

Wheel motor parking brake stroke measurement

Introduction:

The hydrostatic drive motors on a Bergkamp Continuous Paver are equipped with a parking brake feature. The parking brake is a wet disc brake system. The brake is spring applied and hydraulically released. It is important to understand that this is a parking brake only and is not to be used as a dynamic brake.

Over time due to normal wear, or due to misuse/abuse the brake discs may become worn to the point of needing shimmed or replaced. Excessively worn discs can greatly reduce the brake holding capacity of the system leading to unsafe operating conditions. This document will instruct you how to measure the wear on the discs. A separate document is available with instructions to shim the brakes if necessary.

Possible causes of brake disc wear:

The most common cause of brake disc wear is due to the brakes dragging while the paver is moving. This could be due to insufficient hydraulic brake release pressure. Refer to your operators' manual for the proper hydraulic brake release pressure. If the paver is unable to maintain proper hydraulic brake release pressure, this issue needs addressed before proceeding with shimming the brake discs.

Another cause of brake disc wear is moving the paver before the brakes are fully released. After actuating the brake release switch do not begin moving the paver until the park brake indicator is off. If the indicator is on or flashing, the brakes are still engaged, and damage will occur if the paver is moved under this condition.

Testing brake piston stroke:

The brake system is engineered to require a specific amount of piston stroke to compress the disc set. Acceptable piston stroke is 0.043" +0.014"/-0.010".

Tools required:

Depth gauge with magnetic mount base

Brake release stud (equipped on paver inside engine compartment door with red bridge beams)

Note: There are 2 different versions of brake chambers requiring different brake release studs. Refer to the pictures in this document to determine version. It is possible not all motors on the paver will have the same version.

Brake release stud for P35 brake is Bergkamp p/n 011495

Brake release stud for F35 brake is Bergkamp p/n 002050

Safety precautions:

All four drive wheels should be off the ground and supported with jackstands.

Let everyone in the area know to stay clear of machine during testing.



Wheel motor with P35 brake. Note brake cover is held in place with a snap ring.



Wheel motor with F35 brake. Note brake cover is held in place with bolts.

- 1) Remove the dust plug from the center of the brake housing cover.
- 2) Thread the brake release stud into the brake piston. The stud only needs to be hand tight.
- 3) Position the depth gauge to contact the end of the stud and zero out the dial indicator with the brakes set.
- 4) Release the brakes with proper hydraulic brake release pressure (refer to your operators manual). The stud should travel outward as the brake piston is stroked. Record the measurement at the fully stroked position.
- 5) Perform this test and record the results for all (4) motors.

