6.7L DIESEL - FUEL KNOCK AT IDLE WITH MALFUNCTION INDICATOR LAMP (MIL) ILLUMINATED WITH MULTIPLE DIAGNOSTIC TROUBLE CODES (DTCS)	TSB 16-0049

FORD:

2011-2016 F-Super Duty

This article supersedes TSB **15-0165** to update the Issue Statement and Service Procedure.

ISSUE

Some 2011-2016 F-Super Duty vehicles equipped with a 6.7L diesel engine may exhibit a fuel knock type noise at idle, illuminated MIL with one or more of the following DTCs: P0263, P0266, P0269, P0272, P0275, P0278, P0281, P0284, P02DA, P02D0, P02D1, P02D2, P02D3, P02D4, P02D5, P02D6, P02D7, P02D8, P02D9, P02CC, P02CD, P02CE and/or P02CF stored in powertrain control module (PCM) memory.

ACTION

Follow the Service Procedure steps to correct the condition.

SERVICE PROCEDURE

1. Connect the Ford Integrated Diagnostic System (IDS) service tool or equivalent scan tool, to the data link connector (DLC). Check for DTCs P0263, P0266, P0269, P0272, P0275, P0278, P0281, P0284, P02DA, P02D0, P02D1, P02D2, P02D3, P02D4, P02D5, P02D6, P02D7, P02D8, P02D9, P02CC, P02CD, P02CE and/or P02CF.
2. Are one or more DTCs stored in PCM memory and does the vehicle exhibit a fuel knock type noise at idle?
    a. No - this article does not apply. Refer to Powertrain Control/Emissions Diagnosis (PC/ED) manual for normal diagnostics.
    b. Yes - proceed to Step 3.
3. Using IDS enter PCM datalogger and select the following parameter identifications (PIDs):
    a. ECT1 (Temp)
    b. EGR_A_COMMAND
    c. EOT
    d. RPMDSD#
    e. VGTDC#
4. Using active command, select RPM# PID and increase engine speed to 1500 RPM for two minutes.
5. Hold the engine speed at 1500 RPM and command EGR_A_CMD to 0 and VGTDC to about 60% to make sure the engine coolant temperature (ECT)1 and engine oil temperature (EOT) are above 80 °C (176 °F). Once ECT1 and EOT reach 80 °C (176 °F), return the engine speed back to idle. Release the command from the other parameters.
6. Perform the manual injector balance test under toolbox, powertrain, power balance. Does the noise go away when running the manual injector balance test?
    a. Yes - proceed to Step 7.
    b. No - this article does not apply. Refer to PC/ED manual for normal diagnostics.
7. Using IDS, select toolbox, powertrain, service functions, reset specified functions:
    a. Fuel System - High Pressure Side
    b. Min. Fuel Mass Adaptation - All Cylinders

c. Crankshaft Position Sensor

8. Clear all DTCs.

OPERATION	DESCRIPTION	TIME
160049A	2011-2016 F-Super Duty 6.7L: Retrieve DTCs Follow Service Procedure To Diagnose And Reset Service Functions (Do Not Use With Any Other Labor Operations)	0.5 Hr.

WARRANTY STATUS:
Eligible Under Provisions Of New Vehicle Limited Warranty Coverage And Emissions Warranty Coverage
Warranty/ESP coverage limits/policies/prior approvals are not altered by a TSB. Warranty/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

DEALER CODING

BASIC PART NO.	CONDITION CODE
12A650	42