

## BEARING ADJUSTMENT

## ISSUE 22-01

For ECO, ECO Plus, ECO Plus 2 and ECO Plus 3 series axles after the first service, bearing re-adjustments are to be carried out at least annually. This allows for the continued wear of the bearings to be taken up. Failure to perform this regular maintenance can allow 'looseness' to develop in the bearings.

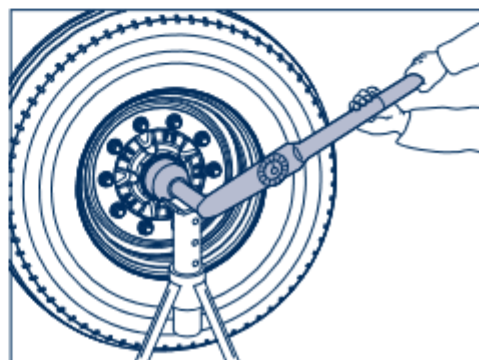
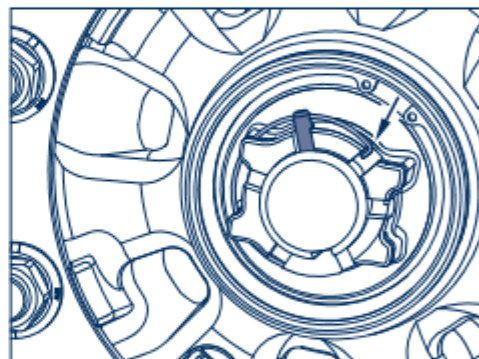
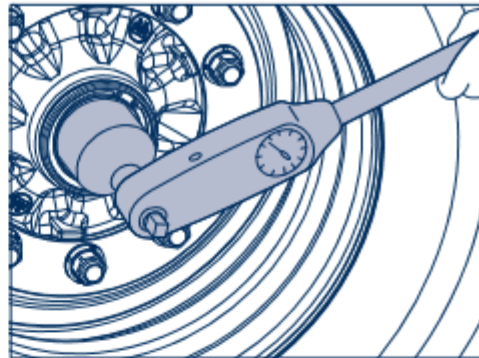
ECO Unit:

### Adjust the bearing play

1. Unscrew the cap.
2. Loosen axle nut.
3. Fasten axle nut using a torque wrench whilst rotating the ECO hub unit. It should take several turns until the tightening torque has reached 150 Nm.
  - If a normal axle nut spanner is used (vehicle tool kit), tighten the axle nut until the ECO Unit drags slightly (auxiliary solution).
4. Turn back axle nut to the next locking position (max. 15°). The asymmetrical cap of the axle nut enables the next locking position to be reached after turning back max. 15°.
5. Insert bolt and locking ring.
6. Screw on caps.

Tightening torque:

Steel / cast cap	800 Nm
Aluminium cap	350 Nm



## ECO Plus Unit:

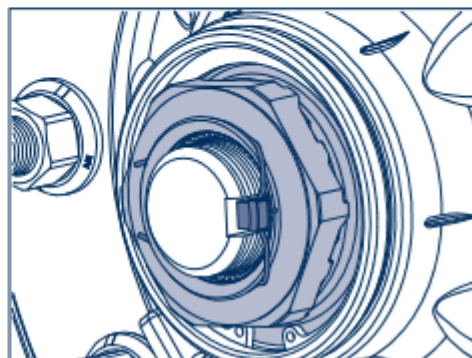
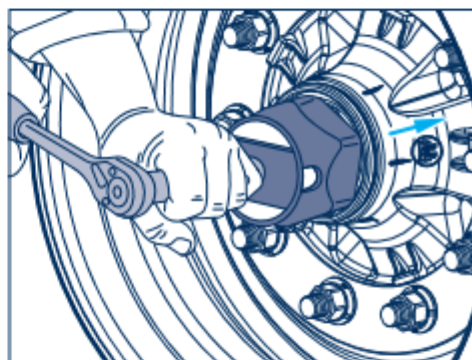
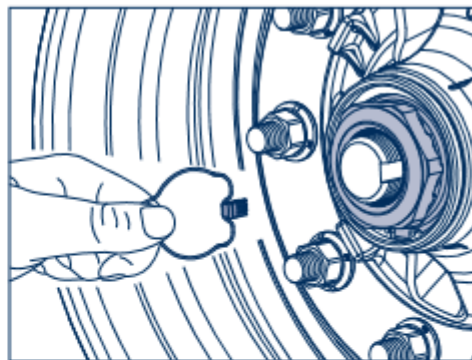
### Adjust the bearing play

1. Unscrew the cap.
2. Remove the hooked spring ring with a wedge from the axle nut.
3. Fasten axle nut using a hexagon socket spanner whilst rotating the ECO hub unit. It should take several turns until the clutch on the axle nut slips.



**Attention!**  
Do not use an impact driver.

4. Fit the retaining key in the groove between the axle stub and the nut (do not reset the axle nut).
5. For production date April 2000 onwards, insert the hooked spring ring behind the edge of the axle nut or, up to March 2000, into the thread on the axle stub.
6. Tighten the cap to 800 Nm.



## Eco Plus 2 Unit:

### Adjust the bearing play

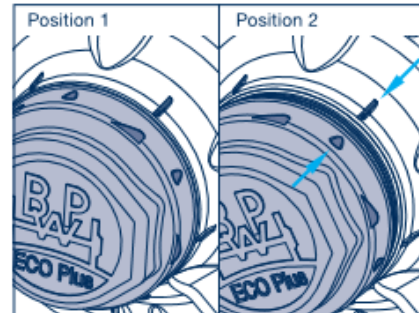
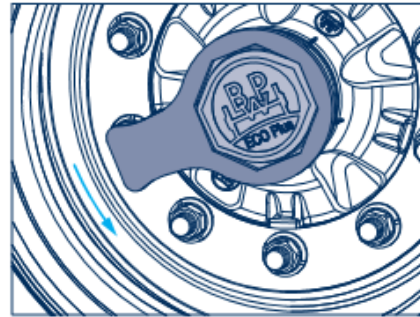
1. Unscrew the cap with a 120 mm hub cap spanner. Undo the cap by turning it anti-clockwise by approx. 30° from position 1 to position 2.

When turned further the hub cap lifts clearly away from the ECO Unit and can be removed by pulling it away.



**Attention!**  
Do not use an impact driver - bayonet lock.

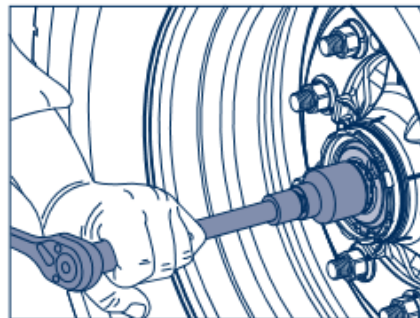
2. Remove the hooked spring ring and retaining key from the axle bolt.



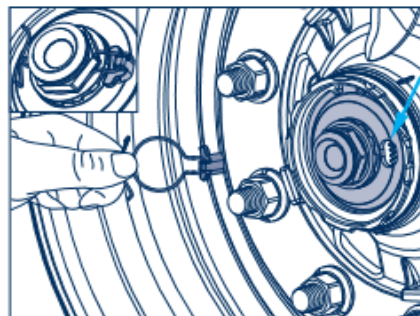
3. Use hex spanner (SW 46 mm) to fasten axle bolt whilst rotating the ECO unit. It should take several turns until the clutch on the axle bolt slips.



**Attention!**  
Do not use an impact driver.



4. Insert the retaining key into the recess in the axle bolt and the gearing of the toothed lock washer (arrow). (Do not turn back the axle bolt.)
5. Insert the hooked spring ring into the groove of the hexagon profile of the axle bolt. Make sure that the hooked spring ring assembly is correctly seated in the annular groove of the axle bolt.
6. Insert a new O-ring into the groove in the wheel hub.

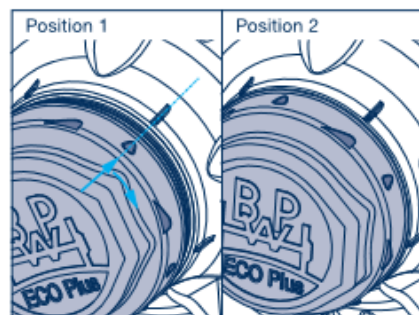


7. Apply a thin layer of BPW ECO-Li<sup>plus</sup> special longlife grease to the hubcap in the area of the O-ring contact surface and the bayonet fitting.
8. Screw on the cap with a 120 mm cap spanner.



**Attention!**  
Do not use an impact driver - bayonet lock.

Push on the hubcap, see position 1.  
Press on the hubcap and turn it by approx. 30° in a clockwise direction to lock it in place. A tight seat is provided when position 2 is reached.



## Eco Plus 3 Unit:

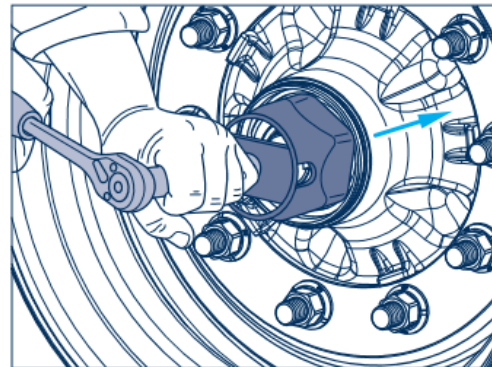
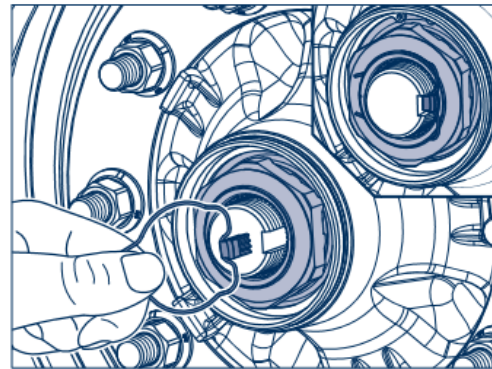
### Adjust the bearing play

1. Unscrew the cap.
2. Remove the hooked spring ring with a wedge from the axle nut.
3. Fasten axle nut using a hexagon socket spanner whilst rotating the ECO hub unit.  
It is necessary to turn the ECO Unit numerous times before the gearing slips over the axle nut.



**Attention!**  
Do not use an impact driver.

4. Fit the retaining key in the groove between the stub axle and the nut (do not reset the axle nut).
5. Insert the hooked retainer spring behind the formed edge of the axle nut.
6. Insert a new O-ring into the annular groove of the wheel hub. Apply a thin coat of BPW special long-life grease ECO-Li<sup>Plus</sup> to the O-ring contact surface and thread of the hub cap.
7. Screw on the hub cap and tighten to 350 Nm.



**DO NOT WASH / REMOVE GREASING FROM THE TORQUE PREVAILING AXLE NUT / BOLT WHEN SUPPLIED NEW.** These are pre-lubricated from factory using special long life, high temperature graphite grease to ensure correct drag between the moving parts. Removal of this lubricant will alter the torque required for adjustment.

Eco Plus Torque Prevailing Nut



Eco Plus 2 Torque Prevailing Bolt

