

General Safety Information

WARNING

- 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 serious injury may result.
- The calipers and rotor will become hot when the brakes are operated, so do not touch them while riding or immediately after dismantling from the bicycle, otherwise you may get burned. Check that the brake components have cooled down sufficiently before attempting to adjust the brakes.
- Obtain and read the service instructions carefully prior to installing the parts. Loose, worn or damaged parts may cause the bicycle to fall over and serious injury may occur as a result. 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

- Use the CS-M980 in combination with an MTB 10-speed chain.
- If the wheel becomes stiff and difficult to turn, you should lubricate it with grease.
- Do not apply any oil 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.
- Parts are not guaranteed against natural wear or deterioration resulting from normal use.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

Technical Service Instructions

SI-3DX0A-002

FH-M985 / HB-M985

Freehub / Front hub

Specifications

Freehub / Front hub

	Freehub	Front hub
Model No.	FH-M985	HB-M985
Gears	10	—
No. of spoke holes	32	32
Overlock nut dimensions	135 mm	100 mm
Applicable brakes	Disc brake	Disc brake

Cassette sprocket tooth combination

Model number	Group name	Gears	Tooth combination
CS-M980	bJ	10	11, 13, 15, 17, 19, 21, 23, 26, 30, 34T
	bK	10	11, 13, 15, 17, 19, 21, 24, 28, 32, 36T

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

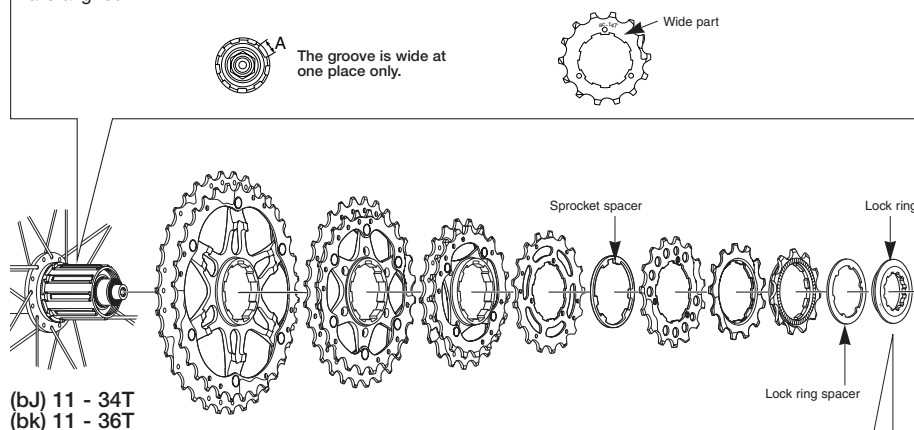
* Service Instructions in further languages are available at :
<http://techdocs.shimano.com>

Please note: specifications are subject to change for improvement without notice. (English)
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< FH-M985 >

Installation of the sprockets

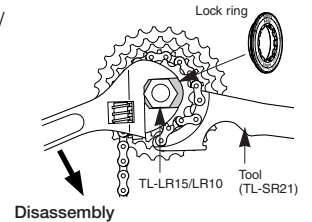
For each sprocket, the surface that has the group mark should face outward and be positioned so that the wider part of each sprocket and the A part (where the groove width is wide) of the freewheel body are aligned.



For installation of the HG sprockets, use the special tool (TL-LR15/LR10) to tighten the lock ring.

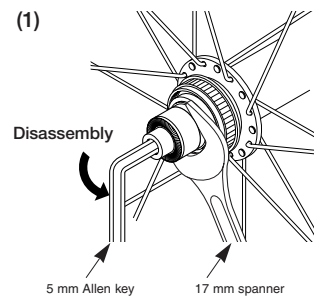
Tightening torque:
30 - 50 N·m {261 - 434 in. lbs.}

To replace the HG sprockets, use the special tool (TL-LR15/LR10) and TL-SR21 to remove the lock ring.



Replacement of the freewheel body

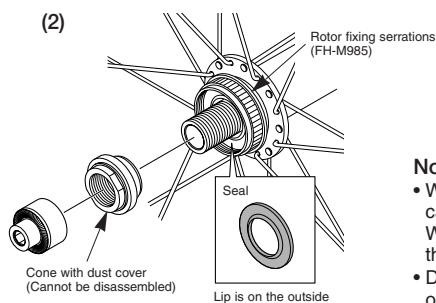
First, pull out the hub axle by following the procedure shown in the illustration. The double-lock section at the freewheel side cannot be disassembled.



Note:

The hub cone is made from a light alloy. Use a suitable tool which has no wear or other damage when adjusting the hub rotation.

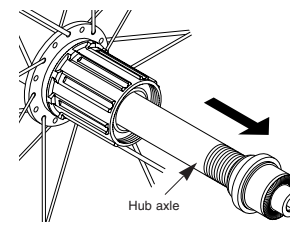
Left side Tightening torque:
15 - 20 N·m {132 - 172 in. lbs.}



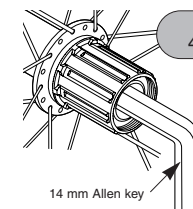
Note:

- When removing and installing the seal, do it 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 cover which is crimped onto the cone.

(3)



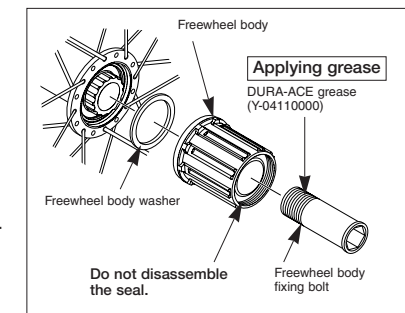
(4) After removing the hub axle, remove the freewheel body fixing bolt (inside the freewheel body), and then replace the freewheel body.



Tightening torque:
45 - 50 N·m {392 - 434 in. lbs.}

Note:

When replacing the freewheel body, replace the freewheel body fixing bolt at the same time. Be sure to apply grease to the thread of the freewheel body fixing bolt, otherwise looseness or sticking may occur. Do not attempt to disassemble the freewheel body, because it may result in a malfunction.



< HB-M985 >

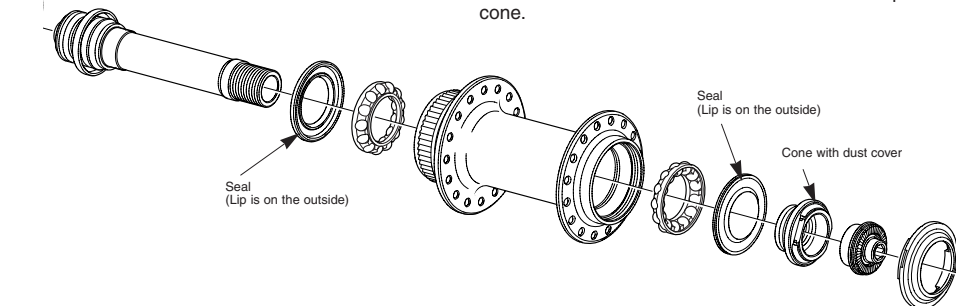
Maintenance

The unit can be disassembled as shown in the illustration.

Apply grease to the various parts at periodic intervals.

Note:

- The HB-M985 cannot be disassembled from the left side of the hub unit (the rotor fixing serration side).
- When removing and installing the seal, do it 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 cover which is crimped onto the cone.



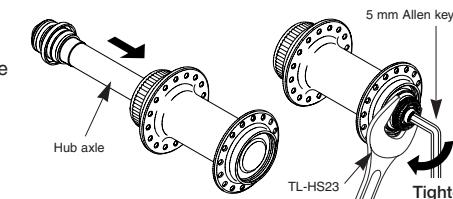
< Assembly >

Use the special tool (TL-HS23 / 18mm) for installing the hub axle and a 5 mm Allen key to tighten the lock nut so as to double-lock the mechanism as shown in the illustration.

Note:

The hub cone is made from a light alloy. Use a suitable tool which has no wear or other damage when adjusting the hub rotation.

Tightening torque:
15 - 17 N·m {132 - 146 in. lbs.}

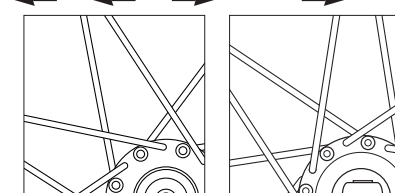


Wheel spoke lacing

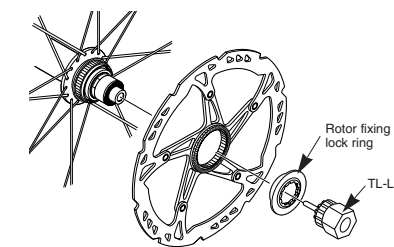
Check that the spokes have been laced as shown in the illustration. A radial assembly cannot be used.

Rotating direction of wheel

Front left Rear left Rear right Front right



Installation of the rotor (SM-RT98)



Tightening torque:
40 - 50 N·m {350 - 435 in. lbs.}