FH-M805
FH-M800

Freehub

General Safety Information

⚠ WARNING

- **Off-road bicycle riding and extreme mountain bike riding, represented in part by North Shore style riding, “trials riding”, or urban stunt riding is an inherently dangerous activity. There is a risk of being involved in an accident that can result in a serious injury or even death. It is strongly recommended that riders wear protective head and body gear and perform thorough safety checks of their bicycles before riding. Please remember that you are riding at your own risk and that you have to consider your experience and your skills very carefully.**
- The FH-M805 / FH-M800 freehub are designed for off-road bicycle riding and extreme mountain bike riding, that are represented in part by North Shore style riding, “trials riding”, or urban stunt riding. However, depending on the riding condition, The hub axle could develop a crack, which may result in failure of the hub axle. This can lead to an accident that could result in serious injury or even death.
  Before riding, you should carefully check your hubs to make sure that there are no cracks in the axles , and if you find any sign of a crack or any other unusual condition, do NOT use the bicycle.
- A hub axle is an essential component for the firm and reliable attachment of a rear hub and a rear derailleur to the bicycle frame. Its material, strength, size and shape all are key to accomplishing this goal. That is why Shimano ships a hub axle with a hub.
  We strongly recommend that you use the hub axle that is shipped with a hub when attaching the hub to the bicycle frame. A wheel may come off and cause a serious injury to the rider if you use a different hub axle because (1) a different hub axle may not be long enough to be able to sufficiently tighten the rear hub, and/or (2) a different hub axle may break due to lack of strength.
  Shimano does not sell its hub axle separately except when a customer uses Shimano’s RD-M805 or RD-M800 rear derailleur with a non-Shimano rear hub. However, if a customer chooses to use a non-Shimano rear hub, the customer is doing so at his/her own risk and is responsible for making sure that the wheel is firmly fixed.
- Before riding, confirm that the hub axle has been tightened with torque of 35 - 45 N·m and the wheel has been secured to the frame. Serious injury can result from falling if the wheel comes off.
- Obtain and read the service instructions carefully prior to installing the parts. Loose, worn, or damaged parts may cause injury to the rider.
  We strongly recommend only using genuine Shimano replacement parts.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

- When installing the wheel and rear derailleur onto the frame, first apply grease to the hub axle by following directions in the Service Instructions.
- If the wheel becomes stiff and difficult to turn, you should lubricate it with grease.
- Do not apply any lubricant to the inside of the hub, otherwise the grease will come out.
- You should periodically wash the sprockets in a neutral detergent and then lubricate them again. In addition, cleaning the chain with neutral detergent and lubricating it can be a effective way of extending the useful life of the sprockets and the chain.
- If the chain keeps coming off the sprockets during use, replace the sprockets and the chain.
- This product is not warranted against damage resulting from use such as jumping while riding or if the bicycle falls over, except if such malfunctions result from non conforming materials or manufacturing methods.
- Parts are not guaranteed against natural wear or deterioration resulting from normal use.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

In order to realize the best performance, we recommend that the following combination be used.

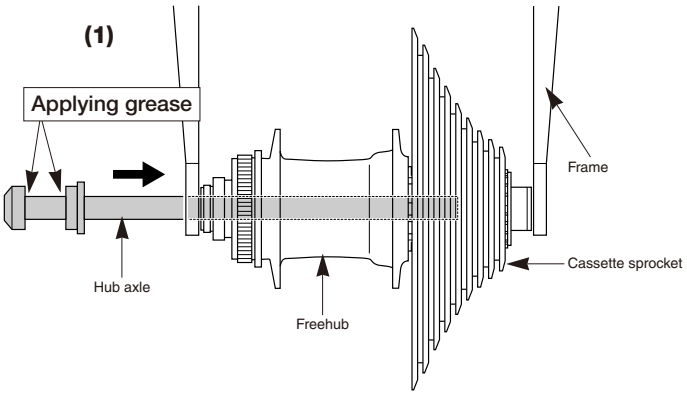
Series	SAINT	
DUAL CONTROL lever	ST-M800	
Outer casing	SIS-SP41	
Rear derailleur	RD-M805	RD-M800
Type	SGS / GS / SS	
Freehub	FH-M805	FH-M800
Front hub	HB-M800A	
Gears	9	
Cassette sprocket	CS-M760	
Chain	CN-HG93	
Bottom bracket guide	SM-SP17 / SM-BT17	

Specifications

Freehub

Model No.	FH-M805	FH-M800
Gears	9	9
No. of spoke holes	36 / 32	36 / 32
Overlock nut dimensions	150 mm	135 mm
Axle diameter	12 mm	10 mm
Applicable rear derailleur	RD-M805	RD-M800

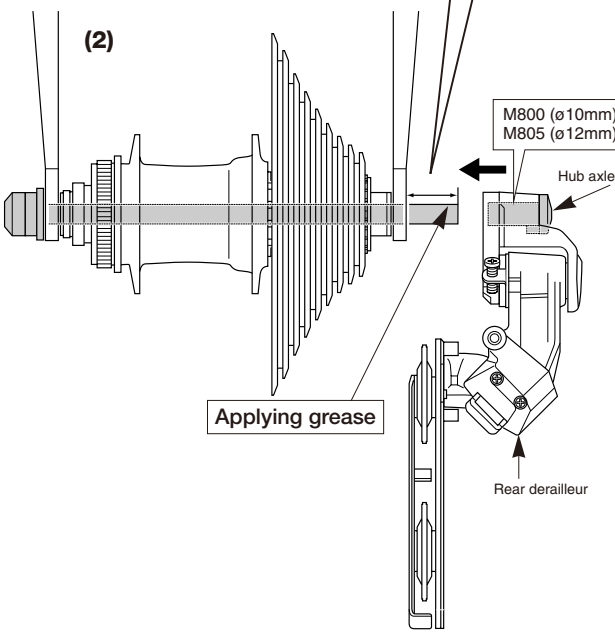
Installation to the frame

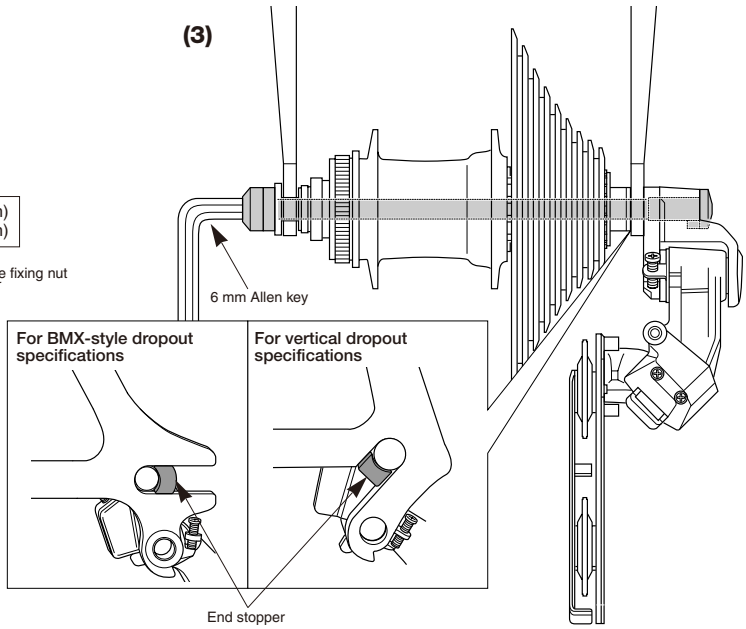


1. Install the sprockets to the FH-M805 / FH-M800 freehub, place the freehub onto the frame and pass the hub axle through it.
2. Install the hub axle fixing nut that is attached to the rear derailleur onto the hub axle.
   * FH-M805 (ø12mm), FH-M800 (ø10mm)
3. Turn the hub axle to secure the freehub and the rear derailleur to the frame.
   Check that the pawl on the fork end is set into the end stopper.

Freewheel hub / Rear derailleur tightening torque: 35 - 45 N·m {305 - 392 in.lbs}

Check that the axle on the right hand side protrudes about 20 – 30 mm. If it is not long enough, the wheel may come off because the hub axle does not tighten the hub sufficiently.

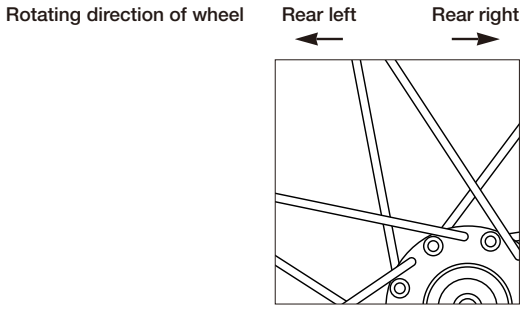




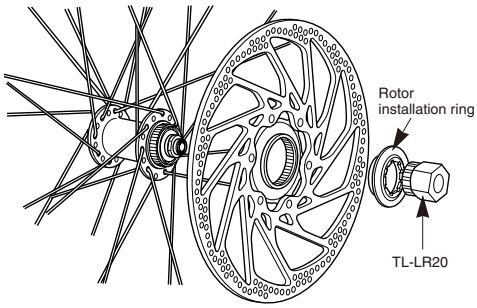
	Axle diameter	Vertical dropout	BMX-style dropout
FH-M800	ø10mm	×	×
FH-M805	ø12mm	×	—

Wheel spoke lacing

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



Installation of the rotor

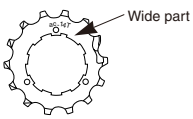


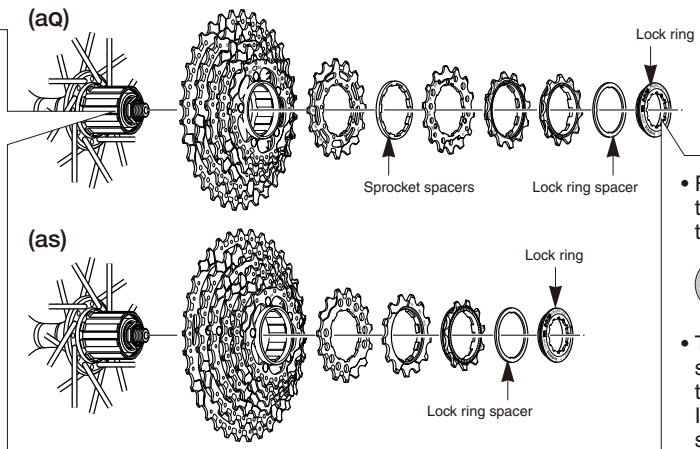
Tightening torque:
40 N·m {350 in. lbs.}

Installation of the sprockets

For each sprocket, the surface that has the group mark should face outward and be positioned so that the wider part of each sprocket and the A part (where the groove width is wide) of the freewheel body are aligned.

The groove is wide at one place only.

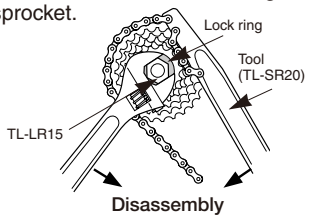




- For installation of the sprockets, use the special tool (TL-LR15) to tighten the lock ring.

Tightening torque:
30 - 50 N·m {261 - 434 in. lbs.}

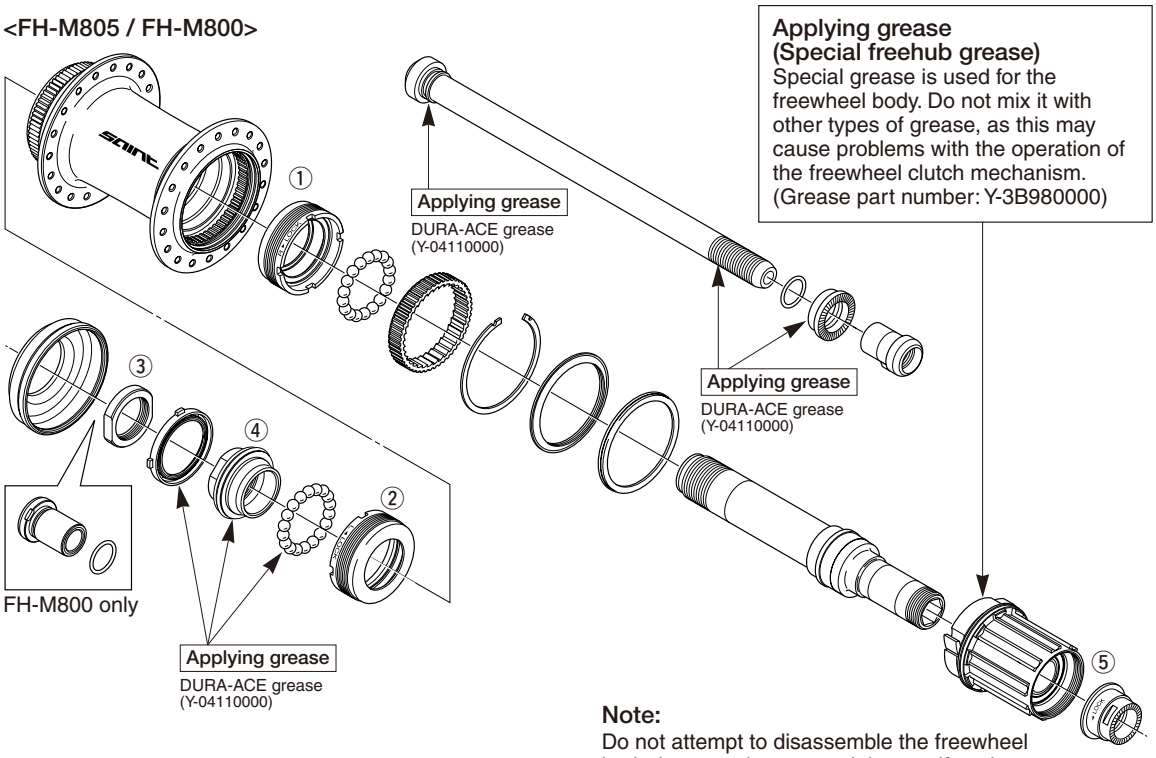
- To replace the sprockets, use the special tool (TL-LR15) and TL-SR20 to remove the lock ring.
Install the TL-SR20 to the largest sprocket.



Maintenance

These units can be disassembled as shown in the illustrations. Grease should be applied to each part at periodic intervals.

<FH-M805 / FH-M800>



Note:
Do not attempt to disassemble the freewheel body, because it may result in a malfunction.

Part name	Thread type	Special tool	Tightening torque
① Right hand cup	Right hand thread	TL-HA20	40 - 50 N·m {350 - 435 in. lbs.}
② Left hand cup	Left hand thread	TL-HA20	40 - 50 N·m {350 - 435 in. lbs.}
③ Left hand lock nut (M20)	Right hand thread	TL-HS22 (24mm)	30 - 35 N·m {261 - 305 in. lbs.}
④ Left hand cone (M20)	Right hand thread	TL-HS21 (23mm)	————
⑤ Freewheel body fixing nut (M15)	Left hand thread	TL-HS22 (17mm)	20 - 25 N·m {175 - 218 in. lbs.}

SHIMANO

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

SHIMANO EUROPE HOLDING B.V.
Industrieweg 24, 8071 CT Nunspeet, The Netherlands Phone: +31-341-272222

SHIMANO INC.
3-77 Oimatsu-cho, Sakai, Osaka 590-8577, Japan