

**54t STAR RATCHET UPGRADE MANUAL** 

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This manual contains the instructions for the correct methods required to replace or upgrade the star ratchets from 36t to 54t on the Prime SR1, SR1D, SR2 and SR2D hubs, as well as safety warnings and caution indicators to avoid any hazardous situation.

Please, read before attempting any form of repairs on your Prime hubs. Failure to follow the warnings and instructions may result in serious injury if not followed correctly.

It is always recommended that a trained bicycle mechanic perform any maintance required on the Prime hubs to avoid incorrect installation and prevent injury.

The use of the correct tools is required to perform any tasks on the Prime hubs, the use of incorrect tools may damage the hubs if not correct which can lead to premature failure of the product which may void warranty.



#### WARNING

When assembling or working on the any component from the Prime take care. Please, always wear protective, gloves and goggles, regardless of whether the component is connected to the battery.



#### WARNING

The Prime star ratchet upgrade manual is intended for professional mechanics.

Persons without proffestional training in the assembly of bicycles or components must not handle or install any components on their own.



### WARNING

Next guides show in detail what is required with specifications and associated information to replace the star ratchets in Prime hubs. Assembly and replacement guides are also included along with the tools required for each procedure. Please note that the guide shows reccommendations and procedures and is intended to avoid possible errors in the process that could damage the system.

# TOOLS

The following section goes through the tools required to perform the correct proceedure to disassemble and re-assemble the Prime hubs for upgrading the star ratchet kit from 36t to 54t.

# TOOLS AND CONSUMABLES REQUIRED FOR ASSEMBLY

- Isopropyl Alcohol
- Cleaning Cloth
- Star Ratchet Grease
- Workshop or Latex Gloves
- Protective Eye Wear



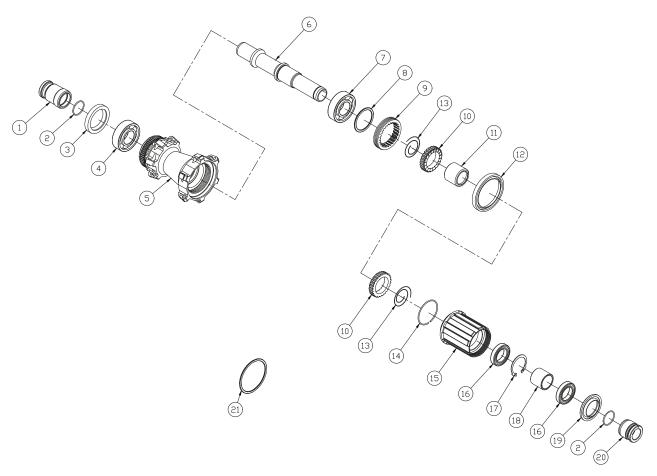
### WARNING

Please note that the use of incorrect tools may cause damage to the hub and will void all warranty. The above tools are recommend by Prime and are proven the correct tools to carry out the star ratchet replacement.



# WARNING

Please note that the below diagram is for illustration purposes only, The hubshell, endcaps and freehub design may differ between models or spec. Diagram is used purely for aiding with showing part names and descriptions that may be used throughout the guide.



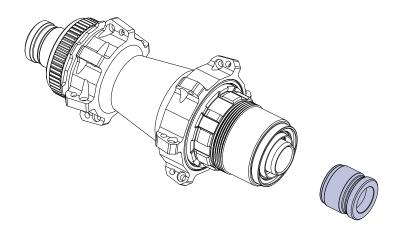
Part #	Description	Quantity
1	Non Drive Side End Cap (Right)	1
2	O-Ring (Pre Fitted in End Caps)	1
3	Bearing Dust Cover	1
4	Non Drive Side Bearing	1
5	Hub Shell	1
6	Axle	1
7	Drive Side Bearing	1
8	Ratchet Washer	1
9	Ratchet Ring	1
10	Star Ratchet	2
11	Star Ratchet Bushing	1
12	Hubshell Seal	1
13	Star Ratchet Spring	2
14	C-Ring (Pre Fitted to Freehub)	1
15	Freehub	1
16	Freehub Bearing	2
17	Bearing Retaining Circlip	1
18	Freehub Bearing Spacer	1
19	Freehub Bearing Dust Cover	1
20	Drive Side End Cap (Left)	1
21	Freehub Spacer (Only Required on HG	1
	Freehubs for use with 10 Speed)	'

# DISASSEMBLY

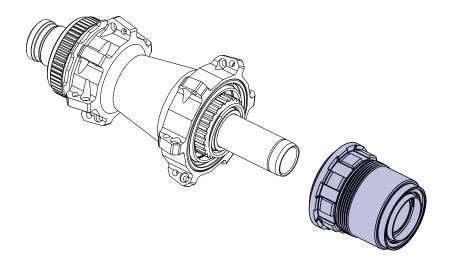
The following steps go through the disassembly of the Prime rear hubs for the purpose of changing the star ratchets, each step should be followed precisely to avoid any error.

The disc rotor and cassette should be removed prior to any work being carried out.

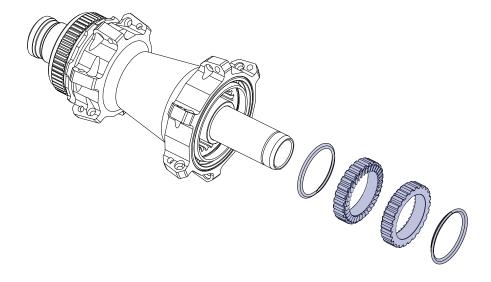
It is advised that through all the steps in the disassembly that parts should be cleaned and laid out in an orderly format to help with re-assembly and to prevent any lose of parts.



1. Remove both non-drive side and drive side end caps.



2. Slide the freehub off the axle and place to one side ready for re-fitment later in the guide. Ensure that the ratchet spring is not seated in the freehub.

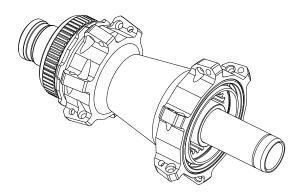


3. Slide off both ratchet springs and 36t star ratchets. These springs and ratchets will not be being used again

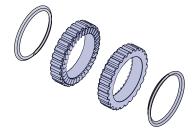
This concludes the main dismantle of the Prime hub for star ratchet replacement, ensure all parts are laid out in an orderly fashion ready for re-assembly later in the guide.

The hub should now be disassembled ready for the replacement/upgrade of the star ratchets. The below illustration shows the break down of the hub in 3 sections, hub body, ratchet system and freehub.

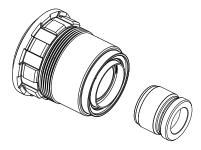
The parts highlighted will be being replaced.



**Hub Body** 



Ratchet System



Freehub



# **ASSEMBLY**

The following steps goe through the assembly and bearing replacement of the Prime rear hubs, each step should be followed precisely to avoid any error.

It is advised that through all the steps in the assembly that parts should be cleaned before re-fitment and that the correct grease should be applied where stated.



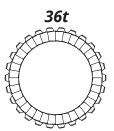
# INFORMATION

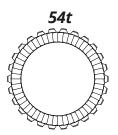
The following steps illustrate the process to replace bearings on a Prime XDR (SRAM) freehub. This is purely for illustration purposes and the steps required to complete the process are the same across all types of Prime freehubs. Different bearing specifications will be required depending on the freehub that is being worked on so please use below chart for guidance.

# WARNING

It is vital that the star ratchets are not mixed together. The 36t and the 54t are not compatible with one another. Ensure that either only 54t ratchets or 36t ratchets are fitted. Image below illustrates the difference between the star ratchets.







### WARNING

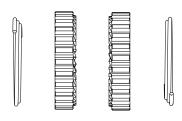
It is vital that the star ratchets and springs are fitted with the correct orientation. If these are fitted incorrectly it may effect the performance of the hub and possible premature failure.

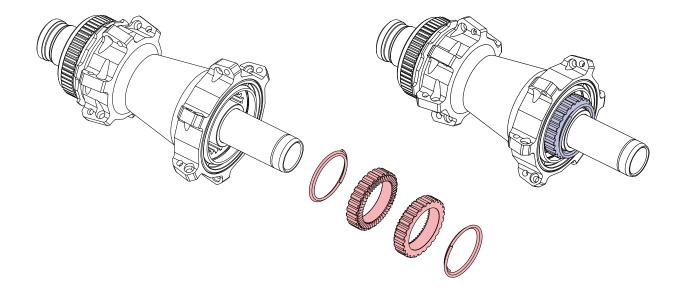
The springs must be orientated with the tapered end (smaller diameter) towards the star ratchets.

The star ratchets must be orientated with the engagement points facing one another.

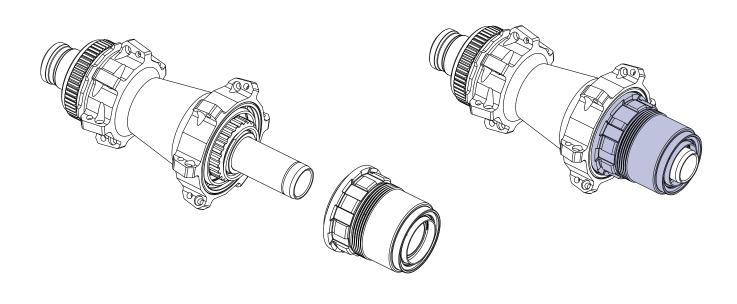
Image below illustrates the correct order and orientation.



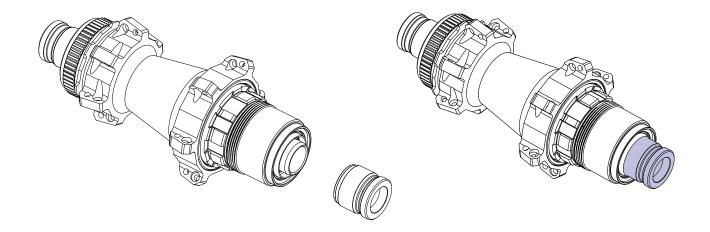




1. Taking both ratchet springs and 54t star ratchets apply a thin layer of ratchet grease across any contacting surfaces highlighted in red. Once the ratchets and springs are lubricated, slide them of the axle in the correct order.



2. Slide the freehub onto the axle of the main hub. Ensure that the ratchets seat correctly within the hubshell and freehub, with the freehub pushed as far as it will sit on the axle.



# 3. Press on the drive side endcap and ensure that it is firmly positioned on the axle.

This concludes the assembly and ratchet replacement or upgrade on the Prime rear SR hubs. The cassette and disc rotor can now be re-attached and the wheel inserted into the bike.



# WARNING

It is advised that a test ride is performed once the the hub re-assembly is complete to ensure that everything has been fitted correctly.

If performing a test ride it is advised that all necessary safety gear is used to prevent any form of injury.

