



Service Letter

No: SL88-238/UM
May, 1988

L67-80-90GB/GBE
S/K/L50-60-70-80-90MC/MCE
Exhaust Valve "Knocking" ("Hammering")

Dear Sirs,

Exhaust valve knocking is caused by insufficient cushioning in the hydraulic oil system. This is basically due to three different reasons:

- 1) deficiencies in the oil supply,
2) errors in the air spring,
3) excessive leakage in the high pressure oil system.
- 1) Deficiencies in the oil supply can, for instance, be:
 - a) air in the oil (foaming), most possibly caused by air being drawn-in at the pump (suction side),
 - b) too low supply pressure,
 - c) too high oil temperature, giving low viscosity.
- 2) Errors in the air spring system can be:
 - a) incorrect supply pressure (too high).
 - b) a defective or maladjusted safety valve (drain valve).

It is very important that the supply air pressure and the safety valve opening pressure correspond as follows:

<u>Supply pressure (bar)</u>	<u>Opening pressure (bar)</u>
5.5	17.5
7.0	21.0

3) Excessive (abnormal) leakages in the high pressure oil system can, for instance, occur at:

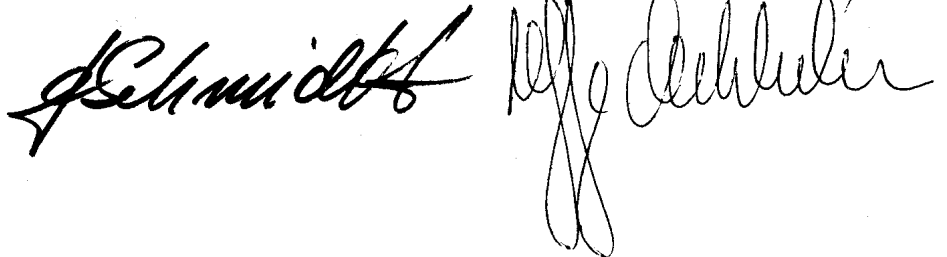
- A*) a maladjusted or defective throttle screw,
- B*) the oil cylinder piston rings, on either cam or exhaust valve sides (new type S-lock rings might help),
- C*) the oil cylinder safety valve, on the cam side. This leakage can arise from the valve seats, or from the sealing ring (packing) between the valve and the housing. The sealing ring must be a special narrow steel type,
- D*) the puncture non-return valve, caused by spindle maladjustment, or defective non-return valve seats,
- E*) high pressure pipe joints, caused either by insufficient/uneven tightening, or by damaged surfaces,
- F*) the venting valve at the top of the exhaust valve.

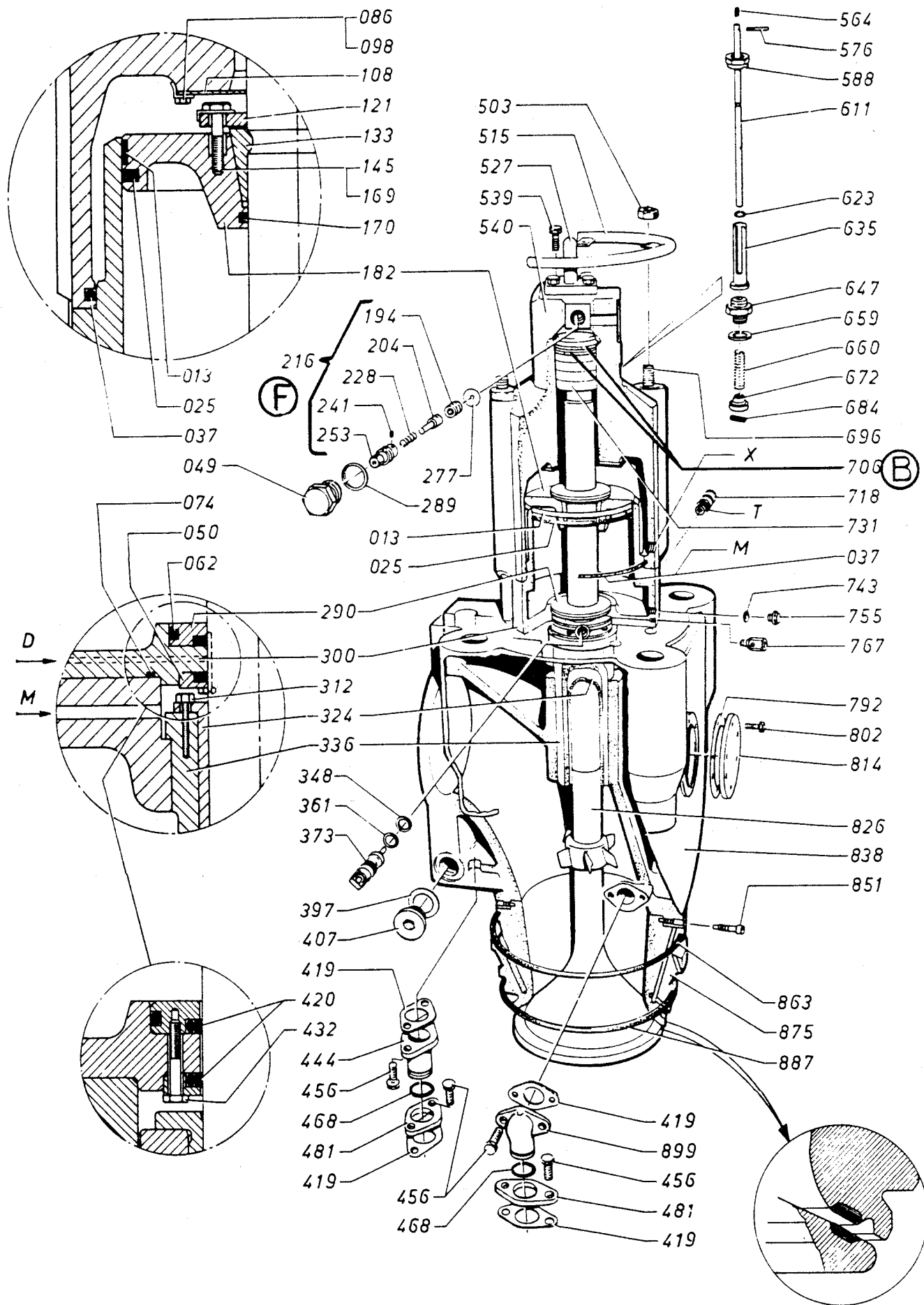
*) See enclosed instruction book plates 90805-56, 90806-24, 90801-78.

In order to check the extent of any such leakages, it is recommended to measure the drain amount from the valve to the camshaft system. In this respect, reference is made to the value given in the instruction book.

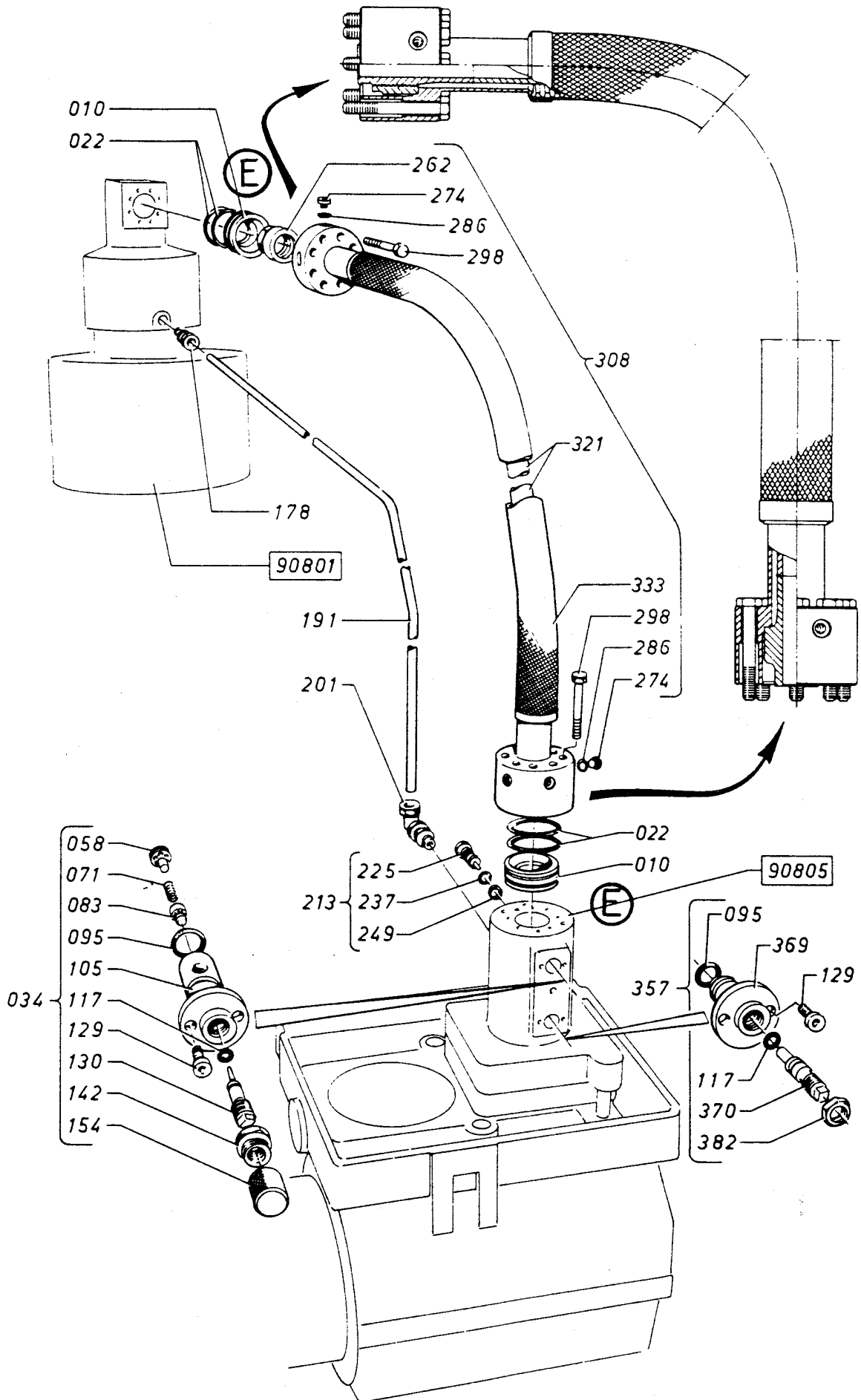
Yours faithfully,

MAN B&W Diesel A/S

Two handwritten signatures in black ink. The first signature, on the left, is 'Schmidt' written in a cursive, flowing style. The second signature, on the right, is 'Aehlrich' also in a cursive style, with a long, vertical flourish extending downwards from the end of the name.



L60MC/MCE



L60MC/MCE

