

FD-R443

Front derailleur

Before use, read these instructions carefully, and follow them for correct use.

WARNING

- 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.

Note

- If attaching the FD-R443 (brazed-on type) to a seat tube with a thickness of more than 31.8 mm, the derailleur may come into contact with the seat tube and interfere with normal gear shifting performance.
- For smooth operation, use the specified outer casing and bottom bracket cable guide.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.
- This front derailleur is for triple front chainwheel use only. It cannot be used with the double front chainwheel, as the shifting points do not match.
- For the chain, be sure to use only the Shimano narrow type chain. The wide type chain cannot be used.
- For maximum performance we highly recommend Shimano lubricants and maintenance products
- For any questions regarding methods of installation, adjustment, maintenance or operation, please contact a professional bicycle dealer.

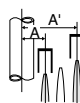
In order to realize the best performance, we recommend that the following combination be used.

Shifting lever	SL-R440		
Outer casing	SP40		
Gears	27		
Front derailleur	FD-R443		
Front chainwheel	FC-6503	FC-5504	FC-4403
Bottom bracket	BB-6500	BB-5500	BB-UN52
Rear derailleur	RD-6500/RD-5500/RD-4400		
Freehub	FH-6500/FH-5500/FH-4400		
Cassette sprocket	CS-6500/CS-HG70-9/CS-HG50-9		
Chain	CN-HG92/CN-HG72		
Bottom bracket cable guide	SM-SP17		

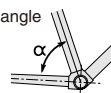
Specifications

Type	Band type / Brazed on type
Front chainwheel tooth difference	22 teeth or less
Min. difference between top and intermediate	10T
Front derailleur installation band diameter	S (28.6mm), M (31.8mm)
Chainstay angle (α)	63° - 66°
Chain line	45mm

Stroke

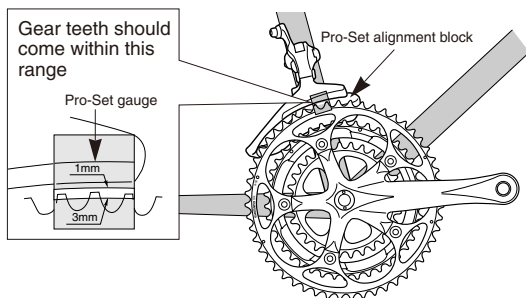


Chainstay angle



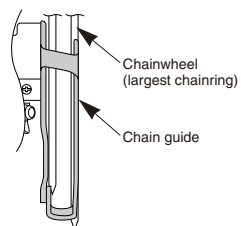
Installation of the front derailleur

Adjust and then install the front derailleur as shown in the illustration. Do not remove the Pro-Set alignment block at this time.



The level section of the chain guide outer plate should be directly above and parallel to the largest chainring. Secure using a 5mm Allen key.

Tightening torque:
5 - 7 Nm
{44 - 60 in. lbs.}

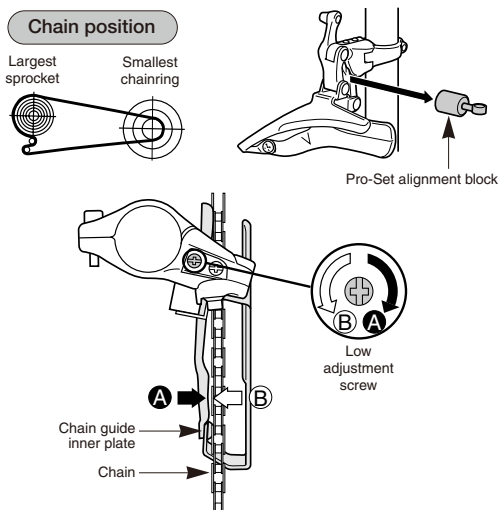


SIS adjustment

Be sure to follow the sequence described below.

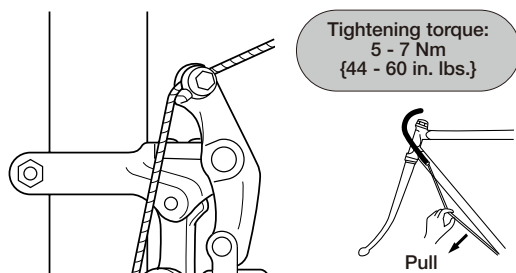
1. Low adjustment

First remove the Pro-Set alignment block. Next, set so that the clearance between the chain guide inner plate and the chain is 0-0.5mm.



2. Connection and securing of cable

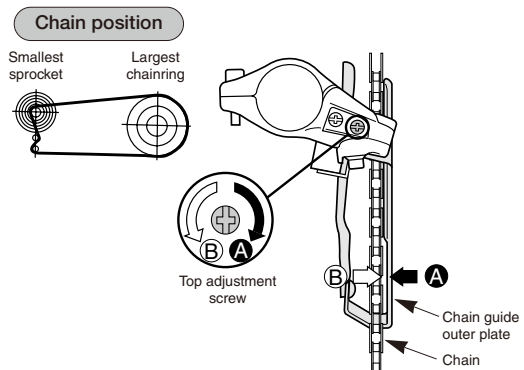
While pulling the inner cable, tighten the wire fixing bolt with a 5 mm allen key to secure the cable.



After taking up the initial slack in the cable, re-secure to the front derailleur as shown in the illustration.

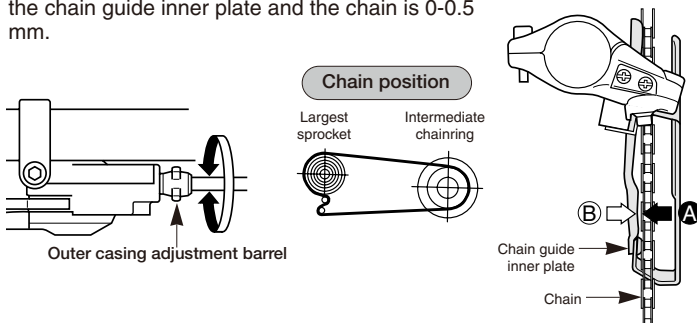
3. Top adjustment

Set so that the clearance between the chain guide outer plate and the chain is 0-0.5 mm.



4. Adjustment of the intermediate chainring

When carrying out adjustment, set the chain to the largest sprocket, and at the front, set the chain to the intermediate chainring. Adjust using the outer casing adjustment barrel so that the clearance between the chain guide inner plate and the chain is 0-0.5 mm.



■ Front shifting (SL-R440)

Both lever (A) and lever (B) always return to the initial position when they are released after shifting.

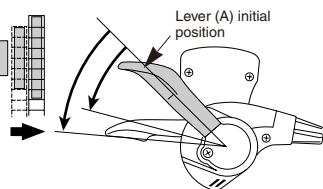
When operating one of the levers, always be sure to turn the crank arm at the same time.

To shift from a small chainring to a larger chainring

When lever (A) is pressed once, there is a shift of one step from a small chainring to a larger chainring.

Example:

from intermediate chainring to largest chainring.

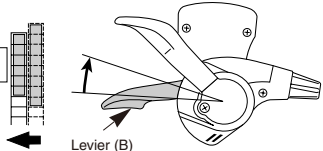


To shift from a small chainring to a larger chainring

When lever (A) is pressed once, there is a shift of one step from a small chainring to a larger chainring.

Example:

from intermediate chainring to largest chainring.



5. Troubleshooting chart

After completion of steps 1 - 4, move the shifting lever to check the shifting. (This also applies if shifting becomes difficult during use.)

If the chain falls to the crank side	Tighten the top adjustment screw clockwise (about 1/4 turn).
If shifting is difficult from the intermediate chainring to the largest chainring	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If shifting is difficult from the intermediate chainring to the smallest chainring	Loosen the low adjustment screw counterclockwise (about 1/4 turn).
If there is interference between the chain and the front derailleur inner plate at the largest chainring	Tighten the top adjustment screw clockwise (about 1/8 turn).
If there is interference between the chain and the front derailleur outer plate at the largest chainring	Loosen the top adjustment screw counterclockwise (about 1/8 turn).
If the intermediate chainring is skipped when shifting from the largest chainring	Loosen the outer casing adjustment barrel counterclockwise (1 or 2 turns).
If there is interference between the chain and front derailleur inner plate when the rear sprocket is shifted to the largest sprocket when the chainwheel is at the intermediate chainring position.	Tighten the outer casing adjustment barrel clockwise (1 or 2 turns).
If the chain falls to the bottom bracket side.	Tighten the low adjustment screw clockwise (about 1/2 turn).

Be sure to read these service instructions in conjunction with the service instructions for the SL-R440 before use.

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