



# **SRAM**<sup>®</sup>

## Guide<sup>™</sup> T Caliper



service  
manual



**SRAM**<sup>®</sup>

GEN.0000000005632 Rev A  
© 2017 SRAM, LLC

# 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.

## FOR AUSTRALIAN CUSTOMERS:

This SRAM limited warranty is provided in Australia by SRAM LLC, 1000 W. Fulton Market, 4th Floor, Chicago, IL, 60607, USA. To make a warranty claim please contact the retailer from whom you purchased this SRAM product. Alternatively, you may make a claim by contacting SRAM Australia, 6 Marco Court, Rowville 3178, Australia. For valid claims SRAM will, at its option, either repair or replace your SRAM product. Any expenses incurred in making the warranty claim are your responsibility. The benefits given by this warranty are additional to other rights and remedies that you may have under laws relating to our products. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## 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 user manual. The SRAM user manuals can be found online at [sram.com](http://sram.com), [rockshox.com](http://rockshox.com), [avidbike.com](http://avidbike.com), [truvativ.com](http://truvativ.com), or [zipp.com](http://zipp.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                                  | • Stripped threads/bolts (aluminium, titanium, magnesium or steel) | • Handlebar grips        | • Transmission gears |
| • Bushings                                    | • Brake sleeves                                                    | • Shifter grips          | • Spokes             |
| • Air sealing o-rings                         | • Brake pads                                                       | • Jockey wheels          | • Free hubs          |
| • Glide rings                                 | • Chains                                                           | • Disc brake rotors      | • Aero bar pads      |
| • Rubber moving parts                         | • Sprockets                                                        | • Wheel braking surfaces | • Corrosion          |
| • Foam rings                                  | • Cassettes                                                        | • Bottomout pads         | • Tools              |
| • Rear shock mounting hardware and main seals | • Shifter and brake cables (inner and outer)                       | • Bearings               | • Motors             |
| • Upper tubes (stanchions)                    |                                                                    | • Bearing races          | • Batteries          |
|                                               |                                                                    | • Pawls                  |                      |

**Notwithstanding anything else set forth herein**, 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.

## Brake Service Overview

SRAM® brake systems need to be serviced periodically to optimize braking function. If brake fluid is leaking from any area of the brake there may be damage or wear and tear to the internal moving parts. If the system has been contaminated with the wrong fluid there may be damage to all rubber and plastic internal parts. If your brake was damaged in a crash there may be damage to the lever blade, pushrod, and housing assemblies. Inspect and replace these parts to restore proper brake function.

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

## SAFETY INSTRUCTIONS

- Servicing your brakes removes all of the brake fluid from the system. You must bleed your brakes after you service the brake caliper.
- Always wear safety glasses and nitrile gloves when working with DOT fluid.
- Place an oil pan on the floor where you will be working on the brake.
- Used DOT fluid should be recycled or disposed of in accordance to local and federal regulations.
- Never pour DOT fluid down a sewage or drainage system or into the ground or a body of water.
- DOT fluids will damage painted surfaces. If any fluid comes in contact with a painted surface (e.g. your frame) or printing on the brakes, wipe it off immediately and clean it with isopropyl alcohol or water. Damage to painted and/or printed surfaces by DOT fluid is not covered under warranty.
- Do not allow any brake fluid to come in contact with the brake pads. If this occurs, the pads are contaminated and must be replaced.
- For best results, use only SRAM High-Performance DOT 5.1 brake fluid. If SRAM brake fluid is not available, only use DOT 5.1 or 4 brake fluid.
- Do not use mineral oil or DOT 5 fluid.

## ⚠CAUTION

Do not use mineral oil or DOT 5 fluid. Do not use tools, rags, or syringes that are contaminated with mineral oil or DOT 5 fluid. Using contaminated materials will result in permanent damage to the seals and reduce braking performance. Brakes must be replaced if contaminated with mineral oil or DOT 5 fluid.

# TABLE OF CONTENTS

**BRAKE SERVICE OVERVIEW** .....

TROUBLESHOOTING.....

**CALIPER SERVICE** .....

PARTS AND TOOLS NEEDED FOR SERVICE.....

CALIPER EXPLODED VIEW.....

CALIPER BRAKE PAD REMOVAL.....

CALIPER PISTON REMOVAL.....

CALIPER PISTON INSTALLATION .....

5

6

7

7

7

8

9

12



# **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!

## Service Procedures

The following procedures should be performed throughout service, unless otherwise specified.

Clean the part with isopropyl alcohol and a clean, lint-free shop towel.

Clean the sealing surface on the part and inspect it for scratches.



Replace the o-ring or seal with a new one from the service kit.

Use your fingers, a ziptie, or a pick to pierce and remove the old seal or o-ring.

Apply DOT grease to the new seal or o-ring when instructed.

### NOTICE

Do not scratch any sealing surfaces when servicing the product. Scratches can cause leaks. Consult the spare parts catalog to replace the damaged part.



Use aluminum soft jaws when placing a part in a bench vise.

Tighten the part with a torque wrench to the torque value listed in the red bar. When using a crowfoot socket and torque wrench, install the crowfoot socket at 90 degrees to the torque wrench.



Specified torque value in N-m (in-lb)

### Disc Brake Pad Advancement Procedure

If your brakes have excessive brake lever throw, it may be a result of the pistons sticking in the caliper. Before bleeding the system, you can try to loosen the sticky piston by performing the following steps:

- 1 Clamp the bicycle into a bicycle work stand and remove the wheel according to the wheel manufacturer's instructions.



- 2 Squeeze the brake lever several times until the brake pads nearly contact one another.



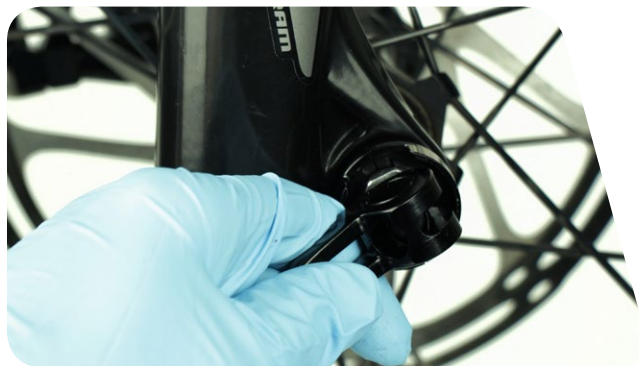
- 3 Insert the pad spreader tool between the brake pads to spread the pads to the full width of the clip.



- 4 Remove the pad spreader tool.



**5** Install the wheel according to the manufacturer's instructions.



**6** Squeeze the brake lever several times to position the brake pads to the proper distance from the rotor.  
Center the caliper on the rotor, if necessary.



**7** Spin the wheel and check the brake function. The pistons should move freely and there should not be excessive brake lever throw.



**8** If there is no improvement in the brake function, proceed to [Caliper Service](#).

## Caliper Service

We recommend that you have your SRAM® Guide™ Brakes serviced by a qualified bicycle mechanic. Servicing SRAM brakes requires knowledge of brake components as well as the special tools and fluids used for service.

For exploded diagram and part number information, please refer to the Spare Parts Catalog available on our website at [sram.com/service](http://sram.com/service). For order information, please contact your local SRAM distributor or dealer.

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/service](http://sram.com/service).

**Your product's appearance may differ from the pictures contained in this publication**

## Parts and Tools Needed for Service

## Parts

- Caliper Piston Kit
- SRAM Guide Brake Pad Kit

## Safety and Protection Supplies

- Clean, lint-free rag
- Nitrile gloves
- Oil pan
- Safety glasses

## SRAM Tools

- Pad Spreader Tool (1.8 mm) Guide/Trail Caliper
- SRAM Brake Bleed Kit (includes: Guide Bleed Block and Bleeding Edge™ Fitting)

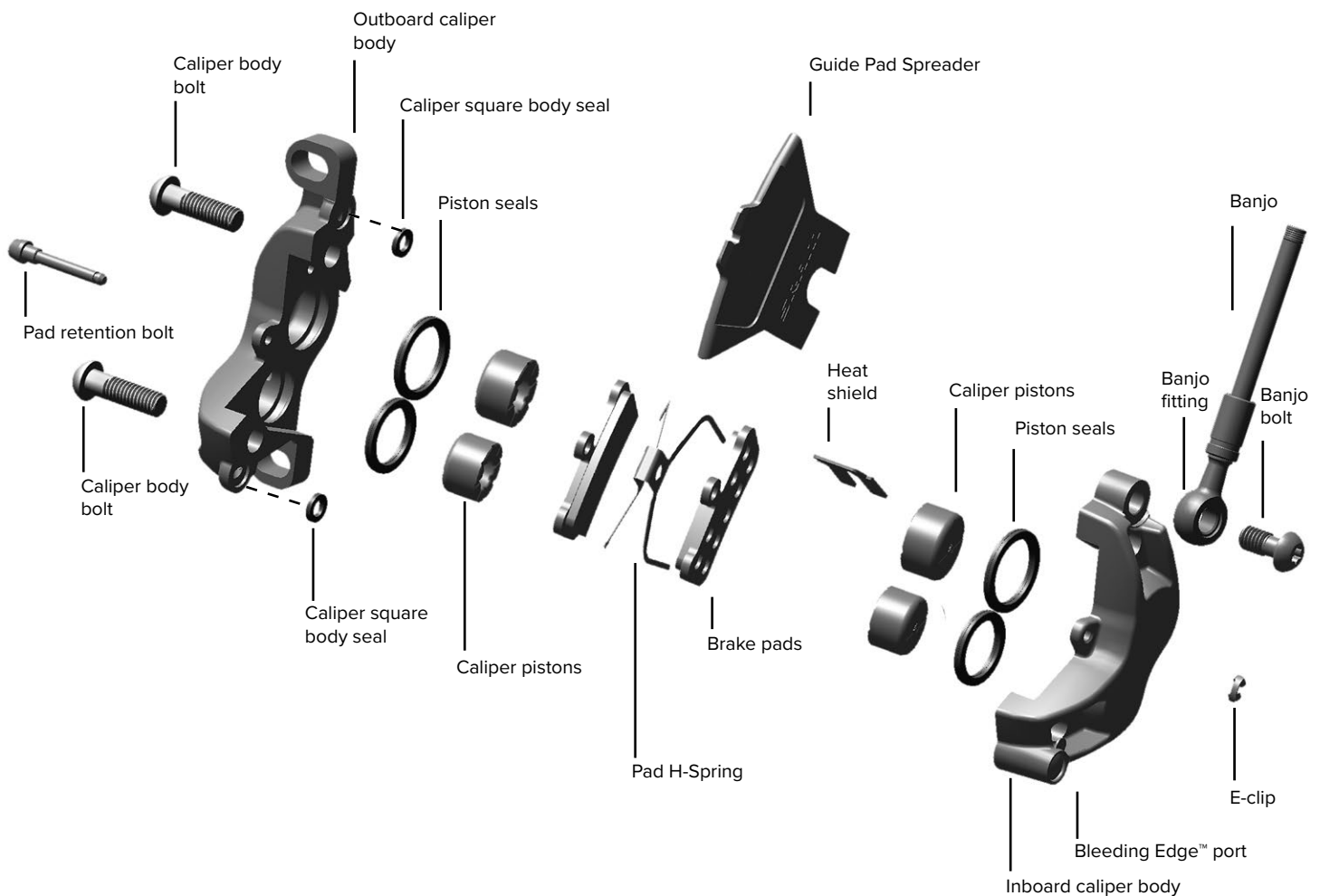
## Common Tools

- 2.5, 5 mm hex wrench
- T25 TORX® wrench
- T25 TORX bit socket
- Digital caliper
- Needle nose pliers
- Pick with a 90 degree bent tip
- Torque wrench

## Lubricants and Fluids

- Isopropyl alcohol
- SRAM High-Performance DOT 5.1 fluid. If SRAM fluid is not available, only use DOT 5.1 or 4 fluid.
- SRAM or AVID DOT grease. If SRAM or AVID DOT grease is not available only use a DOT compatible grease.

## Caliper Exploded View



## Caliper Brake Pad Removal

- 1 Use a 5 mm hex wrench to remove the brake caliper from the fork or frame.

Remove the caliper mounting bracket and hardware from the caliper then set them aside in the order that they were removed.

- 2 Remove the E-clip from the pad retention bolt.  
Remove the pad retention bolt from the caliper.



- 3 Remove the brake pads and pad H-spring from the caliper.

### NOTICE

If the brake pad thickness is less than 3 mm, replace the pads.



## NOTICE

DOT fluid will damage painted surfaces. If any fluid comes in contact with a painted surface (e.g your frame) or printing on the brakes, wipe it off immediately and clean it with isopropyl alcohol or water. Damage to painted and/or printed surfaces by DOT fluid is not covered under warranty.

- 1** Install the pad retention bolt.  
Insert the Guide™ pad spreader so that it snaps onto the pad retention bolt.



- 2** Squeeze the brake lever numerous times to advance the pistons until they contact the pad spreader.



- 3** Remove the banjo bolt.



- 4** Remove the pad spreader.  
Remove the pad retention bolt.



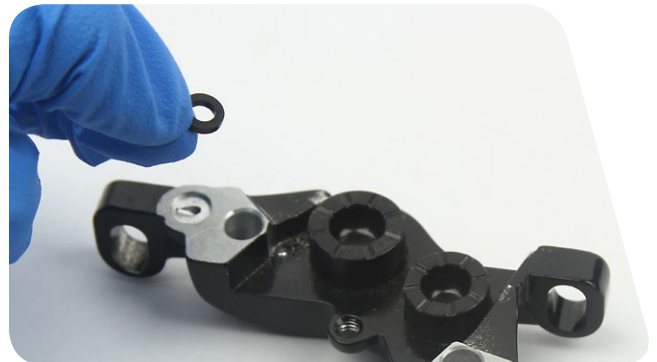
- 5** Remove each caliper body bolt.



- 6** Separate the caliper body halves.  
Set the heat shield aside.



- 7** Remove the caliper square body seals from the outboard side of the caliper.



- 8** Remove the pistons from each caliper body half.



- 9 Remove the piston seals from each caliper body half. Install new seals inside each caliper body half.

**⚠ WARNING**

Do not scratch the seal gland with the pick. Scratches could cause fluid to leak when the brake is applied, which will contaminate the brake pads and could lead to a brake failure.



Pick

### NOTICE

DOT fluid will damage painted surfaces. If any fluid comes in contact with a painted surface (e.g. your frame) or printing on the brakes, wipe it off immediately and clean it with isopropyl alcohol or water. Damage to painted and/or printed surfaces by DOT fluid is not covered under warranty.

- 1 Inspect the caliper pistons for damage and replace the pistons if necessary.

Apply a small amount of SRAM High-Performance DOT 5.1 fluid to the circumference of each piston. Install the pistons into the caliper bores.

### NOTICE

For the best braking performance, use only SRAM High-Performance DOT 5.1 fluid. If SRAM fluid is not available, use only DOT 5.1 or 4 fluid. Do not use grease. Grease will prevent the pistons from fully retracting into the caliper bores which will reduce braking performance.



- 2 Spray isopropyl alcohol on the caliper halves and both of your gloves and clean them with a rag.



- 3 Add a small amount of DOT compatible grease onto the new caliper square body seals, then install onto the caliper.

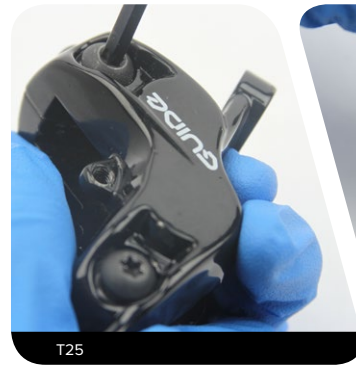


- 4** Align the caliper body halves then use a T25 TORX® wrench to thread each body bolt into the caliper two full turns.

Install the heat shield into the tabs, and make sure the heat shield is pushed firmly flush against the caliper.

#### NOTICE

If the heat shield is not installed so that it is pushed against the caliper wall, then it could interfere with brake performance.



- 5** Tighten each body bolt.



T25 TORX

9.8 - 11.8 N·m (87 - 104 in-lb)

- 6** Remove the o-rings from the banjo bolt and banjo fitting. Apply a small amount of SRAM® High-Performance DOT 5.1 fluid to the new o-rings and install them.



SRAM DOT 5.1 fluid



- 7** Hold the banjo at the desired angle.  
Tighten the banjo bolt.



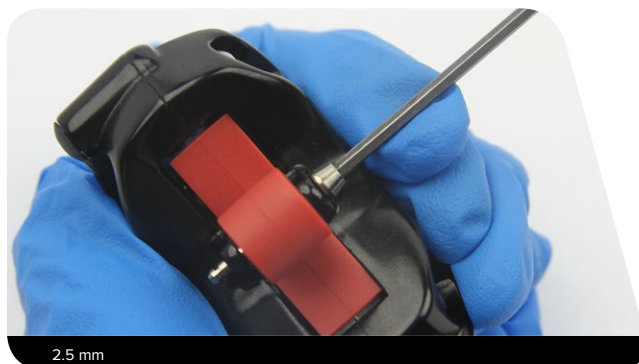
- 8** Insert the Guide™ bleed block into the caliper.



Install the pad retention bolt.

**⚠ WARNING**

You must bleed your brakes before reinstalling the brake pads. Installing the brake pads prior to bleeding the brakes could contaminate the brake pads and lead to a brake failure.



- 9** Spray isopropyl alcohol on the caliper and clean it with a rag.



Visually check your work. If any of the o-rings protrude from the banjo fitting or banjo bolt, remove and replace the o-rings, then repeat the installation process.

**⚠ CAUTION**

Servicing your brakes removes all of the fluid from the system. You must bleed the brakes after you service the brake caliper. For brake bleed, hose shortening, and brake pad replacement instructions consult the MTB Disc Brake Hose Shortening and Bleed Manual at, [www.sram.com/service](http://www.sram.com/service).

This publication includes trademarks and registered trademarks of the following companies:

TORX® is a registered trademark of Acument Intellectual Properties, LLC.

# ***SRAM***®

*www.sram.com*



ASIAN HEADQUARTERS  
SRAM Taiwan  
No. 1598-8 Chung Shan Road  
Shen Kang Hsiang, Taichung City  
Taiwan R.O.C.

WORLD HEADQUARTERS  
SRAM LLC  
1000 W. Fulton Market, 4th Floor  
Chicago, Illinois 60607  
USA

EUROPEAN HEADQUARTERS  
SRAM Europe  
Paasbosweg 14-16  
3862ZS Nijkerk  
The Netherlands