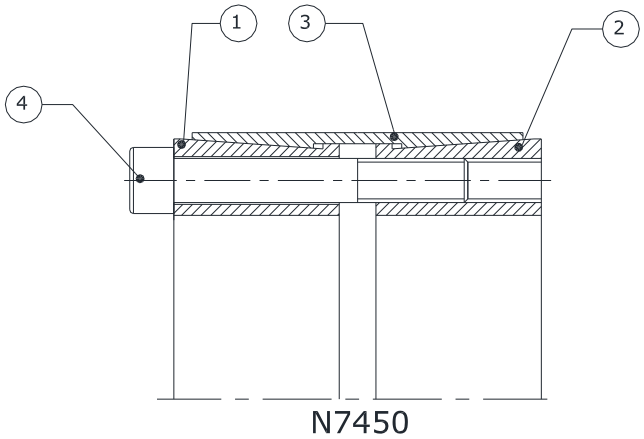
Doc. No.: N-DD-IM-LA122	**Installation & Removal Instructions of Locking Assembly** *(N7450 Model)*			
Rev : -00	Rev Date : -	Prepared by : JPS	Checked by : ABV	Page | **1**

1.) About N7450 & Function:

- N7450 Locking Assembly is internal clamping device to provide backlash free mounting of hub on shaft.Torque is transmitted by contact pressure & friction between contact surface. Condition surface and proper tightening of screw(s) is great importance.By appling torque to clamping screw,radial clamping force generated due to taper surface.The radial clamping force press outer ring into the hub bore and both nut onto the shaft and create a friction connection at respective contact surfaces.

2.) Nomenclature:



N7450

No.	Nomenclature
1	Front Nut
2	Rear Nut
3	Outer Ring
4	Clamping Srew(s)

3.) Technical Requirement for safe operation:

- A good surface finish by machine tool is sufficient. Maximum allowable surface finish: Ra max 3.2µm. Maximum permissible tolerances for hub H8 & Shaft h8.
- **Note : Don't use oil containing molybdenum sulphide or high-pressure additives or grease of any kind.**

4.) Installation:

- Before Installation be ensure that hub bore and shaft are properly clean (No dust particles).
- Apply light coat oil onto hub, shaft at where Locking assembly is to be located.
- First of all,loosen the clamping screw(s) by hand.
- Slide the locking assembly onto the shaft & into hub and after confirming the correct position of locking assembly in respect of hub then hand tighten all screws in diametrically opposed sequence
- Once the axial position of locking assembly is fixed then tighten all screws one by one in diametrically opposed sequence by using torque wrench. (As mention in Fig. 1)
- At a time tighten screws by 1/4 revolution with help of torque Wrench for several passes*(Set torque wrench for 1st pass : 1/2 Ta ; 2nd pass: Full Ta or 5% more)*. Where Ta= Tightening torque
- The tightening process is completed only when no one screw turn at specified tightening torque value.

*(**IMPORTANT:** Improper installation generates uneven tension in tightening screws and ultimately Which transfers uneven pressure distribution at shaft and hub connection, Lead to Malfunctioning of locking assembly.)*

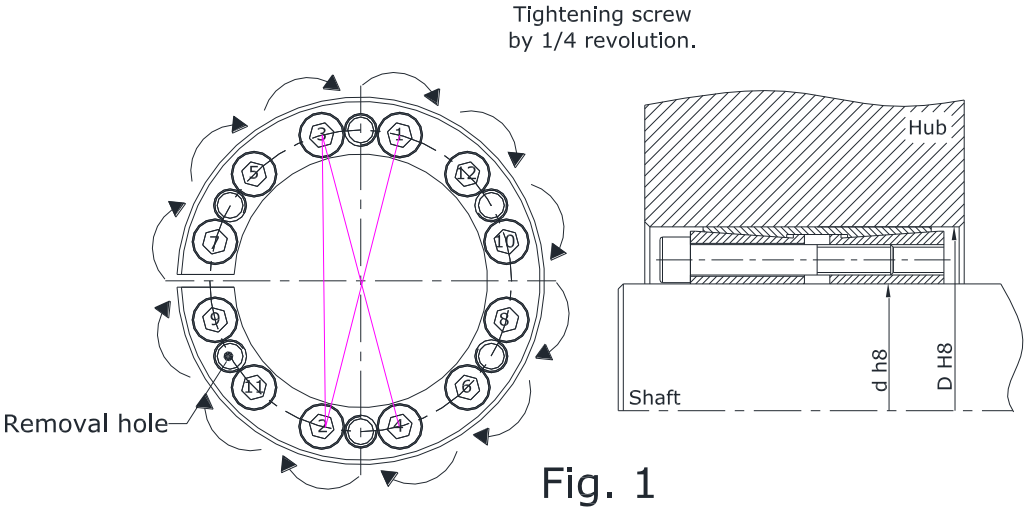


Fig. 1

Torque wrench torque	No. of Pass	Bolt Sequence	Tightening of screws
1/2 Ta	P_1, P_2, P_3, P_4,...n	1,2 ,3 ,4, ...	By 1/4 Revolution
Ta or 5% more	P_1, P_2, P_3, P_4,...n	1,2 ,3 ,4, ...	By 1/4 Revolution

Tightening Torque:
For N7450:

Screw Size	M6	M8	M10	M12	M14	M16	M20	M22
Ta(Nm)	17	41	83	145	230	355	690	930

- **Above mention value of tightening torque is maximum. Please refer drawing for actual value of tightening torque as per your application.**

5.) Removal:

- Loosen the clamping screws uniformly one by one with the help of torque wrench in diametrically opposed sequence in multiple steps by 1/4 revolution (As shown in Fig. 2) for each step to prevent

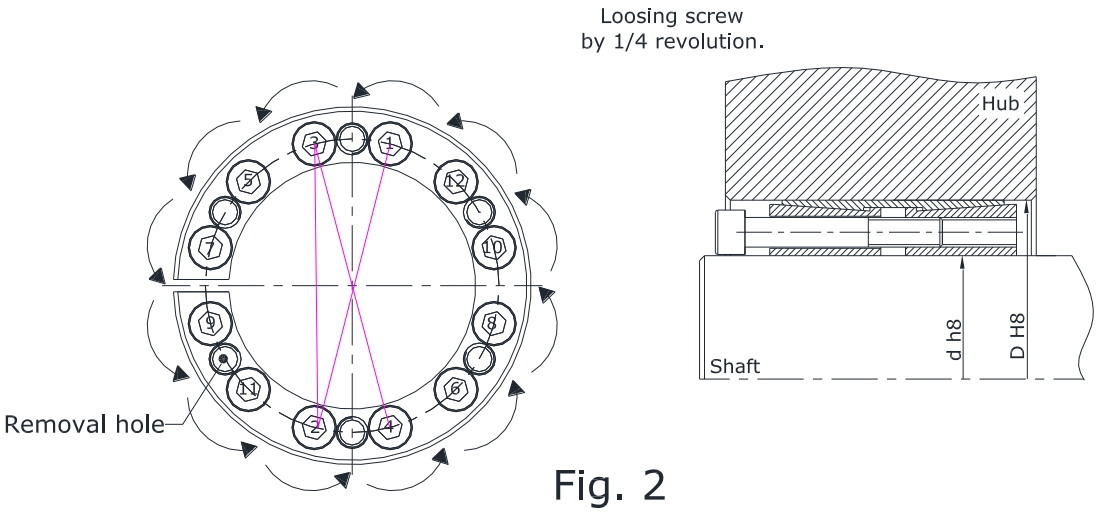


Fig. 2

misalignment of the clamping surfaces and breaking of screws. Don't loose single screw at a time, otherwise it may lead to tilt inner ring and outer ring and damage of locking assembly occurs.

- For easy jacking process,grind and apply grease on faces of threads and on threads also to reduce friction loss.
- N7450 is not self releasing. So remove all screw and transfer 6 screws into removal(As mention in Fig. 3) which have been provided on inner ring. For first pass 1/4 revolution tightening of screws into removal holes which lead to jacking of front nut and pressing on rear nut .With the help of this procedure, realesing of front nut and rear nut take place. Continue this procedure for several passes for removal of locking assembly completely.

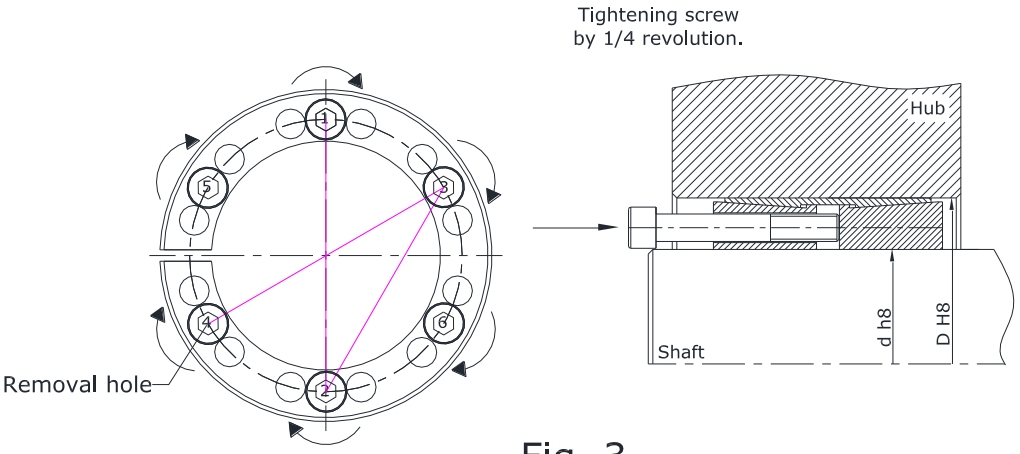


Fig. 3

6.) Reuse:

- For reuse of locking assembly, to re-lubricate front nut, rear nut, outer ring, clamping screw. If any damage found in parts of locking assembly,then replacement of whole assembly required. Before reuse of locking assembly's screws please check screws length because of during operating condition if they have been elongated so they cannot be used further so replace with same size and grade.

7.) Maintenance:

- Locking assembly N7450 is maintenance free. We therefore recommend to check tightening torque of the clamping screws every time maintenance is performed on the machine.

(All Figures shown in instructions are for easy understanding of installation and removal processes.)

8.) Storage Preservation and Instruction:

- Don't store in corrosive environment.
- Once the Locking assembly has been used then clean the all parts of it with clean cloth.
- Lubricate all parts with rust preventive oil S-VCI 415 or equivalent and assemble as it was & packed in plastic bag
- After wrapping in plastic bag, Material is packed by S-VCI 131 or equivalent rust preventive paper & store.