

# Tool Wear and Breakage Monitoring System - Automotive Applications

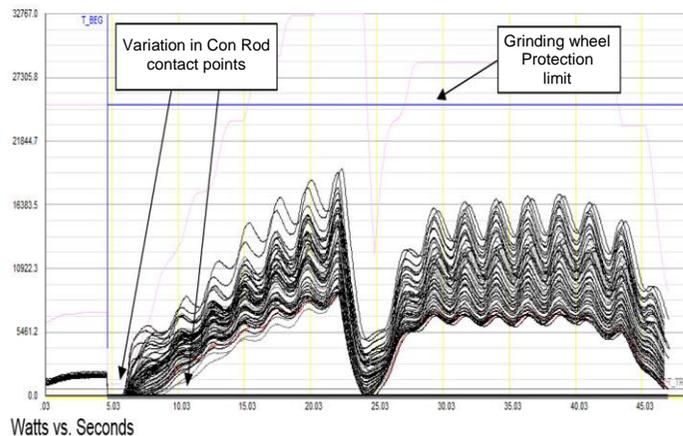
## Tool/Part Contact Detection for Grinding Operations

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### DIGITAL WAY PROVIDES A SIMPLE AND RELIABLE SOLUTION FOR GRINDING GAP ELIMINATION AND GRINDING WHEEL CRASH PROTECTION

Already known for its Tool Breakage monitoring systems, Digital Way also provides systems that can be used for completely different purposes. Among them, we can provide wheel/part contact detection for grinding operations. Up to now, wheel/part contact detection was achieved most of the time by using mechanical systems such as Belleville Spring washers or sometimes vibration or acoustic emission sensing.

Those various solutions have some significant drawbacks. In the case of Belleville spring washers, their implementation is quite difficult and requires frequent mechanical maintenance to ensure proper operation. When vibration or acoustic emission is used, those sensors can sometimes be disturbed by spurious emissions from the machine itself as when it ages or when coolant or lubrication levels change.



Watts vs. Seconds



### PROTECT EXPENSIVE CBN GRINDING WHEELS FROM CRASHES

The WattPilote is located in the control cabinet and is protected from mechanical and vibrational disturbances. It rapidly detects any increase in power consumed by the motor driving the grinding wheel and transmits this information in less than 5 milliseconds to the machine control. This capability helps to precisely determine the contact point and it also minimizes the chance that the grinding wheel could be damaged in a crash or by a condition that generates excessive power consumption.



### Minimize cycle time

In addition to protecting your expensive CBN grinding wheels from crash damage, the WattPilote will allow you to increase your approach speeds – right up to the point of grinding wheel contact. This reduces cycle time and improves your machine productivity.



### WATTPILOTE CONTACT

WattPilote Contact is the successor of WattPilote Accostage, developed for the detection of tool/workpiece contact. WattPilote Contact contains all the essential gap-elimination functions, and has been enhanced through the addition of new features including overload protection, tool breakage detection, and a simple PC-based user interface - WP\_VISU\_C software.

# WattPilote

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