

MAINTENANCE PROCEDURE FOR HSKF63 CLAMPING GROUP

SRD recommend the removal, cleaning and lubrication of HSK clamping group monthly but not less than quarterly. This is require to maintain a proper clamping and insure a good retention of the HSK tool holder.

Failure to perform this maintenance can result in system damage or personal injury. We further advise this customer to purchase a dynamometer retention gauge to verify and accurately check the drawbar retention force.

REMOVING HSK CLAMPING GROUP

1. Activate the pneumatic or hydraulic actuator to the open (unclamped) position.
2. While holding the clamping turret stationary with a 18mm open end wrench, use a 4mm T wrench to loosen the set screw inside of the clamping turret.
3. With the set screw loose, turn the clamping turret counter clockwise to remove it.
4. Use the 4mm T wrench to apply a light pressure to the brass spacer in the center of the shaft taper. This will relieve the tension on the gripper segments and make them easier to remove. Push one gripper segment inward then tilt toward the center of the spindle. This will loosen the gripper segment. Remove all gripper segments in this manner.
5. Remove the brass spacer with a pair of soft jaw needle nose pliers. Use caution when working with the brass spacer as metal can damage brass objects.

INSPECTION AND CLEANING

1. Use a lint-free towel to clean the clamping turret, brass spacer and gripper segments (six fingers). Use a long swab to clean inside the shaft taper where the clamping group rest. Use denatured alcohol to remove any excess of grease of dirty.
2. Inspect the clamping turret, brass spacer and gripper segments for wear or damaged edges. Use a flashlight to inspect inside spindle taper.

LUBRICATION

1. Apply a light coat of Metaflux grease to the bevelled edges of the clamping turret.
2. Apply a light coat of Metaflux grease to each gripper segments. Be sure to cover the entire segment especially all bevelled or notched areas.

INSTALLATION HSK CLAMPING GROUP

1. Insert the brass spacer until it rests against the spring.
2. Insert the notched end of one gripper segment.
3. Align the male notch of the brass spacer with female notch of the gripper segment.
4. Tilt the end of the gripper segment toward the center of the spindle shaft.
5. Use the 4mm T wrench to apply a light pressure to the brass spacer.
6. While applying pressure to the brass spacer, push the gripper segment in then tilt outward to lock into position. Install the remain gripper segments in that manner.
7. Screw the clamping turret clockwise onto the threaded drawbar.
8. With the spindle still in the unclamped (open) position, adjust the clamping turret until it protrudes 10.5mm from the spindle shaft face.
9. While securing the clamping turret with the 18mm open end wrench, install and tighten the center set screw to lock the clamping turret.

TESTING OF THE CLAMPING GROUP

1. Insert and eject the HSK tool holder several times to check for the proper clamping and release. If the tool holder does not clamp or unclamp properly, verify that the clamping turret has a 10.5mm protrusion from the spindle shaft face.
2. Insert the dynamometer retention gauge into the spindle taper to check the drawbar retention force. The minimum value is 9800N (2.156 pounds) force and the maximum value is 13000N (2.860 pounds) force.
3. To increase the drawbar retention force, screw the clamping turret clockwise $\frac{1}{4}$ turn and check again with the dynamometer retention gauge. MAINTENANCE PROCEDURE HSKF63 COLLET.DOC
4. If the retention force is still below the minimum value, repeat the step 3 until the retention force is within range. **Caution, do not screw the clamping turret below 10.4mm.**
5. To decrease the drawbar retention force, screw the clamping turret counter clockwise $\frac{1}{4}$ turn and check again with the dynamometer retention gauge.

6. If the retention force is still above the maximum value, repeat the step 5 until the retention force is within range. **Caution, do not screw the clamping turret above 10.7mm.**
7. Once the correct combination of clamp, unclamp and drawbar retention force has been obtained, remove the center set screw and apply blue Loctite #242 or similar to the thread of the set screw. While securing the clamping turret with 18mm wrench, insert and tighten the set screw by 4mm T wrench.
8. When this procedure has been completed, be sure to check the drawbar proximity sensors to verify they are functioning properly. The tool presence sensor must be **ON** when the tool holder is clamping properly and **OFF** when the spindle taper is empty. Use two spacers of 0.12mm and lock them between the tool holder face and spindle shaft face: the tool presence sensor must be **ON**. Use two spacers of 0.16mm and lock them between the tool holder face and spindle shaft face: the tool presence sensor must be **OFF**.
9. Please contact SRD for any technical assistance.