



# Maintenance Research Bulletin: July 2013

**NTREC New Technology Research Equipment Committee  
MOR Maintenance Operations Research**



## 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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## Upcoming Events

Supervisors Conference  
Chase on the Lake  
Walker, MN  
September 9-11, 2013

Fall Maintenance Expo  
St. Cloud Public Works  
October 2-3, 2013

Toward Zero Deaths  
Conference  
St. Cloud  
November 14-15, 2013

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Maintenance Research Website  
<http://www.dot.state.mn.us/maint/research.html>

Comments? Questions?  
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