

Dealer's Manual

| | | |
|-------------------------------|-------------|----------|
| ROAD | MTB | Trekking |
| City Touring/ Comfort Bike | URBAN SPORT | E-BIKE |

Rear Derailleur

RD-RX800

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IMPORTANT NOTICE

- **This dealer's manual is intended primarily for use by professional bicycle mechanics.**

Users who are not professionally trained for bicycle assembly should not attempt to install the components themselves using the dealer's manuals. If any part of the information on the manual is unclear to you, do not proceed with the installation. Instead, contact your place of purchase or a local bicycle dealer for their assistance.

- Make sure to read all instruction manuals included with the product.
- Do not disassemble or modify the product other than as stated in the information contained in this dealer's manual.
- All dealer's manuals and instruction manuals can be viewed on-line on our website (<http://si.shimano.com>).
- Please observe the appropriate rules and regulations of the country, state or region in which you conduct your business as a dealer.

For safety, be sure to read this dealer's manual thoroughly before use, and follow it for correct use.

The following instructions must be observed at all times in order to prevent personal injury and physical damage to equipment and surroundings. The instructions are classified according to the degree of danger or damage which may occur if the product is used incorrectly.

 **DANGER**

Failure to follow the instructions will result in death or serious injury.

 **WARNING**

Failure to follow the instructions could result in death or serious injury.

 **CAUTION**

Failure to follow the instructions could cause personal injury or physical damage to equipment and surroundings.

TO ENSURE SAFETY

WARNING

- **Be sure to follow the instructions provided in the manuals when installing the product.**

It is recommended to use genuine Shimano parts only. If parts such as bolts and nuts become loose or damaged, the bicycle may suddenly fall over, which may cause serious injury.

In addition, if adjustments are not carried out correctly, problems may occur, and the bicycle may suddenly fall over, which may cause serious injury.

-  Be sure to wear safety glasses or goggles to protect your eyes while performing maintenance tasks such as replacing parts.
- After reading the dealer's manual thoroughly, keep it in a safe place for later reference.

Be sure to also inform users of the following:

- *Intervals between maintenance depend on the use and riding circumstances. Clean the chain with an appropriate chain cleaner regularly. Never use alkali based or acid based solvents, such as rust cleaners. If those solvents are used the chain might break and cause serious injury.*
- Check the chain for any damage (deformation or crack), skipping, or other abnormalities such as unintended gear shifting. If any problems are found, consult a dealer or an agency. The chain may break, and you may fall.

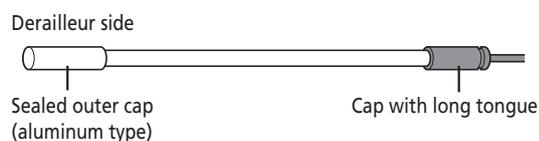
NOTICE

Be sure to also inform users of the following:

- For SHADOW RD+, be sure to check that the plate unit cover and the plate unit cap are installed before riding the bicycle.
- If gear shifting operations cannot be carried out smoothly, clean the derailleur and lubricate all moving parts.
- If looseness in the links is so great that gear shifting adjustments cannot be made, replace the derailleur.
- The gears should be periodically washed with a neutral detergent. In addition, cleaning the chain with neutral detergent and lubricating it can be an effective way of extending the life of the gears and the chain.
- Products are not guaranteed against natural wear and deterioration from normal use and aging.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

For Installation to the Bicycle, and Maintenance:

- Use the OT-RS900 cable and a cable guide for smooth operation.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly. Do not let dust adhere to the inner cable. If the grease on the inner cable is wiped off, the application of SIS SP41 grease (Y04180000) is recommended.
- The end of the outer casing which has the sealed outer cap (aluminum type) should be on the derailleur side. For details refer to the dealer's manual for ST-R9100.



- If gear shifting adjustments cannot be carried out, check that the rear dropouts are aligned. Check whether the cable is lubricated and clean, and if the outer casing is too long or short.
- Periodically clean the derailleur and lubricate all moving parts (mechanism and pulleys).
- Some tension pulleys have an arrow on them to indicate the direction of rotation. In such cases, install the pulley so that the arrow is pointing clockwise when seen from the outer side of the derailleur.
- If you hear abnormal noise as a result of looseness in a pulley, you should replace the pulley.

The actual product may differ from the illustration because this manual is intended mainly to explain the procedures for using the product.

LIST OF TOOLS TO BE USED

LIST OF TOOLS TO BE USED

The following tools are needed for installation, adjustment, and maintenance purposes.

| Tool | | Tool | | Tool | |
|--|---------------------|---|---------------------|---|-----------------|
|  | 2 mm hexagon wrench |  | 4 mm hexagon wrench |  | 5.5 mm spanner |
|  | 3 mm hexagon wrench |  | 5 mm hexagon wrench |  | Screwdriver[#2] |

INSTALLATION

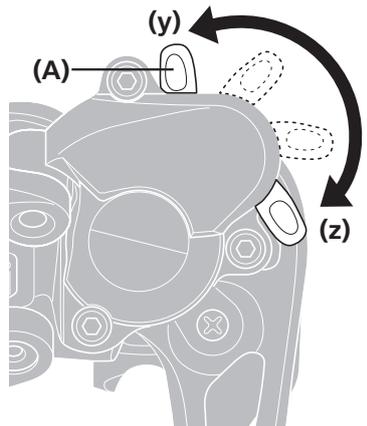
INSTALLATION

■ Installation of the rear derailleur

Standard type

Lever switch setting

1



Make sure that the lever switch is in the OFF position.

If the lever switch is in the ON position, be sure to move it to the OFF position.

(y) ON

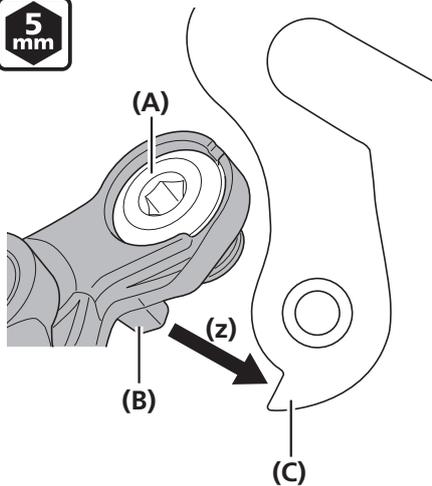
(z) OFF

(A) Lever switch

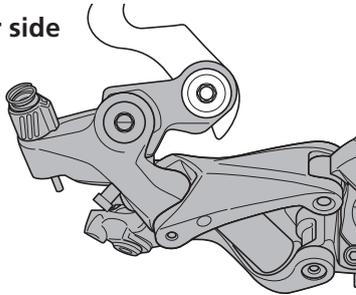
INSTALLATION

Installation of the rear derailleur

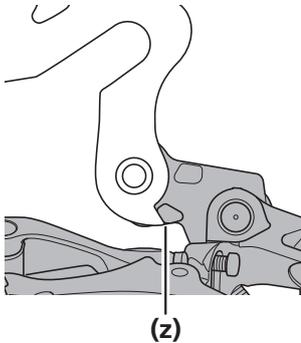
2



Outer side



Inner side



Use a hexagon wrench to tighten the rear derailleur fixing bolt, while being careful that the rear derailleur fixing bolt does not enter the derailleur hanger at an angle.

When doing so, install the rear derailleur so that the projection on the rear of the bracket makes contact with the B-tension stop from above without any gap.

(z) Set without any gap.

- (A)** Rear derailleur fixing bolt
- (B)** Projection on rear of bracket
- (C)** B-tension stop

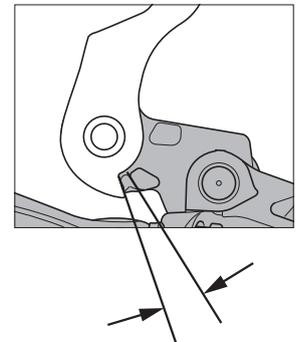
Tightening torque



8 - 10 N·m

NOTICE

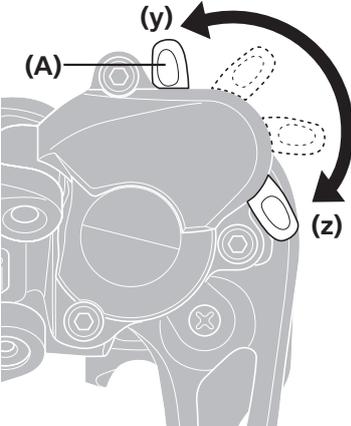
Periodically check that there is no gap between the B-tension stop and the projection on the rear of the bracket. If there is a gap between these two parts, problems with gear shifting performance may occur.



Direct mount type

Lever switch setting

1



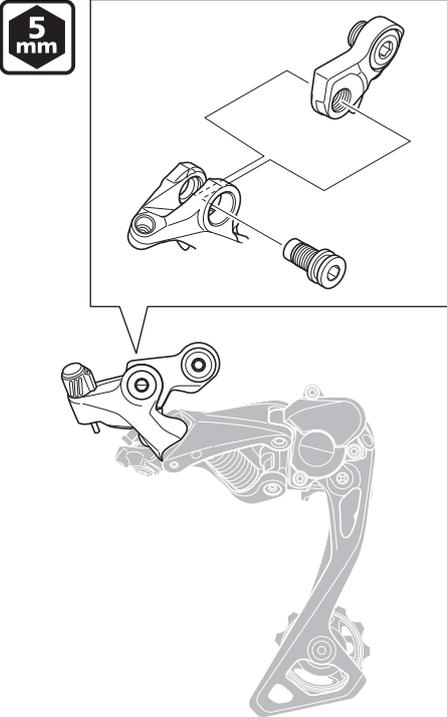
Make sure that the lever switch is in the OFF position.

If the lever switch is in the ON position, be sure to move it to the OFF position.

(y) ON
(z) OFF

(A) Lever switch

2



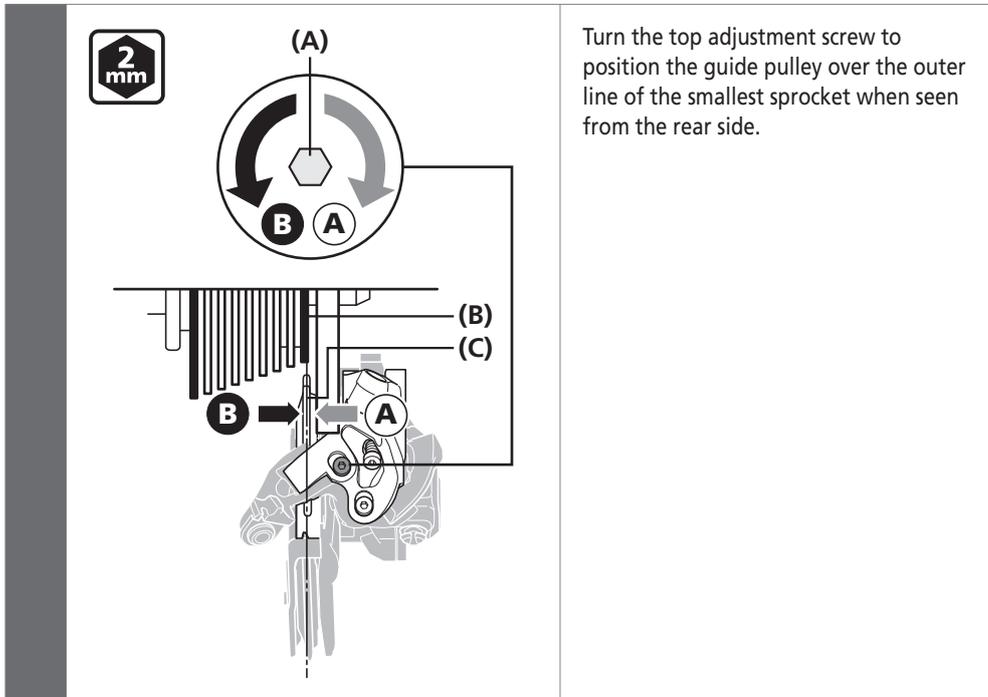
Remove the bracket axle.

ADJUSTMENT

ADJUSTMENT

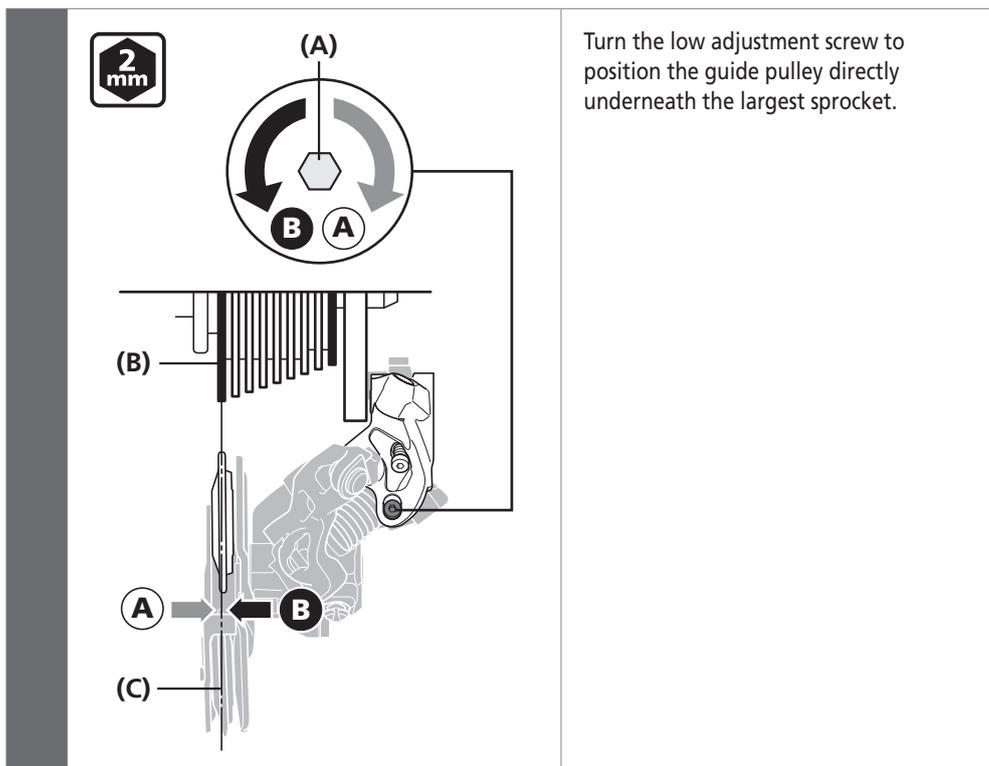
■ Stroke adjustment

Top adjustment



- (A) Top adjustment screw
- (B) Smallest sprocket
- (C) Guide pulley

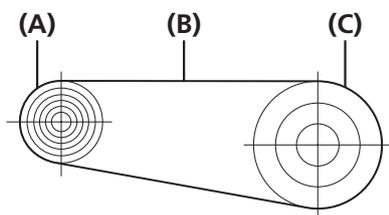
Low adjustment



- (A) Low adjustment screw
- (B) Largest sprocket
- (C) Guide pulley

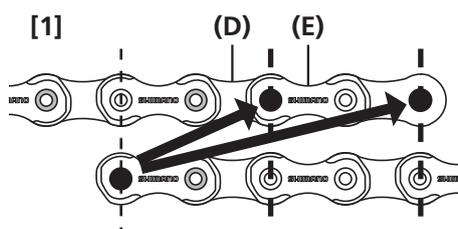
■ Installing the chain

Chain length

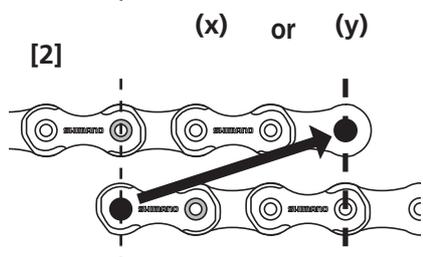


Mount the chain on to the largest sprocket and the largest chainring.

Next, add 2 to 4 links to set the length of the chain.



When mounting the chain, if the inner links and outer links match (as in [1]), set it to a length with 2 or 4 links added. When setting to the length with 2 links added (in [1]), if you are concerned about drive wandering after mounting the chain on the largest sprocket and largest chainring, set it to a length with another 2 links added.

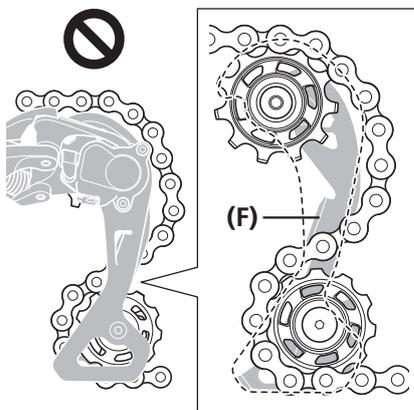
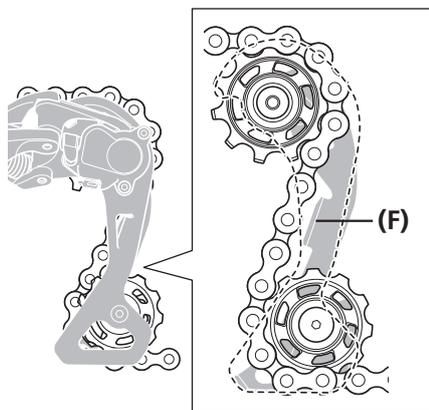


If the inner links match together and the outer links match together (as in [2]), set it to a length with 3 links added.

(x) +2 links

(y) +4 links

(z) +3 links



- (A) Largest sprocket
- (B) Chain
- (C) Largest chainring
- (D) Inner link
- (E) Outer link
- (F) Pin for preventing chain derailment

NOTICE

The rear derailleur plate assembly is equipped with a pin or plate that prevents the chain from derailing.

When passing the chain through the rear derailleur, pass it through the rear derailleur body from the side of the chain derailment prevention plate as shown in the illustration. If the chain is not passed through the correct position, damage may be caused to the chain or rear derailleur.

■ Securing the cable

Cutting the outer casing

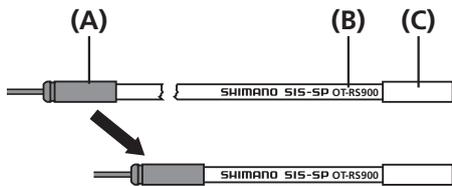
1



When cutting the outer casing, cut the end opposite to the end with the marking.

After cutting the outer casing, make the end round so that the inside of the hole has a uniform diameter.

2

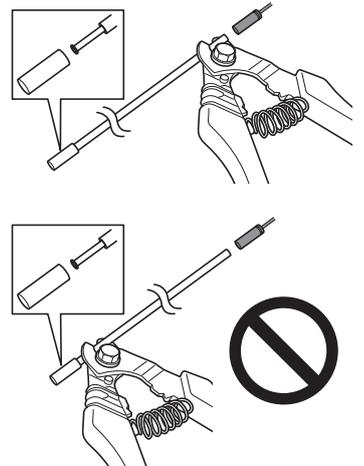


After cutting, attach the same cap with long tongue to the end.

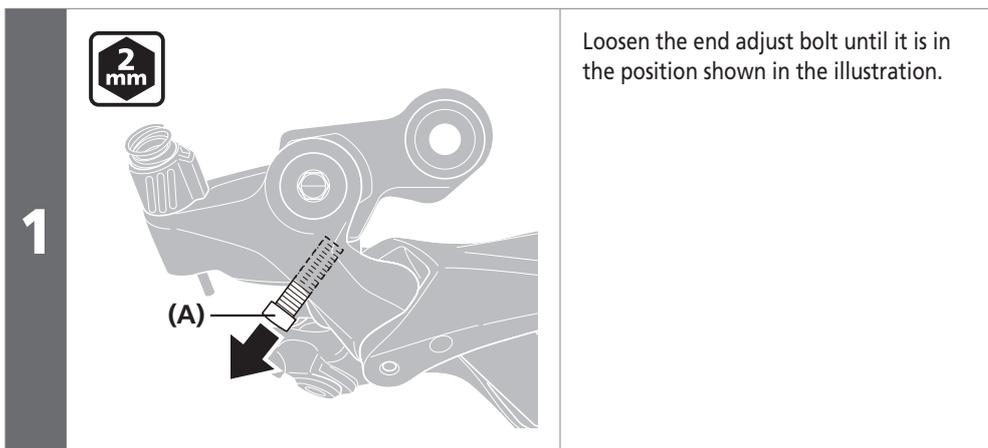
- (A) Cap with long tongue
- (B) OT-RS900
- (C) Sealed outer cap (aluminum type)

NOTICE

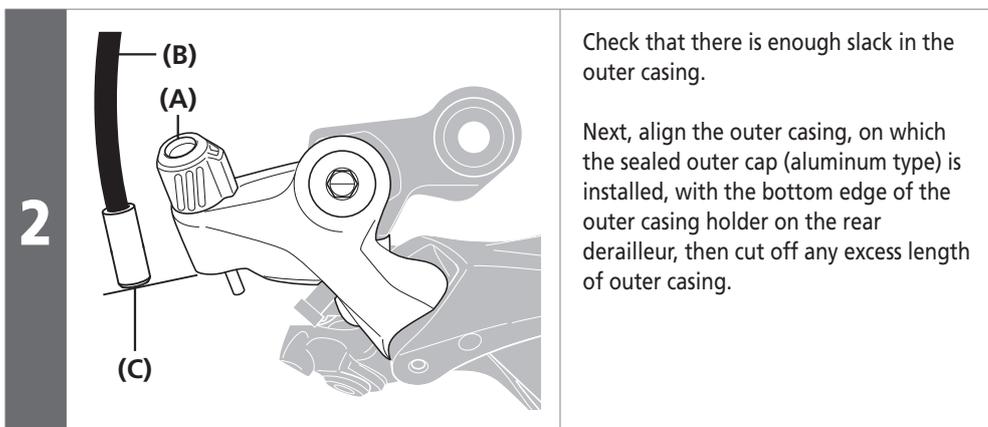
- Make sure to use OT-RS900 for the outer casing.
- When cutting the outer casing, make sure to cut nearer the end with the cap with long tongue.



Outer casing length



(A) End adjust bolt



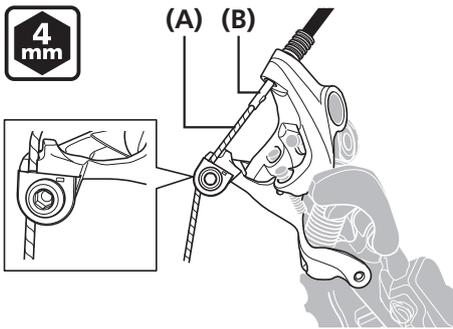
(A) Outer casing holder

(B) Outer casing

(C) Sealed outer cap
(aluminum type)

Connecting and securing the cable

1



4 mm

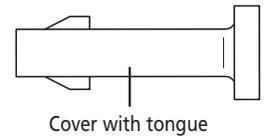
(A) (B)

Connect the inner cable to the rear derailleur.

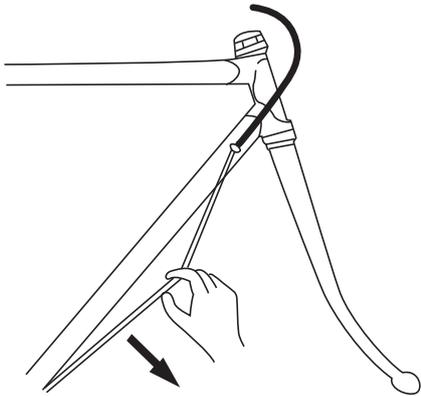
- (A) Inner cable
- (B) Cover with tongue

NOTICE

- Replacing the cover with tongue is recommended when replacing the inner cable.
- Fuzz may be generated when the inner cable is installed or when the coating is damaged during use, but this will not affect its functions.

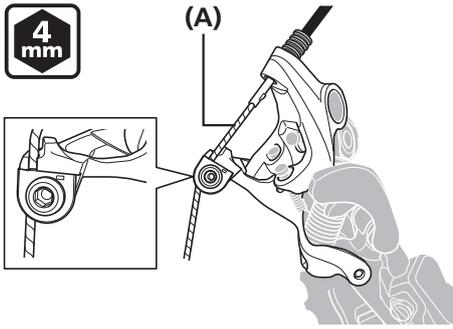


2



Remove the initial slack from the cable as shown in the illustration.

3



4 mm

(A)

Reconnect the inner cable to the rear derailleur.

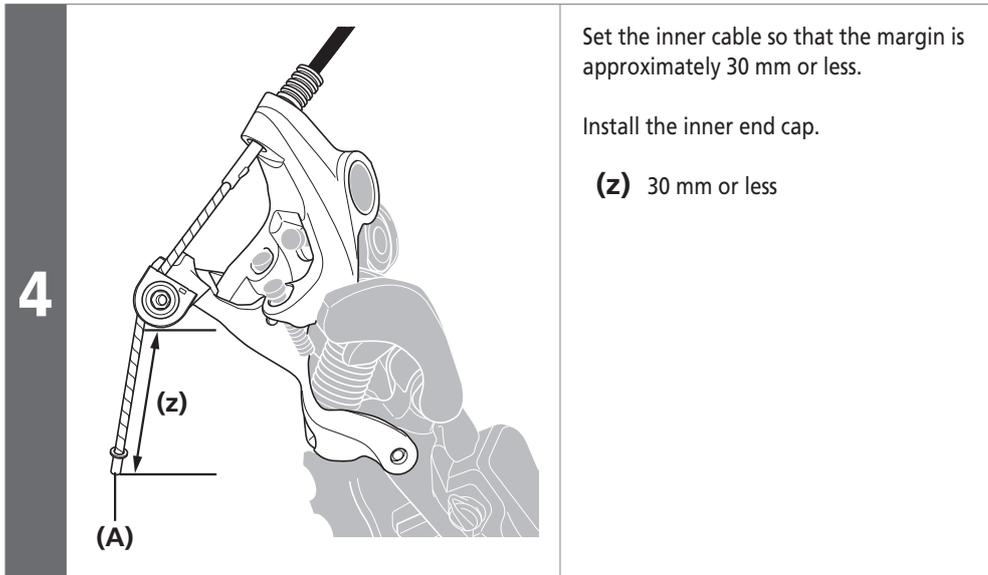
Be sure that the cable is securely in the groove.

- (A) Inner cable

| Tightening torque | |
|-------------------|-----------|
| 4 mm | 6 - 7 N·m |

ADJUSTMENT

▶ Using the end adjust bolt

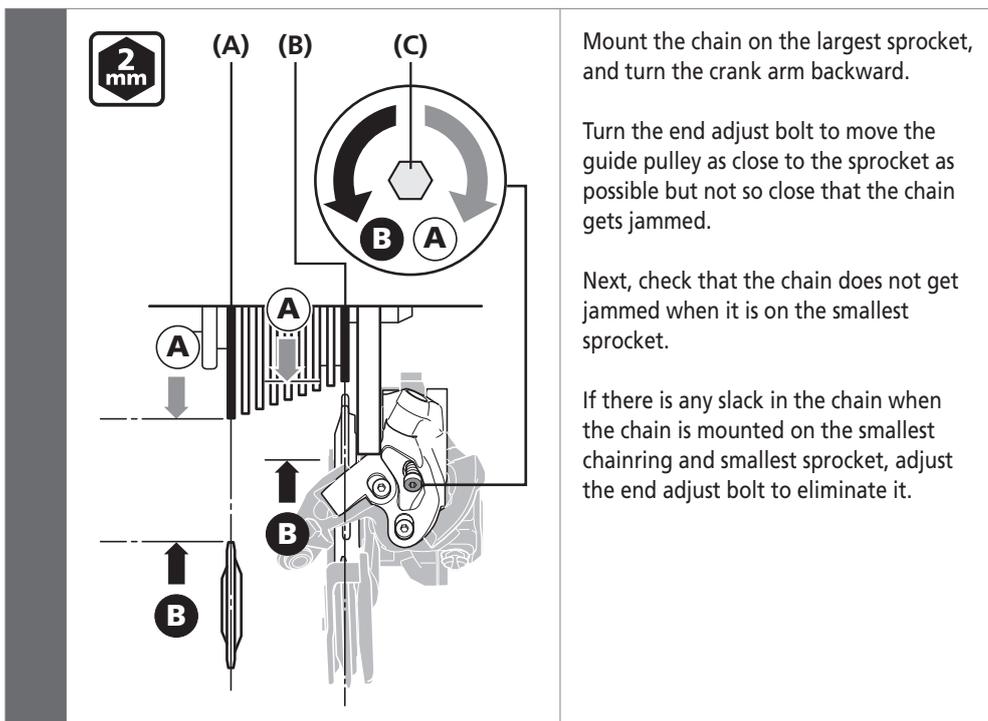


NOTICE

Check that the inner cable does not interfere with the wheel spokes.
Stop the wheel from turning while carrying out this step.

■ Using the end adjust bolt

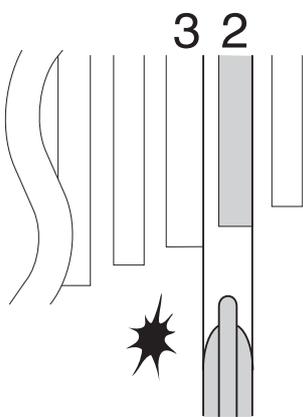
Adjusting the end adjust bolt



■ SIS adjustment**SIS adjustment**

1 Move the lever switch to the OFF position.

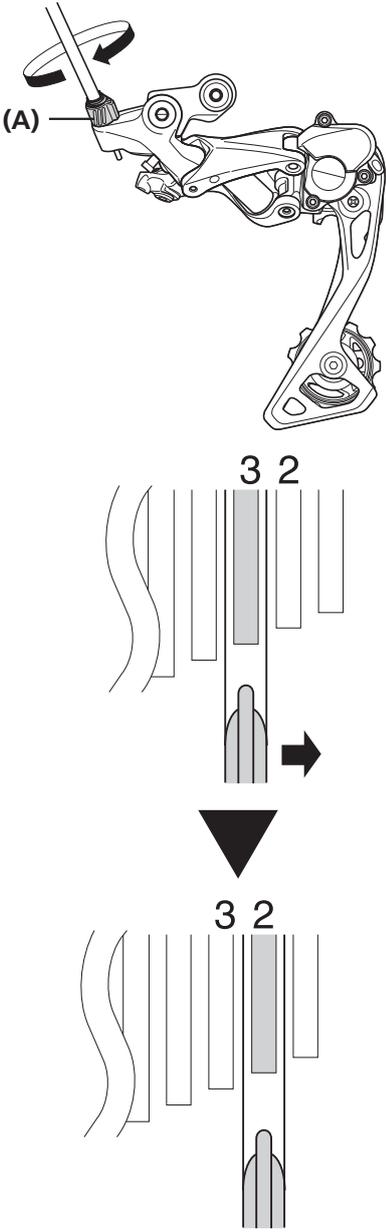
2 Operate the shifting lever once to move the chain from the smallest sprocket to the 2nd sprocket.

Best setting**3**

The best setting is when the shifting lever is operated just enough to close the lever gap and the chain touches the 3rd sprocket counting from the smallest sprocket and makes noise.

When shifting to the 3rd sprocket counting from the smallest sprocket

3



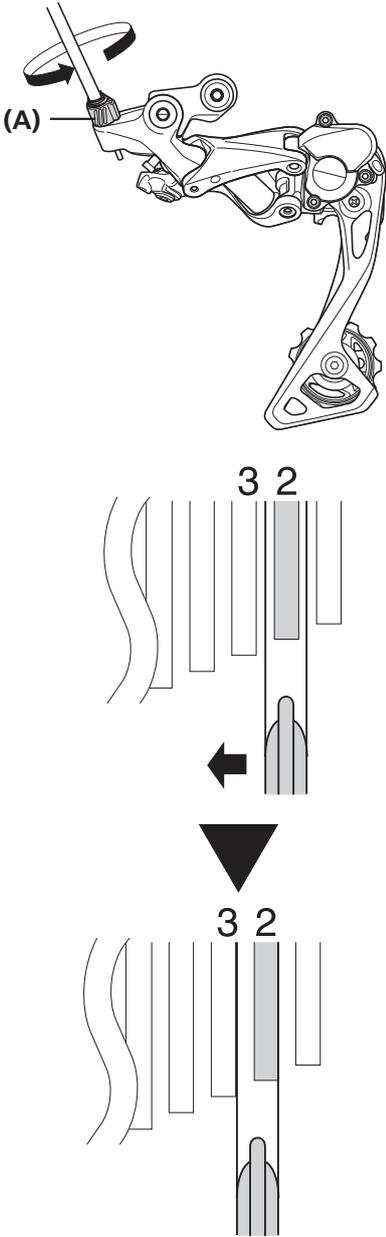
(A) Cable adjustment barrel

Tighten the cable adjustment barrel (clockwise) until the chain returns to the 2nd sprocket counting from the smallest sprocket.

(A) Cable adjustment barrel

When no sound at all is generated

3



Loosen the cable adjustment barrel (counter-clockwise) until the chain touches the 3rd sprocket counting from the smallest sprocket and makes noise.

(A) Cable adjustment barrel

4 Return the lever to its original position (the position where the lever is at the 2nd sprocket setting counting from the smallest sprocket and it has been released) and then turn the crank arm clockwise.

5 Operate lever to change gears, and check that no noise occurs in any of the gear positions.

6 Set the lever switch to ON, and then ride the bicycle normally and check that there are no problems with gear shifting.
If gear shifting from low gear is slow, turn the end adjustment screw to release the guide pulley from the gear.

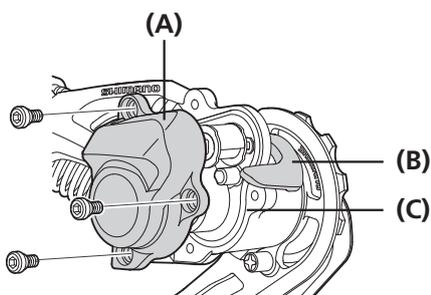
NOTICE
If the chain is touching the 3rd sprocket counting from the smallest sprocket and making noise, turn the cable adjustment barrel clockwise slightly to tighten it until the noise stops and the chain runs smoothly.

■ Friction adjustment

The friction amount can be adjusted as desired. Furthermore, you can also adjust after a change of the friction occurs during use.

1 Set the lever switch to OFF.

2

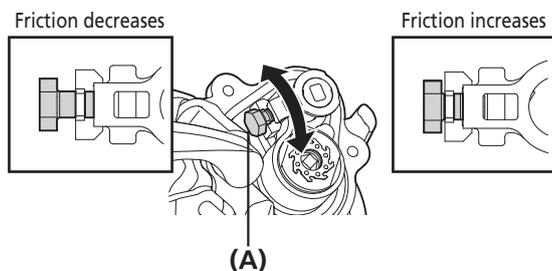


Using a 2 mm hexagon wrench, remove the plate unit cover.

- (A) Plate unit cover
- (B) Lever switch
- (C) Plate unit

3

Using 5.5 mm wrench, move the friction adjustment bolt to adjust the friction.

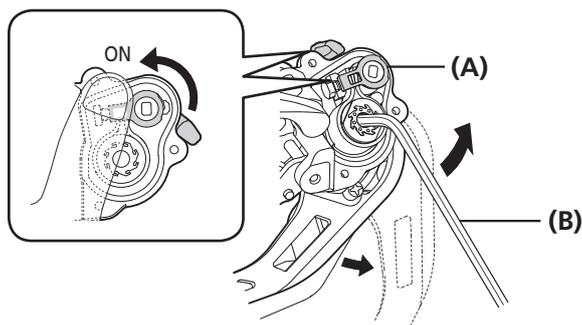


- (A) Friction adjustment bolt

4

Check the friction torque.

- While pressing the friction unit with your finger as shown in the illustration, set the lever switch to the ON position and check the friction torque.



- (A) Friction unit
- (B) 4 mm hexagon wrench

Friction torque

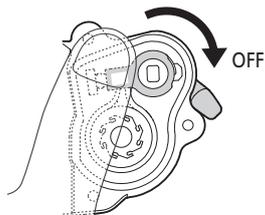


2.9 - 5.1 N·m

NOTICE

If adjusting the friction once more, be sure to set the lever switch to the OFF position while pressing the friction unit with your finger before making the adjustment.

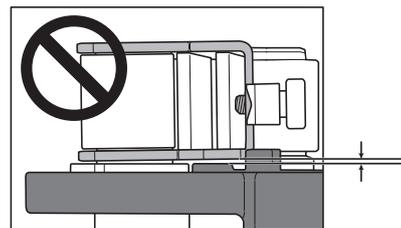
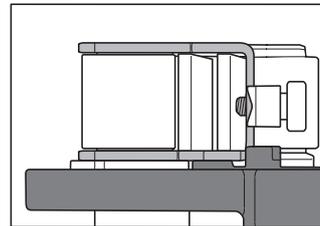
5



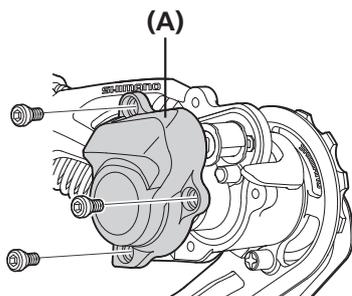
While pressing the friction unit with your finger, set the lever switch to the OFF position. At that time, make sure that the friction unit is in contact with the bottom of the plate unit.

NOTICE

Do not install the plate unit cover with the switch base floating off the bottom of the plate unit. Sufficient sealing performance will not be obtained, which will cause rust to appear in the inner mechanism, potentially resulting in the adhesion of the plate.



6



Install the plate unit cover.

(A) Plate unit cover

Tightening torque



1 - 1.5 N·m

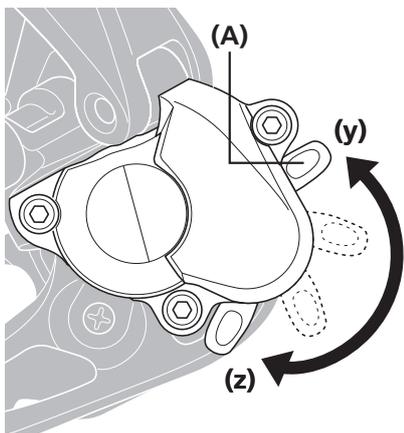
MAINTENANCE

MAINTENANCE

■ Replacement of the plate and the plate tension spring

Removal

1



Make sure that the lever switch is in the OFF position.

If the lever switch is in the ON position, be sure to move it to the OFF position.

(y) ON

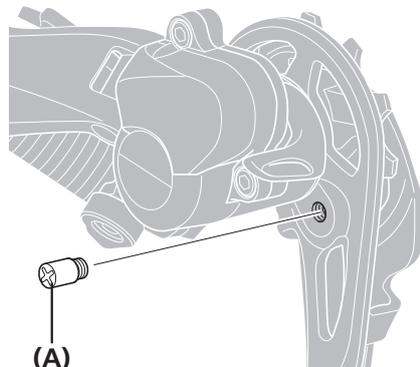
(z) OFF

(A) Friction unit

NOTICE

If operating the lever switch while the plate unit cover is removed, press the friction unit with your finger so that it does not fly out.

2

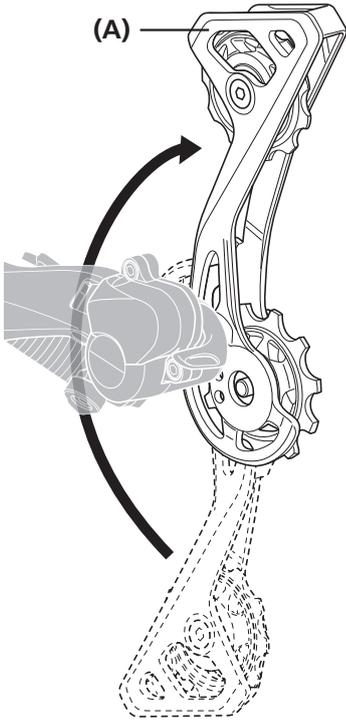


Remove the plate stopper pin with a screwdriver.

(A) Plate stopper pin

▶ Replacement of the plate and the plate tension spring

3

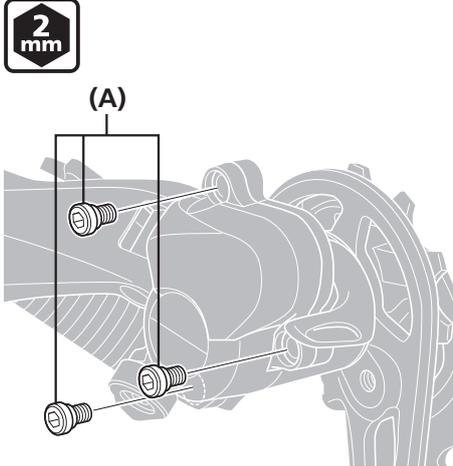


(A)

Turn the plate to loosen the plate tension spring as shown in the illustration.

(A) Plate

4



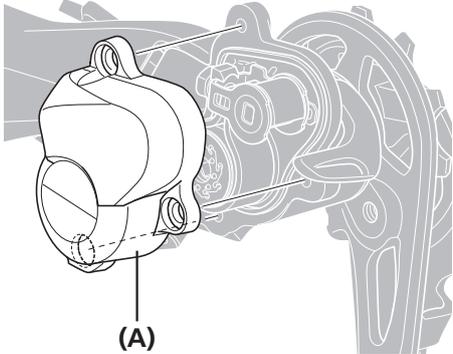
2 mm

(A)

Remove the plate unit cover bolts.

(A) Plate unit cover bolts

5



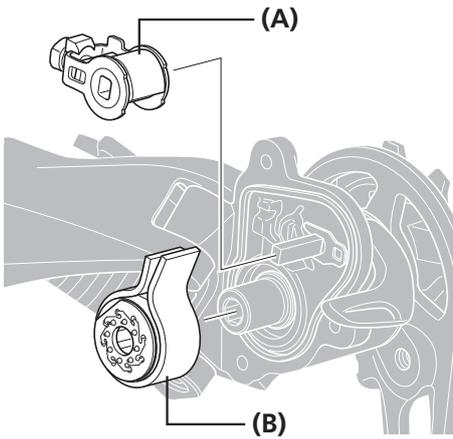
(A)

Remove the plate unit cover.

(A) Plate unit cover

▶ Replacement of the plate and the plate tension spring

6

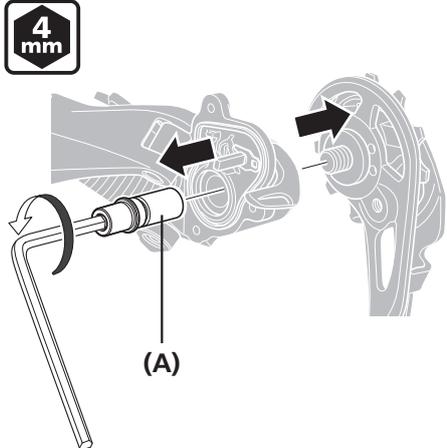


(A)
(B)

Remove the cam unit and the chain stabilizer.

- (A) Cam unit
- (B) Chain stabilizer

7



4 mm

(A)

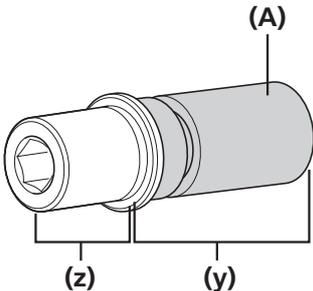
Remove the plate axle.

- (A) Plate axle

Installation

Carry out the removal procedure in reverse.

1



(A)
(z) (y)

Apply grease to the plate axle.

- (y) Grease application area
Grease number:
Premium grease (Y04110000)
- (z) A

- (A) Plate axle

NOTICE

Do not apply grease to **A**.
If grease is applied, grease will get on the inner surface of the roller clutch and friction will be lost.

▶ Replacement of the plate and the plate tension spring

2

4 mm

(A) (B)

Insert the plate axle and insert the tip of the plate tension spring into the groove of the plate.

- (A) Plate tension spring
- (B) Plate

| Tightening torque | |
|-------------------|------------|
| 4 mm | 8 - 10 N·m |

3

(A)
(z)

Make sure that the lever switch is in the OFF position.

If the lever switch is in the ON position, be sure to move it to the OFF position.

(z) OFF position

- (A) Lever switch

4

(A) (B)

(y)

(z) [X]

Set the chain stabilizer into the cam unit as shown in the illustration.

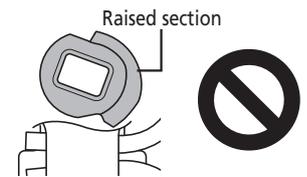
Make sure that the raised section of the cam unit is positioned as in [X] at this time.

- (y) The end with the protrusions is the bottom
- (z) Raised section

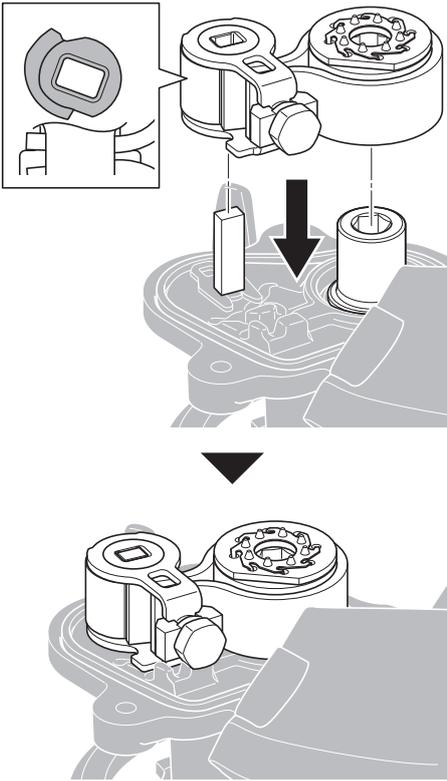
- (A) Cam unit
- (B) Chain stabilizer

NOTICE

Make sure the cam unit is not set as shown in the following illustration.



5

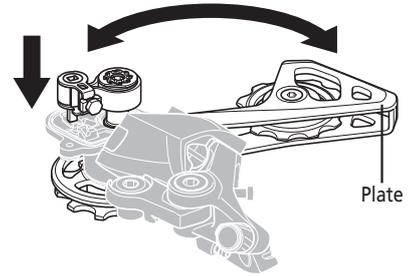


Align the holes in the cam unit and chain stabilizer with the projections on the plate unit and attach as in the illustration.

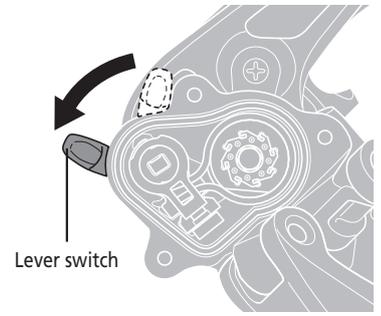
Pay attention to the positioning of the raised section of the cam unit when attaching.

 **TECH TIPS**

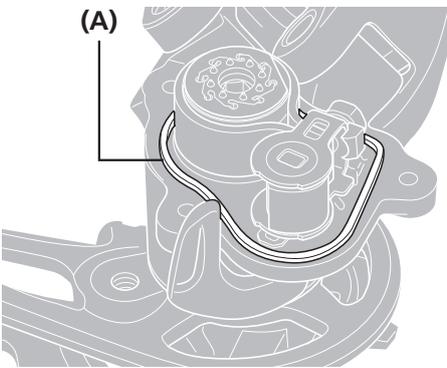
- It helps to move the plate while holding down the cam unit and chain stabilizer when attaching.



- If there is resistance when moving the lever switch to the ON position, the components are attached correctly. If there is no resistance, check the position of the raised section of the cam unit and then reattach the components.



6

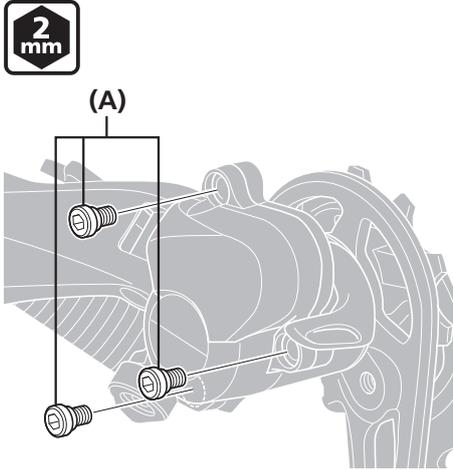


Make sure that the plate unit cover gasket is attached along the grooves in the plate unit.

(A) Plate unit cover gasket

▶ Replacement of the plate and the plate tension spring

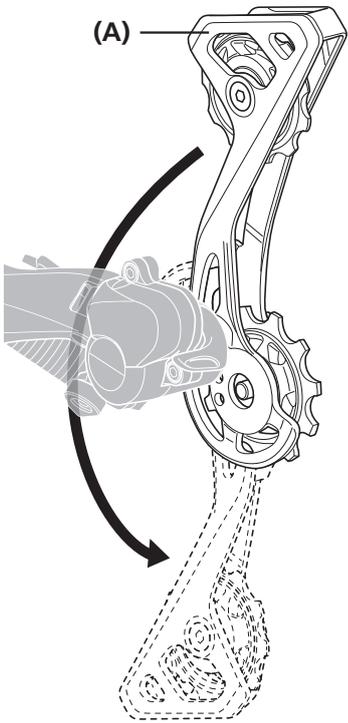
7



Install the plate unit cover bolts.

| | |
|---|-------------|
| (A) Plate unit cover bolts | |
| Tightening torque | |
|  | 1 - 1.5 N·m |

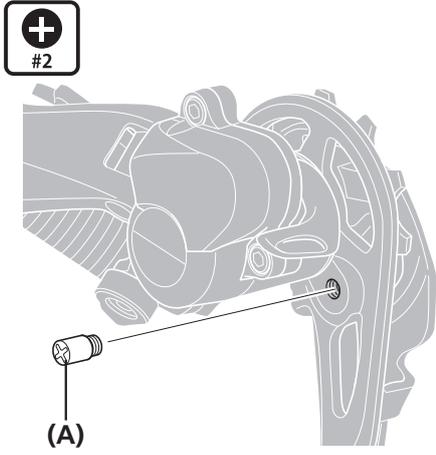
8



Turn the plate in the direction indicated by arrow, tighten the plate tension spring so that it is not loose, and then insert the plate.

| |
|------------------|
| (A) Plate |
|------------------|

9



Install the plate stopper pin.

| | |
|---|-------|
| (A) Plate stopper pin | |
| Tightening torque | |
|  | 1 N·m |

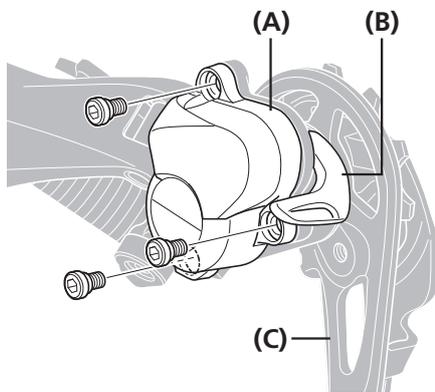
■ Applying grease to the chain stabilizer

If the friction changes or noise is generated, the grease may have become discolored or may have disappeared. Apply more grease.

* Reassemble by carrying out the disassembly procedure in reverse.

1 Move the lever switch to the OFF position.

2



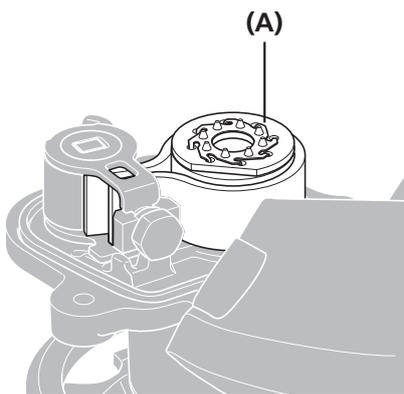
Remove the plate unit cover.

(A) Plate unit cover

(B) Lever switch

(C) Plate unit

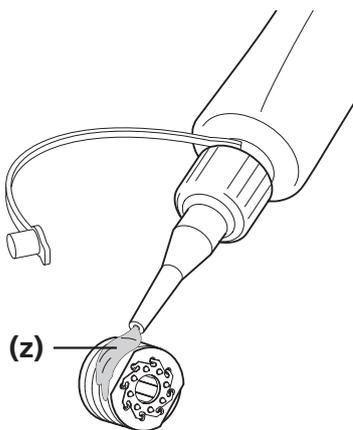
3



Remove the chain stabilizer.

(A) Chain stabilizer

4



Apply grease to the clutch.

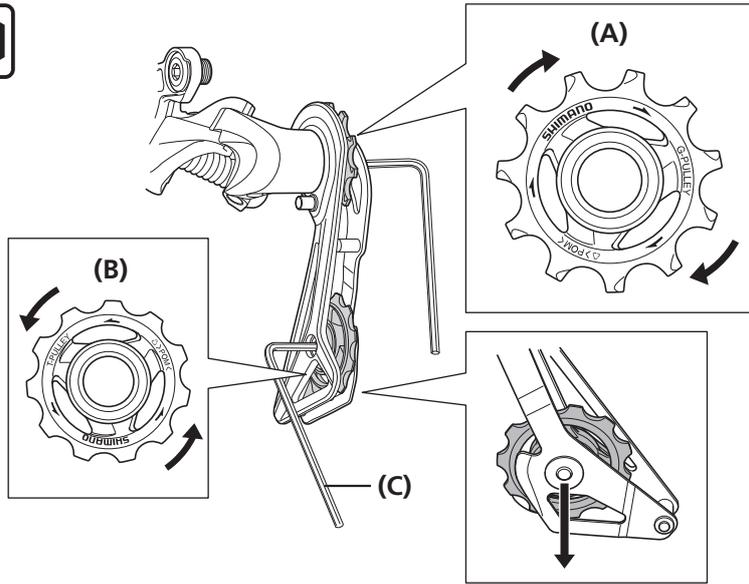
- (z)** New grease number: Y04121000 (50 g)
- Grease number: Y04120800 (100 g)

NOTICE

Be careful not to get grease on the inner surface of the roller clutch. If grease gets inside the clutch, it will cause the clutch to malfunction.

■ Replacement of the pulley

Check the arrow direction on the pulley before installing.



- (A) Guide pulley
- (B) Tension pulley
- (C) 3 mm hexagon wrench

Tightening torque

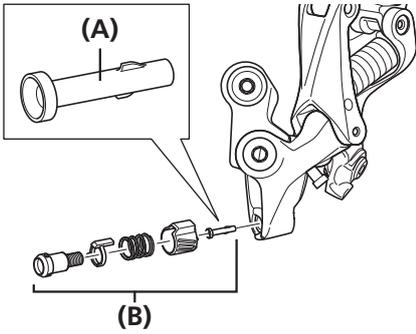


2.5 - 5 N·m

■ Replacing the cable

1 Remove the cable.

2



Remove the cable adjustment barrel and then remove the cover with tongue.

(A) Cover with tongue
(B) Cable adjustment barrel

3

Attach a new cover with tongue.



TECH TIPS

A cover with tongue is supplied with an optional cable.

4

Screw the cable adjustment barrel down to the appropriate point.

5

Attach a new cable.

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

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