
The Impact of PM and HC on EGR Cooler Fouling Poster P-12

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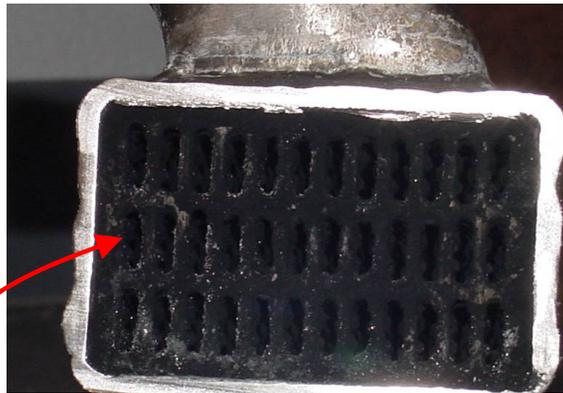
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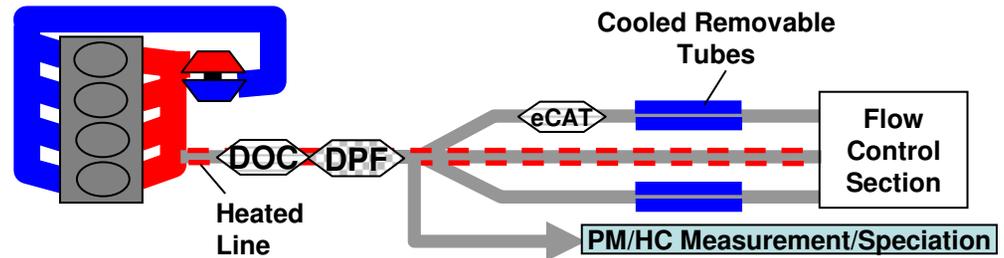
The Impact of PM and HC on EGR Cooler Fouling

- For 2010+, higher EGR rates and more cooling required to reduce NOx and maintain A/F ratios, but.....
 - ❖ More HC's
 - ❖ More PM/SOF
 - ❖ Broader usage of EGR
 - ❖ More likely condensation
 - ❖ **WORSE EGR COOLER FOULING**

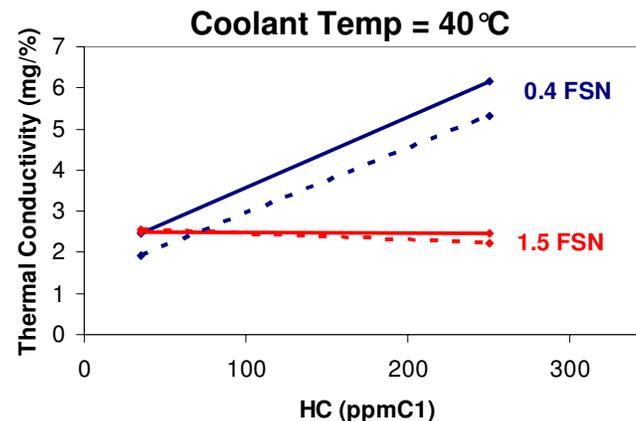


After 200 hr. Fouling Test

Soot and HC based deposits in EGR cooler degrade heat transfer performance and increase pressure drop.



- Cooled EGR sampling apparatus:
 - ❖ Control PM/HC levels independently
 - ❖ Include other key factors (ex: coolant temperature)
 - ❖ Monitor key metrics (effectiveness, mass gain)
 - ❖ Speciation of gas born constituents and deposits
 - ❖ Examine deposition propensities



- Data used to correlate an EGR cooler fouling model.

