engine on sloping ground.

Field of view

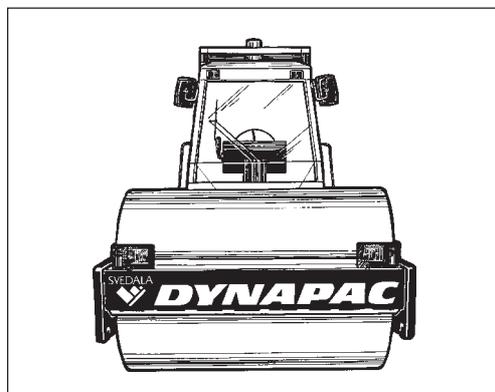


Abb. 11 Field of view

Before starting, make sure that the field of view is unobstructed, both in front and behind. All cab windows must be clean and rearview mirrors properly adjusted.

BEFORE START (Contd.)

Operator's station

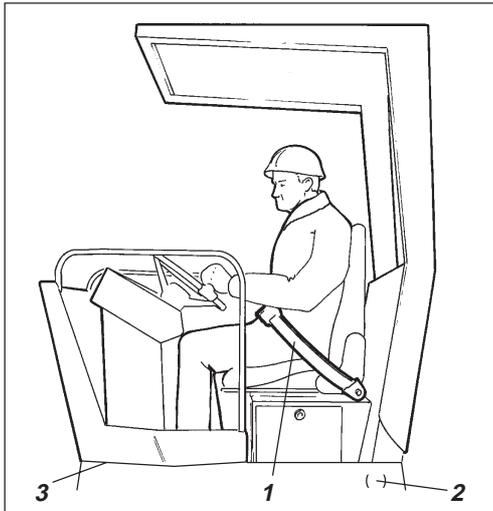


Fig. 12a Operator's station

1. Seat belt
2. Rubber element
3. Anti-slip

Fasten the seat belt provided if ROPS or a cab is fitted on the roller and wear a protective helmet.



Always replace the seat belt with a new one if it is worn or has been subjected to a heavy load.



Check that the rubber elements on the platform are intact. Worn elements will impair comfort.



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

Strike-off blade (optional equipment)

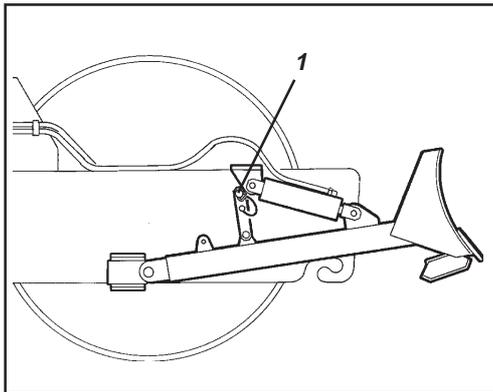


Fig. 12b Strike-off blade

1. Locking pin



Always ensure that the strike-off blade is secured by the locking pin (1) when driving with the blade in its raised position. Always lower the blade to the ground before leaving/parking the roller.

STARTING

Starting the engine

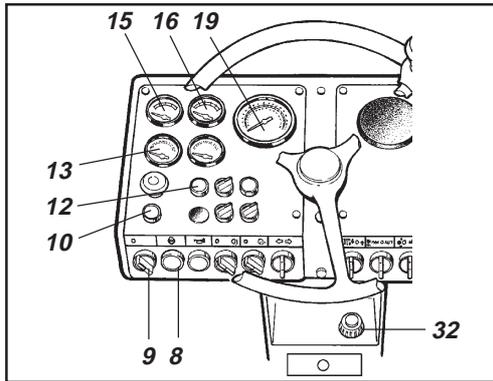


Fig. 13a Instrument panel

- 8. Starter contact
- 9. Starter switch
- 10. Warning lamp, brake
- 12. Warning lamp, oil pressure
- 13. Voltmeter
- 15. Temperature gauge, hydraulics
- 16. Temperature gauge, engine
- 19. Tachometer/hourmeter
- 32. Revs control

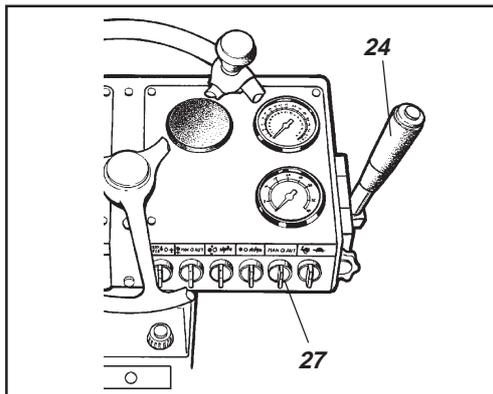


Fig. 13b Instrument panel

- 24. Forward/reverse lever
- 27. Amplitude selector

Set the forward/reverse lever (24) in neutral. The engine cannot be started if the lever is in any other position.

Set the amplitude selector (27) to the 0 mode.

Press the button on the revs control (32) and increase to $\frac{1}{4}$ throttle. Check that the starter switch (9) is at position I.

Press the starter contact (8). Release the contact as soon as the engine fires.



Do not run the starter motor too long. If the engine does not start immediately, wait a minute or so before making a new attempt.

Run the engine warm at about 1000 r/min for 5 to 10 minutes depending on the ambient temperature. Check that the tachometer/hourmeter (19) gives a reading. Check while warming up that the voltmeter (13) indicates 13–14 volt, and that the oil pressure warning lamp (12) is out. Check that the engine temperature gauge (16) gives a reading towards the end of the warming-up period. Warning lamp (10).



When starting up and driving a cold roller (cold hydraulic fluid) the braking distance will be longer than normal until the machine reaches normal working temperature.



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

OPERATION

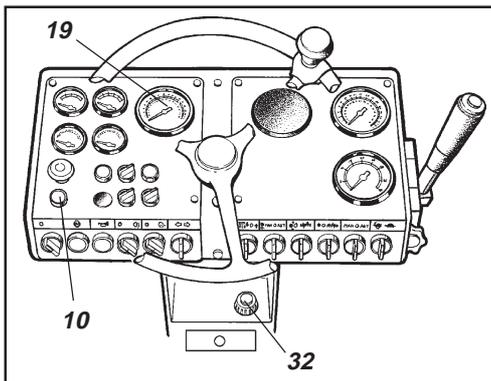


Fig. 14 Instrument panel
 10. Warning lamp, brake
 19. Tachometer/hourmeter
 32. Revs control

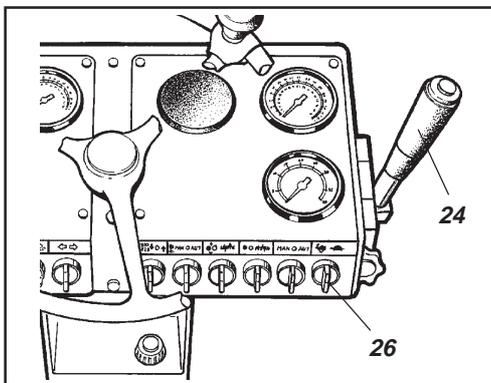


Fig. 15 Right instrument panel
 24. Forward/reverse lever
 26. Speed selector

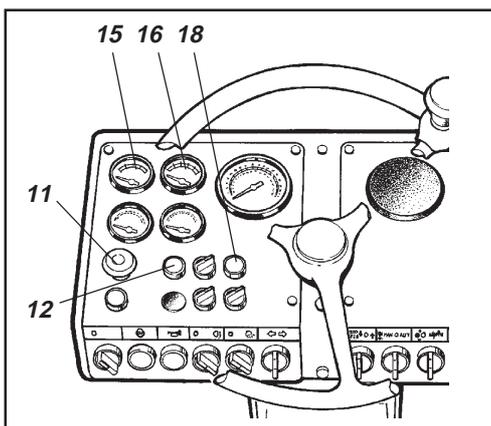


Fig. 16 Left instrument panel
 11. Reserve brake
 12. Engine oil pressure
 15. Hydraulic temperature
 16. Engine temperature
 18. Warning lamp - air cleaner

Open the throttle (32) until engine speed is 2400 r/min on the tachometer (19).
 Turn the control (32) to finely adjust:
 Anticlockwise = increase and 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. The steering should work smoothly and without jerks or interruption.



Ensure that the area in front of and behind the roller is clear.



Pull up the reserve brake knob and check that the warning lamp (10) is out.

Set the speed selector (26) to the desired mode, see decal on the instrument panel.

Low mode (working speed):
 about 0–9 km/h (0–5.5 m/h) (Std, A),
 about 0–6 km/h (0–4 m/h) (D, PD).

High mode (transportation speed):
 about 0–23 km/h (0–14.5 m/h) (Std, A),
 about 0–10 km/h (0–6 m/h) (D, PD).



The high mode may only be used for transport runs on an even surface.



Carefully move the forward/reverse lever (24) in the desired direction of travel. Speed increases as the lever is moved farther from the neutral position.



Speed must always be regulated with the forward/reverse lever and never by changing the engine speed.



Check operation of the reserve brake by pressing the reserve stop knob (11) while the roller is running slowly forward. The roller should then slow down and come to a standstill as the control lamp (10) lights.

Check while driving that the gauges show normal readings and that the warning lamps do not light. Stop the engine immediately and locate the fault if the oil pressure lamp (12) lights.

Max. temperature of hydraulic fluid (15): 85°C (185°F).
 Max. engine temperature (16): 103°C (217°F).



If the air cleaner warning lamp (18) should light while driving and at full engine revs then the main filter is to be cleaned or replaced, see maintenance instructions.

OPERATION

Operating the strike-off blade

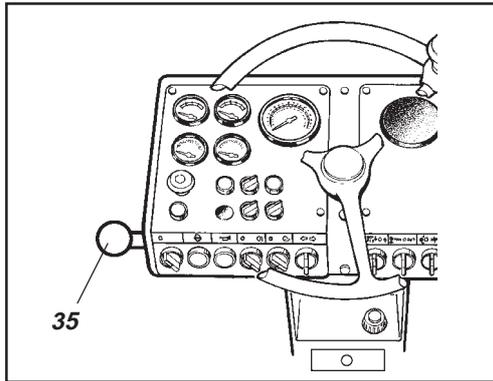


Fig. 17 Instrument panel
35. Lever, strike-off blade



Ensure that the blade is at its uppermost (raised) position before driving. Check the state of the ground before using the blade.

Move the lever forward to lower, and backward to raise the blade.

Lower the blade before leaving/parking the machine.



When driving with the blade raised it must always be secured with the safety pin.

VIBRATION/DRIVING

High/Low amplitude - Setting

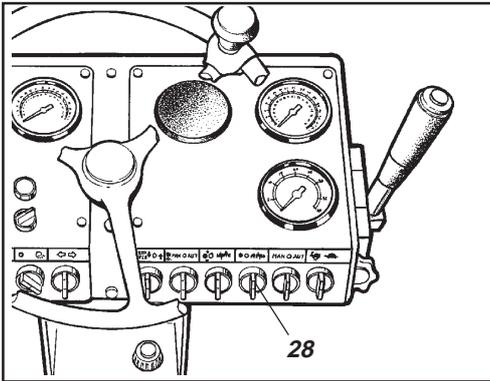


Fig. 18 Right instrument panel
28. Amplitude selector

Vibration on the drum can be set in two modes, switching over is made with the switch (28). Turn the knob to the left for low amplitude/high frequency, to the right for high amplitude/low frequency.



Amplitude setting High/Low may not be altered while vibration is in action. Wait until vibration stops before resetting.



Never allow vibration to be on when the roller is stationary, the surface and the machine may otherwise be damaged.

Vibration - Engaging

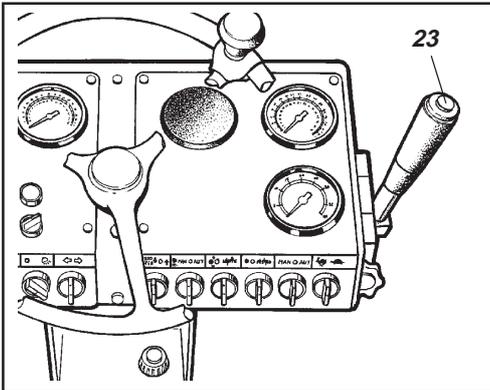


Fig. 19 Right instrument panel
23. Vibration ON/OFF

Engagement and disengagement of vibration is made with the changeover switch (23) on the forward/reverse lever. Always switch off vibration before the roller comes to a standstill.



Vibration should not be switched off when changing the direction of travel.

SAFETY WHEN DRIVING

Slopes

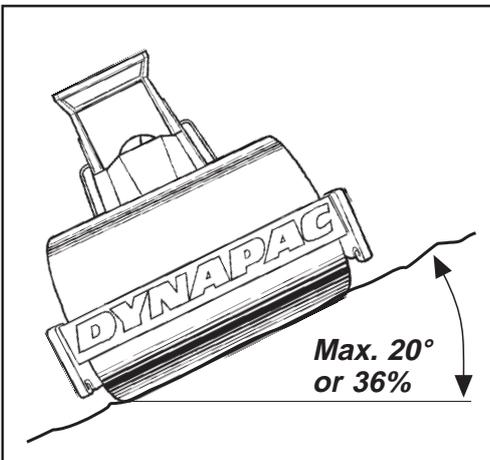


Fig. 20 Tipping angle on side slopes

The tipping angle given here applies to smooth, hard ground and stationary machine. The steering angle is zero (machine moving straight forward) and vibration switched off. Remember that loose ground, steering of the machine, driving speed and increase in height of the centre of gravity (eg, accessories) may cause the machine to topple even on a smaller slope than that stated here.



Where possible, avoid all driving transversely across a slope. Instead, drive up and down on sloping ground. The machine will topple on side slopes greater than 20° or 36%, to the right or left.

EMERGENCY STOP

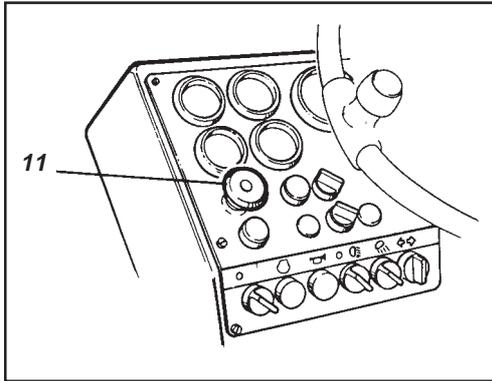


Fig. 21 Left instrument panel
11. Reserve brake knob

Braking is normally done with the forward/reverse lever. The hydrostatic transmission brakes the roller when the lever is moved towards neutral. In addition there are disc brakes in the drum drive and rear axle that act as a parking brake and are activated when the reserve brake knob (11) is pressed in.



In an emergency, press the reserve brake knob (11). Hold the steering wheel firmly and be prepared for a sudden stop.

After emergency braking: Return the forward/reverse lever to neutral. Pull out the EMERGENCY STOP knob (11) and start the roller again if required.

Normal braking

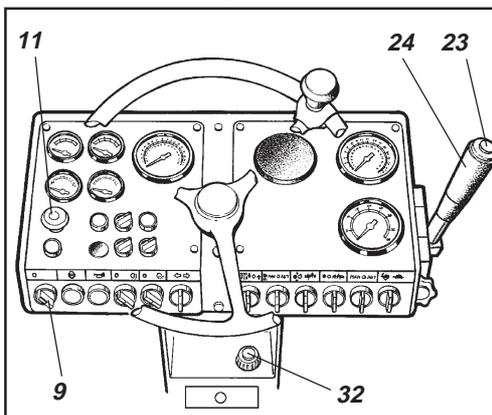


Fig. 22 Instrument panel
9. Switch (Stop, Cummins)
11. EMERGENCY STOP, knob
23. Vibration ON/OFF
24. Forward/reverse lever
32. Revs control

Press the switch (23) to disengage the vibration.

Move the forward/reverse lever (24) to neutral to stop the roller.

Always press the parking brake knob (11) even for brief stops when on sloping ground.

Push in the revs control (32) until the engine idles (800–1000 r/min). Always allow the engine to idle for 5 minutes to cool down.

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

Turn the starter switch (9) to position 0. Lower the instrument cover (accessory on rollers without cab) and lock it.



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 normal working temperature.

PARKING

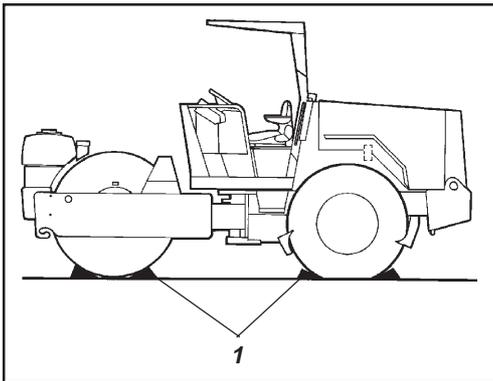


Fig. 23 Chocking the drum and wheels
1. Chock



Never leave the roller with the engine running unless the parking brake knob is pressed in.

The roller also has a parking brake that is automatically applied when the engine stops or if hydraulic pressure in the propulsion circuit fails.



Ensure that the roller is parked in a safe place for traffic. Chock the drums if the roller is parked on sloping ground.



Remember the risk of freezing during the winter. Use anti-freezing agent in the engine radiator and water tanks of the roller. See also maintenance instructions.

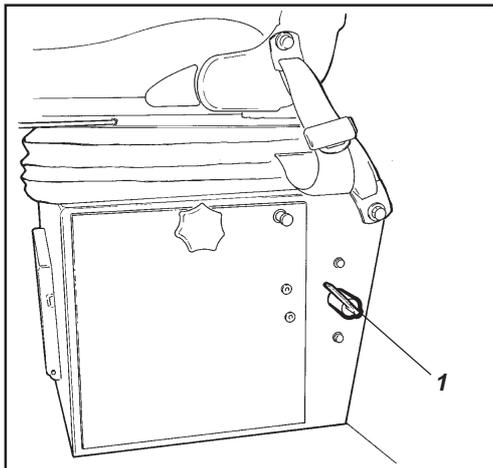


Fig. 24 Battery box
1. Battery disconnecter

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



The battery disconnecter key should be removed when the operator leaves the roller. This will prevent discharging of the battery and will also make it difficult for any unauthorised person to start and drive the machine.

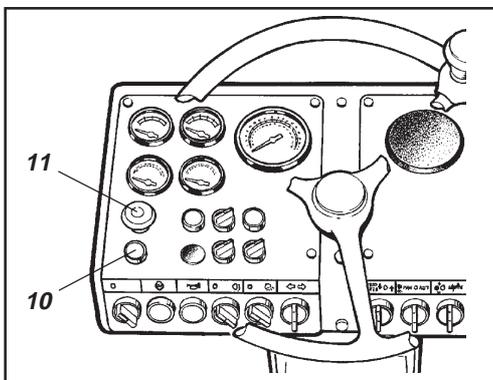


Fig. 25 Left instrument panel
10. Brake warning lamp
11. Reserve brake knob

The reserve brake knob (11) must always be pressed if the operator has to leave his seat for any reason while the engine is running. The brake warning lamp (10) should then light.

HOISTING

Locking the articulation joint

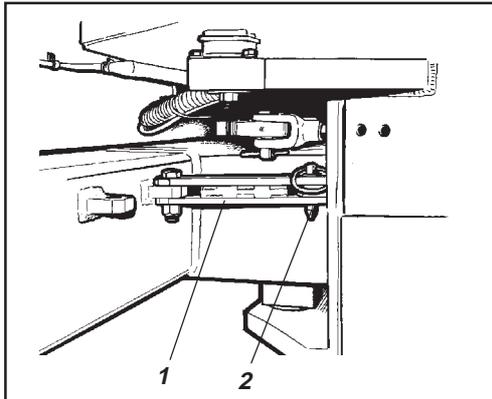


Fig. 26 left side of articulation
1. Articulation in interlocked mode
2. Locking pin



The articulation must be locked before lifting the roller. Fold out the arm (1) and secure it to the rear machine frame with the cotter (2). Attach the lifting chains and ensure that no parts will be crushed when hoisting.



Steel wires, chains, etc, must be dimensioned in conformance with current regulations.

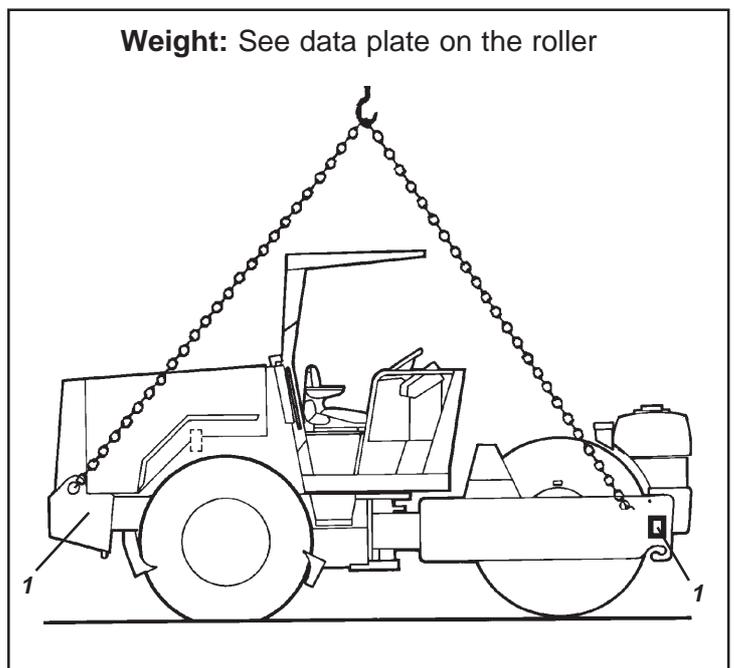


Fig. 27 Lifting the roller
1. Hoisting plate
(rear plate on left side)

Releasing the articulation joint

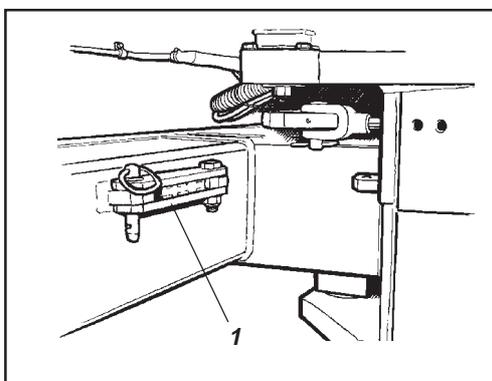


Fig. 28 Left side of articulation
1. Articulation lock in open mode



Keep well clear of the hoisted machine. Ensure that hoisting hooks are securely anchored. Check weight of the machine by reading the data punched on the hoisting plate (1).



Remember to restore the articulation interlock to its open mode before driving again.

TOWING

Alternative 1 Towing short distance with engine working.

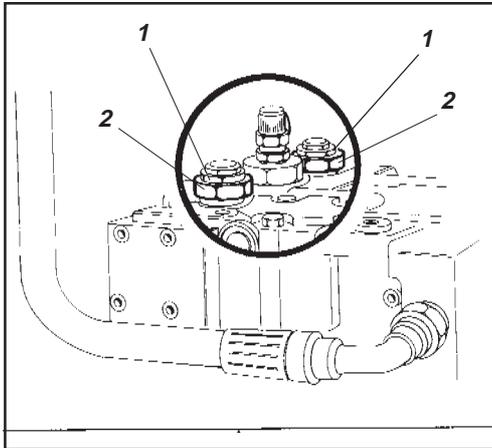


Fig. 29 Towing
1. Adjusting screw
2. Multi-function valve (MFV)

Alternative 2 Towing short distance with engine not working

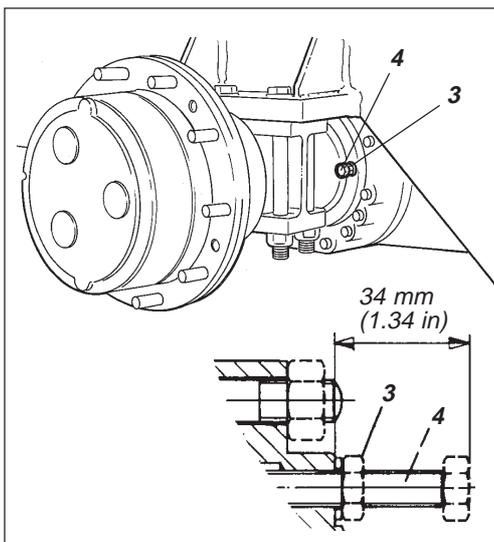


Fig. 30 Rear axle
3. Lock nut
4. Adjusting screw

The roller may be moved up to 50 m in the following way:



Press the reserve brake knob and stop the engine. The machine may start to move when the multi-function valve is loosened. Chock the drums as a safety measure.

Unscrew the adjusting screws (1) three turns anti-clockwise. Hold against the multi-function valve (2) if necessary.

Pull out the reserve brake knob.

Allow the engine to idle.

The machine can now be towed.



A towbar must be used when towing downhill.

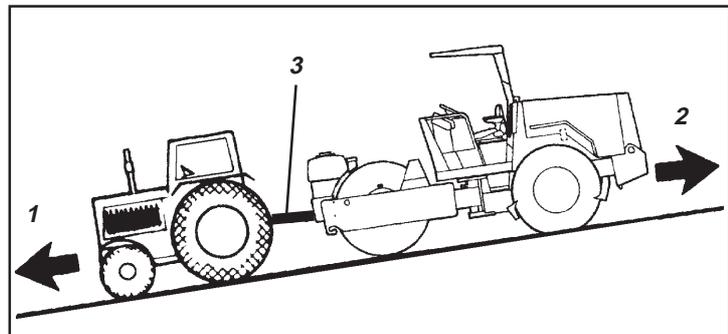


Fig. 31 Counter braking
1. Direction of travel
2. Counter braking
3. Towbar



Chock the drum. The machine may start to move when the multi-function valve (MFV) is loosened and the brakes are released.

Carry out the above measures according to alternative 1, but the brakes must be disengaged mechanically because the engine is not working.

Rear axle brake

Loosen the lock nut (3) and screw in the adjusting screws (4) by hand until resistance increases, and then one further turn. The adjusting screws are located on the rear axle, two screws on each side of the differential housing.

After towing

Remember to re-tighten the brake valve. Unscrew the adjusting screw (4) to its initial position 34 mm (1.34 in) from the contact surface, and tighten the lock nut (3).

Locking the articulation joint

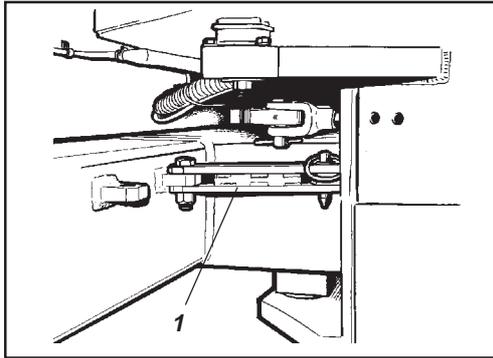


Fig. 32 Articulation joint/locking device
1. Mode for transportation and hoisting



Interlock the articulation before hoisting and transportation, follow the instructions under the respective heading.

Roller prepared for transportation

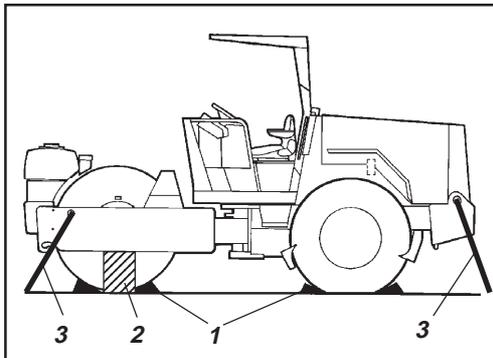


Fig. 33 Transportation
1. Chock
2. Block up
3. Lashing wire

Chock (1) the wheels and drum.

Block up under the drum frame (2), to avoid overload on the rubber suspension of the drum.

Clamp down the roller with wire (3) at all four corners.



Remember to restore the articulation interlock to its open mode before driving the roller again.

OPERATING INSTRUCTIONS – SUMMARY



1. Follow the **SAFETY INSTRUCTIONS** in the **Safety Manual**.
2. Ensure that all instructions in the **MAINTENANCE MANUAL** are followed.
3. Turn the battery disconnecter to **ON**.
4. Move the forward/reverse lever to **NEUTRAL**.
5. Set the amplitude selector to **O**.
6. Set the revs control to the idling mode.
7. Start the engine and allow it to warm up.
8. Set the gear selector to the **WORKING SPEED** mode ().
9. **PULL OUT** the parking brake knob.



10. **DRIVE** the roller. Operate the forward/reverse controls with care.



11. **Test the brakes.**

12. Use the vibration only when the roller is in motion.
13. Check watering of the drum(s) where applicable.



14. **IN AN EMERGENCY:** - Press the reserve brake knob.
- Grip the steering wheel firmly.
- Be prepared for a sudden stop.

15. Parking: - Stop the engine and chock the drum and wheels.
16. Towing: - See the operation manual.
17. Lifting: - See the operation manual.
18. Transport: - See the operation manual.