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Coding Information

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Title: Interstage Cooler Interference With Valve Cover Sound Shield Mounting Bolts

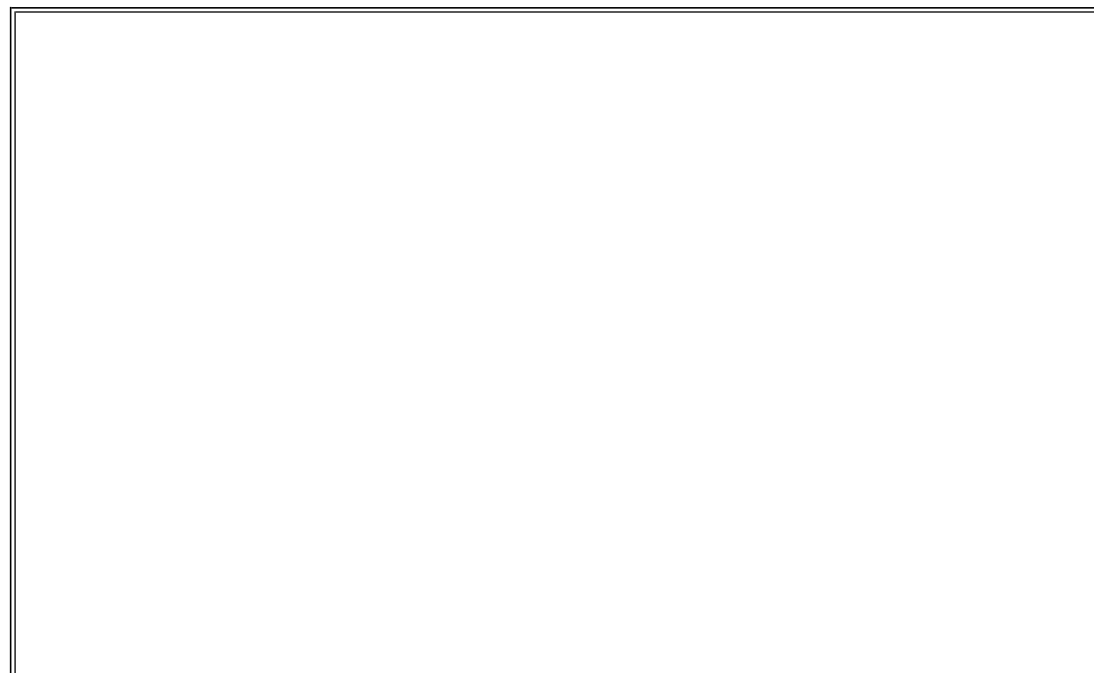
Applies To: EPA 2013 HD-OBD and later DT/9/10 and N9/N10

CHANGE LOG

2015/07/29 - Fixed coding (iKnow visibility), gramatical and formatting revisions,
2015/02/25 - Initial Article Release

DESCRIPTION

There are incidents of contact between the bottom panel of the interstage cooler and the valve cover sound shield mounting bolt on High Torque and SCR equipped medium duty engines. The current socket head screw could cause interference issues between itself and the interstage cooler. This document reviews the concern and repair steps for assembling with button head screws.



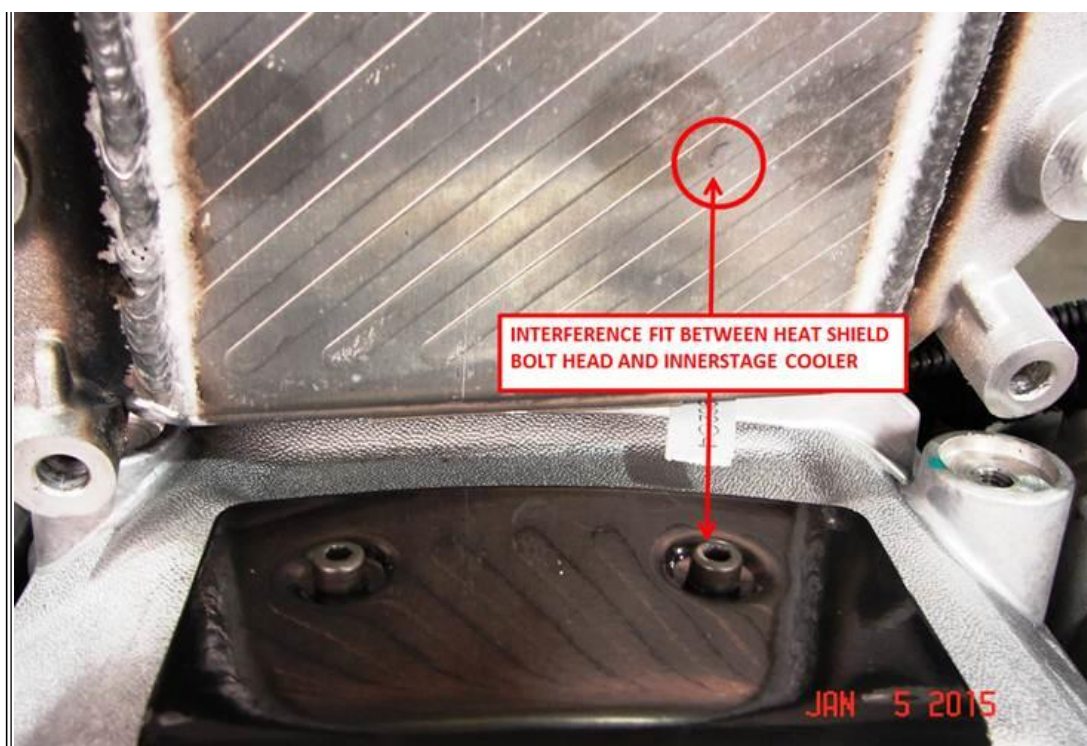


Figure 1: Example of interference

SYMPTOMS

In the event that the interstage cooler is punctured, these symptoms will be present:

- Low boost or low power
- Boost leak (whistling noise)

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
SPN 102 FMI 10 (FCAP)	Boost slow response fault

Customer Observations or Concerns:

- MIL on
- Performance - low power
- Whistling noise

SPECIAL TOOLS / SOFTWARE

Kit Description	Part Number	Notes
Coolant Management Tool	KL5007NAV	
ISC Seal Remover	ZTSE4937-2	
ISC Seal Installer	ZTSE4937-1A	
Press	ZTSE4937-4	3/4-in wrench is required to operate press

SERVICE PARTS INFORMATION

Kit Description	Part Number	Qty	Notes
BOLT, BUTTON HEAD CAP	7098278C1	4	
COOLER ASSY INTERSTAGE	1885586C91	1	EPA 2013 HD-OBD
COOLER, ASSY INTERSTAGE	7094344C91	1	EPA 2014 w/ SCR

DIAGNOSTIC STEPS

Not Applicable

REPAIR STEPS

If the interstage cooler is punctured then these steps should be followed to replace it:

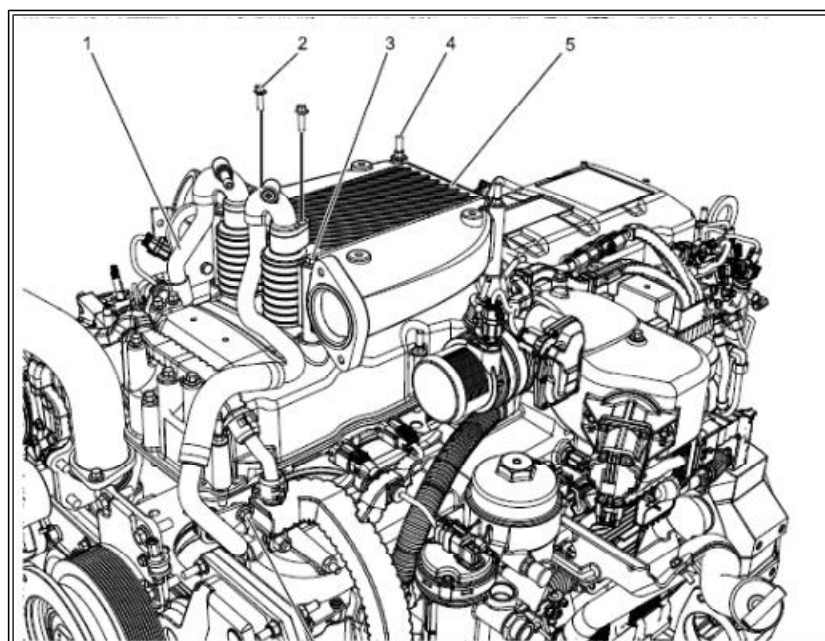


Figure 2: Interstage Cooler

1. ISC coolant supply tube
2. M6 x 20 bolt (2)
3. M8 x 110 bolt (2)
4. M8 x 110 stud bolt (2)
5. Interstage cooler (ISC)
6. M8 x 16 bolt

REMOVAL PROCEDURE:

1. Drain engine coolant using KL5007NAV - Coolant Management Tool
2. Remove M8 x 16 ISC return tube bolt from cylinder head.
3. Remove two M6 x 20 ISC bolts from ISC.
4. Remove ISC coolant return tube.
5. Squeeze white plastic ISC coolant supply tube retainer and pull up on ISC coolant supply tube to disconnect from EGR coolant supply tube.
6. Remove ISC coolant supply tube.
7. Remove two M8 x 100 bolts and two M8 x 110 stud ISC bolts from valve cover.
8. Lift up ISC to remove from turbocharger inlet elbow.
9. Install ZTSE4937-2 seal remover into ISC outlet.

10. Using a 1-1/4 in combination wrench, thread ISC seal remover into outlet until it tightly grips crossover tube lip seal.
11. Using provided bolt and washer, secure box end of 1-1/4 in box end wrench to seal remover.
12. Using up-and-down prying motion, remove seal from ISC outlet.
13. Loosen V-band clamp and remove turbocharger inlet elbow.
14. Remove 2.62 x 61.6 ID O-ring from high-pressure turbocharger assembly and discard.
15. Remove four socket head screws from heat shield.

INSTALLATION PROCEDURE:

1. Install four button head cap screws to heat shield.
2. Install a new 2.62 x 61.6 ID O-ring in groove on HP turbocharger.
3. Attach turbocharger inlet elbow to HP turbocharger with V-band clamp. Do not fully tighten V-band clamp at this time. Allow turbocharger inlet elbow to rotate as necessary to allow for ISC to be installed.
4. Install a new crossover tube lip seal in ISC using ISC Seal Installer and press (page 120).
5. Apply P-80® or equivalent lubricant to new ISC outlet lip seal.
6. Position ZTSE4937-1A seal installer into ZTSE4937-4 press with new seal.
7. Tighten forcing screw until seal installer is flush with the bottom of outlet.
8. Place ISC on turbocharger inlet elbow and valve cover. Install two M8 x 110 bolts and two M8 x 110 stud bolts. Tighten bolts to standard torque (31 N·m | 23 lb·ft)
9. Tighten turbocharger inlet elbow V-band clamp to special torque (17 N·m | 12.5 lb·ft)
10. Install deaeration hose and secure with two 29 mm clipless clamps.
11. Refill engine coolant.

WARRANTY INFORMATION

Warranty Claim Coding:

Group:	12000 - ENGINES
Noun:	925 - Cooler, Intake Air

Standard Repair Times:

Description	Chassis	Engine	SRT	Hours
INTERCOOLER, REPLACE	HC Bus	MAXXFORCE DT/9/10	E12-6570T	0.7
INTERCOOLER, REPLACE	CE/BE	MAXXFORCE DT/9/10	GY12-6570T	0.7
INTERCOOLER, REPLACE	CE/BE	N 9/10	GY12-6570TS	0.7
INTERCOOLER, REPLACE	4300, 4400	MAXXFORCE DT/9/10	KL12-6570T	0.7
INTERCOOLER, REPLACE	DuraStar	N 9/10	KL12-6570TS	0.7
INTERCOOLER, REPLACE	7300, 7400, 7500	MAXXFORCE DT/9/10	M12-6570T	0.7
INTERCOOLER, REPLACE	7300, 7400, 7500	N 9/10	M12-6570TS	0.7
INTERCOOLER, REPLACE	RE/MOTOR HOME	MAXXFORCE DT/9/10 2010 Emissions	NH12-6570T	0.9

Claim Comment Suggestion:

None

Special Requirements:

None

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