

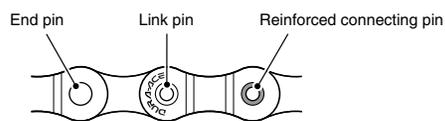
General Safety Information

WARNING – To avoid serious injuries:

- Use neutral detergent to clean the chain. Do not use alkali-based or acid-based detergents such as rust cleaners, as they may result in damage and/or failure of the chain.
- Use the reinforced connecting pin only for connecting the narrow type of chain.
- There are two different types of reinforced connecting pins available. Be sure to check the table below before selecting which pin to use.

Chain	Reinforced connecting pin	Chain tool	Sprocket
9-speed super narrow chain such as CN-7701/CN-HG93	Silver  6.5 mm	TL-CN31/ TL-CN22	CS-S500 18T/20T (t = 2.0 mm)
8-/7-/6-speed narrow chain such as CN-HG50/CN-IG51	Black  7.1 mm	TL-CN31/ TL-CN22 and TL-CN30/ TL-CN21	16T – 23T (t = 2.3 mm)

- If connecting pins other than reinforced connecting pins are used, or if a reinforced connecting pin or tool which is not suitable for that type of chain is used, sufficient connection force may not be obtained, which could cause the chain to break or fall off.
- If it is necessary to adjust the length of the chain due to a change in the number of sprocket teeth, make the cut at some other place than the place where the chain has been joined using a reinforced connecting pin or an end pin.
The chain will be damaged if it is cut at a place where it has been joined with a reinforced connecting pin or an end pin.



- Check that the tension of the chain is correct and that the chain is not damaged.
If the tension is too weak or the chain is damaged, the chain should be replaced. If this is not done, the chain may break and cause serious injury.
- **Obtain and read the service instructions carefully prior to installing the parts.** Loose, worn, or damaged parts may cause serious injury to the rider.
We strongly recommend only using genuine Shimano replacement parts.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

NOTE:

Applicable hubs	Internal 7-speed/8-speed
Applicable sprockets	16T – 23T
Applicable dropout width	4 – 9 mm
Applicable dropout shape	Vertical

- This product cannot be used with coaster brake-type products.
- This product is for single front chainwheels only.
- Periodically clean the chain tensioner and lubricate the pulley.
- If there is a large amount of play in the pulley and an abnormal amount of noise is generated while riding, replace the pulley unit.
- Do not disassemble the pulley unit.
- If the tension applied is too strong, noise may be generated while riding.
- If the chain becomes elongated and excessive looseness occurs, readjust the chain tension.
- Parts are not guaranteed against natural wear or deterioration resulting from normal use.
- For any questions regarding methods of handling or maintenance, please contact the place of purchase.

SI-50F0A-002

CT-S510

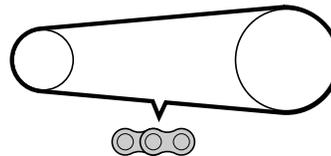
Chain Tensioner

Technical Service Instructions

Be sure to read these service instructions in conjunction with the service instructions for the internal 7-speed/8-speed hubs before use.

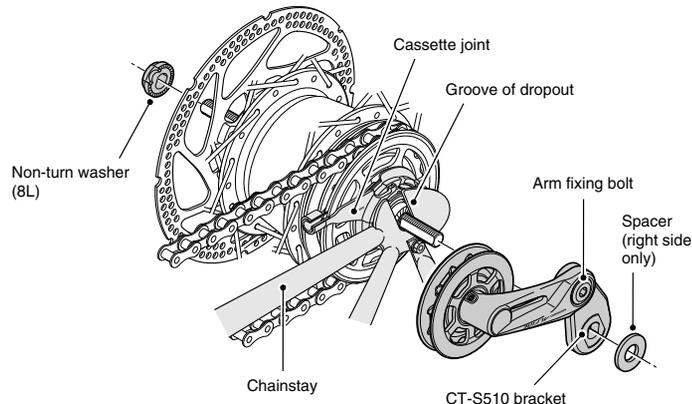
Chain length

Mount the chain onto the chainring and the sprocket, and then adjust the length of the chain by adding two links, or four links at a maximum.



Installation to the frame

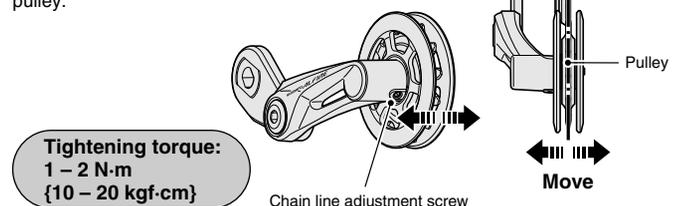
1. Mount the chain onto the sprocket, and then set the hub axle into the dropouts.
2. Place the CT-S510 bracket onto the right side of the hub axle, and place the non-turn washer onto the left side of the hub axle. At this time, turn the cassette joint so that the projecting parts of the bracket and non-turn washer fit into the grooves of the dropouts. If this is done, the cassette joint can be installed so that it is almost parallel to the chainstay.
(Loosen the arm fixing bolt at this time so that the pulley does not interfere with other parts such as the frame.)



3. Place the accessory 2 mm spacer onto the right side (outside of the chain tensioner), and then secure the wheel to the frame with the cap nuts.
(Recommended tightening torque: 30 – 45 N·m {300 – 450 kgf·cm})

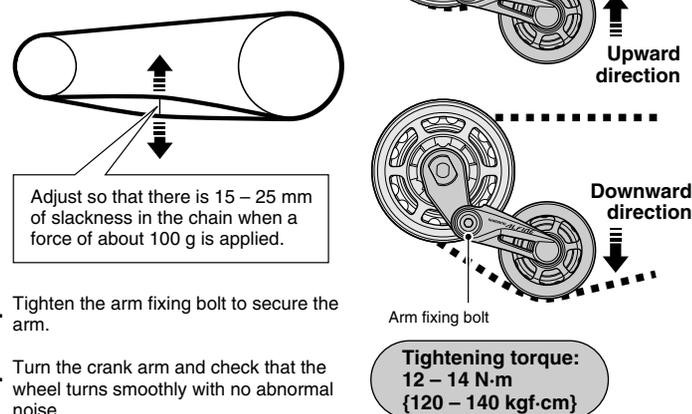
Adjustment of the chain line

1. Loosen the chain line adjustment screw.
2. Move the pulley sideways until the sprocket and pulley are in a straight line.
3. Tighten the chain line adjustment screw to secure the pulley.



Adjustment of the chain tension

1. Mount the chain onto the pulley, and then turn the arm upward so that there is 15 – 25 mm of slackness in the chain when tension is being vertically applied to the chain.
(If tension cannot be applied to the chain in the upward direction, apply the tension in the downward direction instead. If tension cannot be applied in either the upward or downward direction, add two links to the chain and apply the tension in the downward direction.)



2. Tighten the arm fixing bolt to secure the arm.
3. Turn the crank arm and check that the wheel turns smoothly with no abnormal noise.

* Service Instructions in further languages are available at:
<http://techdocs.shimano.com>

Please note: Specifications are subject to change for improvement without notice. (English)

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