

Dealer's Manual

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

Front Chainwheel

DEORE XT
FC-M8050

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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.
- The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by SHIMANO INC. is under license. Other trademarks and trade names are those of their respective owners.

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

DANGER

Be sure to also inform users of the following:

■ Handling the battery

- Do not deform, modify, disassemble or apply solder directly to the battery. Doing so may cause leakage, overheating, bursting, or ignition of the battery.
- Do not leave the battery near sources of heat such as heaters. Do not heat the battery or throw it into a fire. Doing so may cause bursting or ignition of the battery.
- Do not subject the battery to strong shocks or throw it. If this is not observed, overheating, bursting, or fire may occur.
- Do not place the battery into fresh water or sea water, and do not allow the battery terminals to get wet. Doing so may cause overheating, bursting, or ignition of the battery.
- Use the Shimano specified charger and observe the specified charging conditions when charging the specified battery. Not doing so may cause overheating, bursting, or ignition of the battery.

WARNING

- Be sure to follow the instructions provided in the manuals when installing the product.
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.
- For information on products not explained in this manual, refer to the manuals provided with each product.
- 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:

- Be careful not to let yourself be distracted by the cycle computer display while riding the bicycle. Otherwise, you may fall off the bicycle.
- Before riding, check that the wheels are secured. Otherwise, you may fall off the bicycle and be seriously injured.
- Be sufficiently familiar with how to start the power assisted bicycle before riding on busy streets. Otherwise, you may start the bicycle abruptly and have an accident.
- Make sure that the light is on during night riding.
- Do not disassemble the product. Disassembling it may cause injury to persons.
- When charging the battery while it is installed on the bicycle, do not move the bicycle. The battery charger's power plug may not be completely inserted into the outlet, which may lead to fire.
- Check that there are no cracks in the crank arms before riding the bicycle. If there are any cracks, the crank arm may break and you may fall off the bicycle.
- 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.
- Be careful not to let the hemming of your clothes get caught in the chain while riding. Otherwise you may fall off the bicycle.

■ Lithium Ion Battery

- If any liquid leaking from the battery gets into your eyes, immediately wash the affected area thoroughly with clean water such as tap water without rubbing your eyes, and seek medical advice immediately. If this is not done, the battery liquid may damage your eyes.
- Do not recharge the battery in very humid places or the outdoors. If this is not observed, electric shocks may result.
- Do not insert or remove the plug while it is wet. If this is not observed, electric shocks may result. If there is water leaking out of the plug, dry it thoroughly before inserting it.
- If the battery does not become fully charged after 6 hours of charging, immediately unplug the battery from the outlet and contact the place of purchase. Not doing so may cause overheating, bursting, or ignition of the battery.
- Do not use the battery if it has any noticeable scratches or other external damage. Doing so may cause bursting, overheating or problems with operation.
- The operating temperature ranges for the battery are given below. Do not use the battery in temperatures outside these ranges. If the battery is used or stored in temperatures outside these ranges, fire, injury or problems with operation may occur.
 1. During discharge: -10°C - 50°C
 2. During charging: 0°C - 40°C

■ Items related to installation to and maintenance of the bicycle

- Be sure to remove the battery and charger before wiring or attaching parts to the bicycle. Otherwise, an electric shock may result.
- Be sure to follow the instructions provided in the manuals when installing the product. It is recommended that you use only genuine Shimano parts. If bolts and nuts become loose or the product is damaged, the bicycle may suddenly fall over, resulting in a serious injury.
- Maintenance interval depends on the usage and riding circumstances. Clean regularly the chain with an appropriate chain cleaner. Never use alkali based or acid based solvents such as rust cleaners. If those solvent be used chain might break and cause serious injury.

■ HOLLOWTECH II type

- The two crank arm mounting bolts should be tightened in stages rather than fully tightened at once. Use a torque wrench to check that the final tightening torques are within the range of 12 - 14 N·m. Furthermore, after riding approximately 100 km (60 miles), use a torque wrench to re-check the tightening torques. It is also important to periodically check the tightening torques. If the tightening torques are too weak or if the mounting bolts are not tightened alternately in stages, the left crank arm may come off and the bicycle may fall over, and serious injury may occur as a result.



Be sure to also inform users of the following:

- Observe the instructions in the user's manual for the bicycle, in order to ride safely.
- Periodically check the battery charger and adapter, particularly the cord, plug, and case, for any damage. If the charger or adapter is broken, do not use it until it has been repaired.
- Use the product under the direction of a safety supervisor or the directions for use. Do not allow physically, sensory, or mentally impaired persons, inexperienced persons, or persons with no required knowledge including children to use this instrument.
- Do not allow children to play near the product.
- If any malfunction or trouble occurs, consult the dealer nearest you.
- Never modify the system. This may cause a malfunction in the system.
- Be careful to keep body parts away from the sharp teeth of chainrings.

■ Lithium Ion Battery

- Do not leave the battery in a place exposed to direct sunlight, inside a vehicle on a hot day, or other hot places. This may result in battery leakage.
- If any leaked fluid gets on your skin or clothes, wash it off immediately with clean water. Otherwise, the leaked fluid may damage your skin.
- Store the battery in a safe place out of the reach of infants and pets.

NOTE

Be sure to also inform users of the following:

- Be sure to attach dummy plugs to any unused ports.
- For installation and adjustment of the product, consult a dealer.
- The units are designed to be fully waterproof to withstand wet weather riding conditions. However, do not deliberately place them into water.
- Do not clean the bicycle with a high-pressure washer. If water gets into any of the components, operating problems or rusting may result.
- Handle the components carefully, and avoid subjecting them to any strong shocks.
- Do not place the bicycle upside down. Doing so may damage the cycle computer or shift switch.
- Although the bicycle still functions as a normal bicycle even when the battery is removed, the light does not turn on if it is connected to the electric power system. Be aware that using the bicycle under these conditions will be considered non-observance of the road traffic laws in Germany.
- When carrying the bicycle in a car, remove the battery from the bicycle and place it on a stable surface in the car.
- Before connecting the battery, make sure that there is no buildup of water or dirt in the connector where the battery will be connected.
- When charging the battery while it is mounted on the bicycle, be careful of the following:
 - When charging, make sure there is no water on the charging port or the charger plug.
 - Check that the battery mount is locked before charging.
 - Do not remove the battery from the battery mount while charging.
 - Do not ride the bicycle with the battery charger mounted on.
 - Close the charging port cap when not charging.
 - Stabilize the bicycle to ensure that it does not collapse during charging.
- The use of a genuine Shimano battery is recommended. If using a battery from another manufacturer, make sure to carefully read the instruction manual for the battery before use.
- Some of the important information in this dealer's manual can also be found on the device labels.
- The number found on the battery key is necessary when purchasing spare keys. Store it carefully.
- Use a damp cloth, with the water well wrung out, when cleaning the battery and plastic cover.
- If you have any questions about the use and maintenance of the product, consult the dealer where you made the purchase.
- Contact the place of purchase for updates of the component software. The most up-to-date information is available on the Shimano website. For details, refer to the "CONNECTION AND COMMUNICATION WITH DEVICES" section.
- Before riding the bicycle, check that there is no play or looseness between connecting parts. Also, be sure to retighten the crank and pedals at periodic intervals.
- Be sure to keep turning the crank arm during the lever operation.
- If pedaling performance does not feel normal, check the bicycle once more.
- Do not wash the bottom bracket with high-pressure jets of water. Water may enter the bearing section and cause noise or adhesion.
- 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.
- The cuffs of your clothing may get dirty from the chain while riding.
- 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.

■ Connection and communication with PC

A PC linkage device can be used to connect a PC to the bicycle (system or components), and E-TUBE PROJECT can be used to carry out tasks such as customizing single components or the whole system and updating firmware.

- PC linkage device: SM-PCE1
- E-TUBE PROJECT: PC application
- Firmware: software inside each component

■ **Connection and communication with smartphone or tablet**

It is possible to customize single components or the system, and update firmware, using E-TUBE PROJECT for smartphones/tablets after connecting the bicycle (system or components) to a smartphone or tablet via Bluetooth LE.

- E-TUBE PROJECT: app for smartphones/tablets
- Firmware: software inside each component

■ **Lithium Ion Battery**

	<p>Disposal information for countries outside the European Union This symbol is only valid within the European Union. Follow local regulations when disposing of used batteries. If you are not sure, consult the place of purchase or a bicycle dealer.</p>
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■ **Items related to installation to and maintenance of the bicycle**

- Do not use thinner or other solvents to clean any of the components. Such substances may damage the surfaces.
- 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.
- When installing the pedals, apply a small amount of grease to the threads to prevent the pedals from sticking. Use a torque wrench to securely tighten the pedals. Tightening torque: 35 - 55 N·m. The right-hand crank arm has a right-hand thread, and the left-hand crank arm has a left-hand thread.
- If the chain keeps coming off the gears during use, replace the gears and the chain.
- Be sure to use the specified gear tooth combination. If an unspecified gear is used, the dimension between the gears changes, and the chain may fall in between the gears.

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 for installation, adjustment, and maintenance purposes.

Component	Where to use	Tool	
Drive unit	Cover fixing bolt (M3)		Screwdriver [#2]
Crank arm	Cap	 	TL-FC16/TL-FC18
	Stopper plate		5 mm hexagon wrench
Chain device	Guide fixing bolt (M5)		4 mm hexagon wrench
	Back plate fixing bolt (M6)		3 mm hexagon wrench
Front chainring	Lock ring	 	TL-FC39+TL-FC36

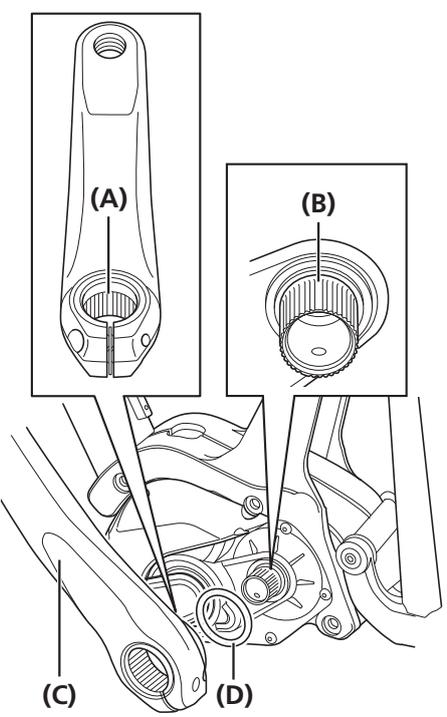
INSTALLATION

INSTALLATION

■ Installing the crank and front chainring

Perform the procedure below for all models, regardless of whether gear shifting is electrical or mechanical.

1

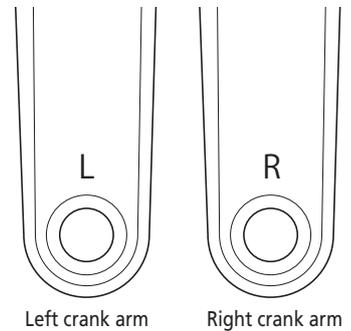


Align the wide part of the left crank arm with the wide part of the front chainring through axle and then attach.

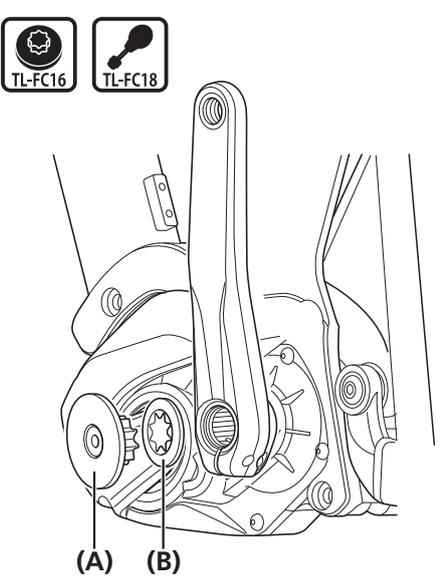
- (A)** Wide groove area (left crank arm)
- (B)** Wide part (front chainring through axle)
- (C)** Left crank arm
- (D)** Axle spacer

NOTE

Left or right is indicated on each crank arm. Check the L and R markings when installing.



2



Use the Shimano original tool to tighten the cap.

- (A)** TL-FC16/TL-FC18
- (B)** Cap

Tightening torque	
 TL-FC16	0.7 - 1.5 N·m
 TL-FC18	

▶▶ Installing the crank and front chainring

3

5 mm

(C)

(z)

(A)

(B)

Push in the stopper plate and check that the plate pin is securely in place, and then tighten the bolt of the left crank arm.

Tighten both bolts equally to the specified tightening torque (12 - 14 N·m).

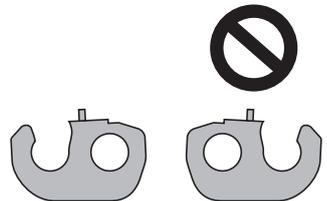
(z) The illustration is of the left crank arm (cross-section)

- (A) Plate pin
- (B) Stopper plate
- (C) Left crank arm

Tightening torque	
5 mm	12 - 14 N·m

NOTE

- The two bolts should be tightened at the same time rather than each bolt being fully tightened separately.
- Set the stopper plate in the correct direction as shown in illustration.



4

#2

(A)

Attach the drive unit cover.

Tighten the cover fixing bolts (M3) in the three locations.

- (A) Cover fixing bolt (M3)

Tightening torque	
#2	0.6 N·m

5

3 mm

(A)

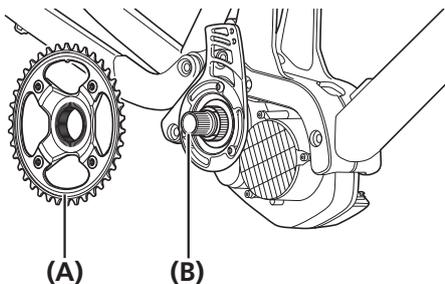
(B)

If using a chain device, temporarily tighten the back plate to the mounting member of the front chainring.

- (A) Back plate fixing bolt (M6)
- (B) Back plate

▶▶ Installing the crank and front chainring

6



Align the cutout in the front chainring with the wide area of the front chainring mounting member when attaching the front chainring.

- (A) Front chainring (SM-CRE80-B)
- (B) Chainring mounting member

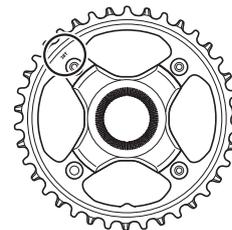
NOTE

- Use the front chainring and chain device combinations specified in the table.

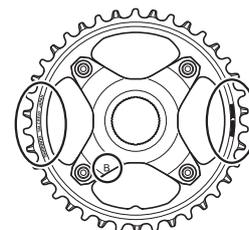
Front chainring	Chain device
SM-CRE80 (34T/38T CL: 50 mm)	Frame mount type
SM-CRE80 (44T CL: 50 mm Double chain guard)	-
SM-CRE80-B (34T/38T CL: 53 mm)	Drive unit mount type

- Note the difference between the front and back of the chainring. The front has a gear size (tooth number) marking.

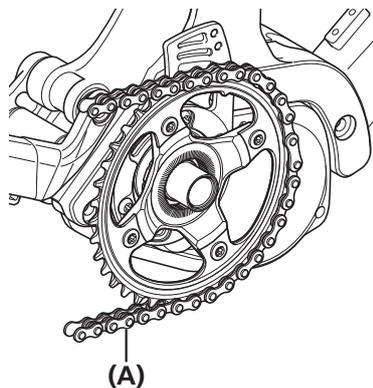
Front



Back



7

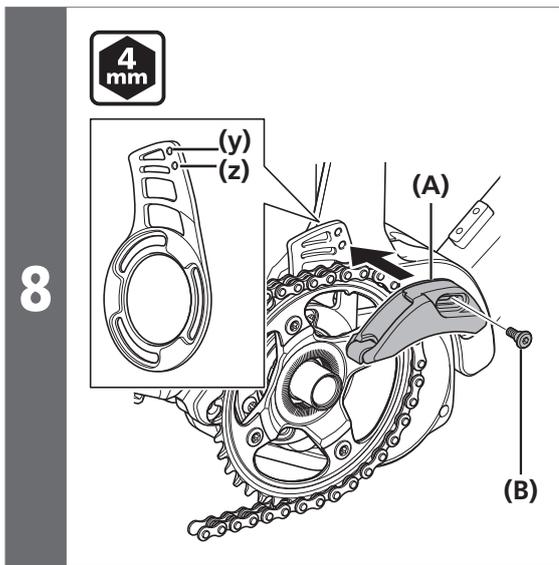


Mount the chain on the chainring.

- (A) Chain

NOTE

When mounting the chain, make sure to match chainring tooth thickness (thick/thin) and chain inner width (wide/narrow).

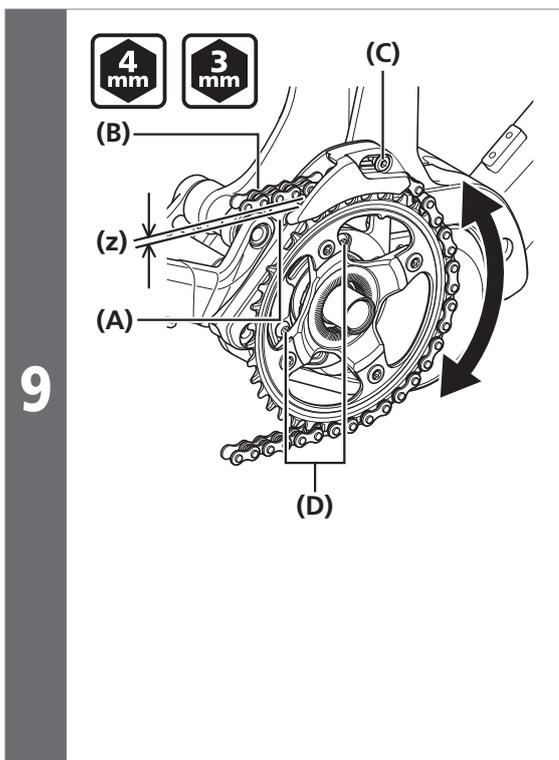


Determine the position of the guide according to the number of teeth on the crank.

Install the guide by temporarily tightening the guide fixing bolt (M5)

- (y) 38T
- (z) 34T

- (A) Guide
- (B) Guide fixing bolt (M5)



If using a chain device, after attaching the chain, rotate the back plate so that the clearance between the chain and the rubber band is 0-1 mm.

Adjustment should be performed under the following conditions.

- Chain is engaging the smallest sprocket
- Rear suspension is fully extended

After adjustment, fully tighten the back plate and guide.

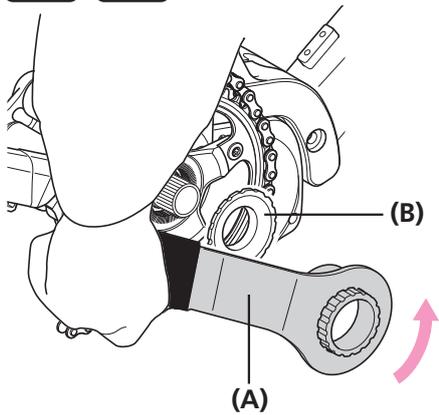
- (z) 0 - 1 mm

- (A) Rubber band
- (B) Chain
- (C) Guide fixing bolt (M5)
(4 mm hexagon wrench)
- (D) Back plate fixing bolt (M6)
(3 mm hexagon wrench)

Tightening torque	
	4 N·m
	5 - 7 N·m

NOTE

If the chain and chain device interfere with each other when SM-CDE80 is used on a bicycle with Rear suspension at sag position, please adjust angle the chain device not to touch chain in the position of Low gear.



Tighten the lock ring by hand and attach the Shimano original tool.

While holding the left crank, tighten the lock ring in the direction shown in the illustration.

(A) TL-FC39/TL-FC36

(B) Lock ring

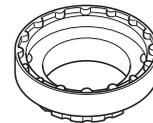
Tightening torque



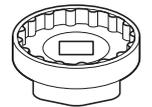
35 - 45 N·m

NOTE

- If using a torque wrench, use TL-FC39 in combination with TL-FC33.



TL-FC39



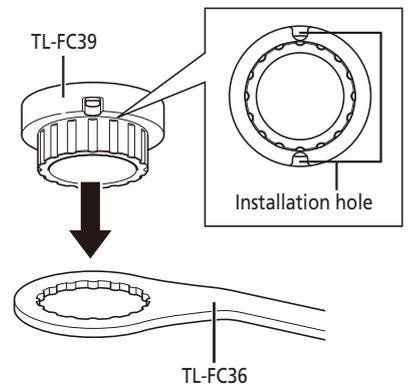
TL-FC33

- An impact wrench cannot be used.

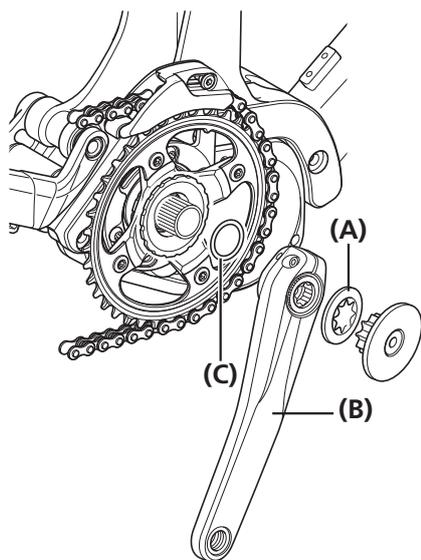


TECH TIPS

- The lock ring has a left hand thread.
- Combine the Shimano original tools as in the illustration. Set TL-FC39 to TL-FC36 using the 2 installation holes on TL-FC39.



11



Install the right crank arm.

Use the Shimano original tool to tighten the cap.

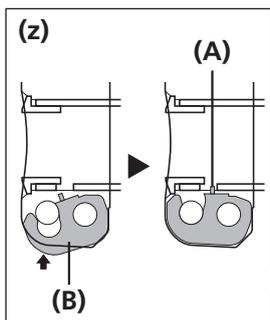
- (A) Cap
- (B) Right crank arm
- (C) Axle spacer

Tightening torque



0.7 - 1.5 N·m

12



Push in the stopper plate and check that the plate pin is securely in place, and then tighten the bolt of the right crank arm.

Tighten both bolts equally to the specified tightening torque (12 - 14 N·m).

- (z) The illustration is of the right crank arm (cross-section)

- (A) Plate pin
- (B) Stopper plate
- (C) Right crank arm

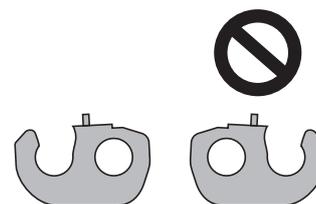
Tightening torque



12 - 14 N·m

NOTE

- The two bolts should be tightened at the same time rather than each bolt being fully tightened separately.
- Set the stopper plate in the correct direction as shown in illustration.



MAINTENANCE

MAINTENANCE

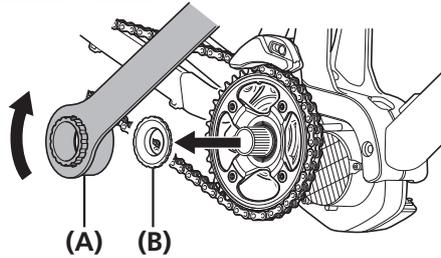
■ Replacing the front chainring

1

Perform procedures with the chain installed to the rear wheel.

Attach the left and right crank arms using TL-FC16.

2



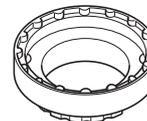
While holding the wheel, use the Shimano original tool to loosen the lock ring in the direction shown in the illustration.

(A) TL-FC39/TL-FC36

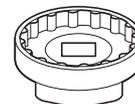
(B) Lock ring

NOTE

- If using a torque wrench, use TL-FC39 in combination with TL-FC33.



TL-FC39



TL-FC33

- An impact wrench cannot be used.

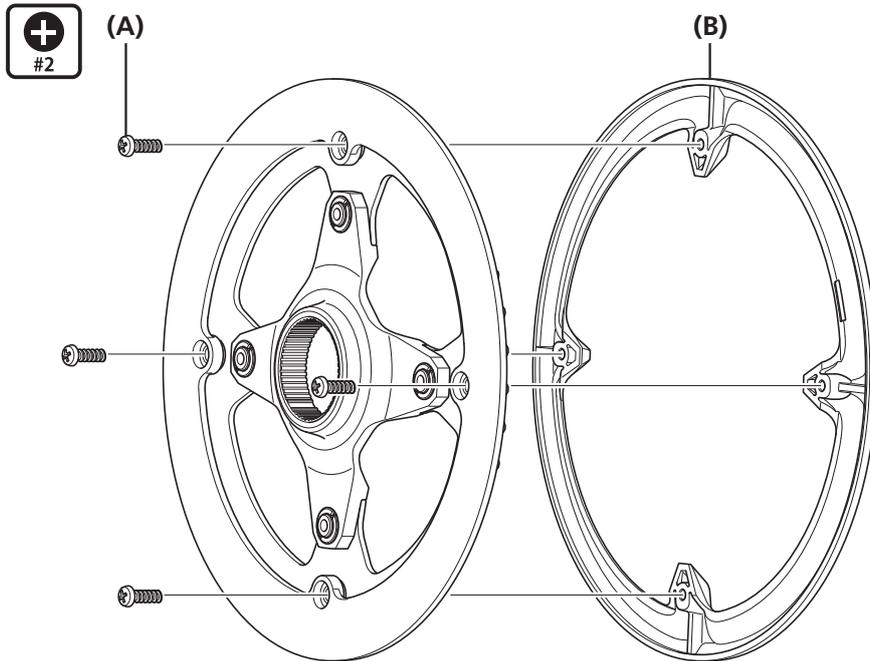
3

Remove and then replace the front chainring.

To install a front chainring, refer to "INSTALLING AND WIRING THE DRIVE UNIT" and "Installing the crank and front chainring".

Replacing the chain guard (SM-CRE80 44T Double chain guard)

Replace the chain guard as shown in the illustration.



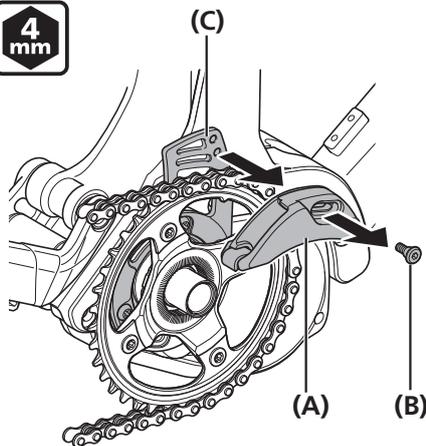
- (A) Chain guard fixing bolt
- (B) Chain guard

Tightening torque



0.7 N·m

■ Replacing the guide of the chain device



Loosen the guide fixing bolt (M5) to remove the guide from the back plate, and then replace it.

- (A) Guide
- (B) Guide fixing bolt (M5)
- (C) Back plate

NOTE

A chain device cannot be used with SM-CRE80 (44T CL: 50 mm Double chain guard).

SHIMANO

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

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