

General Safety Information

⚠ WARNING

- Be careful not to let the cuffs of your clothes get caught in the chain while riding, otherwise you may fall off the bicycle.
- Check that the tension of the chain is correct and that the chain is not damaged. If the tension is too weak or the chain is damaged, the chain should be replaced. If this is not done, the chain may break and you may fall off the bicycle.
- Check that there are no cracks in the crank arms before riding the bicycle. If there are any cracks, the crank arm may break and you may fall off the bicycle.
- 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.
- Obtain and read the service instructions carefully prior to installing the parts.
If adjustments are not carried out correctly, the chain may come off and this may cause you to fall off the bicycle which could result in serious injury.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

- Before riding the bicycle, check that there is no play or looseness in the connection. Also, be sure to retighten the crank arm fixing bolt at periodic intervals. (BB-FC, FC-PD)
- If you feel any looseness in the bottom bracket axle, the bottom bracket should be replaced.
- In addition, if pedaling performance does not feel normal, check this once more.
- Do not wash the bottom bracket with high-pressure jets of water.
- Apply grease to the bottom bracket before installing it.
- To ensure the best performance, be sure to use only the specified type of chain. The wide type of chain cannot be used.
- If the chain keeps coming off the chainring during use, replace the chainring and the chain.
- You should periodically wash the chainring in a neutral detergent and then lubricate it again. In addition, cleaning the chain with neutral detergent and lubricating it can be an effective way of extending the useful life of the chainring 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.
- For any questions regarding methods of installation, adjustment, maintenance or operation, please contact a professional bicycle dealer.

Technical Service Instructions

SI-1JG0A-001

FC-S400

Front chainwheel
(With Chainguard)

Specifications

Front Chainwheel

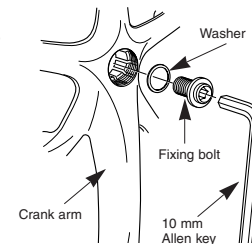
Model number	FC-S400	
Chainguard Type	Single guard	Double guard
Chainwheel tooth combination	45T, 39T	
Bolt circle diameter	130 mm	
Crank arm length	170 mm	
Pedal threads	B.C. 9/16" x 20T.P.I. (English thread)	
Applicable chain	CN-HG53 / CN-HG50	

Bottom Bracket

Model number	BB-ES25	
Chainguard Type	Single guard	Double guard
Spindle length	118 mm	126 mm
Chain line	42.7 mm	49.2 mm
Shell width (Thread dimensions)	68 mm (1.37 X 24 T.P.I.)	

Installation of the front chainwheel

1. Place the crank arm onto the bottom bracket spindle so that it meshes with the serrations on the spindle.
2. Install the washer and fixing bolt and tighten the fixing bolt.

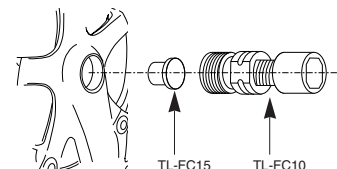


Tightening torque:
35 - 50 N·m {305 - 435 in. lbs.}

Replacing the front chainwheel

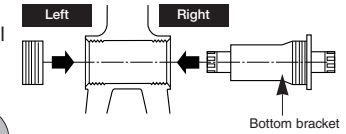
Use the special plug tool (TL-FC15) to remove the FC-S400 crank arm.

1. Remove the fixing bolt and washer from the crank arm.
2. Insert the TL-FC15 into the hole of the bottom bracket axle.
3. Then, screw the cotterless crank arm extractor (TL-FC10) into the crank arm, and then remove the crank arm in the same way as normal.



Installation of the Bottom Bracket

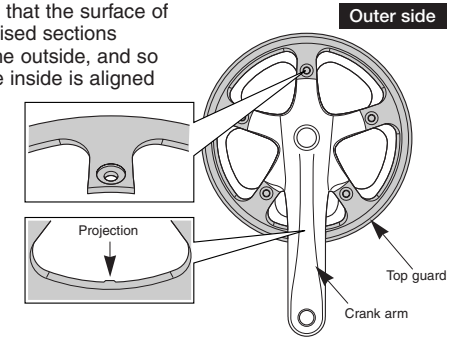
Use the special tool (TL-UN74-S) to install the bottom bracket. First install the main body, then the adapter.



Adapter/bottom bracket
tightening torque:
50 - 70 N·m {435 - 608 in. lbs.}

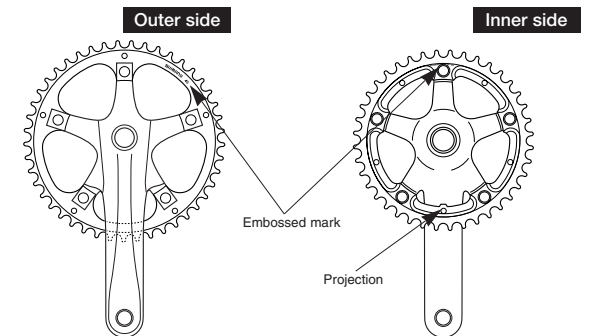
Installation of the chainring

Install the chainguard so that the surface of the top guard with the raised sections around the holes is on the outside, and so that the projection on the inside is aligned with the crank arm.



For 45T chainring, install in the position shown in the illustration so that the surface with the embossed mark is on the outside.

For 39T chainring, install so that the surface with the embossed mark is on the inside, and so that the projection on the inside of the chainring is aligned with the crank arm.



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