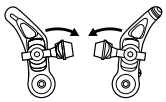
WH-7701
WH-R540

Wheel

General Safety Information

⚠ WARNING

- 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.
- Check that the recommended brake shoe holders have been installed, and that adjustment is correct. If the brake shoes are adjusted incorrectly, the brake shoe holder may contact the spokes when the brake is applied, causing noise.
- Do not use in combination with brakes types such as cantilever brakes in which the brake shoes move in an arc pattern, as the brake shoes may gradually move closer to the spokes and touch them as the brake shoes wear.



- Do not use in combination with bottom link-type suspension forks. With these types of forks, the clearance between the hub axle and the brake shoes can change due to the operation of the suspension, so that when the brakes are applied, the brake shoes may touch the spokes.
- 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.
- Use rim cement to securely affix tubular tires to the rims. If the tires are not fully secure, they may come off the rims, and serious accidents and injury may result.
- These wheels are designed for riding on paved surfaces. If the wheels are used on unpaved surfaces, the wheels may become bent or damaged, and accidents may result.
- 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.
- Obtain, read and carefully service instructions when installing parts. A loose, worn, or damaged parts may cause injury to the rider.
  We strongly recommend that only genuine Shimano replacement parts be used.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

⚠ CAUTION

- When the brake shoes become worn, the brake shoe holders may interfere with the spokes and cause frictional noise when the brakes are applied or brake performance may drop, even if the brake shoes have been installed correctly. If this occurs, replace the brake shoes as soon as possible.
- Two types of rim are available for use with either tubular tires or clincher tires. Use whichever type of rim is suitable for the type of tires used, and make sure that the tires are inflated to the correct pressure.
- The tires should be inflated to a suitable pressure before use.
- If using the rim with clincher tires, use rim tape which can withstand high pressures, otherwise the tires may suddenly puncture and come off, and severe injury may result.

CAUTION

- The Shimano R55HC (high performance) brake shoes use an aggressive compound designed with an emphasis on maximum performance in wet conditions, however they will cause accelerated rim wear.
  Shimano accepts no responsibility for reduced rim life which might occur from using R55HC brake shoes.
- 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.
- Before use, check that there are no pieces of metal or other foreign objects sticking to the brake pads. If any such items are present, they may cause damage to the rim when the brakes are applied.
- 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.
- The hollow on the other side of the valve from the hole is a guide for indicating the wear of the rim. If this hollow is no longer visible, the rim is at the end of its useful life.
- Use tire tubes with valve lengths of 50 mm or more.
- 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.
- Spoke protectors (CP-WH71) are also sold separately. Please ask your bicycle dealer for details.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.
- Reflectors (manufactured by CATEYE) are also sold separately. Please ask your bicycle dealer for details.

Model number	Specification	Coloer
RR-550-WUWSW	CPSC	White
RR-550-WUASW	AS	Amber
RR-317-WUASW	DIN	Amber

- 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.

Applicable tire size		Clincher tire	Tubular tire
		622X19-28C	700C 19-25mm
Wheel		WH-7701 WH-R540	WH-7701
Chain	9-speed	CN-7701 / CN-HG93 / CN-HG73	
	8-speed	CN-HG50	
Cassette sprocket	9-speed	CS-7700 / CS-6500 / CS-HG70-9	
	8-speed	CS-HG50-8	
Applicable brake shoe holder		BR-7700 / BR-6500 / BR-5500	

Specifications

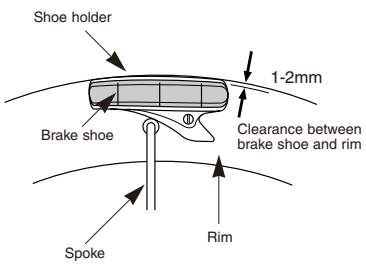
Model number		WH-7701	WH-R540
Speeds		8/9	
Applicable tires	Clincher	○	○
	Tubular	○	—
Applicable spoke length	For front	294mm	286mm
	For rear	Right (sprocket) side:278mm	Left side:294mm
Rim width		18.8mm	19.2mm

Rim size

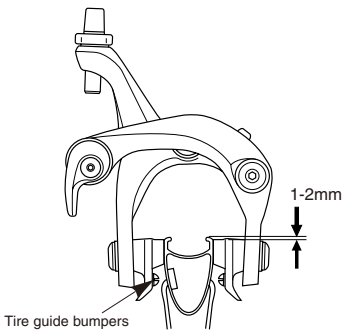
Model number	WH-7701	WH-R540
Clincher tire	622X13C (700C), 700C (19-28C)	700C (19-28C)
Tubular tire	700C	—

Brake shoe setting position

Make sure that the brake shoes and brake shoe holders do not touch the spokes.

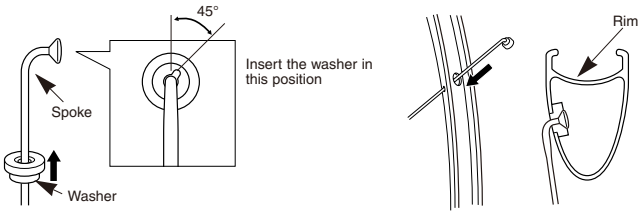


Remove the tire guide bumpers before riding.



Replacing the spokes

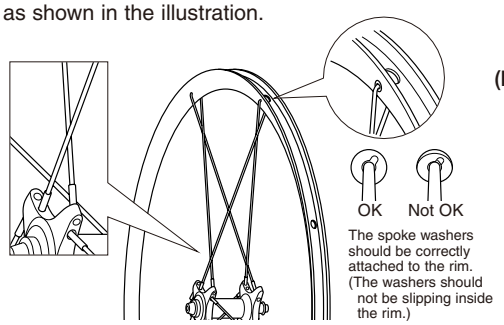
Place a washer onto the spoke as shown in the illustration, and then hook the spoke through the rim.



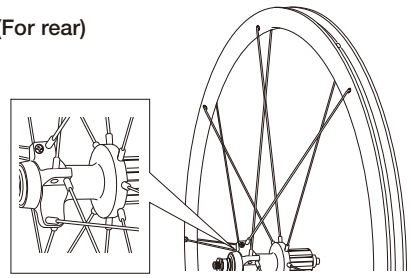
Spoke lacing

Lace the spokes as shown in the illustration.

(For front)



(For rear)



Spoke tension value		
For front	For rear	
	Right (sprocket) side	Left side
220-265lbA (86-122 in.lbsf)	236-360lbA (92-140 in.lbsf)	220-265lbA (86-122 in.lbsf)

*These values should be used as a guide only.

Installation of the HG sprockets

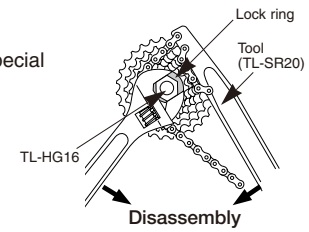
For each sprocket, the surface that has the group mark should face outward and be positioned so that the wide parts of the gear projections on each sprocket and the A part (where the groove width is wide) of the freewheel body are aligned.

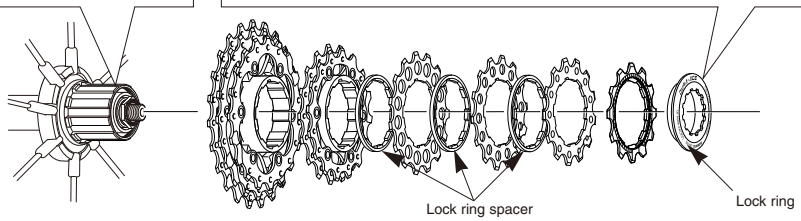
The groove is wide at one place only.

- For installation of the HG sprockets, use the special tool (TL-HG16) 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-HG16) and TL-SR20 to remove the lock ring.





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.}