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.
- 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.
- Parts are not guaranteed against natural wear or deterioration used, sufficient connection force may not be obtained, which could cause the chain to break or fall off.

- 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.

- 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.

- 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.
- Obtain and read the service instructions carefully prior to installing the parts. If adjustments are not carried out correctly, the chain may come off and this may cause you to fall off the bicycle which could result in serious injury.
- Read these Technical Service Instructions carefully, and keep them in a safe place for later reference.

Note

- Black connecting pins pre-attached to the outer link (supplied only to the OEMs) can be assembled using Shimano chain tools. The assembly method should be the same as using standard reinforced connecting pins.
- If gear shifting operations cannot be carried out smoothly, clean 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.
- For smooth operation, use the specified outer casing and the bottom bracket cable guide.
- Grease the inner cable and the inside of the outer casing before use to ensure that they slide properly.
- 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.
- The tension pulley has a mark which indicates the direction of rotation. The side with the arrow is the front side.
- The end of the outer casing which has the aluminum cap should be at the derailleur side.

Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>SS</th>
<th>GS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total capacity</td>
<td>29 teeth or less</td>
<td>37 teeth or less</td>
</tr>
<tr>
<td>Largest sprocket</td>
<td>27T</td>
<td>27T</td>
</tr>
<tr>
<td>Smallest sprocket</td>
<td>11T</td>
<td>11T</td>
</tr>
<tr>
<td>Front chainwheel</td>
<td>14 teeth or less</td>
<td>22 teeth or less</td>
</tr>
</tbody>
</table>

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.

Specifications

<table>
<thead>
<tr>
<th>Chain length</th>
<th>Smallest sprocket</th>
<th>Largest sprocket</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right angle to the ground</td>
<td>Not OK</td>
<td>OK</td>
</tr>
</tbody>
</table>

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. The best setting is when the chain runs smoothly and making noise, turn the outer casing adjustment barrel clockwise slightly to tighten it until the noise stops and the chain runs smoothly.

Operate lever to change gears, and check that no noise occurs in any of the gear positions.

- 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.

<table>
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