

## Nozzle sleeve

Whilst inspecting engines with total running time exceeding 15,000 hours, nozzle sleeves were occasionally found with hardened 'O'-Rings. In a few cases these were associated with water leakage.

In order to improve the life time of the sealing arrangement, the material Viton(green) has been introduced as the material for the **upper** sealing ring.

We recommend that the 12,000 hour inspection period be used as the opportunity to replace the existing upper sealing rings. The current material is Pebunan(black). At this juncture a full set of sealing rings should be ordered to cover the sleeves and the nozzle holders.

The new sealing ring combination Viton / Pebunan should be changed every 24,000 running hours.

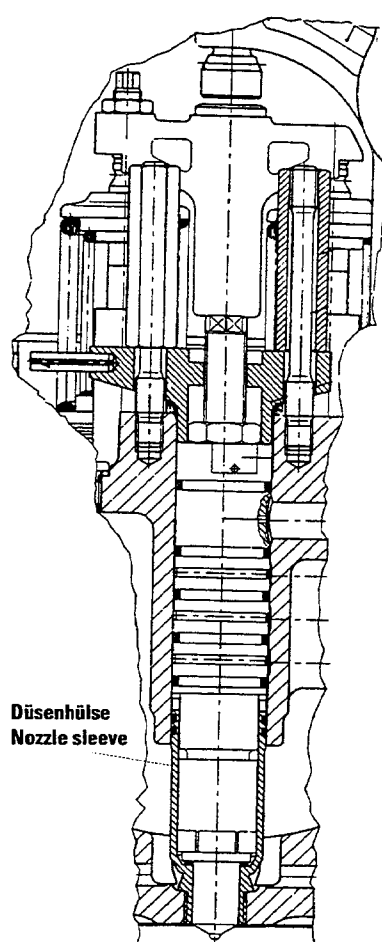
For loosening the nozzle sleeve we offer a pin spanner (part number 2.9122B) at a special price. Please place your order with your local MaK service station or directly with Kiel department VK14.

The attached job card A5.05.01.01.50.00 describes the removal and installation process for the nozzle sleeve.

**When installing, it must be ensured that anti-seize paste is used on the sealing face and the threaded portion.**

**The tightening torque is:**

$$M = 100 \text{ Nm}$$



M20

24000

01

See also: 01.02.01.nn

Spare parts list: B1.05.01.2.2107

Time requirement: 1 Pers./ 0,50 h

Personnel qualification: skilled engine hand

Operating medium: Heavy fuel and distillate fuel

### Maintenance:

Change the O-rings every

24.000 h

### Tools:

Pin spanner

W1 2.9122 B

Ring spanner A/F 27

W2\* 1.9456 B

Torque wrench

W3\* 1.9454-6

\* no illustration

### Auxiliary material

Vaseline\*\*

High-temperature thread paste "Dag S-5080"\*\*\*

\*\*or product of equal standard

### Sequence of operations:

#### 1. Dismount the nozzle sleeve (1).

1.1 Attach the pin spanner (W1) to the nozzle sleeve (1) so that nozzle sleeve and pin spanner are engaged.

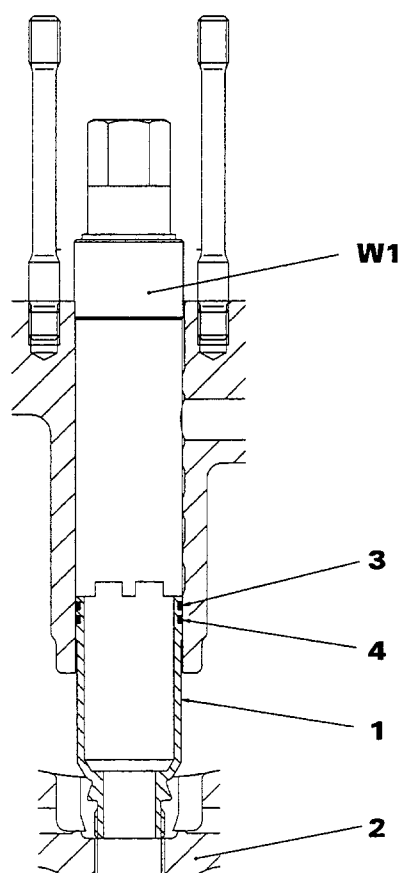
1.2 Attach the ring spanner (W2) to the pin spanner and unscrew the nozzle sleeve until nozzle sleeve and cylinder head (2) are fully unscrewed and loose.

### Attention:

Nozzle sleeve and cylinder head must be fully unscrewed and loose.

1.3 Use a brass mandrel and gently drive out the nozzle sleeve.

1.4 Remove the O-rings (3 and 4).



M20

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**01**

2. Mount the nozzle sleeve
- 2.1 Apply a film of green soft soap to the **new black O-ring** and insert it in the **groove (4)**. Make sure the O-ring is not twisted.
- 2.2 Apply a film of green soft soap to the **new green O-ring** and insert it in the **groove (3)**. Make sure the O-ring is not twisted.

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**Attention:**

**Do not change the position of the O-rings. Observe the mounting instructions.**

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- 2.3 Grease the threads of the nozzle sleeve with high-temperature thread paste.
- 2.4 Insert the nozzle sleeve and tighten the sleeve with the pin spanner (hand-tight).
- 2.5 Tighten the nozzle sleeve at a torque of

**M = 100 Nm.**