

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 Plus	ST-M738	ST-M566 / ST-M565
Outer casing	SIS-SP36 sealed outer casing	SIS-SP36
Front derailleur	FD-M737	FD-M565
Front chainwheel	FC-M737	FC-M563
Bottom bracket	BB-UN91 / BB-UN71	BB-UN71 / BB-UN51
Chain	CN-HG90 / CN-HG91	CN-HG70
Bottom bracket cable guide	SM-SP17 / SM-BT17	

Specifications

Front Derailleur

Model number	FD-M737	FD-M565
Normal type	○	○
Top route type	○	○
Front derailleur installation band diameter	S, M, L, F	S, M, L
Stroke (A-A')	38 - 58	
Chainstay angle (α)	66° - 69°	63° - 66°, 66° - 69°
Applicable chain line	47.5 mm, 50 mm	



Installation band diameters:
S (28.0 - 28.6 mm), M (31.8 mm), L (34.9 mm), F (brazed-on type)

Front chainwheel

Model number	FC-M737	FC-M563
Material	Light alloy	
Bolt circle diameter	94 mm (largest, intermediate), 58 mm (smallest)	
Front chainwheel tooth combination	42 - 32 - 22	42 - 32 - 22
Crank arm length (mm)	180, 175, 170, 165	175, 170
Pedal thread dimensions	BC 9/16" X 20 T.P.I. (English thread)	
Applicable chain line	47.5 mm, 50 mm	

Note: FC-M737 also includes a 44T largest chainring. Furthermore, the smallest chainring is made of steel.

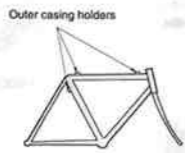
Bottom Bracket

Model number	BB-UN91 / BB-UN71 / BB-UN51
Stamped marking	MM107 LL113
Spindle length	107 (68, 70, 73) 113 (68, 70, 73)
Chain line	47.5 mm 50 mm
Bottom bracket cup thread dimensions	BC 1.37 X 24 T.P.I. (68, 73 mm), M36 X 24 T.P.I. (70 mm)

Note: BB-UN71 and BB-UN51 are not compatible with the MM107 shell width of 73 mm.

Note

- For smooth operation, always be sure to use the SIS-SP outer casing and the bottom bracket cable guide.
- Apply grease to the bottom bracket before installing it.
- The front derailleurs are for triple front chainwheel use only, they cannot be used with the double front chainwheel, as the shifting points do not match.
- Always be sure to use a Shimano narrow type HG chain on the HG sprocket set.
- When installing the top route type, choose a frame that has three outer casing holders as shown in the illustration at right.
- The SIS-SP36 outer casing and SIS-SP36 sealed outer casing can only be used with an inner cable with a diameter of 1.1 mm.



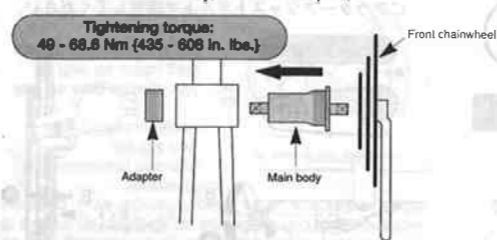
- The 1.2 mm diameter cable cannot be used.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.
- For any questions regarding methods of installation, adjustment, maintenance or operation, please contact a professional bicycle dealer.

SHIMANO

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Please note: specifications are subject to change for improvement without notice. (English)
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Installation of the bottom bracket

Install using the special tool TL-UN73. First install the main body, then the adapter.

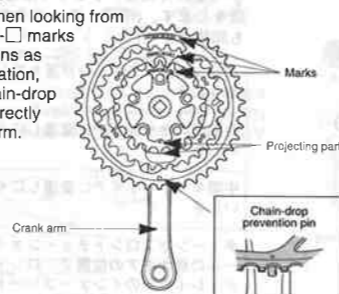


Installation of the chainrings

Be sure to use the following combination for the front chainwheel's tooth configuration.

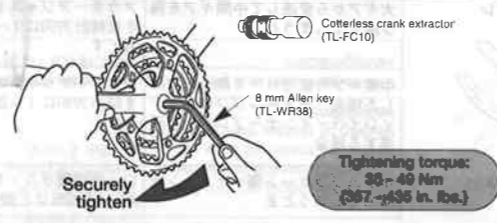
J 42-32-22 (44)

Position so that, when looking from the rear side, the J-□ marks come to the positions as shown in the illustration, and so that the chain-drop prevention pin is directly behind the crank arm.



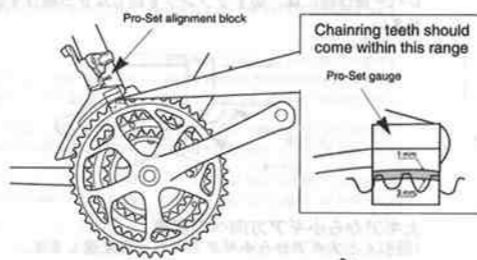
The features of the SIS will not be obtained if the chainrings are installed in the incorrect position, or if a chainring with a mark other than J-□ is being combined. Therefore, be sure to install them in the correct position.

Installation of the front chainwheel



Installation to the frame

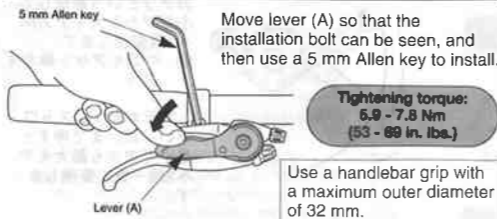
1. Adjust and then install as shown in the illustration. Do not remove the Pro-Set alignment block at this time.



2. The level section of the chain guide outer plate should be directly above and parallel to the largest chainring.

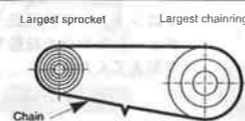
3. Secure using a 5 mm Allen key.

Installation of the lever



Chain length

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

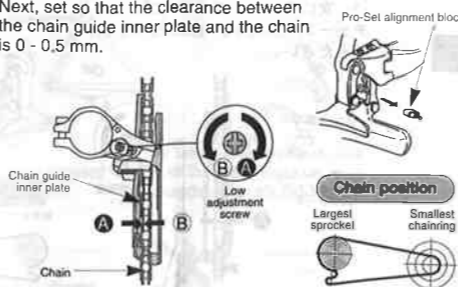


SIS adjustment

Be sure to follow the sequence described below.

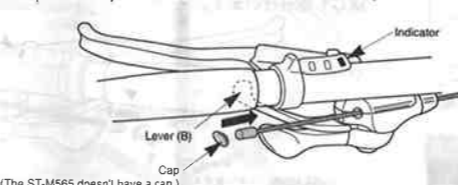
1. Low adjustment

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

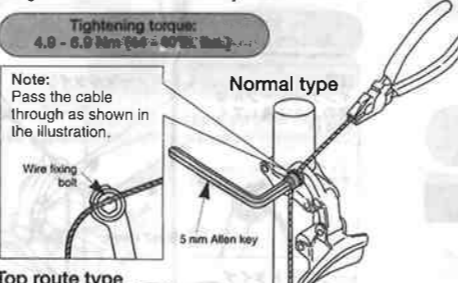


2. Connection and securing of cable

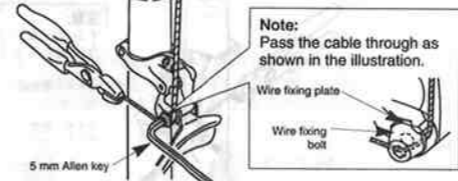
Move lever (B). After checking on the indicator that the lever is at position 1, install and secure the inner cable.



While firmly pulling the inner cable, secure by tightening the fixing bolt with a 5 mm Allen key.

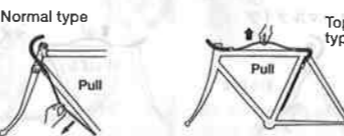


Top route type



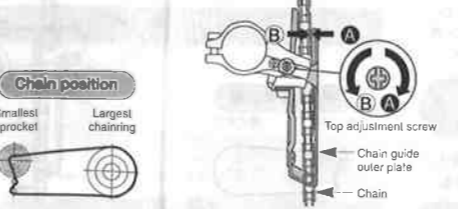
3. Adjustment of cable tension

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



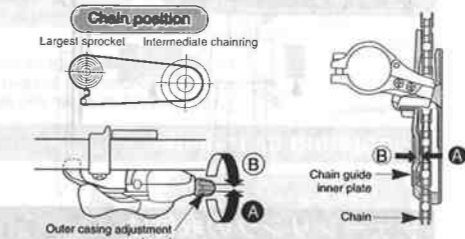
4. Top adjustment

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



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.



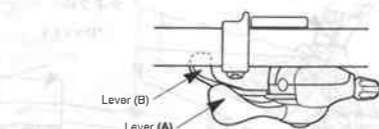
Troubleshooting chart

After completion of steps 1 - 5, 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 chain is shifted to the largest sprocket and 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).

Gear shifting operation

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.



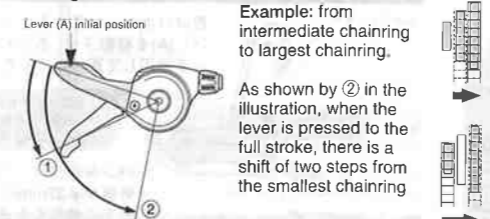
To shift from a large chainring to a smaller chainring

When lever (B) is pulled once, there is a shift of one step from a large chainring to a smaller chainring.



To shift from a small chainring to a larger chainring

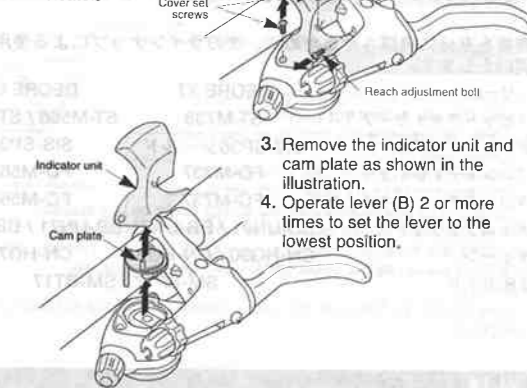
As shown by ① in the illustration, when the lever is pressed to the mid-point of a full stroke, there is a clicking sound and a shift of one step from a small chainring to the next larger chainring.



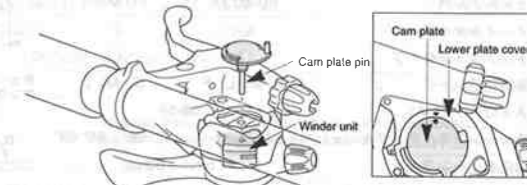
Assembly and replacement of the indicator

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

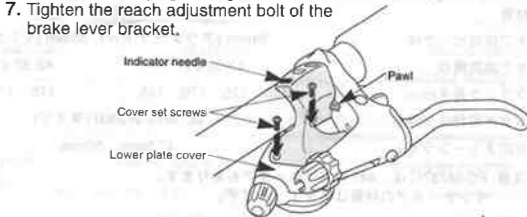
- Remove the reach adjustment bolt of the brake lever bracket.
- Remove the two cover set screws which are securing the indicator.



- Remove the indicator unit and cam plate as shown in the illustration.
- Operate lever (B) 2 or more times to set the lever to the lowest position.



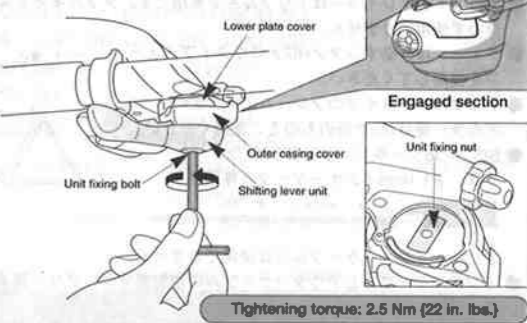
- After checking that the indicator needle is at the right edge, place the indicator unit so that it is aligned with the lower plate cover and the pawl of the brake bracket as shown in the illustration, and then secure it by tightening the two cover set screws.



Removal, replacement and assembly of the shifting lever unit

Disassembly and reassembly should only be carried out when replacing the shifting lever unit.

- Loosen the cable fixing nut of the front derailleur, and then pull the inner cable out of the shifting lever unit.
- After removing the outer casing adjustment barrel of the shifting lever, carry out steps 1. to 3. of "Assembly and replacement of the indicator."
- Remove the unit fixing bolt while pushing the unit fixing nut, and then remove the shifting lever unit while being careful not to disengage the outer casing cover and the lower plate cover.



- To assemble, align the shifting lever unit with the brake lever bracket, and then secure the shifting lever unit with the unit fixing bolt while being careful not to disengage the outer casing cover and the lower plate cover.
- After carrying out steps 4. to 7. of "Assembly and replacement of the indicator," install the outer casing adjustment barrel of the shifting lever.