

SERVICE INSTRUCTIONS SI-F650D

Front Drive System

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

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

Series	DEORE-XT	DEORE-LX
Rapidfire M9	ST-M750 / SL-M750	ST-M570 / SL-M570
Outer casing	SP40 sealed	SP40 sealed
Front derailleur	FD-M750	FD-M570
Front chainwheel	FC-M751	FC-M571
Bottom bracket	BB-ES70	BB-ES70
Chain	CN-HG92	CN-HG72
Bottom bracket cable guide	SM-SP17 / SM-BT17	SM-SP17 / SM-BT17

Specifications

Front Derailleur

Model number	FD-M751/FD-M750/ FD-M570	FD-M750-E / FD-M570-E	FD-M571
Normal type	○	○	○
Top route type	○	○	○
Front chainwheel tooth difference	22T	22T	22T
Min. difference between top and intermediate	12T	12T	12T
Front derailleur installation band diameter	S, M, L	S, M, L	S, M, L
Chainstay angle (α)	66° - 69°	66° - 69°	63° - 66°, 66° - 69°
Applicable chain line	47.5mm, 50.0mm	47.5mm, 50.0mm	47.5mm, 50.0mm
Applicable Bottom Bracket	BB-ES70	BB-ES70E	BB-ES70

Installation band diameters:
S (28.6 mm), M (31.8 mm), L (34.9 mm)



Chainwheel

Model number	FC-M751-4 Arm FC-M571-4 Arm
Chainwheel tooth combination	44-32-22T
Bolt circle diameter	104 mm / 64 mm
Crank arm length	170 mm, 175 mm
Pedal thread dimensions	BC 9/16" x 20 T.P.I.

Bottom Bracket

Model number	BB-ES70	BB-ES70E
Spindle length	113 mm	118 mm
Chain line	47.5 mm	50 mm
Shell width	68, 70, 73 mm	68, 70, 73 mm
Thread dimensions	BC1.37 (68, 73mm) M36 (70mm)	BC1.37 (68, 73mm) M36 (70mm)

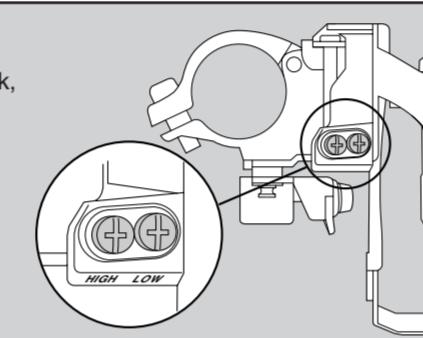
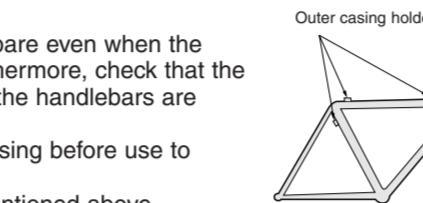
CAUTION

• Use a front chainwheel which is compatible with 9-speed chains in conjunction with Shimano CN-7700, CN-HG92 and CN-HG72 chains. If a chainwheel for an 8-speed chain or less is used, front chainwheel gear shifting problems may occur, or the chain pins might fall out, causing the chain to break.

Note

- Apply grease to the bottom bracket before installing it.
- For smooth operation, use the specified outer casing and the bottom bracket cable guide.
- 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.
- When installing the top route type, choose a frame that has three outer casing holders as shown in the illustration at right.
- Use an outer casing which still has some length to spare even when the handlebars are turned all the way to both sides. Furthermore, check that the shifting lever does not touch the bicycle frame when the handlebars are turned all the way.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.
- Use only the applicable chain and bottom bracket mentioned above.
- Operation of the levers related to gear shifting should be made only when the front chainwheel is turning.
- If the brake fluid used in the oil disc brakes is of a type which tends to adhere to the plastic parts of the shifting lever, this may cause the plastic parts to crack or become discolored. Therefore, you should make sure that the brake fluid does not adhere to these plastic parts. The mineral oil which is used in SHIMANO disc brakes does not cause cracking or discoloration if it adheres to plastic parts, but such parts should be cleaned with alcohol beforehand to prevent foreign particles from adhering.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.
- For any questions regarding methods of handling or maintenance, please contact the place of purchase.

FD-M750/FD-M570 Adjustment Bolts
Because of the different construction of the new link, the positions of the top and low adjustment bolts on the FD-M750/FD-M570 are reversed from the positions on previous front derailleurs.



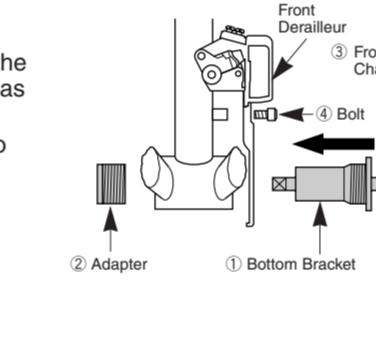
Installation of the Front Derailleur, Bottom Bracket and Front Chainwheel

FD-M750-E / FD-M570-E

Use the special tools (TL-UN70 and TL-UN74-S) to install the bottom bracket ① and the front derailleur so that they face as shown in the illustration.

Install the adapter ②, and then use an 8 mm Allen key ③ to install the front chainwheel. Secure by using the bolt ④.

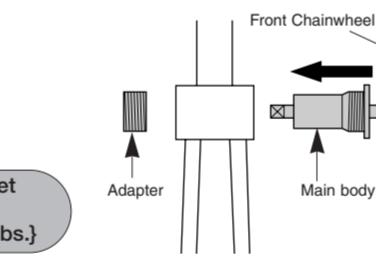
Adapter / bottom bracket tightening torque:
50 - 70 Nm (435 - 608 in. lbs.)
Front chainwheel tightening torque:
35 - 50 Nm (305 - 435 in. lbs.)



FD-M570 / 571 FD-M750 / 751

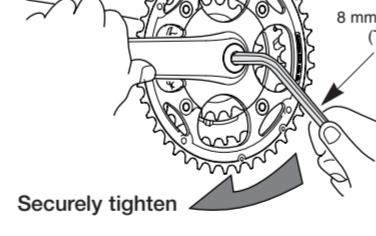
Install using the special tool TL-UN74-S. First install the main body, then the adapter.

Adapter / bottom bracket tightening torque:
50 - 70 Nm (435 - 608 in. lbs.)



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

Front chainwheel tightening torque:
35 - 50 Nm (305 - 435 in. lbs.)



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

Tightening torque:
5 - 7 Nm (44 - 60 in. lbs.)



Model number	FC-M751-4 Arm FC-M571-4 Arm
Chainwheel tooth combination	44-32-22T
Bolt circle diameter	104 mm / 64 mm
Crank arm length	170 mm, 175 mm
Pedal thread dimensions	BC 9/16" x 20 T.P.I.

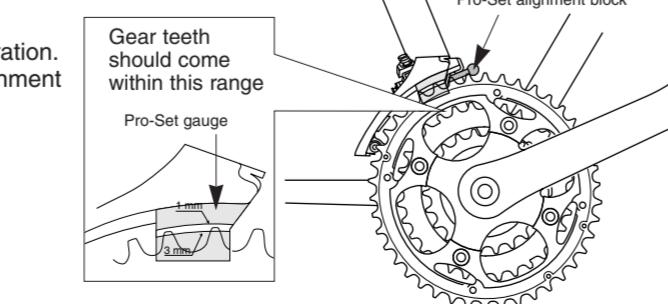
Bottom Bracket

Model number	BB-ES70	BB-ES70E
Spindle length	113 mm	118 mm
Chain line	47.5 mm	50 mm
Shell width	68, 70, 73 mm	68, 70, 73 mm
Thread dimensions	BC1.37 (68, 73mm) M36 (70mm)	BC1.37 (68, 73mm) M36 (70mm)

Chainwheel

Model number	FC-M751-4 Arm FC-M571-4 Arm
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Adjust and then install the front derailleur as shown in the illustration. Do not remove the Pro-Set alignment block at this time.



Gear teeth should come within this range

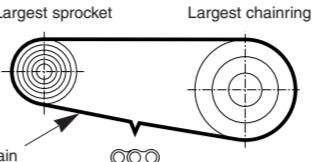
Pro-Set gauge

Wire fixing bolt

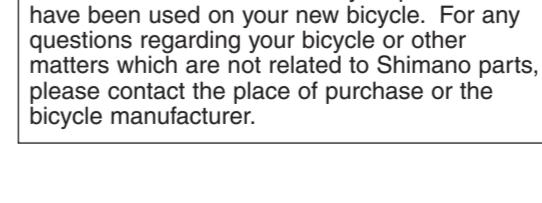
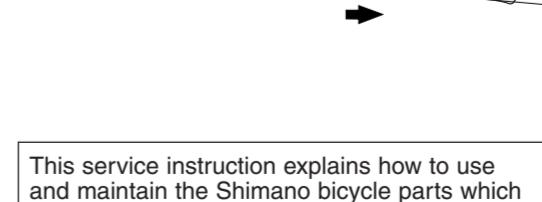
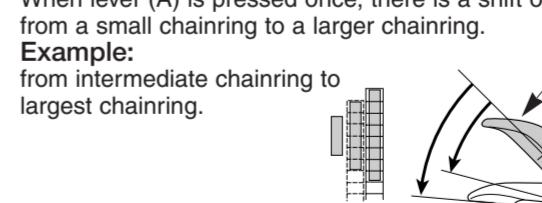
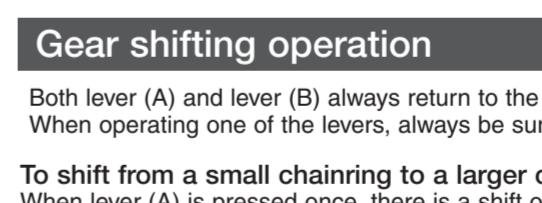
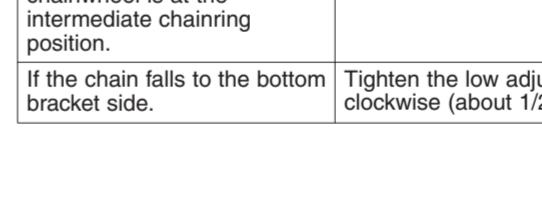
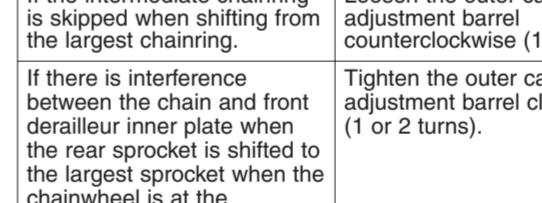
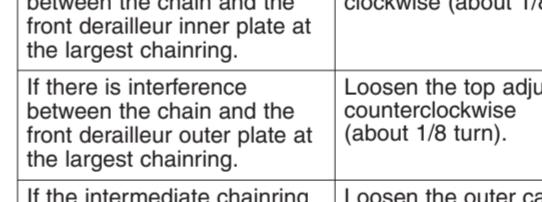
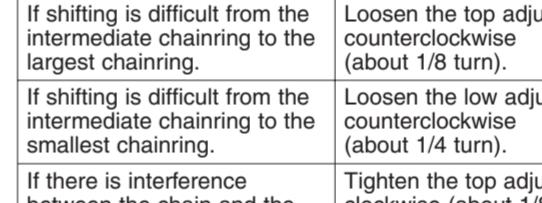
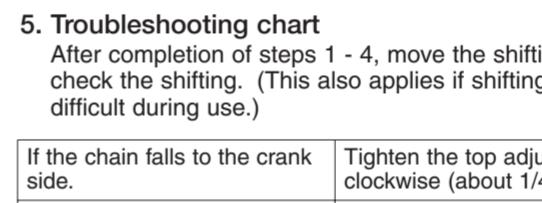
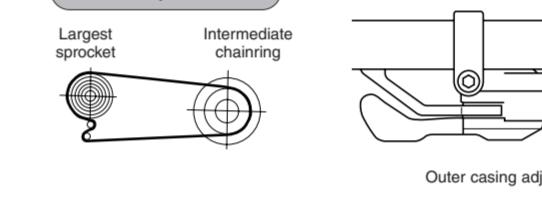
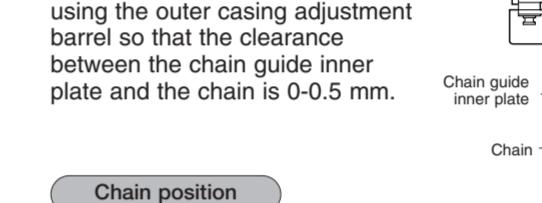
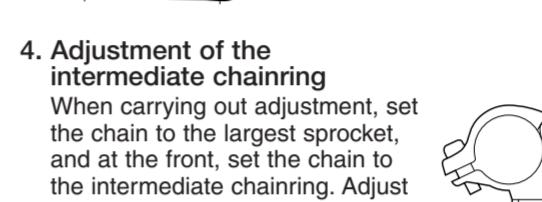
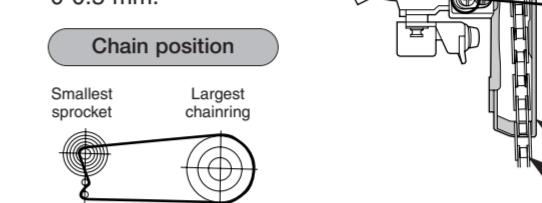
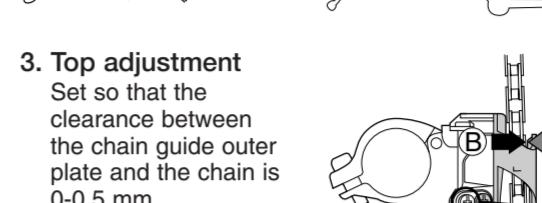
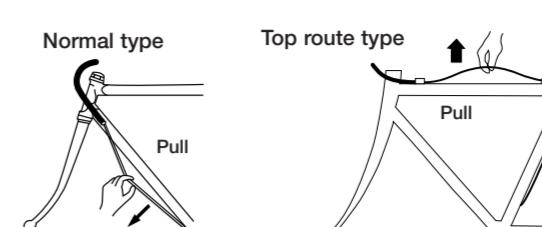
5 mm allen key

Chain length

Add 2 links (with the chain on both the largest sprocket and the largest chainring)



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



Replacement of the shifting lever unit and indicator

Disassembly and reassembly should only be carried out when replacing the indicator.

Removal of the indicator

- Remove the two indicator set screws which are securing the indicator.

Tightening torque : 0.3 - 0.5 Nm (3 - 4 in. lbs.)

- Remove the indicator unit as shown in the illustration.

- Operate lever (B) two times or more to set the lever to the lowest position.</