Subject/Concern: Loss of power, poor driveability, malfunction indicator lamp (MIL) illuminated
Model:
Transit 2006.5 (04/2006–)
Build Date: Up to 30.06.2009
Build Code: Up to 9R
Assembly Plant: Kocaeli
Assembly Plant: Southampton
Engine: 2.2L Duratorq-TDCi (DW) Diesel
Engine: 2.4L Duratorq-TDCi (Puma) Diesel
Engine: 3.2L Duratorq-TDCi (Puma) Diesel
Markets: All
Section: 419-01
Summary

Should a customer express concern about loss of power, poor driveability or malfunction indicator lamp (MIL) is illuminated and the DTC P0089 is present then the fuel pressure relief valve (PRV) will have been activated.

The PRV is a safety device that is activated as a result of excessive fuel rail pressures and the cause of the high fuel rail pressure must be diagnosed to enable the correct repair first time and prevent repeating the PRV activation event.

• NOTE: Use IDS 63 DVD or a later version.

To rectify this concern, the powertrain control module (PCM) should be re-programmed with the latest PCM calibration.

For markets where FordEtis IDS is used, connect FordEtis IDS and select the appropriate symptoms from the concern descriptions above. Follow the FordEtis IDS instructions to rectify this concern.

For markets where FordEtis IDS is not available, use the IDS standard portable diagnostic unit. To rectify this concern follow the attached service repair instruction.

Parts Required
Description Finis Code Quantity
Fuel Metering Valve (SCV) (If required) 1 514 885 1
Fuel Pressure Relief Valve (PRV) (If required) 1 497 165 1
Labor Time
Operation Description Operation No. / Time
IDS - Vehicle Connection/Communication 29 099 0
IDS - Powertrain Control Module (PCM) - Reprogram 29 120 5
IDS - Read/Delete DTCs (Not In Conjunction With Symptom Based Diagnostic) 29 099 4

Fuel Metering Valve (SCV) - Remove And Install (If needed) 23 402 1
Fuel Rail - Remove And Install (If needed) 23 450 1
Fuel Pressure Relief Valve (PRV) - Remove And Install (2.2L Duratorq-TDCi (DW) Diesel) 23 403 1
Fuel Pressure Relief Valve (PRV) - Remove And Install (Fuel Rail Removed) (2.4L / 3.2L Duratorq-TDCi (Puma) Diesel) 23 403 4
DTC P1250-1A And P1250-13 Present:
Fuel Metering Valve (SCV) Wiring Harness - Repair (Includes - Intake Manifold Remove And Install) 710121B80
DTC P0190 Present:
Fuel Rail Pressure Sensor Wiring Harness - Repair 710081B80
Repair/Claim Coding
Causal Part: Refer to the table below
ACES Condition Code: Refer to the table below
OASIS 206000, 614000, 614500, 614600

Repair/Claim Coding:
Description Causal Part ACES Codition Code
PCM calbration update only 29254 04
Renew SCV and PRV Finis Code of the SCV 41
Renew PRV only Finis Code of the PRV 42
Repair SCV wiring harness 36322 28 or 95
Repair fuel rail pressure sensor wiring harness
Production Action

An updated calibration of the PCM has been introduced into production since 01.07.2009 (build code 9A).
Service Instruction

See Summary.

For markets where FordEtis IDS is used, connect FordEtis IDS and select the appropriate symptoms from the concern descriptions above. Follow the FordEtis IDS instructions to rectify this concern.

NOTE: The warranty claims payment system will expect an RVC with any related warranty claim to avoid possible claim rejection.

For markets where FordEtis IDS is not available, follow the service repair instruction below:

IDS - Vehicle Connection/Communication

1. Connect IDS portable diagnostic unit to the vehicle and establish communication (VID the vehicle).

* Confirm the vehicle details are correct.

2. Check for any stored Diagnostic Trouble Codes (DTCs).

Prime repair action - Calibration update only, do not install a new fuel pressure relief Valve (PRV) or the fuel metering valve (SCV)

1. NOTE: Failure to clear the PRV counters may result in P0089 and or P116E DTCs being active causing a warning light to be on. IDS will be unable to clear these DTCs until the counters are reset. Use IDS 63 DVD or a later version.

If P0089 and not one of P116E, P1250 or P121C are present then the PRV activation will most likely have been caused by the control system response to air in the fuel. This is corrected in the latest calibration files. The repair is to update the PCM to the latest available calibration, reset both of the PRV counters, clear any stored DTCs and reassess the performance of the vehicle.

* Select the <Toolbox> tab at the top of the screen.

* Select <Module Programming> and then press the tick.

* Select <Modul Reprogramming> and then <PCM>.

• Press the tick.

* Follow the further instructions from IDS standard and confirm.

* Module Reprogramming starts. Follow the on screen instructions and confirm.

* If concern is not resolved, follow below guidelines:

* If DTCs relevant to the concern but not one of P116E, P1250 or P121C are present, rectify according to IDS instructions and only use this TSB if further fuel system diagnosis is required.

* If any of these DTCs are present P116E, P1250, P121C in addition to P0089 DTC then complete

the following steps.

Check calibration level - Required for all repairs

1. Revised calibrations for preventing air related PRV activation events also use an additional DTC (P116E) for PRV activation. If the P116E DTC is not present when a P0089 DTC is recorded it indicates the calibration is an older level and the calibration should be updated to the latest level once all necessary repairs are complete. If P0089 and P116E are both present then the current calibration level is sufficient to prevent air in fuel type failures.

2. If a P1250 DTC is present check the fuel metering valve (SCV) or wiring harness faults.

* If a P1250 DTC is present then this indicates that the SCV control system has created the PLV activation event. The status bytes of the DTC indicate the type of issue. Follow the instructions for the appropriate status bytes.

* P1250-71-XX: The status byte 71 indicates the SCV has seized resulting in a loss of fuel rail pressure control; this is normally due to sticky residue or fine particle contamination from the fuel. Inspect the fuel quality and if needed clean and flush the low pressure fuel system. Once the fuel system is clear of contamination the SCV must be replaced and if the issue was severe the PRV may be replaced. For additional information, refer to Transit 2006.5 Workshop Manual Section 303-04.

* P1250-13-XX: The status byte 13 indicates the SCV wiring has gone open circuit. Inspect and repair the wiring loom and connectors for faults. Once the wiring fault has been corrected the PRV should be replaced. For additional information, refer to Transit 2006.5 Workshop Manual Section 303-04.

* P1250-1A-XX: The status byte 1A indicates the SCV wiring has shorted to battery. This will not normally result in PLV activation but if the DTC is present inspect and repair the wiring harness and connectors for faults.

3. Check for P121C DTC.

* If a P121C DTC has been recorded this indicates the PLV may have been activated at a pressure much lower than the intended opening pressure. If this DTC is present the PRV will need to be

replaced following any other repairs required (see Parts Required).

4. Instructions for when only P0089 and P116E DTCs are present:

* If only P0089 and P116E DTCs are recorded and not one of P1250 or P121C then one of the following may apply.

* Immediately following a calibration update: If the vehicle has recently had a calibration applied the PRV counters may not have been reset resulting in a false triggering of the DTCs P0089 and or P116E. This is a known issue on Transit 2006.5 (model year 2006/2007).

* Following a previous PRV activation event repair: If the vehicle has previously had a repair for a PRV activation event including a calibration update but the original PRV was not replaced and the vehicle has returned with intermittent loss of power it is possible that the PLV has been degraded by previous activation events and should now be replaced.

* If a P0190 DTC is present: There is an unconfirmed possibility of the DTCs P116E and P0089 being falsely set by an intermittent fuel rail pressure sensor wiring fault. Inspect the wiring to the fuel rail pressure sensor and repair as needed.

* If only P0089 and P116E DTCs are set and none of the above apply. If a vehicle has only the P0089 and P116E DTCs, exhibits drivability issues and has previously had a PRV replaced and DTCs correctly cleared. Treat this case as if it had a P1250-71-XX DTC. Inspect the fuel quality, clean and flush fuel system if needed then replace the SCV and if needed the PRV. For additional information, refer to Transit 2006.5 Workshop Manual Section 303-04.

5. Clear any stored DTCs.

6. Disconnect IDS standard from the vehicle.