



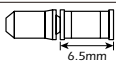
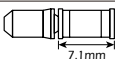
Front Drive System

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

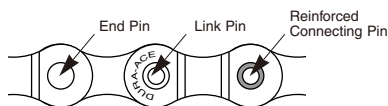
General Safety Information

⚠ 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 pin 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	TL-CN31 / TL-CN22
8- / 7- / 6-speed narrow chain such as CN-HG50 / CN-IG51	 Black	TL-CN31 / TL-CN22 and TL-CN30 / TL-CN21

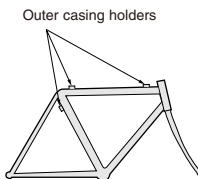
- If it is necessary to adjust the length of the chain due to a change in the number of sprocket teeth, make the cut at some other place than the place where the chain has been joined using a reinforced connecting pin or an end pin. The chain will be damaged if it is cut at a place where it has been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



- Obtain, read and carefully service instructions when installing parts. A loose, worn, or damaged parts may cause injury to the rider.
- We strongly recommend that only genuine Shimano replacement parts be used.
- Keep these Technical Service Instructions in a safe place.

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.
- The SC-C050 speedmeter, SC-C051 odometer and SC-C052 clock and stopwatch are available as separate items. Please ask your bicycle dealer for further details.
- 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.

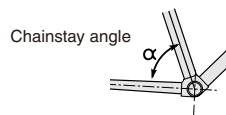
Series		Altus	
Gears	Right	SIS 8-gears	SIS 7-gears
	Left	SIS 3-gears	SIS 3-gears
REVOSHIFT		SB-C055A-L	SB-C055A-L
Outer casing		SIS	SIS
Front derailleur		FD-CT92-E	FD-CT92-E
Front chainwheel		FC-C201	FC-CT92
Bottom bracket		BB-UN25-E	BB-UN25-E
Chain		CN-HG50 / CN-UG50	CN-HG50 / CN-UG50
Bottom bracket cable guide		SM-SP18 / SM-BT18	SM-SP18 / SM-BT18

Specifications

Front Deraillleur

Model number	FD-CT92-E		
Applicable bottom bracket	BB-UN25-E		
Applicable front chainwheel	FC-CT92		
Applicable to both normal type and top route type	○		
Top gear tooth	42T		
Front chainwheel tooth difference	18T		
Min. difference between top and intermediate	8T		
Front derailleur installation band diameter	S, M	L	S, M
Chainstay angle (α)	66° - 69°	66° - 69°	63° - 66°
Applicable chain line	47.5 mm, 50 mm	50 mm	47.5 mm, 50 mm

Installation band diameters:
S (28,6 mm), M (31,8 mm), L (34,9 mm)
(Use the adapter for S and M sizes.)



Bottom Bracket

Model number	BB-UN25-E	
Stamped marking	YL117 mm	ZL122 mm
Spindle length	117 mm	122 mm
Chain line	47.5 mm	50.0 mm
Applicable front chainwheel	FC-C201	FC-CT92
Thread dimensions	BC 1.37 X 24 T.P.I. (68 mm) M36 X 24 T.P.I. (70 mm)	BC 1.37 X 24 T.P.I. (73 mm)

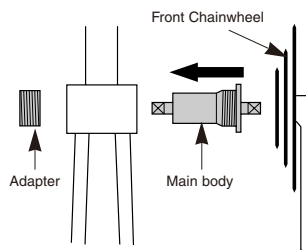
Chainwheel

Model number	FC-C201 / FC-CT92
Chainwheel tooth combination	42-34-24T
Crank arm length	170 mm
Pedal thread dimensions	BC 9/16" x 20 T.P.I.

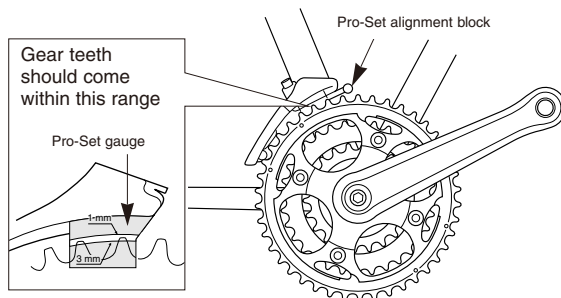
Installation of the Front Derailleur, Bottom Bracket and Front Chainwheel

Install using the TL-UN74-S special tool. First install the main body, then the adapter. After this, use an 8 mm Allen key to install the front chainwheel.

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

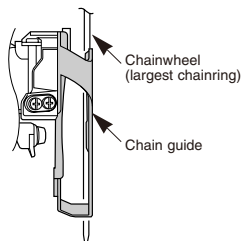


Adjust and then install the front derailleur as shown in the illustration. Do not remove the Pro-Set alignment block at this time.

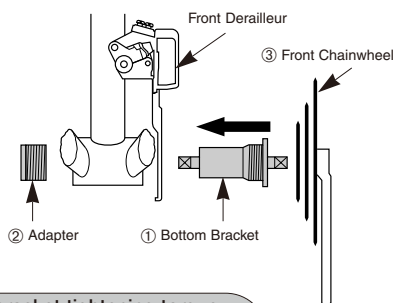


The level section of the chain guide outer plate should be directly above and parallel to the largest chainring. Secure using a 5 mm Allen key.

Tightening torque :
5 - 7 Nm {44 - 60 in. lbs.}



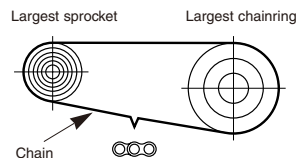
Use the special tools (TL-UN65 and TL-UN74-S) to install the bottom bracket ① and the front derailleur so that they face as shown in the illustration. Install the adapter ②, and then use the cotterless crank extractor (TL-FC10) to install the front chainwheel.



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

Chain length

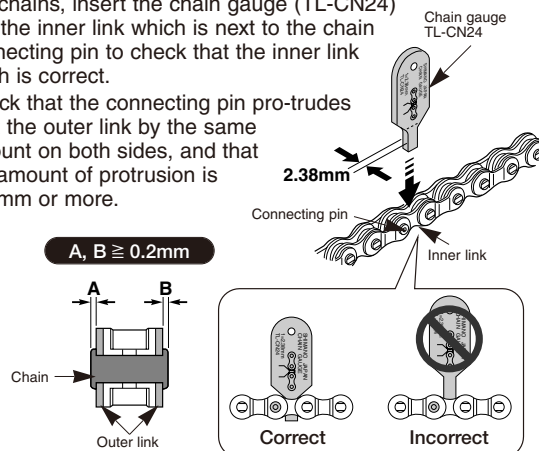
Add 2 links (with the chain on both the largest sprocket and the largest chainring)



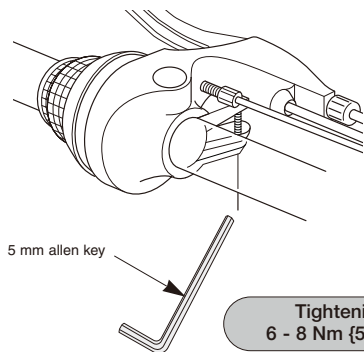
Checking the chain connection

For chains, insert the chain gauge (TL-CN24) into the inner link which is next to the chain connecting pin to check that the inner link width is correct.

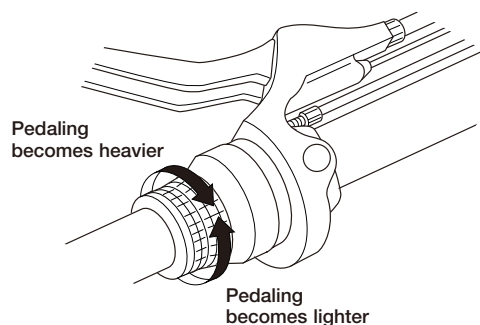
Check that the connecting pin protrudes past the outer link by the same amount on both sides, and that the amount of protrusion is 0.2 mm or more.



Mounting the shifting lever



Gear shifting operation



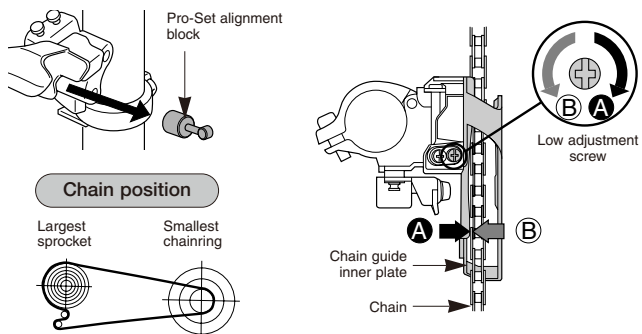
SIS adjustment

Be sure to follow the sequence described below.

1. Low adjustment

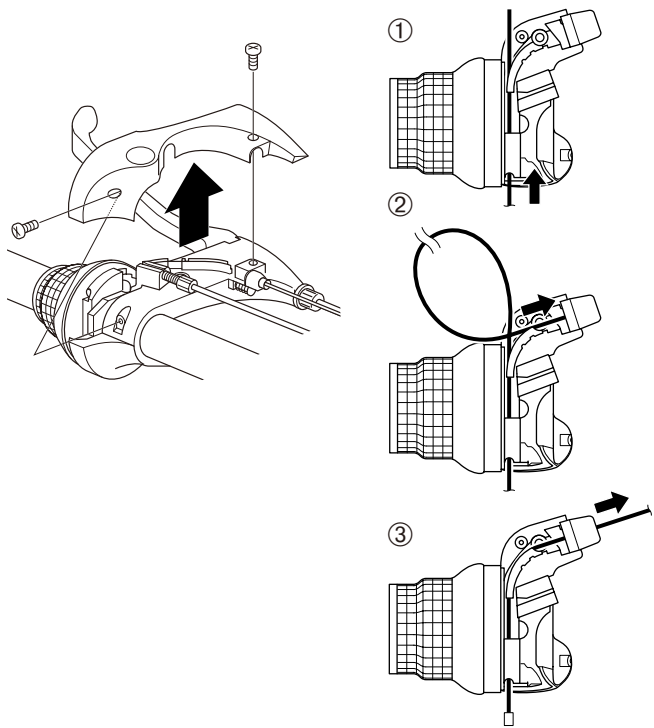
First remove the Pro-Set alignment block .

Next, set so that the clearance between the chain guide inner plate and the chain is 0-0.5 mm.



2. Securing the inner cable

Replace the inner cable by carrying out steps ① to ③ as shown in the illustrations.



Inserting the inner cable

Insert the inner cable into the outer casing from the end with the marking on it. Apply grease from the end with the marking in order to maintain cable operating efficiency.

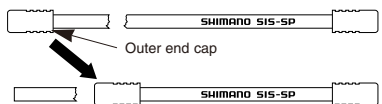


Cutting the outer casing

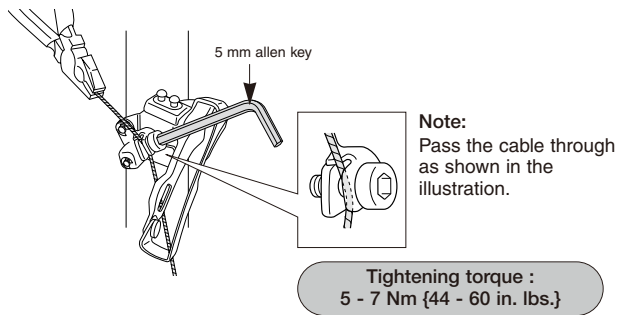
When cutting the outer casing, cut the opposite end to the end with the marking. After cutting the outer casing, make the end round so that the inside of the hole has a uniform diameter.



Attach the same outer end cap to the cut end of the outer casing.

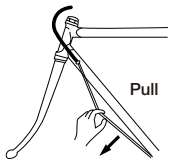


Cut off the excess length of inner cable and then install the inner end cap.

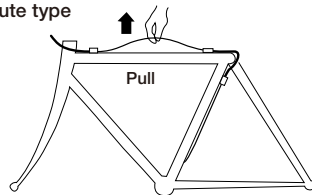


After taking up the initial slack in the cable, re-secure to the front derailleur as shown in the illustration.

Normal type

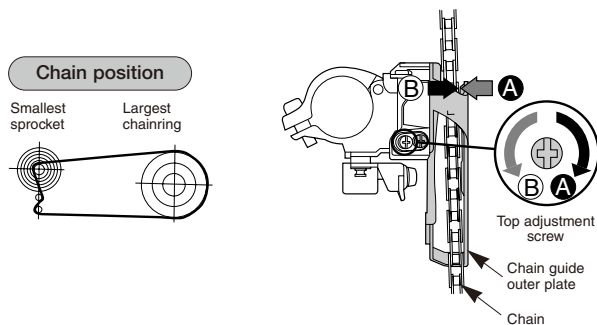


Top route type



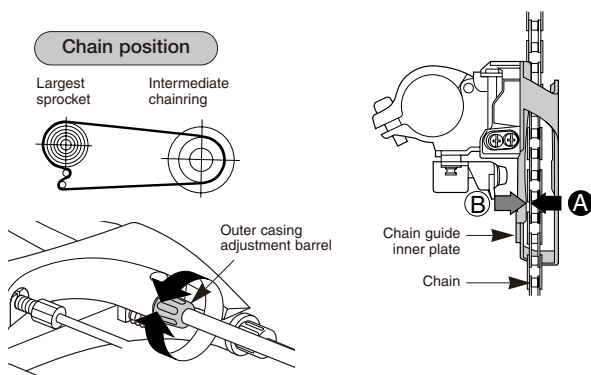
3. Top adjustment

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



4. 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.



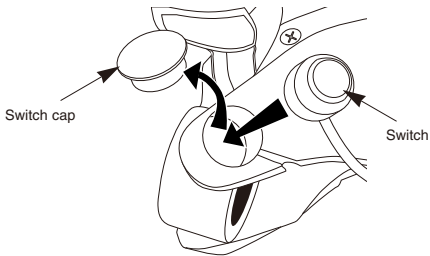
5. Troubleshooting chart

After completion of steps 1 - 4, 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 rear sprocket is shifted to the largest sprocket when the chainwheel is 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).

Installation of the switch

Remove the switch cap and install the switch as shown in the illustration.



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.

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