

2017-2019 Guide RSC





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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 partsShifter 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 <u>www.sram.com/service</u> 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 <u>www.sram.com/company/environment</u>.

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 groun d 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.

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.

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 RSC/RS/R

Safety and Protection Supplies

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

Lubricants and Fluids

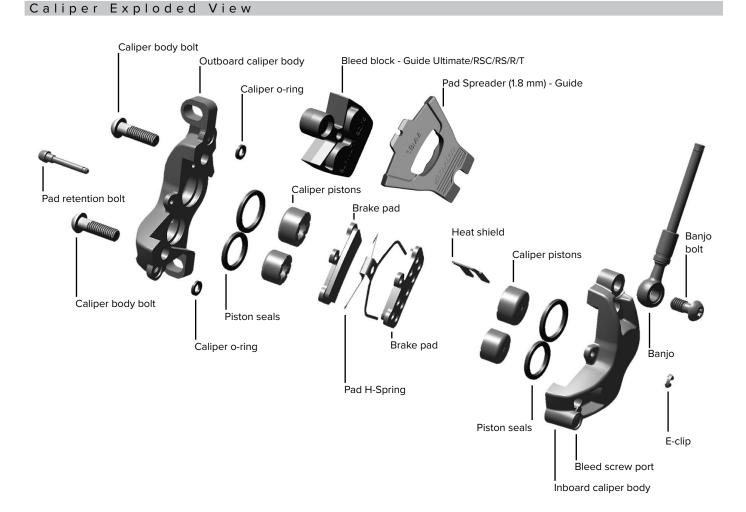
- Isopropyl alcohol
- SRAM High-Performance DOT 5.1 brake fluid. If SRAM fluid is not available, only use DOT 5.1 or 4 brake fluid.
- SRAM or AVID DOT grease. If SRAM or AVID DOT grease is not available only use a DOT compatible grease.

Common Tools

- 2.5 mm hex wrench
- 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 (1.8 mm) Guide



Caliper Brake Pad Removal



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.



Use needle nose pliers to remove the E-clip from the pad retention bolt.

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





Remove the brake pads and pad h-spring 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.





1

pad spreader.

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 2.5 mm hex wrench to install the pad retention bolt.

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

Squeeze the brake lever to advance the pistons until they contact the









T25 TORX wrench

Caliper Piston Removal 10



Remove the Guide 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.





Separate the caliper body halves. Set the heat shield aside.



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







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

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.



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 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.





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





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.

Install new caliper o-rings onto the outboard caliper half.





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.





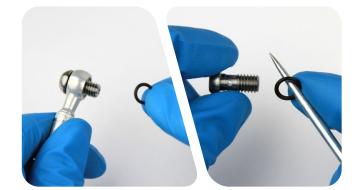
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Use a T25 TORX bit socket with a torque wrench to tighten each bolt to 9.8-11.8 N·m (87-104 in-lb).





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.





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).





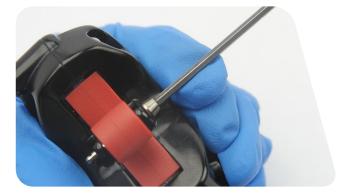
Insert the Guide bleed block into the caliper.



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

AWARNING

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.

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 and brake hose shortening instructions, visit www.sram.com/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.

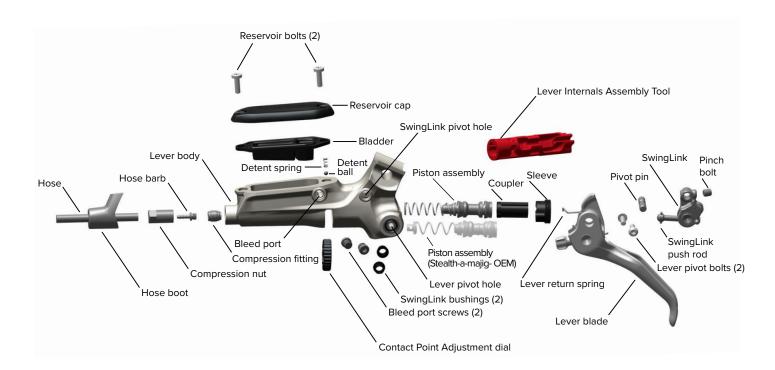
Common Tools

- 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 RSC Exploded View



NOTICE

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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.



3

Pull the hose boot off the compression nut and slide it down the hose.



Use an 8 mm flare nut wrench to remove the hose compression nut. 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 pump out the excess brake fluid from inside 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.





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





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 rag.



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





Remove the reservoir cover and bladder from 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 rag.

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.



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





Remove the lever blade.





1 Use a T8 TORX wrench to remove the SwingLink pinch bolt.



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

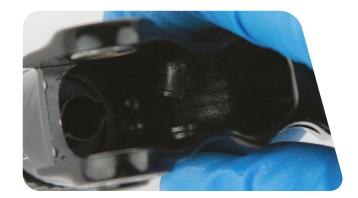


3 Use a T8 TORX wrench to remove the SwingLink.



T8 TORX wrench





Use a SRAM Lever Internals Assembly Tool to unthread the piston sleeve and coupler. 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 and remove the sleeve and coupler.

If the piston sleeve and coupler are stuck in the lever body use needle nose pliers to gently remove.



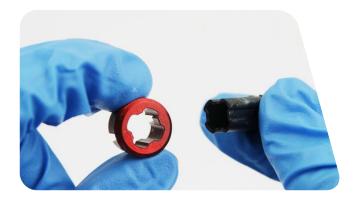
SRAM Lever Internals Assembly Tool

6

5

Remove the sleeve from the coupler by hand.

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



Place a rag over the lever body to prevent the piston assembly spring from forcefully ejecting.

Use your hand to push out the contact adjust knob.

▲CAUTION - EYE HAZARD

Use safety glasses.

The piston assembly is spring loaded and will forcefully eject from the lever body when the contact knob is removed.





9 Spray isopropyl alcohol on the lever body and the lever blade and clean them with a rag.



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.



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

You can also use SRAM DOT Assembly Grease, or DOT 5.1 or 4 compatible grease, as a lubricant.



SRAM High-Performance DOT 5.1 brake fluid

Install the new lubricated piston assembly into the lever body. Spray isopropyl alcohol on the lever body and both of your gloves and clean with a rag.



Use the SRAM Lever Internals Assembly Tool to press the piston into the lever body while inserting the contact adjust knob into the contact adjust slot.

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







5

6

Place the sleeve on the coupler.

clockwise rotation until it stops.

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

Use the SRAM Lever Internals Assembly Tool tool to engage and

thread the sleeve and coupler onto the piston assembly. Engage the slots on the sleeve with the contact adjust knob and continue to thread the SRAM Lever Internals Assembly Tool tool in a





Use needle nose pliers to install the SwingLink bushings.

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





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.



8

10

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.



9 Use a 2 mm hex wrench to remove the SwingLink from the SRAM Lever Internals Assembly Tool and place the pushrod into the coupler sleeve.





2 mm hex wrench



Align the holes of the SwingLink and the SwingLink bushings, then press the pivot pin into the hole until it is flush with the lever body.



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 torque the bolt to 1.1-1.3 N·m (10-12 in-lb).



Lever Blade Installation

Install the lever blade.

Line up the pivot holes of the lever blade with the pivot holes in the lever body.



Make sure your 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 springs must press against the lever body. If the return spring is not seated properly, you will not be able to adjust the reach of the lever blade.



2

3

Apply a small amount of Loctite Threadlocker Blue 242 onto each pivot bolt.



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



Press the bladder into the reservoir cap, make sure the bladder is

properly seated into the reservoir cap. The bladder should be flush





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





6

4

5

with the cap.

Install the detent ball followed by the detent spring into the lever body reservoir hole closest to the lever blade.





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

10

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

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.





Install the compression nut onto the hose.





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.





Install the compression fitting and nut into the lever.





Use a flarenut crowfoot with a torque wrench to tighten the compression nut to 8 $N \cdot m$ (71 in-lb).

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



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 <u>www.sram.com/service</u>.

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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