



APPLICATION NOTE

Heavy Vehicle Condition- Based Maintenance

Monitor component use and vehicle health with the ease and simplicity of wireless technology. When it comes to monitoring data, do it all from the cloud with MicroStrain's SensorCloud platform.

Simple, rapid deployment even in challenging applications

WHY MONITOR COMPONENT HEALTH?

Monitoring component health is vital for maximizing machine availability and reducing operating costs. Industrial vehicles are subject to variable conditions that undermine their performance and longevity.

MicroStrain's integrated monitoring systems provide a scalable solution to effectively track vehicle health and component use. They are ideally suited for enhanced condition-based maintenance (CBM) of heavy-duty construction equipment.



ROBUST



SIMPLE
INSTALLATION



RELIABLE



CLOUD-OPTIMIZED

WHY MICROSTRAIN BY HBK?

MicroStrain's miniature wireless nodes are capable of measuring a wide variety of parameters including vibration, pressure, load, corrosion, strain, torque, temperature, and orientation.

These wireless solutions integrate across engines, powertrains, brakes, bodies, and cabins. With all the reliability of wires and none of the hassle, these sensors enable rapid integration and installation without any disruption of performance or operation.

MicroStrain's optional SensorCloud platform means you can view your data whether you're on-site, out grabbing a coffee, or comfortably relaxing at home.

INPUT SENSORS



WIRELESS NODES



GATEWAYS



SOFTWARE



{MSCL}

Using the MicroStrain SG-Link-200 for Vehicle Health Monitoring

SG-LINK-200 TECHNICAL SPECIFICATIONS

- 3 Analog input channels, plus internal temperature sensor
- Accuracy: $\pm 1\%$ full scale (typical)
- Continuous sampling: 1/hour to 512 Hz (3 channels)
- Burst sampling: 32 Hz to 4095 Hz
- Operating temperature: -40°C to 85°C
- Ruggedized IP68-rated enclosure
- 89.8 x 127 x 51.3 mm, 326 grams with battery



TRACK UNLIMITED PARAMETERS WITH SOPHISTICATED ANALYTICS

MicroStrain's vehicle monitoring systems, including the SG-Link-200 wireless sensor node, track structural strain on off-highway vehicles. Embedded fatigue tracking algorithms enable automated alerts for streamlined maintenance action and fleet management. Wireless data is aggregated on a base station that supports custom health indicators.

It also enables secure communication with SensorCloud, a remote data management and analytics platform that gives service technicians access to unlimited fleet data for enhanced tracking, reporting, and alerts. As a result, heavy vehicle operators improve the effectiveness of scheduled maintenance programs, maximize component life, enhance machine availability, and reduce operating cost... all without sacrificing hauling performance.

MICROSTRAIN'S CONDITION-BASED MAINTENANCE SYSTEMS ENABLE YOU TO:

- Maximize engine power management
- Monitor torque and planetary powertrain transmission
- Track brake fluid temperature and pressure
- Report loads in suspension
- Measure vehicle orientation
- Verify cabin comfort in trucks, loaders, excavators, dozers, and harvesters



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microstrain.com/wireless-sensors/SG-Link-200