

6 Driving the Crane

6.1 Checks Before Driving the Crane

The following checks should be carried out each time before driving the crane, even if only short distances are to be covered. How to check the capacities for all fuels and lubricants is described in detail in the Lubrication and Maintenance Instructions for the Crane Chassis (Part 4).

- Transport condition of the mobile crane (see Sect. 6.2)
- Check the engine oil level and top up if necessary.
- Check the hydraulic oil level.
If level is too low: First determine the cause – then top up.



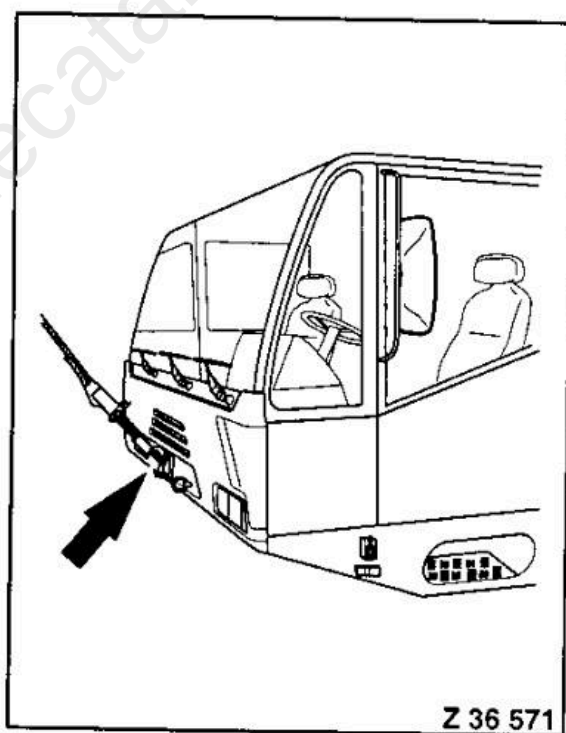
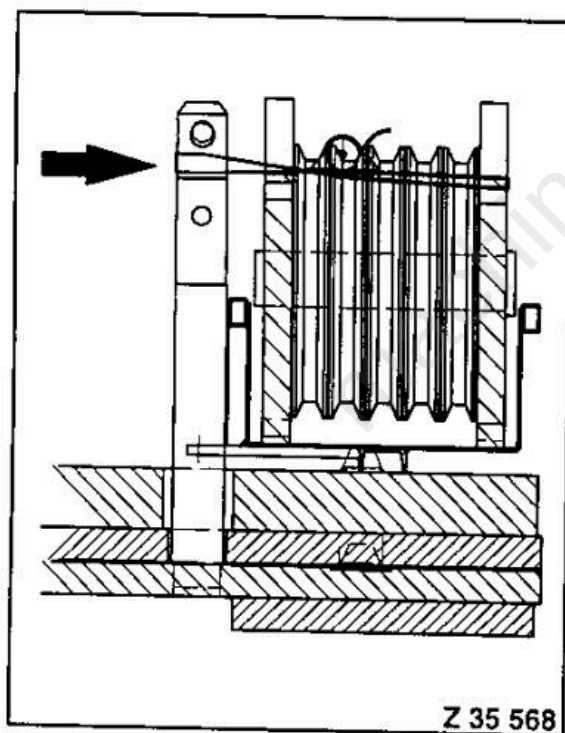
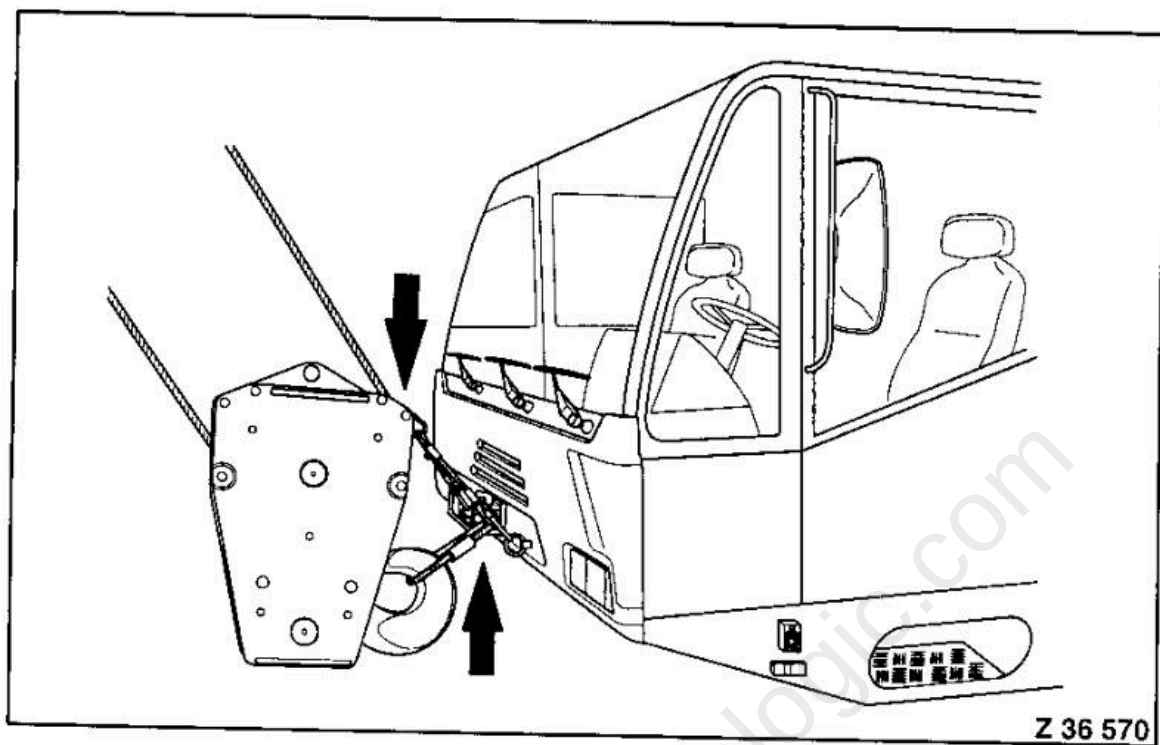
Before the hydraulic oil has warmed up, do not run the engine at speeds of over $n = 1600$ rpm.

- Check the oil level in the transmission and top up if necessary.
- Check the coolant level.
If level is too low: First determine the cause – then top up.
- Check the steering. Indicator lights (72) and (73) must go out shortly after the engine is started.
Since the emergency steering pump is driven by the rolling vehicle, indicator light (74) does not go out until the vehicle starts moving.



Driving the crane with defective steering constitutes a major safety hazard. Faults must be rectified before the crane is driven.

- Test the indicator lights with the ignition switched on to see that they are functioning correctly. Press the appropriate button to check whether the integral indicator light is working.
 - (31, H 425): Longitudinal differentials locked
 - (35, H 411.1): Transmission / converter oil temperature
 - (40, H 426): Transverse differentials locked
 - (67, H 349): Air filter clogging
 - (69, H 345.1): Coolant / engine temperature



6.2.3 Driving over Hill Summits

When driving over hill summits, ensure that all the axles remain in contact with the ground.

The crane operator bears sole responsibility for any damage to the crane chassis caused by "exceeding the maximum suspension travel", or "block position of the suspension" and exceeding the maximum axle loads when an axle lifts off the ground.



When driving over hill summits, it is prohibited:

- to lock the suspension
 - to exceed an axle load of 14 t
- as components MAY BREAK otherwise.**

Should an axle lift off the ground, however, proceed as follows:

1. Stop the crane in a straight position and engage the longitudinal differential lock by actuating switch (49). Indicator light (31) comes on.
2. Drive over the summit at walking pace (max. 5 km/h).



Whilst driving over the summit:

- Avoid turning the steering
- Observe the suspension pressure continually.
If the pressure rises to 270 bar in any of the three suspension circuits, the **AXLES MAY BREAK!**
If a pressure of 300 bar is reached, the summit must not be driven over.
Reverse carefully.

3. Having driven over the hill summit, stop the crane immediately and switch off the longitudinal differential lock by actuating switch (49) again. Indicator light (31) goes out.

To be observed before driving on the road:

- The hydraulic suspension of the chassis must not be locked (see Section 11).
- Independent rear-axle steering (optional) must be switched off (see Section 9).
- A new disc must be inserted in the tachograph in the driver's cab of the crane chassis.
- The power supply to the support pressure indicator is to be switched off by actuating the rotary switch on the display console.
- Apply the mechanical superstructure locking device. (see Sect. 4 of the Operating Instructions for the Superstructure)
- The cab step on the superstructure must be slid into transport position with a lever.
(See Sect. 4 of the Operating Instructions for the Superstructure)
- Lash the luffing cylinder to the support.
- Mark protruding luffing cylinder clearly, in accordance with road traffic regulations.



The protruding luffing cylinder could present a danger for the road users behind.
Only drive on public roads – in this condition – in accordance with the particular motor vehicle safety standards.



The transport safety locks must be released after driving, before operating the superstructure.
Release the transport safety locks in the reverse order.



For removing and fitting the main boom, please observe Sect. 31 in the Operating Instructions for the Superstructure.

6.4.2 Driving in Erect Mode

The crane may only be driven with the **main boom erect** and possibly **equipment attached** when it is **unladen**.



Driving the crane with load is PROHIBITED.
Driving the crane with independent rear-axle steering engaged is PROHIBITED !

Please observe the following when driving without load:

- The gradient of the road must not exceed the following values:
 - * 2 % in the direction of travel
 - * 1 % laterally (without additional equipment)
 - * 0.5 % laterally (with additional equipment)
- Extend the outrigger struts and hold the outrigger feet just above the ground.



Make sure that the outrigger struts are pin locked correctly !

- The hydraulic suspension on the crane chassis must be locked (see Sect. 11).
- Driving speed must not exceed walking pace (max. 5 km/h).
- Main boom to the rear – apply mechanical superstructure locking device. Locking pin (1) must be inserted into locking strip (2). (Z 35 003)
- Apply the slew gear brake.
- The independent rear-axle steering (optional equipment) must be switched off.
- Care should be taken if there is a side wind, particularly if the wind is acting in the same direction as a lateral gradient in the road.
- Constantly monitor the suspension pressure on pressure gauges (5) to (10) in the driver's cab.



If the pressure in any of the three suspension circuits increases to a level of 300 bar, immediately stop the crane and extend the outrigger cylinders until the pressure is taken off the wheels.

Bring the crane into a level position by re-adjusting the hydraulic suspension or correcting the boom position.

If the crane is driven further it may OVERTURN or the AXLES MAY BREAK!

6.4.2.1 Driving the Crane with Main Boom

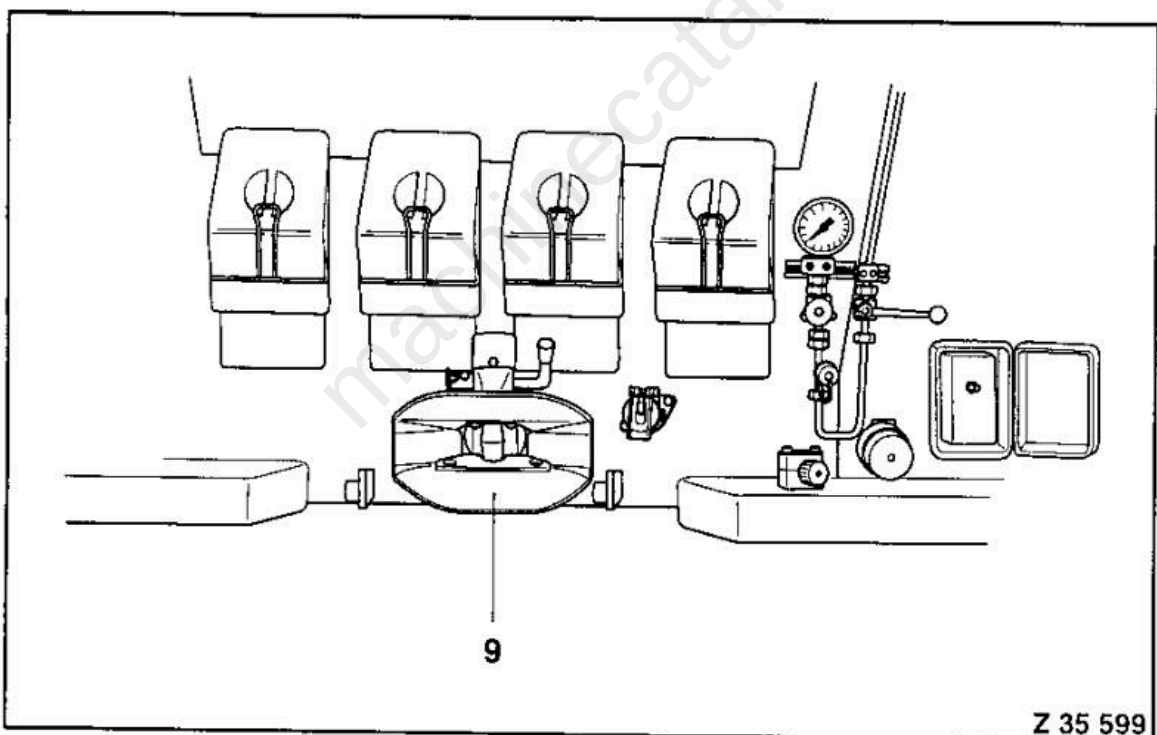
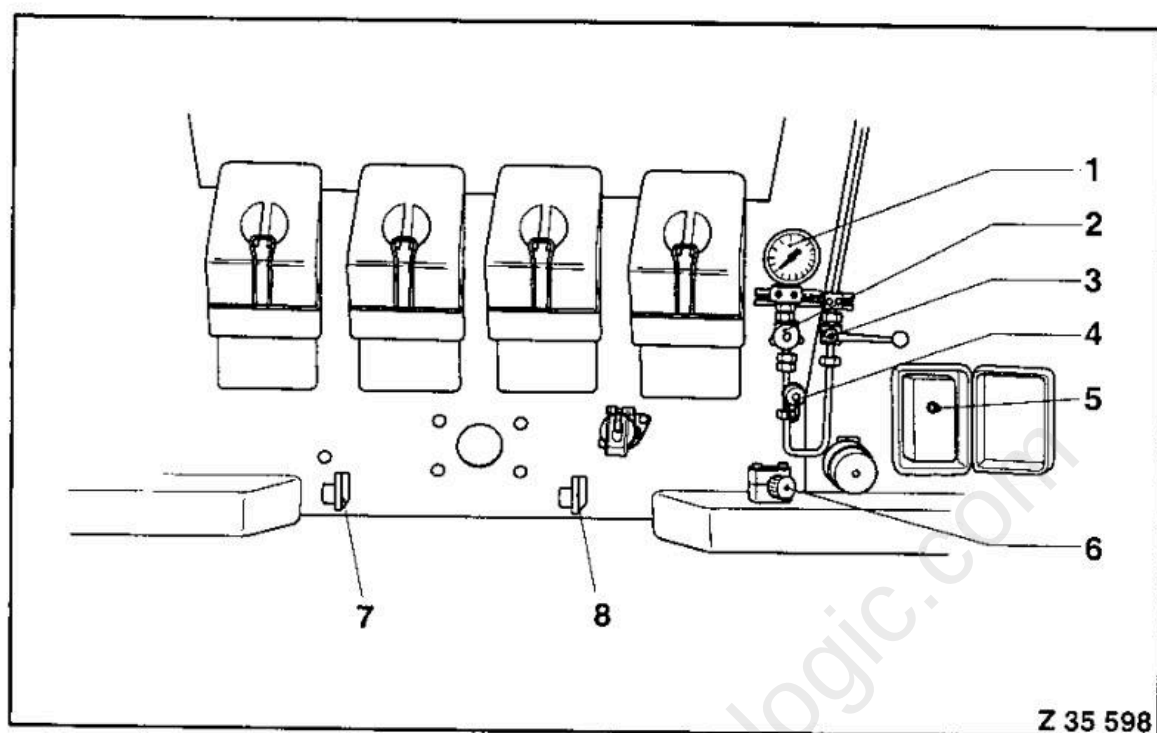
6 axle chassis

(Z 35 559)

The different boom positions and axle loads relative to the configuration of the crane are to be taken from the following table.

Counter-weight (t)	Super-structure position (*)	A (m)	B (°)	RA (m)	Axle loads in (t)	
					1 + 2	3, 4, 5 + 6
0	180°	14,7	83	0,4	8,2	12,3
12,5				0,4	11,7	13,6
23				0,4	14,6	14,8
33			80	1,2	16,7	16,3
40			75	2,4	17,4	17,7
54			70	3,6	20,1	19,8
64			65	4,7	21,7	21,5

* Superstructure position: 180° – main boom to the rear



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