WH-M965 / WH-M765

Wheel

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.
- Before use, check the wheels to make sure that there are no bent or loose spokes, dents, scratches or cracks on the rim surface. Do not use the wheel if any of these problems are found.
- The wheel is designed for cross-country riding. Do not use it for downhill riding, otherwise the wheel may become bent or otherwise damaged, and accidents may occur as a result.
- If the quick release mechanism is not used correctly, the wheel may come off the bicycle and serious injury could result. Read the Service Instructions for the quick release mechanism thoroughly before use.
- **For best result, rotor model SM-RT77 should be used in combination with WH-M965 and WH-M765.**
  Use of the SM-RT96 rotor may result in unwanted noise.
  Noise can be caused by undamped vibration of the rotor when the SM-RT96 rotor is used with WH-M965 and WH-M765.
  Further noise reduction can be obtained by use of resin pads instead of metal pads. Resin pads also provide maximum modulation.
  Metal pads will provide greatest durability and fade resistance, however, they may make more noise than resin.
- Do not use detergents or chemical cleaners to wipe the wheel, otherwise they may cause the air sealant that has been applied to the joints in the rim to peel off.
- These wheels are designed exclusively for use with disc brakes. Do not use these wheels with rim brakes.
- Be sure to carefully read the Service Instructions for the disc brakes also.
- 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.

CAUTION

- Use of genuine Shimano spokes, nipples and washers is strongly recommended. If non-Shimano parts are used, the area where the nipple seats into the hub flange may become damaged.
- The air pressure should be within the range of 200-400 kPa {29-58 psi}.
- The nipples have large diameters and are easy to rotate in order to make it easier to increase the spoke tension.However, be careful not to overtighten the nipples when adjusting the spoke tensions. If the nipples are overtightened, damage to the rim may result.
  (We recommended that you ask authorized bicycle dealers to make the adjustments.)

Note

- 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.
- Special spoke wrenches are available as optional accessories.
- We recommend that you ask authorized bicycle dealers to adjust the spoke tensions if there is any initial play in the spokes and after the first 1,000 km of riding.
- Reflectors are also sold separately. Please ask your bicycle dealer for details.

Model number	Specification	Coloer
RR-550-WUW/W SMN03	JIS / CPSC	White
RR-550-WUA/A SWN03	AS	Amber
RR-317-WUA/4K SWN03	DIN	Amber

- Spoke protectors are also sold separately. Please ask your bicycle dealer for details.

CP-WH10	CS-M960 (11-34T), CS-M960 (12-34T)
CP-WH11	CS-M960 (11-32T)

- For maximum performance we highly recommend Shimano lubricants and maintenance products.
- Parts are not guaranteed against natural wear or deterioration resulting from normal use.

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

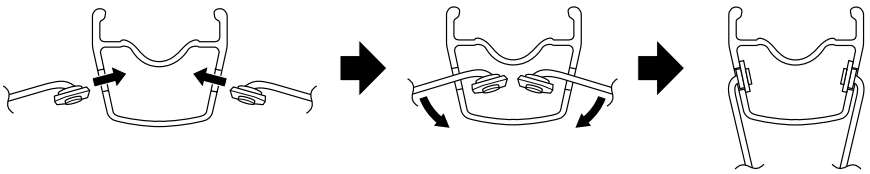
Wheel	**WH-M965 / WH-M765**
Chain	**CN-7701 / CN-HG93 / CN-HG73**
Cassette sprocket	**CS-M960**

Specifications

Speeds		9
No. of spokes		24
Applicable spoke length	For front	272 mm
	For rear	252 mm / 272 mm
Rim width		23.3 mm
Rim size		26”
Applicable tire size		26 x 1.5 ~ 2.25
Applicable brakes		Disc brake
Applicable rotor		SM-RT96

Replacing the spokes

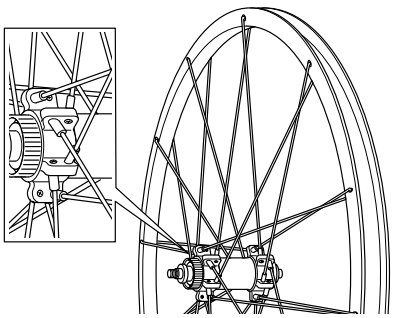
Hook the spoke through the rim as shown in the illustration.



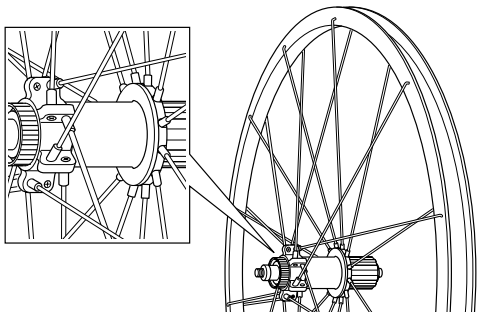
Spoke lacing

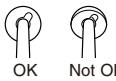
Lace the spokes as shown in the illustration.

For front



For rear





OK Not OK

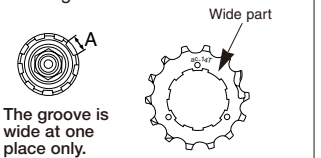
The spoke washers should be correctly attached to the rim.
(The washers should not be slipping inside the rim.)

Spoke tension value			
For front		For rear	
Right (sprocket) side	Left side	Right (sprocket) side	Left side
700 - 1000 N (157 - 225 lbf)	870 - 1250 N (196 - 281 lbf)	930 - 1330 N (272 - 299 lbf)	700 - 1000 N (157 - 225 lbf)

* These values should be used as a guide only.

Installation of the HG sprockets

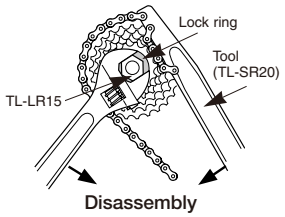
For each sprocket, the surface that has the group mark should face outward and be positioned so that the wide parts of the gear projections on each sprocket and the A part (where the groove width is wide) of the freewheel body are aligned.

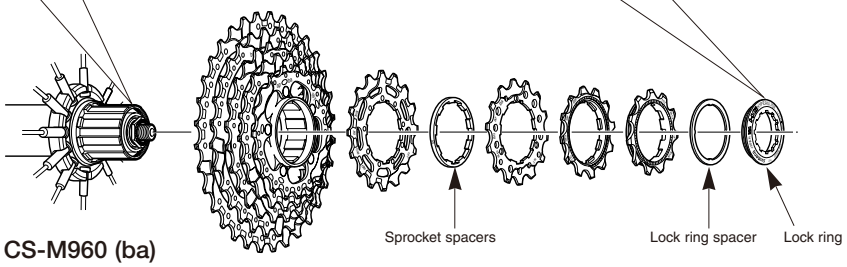


- For installation of the HG sprockets, use the special tool (TL-LR15) to tighten the lock ring.

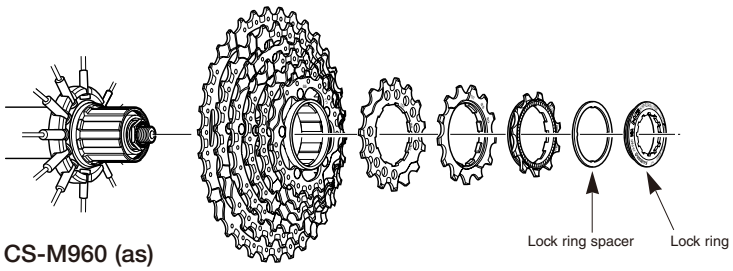
Tightening torque:
30 - 50 N·m {261 - 434 in. lbs.}

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

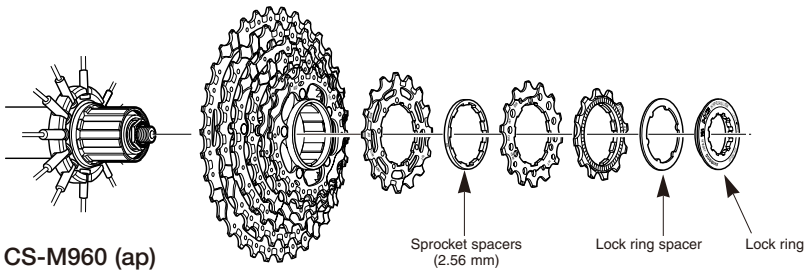




CS-M960 (ba)



CS-M960 (as)



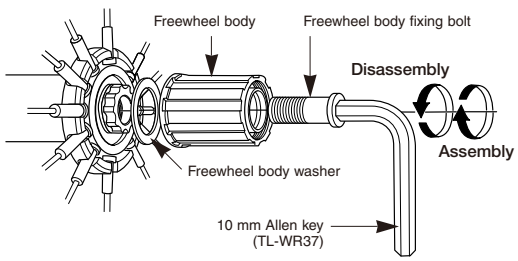
CS-M960 (ap)

Replacement of the freewheel body

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

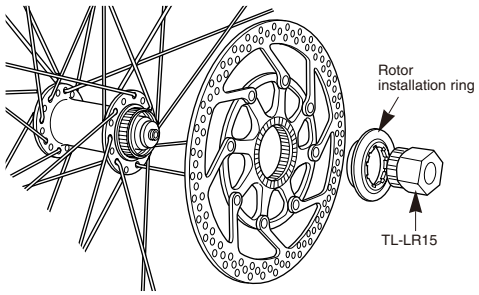
Note
Do not attempt to disassemble the freewheel body, because it may result in a malfunction.

Tightening torque:
35 - 50 N·m {305 - 434 in. lbs.}



Installation of the rotor (SM-RT96)

Tightening torque:
40 N·m {350 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