

Greasing Procedure

Some riders may experience a creaking noise from their 12-speed MICRO SPLINE FREEHUB under heavy torque. This issue can often be resolved by a light application of grease in very specific areas. This guide will outline the procedure for grease application as well as for a thorough inspection of the FREEHUB.

Tools Required

Snap Ring Pliers

17mm Cone Wrench

SHIMANO TL-FH16 Seal Ring Installation Tool

Bench Vise with Axle-Clamping Insert such as the Park Tool AV-5 or similar

Seal Grease for FREEHUB (Y38Z98000)

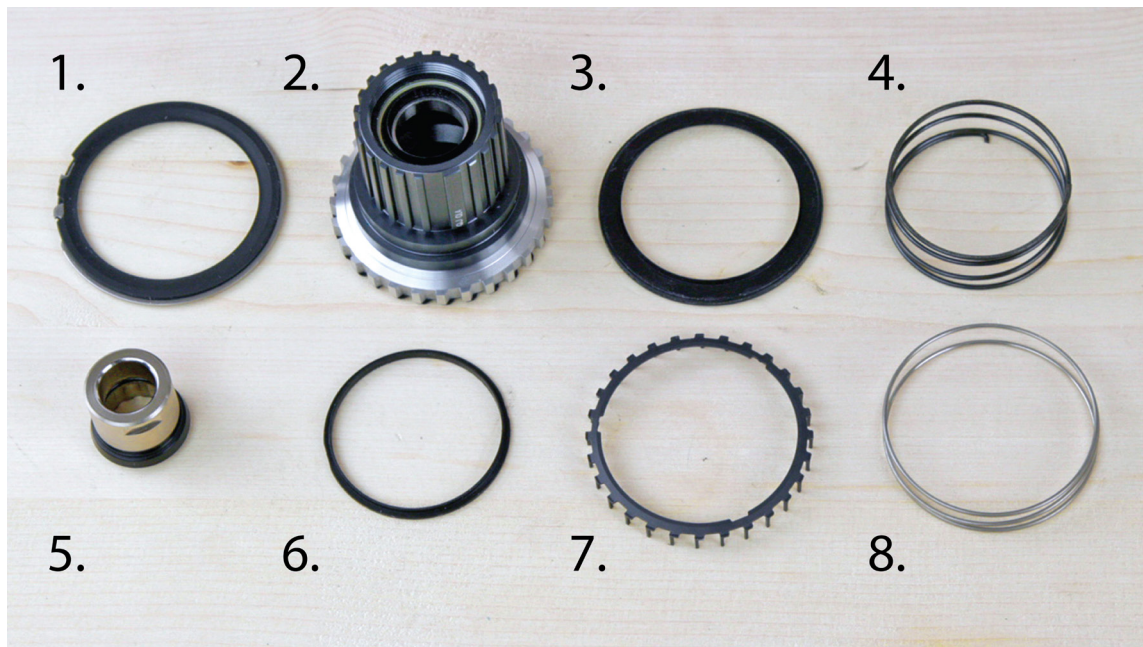
SHIMANO Premium Grease (Y04110000, Y04110010, or Y04110200)

Procedure

A note on the procedure

This procedure is identical to that of a standard service of the new 12-Speed MICRO SPLINE FREEHUBS with the addition of step 12. For further information on this process as well as a full video demonstration, refer to the S-TEC module [MICRO SPLINE HUB SERVICE](#)

Internal Parts Reference:

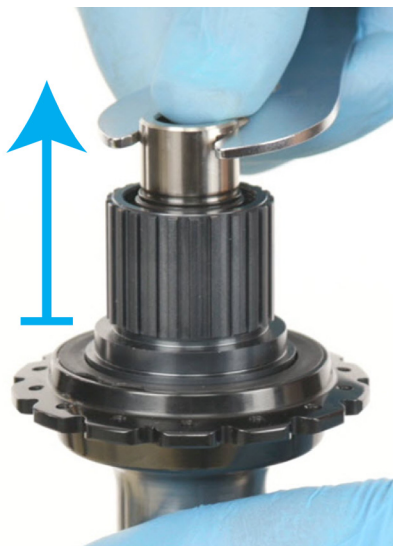


1. Snap Ring with Outer Dust Cover / 2. Freewheel Body / 3. Outer Seal Ring / 4. Coil Spring
5. Right Hand Cap / 6. Slider / 7. Spacer / 8. Spring

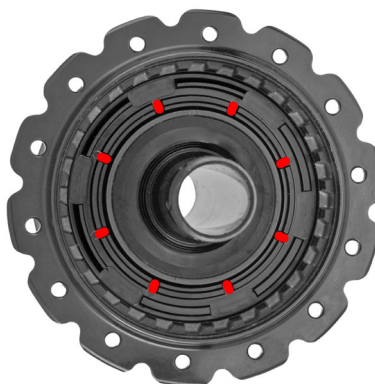
1. After removing the cassette, inspect the outer surfaces of the freewheel body for dirt and grit at the cassette interface areas and clean thoroughly – a small amount of contamination working into the wrong spot can cause a great deal of noise
2. Secure the hub in the vice with the drive side facing up

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3. Set the 17mm cone wrench on the wrench flats of the right hand cap and remove by pulling directly up
NOTE THAT THIS IS NOT A LOCKNUT AND IS NOT THREADED – DO NOT TURN THE CAP



4. Use the snap ring pliers to remove the snap ring with outer dust cover
5. Remove the freewheel body, outer seal ring, and spacer by holding the freewheel body and pulling straight up – if necessary, use a clean rag to get a better grip
6. Remove any shims (XTR models only), the slider, the smaller diameter spring coil spring, and the larger diameter spring – inspect for damage and replace if necessary – note that the slider may have adhered to the underside of the freewheel body.
7. Remove the seal ring and spacer from the freewheel body and inspect for damage – replace as necessary
8. Check the sealed bearings in the freewheel body for excessive play, roughness, or corrosion – if the bearings are compromised, replace the entire freewheel body
9. Check the freewheel body by setting the freewheel body on a bench with the ratchet mechanism facing upward and rotating the mechanism clockwise while holding the MICRO SPLINE interface in place – if it turns freely or skips clockwise, pull up while turning clockwise to reset the ratchet mechanism
10. Thoroughly clean the serrations of the hub shell and the freehub body. Reinstall the large spring, and then the coil spring – make sure that the coil spring sits in the groove and the hooked end of the spring is captured in one of the eight notches



11. Set the slider on top of the coil spring with the wider surface facing up and the lip captured inside the diameter of the coil spring

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GREASING PROCEDURE FOR SHIMANO MICRO SPLINE FACE RATCHET FREEHUBS

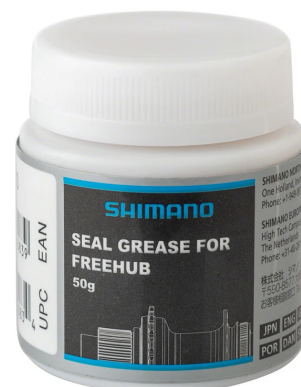
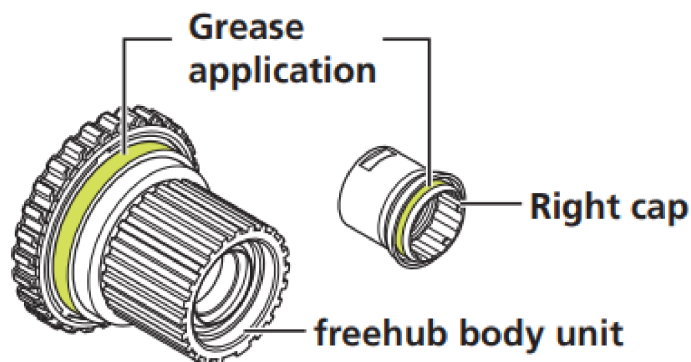
12. Use SHIMANO Premium Grease to lubricate the serrations of the freehub body, then install the spacer onto the freehub body, making certain that the spacer is rotated counter-clockwise when viewed from the top so that the protrusions are against the splines on the freewheel body



13. Install the freewheel body and spacer into the hub shell – be gentle and take your time, as the spacer can be very difficult to reinstall properly and is easily damaged
14. Once the freehub body is installed into the hub shell, ensure that the Premium Grease is spread evenly across the top of the spacer. Avoid applying Premium Grease to the sides of the freehub body.



15. Apply Seal Grease for FREEHUB to the seal portion of the drive side cap, then reinstall it by carefully aligning the protrusions inside the cap with the grooves on the axle and pressing it on
16. Apply Seal Grease for FREEHUB to the section of the freewheel body that contacts the seal and on the inner surface of the outer seal where it contacts the freewheel body



17. Use the FL-FH16 to install the seal ring with the lip facing upwards
18. Install the snap ring and outer dust seal