

SRAM

HydroR Disc Brake Caliper / Lever Piston / Hose Replacement



SERVICE MANUAL

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 (aluminium, 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 HydroR Brake Systems

We recommend that you have your SRAM HydroR 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.

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 caliper. Consult the *HRD Hose Shortening and Bleed Manual* at www.sram.com/service.

NOTICE

Before beginning service, thoroughly clean the exterior of the product to avoid contamination of internal sealing part surfaces.

DOT brake 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 brake fluid is not covered under warranty.

When using a crowfoot socket and torque wrench, install the crowfoot socket at 90 degrees to the torque wrench.

Disc Brake Pad Advancement Procedure

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.
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, Tools, and Supplies

Parts

- HRD B1 Caliper Parts Kit

Safety and Protection Supplies

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

Lubricants and Fluids

- Isopropyl alcohol
- SRAM DOT 5.1 hydraulic brake fluid
- SRAM DOT assembly grease

SRAM Tools

- SRAM bleed block hydraulic road disc

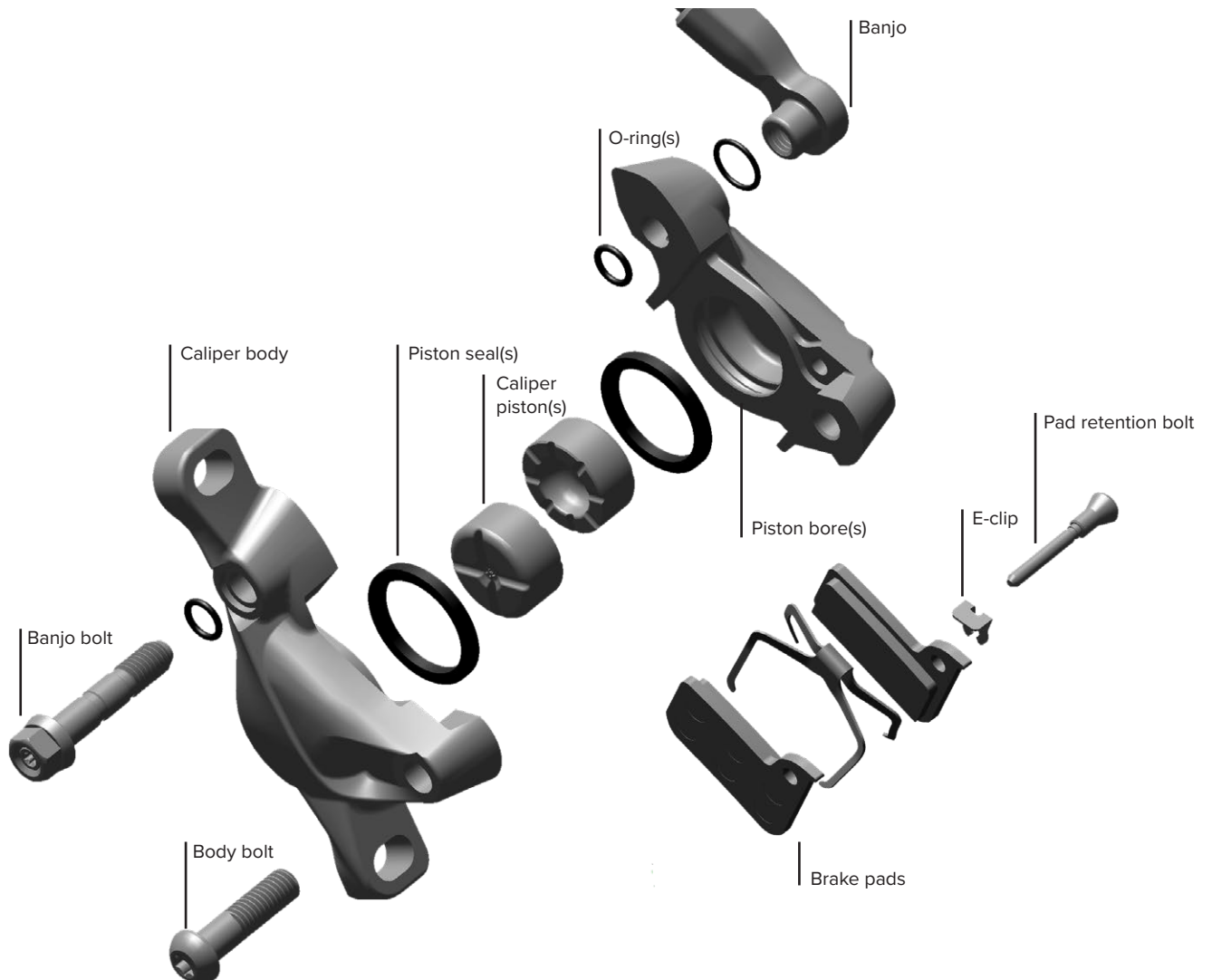
Bicycle Tools

- Bicycle work stand

Common Tools

- Air compressor with rubber-tipped air chuck nozzle
- Bench vise with aluminum soft jaws
- Crowfoot wrench: 8 mm, 9 mm
- Digital caliper
- Flare nut wrench: 8 mm
- Hex wrench: 2.5 mm
- Hex bit socket: 2.5 mm
- Needle nose pliers
- Open end wrench: 6 mm, 10 mm
- Pick
- T25 TORX wrench
- T25 TORX bit socket
- Torque wrench

Exploded View



Caliper Brake Pad Removal

- 1 Remove the caliper mounting hardware from the caliper, then set them aside in the order that they were removed.

Flat mount: Leave the mounting bracket installed.

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



- 3 Remove the brake pads.

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 (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 brake fluid is not covered under warranty.

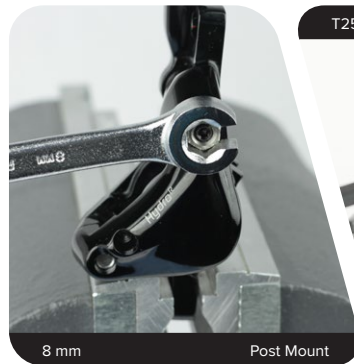
- 1 Disconnect the hose from the banjo.

NOTICE

Fluid will drip. Place an oil pan and/or shop towel under the hose.



- 2 Install the caliper into the soft jaws of a vise. Remove the banjo bolt. Set the banjo aside.



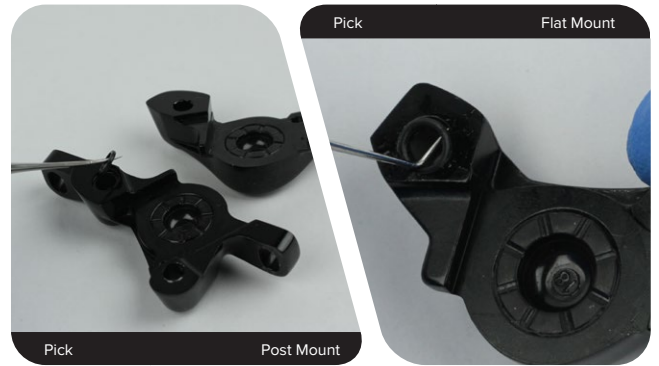
- 3 Remove the caliper body bolt.



- 4 Separate the caliper body halves.



5 Remove the caliper o-ring.



6 Place each caliper half, piston side down, on a soft rubber mat or a small section of inner tube on a flat surface.

Firmly press a rubber-tipped air chuck nozzle into the banjo port to dislodge the piston from the caliper.

⚠ 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 to prevent the piston from becoming a projectile.



Rubber-tipped air chuck nozzle

7 Remove the piston seal from 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.



8 Spray isopropyl alcohol inside each piston bore, the inside and the outside of the caliper, and clean them with a shop towel.

NOTICE

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.

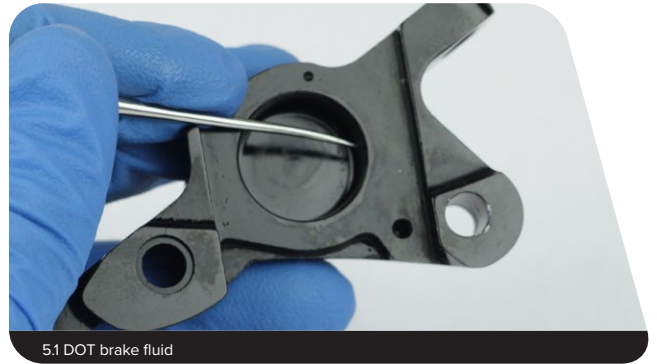
For the best braking performance, use only SRAM DOT 5.1 brake fluid. If SRAM fluid is not available, use only DOT 5.1 brake fluid or 4 fluid.



NOTICE

DOT brake 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 brake fluid is not covered under warranty.

- 1 Apply a small amount of SRAM 5.1 DOT brake fluid to a new piston seal and install a seal into the piston bore on each caliper body half.



5.1 DOT brake fluid

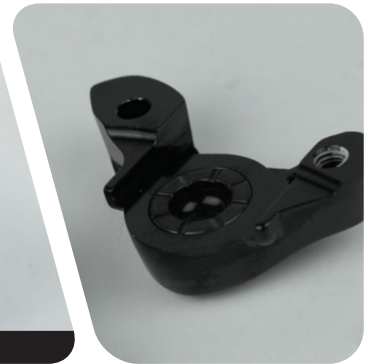
- 2 Inspect the caliper pistons for damage and replace the pistons if necessary.
Apply a small amount of SRAM 5.1 DOT brake fluid to the circumference of each piston. Install a caliper piston into the piston bore on each caliper body half.

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.



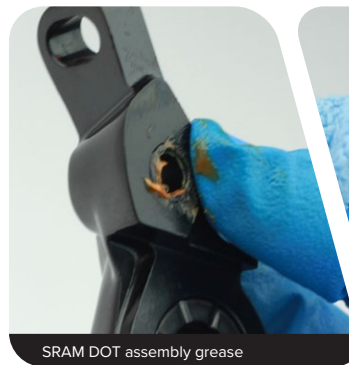
5.1 DOT brake fluid



- 3 Apply grease to the new o-ring and install it onto the outboard caliper half.

NOTICE

The o-ring must be fully seated in the groove to prevent pinching the o-ring during assembly. A pinched o-ring may cause a leak.



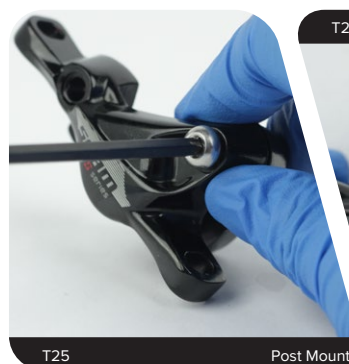
SRAM DOT assembly grease



- 4 Align the caliper body halves. Install the body bolt into the caliper two full turns.

NOTICE

Visually inspect the banjo bolt hole to confirm the o-ring is not pinched or protruding. If the o-ring is visible, then remove the bolt and repeat steps 3 and 4. Pinched o-rings may cause leaks.



T25

Post Mount



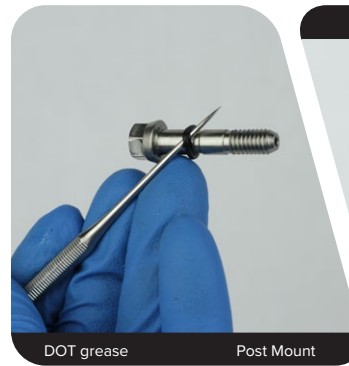
T25

Flat Mount

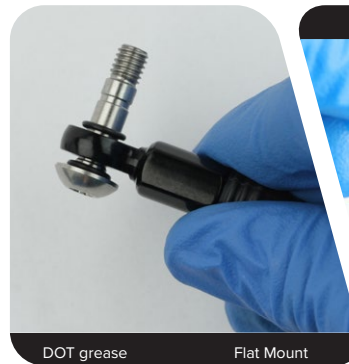
5 Tighten the caliper body bolt.



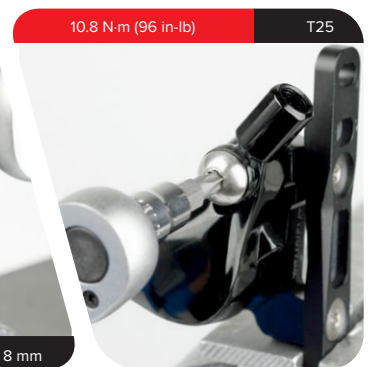
6 Post mount only: Remove the banjo bolt o-ring. Apply grease to the new o-ring and install it on the bolt. Install the bolt into the caliper.



Flat mount only: Remove the o-rings from the banjo bolt. Apply grease to the new o-rings and install them on the banjo bolt so one is on each side of the banjo fitting.



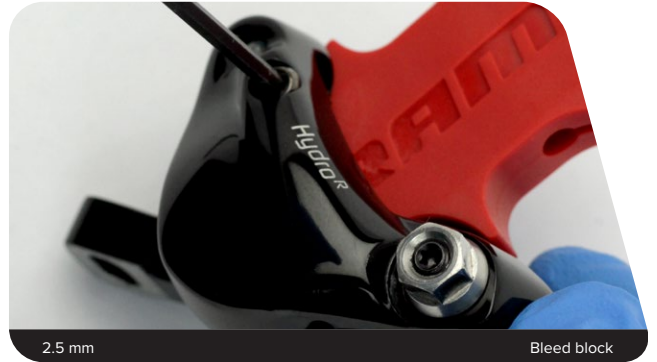
7 Tighten the banjo bolt.



- 8 Spray isopropyl alcohol on the caliper body and clean it with a shop towel.



- 9 Insert the bleed block into the caliper. Install the pad retention bolt.



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

NOTICE

You must install a new hose barb and compression fitting before reconnecting the brake lever to the hose.



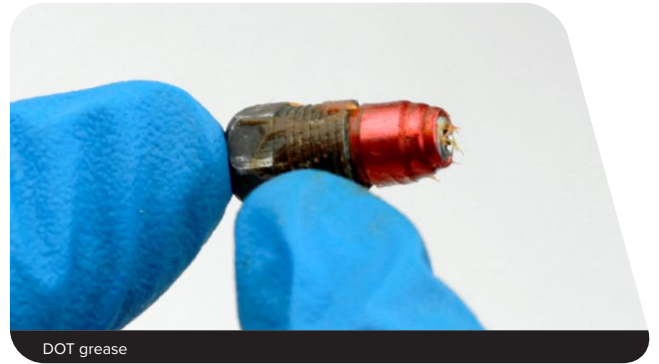
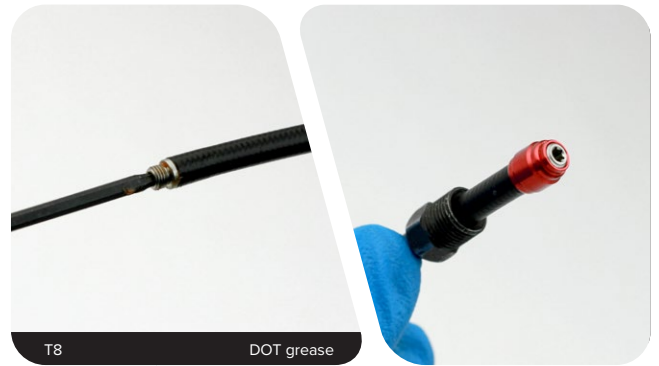
- 11 Apply grease to the threads on a new hose barb. Thread the hose barb into the hose until it is flush with the end of the hose.

NOTICE

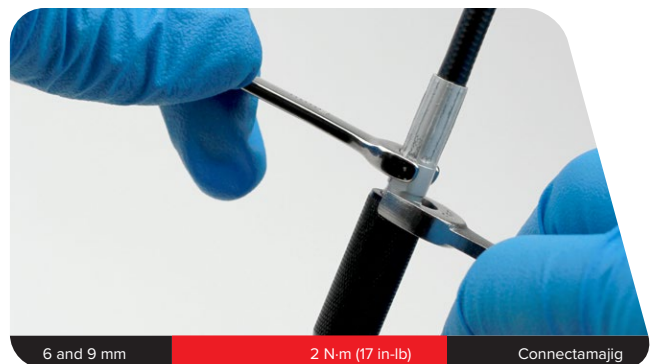
Do not overtighten the hose barb. Overtightening may cause damage to the hose liner.

Install the banjo boot and compression nut onto the hose. Thread a new compression fitting over the hose barb, counter-clockwise, until it is flush or slightly lower than the hose barb.

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



- 12 Install the hose firmly into the brake caliper while threading the compression nut by hand. Tighten the compression nut.



CAUTION

Servicing your brake caliper removes fluid from the system. You must bleed the 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. For brake bleed and brake pad replacement instructions, consult the *HRD Hose Shortening and Bleed Manual* at www.sram.com/service.

SRAM HydroR Lever Service

Perform this service if you have forward or backward play, or rattling in your lever.

Prior to servicing the lever, record the lever placement on the bars and position of the reach so you can return the product to these settings. For an externally routed hose, detach the hose from the bicycle frame according to the bicycle manufacturer's instructions. For an internally routed hose, disconnect the hose from the caliper before removing the hose from the frame.

Parts, Tools, and Supplies

Parts

- HRD/HRR Shift Lever Pushrod Assembly

Safety and Protection Supplies

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

Lubricants and Fluids

- Isopropyl alcohol
- SRAM DOT 5.1 hydraulic brake fluid
- SRAM DOT assembly grease

SRAM Tools

- SRAM brake bleed syringe

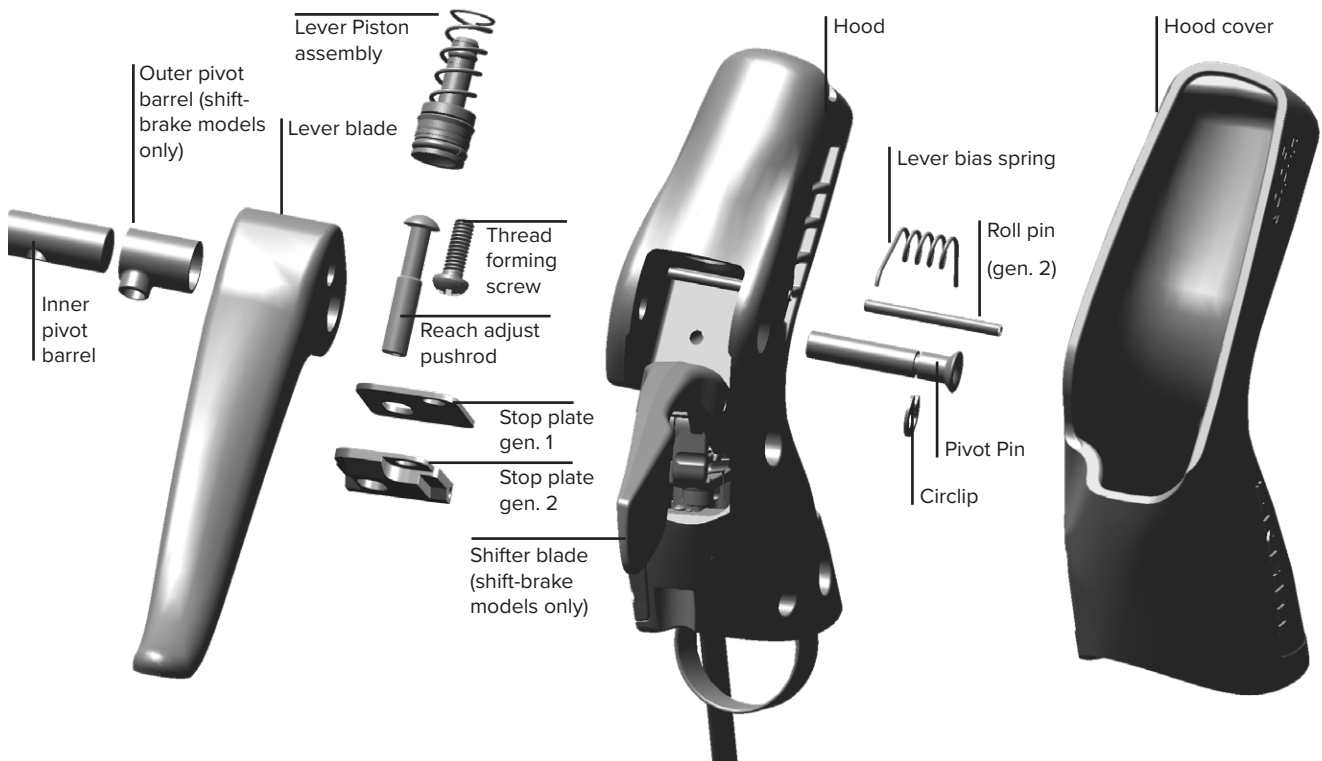
Bicycle Tools

- Bicycle work stand

Common Tools

- Flat blade screwdriver
- Hex wrenches: 2.5, 5 mm
- Hex bit sockets: 2.5, 5 mm
- Needle nose pliers
- Phillips #2 screwdriver
- Pick
- Pin removal punch: 2 mm x 1.5 in
- Rubber mallet
- Torque wrench

Exploded View



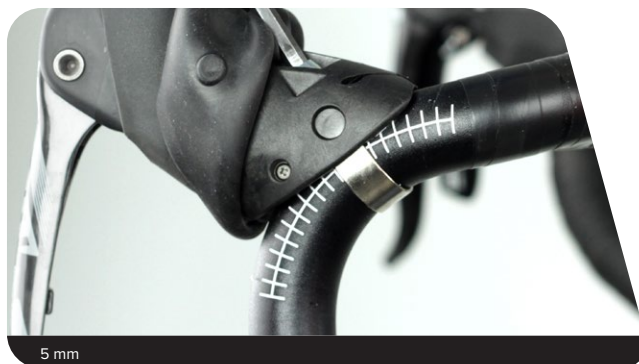
NOTICE

DOT brake 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 brake fluid is not covered under warranty.

There are two stop plate types for HydroR disc brakes: stop plate generation 1, and stop plate generation 2. Follow the procedure for the stop plate type in your lever assembly.



- 1 Remove the shifter cable from the derailleur cable anchor points according to the user manual on www.sram.com/service, if applicable. Remove the handlebar tape. Loosen the handlebar clamp and remove the brake lever from the bicycle.



- 2 Remove the hood cover.



- 3 Use a pick to remove the circlip from the lever pivot pin.



- 4 Push the pivot pin out of the lever blade. Remove the lever bias spring.

⚠ WARNING- EYE HAZARD

Wear safety glasses. The lever bias spring may eject from the lever.



- 5 Turn the reach adjust pushrod clockwise to release the pivot barrel(s) and lever blade from the hood. Use your hand to hold the shifter blade out of the way on shift-brake models.

Set the lever blade assembly aside.



- 6 Fill a clean bleed syringe with 5-10 ml of DOT 5.1 brake fluid.



- 7 Remove the bleed screw from the bleed port.



8 Thread the bleed syringe into the bleed port.

Fluid may drip from the bleed port. Clean the brake assembly with water and a shop towel to remove any DOT brake fluid that drips from the bleed port.

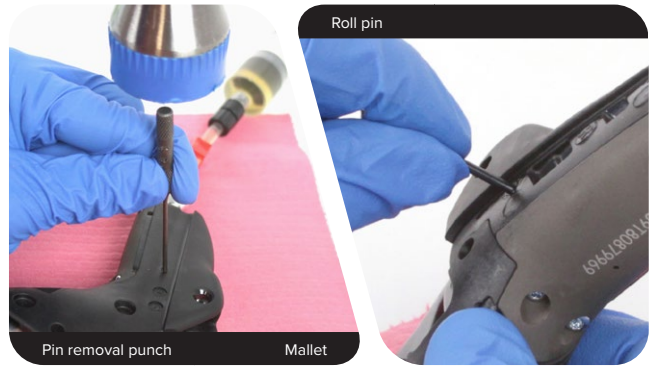


9 Stop Plate Gen. 1: Remove the thread forming screw from the stop plate in the hood.

Remove the stop plate and reach adjust pushrod.



Stop Plate Gen. 2: Use a mallet and a pin-removal punch to gently tap out the roll pin.



Remove the thread forming screw from the stop plate in the hood, then remove the stop plate and reach adjust pushrod.



- 10** Place a shop towel over the lever piston, and apply light pressure to the piston. This will prevent the piston from rapidly ejecting from the brake assembly.



- 11** Apply gentle pressure to the bleed syringe until the lever piston protrudes from the bore far enough to be grabbed with your fingers. Pull the piston out of the bore by hand.



- 12 Use a shop towel to remove excessive DOT brake fluid from the brake assembly.



- 13 Unthread the bleed syringe from the bleed port.
Install the bleed screw into the bleed port.

NOTICE

Place a shop towel below the brake assembly to catch any spilled DOT brake fluid. Clean DOT brake fluid from all painted surfaces.



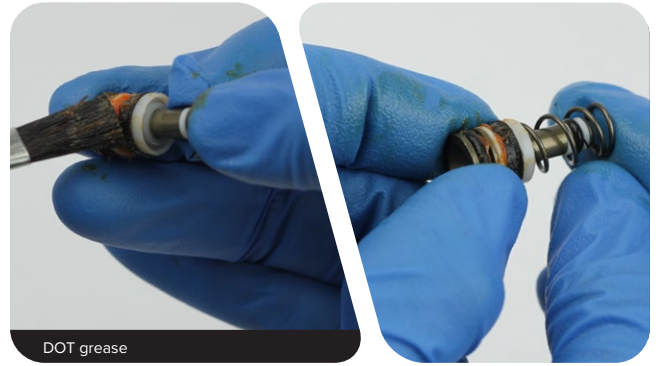
- 14 Spray isopropyl alcohol onto a shop towel and clean the brake assembly.



Lever Cylinder Piston Installation

- 1 Apply grease to the piston seal and o-rings on a new lever cylinder piston assembly.

Install the spring onto the white spring capture on the lever cylinder shaft.



- 2 Install the lever cylinder assembly.

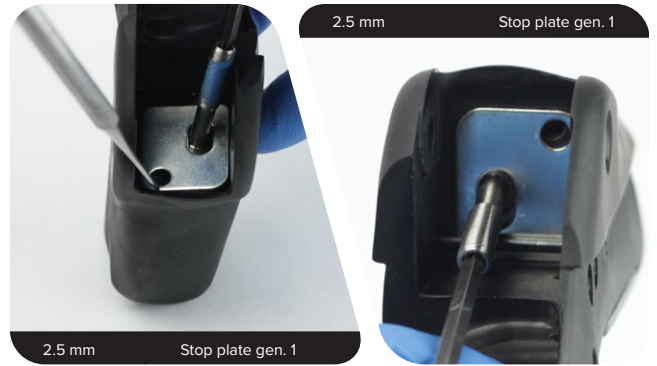


- 3 Install the reach adjust pushrod through the stop plate. Use your hand to hold the shifter blade out of the way on shift-brake models.



4 Stop Plate Gen 1: Use a 2.5 mm hex wrench to depress the reach adjust pushrod so it pushes against the lever cylinder piston head and use a pick to seat the piston stop plate underneath the bar in the hood.

Tighten the thread forming screw into the stop plate while holding the reach adjust pushrod in place.



Stop Plate Gen. 2: Tighten the thread forming screw into the stop plate.

Insert the roll pin into the roll pin hole, then gently tap the roll pin through the stop plate and the hood. Use the pin removal punch to make sure the roll pin is centered in the hood.



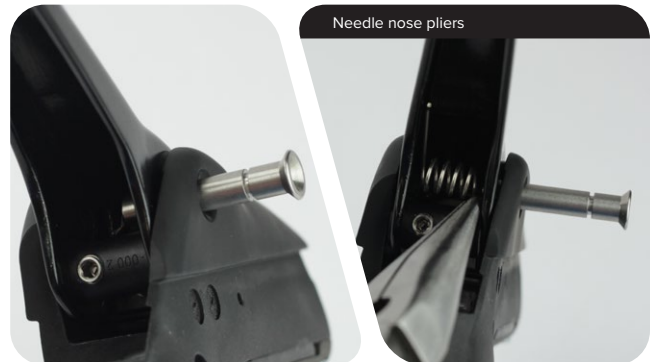
- 5** **Shift-brake lever:** Install the inner pivot barrel into the outer pivot barrel in the lever so the holes in the pivot barrels align with the reach adjust pushrod in the hood.



Brake lever: Install the inner pivot barrel into the lever so the hole in the pivot barrel aligns with the reach adjust pushrod in the hood.
Thread the reach adjust pushrod into the pivot barrel counter-clockwise.



- 6** Install the pivot pin into the inset hole on the hood and through the lever blade hole so that the pin protrudes slightly.



Orient the lever bias spring with the long arm of the spring against the brake lever.

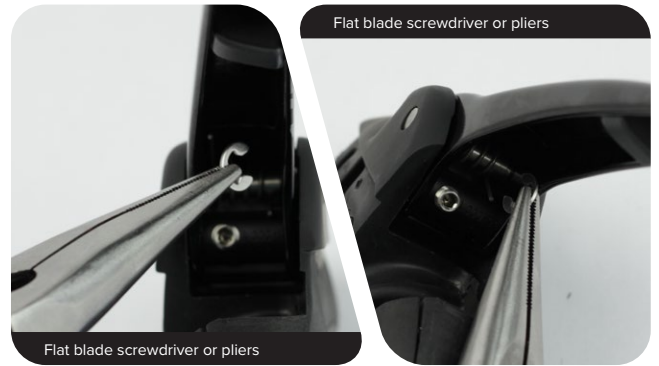
Use needle nose pliers to hold the spring into place so you can push the pivot pin through the lever bias spring and through the other hole in the hood.



- 7 Use needle nose pliers or a flat blade screwdriver to install the circlip onto the pivot pin with the rounded side facing outward.

NOTICE

Inspect the circlip to make sure it is installed properly. If the circlip is missing or not installed properly, it could cause the pivot pin to fall out of the brake.



- 8 Spray isopropyl alcohol on the brake and clean it with a shop towel.



- 9 Replace the shifter cable, if needed.



- 10 Install the hood cover.



- 11** Tighten the brake lever onto the handlebar in the previous recorded position. Return the reach adjust to its original position. Route the hose through or onto the frame according to the frame manufacturer's instructions. Install the shifter cable to the derailleur according to the user manual at www.sram.com/service.



⚠ CAUTION

Servicing your shift-brake or brake lever removes fluid from the system, you must bleed the brakes. For brake bleed and brake pad replacement instructions, consult the *SRAM HRD Hose Shortening and Bleed Manual* at www.sram.com/service.

Hydraulic Hose Replacement for Inline Stealth-a-majig (2021+)

Perform the hose replacement service if the hose needs to be replaced. For hose shortening instructions, consult the *HRD Hose Shortening and Bleed Manual* at www.sram.com/service.

Parts, Tools, and Supplies

Parts

- SRAM Inline Stealth-a-majig hydraulic hose kit

Safety and Protection Supplies

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

Lubricants and Fluids

- Isopropyl alcohol
- SRAM DOT assembly grease

SRAM Tools

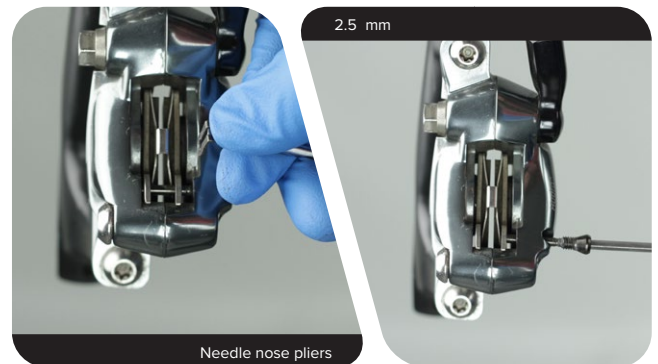
- Bleed block hydraulic road disc
- SRAM hydraulic hose cutter tool

- Crowfoot wrench: 8 mm
- Digital Caliper
- Flare nut wrench: 8 mm
- Hex wrench: 2.5 mm
- Hex bit socket: 2.5 mm
- Marker
- Needle nose pliers
- Open end wrench: 10 mm
- Torque wrench
- TORX wrenches: T8, T25
- TORX bit socket: T25

Hose Removal for an Inline Stealth-a-majig

- 1 Remove the wheel from the bicycle according to the manufacturer's instructions.

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



3 Remove the brake pads.

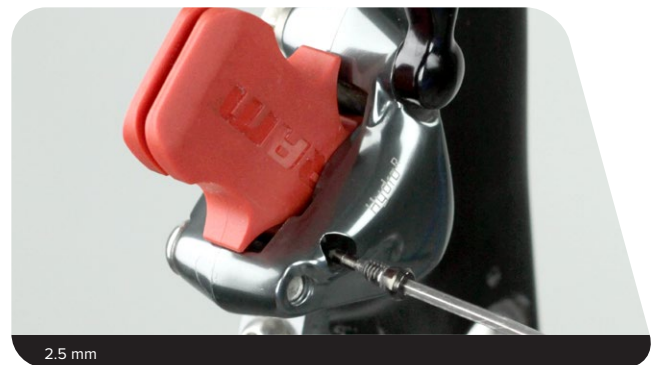
NOTICE

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



Digital Caliper

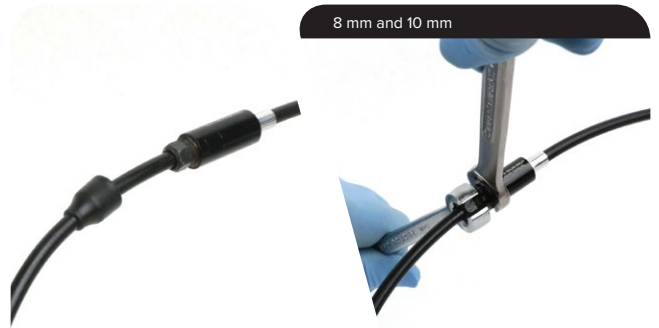
4 Insert the bleed block into the caliper, then install the pad retention bolt.



2.5 mm

5 At the lever end, remove the boot cover on the inline stealth-a-majig valve body.

Loosen and remove the compression nut and hose from the valve body near the lever.



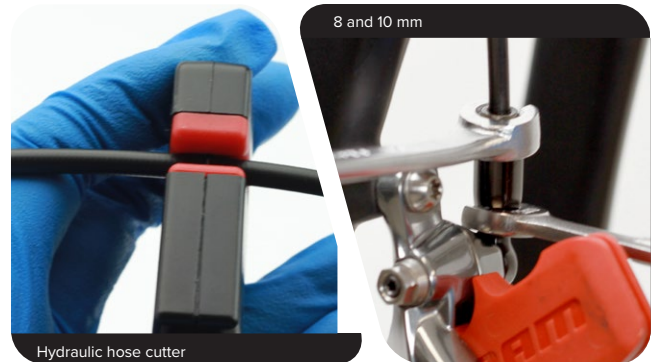
6 At the caliper, cut the hose and remove the compression nut and banjo boot.

Remove the hose from the bicycle frame according to the bicycle manufacturer's instructions.

Disconnect the hose from the banjo.

NOTICE

Fluid will drip. Place an oil pan and/or shop towel under the hose. Install a hose barb into the end of the hose to avoid dripping fluid inside internally routed frames.



Hydraulic hose cutter

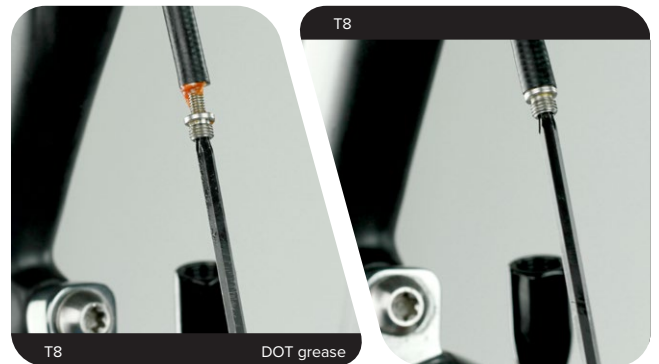
1 Internally routed frames: Insert the new hose and route it through the frame or fork.

Externally routed frames: Loosely connect the new hose to the frame or fork.

2 Apply 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.



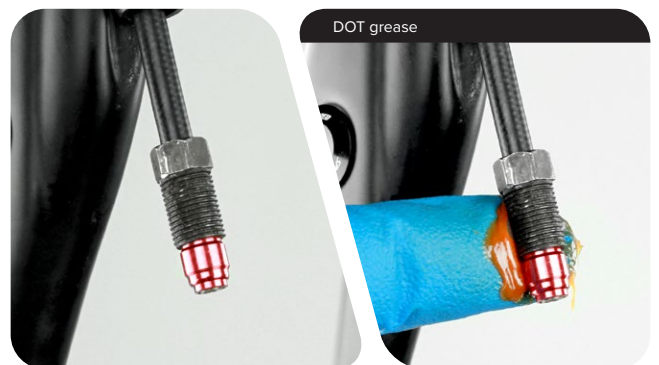
3 Install the banjo boot and long compression nut onto the hose.



4 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 grease to the outside of the compression fitting and the threads of the compression nut.



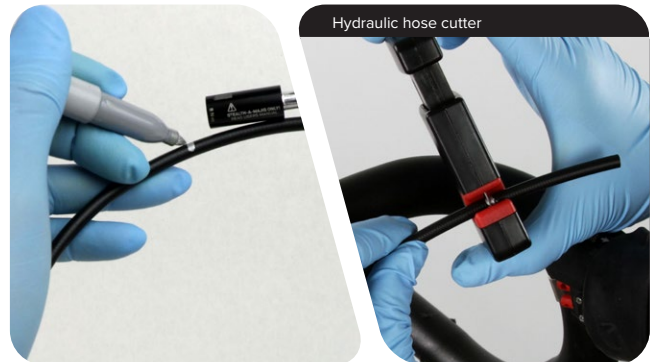
- 5** Install the hose into the caliper while threading the compression nut into the caliper by hand. Tighten the compression nut. Install the hose boot over the compression nut.



- 6** To shorten the hose, hold the hose up to the inline stealth-a-majig valve body with a length that creates a gentle bend in the hose and allows the handlebar to freely turn from side to side. Mark your cut location, then cut the hose.

NOTICE

You must cut the hose at the lever. Cutting the hose at the caliper will remove the crimped banjo from the hose, and it will need to be replaced.



- 7** Apply grease to the hose barb threads.

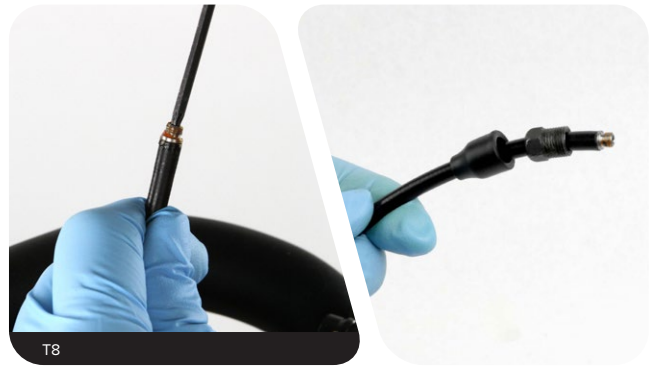


8 Thread the hose barb into the hose until it is flush with the end of the hose.

Install the boot and the short compression nut onto the hose.

NOTICE

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



9 Thread a new 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.

NOTICE

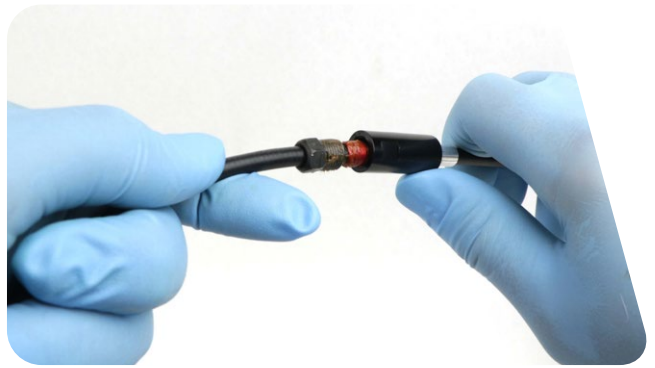
You must install a new hose barb and compression fitting before reconnecting the brake lever to the hose.



10 Apply a thin layer of grease to the compression fitting and compression nut.



- 11 Install the hose into the lever body while threading the compression nut into the valve body by hand. Tighten the compression nut.



- 12 Install the hose boot over the compression nut.



⚠ CAUTION

Hydraulic hose replacement removes all of the fluid from the system. You must bleed your brakes after you service the brake caliper. Consult the *HRD Hose Shortening and Bleed Manual* at www.sram.com/service.

SRAM Hydraulic Hose Replacement for non-Stealth-a-majig (2012+)

Perform the hose replacement service if the hose needs to be replaced. For hose shortening instructions, consult the *HRD Hose Shortening and Bleed Manual* at www.sram.com/service.

Parts, Tools, and Supplies

Parts

- SRAM road disc brake hydraulic hose kit

Safety and Protection Supplies

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

Lubricants and Fluids

- Isopropyl alcohol
- SRAM DOT assembly grease

SRAM Tools

- Bleed block hydraulic road disc
- SRAM hydraulic hose cutter tool

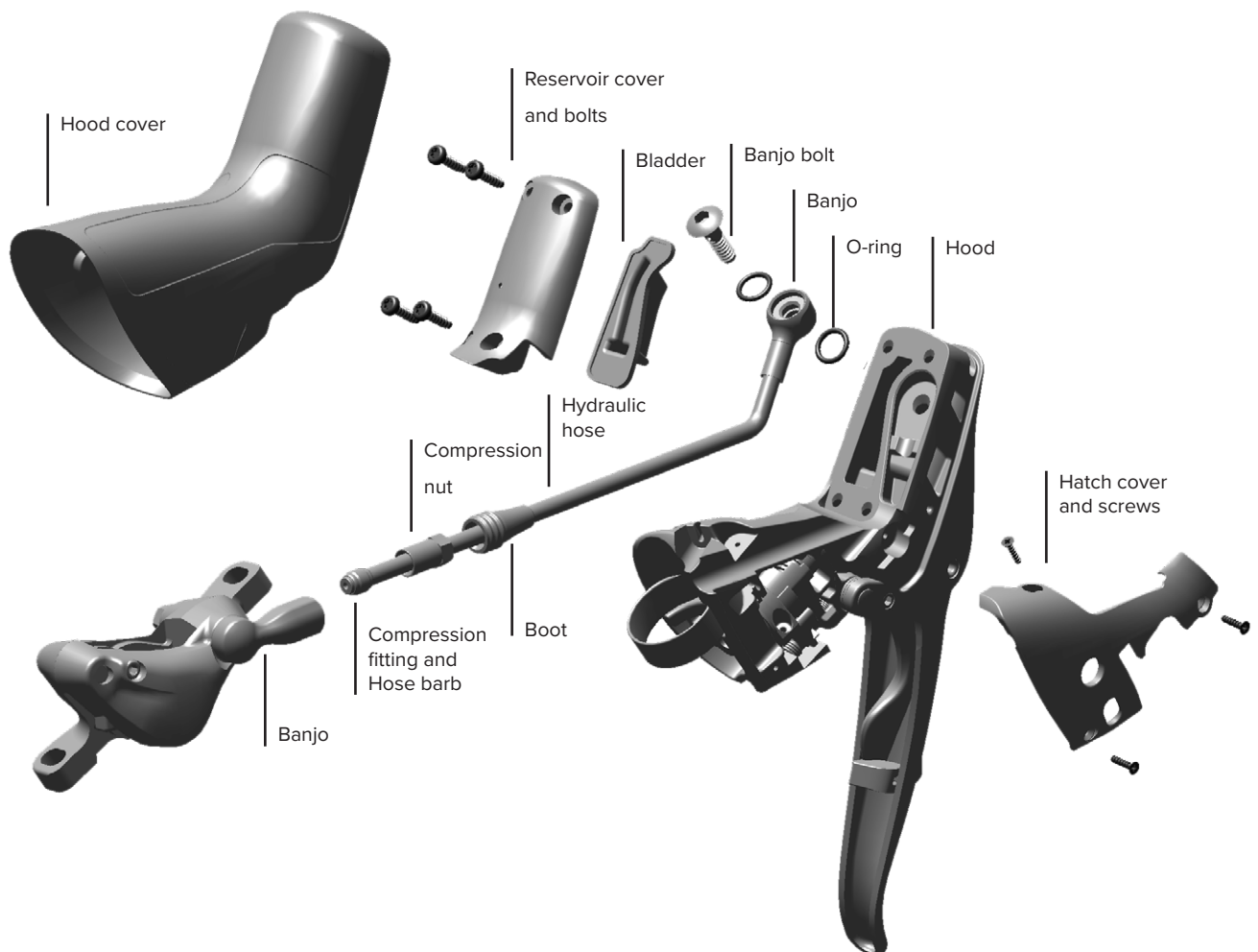
Bicycle Tools

- Bicycle work stand

Common Tools

- Crowfoot wrench: 8 mm, 9 mm
- Digital caliper
- Flare nut wrench: 8 mm
- Hex wrenches: 2.5 mm, 4 mm, 5 mm
- Hex bit sockets: 2.5 mm, 4 mm, 5 mm
- Marker
- Needle nose pliers
- Open end wrench: 6 mm, 10 mm
- Phillips #1 screwdriver
- Pick
- Torque wrench
- TORX wrenches: T8, T10, T25
- TORX bit socket: T10, T25

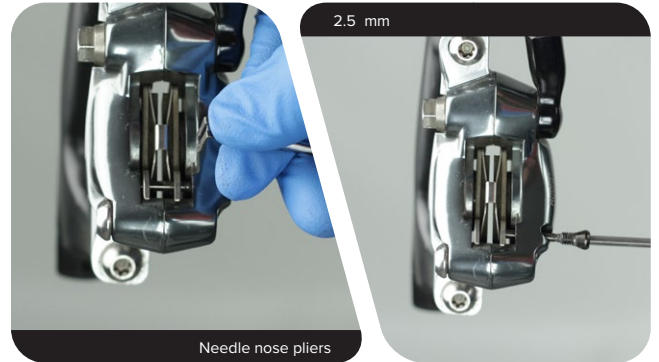
Exploded View



Hose Removal

1 Remove the wheel from the bicycle according to the manufacturer's instructions.

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



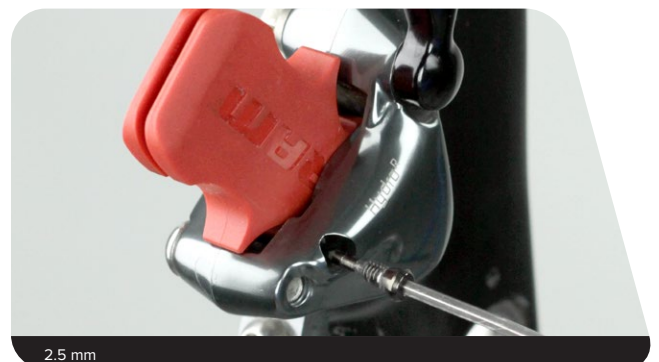
3 Remove the brake pads.

NOTICE

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



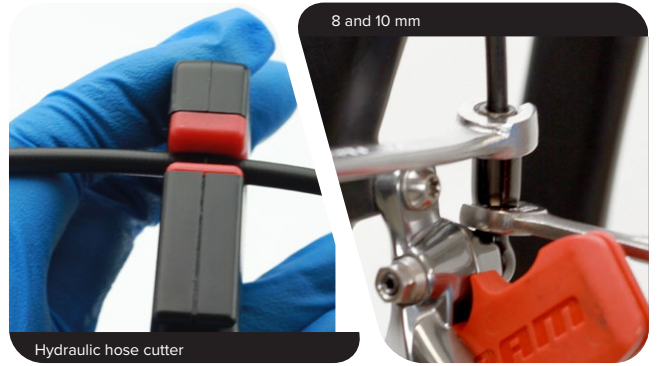
4 Insert the bleed block into the caliper, then install the pad retention bolt.



- 5** Cut the hose and remove the compression nut and banjo boot.
Remove the hose from the bicycle frame according to the bicycle manufacturer's instructions.
Disconnect the hose from the banjo.

NOTICE

Fluid will drip. Place an oil pan and/or shop towel under the hose.



- 6** Remove the shifter cable from the derailleur cable anchor points according to the user manual on www.sram.com/service, if applicable.
Remove the handlebar tape. Loosen the handlebar clamp and remove the brake lever from the bicycle.



- 7** Remove the hood cover from the hood.



- 8** Replace the shifter cable, if needed.



9 Remove the three hatch cover screws. Remove the hatch cover.



10 Remove the four reservoir cover bolts.



11 Use a shop towel to remove the reservoir cover and bladder assembly. Discard the fluid into an oil pan.



12 Remove the banjo bolt and discard the hose.



Hose Installation

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

NOTICE

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.



- 2 Apply grease to the new o-rings and install them onto both sides of the new banjo.



- 3 Install the banjo and hose into the hood.



- 4 Align the bladder assembly in the reservoir cover with the reservoir in the hood.



- 5** Install the four reservoir cover bolts at an alternating sequence until a torque of 1.4 N-m (12 in-lb) is achieved.



- 6** Install the hatch cover onto the hood. Tighten the three hatch cover screws.



- 7** Spray isopropyl alcohol on the hood and clean it with a shop towel.



- 8** Install the hood cover onto the hood.



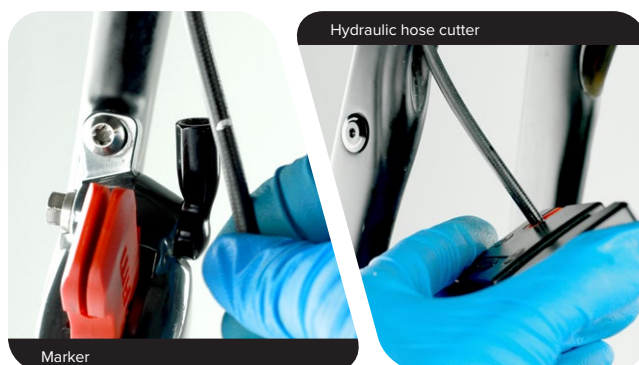
- 9 Install the brake lever onto the handlebar in the desired position and tighten.



- 10 Route the new hose through or onto the frame according to the frame manufacturer's instructions. Install the shifter cable to the derailleur(s) according to the user manual at www.sram.com/service.

- 11 To shorten the hose, hold the hose at the caliper with a length that creates a gentle bend in the hose and allows the handlebar to freely turn from side to side.

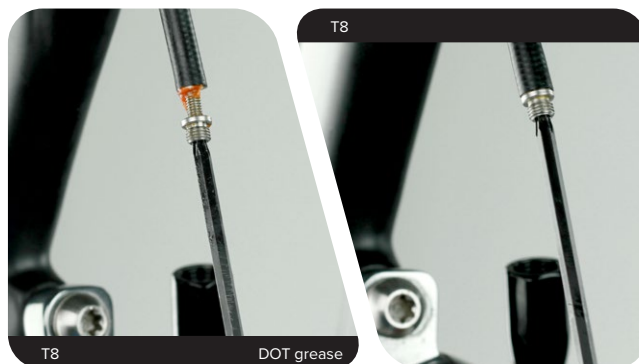
Mark your cut location, then cut the hose.



- 12 Apply 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.



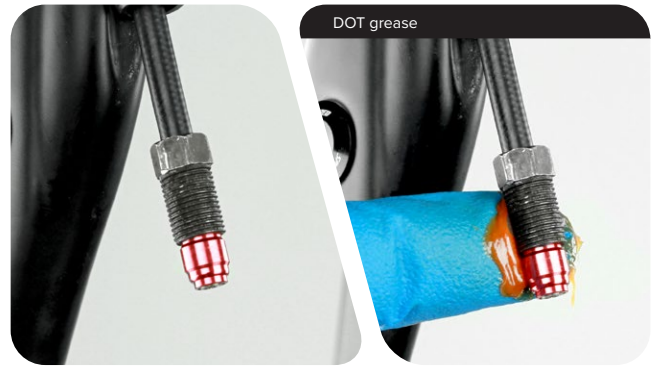
- 13 Install the banjo boot and compression nut onto the hose.



14 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 grease to the outside of the compression fitting and the threads of the compression nut.



15 **Connectamajig only:** Calipers with a Connectamajig at the banjo must replace the banjo when replacing the hose.

The caliper can be removed or remain installed on the frame or fork.

Remove the Connectamajig banjo. Apply grease to the new banjo bolt o-ring(s) and install on the bolt. Install the bolt into the caliper and tighten the new banjo.



- 16 Install the hose firmly into the brake caliper while threading the compression nut by hand. Tighten the compression nut.



- 17 Install the banjo boot over the compression nut.



⚠ CAUTION

Hydraulic hose replacement removes all of the fluid from the system. You must bleed your brakes after you service the brake caliper. Consult the *HRD Hose Shortening and Bleed Manual* at www.sram.com/service.

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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