

DTC Description

0251 Rail pressure control fault

Fault code Description

45 Rail pressure control trim fault

46 Rail pressure control fault

Detection

If the rail pressure feedback becomes lower than the demand, the controller tries to open the IMV by reducing the current across the solenoid. As soon as the IMV current trim becomes lower than a calibratable threshold, the fault «Rail pressure control trim fault» is raised.

If the rail pressure feedback becomes higher than the demand, the controller tries to open the IMV by increasing the current across the solenoid. As soon as the IMV current trim becomes higher than a calibratable threshold, the fault «Rail pressure control trim fault» is raised.

The calibratable threshold depends on the fuel delivery.

		Condition on fuel delivery	
Rail pressure Control Trim Fault		Q < 1 mg/str	Q > 1 mg/str
Condition on IM current trim	I < -450 mA	Raised	Not raised
	I < -300 mA	Not raised	Raised
	I > 200 mA	Not raised	Raised
	I > 650 mA	Raised	Not Raised

If the fuel delivery is higher than 0,5 mg/str, and if the difference between the rail pressure demand and the rail pressure feedback is higher than 50 bars, then, providing the condition lasts for longer than 8 seconds, the fault «Rail pressure control error fault» is raised.

The fuel delivery condition is necessary to avoid wrong diagnosis in the case of pedal release, where a rail pressure error higher than 50 bars can be accepted.

Symptoms

45 Lack of power.

46

Recovery action

45 Activate «reduced fuel» strategy : (minor fault)

46 Switch «Check engine lamp» on. If condition persists then fault code 4 (DTC 1211) is raised.

Electric failure

Fault detected

Diagnostic Tree

DTC : 0251

0251: Rail Pressure Control Fault

Refer to diagnosis for DTC 0190

DTC	Description
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0190 Rail pressure fault

Fault Code	Description
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7 Rail pressure out of range

Detection

If Rail pressure is higher than 1912.5 bar or if Rail pressure is lower than 112.5 bar, then the fault «Rail pressure sensor circuit» is raised.

If engine speed is above 600 erpm and the difference between the two last rail pressure acquisitions is higher than 2000 bars, then the fault «Rail pressure sensor circuit» is raised.

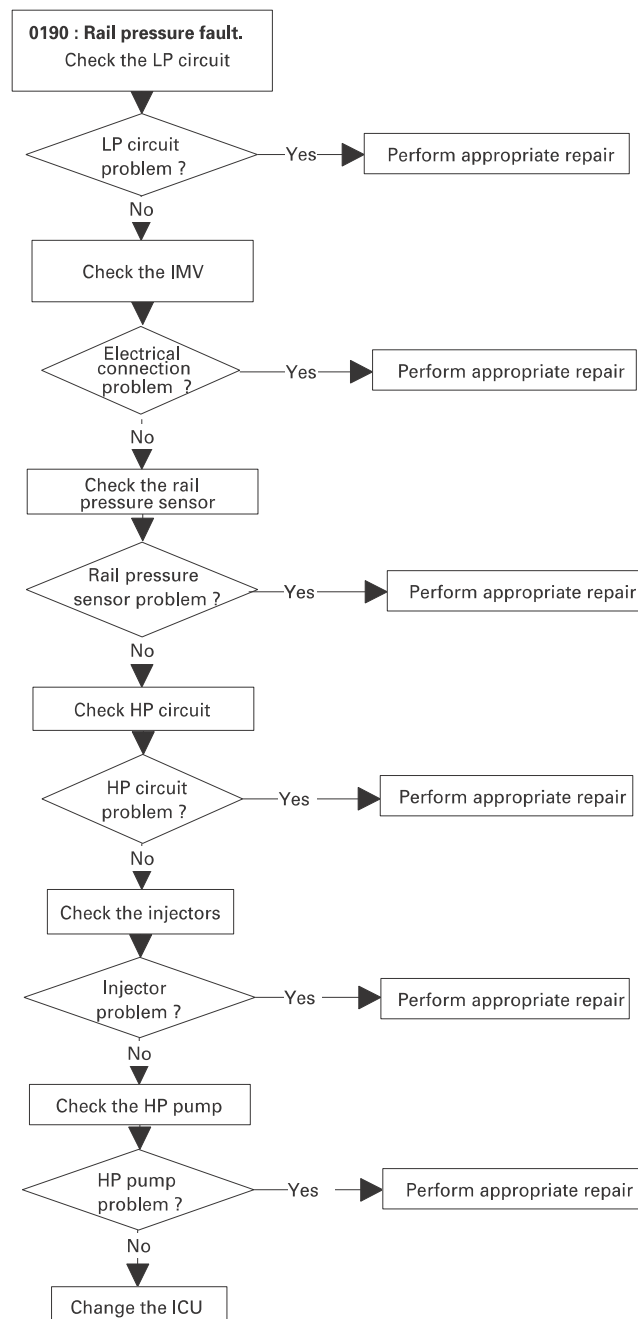
Symptoms

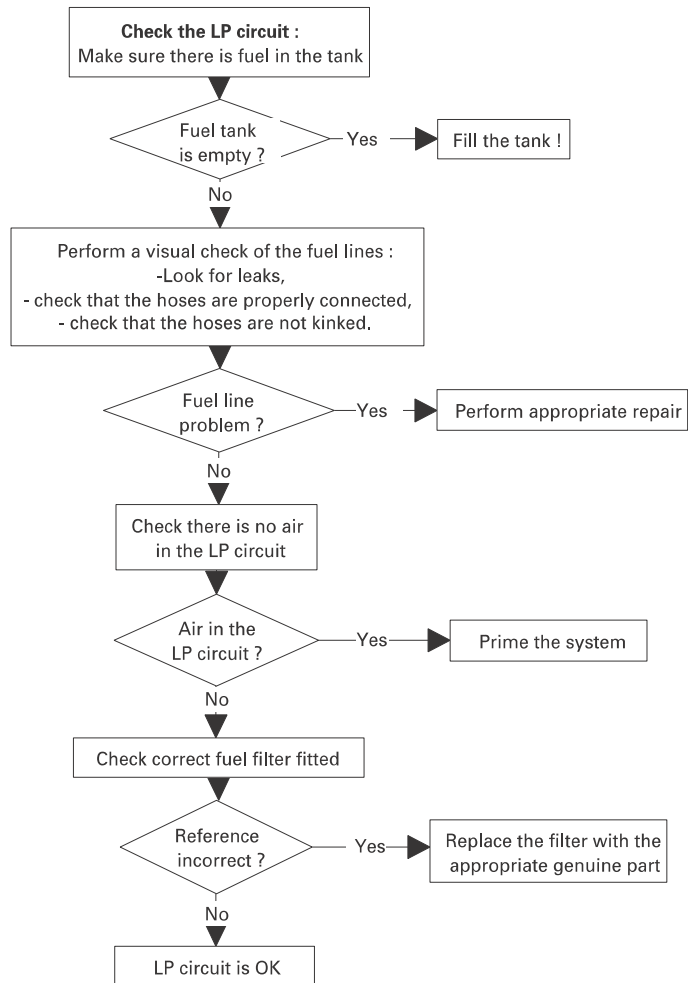
7 Engine stop

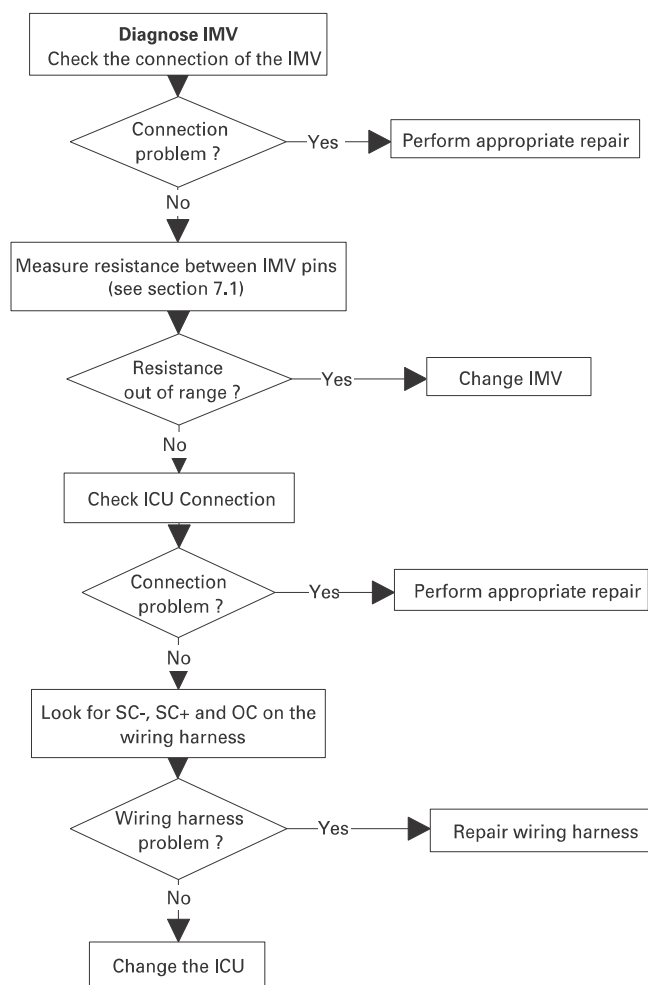
Recovery action

7 Engine Stop (major fault). Switch «Check Engine Lamp» on, (major or minor fault).

Electric failure	Fault detected
OC on CMI D1	Rail pressure sensor circuit
SC- on CMI D1	Rail pressure sensor circuit
SC+ on CMI D1	Rail pressure sensor circuit
OC on CMI D2	Rail pressure sensor circuit
SC- on CMI D2	Rail pressure sensor circuit
SC+ on CMI D2	Rail pressure sensor circuit
OC on CMI D3	Rail pressure sensor circuit
SC- on CMI D3	In range (undetected)
SC+ on CMI D3	In range (undetected)

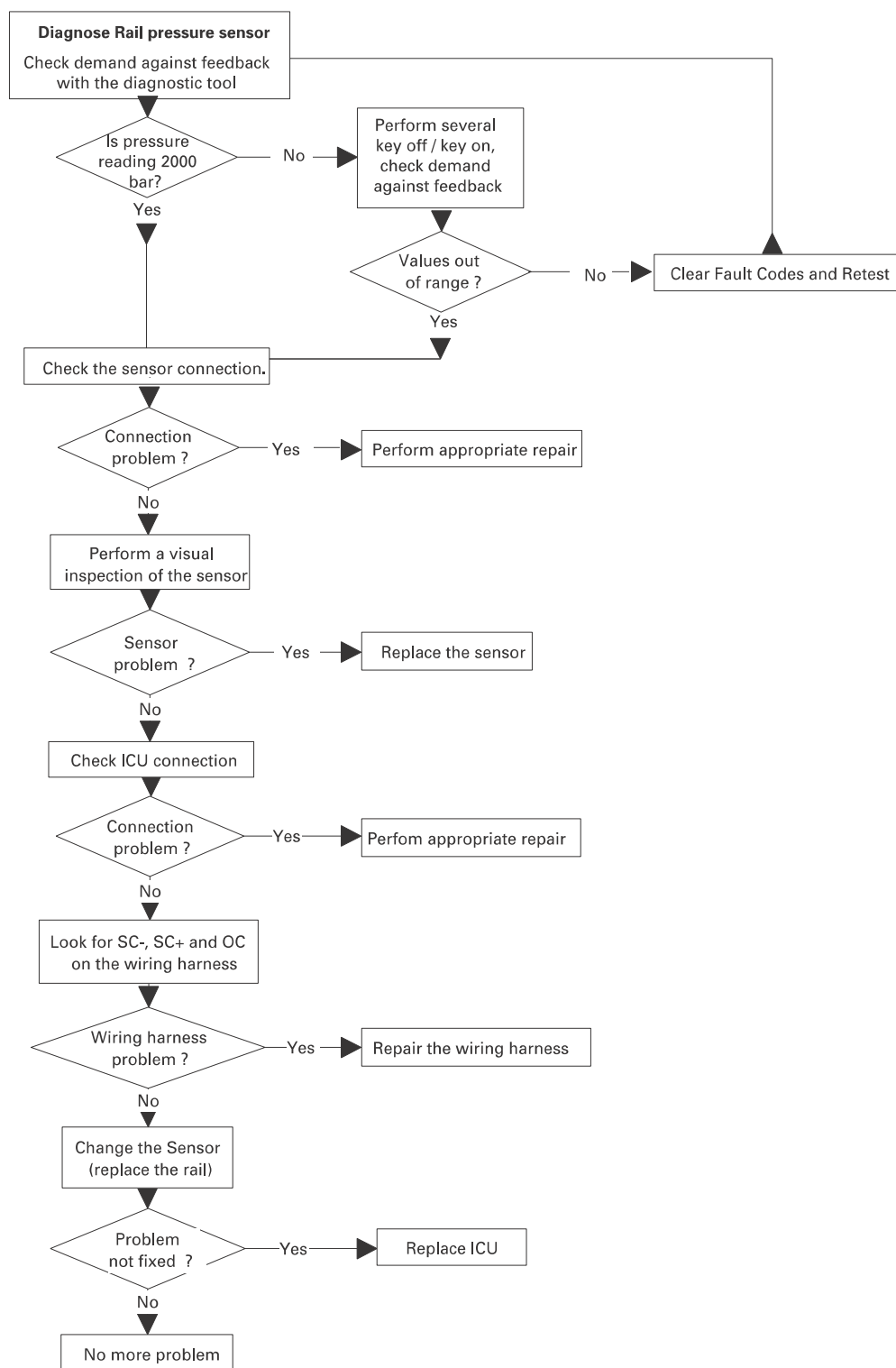






Diagnostic Tree

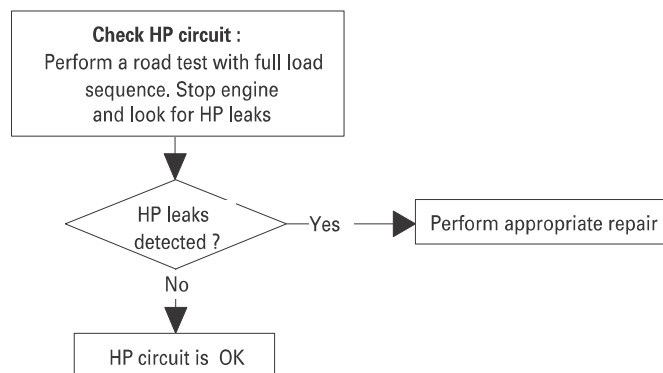
DTC : 0190



FAULT CODES AND CHECKS

Diagnostic Tree

DTC : 0190



Due to the very high pressures generated by the system it is recommended that evidence of leakage is checked for with the engine stopped. Leakage at high pressure coming into contact with components at high temperature present a fire risk. High pressure fuel spray can be very hazardous to the operator and no attempt should be made to work on the system with the engine running.

Diagnostic Tree

DTC : 0190

