

Dealer's Manual

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

Shifting Lever

RAPIDFIRE Plus

SL-M2000
SL-M3010
SL-M4010

Thumb Shifter

SL-TZ500

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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.



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



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



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

TO ENSURE SAFETY

WARNING

- **When installing components, be sure to follow the instructions that are given in the instruction manuals.**
It is recommended that you use only genuine Shimano parts. 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.

NOTE

Be sure to also inform users of the following:

- Be sure to keep turning the crank during the shifting lever operation.
- You should periodically wash the chainrings in a neutral detergent. In addition, cleaning the chain with neutral detergent and lubricating it can be an effective way of extending the useful life of the chainrings and the chain.
- Read the dealer's manuals for the front derailleur, rear derailleur, and brake.
- 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.

The actual product may differ from the illustration because this manual is intended chiefly 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 to assemble this product.

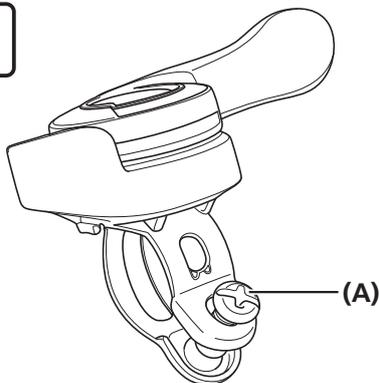
Tool		Tool	
	5mm hexagon wrench		Screwdriver[#2]
	Screwdriver[#1]		9mm spanner

INSTALLATION

INSTALLATION

■ Mounting the shifting lever

SL-TZ500



Install the brake lever in a position where it will not obstruct brake operation.

- Do not use in a combination which causes brake operation to be obstructed.

(A) Screwdriver[#2]

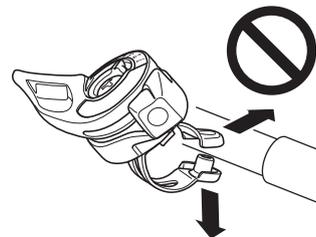
Tightening torque



2.5 N·m

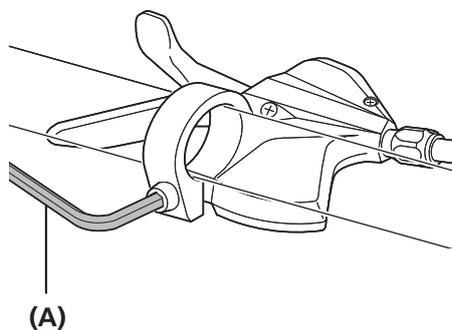
NOTE

- Do not open the clamp of the lever when installing, otherwise the cover may be damaged.



- Install the lever unit in a position where it will not come into contact with the brake lever when you operate the lever unit from the low to the top position.

SL-M2000/SL-M3010/SL-M4010



(A) 5mm hexagon wrench

Tightening torque



5 N·m

NOTE

- Use a handlebar grip with a maximum outer diameter of 36mm.

ADJUSTMENT

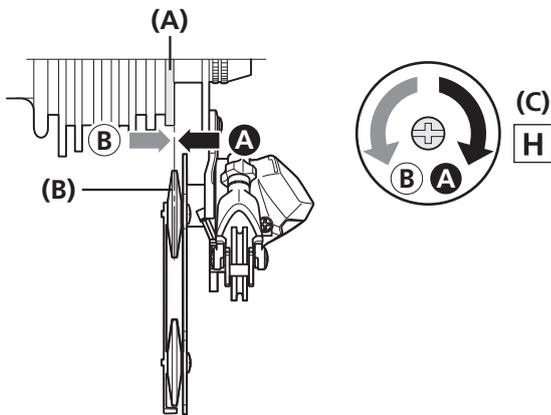
ADJUSTMENT

Be sure to follow the sequence described below.

■ Adjustment of the rear shifting lever

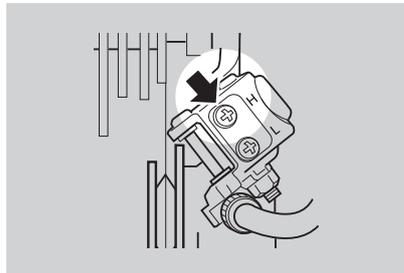
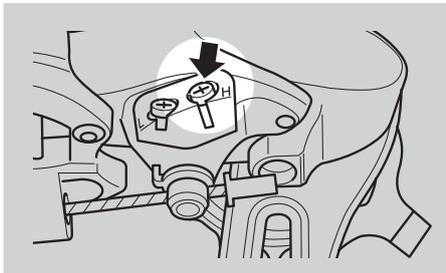
Top adjustment

Turn the top adjustment screw for adjustment so that the guide pulley is positioned over the outer line of the smallest sprocket when viewed from behind.



1

< Example >



- (A) Outer line of smallest sprocket
- (B) Guide pulley
- (C) Top adjustment screw

NOTE

The position of the top adjustment screw differs depending on the model.

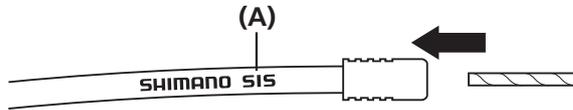
2

After this, install the chain.

Connection and securing of cable

Inserting the inner cable

- Insert the inner cable into the outer casing from the end with the marking on it.
- Apply grease from the end with the marking in order to maintain cable operating efficiency.



(A) Marking

Cutting the outer casing

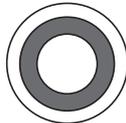
- When cutting the outer casing, cut the opposite end to the end with the marking.
- After cutting the outer casing, make the end round so that the inside of the hole has a uniform diameter.

Bad example



(y)

Good example

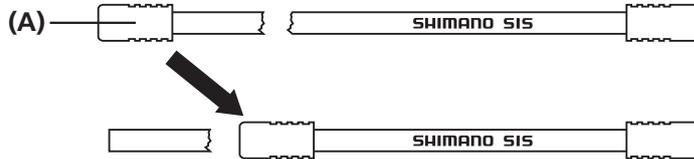


(z)

(y) Coil tipping over inward

(z) Coil not tipping over inward

- Attach the same outer end cap to the cut end of the outer casing.

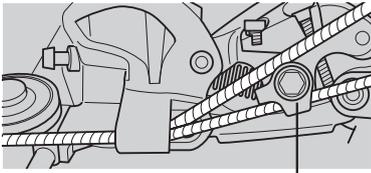


(A) Outer end cap

ADJUSTMENT

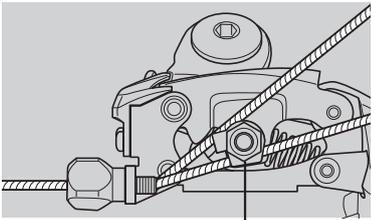
Adjustment of the rear shifting lever

SL-M2000/SL-M3010/SL-M4010



(A)

SL-TZ500



(A)

Connect the cable to the rear derailleur.

(A) Groove

Tightening torque



5 - 7 N·m

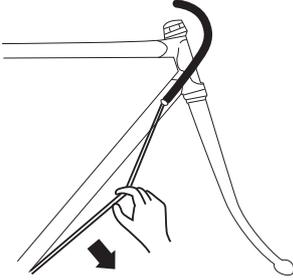
NOTE

Be sure that the cable is securely in the groove.

ADJUSTMENT

▶ Adjustment of the rear shifting lever

Adjustment of cable tension

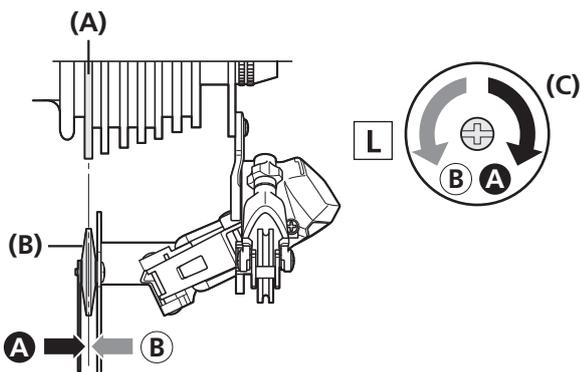


After taking up the initial slack in the cable, re-secure to the rear derailleur as shown in the illustration.

Low adjustment

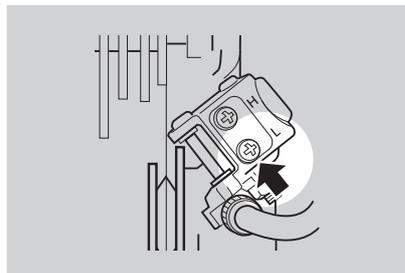
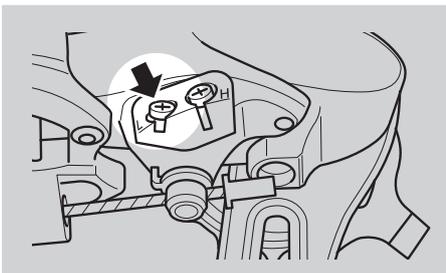
1 While turning the front chainwheel, operate the lever to shift to the lowest gear.

Turn the low adjustment screw so that the guide pulley moves to a position directly below the largest sprocket.



2

< Example >

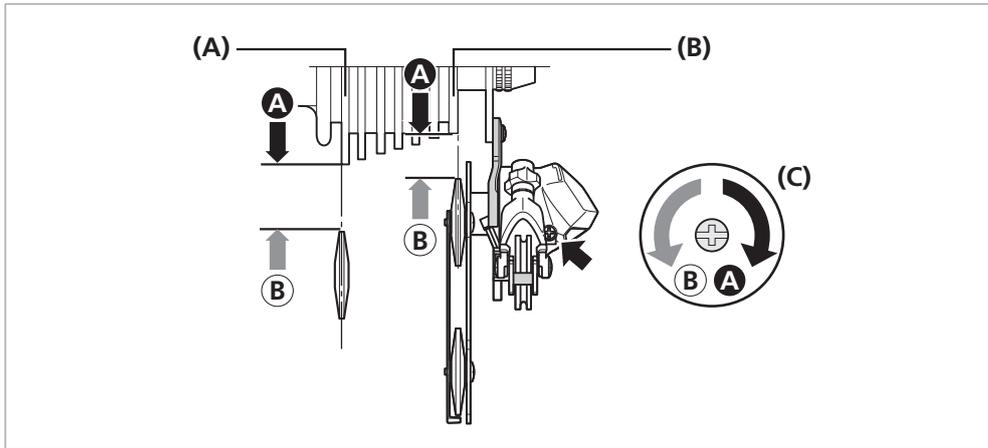


- (A) Largest sprocket
- (B) Guide pulley
- (C) Low adjustment screw

NOTE

The position of the low adjustment screw differs depending on the model.

How to use the B-tension adjustment screw



- (A) Largest sprocket
- (B) Smallest sprocket
- (C) B-tension adjustment screw

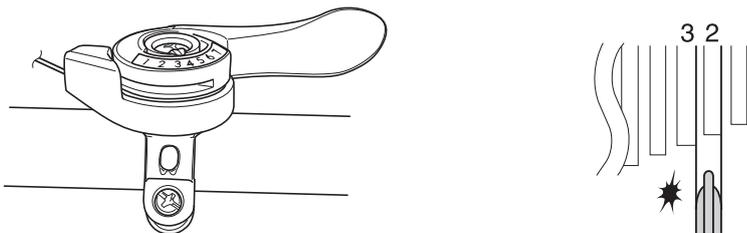
- 1** Mount the chain on the smallest chainring and the largest sprocket, and turn the crank arm backward.
- 2** Then turn the B-tension adjustment screw to adjust the guide pulley as close to the sprocket as possible but not so close that it touches.
- 3** Next, set the chain to the smallest sprocket and repeat the above to make sure that the chain tension is correct.

SIS Adjustment

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

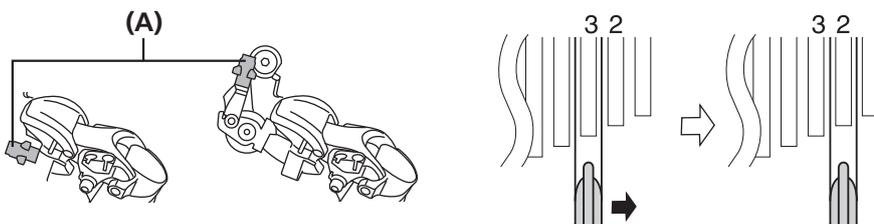
2 Then, while pressing the lever just enough to take up the play in the lever, turn the crank arm.

- The best setting is when the shifting lever is operated just enough to take up the play 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**

Tighten the outer casing adjustment barrel until the chain returns to the 2nd sprocket counting from the smallest sprocket.



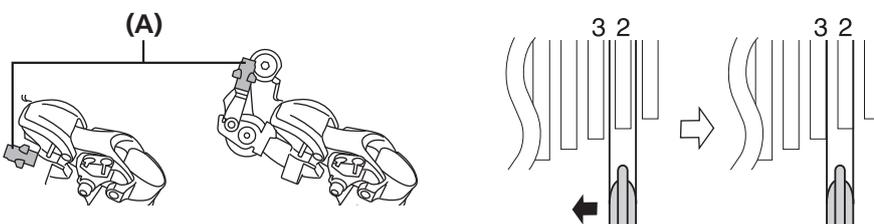
(A) Adjustment barrel

NOTE

The position of the outer casing adjustment barrel differs depending on the model.

- **When no sound at all is heard**

Loosen the outer casing adjustment barrel until the chain touches the 3rd sprocket counting from the smallest sprocket and makes noise.



(A) Adjustment barrel

3 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.

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

ADJUSTMENT

▶▶ SIS Adjustment

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

5 For the best SIS performance, periodically lubricate all power-transmission parts.

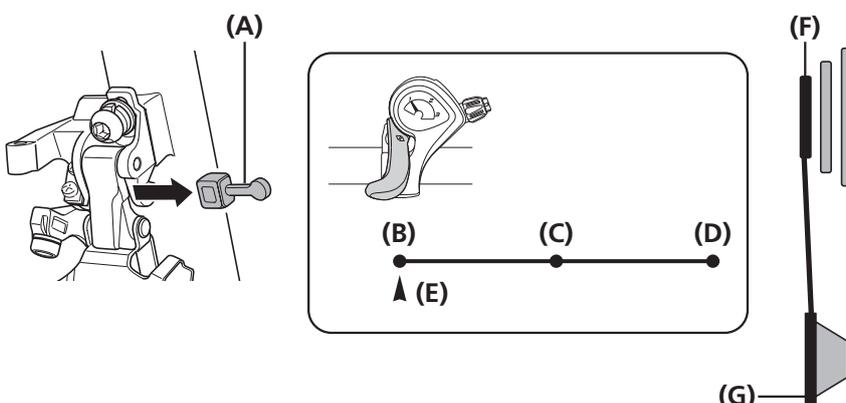
■ Adjustment of the front shifting lever

Be sure to follow the sequence described below.

Low adjustment

1

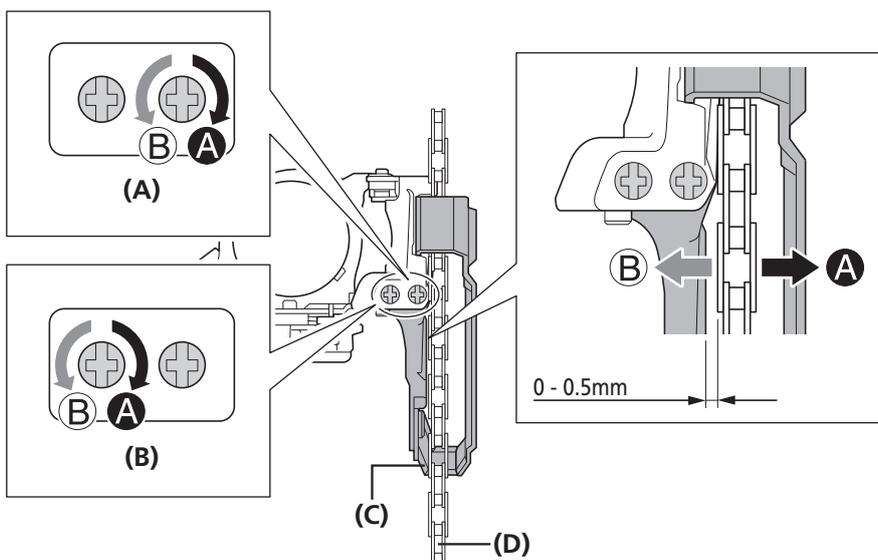
For models equipped with a Pro-Set alignment block, first remove the Pro-Set alignment block.



- (A) Pro-Set alignment block
- (B) Low
- (C) Middle
- (D) Top
- (E) Cable index point
- (F) Smallest chainring
- (G) Largest sprocket

2

Set so that the clearance between the chain guide inner plate and the chain is 0 - 0.5mm.

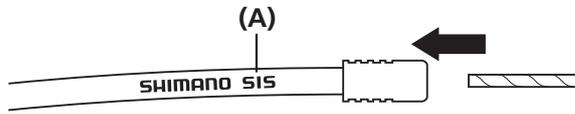


- (A) Top swing
- (B) Down swing
- (C) Chain guide inner plate
- (D) Chain

Connection and securing of cable

Inserting the inner cable

- Insert the inner cable into the outer casing from the end with the marking on it.
- Apply grease from the end with the marking in order to maintain cable operating efficiency.



(A) Marking

Cutting the outer casing

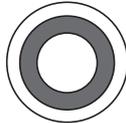
- When cutting the outer casing, cut the opposite end to the end with the marking.
- After cutting the outer casing, make the end round so that the inside of the hole has a uniform diameter.

Bad example



(y)

Good example

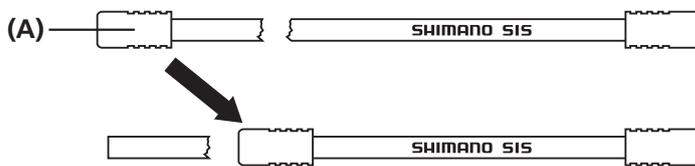


(z)

(y) Coil tipping over inward

(z) Coil not tipping over inward

- Attach the same outer end cap to the cut end of the outer casing.



(A) Outer end cap

Securing the cable

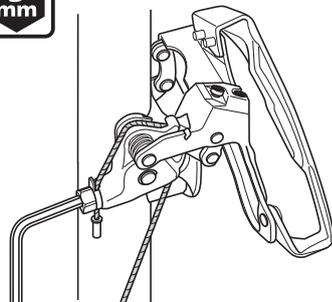
While firmly pulling the inner cable, connect it to the front derailleur.

< Top Swing >

- Use a spanner or a hexagon wrench to tighten the wire fixing bolt.

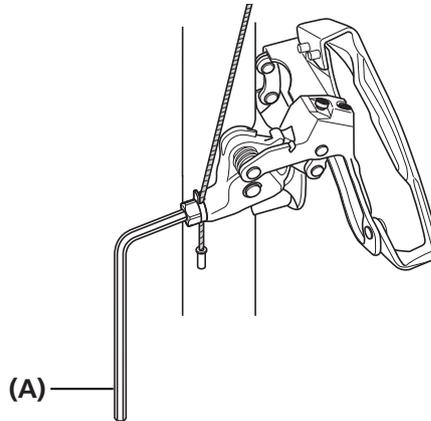


Down pull



(A)

Top pull



(A)

- (A) 5mm hexagon wrench
(Some products can be tightened with a 9mm spanner as well.)

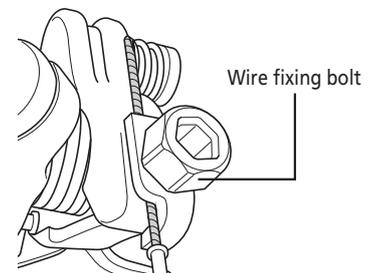
Tightening torque



5 - 7 N·m

NOTE

Pass the cable through as shown in the illustration.

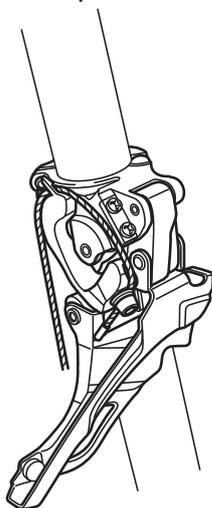


Wire fixing bolt

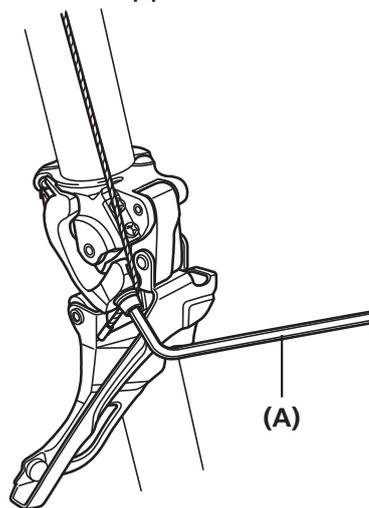
< Down Swing >



Down pull



Top pull



(A)

- (A) 5mm hexagon wrench

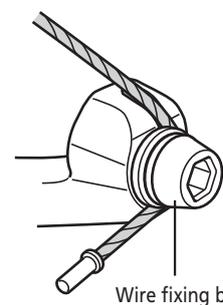
Tightening torque



5 - 7 N·m

NOTE

Pass the cable through as shown in the illustration.



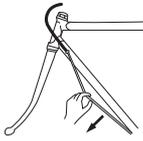
Wire fixing bolt

Adjustment of cable tension

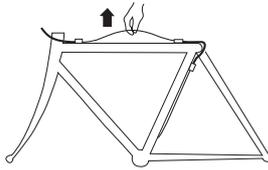
After taking up the initial slack in the cable, re-secure to the front derailleur as shown in the illustration.

1

Down pull



Top pull

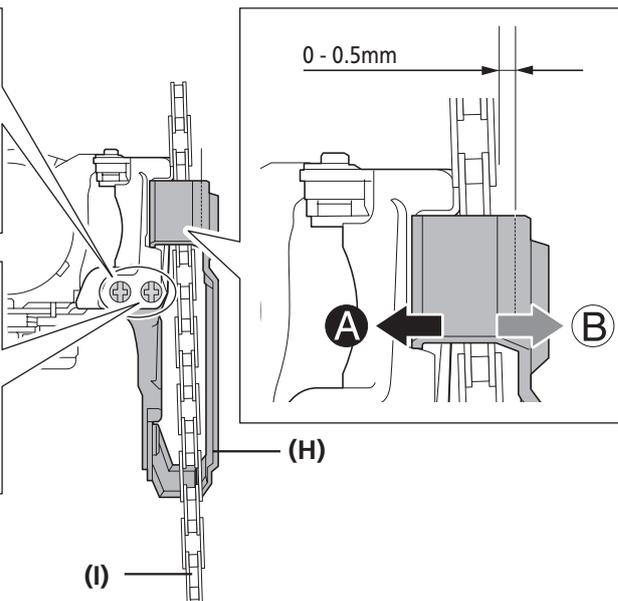
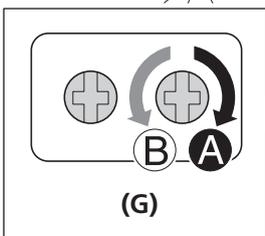
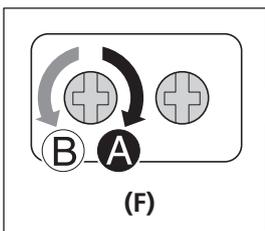
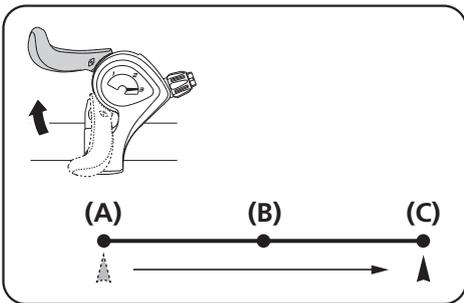


2

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

Top adjustment

Set so that the clearance between the chain guide outer plate and the chain is 0 - 0.5mm.



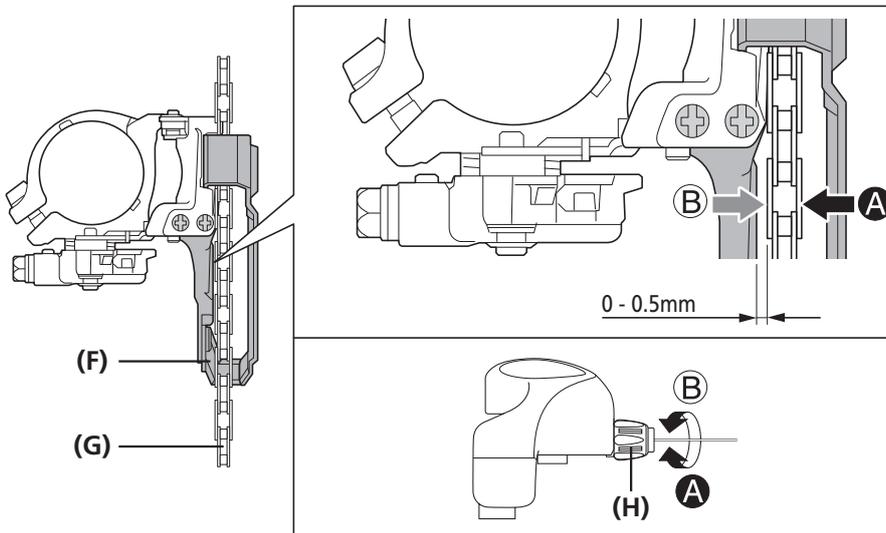
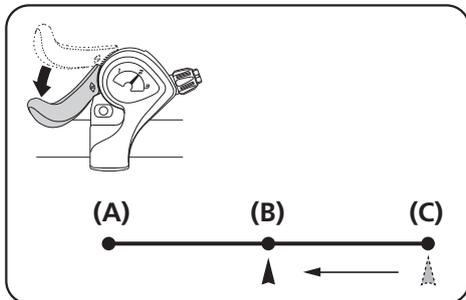
- (A)** Low
- (B)** Middle
- (C)** Top
- (D)** Largest chainring
- (E)** Smallest sprocket
- (F)** Top swing
- (G)** Down swing
- (H)** Chain guide outer plate
- (I)** Chain

ADJUSTMENT

Adjustment of the front shifting lever

Adjustment of the middle chainring

This adjustment is not necessary because LN (friction type) does not have an outer casing adjustment barrel.
Set so that the clearance between the chain guide inner plate and the chain is 0 - 0.5mm.



- (A) Low
- (B) Middle
- (C) Top
- (D) Middle chainring
- (E) Largest sprocket
- (F) Chain guide inner plate
- (G) Chain
- (H) Outer casing adjustment barrel

NOTE

Adjust the lever after operating it from top to middle, instead of low to middle.

Troubleshooting chart

After completion of adjustment, move the shifting lever to check the shifting.
(This also applies if shifting becomes difficult during use.)

* Turn the bolt by 1/8 turn for each adjustment.

If the chain falls to the crank side.	Turn the top adjustment screw clockwise.
If shifting is difficult from the intermediate chainring to the largest chainring.	Tighten the cable. If this does not improve the condition, turn the top adjustment screw counterclockwise.
If shifting is difficult from the largest chainring to the intermediate chainring.	Loosen the cable.
If the chain falls to the bottom bracket side.	Turn the low adjustment screw clockwise.
If the intermediate chainring is skipped when shifting from the largest chainring.	Tighten the cable.
If shifting is difficult from the intermediate chainring to the smallest chainring.	Turn the low adjustment screw counterclockwise.

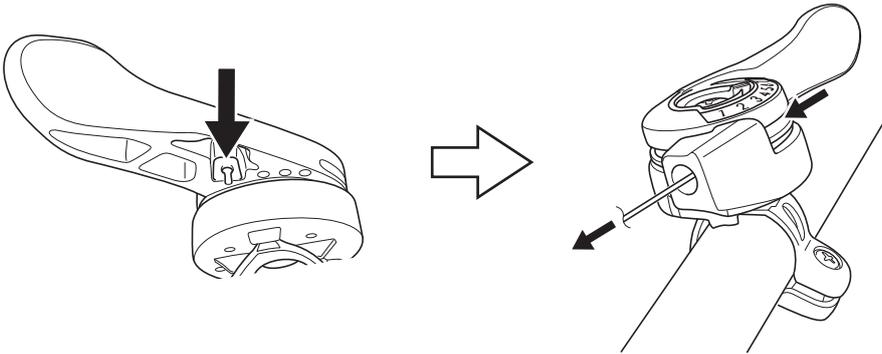
MAINTENANCE

MAINTENANCE

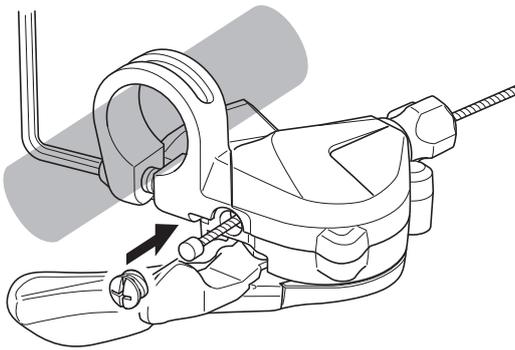
■ Replacing the inner cable

Operate the shifting lever to set the chain to the first position (the top for the rear and the low for the front), and then pass the inner cable through.
 * The shape of the lever differs depending on the model.

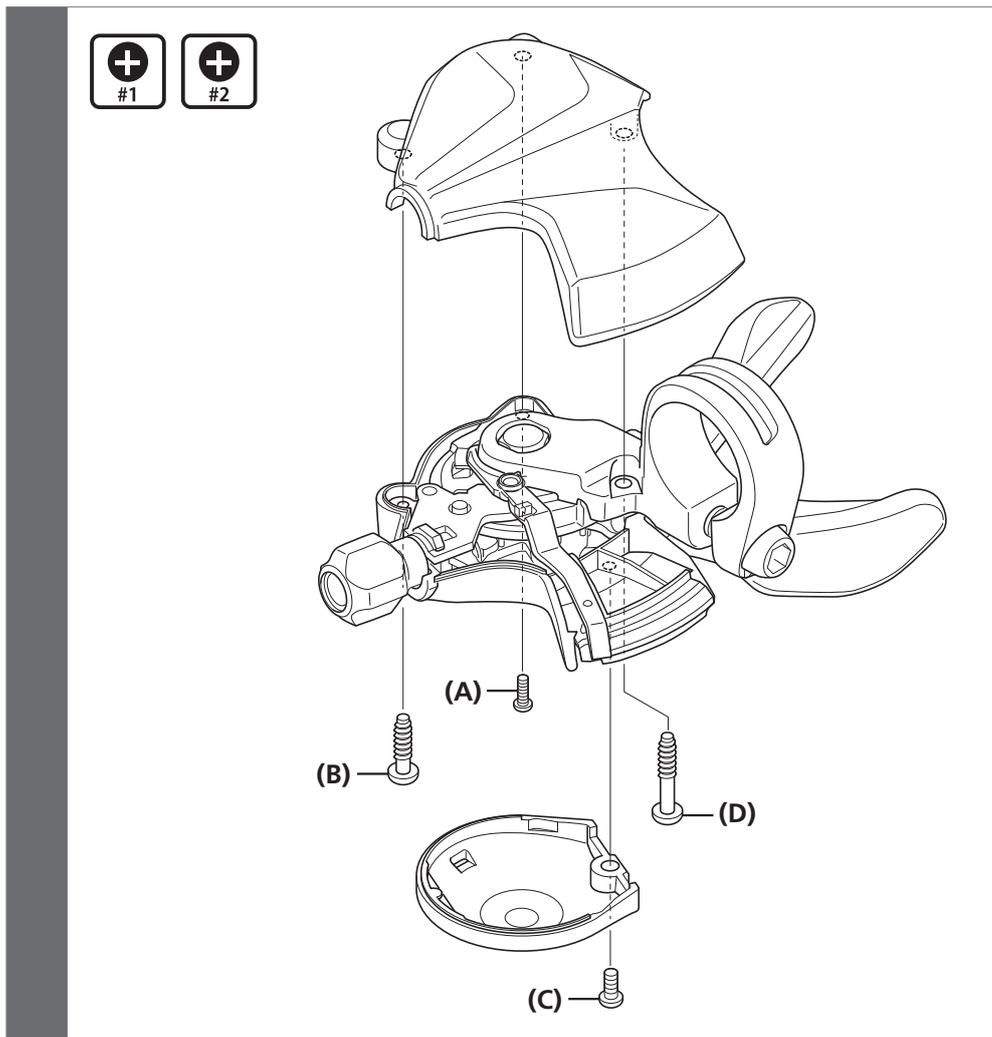
SL-TZ500



SL-M2000/SL-M3010/SL-M4010



■ Replacement of the cover



- (A) Screwdriver[#1]
- (B) Screwdriver[#2]
- (C) Screwdriver[#1]
- (D) Screwdriver[#2]

Tightening torque (A) (C)	
 #1	0.1 - 0.3 N·m

Tightening torque (B) (D)	
 #2	0.3 - 0.6 N·m

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

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