

## Dealer's Manual

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

# Shifting lever

### **SORA**

ST-R3000  
ST-R3030  
SL-R3000  
SL-R3030

### **CLARIS**

ST-R2000  
ST-R2030  
SL-R2000  
SL-R2030

### **Non-Series**

ST-RS200  
ST-RS203

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## Shifting lever (RAPIDFIRE Plus)

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## Shifting lever

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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

- **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:**

- Each bicycle may handle slightly differently depending on the model. Therefore, be sure to learn the proper braking technique (including brake lever pressure and bicycle control characteristics) and operation of your bicycle. Improper use of your bicycle's brake system may result in a loss of control or a fall, which could lead to severe injury. For proper operation, consult a professional bicycle dealer or the bicycle's owner's manual. It is also important to practice riding and braking, etc.
- If the front brake is applied too strongly, the wheel may lock and the bicycle may fall forward, and serious injury may result.
- Always make sure that the front and rear brakes are working correctly before riding the bicycle.
- The required braking distance will be longer during wet weather. Reduce your speed and apply the brakes early and gently.
- If the road surface is wet, the tires will skid more easily. If the tires skid, you may fall off the bicycle; therefore, to avoid this, reduce your speed and apply the brakes early and gently.
- Because of the characteristics of the carbon fiber material, the lever should never be altered. Otherwise, the lever may break preventing braking operation.
- Check before riding that there is no damage such as carbon peeling or cracking. If there is any damage, stop using the bicycle and consult a dealer or an agency. Otherwise, the lever may break preventing braking operation.

### NOTE

#### **Be sure to also inform users of the following:**

- In the case of carbon levers, wash them with a soft cloth using a neutral detergent. Otherwise, the material may break down and be damaged.
- Avoid leaving the carbon levers in areas of high temperature. Also keep them well away from fire.
- Be sure to keep turning the crank during gear shifting.
- Be sure to keep turning the crank during the shifting lever operation.
- If gear shifting operations do not feel smooth, wash the derailleur and lubricate all moving parts.
- 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:**

- Using a frame with internal cable routing is strongly discouraged as it has tendencies to impair the SIS shifting function due to its high cable resistance.
- Use an outer casing which still has some length to spare even when the handlebars are turned all the way to both sides. Furthermore, check that the shifting lever does not touch the bicycle frame when the handlebars are turned all the way.
- Use an outer casing [OT-SP41] and a cable guide (SM-SP17/SP18) for smooth operation.

- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly. If the grease on the inner cable is wiped off, the application of SIS SP41 grease (Y04180000) is recommended. Do not let soil and dirt adhere to the inner cable.
- A special grease is used for the gear shifting cable. Do not use premium grease or other types of grease, otherwise they may cause deterioration in gear shifting performance.
- If gear shifting adjustments cannot be carried out, check that the rear fork ends are aligned. Check whether the cable is lubricated and clean, and if the outer casing is too long or short.

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







**Shifting lever  
(Dual control lever)**

# LIST OF TOOLS TO BE USED



## LIST OF TOOLS TO BE USED

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

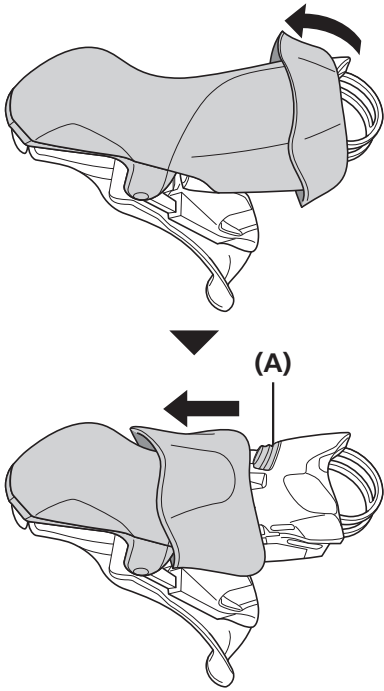
Tool		Tool		Tool	
	2mm hexagon wrench		Screwdriver[#1]		TL-CT12 cable cutter
	5mm hexagon wrench		Plastic mallet		Shimano original E-ring removal tool (Y6RT66000/Y6RT68000)

# INSTALLATION

# INSTALLATION

## ■ Installation to the handlebar

1



Turn over the bracket cover from the back side.

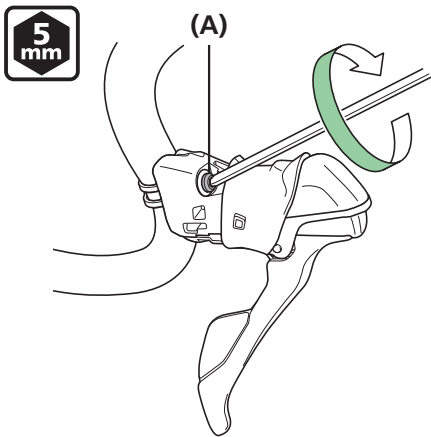
Gently turn over the ends of the bracket cover with both hands and slowly push them down.

(A) Clamp bolt

**NOTE**

Forcibly pulling it may cause damage to the bracket cover because of its material properties.

2



Use a 5mm hexagon wrench to tighten the clamp bolt at the top of the bracket.

(A) Clamp bolt

Tightening torque



6 - 8 N·m

## INSTALLATION

### Installation of the brake cable

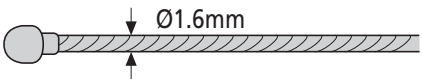

## Installation of the brake cable

Be careful not let the BC-9000/BC-R680 inner cable come into contact with the shifting lever or the metal section (adjustment section) of the caliper brake. When the inner cable is installed, coating may be damaged and become fluffy; however, it will not affect function.

### NOTE

Use a cable which still has some length to spare even when the handlebars are turned all the way to both sides.

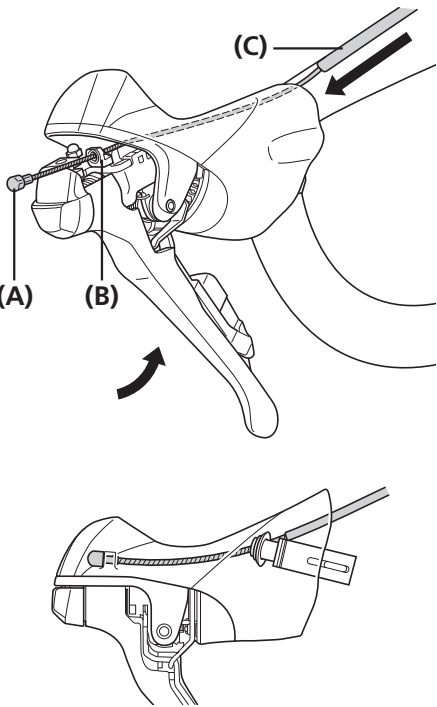
### Cable used

Inner cable	Outer casing
	

### TECH TIPS

For information on how to install the brake cable, refer to the dealer's manual for the brake.

**1**

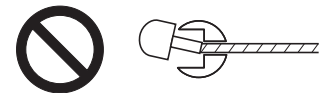
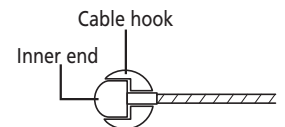


Depress the lever as if to brake and pass the brake cable through.

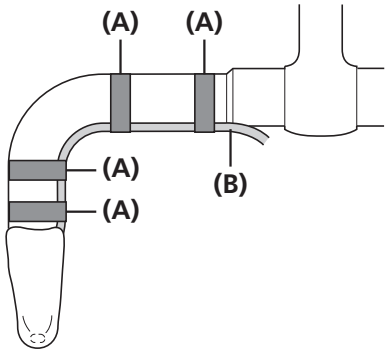
(A) Inner end  
(B) Cable hook  
(C) Outer casing

### NOTE

Make sure that the inner end is firmly set in the cable hook.



**2**



Temporarily secure the outer casing to the handlebar (by using tape or a similar material).

(A) Tape  
(B) Outer casing

**Installation of the shifting cable**

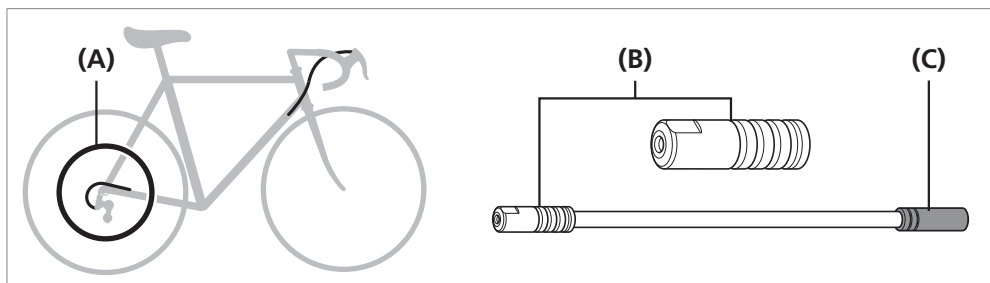
**Cable used**

Dedicated inner cable	Recommended outer casing
<p>Ø1.2mm</p> <p>Opposite side</p>	<p>Normal outer cap/SP41 outer casing</p> <p>Ø4mm</p> <p>SHIMANO SP41</p>

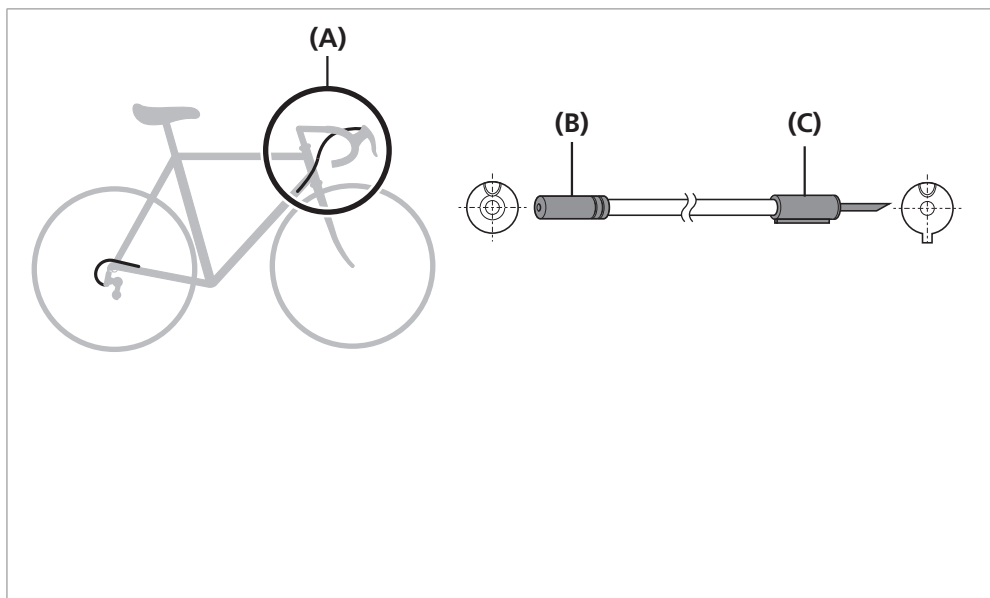
**NOTE**

Do not let dust adhere on the inner cable. If the grease on the inner cable is wiped off, the application of SIS SP41 grease (Y04180000) is recommended.

**Outer cap installation position**



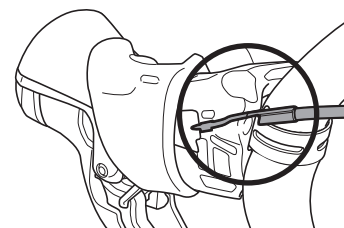
- (A)** Derailleur side
- (B)** Sealed outer cap (resin type)
- (C)** Normal outer cap



- (A)** Shifting lever side
- (B)** Normal outer cap
- (C)** Outer cap with short tongue

**TECH TIPS**

Be sure to insert the convex shape on the cap into the groove in the bracket.



## Cutting the outer casing

### NOTE

- Use a cable which still has some length to spare even when the handlebars are turned all the way to both sides.
- Be careful not to injure your hand with the TL-CT12 needle section.

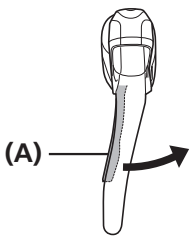
<p><b>1</b></p>		<p>Use the cable cutter (TL-CT12) or an equivalent tool to cut the side opposite of the inscription.</p>	<p><b>(A)</b> Outer cap <b>(B)</b> TL-CT12</p>
<p><b>2</b></p>		<p>After cutting, expand the tip of the liner (<math>\varnothing</math> 2.2 or more) with TL-CT12 or another narrow tool.</p> <p><b>(y)</b> Removing the outer cap <b>(z)</b> Arrange the cut end into a perfect circle</p>	<p><b>(A)</b> TL-CT12 needle <b>(B)</b> TL-CT12</p>
<p><b>3</b></p>		<p>Insert the outer casing until it touches the seating surface of the outer cap.</p> <p><b>(z)</b> Installing the outer cap</p>	<p><b>(A)</b> Outer cap <b>(B)</b> Tip <b>(C)</b> Outer casing</p>

### NOTE

Be careful not to crush the convex section of the tip when inserting the outer casing.

Passing through the shifting inner cable

**1**



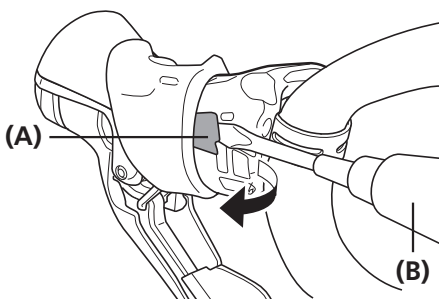
Operate lever [B] and set it to the top position, then attach the cable and make adjustments.

**(A)** Lever [B]



The illustration is of the rear lever.

**2**

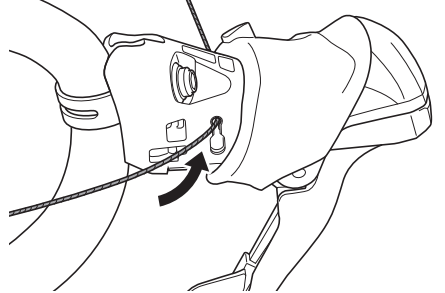


Remove the cable cover using a slotted screwdriver or similar flat-tipped tool.

**(A)** Cable cover

**(B)** Slotted screwdriver

**3**

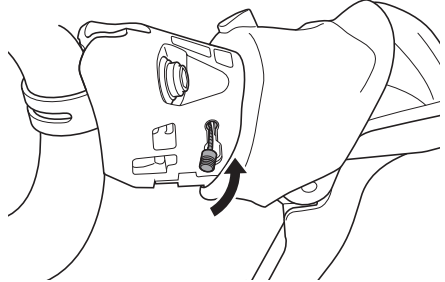


Put the inner cable through as shown in illustration.

**NOTE**

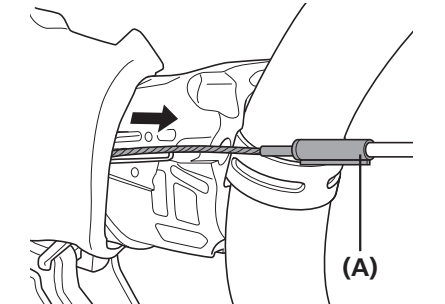
Insert the cable while being careful not to damage the coating.

**4**



Insert the cable in such a manner that the inner end is attached to the unit.

**5**



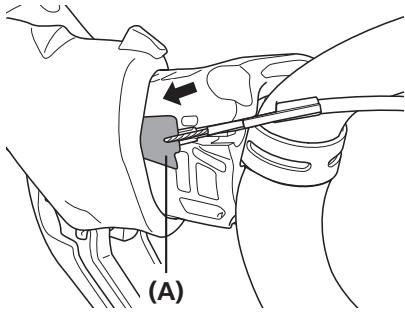
Put the inner cable through as shown in illustration.

**(A)** Outer cap with short tongue

## INSTALLATION

### Installation of the shifting cable

6



Finally, reinstall the cable cover.

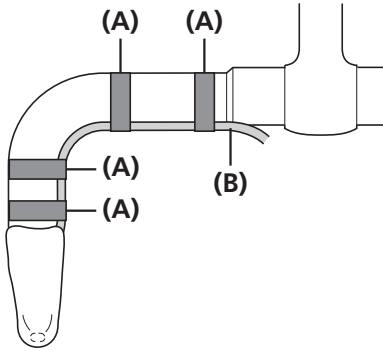
(A) Cable cover



#### TECH TIPS

When the inner cable is installed, coating may be damaged and become fluffy; however, it will not affect function.

7



Temporarily secure the outer casing to the handlebar (by using tape or a similar material).

(A) Tape

(B) Outer casing

8

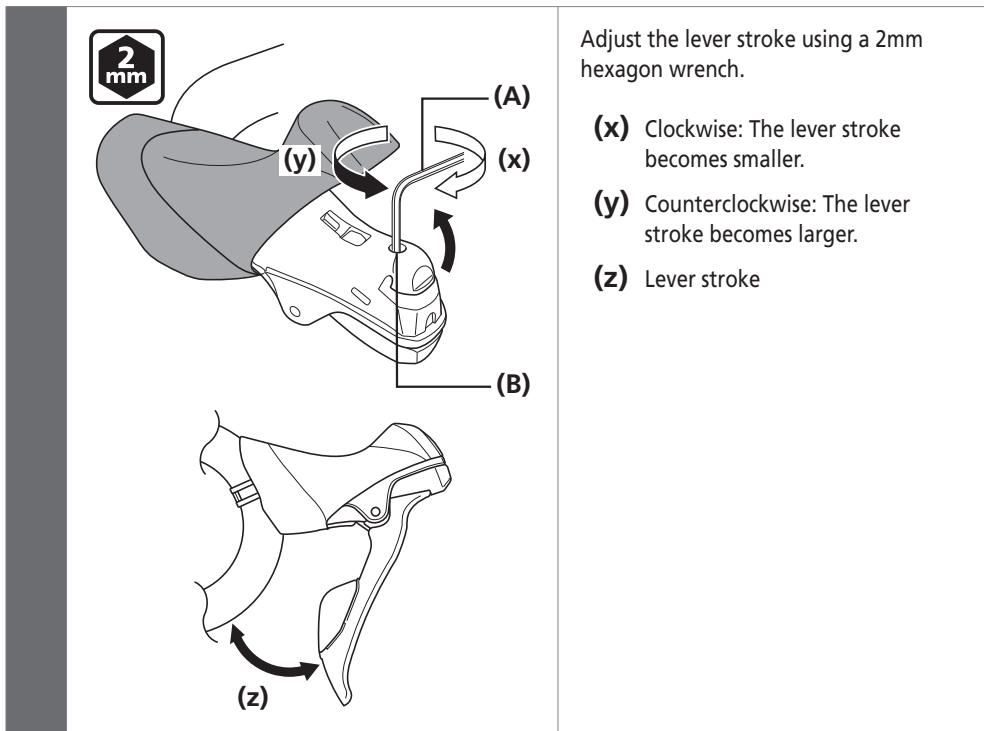
Then wrap the handlebar with handlebar tape.



# ADJUSTMENT

## ADJUSTMENT

## ■ Lever stroke adjustment



(A) 2mm hexagon wrench

(B) Reach adjustment bolt

**NOTE**

Make sure that braking operates properly after the adjustment.

# MAINTENANCE

# MAINTENANCE

## Disassembling the bracket body and lever body

1

First use the Shimano original tool (sold separately) to remove the E-ring.

Use part [B] of the Shimano original E-ring removal tool [2] to align the E-ring with the direction of removal.

Next, set part [A] against the E-ring and remove the E-ring.

(y) Shimano original E-ring removal tool:  
 [1] Y6RT66000  
 [2] Y6RT68000

(z) E-ring removal direction

**(A)** E-ring

⚠ CAUTION

When you remove the E-ring, it may pop out; wear protective glasses while removing it. Check that there is no one and nothing around you before starting the removal.

**TECH TIPS**

The illustration is of the right-hand lever.

2

Insert a hexagon wrench or similar tool into the lever axle hole, tap it gently with a plastic mallet to push out the lever axle, which disassembles it into the bracket body and the lever body.

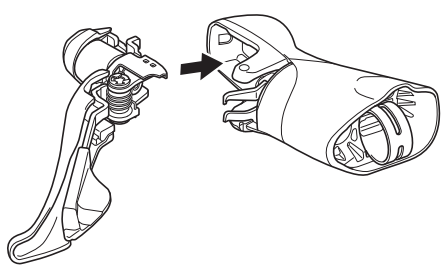
**(A)** Hexagon wrench  
**(B)** Plastic mallet

NOTE

Always be sure to remove the lever axle in this direction. If it is removed in the opposite direction, it may damage the bracket body.

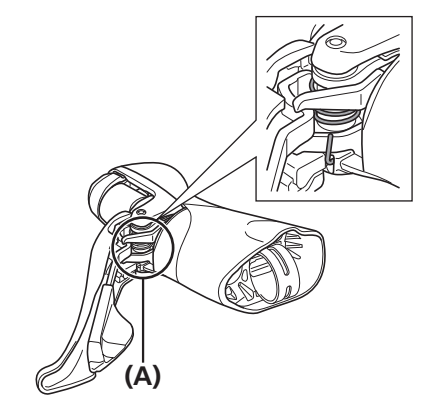
## ■ Assembling the bracket body and lever body

1



Insert the lever into the bracket.

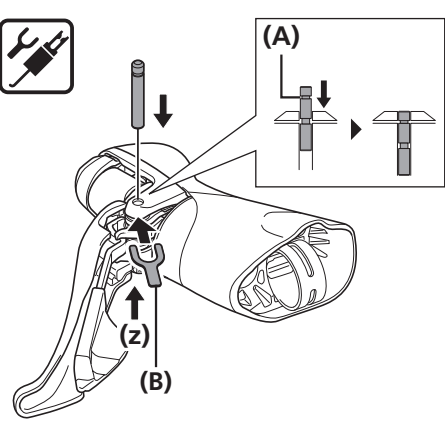
2



Insert the end of the return spring into the notch.

**(A)** Return spring

3



Align the axle holes, set the Shimano original E-ring removal tool [1] in the position shown in the illustration, and then press-fit the lever axle.

**(z)** Do not press-fit the lever axle from this direction. Otherwise, it may damage the bracket body.

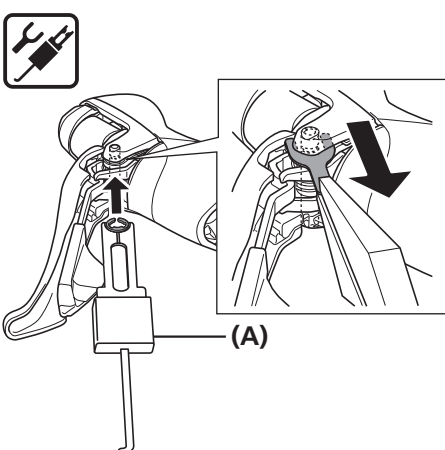
**(A)** E-ring groove

**(B)** Shimano original E-ring removal tool [1]

 **TECH TIPS**

- The correct direction for the lever axle is for the E-ring groove to face up.
- Check that the surface of the bracket body is flat so the E-ring of the lever axle can fit into the groove properly.

4



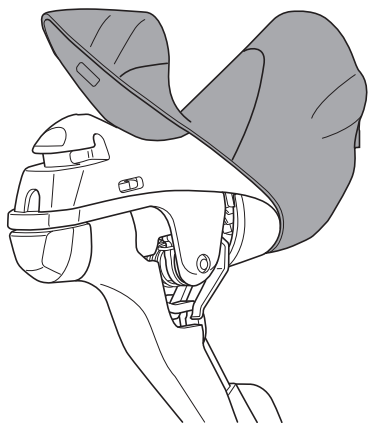
Remove the Shimano original E-ring removal tool [1], and then use the Shimano original E-ring removal tool [2] to install the E-ring.

**(A)** Shimano original E-ring removal tool [2]

**NOTE**

Do not use the removed E-ring again. Be sure to use a new E-ring.

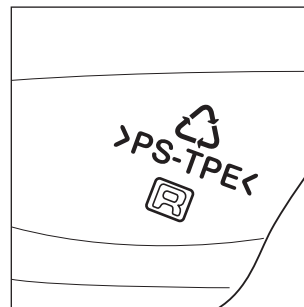
## ■ Replacing the bracket cover



Insert the protrusions on the bracket cover into the hollows in the bracket body when fitting on the bracket cover.

### NOTE

- A label is engraved in the bracket cover.  
R: for right  
L: for left



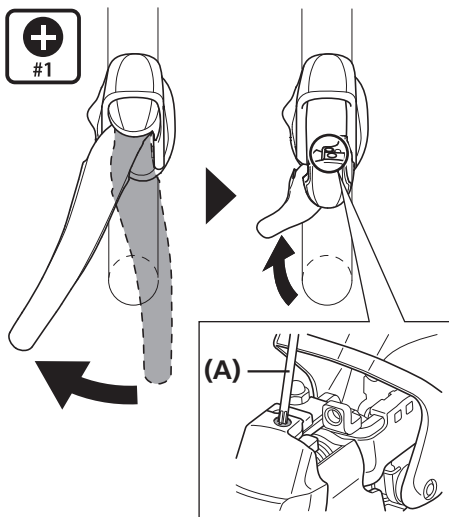
- Always replace the bracket cover with the lever removed from the bicycle as shown in the illustration.



### TECH TIPS

Wipe a little rubbing alcohol inside the bracket cover to make installation easier.

## ■ Replacing the name plate



Operating the shifting lever while operating the brake lever exposes the screws.

Remove the screws and then replace the name plate.

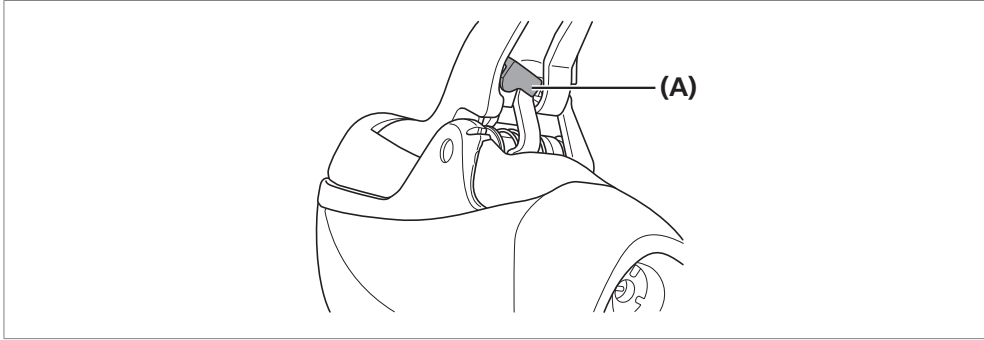
(A) Screwdriver[#1]

### Tightening torque



0.15 - 0.2 N·m

## ■ Replacing the main lever support



(A) Main lever support

**1**

Operate lever [B] two or more times, and then lever [A] by two gears.

(A) Lever [A]  
(B) Lever [B]

**2**

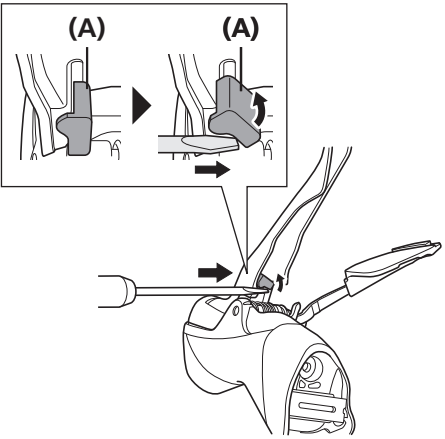
Hold the base of lever [A] and then return only lever [A] to the original position.

(z) Hold with fingers

(A) Main lever support  
(B) Lever [A]

▶ Replacing the main lever support

**3**



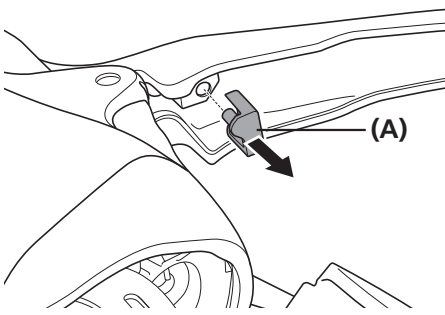
Rotate the main lever support in the direction of the arrow with a slotted screwdriver or an equivalent tool, and then remove the stopper.

---

**(A)** Main lever support

---

**4**



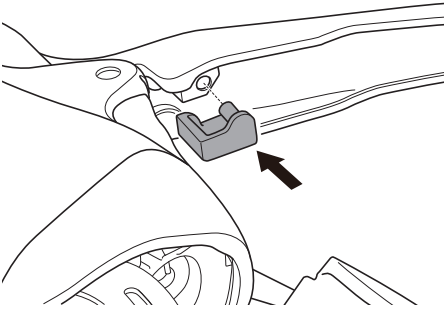
Pull out the main lever support.

---

**(A)** Main lever support

---

**5**



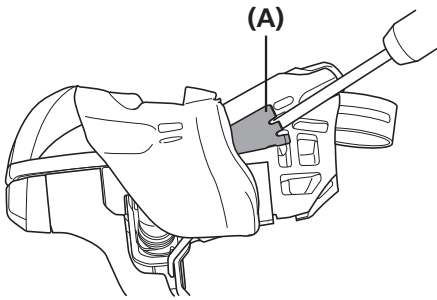
Insert a new main lever support.



## ■ Replacing the SL cable guide

**1** Remove the lever from the handle, and then remove the bracket cover.

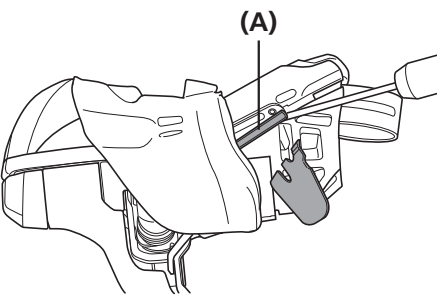
**2**



Remove the cable cover.

**(A)** Cable cover

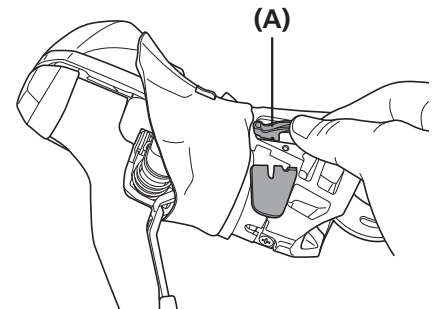
**3**



Use a pointed tool to pry out the SL cable guide.

**(A)** SL cable guide

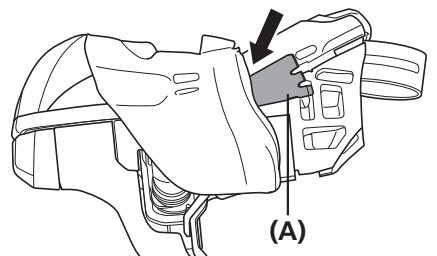
**4**



Push in the new SL cable guide with hands.

**(A)** SL cable guide

**5**

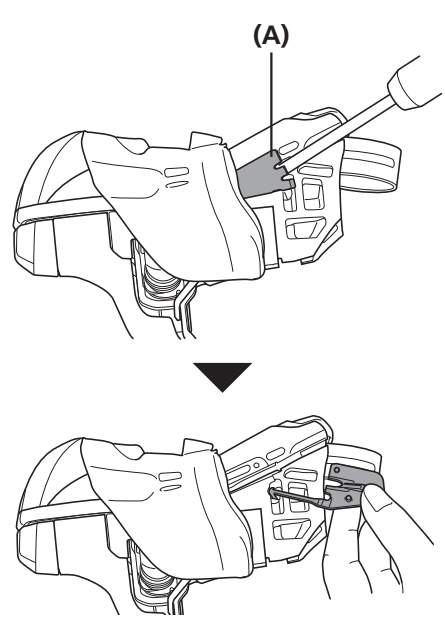


Install the cable cover.

**(A)** Cable cover

## ■ Replacing the cable cover

**1**

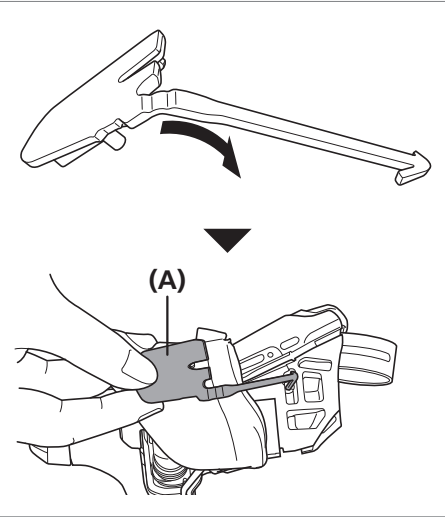


(A)

Remove the cable cover from the bracket using a screwdriver and pull the cable out with your hand.

(A) Cable cover

**2**



(A)

Before installing a new cable cover, make a slight crease on it and insert it into the hole in the bracket.

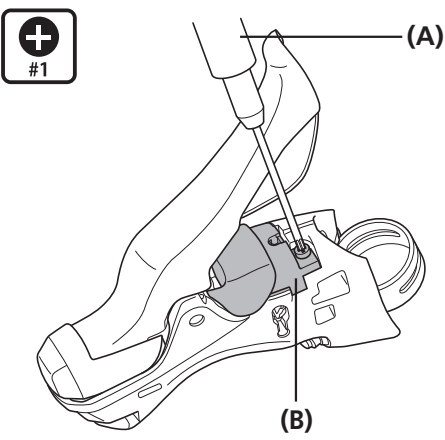
(A) Cable cover

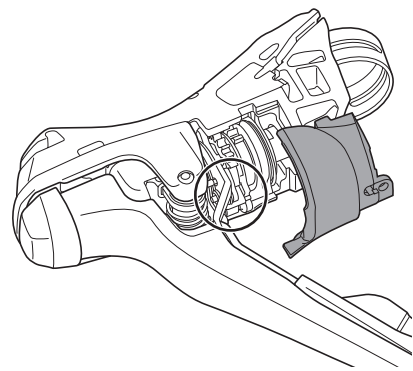
▶ How to pull out a disconnected inner end (shifting cable)

## ■ How to pull out a disconnected inner end (shifting cable)

\* If it is hard to pull out the inner end, follow the procedure below.

**1** Remove the lever from the handle, and then remove the bracket cover.

**2**  Remove the screw located at the bottom of the bracket, and then remove the unit cover.

**3**  Pull out the inner end on the cable hook of the winding body.

**4** Reattach the unit cover and then tighten the screws.

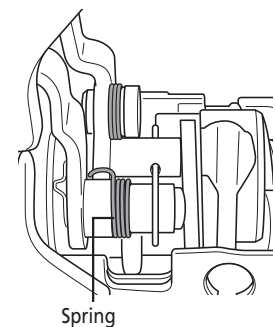
 **TECH TIPS**

Should the inner cable break, it is recommended that you also replace the cable guide together with the inner cable in order to maintain smooth shifting.

- (A)** Screwdriver[#1]
- (B)** Unit cover

**NOTE**

At this point, be careful not to touch the spring accidentally. Doing so could cause a malfunction.



**Tightening torque**







0.2 - 0.25 N·m

# Shifting lever (RAPIDFIRE Plus)

# 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	
	4mm hexagon wrench		Screwdriver[#2]
	Screwdriver[#1]		Screwdriver

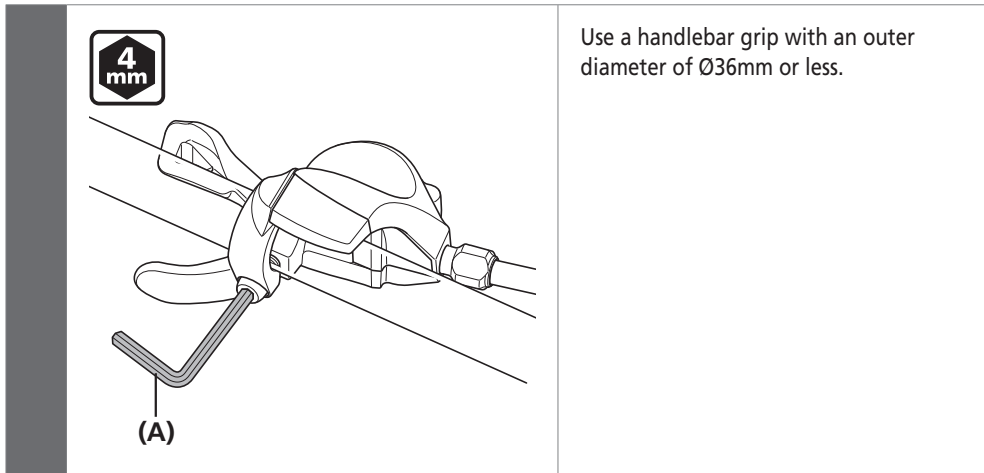
# INSTALLATION

# INSTALLATION

## ■ Installation to the handlebar

### NOTE

- When installing components to a carbon frame (handlebars), there is a risk of causing damage to the frame (handlebars) or inadequate fixing force, even at the recommended tightening torque. Verify the appropriate torque to apply with the bicycle or frame (handlebar) manufacturer.
- Install in a position where brake and gear shifting operations are not obstructed. Do not use in a combination which causes brake operation to be obstructed.



(A) 4mm hexagon wrench

Tightening torque	
4 mm	3 - 5 N·m



# MAINTENANCE

# MAINTENANCE

## ■ Replacing the inner cable

\* Refer to SIS Adjustment in the Rear Derailleur section of General Operations for information on installation to the derailleur and necessary adjustments.

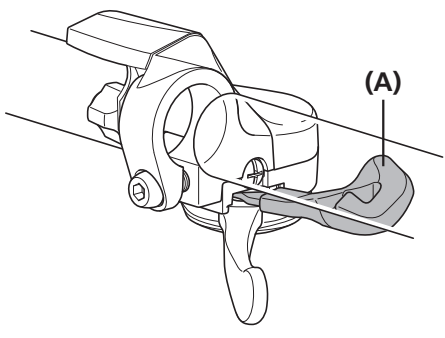
### Table of recommended inner cables

Outer casing	Material or surface treatment
OT-SP41	OPTISLICK

### Replacement procedure

\* The illustration is of the rear lever.

1

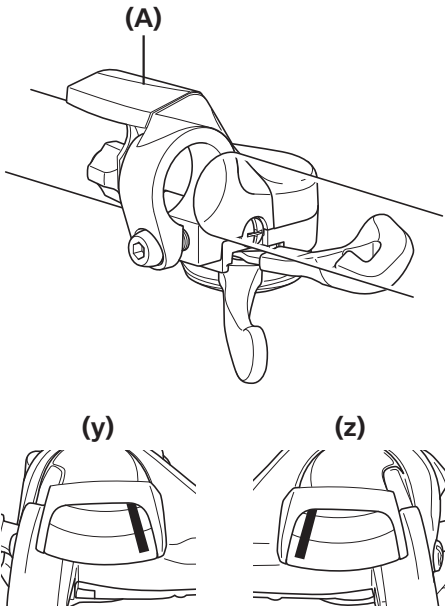


Operate the release lever to set the chain on the smallest chainring/smallest sprocket.

#### (A) Release lever

Specifications	Release lever operation count
2-speed	1 or more times
3-speed	2 or more times
7-speed	6 or more times
8-speed	7 or more times
9-speed	8 or more times
10-speed	9 or more times

2



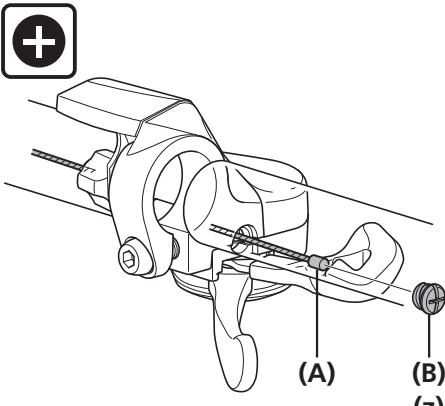
When there is an indicator, check the position of the pointer on the indicator.

(y) Front: right end  
(z) Rear: left end

#### (A) Indicator

▶ Replacement and reassembly of the indicator unit

**3**

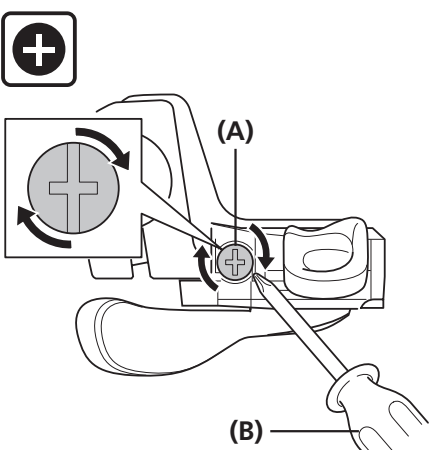


Then remove the wire end hooking cap and install the cable.

**(z)** Screwdriver

**(A)** Inner cable  
**(B)** Wire end hooking cap

**4**



Install the wire end hooking cap by turning it as shown in the illustration until it stops.

Do not turn it any further than this otherwise it may damage the thread on the cap.

**(A)** Wire end hooking cap  
**(B)** Screwdriver

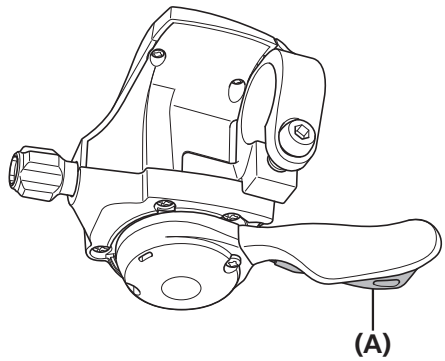
■ Replacement and reassembly of the indicator unit

**NOTE**

Disassembly and assembly should only be carried out when removing or replacing the indicator unit.

**Disassembly**

**1**



Operate the release lever to set the chain on the smallest chainring/smallest sprocket.

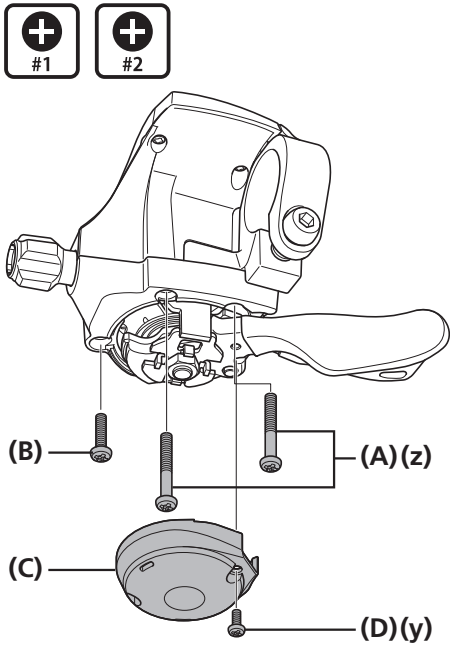
**(A)** Release lever

**(A)** Release lever

Specifications	Release lever operation count
2-speed	1 or more times
3-speed	2 or more times
6-speed	5 or more times
7-speed	6 or more times
8-speed	7 or more times
9-speed	8 or more times

▶ Replacement and reassembly of the indicator unit

**2**



After removing the main lever cover, remove the 3 indicator fixing screws.

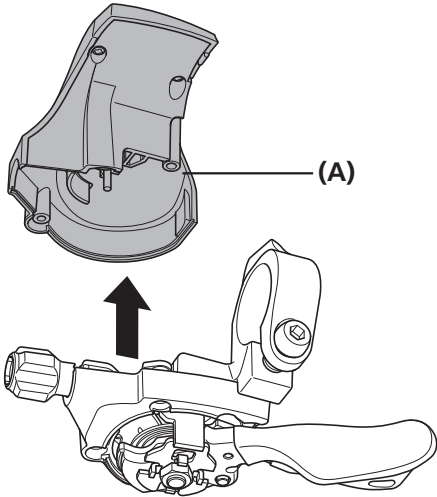
- (y) Screwdriver[#1]
- (z) Screwdriver[#2]

- (A) Indicator fixing screw (long)
- (B) Indicator fixing screw (short)
- (C) Main lever cover
- (D) Cover fixing screw



Depending on the model, the indicator unit may not be replaceable.

**3**

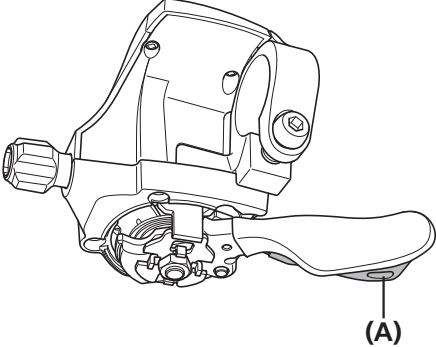


Remove the indicator unit.

- (A) Indicator unit

Assembly

**1**




Operate the release lever to set the chain on the smallest chainring/smallest sprocket.

**(A)** Release lever

Specifications	Release lever operation count
2-speed	1 or more times
3-speed	2 or more times
6-speed	5 or more times
7-speed	6 or more times
8-speed	7 or more times
9-speed	8 or more times

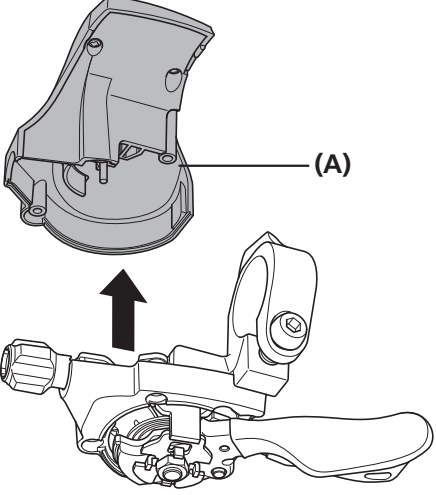
**2**



Check the position of the pointer on the indicator.

**(y)** Front: right end  
**(z)** Rear: left end

**3**



Install the indicator unit.

**(A)** Indicator unit

▶ Replacing the cover

4

Tighten the 3 indicator fixing screws, and then attach the main lever cover.

- (A)** Indicator fixing screw (long)
- (B)** Indicator fixing screw (short)
- (C)** Main lever cover
- (D)** Cover fixing screw

Indicator fixing screw (long)

Tightening torque	
	0.3 - 0.6 N·m

Indicator fixing screw (short)

Tightening torque	
	0.2 - 0.4 N·m

Cover fixing screw

Tightening torque	
	0.1 - 0.3 N·m

5

Check that it is operating correctly.

If it does not operate correctly, reassemble while paying particular attention to steps 1, 2, 3, and 4.

■ Replacing the cover

5

Remove the screw and then replace the cover as shown in the illustration.

- (A)** Cover fixing screw

Tightening torque	
	0.1 - 0.3 N·m




# Shifting lever

# **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	
	2mm hexagon wrench		Screwdriver[#2]
	4mm hexagon wrench		

# INSTALLATION

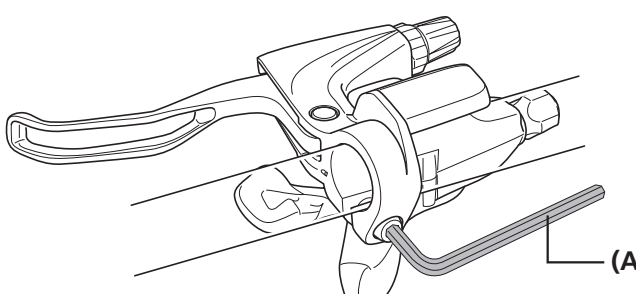
# INSTALLATION

## ■ Installation to the handlebar

Use a handlebar grip with a maximum outer diameter of  $\phi$  32 mm.

1

4  
mm

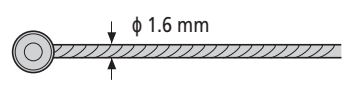
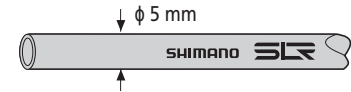


(A) 4mm hexagon wrench

Tightening torque	
<div style="border: 1px solid black; padding: 2px; text-align: center;"> <p style="font-size: 18px; font-weight: bold; text-align: center;">4 mm</p> </div>	<p style="font-size: 24px; font-weight: bold;">6 - 8 N·m</p>

## ■ Installation of the brake cable

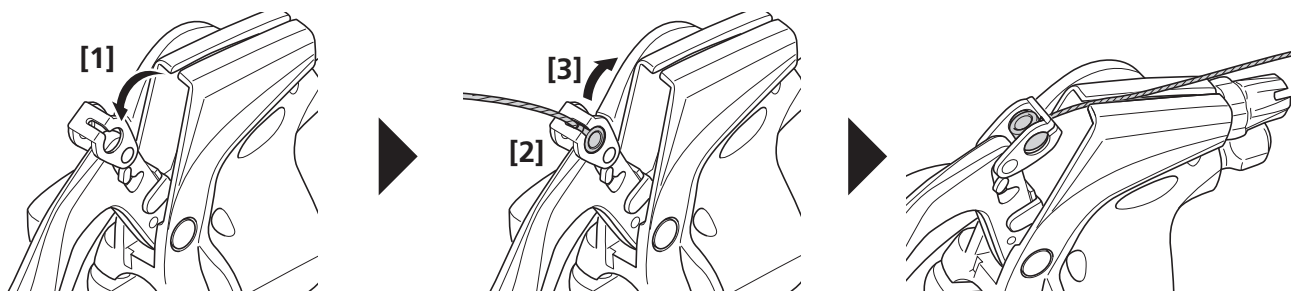
### Cable used

Inner cable	SLR outer casing
 <p><math>\phi</math> 1.6 mm</p>	 <p><math>\phi</math> 5 mm</p> <p>SHIMANO SLR</p>

\* Use a cable which still has some length to spare even when the handlebars are turned all the way to both sides.

\* For information on how to install the brake cable, refer to brake dealer's manual.

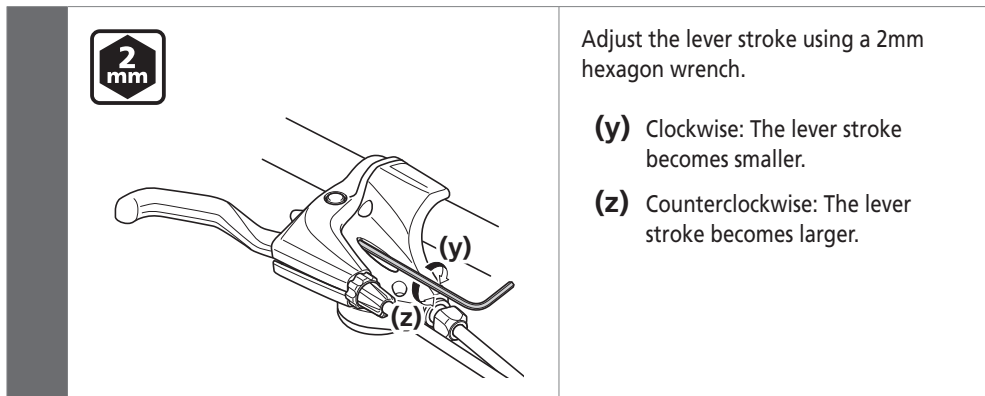
\* Install it as shown in the figure.



# ADJUSTMENT

## ADJUSTMENT

## ■ Lever stroke adjustment



# MAINTENANCE

# MAINTENANCE

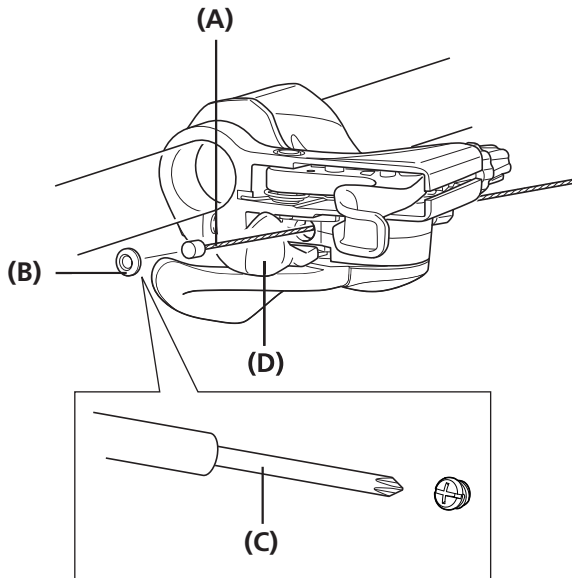
## ■ Replacing the inner cable

Set lever [B] to the smallest gear/sprocket.

Remove the wire end hooking cap and install a new inner cable.



1



- (A) Inner cable
- (B) Wire end hooking cap
- (C) Screwdriver[#2]
- (D) Lever [B]

# SHIMANO

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

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