

The Following procedures cover the installation of Hayes Disc Brakes items purchased as an aftermarket item. When you need to install any of the disc brake components, a qualified technician with the proper tools should do that installation work. Improper installation could cause severe or fatal injuries.

**Warning:** When following any of the procedures below, be sure to keep your hands and fingers from getting caught in the disc. **Failure to do so could result in injury.**

**Warning:** With use, disc brake components may become very hot. Always allow components to cool before attempting to service your bike.

The right hand and left hand master cylinders are identical and will be rebuilt in the same manner. Rebuilding must be done with the master cylinder removed from the bike.

### A. Master Cylinder Piston Removal

- Slide the nose cone off the fitting and down the hose.
- With a 8mm end wrench, loosen the hose nut.
- Pull the hose out of the end of the master cylinder.  
**Caution:** The end of the hose will have fluid in it. Point the hose upward and do not shake it so that you not drip fluid onto a painted surface.
- If there is nothing wrong with the rest of the system, leave the hose and caliper attached to the bicycle. With the grip and shifter removed, slide the master cylinder off the handlebar.
- Remove the lever by first removing the two 4mm Allen head bolts on each side of the master cylinder.
- Using a 2mm Allen wrench, unscrew the lever and adjuster bushing from cartridge push rod.
- Remove the two plastic bushings that fit between the sides of the lever and the body.
- Remove the push rod, master cylinder piston, and spring by removing the snap ring and washer using a snap ring tool. DO NOT attempt to take the rubber seals off of the master cylinder piston.
- Warning:** Always wear safety glasses when removing a snap ring.
- Clean and inspect the inside of the master cylinder and all parts. Replace those parts that are damaged with new service parts. Thoroughly clean all of the parts by spraying them with isopropyl alcohol and wiping them with a clean rag.
- Begin reassembly by dropping the spring and master cylinder assembly into the lever body.
- Place a small amount of the yellow Versilube onto the ball end of the pushrod.
- Install the ball end of the threaded push rod into the master cylinder piston. Push on the threaded push rod to assure that all parts are properly in place.
- Place the retaining washer over the threaded end of the push rod.
- Using a snap ring tool, install the snap ring into the snap ring groove on the inside of the master cylinder body. Push on the threaded push rod to assure that all parts are properly in place.
- Put the adjuster bushing into the hole in the lever and thread the push rod through the hole in the bushing.
- Put both plastic lever bushings onto the lever, hold them with your fingers, and then slide the lever into place. A small screwdriver through the pivot hole will align the wave washers with the hole in the lever and the holes in the master cylinder body.
- Drop the pivot pin through the body, lever bushings, and lever hole. Tighten the 4mm Allen head bolts until tight.
- Put the completed master cylinder back onto the handlebars.
- Reinstall the hose and bleed the system.

**Note:** The bleed instructions are included in the Hayes Bleed Kit or on the Web at: [www.hayesdiscbrake.com](http://www.hayesdiscbrake.com)

### B. Master Cylinder Reservoir Cap/Bladder Removal

**Note:** When removing the bladder assembly from the master cylinder body, there is no need to remove the hose from the end of the master cylinder.

- Remove the two T-10 Torx screws holding the reservoir cap onto the body.
- Remove the reservoir and bladder assembly. DO NOT try to remove the bladder from the cap.
- Clean and inspect the bladder and cap assembly. Replace those parts that are damaged with new service parts. Thoroughly clean all parts by spraying them with isopropyl alcohol and wiping them with a clean rag.
- Place the reservoir cap and bladder assembly into the master cylinder body. Be sure that all parts fit properly.
- Install the two T-10 Torx bolts into the reservoir cap.
- Bleed the system.

**Note:** The bleed instructions are included in the Hayes Bleed Kit or on the Web at: [www.hayesdiscbrake.com](http://www.hayesdiscbrake.com)



Step A3



Step A5/7



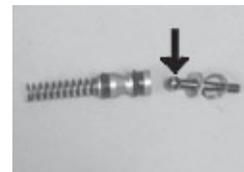
Step A6



Step A8



Step A9



Step A11



Step B2



Step B3