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Service Information Bulletin

SUBJECT	DATE
Check for Rough Running or Stalling - Three-Filter Fuel System	February 2014

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	DD Platform	Check for Rough Running or Stalling - Three-Filter Fuel System	Added steps 1 through 8a. Added graphics for step 12.

13400 Outer Drive, West, Detroit, Michigan 48239-4001
Telephone: 313-592-5000
www.demanddetroit.com

2 Check for Rough Running or Stalling -Three-Filter Fuel System

Check as follows:

1. Connect using DiagnosticLink™.
2. Turn the ignition ON (key ON, engine OFF).
3. Are any of the following fault codes present?
   - SPN 1077/FMI 7 Rail Pressure Deviation
   - SPN 157/FMI 16 Rail Pressure Deviation
   - SPN 3250/FMI 0 DOC Outlet Temperature Very High
   - SPN 3246/FMI 0 DPF Outlet Temperature Very High
   a. Yes; perform the troubleshooting for the fault code.
   b. No; Go to step 4.
4. Using DiagnosticLink, Key ON, Engine OFF (KOEO), monitor the EGR Delta P voltage with the coolant temperature above 65°C (150°F). Is the EGR Delta P voltage between 0.55 to 0.82 volts?
   a. Yes; Go to step 5.
   b. No; perform the troubleshooting for SPN 411/FMI 13.

WARNING: ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

WARNING: PERSONAL INJURY

To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

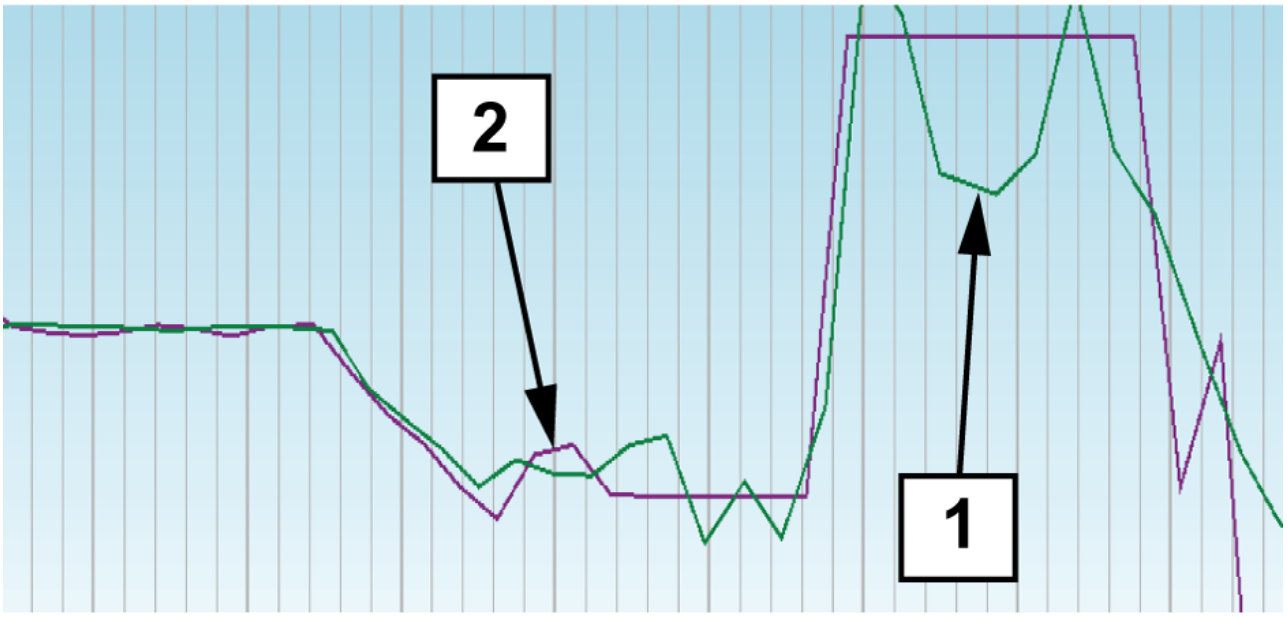
NOTE: Fault code 411/4 will become active with the Delta P sensor unplugged.

5. Disconnect the Delta P electrical sensor. Key ON, Engine Running, idle the engine for 30 seconds then using the accelerator pedal to increase the engine to 1000 rpm. Did the engine stop surging?
   a. Yes; clean the Exhaust Gas Recirculation (EGR) venturi ports and verify repairs.
   b. No; Go to step 6.

NOTE: If the fuel mass is over 50 mg/st at 600 rpm (engine at operating temperature), abort the FSIC routine and Go to step 7.

NOTE: See examples of erratic pressure showing (1) ASL001 Rail pressure and (2) AS098 Desired rail pressure.

6. Run an automatic Fuel System Integrity Check (FSIC) test. Review the automatic FSIC log file; does ASL001 Rail Pressure have a saw tooth pattern or does the desired rail pressure and rail pressure deviate by more than 50 bar?



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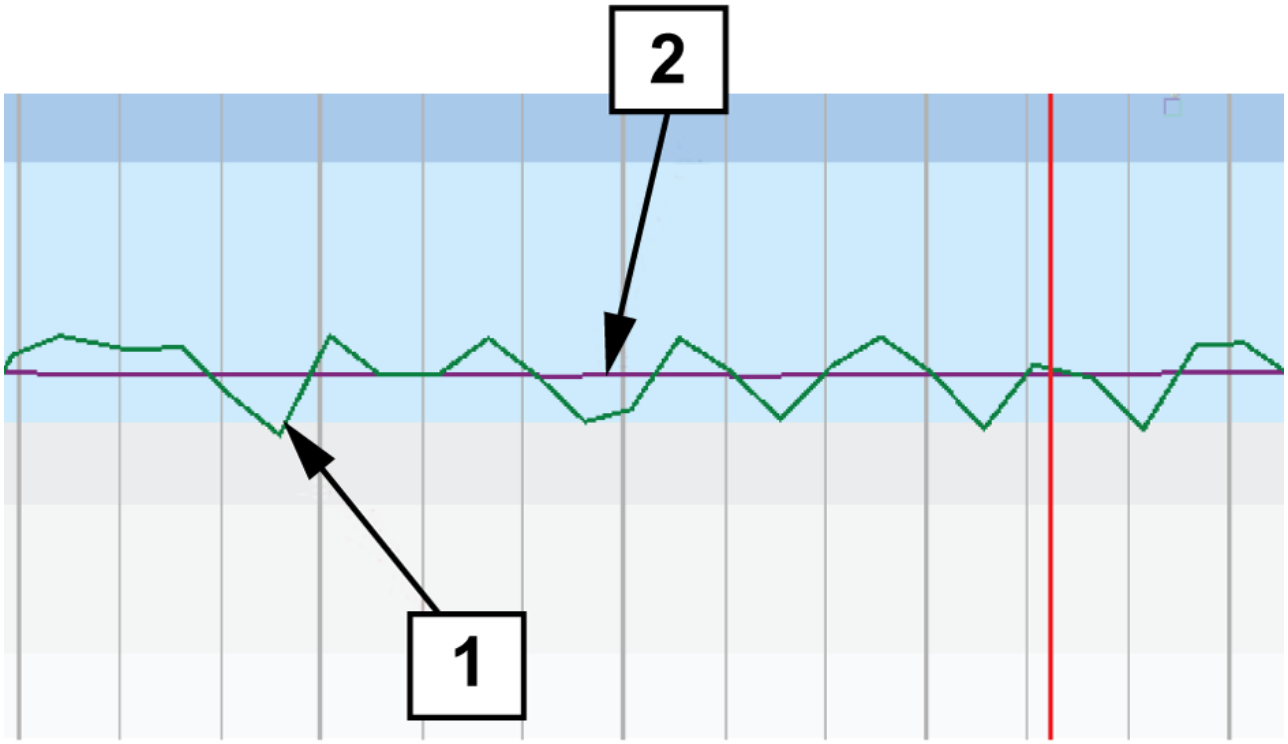

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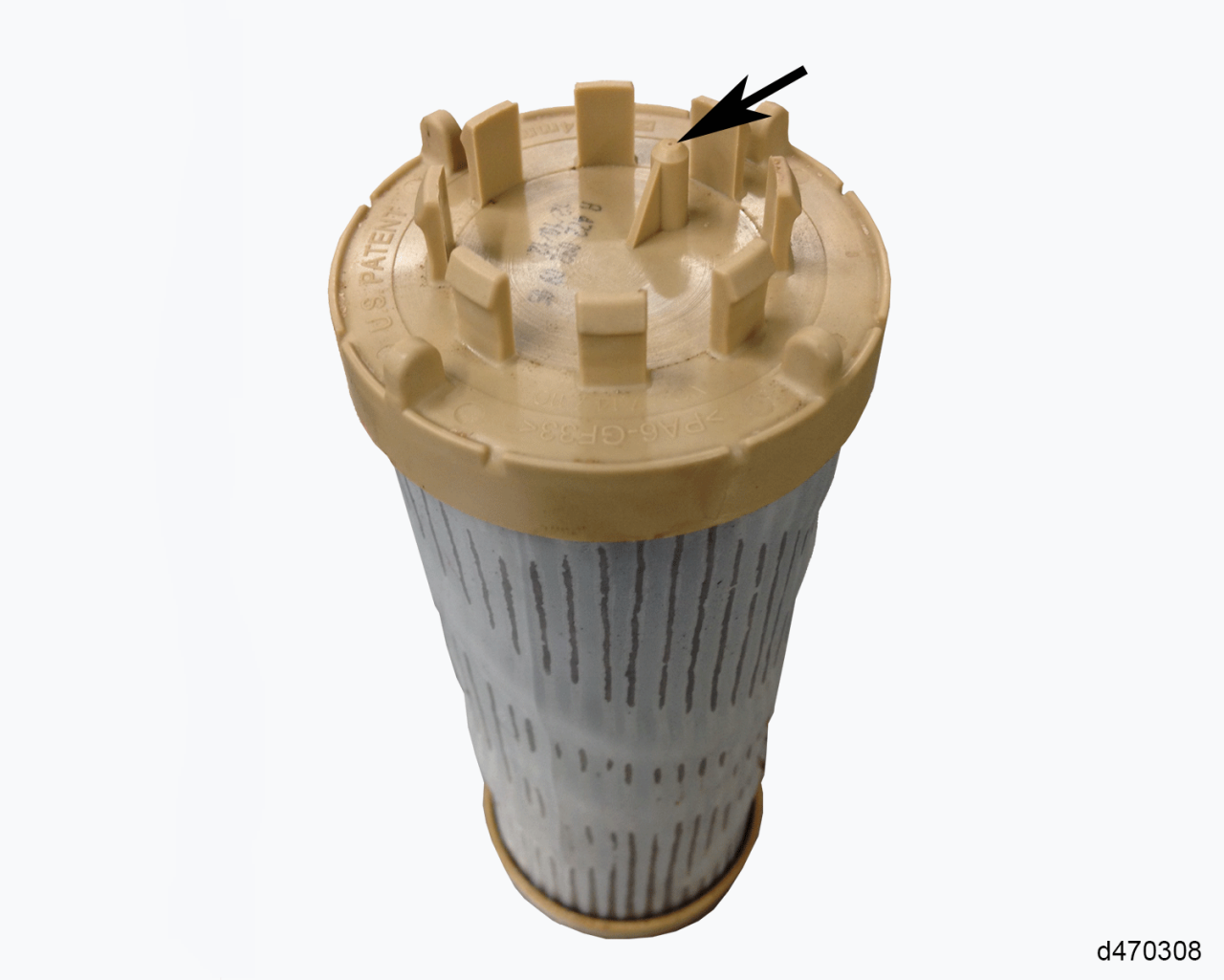
a. Yes; replace the Quantity Control Valve (QCV).
b. No; Go to step 7.

7. Review the automatic FSIC log file. At 600 rpm, is fuel mass over 50 mg/st?
   a. Yes; replace both engine brake solenoids.
   b. No; Go to step 8.
8. Check the Idle Speed Balance (ISB) values. Refer to section "Idle Speed Balance Test". Are there any cylinders above 70% or below -70%?
   a. Yes; follow repair procedures in "Idle speed balance (ISB) test" and verify repairs.
   b. No; Go to step 9.
9. Check for aerated fuel. Refer to section "Aerated Fuel Test - Three-Filter Fuel System". Is fuel aerated?
   a. Yes; repair or replace as necessary.
   b. No; Go to step 10.
10. Check for loose connections, kinked fuel lines or issues related to the fuel system.
    a. If fuel system issues were found, repair or replace as necessary.

b. If fuel system issues were not found, Go to step 11.

NOTICE: If rust is found in the filters, Refer to section "Diesel Exhaust Fluid in Fuel".

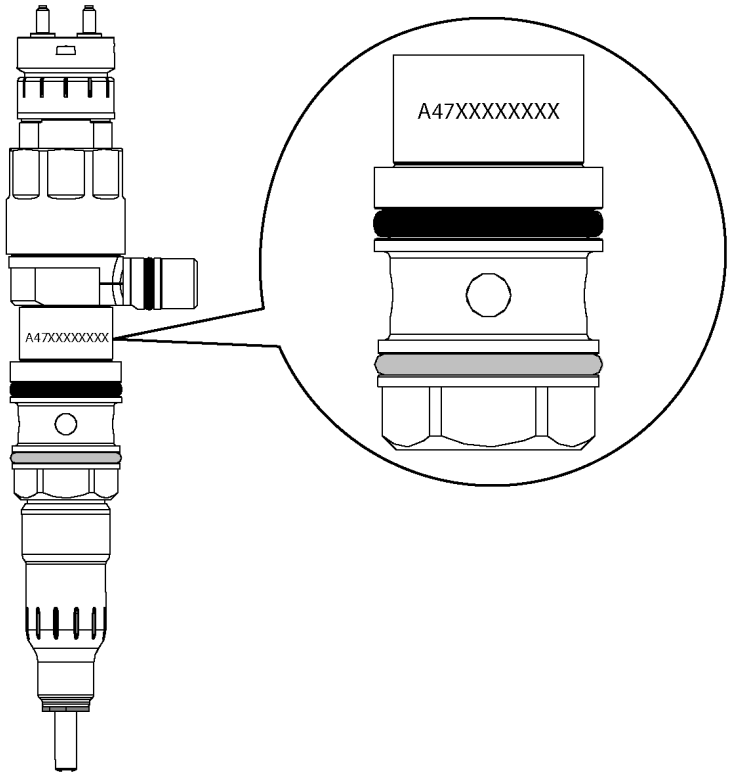
11. Remove prefilter, coalescer and final filters. Check for damaged or missing seals on the bottom of the filters. Are there damaged or missing seals at the bottom of the filters?
    a. Yes; replace fuel filters as necessary.
    b. No; Go to step 12.
12. Check air vents at the top of the Fuel Separator/Coalescer and final filter for blockage.



a. If the Water Separator/Coalescer and final filters have blockage, replace the fuel filters as needed.
   Refer to section "Removal of the Water Separator/Coalescer - Three-Filter System".
   Refer to section "Removal of the Final Filter - Three-Filter System".
b. If no blockage is found, Go to step 13.

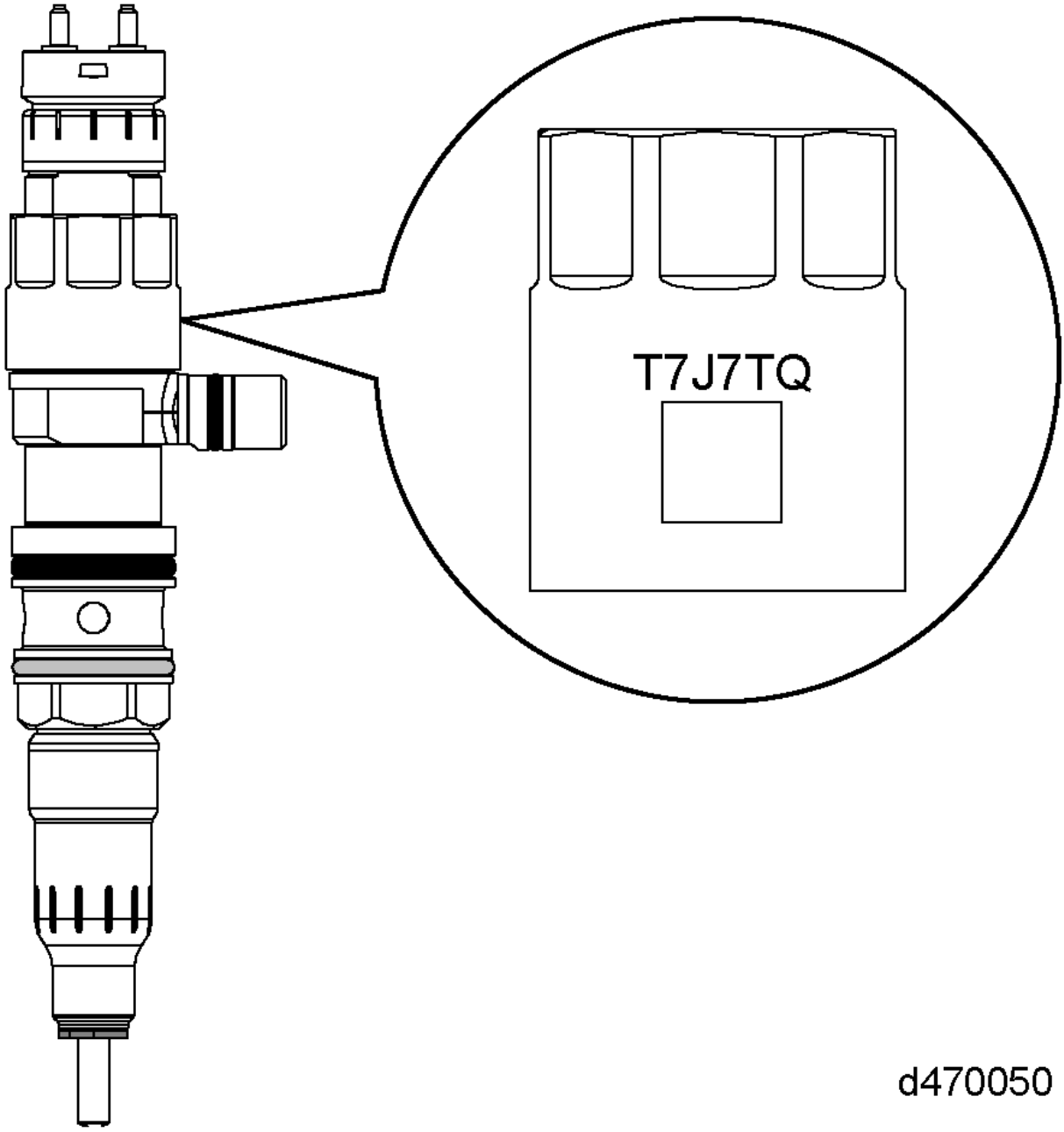
NOTE: Use e-Parts to verify injector part numbers.

13. Verify the fuel injector(s) part number is correct for engine application. Is the fuel injector(s) part number correct?



a. Yes; Go to step 14.
b. No; install correct fuel injector(s).

14. Compare calibration code(s) shown on the DiagnosticLink display with six-digit calibration code(s) on the fuel injector(s).



a. If calibration codes match, Go to step 15.
b. If calibration code on display is different than the calibration code on suspect fuel injector for that cylinder, the fuel injector setting must be reset using DiagnosticLink.

NOTE: If proper valve lash cannot be obtained, call the Customer Support Center at 800-445-1980.

15. Check valve lash and engine brake rocker lash.
    a. If the valve lash is within specification and the engine brake is in adjustment, Go to step 16.
    b. If either is out of adjustment, readjust lash and retest.
16. Using DiagnosticLink, perform a relative compression test; Refer to section "Relative Cylinder Compression Test". Are the results in range?
    a. Yes; contact the Customer Support Center at 800-445-1980.
    b. No; perform a Mechanical Cylinder Compression Test.

