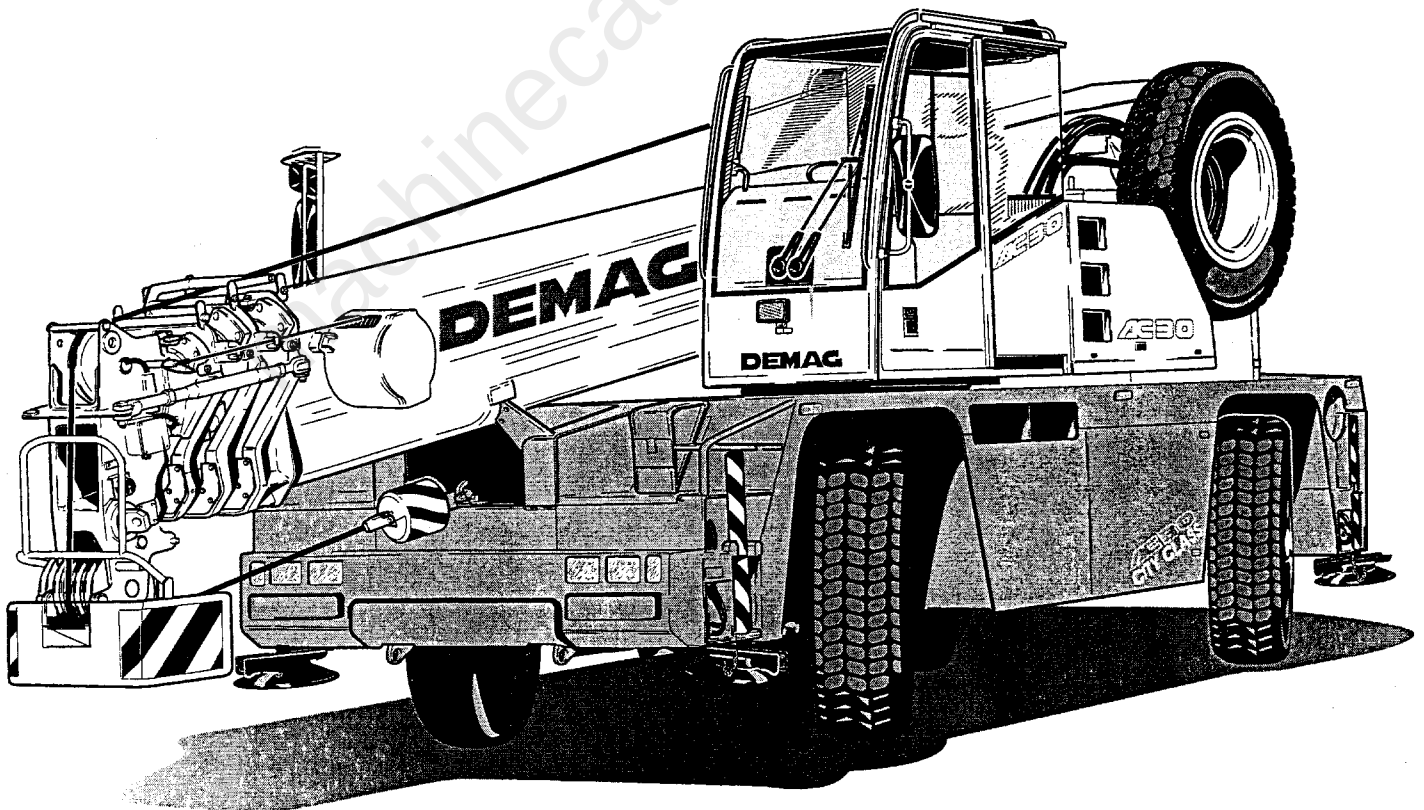


AC30

Part 2

Lubrication and Maintenance Instructions for the Crane



1.4 Measures to Ensure Safe Operating Periods

1.4.1 General

In accordance with the accident prevention regulations for winches, lifting and dragging equipment (VBG 8), the crane operator is obliged to carry out an inspection of the crane at least once a year (also see ISO 9927-1).

The **spend share of the theoretical service life for the winches** must also be determined. The crane operator must employ a specialist for the purpose if necessary.



This regulation is legally binding within the scope of the accident prevention regulations of the trade association. Outside of this realm, the crane manufacturer recommends that the procedures listed are also observed.

1.4.2 Theoretical Service Life

The Design engineer has assumed certain operating conditions in calculating and dimensioning the winches on your crane.

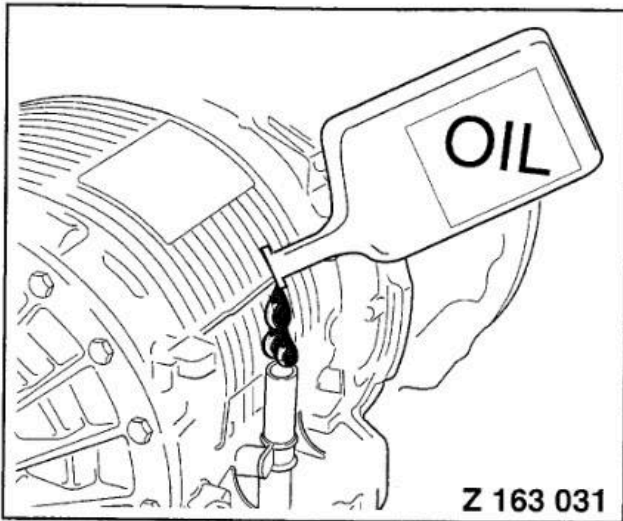
The winches on your crane are classified as follows (ISO 4301/1, FEM 1.001, DIN calculation principles for power units):

- Power unit group: M.....
- Load spectrum: Q..... (L.....)
- Load spectrum factor: $K_m = \dots\dots\dots$

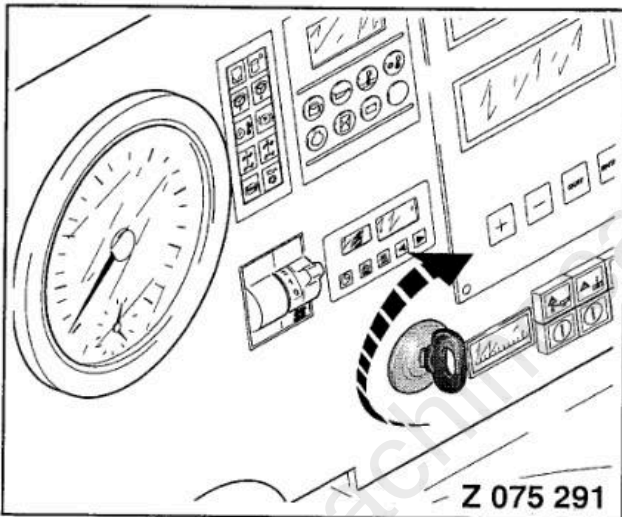
A **theoretical service life, D**, is thus calculated.

 *The values applicable must be taken from the "Monitoring the Winches" table given in the crane log-book.*

No.:	Work to be carried out	Fuel/ Lubricants	Interval / Kilometres driven								as necessary
			Daily	50	500	1.000	5.000	10.000	20.000	40.000	
9	Steering										
9.1	Steering componets			1x				x			
9.2	Lubricate the steering componets	Sec. 2.10				1x	x				at least once a year
9.3	Replacing the hoses										every 4 years
9.4	Angular gear - top up hydraulic oil	Sec. 2.3									x
9.5	Lubricating Independent Rear Axle Steering	Sec. 2.15									every 3 months
10	Braking system										
10.1	Check brake lining for wear				1x	x					at least once a week
10.2	Renew brake linings										x
10.3	Replace brake drums										x
10.4	Perform brake function check							x			
10.5	Check expanding cylinder								x		min. once every 2 years
10.6	Replace other brake parts				x				x		min. once every 2 years
10.7	Air drier - replace granulate cartridge										min. once every 2 years
10.8	Drain water from the air tank				x						at least once a year
11	Wheels and Tyres										
11.1	Tighten the wheel nuts (after a wheel change)			1x			1x	x			
11.2	Check the tyres		x								



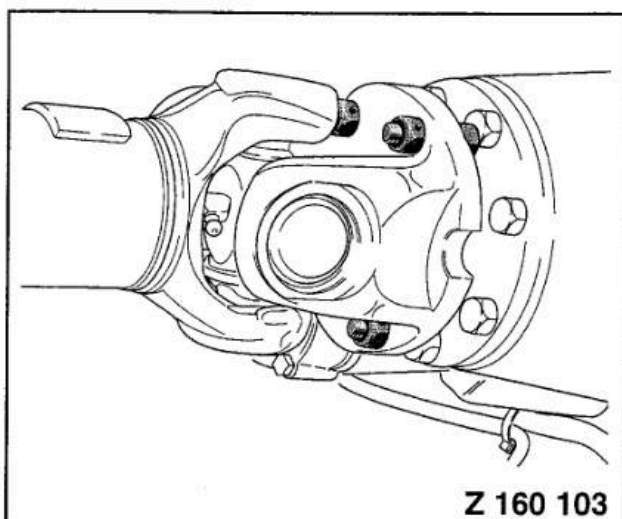
- Fill in oil.
(Z 163 031)



- Switch the selector keypad to neutral "N"
- Start the engine and leave it running at idle speed until the temperature of the drive gear for a warm check is reached and then make the oil check like it is written in **section 6.1**.
(Z 075 291)



If the oil level is too low, malfunctions and damage will occur in the gear system. If too high, drive performance will be decreased.



7 Joint Shafts

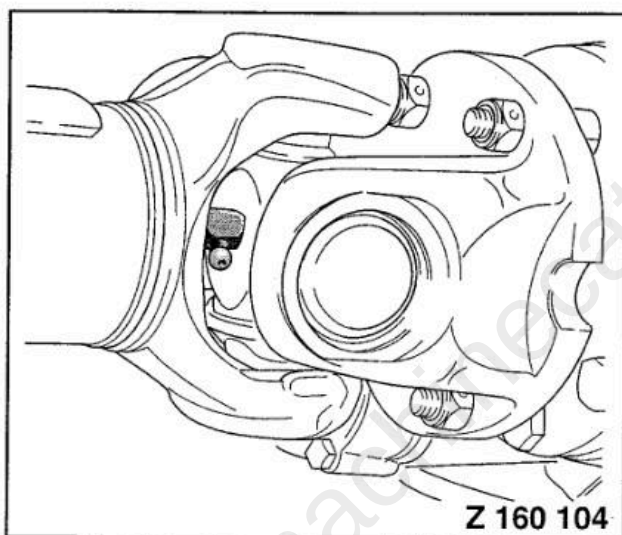
7.1 Flange Connections

Check and, if necessary, tighten the screws and nuts on the flange connections.

Tightening torque:

- screws M12x1.5 : 112 Nm

(Z 160 103)

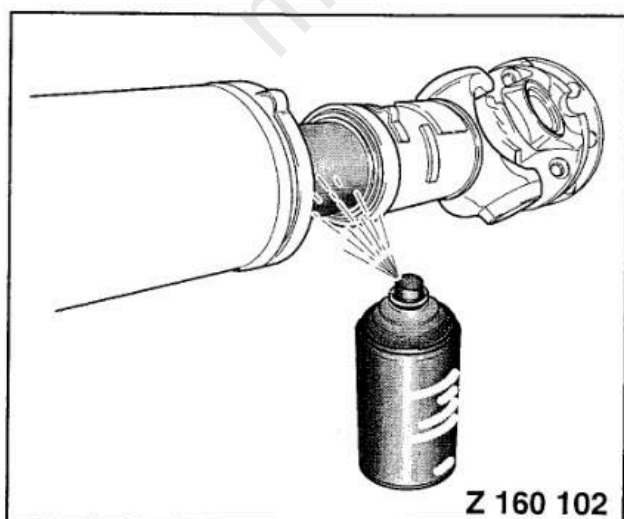


7.2 Lubricate the Joint Shafts

Lubricate the joint shafts at the corresponding nipples.

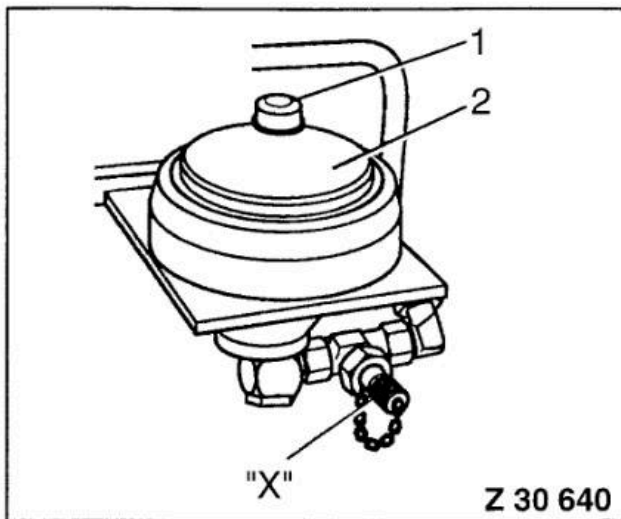
(Z 160 104)

 *On maintenance-free joint shafts there is no nipple on the sliding part.*



Lubricate the slider.

(Z 160 102)



To check and fill the pressure accumulator, proceed as follows:

- **Hydraulic suspension system of the chassis:**

Retract all suspension cylinders up to the stop thus emptying all suspension circuits and depressurizing them.

The pressure accumulator must be completely emptied of hydraulic fluid.

- **Pilot control circuit of the superstructure hydraulics:**

Switch off the drive motor on the superstructure and switch the ignition key to the "0" position.

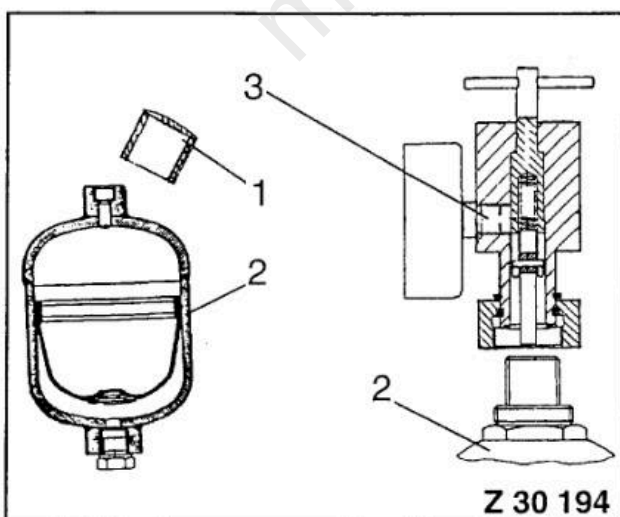
Depressurize the hydraulic system.

The pressure accumulator (2) must be completely emptied of hydraulic fluid. (Z 30 640)

Check this on the mini-gauge connection "X" of the respective suspension circuit or at the pilot control circuit using a manometer. (0 bis 10 bar)

 If the pressure gauge does not indicate a pressure level, the system is not under pressure.

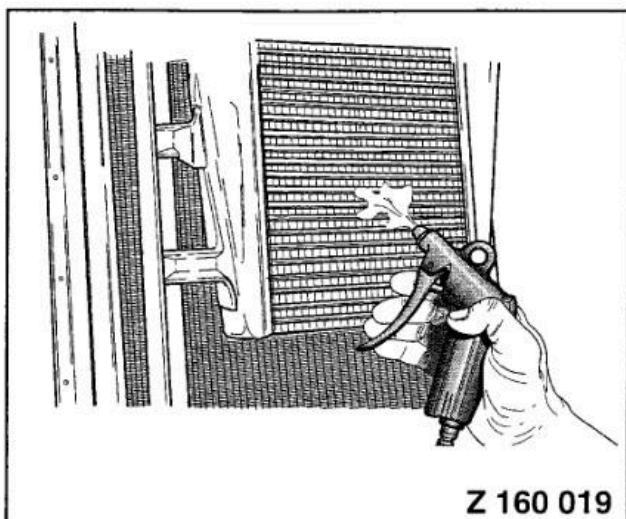
- Remove the protective device (1) on the gas valve of the pressure accumulator (2) and screw on the filling and test device (3).
- Open the gas valve over the screwed-on filling and test device and read off the charge pressure on the pressure gauge of the testing device.
- If there is insufficient initial pressure, the pressure accumulator must be filled up with nitrogen via the filling device (3) up to the corresponding initial pressure. (Z 30 194)



After the initial fill-up, wait approximately two to three minutes.

Check the preliminary pressure again and top up as necessary.

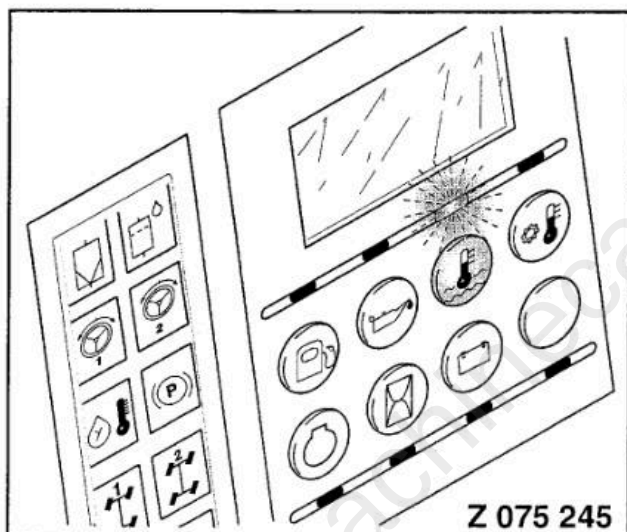
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Z 160 019

Cleaning the cooling system

Pass compressed air through the cooling system at a moderate pressure against the air flow (to ensure the cooling elements are not damaged), or wash out with water, until cooling elements are completely free from impurities (dust, insects, etc.).
(Z 160 019)

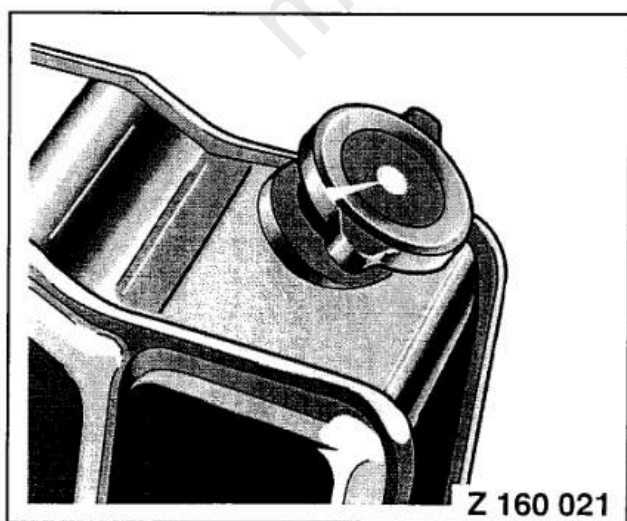


Z 075 245

 If the coolant rises to an unusually high temperature at normal ambient temperatures although the cooling system exterior has been cleaned and there are no other malfunctions, the cooling system interior may be contaminated.
(Z 075 245)

In this instance the cooling system must undergo a thorough cleaning, whereby the entire cooling circuit is degreased, decalcified and derusted.

Further details can be found in the engine manufacturer's operating instructions.



Z 160 021

Check the coolant level and top up as necessary.

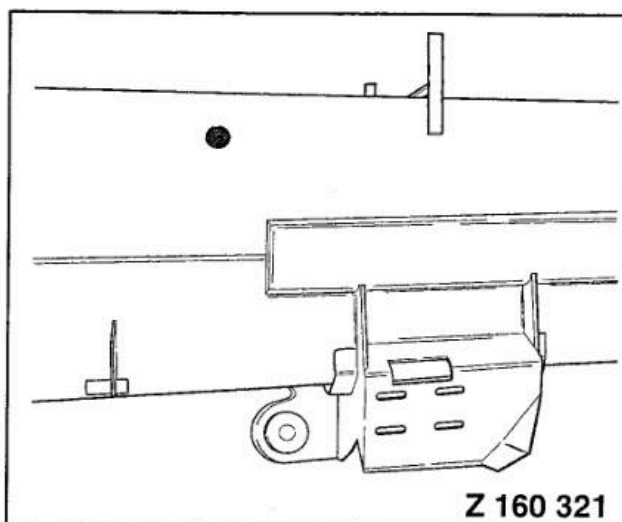


Open the cap of the engine cooling system only when the coolant is at a temperature of below 90° C.

(Z 160 021)

 Before the onset of winter check the coolant for anti-freeze.

 For more informations refer to the engine manufacturer's operating manual.



24 Equipment

24.1 Main Boom - Lubricating the Linings

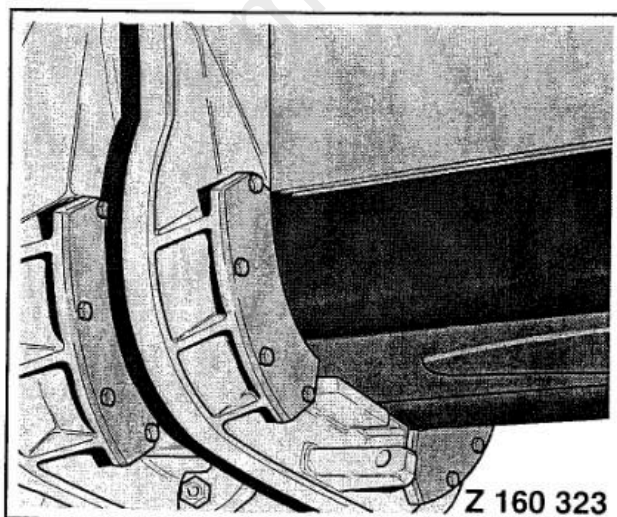
The upper guideways of the boom sections are lubricated via the lubricating nipples situated in the upper bearing.
(Z 160 321)



The basic boom section and the boom section each have a lubricating opening on the left and right-hand side. Extend the telescopic sections of the horizontally positioned boom so that the linings of the smaller boom section can be lubricated through the opening in the larger boom section.
Commence with the first boom section.

 One lubricating nipple must be smeared on either side of each boom section.
(Z 160 322)

 **Switch off engine as otherwise there is the danger of crushing**



24.2 Main Boom - Lubricating the Sliding Surfaces

Extend all the boom sections with the boom in the horizontal position.



RISK OF CRANE OVERTURNING !
When extending, observe the load table.

Then coat the lower guideways with grease using a brush.
(Z 160 323)

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Demag AC 30 All Terrain Crane Maintenance Manual

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