EM015401-0 (EN-US)

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Operation and Maintenance Manual

Gearbox

Doc-No.: 9145 010 000 BA 00

2 Your safety

Storage and transport

This chapter contains important information on the correct storage and transport of the gearbox.
Following the instructions and tips will increase the life cycle and service life of the gearbox. You will also be able to carry out the transport work quicker and more safely.
Paying careful attention to the points in this chapter will also help you to simplify your day-to-day work.

Storage

Storing the equipment

corrosion protection

Components coated with temporary anticorrosive are protected for around six months.

avoid direct exposure to sunlight

Protect the equipment against direct exposure to sunlight.
Only store the electrical equipment, electronic components, replacement parts made out of rubber or plastic such as seals and hoses as well as hydraulic fluids in closed rooms at 15 ºC to 25 ºC.

moisture and dirt

Protect all parts of the equipment stored outdoors against moisture and dirt, e.g. using tarpaulins.

The mounting surfaces of hydraulic components must be protected against corrosion and sealed with blind plates. Protect the hydraulic plug connectors and the connectors of the electrical cables with the caps and plugs supplied.

short term storage

During short-term storage (approx. 4 weeks) of equipment outdoors, but at temperatures **above** freezing, electrical components need not be removed. Such components must be particularly protected against excessive temperatures, dirt and moisture.

long term storage

During long-term storage (more than 4 weeks), the equipment must not be stored outdoors. It must be stored in a dry, well ventilated room.

After a storage period of approx. two years, a random sample inspection must be performed to determine whether the measures taken and the method of storage has prevented damage.
The inspection can be carried out by DBT on request.

natural ageing

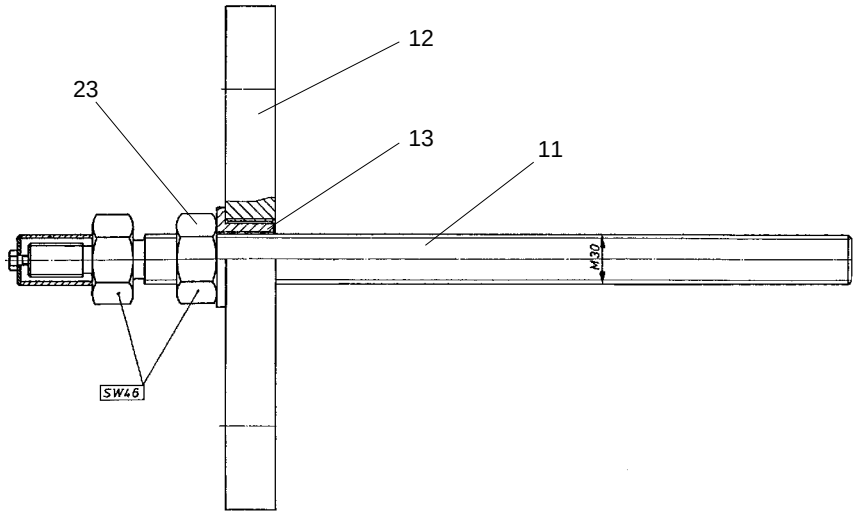
Even with proper storage, seals and hoses are subject to natural ageing. A storage period of approx. two years is therefore quoted as an indicative value for these parts.

Important!
Ensure when storing that any new supplies are stored separately from existing stocks in such a way that on removal, old stocks are always taken first.

frost protection for the oil cooler

Before storing gearboxes with oil coolers at ambient temperatures below the freezing point, flush out the oil cooler with antifreeze.

Fig. 6: Mounting device



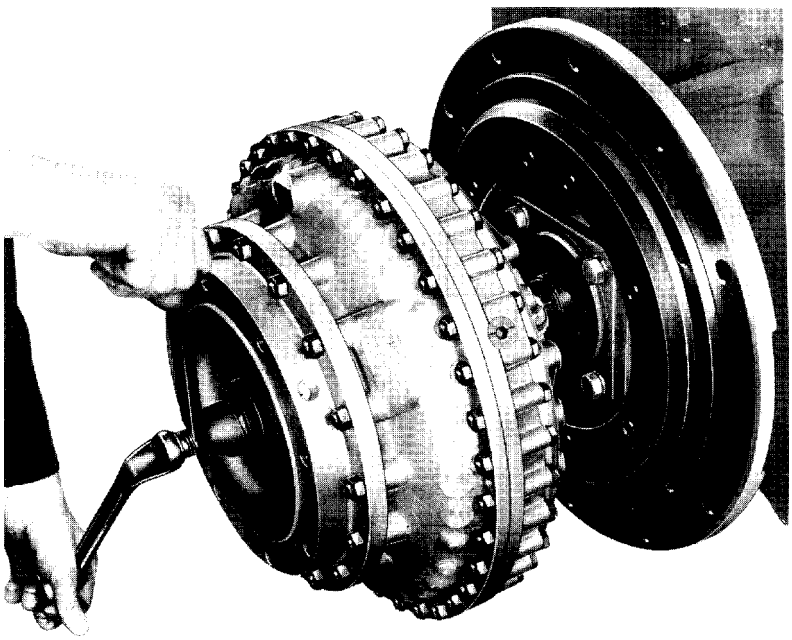
11	Threaded spindle	13	Bush
12	Washer	23	Hex. nut

The drive shaft is locked in place using the hex. nut on the threaded spindle (item 11).

The retaining washer (item 8 - Fig. 5) and sprung dowel pin are inserted into the Voith Turbo fluid coupling after the threaded spindle has been removed from the shaft end. The hex. head screw (item 5) is then screwed in with the spring washer (item 6) into the gearbox drive shaft.

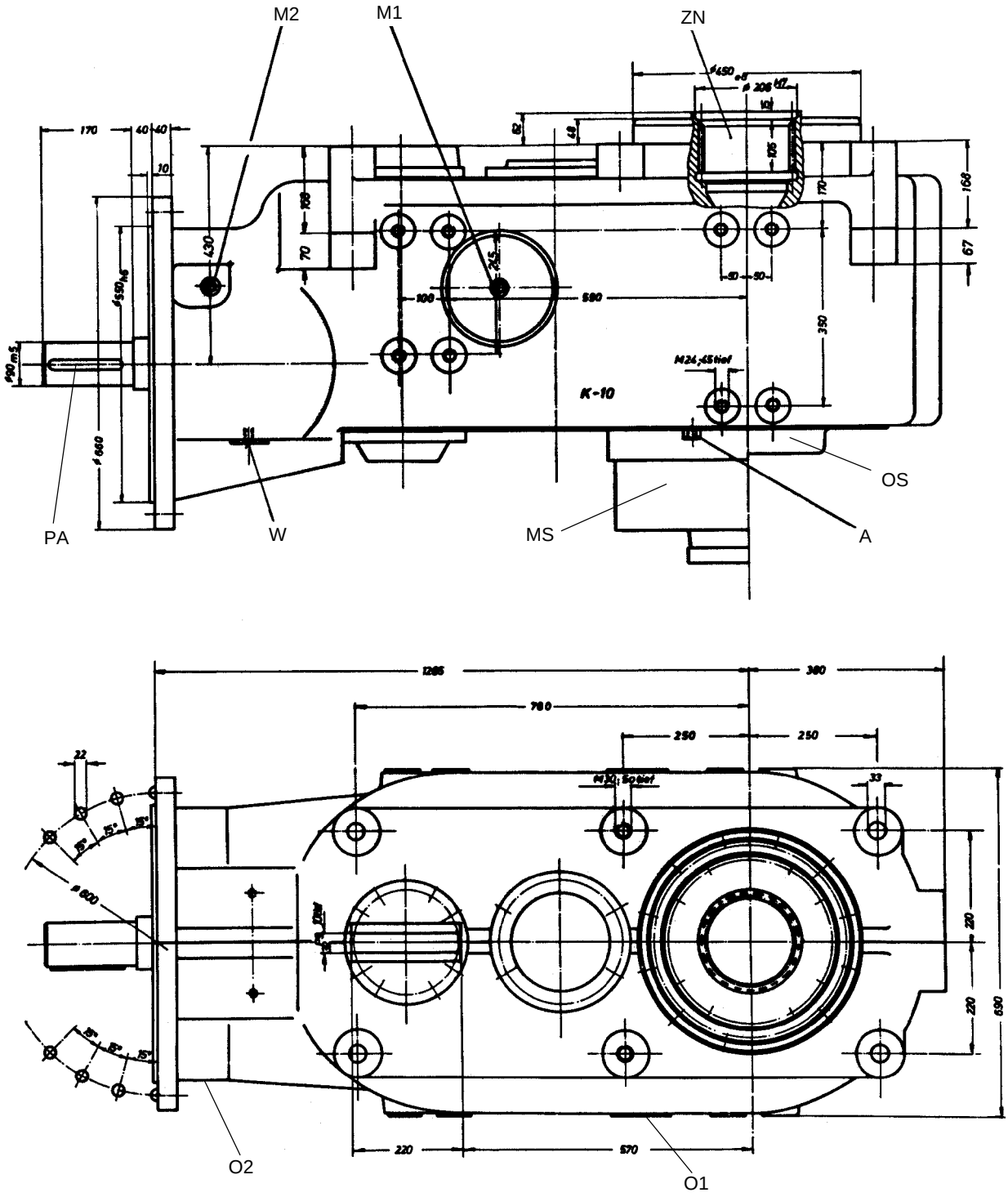
The gearbox shaft connection is thereby firmly secured to the Turbo coupling hub ready for operation.

Fig. 7: Mounting the Voith Turbo fluid coupling



5 Operation

Fig. 15: Gearbox K-10 - toothed hub 190, main dimensions, port dimensions



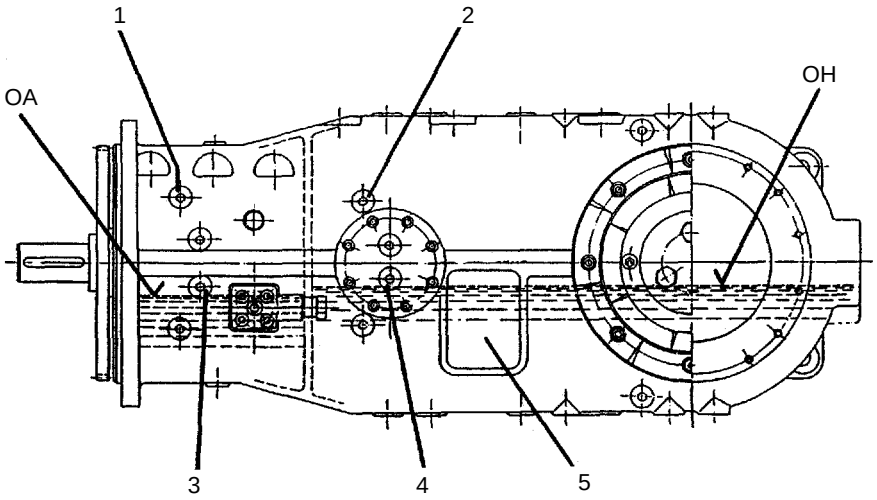
A = Breather plug
M1 = Dipstick 517 lg.
M2 = Dipstick 360 lg.
with breather plug
W = Water port
O1 = Oil drain (screw plug M 30x1.5)
O2 = Oil drain (screw plug M 30x1.5)
MS = with shearing head
OS = without shearing head
PA = Parallel key A 25x14x140
ZN = Toothed hub N 190

Oil level - Oil overflow screws

If the gearbox is operated in horizontal position in a low heading, instead of using a dipstick the oil level can be checked using the overflow screw on the side of the gearbox.
The oil chambers of the gearbox K-10 / oil chamber of the K-10.1 must be filled with oil so that it reaches the lower edge of the respective oil overflow bore.

Caution!
When using this measurement method the gearbox inclination must not exceed ±10° in conveying direction and 0º in mining direction.

Fig. 26: Checking the oil level using the overflow screw



1 Oil filling screw - Drive shaft bearings [1)]
2 Oil filling screw - Main gearbox
3 Oil overflow screw - Drive shaft bearings [1)]
4 Oil overflow screw - Main gearbox
5 Oil level sign

OA = Drive shaft bearing oil level [1)]
OH = Main gearbox oil level

1) Only applicable to gearbox K-10 with two oil chambers