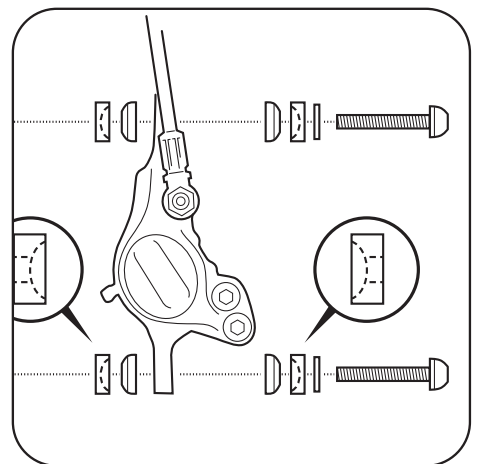
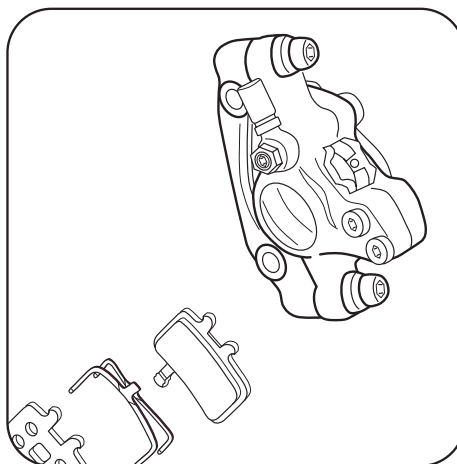
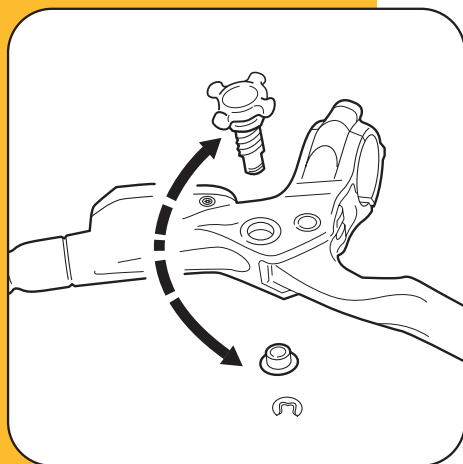


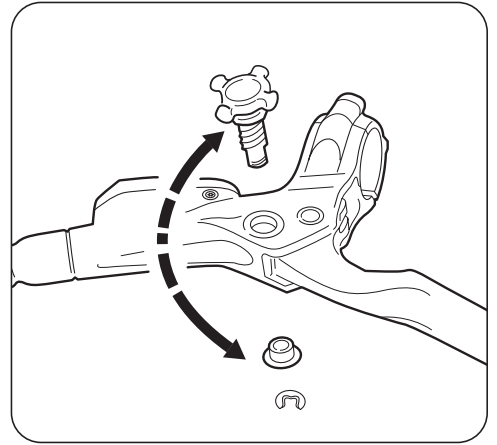
**Juicy®**

# 2006 Juicy® Disc Brake Technical Manual

English

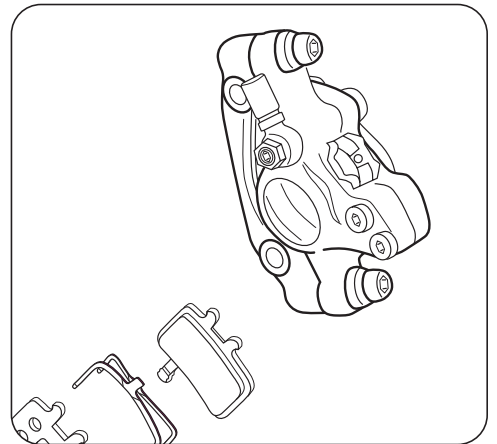


**POWERED BY SRAM™**



# 2006 Juicy® Disc Brake Technical Manual

English



The Juicy Technical Manual was created to help you tune, service and troubleshoot your Avid product. For exploded diagrams and part number information, refer to the Avid Spare Parts Catalog available on our website at [www.avidbike.com](http://www.avidbike.com) or [www.sram.com](http://www.sram.com). Contact your local distributor or visit our website for ordering information.

NOTE: Information contained in this publication is subject to change at any time without prior notice. For the latest technical information, visit our website.

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## Juicy® Seven Lever Overhaul

### Tools/Kits

- Avid Juicy Bleed Kit
- 1/4" socket wrench
- 2.5mm hex wrench
- Sharp pick
- T-10 Torx wrench
- Needle-nose pliers
- E-clip tool (optional)
- Small and large flathead screwdrivers
- Safety glasses
- Clean rags
- Soapy water

### Why does the brake lever assembly need to be serviced?

If brake fluid is leaking from any area of the brake lever assembly, there may be damage or wear-n-tear to internal moving parts. Inspection and/or replacement of all damaged or worn parts will improve brake function.

If your brake was filled with brake fluid OTHER than DOT 4 or 5.1, damage to all rubber and plastic internal parts may exist. Inspection and/or replacement of these parts will improve brake function.

If your brake was damaged in a crash, there may be damage to the lever blade and pushrod assemblies, as well as the reservoir cap, bladder and star wheel assemblies. Inspection and/or replacement of these parts will improve brake function.

# Juicy Seven Lever Overhaul

## Getting Started

1. Remove brake lever from handlebar. Remove caliper from fork or frame. If dirty, clean with soapy water and a clean rag. Pull hose boot off compression nut and slide down hose.
2. Using an 8mm crow's-foot (included in Avid Bleed Kit) and socket wrench (or use a flare nut 8mm wrench), loosen and remove compression nut from lever body. Turn counterclockwise to remove. Unthread completely by hand and slide compression nut down hose. Pull brake hose and compression fitting from lever body.
3. Allow any brake fluid to drain into a container. Hold lever assembly over container and pump lever to remove any brake fluid inside lever assembly.

*NOTE: IF THE SYSTEM HAS BEEN CONTAMINATED WITH THE WRONG FLUID, YOU WILL NEED TO FLUSH ALL THE PARTS WITH SOAPY WATER AND ALLOW TO DRY FULLY PRIOR TO REBUILDING. YOU WILL ALSO NEED TO INSTALL A NEW HOSE.*

## Reservoir Cover/Bladder Removal

4. Using a small Phillips screwdriver, remove both reservoir cover screws.
5. Remove reservoir cover cap and bladder from lever assembly. Additional brake fluid will drain from lever. Hold lever over container and allow fluid to drain.
6. Set lever assembly down on clean towel.
7. Holding the reservoir cover, remove bladder from reservoir cover. Replace with new bladder if contaminated and leaking fluid.

*NOTE: POSSIBLE CAUSES OF LEAKING BLADDER AND/OR RESERVOIR:*

- Brake system may have too much fluid
- Bladder may have split
- Bladder may be contaminated

## Reservoir Cover/Bladder Installation

8. Insert new bladder into cover and seat flush into underside of reservoir cover. Make sure you have the correct orientation.
9. Place reservoir cover and bladder back onto lever body. Install and tighten cover cap screws (short screw closest to lever clamp). Tighten both screws with a Phillips screwdriver.



## Bleed Screws Removal

10. Use a T-10 Torx wrench to remove both bleed screws.
11. Using a sharp pick, remove both o-rings on bleed screws and replace.
12. Install bleed screws back into lever body.



## Star Wheel and Worm Removal:

(Worm is attached to star wheel)

- Replace *IF*: damaged, cracked broken.
  - Replace *IF*: switching sides of lever body or rotating brake lever to other side of bar.
13. Remove retaining e-clip with sharp pick or small flathead screwdriver.
  14. Unthread star wheel and worm from lever body. Unthread by hand; pull out to remove from lever assembly.
  15. Using a pick, insert into gear hole, and push star wheel bushing out of lever body. Set star wheel/ worm assembly aside and continue on to lever blade/pushrod replacement.

*NOTE: IF YOU ARE PERFORMING A COMPLETE OVERHAUL, DO NOT INSTALL STAR WHEEL AND WORM GEAR BACK INTO LEVER ASSEMBLY AT THIS POINT. SKIP TO LEVER/PUSHROD REPLACEMENT STEP.*

## Lever Blade/Pushrod Replacement

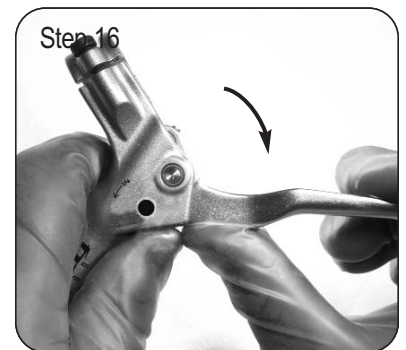
- Replace lever *IF*: lever is bent or damaged (crash replacement).
- Replace pushrod *IF*: pushrod is bent or damaged (crash replacement).

## Lever/Pushrod Removal

16. Holding the lever in both hands, place your thumbs near the pivot and push. The lever gently snaps into the open position.

17. Use a 2.5mm hex wrench and unthread lever pivot set screw and remove completely.
18. Using a sharp pick, or small hex wrench, push lever pivot pin through lever body and remove.
19. Slide pivot pin out and remove lever from body.

20. Pull lever blade away from lever body and remove pushrod pin from worm gear. It will pop out.
21. Remove pushrod from lever. Replace pushrod dust boot if damaged. Clean if not damaged. Insert pushrod dust boot back onto pushrod (open end facing pin; closed end toward threads).





## Juicy Seven Lever Overhaul

22. Reinstall pushrod (new if bent or damaged) into lever blade. Pushrod unthreads and threads back into lever blade.

*NOTE: IF YOU ARE REPLACING ONLY THE LEVER BLADE AND/OR PUSHROD, SKIP TO THE LEVER/PUSHROD INSTALLATION STEPS. IF YOU ARE PERFORMING A COMPLETE LEVER ASSEMBLY INTERNALS OVERHAUL, CONTINUE ON TO THE FOLLOWING 'GEAR/COUPLING/PISTON/SPRING' REMOVAL STEPS. AGAIN, LEVER/PUSHROD AND STAR WHEEL INSTALLATION SHOULD BE PERFORMED LAST.*

### Internals Removal

**LEVER ASSEMBLY INTERNALS INCLUDE:** worm gear, worm gear coupling, piston, piston spring.

**IMPORTANT, 2006 JUICY 7 ONLY:** WORM GEAR RETAINING CLIP MUST BE REMOVED (C-CLIP ABOVE WORM GEAR).

**2004-2005 JUICY 7 DOES NOT USE THE WORM GEAR RETAINING C-CLIP. SKIP TO STEP 26.**

23. Rotate (push end of clip to rotate within groove) worm gear retaining c-clip with a small flathead screwdriver or sharp pick, until the end of the clip protrudes past gap in lever body.



24. Using needle-nose pliers, grasp the clip to remove from the lever body.
25. Insert a large flathead screwdriver into wide slot in top of worm gear and turn counterclockwise. Unthread worm gear completely and slide/pull worm gear out of lever body assembly. Worm gear coupling is located inside worm gear.

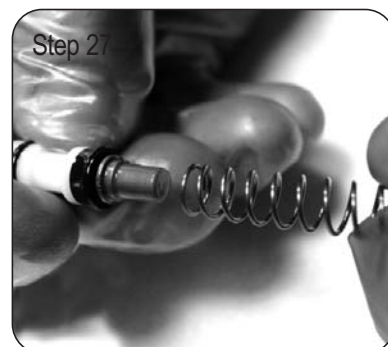


26. The piston spring (below piston inside lever body) should force piston assembly out of lever body. If the spring does not aid piston removal, use a sharp hooked pick to pull piston and spring assembly from lever body. **CAREFUL NOT TO DAMAGE THE PISTON.**

*NOTE: IF THE WORM GEAR COUPLING IS CRACKED, PULL COUPLING OUT OF GEAR AND REPLACE. COUPLING CAN WEAR OUT OVER TIME AND CRACK.*



27. With piston/spring assembly removed from lever body, remove the piston from the spring.



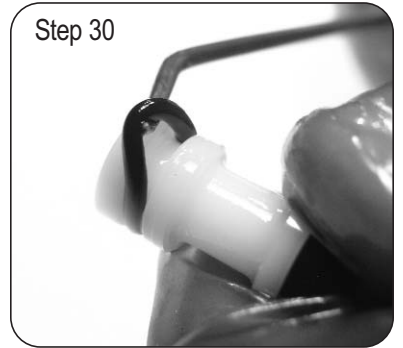
28. Using a small flathead screwdriver, remove spring coupling from piston. Do not scratch any plastic parts (piston or o-rings). If damaged, you will need to replace the piston.
29. Slide piston coupling out of piston.

Step 28



30. Remove and replace piston secondary seal (small o-ring) on top of piston.

Step 30



31. Remove primary cup seal (lower larger black seal) from piston with sharp pick and slide new coupling seal onto base of piston. Ensure it sits flush (flat end first, flush against piston; open end out).

Step 31

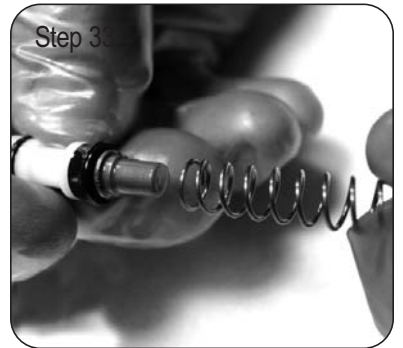


32. Reinstall spring coupling back onto piston and coupling seal (into open end of seal).
33. Reinstall spring onto coupling. The coupling lightly snaps onto piston.

Step 32



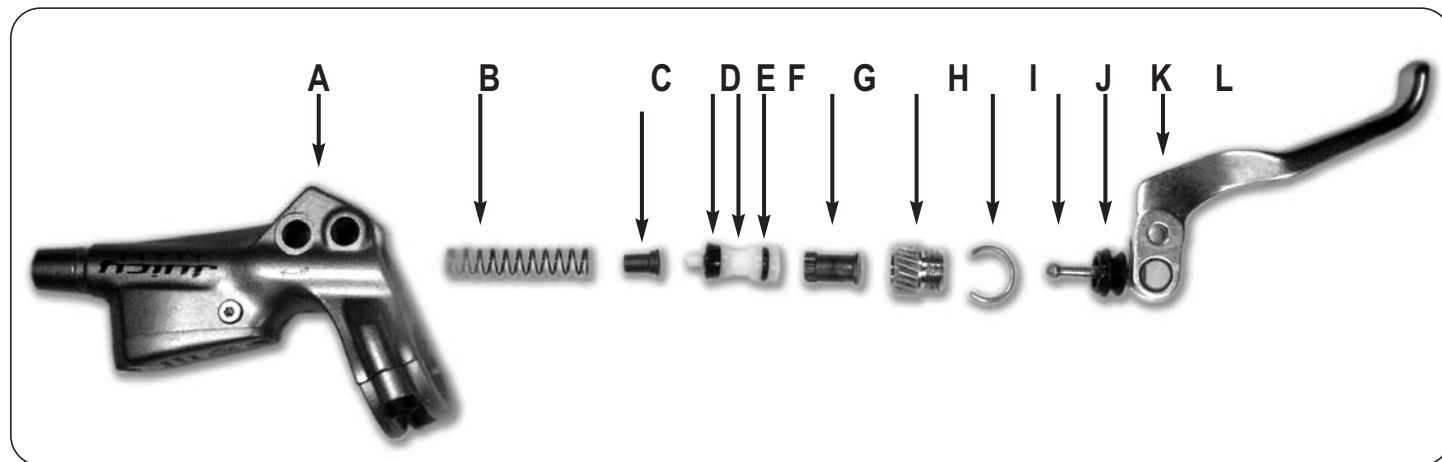
Step 33



**Piston/spring assembly overhaul complete.**

# Juicy Seven Lever Overhaul

## Exploded view of internals



- |                            |                              |
|----------------------------|------------------------------|
| <b>A.</b> Lever body       | <b>G.</b> Worm gear coupling |
| <b>B.</b> Spring           | <b>H.</b> Worm gear          |
| <b>C.</b> Spring coupling  | <b>I.</b> C-clip             |
| <b>D.</b> Primary cup seal | <b>J.</b> Pushrod            |
| <b>E.</b> Piston           | <b>K.</b> Pushrod dust boot  |
| <b>F.</b> Secondary seal   | <b>L.</b> Lever              |

## Internals Installation

34. Insert spring/piston assembly back into lever body, spring first. Slide worm gear coupling (geared end first) into narrow end of worm gear. The coupling slides directly into inner worm gear threads.



35. Insert worm gear and coupling assembly onto top of piston, inside lever body.

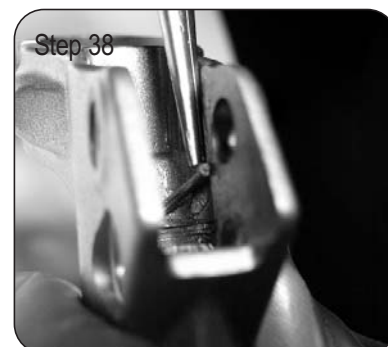
36. Insert large flathead screwdriver into open end (flat slot) of worm gear. Turn clockwise to thread worm gear into lever body. Press down into worm gear while the gear threads into lever body. You will feel spring resistance as you turn. Worm gear thread will engage threads in lever body.

37. Turn clockwise and continue until worm gear is inside lever body, about halfway into lever. After six full turns, worm gear is completely inside lever body. Completely thread into lever body six turns), then back off three turns. This is the correct installation setting.



**2006 JUICY 7 ONLY (2004-2005 JUICY 7 DOES NOT USE THE WORM GEAR RETAINING C-CLIP, SO YOU CAN SKIP TO STEP 40):**

38. Using needle-nose pliers, insert worm gear retaining c-clip above worm gear and into groove in lever body. Position one end of c-clip into groove. Slowly and firmly push down on c-clip with pliers and press down until clip snaps firmly into place in groove. It should 'snap' into place.



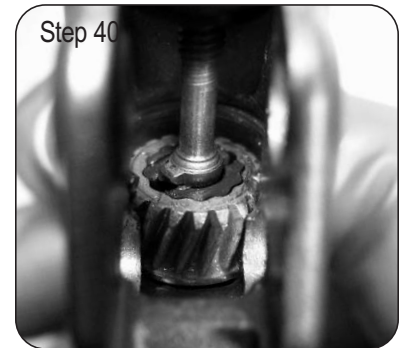


39. Rotate ends of c-clip into groove. Ends of c-clip must NOT protrude past lever body groove and extend into lever slot/gap in lever body. Rotate ends of clip until ends are inside of groove.



## Lever/Pushrod Installation

40. Line up pushrod pin with slot in worm gear coupling (wide slot in center of worm gear coupling). Insert pushrod pin into worm gear coupling. Pushrod pin snaps into worm gear inner coupling slot.



41. Insert lever body/lever bushings into lever body; one on each side. The bushing lip (larger end) should be on inside of lever body.



42. Line up lever pivot pin hole with bushing holes. Insert pivot pin back into lever and bushings. Use your thumb to press down on pivot pin and snap it into place.
43. Reinstall the lever adjust set-screw back into lever. Tighten with 2.5mm hex wrench and adjust to desired position. Adjust as needed after brake lever is installed onto handlebar.



## BREAKTIME

You've been working hard, and you're almost done. Now would be a good time to take a sip of your favorite beverage, sit back, and feel good about yourself. Not everybody gets to overhaul a Juicy brake lever. You are a lucky person.



# Juicy Seven Lever Overhaul

## Star Wheel and Worm Installation

- 44. Press star wheel/worm bushing back into lever body with thumb.
- 45. Thread star wheel/worm assembly back into lever body.



- 46. Using a pair of needle-nose pliers or an e-clip tool, press the retaining e-clip onto end of worm to secure into lever assembly.

*IMPORTANT: Install star wheel/worm assembly LAST if performing complete internals overhaul.*



## Finishing Up

- 47. Clean lever assembly with soapy water and clean rag.
- 48. Bleed the lever: reference the Avid Juicy Bleed and Setup Procedure included in the Avid Juicy User Manual and Bleed Kit, or on [www.avidbike.com](http://www.avidbike.com).
- 49. Time for another break. You've done a great job.



## Juicy® Five Lever Overhaul

### Tools/Kits

- Avid Juicy Bleed Kit
- 1/4" socket wrench
- 2.5mm hex wrench
- Sharp pick
- T-10 Torx wrench
- Needle-nose pliers
- E-clip tool (optional)
- Small and large flathead screwdrivers
- Safety glasses
- Clean rags
- Soapy water

### Why does the Brake lever assembly need to be serviced?

If brake fluid is leaking from any area of the brake lever assembly, there may be damage or wear-n-tear to internal moving parts. Inspection and/or replacement of all damaged or worn parts will improve brake function.

If your brake was filled with brake fluid other than DOT 4 or 5.1 fluid, damage to all rubber and plastic internal parts may exist. Inspection and/or replacement of these parts will improve brake function.

If your brake was damaged in a crash, there may be damage to the lever blade and pushrod assemblies, as well as the reservoir cap and bladder.

Inspection and/or replacement of these parts will improve brake function.

# Juicy Five Lever Overhaul

## Getting Started

1. Remove brake lever from handlebar. Remove caliper from fork or frame. If dirty, clean with soapy water and a clean rag. Pull hose boot off compression nut and slide down hose.
2. Using an 8mm crow's-foot (included in Avid Bleed Kit) and socket wrench (or use a flare nut 8mm wrench), loosen and remove compression nut from lever body. Turn counterclockwise to remove. Unthread completely by hand and slide compression nut down hose.
3. Pull brake hose and compression fitting from lever body.
4. Allow any brake fluid to drain into container. Hold lever assembly over container and pump lever to remove any brake fluid inside lever assembly.

*NOTE: IF THE SYSTEM HAS BEEN CONTAMINATED WITH THE WRONG FLUID, YOU WILL NEED TO FLUSH ALL THE PARTS WITH SOAPY WATER AND ALLOW TO DRY FULLY PRIOR TO REBUILDING. YOU WILL ALSO NEED TO INSTALL A NEW HOSE.*

## Reservoir Cover/Bladder Removal

5. Using a small Phillips screwdriver, remove both reservoir cover screws.
6. Remove reservoir cover cap and bladder from lever assembly. Additional brake fluid will drain from lever. Hold lever over container and allow fluid to drain. Set lever assembly down on clean towel.

7. Holding the reservoir cover, remove bladder from reservoir cover. Replace with new bladder if contaminated and leaking fluid.

*NOTE: POSSIBLE CAUSES OF LEAKING BLADDER AND/OR RESERVOIR:*

- Brake system may have too much fluid.
- Bladder may have split.
- Bladder may be contaminated.

## Reservoir Cover/Bladder Installation

8. Insert new bladder into cover and seat flush into underside of reservoir cover. Make sure you have the correct orientation.
9. Place reservoir cover and bladder back onto lever body. Install and tighten cover cap screws (short screw closest to lever clamp). Tighten both screws with a Phillips screwdriver.



## Bleed Screws Removal

10. Use a T-10 Torx wrench to remove both bleed screws.
11. Using a sharp pick, remove both o-rings on bleed screws and replace.
12. Install bleed screws back into lever body.

Step 10



Step 11



## Lever Blade/Pushrod Replacement

Replace lever *IF*: lever is bent or damaged (crash replacement).

Replace pushrod *IF*: Pushrod is bent or damaged (crash replacement).

## Lever/Pushrod Removal

13. Holding the lever in both hands, place your thumbs near the pivot and push. The lever gently snaps into the open position.

Step 13



14. Use a 2.5mm hex wrench and unthread lever pivot set screw and remove completely.
15. Using a sharp pick, or small hex wrench, push lever pivot pin through lever body and remove.
16. Slide pivot pin out and remove lever from body.

Step 14



Step 15



17. Pull lever blade away from lever body and remove pushrod pin from worm gear. It will pop out.

Step 17



18. Remove pushrod from lever. Replace pushrod dust boot if damaged. Clean if not damaged. Insert pushrod dust boot back onto pushrod (open end facing pin; closed end toward threads).
19. Reinstall pushrod (new if bent or damaged) into lever blade. Pushrod unthreads, and threads back into lever blade.

Step 18



**NOTE:** IF YOU ARE REPLACING **ONLY** THE LEVER BLADE AND/OR PUSHROD, SKIP TO THE LEVER/PUSHROD INSTALLATION STEPS. IF YOU ARE PERFORMING A COMPLETE LEVER ASSEMBLY INTERNALS OVERHAUL, CONTINUE ON TO THE FOLLOWING 'GEAR/COUPLING/PISTON/SPRING' REMOVAL STEPS. AGAIN, LEVER/PUSHROD AND STAR WHEEL INSTALLATION SHOULD BE PERFORMED LAST.

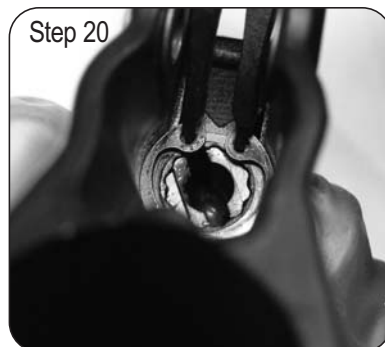
**LEVER ASSEMBLY INTERNALS:** INNER RETAINING RING, COUPLING RETAINER, COUPLING, PISTON, SPRING



## Juicy Five Lever Overhaul

20. Using straight internal snap ring pliers, remove coupling retaining ring. Pull retaining ring from inside of lever body.

*NOTE: PULL RETAINING RING OUT SLOWLY. THE COUPLING RETAINER/COUPLING ASSEMBLY MAY 'POP' OUT WITH THE FORCE OF THE PISTON SPRING. DO NOT LOOK INSIDE WHILE REMOVING TO AVOID POTENTIAL EYE DAMAGE.*



21. Using needle-nose pliers, carefully remove coupling retainer/coupling assembly. Coupling retainer should slide out from lever body easily.

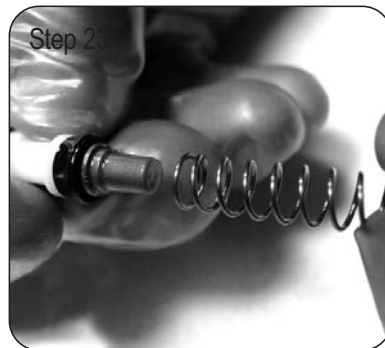
*NOTE: THE COUPLING RETAINER TAKES UP THE SPACE THAT THE WORM GEAR USES IN THE JUICY 7.*



22. Hold lever body assembly upside down and drop the piston/spring assembly into your hand. It should slide out easily.



23. With piston/spring assembly removed from lever body, remove the piston from the spring.

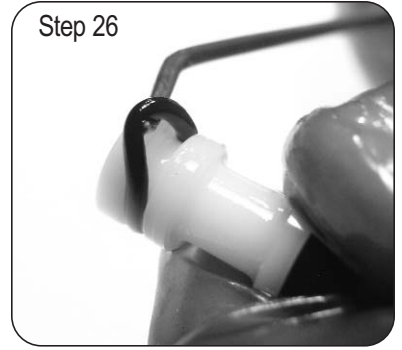


24. Using a small flathead screwdriver, remove spring coupling from piston. Do not scratch any plastic parts (piston or o-rings). If damaged, you will need to replace the piston.



25. Slide piston coupling out of piston.
26. Remove and replace piston secondary seal (small o-ring) on top of piston.

Step 26



27. Remove primary cup seal (lower larger black seal) from piston with sharp pick and slide new coupling seal onto base of piston. Make sure it sits flush. Flat end first, flush against piston; open end out.

Step 27



28. Reinstall spring coupling back onto piston and coupling seal (into open end of seal).
29. Reinstall spring onto coupling. The coupling lightly snaps onto coupling.

Step 28

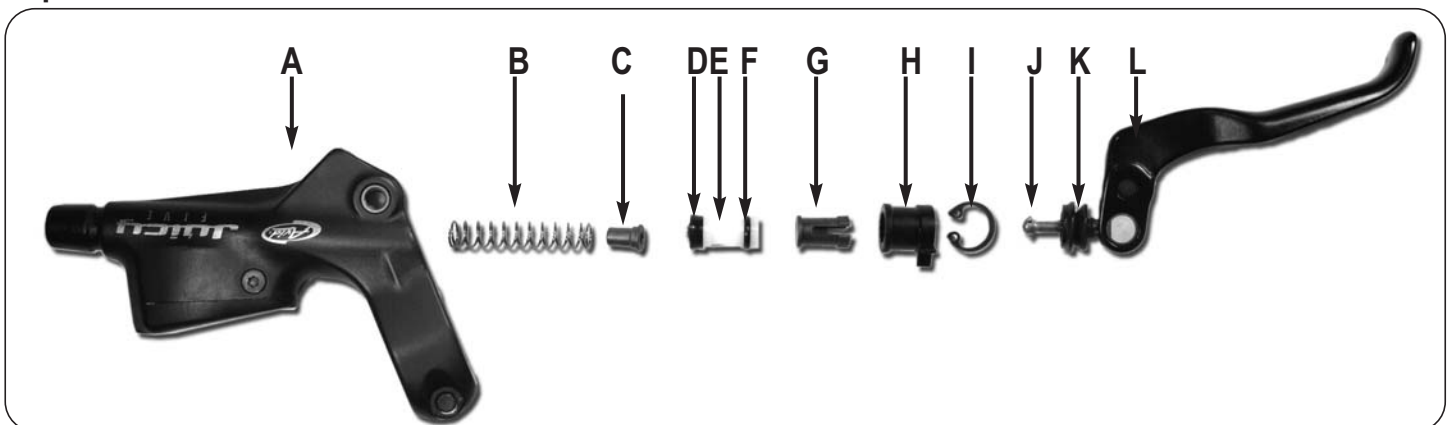


Step 29



**Piston/spring assembly overhaul complete.**

## Exploded view of internals



- |                            |                                   |
|----------------------------|-----------------------------------|
| <b>A.</b> Lever body       | <b>G.</b> Coupling assembly       |
| <b>B.</b> Spring           | <b>H.</b> Coupling retainer       |
| <b>C.</b> Spring coupling  | <b>I.</b> Coupling retaining ring |
| <b>D.</b> Primary cup seal | <b>J.</b> Pushrod                 |
| <b>E.</b> Piston           | <b>K.</b> Pushrod dust boot       |
| <b>F.</b> Secondary seal   | <b>L.</b> Lever                   |

# Juicy Five Lever Overhaul

## Internals Installation

30. Insert spring/piston assembly back into lever body, spring first.



31. Insert coupling retainer and coupling assembly onto top of piston, inside lever body. The v-shape of the retainer should be positioned in the lever blade groove.



32. Using straight internal snap ring pliers, insert coupling retainer retaining ring above coupling retainer and into groove in lever body. Ensure retaining ring snaps into place securely.



## Lever/Pushrod Installation

33. Line up pushrod pin with slot in coupling retainer.

34. Insert pushrod pin into coupling retainer. Pushrod pin snaps into slot.



35. Insert lever body/lever bushings into lever body; one on each side. The bushing lip (larger end) should be on inside of lever body.



36. Line up lever pivot pin hole with bushing holes. Insert pivot pin back into lever and bushings. Use your thumb to press down on pivot pin and snap it into place.

Step 36



37. Reinstall the lever adjust set-screw back into lever. Tighten with 2.5mm hex wrench and adjust to desired position. Adjust as needed after brake lever is installed onto handlebar.

Step 37



### Finishing Up

38. Clean assembled lever assembly with soapy water and clean rag.  
39. Bleed the lever: reference the Avid Juicy Bleed and Setup Procedure included in the Avid Juicy User Manual and Bleed Kit, or at [www.avidbike.com](http://www.avidbike.com).  
40. Time for a break. You've worked hard and done a great job!



# Juicy® Caliper Overhaul

(all Juicy brakes)

### Tools/Kits

- Avid Juicy Bleed Kit
- 1/4" socket wrench
- 4mm hex wrench
- Sharp pick
- T-10 Torx wrench
- 8mm open-end or box wrench
- 11mm box wrench
- Needle-nose pliers
- Small and large flathead screwdriver
- Sharp straight internal snap ring pliers
- Air compressor with blow gun chuck
- Safety glasses
- Clean rags
- Soapy water

### Why does the Caliper assembly need to be serviced?

If caliper brake piston motion is 'sticky' or lacks a positive and smooth return, the caliper body/brake piston o-ring may be out of place or damaged. Inspection and/or replacement of this square-edged o-ring will improve brake function.

If your brake was filled with brake fluid other than DOT 4 or 5.1, damage to all rubber and plastic internal parts may exist. Inspection and/or replacement of these parts will improve brake function. Commonly used INCORRECT fluid is mineral oil or DOT 5, which is silicone based.



# Juicy Caliper Overhaul

## Trouble-shooting 'Sticky' or slow brake pad return feel:

Before completely disassembling your caliper, it's worth trying to loosen the sticky piston. To do so, try the following:

1. Clamp bicycle in bicycle work stand.
2. Spin affected wheel. Lightly squeeze brake lever and watch brake pads when lever is released. Determine which side of the caliper has a slow returning brake piston.
3. Remove caliper from bicycle. If you have a mounting bracket, it is recommended to remove that too or just remove the caliper leaving the bracket on the fork or frame.
4. Remove both brake pads and h-spring.
5. Using an 11mm box wrench, press working piston into caliper body. Squeeze brake lever slowly to move sticky piston inward.
6. Press the piston back into the caliper again. Repeat these steps to correct caliper piston inner o-ring position. Both pistons should now be moving freely.
7. Reinstall caliper onto bicycle. Spin wheel, check function. If there is no improvement, continue with caliper service.

Step 4



Step 4



Step 5



## Getting Started

1. Remove brake caliper from fork or frame.
2. Remove caliper mounting bracket and CPS hardware from caliper. Set aside in correct order.

## Brake Pads and Pad H-spring Removal

3. Using needle-nose pliers, remove brake pads and h-spring from caliper.
4. Remove spring pad clip from outside of caliper.

Step 3



Step 3



## Brake Hose and Banjo Bolt Removal and Service

5. Using an 8mm open-end or box wrench, loosen banjo bolt. Brake fluid will leak, so hold over a container to catch fluid.
6. Pull banjo bolt completely out of caliper. Dump all caliper brake fluid into container.

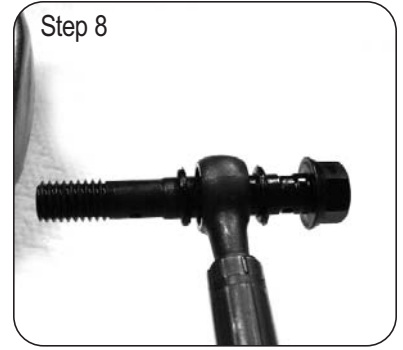
Step 5



Step 6



7. Remove o-rings on each side of brake hose banjo and replace with new o-rings.
8. Insert banjo bolt back into brake hose banjo. Ensure outside banjo o-ring is not damaged by banjo bolt threads. This may cause a leak. Set hose and banjo bolt aside.



## Caliper Disassembly and Service

9. Loosen all three caliper body bolts with a 4mm hex wrench. There are three different bolt lengths. Set aside in correct order.
10. Separate caliper body halves and open caliper assembly.



11. Using a sharp pick, remove small banjo hole (body half) o-ring.



## Brake Pistons Removal and Service

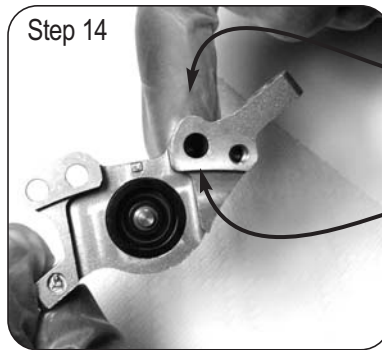
12. **Inboard Caliper Body Half:** Using an air compressor chuck, insert chuck nozzle into banjo bolt hole. Hold caliper in one hand, pointing caliper piston in a safe direction.
13. Squeeze the air chuck and force air into the banjo bolt hole while holding caliper body. Compressed air unseats the caliper piston from the caliper. Pull out completely and remove piston.

**IMPORTANT NOTE:** YOU MAY WANT TO DO THIS INSIDE A PLASTIC BAG TO PREVENT THE PISTON FROM BEING LOST OR CAUSING AN INJURY.



## Juicy Caliper Overhaul

14. **Outboard Caliper Body Half:** Using an air compressor chuck, insert chuck nozzle into banjo bolt hole. Hold caliper in one hand, pointing caliper piston in a safe direction. Hold one finger over the banjo bolt through-hole on opposite side of caliper body so air does not escape.
15. Squeeze the air chuck and force air into the banjo bolt hole while holding caliper body. Compressed air unseats the caliper piston from the caliper. Pull out completely and remove piston.



Step 14

Place your finger over the bottom side of this hole.

Put the air chuck in the top side of this hole and blow.

**IMPORTANT NOTE:** YOU MAY WANT TO DO THIS INSIDE A PLASTIC BAG TO PREVENT THE PISTON FROM BEING LOST OR CAUSING AN INJURY.

16. Remove the square-edge o-ring from inside each caliper body half with a sharp pick. Replace both square-edge caliper body/piston o-rings.



### Caliper Assembly

17. Insert the caliper brake pistons back into each half of the caliper body. Replace with new pistons if damaged.



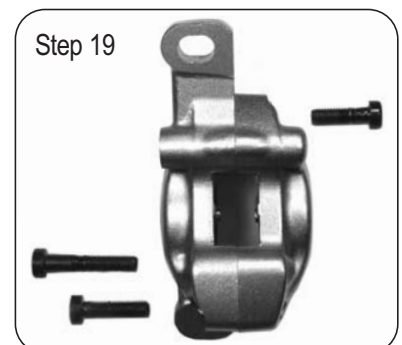
Step 17

18. Install a new banjo bolt hole o-ring into the banjo bolt hole on outboard side of caliper body.



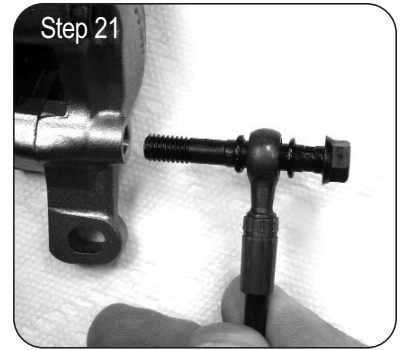
Step 18

19. Insert and thread caliper bolt into caliper closest to banjo bolt hole. Ensure new caliper banjo bolt o-ring is not unseated from its position.
20. Insert remaining two caliper body bolts and tighten all three bolts with a 4mm hex wrench to 4.9-5.9 Nm (43 - 52 in-lb).



Step 19

21. Insert banjo bolt back into caliper into banjo bolt hole. Hand-thread and tighten with 8mm box wrench to 4.9-5.9 Nm (43 - 52 in-lb). Be careful not to pinch either of these o-rings during installation.

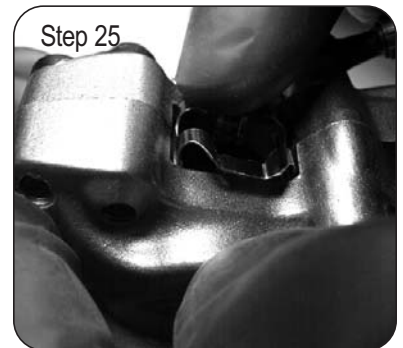


22. Using a T-10 Torx wrench, remove banjo bolt bleed screw and set aside.
23. Using a sharp pick, remove bleed screw o-ring. This o-ring may be a little hard to see. Replace with a new bleed screw o-ring.
24. Reinstall banjo bolt bleed screw back into banjo bolt and tighten with T-10 Torx wrench.



## Brake Pad Installation

25. Insert spring pad clip onto outer side of caliper.
26. Inspect your brake pads: measure the total thickness of each pad. If there is LESS than 3mm of total pad width (pad backing and pad material), replace both brake pads.
27. Position the h-spring between the two pads. The curved handle of inner pad should face toward inboard side of caliper. You should hear a click when the pads are properly secured.



## Finishing Up

28. Visually check your work. Inspect banjo bolt and banjo for any protruding o-rings. If there are any o-rings that are 'squeezed' beyond the outside edges of the banjo or bolt, remove and replace. Repeat installation steps.
29. Wipe assembled caliper with soapy water to remove any brake fluid.
30. Reinstall onto bicycle.
31. Bleed the lever: Reference the Avid Juicy Bleed and Setup Procedure included in the Avid Juicy User Manual and Bleed Kit, or [www.avidbike.com](http://www.avidbike.com).
32. Turn to the person nearest you and say in your most confident voice, "That, my friend, is how you rebuild a caliper."

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