CAS DATALOGGERS

Auto Factory Ensures RICE NESHAP Compliance with Data Logger

dataTaker Measures Regulatory Standards To Meet Deadlines

CAS DataLoggers provided the datalogging solution for an automotive manufacturer who needed to ensure RICE NESHAP compliance, the EPA emissions regulation mandating that diesel engines reduce air pollutant emissions from many categories of new and existing engines. The factory needed to begin retrofitting and testing its diesel engines with emission control devices to meet the 2013 deadline. Following installation of each device, the engines had to be monitored for operating temperature, RPM, pressure and additional parameters for full compliance. Supervisors wanted to have a monitoring system in place well before May 2013, the EPA's deadline.

Installation

CAS DataLoggers provided the factory with a Series 3 dataTaker DT85 Data Logger along with a CANgate Canbus to Serial Converter, both of which were installed in a test cell area. The DT85 datalogger offered 16 to 48 universal analog inputs and 12 digital channels, 4 high-speed counter inputs, and programmable serial sensor channels, allowing connection to every sensor type used in the factory. The 18-bit resolution measurements were shown on the integrated display. In this way the dataTaker can record almost any physical value including temperature, pressure, RPM, and speed. For example, some engines were fitted with continuous parametric monitoring systems (CPMS), so the dataTaker logged the catalyst pressure along with every other value. If necessary, the DT85 is expandable up to 900 inputs.

USAGE

The data logger sent all the data out to the factory's server over FTP for archiving and later analysis. Users can also choose to connect to the DT85 locally, remotely or over the Internet using the dataTaker's communications capabilities including RS232 with modem support, Ethernet and USB memory stick ports. The DT85's user-defined memory stores up to 10 million readings and features independent control of schedule size and mode to record only as long as needed.

The CANgate filters and converts users' CAN (Controller Area Network) and GPS network data into serial ASCII, recording the real-time data (including temperatures, RPM, brake/throttle settings, latitude/longitude, speed etc). The gateway then transfers this data to the DT85 for storage. Users can flexibly configure the CANgate to choose the signals they want to log at any given time, apply statistical functions (average, min/max) and pick the format in which data are returned. The CANgate also supports common protocols such as ISO-15765 and SAE-J1939 in addition to raw CAN frames. 2 CAN interface ports allow connection of separate independent CAN networks.

FREE dEX graphical interface software is built-in with dataTaker data loggers allowing easy configuration. Users can apply calculations and diagnostic information to historical data for analysis and view the data in real-time in convenient dashboard format, trend charts and tables. With no applications to install, dEX runs directly from a web browser and can be accessed locally or remotely where a TCP/IP connection is available.

The collected data from the dataTaker allows users to track all the engine values during operation including the CPMS data. Meanwhile, if an engine is running outside of the specified temperature windows, the data logger's alarm features immediately notify users through SMS messages and emails.

Benefits

The dataTaker helped the factory to get well on its way to RICE NESHAP compliance long before the deadline. The dataTaker DT85 and CANgate pair functioned well as an engine monitoring system to provide the needed data. During the installing and testing phases, the dataTaker DT85 logged, stored and transferred all the data from every temperature and pressure sensor, taking highly accurate readings from the engines and their attached emissions control systems.

For further information on the dataTaker DT85 data logger, RICE NESHAP compliance, or to find the ideal solution for your application-specific needs, contact a CAS Data Logger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.