SERVICE KIT INSTRUCTIONS

Caliper Repair

45-14573B

Caliper Repair
To repair the caliper, it must be removed from the bike and disassembled.

1. Remove the caliper from the bike by removing the two M6x1.0 x 18.4mm mounting bolts.
2. If there is nothing wrong with the hose and the hose fitting, completely remove the caliper hose assembly.
   ***Note*:** For the G1 caliper, remove the banjo bolt using a 4mm Allen Wrench- but leave the banjo attached to the hose - that way you don't have to replace the compression bushing when you are all done.
   ***Note*:** For the G2 caliper, remove the hose connection using a 10mm open-end wrench.

3. Remove the two bridge bolts - with a 5mm Allen wrench. When you remove the two bridge bolts, the caliper will come apart into two pieces. There will be an inner and an outer caliper half and an O-ring between.
4. Take the O-ring out and inspect it for any cuts or debris. The o-ring may be reused when the caliper is put back together.
   ***Caution*:** Do not scratch O-ring groove when removing the O-ring, as this could cause the O-ring to leak.

5. Remove the pistons from the caliper with pressurized air.
   ***Warning*:** Wear safety glasses.
   ***Caution*:** Do not grab hold of the piston post with pliers. This can destroy the piston. Avoid chipping the piston.
   Blow it onto a clean, lint free rag or other soft surface.

6. With your finger tip sealing off the bleeder or banjo hole, angle the caliper so the piston is facing downward, then direct pressurized air thru the hole that connects the 2 halves together. This will force the piston out of the caliper.
7. Carefully remove the square seal inside the piston. The replacement kit will consist of a new piston and square seal.
   ***Caution*:** Do not scratch the groove in the piston. This can cause leakage. Use a sharpened wood or plastic stick.

8. Remove the piston and square seal from the opposing caliper half in the same way.
9. Clean all of the parts. Then rinse each part with isopropyl alcohol. Be sure to clean the caliper through all of the holes.
10. Wipe down each part to remove the residue. Then use compressed air to blow dry and remove all of the remaining dirt, etc. For both caliper halves, be sure to blow compressed air through both the bleeder hole and the transfer port, and all around the square seal groove.
    ***Note*:** Take extra care to get the square seal grooves free of any hair, dirt, scratches, etc. that could cause the caliper to leak.

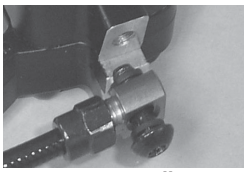
11. Begin re-assembly of the caliper by lightly lubricating the new square seals with DOT 4 or DOT 3 brake fluid and installing the new seals in the caliper halves. With your fingers, rub DOT 4 or DOT 3 brake fluid all around the seal.
12. Carefully push the square seal into its seal groove – making sure that the seal is worked into the groove all of the way around - and that it is pushed all of the way to the back of the seal groove.
13. Put a coating of DOT 4 or DOT 3 brake fluid all around the piston as a lubricant, and carefully push the piston into the bore, past the seal, until it seats at the bottom of the bore.
    ***Note*:** The piston should push in easily, if it doesn't, take the piston out and again push the square seal all of the way to the back of the groove and then try again.

14. Repeat the procedure for the opposing caliper half.
15. Inspect the transfer port O-ring recess. Be sure that it is free of any hair, dirt, etc. that may cause a leak.
16. Install the O-ring into the recess.
    ***Warning*:** The O-ring is a special material and should be purchased through the Hayes caliper service kit. These O-rings are a special material that will not react with DOT 4 or DOT 3 brake fluid. Using an inappropriate O-ring that could deteriorate could cause a leak.

17. Insert the bridge bolts, snug them, and then torque them to 110 in.-lbs +/- 10 in-lbs.
18. Clean the caliper of any excess brake fluid by spraying it with isopropyl alcohol and wiping it down with a clean cloth.
    ***Note*:** Bleeders do not have to be replaced every time the caliper is rebuilt. If it is necessary to replace the bleeder, it is available as a service kit. The thread sealant on the bleeder is there only to seal during the bleeding process. If it wears off, replace it with a wrap of Teflon tape thread sealant.

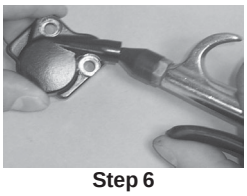
19. Ensure that all parts of the hose connection are clean and free of any hair, dirt etc., and that the O-rings are not torn or chipped, and assemble the hose connection back onto the caliper in the original position.
20. Install the hose connection back onto the caliper.

21. Reattach the caliper to the frame or fork and bleed the system.
    ***Note*:** The bleed instructions are included in the Hayes bleed kit or on the web at www.hayesdiscbrake.com


Step2 G1 Caliper Hose Assembly


Step 2 G2 Caliper Hose Assembly


Step 3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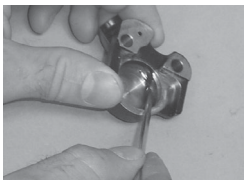
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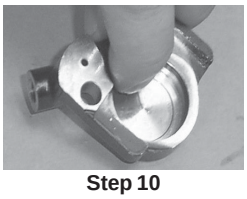
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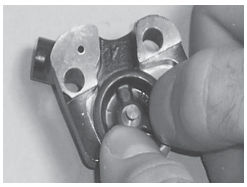
Step 12

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