



INTER 5

SERVICE MANUAL

SG-C7000-5V

SG-C7000-5R

SG-C7000-5C

SG-C7000-5D

SG-C7050-5V

SG-C7050-5R

SG-C7050-5C

SG-C7050-5D

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SHIMANO Nexus INTER5

E-BIKE Dedicated Internal Geared Hub

E-BIKE DESIGN

The NEXUS Inter-5E is a revolutionary internal geared hub designed specifically for the unique demands of E-BIKE riding. It can withstand much higher pedaling forces, even while shifting (+180% compare with SG-C6000 series) by optimizing shift pattern design.

It also offers a gear range with optional automatic shifting.* Automatic shifting offers a stress-free ride, eliminating the need for the rider to worry about whether they're in the right gear or have to change gears after an abrupt stop.

*Only when used on E-BIKE

5-SPEED MECHANICAL SHIFTING



SG-C7000-5C

SG-C7000-5V
For Rim Brake (5-speed)

SG-C7000-5R
For Roller Brake (5-speed)

SG-C7000-5C
For Coaster Brake (5-speed)

SG-C7000-5D
For Disc Brake (5-speed)

SM-C7000-5
Small Parts Set for SG-C7000-5

5-SPEED ELECTRIC SHIFTING



SG-C7050-5C

SG-C7050-5V
For Rim Brake (5-speed)

SG-C7050-5R
For Roller Brake (5-speed)

SG-C7050-5C
For Coaster Brake (5-speed)

SG-C7050-5D
For Disc Brake (5-speed)

SM-C7050-5
Small Parts Set for SG-C7050

SPECIFICATION

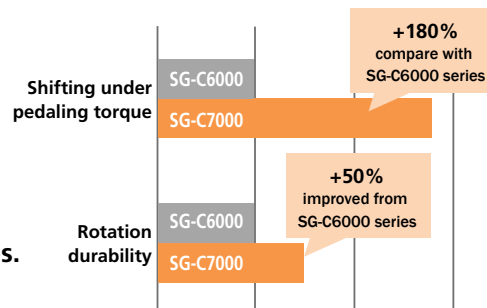
- Gear ratio : 263%
- O.L.D. : 135mm
- Color options : Black, Silver
- Compatible with GATES belt drive

*Except coaster brake spec.

*The Belt Drive specification is designed to not interfere with the belt drive.

FEATURES

- Shifting under pedaling torque: +180% compare with SG-C6000 series.
- Rotation durability: +50% improved from SG-C6000 series.

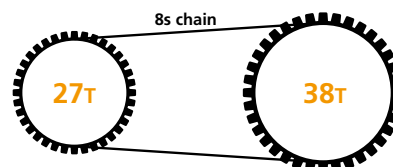


SUITABLE GEAR RANGE & GEAR RATIOS FOR E-BIKE

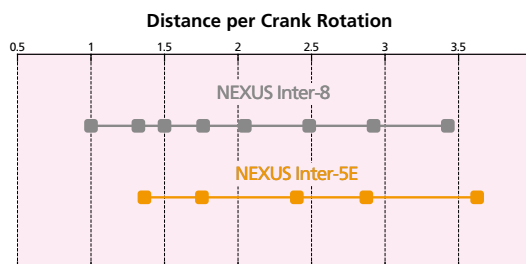
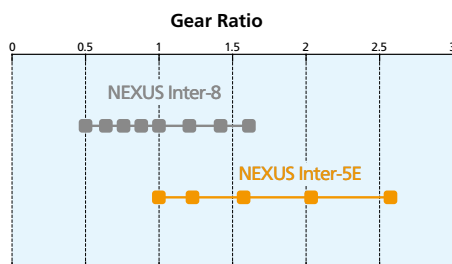
This provides the same wide gear range as NEXUS Inter-8. Use of 38T for the front and 27T for the rear is recommended.

* The overall gear ratio of a bicycle (distance per crank rotation) with an internal geared hub is obtained by multiplying the internal geared hub gear ratio by the sprocket ratio.

Recommended Combination for Inter-5E
CS-C7000 SM-CRE61 / CRE50



1.3-1.5 sprocket ratio is recommended in combination with E-BIKE.



*When tire sizes are 28 inch, sprocket ratio is 2.1 (Inter-8) / 1.4 (Inter-5E).

AUTOMATIC SHIFT

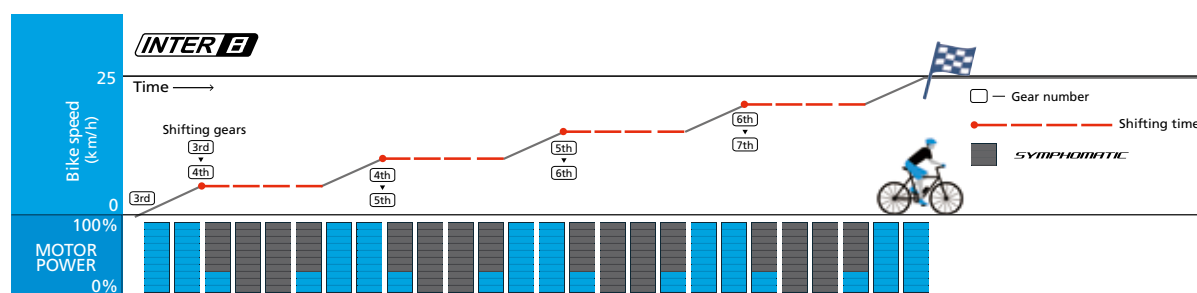
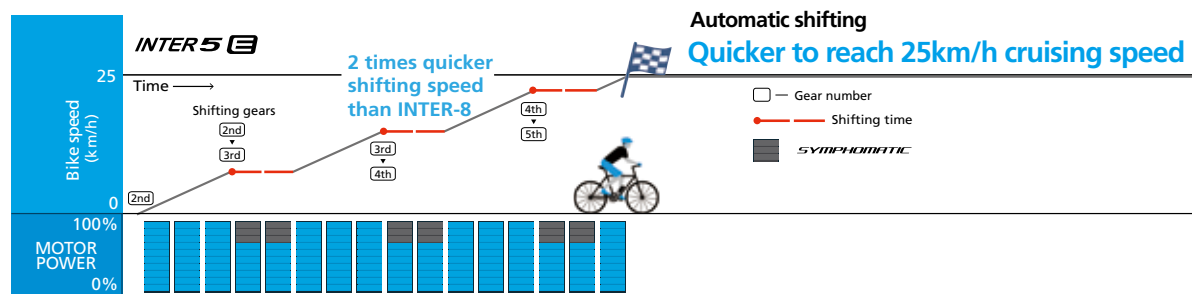
DI2 compatible Inter-5E with SHIMANO STEPS E6100 series and E5000 series offer full automatic shifting. The SHIMANO STEPS system automatically selects and shifts into the optimum gear, based on the number of crank rotations and speed.

Also, riders can always manually shift into the gear they want, even in auto mode. When they do, the SHIMANO STEPS system uses a **learning function** to recognize the manual shift operation and automatically fine-tunes future automatic shift timing to the rider's liking. This offers a stress-free ride, eliminating the need for the rider to worry about whether they're in the right gear or have to change gears after an abrupt stop.

DI2
DIGITAL INTEGRATED DRIVE

SYMPHOMATIC

SHIMANO STEPS computer-assisted shifting system provides a more responsive and stable shifting performance. This innovative system monitors rider's motion and determines the optimal timing to momentarily decrease power to the pedal-assist motor. The temporary reduction of chain tension allows the gear movement of drive train to function smoothly and unimpeded.



INTER5 

Dealer's Manual

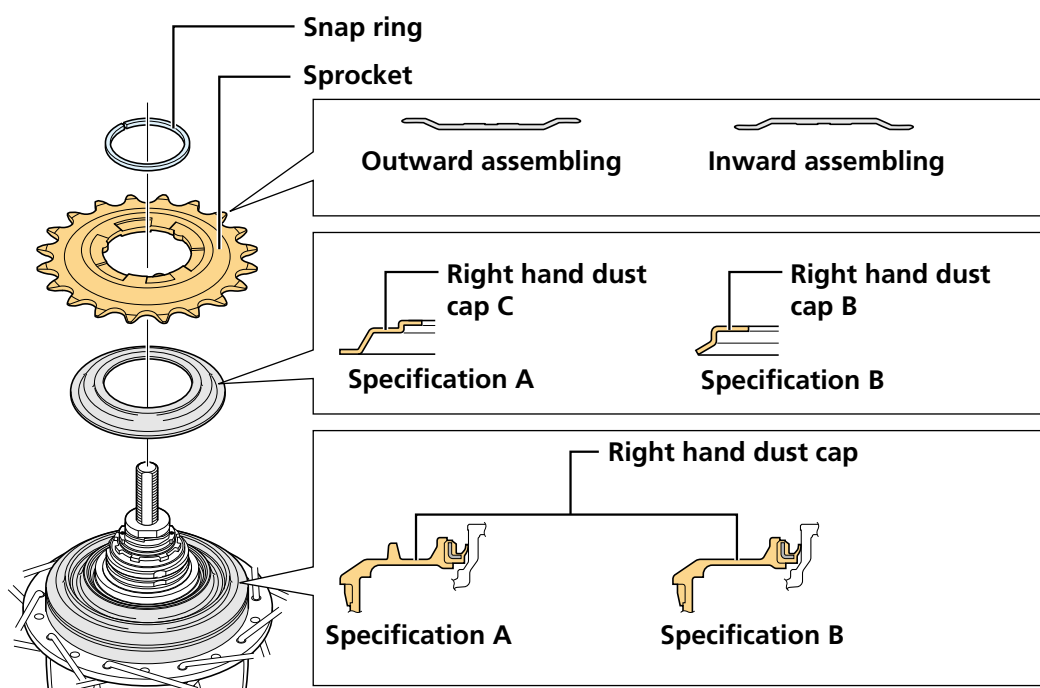
SG-C7000-5V
SG-C7000-5R
SG-C7000-5C
SG-C7000-5D

INSTALLATION/REMOVAL

Installing the sprocket (without chain guard)

1. Install the right hand dust cap, and then secure the sprocket with the snap ring.

Check the specifications, and note the orientation of the right hand dust cap and sprocket when installing them.



NOTICE

- Note the orientation of the sprocket and right hand dust cap.

Specifications	Applicable sprockets	
	Outward assembling	Inward assembling
A	16T-23T	20T-23T
B	16T-23T	
INTER-5E	24T, 27T, 30T	24T, 27T, 30T

Specification A

If the sprocket is an inward assembling sprocket with 19T or fewer or for belt drive specifications, right hand dust cap A will come into contact with the chain or pulley so specification B should be used instead.

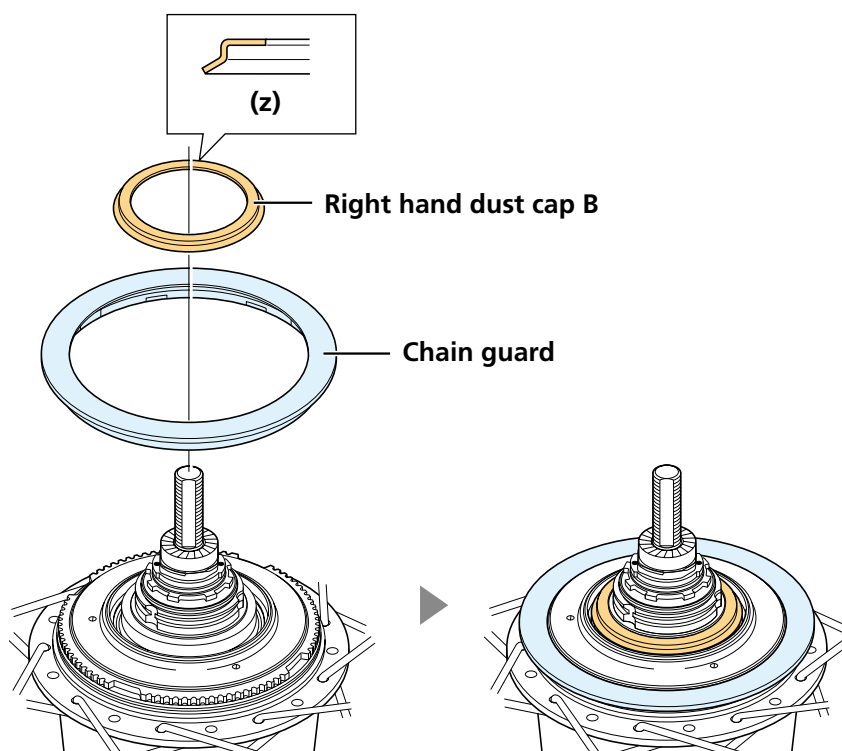
Specification B

If the sprocket is an inward assembling sprocket with 16T and 3 mm teeth or for belt drive specifications, remove right hand dust cap B before use.

Installing the sprocket (with chain guard)

1. Install the chain guard and right hand dust cap.

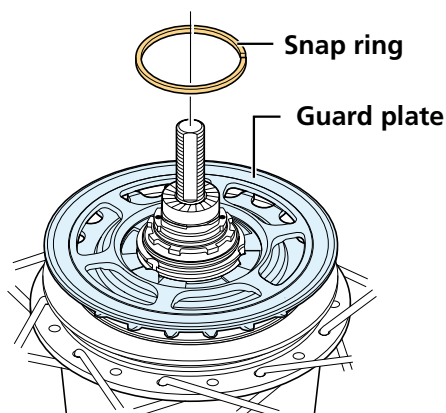
Note the orientation of the right hand dust cap when installing it.



Click here for the latest Dealer's Manual

<https://si.shimano.com/DM/CASG004>

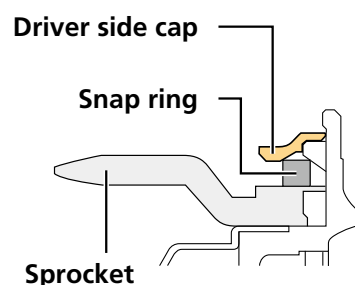
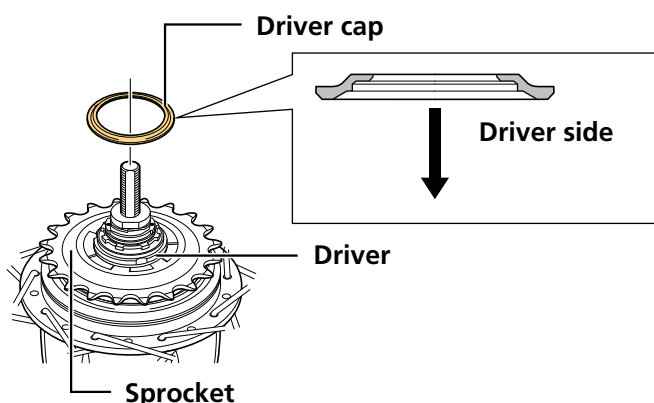
2. Install the sprocket with the guard plate facing outward, and secure it in place with the snap ring.



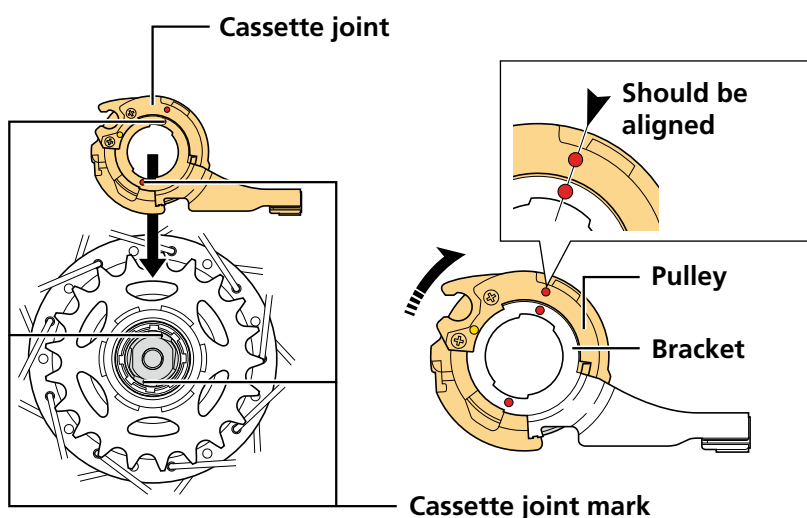
Installation of the cassette joint to the hub

1. Install the driver cap.

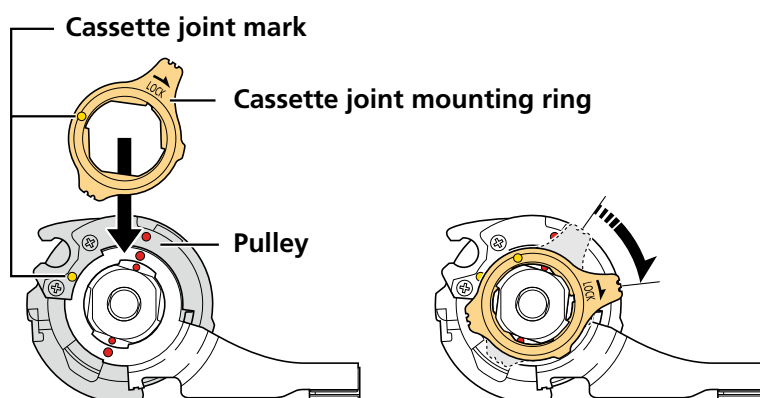
Note the orientation of the driver cap.



2. Turn the pulley to align the mark (red or yellow) of the cassette joint, and install to the hub body.



3. Turn the cassette joint mounting ring 45° clockwise to secure it.



NOTICE

- Hold down the cassette joint bracket securely when performing work.

Installing the disc brake rotor

CAUTION

- Wear gloves when handling the disc brake rotor. Failure to do so may result in cuts to your hands.

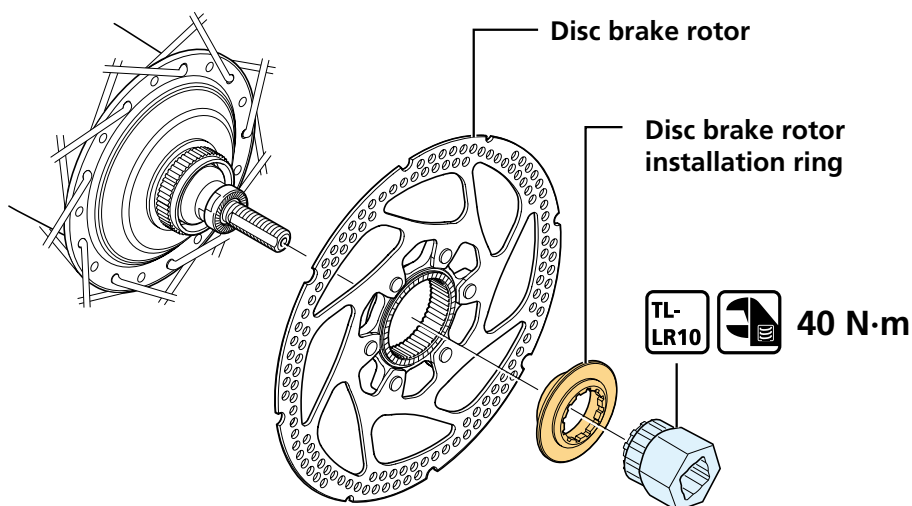


Click here for the latest Dealer's Manual

<https://si.shimano.com/DM/CASG004>

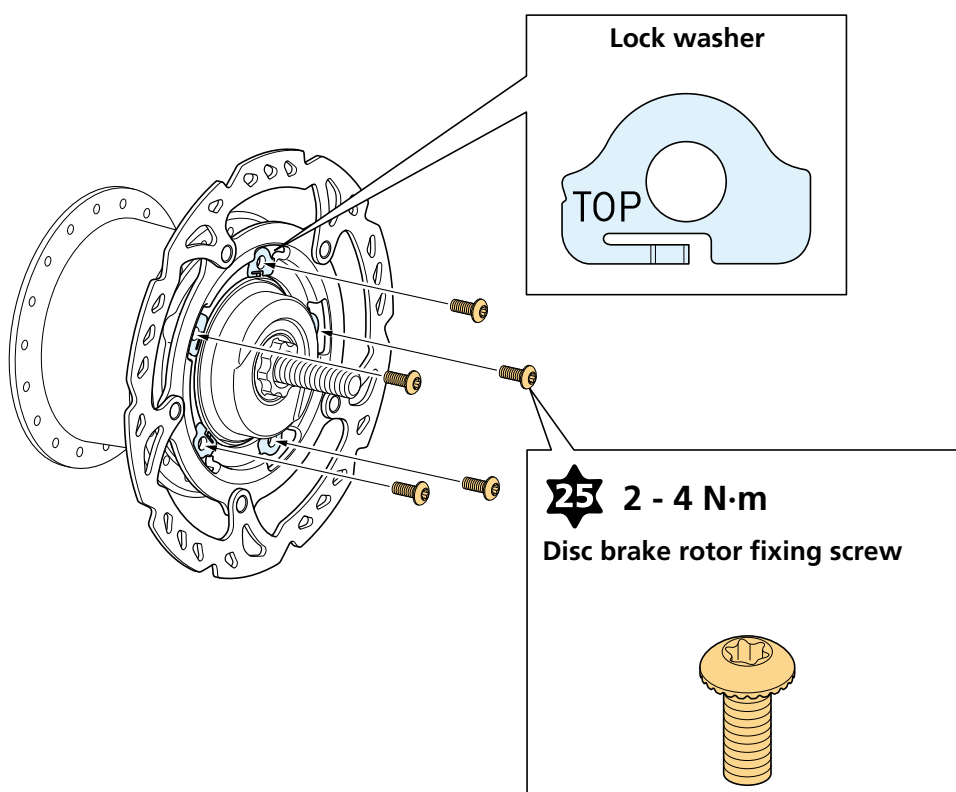
CENTER LOCK type

1. Secure the disc brake rotor as shown in the figure.



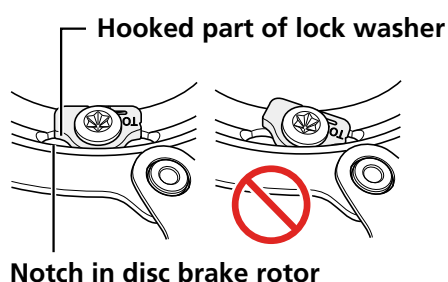
5 screw type (with lock washers)

1. Temporarily secure the disc brake rotor and the disc brake rotor lock washers to the hub as shown in the figure.



NOTICE

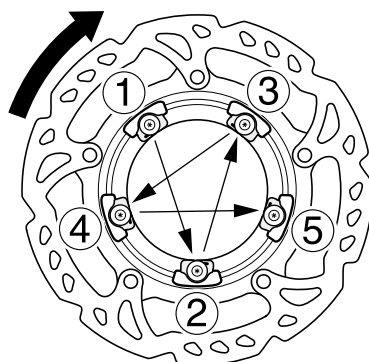
- Fit the lock washers so that the marking "TOP" is visible.
- Ensure that the hooked parts of the lock washers are securely caught on the notches in the disc brake rotor and then tighten on the lock washers with the disc brake rotor fixing screw. If tightened while the hooked parts are against the surface of the disc brake rotor, the lock washers and its hooked parts will become deformed.



- The lock washers are not reusable. Always use new lock washers when installing the disc brake rotor.
- Use the dedicated disc brake rotor fixing screws.

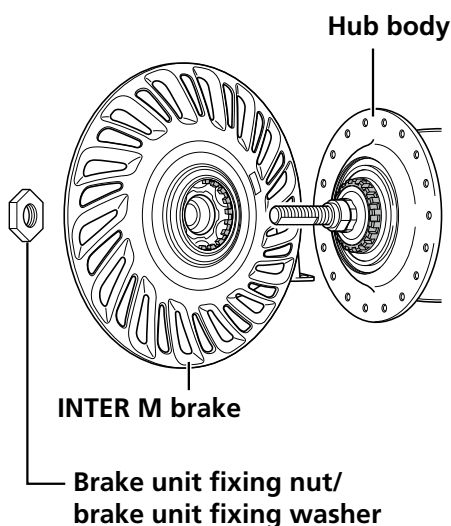
2. Secure the disc brake rotor with force applied in the clockwise direction.

Tighten the disc brake rotor fixing screws in the order shown in the figure.



Installing the INTER M brake to the hub body

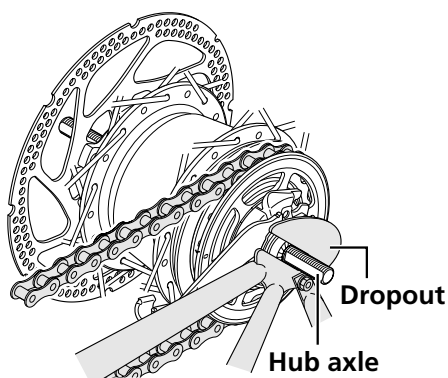
1. Engage the splines on the hub body with the splines on the INTER M brake, and then temporarily tighten with the brake unit fixing nut or the brake unit fixing washer.



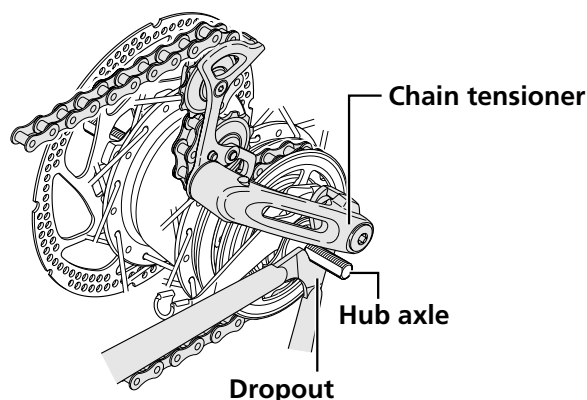
Installation of the hub to the frame

1. Mount the chain on the sprocket, and then set the hub axle into the dropout.

When not using chain tensioner



When using chain tensioner

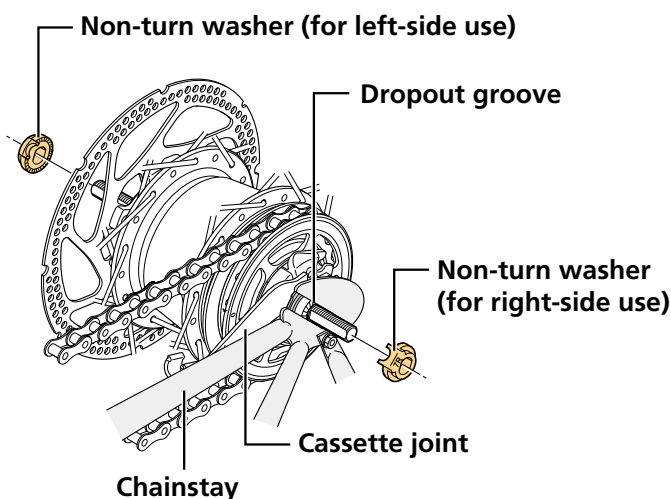


TECH TIPS

- When using the chain tensioner, be sure to read the attached instruction manual for the CT-S500 chain tensioner.

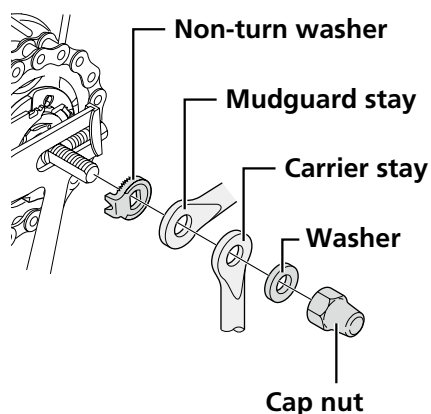
2. Place non-turn washers onto the right and left of the hub axle.

Turn the cassette joint so that the protrusions of the non-turn washers fit into the grooves in the dropouts and align the joint to be installed almost parallel to the chainstay.

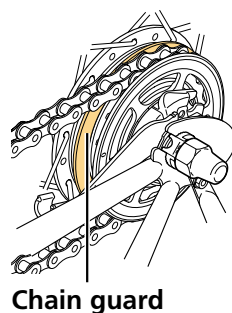


NOTICE

- When installing parts such as a mudguard stay to the hub axle, install them in the order shown in the figure.

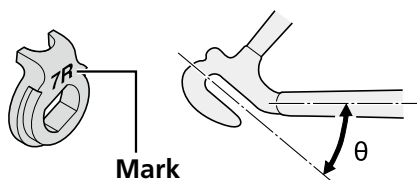


- When installing the hub to the frame, the chain guard may come off. Make sure that the chain guard is securely installed. If not properly installed, noise may be generated.



TECH TIPS

- Use a non-turn washer that matches the shape of the dropout. Different non-turn washers are used for the left and right sides.



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

* Vertical type: Does not include the coaster specifications.

- If the hub nuts are cap nuts, use a frame with dropouts that are at least 7 mm thick.

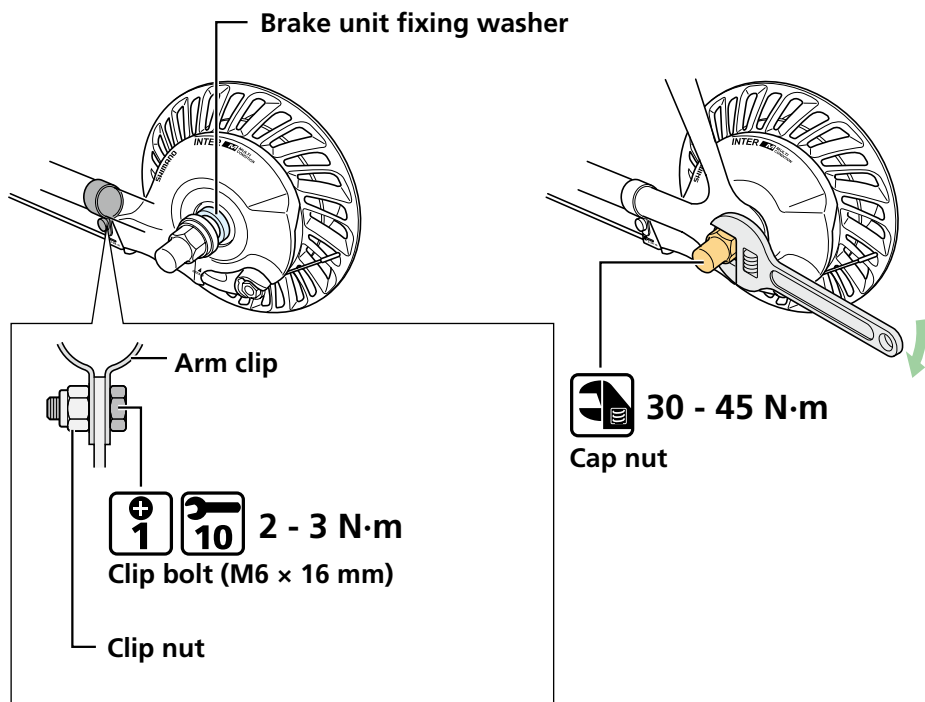
3. Secure with the cap nut.

In the case of INTER M brake specifications (brake unit fixing washer)

- (1) Check that the INTER M brake is securely installed with the brake unit fixing washer.
- (2) Attach the brake arm to the chainstay with the arm clip.
- (3) Temporarily fix the clip bolt and clip nut by lightly tightening them.
- (4) Take up slack in the chain and secure the wheel to the frame with the cap nut.
- (5) Attach the brake arm with the arm clip.



(6) Securely install with the cap nut.

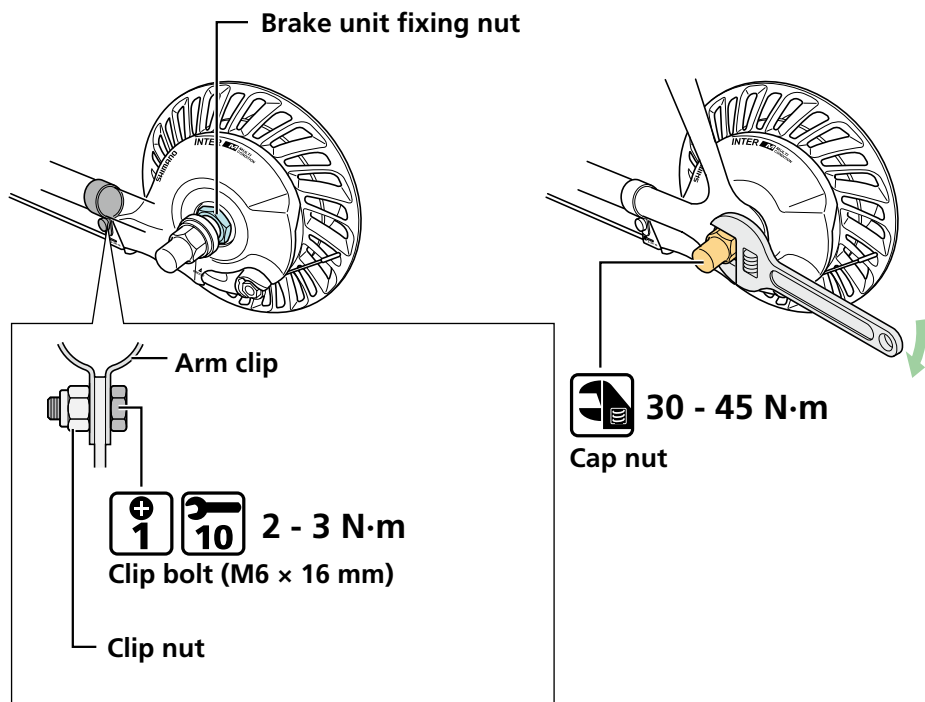


In the case of INTER M brake specifications (brake unit fixing nut)

- (1) Attach the brake arm to the chainstay with the arm clip.
- (2) Temporarily fix the clip bolt and clip nut by lightly tightening them.
- (3) Take up slack in the chain, align the wheel with the frame center, and temporarily secure it with the cap nut.
- (4) Slightly loosen the cap nut, and fully tighten the brake unit fixing nut.
- (5) Take up slack in the chain, align the wheel with the frame center, and secure it with the cap nut.

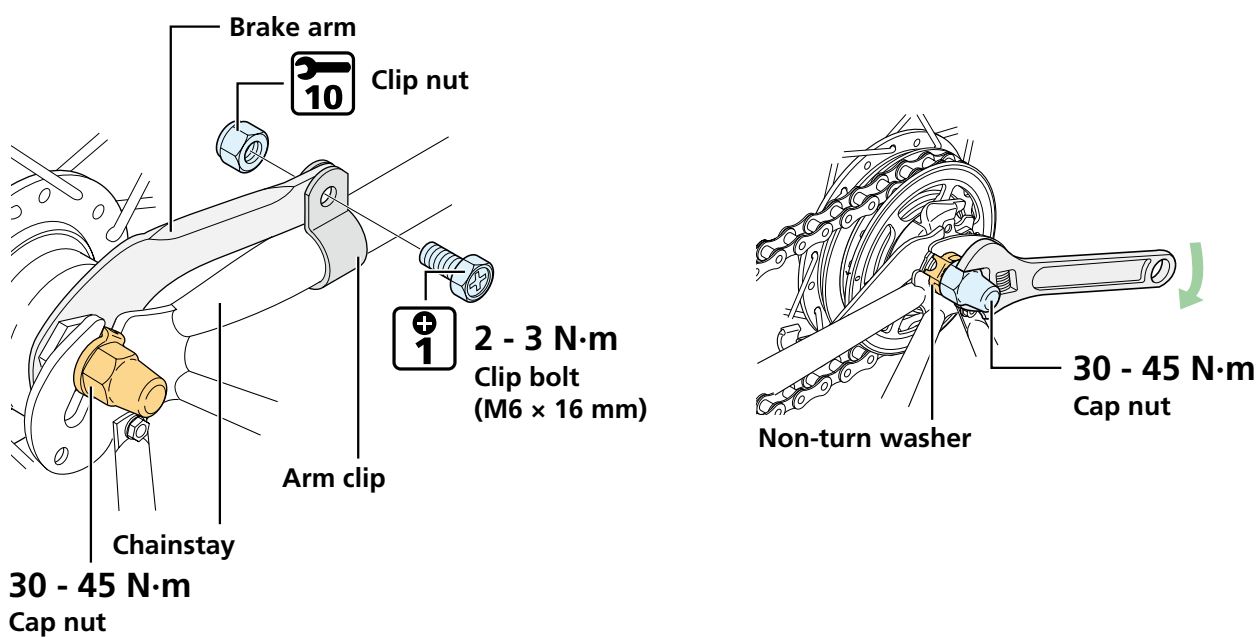


(6) Attach the brake arm with the arm clip.



In the case of coaster brake specifications

- (1) Secure the brake arm with the arm clip.
- (2) Take up slack in the chain and secure the wheel to the frame with the cap nut.

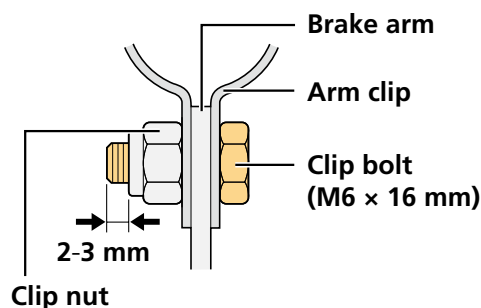


⚠ WARNING

- When securing the brake arm to the frame, be sure to use an arm clip that matches the size of the chainstay, and securely tighten them with the clip bolt and clip nut to the specified tightening torque.
Use a lock nut with a nylon insert (self-locking nut) as the clip nut. It is recommended that SHIMANO made clip bolts, clip nuts, and arm clips be used. If the clip nut comes off the brake arm, or if the clip bolt or arm clip becomes damaged, the brake arm may rotate on the chainstay and cause the handlebars to jerk suddenly, or the bicycle wheel may lock and the bicycle may fall over, causing serious injury.

NOTICE

- If it is not installed correctly, braking performance will suffer. Be careful not to apply excessive force when installing.
- If excessive force is applied to the brake arm to secure it, a problem such as noise will occur and the wheel will become difficult to turn.
- After installing the arm clip, check that the clip bolt protrudes about 2 - 3 mm from the end face of the clip nut.



Before using the Coaster Brake, check that the brake works properly and that the wheel turns smoothly.



Installation of the shifting cable

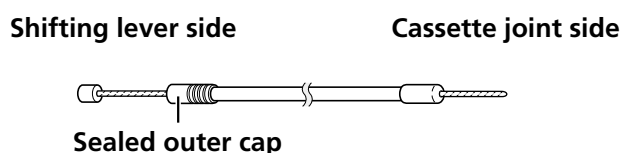
Shifting lever side

1. Install the inner cable and outer casing aligned with the shifting lever.

Refer to the dealer's manual of the shifting lever for details.

NOTICE

- Make sure that the sealed outer cap is at the shifting lever end.



Cassette joint side

1. Operate the shifting lever and set to the specified gear position.

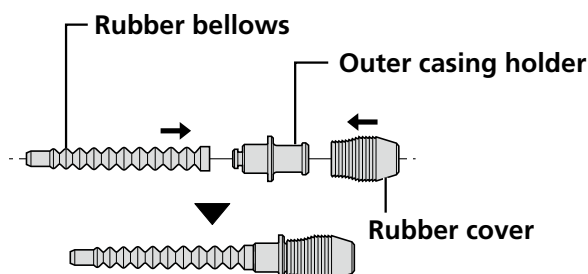
SG-S7001 (internal 11-speed): 11-speed

SG-S7001 (internal 8-speed): 8-speed

SG-C6001 / SG-C6011 (internal 8-speed): 1-speed

SG-C7000 / SG-C7002 (internal 5-speed): 5-speed

2. Install the rubber cover and rubber bellows to the outer casing holder.



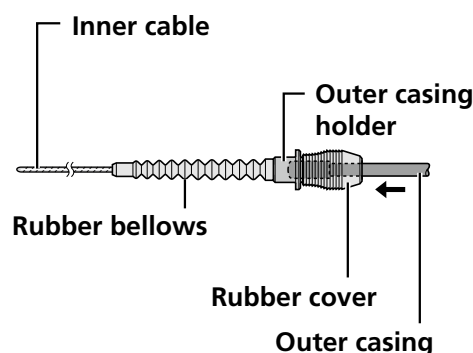
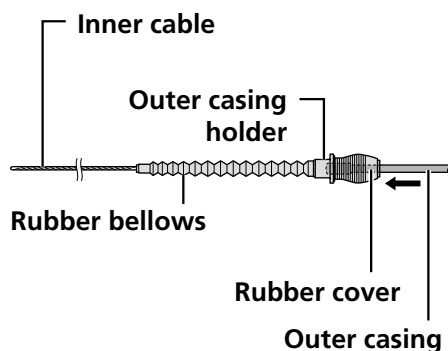
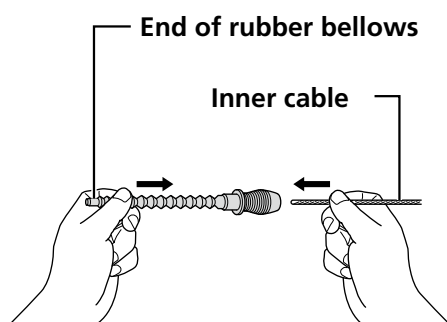
TECH TIPS

- This operation is not required if there is no rubber cover or rubber bellows.



3. Pass the inner cable through.

- (1) Wipe away any grease which may be on the inner cable and, while holding the end of the rubber bellows, pass the inner cable through.
- (2) Insert the outer casing into the rubber cover and set it into the outer casing holder. Push the outer casing so that it securely touches the holder unit.



NOTICE

- Use a new inner cable; do not use a cable which has had its end cut off. Pay attention to the end of the inner cable.



4. Install the inner cable mounting bolt unit.

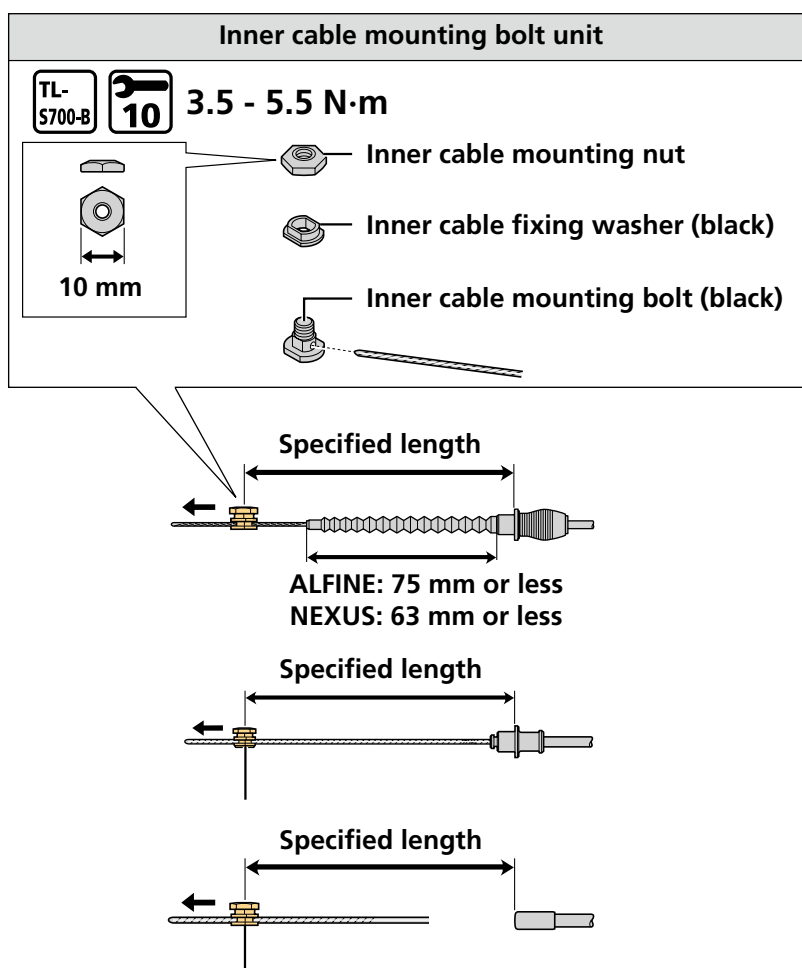
After checking that the end of the outer casing is securely set in the cable adjustment barrel of the shifting lever, secure it at the specified length while pulling the inner cable.

SG-S7001 (internal 11-speed): 184 mm

SG-S7001 (internal 8-speed): 145 mm

SG-C6001 / SG-C6011 (internal 8-speed): 101 mm

SG-C7000 / SG-C7002 (internal 5-speed): 145 mm



NOTICE

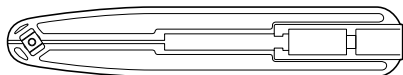
- Use the special inner cable mounting bolt unit.



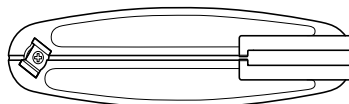
TECH TIPS

- When installing the inner cable mounting bolt unit, use the setting tool TL-S700-B/TL-CJ40.

TL-S700-B (145 mm / 184 mm)

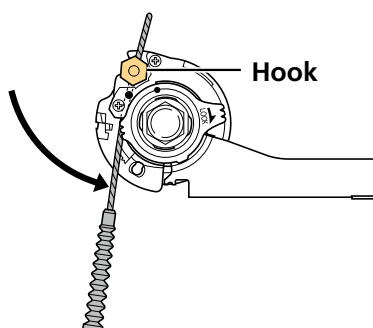
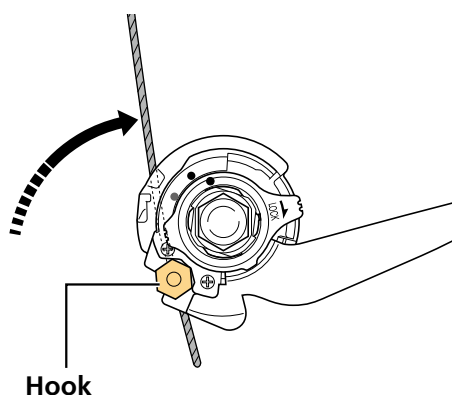
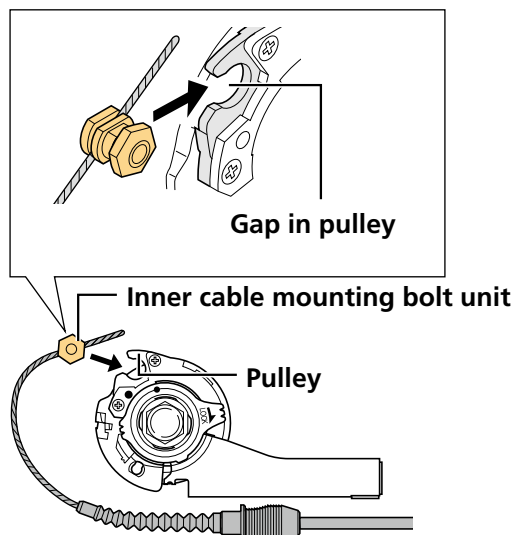
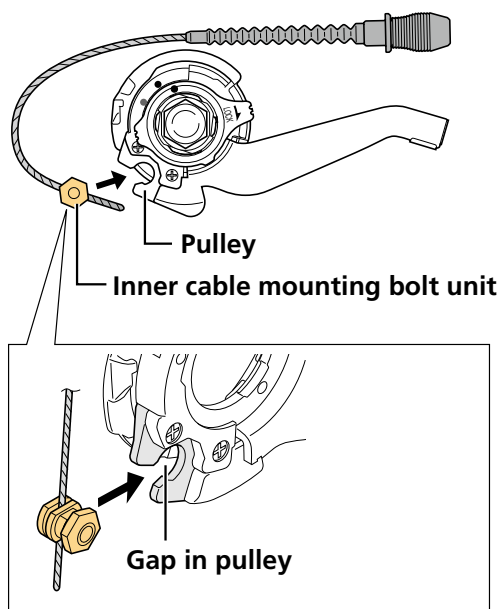


TL-CJ40 (101 mm / 127 mm)



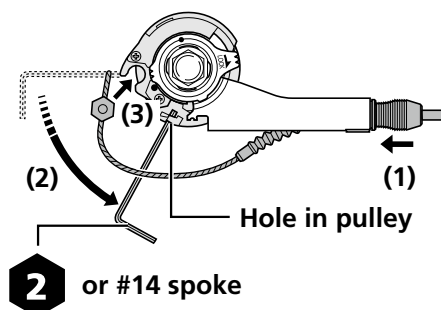
5. Install the inner cable mounting bolt unit.

- Fit the inner cable mounting bolt unit into the gap in the pulley.
- Turn the cable 60° clockwise or counterclockwise and attach it to the hook.



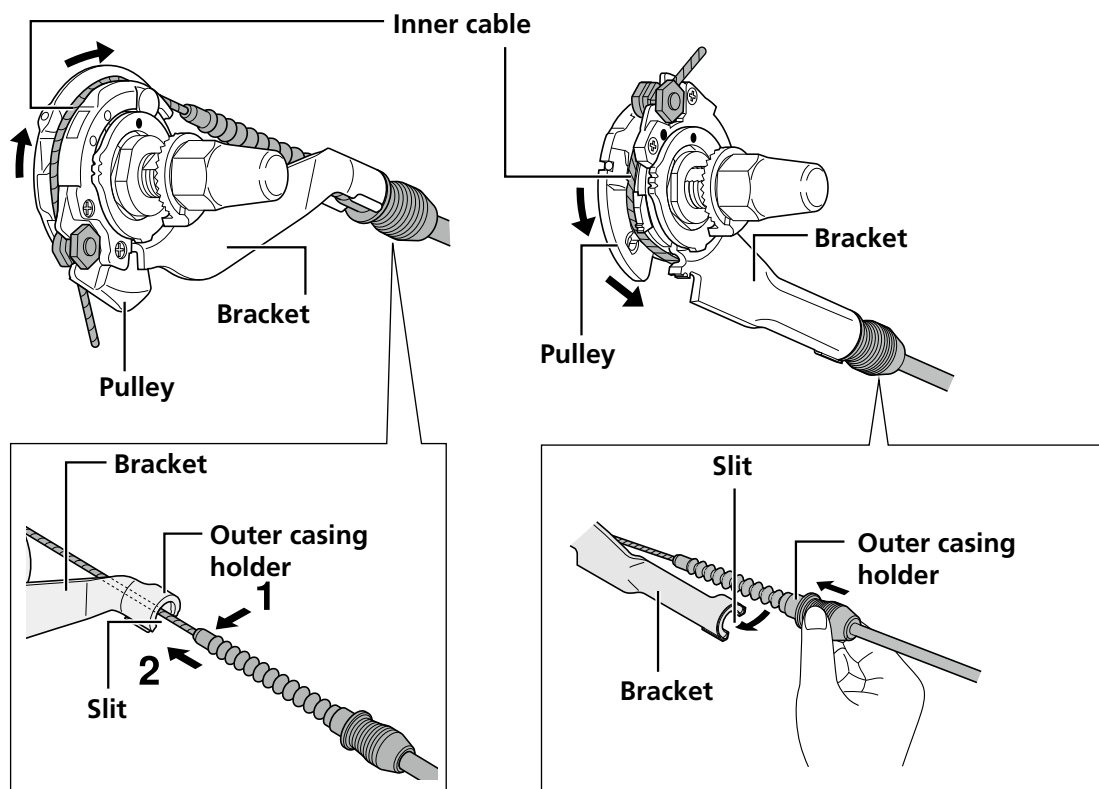
TECH TIPS

- Some models enable the outer casing holder of the cassette joint to be installed first by turning the pulley of the cassette joint.



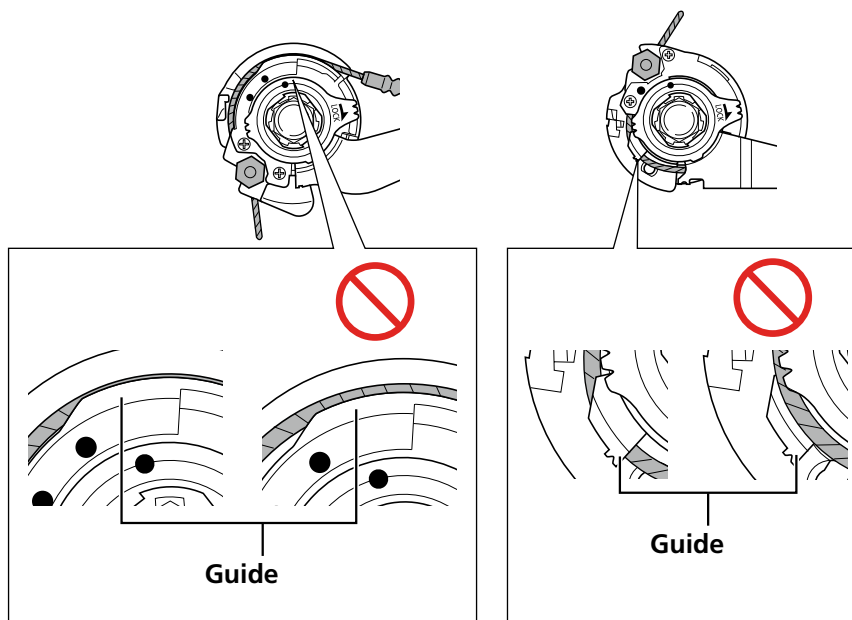
6. Install the inner cable and outer casing.

Attach the inner cable to the pulley as shown in the figure, pass the inner cable through the slit in the cassette joint bracket, and then insert the end of the outer casing securely into the outer casing holder.

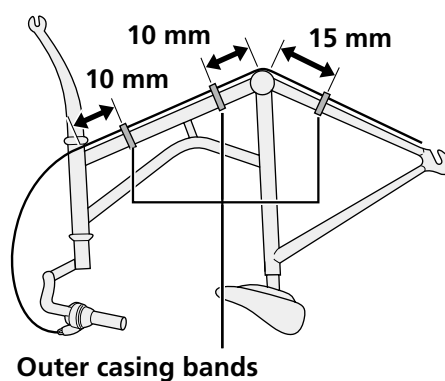


NOTICE

- Check that the inner cable is correctly seated inside the pulley guide.



7. Secure the cable to the frame with the outer casing bands.



ADJUSTMENT

Adjusting the cassette joint

1. Operate the shifting lever and set to the specified gear position.

SG-S7001 (internal 11-speed): 11-speed to 6-speed

SG-S7001 (internal 8-speed): 8-speed to 4-speed

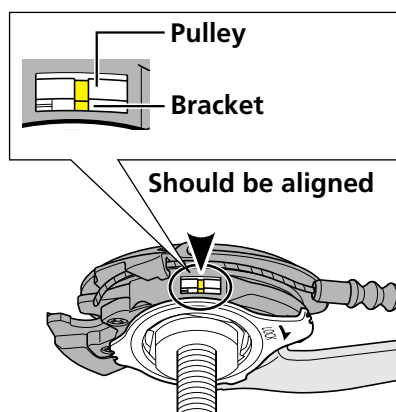
SG-C6001 / SG-C6011 (internal 8-speed): 1-speed to 4-speed

SG-C7000 / SG-C7002 (internal 5-speed): 5-speed to 3-speed

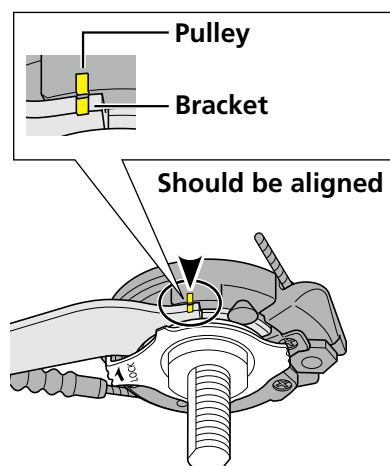
2. Turn the cable adjustment barrel and align the setting lines.

Check that the yellow setting lines on the cassette joint bracket and pulley are aligned with each other. The yellow setting lines on the cassette joint are located in two places.

When the bicycle is upright

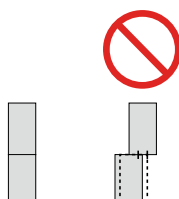


When the bicycle is upside down



NOTICE

- If the overlapping area falls short of two thirds of each setting line, the gears may not be properly engaged during pedaling, resulting in abnormal noise or free spinning of the pedals.



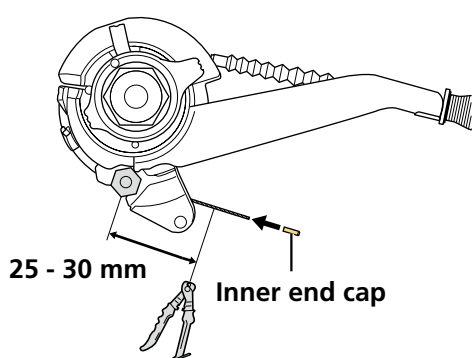
3. Operate the shifting lever and recheck that the yellow setting lines are aligned.

Operate the shifting lever again from step 1 to check.

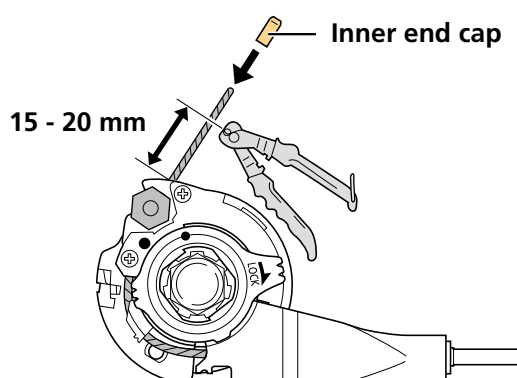
4. Cut off the excess length of inner cable and then install the inner end cap.

For 11-speed, after installing the inner end cap, slightly bend the inner cable outward (toward the dropout) so that it does not touch the chain.

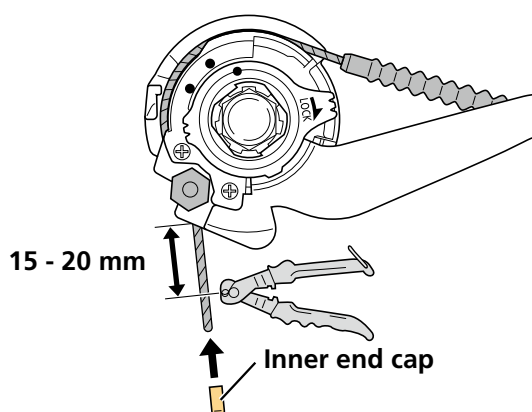
11-speed



8-speed



5-speed



MAINTENANCE

Disconnecting the shifting cable when removing the rear wheel from the frame

1. Set the shifting lever to the specified gear.

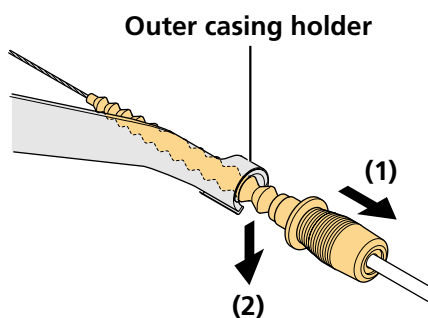
SG-S7001 (internal 11-speed): 11-speed

SG-S7001 (internal 8-speed): 8-speed

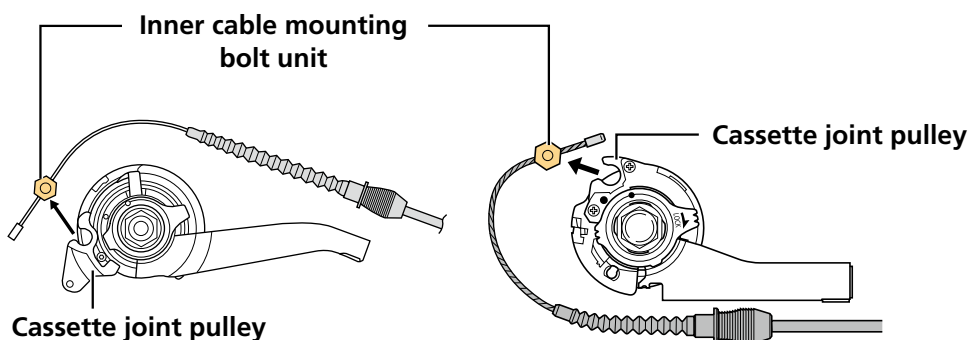
SG-C6001 / SG-C6011 (internal 8-speed): 1-speed

SG-C7000 / SG-C7002 (internal 5-speed): 5-speed

2. Pull the outer casing out from the outer casing holder.

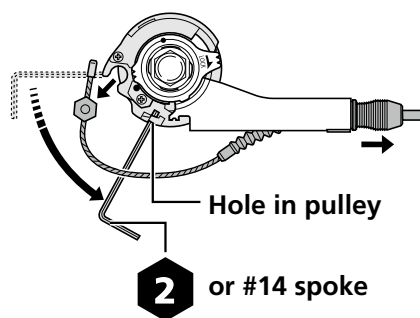


3. Remove the inner cable from the pulley guide, and remove the inner cable mounting bolt unit.



TECH TIPS

- If it is difficult to remove the gear shifting cable, some models enable the outer casing holder to be pulled out from the outer casing holder section of the cassette joint by turning the pulley of the cassette joint.



■ Oil maintenance of the internal assembly

The work performed here will be the same as in SG-C7050-5.

Refer to "Oil maintenance of the internal assembly (oil maintenance kit: Y00298010)" (P.46).



INTER5 

Dealer's Manual

SG-C7050-5V

SG-C7050-5R

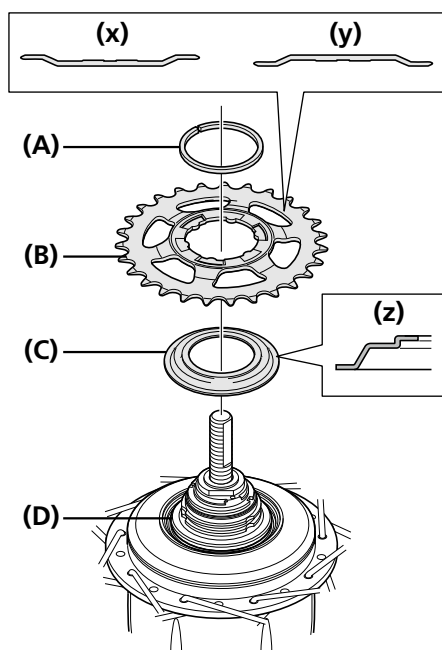
SG-C7050-5C

SG-C7050-5D

INSTALLATION

Refer to the internal geared hub-compatible SHIMANO STEPS dealer's manual for information on installing parts not listed in this document.

Installation of sprocket to the hub



Place right-hand dust cap onto the driver on the right side of the hub body.

Next, install the sprocket and secure it in place with the snap ring.

- (x) Outward assembling: MU-UR510 only
- (y) Inward assembling: Compatible with all motor units
- (z) Note the direction

- (A) Snap ring
- (B) Sprocket
- (C) Right-hand dust cap C
- (D) Driver

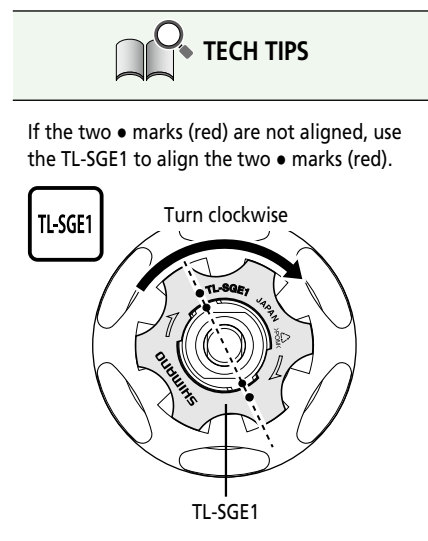
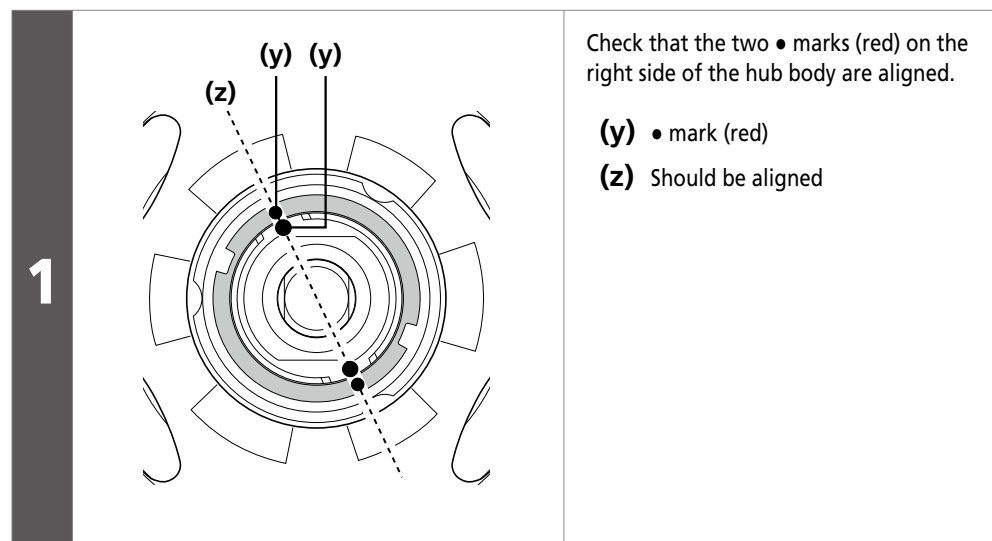
NOTICE

- Only SM-C7050 and CS-C7000 can be used with SG-C7050.
- If using the MU-UR510 motor unit, outward assembling of the sprocket is possible.



Installation of the motor unit to the hub

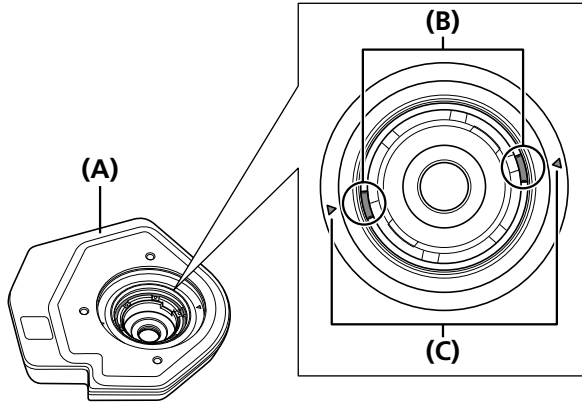
Unless otherwise noted, MU-UR500 is used as an example for this explanation.



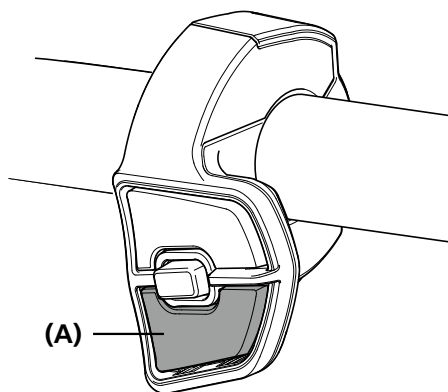
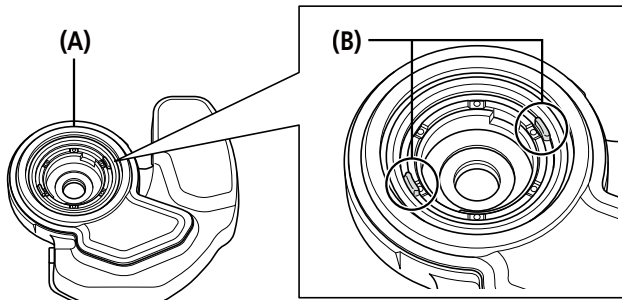
Make sure that the two protrusions on the inside of the motor unit are at the initial positions.

- For MU-UR500, confirm that the mark and protrusions are aligned.
- For MU-UR510, confirm that the protrusions are positioned as shown in the illustration.

MU-UR500



MU-UR510



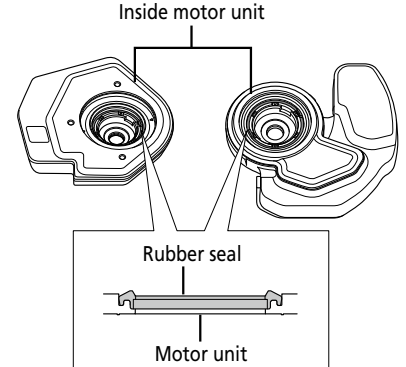
- (A) Inside motor unit
- (B) Protrusion
- (C) Mark (MU-UR500)

NOTICE

Check that the rubber seal is attached. If the rubber seal is not attached, attach as shown in the illustration.

MU-UR500

MU-UR510



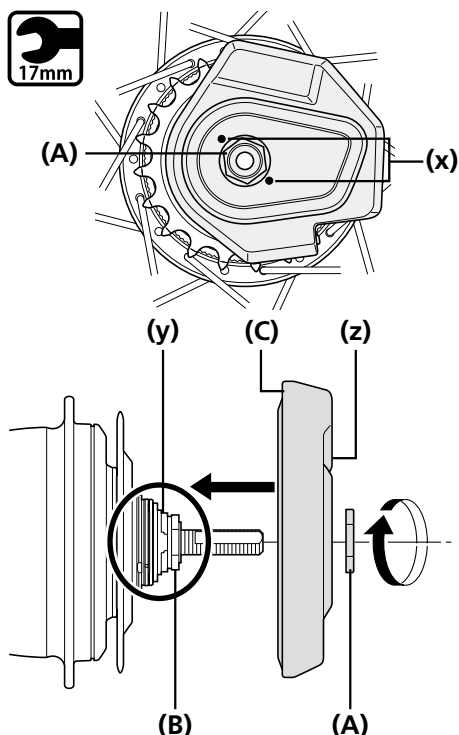
- (A) Shifting switch

NOTICE

The motor unit is set at the initial position when it is shipped; therefore, install it without changing the position. If the motor unit may not be at the initial position, push the shifting switch ten or more times to move the protrusions on the motor unit counterclockwise (check from the inside of the motor unit). (Check the shifting up and down of the shifting switch in advance as it may have been switched by customization.) If the motor unit is installed off the initial position, some gears may become unavailable and the hub or the motor unit may be damaged.



3



Install the motor unit to the hub so that the • mark (x) on the motor unit is aligned with the • mark (y) 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 the L lock nut.

- (x) motor unit • mark (silver)
- (y) hub lock spacer • mark (red)
This is the mark for which the position was aligned in step 1.
- (z) Outer side

- (A) L lock nut
- (B) Right-hand lock nut
- (C) Motor unit

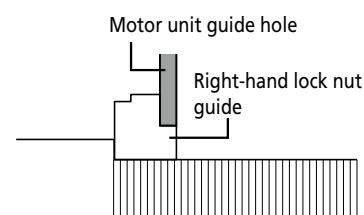
Tightening torque



6 - 10 N·m

NOTICE

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



Click here for the latest Dealer's Manual

<https://si.shimano.com/DM/CASG003>

Installation of the disc brake rotor

Install the disc brake rotor as shown in the illustration.

Center lock type

TL-LR10

(A) Disc brake rotor

(B) Disc brake rotor installation ring

(C) TL-LR10

Tightening torque

TL-LR10

40 N·m

Installation of the hub to the frame

Non-turn washer

Use non-turn washers to secure the internal geared hub and motor unit to the frame.

Non-turn washers are classified with a mark and main body color for easy identification. There are left and right types, and the right type is normally used on the chain side.

Refer to the following to select the non-turn washer based on the shape of the motor unit and dropout to use.



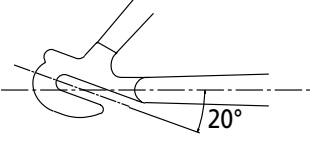
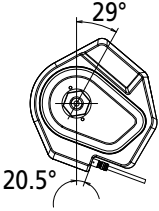
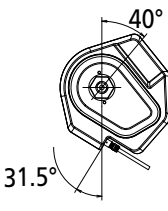
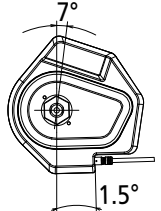
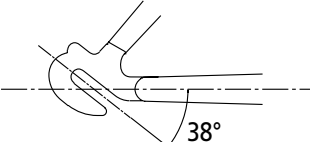
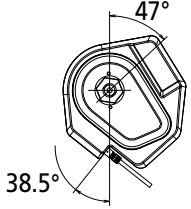
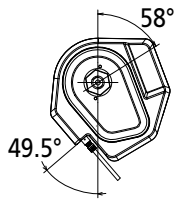
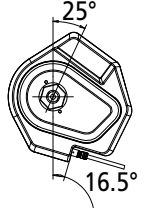
MU-UR500

- When the dropout is the reversed type

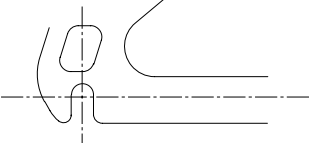
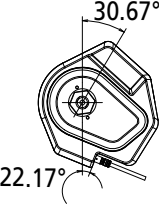
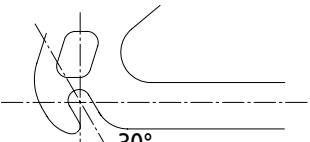
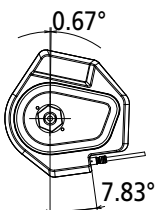
Dropout	Installation angle of non-turn washer and motor unit		
	5R (yellow)/ 5L (brown)	6R (silver)/ 6L (white)	7R (black)/ 7L (gray)

Dealer's Manual (SG-C7050-5V / SG-C7050-5R / SG-C7050-5C / SG-C7050-5D)

• When the dropout is the standard type

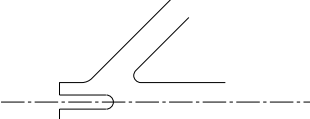

Dropout	Installation angle of non-turn washer and motor unit		
	5R (yellow)/ 5L (brown)	6R (silver)/ 6L (white)	7R (black)/ 7L (gray)
			
			

• When the dropout is the straight drop type

Dropout	Installation angle of non-turn washer and motor unit
	8R (blue)/ 8L (green)
	
	

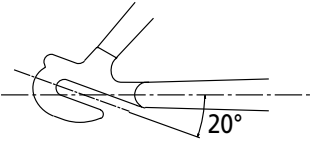
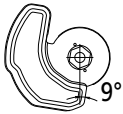
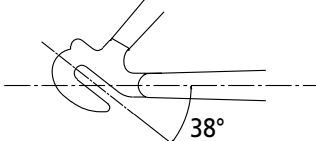
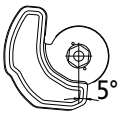
MU-UR510

• When the dropout is the standard type

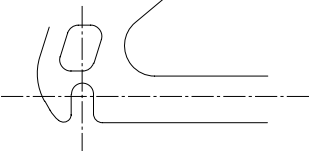

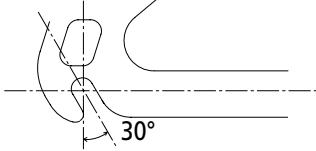

Dropout	Installation angle of non-turn washer and motor unit
	6R (silver)/ 6L (white)
	

Dealer's Manual (SG-C7050-5V / SG-C7050-5R / SG-C7050-5C / SG-C7050-5D)

When the dropout is the reversed type

Dropout	Installation angle of non-turn washer and motor unit	Dropout shape	Installation angle of non-turn washer and motor unit
	5R (yellow)/ 5L (brown)		7R (black)/ 7L (gray)
			

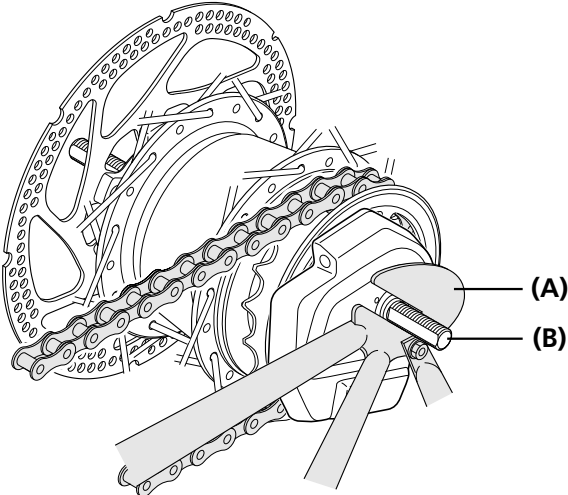
When the dropout is the straight drop type

Dropout	Installation angle of non-turn washer and motor unit	Dropout shape	Installation angle of non-turn washer and motor unit
	8R (blue)/ 8L (green)		9R (light brown)/ 9L (light green)
			

Installation methods

1

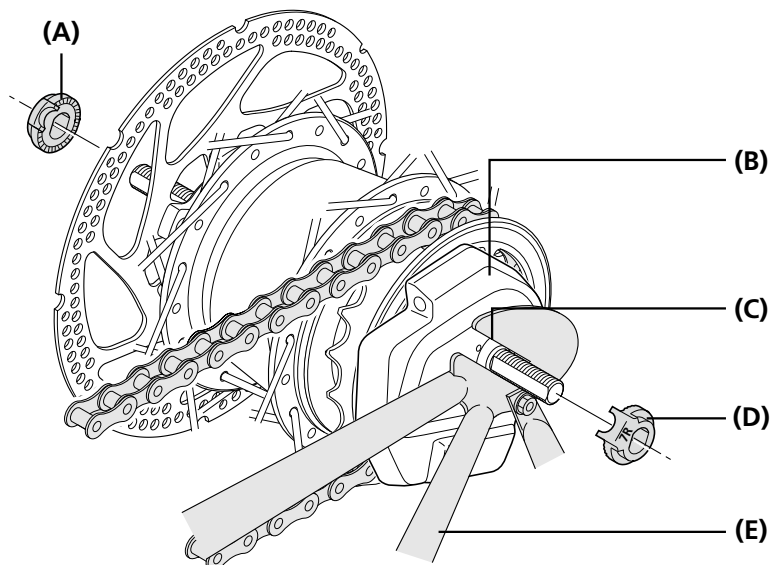
Mount the chain on the sprocket, then set the hub axle into the dropout.



- (A) Dropout
- (B) Hub axle

Place non-turn washers and onto the right and left sides of the hub axle.

At this time, turn the motor unit so that the protrusion of the non-turn washers fit into the grooves of the dropouts and align the washers to be almost parallel to the chainstay.



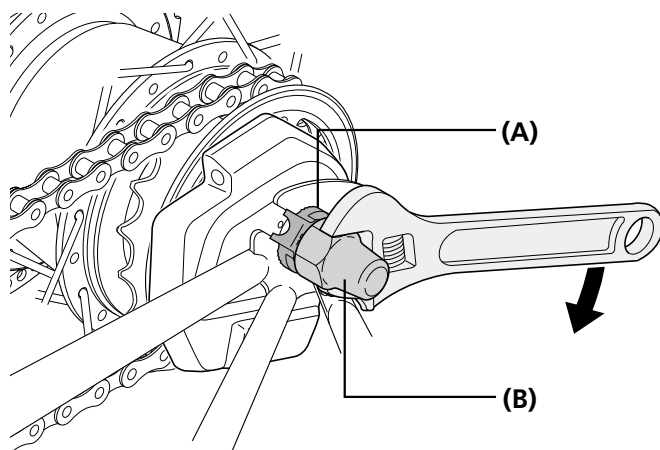
- (A) Non-turn washer (for left-side use)
- (B) Motor unit
- (C) Dropout groove
- (D) Non-turn washer (for right-side use)
- (E) Chainstay



TECH TIPS

- Install the non-turn washer with its protrusion part aligned with the straight part of the dropout.
- Install the non-turn washer so that the protrusion fits securely in the dropout groove at the front and back sides of the hub axle.

Take up slack in the chain and secure the wheel to the frame with the hub nut.



- (A) Non-turn washer
- (B) Hub nut

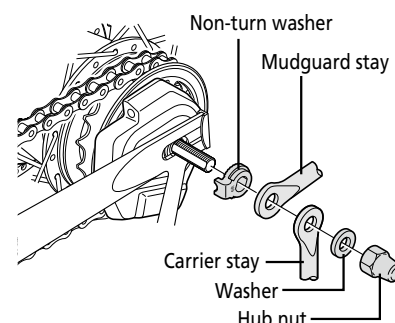
Tightening torque



30 - 45 N·m

NOTICE

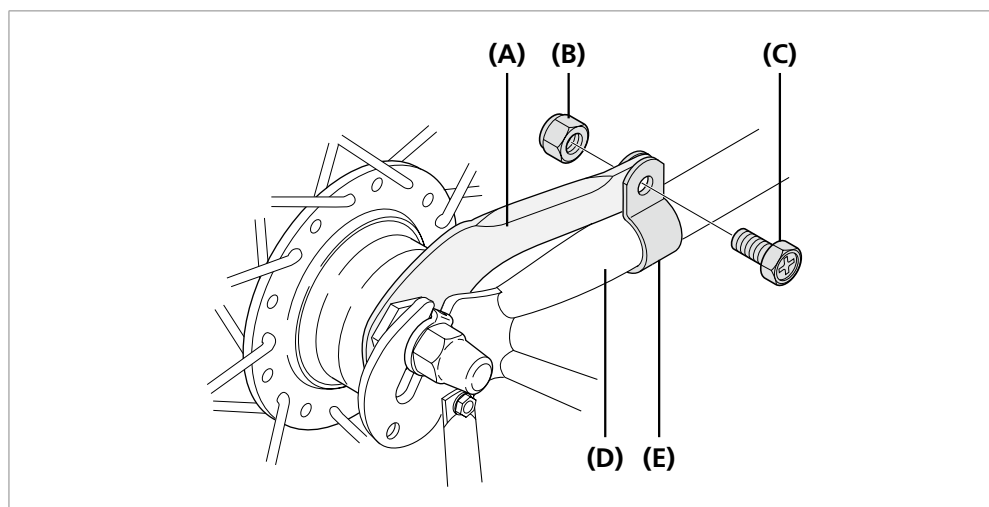
- When installing parts such as a mudguard stay to the hub axle, install them in the order shown in the figure.



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<https://si.shimano.com/DM/CASG003>

For coaster brakes



- (A)** Brake arm
- (B)** Clip nut
- (C)** Clip bolt
- (D)** Chainstay
- (E)** Arm clip



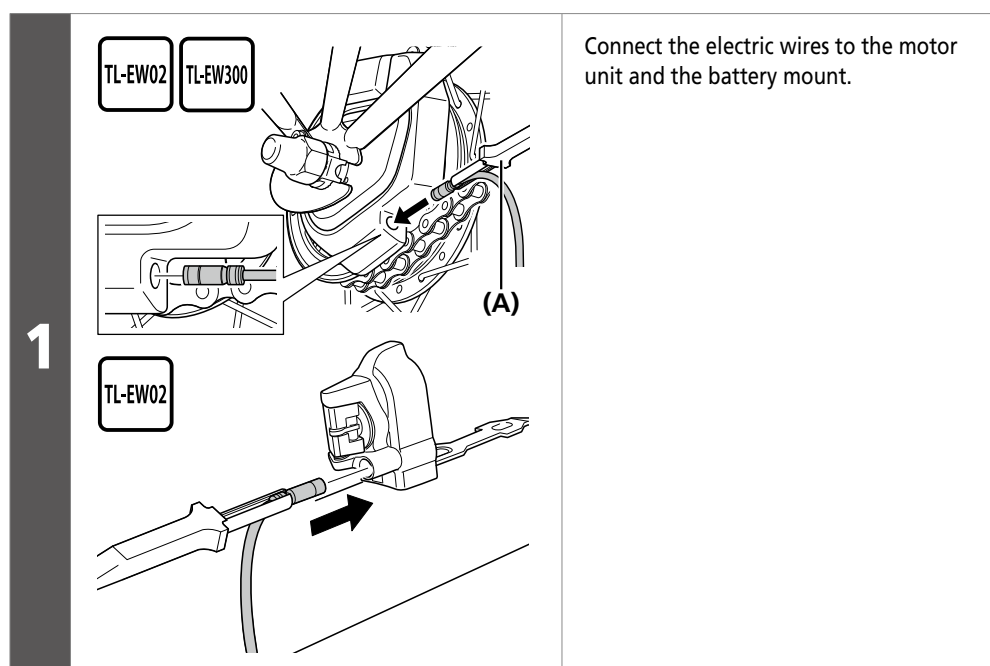
CONNECTION OF THE ELECTRIC WIRES

Refer to the internal geared hub-compatible SHIMANO STEPS dealer's manual for information on connecting electric wires to parts not listed in this document.

NOTICE

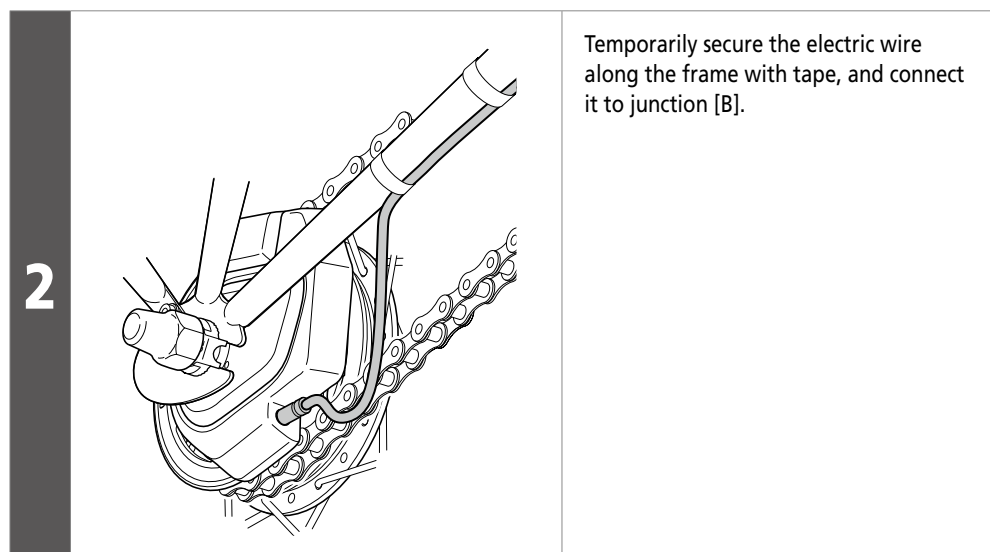
Information on the electric wire and the SHIMANO original tool is described in "Notice" in "TO ENSURE SAFETY". Be sure to refer to it before starting the work.

■ Connection to motor unit



Connect the electric wires to the motor unit and the battery mount.

(A) TL-EW02 (MU-UR500)
TL-EW300 (MU-UR510)



Temporarily secure the electric wire along the frame with tape, and connect it to junction [B].

NOTICE

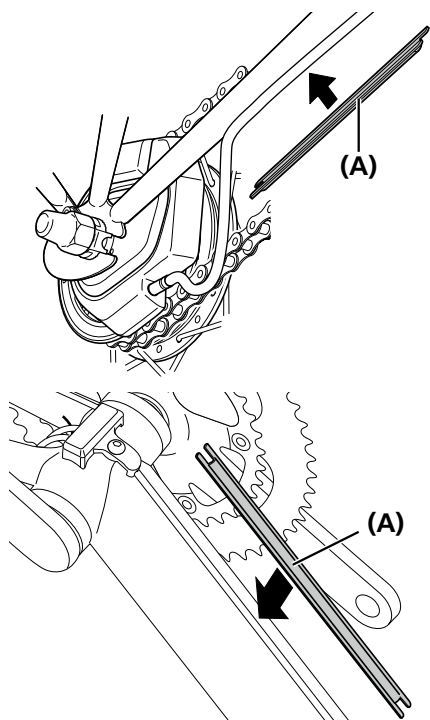
- When routing the electric wire to the motor unit, be sure to install it to the bottom of the chainstay to avoid any interference between the cable and the chain.
- If the motor unit is the MU-UR510 (EW-SD300 type), use the conversion adapter (EW-AD305) to connect the EW-SD50 and EW-SD300, and connect them to junction [B].



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<https://si.shimano.com/DM/CASG003>

3



Install the electric wire cover/cord cover onto the frame.

In order to make sure that the electric wire cover/cord cover is securely attached, clean the frame with alcohol or some other cleaning agent to remove any grease or other substances before installing the cover.

Place the electric wire cover/cord cover over the electric wires, then attach it to the frame.

(A) Electric wire cover (EW-SD50 type)
SM-EWC2
Cord cover (EW-SD300 type)
EW-CC300

4

After connecting the electric wires to all of the components, install the battery and check the operation.

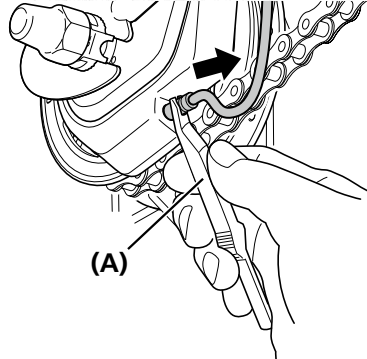
Check that gear-shifting of the rear can be performed properly by operating the shifting switch.



Disconnection of the electric wires

NOTICE

Do not keep connecting and disconnecting the small waterproof connector. The waterproof section or the connecting section may become worn or deformed, and the function may be affected.

<p>Motor unit</p> <div data-bbox="159 560 231 638">TL-EW02</div> <div data-bbox="159 649 231 728">TL-EW300</div>  <p>(A)</p>	<p>Use the wide end of the TL-EW02 SHIMANO original tool to disconnect the electric wires.</p>	<p>(A) TL-EW02 (MU-UR500) TL-EW300 (MU-UR510)</p>
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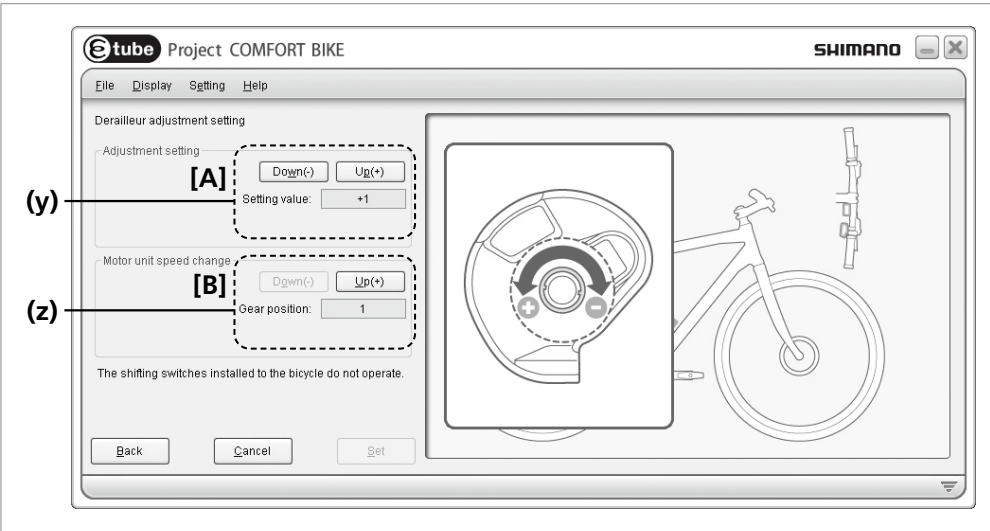
MAINTENANCE

■ Adjusting the motor unit (connection and communication with PC)

For the latest information on E-TUBE PROJECT, check <https://bike.shimano.com/e-tube/project.html>.

⚠ CAUTION

- Improper adjustment may cause gear engagement skipping, resulting in an accidental fall.
- Perform adjustment only when you have an unusual feel during shifting. If there is no problem with shifting, unnecessary adjustment may worsen shifting performance.



- (y) Set the adjustment value
- (z) Shift gears

TECH TIPS

This screen is shown in English, however, a total of 8 languages are available on E-TUBE PROJECT.
(Japanese/English/German/French/Italian/Chinese/Dutch/Spanish)

- 1

Download the latest version of E-TUBE PROJECT from the support website.
(<https://bike.shimano.com/e-tube/project.html>)
- 2

Connect SM-PCE1, SM-PCE02, or SM-BCR2.

Connect the battery when connecting SM-BCR2.
- 3

Activate the adjustment setting mode in E-TUBE PROJECT.
- 4

Check that the adjustment value is set to 0 (default) in E-TUBE PROJECT [A].

(1)	Value is set to 0	⇒ Go to step 5		
(2)	Value is set to other than 0	Adjust the value to 0 and shift gears to check whether abnormal noise or unusual feels have been eliminated. At this time, shift gears via E-TUBE PROJECT [B].	The problem persists	⇒ Go to step 5
			The problem has been remedied	⇒ Go to step 6

5

Change the adjustment value by one in the + or - direction in E-TUBE PROJECT (Illustration [A] below), and check the sound or feel of gear shifting.

* Adjustment can be performed 4 increments in the + direction and 4 decrements in the - direction; a total adjustment range of 8 values.

At this time, shift gears via E-TUBE PROJECT [B].

(1)	The problem has been remedied	Check the sound or feel of gear shifting again while changing the adjustment value one by one in the same direction. Continue adjusting the value until the abnormal noise or unusual feels are eliminated.		
(2)	No sign of improvement	Change the adjustment value by one again in the same direction and then check the sound or feel of gear shifting again.	The problem has been remedied	⇒ Go to step 5(1)
			The problem persists	⇒ Go to step 5(3)
(3)	The condition has worsened	Change the adjustment value by two in the opposite direction and then check the sound or feel of gear shifting again. Continue adjusting the value by one in the same direction until the abnormal noise or unusual feels are eliminated.		

6

Finally, ride the bicycle to check whether there is no problem.



■ Adjusting the motor unit
(connection and communication with smartphone or tablet)

For the latest information on E-TUBE PROJECT, check <https://bike.shimano.com/e-tube/project.html>.

⚠ CAUTION

- Improper adjustment may cause gear engagement skipping, resulting in an accidental fall.
- Perform adjustment only when you have an unusual feel during shifting. If there is no problem with shifting, unnecessary adjustment may worsen shifting performance.

← Detail our adjustment
MU-S70E

Customize

URBAN/CITY

[A]

Adjustment

0

[B]

Gear pedal or change

1

(y)

(z)

The switches installed in the bike do not operate.
(*) See here for more about the adjustment method.

(y) Set the adjustment value

(z) Shift gears

TECH TIPS

This screen is shown in English, however, a total of 8 languages are available on E-TUBE PROJECT.
(Japanese/English/German/French/Italian/Chinese/Dutch/Spanish)

1

Download E-TUBE PROJECT for smartphones/tablets.

2

Establish a Bluetooth® LE connection with a smartphone or tablet referring to the section "About wireless functions (SC-MT800)".


3

Activate the adjustment setting mode in E-TUBE PROJECT.

4

Check that the adjustment value is set to 0 (default) in E-TUBE PROJECT [A].

(1)	Value is set to 0	⇒ Go to step 5		
(2)	Value is set to other than 0	Adjust the value to 0 and shift gears to check whether abnormal noise or unusual feels have been eliminated. At this time, shift gears via E-TUBE PROJECT [B].	The problem persists	⇒ Go to step 5
			The problem has been remedied	⇒ Go to step 6



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<https://si.shimano.com/DM/CASG003>

INTER5

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5

Change the adjustment value by one in the + or - direction in E-TUBE PROJECT (Illustration [A] below), and check the sound or feel of gear shifting.

* Adjustment can be performed 4 increments in the + direction and 4 decrements in the - direction; a total adjustment range of 8 values.

At this time, shift gears via E-TUBE PROJECT [B].

(1)	The problem has been remedied	Check the sound or feel of gear shifting again while changing the adjustment value one by one in the same direction. Continue adjusting the value until the abnormal noise or unusual feels are eliminated.		
(2)	No sign of improvement	Change the adjustment value by one again in the same direction and then check the sound or feel of gear shifting again.	The problem has been remedied	⇒ Go to step 5(1)
			The problem persists	⇒ Go to step 5(3)
(3)	The condition has worsened	Change the adjustment value by two in the opposite direction and then check the sound or feel of gear shifting again. Continue adjusting the value by one in the same direction until the abnormal noise or unusual feels are eliminated.		

6

Finally, ride the bicycle to check whether there is no problem.



■ Oil maintenance of the internal assembly (oil maintenance kit: Y00298010)

Content of kit: WB maintenance oil, Container

General Safety Information

WARNING

- When changing the oil, be careful that no oil gets on the disc brake rotor, brake pads, on the rim when using rim brakes, etc.
If oil gets on any of these parts, there is a danger that brake performance may be reduced.
Take care of this problem according to the procedures in the brake instruction manual.
- Since there is a risk of explosion or fire, do not smoke, eat, or drink while using this oil. In addition, keep it away from ignition sources such as heat, sparks, open flames, or high temperatures and prevent it from catching fire due to static electricity sparks or other sparks.
- Use only outdoors or in a well-ventilated area. Inhalation of oil mist or vapors may cause nausea. Be careful to provide ventilation and use a respirator-type mask.
If mist or vapor is inhaled by mistake, go immediately to an area with fresh air, stay warm and quiet, and seek professional medical advice if required.
If breathing stops, perform artificial respiration, and if breathing is difficult, provide the affected person with oxygen.

Cautions regarding handling of WB maintenance oil :

- Contact with eyes may result in irritation. Use safety glasses when handling, and avoid contact with eyes.
In the event of eye contact, flush eye with fresh water for 15 minutes or more, and seek medical assistance if any abnormal symptoms occur.
- Contact with skin may cause a rash and discomfort. Use gloves when handling. In the event of skin contact, wash well with soap and water.
If skin condition becomes abnormal, seek medical assistance immediately.
- Do not drink. If it is drunk by mistake, do not induce vomiting; make the affected person drink 1 to 2 cups of water and seek medical assistance immediately.
If the affected person loses consciousness, do not give the person anything by their mouth. If vomiting occurs naturally, tilt the body to prevent inhalation.
- After use, be sure to wash hands thoroughly.
- When storing, close the container tightly to prevent water or foreign materials from entering; store out of reach of children; do not store in areas subject to direct sunlight, areas subject to temperatures above 40°C, areas subject to water or high humidity where rust is likely to occur, or in areas where there is a risk of freezing.
- Dispose of used oil, old oil, or oil used for cleaning in accordance with applicable local laws and regulations.
- To maintain the product in good working order, oil should be changed after the first 1,000 km from start of use of the product, and once every year thereafter (after every 2,000 km if bicycle is ridden frequently).
- When performing maintenance, use WB maintenance oil. If the WB maintenance oil is not used, problems such as an oil leakage and gear shifting malfunction may occur.
- Disposal of Used Oil: Follow local county and/or state codes for disposal. Use caution when preparing the oil for disposal.
- Read this manual carefully, and keep it in a safe place for later reference.
- The latest product safety data sheets are accessible online at <https://si.shimano.com>.



1



Fill the container with maintenance oil to a height of 95 mm.

(z) 95 mm

2



Immerse the internal unit in the oil from the left side until the oil reaches up to ring gear unit 1, as shown in the illustration.

(z) Ring gear unit 1

3



Keep the internal unit immersed for approximately 90 seconds.

4



Remove the internal unit from the oil.

5



Let excess oil drain off for approximately 60 seconds.



6



Reassemble the hub.



Troubleshooting

Troubleshooting

Check the following prior to performing adjustment or maintenance.

- All of the following occurrences are due to the internal gear-shifting structure and are not the failure of the internal components.

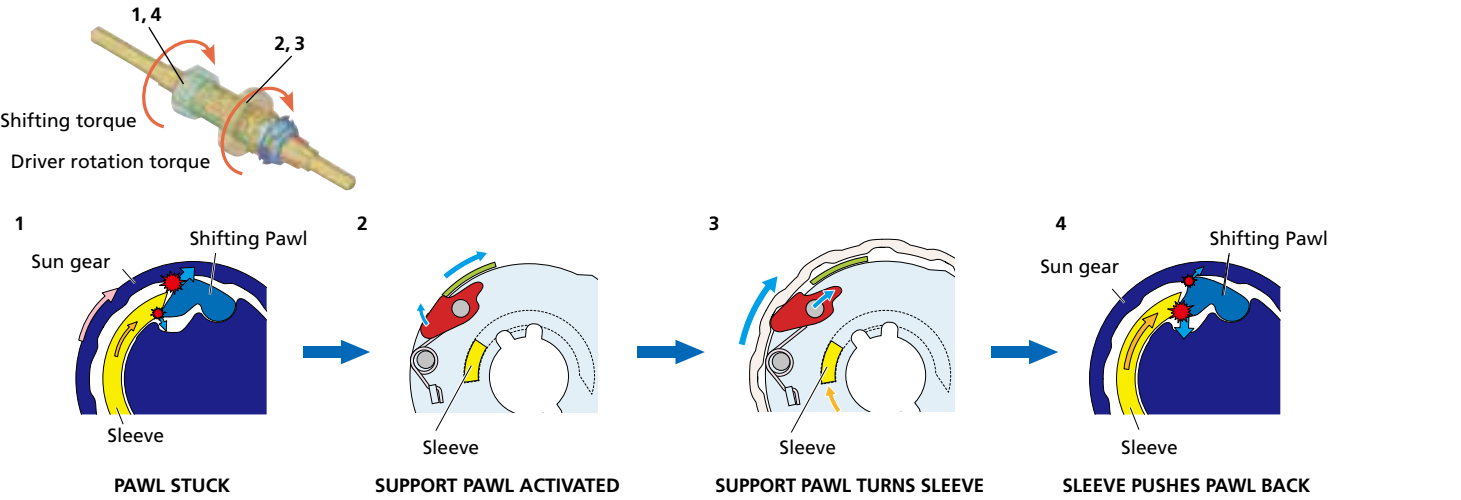
Phenomenon	Type of hub		Gear positions where phenomenon might occur
	For coaster brakes	For roller brakes/ V-BRAKE	
Noise occurs when the pedals rotate.	X	-	All gear positions except 1st
Noise occurs when the bicycle is pushed backward.	X	X	All gear positions except 1st
The hub has a built-in mechanism that supports gear shifting* and when the mechanism operates during gear shifting, noise and vibrations occur.	X	X	All gear positions
Depending on gear position, gear-shifting may feel different.	X	X	All gear positions
Noise occurs when pedal rotation is stopped during riding.	X	-	All gear positions

*Gear Change Support

SHIMANO gear change support mechanism utilizes some portion of pedaling force at down shifting. The result is a quick and precise downshift with very light feeling on both mechanical and DI2 version of the hub.

40% less shifting force required

Pedaling force is applied against the sleeve to help overcome sleeve return pressure and execute the shift.



NOTICE

- If you cannot determine a definite cause for the malfunction, it is recommended to replace the internal assembly. (Refer to p.55)

Troubleshooting

	Symptom/cause			Solution	Reference page	
Gear shifting	Gear shifting is poor.	The cable has been routed inappropriately.			–	
		Cable performance is poor.			–	
		The cassette joint was adjusted while over-shifted.			P.24	
	Gear shifting is impossible.	The cable was not adjusted properly.			P.24	
		Check whether gear shifting is possible with the wheel removed from the frame.	Possible	The wheel was not installed properly to the frame.	Recheck the procedure for installing the hub to the frame.	P.11
			Not possible	There is a malfunction in the shifting lever.	Replace the lever with a new one.	P.18
		There is a malfunction in the hub.		If something is broken inside, replace the broken part or unit. If nothing is broken or if you are unsure, replace the internal assembly.	P.55	
Abnormal noise	There is an abnormal noise.	The cable was not adjusted properly.			P.24	
	The abnormal noise does not stop even after adjusting the cable.	During gear shifting.			P.55	
		When pedaling.			If something is broken inside, replace the broken part or unit. If nothing is broken or if you are unsure, replace the internal assembly.	P.55
When riding	The display on the indicator on the lever differs from the gear position of the hub.	The cable was not adjusted properly.			P.24	
		Internal unit failure.			If something is broken inside, replace the broken part or unit. If nothing is broken or if you are unsure, replace the entire internal unit.	P.55
	The hub is difficult to rotate, or does not rotate smoothly.	The cone is too tight.			Adjust the stop nut so that the hub shell can be turned smoothly without any gap. After adjusting, secure the stop nut with the locknut.	P.73
		Internal unit failure.			If something is broken inside, replace the broken part or unit. If nothing is broken or if you are unsure, replace the entire internal unit.	P.55
		There is rattling when pedaling.	The area around the cone is damaged.			Replace the right hand cone and driver unit.
When not riding	Free rotation is not smooth while not pedaling.			Replace the shell, ball retainer and driver unit.	P.56,60,63	

Troubleshooting

The following items are for coaster brake models.

	Symptoms	Solution	Reference page
Brakes	The brakes are too sensitive.	Apply grease or replace the brake shoe unit	P.58
	The brakes are weak.	Replace the brake shoe unit. If this does not resolve the issue, replace the internal assembly.	P.55,58
	The pedal rotation angle is too large until the brakes are applied.	Replace the brake shoe unit. If this does not resolve the issue, replace the internal assembly.	P.55,58
	The wheels lock when the bicycle is pushed backward.	If something is broken inside, replace the broken part or unit. If nothing is broken or if you are unsure, replace the internal assembly.	P.55
	Applying the brakes causes an abnormal noise.	Apply grease or replace the brake shoe unit.	P.58
	Rotation feels heavy during free rotation.	Replace the brake shoe unit.	P.58

Disassembly & Assembly

Required Tools & Parts

A: Hammer

B: TL-C7001

C: TL-S702

D: Slotted Screwdriver

E: TL-7S20 Hub spanners 17 mm×22 mm (2 pcs.)

F: Cassette joint CJ-C7000



NOTICE

- For internal assembly replacement, only tool "e" is necessary.
- For disassembling/assembling the internal assembly, all tools ("a" through "f") are necessary.
- When assembling or disassembling the internal unit, use a new E-ring. The E-ring is not reusable once removed.
- When disassembling/assembling the internal assembly, work will be easier if a shifting lever compatible with the cassette joint is connected.

Replacing the Internal Assembly

Refer to the part breakdown (p. 78) for the names of parts.

1. Hold the two beveled surfaces of the hub axle on the brake arm side in a vise and remove the dust cap.



NOTICE

- Forcibly pulling it may cause damage to the bracket cover because of its material properties.
- Do not damage the threads of the hub axle.

2. Remove the lock nut and stop nut.

- (1) Secure the hub back into place with the drive side downward.
- (2) Use TL-7S20 to remove the nut.



Locknut 17mm (Y-35P 28000)



Stop Nut 22mm (Y-35P 22000)

3. Remove the brake arm unit and ball retainer from the hub axle.



Replacing the Internal Assembly

4. Remove the hub shell.



5. The internal assembly can be replaced.



Disassembling the Internal Assembly

Installing the cassette joint

With the brake arm facing downward, pinch the flat portion of the axle with a vise, and secure the internal assembly in place.

1. Set the cassette joint.

- (1) Turn the cassette joint pulley in the direction of the arrow to align the red ● marks on the pulley and the bracket.
- (2) Install it with the red ● marks on the cassette joint aligned with the red ● marks on the right side of the hub body.



2. When installing the cassette joint mounting ring, align the yellow ● mark with the yellow ● mark on the pulley of the cassette joint.



3. Turn the cassette joint mounting ring 45° clockwise.

Hold down the bracket securely when performing work.



Disassembling the Internal Assembly

Disassembling the Internal Assembly

When disassembling or assembling the internal assembly, turn the cassette joint until it makes contact and ensure that the unit is in 1st gear (the tabs on the hub axle are folded down) before working. It will be easier to keep the unit in 1st gear if you connect a compatible shifting lever.



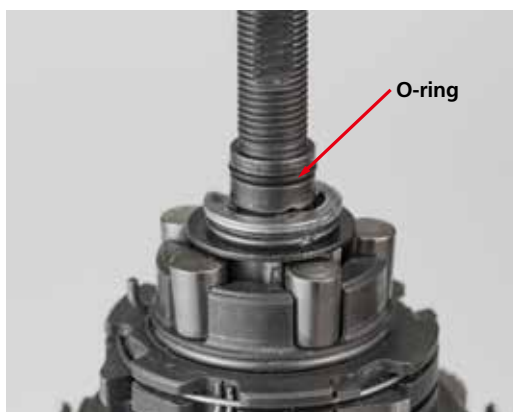
1. Remove the brake shoe unit.

With the drive side facing downward, use a vise to secure the internal assembly in place.



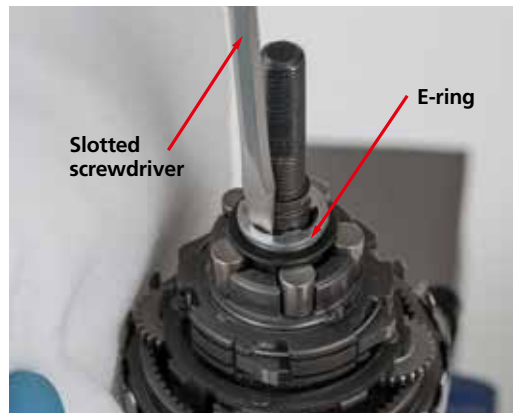
2. Remove the O-ring.

Later steps may still be performed even if the O-ring is not removed.



Disassembling the Internal Assembly

3. Carefully remove the E-ring with a slotted screwdriver.



NOTICE

- The E-ring detaches with some force, so be careful not to lose it.
- Do not reuse an E-ring that has been removed.

Perform steps 5 through 7 with the cassette joint turned until it makes contact.

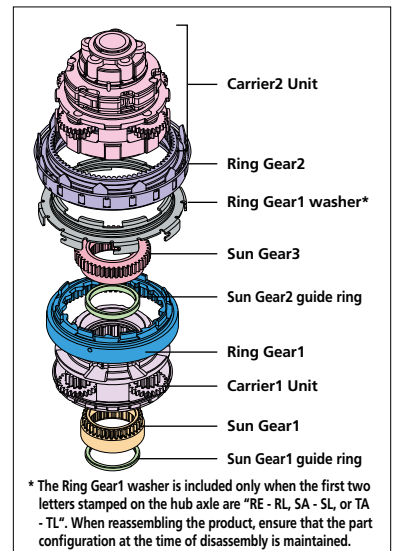
4. Lift the entire carrier unit straight up and remove it.

The carrier unit is structured from several parts.



NOTICE

- The carrier unit is structured from the following parts.



5. Remove Sun Gear1.



Disassembling the Internal Assembly

6. Remove the Sun Gear1 guide ring.**7. Remove the ball retainer.****8. Reverse axle unit in vise to access the drive side cone assembly.**

Disassembling the Internal Assembly

9. Remove the cassette joint.

Follow the reverse procedure from "Installing the cassette joint."

**10. Remove the right-hand lock nut.****11. Remove the stop washer.**

Disassembling the Internal Assembly

12. Remove the lock washer.



13. Remove the drive plate.



Disassembling the Internal Assembly

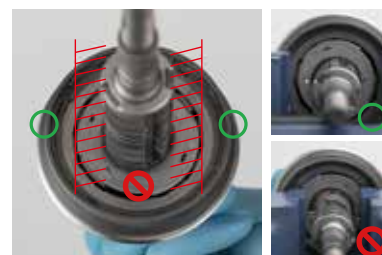
14. Remove the hub axle.

(1) Place the driver on the vise.

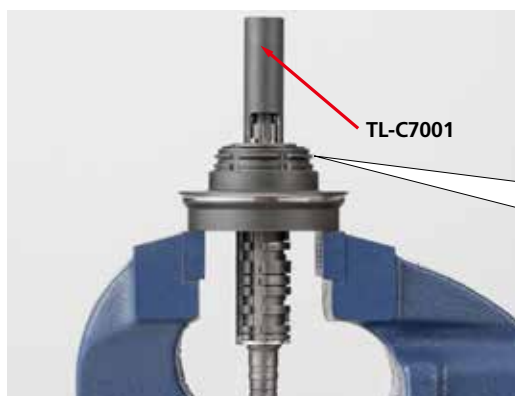


NOTICE

- Make sure to place it so that the vise is outside the washers inside. Otherwise, the washers could detach and you will be unable to reattach them.



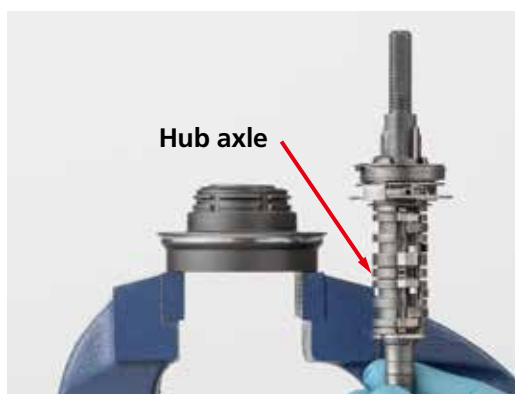
(2) Insert TL-C7001 aligned with the position of the groove on the hub axle.



(3) Use a hammer to strike TL-C7001.
• Use your hand to support the hub axle while you strike it.



(4) The hub axle detaches.



Disassembling the Internal Assembly

- 15. Remove the right-hand cone from the driver unit.**



- 16. Remove ball retainer A from the driver unit.**



NOTICE

- The unit is disassembled as shown below.



Assembling the Internal Assembly

Apply internal geared hub grease to the parts indicated with the following icon.

NOTICE

- Although there is white-colored and black-colored grease, the two types can be mixed during use.



(Y04130100)

1. Install the driver unit.



2. Install the ball retainer A.



3. When installing the right hand cone, align the two serrations with the grooves in the axle, as shown.



Assembling the Internal Assembly

- 4. Set the cone installation tool (TL-S702) and strike it until it comes to a stop.**

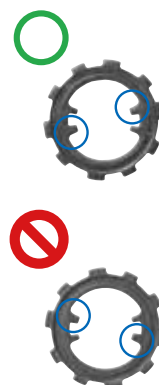
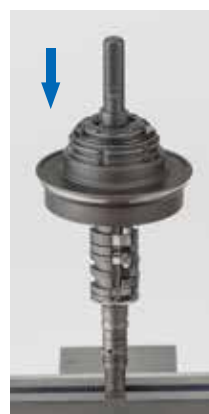


NOTICE

- Make sure the right hand cone is completely seated, as shown and the seal is installed equally.



- 5. Install the driver plate. Be careful of the setting direction as shown in the picture.**



- 6. Install the lock washer.**

Install so that the protrusions on the rear of the lock washer align with the indentations on the cone.



Assembling the Internal Assembly

- 7. When installing the stop washer, align the two teeth with the two grooves of the lock washer.**



- 8. Tighten the right-hand lock nut.**



NOTICE

- If either the lock washer or driver plate rotates during this step, return to assembly step 3 and make sure that the cone is correctly seated.

- 9. Install the cassette joint.**

Refer to "Installing the cassette joint."



Assembling the Internal Assembly

10. Reverse the axle unit in the vise to complete assembly.



11. Install the ball retainer.



NOTICE

- Be careful, as the balls can easily fall from the retainer.
- Keep the vertical direction of the ball retainer in mind as you set it.

12. Install the Sun Gear1 guide ring.

Do this while turning the cassette joint until it makes contact.
If a shifting lever is connected, do this with the unit in 1st gear.



Assembling the Internal Assembly

13. Install Sun Gear1.

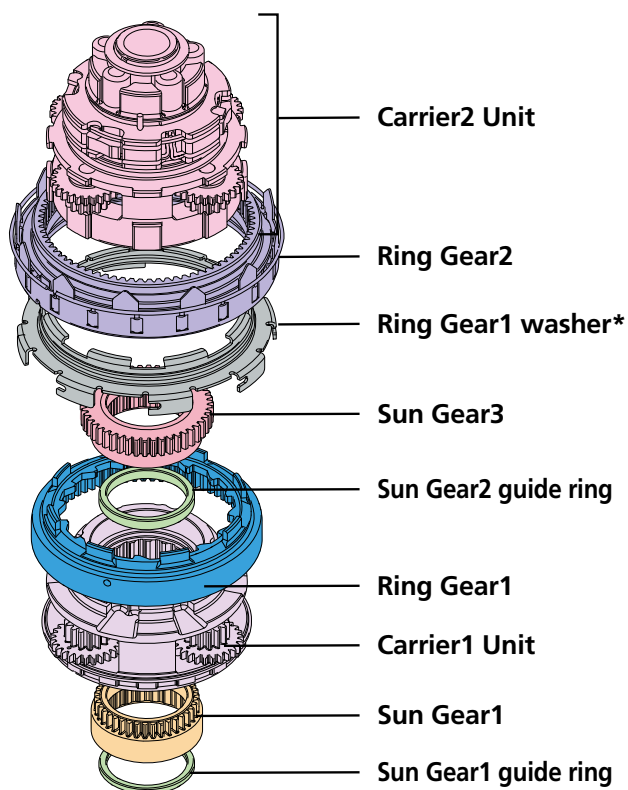
Do this while turning the cassette joint until it makes contact.
If a shifting lever is connected, do this with the unit in 1st gear.



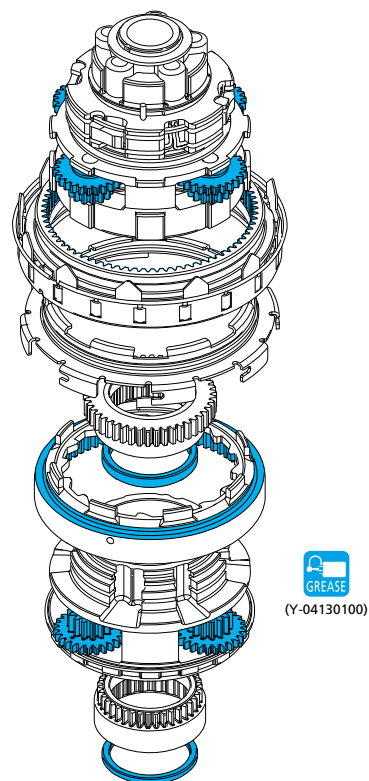
14. Install the carrier unit.

NOTICE

- The carrier unit is structured from the following parts.
- Apply grease to the areas indicated in the figure.



* The Ring Gear1 washer is included only when the first two letters stamped on the hub axle are "RE - RL, SA - SL, or TA - TL". When reassembling the product, ensure that the part configuration at the time of disassembly is maintained.

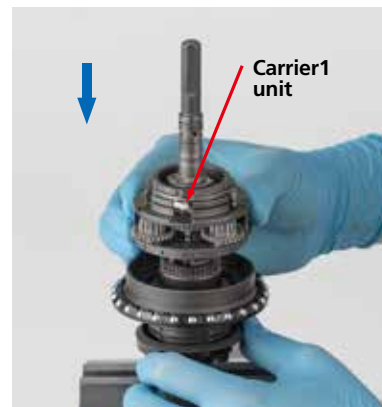


Assembling the Internal Assembly

14. Install the carrier unit.

(1) Install the Carrier1 unit

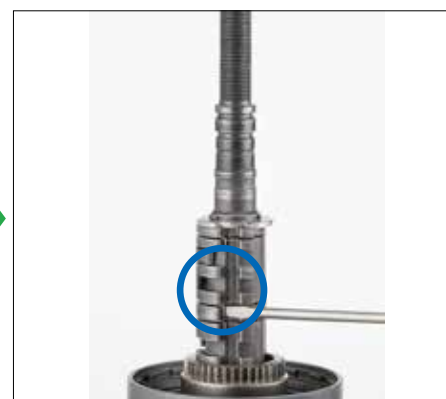
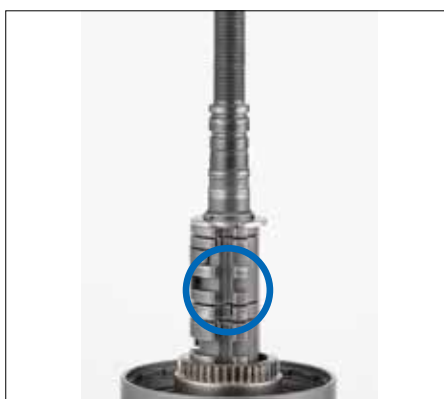
*Do this while pushing the cassette joint until it makes contact.
If a shifting lever is connected, do this with the unit in 1st gear.



When installing, ensure that the tab on the Carrier 1 unit is inserted into the groove on the axle unit.

NOTICE

- If the metal fitting of the axle unit groove has come out as shown in the figures, use a slotted screwdriver to push it in before installing the Carrier 1 unit.



(2) Install up to Ring Gear1.

*Do this while pushing the cassette joint until it makes contact.
If a shifting lever is connected, do this with the unit in 1st gear.



Assembling the Internal Assembly

- (3) Combine the Carrier2 Unit, Ring Gear2, and Ring Gear1 washer.

*The Ring Gear1 washer is included only when the first two letters stamped on the hub axle are "RE - RL, SA - SL, or TA - TL". When reassembling the product, ensure that the part configuration at the time of disassembly is maintained.



- (4) Install the combined unit.

*Keep your hands away from the cassette joint while doing this.
If a shifting lever is connected, do this with the unit in 5th gear.
*If installation is difficult, install while slightly turning the driver.



15. Install a new E-ring.

Install so that the protrusion in the center of the E-ring fits into the hole in the hub axle.



Contact point of E-ring and Carrier Unit

NOTICE

- If you cannot see the hole in the hub axle, the carrier unit might not be installed properly. Return to step 12 and reinstall it.

Assembling the Internal Assembly

16. Install the O-ring.



NOTICE

- It is recommended that you wrap the threads with tape before installing the O-ring to prevent damage to the O-ring contacting the axle threads.

17. Install the brake shoe unit.

Install so that the end of the slide spring on the hub fits into the gap in the brake shoe.



NOTICE

- Keep the vertical direction of the brake shoe unit in mind as you install it.



Upper side

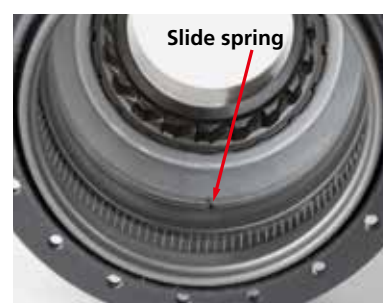


Lower side



18. Install the hub shell.

Be careful that the slide spring inside the hub shell does not touch the convex section of the internal assembly.



Assembling the Internal Assembly

- 19.** Place ball retainer onto the hub shell.

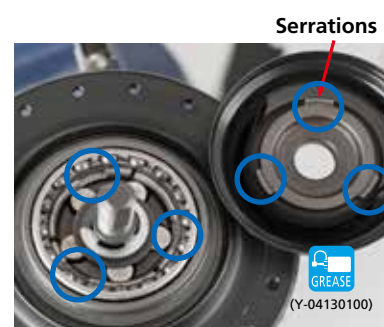


NOTICE

- Be careful of the setting direction.



- 20.** Place the brake arm unit onto the hub axle and turn it to the left and right so that the serrations of the brake shoe and brake arm unit engage with each other.



- 21.** Screw the stop nut to adjust so that the hub shell can be turned smoothly without any play. After adjusting, secure the stop nut with the locknut.



Locknut



Stop Nut



Assembling the Internal Assembly

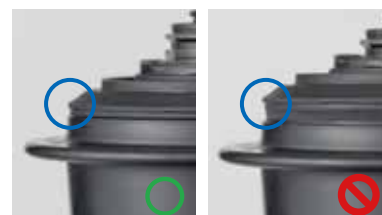
22. Turn the unit over, secure it back in the vise, and then remove the cassette joint.

Follow the reverse procedure from "Installing the cassette joint."



23. Install the dust cap.

Install so that there is a 1 to 1.5 mm gap with the dust cap.



24. Assembly is now complete.



Service Parts & Tools

Service Parts and Tools

Cassette Joint



CJ-C7000-5



CJ-C7000-5BD
for Belt Drive Spec.

The Belt Drive specification is designed to not interfere with the belt drive.

CJ-C7000-5



CJ-C7000-5BD



Measurement Tool



TL-S700-B

Motor unit



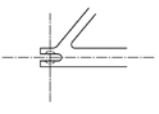
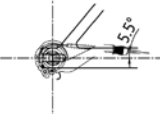
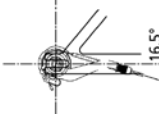
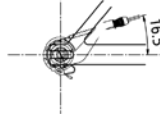
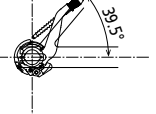

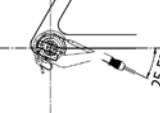
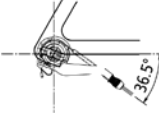
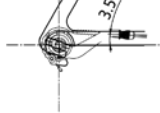
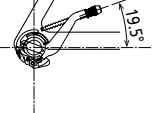
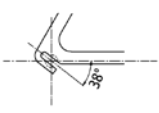

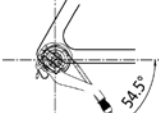
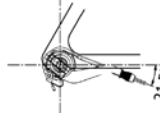
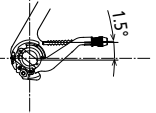
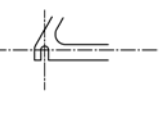
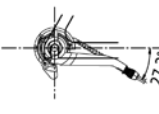

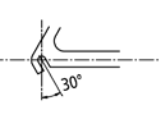
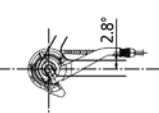
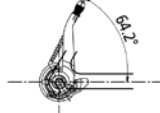
MU-UR500

NEXUS non-turn washers

The shape of the dropout determines which NTW to choose. In the illustration below, you can see the result for various frame dropouts in combination with the chosen NTW.

	5R/L	6R/L	7R/L	8R/L	9R/L
For right hand side	  5R: Yellow	  6R: Silver	  7R: Black	  8R: Dark blue	  9R: Light brown
For left hand side	  5L: Brown	  6L: White	  7L: Gray	  8L: Dark green	  9L: Light green

*see Technical Information for the latest information

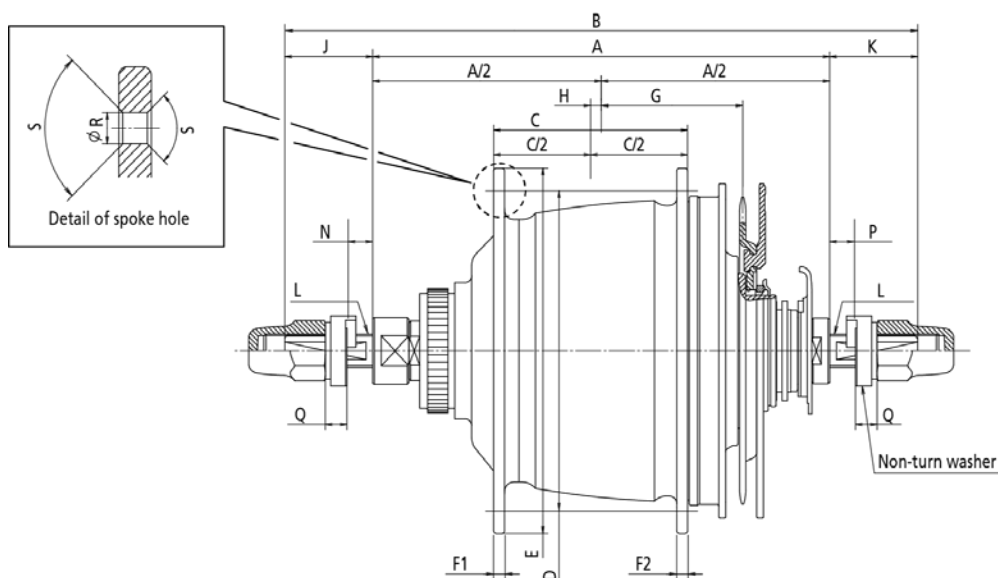
		5R/L	6R/L	7R/L	8R	8L	9R/L
Reversed type rear dropout					—	—	
Standard type rear dropout					—	—	
					—	—	
Vertical type rear dropout		—	—	—			—
		—	—	—			—

Hub dimensions

(Over Locknut Dimensions and Axle)

Hub dimensions (Over Locknut Dimensions and Axle)

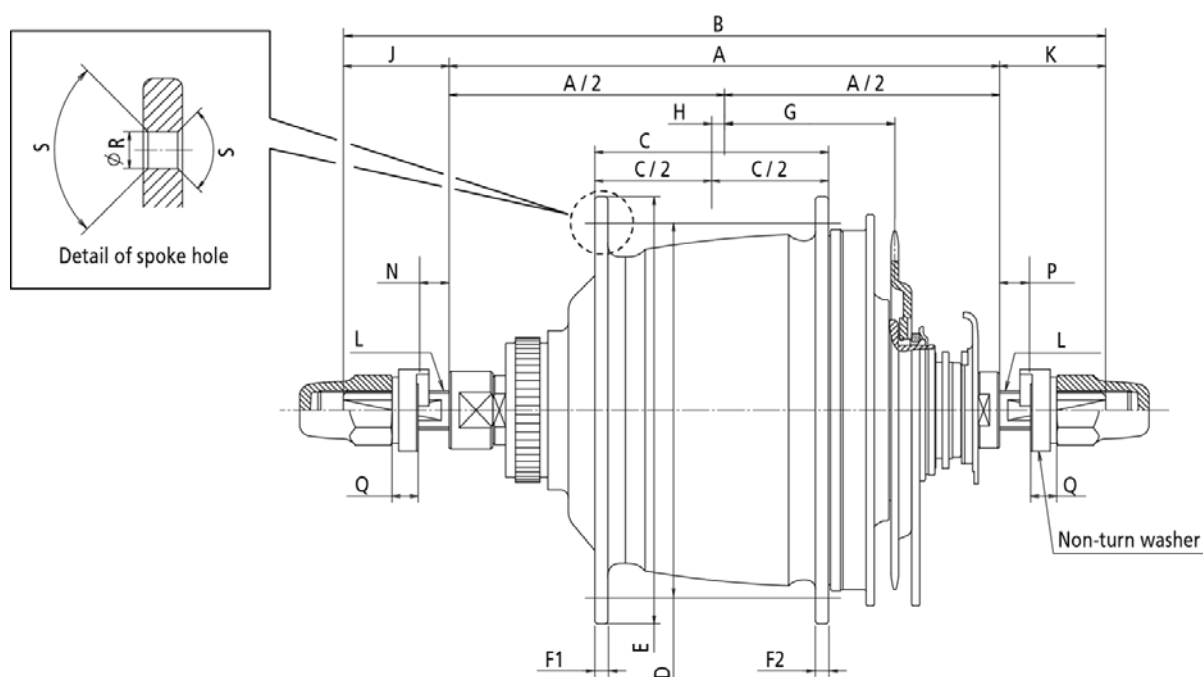
SG-C7000-5V / SG-C7000-5R / SG-C7000-5C / SG-C7000-5D



Series	NEXUS	
Function name	INTER-5E	
Model No.	SG-C7000-5D	SG-C7000-5R SG-C7000-5V SG-C7000-5C
Speed	5	
Gear ratio: Total	263%	
Spoke size	#13 / #14	
A Over locknut dim. / O.L.D. (mm)	135	
B Axle length (mm)	187	
C Flange distance (mm)	57.3	58.3
D Spoke hole P.C.D. (mm)	92.6	
E Flange diameter (mm)	105.2	
F Flange width (mm): F1 (left)	3.2	
F Flange width (mm): F2 (right)	3.2	
G Chain line (mm): G1 (outward assembly)	47.2	
G Chain line (mm): G2 (inward assembly)	42.2	
H Offset (mm)	3.2	3.2 / 3.7 (-5C spec.)
J Axle length from hub (left)	26	
K Axle length from hub (right)	26	
L Axle size	BC3 / 8 TPI 26	
N Rear dropout mounting width (left, includes stay etc.)	5-9	
P Rear dropout mounting width (right, includes stay etc.)	5-9	
Q Non-turn washer width	6.4	
R Spoke hole diameter (mm)	2.9	
S Spoke hole chamfer	90°	

Hub dimensions

SG-C7050-5V / SG-C7050-5R / SG-C7050-5C / SG-C7050-5D

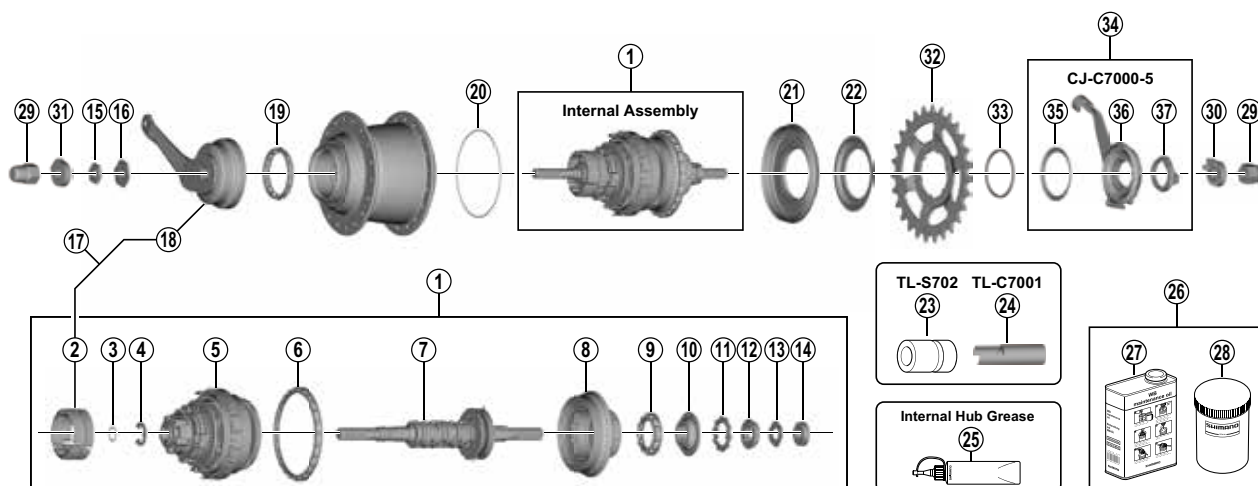


Series	NEXUS	
Function name	INTER-5E	
Model No.	SG-C7050-5D	SG-C7050-5R SG-C7050-5C SG-C7050-5V
Speed	5	
Gear ratio: Total	263%	
A Over locknut dim. / O.L.D. (mm)	135	
B Axle length (mm)	187	
C Flange distance (mm)	57.3	58.3
D Spoke hole P.C.D. (mm)	92.6	
E Flange diameter (mm)	105.2	
F Flange width (mm): F1 (left)	3.2	
F Flange width (mm): F2 (right)		
G Chain line (mm): (inward assembly)	42.2	
H Offset (mm)	3.2	3.7
J Axle length from hub (left)	26	
K Axle length from hub (right)		
L Axle size	BC3 / 8 TPI 26	
N Rear dropout mounting width (left, includes stay etc.)	5-9	
P Rear dropout mounting width (right, includes stay etc.)		
Q Non-turn washer width	6.4	
R Spoke hole diameter (mm)	2.9	
S Spoke hole chamfer	90°	

EV / Spare Parts List

Spare parts list

NEXUS 5-speed Internal Hub w/Coaster Brake SG-C7000-5C

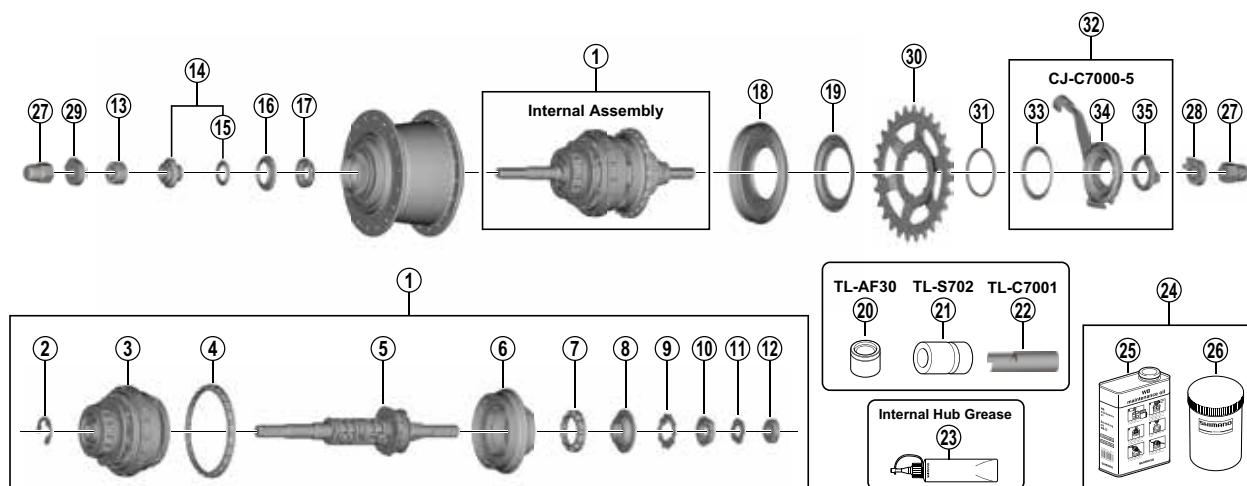


ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	Y3FH98010	Internal Assembly (Axle Length 187 mm)
2	Y37G98020	Brake Shoe Unit (3 pcs.)
3	Y37E08000	O-Ring
4	Y3FE10000	E-Ring (D9.6)
5	Y3FE98020	Carrier Unit
6	Y38X98050	Ball Retainer O (3/16" x 26)
7	Y3FH98020	Hub Axle Unit (Axle Length 187 mm)
8	Y3FF98040	Driver Unit
9	Y3FF98050	Ball Retainer A (7/32" x 13)
10	Y3FJ98030	Right Hand Cone w/Seal
11	Y31L04000	Drive Plate
12	Y31L98030	Lock Washer
13	Y34R09000	Joint Nut Stop Washer
14	Y35Z11000	Right Hand Serrated Lock Nut (5.4 mm)
15	Y35P28000	Left Hand Lock Nut (3 mm)
16	Y35P22000	Stop Nut
17	Y31N98060	Brake Shoe Unit & Brake Arm Unit
18	Y31N98050	Brake Arm Unit (3 Serration)
19	Y38R98190	Ball Retainer B (3/16" x 16)
20	Y35J11100	Hub Shell Slide Spring
21	Y37G98080	Right Hand Dust Cap A w/Seal
22	Y3FF47000	Right Hand Dust Cap C
23	Y13098022	TL-S702 Right Hand Cone Installation Tool
24	Y70821000	TL-C7001 Right Hand Cone Removal Tool

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
25	Y04130100	Internal Hub Grease (Net. 100g)
26	Y00298010	WB maintenance oil set
27	Y00201000	WB maintenance oil (1L)
28	Y00201100	Bottle
29	Y31414010	Cap Nut (3/8")
30	Y33Z20500	Non-turn Washer 5R (Yellow)
	Y33M39600	Non-turn Washer 6R (Silver)
	Y33M39700	Non-turn Washer 7R (Black)
	Y34R85010	Non-turn Washer 8R (Dark Blue)
31	Y33M39510	Non-turn Washer 5L (Brown)
	Y33M39610	Non-turn Washer 6L (White)
	Y33M39710	Non-turn Washer 7L (Gray)
	Y34R85000	Non-turn Washer 8L (Dark Green)
32	Y0FM24000	Sprocket Wheel 24T (CS-C7000)
	Y0FM01000	Sprocket Wheel 27T (CS-C7000)
	Y0FM30000	Sprocket Wheel 30T (CS-C7000)
33	Y7ZP04000	Snap Ring
34	Y7ZP98010	CJ-C7000-5 Cassette Joint Unit
35	Y7ZP98030	CJ-C7000-5 Cassette Joint Unit for Belt drive system
36	Y7ZP05000	Driver Cap
36	Y7ZP98020	CJ-C7000-5 Cassette Joint
	Y7ZP98040	CJ-C7000-5 Cassette Joint for Belt drive system
37	Y33Z98020	Cassette Joint Fixing Ring

Spare parts list

NEXUS 5-speed Internal Hub SG-C7000-5D

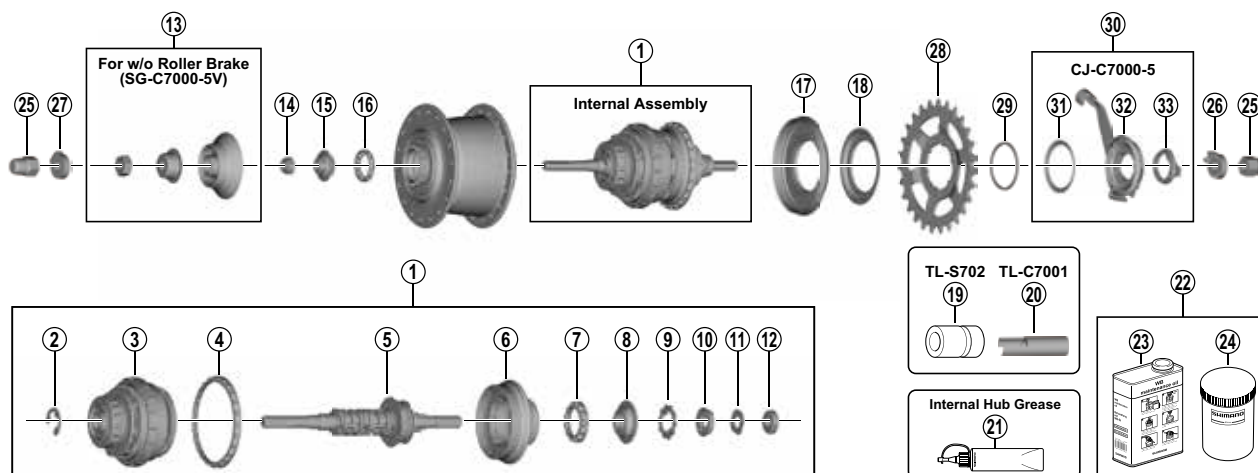


ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	Y3FJ98010	Internal Assembly (Axle Length 187 mm)
2	Y3FF49000	Stop Ring Diameter (12 mm / 1.3 mm)
3	Y3FF98020	Carrier Unit
4	Y38X98050	Ball Retainer O (3/16" x 26)
5	Y3FJ98020	Hub Axle Unit (Axle Length 187 mm)
6	Y3FF98040	Driver Unit
7	Y3FF98050	Ball Retainer A (7/32" x 13)
8	Y3FJ98030	Right Hand Cone w/Seal
9	Y31L04000	Drive Plate
10	Y31L98030	Lock Washer
11	Y34R09000	Joint Nut Stop Washer
12	Y35Z11000	Right Hand Serrated Lock Nut (5.4 mm)
13	Y35Z19000	Left Hand Serrated Lock Nut (10.7 mm)
14	Y31L98040	Left Hand Cone w/Dust Cap & Seal Ring
15	Y37710000	Seal Ring
16	Y32T08100	Left Hand Inner Dust Cap
17	Y36U98030	Ball Retainer (7/32" x 9)
18	Y37G98080	Right Hand Dust Cap A w/Seal
19	Y3FF47000	Right Hand Dust Cap C
20	Y70811000	TL-AF30 Left Hand Inner Dust Cap Installation Tool
21	Y13098022	TL-S702 Right Hand Cone Installation Tool
22	Y70821000	TL-C7001 Right Hand Cone Removal Tool
23	Y04130100	Internal Hub Grease (Net. 100g)

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
24	Y00298010	WB maintenance oil set
25	Y00201000	WB maintenance oil (1L)
26	Y00201100	Bottle
27	Y31414010	Cap Nut (3/8")
28	Y33Z20500	Non-turn Washer 5R (Yellow)
	Y33M39600	Non-turn Washer 6R (Silver)
	Y33M39700	Non-turn Washer 7R (Black)
	Y34R85010	Non-turn Washer 8R (Dark Blue)
29	Y33M39510	Non-turn Washer 5L (Brown)
	Y33M39610	Non-turn Washer 6L (White)
	Y33M39710	Non-turn Washer 7L (Gray)
	Y34R85000	Non-turn Washer 8L (Dark Green)
30	Y0FM24000	Sprocket Wheel 24T (CS-C7000)
	Y0FM01000	Sprocket Wheel 27T (CS-C7000)
	Y0FM30000	Sprocket Wheel 30T (CS-C7000)
31	Y7ZP04000	Snap Ring
32	Y7ZP98010	CJ-C7000-5 Cassette Joint Unit
	Y7ZP98030	CJ-C7000-5 Cassette Joint Unit for Belt drive system
33	Y7ZP05000	Driver Cap
34	Y7ZP98020	CJ-C7000-5 Cassette Joint
	Y7ZP98040	CJ-C7000-5 Cassette Joint for Belt drive system
35	Y33Z98020	Cassette Joint Fixing Ring

Spare parts list

NEXUS 5-speed Internal Hub SG-C7000-5R / 5V

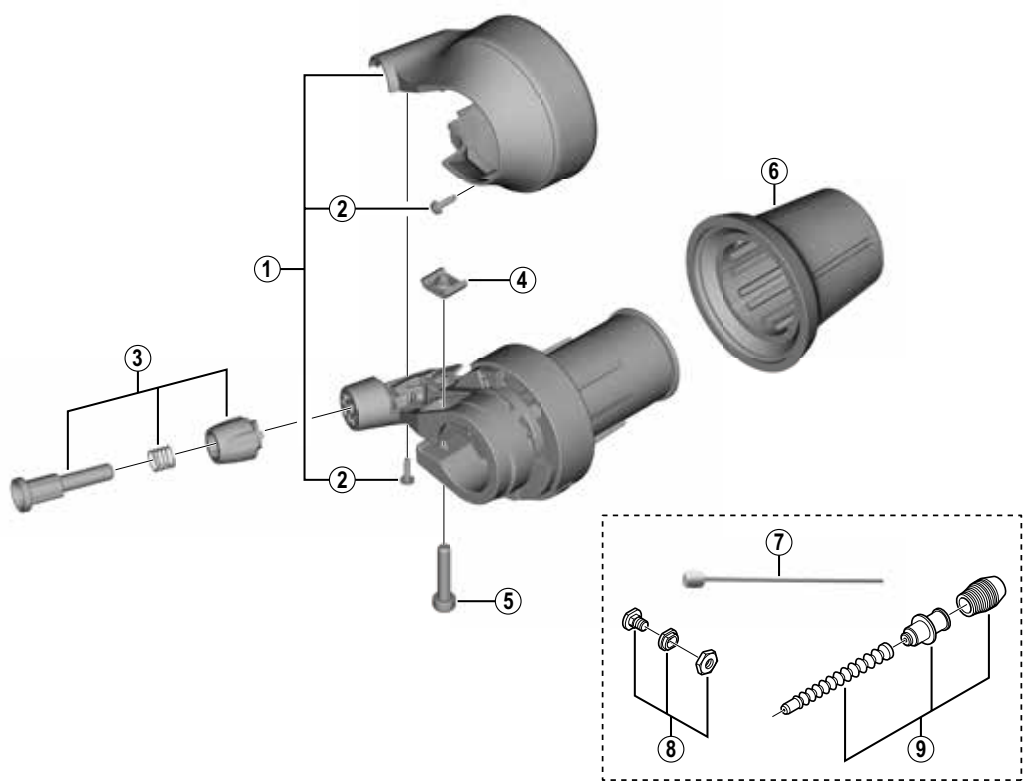


ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	Y3FG98010	Internal Assembly (Axle Length 187 mm)
2	Y3FF49000	Stop Ring Diameter (12 mm / 1.3 mm)
3	Y3FF98020	Carrier Unit
4	Y38X98050	Ball Retainer O (3/16" x 26)
5	Y3FG98020	Hub Axle Unit (Axle Length 187 mm)
6	Y3FF98040	Driver Unit
7	Y3FF98050	Ball Retainer A (7/32" x 13)
8	Y3FJ98030	Right Hand Cone w/Seal
9	Y31L04000	Drive Plate
10	Y31L98030	Lock Washer
11	Y34R09000	Joint Nut Stop Washer
12	Y35Z11000	Right Hand Serated Lock Nut (5.4 mm)
13	Y34R98100	Left Hand Dust Cap Unit
14	Y31Z06030	Lock Nut for Left Hand Cone
15	Y35J90000	Left Hand Cone w/Dust Cap
16	Y34R98070	Ball Retainer P (3/16" x 13)
17	Y37G98080	Right Hand Dust Cap A w/Seal
18	Y3FF47000	Right Hand Dust Cap C
19	Y13098022	TL-S702 Right Hand Cone Installation Tool
20	Y70821000	TL-C7001 Right Hand Cone Removal Tool
21	Y04130100	Internal Hub Grease (Net. 100g)
22	Y00298010	WB maintenance oil set

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
23	Y00201000	WB maintenance oil (1L)
24	Y00201100	Bottle
25	Y31414010	Cap Nut (3/8")
26	Y33Z20500	Non-turn Washer 5R (Yellow)
	Y33M39600	Non-turn Washer 6R (Silver)
	Y33M39700	Non-turn Washer 7R (Black)
27	Y34R85010	Non-turn Washer 8R (Dark Blue)
	Y33M39510	Non-turn Washer 5L (Brown)
	Y33M39610	Non-turn Washer 6L (White)
	Y33M39710	Non-turn Washer 7L (Gray)
28	Y34R85000	Non-turn Washer 8L (Dark Green)
	Y0FM24000	Sprocket Wheel 24T (CS-C7000)
	Y0FM01000	Sprocket Wheel 27T (CS-C7000)
29	Y0FM30000	Sprocket Wheel 30T (CS-C7000)
	Y7ZP04000	Snap Ring
30	Y7ZP98010	CJ-C7000-5 Cassette Joint Unit
31	Y7ZP98030	CJ-C7000-5 Cassette Joint Unit for Belt drive system
32	Y7ZP05000	Driver Cap
	Y7ZP98020	CJ-C7000-5 Cassette Joint
33	Y7ZP98040	CJ-C7000-5 Cassette Joint for Belt drive system
	Y33Z98020	Cassette Joint Fixing Ring

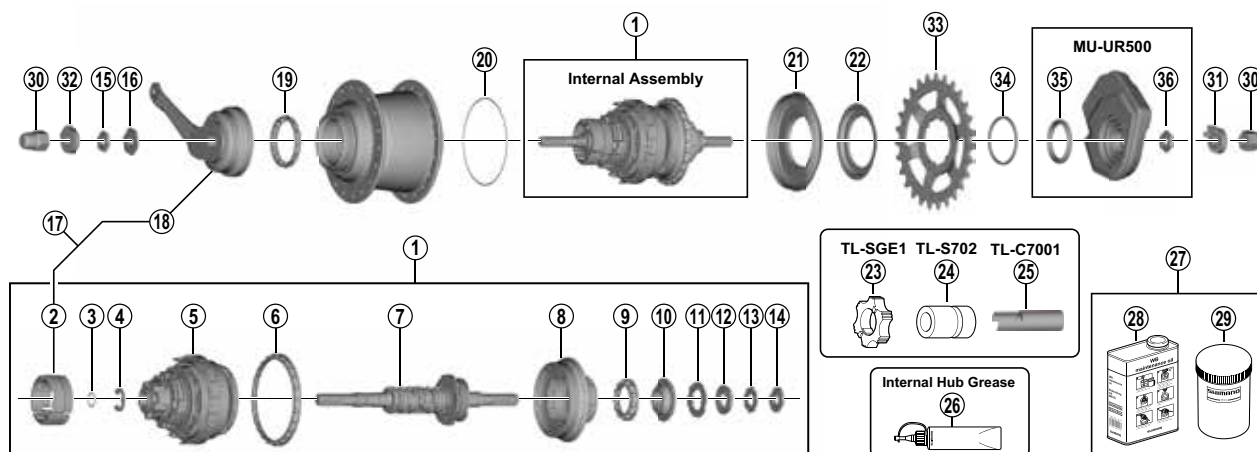
Spare parts list

NEXUS REVOSHIFT Shifter
SL-C7000-5 5-speed



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	Y0FL98010	Indicator Cover (Silver) & Fixing Screws
	Y0FL98020	Indicator Cover (Black) & Fixing Screws
2	Y6F004100	Cover Fixing Screw
3	Y01A98010	Cable Adjusting Bolt Unit
4	Y6NA08000	Clamp Nut
5	Y6F409100	Clamp Screw (M4 x 18.7)
6	Y0FL00080	Grip
7	Y60098911	"Shift inner cable stainless steel • Stainless steel inner cable • Diameter 1.2 mm x 2100 mm incl. inner end cap"
8	Y6TV98070	Inner Cable Fixing Bolt Unit
9	Y74Y98160	Outer Casing Holder Unit

Spare parts list

NEXUS 5-speed Internal Hub w/Coaster Brake
SG-C7050-5C

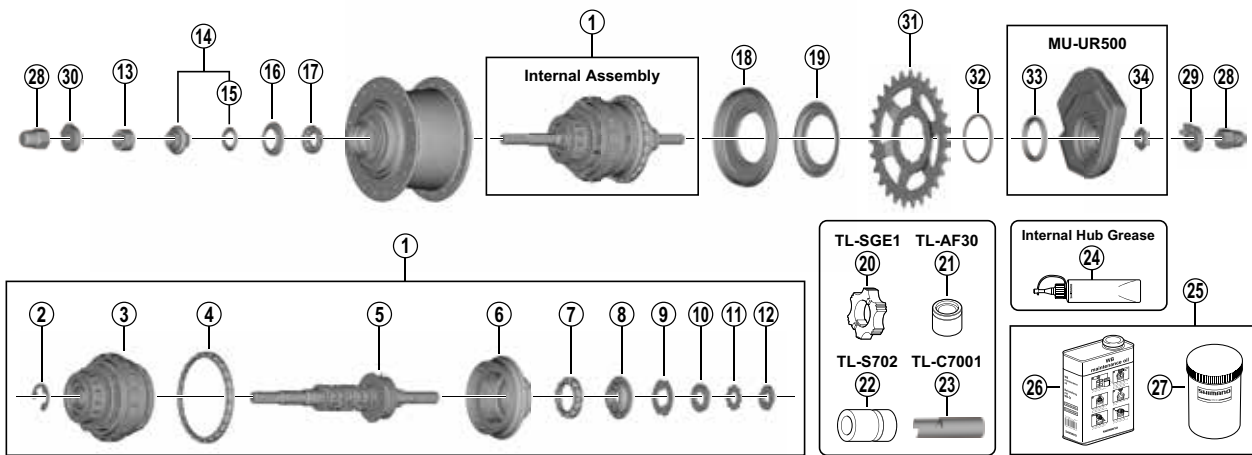
ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	Y3FE98010	Internal Assembly (Axle Length 187 mm)
2	Y37G98020	Brake Shoe Unit (3 pcs.)
3	Y37E08000	O-Ring
4	Y3FE10000	E-Ring (D9.6)
5	Y3FE98020	Carrier Unit
6	Y38X98050	Ball Retainer O (3/16" x 26)
7	Y3FE98030	Hub Axle Unit (Axle Length 187 mm)
8	Y3FF98040	Driver Unit
9	Y3FF98050	Ball Retainer A (7/32" x 13)
10	Y3FF98060	Right Hand Cone w/Seal
11	Y37S07000	Drive Plate
12	Y37S98050	Lock Washer
13	Y38F17000	Right Hand Lock Nut Washer
14	Y38F16000	Right Hand Lock Nut (3.7 mm)
15	Y35P28000	Left Hand Lock Nut (3 mm)
16	Y35P22000	Stop Nut
17	Y31N98060	Brake Shoe Unit & Brake Arm Unit
18	Y31N98050	Brake Arm Unit (3 Serration)
19	Y38R98190	Ball Retainer B (3/16" x 16)
20	Y35J11100	Hub Shell Slide Spring
21	Y37G98080	Right Hand Dust Cap A w/Seal
22	Y3FF47000	Right Hand Dust Cap C

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
23	Y20W10000	TL-SGE1 1st Gear Set Tool
24	Y13098022	TL-S702 Right Hand Cone Installation Tool
25	Y70821000	TL-C7001 Right Hand Cone Removal Tool
26	Y04130100	Internal Hub Grease (Net. 100g)
27	Y00298010	WB maintenance oil set
28	Y00201000	WB maintenance oil (1L)
29	Y00201100	Bottle
30	Y31414010	Cap Nut (3/8")
31	Y33Z20500	Non-turn Washer 5R (Yellow)
	Y33M39600	Non-turn Washer 6R (Silver)
	Y33M39700	Non-turn Washer 7R (Black)
	Y34R85010	Non-turn Washer 8R (Dark Blue)
32	Y33M39510	Non-turn Washer 5L (Brown)
	Y33M39610	Non-turn Washer 6L (White)
	Y33M39710	Non-turn Washer 7L (Gray)
	Y34R85000	Non-turn Washer 8L (Dark Green)
33	Y0FM24000	Sprocket Wheel 24T (CS-C7000)
	Y0FM01000	Sprocket Wheel 27T (CS-C7000)
	Y0FM30000	Sprocket Wheel 30T (CS-C7000)
34	Y7ZP04000	Snap Ring
35	Y78U00022	Motor Unit Seal
36	Y707000Y0	Lock Nut

Spare parts list

NEXUS 5-speed Internal Hub

SG-C7050-5D

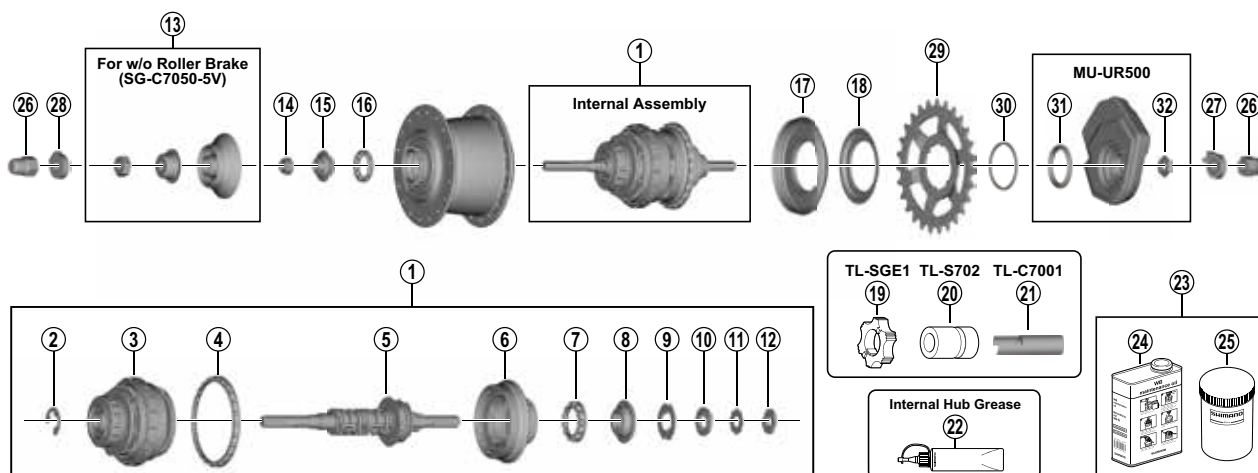


ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	Y3FF98010	Internal Assembly (Axle Length 187 mm)
2	Y3FF49000	Stop Ring Diameter (12 mm / 1.3 mm)
3	Y3FF98020	Carrier Unit
4	Y38X98050	Ball Retainer O (3/16" x 26)
5	Y3FF98030	Hub Axle Unit (Axle Length 187 mm)
6	Y3FF98040	Driver Unit
7	Y3FF98050	Ball Retainer A (7/32" x 13)
8	Y3FF98060	Right Hand Cone w/Seal
9	Y37S07000	Drive Plate
10	Y37S98050	Lock Washer
11	Y38F17000	Right Hand Lock Nut Washer
12	Y38F16000	Right Hand Lock Nut (3.7 mm)
13	Y35Z19000	Left Hand Serrated Lock Nut (10.7 mm)
14	Y31L98040	Left Hand Cone w/Dust Cap & Seal Ring
15	Y37710000	Seal Ring
16	Y32T08100	Left Hand Inner Dust Cap
17	Y36U98030	Ball Retainer (7/32" x 9)
18	Y37G98080	Right Hand Dust Cap A w/Seal
19	Y3FF47000	Right Hand Dust Cap C
20	Y20W10000	TL-SGE1 1st Gear Set Tool
21	Y70811000	TL-AF30 Left Hand Inner Dust Cap Installation Tool

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
22	Y13098022	TL-S702 Right Hand Cone Installation Tool
23	Y70821000	TL-C7001 Right Hand Cone Removal Tool
24	Y04130100	Internal Hub Grease (Net. 100g)
25	Y00298010	WB maintenance oil set
26	Y00201000	WB maintenance oil (1L)
27	Y00201100	Bottle
28	Y31414010	Cap Nut (3/8")
29	Y33Z20500	Non-turn Washer 5R (Yellow)
	Y33M39600	Non-turn Washer 6R (Silver)
	Y33M39700	Non-turn Washer 7R (Black)
	Y34R85010	Non-turn Washer 8R (Dark Blue)
30	Y33M39510	Non-turn Washer 5L (Brown)
	Y33M39610	Non-turn Washer 6L (White)
	Y33M39710	Non-turn Washer 7L (Gray)
	Y34R85000	Non-turn Washer 8L (Dark Green)
31	Y0FM24000	Sprocket Wheel 24T (CS-C7000)
	Y0FM01000	Sprocket Wheel 27T (CS-C7000)
	Y0FM30000	Sprocket Wheel 30T (CS-C7000)
32	Y7ZP04000	Snap Ring
33	Y78U00022	Motor Unit Seal
34	Y707000Y0	Lock Nut

Spare parts list

NEXUS 5-speed Internal Hub SG-C7050-5R / SG-C7050-5V



ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
1	Y3FD98010	Internal Assembly (Axle Length 187 mm)
2	Y3FF49000	Stop Ring Diameter (12 mm / 1.3 mm)
3	Y3FF98020	Carrier Unit
4	Y38X98050	Ball Retainer O (3/16" x 26)
5	Y3FD98020	Hub Axle Unit (Axle Length 187 mm)
6	Y3FF98040	Driver Unit
7	Y3FF98050	Ball Retainer A (7/32" x 13)
8	Y3FF98060	Right Hand Cone w/Seal
9	Y37S07000	Drive Plate
10	Y37S98050	Lock Washer
11	Y38F17000	Right Hand Lock Nut Washer
12	Y38F16000	Right Hand Lock Nut (3.7 mm)
13	Y34R98100	Left Hand Dust Cap Unit
14	Y31Z06030	Lock Nut for Left Hand Cone
15	Y35J90000	Left Hand Cone w/Dust Cap
16	Y34R98070	Ball Retainer P (3/16" x 13)
17	Y37G98080	Right Hand Dust Cap A w/Seal
18	Y3FF47000	Right Hand Dust Cap C
19	Y20W10000	TL-SGE1 1st Gear Set Tool
20	Y13098022	TL-S702 Right Hand Cone Installation Tool

ITEM NO.	SHIMANO CODE NO.	DESCRIPTION
21	Y70821000	TL-C7001 Right Hand Cone Removal Tool
22	Y04130100	Internal Hub Grease (Net. 100g)
23	Y00298010	WB maintenance oil set
24	Y00201000	WB maintenance oil (1L)
25	Y00201100	Bottle
26	Y31414010	Cap Nut (3/8")
27	Y33Z20500	Non-turn Washer 5R (Yellow)
	Y33M39600	Non-turn Washer 6R (Silver)
	Y33M39700	Non-turn Washer 7R (Black)
	Y34R85010	Non-turn Washer 8R (Dark Blue)
28	Y33M39510	Non-turn Washer 5L (Brown)
	Y33M39610	Non-turn Washer 6L (White)
	Y33M39710	Non-turn Washer 7L (Gray)
	Y34R85000	Non-turn Washer 8L (Dark Green)
29	Y0FM24000	Sprocket Wheel 24T (CS-C7000)
	Y0FM01000	Sprocket Wheel 27T (CS-C7000)
	Y0FM30000	Sprocket Wheel 30T (CS-C7000)
30	Y7ZP04000	Snap Ring
31	Y78U00022	Motor Unit Seal
32	Y707000Y0	Lock Nut