

Maintenance of worm gear screw jacks of the types N, V and R with trapezoidal screw threads or with ball screw spindles, and greasing.

These are general instructions for maintenance. Specified instructions are provided together with each individual product. There are special instructions for the maintenance of products requiring oiling as well.

Safety:

All mounting bolts need to be retightened after a short period of operation. The wear of the worm gear has to be checked by measuring the thread backlash and the reversing gear backlash at the driving pin after approximately 200 hours of operation or even sooner if operating conditions are difficult. If the axial backlash with a single-start trapezoidal screw thread is more than $\frac{1}{4}$ of the thread pitch, the worm gear of the **types N and V** or the spindle nut of the **type R** has to be replaced.

Lubrication:

Worm gear screw jacks are delivered ready for operation. After approximately 50 hours of operation they have to be lubricated through the grease nipples after removing the locking screw. The spindle should be cleaned and greased at the same time. Power-on time must not exceed 30 %, even during operation.

High-performance hoist gears of the type "NH" - are equipped with lifetime lubrication.

The recirculating ball screw nut is filled with a special type of grease, which is thermally and mechanically very stable. Its high pressure durability and good adhe-

sive qualities guarantee reliable long-term lubrication.

A loss of grease in the nut can be replaced by relubricating the arbour through the lubrication nipple attached to the gear neck.

As for the **types N and V** the lifting spindle is greased through the inside of the gear case, as for the **type R** the grease has to be applied to the lifting spindle.

As for the **type R** with a ball screw spindle lubrication is effected through the nut grease nipple. Before putting the jack into operation you should make sure that the lifting spindle is greased over its entire range or that the ball screw nut is filled with grease or connected to a central lubrication system.

If the lifting spindle runs unlubricated, this will result in premature wear of the worm gear or the spindle. The worm gear screw jack should be cleaned and filled with fresh grease after approximately 700 hours of operation or after 18 months at the latest.

Recommended greases for type NM0 to NM5:

Mobilux EP2, AVIA-Lithoplex 2EP

Recommended oil for type:

NH1 to NH5 Molyduval Syntholube G220EP

Recommended greases for type NJ1 to NJ5:

Divinol Lithogrease 1500

The intervals at which greasing is necessary depend on many factors such as the degree of soiling, operating temperature, load etc. That is why the aforementioned periods can only be approximate values!

Dismantling:

Worm gear screw jacks can quite easily be dismantled.

1. As for the **types N and V** unscrew the spindle (in case of ball screw spindles you need a mounting sleeve) and remove the spindle guard if necessary. As for the **type R** remove the locking cap, unscrew the safety nut of the lifting spindle and remove the spindle.
2. Unscrew the two threaded pins that retain the bearing cap.
3. Unscrew the bearing cap using a nose wrench.

When putting back the bearing cap again, pay attention to the following: Attach the bearing cap tightly, then loosen it again, and attach the bearing cap carefully paying attention to the axial backlash and smooth operation.

Grease or oil for type

Type	NM0	NM/H1	NM/H2	NM/H3	NM/H4	NM/H5	NJ1	NJ2	NJ3	NJ4	NJ5
Grease (kg)	0,03	0,08	0,14	0,24	0,80	1,10	1,50	2,00	2,00	2,70	3,20
Oil (l)	---	0,05	0,06	0,15	0,37	0,80	---	---	---	---	---

Worm gear screw jacks should be checked for leakage after completing the maintenance services.

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