



# SERVICE KIT INSTRUCTIONS

## MX-2, MX-3, MX-4 Mechanical Disc Brake Installation

### Safety Info

This brake has been designed for use on a single person bicycle. The use on any other vehicle or device not approved by Hayes Disc Brake will void the warranty and can cause serious injury.

As a serious rider you are probably well aware of the need to practice safety in all aspects of the sport. This includes service and maintenance practices as well as riding practices. Before each ride, always check your brakes for proper function and the brake pads for wear.

When you ride, always wear a helmet.

### Installation

A qualified technician with the proper tools should perform installation of the disc brake components. Improper installation could cause severe or fatal injuries.

#### A. Tools Required

Screwdrivers: Torx T25 driver      Cable cutters  
Allen drivers: 5mm                      Torque wrench (0-110 in-lbs)

#### B. Mounting the Disc to the Hub

**Note:** Mounting the brake disc to the wheel is a simple matter, but one that requires care. Wheels should be built by a qualified technician in a 3 cross spoke pattern. We recommend the use of steel, quick release skewers only.

- Clean the disc and the hub-mounting surface with isopropyl alcohol.
- Warning:** Do not use disc brake cleaners.
- Place the disc on the hub-mounting surface. Be sure that the arrow on the disc is pointing in the same direction of the forward wheel rotation.
- Using a Torx T25 driver, install, tighten, and torque the disc screws to 50 in-lbs (5.6 Nm), in a star pattern sequence.

#### C. Mounting the Brake to the Frame or Fork

- Remove the wheel(s).
- For some installations it will be necessary to mount a bracket to the frame or fork to accept the Hayes Mechanical Brake. Mount the bracket to the frame or fork using (2) M6 x 1.0 x 18.4mm long mount bolts. Torque the bolts to 110 in-lb (12.43Nm).
- Mount the caliper to the frame or fork adapter using (2) M6 x 1.0 x 18.4mm long mount bolts and (2) mount washers. Snug the bolts, but leave them loose enough so that the MX-2 Mechanical brake will move on its slots.
- Re-install the front wheel.
- Set lever reach adjustment per the lever manufacturers instructions. Doing this first prevents this adjustment from affecting other adjustments.
- Install the cable through the brake lever and spin the lever adjusting barrel down tight to the closed position.
- Install the cable through its housing and through the cable anchor screw and washer.
- Seat the cable housing snugly at the brake lever and the brake.
- Pull the cable wire tight and tighten the cable anchor screw to 60 in-lbs of torque
- Trim the excess cable and crimp a cable end on the end of the trimmed cable.
- Squeeze and hold the brake lever. While holding the brake lever, shake the mechanical brake to position it in its natural centered position over the disc. While still squeezing the lever, tighten the mounting bolts.
- Using a 5mm Allen wrench, turn the fixed inner pad adjuster counter clockwise 1/8 of a turn until there is a .015"-.020" (.38-.50mm) gap.
- Adjust the amount of lever travel by turning the adjuster barrel at your lever.
- Spin the wheel. Check that it spins freely and that the gaps, between the pad and the disc, are equal. If the gaps are unequal, or if there is drag, readjust the caliper position by loosening the mounting bolts and adjusting the caliper as needed.
- Hint:** A white piece of paper can be used as a background to help sight down the disc looking for equal clearance between the pads and the disc.
- When the gaps are equal and wheel spins freely (without drag), torque the mounting bolts to 110 in-lbs (12.43Nm).

### Starting Out

**Burnish:** Disc brakes require a special burnishing period to achieve maximum braking power. This burnishing period lasts for about 30-40 stops. During this period some noise may occur.

### Maintenance

**A. Cleaning and Care :** The brake disc and pads should only be cleaned with isopropyl alcohol (not disc brake cleaner).

**B. Brake Pad Change :** Due to wear, contamination, or damage, the brake pads will, on occasion have to be replaced. The following procedure is to be followed for that change of brake pads.

- Remove the wheel.
- Using a 5mm Allen wrench, turn the inner pad adjuster counter clock-wise until one engagement thread is exposed.
- Using a needle nose pliers, **remove the outer pad first.**  
**Note:** The outer pad is the pad away from the wheel.  
To do this, pull the tab in the center of the pad backing plate toward the center of the caliper and out. The pad is held in with a magnet.
- Repeat the above steps for the inner pad.  
**Note:** The inner and outer brake pads are identical.

To replace the pads...

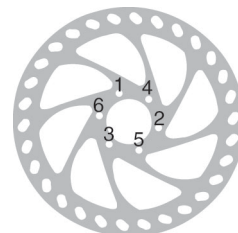
- Using a needle nose pliers, **install the inner pad first.**  
**Note:** The inner pad is the pad closest to the wheel.  
Use the tab in the center of the pad backing plate to push the new pads into place. Angle the pad slightly until the force of the magnet pulls the pad into place.
- Now repeat the procedure for the outer pad.
- Install the wheel.
- Using a 5mm Allen wrench, adjust the inner pad adjuster to the proper gap.  
**Note:** See installation instructions above for proper set-up.

ITEM	TORQUE
Disc Screws	50 in-lbs +/- (5.6 +/- .5Nm)
Cable anchor screw	60 in-lbs +/- (6.8 +/- .5Nm)
Caliper Mount Bolts	110 in-lbs +/- 10 in-lbs. (12.43 +/- 1.1Nm)

### Warranty

Any Hayes Disc Brake found by the factory to be defective in materials and/or workmanship within two years from the date of purchase will be repaired or replaced at the option of the manufacturer, free of charge, when received at the factory with proof of purchase, freight prepaid. This includes assembly costs (for instance by the dealer), which shall not be covered by Hayes Bicycle Group. This warranty does not cover breakage, bending, or damage that may result from crashes or falls. This warranty does not cover any defects or damage caused by alterations or modifications of new Hayes disc brakes or parts or by normal wear, accidents, improper maintenance, damages caused by the use of parts of different manufacturers, improper use or abuse of the product, or failure to follow instructions contained in an instruction manual for Hayes Disc Brake. Any modifications made by the user will render the warranty null and void. The cost of normal maintenance or replacement of service items, which are not defective, shall be paid for by the original purchaser. This warranty is expressly in lieu of all other warranties, and any implied are limited in duration to the same duration as the expressed warranty herein. Hayes Bicycle Group shall not be liable for any incidental or consequential damages.

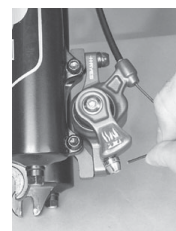
If for any reason warranty work is necessary, return the brake to the place of purchase. In the USA, contact Hayes Bicycle Group for a return authorization number (RA #) at (888) 686-3472. At that time, instructions for repair, return, or replacement shall be given. Customers in countries other than USA should contact their dealer or local Hayes Disc Brake distributor.



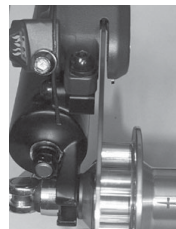
Step B-3  
Torqueing Sequence



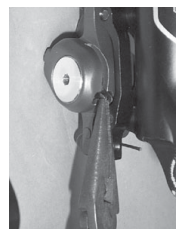
Step C-2  
Fork Adaptor



Step C-7  
Stringing Cable



Step C-14  
Checking Gaps



Step B-2  
Removing Pads



Brake Pads  
**Note:** Inner and outer pads are the same.



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