

Automatix Service Manual



SRAM®

SRAM LLC WARRANTY

Extent of Limited Warranty

Except as otherwise set forth herein, SRAM warrants its products to be free from defects in materials or workmanship for a period of two years after original purchase. This warranty only applies to the original owner and is not transferable. Claims under this warranty must be made through the retailer where the bicycle or the SRAM component was purchased. Original proof of purchase is required.

Except as described herein, SRAM makes no other warranties, guaranties, or representations of any type (express or implied), and all warranties (including any implied warranties of reasonable care, merchantability, or fitness for a particular purpose) are hereby disclaimed.

Local law

This warranty statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state (USA), from province to province (Canada), and from country to country elsewhere in the world.

To the extent that this warranty statement is inconsistent with the local law, this warranty shall be deemed modified to be consistent with such law, under such local law, certain disclaimers and limitations of this warranty statement may apply to the customer. For example, some states in the United States of America, as well as some governments outside of the United States (including provinces in Canada) may:

- a. Preclude the disclaimers and limitations of this warranty statement from limiting the statutory rights of the consumer (e.g. United Kingdom).
- b. Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations.

Limitations of Liability

To the extent allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event shall SRAM or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages.

Limitations of Warranty

This warranty does not apply to products that have been incorrectly installed and/or adjusted according to the respective SRAM technical installation manual. The SRAM installation manuals can be found online at sram.com, rockshox.com, avidbike.com, truvativ.com, zipp.com, or quarq.com.

This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturers specifications of usage or any other circumstances in which the product has been subjected to forces or loads beyond its design.

This warranty does not apply when the product has been modified, including, but not limited to any attempt to open or repair any electronic and electronic related components, including the motor, controller, battery packs, wiring harnesses, switches, and chargers. This warranty does not apply when the serial number or production code has been deliberately altered, defaced or removed.

This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage as a result of normal use, failure to service according to SRAM recommendations and/or riding or installation in conditions or applications other than recommended.

Wear and tear parts are identified as:

- Dust seals
- Bushings
- Air sealing o-rings
- Glide rings
- Rubber moving parts
- Foam rings
- Rear shock mounting hardware and main seals
- Upper tubes (stanchions)
- Stripped threads/bolts (aluminium, titanium, magnesium or steel)
- Brake sleeves
- Brake pads
- Chains
- Sprockets
- Cassettes
- Shifter and brake cables (inner and outer)
- Handlebar grips
- Shifter grips
- Jockey wheels
- Disc brake rotors
- Wheel braking surfaces
- Bottomout pads
- Bearings
- Bearing races
- Pawls
- Transmission gears
- Spokes
- Free hubs
- Aero bar pads
- Corrosion
- Tools
- Motors
- Batteries

Notwithstanding anything else set forth herein, this warranty is limited to one year for all electronic and electronic related components including motors, controllers, battery packs, wiring harnesses, switches, and chargers. The battery pack and charger warranty does not include damage from power surges, use of improper charger, improper maintenance, or such other misuse.

This warranty shall not cover damages caused by the use of parts of different manufacturers.

This warranty shall not cover damages caused by the use of parts that are not compatible, suitable and/or authorised by SRAM for use with SRAM components.

This warranty shall not cover damages resulting from commercial (rental) use.

TABLE OF CONTENTS

- EXPLODED VIEW - SRAM AUTOMATIX 4**
 - REPLACEMENT PARTS 4
- SRAM INTERNAL GEAR HUB SERVICE..... 5**
- WORKING ON THE COASTER BRAKE 5**
 - PARTS AND TOOLS NEEDED FOR SERVICE 5
- EXCHANGING THE GEAR UNIT 9**
 - PARTS AND TOOLS NEEDED FOR SERVICE 9



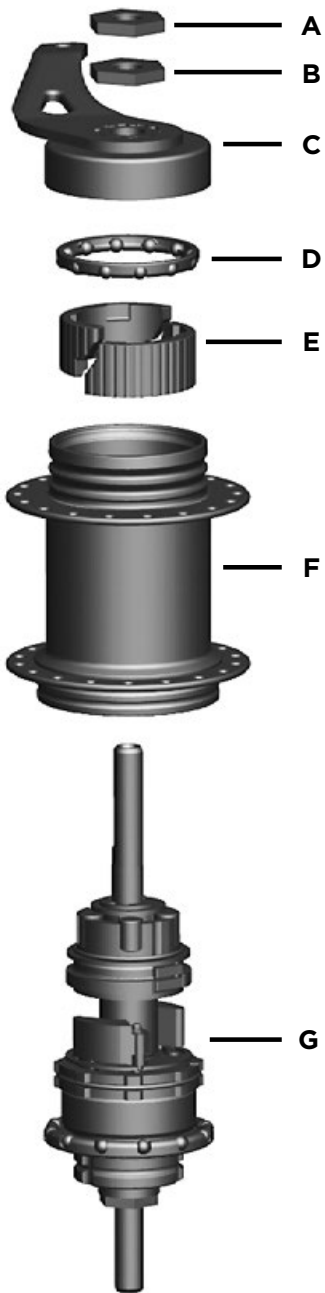
SAFETY FIRST!

We care about YOU. Please, always wear your safety glasses and protective gloves when servicing SRAM products.
Protect yourself! Wear your safety gear!

EXPLODED VIEW - SRAM AUTOMATIX

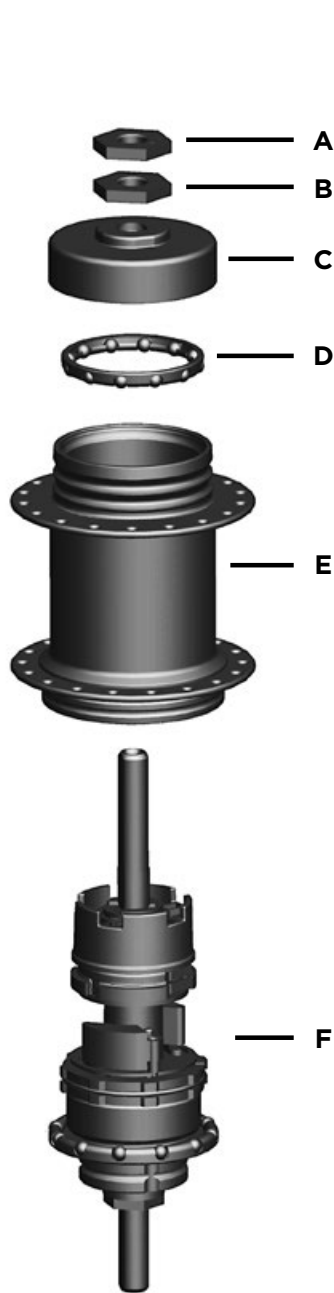
REPLACEMENT PARTS

For spare part number information, please refer to the [Spare Parts Catalog](#) available on our website at www.sram.com. For order information, please contact your local SRAM distributor or dealer.



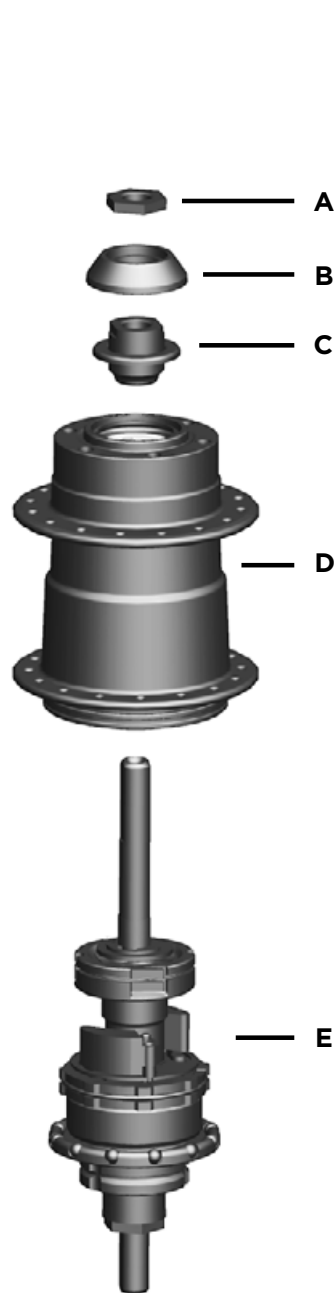
Coaster Brake

- A. Locknut
- B. Axle nut
- C. Lever cone
- D. Ball retainer
- E. Brake segments
- F. Hub shell
- G. Gear unit



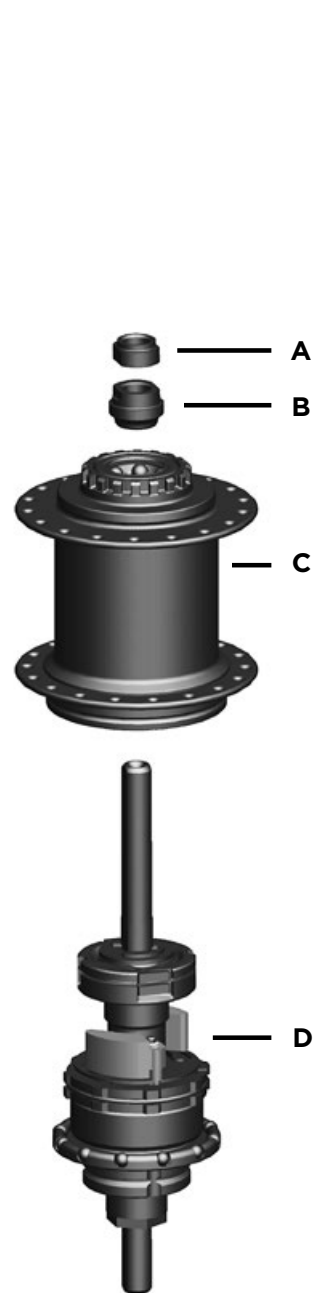
Without Brake

- A. Locknut
- B. Axle nut
- C. Cap
- D. Ball retainer
- E. Hub shell
- F. Gear unit



Disc Brake

- A. Locknut
- B. Cap
- C. Bearing cone
- D. Hub shell
- E. Gear unit



Roller Brake

- A. Locknut
- B. Bearing cone
- C. Hub shell
- D. Gear unit

SRAM INTERNAL GEAR HUB SERVICE

We recommend that you have your SRAM Internal Gear Hub serviced by a qualified bicycle mechanic. Servicing SRAM Internal Gear Hubs requires knowledge of such components as well as the special tools and fluids used for service.

Information contained in this publication is subject to change at any time without prior notice. For the latest technical information, please visit our website at sram.com.

Your product's appearance may differ from the pictures/diagrams contained in this publication.

WORKING ON THE COASTER BRAKE

CAUTION

Excessive heating of the hub caused by continuous heavy use of the coaster brake may result in loss of lubricant and cause sharper braking. Relubricating of the brake sleeve with SRAM Special Grease is then necessary.

SAFETY INSTRUCTIONS

SRAM recommends the use of nitrile gloves when working with grease.

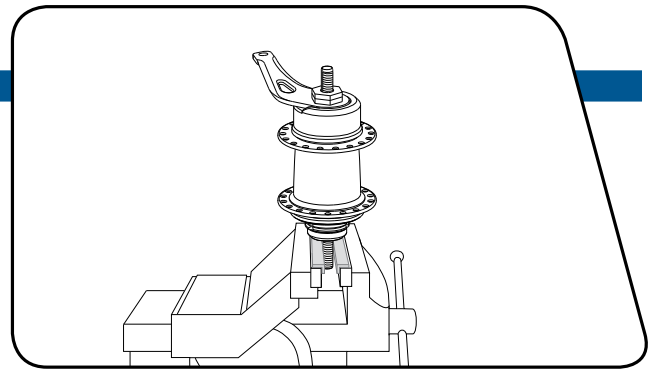
PARTS AND TOOLS NEEDED FOR SERVICE

- Safety glasses
- Nitrile gloves
- Apron
- Clean, lint-free rags
- Bench vise with aluminum soft jaws
- SRAM Special Grease, part no. 0369 135 200 / ... 201
- SRAM Ball Bearing Grease, part no. 0369 001 015
- Grease brush
- 22 mm open end wrench and 22 mm crow foot
- Torque wrench

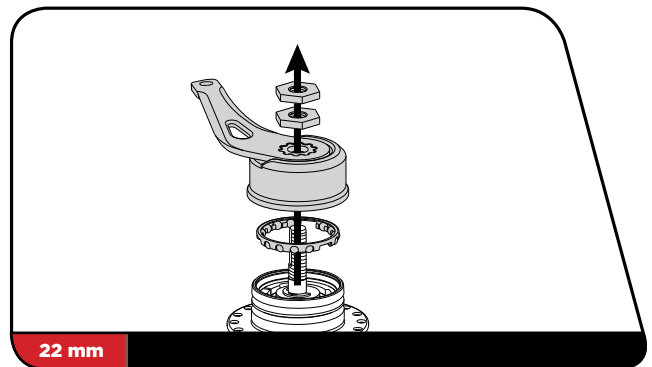
- 1** Clamp the drive side of the axle with the two flats of the axle into the vise.

NOTICE

Use aluminum soft jaws to prevent damage to the gear hub axle when clamping into a vise.

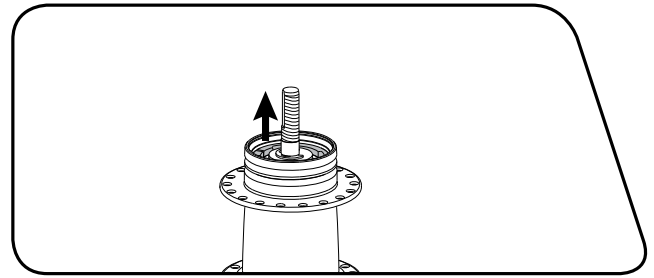


- 2** Use a 22 mm open end wrench to loosen and remove both nuts. Take off the lever cone and the ball retainer.



3 Take both brake segments out of the hub shell and clean them with a clean rag.

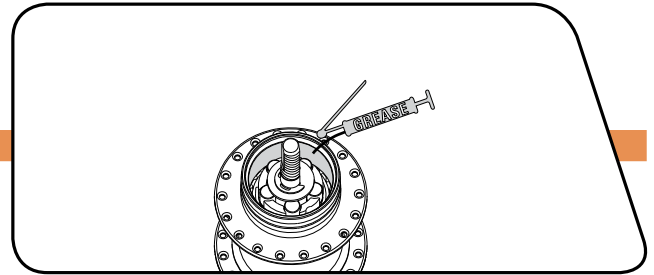
The brake segments must be renewed, if, as a result of wear, the grooves on the outer surface are scarcely visible.



4 Clean the brake cylinder surface inside of the hub shell with a clean rag. Apply a small amount of grease onto the brake cylinder surface inside of the hub shell. Completely coat the outer surfaces of the brake segments with grease.

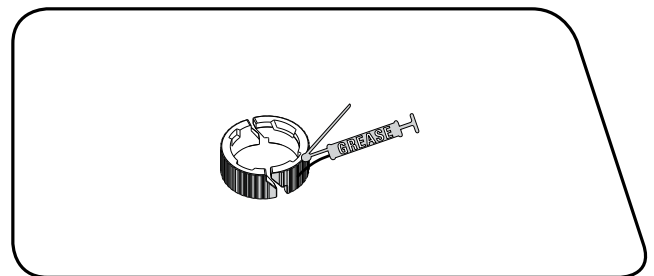
⚠ WARNING:

When working on the coaster brake only use SRAM Special Grease (part no. 0369 135 200 / ... 201) to ensure a proper brake function. The use of any other grease may cause bad brake performance or a blockage of the rear wheel. This could cause you to lose control of your bicycle, which could lead to a crash and could lead to serious injury and/or death.

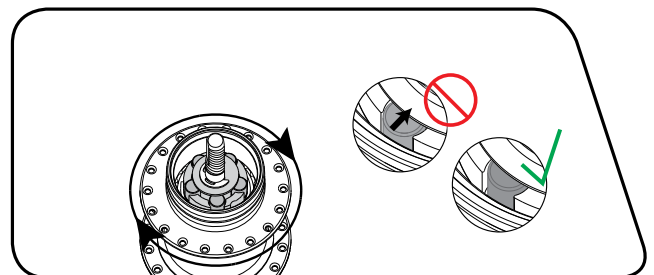


5 Completely coat the outer surfaces of the brake segments with grease.

Use only SRAM Special Grease, part no. 0369 135 200 / ... 201.

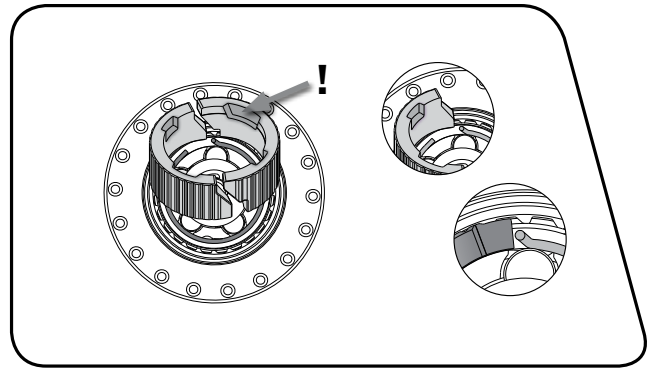


6 Turn the shell in a clockwise direction as far as it will go. This ensures that the rollers of the brake can fall back and that the brake segments can be mounted.



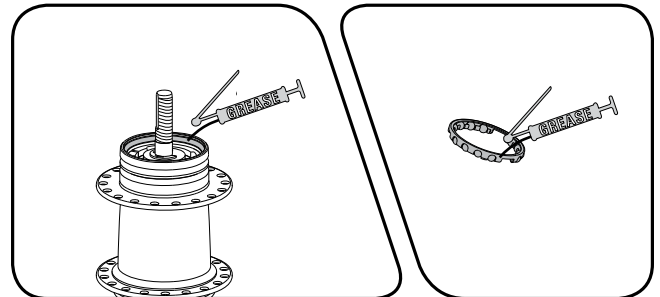
7 Insert the brake segments:
The recesses must point upwards.

At first insert the brake segment so that the bevel is visible from above. The brake segment lie against the angled spring end. Insert the second brake segment.

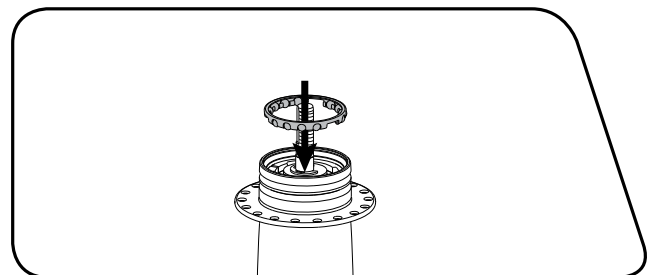


8 Clean the ball retainer and the ball track of the hub shell with a clean rag. Apply a small amount of grease to the ball retainer and the ball track.

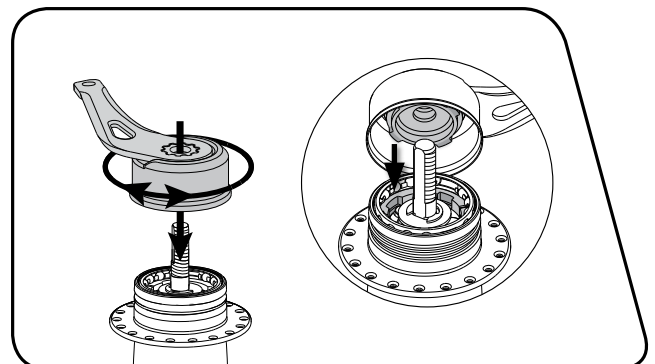
Use SRAM Ball Bearing Grease (part no. 0369.001.015).



9 Insert the ball retainer. The side with the balls must point downwards.



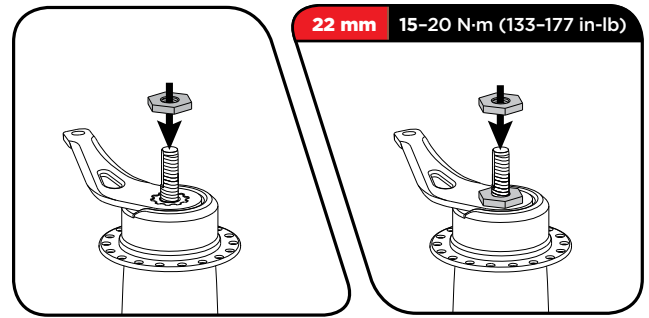
10 Replace the lever cone.
By turning to the left and right, bring the lever cone into its final position. The locating lugs of the lever cone will then lie in the recesses of the brake segments.



11 Thread one nut, by hand, onto the axle.

Position the bearing in a play-free manner. Hold the fore nut with a 22 mm wrench, and use a torque wrench with 22 mm crow foot to tighten the locknut to 15 - 20 N·m (133 - 177 in-lb).

Test the play of the bearing and correct if required.



This concludes the service on the coaster brake.

EXCHANGING THE GEAR UNIT

SAFETY INSTRUCTIONS

SRAM recommends the use of nitrile gloves when working with grease.

NOTICE

Use aluminum soft jaws to prevent damage to the gear hub axle when clamping into a vise.

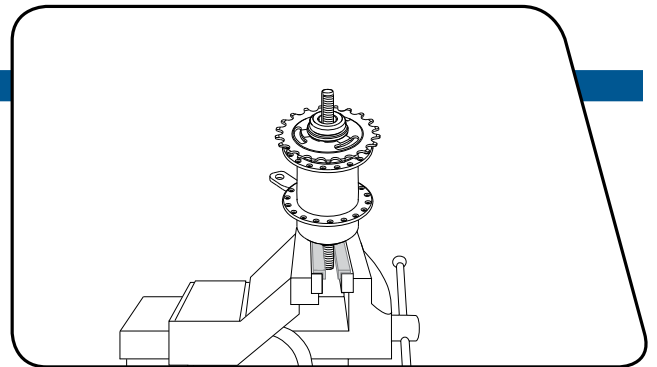
PARTS AND TOOLS NEEDED FOR SERVICE

- Safety glasses
- Nitrile gloves
- Apron
- Clean, lint-free rags
- SRAM Special Grease, part no. 0369 135 200 / ... 201
- SRAM Ball Bearing Grease, part no. 0369 001 015
- Grease brush
- Flat blade screwdriver
- Torque wrench
- Bench vise with aluminum soft jaws
- Version with coaster brake and without brake: 22 mm open end wrench and 22 mm crow foot
- Version with Disc Brake: 15 and 17 mm open end wrench and 17 mm crow foot
- Version with Roller Brake: 13 mm open end wrench and 13 mm crow foot

- 1** Clamp the non drive side of the axle with the two flats of the axle into the vise.

NOTICE

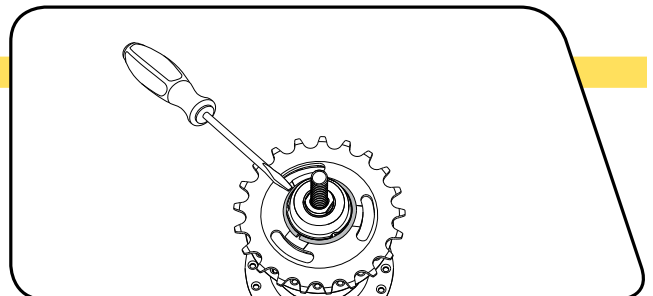
Use aluminum soft jaws to prevent damage to the gear hub axle when clamping into a vise.



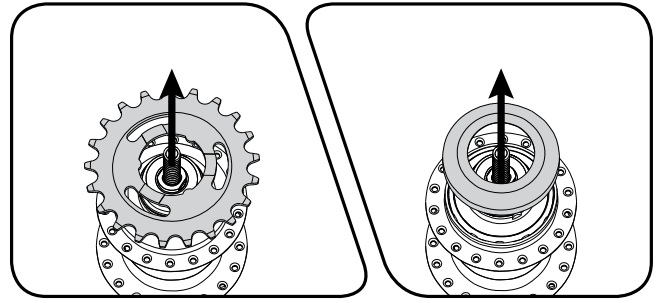
- 2** Use a flat blade screwdriver to remove the circlip.

⚠ CAUTION - EYE HAZARD

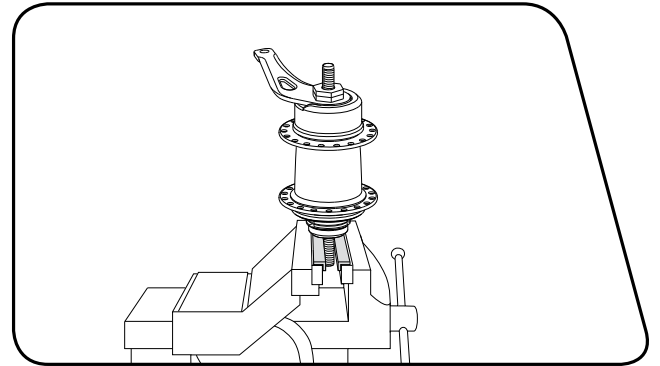
The circlip is spring force loaded. Wear safety glasses.



3 Take off the sprocket and the dust cap.



4 Clamp the drive side of the axle with the two flats of the axle into the vise.

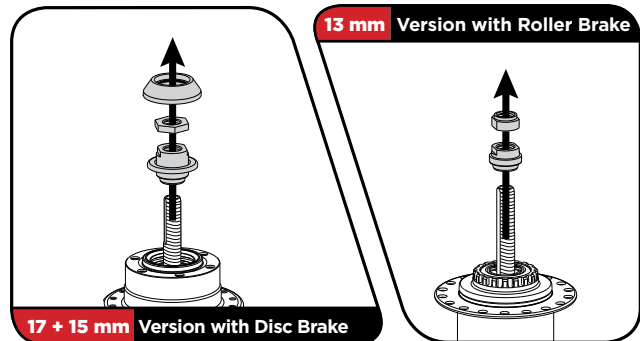
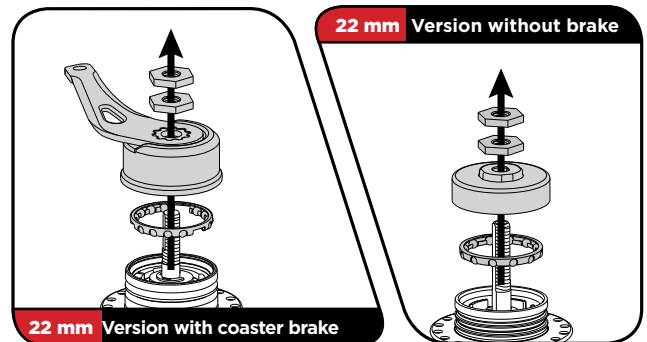


5 Hub version with coaster brake:
Use a 22 mm open end wrench to loosen and remove both nuts.
Take off the lever cone and the ball retainer.

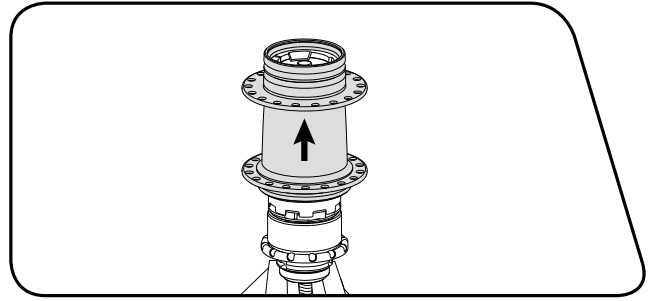
Hub version without brake:
Use a 22 mm open end wrench to loosen and remove both nuts.
Take off the cap and the ball retainer.

Hub version with Disc Brake:
Take off the cap. Use a 17 mm open end wrench to loosen and remove the locknut. Use a 15 mm open end wrench to loosen and remove the bearing cone.

Hub version with Roller Brake:
Prior to exchange your Automatix gear unit, remove the Roller Brake from the hub according to the manufacturer's instructions. Use a 13 mm open end wrench to loosen and remove the locknut and the underlying bearing cone.



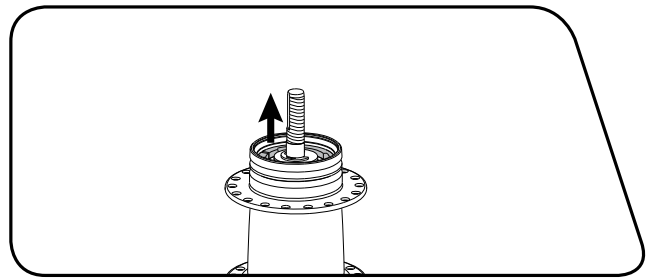
6 Take the hub shell/rear wheel off.



7 Remove the old gear unit from the vise and discard it. Clamp the hub with the new gear unit on the drive side of the axle into the vise.

Hub versions without brake, Disc Brake, and Roller Brake:
Repeat step 5 and 6 to uncover the new gear unit. Set the detached parts aside.

8 Hub version with coaster brake:
Repeat step 5. Set the detached parts aside.
Take both brake segments out of the hub shell and set aside.
Take the hub shell off to uncover the new gear unit.

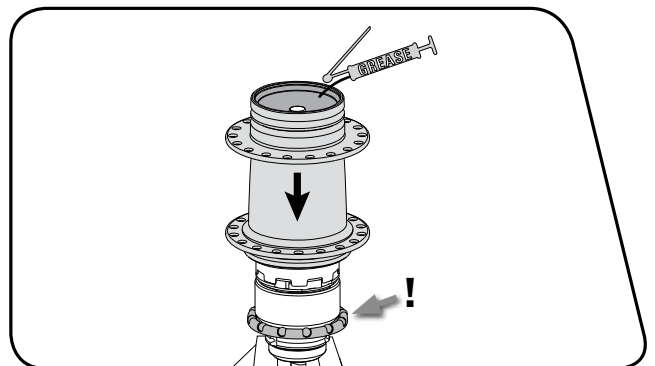


9 Clean the interior of the hub shell with a clean rag. Apply a small amount of grease on the interior of the hub shell and the ball tracks on the top and the bottom of the hub shell.

Use SRAM Ball Bearing Grease (part no. 0369 001 015).

Hub version with coaster brake:
Do not grease the brake cylinder surface inside of the hub shell.

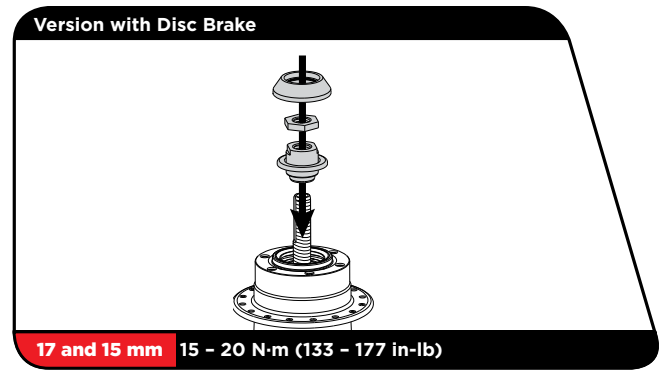
Position the hub shell/rear wheel over the new gear unit. Turning slightly to the left/right eases positioning. Ensure that the hub shell is correctly seated on the ball retainer.



10 Hub version with Disc Brake:
Thread the bearing cone, by hand, onto the axle.

Position the bearing in a play-free manner. Hold the bearing cone with a 15 mm wrench, and use a torque wrench with 17 mm crow foot to tighten the locknut to 15 - 20 N·m (133 - 177 in-lb).
Test the play of the bearing and correct if required.

This concludes the change of the gear unit on a hub with Disc Brake.

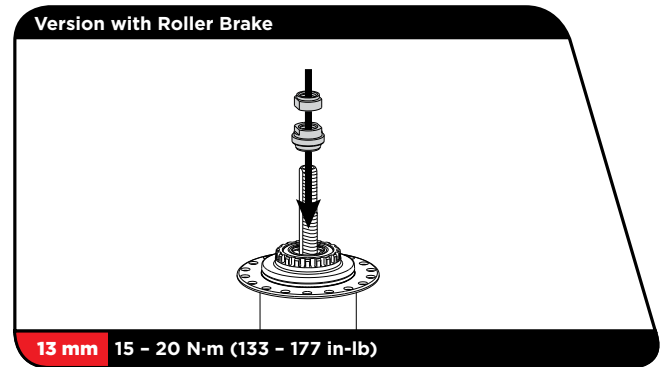


Hub version with Roller Brake:
Screw the bearing cone onto the axle. Wrench size 13 mm.

Position the bearing in a play-free manner. Hold the bearing cone with a 13 mm wrench, and use a torque wrench with 13 mm crow foot to tighten the locknut to 15 - 20 N·m (133 - 177 in-lb).
Test the play of the bearing and correct if required.

Reinstall the Roller Brake according to the manufacturer's instructions.

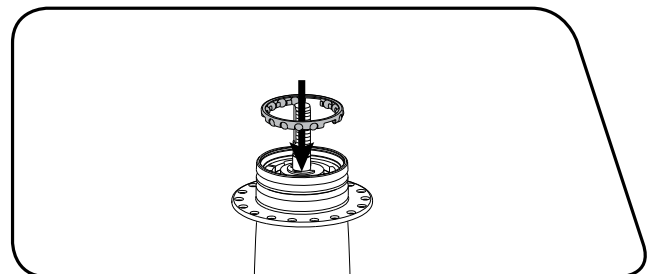
This concludes the change of the gear unit on a hub with Roller Brake.



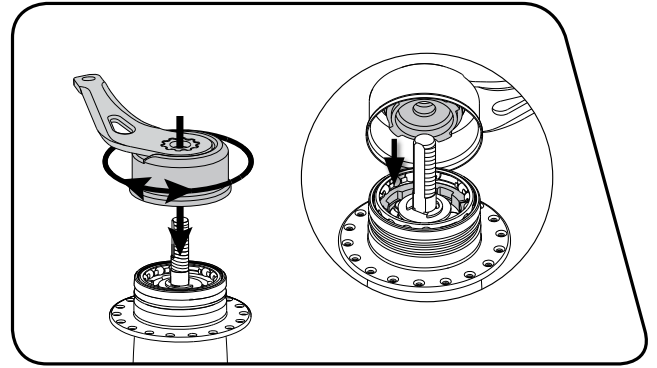
11 Hub version with coaster brake:
Reinstall the new brake segments (see the [Working on the coaster brake](#) section. Following steps 4 through 7.).

Hub versions with coaster brake and without brake:

12 Insert the new ball retainer. The side with the balls must point downwards.



- 13** Hub version with coaster brake:
 Replace the lever cone.
 By turning to the left and right, bring the lever cone into its final position. The locating lugs of the lever cone will then lie in the recesses of the brake segments.

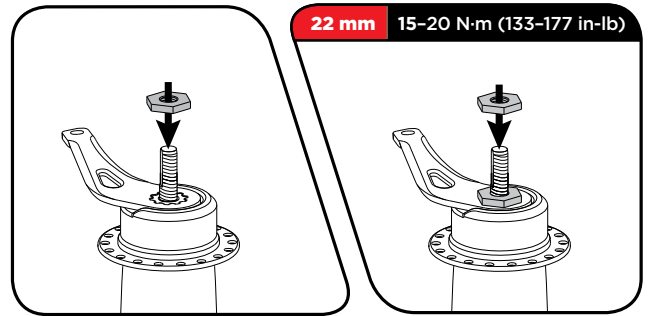


Thread one nut, by hand, onto the axle.

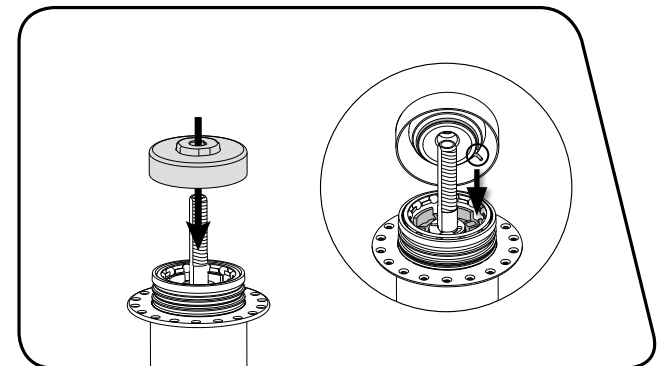
Position the bearing in a play-free manner. Hold the fore nut with a 22 mm wrench, and use a torque wrench with 22 mm crow foot to tighten the locknut to 15 - 20 N·m (133 - 177 in-lb).

Test the play of the bearing and correct if required.

This concludes the change of the gear unit on a hub with coaster brake.



- 14** Hub version without brake:
 Slide the cap on the axle.

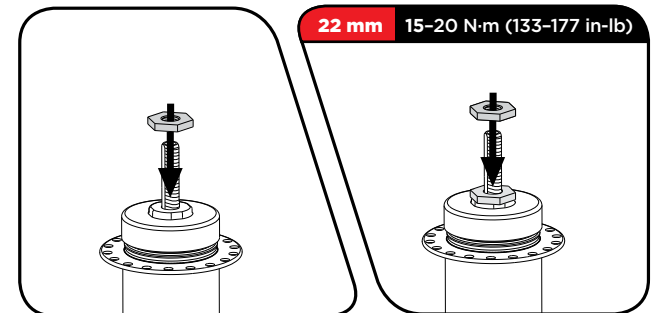


Thread one nut, by hand, onto the axle.

Position the bearing in a play-free manner. Hold the fore nut with a 22 mm wrench, and use a torque wrench with 22 mm crow foot to tighten the locknut to 15 - 20 N·m (133 - 177 in-lb).

Test the play of the bearing and correct if required.

This concludes the change of the gear unit on a hub without brake.



www.sram.com