

Impact of Biodiesel Metals on the Performance and Durability of DOC and DPF Technologies

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Biodiesel Aging of DOCs, DPFs and SCRs

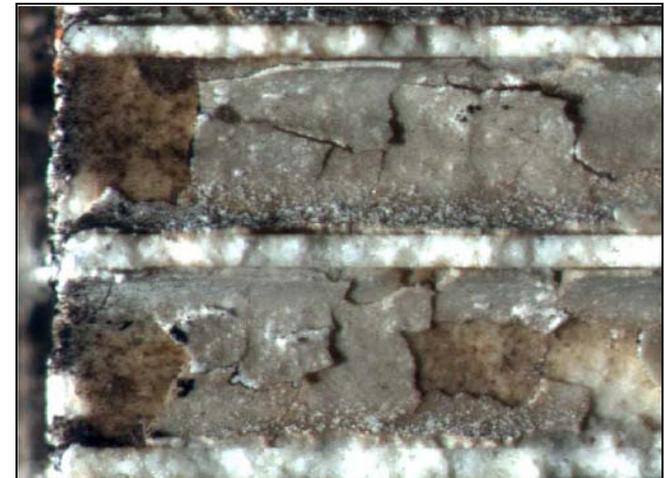
Motivation

- Alkali and alkaline metals found in biodiesel can attack diesel catalysts
- Current biodiesel ASTM standard for fuel-born metals may be too high

Results

- Developed accelerated test method to expose diesel catalysts
 - 8 DOCs, 8 DPFs and 4 SCRs
- Biodiesel ash did not adversely impact the back pressure of a DPF
- Biodiesel ash caused severe deactivation of a DOC

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DOC – sintered ash and washcoat detachment