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SB-10056549-4215

TO: Service Locations

FROM: Service Systems Development

SUBJECT: **GHG14 DD Engine EGR System Fault Codes**

Note: This document supersedes 13 TS-30.

ISSUE

Errors in the EGR system may result in one or more of the following codes:

- SPN 2791/FMI 2 - EGR Valve Actuator, Position Deviation Error
- SPN 2791/FMI 11 - EGR Valve Actuator, Motor Off
- SPN 2791/FMI 16- EGR Valve Actuator, Learn Cycle Too Large
- SPN 520296/FMI 31 - EGR Valve Actuator Learn Cycle Incomplete
- SPN 2659/FMI 0 - EGR Flow Target Error Diagnostic - High Flow
- SPN 2659/FMI 1 - EGR Flow Target Error Diagnostic - Low Flow

CAUSE

Incorrect, missing, or loose parts in the EGR system can cause the above fault codes.

REQUIRED ACTION

Follow all published troubleshooting in Power Service Literature in the *EPA07/10/GHG14 DDEC VI/10/13 Electronics and Troubleshooting Manual* (DDC-SVC-MAN-0084). Note that some EGR system fault codes are covered in Advanced Diagnostics as shown in Technical Service letter 11 TS-3.

1. Carefully inspect the EGR valve system hardware consisting of the EGR valve actuator, lever, pull rod, and EGR valve for incorrect, missing, damaged, or loose parts. The lever on top of the EGR valve actuator is dependent on engine model and type. See Figures 1 and 2 for information on how to correctly identify the lever. Note the numbers stamped on the lever.



Figure 1 – Location of Lever



471 used on DD13	472 used on DD15AT (model 472906)	473 used on DD15TC (472909) and DD16
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Figure 2 – Identification of Lever

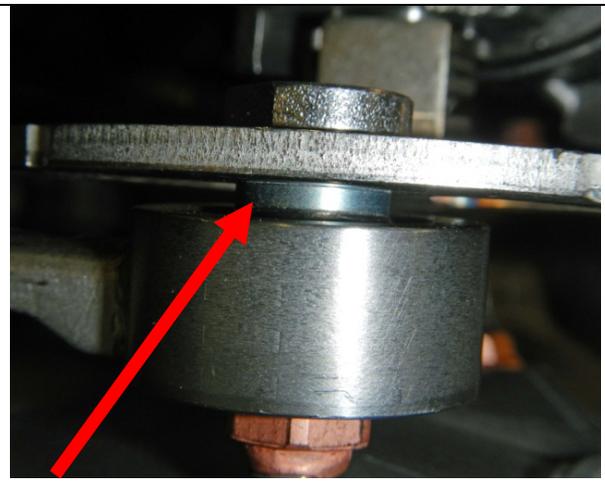
2. Inspect the pull rod connecting the lever to the EGR valve. The hardware should be firmly tightened with no slack, and there should be no binding in movement. The pull rod has a “v” stamped on it at the EGR valve end, and an “s” stamped on it at the EGR valve actuator end. The DD15AT (472906) has an additional spacer at the EGR valve end that must also be correctly installed. The spacer is used on the connecting bolt between the top of the pull rod ball socket and the bottom of the EGR valve circular lever. Omission of the spacer can result in binding of the EGR valve during actuation. The EGR pull rod lever design is different on DD13, DD15TC, and DD16 engines and a spacer is not used on those applications. See Figures 3-6 for examples of the various configurations.



Figure 3 – DD13 System, Pull Rod P/N Located on Top (Former) or on Front Facing Away from Engine (Current)



EGR Valve Circular Lever



Spacer Between Pull rod and Circular Lever

Figure 4 – DD15AT (472906) System



Figure 5 – DD15AT (472906) System, Pull rod P/N Located on Top



Figure 6 – DD15TC (472909) and DD16 System, Pull rod P/N Located on Top

REQUIRED MATERIAL

If any parts need replacing, Table 1 provides a list of the correct part numbers for the major components. Part numbers are subject to change without notice.

Engine Type	EGR Small Lever Assembly	EGR Valve actuator	Pull rod
DD13 (Former)	A4711400124	A4701500494	A4711401946
DD13 (Current)	A4711400124	A4701500494	A4711403246
DD15AT (472906)	A4721400124	A4701500494	A4721400946
DD15TC (472909) and DD16	A4731400124	A4701500494	A4731400346

Table 1 – EGR System Major Components

REPAIR PROCEDURE

If any repairs are needed, repair information on the EGR system components can be found in the *EPA07/10/GHG14 Exhaust – EGR – ATS Manual* (DDC-SVCMAN-0083).

Note that if the EGR valve actuator is being replaced, it must be fully installed onto the engine with all necessary hardware attached before the ignition is turned on for the first time in the valve actuator's life. This is because the valve actuator does a “slow learn” the first time it’s powered up to correctly learn the end stops as it fully cycles. Subsequent ignition sequences only have a “quick learn”. If the valve actuator is not correctly installed, the initial “slow learn” will be incorrect. This can be corrected by running the “EGR Actuator Slow Learn” procedure in DiagnosticLink®. Choose “EGR Actuator Slow Learn” from the Actions » EGR menu to display the EGR Actuator Slow Learn dialog box.

CLAIM PROCESS

Normal in-warranty procedures apply. **Proactive removal of properly functioning EGR system parts is not allowed under warranty.**

CONTACT INFORMATION

Please contact the Detroit™ Customer Support Center at 800-445-1980 or email csc@daimler.com if you have any questions.