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# Mounting & Maintenance

## OSPW X

For Shimano XT/XTR 12 speed



**CERAMICSPEED**

# Maintenance

No set of rules can be made for how often your Oversized Pulley Wheels are to be maintained. Maintenance frequency depends on the weather conditions that you are riding in.

A worn chain will increase the wear on the pulley wheels significantly, so make sure that you change your chain before it is completely worn out. Under normal conditions, we recommend that you service the Oversized Pulley Wheels when you have ridden under wet conditions, washed your bike or each time you lubricate the chain. For normal maintenance, add a drop of oil into the lubrication points (see the page 3) for optimal performance. Make sure to position the OSPW X System horizontally to ensure that the oil reaches the Oversized Pulley Wheel bearings.

We recommend the use of CeramicSpeed Oil on the OSPW X System. This can be purchased from the CeramicSpeed dealers worldwide or from our webshop. Watch our maintenance video on [ceramicspeed.com](http://ceramicspeed.com) in the Support section.

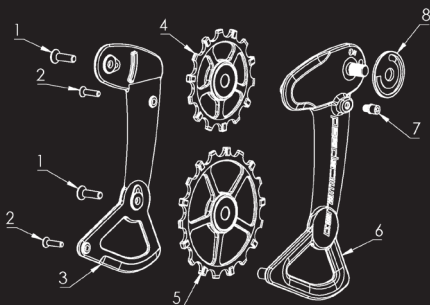
**When travelling**, your OSPW X System will not fit in the bike travelling bag. We recommend that you dismount the whole rear derailleur and pack it aside.

## Extended Maintenance

Approximately once every half a year we recommend that you perform an extended maintenance. In this case, you should dismount the Oversized Pulley Wheels from the cage, remove the seals from both sides and clean all parts in a shaker with degreaser. After cleaning, dry the components off, put two drops of oil onto the CeramicSpeed Balls, place the seals back on and remount the Oversized Pulley Wheels. When dismounting the cage plates, you will need a 2.5 mm Allen Key for the pulley wheel bolts (see page 3) and a 2 mm Allen key for the tower bolts. To remount the screws, tighten the pulley wheel screws up to a max torque of 1 Nm and the tower bolts up to 0.3 Nm. For this, a torque tool is recommended. If you're riding in wet and muddy conditions, we recommend you to perform an extended maintenance more frequently and replace oil with All Round Grease for better protection.

# Mounting the CeramicSpeed Oversized Pulley Wheel X System for Shimano XT/XTR

Pos.	Description
1	Pulley wheel bolts
2	Tower bolts
3	Back cage plate
4	Upper pulley
5	Lower pulley
6	Front cage
7	Rotation stop screw
8	Cage-bushing



## ATTENTION:

For a good result after installation, ensure that the existing setup is performing/shifting correctly before mounting the OSPW X. A common cause of imperfect shifting is poor shift cable/housing setup from the shifter to the derailleur, misalignment of the derailleur hanger, or poor b-limit adjustment.

## Tools required

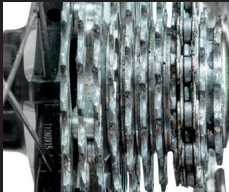
For the installation of your new CeramicSpeed Oversized Pulley Wheel X for Shimano XT/XTR you will need the following tools:

- A: 2mm Allen key
- B: 2,5mm Allen key
- C: 4mm Allen key
- D: 5mm Allen key
- E: Chain Tool
- F: Phillips screwdriver
- G: Torque wrench 0,3 & 1 Nm
- H: Torque wrench 3 & 6 Nm

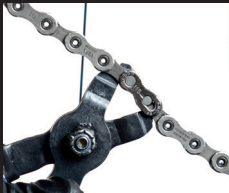


# Mounting Manual

To ensure the very best in riding performance it is vital that your new OSPW X System is mounted correctly. Follow these instructions to install your OSPW X System for Shimano XT/XTR:



1. Begin with your bike mounted in a stand. Remove the rear wheel.



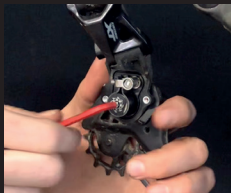
2. Remove your chain by using the proper chain tool.



3. Next, shift the derailleur up, past the cable routing mount. Using one hand to rotate the front pulley cage plate (A) downward, locate and remove the Phillips head rotation stop screw (B). Carefully allow the pulley cage spring to unwind, releasing the spring tension. Your derailleur cage will appear to be upside down.



4. Remove the 3 screws on the clutch cover with a 2mm Allen Key. Please note the rubber gasket that sits between the clutch cover and derailleur body. Carefully set the cover, gasket, and screws aside as they will be reinstalled.



5. Hold the original cage and loosen the main mounting screw inside the clutch with a 4mm Allen key and remove the original cage. Take care that all the clutch parts remains in the original position, flat against the derailleur body. Once the cage is free, be careful to not drop the pulley spring and/or plastic spacer.



6. Remove the aluminium washer, spring and plastic dust cover from the Shimano cage and set it aside. The end of the spring is hooked to lock into the pulley cage, you may need to wiggle the spring to release the hook from the cage.



7. Unbox the OSPW X and remove the rotation stop screw with a 2,5mm Allen key (to be reinstalled once the cage is installed).



8. For Shimano XT derailleurs mount the black alloy spacer between the cage and alloy washer first. The groove for the spring should face out and be visible once placed on the OSPW X cage.

For Shimano XTR derailleurs, move onto the next step.



9. Place the factory alloy washer, spring and plastic cover onto the face of the OSPW X cage. Make sure that the plastic dust cover is facing the same way on the OSPW X cage as on the Shimano assembly. The flat face should sit against the OSPW X cage.



10. Insert the hooked end of the spring into the hole marked L. The plastic dust cover must be placed over the spring and aligned in the right position when mounting the OSPW cage to the derailleur body.

The H (high) spring tension setting may be selected if riding exceptionally rough terrain, or if chain retention is an issue.



11. To install the cage onto the derailleur, rotate the derailleur body back, and position the cage facing forward. Align the OSPW X cage pivot screw, tension spring and plastic dust cover with the square shaped slot of the derailleur body and insert it until it sits flush. Rotate the system back and forth to ensure smooth movement and spring engagement.



12. Carefully align the male threads of the cage with the female threads in the derailleur, and slowly thread the mounting bolt within the clutch with a 4mm Allen to avoid cross threading. Hold the OSPW X cage still and tighten the main mounting bolt inside the clutch to 6 Nm.

Take care that the clutch remains in the original position during the installation.



13. Rotate the cage counter-clockwise seen from the face of the derailleur (up first and then backwards) to increase the spring tension. Using a 2,5mm Allen key, install the CeramicSpeed stop screw to a torque of 3Nm.



- 14.** Position the clutch cover in place over the clutch, taking careful note of the gasket and install the three screws with a 2mm Allen Key to 1 Nm.

- 15.** Your new OSPW X System is now installed.

Shift the derailleur to the bottom, and install the rear wheel. Re-install the chain and adjust the length according to the guide below. In many cases the existing chain length may be reused.

Confirm the upper and lower limits, and adjust the gears until they are appropriately aligned with the cassette sprockets.

## Chain length

Recommendation on upper pulley clearance on the largest cog (adjusting of B-limit) = 10-15mm depending on cassette size.

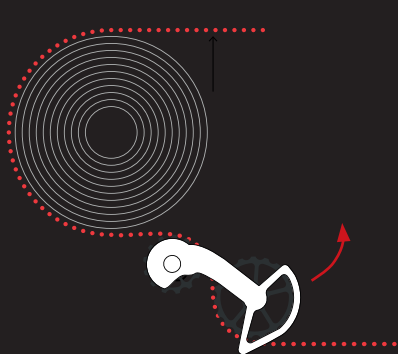


STEP 1: Place the chain around the front chain ring, smallest cog, and through the derailleur. To find the correct chain length, pull the two chain ends together, just as you would when needing to cut a chain to length. The lower part of the cage should start to move downwards, away from the cassette, as referenced in the second image.



STEP 2: When tension is applied on the chain and the OSPW X System appears to be aligned as the diagram above, the chain needs to be cut (1 link shorter than step 1) and connected by the required amount of links in order to achieve sufficient tension in this gear combination (always the small cog on the cassette).





**STEP 3:** With the chain now cut to length it is important to test the clearance of the OSPW X System when the rear derailleur is set in the largest cog on the cassette. Just as the arrow indicates the cage should be able to rotate counter clockwise. It is important that there is some clearance between the upper pulley wheel of the OSPW X System and the largest cog on the cassette. If you find the clearance is not enough, adjust the B-tension accordingly.