

SAFETY ADVISORY

Instantaneous Disk Brake Failure Recumbent Trikes New or Old

Perhaps you are not aware that mechanical disk brakes on a recumbent trike can fail with no warning and this advisory explains the mitigation.

Background:

As you know, many travel the path from HMB* to the LMST** by walking or biking the 27% grade. Recently there have been three accidents caused by disk brake failure when riding a recumbent trike down the path. In one case there was injury to the rider and the bike was damaged. In my case I have a new bike and travel the path almost daily. At the top of the hill I had braking power in both the left and right hand wheels. One third the way down the left-hand brake failed and I could not stop the bike using the right-hand brake. The right-hand brake did slow the bike enough that an out of control crash was avoided.

The cause:

My bike has a stationary and a moveable brake pad mounted in the caliper. The stationary brake pad had become worn where it no longer contacted the disk. Just three months traversing the hill had worn the brake pad where it became ineffective.

Solution:

Properly adjust the brakes so the stationary brake pad nearly touches the disk. In my case there was plenty of pad remaining, but it needed to be re-adjusted. See video below.

Recommendation:

Regularly do a visual inspection to determine the amount of brake pad exposed to the disk. Lifting the tire from the ground and spinning by hand while applying the brakes is not a sufficient test. If you are not a DIY person then have this inspection and readjustment procedure done by a professional at a bike shop.

This safety condition probably exists for any bicycle mechanical disk braking system, but I do not have personal experience with other bikes.

Here is a good video on the subject titled: "[How to Align a Mechanical Disc Brake on a Bike.](#)"

Safe Biking

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www.leeHITE.org

*Heritage at Miami Bluffs

**Little Miami Scenic Trail

