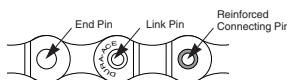


General Safety Information

WARNING

- 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.
- 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 | 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.
- 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.
- 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

- 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 lubricant to the inside of the hub, otherwise the grease will come out.
- 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 an 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.
- Always be sure to use the sprocket set bearing the same group marks. Never use in combination with a sprocket bearing a different group mark.
- Use a frame with internal cable routing is strongly discouraged as it has tendencies to impair the SIS shifting function due to its high cable resistance.
- 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.
- For smooth operation, use the specified outer casing and the bottom bracket cable guide.
- The SC-C050 speedometer, SC-C051 odometer and SC-C052 clock and stopwatch are available as separate items. Please ask your bicycle dealer for further details.
- 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.



Technical Service Instructions

SI-R917B

Rear Drive System

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

| Series | Altus | Tourney 40 | Tourney |
|----------------------------------------|--------------------------|----------------------|--------------------|
| CI-DECK | ID-C050-8R | ID-C050-7R | ID-C050-6R |
| REVOSHIFT | SB-C055A-8R | SB-C055A-7R | SB-C055-6R |
| Outer casing | SIS | SIS | SIS |
| Rear derailleur | RD-CT95 | RD-TX70/50/30 | RD-MR40-7 |
| Type | Smart Cage | Smart Cage | MGS |
| Freehub | FH-CT91 | — | — |
| Gears | 8 | 7 | 6 |
| Cassette sprocket / Multiple freewheel | CS-HG50-8I CS-HG40-8I | MF-HG40-7 MF-TZ07 | MF-HG22 MF-TZ06 |
| Chain | CN-HG50 / CN-UG50 | | |
| Bottom bracket cable guide | SM-SP18 / SM-BT18 | | |

Specifications

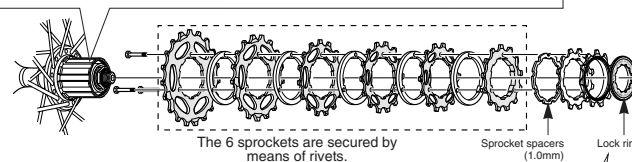
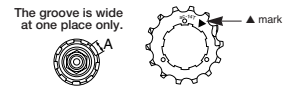
| Rear Derailleur | RD-CT95 | RD-MR40-7 | RD-TX70 / 50 / 30 |
|------------------------------------------------------------|---------------------|----------------------|--------------------------------------------|
| Model number | RD-CT95 | RD-MR40-7 | RD-TX70 / 50 / 30 |
| Type | Smart cage | MGS | Smart cage |
| Total capacity | 43T | 40T | 43T |
| Largest sprocket | 34T | 34T | 28-34T |
| Smallest sprocket | 11T | 13T | 11T |
| Front chainwheel tooth difference | 20T | 20T | 20T |
| Applicable front chainwheel (chaining tooth configuration) | FC-CT92 (42-34-24T) | FC-TY33A (48-38-28T) | FC-TX70 (42-34-24T) FC-TX71 (48-38-28T) |

Cassette sprocket / multiple freewheel tooth combination

| Model number | Gears | Group name | Tooth combination |
|--------------|-------|------------|---------------------------------|
| CS-HG50-8I | 8 | an | 11, 13, 15, 17, 20, 23, 26, 30T |
| CS-HG40-8I | 8 | ao | 11, 13, 15, 17, 20, 23, 26, 34T |
| MF-HG40-7 | 7 | az | 14, 16, 18, 20, 22, 24, 34T |
| MF-HG37 | 7 | ax | 14, 16, 18, 20, 22, 24, 28T |
| MF-TZ07 | 7 | dy | 14, 16, 18, 20, 22, 24, 28T |
| MF-TZ06 | 6 | bx | 14, 16, 18, 21, 24, 28T |
| MF-HG22 | 6 | Y | 14, 16, 18, 21, 24, 28T |

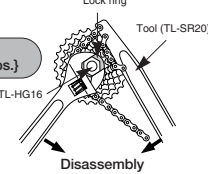
Installation of the sprockets

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



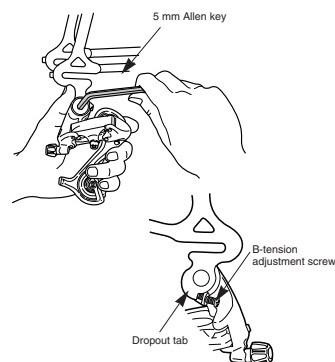
- For installation of the sprockets, use the special tool (TL-HG16) to tighten the lock ring.
- To replace the sprockets, use the special tool (TL-HG16) and TL-SR20 to remove the lock ring.

Tightening torque:
30 - 50 N·m [261 - 434 in. lbs.]



Installation of the rear derailleur

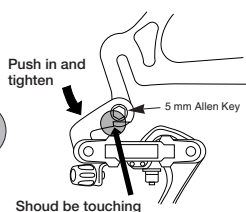
When installing, be careful that deformation is not caused by the B-tension adjustment screw coming into contact with the dropout tab.



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

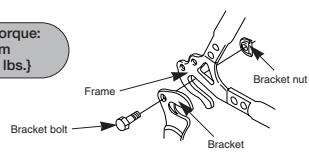
<RD-MR40, RD-TX70 / 50 / 30>

Direct-mount type



Tightening torque:
8 - 10 N·m
[70 - 86 in. lbs.]

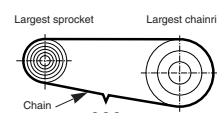
Bracket type



Tightening torque:
3 - 4 N·m
[26 - 34 in. lbs.]

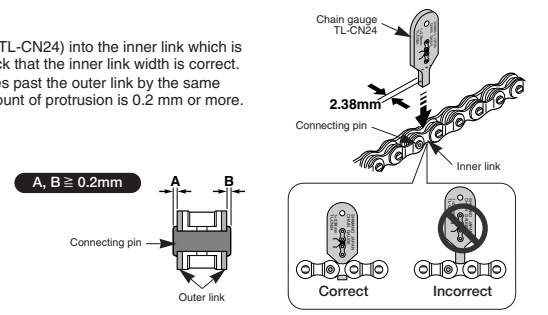
Chain length

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

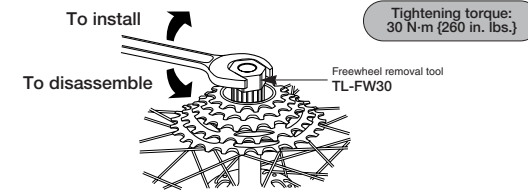


Checking the chain connection

For IG, 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.

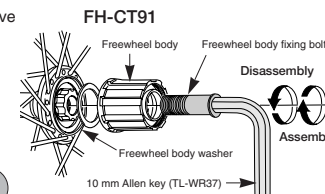


Installation of the freewheel



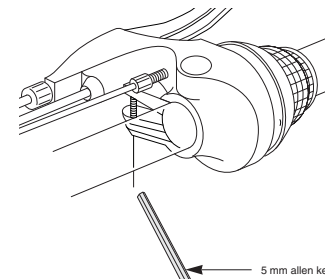
Replacement of the freewheel body

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.]

Mounting the shifting lever

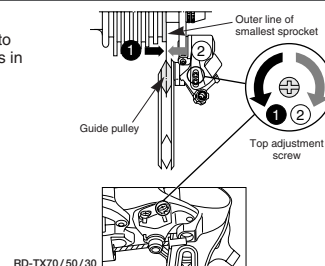


Tightening torque:
6 - 8 N·m [53 - 69 in. lbs.]

Adjustment

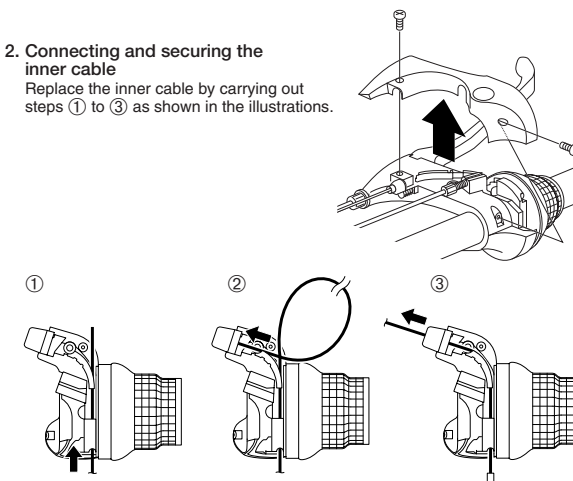
1. Top adjustment

Turn the top adjustment screw to adjust so that the guide pulley is in line with the outer line of the smallest sprocket when looking from the rear. After this, install the chain.



2. Connecting and 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.

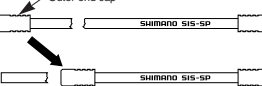


Cutting the outer casing

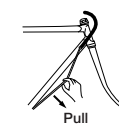
When cutting the outer casing, cut the opposite end to the end with the marking. After cutting the outer casing, make the end round so that the inside of the hole has a uniform diameter.



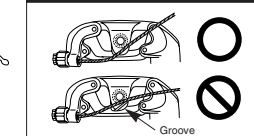
Attach the same outer end cap to the cut end of the outer casing.



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

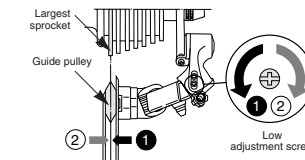


Note: Be sure that the cable is securely in the groove.



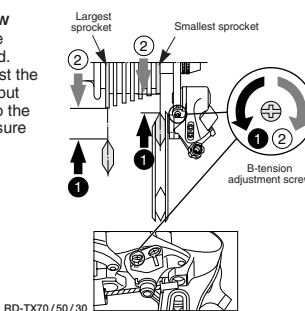
3. Low adjustment

While turning the front chainwheel, operate the lever to shift to the lowest gear. Turn the low adjustment screw so that the guide pulley moves to a position directly in line with the largest sprocket.



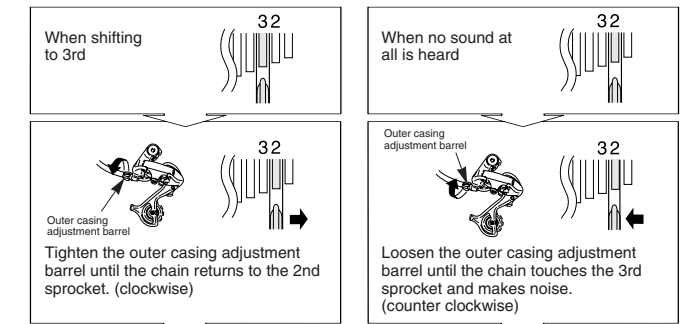
4. How to use the B-tension adjustment screw

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.



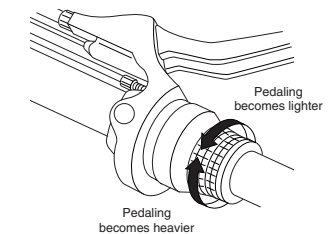
Best setting

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.

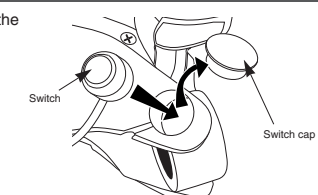
For the best SIS performance, periodically lubricate all power-transmission parts.

Gear shifting operation



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.

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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