



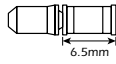
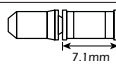
FD-C810

Front derailleur (with computer unit)

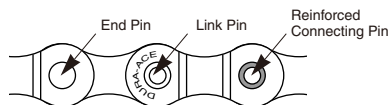
General Safety Information

⚠ WARNING

- Use neutral detergent to clean the chain. Do not use alkali-based or acid based detergent such as rust cleaners as it may result in damage and/or failure of the chain.
- Use the reinforced connecting pin only for connecting the narrow type of chain.
- There are two different types of reinforced connecting pins available. Be sure to check the table below before selecting which pin to use. If connecting pins other than reinforced connecting pins are used, or if a reinforced connecting pin or tool which is not suitable for the type of chain is used, sufficient connection force may not be obtained, which could cause the chain to break or fall off.

Chain	Reinforced connecting pin	Chain tool
9-speed super narrow chain such as CN-7701 / CN-HG93	 Silver 6.5mm	TL-CN31/TL-CN22
8-/7-/6-speed narrow chain such as CN-HG50 / CN-IG51	 Black 7.1mm	TL-CN31/TL-CN22 and TL-CN30/TL-CN21

- If it is necessary to adjust the length of the chain due to a change in the number of sprocket teeth, make the cut at some other place than the place where the chain has been joined using a reinforced connecting pin or an end pin. The chain will be damaged if it is cut at a place where it has been joined with a reinforced connecting pin or an end pin.



- 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 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 injury to the rider.
We strongly recommend only using genuine Shimano replacement parts.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

- Be sure to use a 9-speed super narrow chain.
- In addition, if pedaling performance does not feel normal, check this once more.
- Check that there is no looseness in any joints or connections before riding the bicycle. (BB-FC, FC-PD)
- Do not wash the bottom bracket with high-pressure jets of water.
- If you feel any looseness in the bottom bracket axle, the bottom bracket should be replaced.
- If gear shifting operations do not feel smooth, wash the derailleur and lubricate all moving parts.
- If the amount of looseness in the links is so great that adjustment is not possible, you should replace the derailleur.
- Apply grease to the bottom bracket before installing it.
- 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.
- If the chain keeps coming off the chainrings during use, replace the chainrings and the chain.
- 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.
- Operation of the levers related to gear shifting should be made only when the front chainwheel is turning.
- 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.

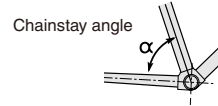
In order to realize the best performance, we recommend that the following combination be used.

Series	NEXAVE C810
Front derailleur (with computer unit)	FD-C810
Manual shift switches	SW-C810
FLIGHT DECK (cycle computer)	SC-C810
Electronic wire cable	EW-C810
Front chainwheel	FC-C810
Bottom bracket	BB-UN25-K (130 mm)
Chain	CN-HG73
Freehub (Hub dynamo)	FH-C810 / FH-C811

Specifications

Front Derailleur

Model number	FD-C810	Chainstay angle (α)	63° - 69°
Front chainwheel tooth difference	22T	Applicable front chainwheel	FC-C810
Min. difference between top and intermediate	12T		



Chainwheel

Model number	FC-C810
Chainwheel tooth combination	46T - 34T - 24T
Bolt circle diameter	100 mm / 64 mm
Crank arm length	170 mm / 175 mm

Bottom Bracket

Type	Chain line	Shell width	Spindle length	Thread dimensions
Triple	50 mm	68 mm	130 mm	BC1.37 X 24 T.P.I.

Installation of the Front Derailleur, Bottom Bracket and Front Chainwheel

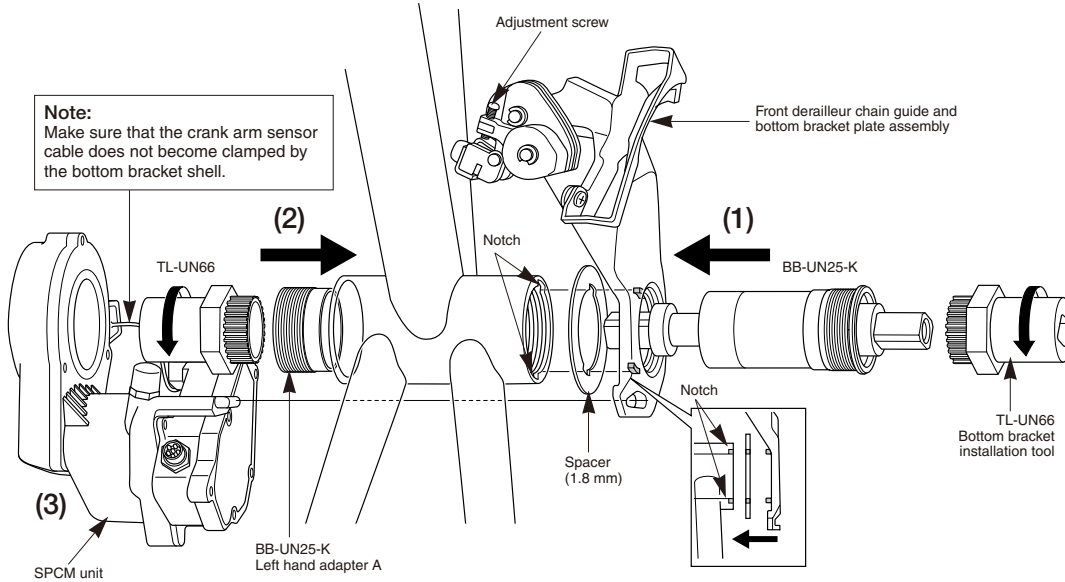
1. Align the front derailleur chain guide, the bottom bracket plate assembly and a 1.8 mm thick spacer with the notch on the right end of the bottom bracket shell, and screw them onto the right end of the bottom bracket.

2. Screw left hand adapter A onto the left end of the bottom bracket shell to secure the bottom bracket.

Tightening torque :
50 - 70 N·m {435 - 608 in. lbs.}

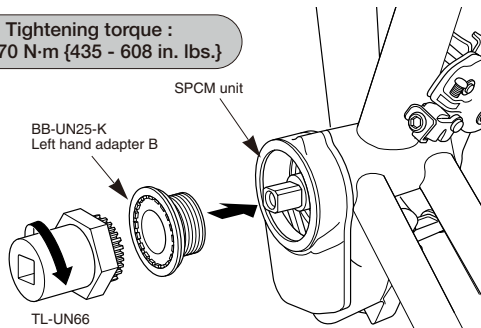
Tightening torque :
50 - 70 N·m {435 - 608 in. lbs.}

* If the chaincase stay is already attached, the spacer is not needed.



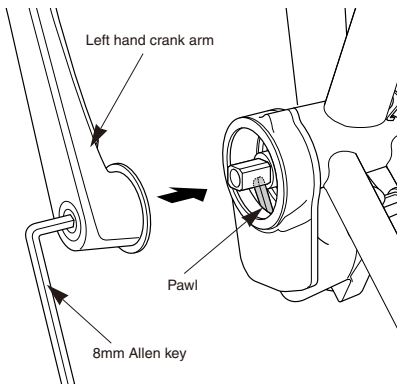
3. Screw left hand adapter B onto the left end of the bottom bracket shell to secure the SPCM unit.

Tightening torque :
50 - 70 N·m {435 - 608 in. lbs.}



4. Install the left hand crank arm. At this time, push the pawl in if it is protruding so that it is not clamped by the left hand crank arm.

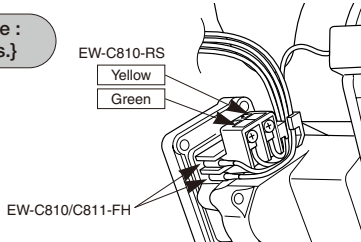
Tightening torque :
35 - 50 N·m {305 - 435 in. lbs.}



5. Install FH-C810/C811 (Hub dynamo), CS-LG60 (Cassette sprocket), SW-C810 (Shift switch), SC-C810 (FLIGHT DECK) and RD-C810. Then, install the chain. Shifting adjustment is possible without any suspension.

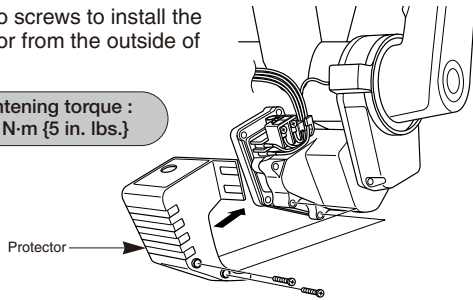
6. Connect the cable (EW-C810/C811-FH) from dynamo and one (EW-C810-RS) from rear suspension to the cable terminal.
In the case of EW-C810-RS, be careful not to connect opposite cables, otherwise the function (hard/soft) will be opposite.

Tightening torque :
0.6 N·m {5 in. lbs.}

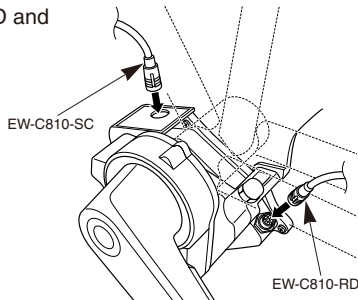


7. Use two screws to install the protector from the outside of wiring.

Tightening torque :
0.6 N·m {5 in. lbs.}



8. Insert EW-C810-RD and EW-C810-SC.

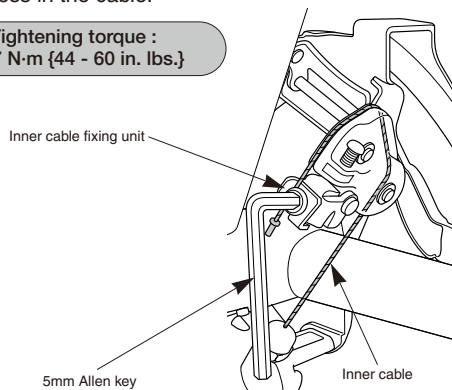


9. After moving the crank, microcomputer will start and turn on the light on the display (SC-C810).
Change the shifting mode to manual-mode.

10. Set gear display mode on FLIGHT DECK display.
Switch the front gear position until showing LOW on the display. If it shows different position, shift to LOW by using the manual shifting.

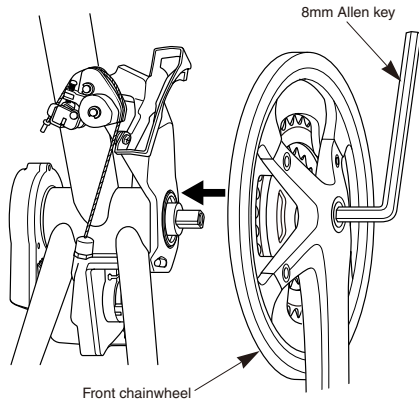
11. With the front derailleur at the low position, gently pull the inner cable that is protruding from the SPCM to secure it to the inner cable fixing unit so that there is no looseness in the cable.

Tightening torque :
5 - 7 N·m {44 - 60 in. lbs.}

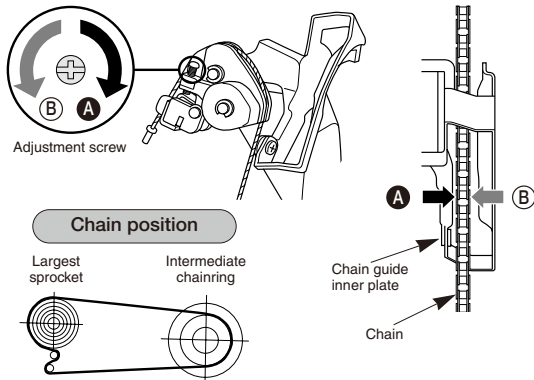


12. Install the right hand chainwheel.

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



13. Operate the shifting levers to set the chain to the middle position at the front and the low position at the rear. In this pattern, tighten the adjustment screw so that the chain guide inner plate and the chain is 0 - 0.5 mm.



14. Move the chain to all positions and check that gear shifting is smooth with no noise produced and without the chain coming off.

This service instruction explains how to use and maintain the Shimano bicycle parts which have been used on your new bicycle.
For any questions regarding your bicycle or other matters which are not related to Shimano parts, please contact the place of purchase or the bicycle manufacturer.

SHIMANO

SHIMANO AMERICAN CORPORATION
One Holland, Irvine, California 92618, U.S.A. Phone: +1-949-951-5003

SHIMANO EUROPE HOLDING B.V.
Industrieweg 24, 8071 CT Nunspeet, The Netherlands Phone: +31-341-272222

SHIMANO INC.
3-77 Oimatsu-cho, Sakai, Osaka 590-8577, Japan

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