

## INSTALLATION AND REMOVAL INSTRUCTIONS FOR MAV LOCKING ASSEMBLY SERIES 3003

MAV 3003 locking element is made of two rings coupled together along a tapered surface. To fit this system, user must use a flange – designed according to his own requirements and not supplied by MAV – to transmit the thrust force of the screws to the rings. The torque capacity of this device is based on a coefficient of friction of  $\mu=0.12$  for lightly oiled tapers, shaft and hub contact areas. The screws should also be lightly oiled, see on MAV catalogue tightening torque / preload chart for DIN 912 type, based on a coefficient of friction of  $\mu=0.14$ . **Therefore, it is important NOT to use Molybdenum Disulfide (e.g., Molykote, Never-Seeze or similar lubricants) in any Locking Assembly installation.**

Recommended shaft / hub bore tolerances: see table on MAV catalogue.

Recommended shaft / hub bore surface roughness:  $Ra \leq 0.8 \mu\text{m}$ .

The hub must be provided with a centering face to allow good concentricity connection, as the Locking Assembly is not self -centering (fig.1).

### INSTALLATION

1. Make sure that all contact surfaces and screws are clean and lightly oiled.
2. Fit the parts in the following order:
  - a) Hub
  - b) Spacer item 5, if any, to bridge the undercut
  - c) Outer ring item 2 / inner ring item 1
  - d) Thrust ring item 3
  - e) Locking screws item 4
3. Tighten locking screws lightly and align hub.
4. Use torque wrench and set it approximately 5% higher than specified tightening torque (Ma). Torque screws in a crosswise pattern, using only 1/4 turns for several passes until 1/4 turns can no longer be achieved.
5. Still apply overtorque for 1-2 more passes. This is required to compensate for a system-related relaxation of locking screws since tightening of a given screw will always relax adjacent screws. Without overtorquing an infinite number of passes would be needed to reach specified tightening torque.
6. Reset torque wrench to specified torque (Ma) and check all locking screws. No screw should turn at this point, otherwise repeat step 5 for 1 or 2 more passes. It is not necessary to re-check tightening torque after equipment has been in operation.
7. Check distance "X". The thrust ring must never contact the face of the hub. The gap between thrust ring and hub face should be as uniform as possible.

### REMOVAL

Prior to initiating the following removal procedure, check to ensure that no torque or thrust loads are acting on the Locking Assembly, shaft or any mounted components.

1. Loosen all locking screws in several stages. MAV 3003 series feature self -releasing tapers, meaning the the locking element rings should release automatically. If this is not the case, light tapping is sufficient for disengagement of the locking element rings.

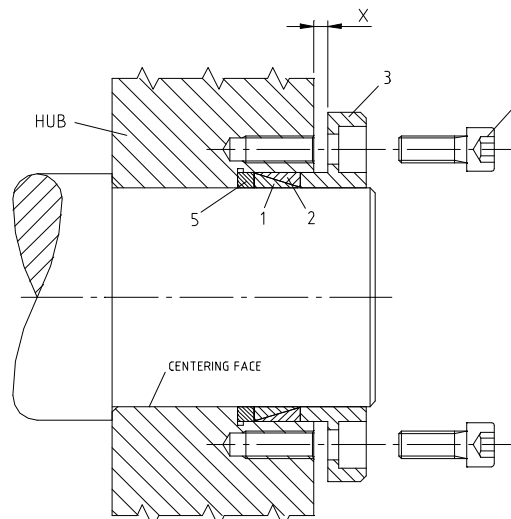


Fig. 1