DYNAPAC
CC 622/622HF
MAINTENANCE

M622EN3
The Dynapac CC 622/622HF is a vibratory roller in the 12-tonne class, with articulated steering and with propulsion, brakes and vibration on both drums.
CONTENTS

Lubricants and symbols ................................................... 3
Technical specifications .................................................. 4-6
Maintenance schedule ..................................................... 7
Maintenance measures .................................................... 8, 9
Every 10 hours of operation (Daily) .......................... 10-14
Every 50 hours of operation (Weekly) ...................... 15-18
Every 250 hours of operation (Monthly) .............. 19, 20
Every 500 hours of operation (Every three months) . 21-25
Every 1000 hours of operation (Every six months) . 26, 27
Every 2000 hours of operation (Yearly) ............... 28-32
Long-term storage ....................................................... 33
Special instructions ....................................................... 34
Electrical system, fuses ............................................35-37

WARNING SYMBOLS

Safety instructions - Personal safety

Special caution - Machine or component damage

GENERAL

Read the entire manual before starting any service work.

Make sure that ventilation (extraction) is adequate if the engine is run indoors.

The machine must be cared for properly to ensure satisfactory operation. Keep the machine clean to facilitate quick and timely detection of any leakage, loose bolts and loose connections.

Make a habit each day, before starting up, of checking the roller to detect any leakage or damage. Also check the ground underneath the roller, where it is most often easier to detect any leakage.

TAKE CARE OF THE ENVIRONMENT! Do not leave behind any oil, fuel or other substances that are detrimental to the environment.

This manual contains instructions for periodic measures that should normally be performed by the operator.

The manufacturer’s instructions noted in the engine manual also apply. This is placed under a separate flap in the product folder for the roller.

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.
LUBRICANTS AND SYMBOLS

CAUTION
Always use high-quality lubricants in the recommended amounts. Too much grease or oil can cause overheating and subsequent increased wear.

ENGINE OIL
ambient temperature
-10°C to +40°C (14°F to 104°F) Shell Rimula SAE 15W/40 or equivalent.

HYDRAULIC FLUID
ambient temperature
-10°C to +40°C (14°F to 104°F) Shell Tellus TX68 or equivalent
above +40°C (above 104°F) Shell Tellus TX100 or equivalent

BIOLOGICAL HYDRAULIC FLUID
Shell Naturelle HF-E46
When it leaves the factory, the machine may be filled with biologically degradable fluid. The same type of fluid must be used when changing or topping off.

DRUM OIL
ambient temperature
-15°C to +40°C (5°F to 104°F) Mobil SHC 629 or equivalent

TRANSMISSION OIL
ambient air temperature
-15°C – +40°C (5°F – 104°F) Shell Spirax SAE 80W/90, HD API, GL-5

GREASE
SKF LGHB2 (NLGI Class 2) or equivalent for the articulated joint.
Shell Retinax LX2 or equivalent for other grease points.

FUEL
See engine manual.

COOLANT
mixed 50/50 with water GlycoShell or corresponding.
Anti-freeze protection down to about -41°C (-106°F).

Other fuel and lubricants are required for operation in extremely high or extremely low ambient temperature. See the “Special instructions” chapter, or consult Dynapac.

Engine, oil level
Engine, oil filter
Hydraulic reservoir, level
Hydraulic fluid filter
Drum, oil level
Lubricating oil
Air pressure
Coolant, level
Air filter
Battery
Sprinkler
Sprinkler water
Recycling
Fuel filter
Sprinkler, tyres
Transmission, oil level

DYNAPAC CC 622/622HF M622EN3
3
## TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Weights &amp; dimensions</th>
<th>CC 622/622HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating mass with ROPS, EN500, kg (lbs)</td>
<td>12550 (27,672)</td>
</tr>
<tr>
<td>Operating mass without ROPS, kg (lbs)</td>
<td>11900 (26,239)</td>
</tr>
<tr>
<td>Operating mass with cab, kg (lbs)</td>
<td>12300 (27,121)</td>
</tr>
<tr>
<td>Length, standard equipped roller, mm (in)</td>
<td>5090 (200)</td>
</tr>
<tr>
<td>Width, standard equipped roller, mm (in)</td>
<td>2270 (89)</td>
</tr>
<tr>
<td>Width, with cab, mm (in)</td>
<td>2270 (89)</td>
</tr>
<tr>
<td>Height, without cab (Shipping height), mm (in)</td>
<td>2240 (88)</td>
</tr>
<tr>
<td>Height, with cab, mm (in)</td>
<td>3040 (120)</td>
</tr>
<tr>
<td>Height, with AC, mm (in)</td>
<td>3040 (120)</td>
</tr>
<tr>
<td>Height, with AC and hazard beacon, mm (in)</td>
<td>3385 (133)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fluid volumes, Litres</th>
<th>CC 622/622HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drum (qts)</td>
<td>17 (17.9)</td>
</tr>
<tr>
<td>Hydraulic reservoir (qts)</td>
<td>40 (42.3)</td>
</tr>
<tr>
<td>Fuel tank (gal)</td>
<td>200 (52.8)</td>
</tr>
<tr>
<td>Water tank (gal)</td>
<td>485 (128)</td>
</tr>
<tr>
<td>Diesel engine, lubr. oil (qts)</td>
<td>11 (11.6)</td>
</tr>
<tr>
<td>Transmission (qts)</td>
<td>0.8 (0.9)</td>
</tr>
<tr>
<td>Diesel engine, coolant (qts)</td>
<td>7.9 (8.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical system</th>
<th>CC 622/622HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery</td>
<td>12 V 170 Ah</td>
</tr>
<tr>
<td>Alternator</td>
<td>12 V 95A</td>
</tr>
<tr>
<td>Fuses</td>
<td>5, 7.5, 15, 20 och 25 Ampére</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vibration data</th>
<th>CC 622</th>
<th>CC 622HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static linear load, kg/cm (pli)</td>
<td>28,5 (159.6)</td>
<td>28,6 (160.2)</td>
</tr>
<tr>
<td>Front:</td>
<td>28,2 (157.9)</td>
<td>28 (156.8)</td>
</tr>
<tr>
<td>Rear:</td>
<td>0,61 (0,024)</td>
<td>0,62 (0,024)</td>
</tr>
<tr>
<td>Amplitude mm (in)</td>
<td>0,31 (0,012)</td>
<td>0,22 (0,009)</td>
</tr>
<tr>
<td>Frequency, Hz (vpm)</td>
<td>49 (2940)</td>
<td>62 (3720)</td>
</tr>
<tr>
<td>At High amplitude:</td>
<td>49 (2940)</td>
<td>49 (2940)</td>
</tr>
<tr>
<td>Centrifugal force, kN (lb)</td>
<td>127 (28,575)</td>
<td>127 (28,575)</td>
</tr>
<tr>
<td>At High amplitude:</td>
<td>65 (14,625)</td>
<td>71,4 (16.051)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Traction</th>
<th>CC 622</th>
<th>CC 622HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed range, km/h (mph)</td>
<td>0-11 (0-7)</td>
<td>0-11 (0-7)</td>
</tr>
<tr>
<td>Climbing ability (theoretical) %</td>
<td>32 (at 11km/h (7 mph))</td>
<td>32 (at 11km/h (7 mph))</td>
</tr>
</tbody>
</table>
TECHNICAL SPECIFICATIONS

Tightening torque

Tightening torque in Nm (lbf.ft) for oiled, bright galvanized bolts tightened with a torque wrench.

<table>
<thead>
<tr>
<th>M</th>
<th>STRENGTH CLASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>thread</td>
<td>8.8</td>
</tr>
<tr>
<td>M6</td>
<td>8,4</td>
</tr>
<tr>
<td>M8</td>
<td>21</td>
</tr>
<tr>
<td>M10</td>
<td>40</td>
</tr>
<tr>
<td>M12</td>
<td>70</td>
</tr>
<tr>
<td>M16</td>
<td>169</td>
</tr>
<tr>
<td>M20</td>
<td>330</td>
</tr>
<tr>
<td>M24</td>
<td>570</td>
</tr>
<tr>
<td>M30</td>
<td>1130</td>
</tr>
<tr>
<td>M36</td>
<td>1960</td>
</tr>
</tbody>
</table>

Caution: ROPS bolts must always be tightened dry.

Bolt size: M24 (P/N 903792)
Strength class: 10.9
Tightening torque: 800 Nm (590lbf.ft) (for Dacromet treated)

Hydraulic system

Opening pressure, MPa (psi)

<table>
<thead>
<tr>
<th>System</th>
<th>Opening pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive system</td>
<td>42,0 (6,100)</td>
</tr>
<tr>
<td>Charge system</td>
<td>2,4 (350)</td>
</tr>
<tr>
<td>Vibration system</td>
<td>35,0 (5,100)</td>
</tr>
<tr>
<td>Steering system</td>
<td>20,0 (2,900)</td>
</tr>
<tr>
<td>Brake release</td>
<td>1,5 (220)</td>
</tr>
</tbody>
</table>

Air Condition (Optional)

The system described in this manual is of the ACC type (Automatic Climate Control), i.e., a system that maintains the set temperature in the cab, on condition that windows and door are kept closed.

Refrigent designation: HFC-R134:A
Weight of refrigerant newly filled: 1600 gram
TECHNICAL SPECIFICATIONS

Vibration
(ISO 2631)

The vibration levels are measured in conformance with the operation cycle described in EU directive 2000/14/EC on EU equipped machines, on soft polymer material with vibration switched ON and operator’s seat in the transport mode.

Whole-body vibration is measured at less than the action value of 0.5 m/s² specified in EU directive 2002/44/EC. (The limit value is 1.15 m/s².)

Hand/arm vibration is measured at less than the action value of 2.5 m/s² specified in the same directive. (The limit value is 5 m/s².)

CAUTION: Vibration levels may vary when driving on different courses and with different seat positions.

Acoustic values

The acoustic values are measured in conformance with the operation cycle described in EU directive 2000/14/EC on EU-equipped machines, on soft polymer material with vibration switched ON and operator’s seat in the transport mode.

<table>
<thead>
<tr>
<th>Model</th>
<th>Guaranted acoustic power level dB(A)</th>
<th>Acoustic pressure level, operator’s ear (platform) dB(A)</th>
<th>Acoustic pressure level, operator’s ear (cab) dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC622</td>
<td>109</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>CC622HF</td>
<td>109</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

CAUTION: Noise level can vary when driving on different courses and with different seat positions.
Fig. 1 Service and maintenance points

1. Air cleaner 10. Articulated steering 19. Rubber element
7. Scrapers 16. Diesel engine
8. Drums 17. Hinge
MAINTENANCE MESURES

The periodic measures should be performed primarily after the specified hours of operation. Use the daily, weekly, etc. time periods only where this is not possible.

CAUTION
Remove all dirt before filling, when checking oils and fuel, and when lubricating with oil or grease.

CAUTION
The engine manual specifies additional service/maintenance instructions which relate to the diesel engine.

Every 10 hours of operation (Daily)

<table>
<thead>
<tr>
<th>Item in fig. 1</th>
<th>Measure</th>
<th>See page</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Check level of engine oil</td>
<td>10</td>
<td>See engine manual</td>
</tr>
<tr>
<td>22</td>
<td>Check level of engine coolant</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Check level in hydraulic reservoir</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Refuel</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Fill the water tanks</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Check the watering system/drum</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Emergency watering</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Check setting of scrapers/drum</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inspect spring-action scrapers</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Check brakes</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Every 50 hours of operation (Weekly)

<table>
<thead>
<tr>
<th>Item in fig. 1</th>
<th>Measure</th>
<th>See page</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Lubricate the steering articulation</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Lubricate steering cylinder mounts</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Lubricate control cylinder for pivot steering</td>
<td>15</td>
<td>Optional</td>
</tr>
<tr>
<td>1</td>
<td>Inspect and if necessary clean the filter element in the air cleaner</td>
<td>16</td>
<td>Replace as required</td>
</tr>
<tr>
<td>23</td>
<td>Check oil level in pump gearing</td>
<td>17</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>Inspect the air conditioning</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

IMPORTANT ! After the first 50 hours of operation with the roller change all the oil filters and lubricating oil, but not the hydraulic fluid.
## MAINTENANCE MESURES

### Every 250 hours of operation (Monthly)

<table>
<thead>
<tr>
<th>Item in fig. 1</th>
<th>Measure</th>
<th>See page</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Clean the hydraulic cooler and the water radiator</td>
<td></td>
<td>Or when required</td>
</tr>
<tr>
<td></td>
<td>Inspect the air conditioning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Check level of battery fluid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Every 500 hours of operation (Every three months)

<table>
<thead>
<tr>
<th>Item in fig. 1</th>
<th>Measure</th>
<th>See page</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Change the engine oil and oil filter</td>
<td>21</td>
<td>See engine manual</td>
</tr>
<tr>
<td>16</td>
<td>Change engine fuel filter</td>
<td></td>
<td>See engine manual</td>
</tr>
<tr>
<td>8</td>
<td>Check oil level in drums</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Lubricate the pivot bearing</td>
<td></td>
<td>Optional</td>
</tr>
<tr>
<td>19</td>
<td>Check the rubber elements and bolted joints</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Check the cap/vent of the hydraulic reservoir</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Lubricate hinges and controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Lubricate the seat bearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Change/clean the engine prefilter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Every 1000 hours of operation (Every six months)

<table>
<thead>
<tr>
<th>Item in fig. 1</th>
<th>Measure</th>
<th>See page</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Change hydraulic filter</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Change main filter of the air cleaner</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Change oil in the pump gearing</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Replace air cleaner filter in cab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Change oil in drum/drums (HF version)</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Check engine valve clearance</td>
<td></td>
<td>See engine manual</td>
</tr>
<tr>
<td>16</td>
<td>Check the engine belt-drive system</td>
<td></td>
<td>See engine manual</td>
</tr>
</tbody>
</table>

### Every 2000 hours of operation (Yearly)

<table>
<thead>
<tr>
<th>Item in fig. 1</th>
<th>Measure</th>
<th>See page</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Change fluid in hydraulic reservoir</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Change oil in drum/drums</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Empty and clean the fuel tank</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Empty and clean the water tanks</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lubricate the Forward/Reverse control</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Check the condition of the articulation</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overhaul air conditioning</td>
<td>31</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>Fresh air filter – Replacement</td>
<td>32</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>Air conditioning – Overhaul</td>
<td>32</td>
<td>Optional</td>
</tr>
</tbody>
</table>
EVERY 10 HOURS OF OPERATION (Daily)

Diesel engine, oil level – Check

**WARNING**

Place the roller on a level surface. Switch the engine off and push in the reserve/parking brake knob for all checking and adjustments on the roller, unless otherwise specified.

The oil dipstick is accessible through the right door of the engine compartment.

**WARNING**

Beware of hot parts of the engine and exhaust pipe when taking out the oil dipstick. Observe caution. Wear gloves and safety goggles.

The dipstick is located on the short side of the engine above the hydraulic pumps.

Pull up the dipstick (1) and ensure that the oil level is between the upper and lower mark. For further details, see the engine manual.

Check that level of the coolant is between the max. and min. marks.

**WARNING**

Observe caution if the filler cap must be opened while the engine is hot. Wear gloves and safety goggles.

Fill with a mixture of 50% water and 50% anti freeze. See page 3 in these instructions and in the engine manual.

**CAUTION**

Flush the system every other year and change the coolant. Ensure also that air can flow unrestricted through the radiator.

---

**Fig. 2 Engine compartment**
1. Oil dipstick
2. Filler cap

**Fig. 3 Radiator**
1. Filler cap
2. Level/max. mark
3. Level/min. mark
4. Intercooler
5. Radiator
6. Hydraulic fluid cooler
**EVERY 10 HOURS OF OPERATION (Daily)**

**Hydraulic reservoir, level check – Filling**

- **Fig. 4 Hydraulic reservoir**
  1. Oil sight glass
  2. Filler hose
  3. Filler cap

- **WARNING**
  Place the roller on a level surface. Switch the engine off and push in the reserve/parking brake knob for all checking and adjustments on the roller, unless otherwise specified.

- **Open the right door of the engine compartment.**

- **Make sure that the oil level is between the max/min marks. Top off with hydraulic fluid according to the lubricant specification if the level is too low.**

**Fuel tank – Refueling**

- **Fig. 5 Fuel tank**
  1. Tank cap
  2. Filler pipe

- **WARNING**
  Never refuel while the engine is running, do not smoke, and avoid spilling fuel.

- **Refuel every day before starting to work. Screw off the lockable tank cap (1) and fill diesel fuel to the lower edge of the filler pipe (2).**

- **See the engine handbook for the grade of diesel fuel.**

- **The tank holds 200 litres (52 gal) of fuel.**

**Water tanks – Filling**

- **Fig. 6 Rear water tank**
  1. Tank cap
  2. Strainer

- **CAUTION**
  Screw off the tank cap (1) and fill with pure water. Do not remove the strainer (2).

- **Fill both water tanks; they hold 485 liters (128 gal) each.**

- **A step is located on the hydraulic reservoir behind the right door of the engine compartment to facilitate access to the tank cap, and also a retractable step on the right front drum fork.**

- **Sole additive: Small amount of environment friendly anti-freeze fluid.**
EVERY 10 HOURS OF OPERATION (Daily)

Sprinkler system/Drum – Checking/Cleaning

Start the sprinkler system and make sure that no nozzle (1) is clogged. If necessary, clean clogged nozzles and the coarse filter located adjacent to the water pump (2); see figures below.

A pump system is located underneath each water tank behind the cover (2), which is opened by turning the quick-screws (3) a 1/4 turn counter-clockwise. To lock the cover, place the screws with the slot vertical and push straight in.

Dismantle the clogged nozzle by hand. Blow the nozzle (2) and fine filter (4) clean with compressed air, or install replacement parts and clean the clogged parts at a later opportunity.

WARNING Use protective goggles when working with compressed air.

When cleaning the coarse filter (1), close the stopcock (2) and loosen the filter housing (3).

Clean the filter and filter housing, ensure that the rubber gasket in the filter housing is intact.

After inspection and any cleaning, start the system and check that it works.

A drain cock (5) is located in the left part of the pump system area. This facilitates draining of both tank and pump system.
EVERY 10 HOURS OF OPERATION (Daily)

Emergency watering

If one of the water pumps stops, the remaining pump will be able to keep the sprinkler system operating - however, at reduced capacity.

To operate with only one pump, open the stopcock (1) in the water hose in the engine compartment, and also the stopcock on the coarse filter by the pump that has stopped, see pump system.

Scrapers, fixed
– Checking/Setting

Make sure that the scrapers are undamaged. Adjust the scrapers so that they lie 1–2 mm (0.04-0.08 in) from the drum. For special asphalt compounds, it may be better if the scraper blades (1) lie lightly against the drums.

Asphalt remnants can accumulate on the scraper and affect the contact force.

Loosen the screws (2) to adjust the scraper blade up or down.

Loosen the screws (3) to adjust the contact pressure of the scraper blade against the drum.

Remember to tighten all the screws after any adjustment.

Scrapers, spring loaded
(Optional) – Checking

Make sure that the scrapers are undamaged. The spring loaded scrapers require no adjustment because the spring force provides the correct contact force. Asphalt remnants can accumulate on the scraper and affect the contact force.

Clean as needed.

CAUTION The scrapers must be retracted from the drum during transport driving.
EVERY 10 HOURS OF OPERATION (Daily)

Brake function – Check

Check operation of the brakes as follows:

Drive the roller **slowly** forward.

Push the reserve/parking brake knob (38); the warning lamp on the instrument panel should light and the roller should stop.

After testing the brakes, set the forward/reverse lever (40) in neutral.

Pull up the reserve/parking brake knob.

The roller is now ready for operation.

---

**Fig. 13 Control panel**

38. Reserve/parking brake knob
40. Forward/reverse lever
EVERY 50 HOURS OF OPERATION (Weekly)

Steering joint – Lubrication

WARNING
Place the roller on a level surface. Switch the engine off and push in the reserve/parking-brake knob for all checking and adjustments on the roller, unless otherwise specified.

WARNING
Allow no one to get near the steering joint when the engine is running. Danger of being crushed when steering is operated. Push the reserve/parking brake knob before lubricating.

Turn the steering wheel fully to the left to gain access to all four grease nipples (1) from the right side of the machine.

Wipe the grease nipples (1). Grease each nipple with five strokes of the hand-operated grease gun. Make sure that grease penetrates the bearings. If grease does not penetrate the bearings, it may be necessary to relieve the articulation joint with a jack while repeating the greasing process.

Turn the machine back for driving straight ahead. This makes the two grease nipples of the steering cylinder accessible from the left side of the machine.

Wipe the nipples (1) and grease each one with three strokes of the hand-operated grease gun.

Fig. 14 Right side of articulation
1. Grease nipples

Fig. 15 Left side of articulation
1. Grease nipples

Steering cylinder – Lubrication

Fig. 16 Pivot cylinder
1. Grease nipples

Pivot cylinder (Optional) – Lubrication

WARNING
Allow no one near the rear drum while the engine is running. Danger of being crushed when the drum is operated.

Turn the rear drum for turning left to make the two grease nipples (1) accessible from the right side of the machine.

Wipe the nipples and lubricate in the same way as for the steering cylinder above.
EVERY 50 HOURS OF OPERATION (Weekly)

Air cleaner – Check/Cleaning

Replace or clean the main filter of the air cleaner when the warning lamp on the instrument panel lights at full engine revs.

Release the three locking braces (1) and pull off the cover (2), pull out the main filter (3).

Do not remove the backup filter (4).

Main filter – Cleaning with compressed air

Use compressed air at a maximum pressure of 5 bar (72 psi) to clean the main filter by blowing up and down along the inside of the pleated paper filter.

Hold the air nozzle at least 2 to 3 cm (0.8-1.2 in) from the paper pleats so as not to tear the paper.

**WARNING**

**Use protective goggles when working with compressed air.**

Wipe the inside of the cover (2) and the filter housing (5).

Ensure that the hose clips between the filter housing and the intake hose are tightened and that the hoses are intact. Inspect the entire hose system all the way to the engine.

**CAUTION**

Change the main filter after cleaning it five times.

Replace the backup filter with a new one after cleaning or changing the main filter five times. The backup filter cannot be cleaned and reused.

To change the backup filter (4), pull the old filter out from its holder, insert a new one and reassemble the air cleaner in the reverse order.
EVERY 50 HOURS OF OPERATION (Weekly)

Pump drive, oil level – Checking/Topping up

Position the roller on a flat surface.

**CAUTION**  When checking the oil level, the engine must be switched OFF and the parking brake applied.

Open the right door of the engine compartment and screw off the dipstick (1).

The oil level must be between the two marks at the bottom of the dipstick.

Fill with transmission oil if required; see lubricant specification.

Ensure that the rubber packing between the dipstick and gear housing is in place, and firmly screw in the dipstick.
 arttırıcı ognişinin (İncişiğerli) inşası (İlkişişi)

**WARNING**

Never work under the roller with the engine running. Park on a level surface, chock the wheels and press the parking brake control.

When the unit is in operation, check in the sight glass (1) that no bubbles are visible in the dryer filter.

Steer the roller fully to the right for easier access to the dryer filter.

**WARNING**

Always push the parking brake knob.

The filter is located on the left side underneath the cab. If bubbles are visible in the sight glass it is a sign that the level of refrigerant is too low. The sight glass is visible where the hoses go in under the cab floor, see figure. If so, stop the unit. There is a risk of damage to the unit if it is run with insufficient level of refrigerant. Fill with refrigerant.

In the event of noticeable deterioration of cooling capacity, clean the condenser element (1), which is located at the rear of the cab roof. Also clean the cooling unit inside the cab.

**Fig. 21** Drying filter
1. Sight glass
2. Filter housing

**Fig. 22** Cab
1. Condenser element
EVERY 250 HOURS OF OPERATION (Monthly)

Hydraulic fluid cooler
– Check/Cleaning

Open the left-hand door to the engine compartment to gain access to the radiator and the hydraulic fluid cooler.

Ensure that air can flow unrestricted through the cooler and radiator, (1), (2) and (3).

Blow a dirty cooler and radiator clean with compressed air, or wash using a high-pressure washing jet.

Take care when using a high-pressure washing jet, do not hold the nozzle too close to the cooler.

Use protective goggles when working with compressed air.

Air conditioning
– Inspection (Optional)

Inspect refrigerant hoses and connections and make sure that there are no signs of oil film that could indicate leakage of refrigerant.
EVERY 250 HOURS OF OPERATION (Monthly)

Battery – Checking the electrolyte level

Open the left door of the engine compartment.

Pull out the battery that is located on the floor behind the coolers.

**WARNING** Use safety goggles. The battery contains acid. Rinse with water if electrolyte comes into contact with the body.

**WARNING** Never use an open flame when checking the electrolyte level. Explosive gas is generated when the alternator is charging.

Take off the cell caps and make sure that electrolyte is about 10 mm (0.4 in) above the plates. Check the level of all cells. Top off with distilled water to the right level if the level is low. The engine should be run for a while before topping off with distilled water if the ambient temperature is below freezing. Otherwise, the electrolyte might freeze.

Make sure that ventilation holes in the cell cover are not clogged. Then put the cover back on.

The cable shoes should be clean and well tightened. Clean corroded cable shoes and grease them with acid-free Vaseline.

**CAUTION** When disconnecting the battery, always disconnect the negative cable first. When connecting the battery, always connect the positive cable first.

Discard used batteries properly. Batteries contain lead, which is detrimental to the environment.

**WARNING** Before doing any electric welding on the machine, disconnect the battery ground cable and then all electrical connections to the alternator.

---

**Fig. 25 Battery space**
1. Battery
2. Cell cap
3. Cable shoes
4. Pull-out handle

**Fig. 26 Electrolyte level in battery**
1. Cell cap
2. Electrolyte level
3. Plate
EVERY 500 HOURS OF OPERATION (Every three months)

Engine
– Changing the oil

Place the roller on a level surface. Switch the engine off and push in the reserve/parking brake knob for all checking and adjustments on the roller, unless otherwise specified.

The engine oil drain plug is located adjacent to the battery behind the left door of the engine compartment.

Run the engine warm before draining the oil.

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

Place a suitable receptacle, for at least 15 litres (4 gal), under the drain plug.

Observe caution when draining the engine oil. Wear gloves and safety goggles.

Unscrew the oil drain plug (1). Allow all of the oil to drain off, and refit the plug.

Fill with fresh engine oil; see lubricant specification or the engine manual for the correct grade of oil.

Check the dipstick to ensure that the engine oil level is correct, for details see the engine manual.

The oil filter (1) can be reached most easily through the right-hand door of the engine compartment.

See the engine manual for details concerning changing of the filter.

---

EVERY 500 HOURS OF OPERATION (Every three months)

Engine
– Changing the oil filter

Unscrew the oil drain plug (1). Allow all of the oil to drain off, and refit the plug.

Fill with fresh engine oil; see lubricant specification or the engine manual for the correct grade of oil.

Check the dipstick to ensure that the engine oil level is correct, for details see the engine manual.

The oil filter (1) can be reached most easily through the right-hand door of the engine compartment.

See the engine manual for details concerning changing of the filter.
EVERY 500 HOURS OF OPERATION (Every three months)

Drum, oil level
- Inspection/Filling

Position the roller with the filler plug (1) - the large plug - straight up.

Wipe clean around the level plug (2) - the small plug - and unscrew it.

Make sure that the oil level reaches up to the lower edge of the hole, top off with fresh oil as required. See Lubricant specification.

When removing the filler plug, wipe it clean from any metal on its magnet.

Make sure that plug seals are intact and replace with new seals as required.

Refit the plugs.

Check both drums.

Drive a distance and make sure that the plugs are tight.
EVERY 500 HOURS OF OPERATION (Every three months)

Pivot bearing (Optional) – Lubrication

Grease each nipple (1) with five strokes of a handoperated grease gun.

Use grease according to the lubricant specification.

Fig. 30 Rear drum, right side
1. Grease nipples, 4 off

Rubber elements and fastening screws – Check

Check all rubber elements (1), replace all of the elements if more than 25% of them on one side of the drum are cracked deeper than 10-15 mm (0.4-0.6 in).

Use the blade of a knife or pointed object to assist when checking.

Make sure that the fastening screws (2) are tightened.

Fig. 31 Drum, vibration side
1. Rubber element
2. Fastening screws

Hydraulic reservoir cap – Check

Open the right door of the engine compartment.

Unscrew and make sure that the reservoir cap is not clogged, air must have unobstructed passage through the cap in both directions.

If clogged in either direction, clean with a little diesel oil and blow with compressed air until free passage is assured or replace the cap with a new one.

WARNING Use protective goggles when working with compressed air.

Fig. 32 Engine compartment, right side
1. Tank cap
EVERY 500 HOURS OF OPERATION (Every three months)

Hinges, controls – Lubrication

Lubricate both hinges (1) on the engine compartment doors until grease penetrates through.

Grease the hinges of the cab door in the same way.

Lubricate the hinges of the front and rear spotlight covers with a few drops of oil.

Lubricate the forward/reverse control wires by the control arm of the hydraulic pump. Apply a few drops of oil to the mouth of the control sleeve.

Fig. 33 Engine hood
1. Hinge
2. Control wires

Seat bearing – Lubrication

Remove both steps from under the operator’s platform, or one step and cover plate on the other side of the roller if fitted with a cab.

Lubricate the seat sliding rails for transverse travel with five strokes of a hand-operated grease gun. Grease all four nipples, two of which (1) are accessible from each side.

Also grease the slew bearing of the seat with a few strokes of the gun. The lubrication nipple (3) is accessible after the cover on the seat frame underneath the front of the seat is removed.

Also lubricate the seat locking mechanism, both for transverse travel and slewing. Use engine oil or drum oil.

CAUTION: If the seat begins to bind when resetting, then it should be lubricated more often than specified here.

Fig. 34 Seat bearing, underneath
1. Grease nipples
2. Slide rails
3. Lubrication nipple
EVERY 500 HOURS OF OPERATION (Every three months)

Seat bearing – Lubrication

![Seat bearing diagram]

**CAUTION**
Remember that the chain is a vital part of the steering mechanism.

Remove the cover (5) to gain access to the lubrication nipple (1). Lubricate the slew bearing of the operator’s seat with three strokes of a hand-operated grease gun.

Lubricate the seat locking latch (7), accessible from below.

Also grease the slide rails of the seat (6).

**CAUTION**
If the seat begins to bind when resetting, it needs to be lubricated more often.

Lean and grease the chain (3) between the seat and the steering column. If the chain becomes slack on the cogwheel (2), loosen the screws (4) and move the steering column forward, tighten the screws and check the tension of the chain.

---

### Diesel engine fuel filter – Change/cleaning

![Diesel engine fuel filter diagram]

**WARNING**
Place the roller on a level surface. Switch the engine off and push in the reserve/parking brake knob for all checking and adjustments on the roller, unless otherwise specified.

Prefilter, loosen the screw (1) and remove the glass bowl (2).

Take out the strainer (3) and clean using a non-flammable fluid. Reinstall the strainer and the bowl.

Replace fuel filter. See engine manual.

Start the engine and check that the pre-filter does not leak.

**WARNING**
Make sure there is adequate ventilation (extraction) if the diesel engine is run indoors. Risk of carbon monoxide poisoning.
EVERY 1000 HOURS OF OPERATION (Every six months)

Hydraulic fluid filter
– Changing

Place the roller on a level surface. Switch the engine off and push in the reserve/parking-brake knob for all checking and adjustments on the roller, unless otherwise specified.

Open the right door of the engine compartment.

Remove the oil filter (1) and discard it in a safe manner; it is of the expendable type and cannot be cleaned.

Thoroughly clean the sealing surface of the filter holder.

Apply a thin coat of fresh hydraulic fluid on the rubber gasket of the new filter.

Screw on the filter by hand, first until the filter gasket makes contact with the filter base and then a further $\frac{1}{2}$ turn.

Start the engine and check that the filter does not leak.

Check the hydraulic fluid level in the sight glass (3) and top off as required, see under the heading “Every 10 hours of operation.”

Replace the main filter (3) of the air cleaner even if it has not yet been cleaned five times, see 50 hours with regard to changing the filter.

If a clogged filter is not replaced the exhaust fumes will be black and the engine will loose power. There will also be danger of severe damage to the engine.

Air filter – Replacement

Fig. 37 Air cleaner
3. Main filter

Fig. 36 Hydraulic reservoir
1. Hydraulic filter
2. Reservoir
3. Sight glass
EVERY 1000 HOURS OF OPERATION (Every six months)

Pump drive – Oil change

![Fig. 38 Pump gearing](image)
1. Drain plug

**WARNING**
Observe caution when draining hot oil. Wear gloves and safety goggles.

Use a receptacle that will hold at least 1.5 litre (1.6 qts) for draining the oil.

Unscrew the drain plug (1) and also unscrew the dipstick to allow the oil to flow freely, see under the "Every 50 hours of operation" heading.

Wipe away any metal particles from the magnetic drain plug, and refit the plug and its packing.

The gearbox holds 0.8 liter (0.85 qts). For topping off, see under the "Every 500 hours of operation" heading.

Fresh air filter – Replacement

![Fig. 39 Cab](image)
1. Fresh air filter (x2)
2. Screw (x2)

**WARNING**
Use a stepladder to reach the filter (1).

There are two fresh-air filters (1), one on each side of the cab. Unscrew the screws (2), take down the entire housing and remove the filter insert.

Replace with new filters.

It may be necessary to change the filters more often if the machine is run in a dusty environment.

Drum – Oil change (HF)

![Fig. 40 Drum, vibration side](image)
1. Drain plug

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

Drive the roller until the drain plug (1) - the large plug - is straight down.

**WARNING**
Switch off the engine and push the reserve/parking brake knob.

Place a receptacle that will hold at least 20 liters (21 qts) under the plug. Save the oil and dispose of it in an approved manner.

Remove the plug (1) and allow all the oil to run out. See under the heading "Every 500 hours of operation" for filling oil.
EVERY 2000 HOURS OF OPERATION (Yearly)

Hydraulic reservoir – Changing the fluid

Place the roller on a level surface. Switch the engine off and push in the reserve/parking-brake knob for all checking and adjustments on the roller, unless otherwise specified.

WARNING

Observe caution when draining hot oil. Wear gloves and safety goggles.

Place a receptacle that will hold at least 50 liters (53 qts) under the plug. Save the oil and dispose of it in an approved manner.

Remove the drain plug (1) and allow all the oil to run out, wipe and refit the drain plug.

CAUTION

Fill with fresh hydraulic fluid of the grade indicated in the Lubricant specification.

Replace the hydraulic filter as described under the heading “Every 1000 hours of operation.”

Start the engine and operate the various hydraulic functions. Check the level in the reservoir and top off as required.

WARNING

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

Drive the roller until the drain plug (1) - the large plug - is straight down.

WARNING

Switch off the engine and push the reserve/parking brake knob.

Place a receptacle that will hold at least 20 liters (21 qts) under the plug. Save the oil and dispose of it in an approved manner.

Remove the plug (1) and allow all the oil to run out. See under the heading “Every 500 hours of operation” for filling oil.

Drum – Oil change

It is easiest to clean the tank when it is almost empty.

Pump out any bottom sediment with a suitable pump; for example, an oil emptying pump. Save the oil in a can and dispose of it in an approved manner.

WARNING

Remember the danger of fire when handling fuel.

The fuel tank is made of recyclable plastic (polyethylene).

Fuel tank – Cleaning

Fig. 42 Engine compartment, right side
1. Drain plug
2. Hydraulic reservoir

Fig. 43 Drum, vibration side
1. Drain plug

Fig. 44 Fuel tank
1. Oil emptying pump
EVERY 2000 HOURS OF OPERATION (Yearly)

Watering system
- Draining

Remember the risk of freezing during the winter period and drain the tank, pump and leads; or mix the water with a small amount of environmentally friendly antifreeze.

The easiest way to empty the tank is to screw off the filter housing (1) and disconnect the hoses by releasing the quick-couplings.

There is also a drain cock (red square) under each water tank.

Open the drain cock (2) to empty the water pump.

Clean the tanks with water and a suitable detergent for plastic surfaces.

Refit the filter housing (1) or the drain plug (2), fill with water and check for tightness.

The water tanks are made of recyclable plastic (polyethylene).

Water tank – Cleaning

Fig. 45 Pump system
1. Filter housing
2. Drain cock
3. Quick-couplings

Fig. 46 Water tank
1. Pump system
2. Drain plug

Forward/Reverse lever
- Lubrication

Remove the screws (1) and take off the plate (2).

Lubricate the sliding surface of the cam disc (3) with grease.

Refit the plate (2) and the screws (1).
EVERY 2000 HOURS OF OPERATION (Yearly)

Steering joint – Check

Inspect the steering joint to detect any damage or cracks.

Check and correct any loose bolts.

Check also for any stiffness and play.

Fig. 48 Steering joint
Air conditioning
– Overhaul (Optional)

Regular inspection and maintenance are necessary to ensure satisfactory long-term operation.

Clean the condenser element (1) free from dust with the aid of compressed air. Blow from above.

**CAUTION**
The air jet could damage the flanges of the elements if it is too powerful.

**WARNING**
Wear protective goggles when working with compressed air.

Inspect the fastening of the condenser element.

Clean the cooler unit and the cooling elements (1) free from dust with the aid of compressed air.

Inspect the system hoses for chafing. Make sure that drainage from the cooling unit is unobstructed so that condensation does not accumulate inside the unit.

Check the drain by squeezing the valves (2) underneath the cab.
EVERY 2000 HOURS OF OPERATION (Yearly)

Compressor – Inspection

Inspect fastening of the compressor and hydraulic motor. These components are located behind the steps to the cab. Dismantle the steps.

The unit should be run at least five minutes every week, if possible, to ensure that the rubber gaskets in the system remain lubricated.

Drying filter – Inspection

Never work under the roller with the engine running. Park on a level surface, chock the wheels and press the parking brake control.

Open the engine hood while the unit is operating and check in the sight glass (1) that no bubbles are visible on the dryer filter. If bubbles are visible through the sight glass, it is a sign that the level of refrigerant is too low. If so, stop the unit. There is a risk of damage to the unit if it is run with insufficient refrigerant.

Check the moisture indicator (2). The color should be blue; if it is beige the dryer cartridge must be replaced by an authorized service company.

The compressor will be damaged if the unit is run with too little refrigerant.

Do not disconnect the hose coupling.

The cooling system is pressurized. Incorrect handling can result in serious personal injuries.

The system contains pressurized refrigerant. Releasing refrigerants into the air is prohibited. The refrigerant circuit may only be repaired by an authorized company.
The following instructions should be followed for storage longer than one month:

The measures apply for a period of up to 6 months.

The items marked * must be restored before using the roller.

**LONG-TERM STORAGE**

*See manufacturer’s instructions in the engine manual that accompanies the roller.*

**Diesel engine**
- Remove the battery from the roller, clean it, check that the electrolyte level is correct (see under the heading "Every 50 hours of operation") and tricklecharge the battery once a month.

**Battery**
- Cover the air cleaner (see under the heading "Every 50 hours of operation" and also under the heading "Every 1000 hours of operation") or its opening with plastic or tape, and also cover the exhaust opening. This is necessary to prevent moisture from entering the engine.

**Air cleaner, exhaust pipe**
- Fill the fuel tank completely to prevent condensation.

**Fuel tank**
- Fill the hydraulic reservoir to the uppermost level mark, see under the heading "Every 10 hours of operation."

**Hydraulic reservoir**
- Fill the hydraulic reservoir to the uppermost level mark, see under the heading "Every 10 hours of operation."

**Sprinkler system**
- Make sure that tire pressure is at least 200 kPa, (2,0 kp/cm²) (29 psi).

**Steering cylinder, hinges, etc.**
- Lower the instrument shield plate on the steering column. Cover the entire roller with a tarpaulin. The tarpaulin must be free from the ground. Store the roller indoors if possible, preferably on premises with an even temperature.

**Tires (Combi)**
- Lubricate bearings of the steering joint and both bearings of the steering cylinder with grease (see under the heading "Every 50 hours of operation").
- Grease the piston rod of the steering cylinder with inhibitor grease. Grease the hinges on doors to the engine compartment and the cab, and also grease both ends of the forward/reverse control (bright parts) (see under the heading "Every 500 hours of operation").
SPECIAL INSTRUCTIONS

Standard oils and other recommended fluids

When they leave the factory, the systems and components are filled with oil or fluid as indicated in the Lubrication specification and are thus suitable for operation in ambient temperatures between -10°C and +40°C (14°F - 104°F).

CAUTION A maximum temperature of +35°C (95°F) applies for biological hydraulic fluid.

Higher ambient temperature above +50°C (122°F)

The following recommendations apply for operation in higher ambient temperatures up to a maximum of +50°C (122°F):

The diesel engine can be run at this temperature using the normal oil, but for other components, the following fluids must be used: Hydraulic system: mineral fluid Shell Tellus TX100 or equivalent.

Temperature

The temperature limits apply to standard versions of the roller.

Rollers that are fitted with additional equipment, such as noise suppression, etc., may require extra observation in the higher temperature ranges.

High-pressure washing

CAUTION Never aim a water jet directly at the cap of the fuel tank or hydraulic reservoir. This is especially important when using a high-pressure jet.

Do not spray water directly on electric components or the instrument panel. Put a plastic bag over the filler cap of the fuel tank and secure with a rubber band. This will prevent water from entering the venting hole in the filler cap. This could otherwise cause operational disturbance, for example, a clogged filter.

Fire fighting

In the event of fire in the machine, use an ABE powder fire extinguisher if possible. A BE-type carbon dioxide fire extinguisher may also be used.

Protective structure (ROPS), protective cab

If the roller is equipped with a protective structure (ROPS, Roll Over Protective Structure), or protective cab, never subject the structure or cab to welding or drilling. Never attempt to repair a damaged structure or cab; they must be replaced with new ones.

Starting aid

When using an auxiliary battery to assist starting, always connect the positive terminal of the auxiliary battery to the positive terminal of the roller battery, and negative to negative.
ELECTRICAL SYSTEM, FUSES

Fuses

The electrical regulating system and control system are protected by 24 fuses, located in the instrument panel and in the engine compartment.

The four fuse boxes (1) are located behind the lower instrument plate, which is opened by turning the four quick-screws (2) a 1/4 turn counter-clockwise.

Fuses in the engine compartment are located together with the battery disconnector, behind the left cover of the engine compartment.

The machine is equipped with a 12 V electrical system and an alternator.

WARNING: Connect the battery to the correct polarity (– to ground). The cable between battery and alternator must not be disconnected when the engine is running.

The main fuse panel is located behind the left cover of the engine compartment.

The main fuses and start relay are easily accessible on lowering the cover forward.

Fig. 54 Instrument panel  
1. Fuse boxes  
2. Quick-screws

Fig. 55 Battery space  
1. Battery disconnector  
2. Main fuse panel

Fig. 56 Main fuse panel  
1. Battery disconnector  
100A  
2. Main fuse, Cab/standard electricity  
125A  
3. Preheating, engine  
4. Start relay
The control unit and relays for preheating the diesel engine are located behind the left door of the engine compartment on the wall adjacent to the rear drum.

**Fig. 57 Engine compartment, left side**
1. Control unit for preheating
2. Heating relay

**Relays**

- K1 Lights relay
- K2 Direction indicator relay
- K3 Brakes relay
- K4 Reverse alarm relay
- K5 Fuel level relay
- K7 Horn relay
- K8 Sprinkler
- K9 Main relay
- K10 AVC
- K11 Neutral switch
- K12 VBS relay

**Fig. 58 Instrument panel**
ELECTRICAL SYSTEM, FUSES

Fuses on the machine

The figure shows the rating and function of the different fuses. All fuses are flat pin fuses.

**Fig. 59 Fuse boxes, left side**

1. Vacant
2. Direction indicators, main fuse
3. Left position lights, front and rear, brake lights
4. Right position lights, front and rear
5. Left direction indicator, front and rear, side blinkers
6. Right direction indicator, front and rear, side blinkers
*/20A 7. Right working lights
*/20A 8. Left working lights
7,5A 9. Left front headlight, instrument lighting
7,5A 10. Right front headlight
7,5A 11. Edge cutter, sprinkler Up/Down
12. Vacant
*/If driving lights 10A

**Fuse boxes, right side**

7,5A 1. Brake valve, start relay, control relay cab
10A 2. Vibration relay, VBS
3A 3. Indicator panel
7,5A 4. Horn
7,5A 5. Vibration Front/Both/Rear, AVC-relay
10A 6. Hazard beacon
7,5A 7. Sprinkler pump front
7,5A 8. Sprinkler pump rear
15,0A 9. Sprinkler system main fuse
15,0A 10. Steering, offset up/down
7,5A 11. Reversing alarm
7,5A 12. Instruments, voltmeter, temperature level, speedometer, tachometer, frequency meter

Fuses in the cab

The electrical system in the cab has an individual fuse box located in the right front side of the cab roof. The figure shows the rating and function of the different fuses. All fuses are flat pin fuses.

**Fig. 60 Fuse box in cab**

15A 1. Rear cab working light
15A 2. Front cab working light, drum headlight
5A 3. Cab interior lighting
20 A 4. Heating/fresh-air fan
15A 5. Windshield wiper/washer
15A 6. Front windshield wiper/washer