

General Safety Information

⚠ WARNING

“Maintenance interval depends on the usage and riding circumstances. Clean regularly the chain with an appropriate chaincleaner. Never use alkali based or acid based solvents such as rust cleaners. If those solvent be used chain might break and cause serious injury.”

- 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 cause serious injury.
- 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 the bicycle to fall over and serious injury may occur as a result. 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.

⚠ CAUTION

- If the chain is on the smallest or intermediate chainring, there is the danger of injury from the tips of the teeth on the largest chainring.

Note

- Make sure that the chainring combination matches the front chainwheel tooth configuration in the Product specifications table. If other combinations are used, the distance between the chainrings will be incorrect and the chain might slip off and get caught in between them.
- When the chain is in the position shown in the illustration, the chain may contact the front chainrings or front derailleur and generate noise. If the noise is a problem, shift the chain onto the next-larger rear sprocket or the one after if the chain is in the position shown in Figure 1. Shift the chain onto the next-smaller sprocket or the one after if it is in the position shown in Figure 2.
- Be sure to use only the applicable chain and bottom bracket.
- Before riding the bicycle, check that there is no play or looseness in the connection. Also, be sure to retighten the crank arms and pedals at periodic intervals.
- 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.
- If the chain keeps coming off the chainrings during use, replace the chainrings and the chain.
- You should periodically wash the chainrings in a neutral detergent and then lubricate them again. In addition, cleaning the chain with neutral detergent and lubricating it can be an effective way of extending the useful life of the chainrings and the chain.
- The cuffs of your clothing may get dirty from the chain while riding.
- When installing the pedals, apply a small amount of grease to the threads to prevent the pedals from sticking. Use a torque wrench to securely tighten the pedals. Tightening torque: 35 - 55 N.m {305 - 479 in.lbs.}. The right-hand crank arm has a right-hand thread, and the left-hand crank arm has a left-hand thread.
- 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.

This front chainwheel is designed for 10-speed systems, and cannot be used in 9-speed systems.

Technical Service Instructions

SI-1N00A-001

FC-M522

Front chainwheel

Specifications

Front chainwheel

Model number	FC-M522
Chainwheel tooth combination	42-32-24T
Bolt circle diameter	104 mm / 64 mm
Chain line	50 mm
Bottom bracket shell width	68, 73 mm
Thread dimensions	BC1.37 (68, 73 mm)
Applicable bottom bracket	BB-ES25
Applicable chain	CN-HG54

Bottom Bracket

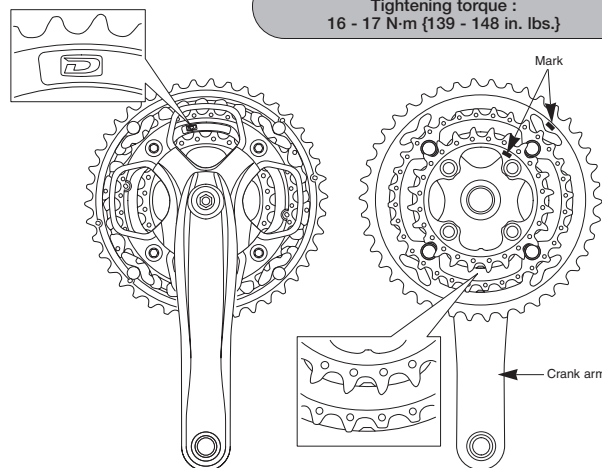
Model number	BB-ES25
Spindle length	113
Chain line	50 mm
Shell width (Thread dimensions)	68 / 73 mm (1.37 X 24 T.P.I.)

Installation of the chainrings

Set so that the “D” symbol on the intermediate chainring is facing outward and so that the tooth numbers on the largest and smallest chainrings are facing inward, and also so that the projections are aligned with the crank arm.

Largest chainring / Intermediate chainring
Tightening torque :
14 - 16 N·m {122 - 139 in. lbs.}

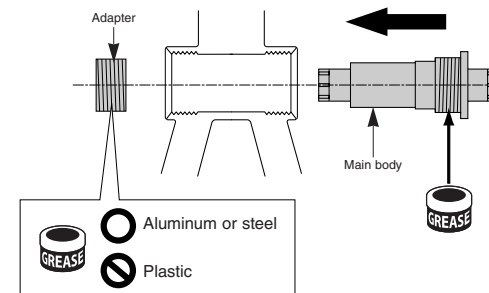
Smallest chainring
Tightening torque :
16 - 17 N·m {139 - 148 in. lbs.}



Installation of the Bottom Bracket

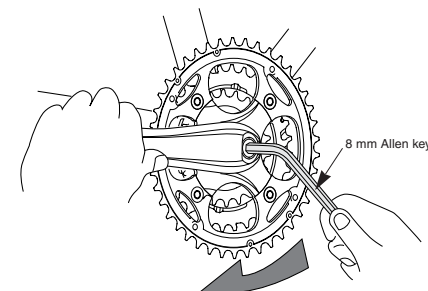
Install using the special tool TL-UN74-S / TL-UN66. First install the main body, then the adapter.

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



Installation of the front chainwheel

Use an 8 mm Allen key to install the front chainwheel.



Front chainwheel tightening torque:
35 - 50 N·m {305 - 435 in. lbs.}

Be sure to read the service instructions for the Front Drive System in conjunction with these service instructions.

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* 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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