CAS DATALOGGERS

Generator Emissions Testing to Maintain EPA Standards

dataTaker Data Logger Monitors Pollutant Levels

Diesel generators are utilized as backup power for a large book retailer in their warehouse. The retailer must assure the generators are constantly operational by conducting generator emissions testing. They must also maintain data for the EPA (Environmental Protection Agency) to document that the exhaust temperature is in compliance with emission regulations.

EPA regulations state that the exhaust must meet and not exceed a specified level of pollutants during operations while maintaining a pre-determined temperature range. If all EPA requirements are not adhered to properly, the retailer could be penalized with heavy fines. In addition, diesel engines could be subject to serious damage.

The generators were fitted with an emission reduction system in order to be in compliance with EPA standards. The operation of the generator and the emission reduction system in the approved range must be demonstrated to the EPA by collecting the exhaust gas temperatures during each operational cycle. This means that during each weekly test, the parameters must be recorded so that the data can be reported to the EPA.

Installation & Usage

CAS DataLoggers provided the dataTaker DT80 data logger to monitor and record the temperature and pollutant levels of the generators. The data logger was configured to only log data when the generator was operational. A digital state input is an output from the controlling PLC when either the generator is started automatically during an outage, or when the weekly operational test is conducted. The DT80 begins recording when the digital input from the generator changes to the "on" state and stops when that signal returns to "off." The DT80 recorded temperature measurements every second while computing the minimum and maximum value from 300 data points at 5-minute intervals. This type of data recording allowed a consistent trend when viewing the data and reduced the data storage requirements while still providing the necessary data for the EPA. The dataTaker firmware and software allows a high degree of statistical logging capabilities.

BENEFITS

The dataTaker DT80 was a cost-effective solution for this generator emissions testing application. The logger's ability to sense the start of the generator and only log data during periods of operation as well as the built-in statistical recording feature made implementation simple – no complex programming required. The USB port for easy data downloads also makes the solution easy to use while satisfying the EPA regulations.

For more information on dataTaker Data Loggers, generator emissions testing or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.