Winter Roadway Friction Testing Using G Force

The VC4000 is an electronic accelerometer computer that provides vehicle brake testing and acceleration as well as a variety of performance based testing applications. It measures the G Force (acceleration factor, drag factor) 100 times per second. MNDOT will use this system to measure braking friction during snow and ice events. It is thought that there are many different degrees of slipperiness during a snow and ice event. The theory is that this meter will give snow plow operators and supervisors information on what degree of slipperiness the road surface is in. This device measures surface friction when the operator taps the brakes and displays a number 1-8. District 6 snow and ice crews will test this unit for its accuracy and effectiveness on determining slippery conditions. The ultimate goal of this project is to achieve results that help determine this device's benefits in deciding whether or not to apply winter chemicals. This device will also be compared to a device tested by District 3 as another MOR project called RCM 411, which uses infrared to determine road friction.

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