

Dealer's Manual

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

Hub set (Disc brake)

SLX

HB-M7000
HB-M7010
HB-M7010-B
FH-M7000
FH-M7010
FH-M7010-B

FH-MT400
FH-MT400-B
FH-MT500
FH-MT500-B
FH-MT510
FH-MT510-B

DEORE

HB-M618
HB-M618-B
HB-M6000
HB-M6010
HB-M6010-B
FH-M618
FH-M618-B
FH-M6000
FH-M6010
FH-M6010-B

E-THRU Axle 12 mm

SM-AX56
SM-AX56-B
SM-AX58
SM-AX58-B

HB-M4050
HB-MT400
HB-MT400-B
FH-M4050

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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 owner's 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 manuals and technical documents are accessible online at <https://si.shimano.com>.
- For consumers who do not have easy access to the internet, please contact a SHIMANO distributor or any of the SHIMANO offices to obtain a hardcopy of the User's Manual.
- 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**

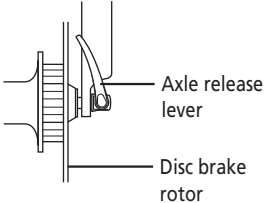
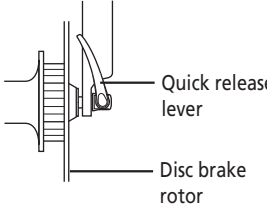
Failure to follow the instructions could cause personal injury or physical damage to equipment and surroundings.

TO ENSURE SAFETY

⚠ WARNING

- **Be sure to follow the instructions provided in the manuals when installing the product.**
Only use SHIMANO genuine parts. If a component or replacement part is incorrectly assembled or adjusted, it can lead to component failure and cause the rider to lose control and crash.
-  Wear approved eye protection while performing maintenance tasks such as replacing components.

Be sure to also inform users of the following:

- **Check that the wheels are fastened securely before riding the bicycle.**
If the wheels are loose in any way, they may come off the bicycle and cause serious injury.
 - Before riding the bicycle, you should carefully check your hubs to make sure that there are no cracks in the axles, and if you find any unusual conditions, **DO NOT** use the bicycle.
These hubs are not designed for downhill bicycle riding or freeriding. Depending on the riding conditions, the hub axle could develop cracks. This could result in the failure of the wheel axle, which can lead to an accident resulting in serious injury or even death.
 - Make sure that even if the axle release lever is tightened as much as possible by hand, the axle release lever does not interfere with the disc brake rotor.
If the axle release lever is on the same side as the disc brake rotor, there is a possibility they may interfere. If the lever interferes with the disc brake rotor, stop using the wheel and consult a dealer or an agency.
- 
- HB-M7010/M7010-B/M6010/M6010-B/M618/M618-B/MT400/MT400-B can only be used in combination with the special front fork and through axle.
If used in combination with any other front fork or through axle, it may cause the wheel to become detached from the bicycle while riding and result in serious bodily injury.
 - FH-M7010/M7010-B/M6010/M6010-B/M618/M618-B/MT400/MT400-B can only be used in combination with the special frame and through axle.
If used with any other type of frame, the wheel may come off while the bicycle is being ridden, and serious injury may occur as a result.
 - Make sure that even if the quick release lever is tightened as much as possible by hand, the quick release lever does not interfere with the disc brake rotor.
If the quick release lever is on the same side as the disc brake rotor, there is the danger that it may interfere with the disc brake rotor. If the lever interferes with the disc brake rotor, stop using the wheel and consult a dealer or an agency.
- 
- If it is difficult to install the wheel, install the quick release lever on the disc brake rotor side.
If doing this, make sure that the quick release lever does not interfere with the disc brake rotor and that burns do not occur.
 - Make sure to properly install the quick release hub onto the bicycle.
Otherwise the wheel may detach from the bicycle while riding, resulting in serious injury.
 - After reading the owner's manual for the quick release lever thoroughly, keep it in a safe place for later reference.

For Installation to the Bicycle, and Maintenance:

- When installing the front wheel to the front suspension fork, always be sure to follow the directions given in the manual for the front suspension fork.

The securing method and tightening torque for the front wheel both vary depending on the type of front suspension fork being used. If the instructions are not followed, the front wheel may fall out of the front fork and serious injury may occur. When the front wheel is tightened onto the front suspension fork in accordance with the tightening torque in the manual, the front wheel's rotation may become stiff; however, the instructions must always be followed.

- Use a SHIMANO hub axle.

If a different hub axle is used to secure the hub, it may not have sufficient strength to secure the freehub, or the axle may break because of insufficient strength, and this may cause the wheel to fall off, and serious injury may occur.

- Be sure to also carefully read the owner's manual for the disc brakes.

■ Quick release type

- Use a front fork which is equipped with a wheel retention mechanism.

**For Installation to the Bicycle, and Maintenance:**

- When using the SHIMANO original tool (TL-FC36) to remove and install the disc brake rotor lock ring, wear gloves and be careful not to touch the outer edges of the disc brake rotor with your hands. Failure to do so may result in cuts to your hands.

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

- This product is not warranted against damage resulting from improper use, such as jumping while riding or if the bicycle falls over, except if such malfunctions are caused by manufacturing methods.
- 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:









- If the wheel becomes stiff and difficult to turn, lubricate it with grease.
- Do not lubricate the internal parts of the hub. Otherwise, grease will flow out.
- When replacing the E-THRU Axle, make sure that the replacement E-THRU Axle is of the same model as the current E-THRU Axle attached to the frame.
A different model may not be mounted properly onto the frame due to differences in axle length, screw size, housing diameter, etc.
- Use the TL-HB16 when attaching the front hub to the wheel truing tool.
- SM-AX56/SM-AX56-B/SM-AX58/SM-AX58-B cannot be used because the model is not designed for downhill bicycle riding or freeriding.

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	
	10 mm hexagon wrench		17 mm hub spanner		TL-FC36
	TL-FH15		22 mm hub spanner		TL-LR15
	13 mm hub spanner		Adjustable wrench		

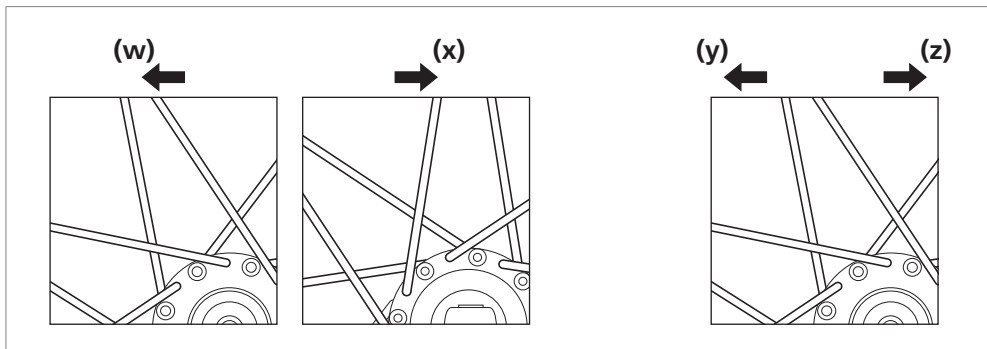
INSTALLATION

INSTALLATION

■ Spoke lacing

Check that the spokes have been laced as shown in the illustration.
A radial lacing cannot be used.

Rotating direction of wheel



(w) For front: Left (disc brake rotor) side

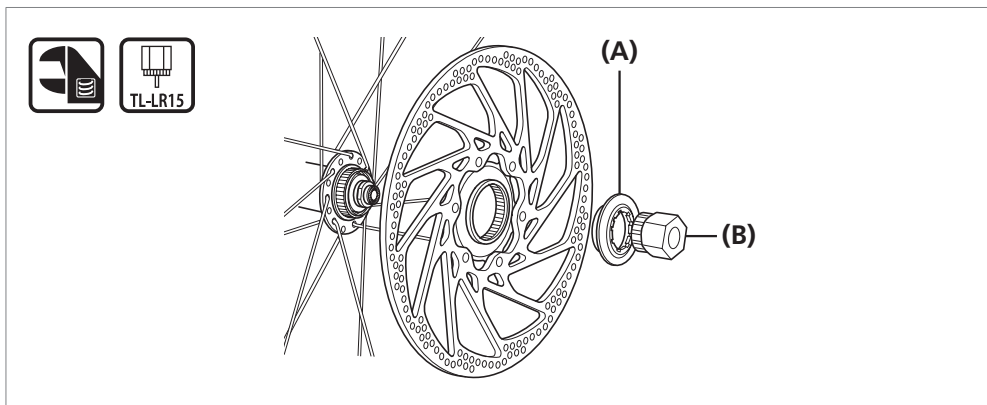
(x) For front: Right side

(y) For rear: Left (disc brake rotor) side

(z) For rear: Right (sprocket) side



■ Installation of the disc brake rotor

Quick release type



(A) Disc brake rotor fixing lock ring

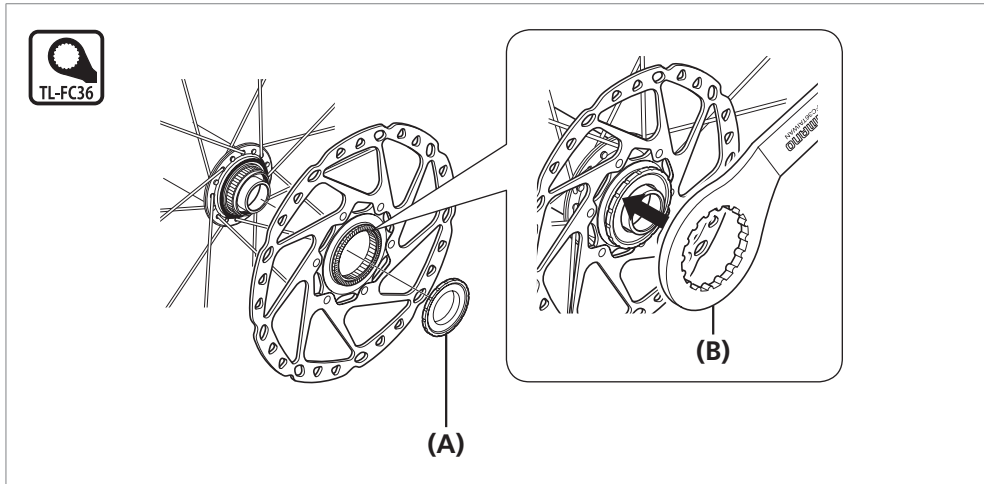
(B) TL-LR15

Tightening torque	
 	<p>40 N·m</p>

INSTALLATION

Installation of the disc brake rotor

E-THRU Axle



(A) Disc brake rotor fixing lock ring

(B) TL-FC36

Tightening torque



40 N·m

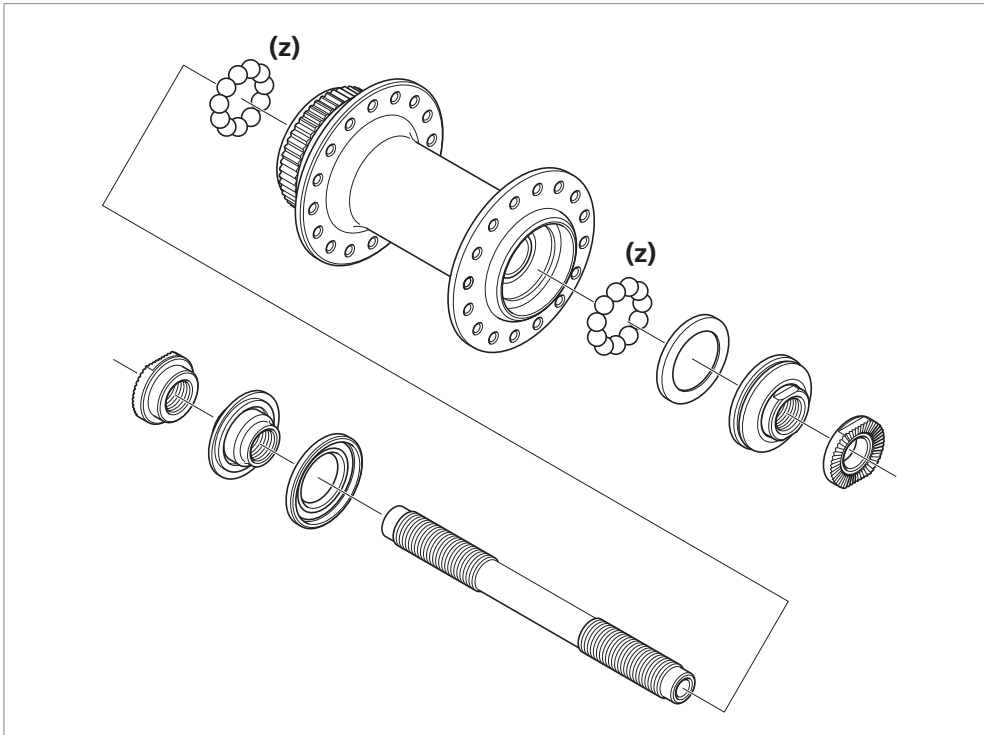
MAINTENANCE

MAINTENANCE

The hub can be disassembled as shown in the illustration. Apply grease to the various parts at periodic intervals.

■ Front hub

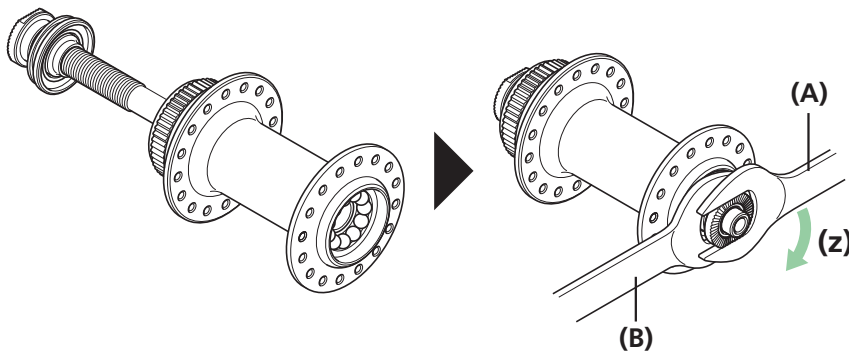
HB-M7000/M6000/M4050



(z) Apply grease: Premium grease (Y-04110000)

Assembly

Install the hub axle, and then use hub spanners as in the illustration to tighten the lock nut so as to double-lock the mechanism.



(z) Tighten

(A) 17 mm hub spanner

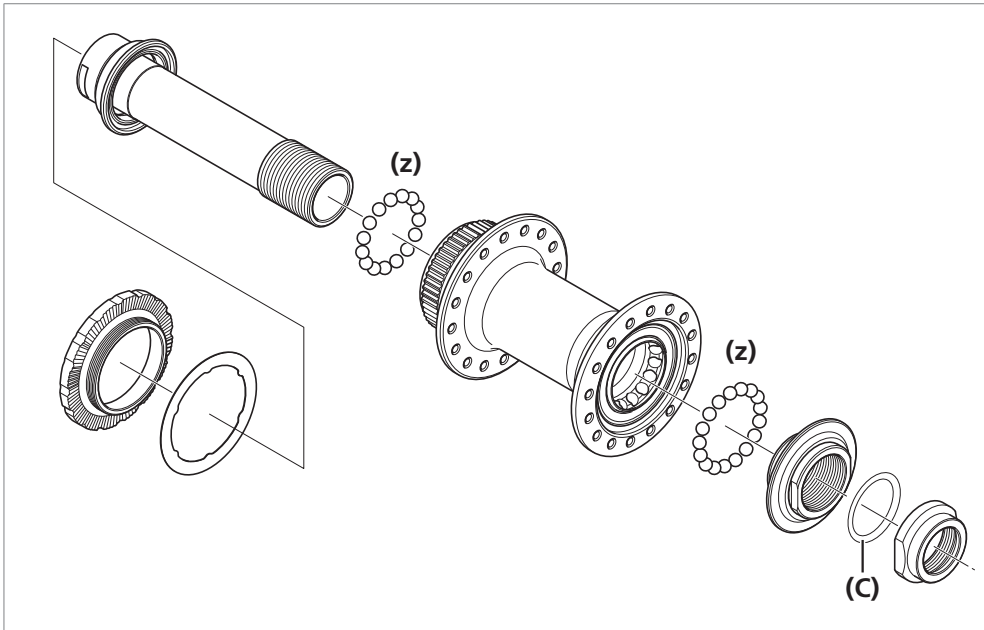
(B) 13 mm hub spanner

Tightening torque



10 - 15 N·m

HB-M7010/M7010-B/M6010/M6010-B/M618/M618-B/HB-MT400/HB-MT400-B

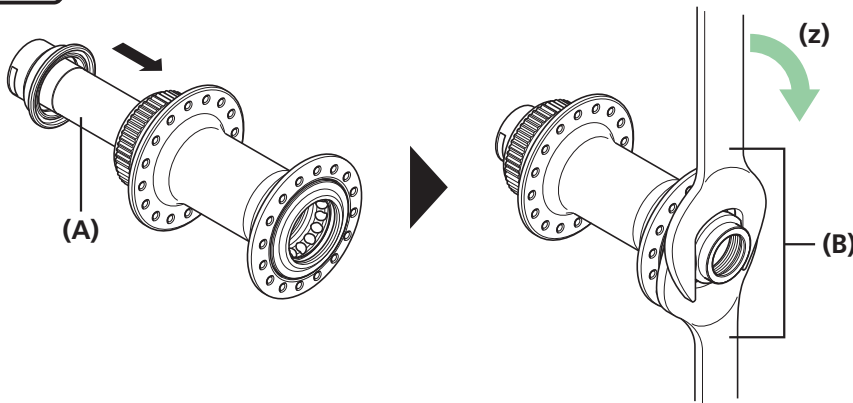


(z) Apply grease: Premium grease (Y-04110000)

(C) Adjusting Spacer (Depending on the hub, an adjusting spacer may not be used.)

Assembly

Install the hub axle, and then use hub spanners as in the illustration to tighten the lock nut so as to double-lock the mechanism.



(z) Tighten

(A) Hub axle

(B) 22 mm hub spanner

Tightening torque



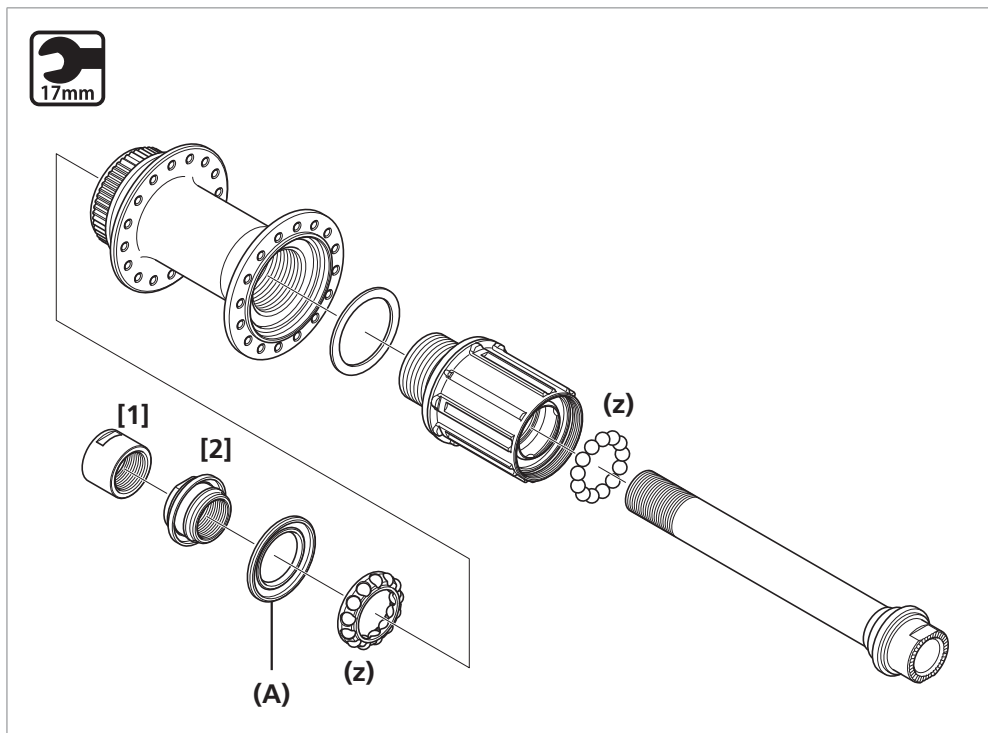
21 - 26 N·m

Freehub

NOTICE

- When removing and installing the seal, do so very carefully so that the seal does not become bent. When reinstalling the seal, make sure that it is facing the right way, and insert it as far as it will go.
- Do not disassemble the dust covers which are crimped onto the axle, the right nut and the cone.
- Do not attempt to disassemble the freewheel body, because it may result in a malfunction.

FH-M7010/M7010-B/M6010/M6010-B/M618/M618-B/FH-MT400/FH-MT400-B

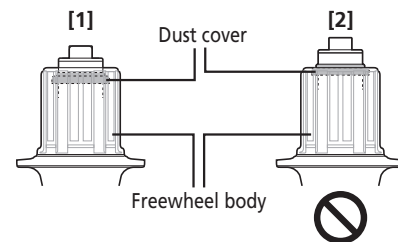


(z) Apply grease: Premium grease (Y-04110000)

(A) Seal (Lip is on the outside)

NOTICE

The correct position for the dust cover is where it is hidden in the freewheel body, as shown in illustration [1]. If the dust cover is in the position shown in illustration [2], repeat the assembly process from the beginning.

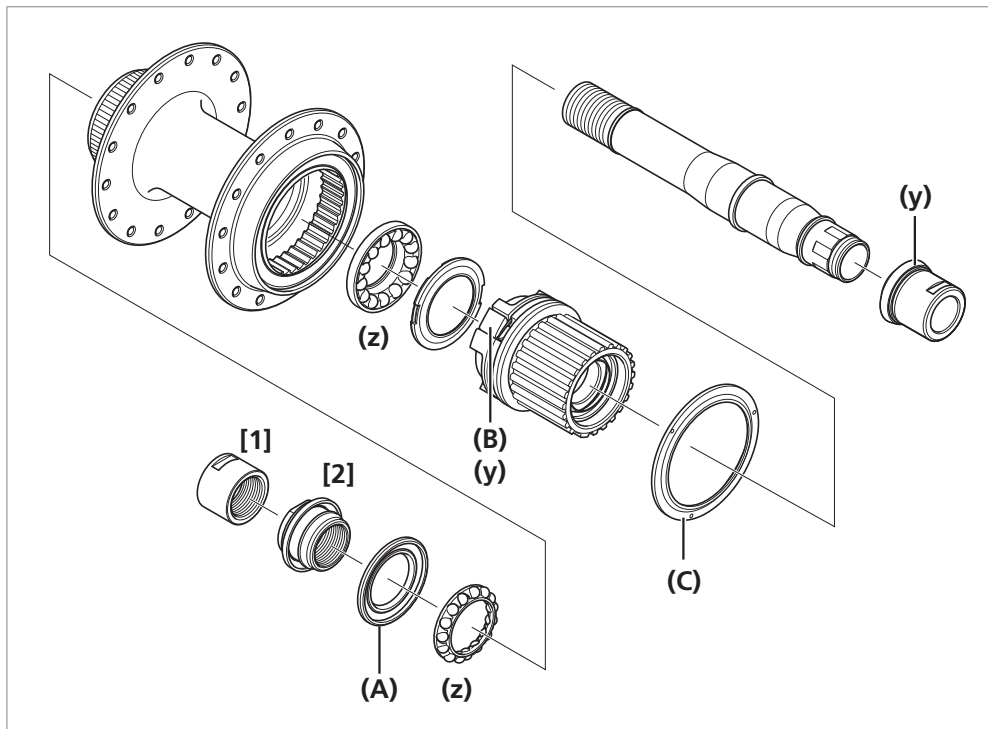


	Part name	Thread type	Tool	Tightening torque
[1]	Left hand lock nut (M15)	Clockwise thread	17 mm hub spanner	15 - 20 N·m
[2]	Left hand cone (M15)	Clockwise thread	17 mm hub spanner	-

Assembly

Perform the assembly in the reverse order from the freewheel body replacement procedure.

FH-MT500/FH-MT500-B/FH-MT510/FH-MT510-B



(y) Apply grease: Special freehub grease (Y-3B980000)

(z) Apply grease: Premium grease (Y-04110000)

(A) Seal (Lip is on the outside)

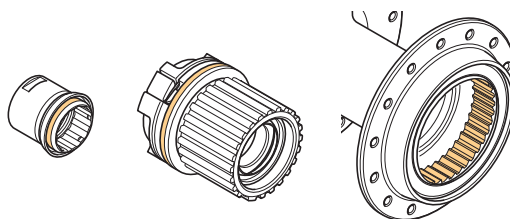
(B) Freewheel body

(C) Outer seal cap (convex section on inner diameter is outward)

	Part name	Thread type	Tool	Tightening torque
[1]	Left hand lock nut (M15)	Clockwise thread	17 mm hub spanner	15 - 20 N·m
[2]	Left hand cone (M15)	Clockwise thread	17 mm hub spanner	-

NOTICE

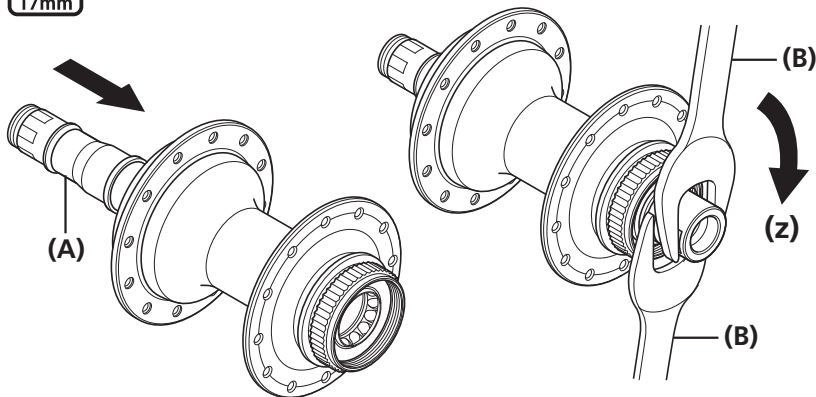
- Perform the assembly according to the assembly procedures when the freewheel body has been removed.
- Special grease is used for the freewheel body. Do not mix it with other types of grease, as this may cause problems with the operation of the freewheel clutch mechanism.
- Do not attempt to disassemble the freewheel body, because it may result in a malfunction.
- Apply special freehub grease to the areas indicated in the figure.



Assembly

Install the hub axle, and then use hub spanners as in the illustration to tighten the lock nut so as to double-lock the mechanism.

1



(z) Tighten

(A) Hub axle

(B) 17 mm hub spanner

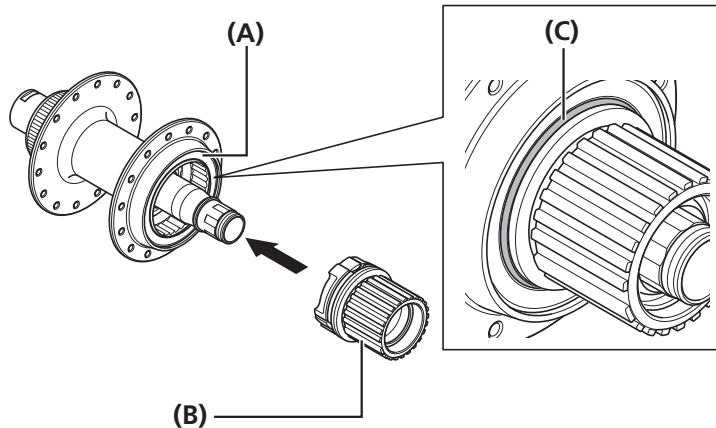
Tightening torque



15 - 20 N·m

Install the freewheel body. After installing the freewheel body, check that the lip of the seal ring is not facing the wrong way.

2



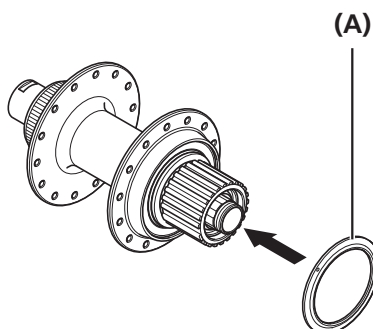
(A) Seal ring

(B) Freewheel body

(C) Lip

Insert the outer seal cap into the grooved part and install it.

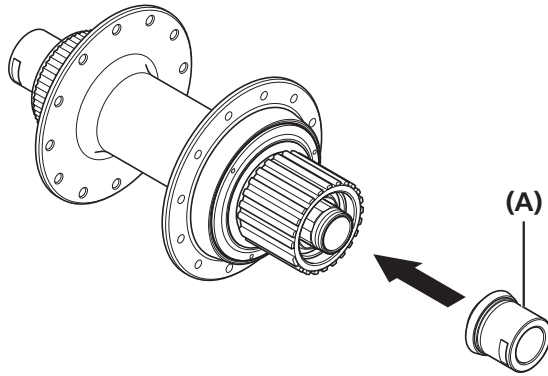
3



(A) Outer seal cap

4

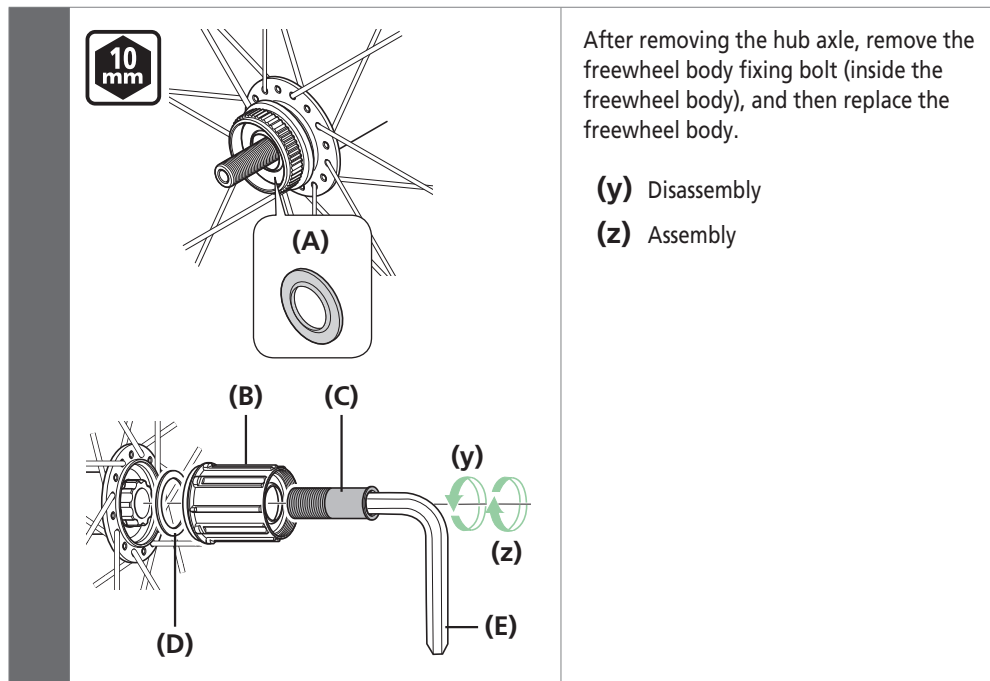
Install the right cap.
Be sure to push it until it connects with a click.



(A) Right cap

Replacement of the freewheel body (For QR type)

FH-M7000/M6000/M4050



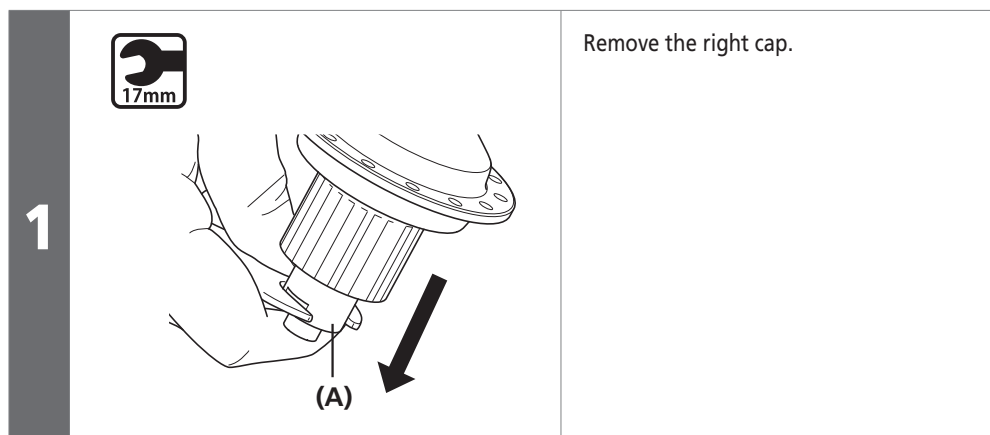
After removing the hub axle, remove the freewheel body fixing bolt (inside the freewheel body), and then replace the freewheel body.

- (y) Disassembly
- (z) Assembly

- (A) Seal (Lip is on the outside)
- (B) Freewheel body
- (C) Freewheel body fixing bolt
- (D) Freewheel body washer
- (E) 10 mm hexagon wrench (TL-WR37)

Tightening torque	
	35 - 50 N·m

FH-MT500

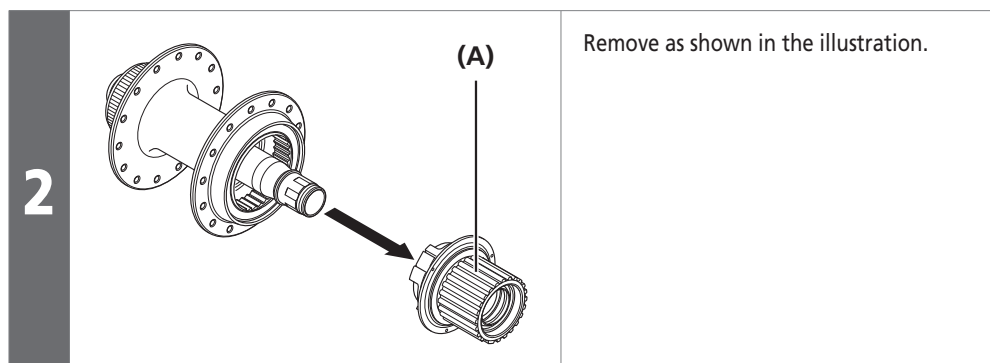


Remove the right cap.

- (A) Right cap

NOTICE

- Position the right cap so it is facing downward and support it with your thumb, etc. to prevent the cap from falling as it is removed.

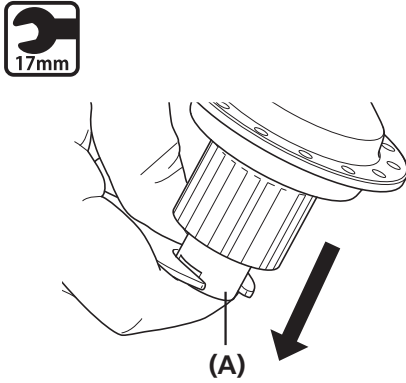


Remove as shown in the illustration.

- (A) Freewheel body

Replacement of the freewheel body (For E-THRU type)

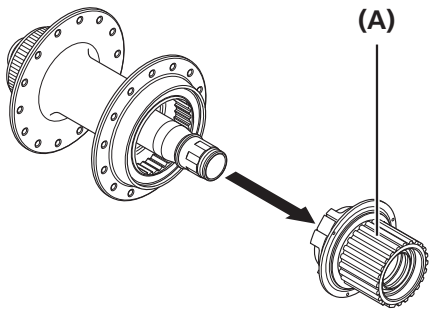
FH-MT510

1		<p>Remove the right cap.</p>
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(A) Right cap

NOTICE

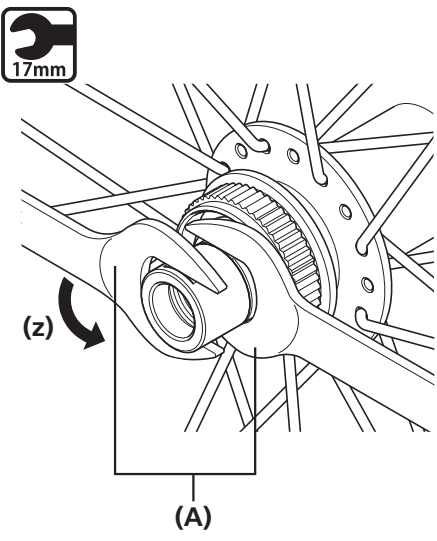
- Position the right cap so it is facing downward and support it with your thumb, etc. to prevent the cap from falling as it is removed.

2		<p>Remove as shown in the illustration.</p>
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(A) Freewheel body

Other than FH-MT510

1



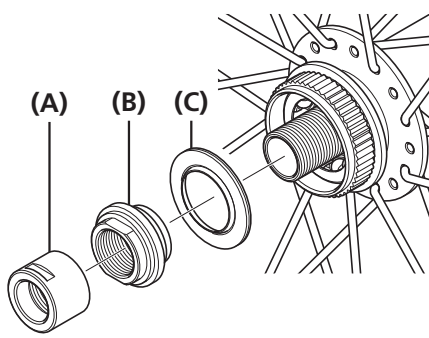
Use the spanner to loosen the lock nut on the double-lock section.

(z) Disassembly

(A) 17 mm hub spanner

Tightening torque	
	15 - 20 N·m

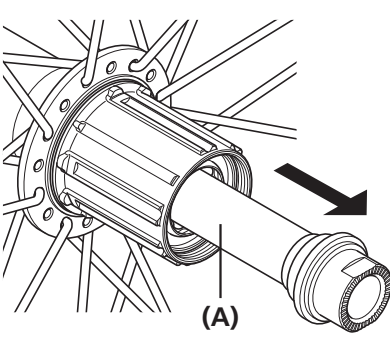
2



Remove as shown in the illustration.

(A) Lock nut
(B) Cone with dust cover
 (Cannot be disassembled)
(C) Seal ring

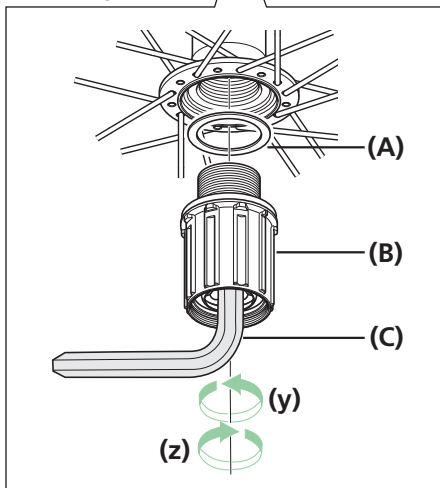
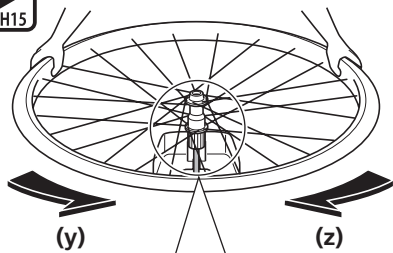
3



Pull out the hub axle from the freewheel body.

(A) Hub axle

4



After removing the hub, remove the freewheel body fixing bolt (inside the freewheel body), and then replace the freewheel body.

Insert TL-FH15 into the freewheel unit, secure the tool so that it does not rotate and then rotate the wheel.

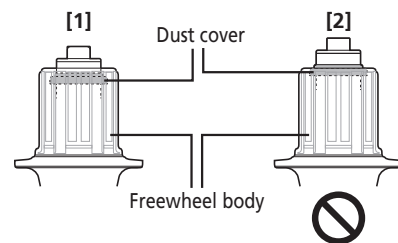
- (y) Disassembly
- (z) Assembly

- (A) Freewheel body washer
- (B) Freewheel body
- (C) TL-FH15

Tightening torque	
	150 N·m

NOTICE

- Do not attempt to disassemble the freewheel body, because it may result in a malfunction.
- The correct position for the dust cover is when it is hidden in the freewheel body, as shown in illustration [1]. If the dust cover is in the position shown in illustration [2], repeat the assembly process from the beginning.



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