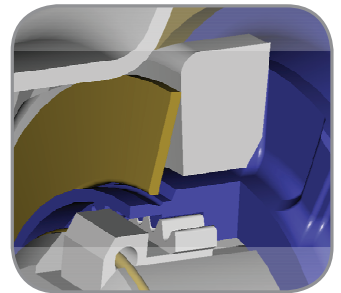
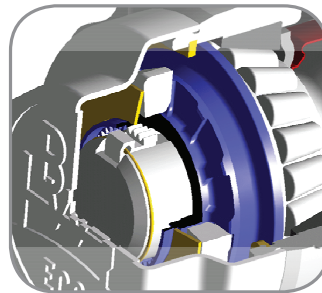


# Testing of BPW ECO Plus Torque Prevaling Axle Nuts

The axle nut on the BPW ECO Plus axle is of a torque prevailing design. The steel backing plate and the nylon reinforced hexagonal section are held together by a cupped spring washer. As the axle nut is turned and the bearing preload reaches the required setting the spring flattens out and allows the hexagonal section to turn without turning the steel part - thus preventing the bearing from being over tightened and potentially damaging the bearing rollers. It also prevents the bearings from being under tightened as the nut must be turned until the mechanism 'clicks' three times. In this way the required bearing pre-load is achieved without the need for an external torque wrench.



### To ensure the correct bearing preload remember to:

- ⦿ Ensure that the axle nut thread and bearing journals are clean and free of fretting corrosion and dirt build-up. Dirt, corrosion or damage to the axle threads or bearing journals may cause the nut to 'click' too early - preventing the correct bearing pre-load from being achieved.
- ⦿ Coat the cleaned bearing journals with the required Assembly and Protection Spray (A&P Spray) to promote correct bearing fitment and reduce fretting corrosion.
- ⦿ Rotate the hub during bearing setting - the hub should turn through three complete revolutions during the time it takes to get the axle nut to 'click' three times.
- ⦿ Test the pre-load setting of the axle nut at the first bearing change and thereafter at each major service.

Due to the nature of the environment in which the axle nut operates the continual heat build up will eventually reduce the strength of the cupped spring washer - thus reducing the strength of the set pre-load and potentially allowing for loose bearings.

### Testing Procedure:

- ⦿ Grip the steel flange of the nut in a suitable vice.
- ⦿ Set a torque wrench on 110 Nm and using the correct socket turn the hexagonal portion of the nut to check which 'clicks' first - the nut or the torque wrench.
- ⦿ If the torque wrench 'clicks' first then the axle nut is still operational and can be reused.
- ⦿ If the nut 'clicks' first then the axle nut is potentially 'worn out' and should be replaced.

**BPW Assembly and Protection (A&P) Spray is available from all BPW Genuine Spare Parts outlets.**

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