



Service Letter

SL95-332/UM
November 1995

Grinding of Nimonic Exhaust Valve Spindle

Dear Sirs,

Lately we have been receiving reports of some difficulties being experienced when grinding the Nimonic exhaust valve spindles.

The difficulties are mainly caused by the clogging up of the grinding stone, which means that it has to be dressed more often.

In order to facilitate the grinding of Nimonic valves, Chris-Marine AB has, in close cooperation with us, developed a set of special accessories, and prepared supplementary grinding instructions, a copy of which is enclosed.

The new accessories are included on Chris-Marine grinding machines for new engines, and can be retrofitted to Chris-Marine grinding machines already in service.

For a quotation and time of delivery, please contact our Diesel Service dept., one of our licensees or Chris-Marine AB.

Yours faithfully,
MAN B&W Diesel A/S

Encl.

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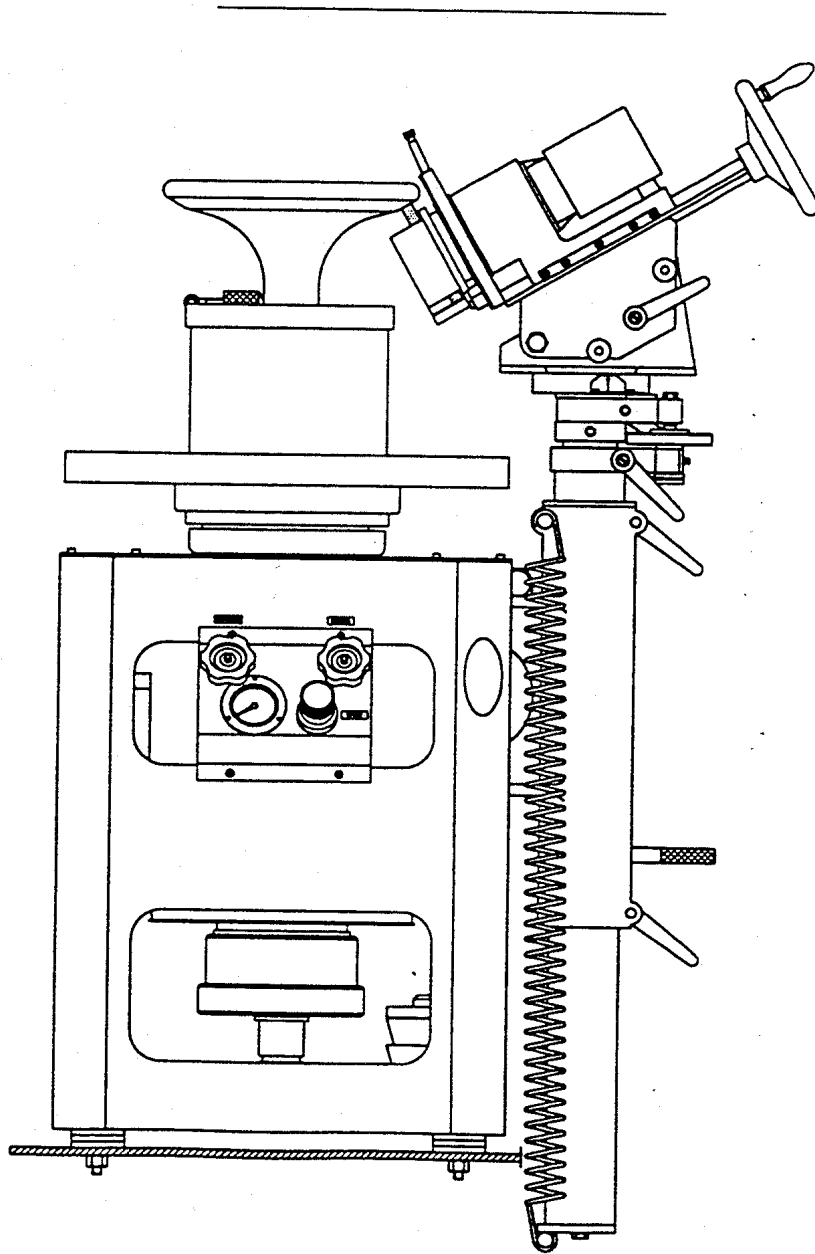
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**CHRIS-MARINE
EXHAUST VALVE AND VALVE SEAT
GRINDING MACHINE
LBD 70**

SUPPLEMENTARY INSTRUCTIONS



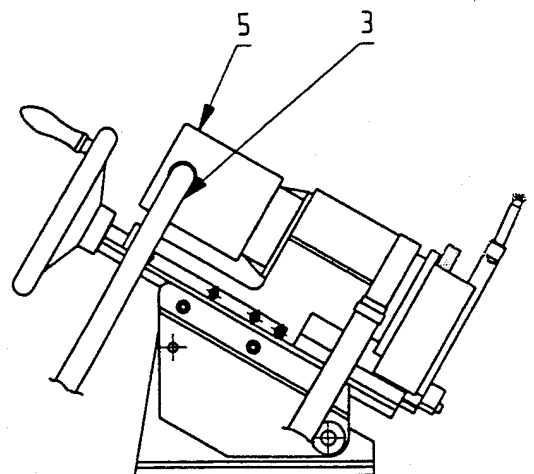
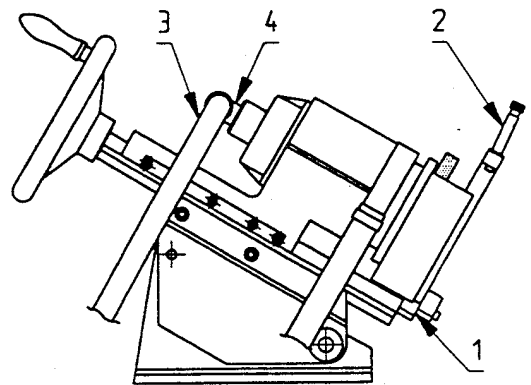
GRINDING OF NIMONIC VALVES

The new Nimonic materials in valve spindles require a different grinding procedure compared to other spindle materials. A modification kit (part No. 8822) for the LBD grinding machine should be used. The kit consists of:

- Holder for grinding wheel dresser part No. 8821
- Vibration damper part No. 8819
- Grinding wheel part No. 01/137304
- Cooling and lubricating oil part No. 99P01

GRINDING PREPARATIONS

- Remove the two screws (1) and exchange the existing dresser holder with holder No. 8821.
- Mount the dresser (2) in the top position when valve spindles are to be ground.
- Remove the air hose (3) and nipple (4) from the grinding motor lid.
- Mount the vibration damper (5), part No. 8819, on the grinding motor, and connect the air hose (3).
- Mount the grinding wheel 01/137304 (violet colour) on the wheel hub. Dress and balance the wheel in accordance with sections 6.2 and 6.3 in the grinding machine instruction book.

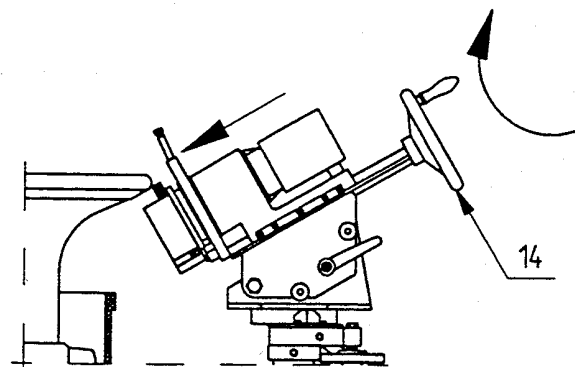
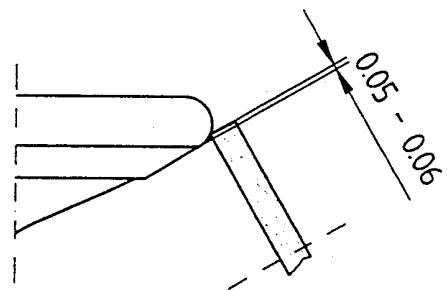
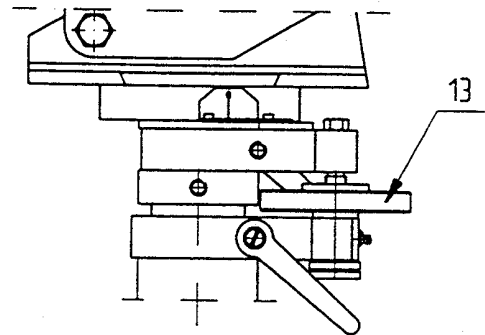
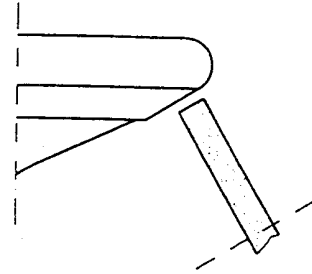


GRINDING OF THE VALVE

The grinding process is performed in two steps: Coarse grinding to remove material, and fine grinding to provide the required surface finish.

Coarse grinding

- Adjust the grinding wheel to a position as close as possible to the valve surface.
- While rotating the grinding wheel by hand, use the feeding wheel (13) to guide the grinding wheel towards the seat surface.
- Upon contact, stop the feed and retract the grinding wheel with the handwheel (14).
- When the grinding wheel is away from the seat surface, feed upwards 0.05 - 0.06 mm (one scale division).
- Start the drive motor and adjust the speed to about 10 rpm (about 0.5 bar on the pressure gauge).
- Start the grinding motor.
- Lubricate the valve surface to be ground by brushing with Texaco Geartex EPC SAE 80W - 140 (Chris-Marine part No. 99P01), or equivalent.
- Feed slowly with the hand wheel (14), approximately 1/8 turn per revolution of the valve, and frequently apply oil with the brush to the valve surface.
- Use cutting depths of 0.05 - 0.06 mm. Grinding can be done in both the inward and outward directions.



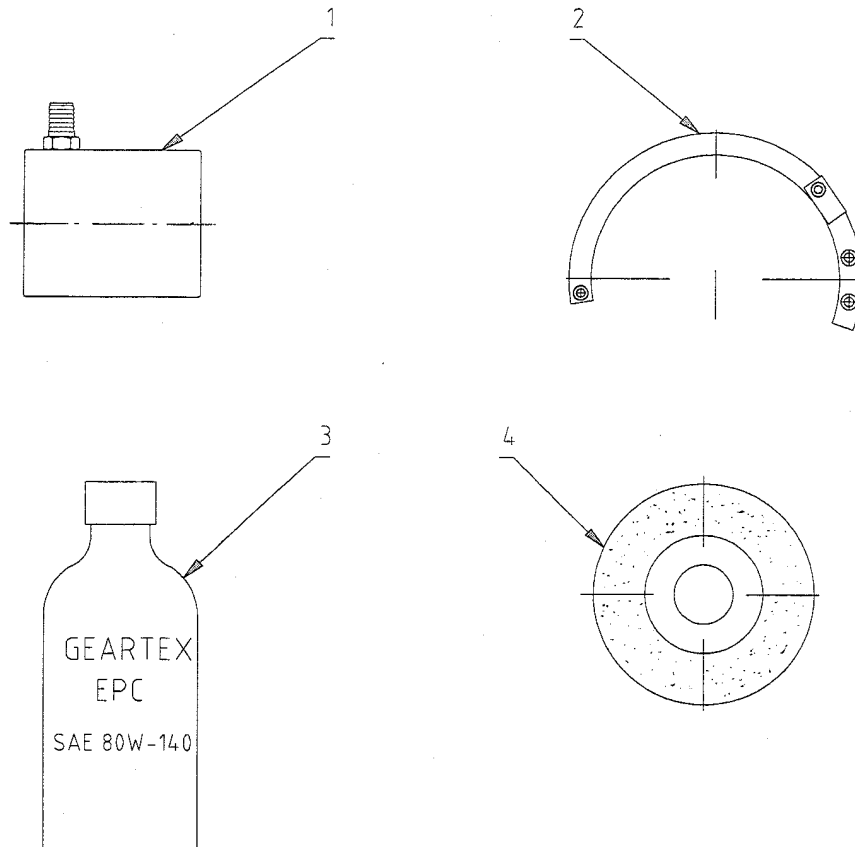
Fine grinding

- Dress the grinding wheel carefully until no deposits can be seen. The final cut should be made in an inward direction.
- Use the same drive speed 10 rpm as used during the coarse cut.
- Set the grinding depth to approximately 0.01 mm.
- Lubricate the valve surface in the same way as during the coarse cut.
- Feed slowly with the hand wheel (14) while frequently lubricating the valve surface.
- After grinding, clean the valve thoroughly.

LIST OF PARTS

Exhaust Valve and Valve Seat Grinding Machine Type LBD

Modification kit No 8822



ITEM	PART NO	NAME	QTY
1	8819	Vibration damper	1
2	8821	Holder for grinding wheel dresser	1
3	99P01	Cooling and lubrication oil	1
4	01/137304	Grinding wheel	1

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