
# SRAM®

# 2016-2019
# Guide Ultimate

service
manual




GEN.0000000005801 Rev C

# SRAM® LLC WARRANTY

**THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AGAINST SRAM, LLC. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE, COUNTRY, OR PROVINCE. THIS WARRANTY DOES NOT AFFECT YOUR STATUTORY RIGHTS. TO THE EXTENT THIS WARRANTY IS INCONSISTENT WITH THE LOCAL LAW, THIS WARRANTY SHALL BE DEEMED MODIFIED TO BE CONSISTENT WITH SUCH LAW. FOR A FULL UNDERSTANDING OF YOUR RIGHTS, CONSULT THE LAWS OF YOUR COUNTRY, PROVINCE, OR STATE.**

## EXTENT OF LIMITED WARRANTY

Except as otherwise set forth herein, SRAM warrants its bicycle components to be free from defects in materials or workmanship for a period of two (2) years after original purchase of the product.

SRAM warrants all Zipp MOTO Wheels and Rims to be free from defects in materials or workmanship for the lifetime of the product.

SRAM warrants all non-electronic Zipp branded bicycle components, Model Year 2021 or newer, to be free from defects in materials or workmanship for the lifetime of the product.

## GENERAL PROVISIONS

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 product was purchased or a SRAM authorized service location. Original proof of purchase is required. All SRAM warranty claims will be evaluated by a SRAM authorized service location whereupon acceptance of the claim the product will be repaired, replaced, or refunded at SRAM's discretion. To the extent allowed by local law claims under this warranty must be made during the warranty period and within one (1) year following the date on which any such claim arises.

## NO OTHER WARRANTIES

EXCEPT AS DESCRIBED HEREIN, AND TO THE EXTENT ALLOWED BY LOCAL LAW, 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.

## LIMITATIONS OF LIABILITY

EXCEPT AS DESCRIBED HEREIN, AND TO THE EXTENT PERMITTED BY LAW, IN NO EVENT SHALL SRAM OR ITS THIRD PARTY SUPPLIERS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. SOME STATES (COUNTRIES AND PROVINCES) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

## LIMITATIONS OF WARRANTY

This warranty does not apply to products that have been incorrectly installed, adjusted, and/or maintained according to the respective SRAM user manual. The SRAM user manuals can be found online at sram.com/service.

This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturer's specifications of intended 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.

SRAM components are designed for use only on bicycles that are pedal powered or pedal assisted (e-Bike/Pedelec).

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 or parts that are not compatible or suitable for use with SRAM components.

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

## WEAR AND TEAR

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 include:**

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

## ZIPP IMPACT REPLACEMENT POLICY

Zipp branded products, Model Year 2021 or newer, are covered under a lifetime impact-damage replacement policy. This policy can be used to obtain a replacement of a product in the event of non-warranty impact damage occurring while riding your bicycle. See www.zipp.com/support for more information.

# 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!

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## SRAM Guide Brake Systems Service

We recommend that you have your SRAM Guide components serviced by a qualified bicycle mechanic. Servicing SRAM components requires knowledge of bicycle mechanics as well as the special tools and lubricants/fluids used for service.

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.

Visit www.sram.com/service for the latest SRAM Spare Parts catalog and technical information. For order information, please contact your local SRAM distributor or dealer.

For recycling and environmental compliance information, please visit www.sram.com/company/environment.

Information contained in this publication is subject to change at any time without prior notice. Your product's appearance may differ from the pictures contained in this publication.

## SAFETY INSTRUCTIONS

**Do not use mineral oil or DOT 5 fluid.**

If the brake system has been contaminated with mineral oil or DOT 5 fluid, flush all of the parts with soapy water, rinse them with clean water, then allow all the parts to dry prior to rebuilding. Install new seals, a new bladder, and replace the hose.

**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.**

Use only DOT compatible grease.

Always wear safety glasses and nitrile gloves when working with DOT brake fluid.

Used DOT brake fluid should be recycled or disposed of in accordance to local and federal regulations.

Never pour DOT brake fluid down a sewage or drainage system or into the ground or a body of water.

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.

Place an oil pan on the floor underneath the area where you will be working on the brake.

Servicing your brakes removes all of the brake fluid from the system. You must bleed your brakes after you service the brake system. Consult the *SRAM MTB Disc Brake Hose Shortening and Bleed Manual* at www.sram.com/service.

## *NOTICE*

The Guide caliper must be serviced before the lever. The lever must be connected to the caliper and the brakes must still have fluid in them in order to advance the pistons and service the caliper. Once the lever has been disconnected and the fluid drained it is not possible to advance the pistons.

## ⚠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 contaiminated with mineral oil or DOT 5 fluid.

## Service Procedures

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

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

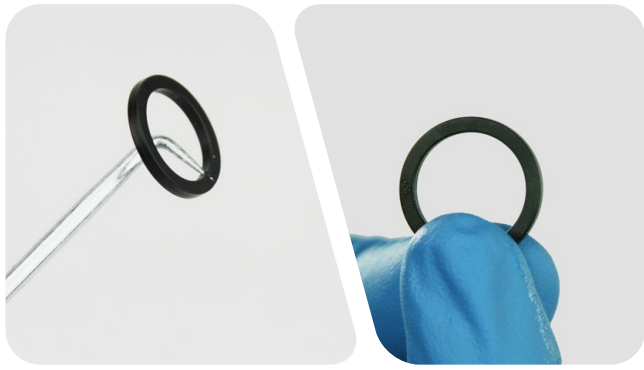
Clean the sealing surface on the part and inspect it for scratches.


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.

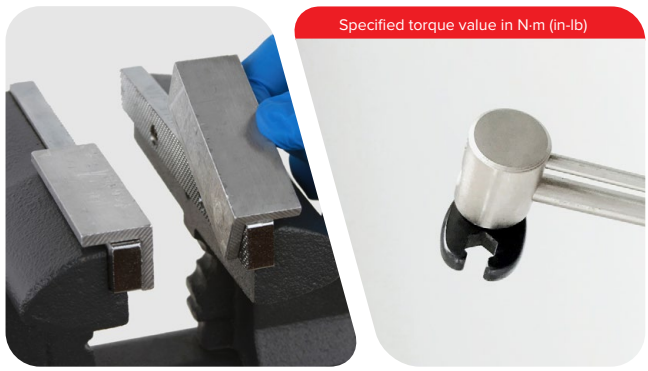
**NOTICE**

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.



# Troubleshooting

**NOTICE**

Do not apply DOT brake fluid or grease to caliper pistons when performing troubleshooting procedures. Use of DOT brake fluid or grease can diminish braking performance and cause rotor rubbing.

If your brakes exhibit excessive lever throw or spongy feel, perform the following steps before bleeding the system:

1. Clamp the bicycle into a bicycle work stand.
2. Remove the wheel from the affected caliper.n
3. Remove the brake pads.
4. Install the pad spacer.
5. Squeeze the brake lever several times until the pistons have advanced and contact the pad spacer. One piston may move faster than the other; continue to squeeze the lever until the pistons touch the spacer.
6. Remove the pad spacer.
7. Use a plastic tire lever to push the pistons back into the caliper bores.
8. Repeat steps 4-7 until the pistons move freely.
9. Install the brake pads and the wheel.
10. Loosen the caliper bolts.
11. Lightly squeeze (approx. 4 lbs) the brake lever several times to position the brake pads to the proper distance from the rotor.
12. Center the caliper on the rotor, and tighten the caliper bolts.
13. Spin the wheel and check the brake function. The pistons should move freely and there should not be excessive brake lever throw. If there is no improvement in the brake function, proceed with caliper service.

## Parts and Tools Needed for Service

**Parts**

- SRAM Guide Brake Pad Kit
- Caliper Piston Kit - Guide Ultimate

**Safety and Protection Supplies**

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

**Lubricants and Fluids**

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

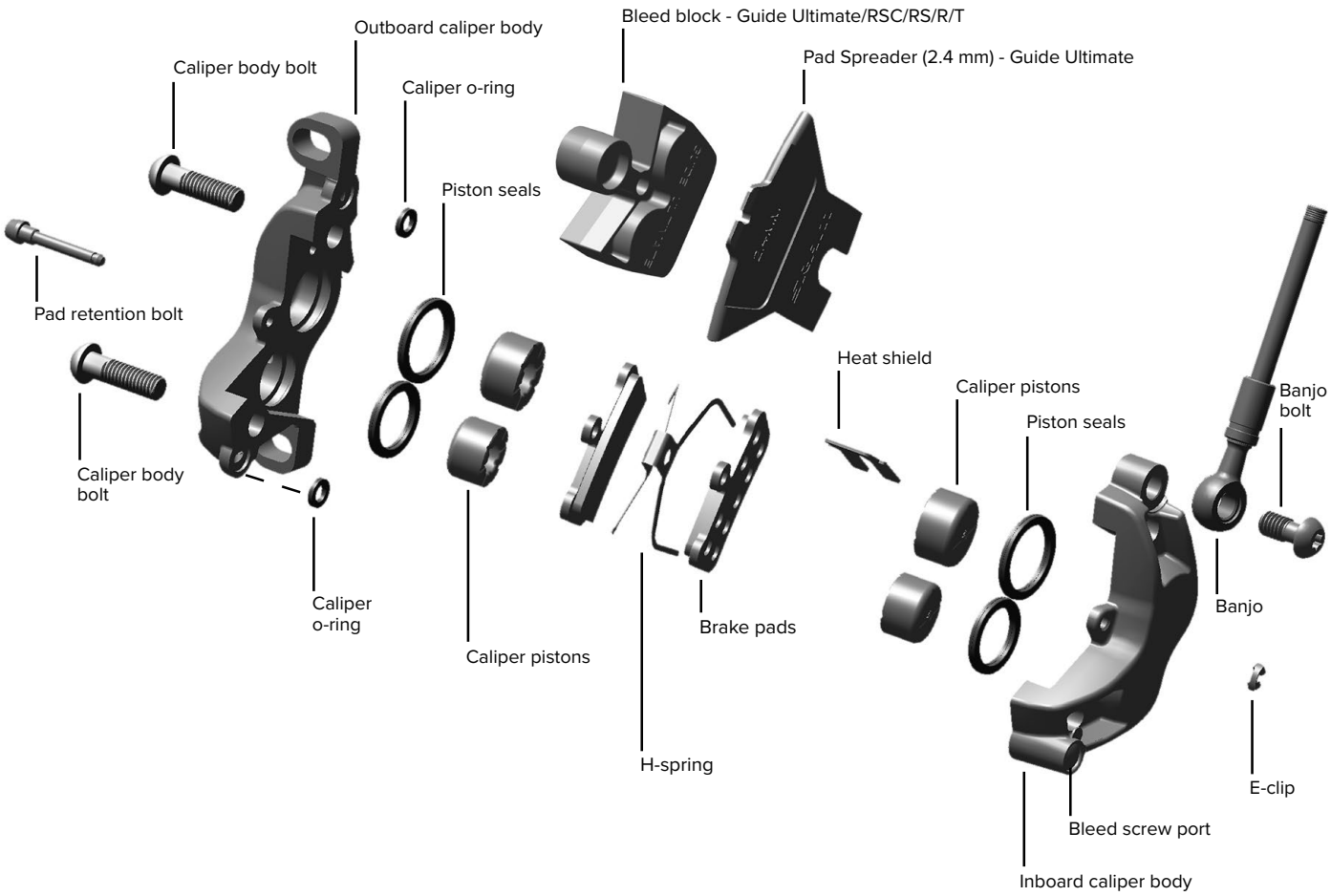
**Common Tools**

- Needle nose pliers
- Pick with a 90 degree bent tip
- T25 TORX wrench
- T25 TORX bit socket
- Torque wrench
- Digital caliper

**SRAM Tools**

- SRAM Brake Bleed Kit (includes: Bleed Block and Bleeding Edge Fitting)
- Pad Spreader Tool (2.4 mm) - Guide Ultimate

## Caliper Exploded View



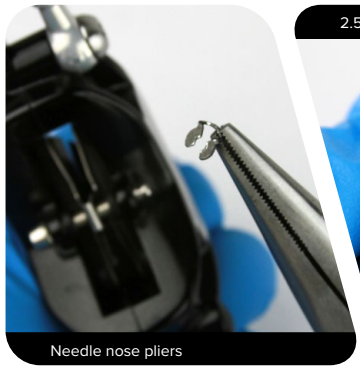
## Caliper Brake Pad Removal

1 Use a T25 TORX 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 Use needle nose pliers to remove the E-clip from the pad retention bolt. Remove the Guide Ultimate pad spreader.

Use a 2.5 mm hex wrench to remove the pad retention bolt from the caliper.

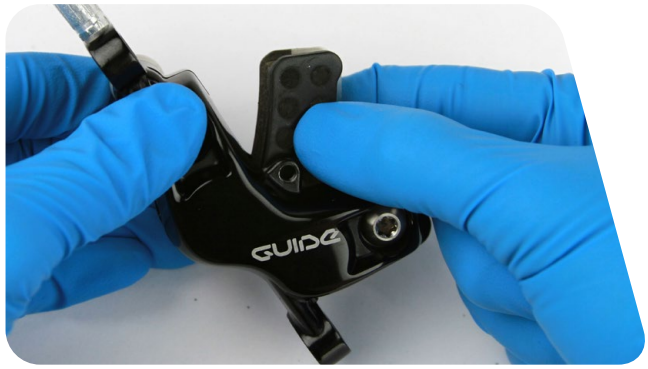

Needle nose pliers


2.5 mm hex wrench

3 Remove the brake pads from the caliper.

**NOTICE**

Brake pads must be replaced if the total thickness of the backing plate and pad friction material is less than 3 mm.



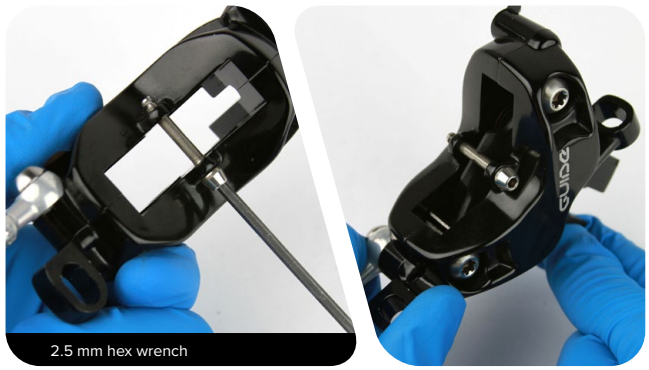

Caliper

**NOTICE**

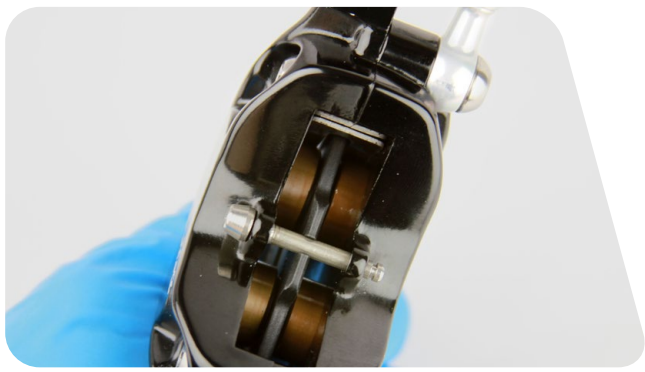
DOT brake fluid will damage painted surfaces. If any fluid comes in contact with a painted surface (i.e. your frame) or printing on the brakes, wipe it off immediately and clean it with isopropyl alcohol or water. Damage to painted and/or printed surfaces by DOT brake fluid is not covered under warranty.

1 Use a 2.5 mm hex wrench to install the pad retention bolt.

Insert the Guide Ultimate pad spreader so that it snaps onto the pad retention bolt.




2 Squeeze the brake lever to advance the pistons until they contact the pad spreader.



3 Use a T25 TORX wrench to remove the banjo bolt.

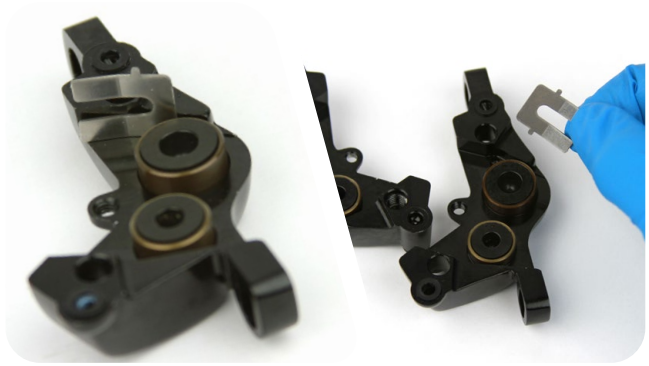
4 Remove the Guide Ultimate pad spreader.

Use a 2.5 mm hex wrench to remove the pad retention bolt.


5 Use a T25 TORX wrench to remove each caliper body bolt.


6 Separate the caliper body halves.

Set the heat shield aside.



7 Remove both of the caliper o-rings from the outboard side of the caliper.

8 Remove the pistons from each caliper body half.

9 Use a pick to remove the piston seals from each caliper body half. Install new seals inside each caliper body half.

**⚠CAUTION**

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

## Caliper Piston Installation

**NOTICE**

DOT brake fluid will damage painted surfaces. If any fluid comes in contact with a painted surface (i.e. 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 brake fluid is not covered under warranty.

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

Use your gloved finger to apply a small amount of SRAM High-Performance 5.1 DOT brake fluid to the circumference of each piston. Install the pistons into each half of the caliper body.

**NOTICE**

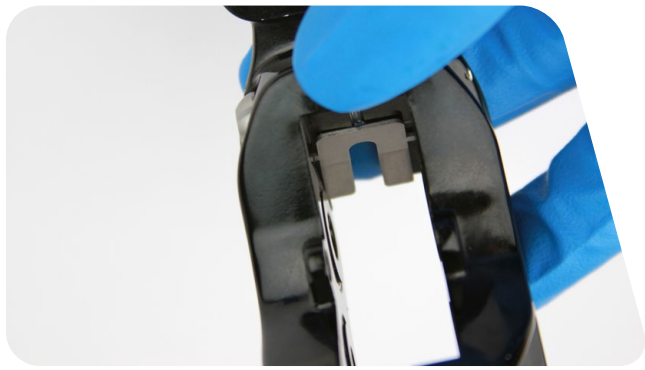
For the best braking performance, use only SRAM High-Performance 5.1 DOT brake fluid. If SRAM fluid is not available, use only DOT 5.1 or 4 brake fluid. Do not use grease. Grease will prevent the pistons from fully retracting into the caliper bores which will reduce braking performance.


2 Spray isopropyl alcohol on the caliper halves and both of your gloves, and clean them with a shop towel.

3 Install new caliper o-rings onto the outboard caliper half. Add a small amount of DOT compatible grease onto the installed o-rings to help them stay in place, or to prevent them from falling out, as you assemble 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.

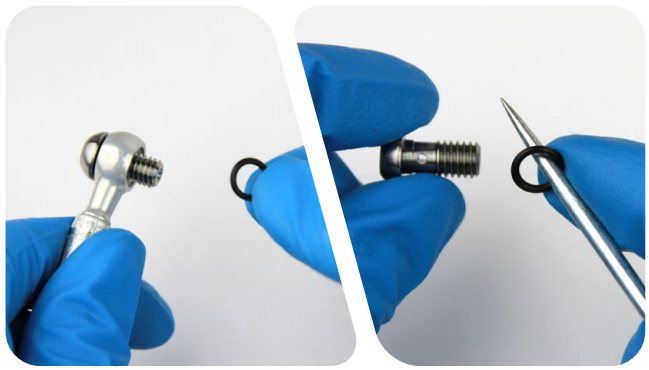
Install the heat shield.

5 Use a T25 TORX bit socket with a torque wrench to tighten each bolt to 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 5.1 DOT brake fluid to the new o-rings and install them.



7 Hold the banjo at the desired angle.
Use a torque wrench with a T25 TORX bit socket to tighten the bolt to 4.4-5.4 N·m (39-48 in-lb).


8 Insert the Guide Ultimate bleed block into the caliper.

**⚠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 could lead to a brake failure.


9 Spray isopropyl alcohol on the caliper and clean it with a shop towel.

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 and/or lever.

For brake bleed, brake hose shortening, and brake pad replacement instructions, visit www.sram.com/service.

# Lever Service

## Parts and Tools Needed for Service

**Parts**

- Lever Internals - Guide Ultimate/RSC / Code RSC

**Safety and Protection Supplies**

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

**Lubricants and Fluids**

- Isopropyl alcohol
- Loctite Threadlocker Blue 242
- SRAM High-Performance DOT 5.1 brake fluid. If SRAM fluid is not available, only use DOT 5.1 or 4 brake fluid.
- SRAM or AVID DOT grease. If SRAM or AVID DOT grease is not available only use a DOT compatible grease.

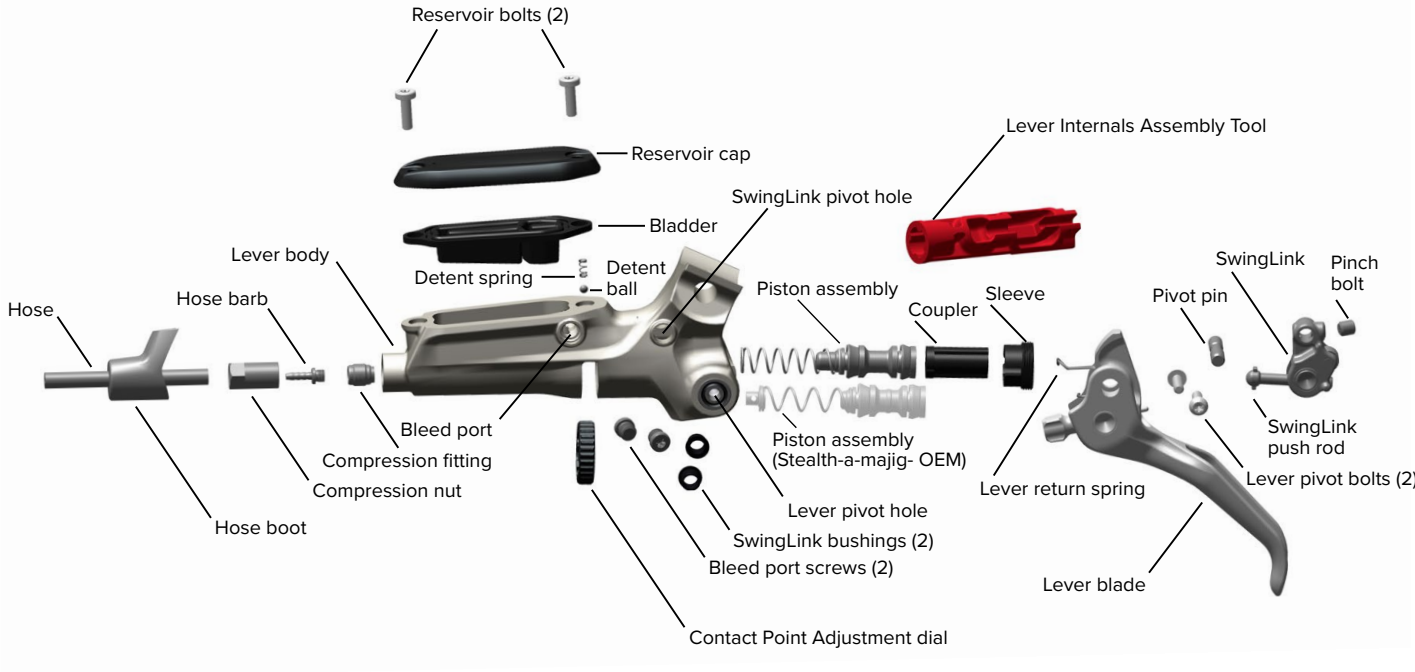
**Common Tools**

- Needle nose pliers
- Pick with a 90 degree bent tip
- T8, T10, & T25 TORX wrench
- T8 & T10 TORX bit socket
- 8 mm flare nut crowfoot wrench
- 2 mm & 4 mm hex wrench
- Torque wrench

**SRAM Tools**

- Lever Internals Assembly Tool - Guide Ultimate/RSC / Code RSC

## Guide Ultimate Exploded View



**NOTICE**

DOT brake fluid will damage painted surfaces. If any fluid comes in contact with a painted surface (i.e. 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 brake fluid is not covered under warranty.

1 Use a T25 TORX wrench or a 4 mm hex wrench to remove the brake clamp bolt from the discrete clamp, MMX, or XLoc (XLoc requires removal of the shifter) and remove the brake lever from the handlebar.

2 Pull the hose boot away from the brake body to expose the compression nut, then slide the boot down the brake hose.


3 Use an 8 mm flare nut wrench to unthread the hose compression nut, then pull the brake hose and compression fitting from the brake lever body.

8 mm flare nut wrench

4 Pour the brake fluid into an oil pan. Squeeze the lever blade to force any remaining brake fluid out of the lever body.

**NOTICE**

If the system has been contaminated with mineral oil or DOT 5 fluid, flush all the parts with soapy water, rinse, and allow all parts to dry prior to rebuilding. Install all new seals and a new hose.

For the best braking performance, use only SRAM High-Performance 5.1 DOT brake fluid. If SRAM fluid is not available, use only High-Performance 5.1 DOT brake fluid or 4 fluid.

5 Use a T10 TORX wrench to remove the reservoir cap bolt nearest to the lever blade.

T10 TORX wrench

6 Carefully turn the lever body upside down so that the detent spring and ball fall out of the lever body. If they do not initially fall out, gently tap the lever against a clean shop towel.

7 Use a T10 TORX wrench to remove the other reservoir cap bolt.

T10 TORX wrench

8 Remove the reservoir cover and bladder from the lever body.

9 Pour the fluid from the brake lever body into a pan.

10 Separate the bladder from the reservoir cover.

Spray isopropyl alcohol on the bladder and the reservoir cover, then clean them with a shop towel.

**NOTICE**

All components must be completely dry before reinstalling them. Moisture residue from cleaning the bladder can leak out of the bladder as it dries, which can be misinterpreted as a system leak, when it is not.

11 Use a T10 TORX wrench to remove the lever pivot bolts.

T10 TORX wrench

12 Remove the lever blade.

## Piston Assembly Removal

1 Use a T8 TORX wrench to unthread then remove the SwingLink pinch bolt from the lever body.

T8 TORX wrench

2 Use the end of a T8 TORX wrench to push the SwingLink pivot pin out of the lever body.

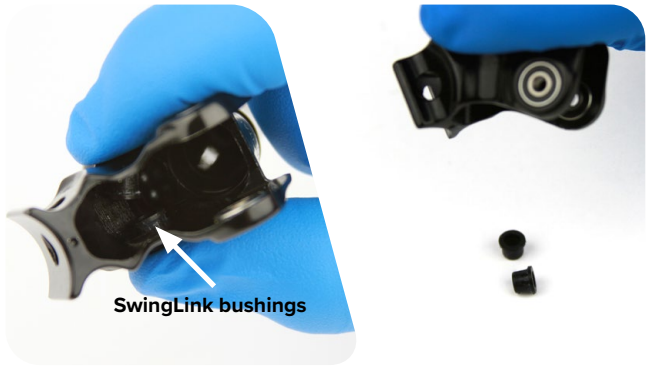

T8 TORX wrench

3 Slide the end of a T8 TORX wrench through the hole in the SwingLink, then pull the SwingLink out of the lever body.

T8 TORX wrench

T8 TORX wrench

**4** Remove the SwingLink bushings by hand.

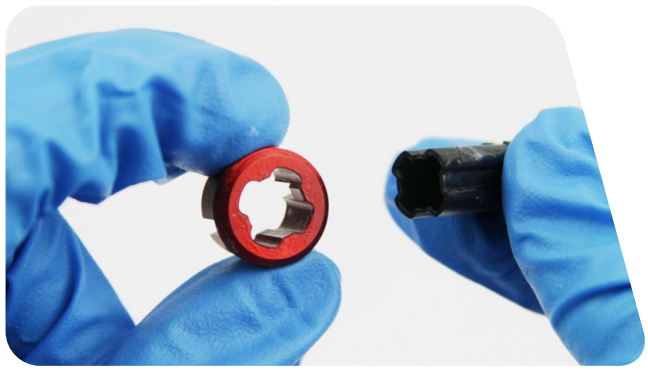



**5** Insert the SRAM Lever Internals Assembly Tool into the lever body and align the keyslot of the tool with the piston sleeve. Use the tool to unthread the sleeve, then remove the sleeve and coupler from the lever body.

*If the piston sleeve and coupler become stuck in the lever body after unthreading the piston sleeve, use a pair of needle nose pliers to gently grip the piston sleeve and remove it from the lever body.*


**6** Remove the sleeve from the coupler from the SRAM tool, then separate the sleeve and coupler by hand.

Spray isopropyl alcohol on both the sleeve and the coupler and clean them with a shop towel.



**7** Place a shop towel over the open end of the lever body near the Contact Point Adjustment dial.

Use your fingers to slide the Contact Point Adjustment dial out of the lever body.

**⚠CAUTION - EYE HAZARD**

Wear safety glasses.

The piston assembly is spring loaded and will forcefully eject from the lever body when the Contact Point Adjustment dial is removed. Be sure to cover the end of the lever body with a shop towel to capture the piston assembly and prevent it from becoming a projectile.

8 Remove the piston assembly from the lever body.

9 Spray isopropyl alcohol on the lever body and the lever blade, then clean them with a shop towel.

**NOTICE**

DOT brake fluid will damage painted surfaces. If any fluid comes in contact with a painted surface (i.e. 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 brake fluid is not covered under warranty.

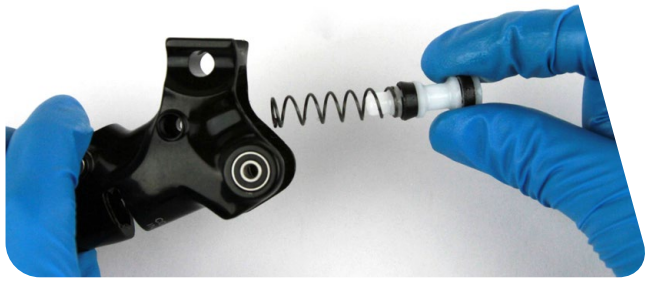
1 Submerge the new piston assembly in SRAM High-Performance 5.1 DOT brake fluid.

*You can also use SRAM High-Performance 5.1 DOT brake fluid or 4 compatible grease, as a lubricant.*

SRAM High-Performance 5.1 DOT brake fluid

2 Insert the piston assembly into the lever body.

Spray isopropyl alcohol on the lever body and both of your gloves, then clean them with a shop towel.



3 Use the SRAM Lever Internals Assembly Tool to press the piston into the lever body. While pressing down on the piston, with the half moon shape of the tool turned toward the lever opening, insert the contact adjust dial half way into the lever then remove the tool. Continue to insert the dial so that it is fully seated into the lever body.

*You should hear a pop sound when the contact knob is fully seated in place.*


SRAM Lever Internals Assembly Tool


SRAM Lever Internals Assembly Tool

4 Insert the sleeve into the coupler by hand.

*The sleeve threads must be oriented away from the base of the coupler.*

5 Insert the sleeve and coupler into the keyslot of the SRAM Lever Internals Assembly Tool.

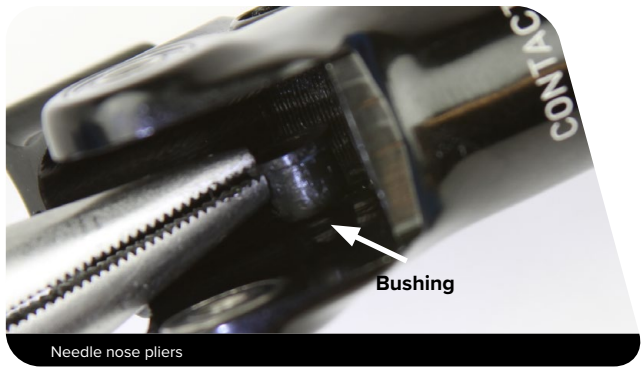
Use the SRAM tool to align the slots on the sleeve with the slots on the contact adjust dial and insert the SRAM tool into the lever body until you feel the sleeve and contact adjust dial engage.

Thread the sleeve into the lever body until it stops then remove the SRAM tool from the lever body.

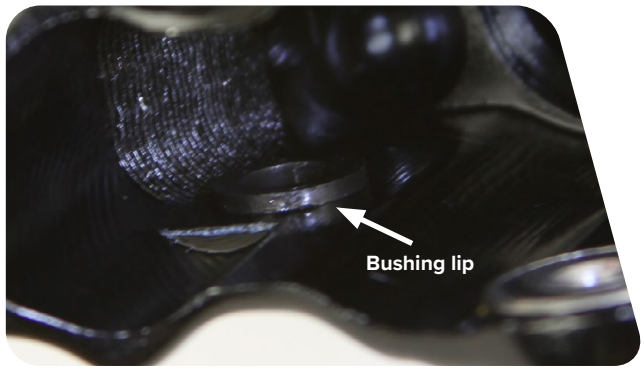

Lever Internals Assembly Tool


6 Use needle nose pliers to install the SwingLink bushings into the lever SwingLink pivot holes so that the lip of the bushing is flush on the inside of the lever body.

*If the SwingLink bushings fall out easily, apply a small amount of grease to the bushings to help hold them in place.*



Needle nose pliers



7 Place the SwingLink onto the SRAM Lever Internals Assembly Tool to adjust the length of the push rod on the SwingLink.

Use a 2 mm hex wrench to tighten the push rod into the SwingLink.

SRAM Lever Internals Assembly Tool 2 mm

8 Use a caliper to verify that the push rod lenth in the SwingLink is 26.3 mm. Turn the push rod counter-clockwise by hand to extend the pushrod length. Turn the push rod clockwise by hand to decrease the pushrod length.

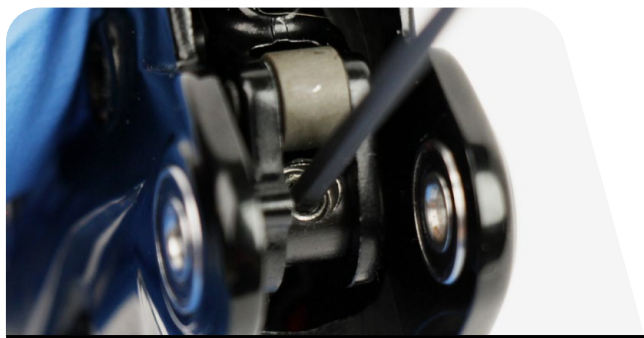
**NOTICE**

The push rod length must be set to exactly 26.3 mm. Any other length will reduce brake performance.


Caliper

9 Place the SwingLink onto a 2 mm hex wrench then insert the pushrod into the coupler sleeve.

2 mm hex wrench



2 mm hex wrench

**10** Align the SwingLink pivot holes and the SwingLink bushings, then press the pivot pin into the SwingLink pivot hole until it is flush with the lever body on both sides.

**11** Apply a small amount of Loctite Threadlocker Blue 242 onto the pinch bolt.

Use a T8 TORX wrench to thread the SwingLink pinch bolt into the lever body.

Use a torque wrench and a T8 TORX bit socket to tighten the bolt to 1.1-1.3 N·m (10-12 in-lb).

Loctite Threadlocker Blue 242

T8 TORX wrench

T8 TORX bit

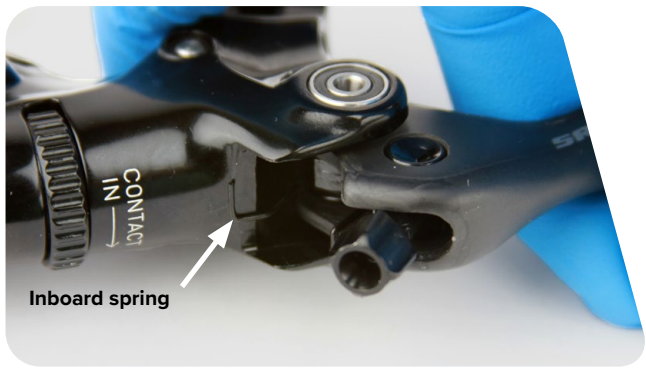
1.1-1.3 N•m (10-12 in-lb)

## Lever Blade Installation

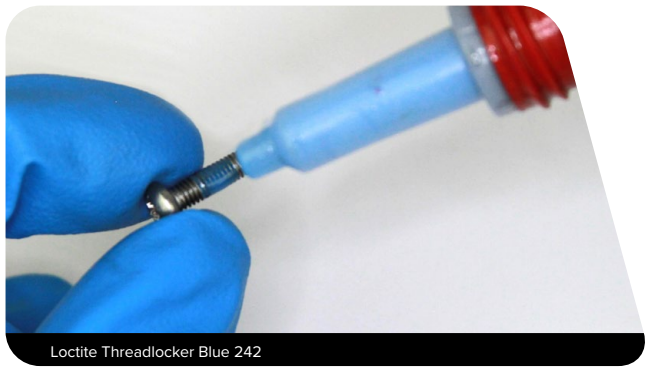
**1** Insert the lever blade into the lever body with the inboard spring pressing against the lever body.

Align the pivot holes of the lever blade and the lever body.

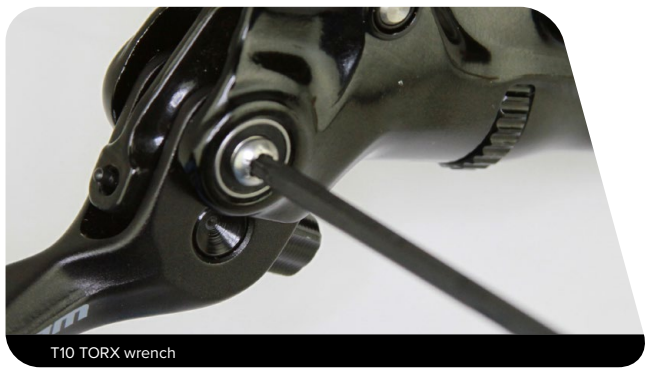
*Make sure the lever return spring is seated properly in the lever. The outboard end of the spring must press against the lever blade, while the inboard end of the spring must press against the lever body. If the return spring is not seated properly the reach adjustment feature of the lever blade will be inoperable.*




**2** Apply a small amount of Loctite Threadlocker Blue 242 onto the threads of each pivot bolt.


Loctite Threadlocker Blue 242

**3** Use a T10 TORX wrench to thread each pivot bolt into the bearings on each side of the lever body.


T10 TORX wrench

4 Use a torque wrench and a T10 TORX bit socket to tighten each pivot bolt to 1.1-1.3 N·m (10-12 in-lb).


5 Press the bladder into the reservoir cap, the bladder must be flush with the cap to be properly installed.

6 Insert the reservoir cap/bladder assembly onto the lever body.


7 Use your fingers to insert the detent ball followed by the detent spring into the lever body reservoir hole closest to the lever blade.

**8** Use a torque wrench and a T10 TORX bit socket to tighten each reservoir cap bolt to 1.1-1.3 N·m (10-12 in-lb).


**9** Spray isopropyl alcohol on the lever body and clean it with a shop towel.


**10** Cut the hose to install a new barb and compression fitting.

**⚠WARNING**

All SRAM brakes that use a compression fitting and hose barb must use a new SJ (Stealth-a-majig) hose barb and a new, red SJ compression fitting upon reassembly.

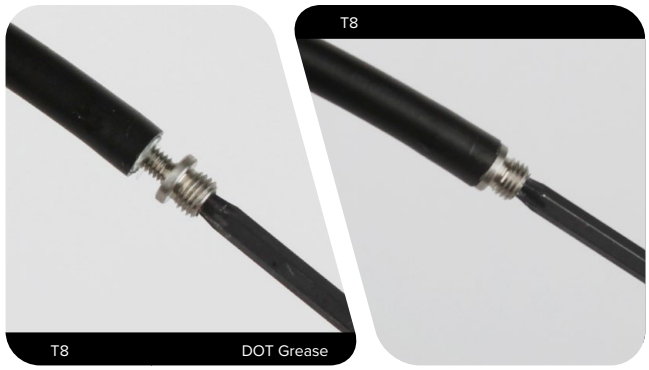
The factory may have installed a non-red SJ compression fitting, which functioned properly prior to disconnection. Upon reconnection, you must install a new SJ hose barb and a new, red SJ compression fitting.

Brake hoses assembled with non-Stealth-a-majig hose barbs and compression fittings, will **not function**.


**11** Apply DOT grease to the hose barb threads. Thread the hose barb into the hose until it is flush with the end of the hose.

***NOTICE***

Do not overtighten the hose barb. Overtightening may cause damage to the hose liner.

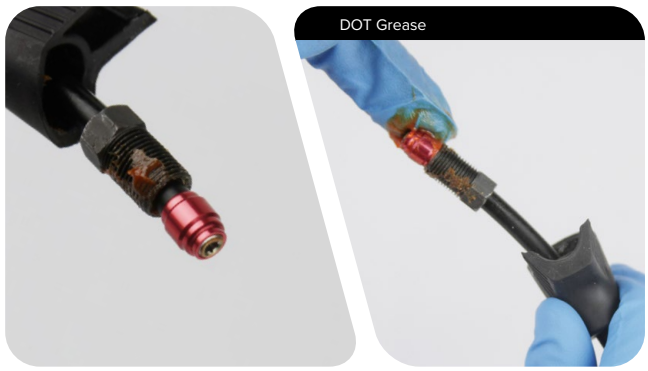


**12** Install the compression nut onto the hose.

**13** Thread the compression fitting over the hose barb, counter-clockwise, until it is flush or slightly lower than the hose barb.

*The compression fitting is reverse threaded.*

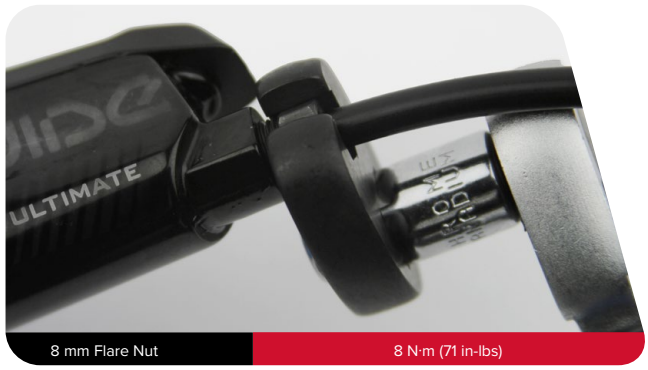
Apply DOT grease to the outside of the compression fitting and the threads of the compression nut.




**14** Install the compression fitting and nut into the lever.


**15** Tighten the compression nut.

Clean the lever.




**⚠CAUTION**

Servicing your brakes removes all of the fluid from the system. You must bleed the brakes after you service the brake caliper and/or lever.

For brake bleed, brake hose shortening, and brake pad replacement instructions, visit www.sram.com/service.

## Disc Brake Pad and Rotor Bed-in Procedure

All new brake pads and rotors should be put through a wear-in process called 'bed-in'. The bed-in procedure, which should be performed prior to your first ride, ensures the most consistent and powerful braking feel along with the quietest braking in most riding conditions. The bed-in process heats up the brake pads and rotors, which deposits an even layer of brake pad material (transfer layer) to the braking surface of the rotor. This transfer layer optimizes braking performance. To watch a video of the bed-in procedure, visit www.sram.com/service.

**⚠WARNING- CRASH HAZARD**

The bed-in process requires you to perform heavy braking. You must be familiar with the power and operation of disc brakes. Braking heavily when not familiar with the power and operation of disc brakes could cause you to crash, which could lead to serious injury and/or death. If you are unfamiliar with the power and operation of disc brakes, you should have the bed-in process performed by a qualified bicycle mechanic.

To safely achieve optimal results, remain seated on the bike during the entire bed-in procedure. Do not lock up the wheels at any point during the bed-in procedure.

- Accelerate the bike to a moderate speed, then firmly apply the brakes until you are at walking speed. Repeat approximately twenty times.
- Accelerate the bike to a faster speed, then very firmly apply the brakes until you are at walking speed. Repeat approximately ten times.
- Allow the brakes to cool prior to any additional riding.
- After the bed-in procedure has been performed, the caliper may need to be re-centered.

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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
U.S.A.

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