

Application Note – Monitoring brakes of new passenger vehicles

Customer Requirements

The braking and durability performance of a new passenger vehicles brakes is critical for the safety of the occupants of the vehicle.

An international manufacturer of passenger vehicles wanted to evaluate the durability of the brake system of a new vehicle, critical information used for the estimation of component life and setting of service intervals. Front disk pad temperatures, road speed, average deceleration and braking duration. The pad temperatures and road speed of the vehicle needed to be recorded for one second before the brakes were applied. The whole task had to operate automatically with no driver input to start or stop the data acquisition process.



Equipment

DT800

DeLogger™ 4 Pro software.

64 MB Memory card.

Sensors

Thermocouples, Accelerometer, Road speed sensor

Datataker Solution

One of the most demanding of users is the taxi industry whose vehicles spend long hours on the road in a wide variety of traffic conditions. A prototype vehicle was instrumented and then operated as a taxicab in a major city centre for a trial period.

The *DT800* was programmed to wake from sleep mode when the ignition was turned on and power back down to sleep mode when turned off. The *DT800* was programmed to constantly read the sensors and record data when the brakes were applied. By using a simple shift register the temperatures and speed of the vehicle was recorded. By using the *DT800*'s histogram channel option the volume of data was greatly reduced.

The data was downloaded and emailed to the test engineers on a weekly basis, with downloading occurring during scheduled cleaning and maintenance.

If you need more detail on this application please contact joyce.reid@datataker.com.au

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