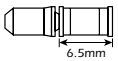
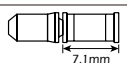
Capreo Drive System

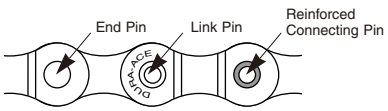
General Safety Information

⚠ 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.



- 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 you may fall off the bicycle.
- 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.
- Check that the wheels are fastened securely before riding the bicycle. If the wheels are loose in any way, they may come off the bicycle and serious injury may result.
- 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.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

⚠ CAUTION

- The components of the F700 Capreo drive system are designed for use with collapsible-type bicycles with small wheel diameters that are intended for riding on sealed surfaces.
  If they are used with bicycles that are to be ridden on unsealed surfaces or bicycles with wheels that are larger than 20 inches, the components may become bent or damaged.

Note

- 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.
- You should periodically clean the derailleur and lubricate all moving parts (mechanism and pulleys).
- If gear shifting adjustment cannot be carried out, check the degree of parallelism at the rear end of the bicycle. Also check if the cable is lubricated and if the outer casing is too long or too short.
- If you hear abnormal noise as a result of looseness in a pulley, you should replace the pulley.
- If the wheel becomes stiff and difficult to turn, you should lubricate it with grease.

- Do not apply any grease to the inside of the hub, otherwise the grease will come out again.
- You should periodically wash the sprockets in a neutral detergent and then lubricate them again. In addition, cleaning the chain with neutral detergent and lubricating it can be a effective way of extending the useful life of the sprockets and the chain.
- If the chain keeps coming off the sprockets during use, replace the sprockets and the chain.
- 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.
- 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	**Capreo**
Shifting lever	**SL-F700-R**
Outer casing	**SP40 sealed**
Rear derailleur	**RD-F700**
Type	**SS / SGS**
Front chainwheel	**FC-F700**
Bottom bracket	**BB-UN40 / BB-UN25**
Freehub	**FH-F700**
Gears	**9**
Cassette sprocket	**CS-HG70-S**
Chain	**CN-HG73**

Specifications

Rear Derailleur

Model number	RD-F700	
Type	SS	SGS
Gears	9	9
Total capacity	17 teeth or less	17 teeth or less
Largest sprocket	26T	26T
Smallest sprocket	9T	9T
Applicable front chainwheel (chainring tooth configuration)	FC-F700 (45T)	

Cassette sprocket tooth combination

Type	Gears	Group name	Tooth combination
HG	9	**bc**	9, 10, 11, 13, 15, 17, 20, 23, 26T

Front Chainwheel

Model number	FC-F700
Chainwheel teeth	45T
Bolt circle diameter	130 mm
Crank arm length	165, 170 mm

Bottom Bracket

Model number	BB-UN40 / BB-UN25			
Spindle length	MM110	LL113	YL117	117.5
Chain line	46mm	48.5mm	50mm	52.5mm + t
Shell width (Thread dimensions)	68 mm (1.37 X 24 T.P.I.) 70 mm (M36 X 24 T.P.I.)			

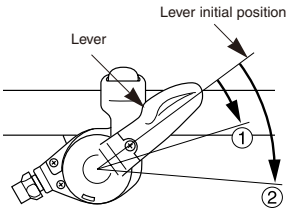
t : Chain case thickness

Gear shifting operation

Both lever and button return to the initial lever or button position when they are released after shifting. When operating lever or button, always be sure to turn the crank arm at the same time.

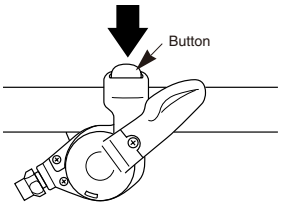
To shift from a smaller sprocket to a larger sprocket [Lever]

To shift one step only, press lever to the (1) position. To shift two steps at one time, press to the (2) position. A maximum two-step shift can be made in this manner.



To shift from a larger sprocket to a smaller sprocket [Button]

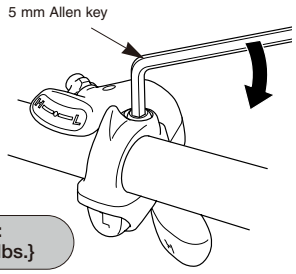
Press button once and then release it to shift one step from a larger to a smaller sprocket.



Installation of the lever

Use a handlebar grip with a maximum outer diameter of 32 mm.

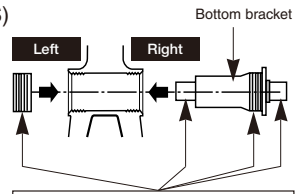
Install the brake lever in a position where it will not obstruct brake operation. Do not use in a combination which causes brake operation to be obstructed.



Tightening torque:
6 - 8 N·m {53 - 69 in. lbs.}

Installation of the Bottom Bracket

Use the special tool (TL-UN74-S) to install the bottom bracket. First install the main body, then the adapter.

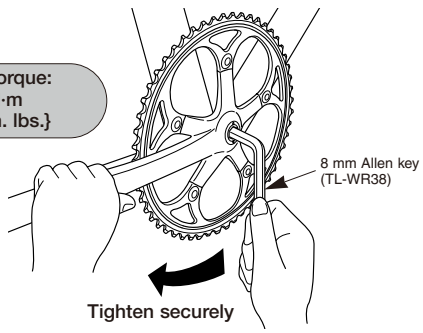


Adapter/bottom bracket tightening torque:
50 - 70 N·m
{435 - 608 in. lbs.}

Apply grease to the bottom bracket before installing it.

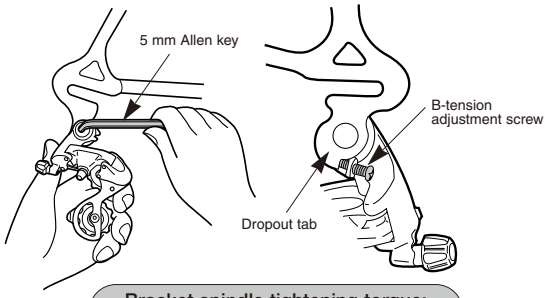
Installation of the front chainwheel

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



Installation of the rear derailleur

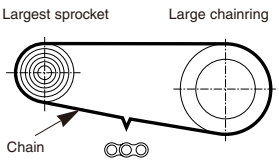
When installing, be careful that deformation is not caused by the B-tension adjustment screw coming into contact with the dropout tab.



Bracket spindle tightening torque:
8 - 10 N·m {70 - 86 in. lbs.}

Chain length

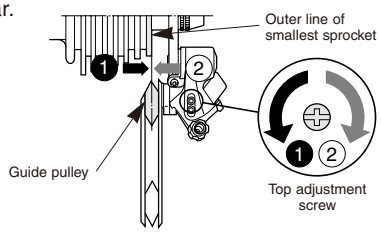
Add 2 links (with the chain on both the largest sprocket and the largest chainring)



Stroke adjustment and cable securing

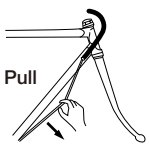
1. Top adjustment

Turn the top adjustment screw to adjust so that the guide pulley is below the outer line of the smallest sprocket when looking from the rear.



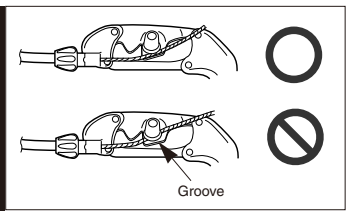
2. Connection and securing of the cable

Connect the cable to the rear derailleur and, after taking up the initial slack in the cable, re-secure to the rear derailleur as shown in the illustration.



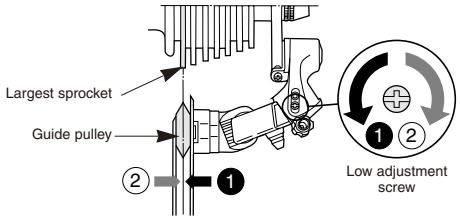
Tightening torque:
5 - 7 N·m {44 - 60 in. lbs.}

Note:
Be sure that the cable is securely in the groove.



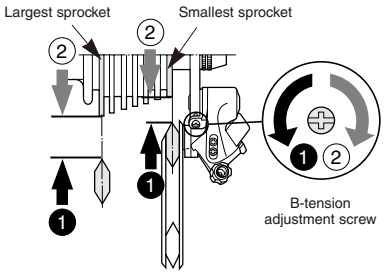
3. Low adjustment

Turn the low adjustment screw so that the guide pulley moves to a position directly in line with the largest sprocket.



4. How to use the B-tension adjustment screw

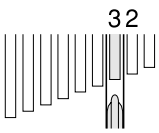
Mount the chain on the smallest chainring and the largest sprocket, and turn the crank arm backward. Then turn the B-tension adjustment screw to adjust the guide pulley as close to the sprocket as possible but not so close that it touches. Next, set the chain to the smallest sprocket and repeat the above to make sure that the pulley does not touch the sprocket.



5. SIS Adjustment

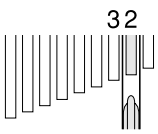
Operate the shifting lever several times to move the chain to the 2nd sprocket. Then, while pressing the lever just enough to take up the play in the lever, turn the crank arm.

When shifting to 3rd

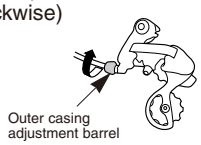


Tighten the outer cable adjusting barrel until the chain returns to the 2nd sprocket. (clockwise)

When no sound at all is heard

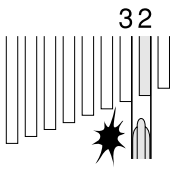


Loosen the outer casing adjustment barrel until the chain touches the 3rd sprocket and makes noise. (counter clockwise)



Best setting

The best setting is when the shifting lever is operated just enough to take up the play and the chain touches the 3rd sprocket and makes noise.



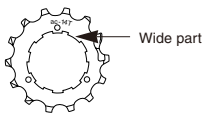
* Return the lever to its original position (the position where the lever is at the 2nd sprocket setting and it has been released) and then turn the crank arm clockwise. If the chain is touching the 3rd sprocket and making noise, turn the outer casing adjustment barrel clockwise slightly to tighten it until the noise stops and the chain runs smoothly.

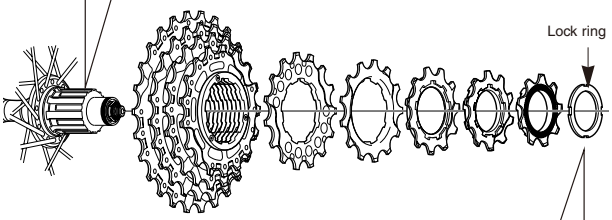
For the best SIS performance, periodically lubricate all power-transmission parts.

Installation of the sprockets

For each sprocket, the surface that has the group mark should face outward and be positioned so that the wider part of each sprocket and the A part (where the groove width is wide) of the freewheel body are aligned.

The groove is wide at one place only.

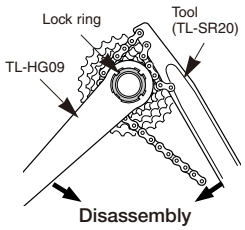




- For installation of the sprockets, use the special tool (TL-HG09) to tighten the lock ring.

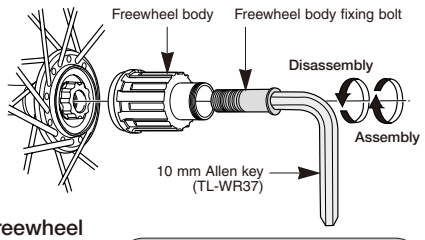
Tightening torque:
30 - 50 N·m {261 - 434 in. lbs.}

- To replace the sprockets, use the special tool (TL-HG09) and TL-SR20 to remove the lock ring.



Replacement of the freewheel body

After removing the hub axle, remove the freewheel body fixing bolt (inside the freewheel body), and then replace the freewheel body.

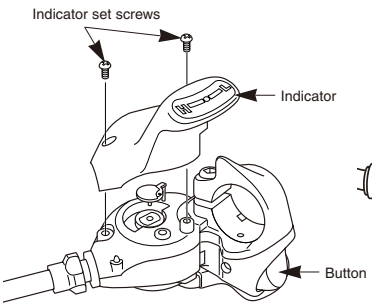


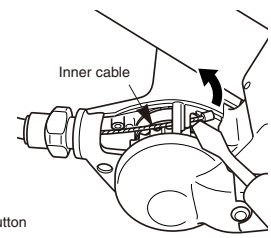
Note:
Do not attempt to disassemble the freewheel body, because it may result in a malfunction.

Tightening torque :
35 - 50 N·m {305 - 434 in. lbs.}

Replacing the indicator / Replacing the inner cable

Press button to set the lever to the highest position.





Tightening torque:
0.4 N·m {4 in. lbs.}