

Dealer's Manual

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

Lighting System

Front light

LP-X200
LP-X103
LP-X102
LP-X101
LP-X100

LP-R200

Tail light

LP-RTX2
SM-RTX2

Electric wire

EW-NX60
EW-NX30

REVOSHIFT (with LED)

SL-RS34
SM-RS34

CONTENTS

IMPORTANT NOTICE.....	3
TO ENSURE SAFETY.....	4
LIST OF TOOLS TO BE USED.....	6
INSTALLATION	8
Light.....	8
Installing the front light.....	8
Connecting to the hub dynamo.....	12
Connecting the electric wire	15
Installing the taillight	16
Fixing to the cable.....	19
Electric wire (EW-NX30).....	20
Converter interchangeability	20
Shape of the electric wire connector and how to connect/disconnect it	23
Wiring diagram	24
Installation to the handlebar (SM-RS34).....	27
MAINTENANCE	30
REVOSHIFT (with LED).....	30

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:

- Check that the front light and tail light are on during night riding.
- The Revoshift shifter LED is intended for use as a position light, not as a bicycle headlight. Be sure to turn on the headlight when riding at night.

NOTE

Be sure to also inform users of the following:

- Check that the hub dynamo connection terminal is securely connected before using the hub dynamo.
- The sensor-equipped LED light automatically lights up depending on the surrounding light detected by the illumination sensor. If you find that the lamp lights up earlier than it should, clean the illumination sensor receiver.
- The illumination sensor activates at speeds of approximately 4 km/h or higher; therefore, the lamp does not light up at lower speeds, such as shortly after starting to ride. The light flickers at speeds between 4 and 10km/h.
- The tail light bracket (short mud guard) does not provide full protection against mud and water. Use the tail light bracket with caution because it may cause water to splash depending on factors such as speed, wheel revolution, or road conditions.
- Be sure to keep turning the crank during lever operation.
- Do not sit on or place baggage on the tail light bracket, otherwise the product may be damaged.
- Do not hit or push the tail light bracket with shoes, etc., when getting on the bicycle.
- Check the tail light for dirt such as mud, before use, and if it is dirty, clean it with a soft cloth.
- The position light and taillight remain on during riding.
- The light bulb for the LED-equipped front and tail light cannot be replaced; replace the device.
- Use a 2.4W Shimano hub dynamo. 3W hub dynamos are not supported.

For Installation to the Bicycle, and Maintenance:

- 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.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.
- Use the specified cable and B.B. guide for smooth operation.
- Also read the manual for the hub dynamo.
- Products are not guaranteed against natural wear and deterioration from normal use and aging.

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.

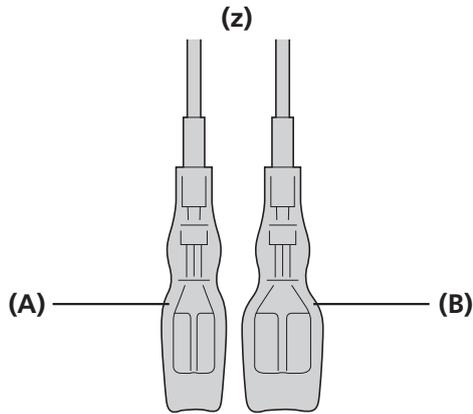
Tool		Tool		Tool	
	3mm hexagon wrench		Screwdriver[#1]		Slotted screwdriver
	8mm spanner		Screwdriver[#2]		
	10mm spanner		Screwdriver[#3]		

INSTALLATION

INSTALLATION

■ Light

- These lights adhere to Japanese Industrial Standards (JIS) when used within the system.
- 6V/2.4W hub dynamos with the J2 terminal, such as DH-2N30-J, are supported.



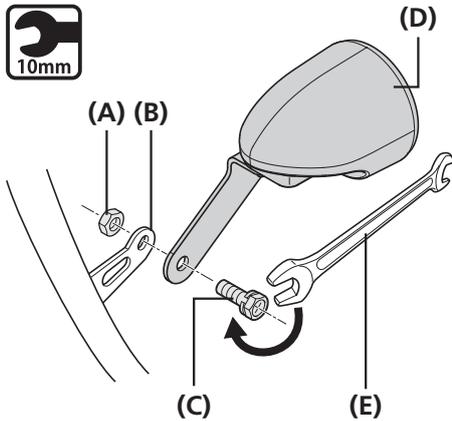
(z) J2 terminal

(A) Connector (small)

(B) Connector (large)

■ Installing the front light

Light stay type



Install the LED light to the dynamo mount stay of the front fork as shown in the illustration.

(A) Fixing nut

(B) Dynamo mount stay

(C) Fixing bolt with spring washer

(D) LED light

(E) 10mm spanner

Tightening torque

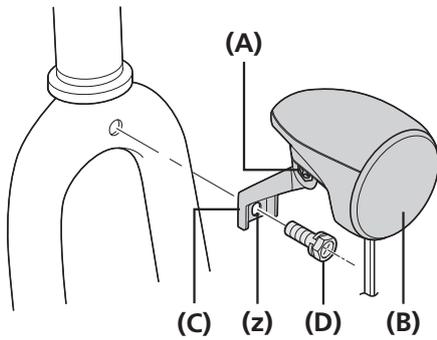


5 - 6 N·m

INSTALLATION

▶ Installing the front light

Center mount type



Install as shown in the illustration.

(z) Hole diameter: 6.5 × 10

- (A) Light fixing bolt
- (B) Sensor-equipped LED light main body
- (C) Center stay
- (D) Center stay fixing bolt
(Not supplied by Shimano.)

Light fixing bolt tightening torque



2 - 3 N·m

NOTE

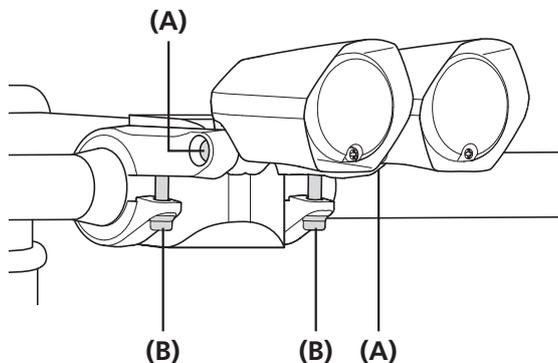
- Shimano does not supply fixing bolts and nuts for securing center stays.
- Tighten to the following tightening torque when securing the center stay to the frame.

Tightening torque

5 - 6 N·m

Handlebar mount type

Install the LED light while adjusting the angle as shown in the illustration.



(A) Bolt [1]

(B) Bolt [2]

Bolt [1] tightening torque



0.5 - 0.6 N·m

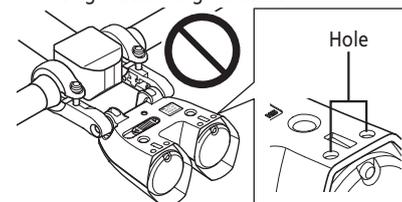
Bolt [2] tightening torque



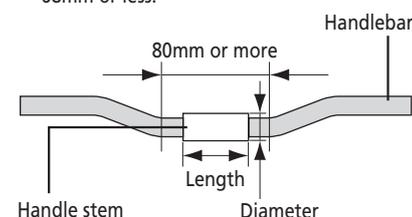
0.3 - 0.4 N·m

NOTE

- The hole in the bottom of the light acts as a drain for water such as rain. Installation in the opposite direction, as shown in the illustration, may cause water to enter and the light becoming defective.

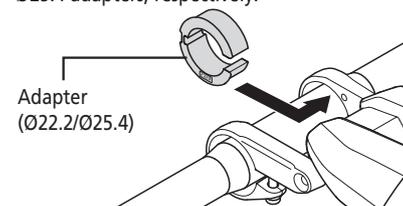


- Use a handlebar with a straight section of 80mm or longer.
- Use a handle stem with a length of 40mm or shorter and with an outside diameter of 68mm or less.



TECH TIPS

If the handle diameter is Ø31.3 to Ø31.9, the handle can be used without adapters.
If the handle diameter is Ø22.2 to Ø23.7 or Ø24.0 to Ø25.5, use the handle with Ø22.2 or Ø25.4 adapters, respectively.

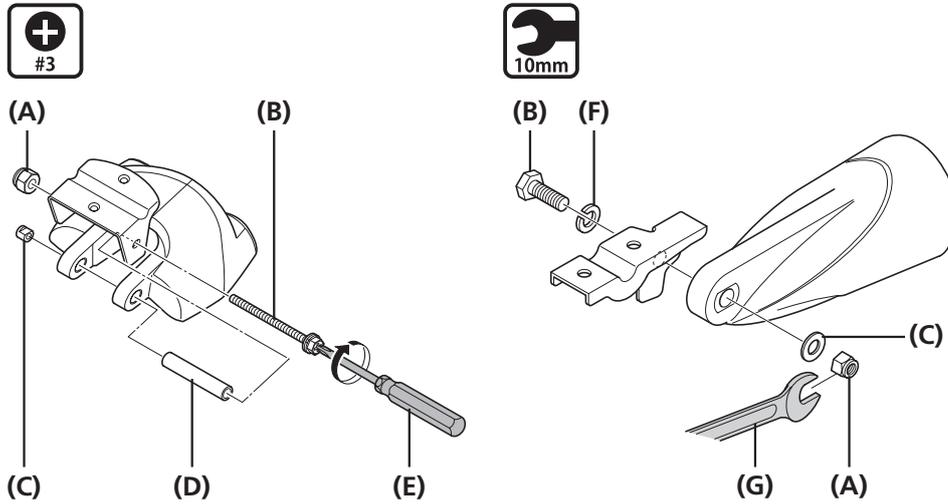


Under basket mount type

Install the LED light in the order shown in the illustration.

At that time, install the LED light so that the light does not shift between the basket stay and the front basket.

[1]



- (A) Light fixing nut
- (B) Light fixing bolt
- (C) Washer
- (D) Sleeve
- (E) Screwdriver[#3]
- (F) Spring washer
- (G) 10mm spanner

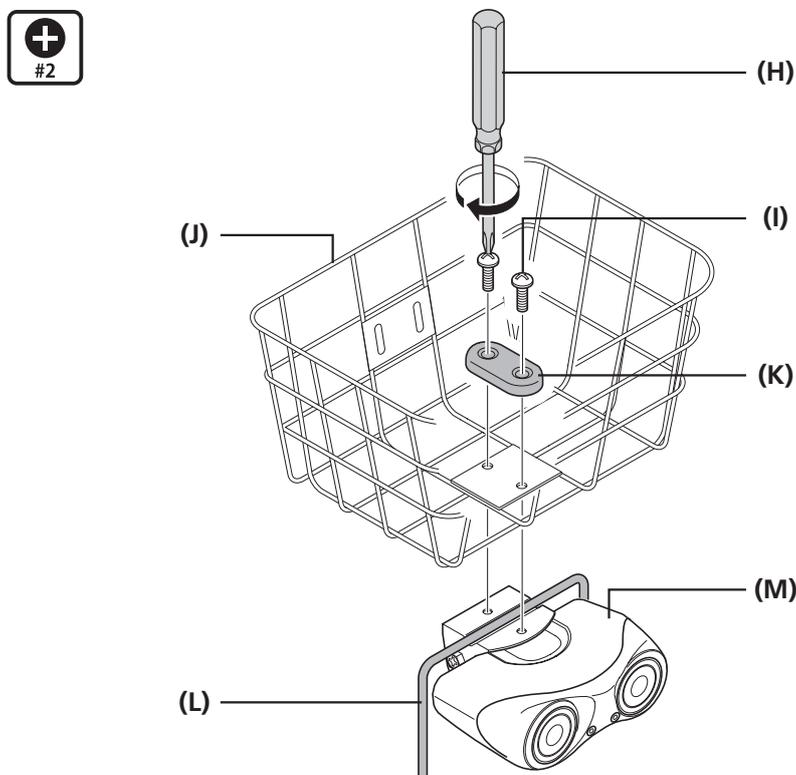
Light fixing bolt tightening torque

 #3	5 - 6 N·m
--------	-----------

Light fixing bolt tightening torque

 10mm	6 - 7 N·m
----------	-----------

[2]



- (H) Screwdriver[#2]
- (I) Front basket fixing bolt (M5)
- (J) Front basket
- (K) Fixing plate
- (L) Basket stay
- (M) LED light

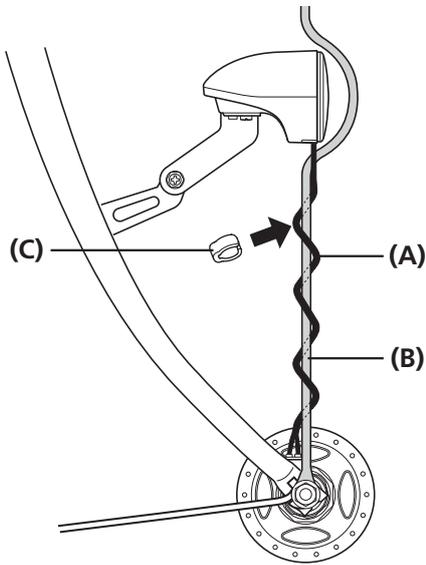
Tightening torque

 #2	3 - 4 N·m
--------	-----------

■ Connecting to the hub dynamo

When a basket stay is fitted

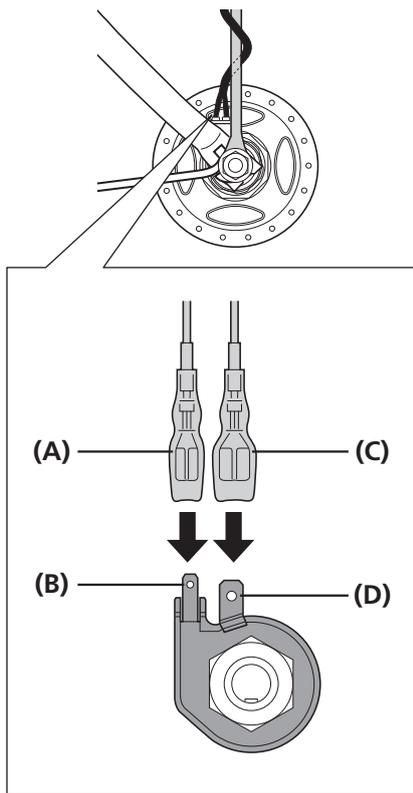
1



Wind the LED light cord around the basket stay.

- (A) Cord
- (B) Basket stay
- (C) Cable fixing clip

2

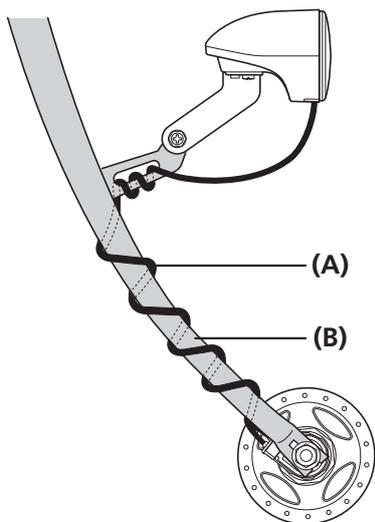


Attach the connector to the connection terminal for the hub dynamo.

- (A) Connector (small)
- (B) Connection terminal (small)
- (C) Connector (large)
- (D) Connection terminal (large)

When a basket stay is not fitted

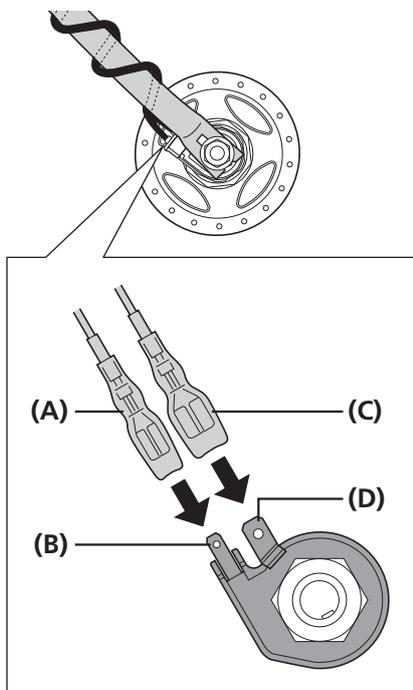
1



Wind the LED light cord around the front fork.

- (A) Cord
- (B) Front fork

2



Attach the connector to the connection terminal for the hub dynamo.

- (A) Connector (small)
- (B) Connection terminal (small)
- (C) Connector (large)
- (D) Connection terminal (large)

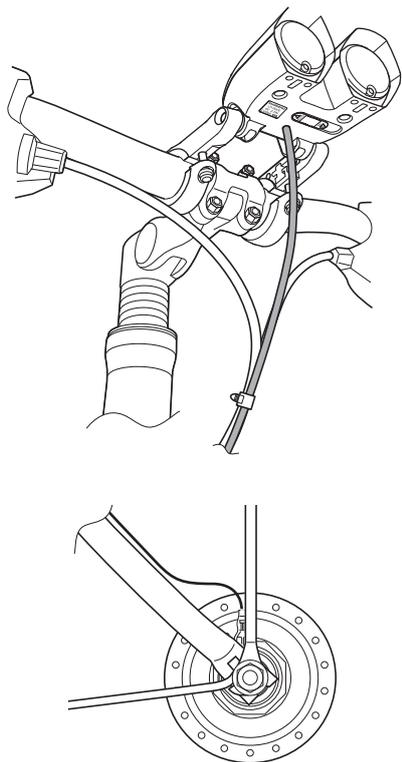


TECH TIPS

If the cable loosens, fix it with a zip tie.

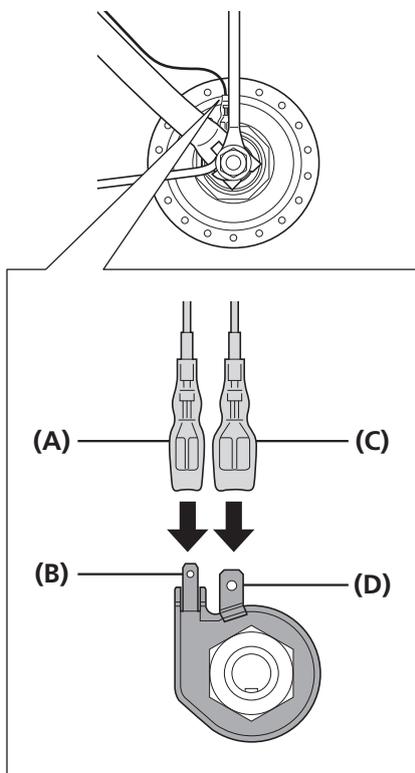
For handlebar mount type

1



Run the LED light cord along the brake cable and fix with a zip tie.

2



Attach the connector to the connection terminal for the hub dynamo.

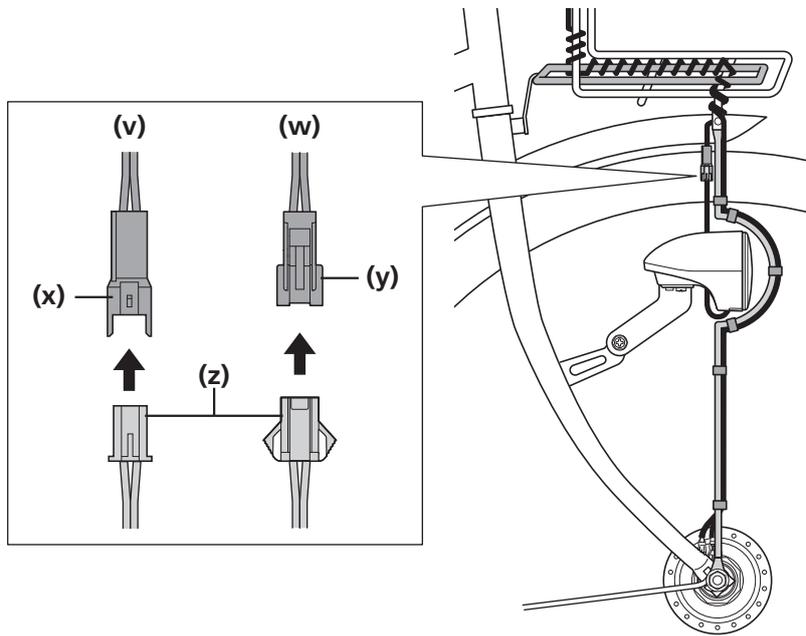
- (A) Connector (small)
- (B) Connection terminal (small)
- (C) Connector (large)
- (D) Connection terminal (large)

INSTALLATION

▶▶ Connecting the electric wire

■ Connecting the electric wire

Connect the LED light connector to the connector of EW-NX30 (electric wire) wound around the basket stay close to the light.



(v) For EW-NX60
(conventional model)

(w) For EW-NX30

(x) To EW-NX60

(y) To EW-NX30

(z) To the front light



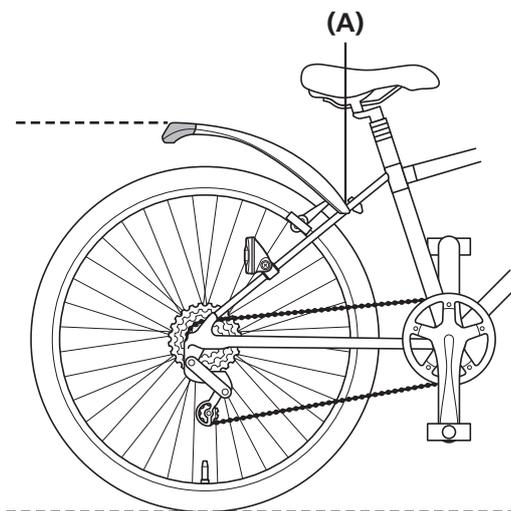
For details on the electric wire (EW-NX30), refer to the electric wire section.

■ Installing the taillight

Mud guard style stay type

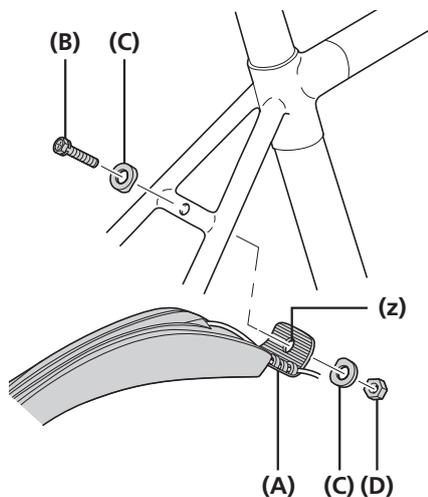
Install as shown in the illustration. At this time, make the light parallel to the ground.

After installation, check that the taillight bracket is securely fixed.

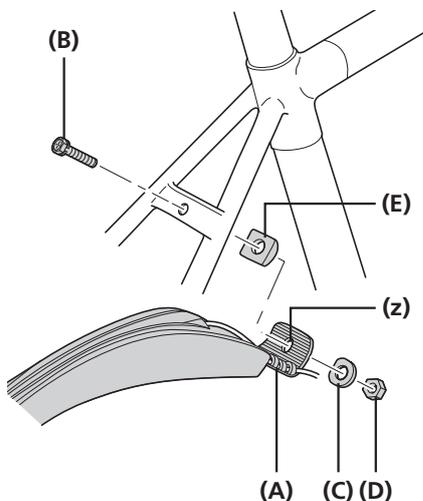


(A) Taillight bracket

For round seat stay bridge



For flat seat stay bridge



(z) Hole diameter: 6.4 x 9.7

- (A)** Taillight bracket
- (B)** Fixing bolt (not included)
- (C)** R washer
- (D)** Fixing nut (not included)
- (E)** Seat stay adapter

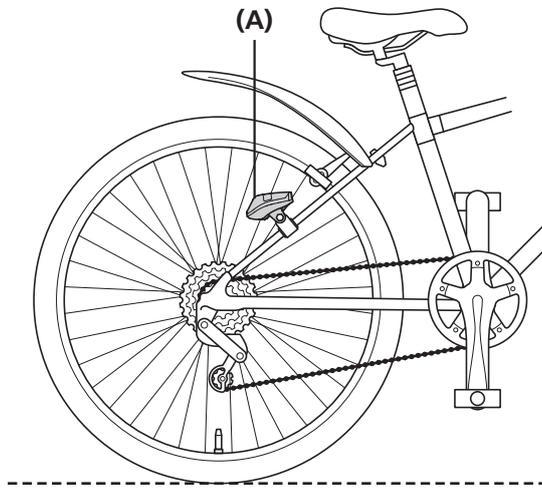
NOTE

Fixing bolts and nuts are not supplied with Shimano products. Use self-locking fixing bolts and nuts. Place an R washer or seat stay adapter between the fixing bolt and seat stay bridge as necessary.

Seat stay mount type

Install as shown in the illustration. At this time, make the light parallel to the ground.

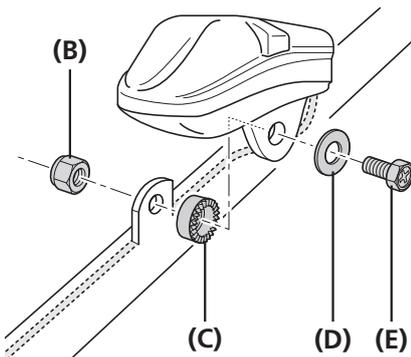
After installation, check that the tail light is securely fixed.



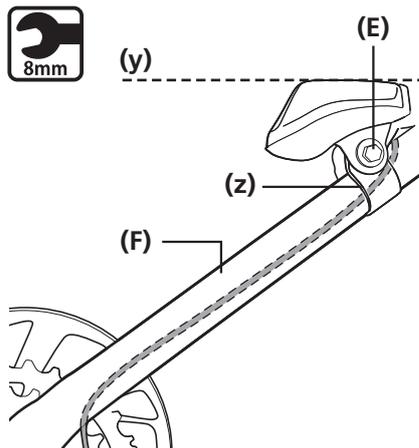
(A) Seat stay mount type with adapter

1

For direct mount type



For clamp band type



(y) Parallel to the ground

(z) Compatible with 13mm, 16mm, and 19mm diameter frames.

(B) Nut

(C) Stay

(D) Washer

(E) Bolt

(F) Seat stay

Tightening torque



1.6 N·m



TECH TIPS

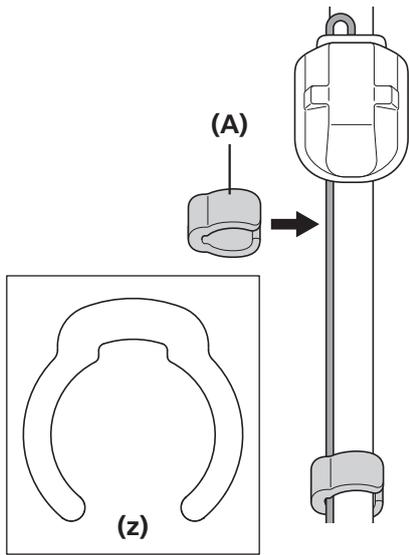
For clamp band type

For Ø13mm and Ø16mm frames, use compatible adapters, respectively.

INSTALLATION

▶▶ Installing the taillight

2



Fix the cable in place with a cable fixing clip.

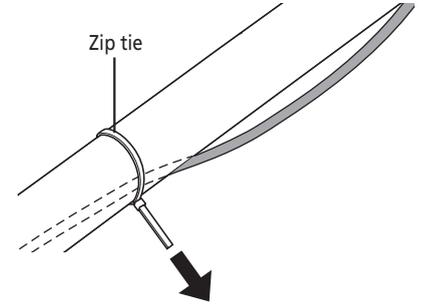
Three outside diameter specifications are available: 13mm, 16mm, and 19mm.

(z) Cannot be used with elliptical tubes.

(A) Cable fixing clip



For an elliptic seat stay, use a zip tie.



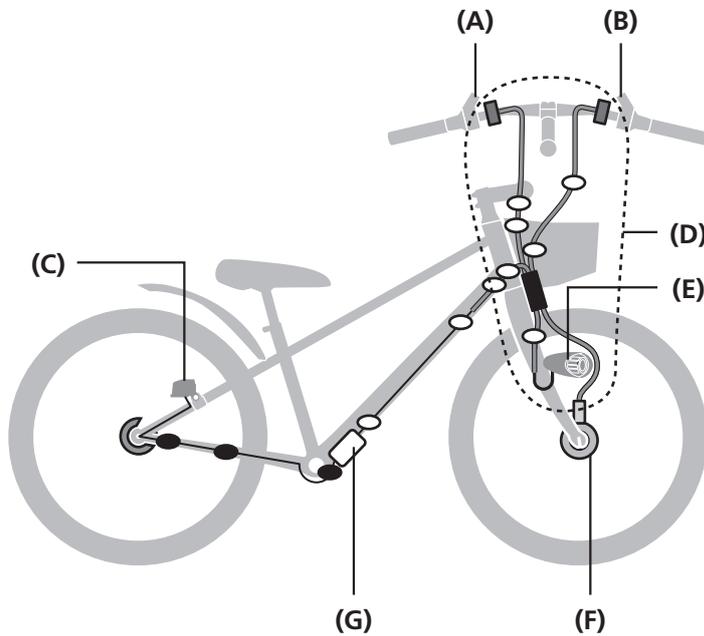
INSTALLATION

► Fixing to the cable

■ Fixing to the cable

EZ cable clamp

Fix in place as shown in the illustration.



○ EZ cable clamp A/B

● EZ cable clamp C

(A) SL/SM-RS34 (L)

(B) SL/SM-RS34 (R)

(C) LP-RTX2

(D) EW-NX30-4B

(E) Front light

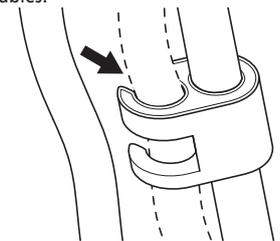
(F) Hub dynamo

(G) Cord adjuster



TECH TIPS

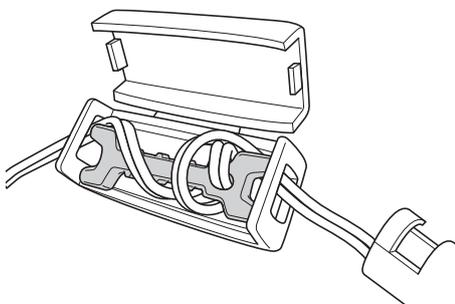
The EZ cable clamp depends on the brake and shift cables.



• EZ cable clamp A/B:
For cables with 5mm diameter

• EZ cable clamp C:
For cables with 4mm diameter

Cord length adjustment



A cord adjuster allows cord length adjustment of up to 200mm.

INSTALLATION

▶ Electric wire (EW-NX30)

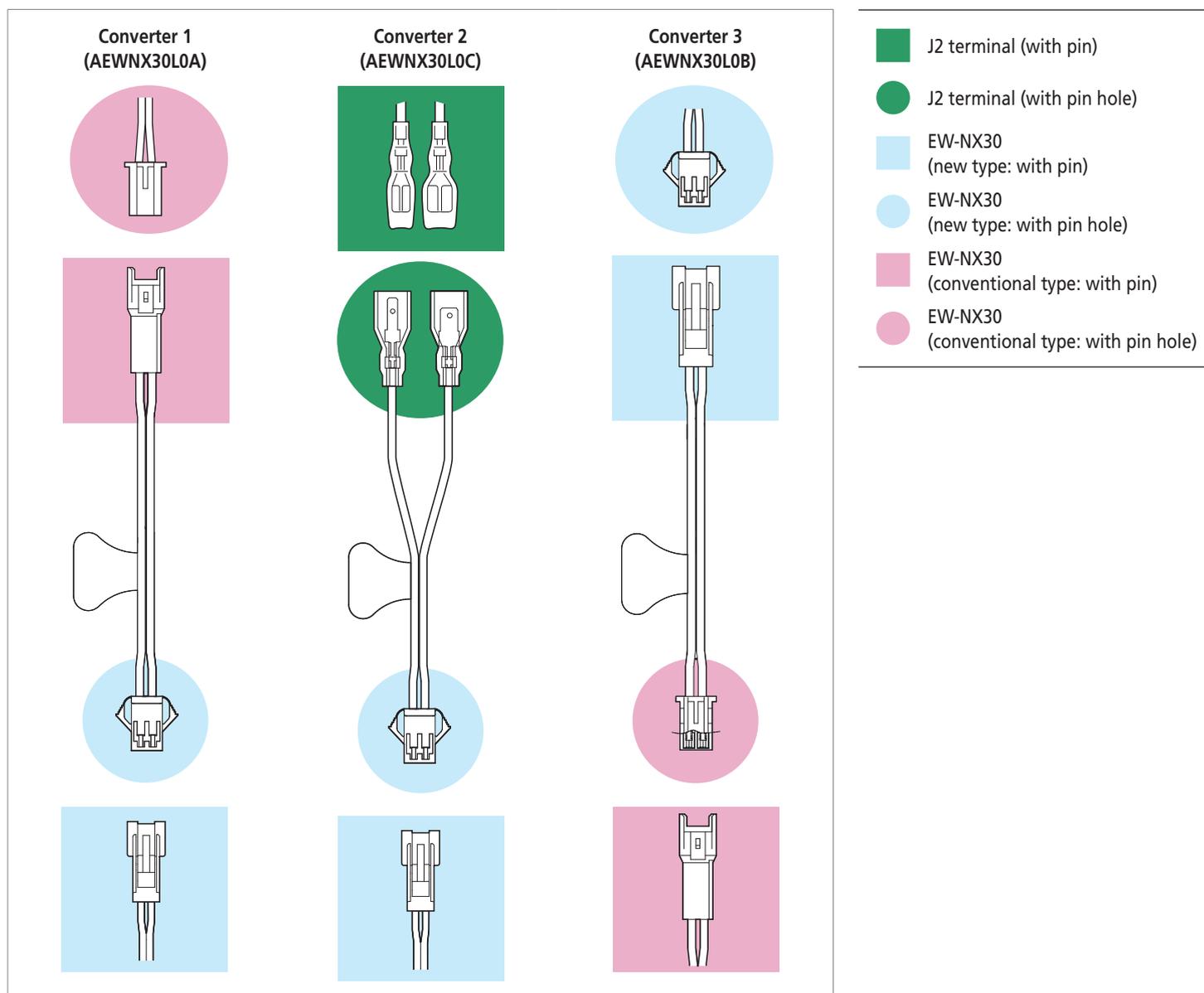
■ Electric wire (EW-NX30)

The type of EW-NX30 differs depending on the product. Refer to the following table.

		EW-NX30 type		
		4B (4-branch) type	3B (3-branch) type	2B (2-branch) type
Products connected	Front light	OK	OK	OK
	REVOSHIFT (LED)	OK	OK	Not OK
	Tail light	OK	Not OK	OK

■ Converter interchangeability

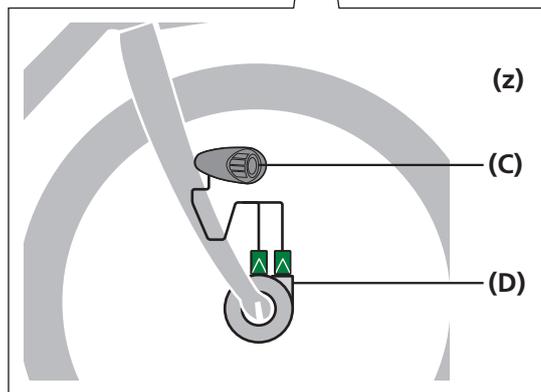
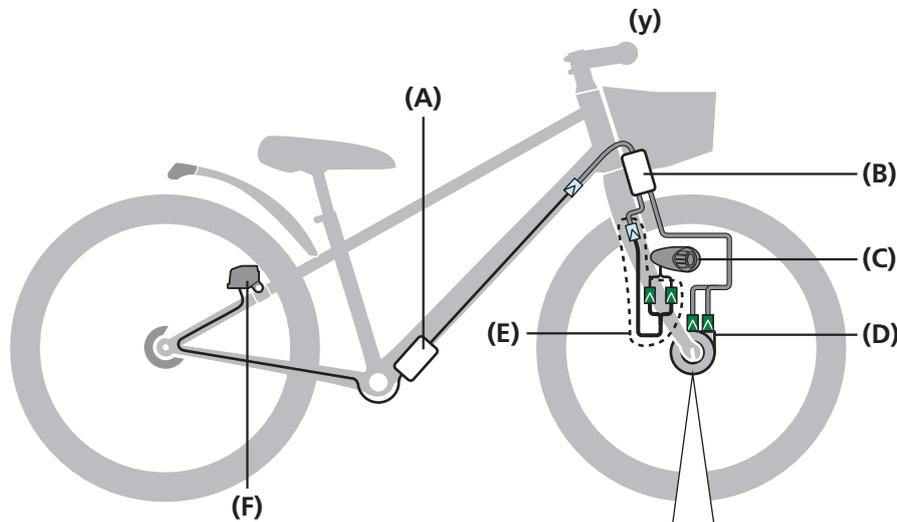
Converter types



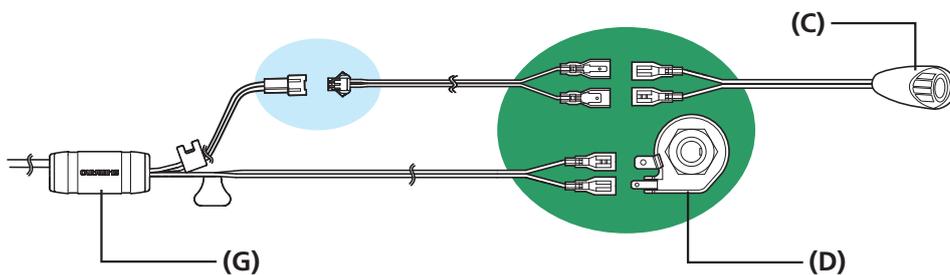
Combinations

Converter 2

Used to add a taillight to a J2 terminal specification front light.



EW-NX30-2B



▶ / ● J2 terminal

◻ / ◐ EW-NX30 (new type)

(y) After upgrade:
Bicycle with a taillight

(z) Before upgrade:
Bicycle with an automatic light

(A) Cord adjuster

(B) EW-NX30-2B

(C) Front light

(D) Hub dynamo

(E) Converter

(F) LP-RTX2 (Seat stay mount type)

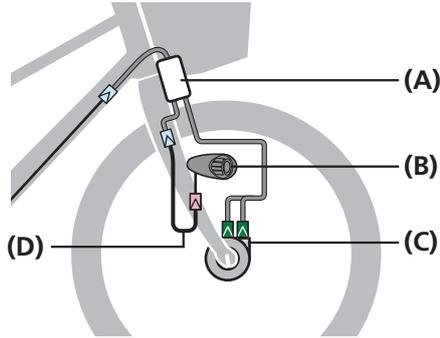
(G) Distributor

INSTALLATION

▶ Converter interchangeability

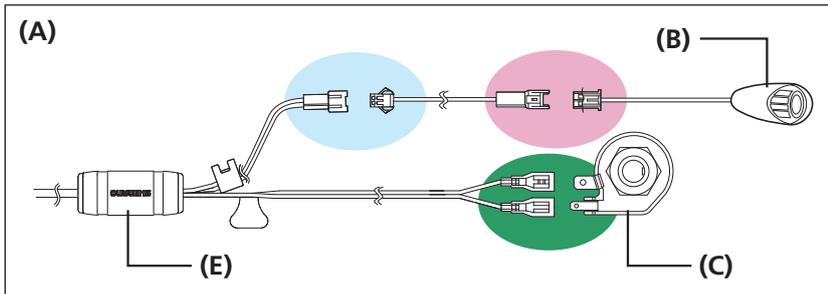
Converter 1

Use EW-NX30 with a front light equipped with an EW-NX60 connector.



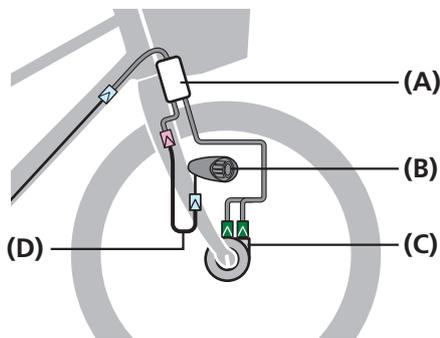
- ▶ / ● J2 terminal
- ▶ / ● EW-NX30 (new type)
- ▶ / ● EW-NX60 (conventional type)

- (A) EW-NX30-2B/3B/4B
- (B) Front light
- (C) Hub dynamo
- (D) Converter
- (E) Distributor



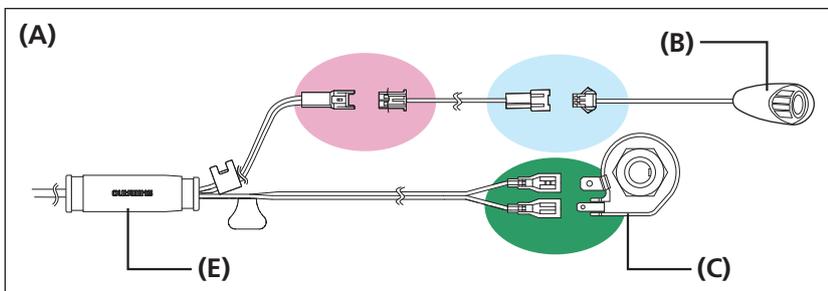
Converter 3

Use EW-NX60 with a front light equipped with an EW-NX30 connector.



- ▶ / ● J2 terminal
- ▶ / ● EW-NX30 (new type)
- ▶ / ● EW-NX60 (conventional type)

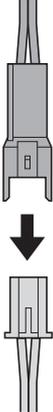
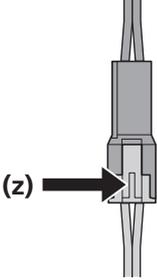
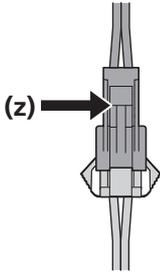
- (A) EW-NX60 (3-branch/4-branch)
- (B) Front light
- (C) Hub dynamo
- (D) Converter
- (E) Distributor



INSTALLATION

▶▶ Shape of the electric wire connector and how to connect/disconnect it

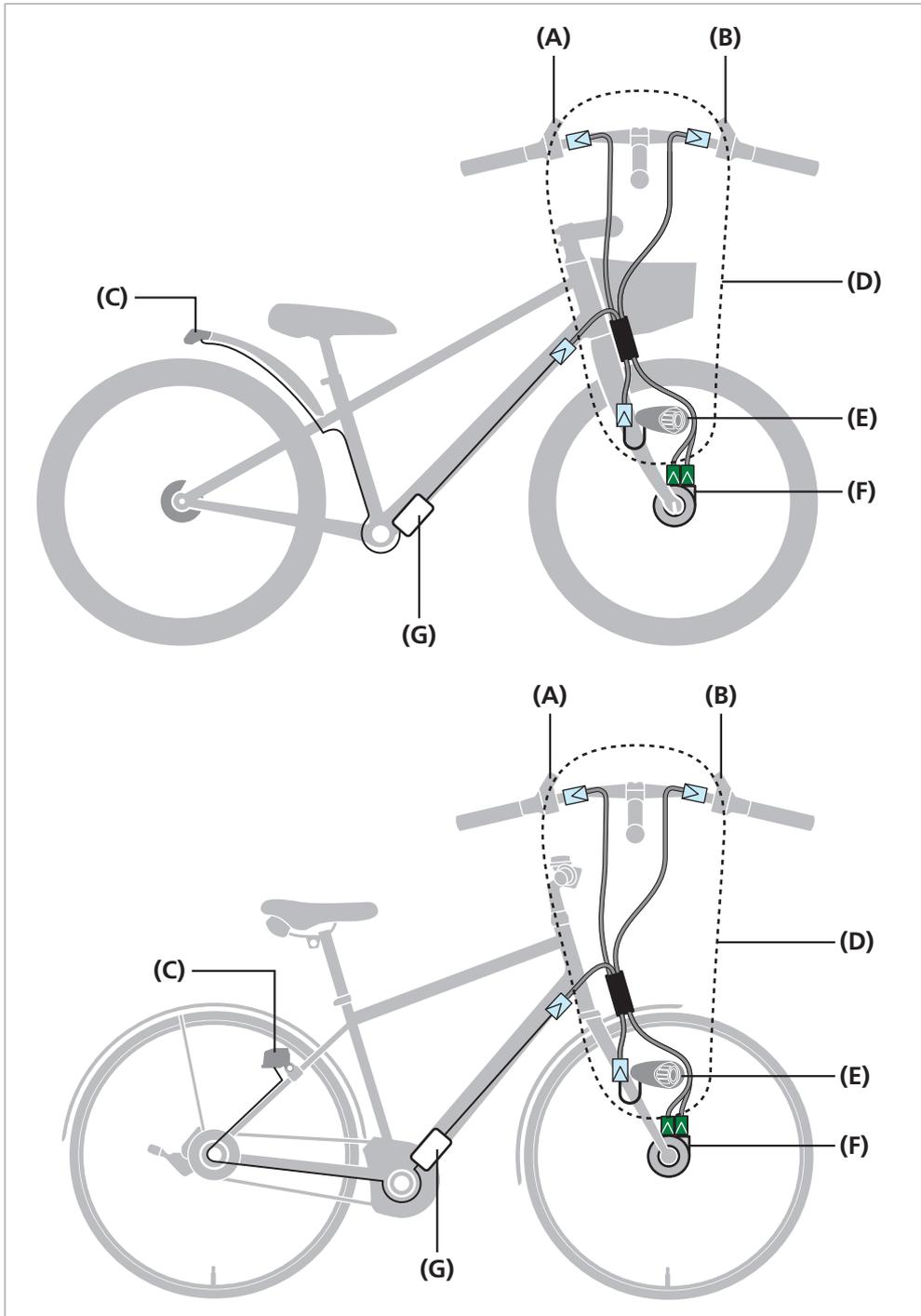
■ Shape of the electric wire connector and how to connect/disconnect it

	EW-NX60 (conventional type)	EW-NX30 (new type)
How to secure		
How to remove		
Pull out the electric wire slowly while pushing the center of the connector.		

(z) Push

■ Wiring diagram

4-branch type



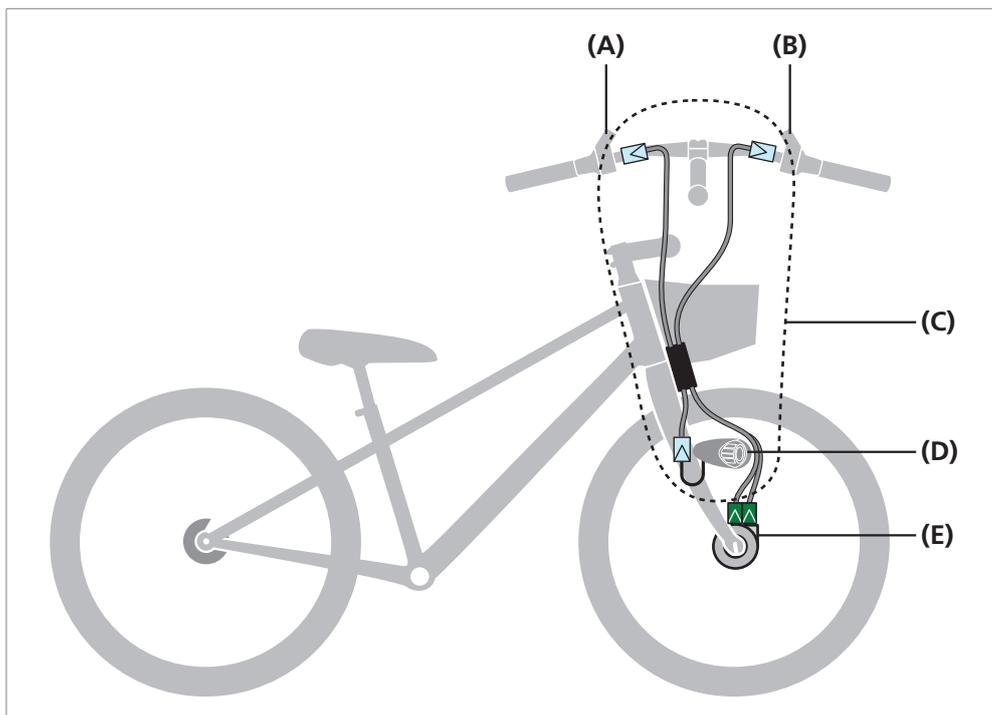
-  J2 terminal
-  Connector
-  Distributor

- (A)** SL/SM-RS34 (L)
- (B)** SL/SM-RS34 (R)
- (C)** LP-RTX2
- (D)** EW-NX30-4B
- (E)** Front light
- (F)** Hub dynamo
- (G)** Cord adjuster

NOTE

Secure the electric wire on the cable using the EZ cable clamp.
For LP-RTX2 and single specification, secure with a zip tie.

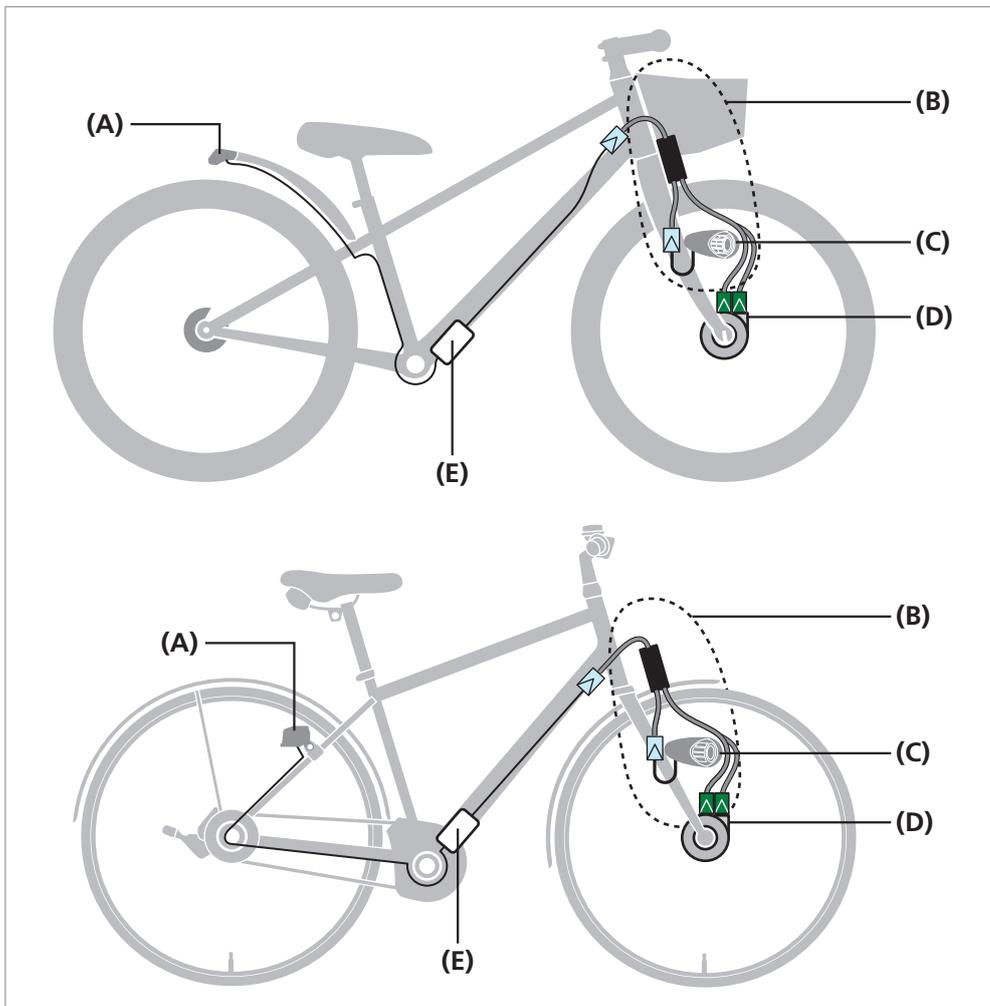
3-branch type



-  J2 terminal
-  Connector
-  Distributor

- (A)** SL/SM-RS34 (L)
- (B)** SL/SM-RS34 (R)
- (C)** EW-NX30-3B
- (D)** Front light
- (E)** Hub dynamo

2-branch type



-  J2 terminal
-  Connector
-  Distributor

- (A)** LP-RTX2
- (B)** EW-NX30-2B
- (C)** Front light
- (D)** Hub dynamo
- (E)** Cord adjuster

NOTE

Secure the electric wire on the cable using the EZ cable clamp.
 For LP-RTX2 and single specification, secure with a zip tie.

INSTALLATION

►► Installation to the handlebar (SM-RS34)

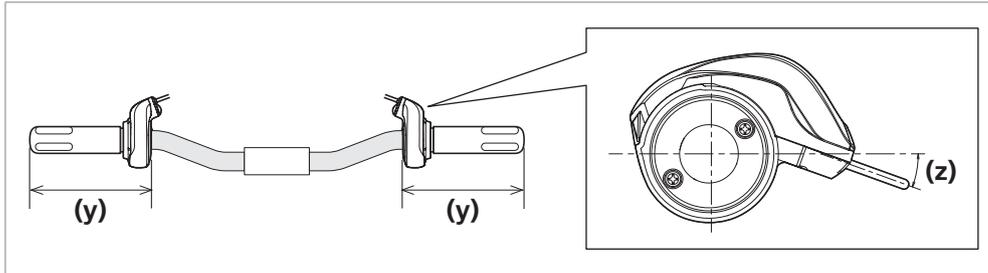
■ Installation to the handlebar (SM-RS34)

For information on how to install SL-RS34, refer to the dealer's manual for REVOSHIFT.

NOTE

To ensure that the light can illuminate ahead of the bicycle, use handles that are at an angle of 60° or less in relation to the direction of travel. Additionally, use handlebars with a straight section of 158mm or more in length.

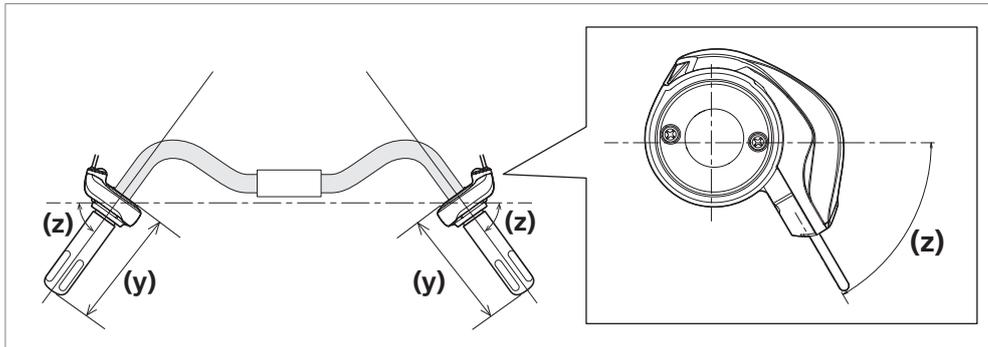
Straight handle type



(y) 158mm

(z) 20°

Comfort bike handle type



(y) 158mm

(z) 60°

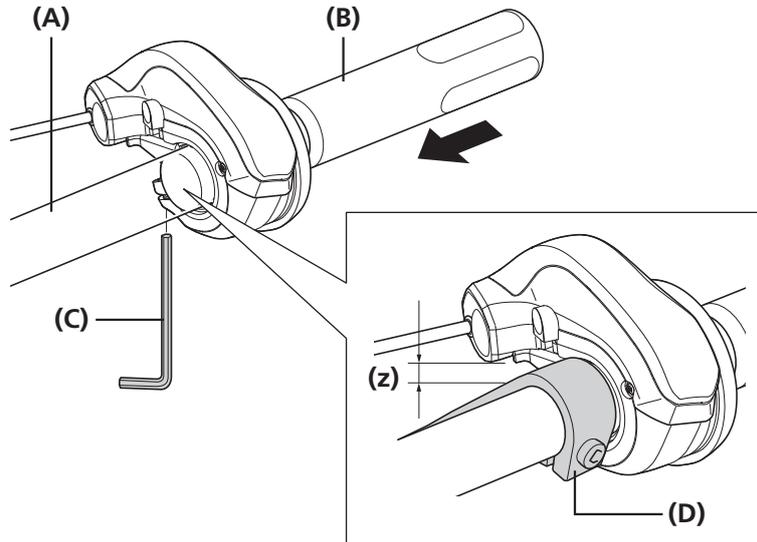
INSTALLATION

▶ Installation to the handlebar (SM-RS34)

Precautions when installing SM-RS34

Install in a position where it will not interfere with brake operation. Do not use a basket stay if it interferes with brake operation.

Allow a clearance of approximately 5mm from the brake bracket.



(z) 5mm

- (A) Handlebar
- (B) Grip
- (C) 3mm hexagon wrench
- (D) Brake bracket

Tightening torque



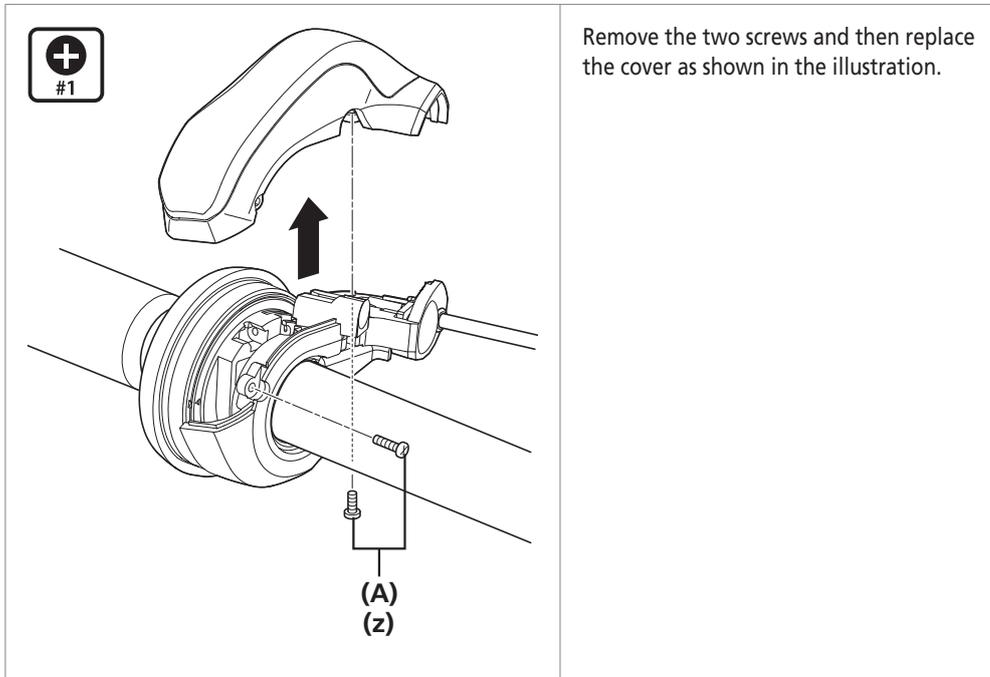
2 N·m

MAINTENANCE

MAINTENANCE

■ REVOSHIFT (with LED)

Replacing the cover



(z) Screwdriver[#1]

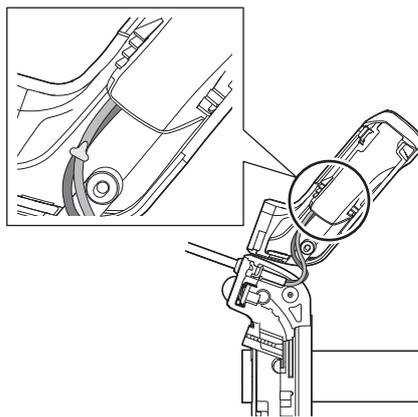
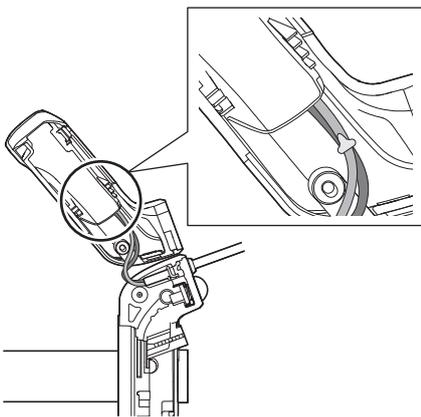
(A) Screw

Before replacing the cover, check that the cord is routed as shown in the illustration.

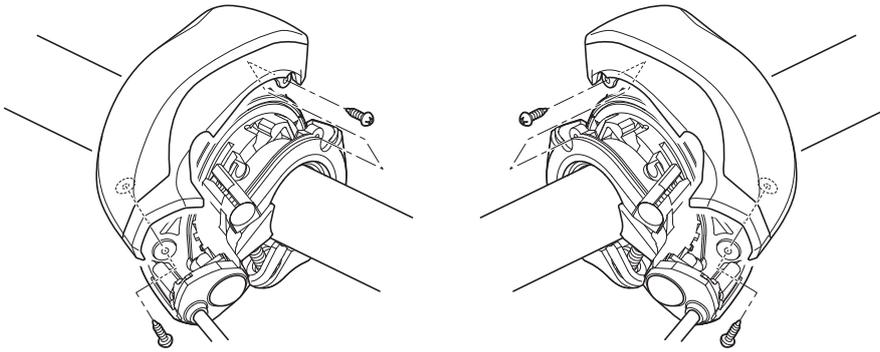
Front

Rear

1



Insert the cord into the groove of the reflector and secure it with the fixing screws.



2

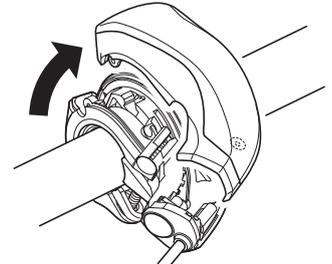
Tightening torque



0.1 - 0.2 N·m

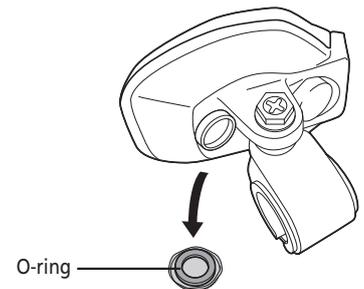
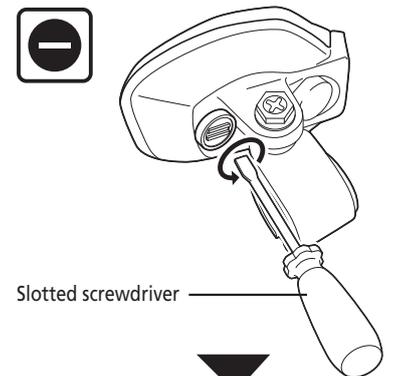
NOTE

The light is not completely waterproof. When the cover becomes foggy, open the lid to dry it.



For a tail light

Rotate the cover one turn counterclockwise with a slotted screwdriver to remove it and then dry it.



SHIMANO

SHIMANO AMERICAN CORPORATION

One Holland, Irvine, California 92618, U.S.A. Phone: +1-949-951-5003

SHIMANO EUROPE B.V.

Industrieweg 24, 8071 CT Nunspeet, The Netherlands Phone: +31-341-272222

SHIMANO INC.

3-77 Oimatsu-cho, Sakai-ku, Sakai-shi, Osaka 590-8577, Japan

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

© Sep. 2016 by Shimano Inc. HTR