No.: 19 TS-6
July 15, 2019

TO: Service Locations

FROM: Detroit - Customer Support Center

SUBJECT: **Modified Parked Regeneration Concerns**

ISSUE

The call center has received a number of calls regarding concerns about the modified parked regeneration on EPA10 and GHG14 units.

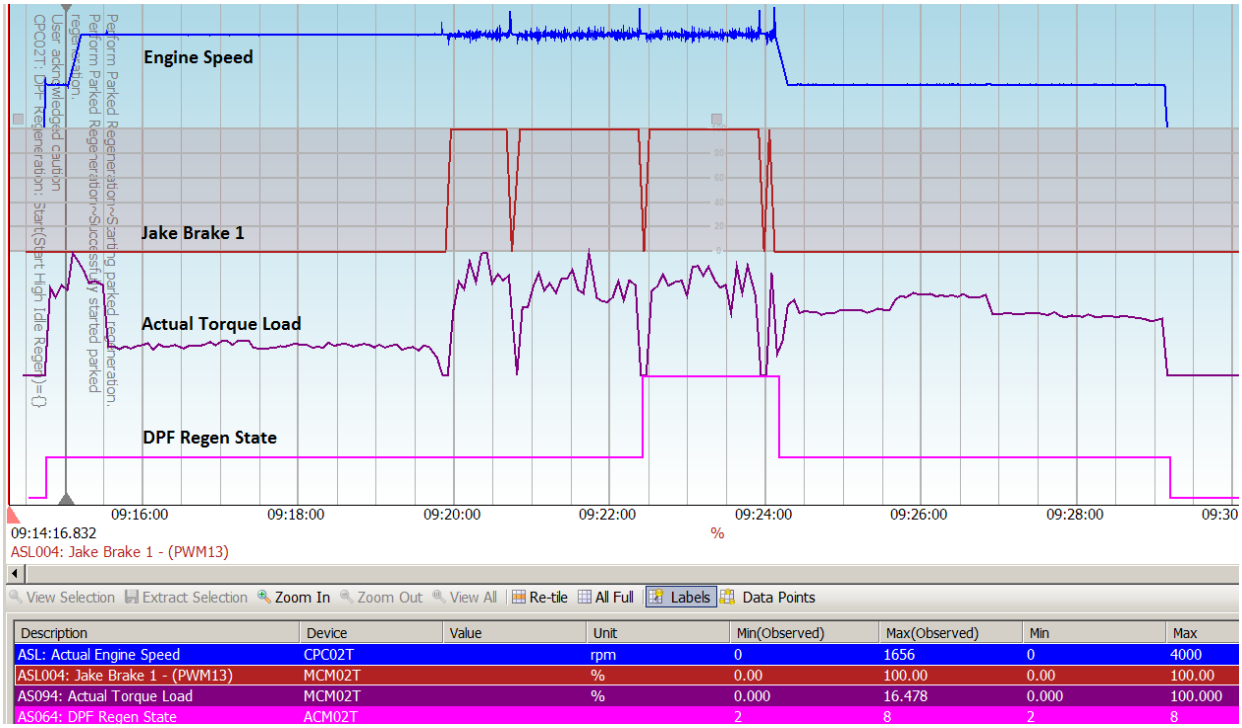
CAUSE

The modified parked regeneration strategy has been standard on GHG17 units since the start of GHG17 production and was added to EPA10 and GHG14 units with a software update. The modified regeneration utilizes an improved strategy to clean the DOC inlet face and reduce downtime due to DOC face plugging. The regeneration includes 10-12 minutes of the DOC face unplugging procedure at the beginning of all parked regenerations prior to hydrocarbon dosing. The modified parked regeneration software does not affect passive regenerations. There are several changes that MAY be noticed with the modified parked regeneration.

The following changes are normal and are not cause for concern:

- The engine speed was increased from 1100 rpm and may fluctuate/surge between 1100 and 1300 rpm.
- The front jakes may cycle on and off. See Figure 1.
- Increased exhaust temperature may lead to visible changes in the exhaust manifold. See Figure 2.
- The intake throttle valve, SCR inlet NOx, rail pressure, and several other parameter values may fluctuate. See Figure 3.
- Higher engine speed and increased torque load may cause inlet manifold pressure, EGR flow, and DOC inlet pressure to be slightly higher than previously acceptable values.
  Note: DOC inlet pressure will also be affected by other factors such as jake brake status, intake throttle valve position, and fan status.

Figure 1



Description	Device	Value	Unit	Min(Observed)	Max(Observed)	Min	Max
ASL: Actual Engine Speed	CPC02T		rpm	0	1656	0	4000
ASL004: Jake Brake 1 - (PWM13)	MCM02T		%	0.00	100.00	0.00	100.00
AS094: Actual Torque Load	MCM02T		%	0.000	16.478	0.000	100.000
AS064: DPF Regen State	ACM02T			2	8	2	8

Figure 2

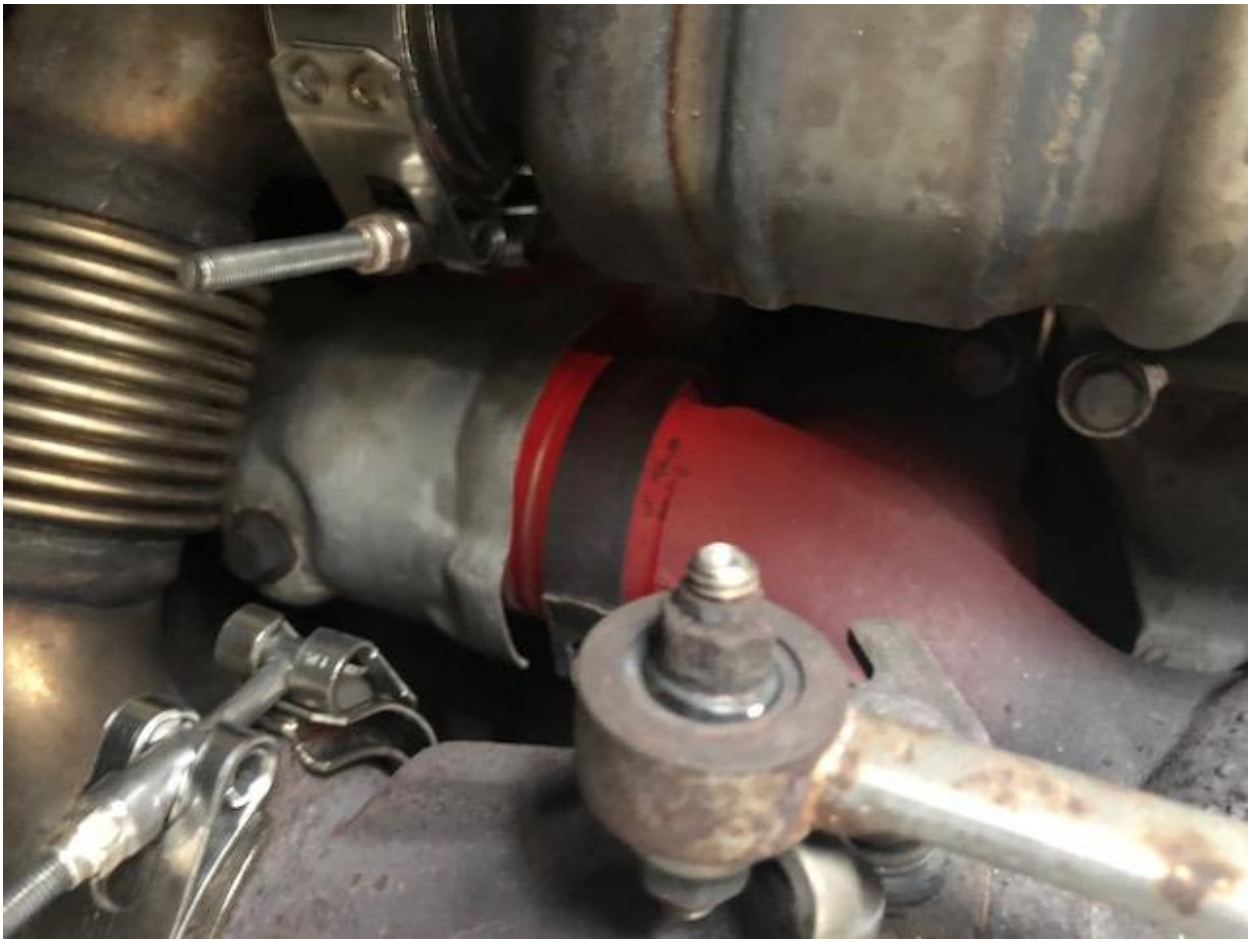
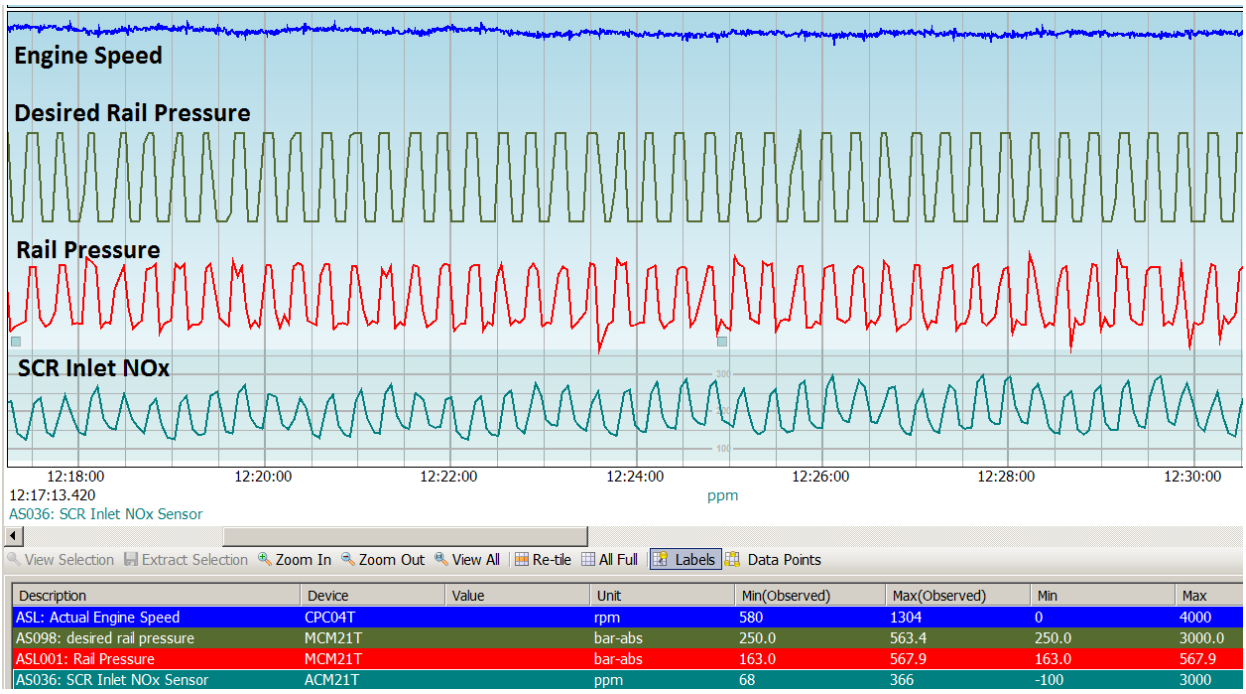


Figure 3



Description	Device	Value	Unit	Min(Observed)	Max(Observed)	Min	Max
ASL: Actual Engine Speed	CPC04T		rpm	580	1304	0	4000
AS098: desired rail pressure	MCM21T		bar-abs	250.0	563.4	250.0	3000.0
ASL001: Rail Pressure	MCM21T		bar-abs	163.0	567.9	163.0	567.9
AS036: SCR Inlet NOx Sensor	ACM21T		ppm	68	366	-100	3000

The modified regeneration is enabled for EPA 10 and GHG14 units at or above the software levels shown below. Note that these are the **minimum** levels so any unit with newer software will also have the modified regeneration.

GHG14

- MCM 4.7.0.0 software with fuel map version ZGS 003 (except for three ratings that are ZGS 004).
    - DD13 450/1450/1650 1-box, p/n A0294487935 ZGS 004
    - DD15AT 455/1550/1750 1-box, p/n A0304480035 ZGS 004
    - DD15AT 400/1750 1-box, p/n A0304480335 ZGS 004
- ACM 5.57.0.0 software with fuel map version ZGS 004 (except for Pierce fire trucks that get 5.57.1.0 software with fuel map version ZGS 998).
- Compatible CPC software is R34_00_000A or X34_02_000A.
- Compatible TCM software is NAMT070700, NAMT075900, or NAMT076100.

EPA10

- MCM 7.7.1.47 software with fuel map version ZGS 999 or ZGS 003 except for DD13 380/410/1450 rating which is ZGS 998 or ZGS 003.
- ACM 8.7.0.107 software with fuel map version ZGS 999.
- Compatible CPC software is X22_04_000a or R22_02_000a

REQUIRED ACTION

No additional diagnostics are needed for units displaying above conditions that successfully complete the modified regeneration.

Some units may experience difficulties completing the modified parked regeneration. The modified parked regeneration utilizes increased DOC inlet temperature to clean the DOC inlet face. Excessive torque loads can cause parked regenerations to abort. In some cases the

increased demand on the engine needed to raise DOC inlet temperature can prevent parked regenerations from completing. An engine in good condition will be able to complete the modified parked regeneration.

Some issues that could cause the regeneration to abort:

- High turbo speed (if equipped with a turbo speed sensor)
- Valve lash out of adjustment
- Engine brake concerns
- Incorrect or non-OEM components installed (i.e. incorrect cylinder kit components or injectors installed)
- Low cylinder compression due to damaged cylinder kits
- Low cylinder compression due to normal wear on high mileage engines
- Fuel system concern
- Accessory drive concern

If units are unable to complete the modified parked regeneration refer to Symptom Diagnostics - Regeneration: Unable to Complete a Parked Regeneration.

CONTACT INFORMATION

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