Dealer's Manual



IMPORTANT NOTICE

• This dealer's manual is intended primarily for use by professional bicycle mechanics.

Users who are not professionally trained for bicycle assembly should not attempt to install the components themselves using the dealer's manuals.

If any part of the information on the manual is unclear to you, do not proceed with the installation. Instead, contact your place of purchase or a local bicycle dealer for their assistance.

- Make sure to read all instruction manuals included with the product.
- Do not disassemble or modify the product other than as stated in the information contained in this dealer's manual.
- All dealer's manuals and instruction manuals can be viewed on-line on our website (http://si.shimano.com).
- Please observe the appropriate rules and regulations of the country, state or region in which you conduct your business as a dealer.

For safety, be sure to read this dealer's manual thoroughly before use, and follow it for correct use.

The following instructions must be observed at all times in order to prevent personal injury and physical damage to equipment and surroundings.

The instructions are classified according to the degree of danger or damage which may occur if the product is used incorrectly.



Failure to follow the instructions will result in death or serious injury.



Failure to follow the instructions could result in death or serious injury.

Failure to follow the instructions could cause personal injury or physical damage to equipment and surroundings.

TO ENSURE SAFETY

WARNING

• When installing components, be sure to follow the instructions that are given in the instruction manuals.

It is recommended that you use only genuine Shimano parts. If parts such as bolts and nuts become loose or damaged, the bicycle may suddenly fall over, which may cause serious injury.

In addition, if adjustments are not carried out correctly, problems may occur, and the bicycle may suddenly fall over, which may cause serious injury.

- 💭 Be sure to wear safety glasses or goggles to protect your eyes while performing maintenance tasks such as replacing parts.
- After reading the dealer's manual thoroughly, keep it in a safe place for later reference.

NOTE

Be sure to also inform users of the following:

- Products are not guaranteed against natural wear and deterioration from normal use and aging.
- For maximum performance we highly recommend Shimano lubricants and maintenance products.

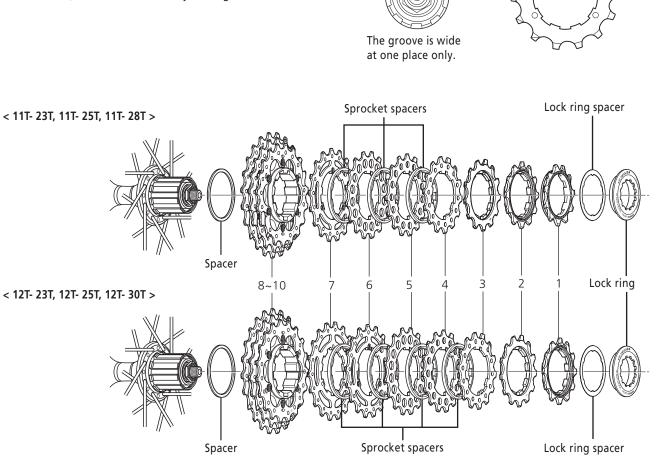
For Installation to the Bicycle, and Maintenance:

- You should periodically wash the chainrings in a neutral detergent. 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.
- Always use the recommended combination of gears.

The actual product may differ from the illustration because this manual is intended chiefly to explain the procedures for using the product.

INSTALLATION

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



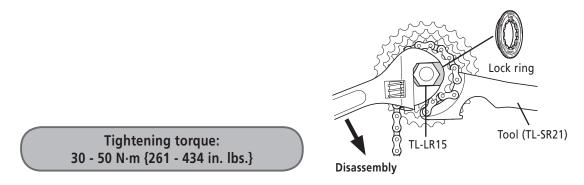
Wide part

aç-

	11-23T			11-25T			11-28T		
Number	Number of teeth	Mark	Spider arm	Number of teeth	Mark	Spider arm	Number of teeth	Mark	Spider arm
10	23	A3		25	C3		28	H3	
9	21	A2	19-23 19-21-23	23	C2	11-25 21-23-25	24	C2	11-28 21-24-28
8	19	A1		21	C1		21	C1	
7	17	17T	-	19	19T3	-	19	19T3	-
6	16	16T	-	17	17T2	-	17	17T2	-
5	15	15T	-	15	15T	-	15	15T	-
4	14	14T	-	14	14T	-	14	14T	-
3	13	13T	-	13	13T	-	13	13T	-
2	12	12T	-	12	12T	-	12	12T	-
1	11	11T	-	11	11T	-	11	11T	-

	12-23T			12-25T			12-30T		
Number	Number of teeth	Mark	Spider arm	Number of teeth	Mark	Spider arm	Number of teeth	Mark	Spider arm
10	23	B3		25	C3		30	J3	
9	21	B2	12-23 19-21-23	23	C2	12-25 21-23-25	27	J2	12-30 24-27-30
8	19	B1		21	C1	-	24	J1	
7	18	18T	-	19	19T	-	21	21T	-
6	17	17T	-	17	17T	-	19	19T3	-
5	16	16T	-	16	16T	-	17	17T2	-
4	15	15T	-	15	15T	-	15	15T	-
3	14	14T	-	14	14T	-	14	14T	-
2	13	13T	-	13	13T	-	13	13T	-
1	12	12T	-	12	12T	-	12	12T	-

- For installation of the HG sprockets, use the special tool (TL-LR15) to tighten the lock ring.
- To replace the HG sprockets, use the special tool (TL-LR15) and TL-SR21 to remove the lock ring.



■ Notes on spacer

Add spacers according to the following table. If using with a special 10-speed freewheel, a spacer is not required.

	Special 10-speed freewheel	Other freewheels			
CS-7900	Unnecessary	Necessary			
CS-6700	Unnecessary	Necessary			
CS-5700	Unnecessary	Necessary			
CS-4600		Unnecessary			
CS-HG81-10		Unnecessary			
CS-6600*		Unnecessary			

*13-25T/14-25T/15-25T



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Please note: specifications are subject to change for improvement without notice. (English) @ Mar. 2012 by Shimano Inc. HTR