

## **Fast Calculation Method of Abnormality Degree for Real Time Abnormality Detection of Vehicle Equipment**

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Vibration monitoring is effective in early detection of equipment failure. In the vibration monitoring system we have proposed, abnormality detection is performed by applying the nearest neighbor method (NN) to the octave band analysis results of vibration. However, the NN requires a long calculation time and is not suitable for detecting an abnormality in real time. Therefore, we decided to consider applying the One Class Support Vector Machine (OCSVM) to abnormality detection. In this paper, the OCSVM is applied to actual vibration data, and calculation time are compared with the NN. As a result, we verified that the calculation time can be significantly reduced compared to the NN.