

# PRIME

## Prime Bleed Instructions

This Manual is intended to provide the information necessary for normal maintenance and service of the Prime Disc Brake. Although the steps and procedures are relatively simple, they should not be attempted until you are thoroughly familiar with the entire set of procedures. Images have been provided to help you in the steps and procedures. Complete Service instructions can be downloaded from the Hayes Disc Brake Website at [www.hayesbicycle.com](http://www.hayesbicycle.com).

Within this manual are specifically labeled comments intended to bring special attention to a general procedure or detailed step. Be aware of, and understand, the meaning of these labels.

**Warning:** Means that there is the possibility of personal injury to you or to others.

**Caution:** Means that there is the possibility of damaging the brake or the bike.

**Note:** Provides general information.

**Hint:** Provides information that can help you properly complete a specific procedure.

Air trapped in the hydraulic system of the disc brakes can decrease performance of the system and should be removed by "bleeding" the system and replenishing the system with new brake fluid. The system is filled by pumping fluid from the lowest point (at the caliper), through the system, to the highest point, the bleeder on the master cylinder.

**Caution:** Use only new DOT 4 or DOT 5.1 brake fluid from a closed, sealed container. Use of any other fluid can cause the rubber parts to degrade and cause brake to fail.

**Caution:** DOT 4 or DOT 5.1 brake fluid will strip paint. Use extreme caution to avoid getting DOT 4 or DOT 5.1 brake fluid on paint. If DOT 4 or DOT 5.1 brake fluid comes in contact with paint, wipe it off immediately and rinse with isopropyl alcohol.

**Warning:** If you get any brake fluid on the brake pads, discard them and replace with new pads. If you get any brake fluid on the disc, clean it thoroughly with isopropyl alcohol.

**Warning:** DOT 4 and DOT 5.1 brake fluid can be an irritant when it comes into contact with human tissue. For skin contact, brake fluid should be washed off in flowing water. For eye contact, the eye area should be irrigated with flowing water immediately and continuously for 15 minutes. Consult with medical personnel. If effects occur from inhaling brake fluid fumes, move to an area with fresh air. Consult a physician. If brake fluid is ingested, induce vomiting and consult medical personnel. Used brake fluid should be disposed of in accordance with local laws.

### Bleed Kit Assembly

1. Fill the squeeze bottle with new DOT 4 or 5.1 brake fluid and screw the cap onto the end of the bottle.
  2. Cut a 2" section of hose.
  3. Push the short section of hose over the cap until it slides past the ridge on the cap.
  4. Slide the hose retainer onto the short hose.
  5. Push the long section of hose into the master cylinder bleed fitting.
- Note:** There are multiple fittings with the kit. The black, threaded plastic fitting or the metal threaded fitting may be used with the Prime master cylinder, the metal threaded fitting must be used with the Prime caliper.

### Bleeding the System

1. Remove the caliper, master cylinder and hose from the bike and mount the master cylinder to a handlebar clamped in a bicycle repair stand. Keep the handlebar clamp loose on the handlebar so that the master cylinder can rotate easily.
2. Remove the pad pin, pad spring, and brake pads so that any spilled fluid does not contaminate the pads. (See Pad Removal/Installation Instructions for pad removal) (Fig. 1)
3. Push the caliper pistons all the way into their bores using the box end of an 8mm end wrench. (Fig. 2)
4. Position the master cylinder so that the reservoir bleeder screw on it is the highest point on the brake system. (Fig. 3)
5. Set the stroke adjust dial at middle position.
6. Remove the master cylinder bleed screw and thread in the metal or plastic bleed fitting. Slide the red clip on to the catch bottle hose, and attach the hose to the bleed fitting. Close the red clip on the hose. (Fig. 4)
7. Remove the caliper bleed screw and thread in the bleed fitting. Attach the hose from the filler bottle to the fitting. (Fig. 5)
8. Gently squeeze the lever to purge the filler bottle hose of any air.
9. Unclip the red clip on the overflow bottle. (Fig. 6)
10. Squeeze the fluid bottle firmly – forcing fluid into the caliper for a count of five. Stop squeezing until the bottle returns to its natural shape. When the squeeze is released, air should be drawn out of the caliper. Continue alternately squeezing the fluid bottle, for a count of five, and releasing until no air bubbles come out of the caliper. (Fig. 7)
11. After all the air is out of the caliper; squeeze the bottle until fluid comes out at the master cylinder with no air bubbles.
12. While squeezing the bottle, rotate the master cylinder upwards so it is perpendicular with the ground. Quickly stroke the lever to the handlebars, and release. (Fig. 8)
13. While still squeezing the bottle, rotate the master cylinder downwards until it is again perpendicular to the ground then back to normal riding position. (Fig. 9)
14. Repeat steps 12 and 13 with the handlebar pointing downward at a 45 degree angle. (Fig 10 & 11)
15. While still gently squeezing the filler bottle, clip the red clip on the overflow hose, and then stop squeezing the filler bottle.
16. Unthread the filler bottle cap about half way to equalize the pressure in the bottle with the room, then tighten the cap.
17. Remove the filler bottle and the caliper's bleed fitting, let a small bead of brake fluid form in the bleed port, then install the bleed screw. Torque to 12±2 in-lbs (1.36±0.23 N\*m) **Do Not Over-torque!**
18. Unclip the red clip on the overflow bottle, remove the overflow hose and master cylinder bleed fitting, and install the master cylinder's bleed screw. Torque to 12±2 in-lbs (1.36±0.23 N\*m) **Do Not Over-torque!**
19. Clean the caliper and master cylinder with isopropyl alcohol. Take great care to remove all brake fluid because if the fluid comes into contact with the disc or brake pads, performance will forever be greatly reduced.
20. Replace the brake pads and pad spring, and install the pad pin. Torque to 10±1 in-lbs (1.13±0.11 N\*m) **Do Not Over-torque!**
21. Install the master cylinder to the bike's handlebar and tighten the handlebar clamp screws to 30±5 in-lb (3.39±0.56 N\*m). Reinstall the caliper on the frame or fork. See the Prime Hydraulic Brake Information manual (45-26588) for install instructions
- Note:** Complete Service manuals and service videos can be found online at [www.hayesdiscbrake.com](http://www.hayesdiscbrake.com).
22. Set the dead stroke adjust to minimum and then pump the brake lever to preset the pad spacing to the rotor. Then center caliper according to the installation instructions.
23. Go ride your bike!



Fig. 1

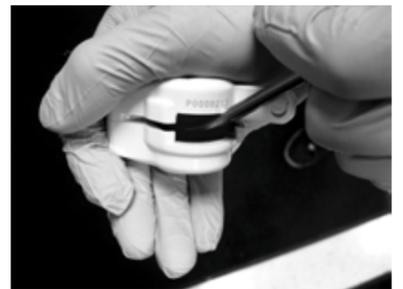


Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11