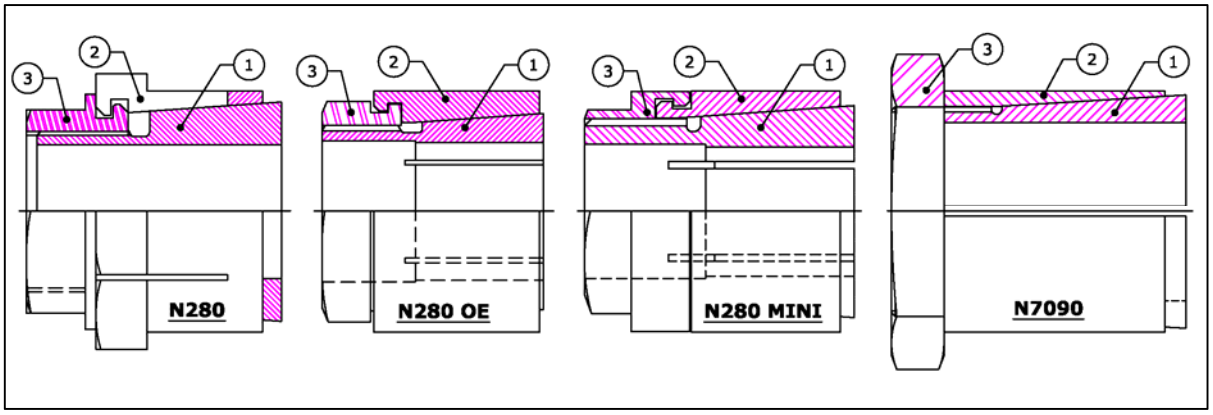
## 1.) About N280, N280 OE, N280 Mini, N7090 & Function:

- N280, N280 OE, N280 Mini, N7090 Trantorque/Locking Assemblies are internal clamping device to provide backlash free mounting of hub on shaft. Torque is transmitted by contact pressure & friction between contact surface. Surface condition and proper tightening of Hexagonal Nut is great importance. By appling torque to Hexagonal Nut, Radial clamping force generated due to taper surface.

## 2.) Nomenclature:



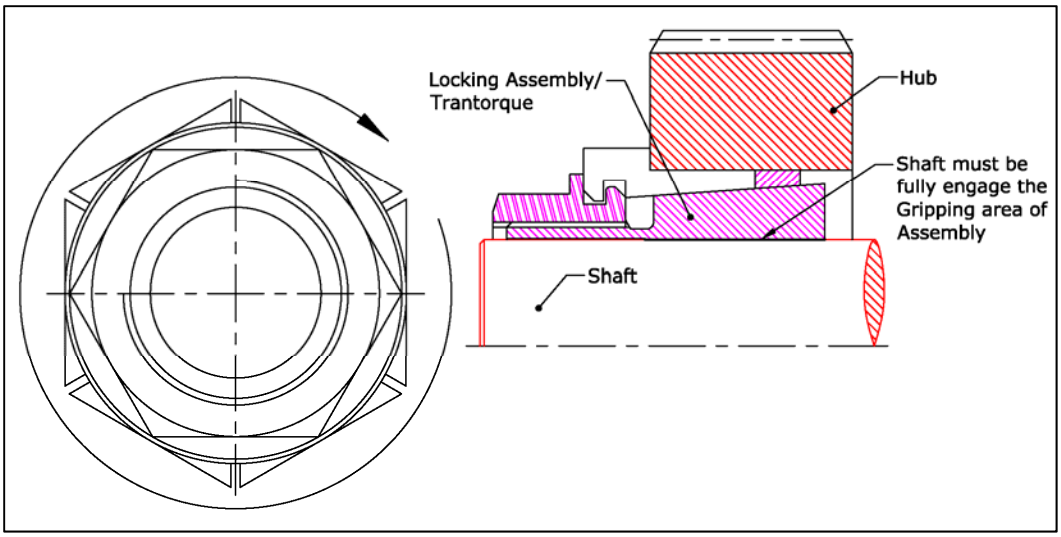

| No. | Nomenclature |
|---|---|
| 1 | Inner Ring |
| 2 | Outer Ring |
| 3 | Hexagonal Nut |

## 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 bore is H8 & Shaft is h8.
- **Note :**
    1) **Don't use oil containing molybdenum sulphide or high-pressure additives or grease of any kind.**
    2) **For Tightening of screws, Torque wrench must be used. Do not uses Allen keys otherwise required Technical parameters will not be achieved.**
    3) **During installation be ensure that Shaft and hub should be kept concentric and eliminate an effect of self weight of Hub & Shaft upon the locking assembly/Trantorque by balancing them.**

## 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/Trantorque is to be located.
- Slide the assembly onto the shaft & into hub and tight the Hexagonal Nut by Hand slightly.




- Once the axial position of assembly is fixed then tighten Hexagonal Nut by using **Torque Wrench** in clockwise direction, repeat the procedure as many time as specified untill assembly completely assemble between Shaft & Hub. (Fig.)
  (Only for N280 model: the hex flats on the Outer ring are provided for counter-torque, eleminating the need to hold the component or shaft while applying installation torque.)
- For apply TA follow the given in below table or NMTG drawing of Model & Size or NMTG Catalogue data sheet of Model.
- The assembly will have slightly moved axially along the shaft away from the nut. If axially position is critical it may be necessary to loosen the nut and reposition the assembly.

| **Model: N280** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Shaft Dia. (mm) | 15 to 19 | 20 to 25 | 28 to 32 | 34 to 38 | 40 to 42 | 45 to 50 | 55 | 60 | 65 to 70 | 75 |
| Ta (Nm) | 136 | 170 | 225 | 260 | 316 | 554 | 600 | 635 | 680 | 750 |

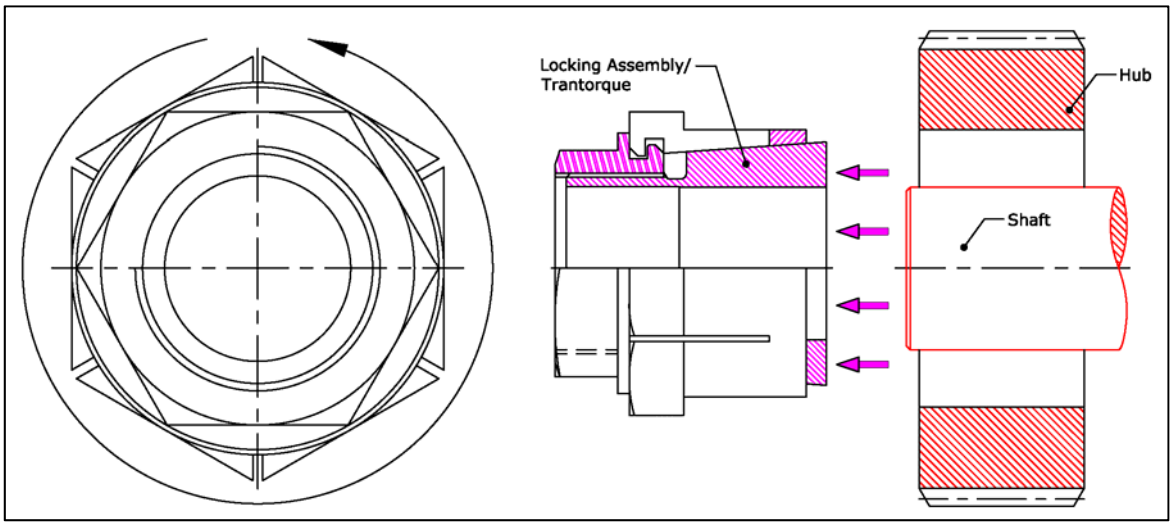
| **Model: N280 Mini** | | | | |
|---|---|---|---|---|
| Shaft Dia. (mm) | 3 to 6 | 7 to 9 | 10 to 12 | 14 to 16 |
| Ta (Nm) | 14 | 28 | 44 | 66 |

| **Model: N280 OE** | | | | | |
|---|---|---|---|---|---|
| Shaft Dia. (mm) | 17 to 19 | 20 to 22 | 24 to 25 | 28 to 30 | 32 to 35 |
| Ta (Nm) | 110 | 150 | 185 | 240 | 265 |

| **Model: N7090** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Shaft Dia. (mm) | 10 to 12 | 14 to 15 | 15.88 to 17 | 19 | 20 | 25 | 30 | 35 | 40 |
| Ta (Nm) | 19 | 25 | 27 | 30 | 32 | 42 | 47 | 57 | 64 |

## 5.) Removal:

- Loosen the Nut of Assembly by **Torque Wrench** then after loosen assembly from Shaft-Hub Connection, several turns the Nut several rounds in removal direction by hand.
  (For N280 model: loosen the nut in anticlockwise direction by holding hex flats of Outer ring gradually, till the Assembly is released from Shaft & hub.)
- After complete loosen assembly, Removal Assembly from Shaft & Hub Contact.




## 6.) Reuse:

- For reuse, re-lubricate inner ring, outer ring and Nut of Assembly. If any damage found in parts of locking assembly/ Trantorque,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 N2506 is maintenance free. We therefore recommend to check the 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 & Instruction:

- NMTG Product is supplied with an oil film as Rust & Corrosion Protection as per below instruction for Short term storage.
- This protection is renewed at regular intervals which depends on Environmental condition at Storage site. (Temperature, Atmosphere, etc.)

➢ **Maximum Storage period is 6 Months for Short-term Storage**.

Please follow Instruction for Preservation & Storage of NMTG Products:

- Once NMTG Product is used then clean all its parts with clean cloth.
- Lubricate all parts with rust preventive oil S-VCI 415 or equivalent & 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.
- Keep it in dry place and free from dust.
- Do not expose to open or corrosive environment.
- Keep away from direct Sunlight.
- Avoid Mechanical Shock & Vibration.
- Storage Temperature: -10 to +60°C.
- Relative Humidity: Maximum 95%, non-condensing.

**For Long term Storage (1 Year):**

Please follow Instruction for Preservation & Storage of NMTG Products:

- Once NMTG Product is used then clean all its parts with clean cloth.
- Lubricate all parts with rust preventive oil S-VCI 415 or equivalent & assemble as it was & packed in special Vacuum bag.
- After wrapping in Vacuum bag, Material is packed & store.
- Keep it in dry place and free from dust.
- Do not expose to open or corrosive environment.
- Keep away from direct Sunlight.
- Avoid Mechanical Shock & Vibration.
- Storage Temperature: -10 to +60°C.
- Relative Humidity: Maximum 95%, non-condensing.