

# 11T Pulleys for 105 R7100 & Ultegra R8100 | 12 Speed

## Pack Contents:

- 2x 11T CNC Machined 7075-T6 Pulley Wheels

## 1. Pre-Installation Check:

- Ensure the derailleur hanger is straight and aligned with the cassette sprockets.
- Check for excessive wear on the derailleur, chain and cassette, replacing any worn components before fitting new JRC pulley wheels.
- Inspect the pulley wheel cage for any signs of damage or bending.
- Ensure you have the required tools: allen wrenches, torque wrench and thread lock.

## 2. Original Pulley Wheel Removal:

- Note the chain direction before you remove the original pulley wheels.
- Remove and retain the original bolts for use with the new JRC pulleys.

## 3. JRC Pulley Wheel Installation:

- Place the JRC pulley wheels into the corresponding position on the derailleur cage.
- Insert the retained original pulley bolts, threading them lightly into position to avoid cross-threading.
- JRC 11T Pulleys are unidirectional, with no specific top/bottom position or forward/backward rotation.

## 4. Bolt Tightening:

- Tighten the pulley wheels to the manufacturer's recommended torque: Shimano's most recent manuals recommend 2.5Nm - 5Nm torque for pulley wheel bolts on all 12 speed Di2 Road Systems.
- Reapply thread lock to the bolts before tightening. Follow the instructions on the thread lock product for proper application.
- Double-check the seating of the pulleys to ensure they can rotate freely and are secure.

## 5. Pre-Ride Check:

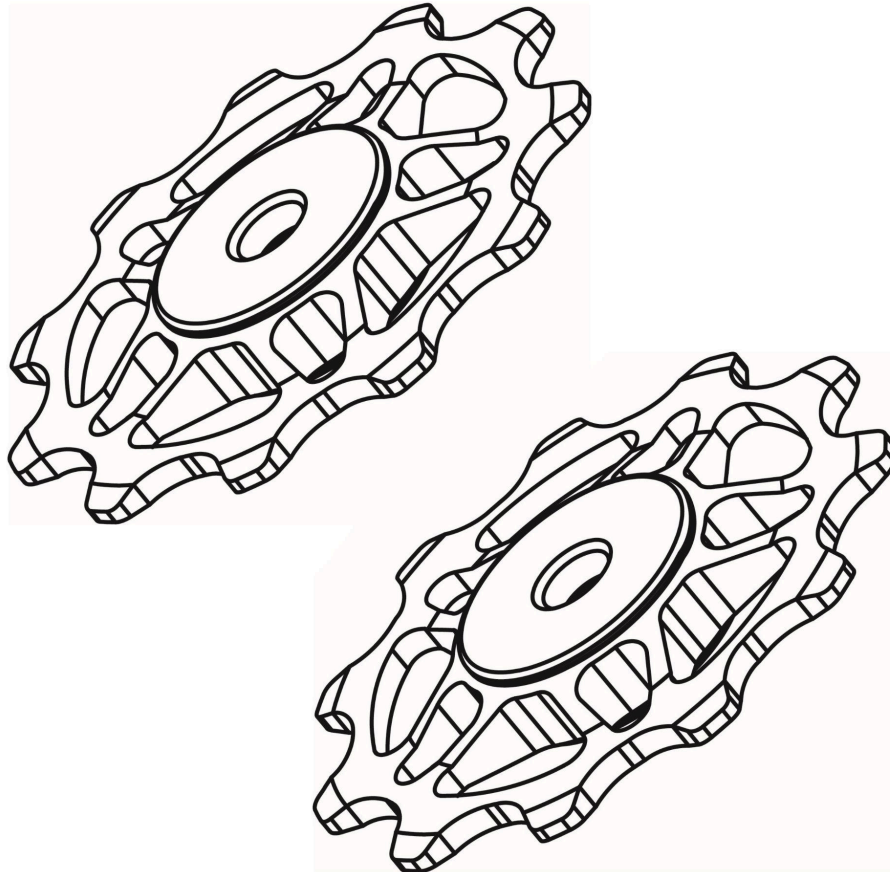
- Before test riding the bike outside, test the gears in a workstand.
- Cycle through all of the gears to ensure they are functioning correctly.
- Check and adjust the indexing if necessary to ensure smooth function of each of the gears before riding.

## Troubleshooting:

- If the chain is overriding the pulleys or not tracking correctly, check for:
  - Misaligned Derailleur hanger
  - Bent Derailleur cage
- If the chain is skipping over the pulley wheels or is excessively noisy, confirm that the cassette and chainrings are in good condition. Worn components may require replacement.

**Important Note:**

- 7075-T6 jockey wheels are more precise than OEM plastic pulleys and may reveal some derailleur misalignment.
- If you encounter mechanical difficulties, it is recommended that a suitably certified professional bike mechanic is consulted for assistance.



## Caring for your Pulley Wheels

Pulley wheels need to be able to spin with the only resistance evident offered by the lubricant inside the bearing.

They are, however, in a position on the bike where they are subject to considerable exposure to the elements if you ride outside - especially MTB or CX. They do a lot of unnoticed work tensioning and guiding the chain as you ride and shift.

In this position they are not only subject to dirt and water but are also sometimes neglected. Water and mud ingress over time is likely to lead to bearing damage inside the pulley wheels. The best way to avoid this and potential damage to the pulley wheels occurring as a result is MAINTENANCE. This is best divided into two parts: ROUTINE MAINTENANCE and OVERHAUL.

So: there are two ways to think about maintaining your pulley wheels - an 'every second ride' routine oiling - just oil the bearing around the bearing cap after wiping the dirt off. A wet chain lube such as Finish Line and/or White Lightening will be perfect for this and keep things running smoothly. Once this procedure is done regularly, your pulley wheels will remain in good condition, spin freely and function as they should to guide and tension the chain.

Much less often - perhaps once or twice a year depending on the conditions you ride in, the need to do a thorough clean and overhaul may arise where you will have to remove the pulley wheels to access the bearing caps and remove the bearing seals (noting carefully how the chain wraps around them beforehand).

Once removed from the derailleur remove the caps using a thin, flat non-metallic tool to remove the cap without damaging it. This will reveal the bearing and its rubber seal - this will most likely be coloured black on the JRC pulley wheels. This can be gently removed using very little force with the tip of a craft knife blade or similar - use goggles and gloves to do this. Slip the tip of the blade under either the internal or external edge of the seal and prise it off carefully. After wiping the pulley wheels clean and rinsing the bearing with degreaser, let it dry. Replace the seal on one side only (this stops the fresh oil from simply pouring out of the other side), add the new oil and replace the cap. Repeat the process for the other pulley wheel.

The pulley wheels should spin freely and only have the resistance of the lubricant inside.