

# UltraHubs SPD

## FEATURES

UltraHubs SPD sport unique features like low friction external seals, Gr5 Titanium ratchet and pawls, multishaped oversized axles, Ertalite slider, Micro-Tuner quick bearing preload system, "hart coat" anodized cassette body and axle ends. Destination: X-Country use. Use them proper care and maintenance and their absolute performance will last for years. This manual gives you the information needed for setup, cleaning and basic maintenance.

## FRONT HUB MAINTENANCE (LEVEL 1)

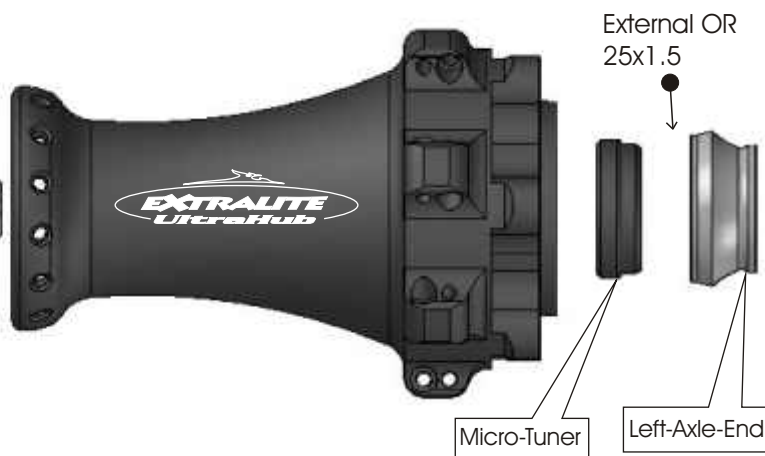
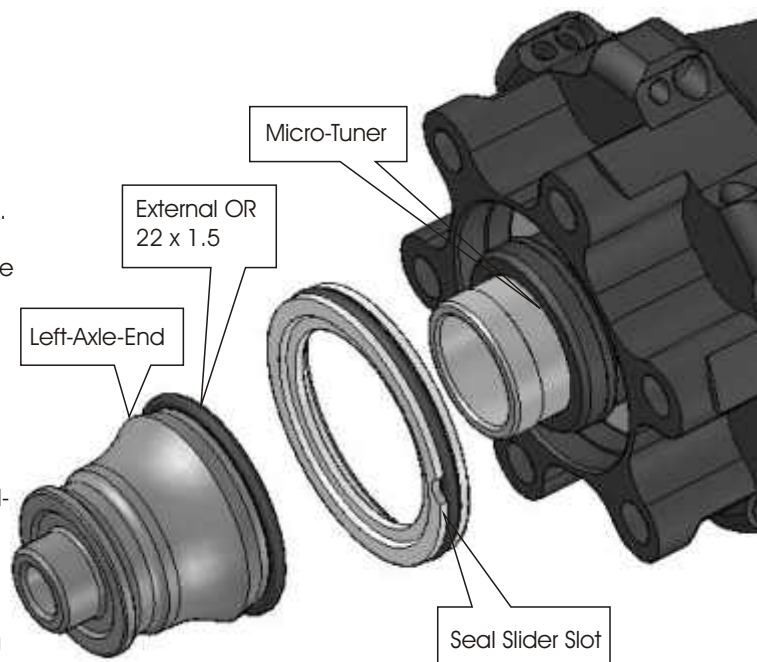
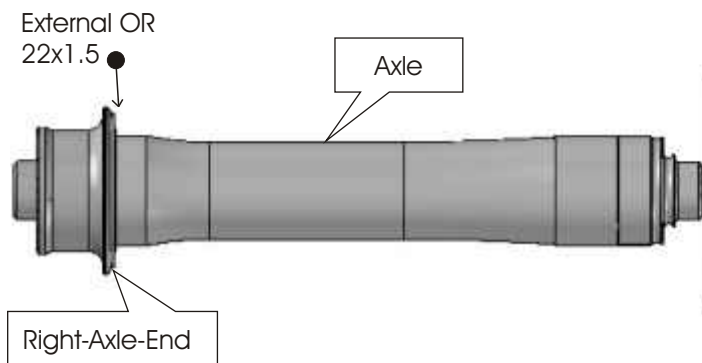
### Cleaning Seals area.

- 1) Pull and remove Left-Axle-End and External-OR (22x1.5).
- 2) Remove Seal-Slider from the Slot (use a micro screwdriver).
- 3) Fully unscrew Micro-Tuner by hand.
- 4) Pop out Axle and External-OR (25x1.5) pushing Axle from left side.
- 5) Clean all parts and hub internals (Do not use aggressive solvents).
- 6) Grease bearing contact area and Micro-Tuner thread.
- 7) Fully screw in Micro-Tuner by hand (check the thin threads engage correctly).
- 8) Pop in Left-Axle-End.
- 9) Do Preload Tuning (see Baring Set-Up chapter).
- 10) Pull and remove Left-Axle-End.
- 11) Grease Micro-Tuner / Bearing area.
- 12) Carefully insert Seal-Slider (face with slot outside).
- 13) Pop in Left-Axle-End.
- 14) Install External-OR (22x1.5 oiled) between Left-Axle-End and Seal-Slider.
- 15) Install External-OR (25x1.5 oiled) between Right-Axle-End and Bearing.

**WARNING:** Water and moisture (stagnant in seal areas or hub body) can permanently damage bearings.

### Right spoke replacement.

Follow "Cleaning Seals area" points and change damaged spoke after point 4).



## BEARING PRELOAD SET-UP (front and rear):

Bearings come pre-adjusted from the factory. Optimal preload is important for long bearing life.

### Checking

Before modifying bearing preload carefully check the complete wheel as follows:

- 1) Pull and remove Left-Axle-End and External-OR (22x1.5).
- 2) Remove Seal-Slider from the Slot (use a micro screwdriver).
- 3) Pop in Left-Axle-End
- 4) Install wheel into dropouts and normally lock skewer.
- 5) Check there is no play at rim diameter.
- 6) Leave wheel free to completely stop spinning and carefully control latest instants of movement. Stopping should be very smooth.

### Preload Tuning

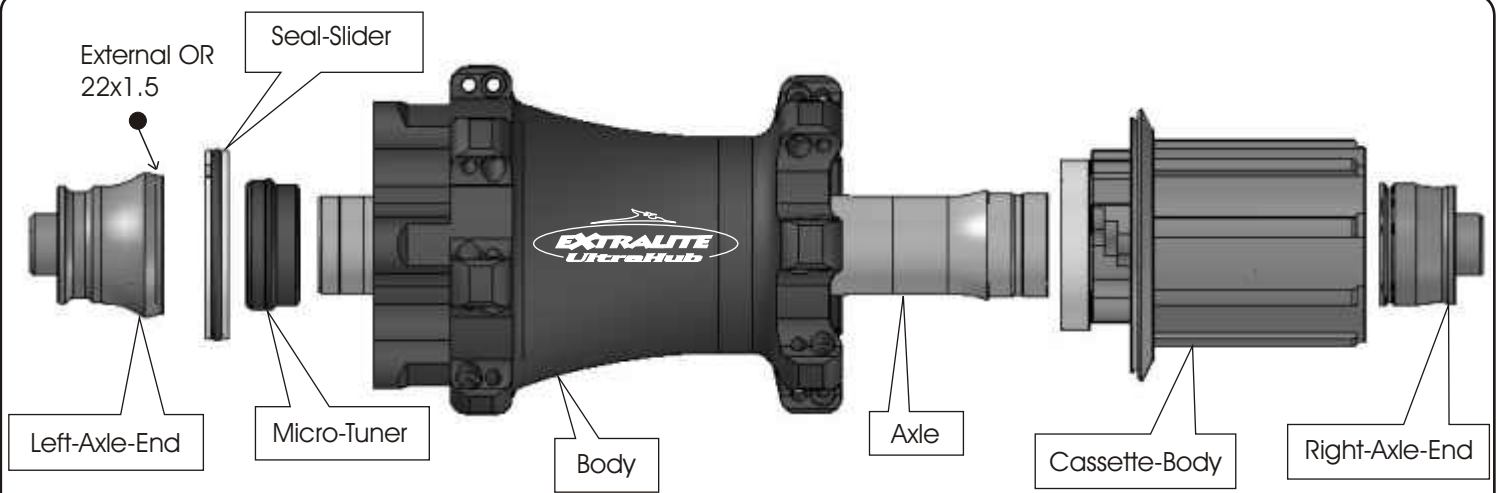
If necessary fine tune as follows; no tools are required.

- 1) Pop out Left-Axle-End.
- 2) Hold right axle end with one hand and turn Micro-Tuner fully clockwise by hand.
- 3) Unscrew Micro-Tuner for 1/8 to 1/4 of turn.
- 4) Repeat Preload Checking and eventually slightly correct it.

**Counterclockwise** to increase rolling and stopping smoothness.

**Clockwise** to reduce play.

**WARNING:** Incorrect bearing preload may seriously damage bearings/parts and decreases performance.



## REAR HUB MAINTENANCE (LEVEL 1)

### Cleaning Seal area.

- 1) Pull and remove Left-Axle-End and External-OR (22x1.5).
- 2) Remove Seal-Slider from the Slot (use a micro screwdriver).
- 3) Clean Seal area (Do not use aggressive solvents).
- 4) Grease Micro-Tuner / Bearing area.
- 5) Carefully insert Seal-Slider (face with slot outside).
- 6) Pop in Left-Axle-End.
- 7) Install External-OR (22x1.5 oiled) between Left-Axle-End and Seal-Slider.

### Complete cleaning (freewheel, seals and body).

- 1) Remove Left-Axle-End and External-OR (22x1.5) pulling it and insert a 10mm hex wrench into left axle side.
- 2) Unscrew Right-Axle-End with a 5mm hex wrench.
- 3) Pull Cassette-Body and remove it.
- 4) Remove Seal-Slider from the Slot (use a micro screwdriver).
- 5) Fully unscrew Micro-Tuner by hand.
- 6) Push axle from left side and remove it. **Warning: you may find delicate tolerance washers** (0 to 3 pcs. thin and transparent) between axle central shoulder and main hub bearing. Handle washers carefully and remind to re-install them properly. Washer thickness tunes lip-seal preload and friction.
- 7) Clean all parts (Do not use aggressive solvents).
- 8) Insert Axle: grease bearing contact areas carefully position tolerance washers (if any) between axle central shoulder and main hub bearing.
- 9) Fully screw in Micro-Tuner by hand (check the thin threads engage correctly).

- 10) Grease freewheel area with 2cc. of extra soft grease.
- 11) Inserting cassette body: check for correct spring/pawl positioning, carefully press pawls one by one and insert partially. Check pawls engagement, insert completely.
- 12) Tighten Right-Axle-End at 4-5 Nm.
- 13) Pop in Left-Axle-End.
- 14) Do Preload Tuning (see chapter).
- 15) Pull and remove Left-Axle-End.
- 16) Grease Micro-Tuner / Bearing area.
- 17) Carefully insert Seal-Slider (face with slot outside).
- 18) Pop in Left-Axle-End.
- 19) Install External-OR (22x1.5 oiled) between Left-Axle-End and Seal-Slider.

**WARNING:** 1) Water and moisture (stagnant in seal areas or hub body) can permanently damage bearings / freewheel parts.  
 2) Use only very soft density grease, Medium or hard density grease may cause un-complete pawl engagement and this will seriously damage freewheel mechanism. Chemical additives may affect physical properties of Lip-Seal, O-ring spring and Bushings.

### ULTRADISC LACING

This wheels are carefully hand built using quality DB spokes and alloy nipples with hexagonal head.

After the first few rides tension check and rim aligning might be required.

Always follow these rules to avoid damages to the alloy nipples:

- 1) Remove tyre, tube and/or flap.
- 2) Use only 5.5mm hex socket wrench to screw nipples.
- 3) Adjust nipples only from internal side of the rim (outer square tools should be only used for emergency).

Spare spoke/bearings sets are available at Extralite, please contact us for tech support.