

Technical Service Bulletin Number
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TSB170038



Technical Service Bulletin

Subject

Fault Code 2387, 3616, or Turbocharger Actuator Sticking

Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

Product Affected

- ISX15 CM871
- ISX15 CM871E

Issue

Symptom:

- FC2387 – VGT Actuator Driver Circuit (Motor) – Mechanical System **Not** Responding or Out of Adjustment
- FC3616 – Engine VGT Nozzle Position – Mechanical System **Not** Responding or Out of Adjustment
- Turbocharger actuator sticking

Root Cause:

- The exhaust gas recirculation (EGR) cooler, Part Number 4337587, used in Service Kit, Part Number 4376532, has an internal heat shield at the gas inlet header. The

internal heat shield can crack in some instances. See Figures 1 and 2 below. Metal pieces from the internal heat shield can be ingested by the turbocharger, resulting in turbocharger nozzle vane damage and turbocharger actuator sticking.

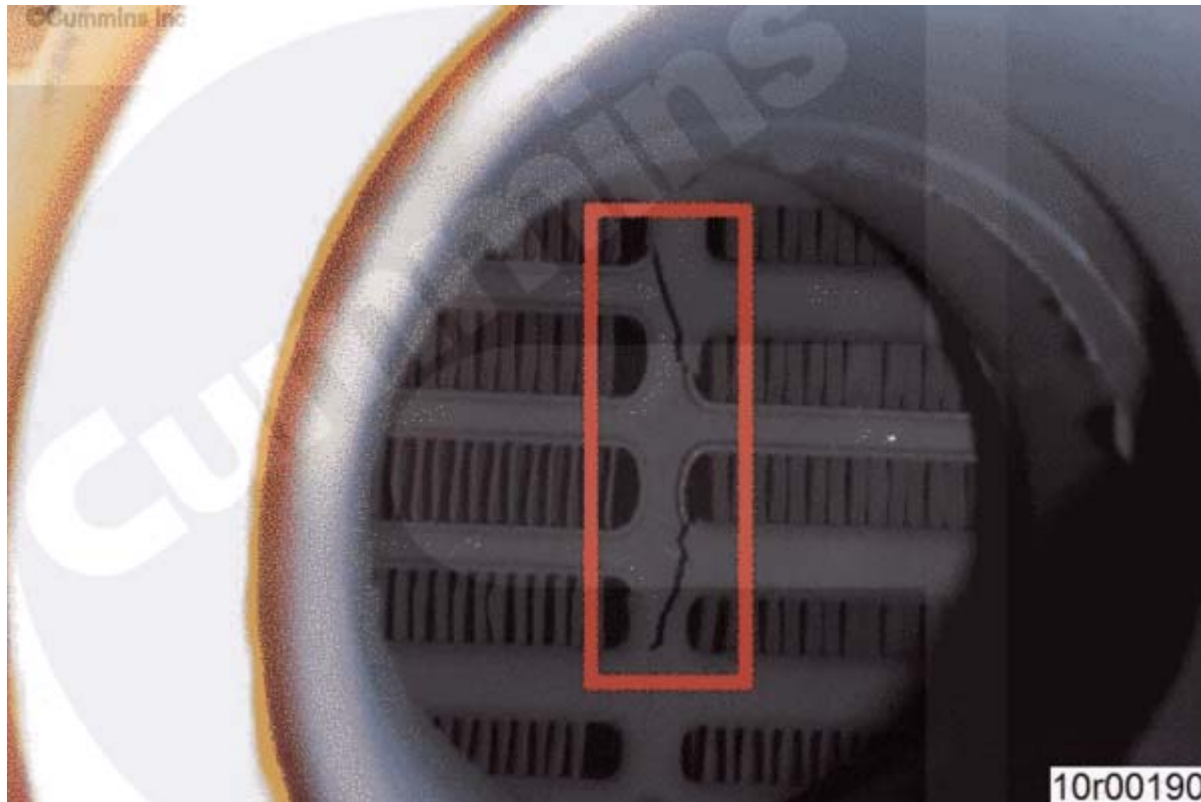


Figure 1, EGR Cooler Heat Shield Crack.

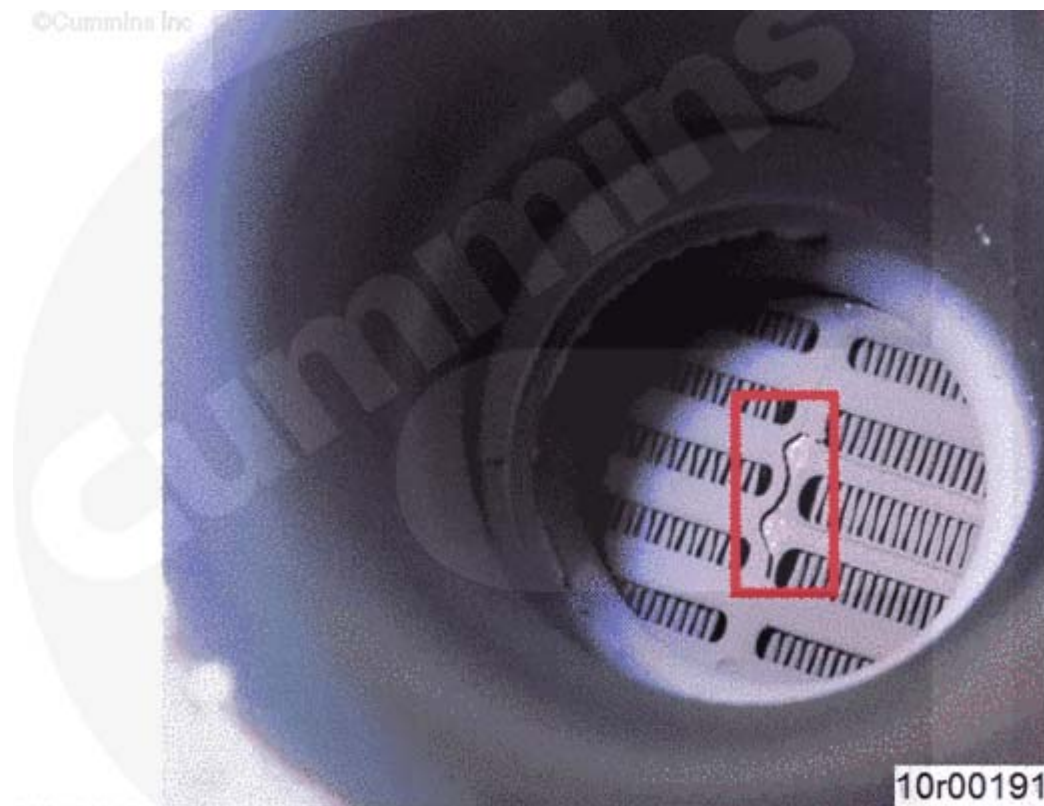


Figure 2, EGR Cooler Heat Shield Crack.

Verification

- FC2387 or FC3616 present.
- EGR cooler is part number 4337587. See Figures 3, 4, and 5.
- EGR cooler heat shield at inlet is cracked. See Figures 1 and 2 above.



Figure 3, EGR Cooler, Part Number 4337587, used in EGR Cooler Kit, Part Number 4376532.



Figure 4, EGR Cooler Part Number Location.

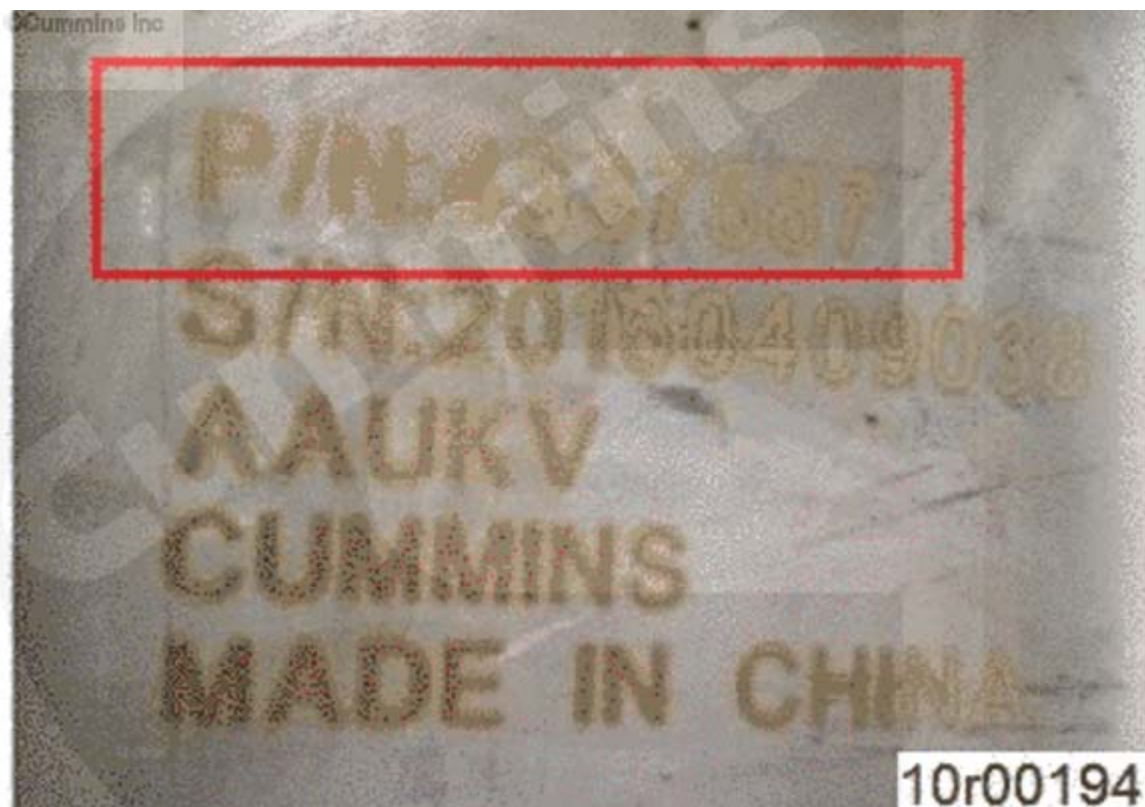


Figure 5, EGR Cooler Part Number Example.

Resolution

- Follow published troubleshooting for FC2387 and/or FC3616.
- Cummins Inc. recommends replacing EGR cooler, Part Number 4337587, with EGR cooler, Part Number 3689035 (Service Kit, Part Number 4309398), to prevent future damage to turbocharger. See Figure 6 below.
- EGR cooler, Part Number 3689035, does **not** have an internal heat shield at inlet header plate.



Figure 6, EGR Cooler, Part Number 3689035, used in EGR Cooler Kit, Part Number 4309398.

Service Parts Availability

Service parts are available. See Table 1 for part numbers.

Table 1, Service Parts				
Part Description	Existing Part Number	Obsolete	Superseded	New Part Number
EGR Cooler Kit	4376532	No	No	4309398
EGR Cooler	4337587	No	No	3689035

Table 1, Service Parts				
Part Description	Existing Part Number	Obsolete	Superseded	New Part Number

Document History

Date	Details
2017-3-23	Module Created

Last Modified: 27-Mar-2017

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