



Component Location



General Description

Fuel Pressure Regulator Valve (FPRV) is integrated with high pressure pump and controls common rail pressure as regulating the quantity of fuel which is delivered to common rail. In order to control rail pressure to be optimum to current driving condition, ECM controls fuel pressure regulator valve operating current (with the method of duty-control) using RPCV signal, RPM and APS signal. The lower Fuel pressure regulator valve current is, the more fuel is supplied to common rail.

DTC Description

P0253 is set when "0"A in control circuit of Fuel metering unit (integrated with high pressure pump) is detected for more than specified duration. This code is due to open or short to ground in control circuit or Fuel metering unit internal open.

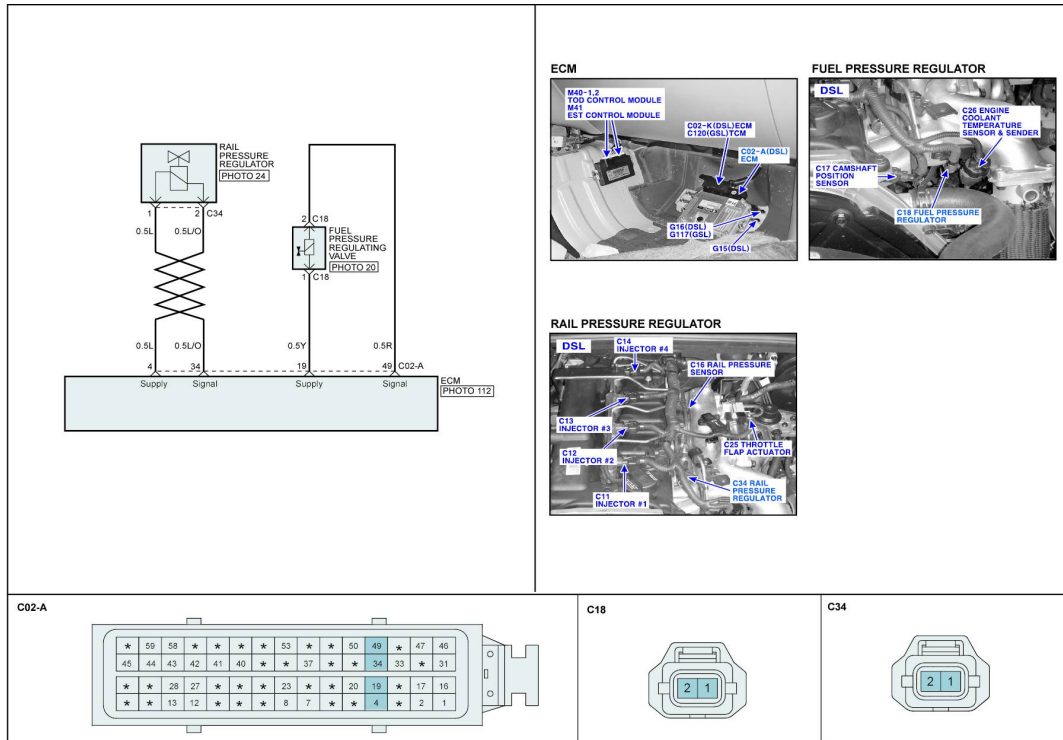
DTC Detecting Condition

Item	Detecting Condition			Possible Cause
DTC Strategy	● Voltage monitoring (short circuit to ground of metering unit output OR open circuit of metering unit output)			● FPRV circuit ● FPRV component
Enable Conditions	● IG KEY "ON"			
Threshold Value	● Short to GND - 0.28 sec. ● Wiring open - 0.22 sec.			
Diagnostic Time	● Refer to threshold value			
Fail Safe	Fuel Cut	NO		
	EGR Off	NO		
	Fuel Limit	YES		
	Check Lamp	YES		

Specification

Fuel pressure regulator valve resistance	Operating frequency
2.9 ~ 3.15Ω (20°C)	185 Hz

Schematic Diagram



Signal Waveform

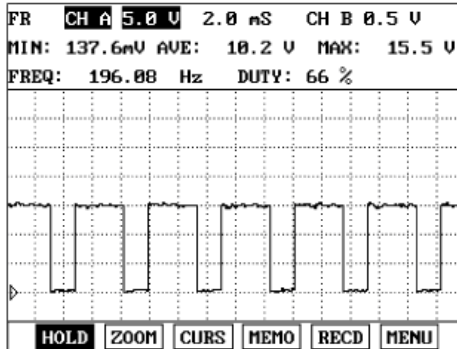


Fig.1

Fig 1) Waveform of fuel pressure regulator valve at idle. It shows approx. 34% duty((-)duty).

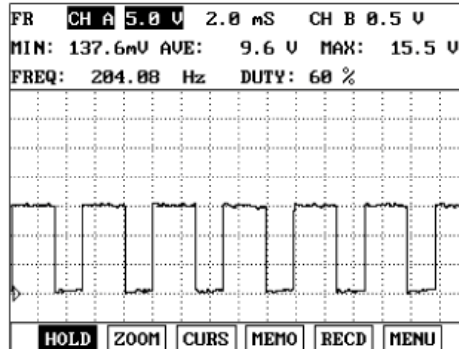


Fig.2

Fig 2) Waveform of fuel pressure regulator valve as accelerating. approx. 38% duty ((-)duty) is outputted as engine load increases.)