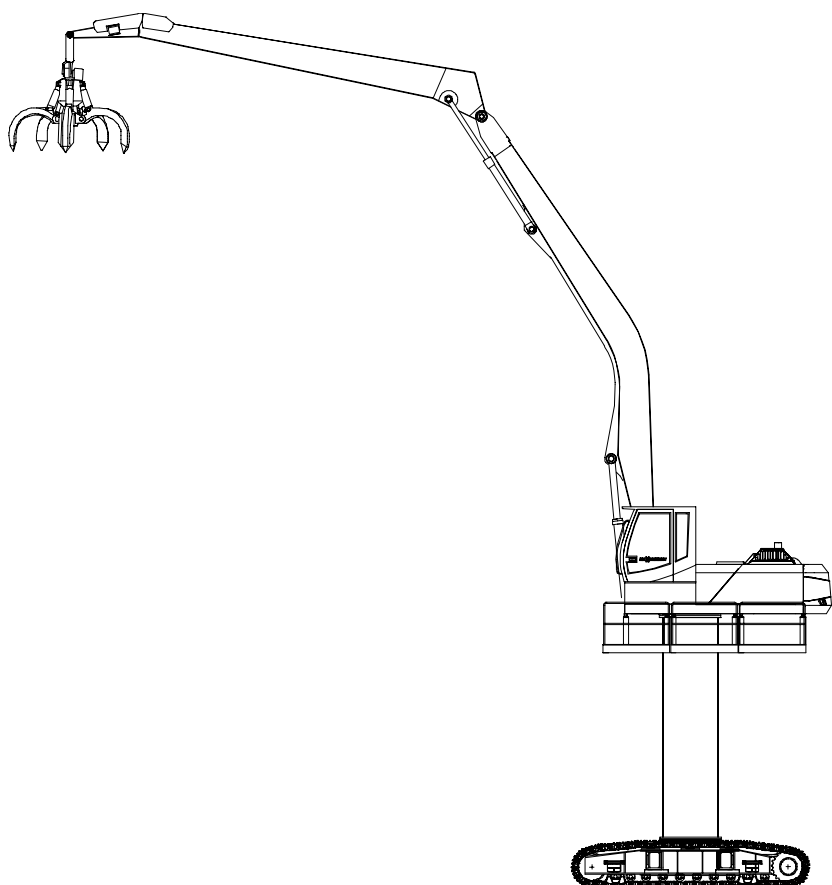


# 835 R-HD special

## Material handling



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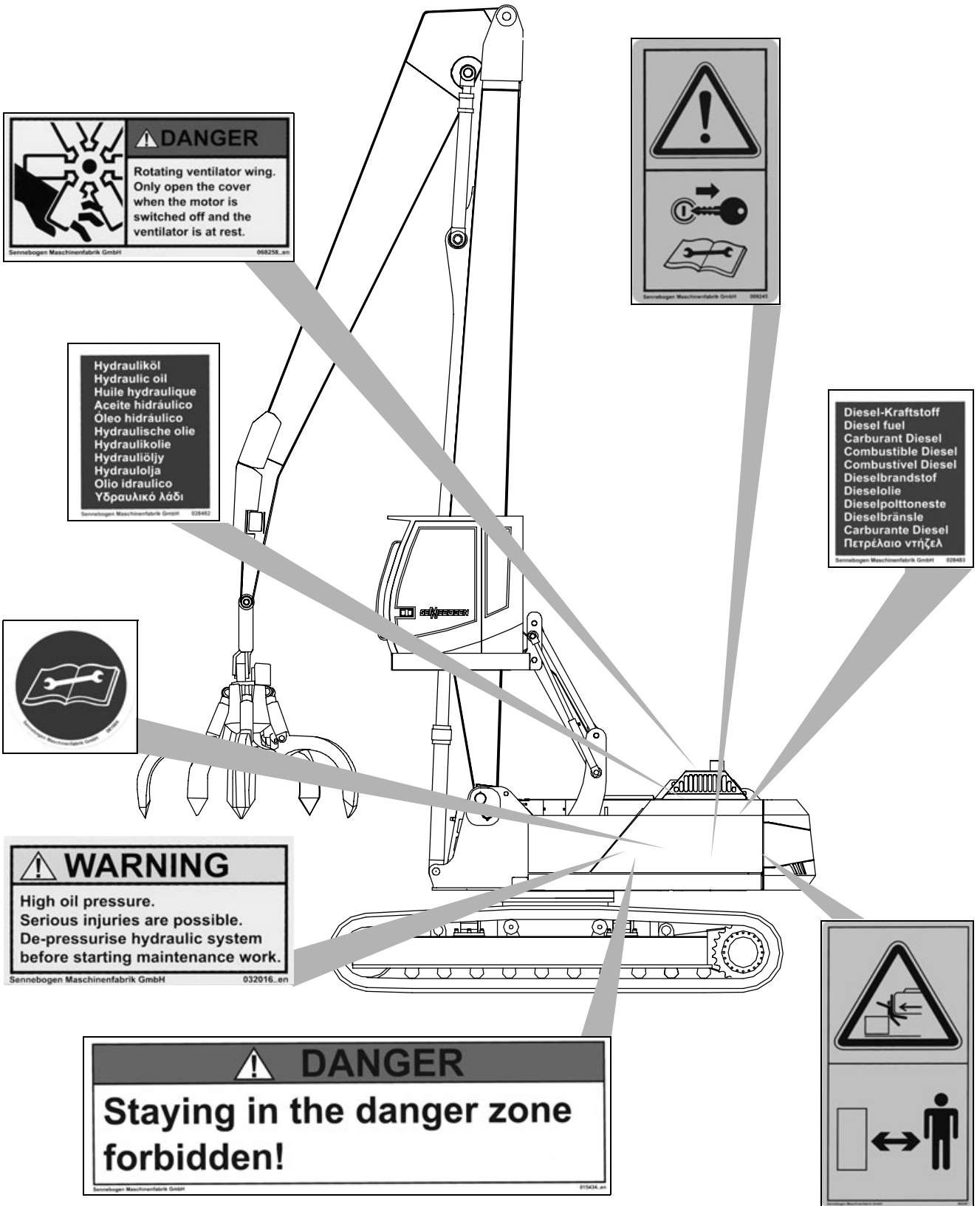
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### 1.6.3 Operation

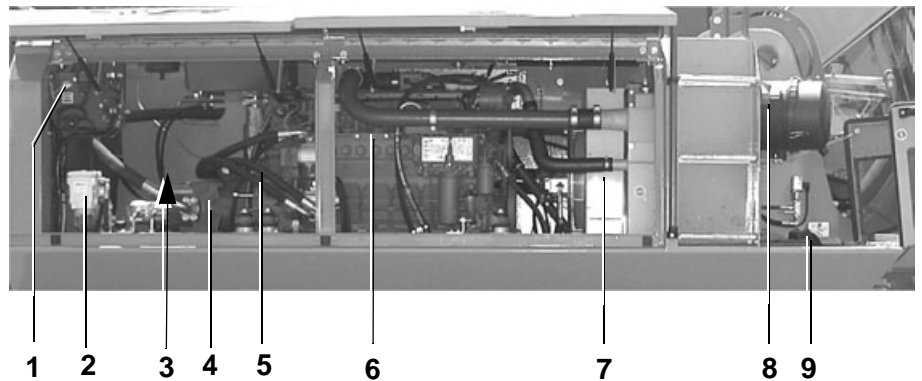


#### WARNING

- Read Chapter 1 SAFETY.  
Before start-up, carry out checks according to Section 4.3 .
- Persons working on or with the machine must be trained or instructed for that purpose.  
Operation and deployment may only be carried out by persons suitably instructed.
- Proceed with utmost caution if you override the jib end limit.
- Ensure that there is no one within the danger area.
- Maintain safety distance to overhead lines.
- Only operate the machine from the driver's seat.
- Do not transport persons on the machine.
- Consider environment conditions, e.g. poor visibility, wind speeds, etc.
- Use the specific lifting capacity table for that machine.
- Note performance specification.
- Check that anchorage points have a sufficient safe working load.
- Observe guide signals as necessary.
- Position boom in direction of travel during long journeys.
- Before leaving the driver's cab:
  - completely lower cab if necessary
  - position the machine on firm base, if necessary set back from the edge of the excavation
  - lower suspended loads
  - secure working equipment
  - pull safety lever back
  - Chock wheels/running gear
  - switch off engine
  - lock cab, show warning lights if necessary.

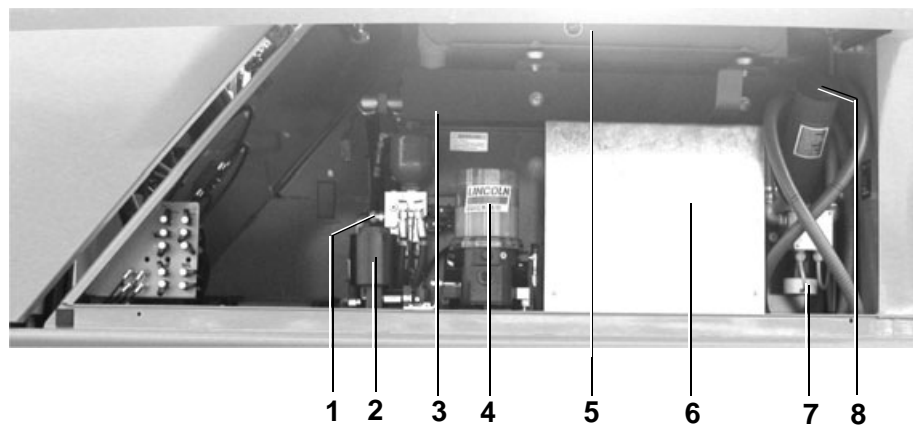


## 2.3 Upper structure



### Engine compartment:

- |   |   |
|---|---|
| 1 Battery disconnecting switch (optional) | 6 Drive engine                            |
| 2 Water separator (optional)              | 7 Combination cooler (water/charging air) |
| 3 Hydraulic tank cutoff flap              | 8 Air filter                              |
| 4 Pump unit                               | 9 Batteries                               |
| 5 Gearbox                                 |   |



### Storage space:

- |   |                                    |
|---|------------------------------------|
| 1 Emergency lowering – cab              | 5 Hydraulic oil cooler             |
| 2 Slewing ring lubrication (optional)   | 6 Electric switch cabinet          |
| 3 Fuel tank                             | 7 Refueling pump (optional)        |
| 4 Central lubrication system (optional) | 8 Fuel filler strainer – fuel tank |

## 4 Start-up

### 4.1 Safety notes



#### WARNING

- Read Chapter 1 SAFETY.  
Before start-up, carry out checks according to Section 4.3 .
- Check that all machine safety devices are complete and correctly secured.
- Wear protective work clothing (safety helmet, eye protection), if working conditions necessitate.
- Take off jewelry or loose clothing.
- Secure loose items e.g. tools or other accessories.
- Agree on hand signals with guide.
- Obtain information on first aid and rescue facilities.
- Enter and exit machine only when stationary. Use the appropriate steps and ladders:
  - if necessary, clean steps and ladders before use
  - do not carry any items when climbing up or down. lift items of equipment onto machine using a rope or lifting gear.
  - Do not use operating elements in driver's cab as handholds.
- Ensure that there is no one within the danger area.
- Check machine safety equipment (brakes, signal and lighting devices).
- Check operating elements and safety devices are functioning correctly while driving slowly.

**Driver's door**

The driver's door can be latched in the open position on the side panel of the cab. Pressing the release (3) in the cab releases the catch again.

**Front windshield**

Opening front windshield: tilt inwards or push upwards. Ensure that the wiper is resting on the holder. Press the two upright bars inwards and push the screen to the position required. Ensure that the windshield latches in the desired position. Push the two upright bars back outwards.

**Interior lighting**

The cab is provided with interior lighting.  
Turning the lamp lens switches the lighting on and off.

**Windshield washer system**

The windshield wipers are operated via the switch on the right control panel. The reservoir for the windshield washer system cleaning fluid is located on the cab floor. Always fill the reservoir with anti-freeze agent.

**Driver's seat**

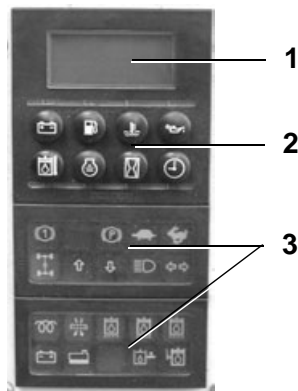
Operation of the driver's seat is described in separate instructions. These instructions can be found in Section 10.3.

**Dismantling/assembling cab****DANGER**

Danger to life from falling cab!

- The cab must be assembled/dismantled by trained and instructed technicians only!
- Replace connection elements (bolts, pins) for cab suspension and cab attachment annually.
- Only use genuine Sennebogen replacement parts.

### 5.3.7 Sennebogen Diagnosis System (SDS)



1 Display

2 Keypad with LEDs

3 Indicator and warning lights

Additional information can be called up via the SDS, e.g. actual hydraulic oil temperature.



**Note**

Do not clean the SDS with alcohol or liquids containing solvents! These will corrode the plastic surface.



**Note**

All temperature details are displayed in °Celsius (°C).

Sensors on the machine monitor the actual operating conditions and transmit the measurement results to the SDS. The measurement results are evaluated in the SDS and are shown on the display when a key is pressed. The indicator and warning lights are activated if irregularities occur on the machine.

**Self test:**

The SDS carries out a self test after the ignition is switched on. All segments of the display are activated, all LEDs illuminate. The sensors are checked. The SDS is subsequently operational.

If the SDS detects a fault this is shown on the display and via LED. Arrange for rectification of faults through Sennebogen customer service.

**Display (1)**

The 2-part display shows additional information, e.g. the time. Press a function key on the keypad (2) to call up and display the corresponding information.

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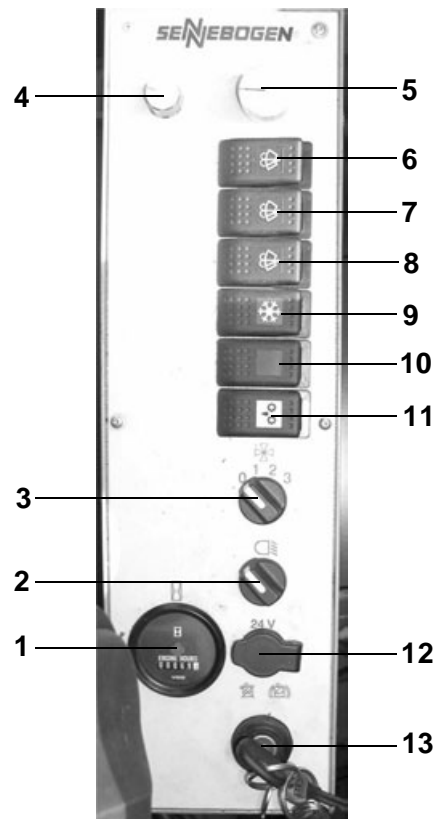
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### 5.3.8 Control panel, right-hand, back



- 1 Hours run meter
- 2 Light switch
- 3 Blower
- 4 Interval - front screen wiper
- 5 Rpm adjustment
- 6 Front windscreen wiper
- 7 Roof-screen wiper
- 8 Front windshield wiper – lower (optional)
- 9 Air conditioner (optional)
- 10 Central lubrication system (optional)
- 11 Piunion lubrication (optional)
- 12 24 V socket outlet
- 13 Ignition lock/engine start

The following types of damage may occur if the limit shutdown is changed independently:

- Wear on the cylinder bearing points and boom.
- Damage to hydraulic cylinders.
- Increased wear on the machine.

These types of damage fall outside the terms of warranty of SENNEBOGEN Maschinenfabrik GmbH.

The machine operator is wholly liable for any such damage or consequential damage!

**Hoisting limit (optional)**

You can use the optional *hoisting limit* (2) to limit the "stroke up" of the compact boom. This may be useful:

- near power lines (see Section 1.5.1)
- in buildings with limited height
- under bridges
- with other attachments supplied by SENNEBOGEN in some cases.

How to adjust the hoisting limit:

1	Carefully move the compact boom to just below the maximum height limit (maintain safety distance!).
2	Loosen the terminal screw (2a).
3	Move the hoisting limit (2) until the sensor (2b) responds (LED on the sensor goes out).
4	Tighten the terminal screw (2a).
5	Turn on the Flip switch <i>Lift limit</i> at the left of the control panel.
6	Carefully check the setting and repeat if necessary.



**Note**

The optional hoisting limiter (2) cannot be bypassed.

**Note**

The slew gear brake is applied automatically as soon as

- the right-hand control lever is in neutral position, after approx. 3.5 – 4 s or
- the safety lever is pulled back or
- the engine is switched off (e.g. emergency shut-down, key switch).

In adverse conditions it may take 30 seconds before the full braking effect is applied.

## 6 Monitoring, care and cleaning



### WARNING

The work described below must be carried out by trained and instructed specialist personnel.



More extensive maintenance tasks are described in a separate manual.

### 6.1 Safety notes

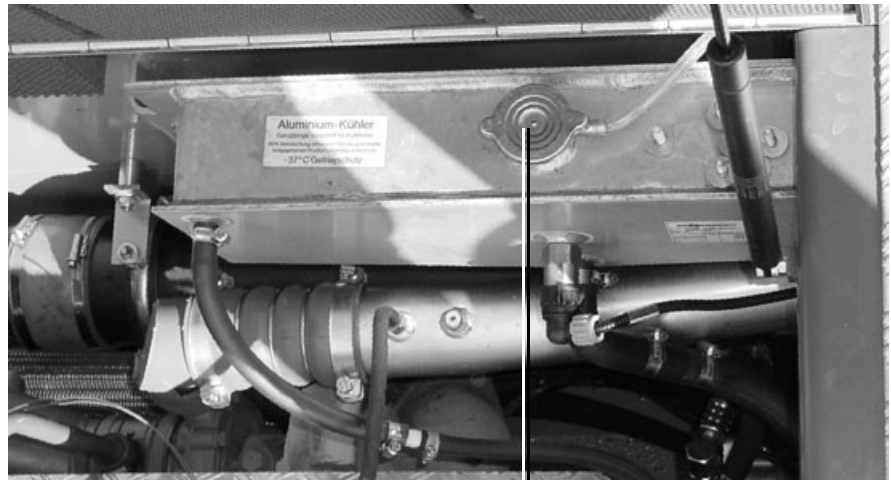


#### WARNING

- The tasks described may only be carried out by trained and instructed specialist personnel.
- Wear personal protection equipment (e. g. safety helmet, ear protection, protective gloves, safety boots).
- Observe accident-prevention and safety regulations.
- Lower suspended loads and boom to the ground.
- Pull left safety lever to the rear.
- Shut down the machine and secure against unauthorized restarting before starting with any work.
- Place warning sign on operating elements.
- Smoking or handling open flame is forbidden.
- Use appropriate safe climbing aids or work platforms.
- Stay clear of rotating and moving parts.
- Relieve hydraulic system pressure before starting maintenance work (see Abschnitt 6.5.5).
- Dispose of hydraulic oil in accordance with regulations.
- Wear protective gloves when working on steel wire rope.
- Only use genuine SENNEBOGEN spare parts.
- Only use oils and lubricants specified in the lubricants table.
- Do not lift heavy components by hand. Use lifting gear.
- For pneumatic tires:  
When inflating tires, maintain sufficient safety distance and use a tire cage.
- Keep the cab clean and tidy.
- Actuate the optional battery disconnecting switch, if applicable, to interrupt the power supply.

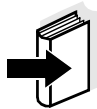


### Checking the coolant level or antifreeze



2

- |   |  |
|---|--|
| 1 | Allow drive engine and radiator to cool down.  |
| 2 | Carefully open cap (2) of cooler equalization container in the engine compartment to allow the pressure to equalize.                 |
| 3 | Check antifreeze and coolant level, top up if necessary. The coolant must contain at least 50% antifreeze agent throughout the year. |



#### Note

Observe the instructions in the engine manufacturer's instruction manual.

**Changing the oil**

1	Park the machine on level ground. The position of the drain plug (3) must be the lowest point.
2	Stop the engine.
3	Place a suitable receiving container underneath the drain plug (3).
4	Unscrew the filling plug (1).
5	Unscrew the drain plug (3) and allow the oil to drain.
6	Clean the filling and drain plugs, check the seals for wear and replace when necessary.
7	Reinstall the drain plug (3).
8	Pour in new oil slowly and carefully through the filling hole (1).
9	Reinstall the filling plug (1).
10	Checking the oil level after 2 hours.

### 6.7.3 Retighten the slewing ring screws



**DANGER**

Risk of fatality!

Defective slewing ring screws may cause the upper structure to tip over. It is therefore essential to observe maintenance intervals!

- Tighten slew ring bolts with torque wrench. Observe tightening torques according to Abschnitt 6.12.
- Check or change slewing ring bolts every 5000 hrs run / every 5 years.



**Note:**

Testing must be performed by an expert from an independent specialist company / independent institute.

Unrestricted use of the slewing ring bolts must be proven by means of a certificate.

The slewing ring bolts must be changed otherwise.

Corroded or damaged bolts can shear and lead to the upper structure tipping over.

- Do not tighten corroded or damaged bolts, replace immediately with new bolts.
- Adhere without fail to the number and diameter of bolts.
- Only use genuine SENNEBOGEN spare parts!
- If you suspect damage to the screw fastenings, call SENNEBOGEN customer service and arrange for a check to be carried out.
- Contact SENNEBOGEN customer service if you have any further queries.



1	Shut down drive engine.
2	Retighten the slewing ring screws with a torque wrench using the cross.

## 7 Transportation

### Preliminary work

Transport the machine using a flat bed truck. The following preliminary work is necessary:

- Select a suitable transport vehicle.  
Note dimensions and weight of the machine according to Section 7.2.
- Clean machine.
- Fold boom / jib into transportation position.
- Lock upper structure and undercarriage according to Section 7.3.
- If necessary, remove working tools.

### 7.1 Safety notes



#### WARNING

- In Germany:  
Loading and transportation work is only to be carried out by authorised specialist personnel in accordance with VBG 40, §48 and Federal Motor Vehicle Safety Standards (StVo) §22.
- Observe the relevant regulations for securing of loads.  
The respective transport operator is *always responsible for the transportation of machine and accessories*.
- When loading and transporting, secure the machine and its working equipment from unintended movement.
- Clean running gear of machine sufficiently from mud, snow and ice, so that ramps can be accessed without danger of sliding.
- Provide low loader access ramps with wooden planks.
- Check conditions of route before starting journey.
- Only transport machine using designated tie-down and lifting points.
- Ensure that the machine does not present any hazards to other road users.
- Wear personal protection equipment (e. g. safety helmet, protective gloves, safety boots).

## 8.4 Tyres and undercarriage

**Oil leaks on differential, hubs or drive transmission**

Cause	Remedy
Sealing plug loose	– Tighten sealing plug.
Seals damaged	– Replace seals.

**Oil leaks from slewing gear transmission**

Cause	Remedy
Loose connections	– Tighten connections.

**Rotary transmission leaking**

Cause	Remedy
Seals damaged	– Replace seals.
Lines loose	– Tighten locking bolts.

**Noises in slewing gear**

Cause	Remedy
Insufficient lubrication on spur ring	– Lubricate spur ring according to lubrication plan.

## 8.5 Cab

**Cab moves or swings drastically**

Cause	Remedy
Cab mounting or cab fastening damaged	<ul style="list-style-type: none"> <li>– Check all connection elements, bolts and pins of cab mounting and fastening for damage, cracks or deformation.</li> <li>– Have damaged components exchange immediately by trained and instructed specialist personnel.</li> </ul>

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