

General Safety Information

WARNING – To avoid serious injuries:

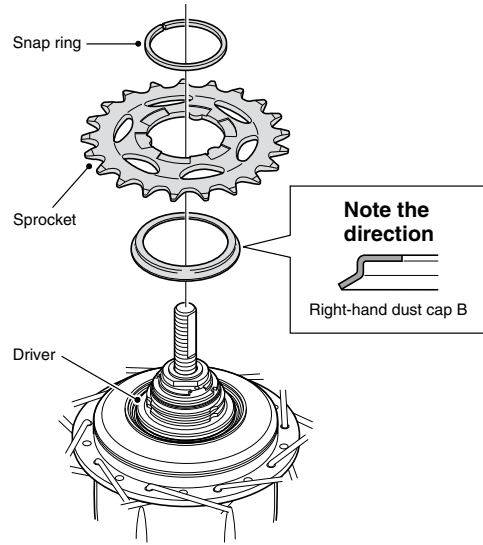
- When installing the hub to the frame, be sure to install the correct non-turn washers to the left and right sides, and securely tighten the hub nuts to the specified torques. If the non-turn washers are installed to one side only, or if the hub nuts are not tightened sufficiently, the non-turn washer may fall out, which could cause the hub axle to rotate and the motor unit to turn. This may then cause the cables to break.
- 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.
- Check that the wheels are fastened securely before riding the bicycle. If the wheels are loose in any way, they may come off the bicycle and serious injury may result.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

NOTE:

- You can shift gears while pedaling, but on rare occasions the pawls and ratchet inside the hub may produce some noise afterwards as part of normal gear shifting operation.
- The 8-speed hub has a built-in mechanism to support shifting. When this support mechanism operates during shifting, noise or vibration may occur. The shifting feel may also change depending on the gear position at the time of shifting. Noise may also be generated if the crank arms are turned backward or if the bicycle is pushed backward when the gear position is 5, 6, 7 or 8. These occurrences are a normal result of the structure of the internal gear shifting mechanism, and are not a sign of a malfunction.
- It is recommended that you set the chainrings so that the gear ratios are approximately 2.1.
Example: F36T – R16T, F38T – R18T, F46T – R22T
- In order to maintain proper performance, it is recommended that you ask the place where you purchased the bicycle or your nearest Pro shop to carry out maintenance such as greasing the internal hub about once every two years starting from the first time of use (or once about every 5,000 km if the bicycle is used very frequently). Furthermore, it is recommended that you use the Shimano internal hub grease or lubrication kit when carrying out maintenance. If the special grease or lubrication kit is not used, problems may occur such as the gear shifting not working correctly.
- The internal hub is not completely waterproof. Avoid using the hub in places where water might get inside it and do not use high-pressure water to clean the hub, otherwise the internal mechanism may rust.
- You should periodically wash the sprockets in a neutral detergent and then lubricate them again. In addition, cleaning the chain with neutral detergent and lubricating it can be a effective way of extending the useful life of the sprockets and the chain.
- If the chain keeps coming off the sprockets during use, replace the sprockets and the chain.
- Parts are not guaranteed against natural wear or deterioration resulting from normal use.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.
- For any questions regarding methods of handling or adjustment, please contact the place of purchase.
- Do not disassemble the hub. If you think disassembly might be necessary, contact the place of purchase.

Installation of the sprocket to the hub

Place right-hand dust cap B onto the driver on the right side of the hub body. Next, install the sprocket and secure it in place with the snap ring.



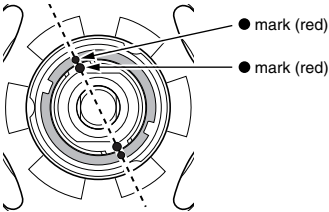
Note:

- This product should only be used with inward assembling sprockets from 16T to 23T.
- If the sprocket is 16T and has thick teeth, remove right-hand dust cap B before use.

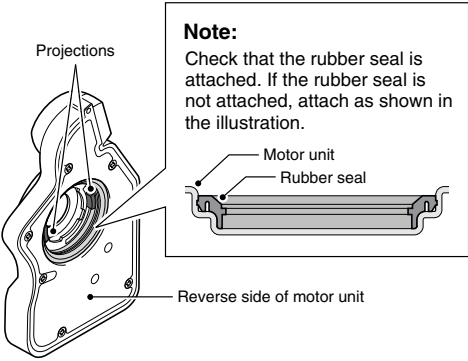
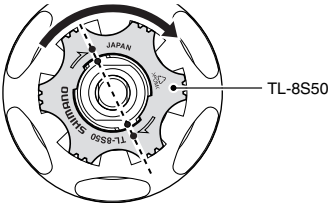
Installation of the motor unit to the hub

1. Check that the two ● marks (red) on the right side of the hub body are aligned. If the two ● marks (red) are not aligned, use the TL-8S50 to align the two ● marks (red).

Aligned



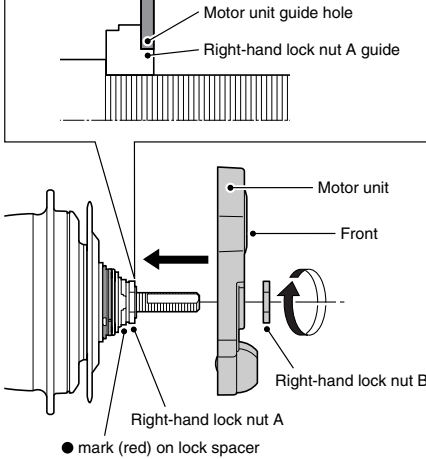
Turn clockwise



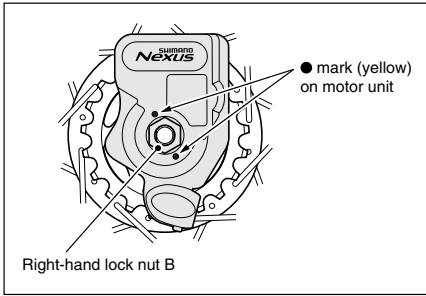
3. Install the motor unit to the hub so that the ● mark (yellow) on the motor unit is aligned with the ● mark (red) on the hub lock spacer. After this, gently push the motor unit while turning it slowly to set it correctly until it stops turning on the hub axle. Next, secure the motor unit by tightening right-hand lock nut B.

Note:

Check that the guide of right-hand lock nut A is seated securely in the guide hole on the front of the motor unit.

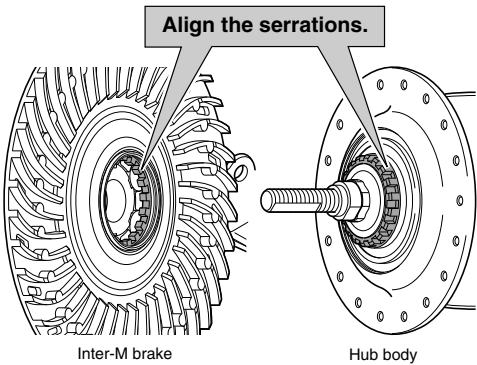


Tightening torque:
6 – 10 N·m {52 – 87 in. lbs.}



Installing the Inter-M brake to the hub body

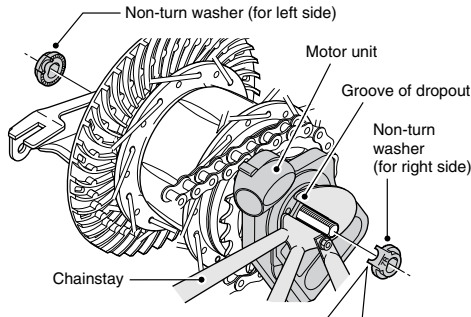
Engage the serrations on the hub body with the serrations on the Inter-M brake, and then provisionally tighten the brake unit fixing nut.



Refer to the service instructions for the Inter-M brake for details on installing the Inter-M brake.

Installation of the hub to the frame

1. Mount the chain on the sprocket, and then set the hub axle into the dropouts.
2. Place the non-turn washers onto the right side and left side of the hub axle. At this time, turn the motor unit while installing it so that the projecting parts of the non-turn washers fit into the grooves of the dropouts.



- Use whichever non-turn washers match the shape of the dropouts. Different non-turn washers are used at the left and right sides.

Dropouts	Non-turn washer		Size
	Mark/Color	Right	Left
Standard	5R/Yellow	5L/Brown	$\theta \leq 20^\circ$
	7R/Black	7L/Gray	$\theta \leq 38^\circ$
Reversed	6R/Silver	6L/White	$\theta = 0^\circ$
Reversed (full chain case)	5R/Yellow	5L/Brown	$\theta = 0^\circ$
Vertical	8R/Blue	8L/Green	$\theta = 60^\circ - 90^\circ$

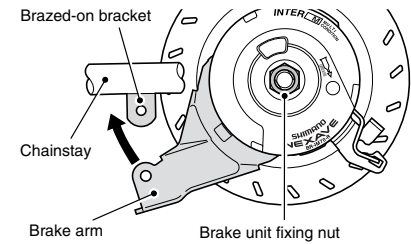


- The projecting parts should be on the dropouts side.
- Install the non-turn washers so that the projecting parts is securely in the dropouts grooves on either side of the hub axle.

3. Install the brake arm of the Inter-M brake to the brazed-on bracket of the chainstay, provisionally tighten the arm screw and arm nut, and then tighten the brake unit fixing nut.

Note:

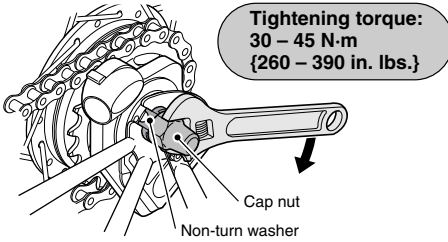
If the brake arm is in the incorrect position as shown in the illustration so that it cannot be provisionally installed to the brazed-on bracket of the chainstay, loosen the brake unit fixing nut and turn the brake arm. Then, after provisionally securing the brake arm to the brazed-on bracket of the chainstay, tighten the brake unit fixing nut.



Tightening torque:
20 – 25 N·m {174 – 217 in. lbs.}

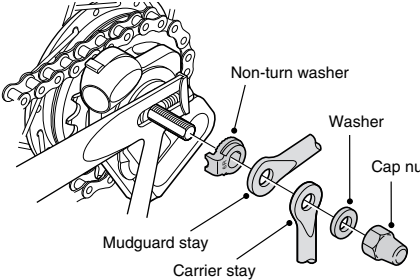
These service instructions explain how to use and maintain the Shimano bicycle parts which have been used on your new bicycle. For any questions regarding your bicycle or other matters which are not related to Shimano parts, please contact the place of purchase or the bicycle manufacturer.

4. Take up the slack in the chain and secure the wheel to the frame with the cap nuts.

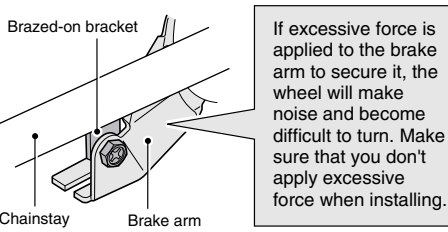


Note:

When installing a part such as a mudguard stay to the hub axle, install in the order shown in the illustration below.



5. Fix the brake arm of the Inter-M brake securely to the brazed-on bracket of the chainstay.

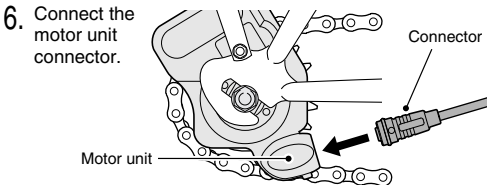
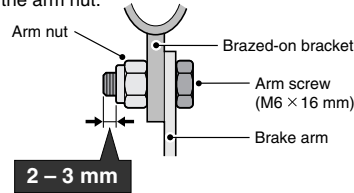


Note:

- When installing the brake arm, securely tighten the arm screw while holding the arm nut with a 10 mm spanner.

Tightening torque:
2 – 3 N·m {17 – 26 in. lbs.}

- After installing the brake arm, check that the arm screw protrudes about 2 – 3 mm from the surface of the arm nut.



7. Before use, check that the brake works properly and that the wheel turns smoothly.

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

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SG-8R56
MU-8S40

Inter-8 Hub
Motor unit

Technical Service Instructions

Be sure to read these service instructions in conjunction with the service instructions for the Inter-M Brake and the AI-8S40 before use.