

Abnormality Diagnosis of Diesel Engines and Hydraulic Torque Converters by using Portable Lubricating Oil Analyzer

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The authors newly developed a portable lubricating oil analyzer equipped with the on-line iron powder concentration sensor. This paper describes experiment results for confirming applicability of the analyzer to abnormality diagnosis of diesel engines and hydraulic torque converters at a facility of maintenance and repair. First, it was confirmed that the analyzer could analyze on-site the iron powder concentration of sampled oil in a diesel engine, easily and in very short time. Secondly, an abnormality simulating test of torque converter was also conducted. In the test, foreign body was mixed in the lubricated part of the torque converter for confirming its applicability to abnormality diagnosis. From these test results, it was confirmed that the analyzer was effective for abnormality diagnosis of railway vehicle driving equipment.