

**Precision Ring Drive with Removable Pinion**

➤ ➤ ➤ Precision Ring Drives containing the removable pinion option should follow this document for servicing of the pinion and setting preload. For all other installation instructions, refer to Nexen literature 21265.

**PINION REPLACEMENT AND PRELOAD**

The PRD is delivered with the proper preload from the factory. If pinion service is required, the following will guide you through the process of pinion replacement and preload.

**Removal:**

1. To replace pinion, loosen, do not remove, the four preload screws (Item 1) as shown in Figure 1. Leave the screws just loose enough so the plate will slide.
2. Remove preload by turning the preload bolt (Item 2) clockwise as shown in Figure 1. The screw is only for pushing the pinion into gear, turning screw clockwise will not pull the pinion from the gear, it only removes the system tension. Turn screw until it bottoms out.
3. Remove the six screws (Item 3) to remove the preload adjust plate (Item 4).
4. Slide the preload plate/pinion/gearbox assembly out of tooth mesh.
5. To remove the pinion, remove the six screws (Item 5).

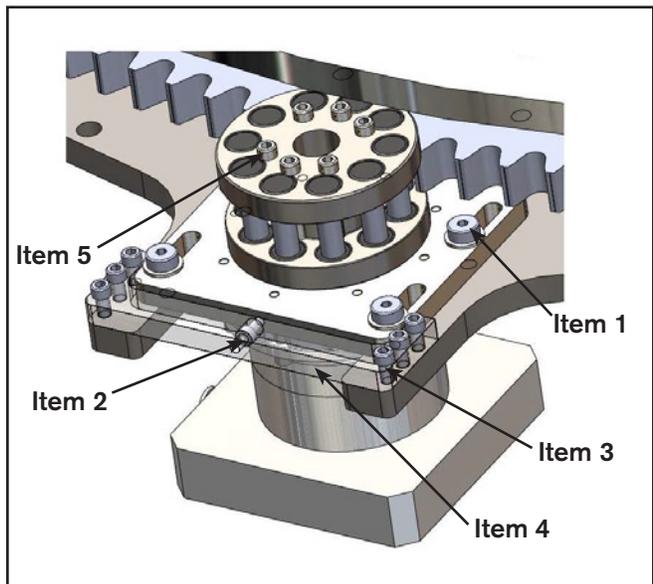


Figure 1

**Installation:**

1. Clean the gearhead mounting face and pilot bore inspecting for contaminates, burs, or surface defects.
2. Check the runout of the gearbox pilot bore and face. Both items should be less than 0.008 mm.
3. Clean the pinion flange and pilot where it will contact the gearbox.
4. Apply serviceable thread locking compound to the pinion mounting screws and install the pinion.
5. Position dial indicator on the center of the pinion rollers as shown in Figure 2 and zero it. Rotate the pinion a minimum of one complete revolution noting the runout on the top of each pin. When the pinion is properly centered the concentric runout at the center of the rollers must be less than +/- 0.030 mm.



Figure 2

6. Tighten the mounting screws to 8.5 Nm in a star pattern. Then repeat the tightening pattern to 17.5 Nm. Check pinion runout one more time to ensure it did not move during tightening.
7. Slide pinion/preloader gearbox setup into contact with the gear, do not force them together, preload will be set in the upcoming steps.

## PINION REPLACEMENT AND PRELOAD *(continued)*

8. Reinstall preload adjust plate (Item 4) of Figure 1. Make sure the head of preload screw (Item 2) aligns with the counter bore of the plate. Apply serviceable thread locking compound to screws (Item 3) and torque to 17.5 Nm.
9. Seat the pinion by rotating the preload screw counterclockwise until the pinion first makes solid contact with the gear. Do not apply excessive torque on the screw. It should be finger tight at this point.
10. Place a magnetic base dial indicator on the machine frame or PRD mounting plate, and locate its probe on the OD of the pinion flange such that it measures in the direction of preload travel.
11. Apply the preload of 0.010 – 0.015 mm by turning the preload screw (Item 2) counterclockwise. Once preload is set tighten the preload bolts (Item 1) to 40 Nm. Watch the dial indicator as the preload is set as it may move. If any changes are witnessed, remove the preload and repeat procedure.

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