# COMPACTION ROLLER

# HR120C-9

# TABLE OF CONTENTS

# 2 MACHINE DESIGNATION, MANUFACTURER AND NOTES

## 2.1 Machine designation and intended use

| Designation | Type |
|---|---|
| HYUNDAI compaction rolle | HR120C-9 |
| **Purpose of use:** | |
| The compaction roller serves to compact soil. | |
| **Intended use:** | |
| The compaction roller may only be used for the purposes and work mentioned in this manual. Any use of the machine for further purposes is considered as misuse and is not permitted. | |

## 2.2 Manufacturer

| **Name of the manufacturer:** |
|---|
| **ATLAS WEYHAUSEN**<br>F. Weyhausen AG & Co. KG<br>Maschinenfabrik |
| **Address:** |
| 27793 Wildeshausen, Visbeker Straße 35 (Germany) |
| **Contact:** |
| Phone: +49 (0) 4431 981-0<br>Fax: +49 (0) 4431 981-139<br>E-Mail: info@f-weyh ausen.de<br>Web: http://www.radlader.com |

## 2.2A Distributor

| Distributor, Adderss |
|---|
| Hyundai Heavy Industries co., Ltd.<br>1000, Bangeojin sunhwan-doro, Dong-Gu,<br>Ulsan, 682-792, Korea |

## 2.3 Type plate and serial number

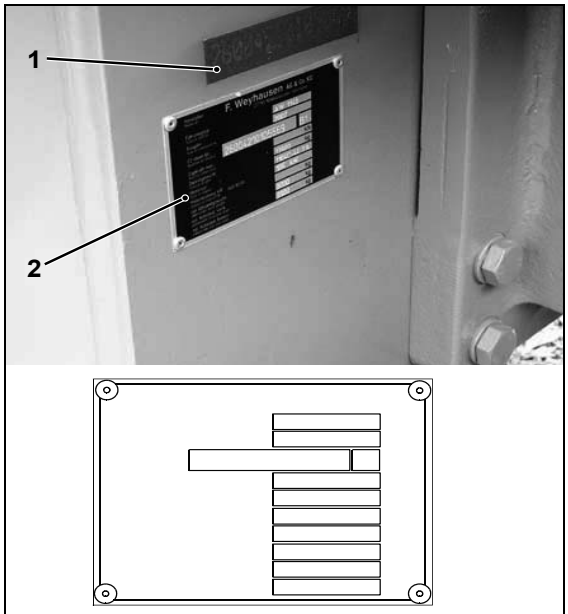



**Fig.1 Serial number at the basic frame**

| **Type plate labeling** |
|---|
| 2601 XXX E123456X |
| The serial number (1) features reference numbers X in order to identify specific equipment.<br>The serial number (1) can be found on the type plate (2) on the right side, below the cabin, and in addition, it has been engraved on the basic frame. |
| **Serial number** |
| 2601 XXX E123456X |
| The serial number is engraved on the basic frame. |

# 2.4 Position of the type plates

## 2.4.1 Type plate vehicle

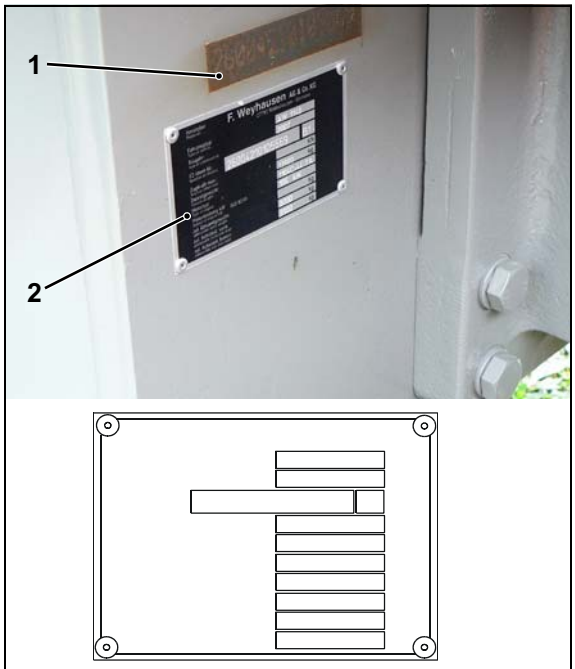



Fig.2 Type plate at the basic frame

| Type plate labeling |
|---|
| 2 6 9 9 X X X E 1 2 3 4 5 6 X |
| The serial number (1) features reference numbers X in order to identify specific equipment.<br>The serial number (1) can be found on the type plate (2) on the right side, and in addition, it has been engraved on the basic frame.<br>The following information is provided by the type plate:<br>• Type<br>• Year of manufacture<br>• Vehicle identification number (serial number)<br>• Service weight<br>• Engine type<br>• Engine output (kW)<br>• Maximum permissible total weight |
| **Serial number** |
| 2 6 9 9 X X X E 1 2 3 4 5 6 X |
| The serial number is engraved on the basic frame. |

## 2.4.2 Type plate Diesel engine

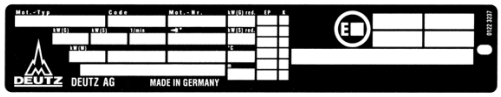



Fig.3 Type plate Diesel engine

# 2.5 User instructions

## 2.5.1 Using the compaction roller

### Responsibility of the contractor

The **contractor** is the **owner** or **hirer** of the compaction roller.

- The responsibility to ensure that the compaction roller is exclusively operated, serviced and maintained by staff that is
  - physically, mentally and professionally fit and
  - has read and understood the operating and maintenance manual

  rests entirely with the owner or hirer of the vehicle.
- Prompt the operating and service staff to confirm this in written form before authorizing them to use the vehicle.
- Individuals under the influence of alcohol or drugs must not operate the compaction roller.
- Make sure that, in addition to the instructions and guidelines stated in this manual, the mandatory national or local safety regulations and laws referring to the operation of construction machinery are observed.

### Responsibility of the driver and the service staff

Any individual intending to operate the compaction roller must have read and understood this operating and maintenance manual before starting to carry out any work related to the vehicle.

This also applies to individuals that are familiar with the operation and maintenance/servicing of this particular type of machine or similar vehicles.

The **driver of the compaction roller** is the person who operates and drives the compaction roller.

- Before starting to operate the compaction roller, it is the driver‘s obligation to ascertain that the vehicle is in faultless condition. In addition, the driver must observe the instructions concerning the operation of the compaction roller while it is being used.
- The responsibility to ensure that the machine and its operation do not cause any danger rests entirely with the driver of the compaction roller.
- Before working with the compaction roller, be sure to familiarize yourself with all its control elements and functions as well as its driving characteristics.

The **service staff** includes all individuals involved in servicing, maintaining and repairing the compaction roller.

- The service staff must abide by the default maintenance intervals and is responsible for carrying out the required inspections and work.
- The staff needs to ensure that the execution of the maintenance and service work in question does not cause any dangers to the environment.

This page intentionally blank

## 2.6 Notes on this operating and maintenance manual

This operating and maintenance manual serves to ensure the correct operation and maintenance of the compaction roller.

- It is an essential part of the compaction roller and needs to be kept close at hand in the cabin at all times.
- This manual contains all the information required for putting the compaction roller into operation, for working with it and driving it.
- Furthermore, it contains instructions regarding service and maintenance measures which need to be taken by the driver or the service staff. They serve to ensure that the vehicle is always ready for operation and contribute to a prolonged service life.
- Observing the safety instructions both in the corresponding chapters and in the descriptions is of vital importance.
- If you have any further questions concerning the operation or maintenance of the compaction roller, please contact your local authorized HYUNDAI dealer.
- In case you lose the operating and maintenance manual, order a new copy. Please state the serial number and the order number (if available).
- The owner or hirer of the compaction roller will be held liable for any damage resulting from inexpert operation or lack of skill on the part of the staff.

### 2.6.1 Symbols in the operating and maintenance manual

The warning notices in this operating and maintenance manual are accentuated by means of signal words and symbols which reflect the extent and the type of danger involved.
In order to prevent bodily injury and material damage, observing the warning notices in this operating and maintenance manual is **of vital importance**!

**DANGER!**
Warns of an imminently dangerous situation which may result in severe bodily injury or death if it is not avoided.

**WARNING!**
Warns of a dangerous situation which may result in severe bodily injury or death if it is not avoided.

**CAUTION!**
Warns of a dangerous situation which may result in slight injury if it is not avoided.

**CAUTION!**
Warns of a dangerous situation which may result in material damage if it is not avoided.

*NOTE*
Refers to further information and gives advice in order to ensure trouble-free and efficient operation.

# 3 SAFETY INSTRUCTIONS

## 3.1 General use of the compaction roller

**DANGER!**
Before starting the compaction roller, the driver needs to be informed of the specific safety requirements for work in the danger zone and is obliged to check whether the necessary precautions have been taken.

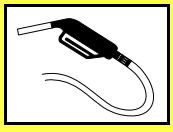
**CAUTION!**
***Unknown environmental and working conditions!***
- Prior to starting your work, make sure that the weather, the road and the condition of the ground allow for a safe operation of the compaction roller. Watch out for potential sources of danger and act accordingly.

## 3.2 Driving and working with the compaction roller

**CAUTION!**
***The compaction roller is to be used in faultless condition only!***
- Carry out the required checks and maintenance measures, see chapters on maintenance.
- Repair damage immediately or contact the **HYUNDAI SERVICE.**
  Do not resume your work before the damage is repaired.

**WARNING!**
***Danger of falling while getting on/off the compaction roller!***
- Always face the machine, use handles, stairs and steps!
- Always keep stairs, steps and handles clean and dry!
- Do not use any control elements as handles!

**WARNING!**
***Restricted visibility caused by smoke, dust, fog etc.!***
- Stop the vehicle or reduce speed until visibility improves.
- Do not hang up any clothes or other objects which might restrict your view.



**WARNING!**
***Ensure the operational readiness of the compaction roller!***
- Prior to starting your work, check the fill levels and add the required consumables, see maintenance instructions.

## CAUTION!

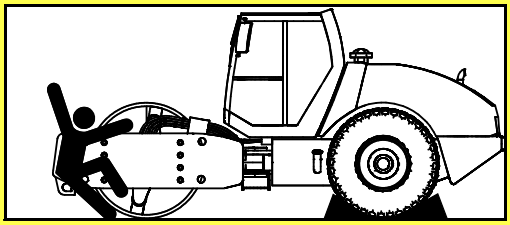
***Parking the compaction roller!***

- Secure the compaction roller after each operation. Activate the parking brake and pull out the ignition key.

## DANGER!

***Risk of injuries!***

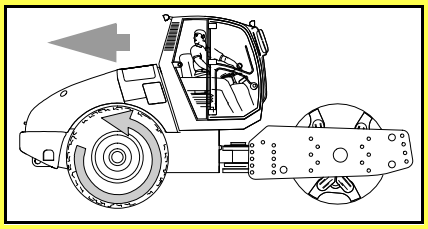
- Secure the compaction roller against rolling!



## DANGER!

***Watch out for individuals in the work area and within the operating range of the vehicle!***

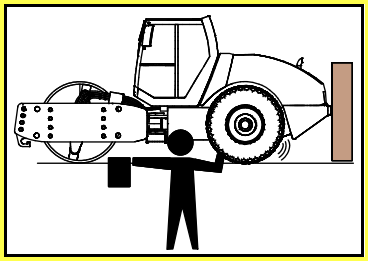
- Secure the work area against unauthorized trespassing.
- Before and while driving backwards, check the area behind you by looking backwards.



## DANGER!

***Working in unknown and/or complex environments!***

- Find a skilled person to give you instructions!
- Agree on hand signals and warning calls beforehand!!



## DANGER!

***Risk of injuries!***

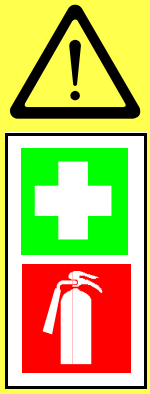
- Transporting individuals on the vehicle is strictly prohibited!

## DANGER!

***Sliding, breaking in of the compaction roller!***

- Exercise extra caution when working near water!
- Before starting to work, check the inclination and carrying capacity of the ground.

## 3.3 Safety instructions in emergencies



**CAUTION!**

***The emergency equipment can save lives!***

- Always keep a first aid kit and a fire extinguisher close at hand.
- Make sure the emergency equipment is always ready for use.
- Familiarize yourself with using the emergency equipment beforehand.

# 4 TECHNICAL SPECIFICATIONS

## 4.1 Operating data

| Compaction roller type HR120C-9 | with smooth drum |
|---|---|
| General data: | |
| Service weight | 12300 kg |
| Axle load, front | 7100 kg |
| Axle load, rear | 5200 kg |
| **Compaction capacity:** | |
| Static linear load | 32.80 kg/cm |
| Amplitude high/low | 1.8/0.6 mm |
| Frequency with high/low amplitude | 30/40 Hz |
| Centrifugal force with high/low amplitude | 240/140 kN |
| **Drum:** | |
| Drum width | 2100 mm |
| Drum diameter | 1500 mm |
| Drum thickness | 30 mm |
| **Transmission/Drive:** | |
| Speed | 0-12 km/h |
| Pendulum angle | +/- 12 degrees |
| Gradeability with/without vibration | 48% / 52% |

## 4.2 Tires

| Compaction roller type HR120C-9 | |
|---|---|
| Standard | 23.1-26 |

## 4.3 Fill levels

| Compaction roller type HR120C-9 | with smooth drum |
|---|---|
| Fuel tank | 300 l |
| Hydraulic tank | 106 l |

## 4.4 Engine

| Compaction roller type HR120C-9 | with smooth drum |
|---|---|
| Make Diesel engine | Deutz BF4M 2012 C |
| Nominal output | 95 kW (129 HP) |

## 4.5 Dimensions

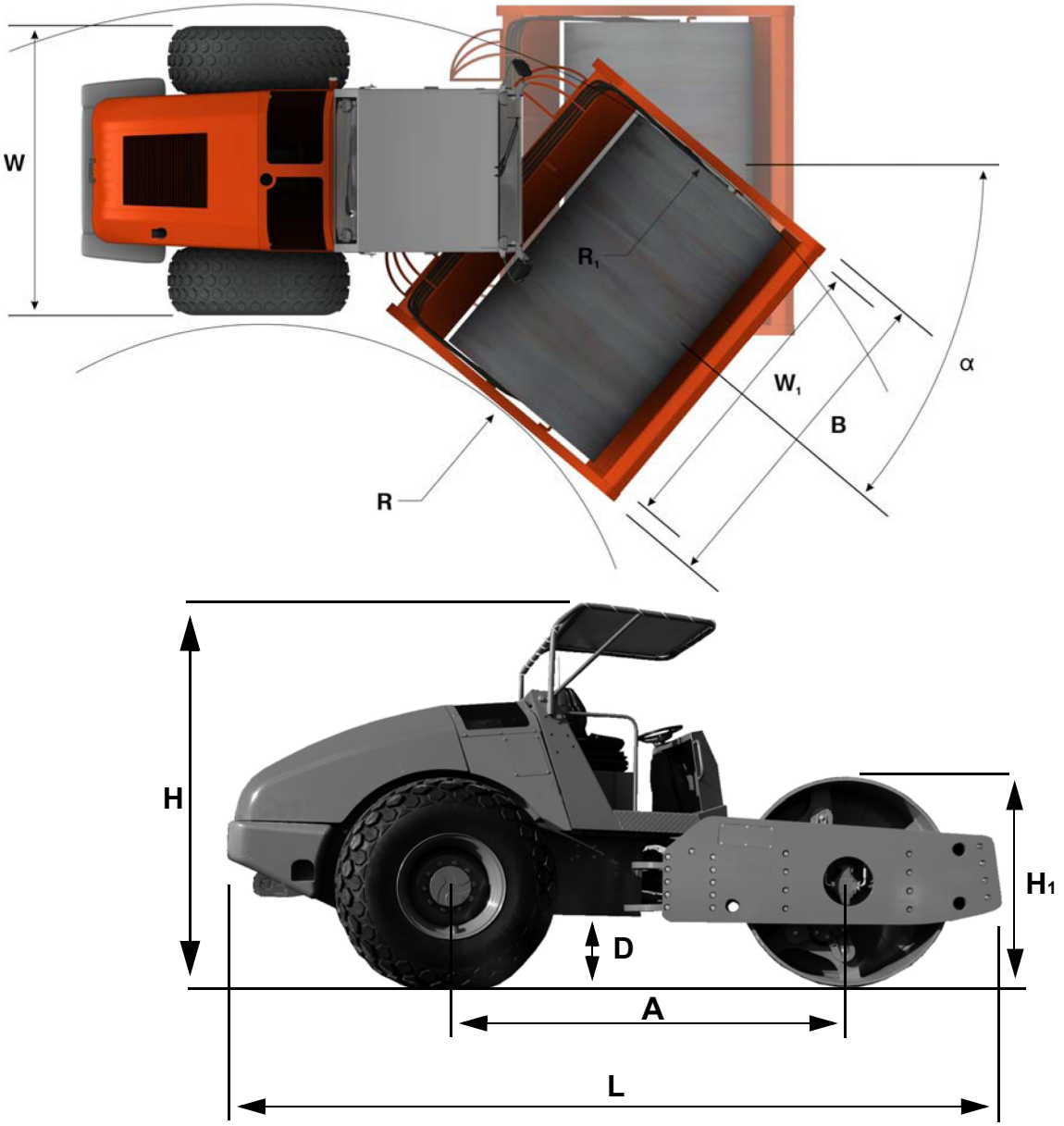



Fig.4 Dimensions

| Dimensions | with smooth drum (in mm) |
|---|---|
| A | 3195 |
| B | 2270 |
| D | 490 |
| H | 3200 |
| H1 | 1500 |
| L | 5757 |
| R | 4860 |
| R1 | 7015 |
| W | 2090 |
| W1 | 2100 |
| α | ±30° |

# 5 TRANSPORTING THE COMPACTION ROLLER

## 5.1 Securing the compaction roller before transporting it

**WARNING!**
***Secure attachments and objects before transporting the compaction roller!***
Remove objects attached to the exterior of the driver`s compartment and transport them separately. Remove or fasten objects that are kept in the cabin.

### 5.1.1 Loading and securing the compaction roller

**CAUTION!**
***Precautionary measures for transporting the compaction roller!***
The compaction roller may be loaded and unloaded by experienced and adequately trained persons only.
The compaction roller may only be loaded and unloaded on level and solid ground.

- Transporting the compaction roller requires a flat bed truck with a sufficient load capacity, which is adequately equipped for securing the compaction roller. Observe the total weight of the compaction roller before loading it onto the truck; see chapter on technical specifications.

### 5.1.2 Loading and unloading the compaction roller

**Driving the compaction roller onto a flat bed truck**

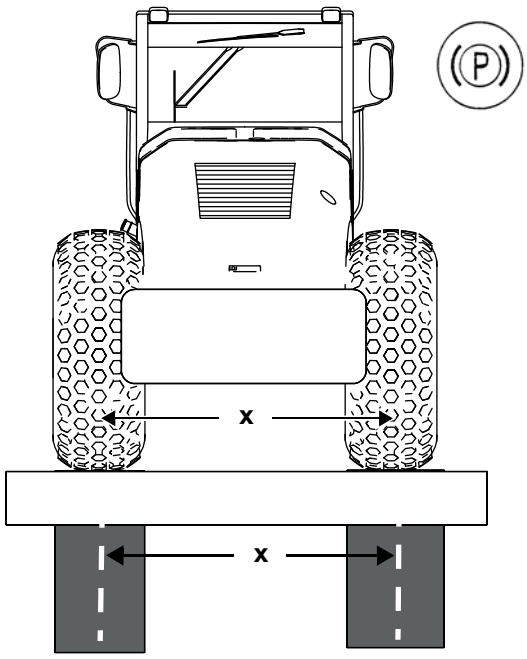



Fig.5 Driving onto a flat bed truck

- Check the position of the ramps of the flat bed truck before driving the compaction roller onto it.
- The ramps need to be positioned in a way that ensures that the tires roll on the center of the ramps.
- Set the "rabbit/turtle" switches to position a (see 10.2.3).
- Start the Diesel engine and release the parking brake. The symbol "parking brake" on the dashboard is deactivated.
- Drive the compaction roller onto the flat bed truck in reverse gear, with the rear of the roller ahead.
- Activate the parking brake and stop the diesel engine. The activation of the parking brake is indicated by the corresponding symbol on the dashboard.
- Remove the ignition key.

## 5.1.3 Securing the compaction roller on the transport vehicle

### Fastening the anti-buckling device between the front and the rear end

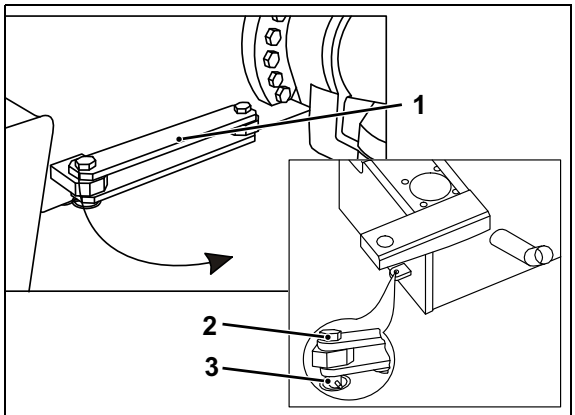



Fig.6 Fastening the anti-buckling device

- Install the anti-buckling device (1) between the front and the rear end.
- Secure the bolt (2) by means of a safety splint pin (3).

### Tying the compaction roller to the transport vehicle

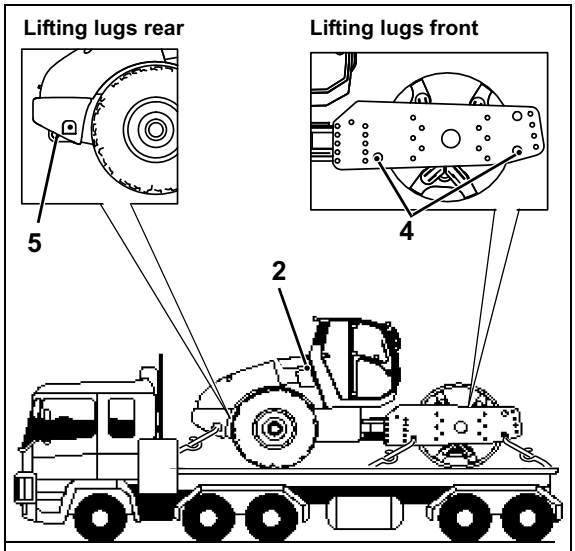



Fig.7 Securing the compaction roller

- The compaction roller disposes of four lifting lugs at the front end (4) and two lifting lugs at the rear frame (5).

**WARNING!**
The compaction roller may only be fastened to the transport vehicle at the labeled lifting lugs at the front end and at the rear frame.

*NOTE*
Observe the national regulations and guidelines regarding tie-down safety standards!

- Use chain hoists to secure the compaction roller (2) on the flat bed truck at the six lifting lugs.

## 5.1.4 Carrying out the transport

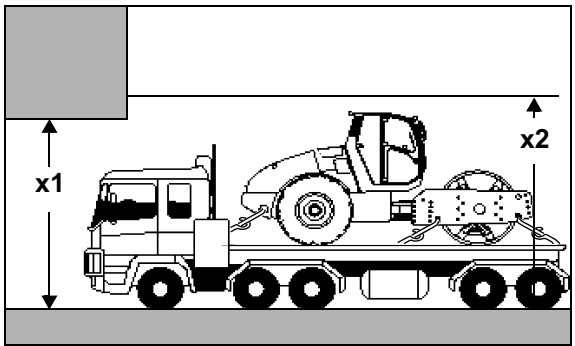



Fig.8 Carrying out the transport

- Be sure to inform yourself of the height **X2** of the transport vehicle with the compaction roller tied to it.

**CAUTION!**
Consider the height of the transport vehicle with the compaction roller fastened to it (**X2**) before attempting to pass underbridges with a height of **X1**!

- Observe the applicable national and local laws regarding the execution of the transport.

# 6 GETTING ACQUAINTED WITH THE COMPACTION ROLLER

## 6.1 Overview: Assembly groups

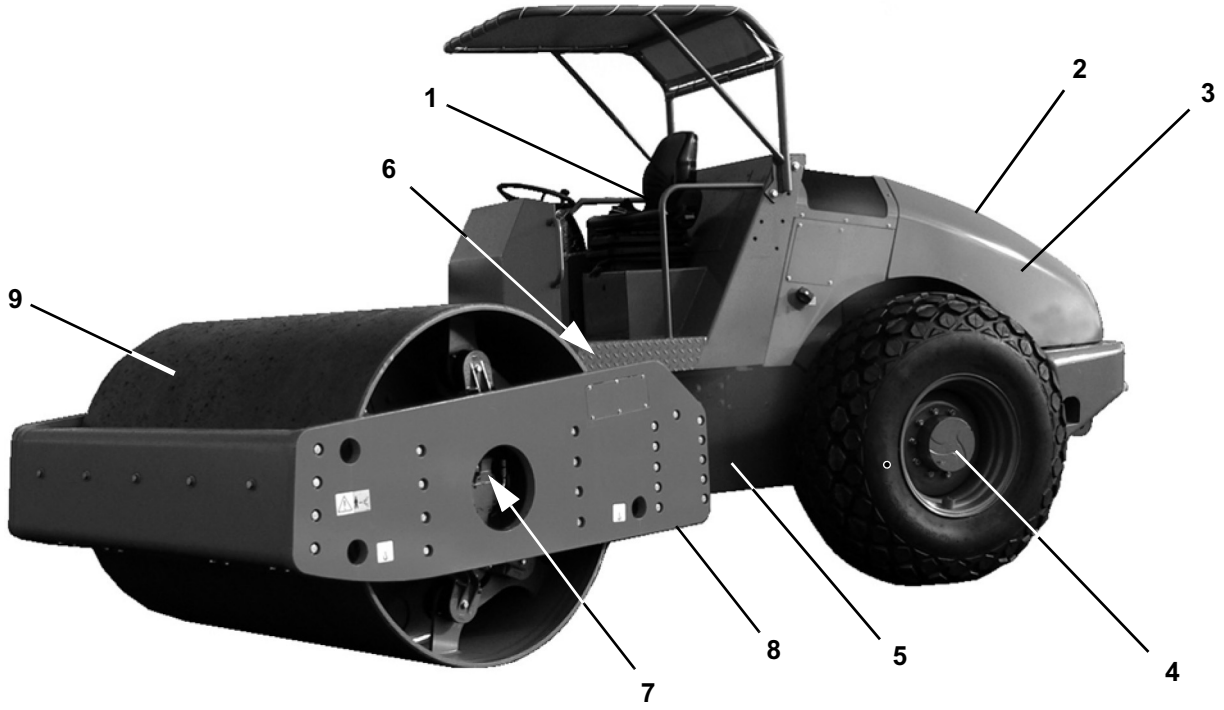



**Fig.9 Overview: Assembly groups**

### Captions Assembly groups

1 Driver‘s compartment
2 Engine compartment with engine hood
3 Diesel engine and hydraulic system
4 Rear axle and wheels
5 Basic frame
6 Articulated pendulum joint
7 Vibration
8 Drum frame
9 Drum

## 6.2 Overview: Driver‘s compartment

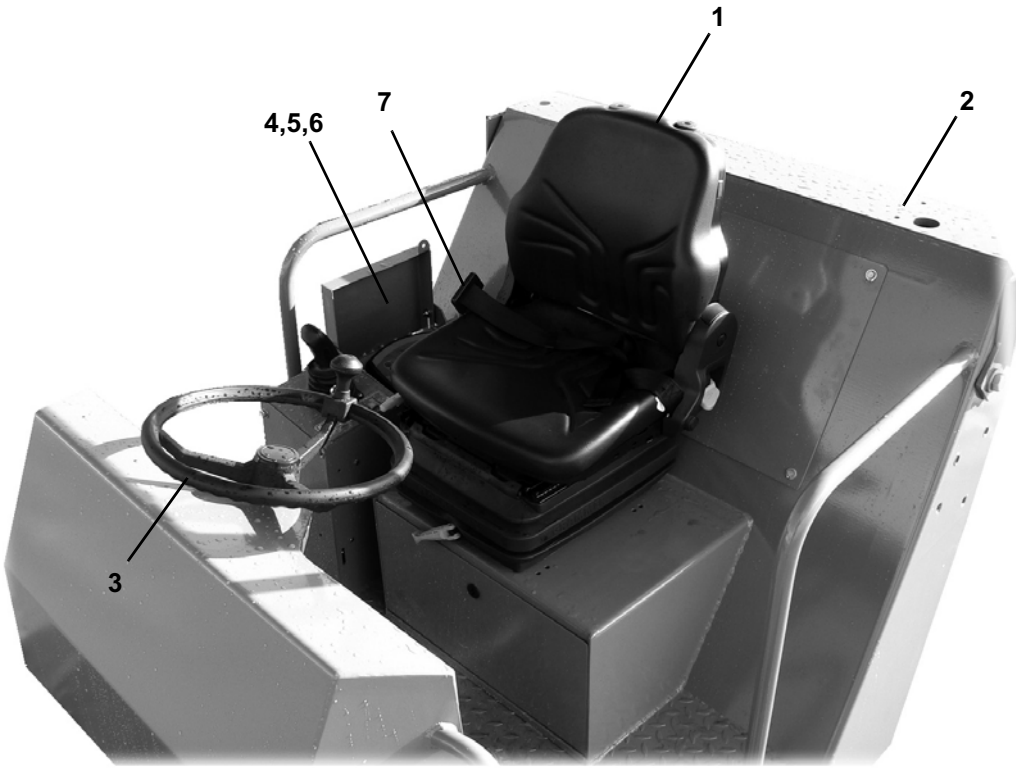



**Fig.10 Overview: Driver‘s compartment**

**Captions Driver‘s compartment**

1 Driver‘s seat
2 Frame
3 Steering wheel
4 Panel of switches*
5 Joystick*
6 Dashboard*
7 Safety belt

*see chapter 9 for details

## 6.3 Warning notices and labels

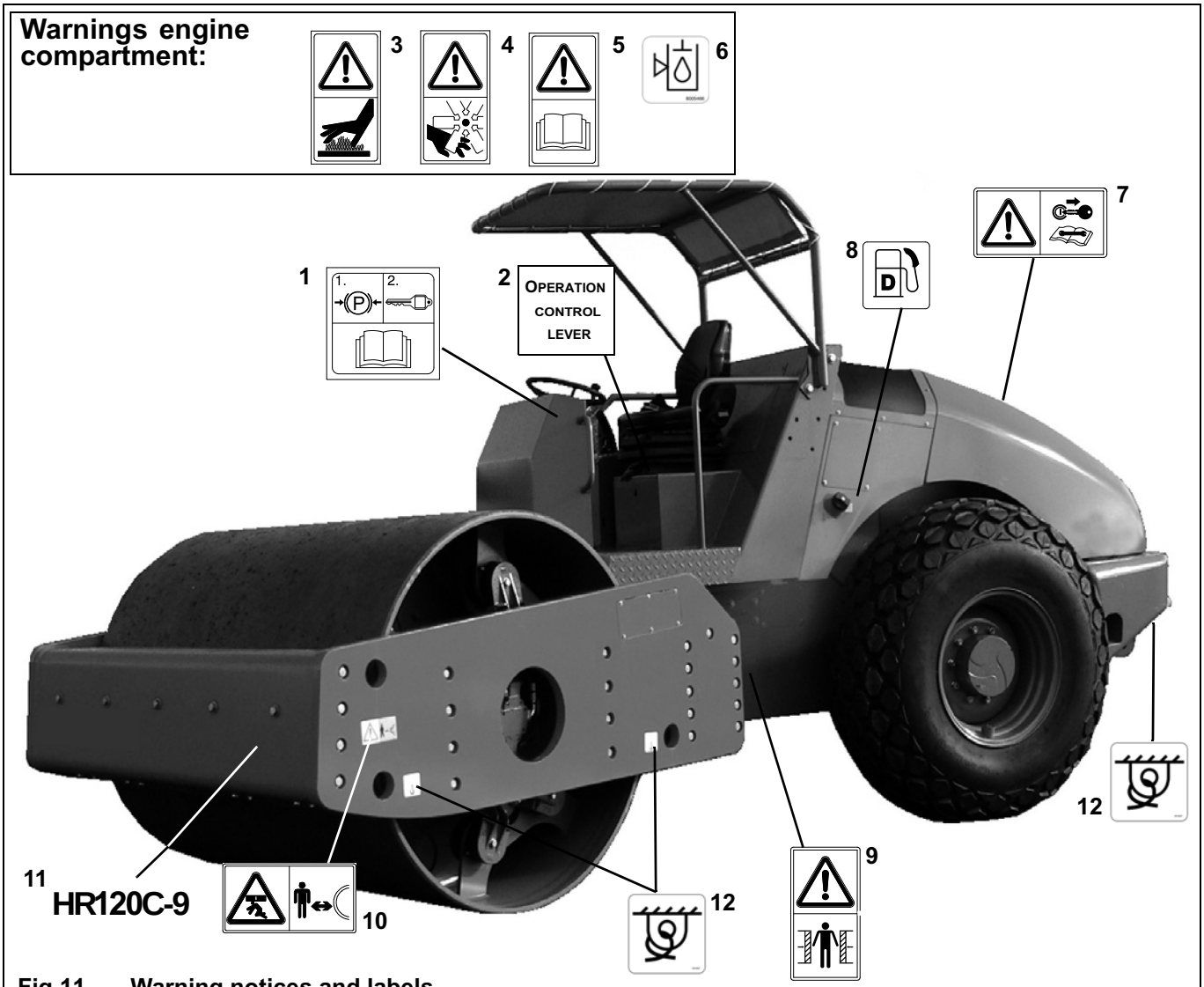



**Fig.11 Warning notices and labels**

### Captions warning notices and labels

1 Start, actuate the parking brake & read the operating manual
2 Operation of the control lever (joystick)
3 Warning Hot surfaces
4 Warning Hand injuries
5 Read the operating manual
6 Fill level hydraulic oil
7 Lock the engine hood
8 Diesel only
9 Danger of crushing!
10 Warning Safety Distance - Risk of being run over
11 Type
12 Lift / Tie down point

# 7 BEFORE STARTING THE COMPACTION ROLLER

## 7.1 Prior to the initial start

*NOTE*

***Obligation to inform yourself!***

- Inform yourself of all issues related to operating the compaction roller.
- Read the safety instructions before starting the compaction roller. In addition to this, be sure to observe the national and local laws and directives concerning the operation of earth-moving construction machines. In case of doubt, contact your local HYUNDAI dealer.

## 7.2 Checking the compaction roller

### 7.2.1 Visual inspection

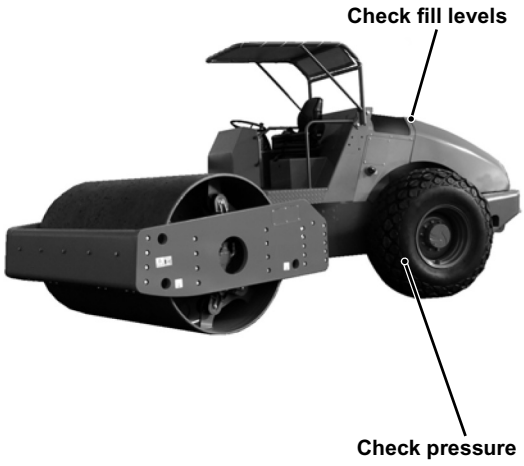



**Fig.12 Visual inspection**

Prior to starting the compaction roller, perform a visual inspection to get a picture of the current condition of the compaction roller.

**Check:**

- the accumulation of dirt and clean the compaction roller by means of a high pressure washer, if necessary,
- the condition and the air pressure of the tires (adjust the tire pressure, if necessary),

| Tires | minimum pressure | max. pressure | Type |
|---|---|---|---|
| **Standard** | 1.6 bar | 1.8 bar | water filling |

- the fill levels:
  - Fuel (Diesel)
  - Hydraulic oil
  - Engine oil
  - Coolant

## 7.2.2 Checking the drum area

Before accessing the cabin and starting the compaction roller, check its drum area.

### Cleaning the drum area

Check the scraper(s) of the smooth or pad foot drum and the drive area for the accumulation of dirt.

- If required, clean the entire drum area by means of a high pressure washer.

### Checking the scrapers

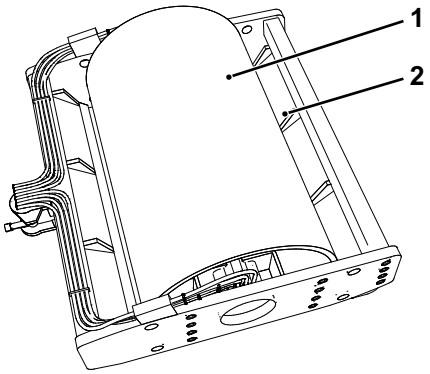



**Fig.13 Checking the scrapers**

- The smooth roller drum can be equipped with one of the following scraper types:
  - Standard scraper, rigid metal bar
  - Contact scraper, spring-loaded
  - Contact scraper with elastic vulcollan bar.
- After cleaning the drum area, check whether the scraper is correctly fitted at the smooth roller drum. If the scraper (2) is not properly seated at the smooth drum (1), adjust it.

### Standard scrapers rigid metal bar

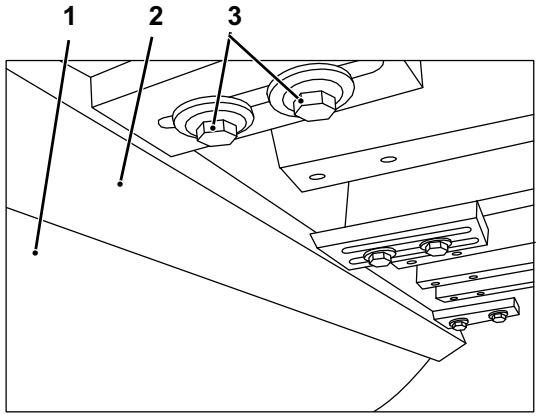



**Fig.14 Standard scrapers**

- Loosen the fastening bolts (3) of the scraper.
- Move the scraper (2) toward the smooth roller drum (1), to a distance of approx. 20 mm.
- Tighten the fastening bolts (3).

### Contact scrapers, spring-loaded or Vulcollan bar

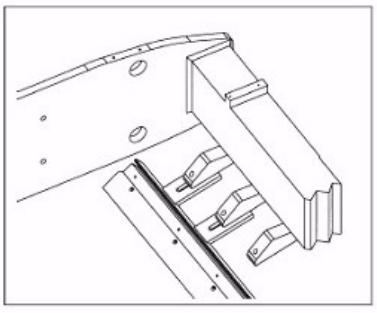


**Fig.15 Contact scrapers**

- Proceed as described above, but in this case, the scraper in question (flexible or spring-loaded) needs to fit tightly at the smooth roller drum.

### 7.2.3 Refueling (Diesel)

- Before starting your daily work with the compaction roller, make sure there is a sufficient amount of Diesel in the fuel tank.

**CAUTION!**
***Environmental protection!***
Make sure that neither oil nor fuel can penetrate the soil, pollute water or leak into the sewer system!

| Type of fuel | according to standard | temperature range |
|---|---|---|
| **Diesel fuel** | ASTM D975-No. 1 | for temperatures from below 0° C to - 30° C |
| **Diesel fuel** | ASTM D975-No. 2 | for temperatures from above -10° C to 40° C |


**Fig.16 Filler neck**

- The filler neck (1) for the fuel tank is located on the left side of the vehicle.
- Unlock the cover of the tank.
- Open the tank cover and add a sufficient amount of Diesel fuel.
- Close the tank cover and lock it.

# 8 INDIVIDUAL SETTINGS

## 8.1 Adjusting the driver‘s seat

### Driver‘s seat - Features

- Check the features of your driver‘s seat.
- Your seat may not dispose of all the optional features described in this section.

**WARNING!**
Always make sure you have made all the required adjustments before starting the compaction roller.

### Weight adjustment

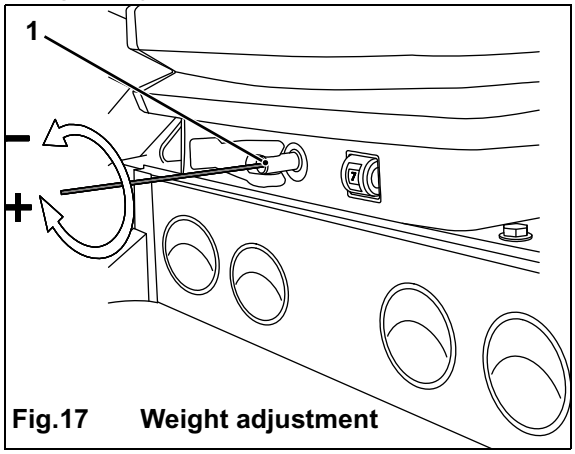


Fig.17 Weight adjustment

*NOTE*
The driver‘s seat has been designed for a maximum weight of 130 kg.
In order to prevent damage to your health, check and adjust the settings of the driver‘s seat each time before putting the compaction roller into operation.

- In order to make the necessary adjustments, the seat has to be unoccupied.
- Turn the adjustment lever (1) in the desired direction until it corresponds to your weight.
- The current setting is displayed on the vision panel.

### Height adjustment

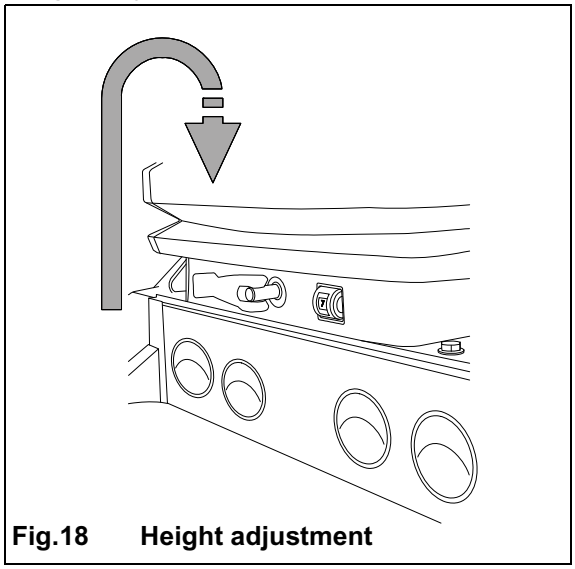


Fig.18 Height adjustment

- Lift the driver‘s seat until it audibly locks into the desired position.
- If you lift the driver‘s seat beyond the maximum height (stop), the seat will move back to its lowest position.

## Longitudinal adjustment

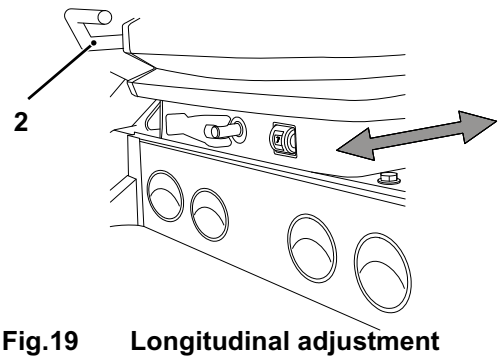



**Fig.19 Longitudinal adjustment**

- Make the necessary adjustments by means of the corresponding locking lever (2).
- Lift the locking lever and move the driver‘s seat into the desired position until the locking lever clicks into place.

**CAUTION!**
After making the required adjustments, ensure that the locking lever has clicked into place. If this is the case, the position of the driver‘s seat is fixed, i.e. it must not be possible to move it into another position any more!

## Backrest inclination

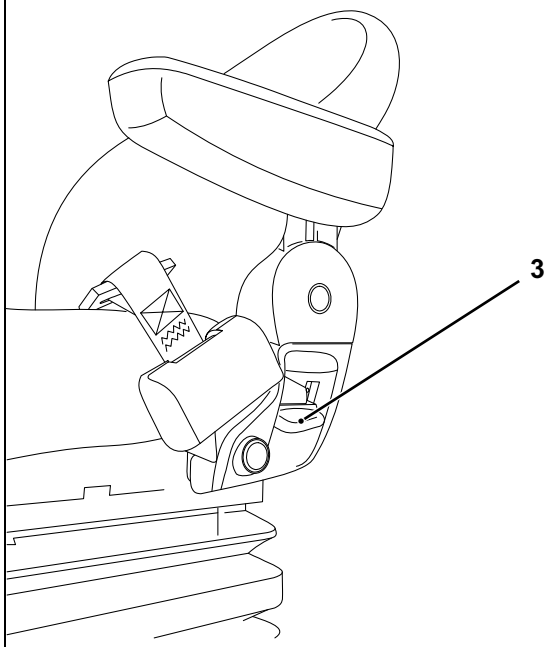



**Fig.20 Backrest inclination**

- Adjust the backrest by means of the corresponding locking lever (3).
- Lift the locking lever and move the backrest into the desired position.
- Check whether the locking lever (3) has clicked back into place after you have made the adjustment.

**CAUTION!**
After making the required adjustments, ensure that the locking lever has clicked into place. If this is the case, the position of the driver‘s seat/the backrest is fixed, i.e. it must not be possible to move it into another position any more!

## Armrest on the left side of the seat

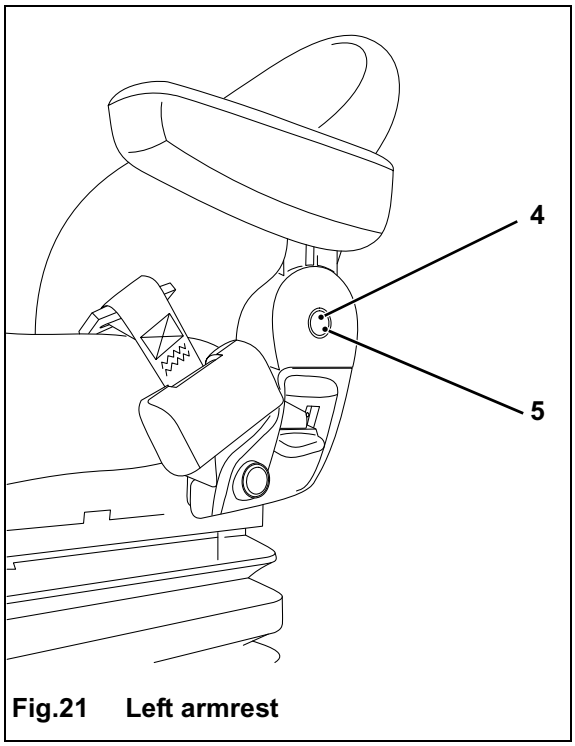



**Fig.21 Left armrest**

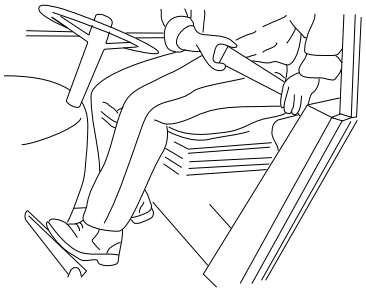
- The armrest on the left is foldable and its height can be adjusted.

*NOTE*

Before using the compaction roller and before leaving the seat, lift the left armrest

- In order to adjust the height of the left armrest, remove the cap (4) covering the adjusting nut.
- Loosen the adjusting nut (5).
- Move the armrest to the desired height and tighten the adjusting nut again.
- Attach the cap.

## 8.2 Fastening the safety belt



**Fastening the safety belt**

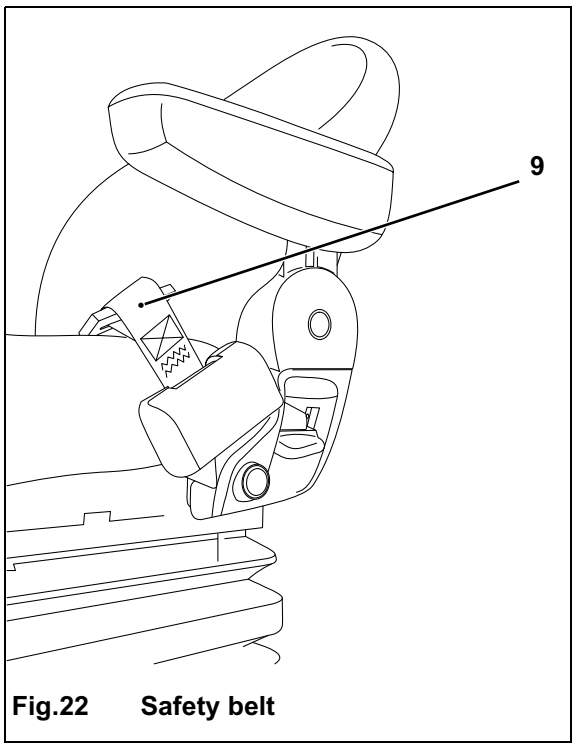



**Fig.22 Safety belt**

**DANGER!**
***Risk of death!***
Fastening the safety belt before starting the Diesel engine and before driving the compaction roller is of vital importance to your safety!

- The safety belt (9) is part of the driver‘s seat and can be found at the left side of the seat.
- Sit down on the driver‘s seat.
- Take the clasp of the safety belt and pull the belt around your upper body.
- Attach the clasp to the lock of the safety belt.
- Ascertain that the clasp audibly clicks into the lock and is securely fastened.

*NOTE*
After locking it, the safety belt has to fit tightly.

# 9 Control elements and displays

## 9.1 Overview: Control elements

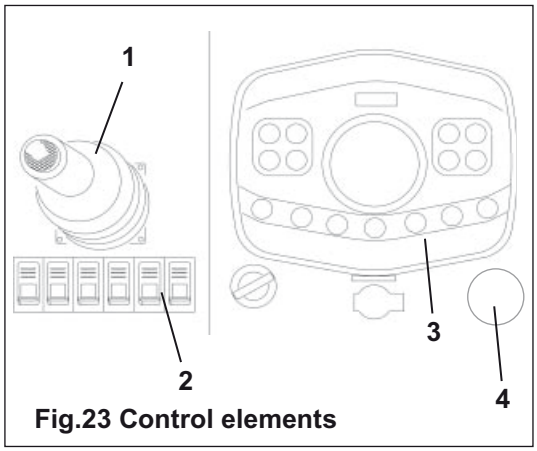
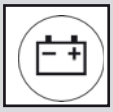
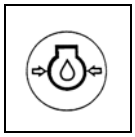
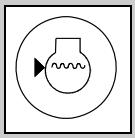
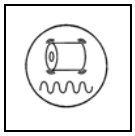
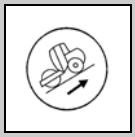


Fig.23 Control elements

- Joystick (**1**)
- Panel of switches (**2**).
- Dashboard (**3**)
- Emergency stop push-button (**4**)

### 9.1.1 Table of displays, symbols and lights

| Symbol | Function | Description |
|---|---|---|
|  | **Display forward motion (green)** | Activation (light) indicates that the wheel loader is moving forward. |
|  | **Display reverse motion (green)** | Activation (light) indicates that the wheel loader is moving backward. |
|  | **Warning light parking brake (red)** | Light indicates the activation of the parking brake. The Diesel engine can only be started with the parking brake applied. Driving is not possible with the parking brake applied. |
|  | **Warning light charge control (red)** | Light indicates that the ignition is activated. Fades as soon as the Diesel engine and the generator have started. |
|  | **Warning light brake pressure (red)** | Indicates that the hydraulic oil pressure of the brake system is insufficient. |

| Symbol | Function | Description |
|---|---|---|
|  | **Diesel engine oil temperature (red)** | If this lamp lights up, immediately stop the compaction roller and let the Diesel engine idle to cause the engine oil to cool!<br>See Deutz operating manual. |
|  | **Diesel engine oil pressure (red)** | If this lamp lights up during operation, immediately stop the Diesel engine. |
|  | **Coolant fill level Diesel engine (red)** | Indicates an insufficient level of coolant in the cooling circuit, see chapters on maintenance. |
|  | **Dual display<br>Accumulation of dirt in the fuel filter / air filter of the Diesel engine (yellow)** | If this lamp lights up, determine the cause and clean / replace the filter, see chapters on maintenance. |
|  | **Display high amplitude (yellow)** | Indicates that “**high** amplitude“ has been selected by means of the switch “soil compaction“ on the panel next to the control lever. |
|  | **Display low amplitude (yellow)** | Indicates that “**low** amplitude“ has been selected by means of the switch “soil compaction“ on the panel next to the control lever. |
|  | **Display full thrust drum (green)** | Lights up whenever the left "rabbit/turtle" button on the panel of switches is set to "full thrust drum" (see 10.2.3) |
|  | **Display full thrust axle (green)** | Lights up whenever the right "rabbit/turtle" button on the panel of switches is set to "full thrust axle" (see 10.2.3) |

### 9.1.2 Control lever/joystick

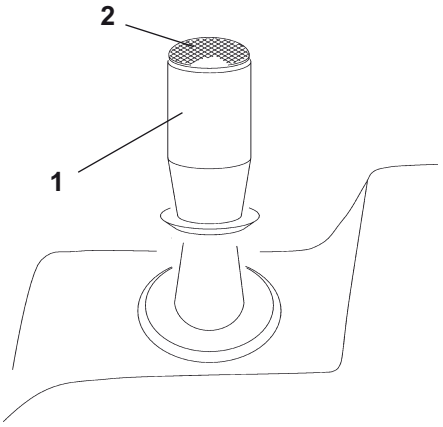



Fig.24 Joystick

- Use the joystick (**1**) to set the direction of motion and the speed of the compaction roller.
- The button (**2**) on the joystick serves to activate and deactivate the vibration.

*NOTE!*

***Speed of the compaction roller!***

- The further you move the joystick into the desired direction of motion, the higher the speed of the vehicle.
- As soon as the end position of the joystick is reached, the maximum speed of the compaction roller has been reached as well.
- The compaction roller stops if it is set to the neutral position **N**.

### 9.1.3 Panel of switches

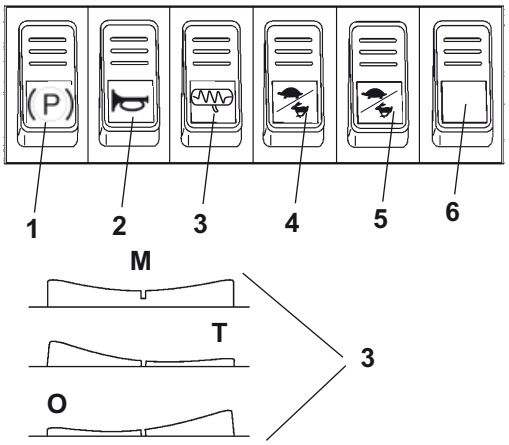



Fig.25 Panel of switches

**1** Parking brake
**2** Horn
**3** Vibration selector switch (see **10.2.3** for further information)
**4** “Rabbit/Turtle“: Full thrust drum
**5** “Rabbit/Turtle“: Full thrust rear axle
**6** w/o function

### 9.1.4 Dashboard

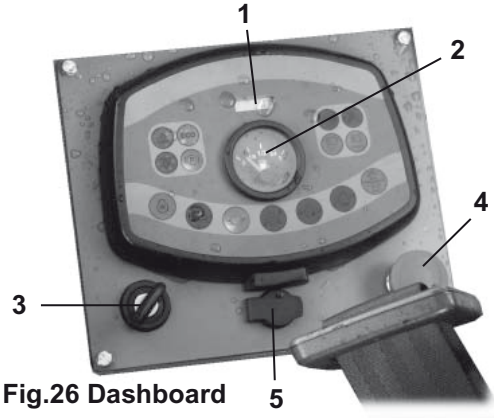



Fig.26 Dashboard

- The dashboard of the wheel loader provides the driver with important information regarding the vehicle`s functions and operating conditions by means of displays, symbols and lights.

  • Operating hour meter (**1**)
  • Fuel level in the tank (**2**).
  • Ignition lock (**3**)
  • Emergency stop push-button (**4**).
  • 12V socket (**5**)

# 10 STARTING, DRIVING AND STOPPING

## 10.1 Prior to the initial start

*NOTE!*

***Obligation to inform yourself!***

- Inform yourself of all issues related to operating the compaction roller.
- Read the safety instructions before starting the compaction roller. In addition to this, be sure to observe the national and local laws and directives concerning the operation of earth-moving construction machines. In case of doubt, contact your local HYUNDAI dealer.

## 10.2 Starting and driving

### 10.2.1 Starting the Diesel engine

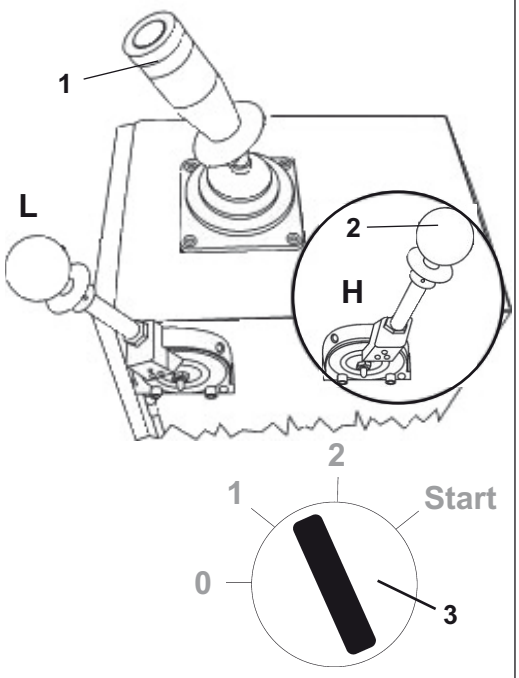



**Fig.27 Starting the Diesel engine**

- In order to start the Diesel engine, make sure the joy-stick (1) is in the central (neutral) position. It may not be operated during the starting procedure. Make sure the parking brake is applied.
- Insert the ignition key in the ignition lock (3, see also g. 32) and turn the key to the first stage in order to activate the ignition. The symbol indicating the activation of the parking brake lights up on the dashboard.

**Starting a cold engine:**

- Set the rev adjustment lever (2) to a slightly increased rotational speed. When starting, do not fully accelerate!
- To start the Diesel engine, turn the ignition key further, to the limit stop, and wait until the engine starts.
- As soon as the Diesel engine has started, immediately release your grip on the ignition key.
- Shift to first gear by moving the rev adjustment lever (2) to the **L** position.

**CAUTION!**

A warming-up phase of ***10 minutes*** with the Diesel engine running at idle speed is required prior to driving the compaction roller or to carrying out any movements of the attachments! The functions of the hydraulic system are not available before the hydraulic oil has sufficiently warmed up!

**Starting a warm engine:**

- In order to start the Diesel engine, turn the ignition key to the limit stop, and wait until the engine starts.
- As soon as the Diesel engine has started, immediately release your grip on the ignition key.

**The compaction roller is now ready for operation.**

*NOTE!*

***If the Diesel engine does not start...***

***...check*:**

- whether the parking brake is applied,
- the charge condition of the battery
- the amount of Diesel in the fuel tank,
- the engine compartment by performing a visual inspection,
- the emergency stop push-button.

***If the Diesel engine still does not start...***

- ... contact the HYUNDAI service team.

## 10.2.2 Setting the Diesel engine speed

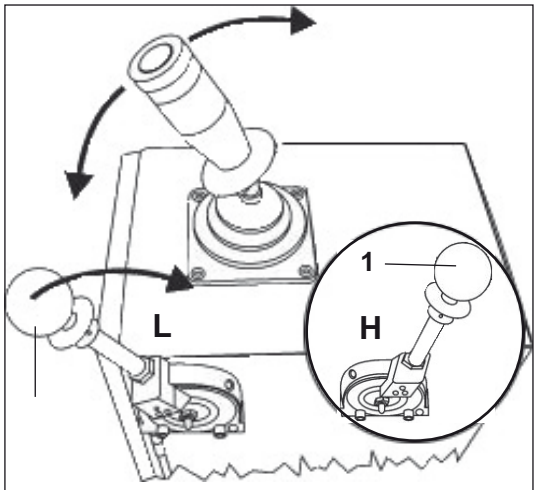



**Fig.28 Joystick and rev adjustment lever**

- The Diesel engine speed is adjusted by means of the rev adjustment lever (1). The required number of revolutions depends on the purpose of your operation, i.e. whether you intend to put the vehicle to use as a compactor (work) or you just want to drive it (without compaction).
- The rev adjustment lever (1) disposes of two notch positions:
  - Position 1: Start/stop: idle-running speed (**L**)
  - Position 2: Driving/working: maximum speed (**H**)
- In order to drive at maximum speed, drive at full throttle, with the two “turtle/rabbit“ switches set to
- position b (see 10.2.3).
- In order to drive slowly, set to idle speed. The lowest driving speed is reached if you additionally press down the “turtle/rabbit“ switches at the top (position a).
- If the lever is not actuated for a while, it will eventually move back to idle speed.

## 10.2.3 Selecting the mode of operation

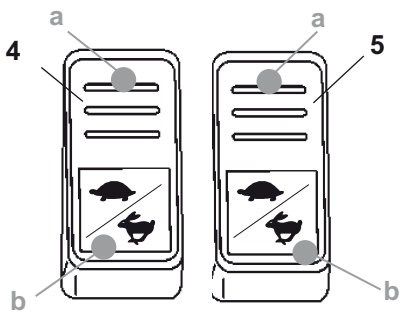



**Fig.29 Modes of operation**

There are two modes of operation, which are selected by means of the two “rabbit/turtle“ switches.

**Left “rabbit/turtle“ key** (**4**):

- If the top of the switch is pressed down (position a), maximum thrust is made available to the drum while the machine is set to a slow speed.
- If the bottom of the switch is pressed down (position b), the machine is set to a fast speed but the thrust of the drum is reduced accordingly.

**Right “rabbit/turtle“ key** (**5**):

- If the top of the switch is pressed down (position a), maximum thrust is made available to the axle while the machine is set to a slow speed.
- If the bottom of the switch is pressed down (position b), the machine is set to a fast speed but the thrust of the axle is reduced accordingly.
- Changing the mode of operation with the vehicle in motion is possible.

### 10.2.4 Setting and changing the direction of motion

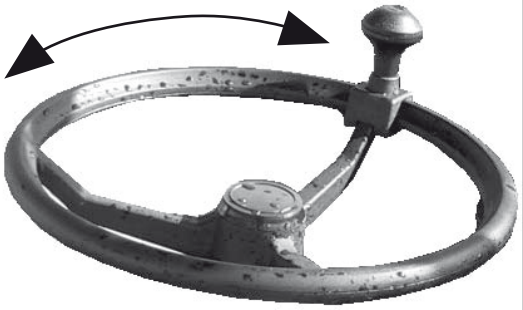


Fig.30 Changing direction

Turn the steering wheel (7) in the desired direction of motion.

- Turning the steering wheel to the right causes the compaction roller to turn right.
- Turning the steering wheel to the left causes the compaction roller to turn left.

### 10.2.5 Operation without vibration: Driving the compaction roller

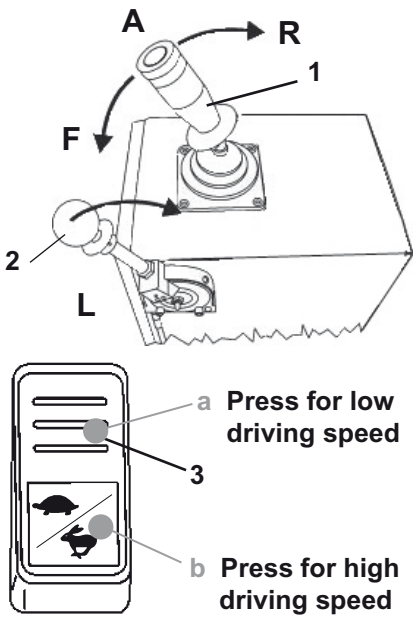



Fig.31 Operation without vibration

*NOTE!*
In order to drive the compaction roller without vibration, the Diesel engine speed needs to be set to maximum speed.

- Set the highest Diesel engine speed by means of the rev adjustment lever (2).
- In order to drive slowly, set both “rabbit/turtle“ switches (3) on the panel of switches to position a, i.e. press them down at the top (see also 10.2.2). In order to drive fast, set both "rabbit/turtle“ switches (3) to position b, i.e. press them down at the bottom. Release the parking brake.
- Make sure the vibration selector switch is set to the central position and the vibration mode is deactivated.
- Slowly move the joystick (1) from the central position (**A**) in the desired direction of motion:
  - **Forward motion** of the compaction roller: Move the joystick forward (**F**).
  - **Reverse motion** of the compaction roller: Move the joystick backward (**R**).
- The more you move the joystick (1), the faster the motion of the compaction roller.
- In order to change the direction of motion while driving, turn the steering wheel. The compaction roller will bend at the articulated joint and move in the desired direction.

### 10.2.6 Operation without vibration: Stopping the compaction roller

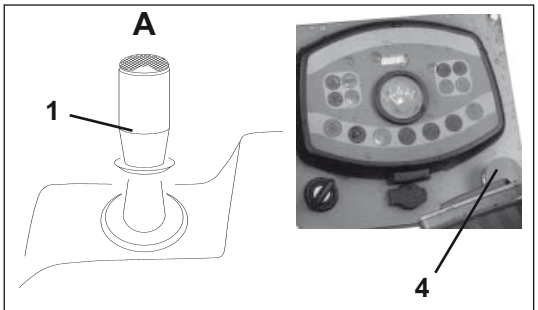



Fig.32 Stopping without vibration

- Moving the joystick (1) to the central position **A** initiates the brake application, which causes the vehicle to stop.

**CAUTION!**
If the compaction roller does not stop although the joystick is in the central position or if an emergency situation calls for an immediate standstill of the compaction roller, push the emergency stop push-button (4)!

## 10.2.7 Operation with vibration: Driving the compaction roller

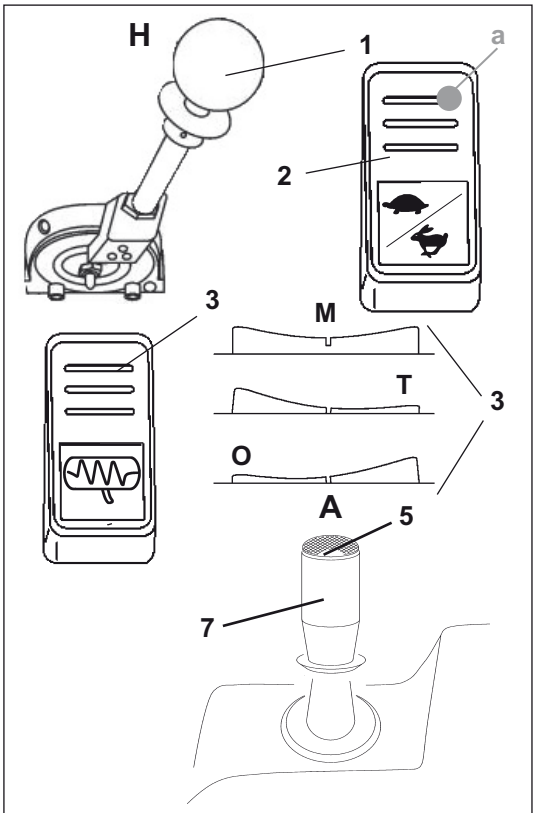



Fig.33 Operation with vibration

- Move the rev adjustment lever (1) to the **H** position.
- Make sure both “rabbit/turtle“ switches (2) on the panel of switches are set to (i.e. pressed down at) position **a**.
- Release the parking brake by means of the corresponding switch.
- Use the selector switch (3) to select the desired type of compaction:
  **M** Middle position: Vibration off
  **T** Right side pressed down: Deep compaction
  **O** Left side pressed down: Surface compaction

*NOTE!*
Selecting the type of vibration does not activate the vibration itself. In order to do so, press (5).

Slowly move the joystick (7) from the central position (**A**) in the desired direction of motion:
  - **Forward motion** of the compaction roller: Move the joystick forward (**F**).
  - **Reverse motion** of the compaction roller: Move the joystick backward (**R**).
- The more you move the joystick, the faster the motion of the compaction roller.
- In order to change the direction of motion while driving, turn the steering wheel. The compaction roller will bend at the articulated joint and move in the desired direction. The vibration does not have to be deactivated for any changes of direction.

## 10.2.8 Operation with vibration: Stopping the compaction roller

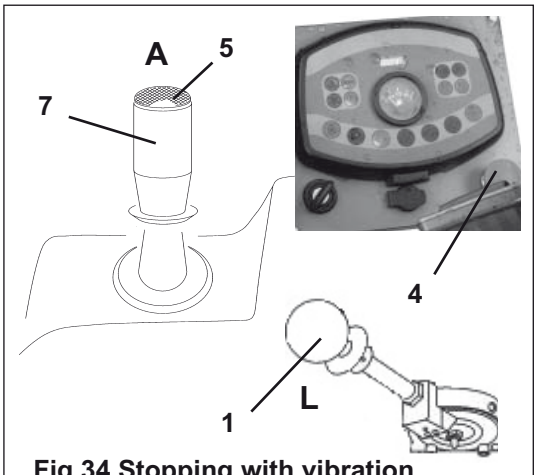
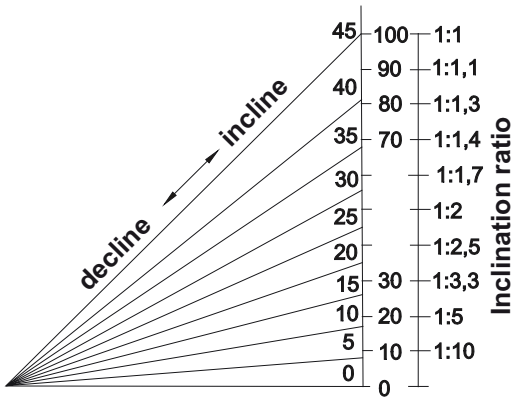



Fig.34 Stopping with vibration

- Deactivate the vibration by pushing the button (5) on the top of the joystick (7). The previously set mode of vibration remains selected.
- Moving the joystick (7) to the central position **A** initiates the brake application, which causes the vehicle to stop.
- Move the rev adjustment lever (1) to position **L**.

**CAUTION!**
If the compaction roller does not decelerate and stop although the joystick is set to the central position or if an emergency situation calls for an immediate standstill of the compaction roller, push the emergency stop push-button (4)!

### 10.2.9 Driving on slopes




**Maximum gradeability***

a) with compaction: 45%
b) w/o compaction: 48%

*** (depending on the surface)**

**Fig.35 Gradeability**

**DANGER!**
***Danger of tipping!***
Never drive or park the compaction roller across slopes, as operation involving lateral inclinations increases the danger of tipping. Never turn the vehicle around on a slope! Take the maximum climbing ability (gradeability) of the compaction roller into account.

- To drive downhill or uphill, set the highest Diesel engine speed and make sure the “rabbit/turtle“ switches are set to position b (see 10.2.3).

- **Driving uphill:**
  a) with the roller drum ahead:
  Forward motion is required; the roller drum needs to point uphill, in the direction of motion.
  b) with the rear end ahead:
  Reverse motion is required, with the rear of the compaction roller pointing uphill, in the direction of motion.
- **Driving downhill:**
  Reverse motion is required, with the rear end of the compaction roller pointing downhill, in the direction of motion.

## 10.3 Line-of-sight obstruction

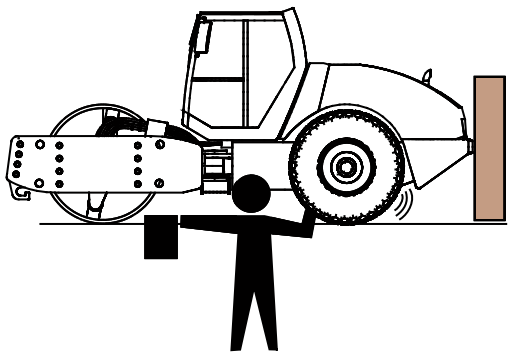


**Fig.36 Hand signals & instructions**

In order to compensate for drawbacks caused by line-of-sight obstruction, the following measures are to be taken:
- Find a skilled person to give you the required instructions and hand signals.
- Block the access to the operating area of the compaction roller.

*NOTE!*
In countries where official regulations concerning this issue exist, a special permit must be obtained.
- The control elements of the vehicle must allow for easy and safe operation.
- A suffcient field of vision must be ensured for the driver at all times, regardless of the operating and weather conditions.

## 10.4 Stopping and parking the compaction roller

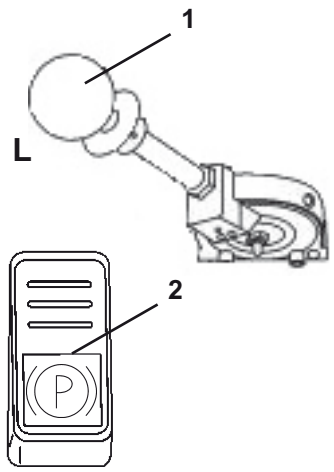



**Fig.37 Stopping and parking**

- Make sure you always park the vehicle on level, solid grounds, which need to be able to carry the weight of the compaction roller without sagging.
- Stop the compaction roller (with or without vibration, see instructions above).
- Move the rev adjustment lever (1) to the **L** position.
- Activate the parking brake (2).
- Turn the ignition key to the 0-Position and pull it out of the ignition lock.
- Secure the vehicle against rolling by means of wheel chocks.

**WARNING!**
If you intend to park the compaction roller in areas that are part of public road service, be sure to observe the applicable regulations, safety guidelines and laws!

# 11 WORKING WITH THE COMPACTION ROLLER

## 11.1 Safety instructions referring to work with the vehicle

*NOTE!*

***Obligation to inform yourself!***

- Inform yourself of all issues related to operating the compaction roller.
- Read the safety instructions before starting the compaction roller. In addition to this, be sure to observe the national and local laws and directives concerning the operation of earth-moving construction machines. In case of doubt, contact your local HYUNDAI dealer.

## 11.2 Soil compaction

### Modes of operation

- The compaction roller disposes of the following modes of operation:
  a) Simple operation (driving without vibration), see 10.2.5
  b) Surface soil compaction
  c) Deep soil compaction

### Basic information

- During soil compaction work, the vehicle should run at a speed of about 1.2 to 3.0 km/h (which corresponds to approximately 20-25 metres per minute), depending on the composition of the soil and the dumping height. The first rolling cycles should be performed statically (i.e. without vibration, see 10.2.5) and on loose material.
- Variations in the composition of different kinds of soil render it impossible to indicate generally valid figures regarding the number of compaction passes required to achieve a specific result. Therefore, trial runs are the recommended means of determining the necessary number of passes and the layer thickness.
- As for too many passes, not only are they uneconomical but can, on finely graded material, be the cause of extreme vibration of the roller chassis which subjects the vehicle to overstraining. Under normal conditions, the required degree of compaction is generally established after 4 to 8 passes.
- If the roller chassis vibrates strongly, which is probably particularly the case during the last passes, increase the speed to the upper limit of the recommended speed range.
- While performing static compaction passes, maximum speed may be set as required.
- In order to compact soils containing rock, the size of the biggest particle may never exceed two thirds of the dumping height because only insufficient compaction will be achieved under such conditions.

## 11.2.1 Surface soil compaction

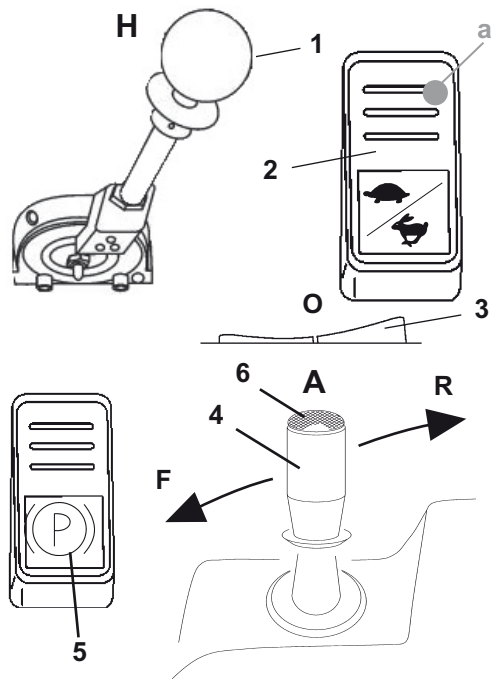



Fig.38 Surface soil compaction

- Move the rev adjustment lever (1) to position **H**.
- Make sure both “rabbit/turtle“ switches (2) on the panel of switches are set to position **a**.
- Release the parking brake (5).
- The vibration selector switch (3) needs to be pressed down on the left (position **O**) to activate surface soil compaction.
- Slowly move the joystick (4) from the central position **A** to the desired direction of motion (**F** or **R**). The farther you move the joystick, the faster the speed of the vehicle.
- In order to activate the vibration, push the button (6) on the top of the joystick.

## 11.2.2 Deep soil compaction

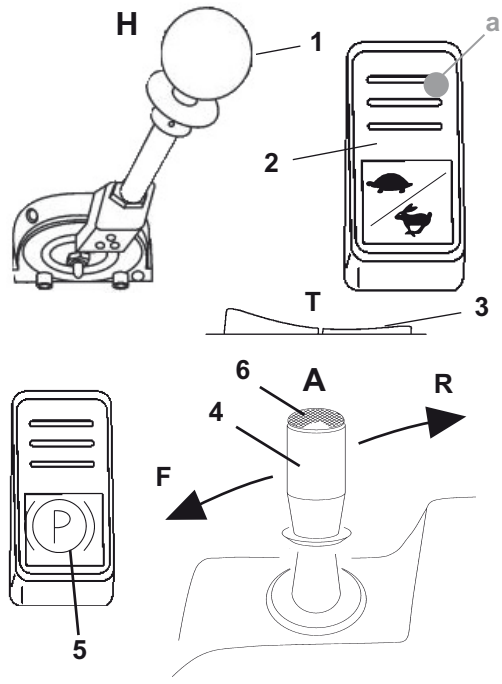



Fig.39 Deep soil compaction

- Move the rev adjustment lever (1) to position **H**.
- Make sure both “rabbit/turtle“ switches (2) on the panel of switches are set to position **a**.
- Release the parking brake (5).
- The vibration selector switch (3) needs to be pressed down on the right (position **T**) to activate deep soil compaction.
- Slowly move the joystick (4) from the central position **A** to the desired direction of motion (**F** or **R**). The farther you move the joystick, the faster the speed of the vehicle.
- In order to activate the vibration, push the button (6) on the top of the joystick.

# 12 TOWING THE COMPACTION ROLLER

## 12.1 Safety instructions referring to the towing process

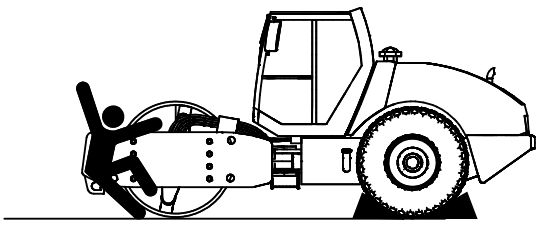
**CAUTION!**
***Precautionary measures for towing!***
The towing preparations and the towing process itself may only be carried out by experienced and skilled persons who have undergone the specific training required for these measures.
Make sure the towing vehicle disposes of the required tractive force. The total weight of the compaction roller needs to be taken into account, see chapter Technical specifications.

**WARNING!**
The compaction roller may only be towed if its emergency steering is in working order.

**WARNING!**
***Material damage!***
Before starting the towing process, make sure that the required preparations at the driving hydraulics and the parking brake have been completed.
Set the towing vehicle in motion very slowly.

## 12.2 Measures to be taken prior to towing

### 12.2.1 Secure the compaction roller against rolling



**DANGER**
***Risk of death!***
Use the wheel chocks to prevent the compaction roller from rolling, since there is no braking effect after releasing the parking brake and the HP valves!

- Put the wheel chocks under the rear wheels.

**WARNING!**
***Operation on slopes!***
If the compaction roller is parked on a slope and needs to be towed, make sure that the rear wheels and the drum are adequately secured!

## 12.2.2 Releasing the parking brake and the HP valves

**WARNING!**

***Risk of death!***

If the compaction roller is not properly secured against rolling, you must **not** carry out any of the work described below.

### Opening the HP valves

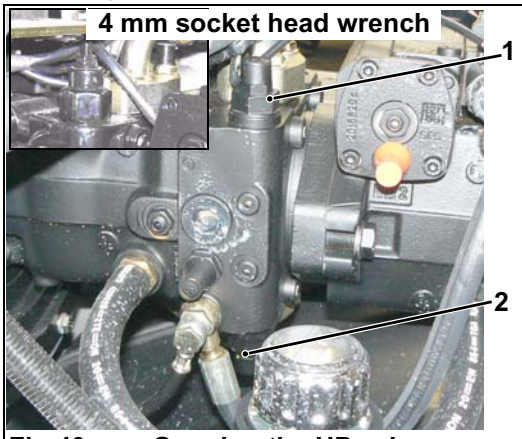



**Fig.40 Opening the HP valves**

In order to tow the compaction roller, short-circuit the hydraulic circuit between the traction pump and the hydraulic traction motors.

- Access the HP valves from the left side of the engine compartment (in the direction of motion).
- You need a socket head wrench (size WW 4) to loosen the HP valves (1) and (2).
- Unscrew the protecting caps.
- Use the socket head wrench to screw in the adjusting spindles until they are level with the valve housing.

### Deactivating (releasing) the parking brake

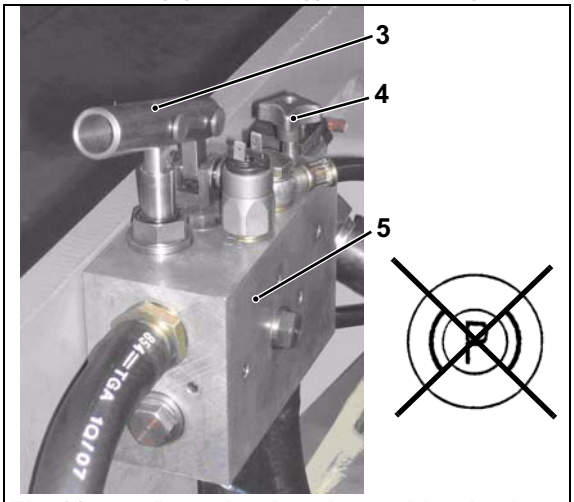



**Fig.41 Deactivating the parking brake**

In order to tow the compaction roller, you need to release the parking brake in the rear axle and in the drum via the hand pump (5).

- The hand pump (5) is installed in the engine compartment (on the left side, in the direction of motion).
- Put a pipe extension into the pump actuation (3).
- Close the relief valve (4).
- Build up pressure by manually pumping, which releases the parking brake und causes the corresponding light on the dashboard to go out.
- Remove the pipe extension.

## 12.3 Carrying out the towing process

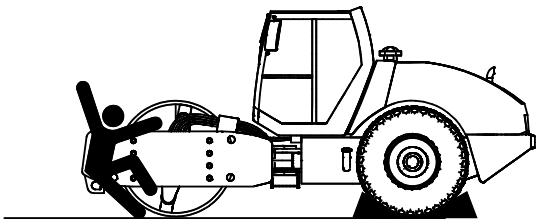
**WARNING!**
The compaction roller may only be towed if its emergency steering is in working order.

**WARNING!**
***Material damage!***

- Before starting the towing process, make sure the necessary preparations concerning the driving hydraulics and the parking brake have been completed.
- Set the towing vehicle in motion very slowly.
- The compaction roller may only be towed within a work zone.

- First of all, secure the compaction roller against rolling by establishing the connection with the towing vehicle.
- Remove the wheel chocks and the additional safety equipment used for preventing the compaction roller from rolling.
- The towing distance is to be kept as short as possible.

### 12.3.1 After towing



**DANGER**
Immediately after completing the towing process, secure the compaction roller against rolling by means of the wheel chocks and further equipment, if required.

- After the towing process, the hydraulic circuit between the traction pump and the traction motor must be closed and the parking brake needs to be put in working order again.

**Closing the HP valves**

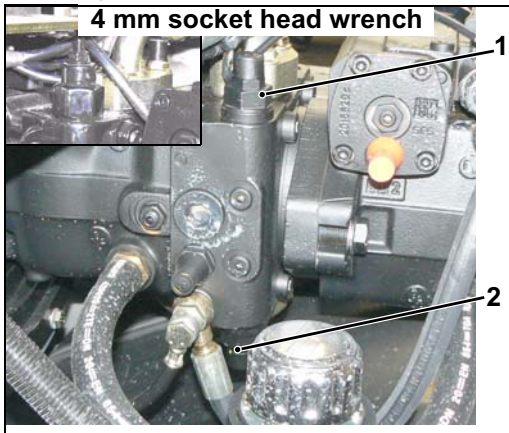



Fig.42 Closing the HP valves

- Access the HP valves from the left side of the engine compartment (direction of motion).
- In order to activate the HP valves (1 and 2), you need a socket head wrench (WW 4).
- Use the wrench to loosen the adjusting spindles until they have reached their initial position.
- Attach the protecting caps.

## Activating the parking brake

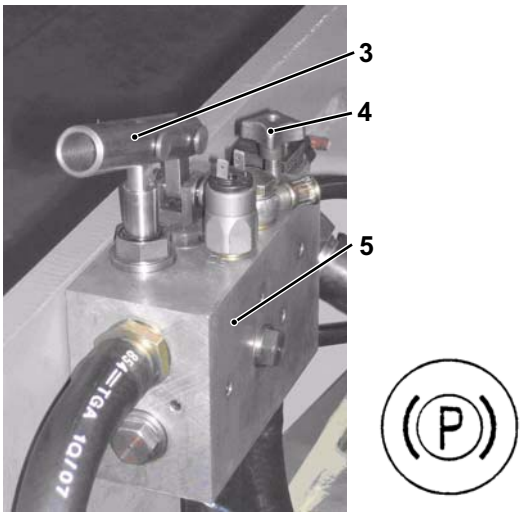



**Fig.43 Activating the parking brake**

After towing the compaction roller, you need to activate the parking brake in the rear axle again.

The hand pump (5) is situated in the engine compartment, on the left side (direction of motion).

- Slowly open the relief valve (4).
- The oil pressure escapes in the tank and the parking brake is activated, which is confirmed by the display on the dashboard, where the corresponding symbol needs to light up.

# 13 TIRES AT THE REAR AXLE

## 13.1 Water filling of the tires at the rear axle

In order to improve the propulsional properties of the tires at the rear axle, on delivery, they are filled with water and an additive composed of magnesium chloride which serves as antifreeze.

*NOTE*

- Magnesium chloride is commercially available granulated salt with a 47% share of dry substance which can be purchased at (chemical) wholesale.
- In countries where the exterior temperatures never fall below zero degrees Celsius, the tires can be filled with industrial water, without any additives.

### 13.1.1 Filling procedure: Water and antifreeze additive

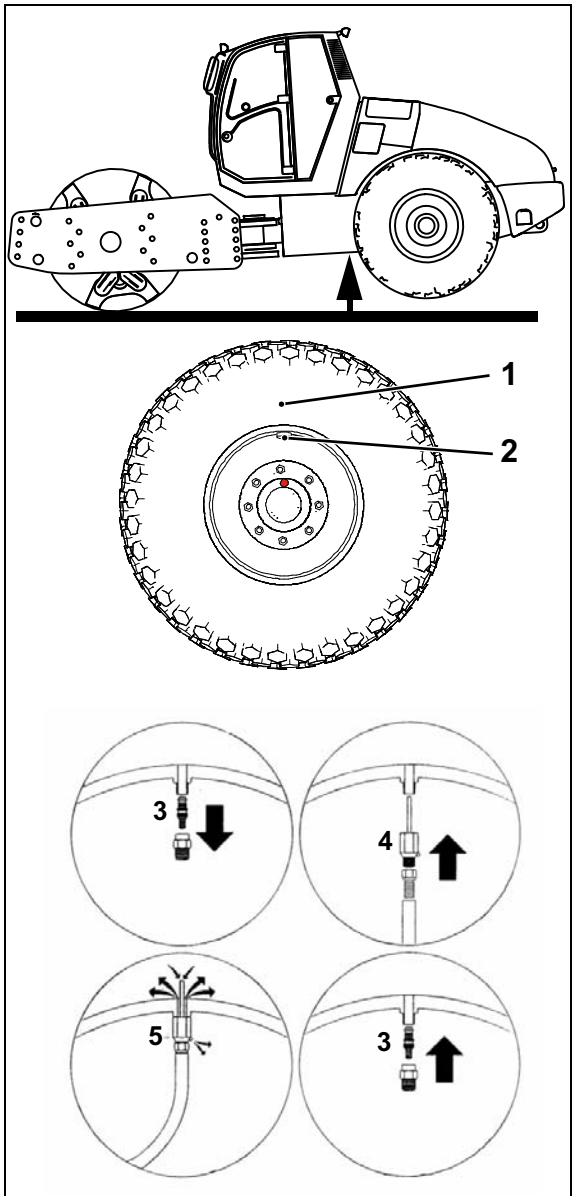



Fig.44 Filling the tires

- Lift the compaction roller at the rear axle by means of a sufficiently dimensioned hydraulic jack.
- Turn the tire (1) until the charge valve (2) is in the **top** position.
- Slowly unscrew the valve core (3).
- Screw a hose line (4) onto the charge valve (2).
- The saline solution (see “Preparation of the saline solution below) can be poured into the tire (1) by means of a container placed above the tire or via a special pump.
- The filling procedure (5) must be interrupted repeatedly because the tire needs to be bled.
- In case the tire is not sufficiently filled after pouring in the saline solution, add industrial water to establish the required fill level.

*NOTE*

- Since air must be exhausted from the tire (5), repeatedly interrupt the filling process. As soon as the level of water/saline solution has reached 75% of the volume of the tire (i.e. it is on a level with the charge valve), stop the filling process.
- The remaining air in the upper part of the tire is essential to ensuring its springiness.
- As soon as the required fill level of 75% has been reached, the saline solution must not leak from the tire with the charge valve (2) opened.

- After completing the process, attach the valve core (3) and fill the tire (1) with compressed air.
  Prescribed pressure: **1.6 bar (for standard tires).**

*NOTE*

**Preparation of the saline solution:**

- Mix magnesium chloride and water at a weight ratio of 1:1 in a clean container. Stir until the salt has completely dissolved.
- Always add the salt to the water, never vice versa.

### 13.1.2 Filling procedure: Pure water

- In order to fill the tire with water, use industrial water.
- The filling procedure is identical to the one described in section 17.1.1.

### 13.1.3 Emptying the tires

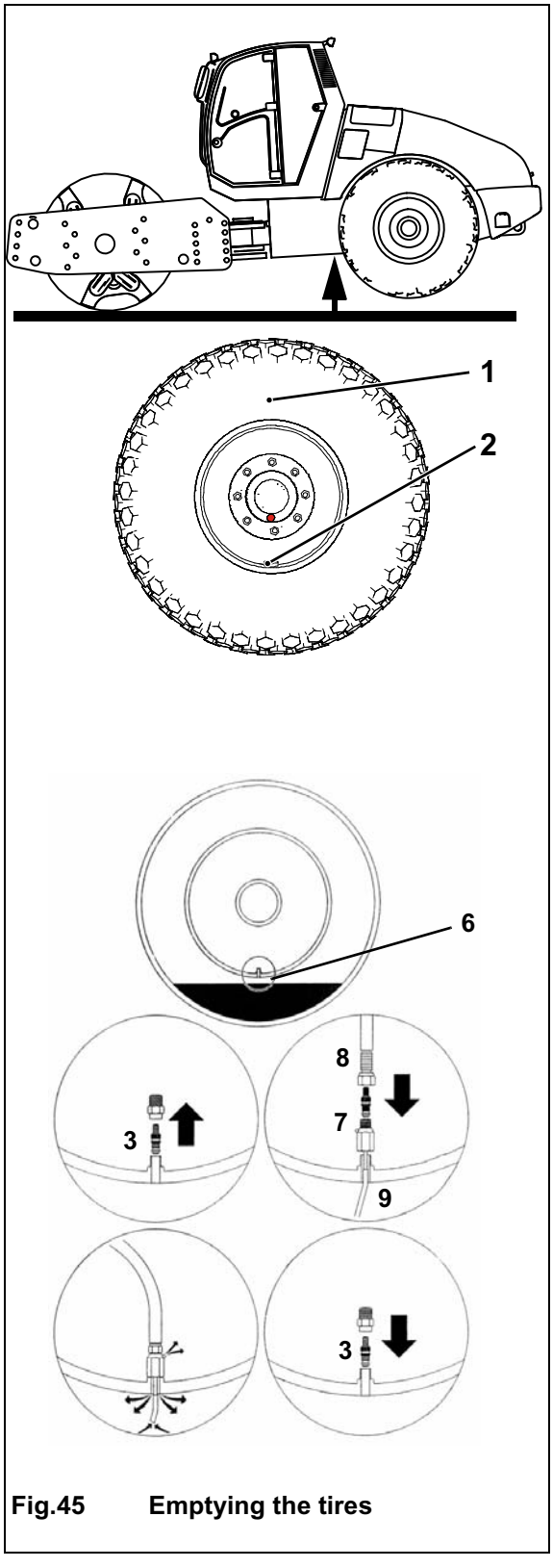



**Fig.45 Emptying the tires**

Lift the compaction roller at the rear axle by means of a sufficiently dimensioned hydraulic jack.

- Turn the tire (1) until the charge valve (2) is in the **lowest** position.
- Slowly unscrew the valve core (3).
- Due to the overpressure in the tire, water will pour out of the tire down to the level of the charge valve (6).
- Extend the vent pipe of the composite valve (7) by means of a thin rubber hose (9).
- In order to remove the remaining quantity of water from inside the tire, screw the composite valve (7) onto the charging valve (2) and charge with compressed air (8).
- The compressed air drives the remaining water out of the tire via the rubber hose (9) until it finally leaks from an opening at the side of the composite valve.
- As soon as the tire is empty, attach the valve core (3) and fill the tire (1) with compressed air.
  Prescribed pressure: **1.6 bar (for standard tires).**

### 13.1.4 Filling procedure: Using the “Hanauer Maus“

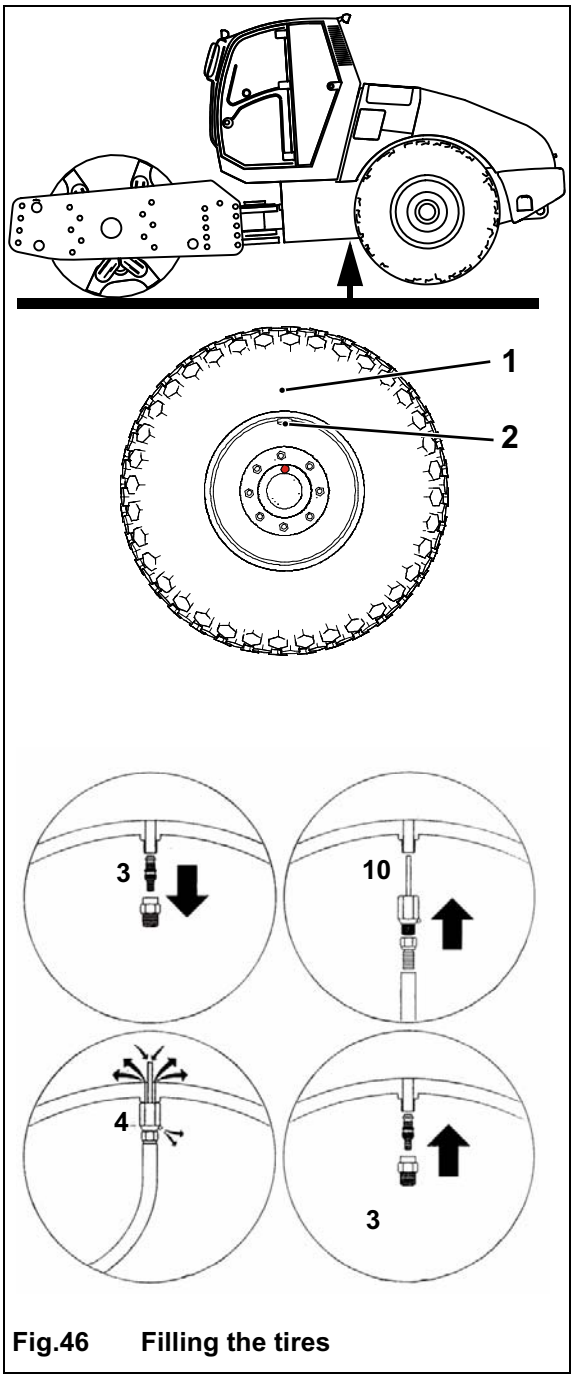



**Fig.46 Filling the tires**

In order to fill or empty a tire by means of the so-called “Hanauer Maus“ (“Mouse of Hanau“), carry out the following instructions:

- Use a sufficiently dimensioned hydraulic jack to lift the compaction roller at the rear axle.
- Turn the tire (1) until the charge valve (2) is in the **top** position.
- Slowly screw off the valve core (3).
- Screw the fill valve (10) into the charge valve (2).
- Screw a hose line (4) onto the fill valve (10).
- The air escapes from the tube and the opening at the side of the fill valve (10).

*NOTE*

- The filling procedure is complete as soon as a constant jet of water exits the opening.

- Twist off the fill valve (10) and tighten the valve core (3).
- At the end of the filling procedure, unscrew the fill valve (10) and screw in the valve core (3).
- Fill the tire (1) with compressed air until the required pressure of **1.6 bar** (for standard tires) has been established.

## 13.2 Checking the tire inflation pressure

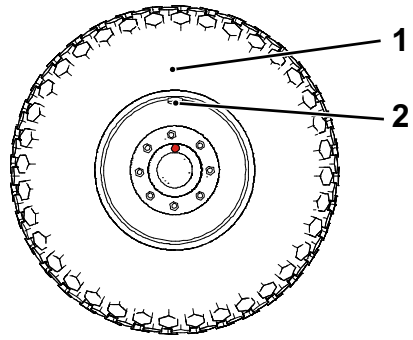



**Fig.47 Checking the tire pressure**

**DANGER!**

***Risk of injuries!***

- Antifreeze may leak from the tire while its tire pressure is being checked.
- This can lead to chemical burns. Wear protective clothing to protect your skin!

- Check the tire pressure once a week:

| Type of tires | Pressure | Description |
|---|---|---|
| **Standard tires** | 1.6 bar | water filling |
| **Special tires** | Please contact the tire manufacturer for information on the required pressure! | water filling |

**Checking the tire pressure**

- In order to check the tire inflation pressure, the charge valve (2) needs to be in the top (“12 o‘clock“) position.
- Drive the compaction roller forward and backward to establish this position of the tires (1).
- Unscrew the safety cap of the charge valve.
- Press the charge valve until the saline solution stops leaking from the charge valve (2).

**WARNING!**

***Material damage!***

- Always empty the tire and make sure no water and saline solution can leak from the charge valve before checking the tire inflation pressure.
- Moisture destroys the tire gauge.

- Attach the tire gauge and check the tire inflation pressure.
- If necessary, adjust the tire pressure.

## 13.3 Mounting the tires

**WARNING!**

***Material damage!***

- Have tires replaced or mounted by an authorized HYUNDAI dealer or a trained expert only.
- In order to prevent the tire from sliding on the wheel rim, the tire must not be mounted with the aid of lubricants.

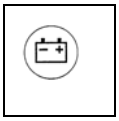
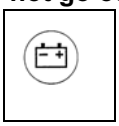
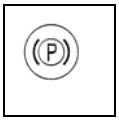
- Tightening torque of the wheel nuts (2): **500 Nm.**

# 14 FAILURES AND TROUBLE SHOOTING

## 14.1 Detecting faults and failures

*NOTE*
In case faults or failures occur which you cannot detect or repair yourself, contact the service staff immediately.

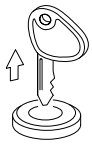
### 14.1.1 Faults and failures during operation

| Fault/Failure | Possible causes | Trouble shooting |
|---|---|---|
| **Diesel engine does not start.**  | Environmental temperature too low. | Preheat sufficiently, repeat the starting procedure. |
| | The fuel tank is empty. | Add Diesel. Have the fuel system ventilated by the service staff, if required. See sections on maintenance. |
| | The fuel filter is plugged. | Clean or replace the fuel filter. |
| | Cold weather causes paraffine to leak. | Add fuel (winter Diesel) with the necessary specifications for use in cold weather. |
| | Leaking fuel pipes or connections. | **Immediate action is required to prevent fuel from penetrating the ground!** Contact the service staff. |
| | After activating the ignition, the control lamp for the battery does not light up. | Check the charge condition of the battery; if necessary, charge the battery. If required, carry out a jump-start. *NOTE* The compaction roller disposes of an electrical system with an operating voltage of 12 V. Be sure to take this into account when jump-starting the vehicle. |
| | The starter does not turn. | Contact the service staff. |
| **After starting the engine, the battery charge lamp does not go out.**  | Defective contact in the electrical system. | Cable connections or plug-in connections are loose or defective. Contact the service staff. |
| | The engine speed of the generator is too low. | Insufficient V-belt tension; tension the V-belts, if required. See Deutz operating and maintenance instructions. |
| | The generator is defective or a V-belt torn. | Replace the V-belt. See Deutz operating and maintenance instructions. |
| | The generator is activated but the battery is not charged. | Contact the HYUNDAI service team. |
| **After starting the Diesel engine, the compaction roller does not move.**  | The parking brake is applied. | Release the parking brake by means of the switch. |
| | The desired direction of motion has been set (joystick) but the compaction roller does not move. | After releasing the parking brake, wait for approx. 1 second before actuating the joystick. If the problem persists, contact our service team. |
| | The compaction roller does not move after a towing process. | HP valves not screwed in, see chapter Towing the compaction roller. |
| | Driving hydraulics not activated. | Contact the HYUNDAI service team. |

| Fault/Failure | Possible causes | Trouble shooting |
|---|---|---|
| **The warning lamp for the air filter lights up.**  | The filter cartridge is dirty. | Clean the air filter and the filter cartridge.<br>For operation with a high formation of dust, insert a new filter cartridge and be sure to store a sufficient amount of filter cartridges. |
| **The warning lamp for the engine oil temperature lights up.**  | The engine oil temperature is too high. | **Immediately stop the compaction roller!**<br>Let the Diesel engine idle in order to cause the engine oil to cool down.<br>If the warning lamp goes out, stop the Diesel engine and check the fill level of the engine oil.<br>**For all work relating to the Diesel engine, exercise extra caution - hot surfaces!**<br>**See maintenance instructions.**<br>If it takes a long time for the engine oil to cool down, clean the engine oil cooler. Contact the HYUNDAI service staff. |
| **The warning lamp for the cooling system lights up.**  | The fill level in the cooling system is too low. | Add coolant, see chapter on maintenance. |
| **The warning lamp for engine oil pressure lights up.**  | Insufficient engine oil pressure or pressure does not build up after starting the Diesel engine. | **Immediately stop the Diesel engine!**<br>Check the fill level of the engine oil. In case it is insufficient, add engine oil according to the specifications in chapter 4.<br>If the engine oil level turns out to be correct, **stop the compaction roller and do not start it again.**<br>Immediately contact the HYUNDAI service team. |

# 15 MAINTENANCE INSTRUCTIONS

## 15.1 Safety instructions referring to maintenance work

**WARNING!**
Be sure to take all safety precautions and to observe all instructions regarding the operation of the compaction roller when carrying out maintenance work!

**WARNING!**
Read the safety instructions and warnings in this operating manual before starting any maintenance work and follow them!

Use signs and warning notices to point out that maintenance work is being carried out.

**WARNING!**
Prevent the compaction roller from unintentionally starting by removing the ignition key from the ignition lock.

### 15.1.1 Safety precautions to be taken prior to maintenance work

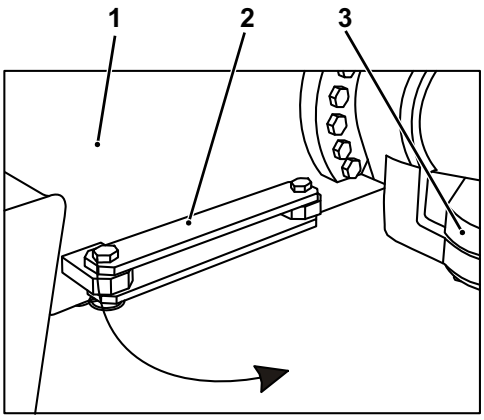



**Fig.48 Installing the anti-buckling device**

- Secure the compaction roller before starting work.
- Stop the Diesel engine and secure it against unintentional activation by pulling out the ignition key.
- Activate the parking brake.
- Secure the wheels at the rear axle by means of wheel chocks.
- In case the maintenance work needs to be carried out in the work zone, be sure to create a safe working environment.
- Ensure the compaction roller´s stability.
- Protect the work area against moisture and dirt.
- Check whether the hydraulic system is depressurized.
- For work at the roller drum, the roller frame or the steering system, always install the anti-buckling device (2) between the roller frame (3) and the rear end (1).
- Use only tools and accessories which are described in this operating and maintenance manual.

### 15.1.2 After completing the maintenance work

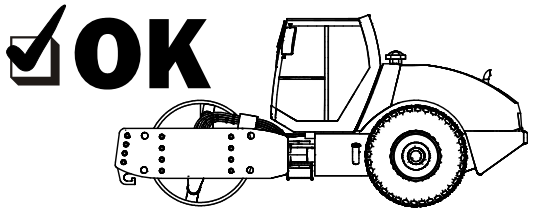



**Fig.49 Checking the compaction roller**

- Ascertain that the compaction roller is in a safe operating condition.
- Check the hydraulic system of the compaction roller for leaks after starting it.
- Test the roller functions.
- Do not resume your work with the compaction roller before thoroughly checking the vehicle.

## 15.2 Overview: Maintenance

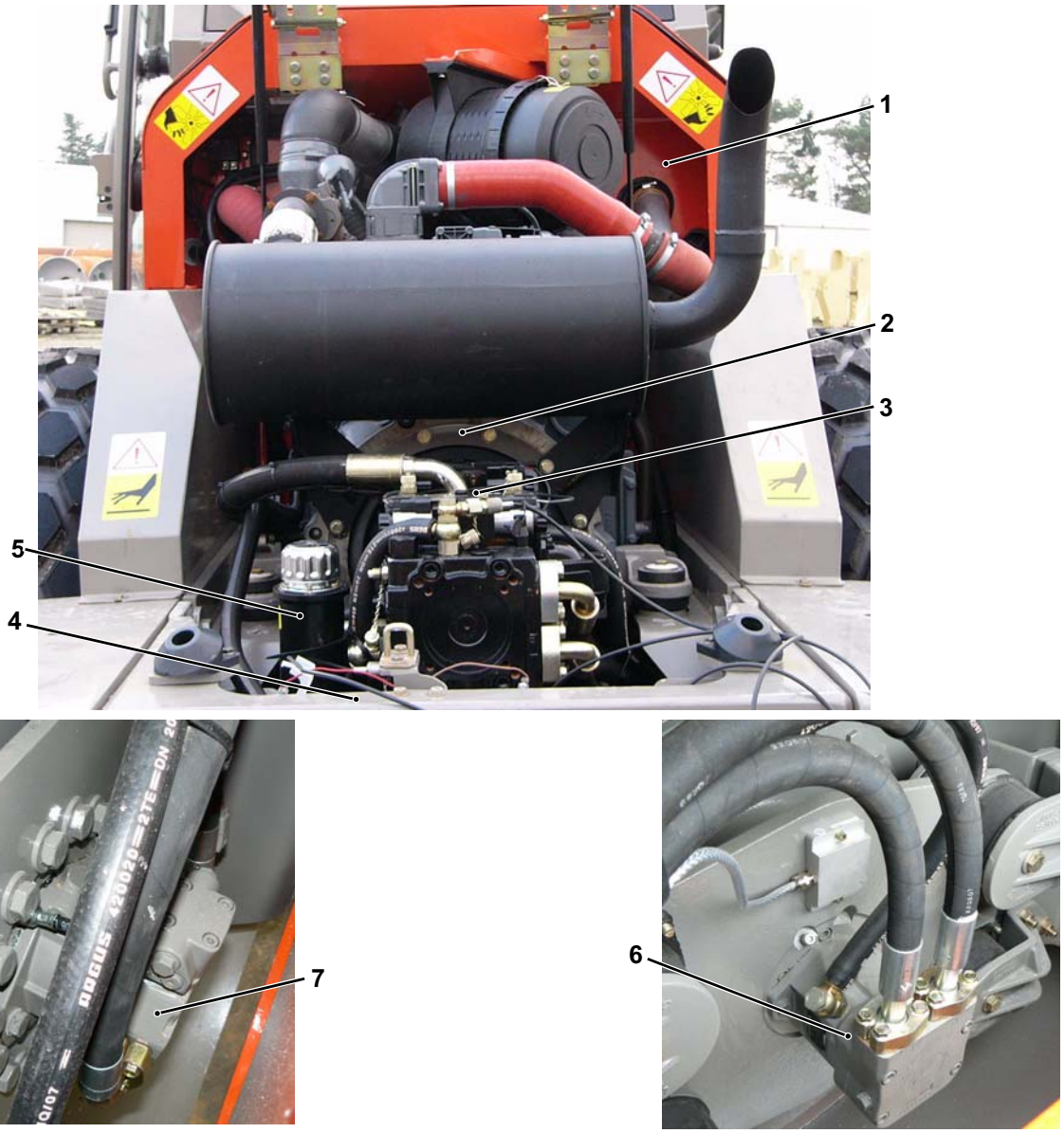



**Fig.50 Engine compartment, drum and vibration drive**

### Captions Engine compartment, drum and vibration drive

1 Engine compartment
2 Diesel engine
3 Hydraulic pump assembly
4 Battery
5 Hydraulic tank
6 Vibration drive
7 Drum drive

## 15.3 Maintenance instructions for the driver

### 15.3.1 Required maintenance measures

*NOTE*

Before taking any maintenance measures at the compaction roller, be sure to consult the chapters on safety instructions and safety precautions for maintenance work.

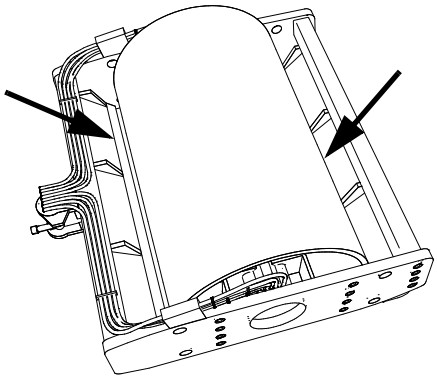
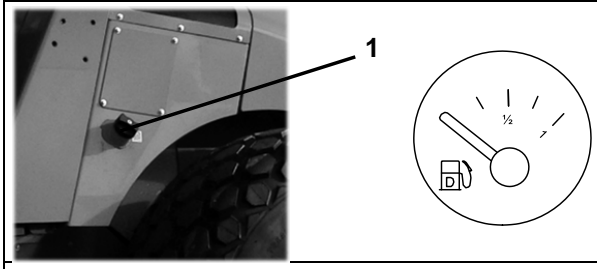
**WARNING!**

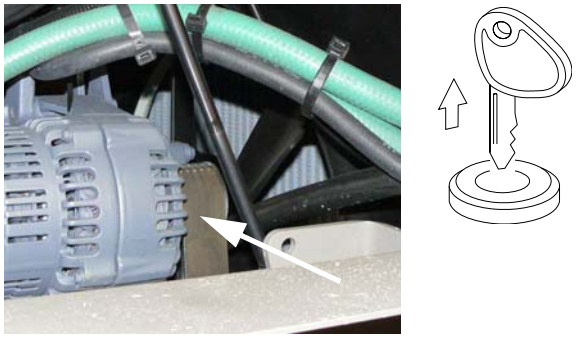
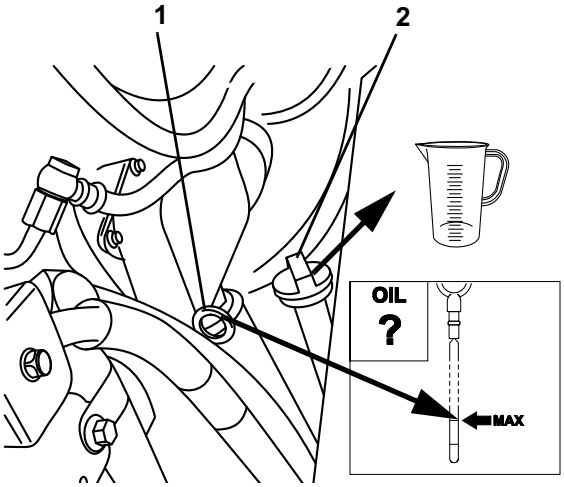
If you do not have the skills and knowledge required to perform the maintenance work, have it carried out by qualified service staff.
**Never neglect the required maintenance work!**

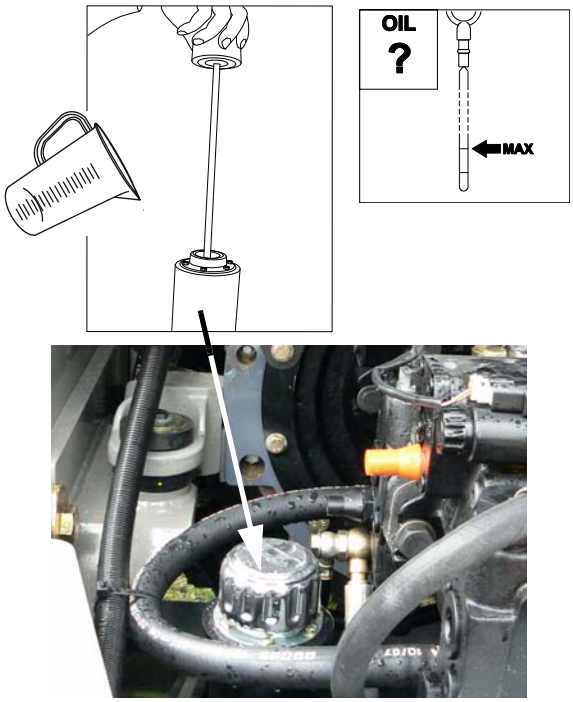
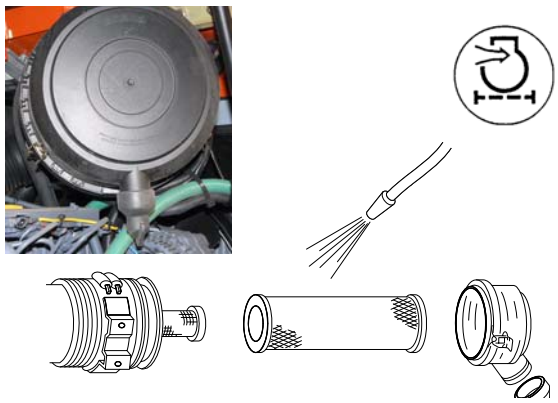
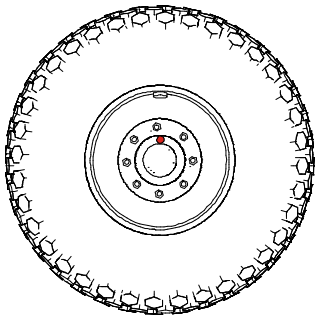
### 15.3.2 Table of lubricants

| Greasing point | Lubricant | Viscosity | Equivalent standard |
|---|---|---|---|
| **Diesel engine** | API classification | SAE 10 W | |
| Arctic climate | CG 4/CH 4 | SAE 20 W - 20 | |
| Temperate climate | | SAE 30 | |
| Tropical climate | | SAE 40 | |
| All climes | | SAE 15 W - 40 | New machine |
| **Axles, Gear box, Floating bearing** | HLS | | Approved:<br>Fuchs Renogear HLS 90,<br>Shell rear axle oil LS-BMW,<br>ELF Tranself BM-LS 90 |
| **Vibration drive** | Engine oil | SAE 15 W - 40 | |
| **Hydraulic oil** | ATRAS Spezial 46 | ISO VG 32<br>ISO VG 46<br>ISO VG 68 | New machine<br>Pay particular attention to the specifications referring to operation with temperatures below 0° C. Be sure to preheat the hydraulic oil sufficiently. |

### 15.3.3 Checks and work to be carried out on a daily basis, before starting work with the compaction roller (Maintenance certificate A)

| Illustration | Daily work |
|---|---|
|  | • Conduct a visual inspection to check the exterior of the compaction roller. Clean it, if necessary.<br>  • Check the hydraulic components and the hoses for leakage.<br>  • Check the distance of the scrapers to the drum.<br>  • Check the scrapers for damage.<br>  • Remove coarse dirt from the roller drum and the scrapers.<br>  • Watch out for damage at the vehicle. |
|  | • Check the fuel level.<br>• Before starting work, check the fuel level and add Diesel, if required. See chapter Before starting the compaction roller. |
|  <br>  | • Check the preliminary fuel filter.<br>• The preliminary fuel filter is situated at the stiffener wall to the cabin (on the right, in the direction of motion).<br>• Open the cover (1) of the ventilation grills and drain the preliminary fuel filter (3). |

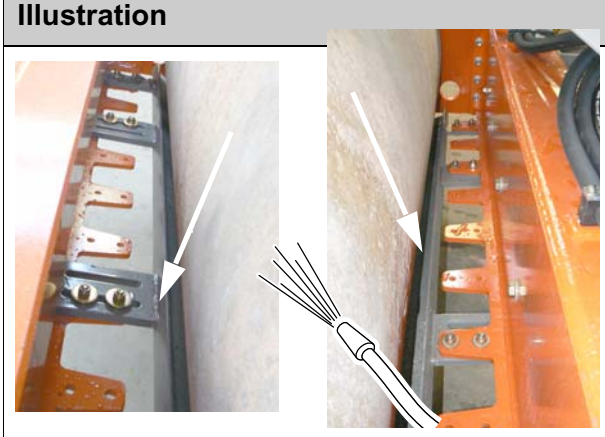
| Illustration | Daily work |
|---|---|
|  | • Check the coolant level.<br>**DANGER!**<br>***Risk of burns caused by hot coolant!***<br>Make sure the engine has cooled down before you open the lid.<br>• Open the cover of the ventilation grill and twist off the lid of the combination cooler.<br>• Check the coolant level.<br>• Add coolant, if required.<br>• Ascertain the correct mixing ratio of the coolant. |
|   | • Check the V-belt tension and check for damage.<br>**WARNING!**<br>• The V-belt tension may only be checked with the Diesel engine stopped.<br>• Turn off the Diesel engine and remove the ignition key.<br>*NOTE*<br>For information on tensioning and replacing the V-belt, please refer to the Deutz 2012 operating and maintenance manual. |
|  | • Check the engine oil level of the Diesel engine at the oil dipstick (1).<br>• If necessary, use the filler neck to add engine oil.<br>• Unscrew the lid (2) of the filler neck and carefully fill in engine oil.<br>*NOTE*<br>• Pay attention to the information on the engine oil to be used in the engine compartment.<br>• If no information is displayed in the engine compartment, consult the table of lubricants for the required specifications.<br>**CAUTION!**<br>Never mix different types of oil!<br>• After adding oil (2) screw the lid back on. |

| Illustration | Daily work |
|---|---|
|  | *NOTE*<br>In order to check the hydraulic oil level, the compaction roller needs to be parked on level ground.<br>• Unscrew the filler neck with the oil dipstick (1) and check the oil level.<br>• Add hydraulic oil, if necessary.<br>**CAUTION!**<br>***Be sure to exercise extreme cleanliness when filling in hydraulic oil!***<br>Inform yourself of the type of hydraulic oil in the hydraulic system. Please refer to the table of lubricants for the required specifications.<br>**CAUTION!**<br>***Damage to the hydraulic system!***<br>Never mix different types of hydraulic oil!<br>• Fill in hydraulic oil by means of the filler neck. |
|  | *NOTE*<br>If the respective lamp on the dashboard indicates an accumulation of dirt at the air filter for the combustion air of the Diesel engine, clean or replace the air filter. After a maximum of five cleanings by means of compressed air, replace the filter cartridge. Wash the interior of the air filter housing and clean it; if necessary, vacuum it.<br>**CAUTION!**<br>***Damage to the Diesel engine!***<br>• Never attempt to clean the air filter housing by blowing air into it! |
|  | • Check the tire inflation pressure. |

| Type of tires | Pressure | Description |
|---|---|---|
| **Standard tires** | 1.6 bar | water filling |
| **Special tires** | Please contact the tire manufacturer for information on the required tire pressure | water filling |

• Check the tire inflation pressure and adjust it, see chapter Tires at the rear axle.

### 15.3.4 Daily checks and work to be carried out after compaction roller operation

| Illustration | Daily work |
|---|---|
|  | • After parking the compaction roller, clean the exterior of the vehicle. If necessary, use a high-pressure washer.<br>**CAUTION!**<br>Make sure the high-pressure washer is not directed at one of the following components:<br>• the seals,<br>• ventilation grills and slots.<br>• Be sure to clean the steps to prevent dirt from accumulating there.<br>• Clean the scrapers of the roller drum before the dirt can harden. |

## 15.4 Maintenance instructions for the service staff

### 15.4.1 Required maintenance work referring to the Diesel engine, the hydraulic system and the electrical system

*NOTE*

Consult the chapter Maintenance instructions for the service staff for a description of the required work.

### 15.4.2 Work to be carried out at intervals of 500 operating hours (Maintenance certificate C)

*NOTE*

These maintenance measures need to be taken in a workshop. They may be carried out by the trained service staff of an authorized HYUNDAI dealer only.

# 16 MAINTENANCE INSTRUCTIONS FOR THE SERVICE STAFF

## 16.1 Required maintenance measures

*NOTE*

Before taking any maintenance measures at the compaction roller, be sure to consult the chapters on safety instructions and safety precautions for maintenance work.

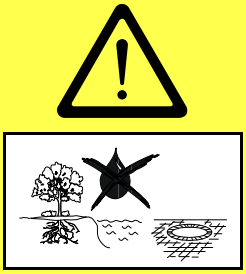
**WARNING!**

If you do not have the skills and knowledge required to perform the maintenance work, have it carried out by qualified service staff.
**Never neglect the required maintenance work!**

**DANGER!**

***Risk of burns!***

If you need to perform any work related to the Diesel engine or the engine compartment, make sure all components have cooled down before you start.



**CAUTION!**

***Environmental protection!***

- Make sure no hydraulic oil or fuel penetrates the ground, pollutes water or leaks into the sewer system. Collect the oil in suitable waste containers.
- When working in nature protection areas, use environmentally friendly hydraulic oil.

**DANGER!**

***Risk of intoxication when working in closed areas!***

- Ensure sufficient ventilation.
- Make sure all emissions are conducted outside the work area.
- Observe all regulations concerning noise protection.

### 16.1.1 Lubricants for maintenance work

### 16.1.2 Table of lubricants

*NOTE*
The table of lubricants can be found in the chapter Maintenance instructions for the driver.

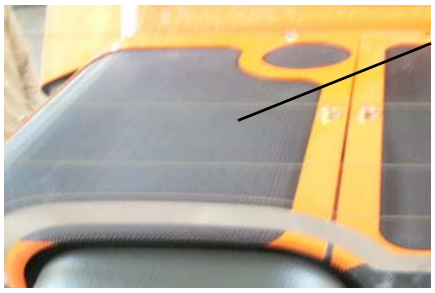
### 16.1.3 Maintenance work referring to the Diesel engine

*NOTE*
Before carrying out any maintenance work related to the Diesel engine, read and observe the Deutz operating and maintenance instructions.

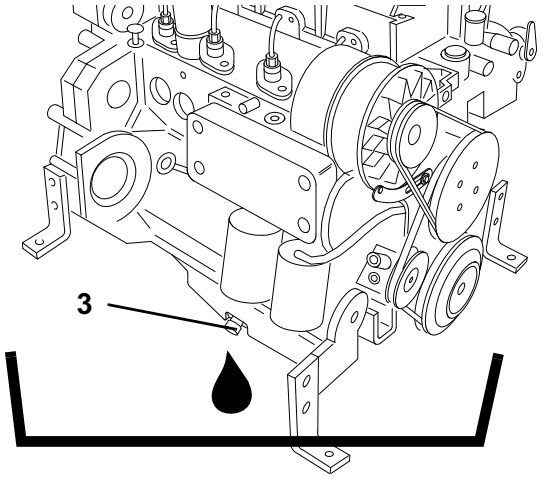
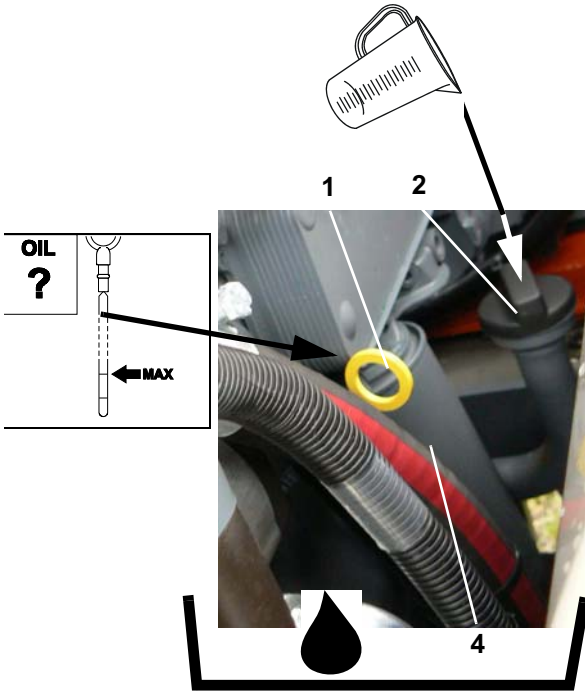
**Maintenance intervals Diesel engine**

- After the initial operation, the first inspection of the vehicle needs to be conducted after 50 operating hours.
- All subsequent maintenance work has to be carried out according to the table of maintenance intervals.

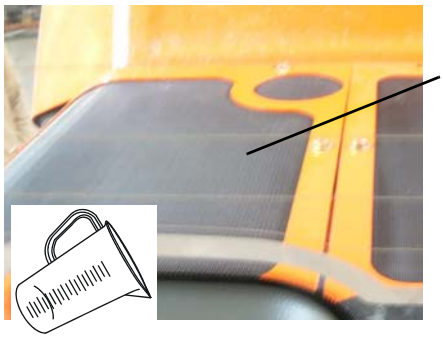
**Fuel system**

| Illustration | Maintenance work and intervals |
|---|---|
|  <br>  | **Weekly or at intervals of 100 operating hours**<br>• Before the fuel enters the Diesel engine, the fuel is cleaned and water is filtered from it.<br>• Checking the fuel-water separator:<br>  • The water-fuel separator (3) is to be found on the right, in the direction of motion).<br>  • Open the cover (1) with the ventilation grills (right, in the direction of motion).<br>  • Drain the fuel-water separator (3) by means of the drain plug below the separator.<br><br>**50 operating hours after the initial operation; subsequently, at intervals of 500 operating hours**<br>• Checking the fuel filter:<br>  • At intervals of 500 operating hours or of 12 months, replace the cartridges of the fuel filter (2).<br>  • Open the cover (1) with the ventilation grills (right, in the direction of motion).<br>  • Place a receptacle under the fuel filter, in order to collect leaking fuel.<br>  • Unscrew both filter cartridges and dispose of them in an environmentally friendly way.<br>  • Waste disposal key in the EU: 150299 (EU).<br>  • Use clean oil to lubricate the surface of the filter sealing.<br>  • Attach the filter cartridges and screw them on manually.<br>  • Let the Diesel engine turn via the starter.<br>  • Open the fuel vent plug and ventilate the fuel system, see Deutz operating manual. |

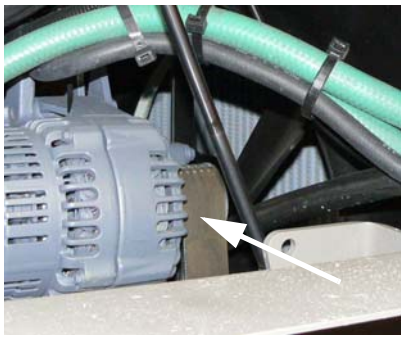
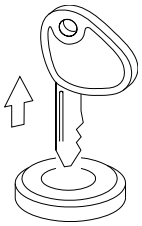
## Engine oil system

| Illustration | Maintenance work and intervals |
|---|---|
|  | **50 operating hours after the initial operation; subsequently, at intervals of 500 operating hours.**<br>Oil change Diesel engine:<br>*NOTE*<br>Take the compaction roller to a workshop in order to carry out the oil change.<br>**WARNING!**<br>***Environmental protection!***<br>• The engine oil must not penetrate the ground, pollute water or leak into the sewer system. Be sure to collect it in sufficiently dimensioned receptacles and dispose of it in an environmentally friendly way (EU waste disposal key 130202).<br>• Start the Diesel engine and wait until it has reached operating temperature.<br>• Stop the Diesel engine and pull out the ignition key.<br>• Place a sufficiently dimensioned receptacle under the exterior drain plug of the Diesel engine.<br>• Unscrew the oil drain plug (3), pull out the oil dipstick (1) and drain the oil.<br>  • Dispose of the waste oil in an environmentally friendly way, according to the applicable regulations.<br>  • EU waste disposal key: 130202 (EU).<br>• Screw in the oil drain plug (3) with a new o-ring.<br><br>Replacing the oil filter:<br>• Place a receptacle under the oil filter in order to collect leaking oil.<br>• Unscrew the filter cartridge and dispose of it in an environmentally friendly way, according to the applicable regulations.<br>• EU waste disposal key: 150299 (EU).<br>• Use clean oil to lubricate the surface of the filter sealing.<br>• Attach the filter cartridge and screw it on manually.<br><br>Adding oil:<br>*NOTE*<br>• Refer to the table of lubricants for specifications of the oil to be used.<br>• Add a sufficient amount of engine oil (approx. 10 l) by means of the filler neck (2).<br>• After filling in the engine oil, screw off the lid and let the Diesel engine turn via the starter.<br>• Check the oil level at the oil dipstick and add oil, if necessary.<br>• Start the Diesel engine and let it idle to reach operating temperature. |
|  | |

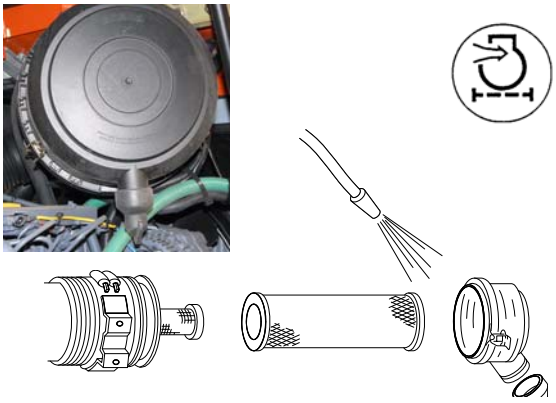
## Cooling system

| Illustration | Maintenance work and intervals |
|---|---|
|  <br>  | **To be carried out if the warning lamp lights up or after repair work**<br>• Check the coolant level.<br>**WARNING!**<br>***Risk of burns caused by hot coolant!***<br>• Before you open the lid of the cooler, make sure that the Diesel engine and the cooling system have cooled down.<br>• Open the cover (1) with the ventilation grills (right, in the direction of motion).<br>• Carefully screw off the lid (2) of the combination cooler.<br>• Check the coolant level.<br>• If coolant needs to be added or after repair work, the following mixing ratio is required:<br>• Capacity of the cooling system: approx. 15 liters. 40% coolant for 1 liter of water<br>• Mixing ratio: 0.6 liter of water and 0.4 liter of coolant. |

## Checking the V-belts

| Illustration | Maintenance work and intervals |
|---|---|
|  <br>  | • Check the V-belt tension and watch out for damage.<br>**WARNING!**<br>• Never check the V-belt tension with the Diesel engine running!<br>• Turn off the Diesel engine and pull out the ignition key.<br>*NOTE*<br>Refer to the Deutz operating manual for instructions on tensioning and replacing the V-belt. |

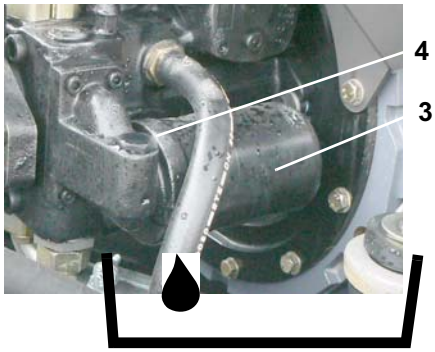
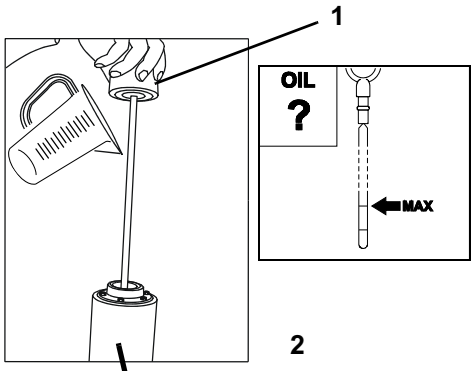
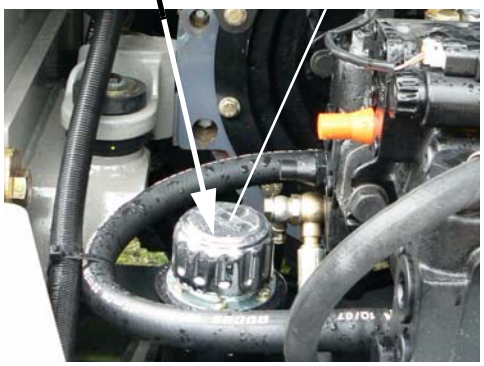
## Replacing the combustion air filter

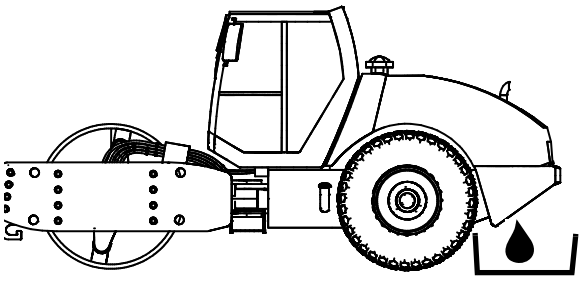
| Illustration | Maintenance work and intervals |
|---|---|
|  | *NOTE*<br>• If the respective lamp on the dashboard indicates an accumulation of dirt at the air filter for the combustion air of the Diesel engine, clean or replace the air filter. After a maximum of five cleanings by means of compressed air, replace the filter cartridge. Wash the interior of the air filter housing and clean it; if necessary, vacuum it.<br><br>**CAUTION!**<br>***Damage to the Diesel engine!***<br>Never attempt to clean the air filter housing by blowing air into it! |

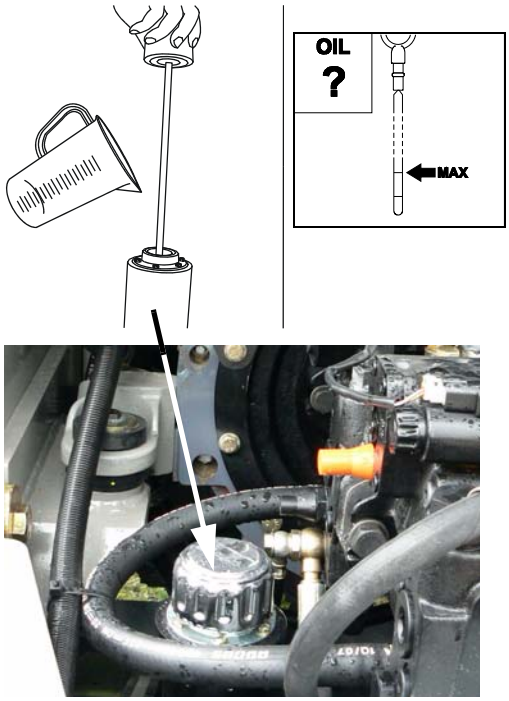
## 16.1.4 Maintenance work referring to the hydraulic system

*NOTE*
Before carrying out any maintenance work related to the hydraulic system, refer to the table of lubricants for information on the required type of hydraulic oil.

**Replacing the hydraulic oil and the oil filter cartridge**

| Illustration | Maintenance work and intervals |
|---|---|
|  <br>  <br>  | **Replace the oil filter cartridge for the hydraulic oil 50 hours after the initial operation and subsequently, at intervals of 500 operating hours**<br>*NOTE*<br>Prior to replacing the filter cartridge (3), place an oilpan under the hydraulic pump.<br>• Slightly loosen the filter cartridge (3) by means of a tension band or a similar tool, but do not screw it off yet.<br>*NOTE*<br>In order to prevent the contents of the suction pipe from leaking, stop loosening the filter cartridge as soon as a suction sound is audible. The air intake causes the oil in the suction pipe to flow back into the tank.<br>• As soon as the suction sound stops, unscrew the oil filter cartridge and remove it in an environmentally friendly way.<br>• EU waste disposal key: 150299 (EU).<br>• Use clean oil to lubricate the sealing of the filter head (4).<br>• Lubricate the new oil filter cartridge (3) with clean hydraulic oil.<br>• Attach the new oil filter cartridge and screw it on manually.<br>*NOTE*<br>• Do not use a tension band to tighten the filter cartridge!<br>Checking the hydraulic oil level:<br>• Unscrew the filler neck with the oil dipstick (1) and check the oil level.<br>• If necessary, add hydraulic oil.<br>• Clean the ventilation head (2).<br>• In case hydraulic oil needs to be added, observe the required specifications in the table of lubricants. |






**Replace the hydraulic oil at intervals of 2000 operating hours or if another type of oil is to be used.**

*NOTE*

Take the compaction roller to a workshop in order to carry out the oil change.

**WARNING!**

***Environmental protection!***

- The engine oil must not penetrate the ground, pollute water or leak into the sewer system. Collect it in sufficiently dimensioned receptacles and dispose of it in an environmentally friendly way (EU waste disposal key 130202).

- Start the Diesel engine and let it run until the hydraulic oil has warmed up.
- Stop the Diesel engine and pull out the ignition key.
- Place an oil receptacle under the hydraulic tank.
- Unscrew the filler neck with the oil dipstick (1).

*NOTE*

- Take the amount of hydraulic oil to be drained into account and be sure to choose a sufficiently dimensioned oil receptacle.

- Unscrew the oil drain plug, remove the oil dipstick and drain the hydraulic oil.
  - Dispose of the waste oil in an environmentally friendly way.
  - EU waste disposal key: 130202 (EU).
- Replace the oil filter cartridge, see description above.
- Screw in the oil drain plug with a new O-ring.
- Add hydraulic oil.

**CAUTION!**

***Be sure to exercise extreme cleanliness when filling in hydraulic oil!***

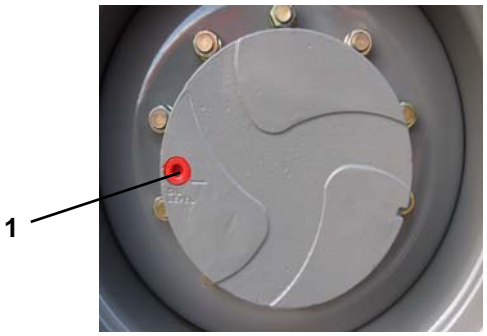
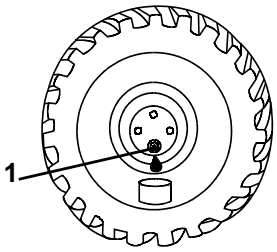
- Inform yourself of the type of hydraulic oil in the hydraulic system. Please refer to the table of lubricants for the required specifications.

- Add hydraulic oil via the filler neck.
- Start the Diesel engine and let it run until the hydraulic oil has warmed up.
- Stop the Diesel engine and pull out the ignition key.
- Check the hydraulic oil level again.

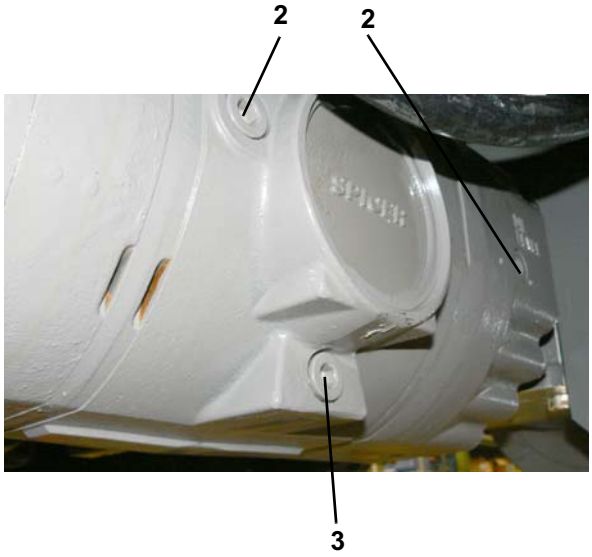
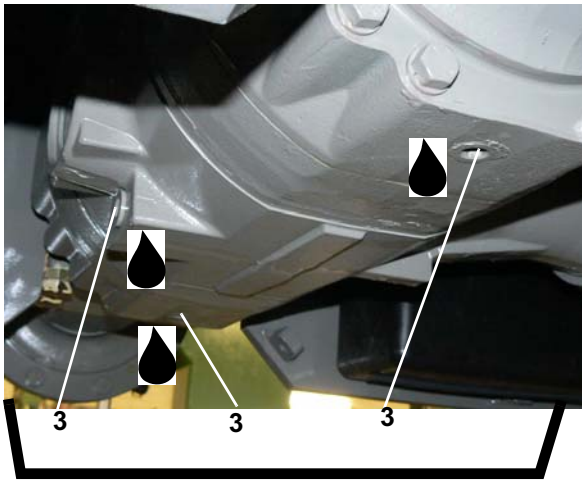
## 16.1.5 Maintenance work referring to the rear axle

*NOTE*
Before carrying out any maintenance work related to the rear axle, refer to the table of lubricants for information on the required type of axle oil.

**Checking the oil level in the wheel drives and changing oil**

| Illustration | Maintenance work and intervals |
|---|---|
|  <br>  | **Check the oil level in the rear axle and in the wheel drives after the 50 initial operating hours and subsequently, at intervals of 500 operating hours**.<br>*NOTE*<br>• Take the compaction roller to a workshop in order to carry out the oil check.<br>• Before carrying out any work related to the rear axle, secure the compaction roller against rolling. Apply the parking brake and put wheel chocks under the tires.<br>**WARNING!**<br>**Environmental protection!**<br>• Prevent the axle oil from penetrating the ground, polluting water or leaking into the sewer system.<br>Checking the oil level in the wheel drives:<br>• Advance the compaction roller until the oil drain plug (1) is in the correct position (see photo on the left).<br>• Unscrew the oil drain plug (1).<br>• The oil level should be barely visible underneath the opening or tangible with a finger.<br>• In case oil needs to be added, be sure to consult the table of lubricants for information on the required specifications.<br>• Screw the oil drain plug (1) back in.<br><br>Oil change in the wheel drives:<br>• In order to replace the oil in the wheel drives, advance the compaction roller until the oil drain plug (1) is in the lowest position (6 o‘clock).<br>• Place a sufficiently dimensioned receptacle under the respective wheel drive.<br>• Unscrew the oil drain plug (1) and drain the oil.<br>• Screw the oil drain plug (1) back in and add axle oil by following the instructions above. |

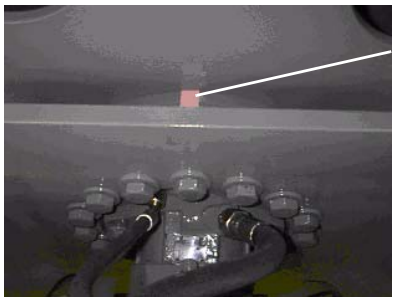
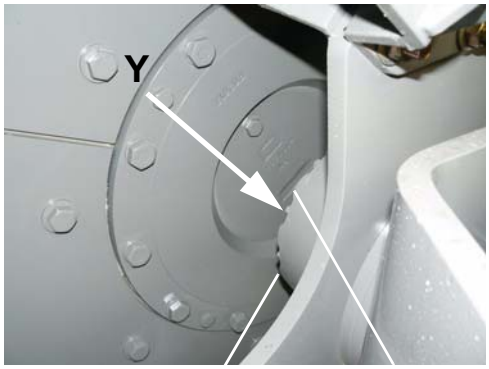
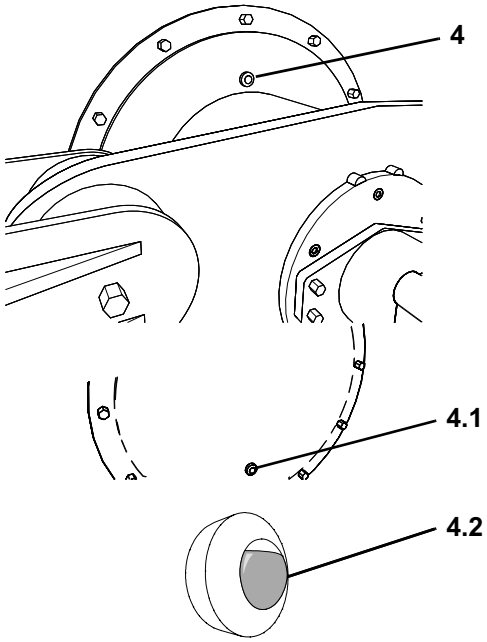
## Checking the oil level in the rear axle and changing oil

| Illustration | Maintenance work and intervals |
|---|---|
|  <br>  | **Check the oil level in the rear axle after the initial 50 operating hours and subsequently, at intervals of 500 operating hours**.<br><br>*NOTE*<br>• Take the compaction roller to a workshop in order to carry out the oil check.<br>• Before carrying out any work related to the rear axle, secure the compaction roller against rolling. Apply the parking brake and put wheel chocks under the tires.<br><br>**WARNING!**<br>**Environmental protection!**<br>• Prevent the oil from penetrating the ground, polluting water or leaking into the sewer system.<br><br>Checking the oil level in the axle housing:<br><br>*NOTE*<br>• The filler screws (2) and the oil drain plugs (3) point backwards (in the direction of motion).<br><br>• Unscrew the filler screws (2) and remove them from the axle housing.<br>• The oil level should be barely visible underneath the opening or tangible with a finger.<br>• Screw the filler screws (2) back in.<br><br>Replacing the oil in the axle housing:<br>• Place a sufficiently dimensioned oil receptacle under the 3 oil drain plugs (3).<br>• Unscrew the oil drain plugs (3) and drain the oil.<br>  • Dispose of the waste oil in an environmentally friendly way.<br>  • EU waste disposal key: 130202 (EU).<br>• Screw the oil drain plugs (3) back in.<br>• Refer to the table of lubricants for information on the required specifications of the axle oil.<br>• Provide the axle housing with new axle oil via the filler screws (2).<br>• Attach and tighten the filler screws (2). |

## 16.1.6 Maintenance work referring to the drum and vibration drive

*NOTE*
Before carrying out any maintenance work related to the components of the drum, be sure to consult the table of lubricants for information on the specifications of the required type of oil. In addition, clean the drum area to prevent dirt from contaminating the oil.

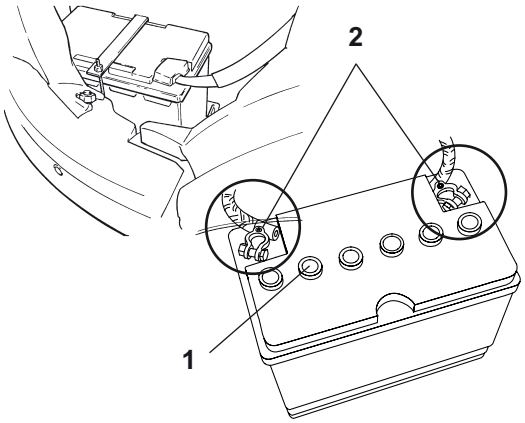
### Checking the oil level

| Illustration | Maintenance work and intervals |
|---|---|
|  <br>  <br>  | **Check the oil level at the drum drive after the initial 50 operating hours and subsequently, at intervals of 500 operating hours**.<br>*NOTE*<br>• Take the compaction roller to a workshop in order to carry out the oil check.<br>• Before carrying out any work related to the drum drive, secure the compaction roller against rolling. Apply the parking brake and put wheel chocks under the tires.<br>• Advance the compaction roller until the labeling (1) at the gear flange is visible and points upward.<br>• The filler and the oil drain screw (2, 3) are both situated on the interior gear side Y.<br>• If the labeling (1) is in the correct position, the control screw (2) is on the left side and the drain screw (3) points downward.<br>• Remove the filler screw (2) from the gear box.<br>• The oil level should be tangible with a finger underneath the opening.<br>• If required, add the necessary amount of gear oil.<br>• Be sure to consult the table of lubricants for information on the specifications of the required gear oil.<br>**Check the oil level at the vibration drive after the initial 50 operating hours and subsequently, at intervals of 500 operating hours.**<br>• Advance the compaction roller until the inspection glass (4) is in the lowest position (6 o‘clock) (4.1).<br>• This implies that the filler screw (4) is in the top position (12 o‘clock).<br>• If, in this position, the oil level does not correspond to the illustration (4.2), oil needs to be added.<br>• Be sure to consult the table of lubricants for information on the specifications of the required oil (engine oil 15W40).<br>• Remove the filler screw (4) from the housing.<br>• Add oil until the correct oil level is reached, see illustration.<br>• Screw the filler screw back in. |

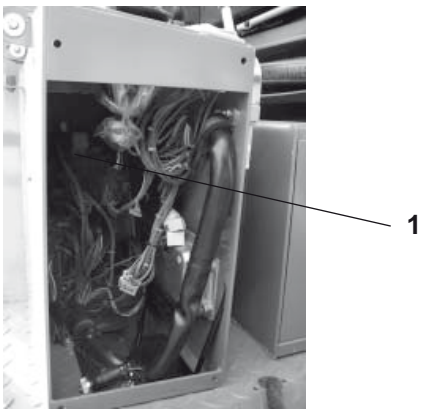
## 16.2 Maintenance work referring to the electrical system

### 16.2.1 Maintenance work related to the battery

**CAUTION!**
***Risk of explosions!***
Keep away sparks and open re from the battery.
Do not smoke.

| Illustration | Monthly work |
|---|---|
|  | • Check the battery poles (**2**) for the accumulation of dirt and for signs of corrosion.<br>• Lubricate the poles and the terminals.<br>• Open the closing caps (**1**) of the battery and check the fill level above the cells.<br>• Make sure the fill level is sufficient, i.e. above the cells.<br>**CAUTION!**<br>Add distilled water only. |

### 14.2.2 Printed circuit board, fuses and relays

| Illustration | Monthly work |
|---|---|
|  | • Check the printed circuit board, the fuses and relays on the printed circuit board.<br>• Open the cover of the console next to the driver`s seat and carry out a visual inspection of the board (**1**).<br>• Check the fuses and relays for the accumulation of dirt or damage.<br>• Always replace defective fuses.<br>• For information on the allocation of the fuses, see **Overview: Fuses** below. |

## 16.2.3 Overview: Fuses

| No. | Ampère | |
|---|---|---|
| **F1** | 30 A | Ignition lock, overflow valve |
| **F2** | 7.5 A | |
| **F3** | 7.5 A | Vibration |
| **F4** | 25 A | |
| **F5** | 25 A | |
| **F6** | 7.5 A | Sensors, control lights H01, 02, 05, 09, 10, 11, 12, 13, 16, fuel gauge, D+ |
| **F7** | 7.5 A | Gear switch axle/drum |
| **F8** | 15 A | Horn, (optional feature: electrical equipment driver`s seat) |
| **F9** | 15 A | |
| **F10** | 15 A | Rotating light, (optional feature: front work lights) |
| **F11** | 15 A | (Optional feature: rear work lights) |
| **F12** | 25 A | |
| **F13** | 7.5 A | |
| **F14** | 15 A | Connector for socket, engine speed sensor, (optional feature: compaction measurement) |
| **F15** | 10 A | Emergency stop, parking brake, drive control |
| **F16** | 15 A | Drive control, vibration, accumulation of dirt at the air filter, Diesel valve, joystick, back-up warner |

# 17 MAINTENANCE INSTRUCTIONS REFERRING TO THE INITIAL OPERATION

## 17.1 Delivery receipt of the HYUNDAI compaction roller

*NOTE*
Make sure all checks and maintenance measures required for the initial operation are carried out in the presence of the customer or his/her staff. Obtain a written confirmation.

- Ascertain the completeness of the delivery (including all accessories and the compaction roller documentation).
- Make a note of any damage found.
- Refer to the chapter Note of delivery and verification of inspections for information on the default maintenance intervals (maintenance certificates).

### 17.1.1 Checking the operating state of the compaction roller

*NOTE*
Carry out the maintenance work described below in the presence of the operating staff (i.e. the driver of the compaction roller) and the service staff of the customer. Refer to the corresponding sections in this operating and maintenance manual.

**Checking the fill levels**

- Ensure that the following fill levels correspond to the required levels as stated in the maintenance manual:
  - Engine oil level
  - Hydraulic oil level
  - Oil level, drum drive
  - Oil level, vibration drive
- Check the tire inflation pressure, see chapter Tires at the rear axle.

**Screw connections**

- Tighten the wheel nuts by means of a torque key (tightening torque: **500 Nm**).
- Check all screw connections.

**Hydraulic system**

- Check the hydraulic hoses and screw connections for leakage.

### 17.1.2 Instruction and demonstration at the machine

*NOTE*
Perform the instruction in the presence of the operating staff (i.e. the driver) and the service staff of the customer. Make sure that your instruction is understood and that the individuals in question will read and comprehend the operating and maintenance manual.

**Vehicle documents and operating manual**

- Hand out the documents related to the compaction roller and point out their relevance.
- Explain the structure and the contents of the operating and maintenance manual.
- Be sure to refer to the safety instructions and stress the importance of observing them.
- Explain the operation and the functions of the compaction roller, based on the instructions in this manual.

*NOTE*
Bear in mind that, after your initial instruction and demonstration, the operating and maintenance manual will be the only resource for obtaining information on the operation of the vehicle.

**Operating elements and displays**

- When giving the operating staff instructions related to the controls and displays, adhere to the sequence provided by the operating and maintenance manual:
  - Begin by explaining the adjustment of the driver‘s seat.
  - Explain the functions of the switches, the buttons and the symbols of the dashboard and the steering column.
  - Point out the connections between certain functions, e.g. the parking brake and engine start.
  - Explain the joystick control.
  - Point to the specifications of the required hydraulic - , gear - , axle - and engine oil types and the brake fluid.

**Working with the compaction roller**

- Soil compaction modes
- Vibration modes
- Roller drum types
- Driving on slopes

**Driving the compaction roller**

- Transporting the compaction roller.
- Refer to the corresponding instructions in the operating and maintenance manual when explaining the towing process.

**Maintenance work**

- Filling the tires
- Checking the tire inflation pressure
- After a practical demonstration, eliminate any signs of leakage and check the function of the brakes and the electrical system.
- Provide information on maintenance measures and intervals. Point out that the use of supplies and substances other than the ones approved by the manufacturer inevitably leads to the expiry of the warranty.

## 17.1.3 Check list: First inspection after the initial 50 operating hours

See chapter Note of delivery and verification of inspections for the corresponding form.

### Diesel engine

*NOTE*
In addition to the measures stated here, refer to the operating manual of the Diesel engine manufacturer and observe the instructions.

### Checking the fill levels

- Check the engine oil level.
- Check the hydraulic oil level.
- Check the fill level in the wheel drives of the rear axle.
- Check the fill level in the axle housing of the rear axle.
- Replace the breather of the rear axle.
- Check the oil level of the drum drive.
- Check the oil level of the vibration drive.
- Check the water filling in the tires, see section on filling the tires.
- Check the tire inflation pressure, see chapter Tires at the rear axle.

### Screw connections

- Check the screw connections of the engine mounting at the Diesel engine.
- Tighten the screw connections of the rear axle
- Tighten the screw connections at the articulated pendulum joint
- Check all other screw connections.

### Hydraulic system

- Replace the filter cartridge at the pump assembly.
- Check the ventilation filter of the hydraulic tank.
- Check the hydraulic hoses and screw connections for leakage.

### Diesel engine

- Replace the air filter cartridge of the Diesel engine. Clean the air filter housing, if required.
- Tighten the fastening screws of the air intake system.
- Tighten the fastening screws of the exhaust system.
- Follow the instructions in the operating and maintenance manual of the Diesel engine manufacturer in order to carry out any maintenance work related to the Diesel engine!

# 18 Appendix

## 18.1 Index

## U



## V



## W

## 18.2 Table of figures