



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 G2 Brake Systems Service

We recommend that you have your SRAM G2 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.

ACAUTION

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.

Warranty and Trademark

For SRAM Warranty information, visit: www.sram.com/warranty.

For SRAM Trademark information, visit: $\underline{\text{www.sram.com/website-terms-of-use}}.$

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.

Do not apply grease to the caliper piston seals. Grease on the seals will reduce the clearance gap between the pads and rotors when the brake is released (low pad rollback).





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.





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:

 $\ensuremath{\mathsf{G2}}\xspace\,\ensuremath{\mathsf{R}}$ is pictured. The procedure is the same for all $\ensuremath{\mathsf{G2}}\xspace$ disc brakes.

- Clamp the bicycle into a bicycle work stand.

 Remove the wheel from the affected caliper.
- Remove the E-clip from the pad retention bolt.

 Remove the pad retention bolt from the caliper.





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



Insert two brake rotors into the caliper rotor slot.





Remove the rotors.





Use a plastic tire lever to carefully press the pistons back into the caliper.

Repeat steps 4-6 one more time.



With the pistons pressed back into the caliper, install the brake pads, H-spring, pad retention bolt, and E-clip.





8 Install the wheel.





Squeeze the brake lever until the contact point is firm and lever throw is acceptable.

Center the caliper on the rotor if necessary.

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, perform a brake bleed.





Parts and Tools Needed for Service

Parts

- Caliper Service Kit 2011-2017 Code / 2017-2022 Guide RE / 2023+ G2 RE
- (Optional) Caliper Piston Kit 2011-2017 Code / 2017-2022 Guide RE / 2023+ G2 RE
- · Hydraulic Disc Brake Hose Fltting Kit

Safety and Protection Supplies

- · Clean, lint-free rags
- Nitrile gloves
- · Oil pan
- Safety glasses

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.

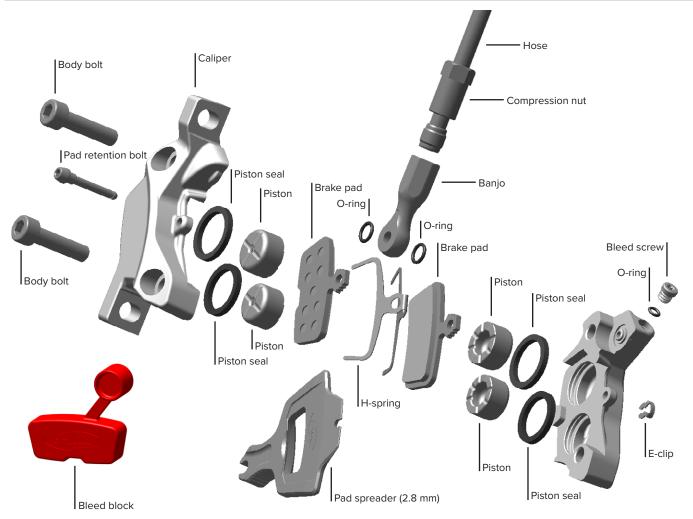
Common Tools

- · Air compressor with a rubber tipped blow chuck
- Digital caliper
- Flare nut crowfoot: 8 mm
- Flare nut wrench: 8 mm
- Hex bit socket: 5 mm
- Hex wrenches: 2.5 and 5 mm
- · Needle nose pliers
- · Pick (metallic)
- Pick (non-metallic)
- · Rubber mat/pad or flat section of inner tube
- Torque wrench

SRAM Tools

- SRAM Brake Bleed Kit (includes: Bleed Block and Bleeding Edge Fitting)
- Pad spreader (2.8 mm width)

Caliper Exploded View



Caliper Brake Pad Removal

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.

Remove the E-clip from the pad retention bolt.

Remove the pad retention bolt from the caliper.





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.







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

Remove the hose boot from the compression nut and slide it away from the caliper.





Remove the compression nut and hose.











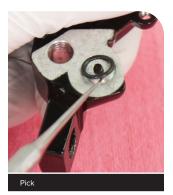


Separate the caliper halves and remove the banjo. Set the banjo aside.





Remove the banjo o-rings and discard them.





Secure a piece of rubber mat on a bench vise, or similar flat secure surface

Position one caliper half flat and firmly with the caliper body fluid port over the edge of the vise.



5

Align the blow chuck nozzle with the caliper body fluid port.

Press the caliper down firmly, then blow air into the caliper body port with one quick burst. The largest piston, closest to the port should dislodge from the caliper. An audible 'pop' sound may be heard.

The large piston should remain in the piston port, flush with the flat surface of the caliper body. DO NOT remove the large piston.

△CAUTION - EYE HAZARD

Wear safety glasses.

The caliper piston may dislodge rapidly from the caliper, which can lead to bodily injury or damage to the parts. Point the caliper piston toward a rubber surface before forcing air into the caliper.



Rubber-tipped blow chuck nozzle

Rubber mat/pad



Position the caliper half again flat on the vise and mat, with the caliper body fluid port over the edge of the vise.

Align the blow chuck nozzle with the caliper body fluid port again.

Press the caliper down firmly and blow air into the caliper body port in short, quick bursts until the small piston dislodges from the caliper. Again, an audible 'pop' sound may be heard when the small piston dislodges from the caliper.

The small piston should be in the piston port, flush with the edge of the caliper body.

△CAUTION - EYE HAZARD

Wear safety glasses.

The caliper piston may dislodge rapidly from the caliper, which can lead to bodily injury or damage to the parts. Point the caliper piston toward a rubber surface before forcing air into the caliper.







Remove both pistons by hand.

NOTICE

To prevent permanent damage to the pistons, do not use tools to remove the pistons.

Repeat the piston removal procedures for the other caliper half.







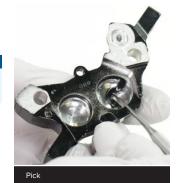


Pierce each piston seal with a pick, and remove each piston seal from inside both caliper body halves.

Discard the piston seals.

NOTICE

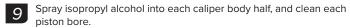
Do not scratch the seal gland with a pick. It could result in a slow fluid leak when the brake is applied.











Allow any remaining isopropyl alcohol to dry before proceeding.







Apply DOT 5.1 brake fluid to each new piston seal. Install each new piston seal into the piston bore seal grooves in each caliper body half.

Use the curved end of a non-metallic pick, or equivalent, to help guide each seal into the piston bore groove.











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.



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

Apply a small amount of SRAM High-Performance DOT 5.1 brake fluid to the circumference of each piston.

Install the piston into the piston bore squarely and evenly, then press the piston into the bore until it stops.

Repeat for each piston and each caliper half.

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.



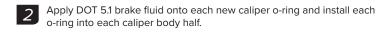














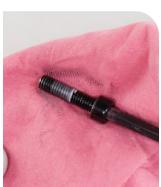


Clean the banjo.



Clean each caliper bolt.





Clean each caliper half.







Align the caliper body halves and install the caliper body bolts two full turns.









Align the banjo hole with the fluid port step, install the banjo, and pinch each caliper half together.



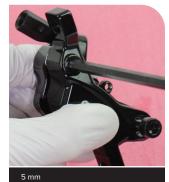


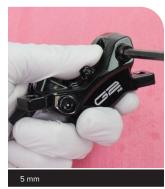












7 Orient the banjo to the original position.



Tighten each caliper body bolt to 8.5-10.1 N·m (75-90 in-lb).





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

MARNING

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 ${f not\ function}.$

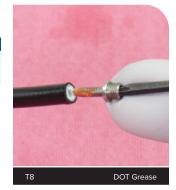




Apply DOT grease to the hose barb threads. Thread the hose barb into the hose until it is flush with the end of the hose.

NOTICE

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







11

Insert the non-threaded end of a new compression fitting over the hose barb and onto the brake hose and press the compression fitting onto the hose until it stops.

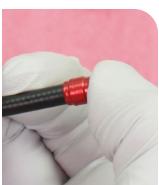
Thread the compression fitting onto the hose barb, counter-clockwise, until it is flush or slightly lower than the hose barb.

The compression fitting is reverse threaded.

Slide the compression nut to the compression fitting.

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











Insert the compression fitting into the banjo and hold it firmly into the banjo. Thread the compression fitting into the banjo by hand until it stops.







Tighten the compression nut and compression fitting to 8 N·m (71 in-lb).

Install a crowfoot socket at 90 degrees to the torque wrench to ensure an accurate torque value.



Install the hose boot onto the compression nut.







Insert the bleed block into the caliper.

MARNING

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.



16

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.

ACAUTION

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.

Parts and Tools Needed for Service

Parts

• Lever Internals V2 Guide R / G2 R / Guide RE / G2 RE / CODE R / DB5

Safety and Protection Supplies

- · Clean, lint-free shop towels
- · Nitrile gloves
- · Oil pan
- · Safety glasses

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.

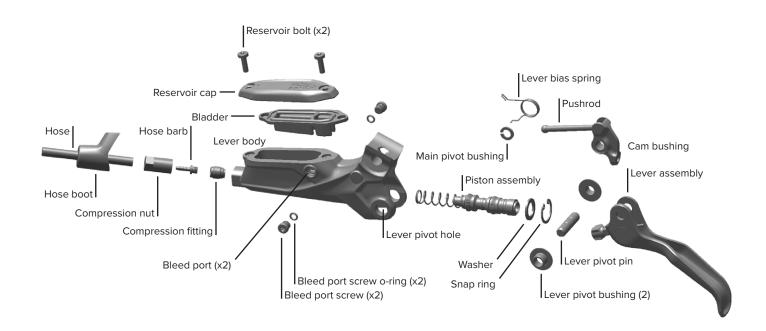
Common Tools

- · Flare nut crowfoot wrench: 8 mm
- Flare nut wrench: 8 mm
- · Hammer
- Hex wrenches: 2.5, 3, 4, & 6 mm
- · Internal snap ring pliers
- · Needle nose pliers
- · Pick (metallic)
- Pick (non-metallic)
- TORX wrench: T8, T10, & T25
- TORX bit socket: T10
- · Socket: 6 mm
- · Torque wrench

SRAM Tools

· SRAM Hydraulic Hose Cutter

Lever 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.

- 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.
- Pull the hose boot off the compression nut and slide it away from the lever.



Remove the hose compression nut.

Pull the brake hose and compression fitting from the brake lever body.





Pour the brake fluid into an oil pan. Squeeze the lever blade to pump 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 new seals and a new hose.

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









Remove the reservoir cover and bladder from the lever body.



Pour the remaining brake fluid from the brake lever body into an oil pan.





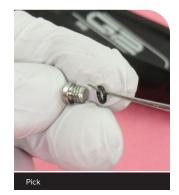
Remove the two lever bleed screws.





PRemove each o-ring from each bleed screw, and discard the o-rings.

Install new o-rings onto each bleed screw.





Install each bleed screw into the lever body.





Separate the bladder from the reservoir cover.

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

Set the bladder and cover aside on a clean 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.







Lever Blade Removal

1

Place the lever pivot on top of a 6 mm socket. Tap a 4 mm hex wrench with a hammer to remove the pivot pin.





Remove the lever blade assembly.

The lever blade assembly will separate into four pieces when removed from the lever body: SwingLink cam, lever bias spring, main pivot bushing, and lever blade assembly.





Remove the lever pivot bushings.

Clean the bushings and set them aside.





Piston Assembly Removal



Use long-tipped internal snap ring pliers to apply downward pressure to the lever body and remove the snap ring.

Turn the lever body upside down to allow the washer to fall out of the body.

↑CAUTION - EYE HAZARD

Wear safety glasses. Do not look directly into the lever body while performing this step. The internal piston/spring assembly is preloaded and will come out of the lever body quickly, which can result in injury.









Remove the piston assembly and discard it.





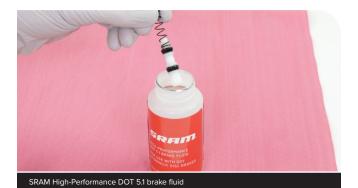
Clean the inside of the lever body.



NOTICE

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Submerge the new piston assembly in SRAM High-Performance DOT 5.1 brake fluid to lubricate the seals.



2 Install the new lubricated piston assembly, spring first, into the lever body.





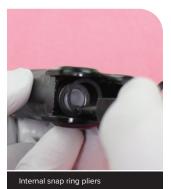
Install the washer onto the piston assembly. Use a pick to center the washer.







Use long-tipped internal snap ring pliers to push the piston washer and piston assembly into the lever body, and seat the snap ring into the groove.







Lever Blade Installation

1

Hold the spring and main pivot clip in place while installing the lever blade.







Insert the Reach Adjust Screw pin into the cam hole.



Insert the pushrod into the piston.





Align the pushrod cam and lever blade with the lever pivot holes in the lever body, then insert the pivot pin through one pivot hole and use it to align the pushrod cam assembly with the lever pivot hole.

Push the pivot pin into the lever pivot hole and through the pushrod cam assembly until it is centered in the lever body.





Confirm 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 adjuster will not function properly.

Actuate the lever and check for proper function.









Reservoir Cap Installation

Insert and seat the bladder into the reservoir cap. The bladder should be flush with the cap with each hole centered and seated over the bolt holes in the cap.

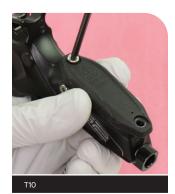


Insert the reservoir cap/bladder assembly onto the lever body.





Use a torque wrench and a T10 TORX bit socket to tighten each reservoir cap bolt to 1.2 N·m (10.5 in-lb).











Slide the lever hose boot and compression nut away from the compression fitting.



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

MARNING

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**.





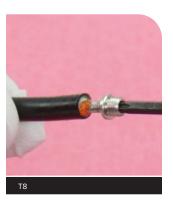
Apply DOT grease to the hose barb threads. Thread the hose barb into the hose until it is flush with the end of the hose.

NOTICE

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











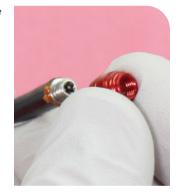
Insert the non-threaded end of a new compression fitting over the hose barb and onto the brake hose and press the compression fitting onto the hose until it stops.

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

The compression fitting is reverse threaded.

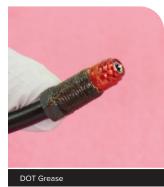
Slide the compression nut to the compression fitting.

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











Insert the compression fitting into the lever and hold it firmly into the lever. Thread the compression fitting into the lever by hand until it stops.









Use a flare nut crowfoot with a torque wrench to tighten the compression nut to 8 N·m (71 in-lb).



7 Slide the hose boot onto the lever.





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



∆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.

MARNING- 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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