

## 4.16 Fuel Level Sensor

### 4.16.1 Description

This input is required as part of the misfire detection system in order to record if a 'low fuel' situation was present when misfire was detected and logged as a fault. On Range Rover 38A the ECM is required to read an analogue fuel level input and determine the 'low fuel' condition from this signal. Discovery Series II had an active high digital input until 2000MY, at which point this input also became an analogue signal.

There are three fuel level input diagnostic checks, during which a fault is detected if: -

1. The input signal is less than a minimum voltage threshold.
2. The input signal is greater than a maximum voltage threshold.
3. The percentage difference between the fuel consumption calculated by the ECM and the change in the fuel tank level is greater than a threshold.

Fuel Level Sensor								
Component/ System	Fault Codes	Monitoring Strategy Description	Malfunction Criteria	Threshold value	Secondary Parameter	Enable Conditions	Time Required	MIL Illumination
<b>Fuel Level Sensor</b>	P0460	rationality check between the fuel consumption calculated by the ECM and the change in fuel tank level	calculated fuel consumption - change in fuel tank level	< -21.5% <u>or</u> > 20.4% (37.6% if tank full, which is defined as tank level > 91.4%)	total fuel used distance traveled transfer gears	> 21.5% > 0.62 miles high range	immediately/ continuous	no MIL illumination (leak detection defaults to enabled)
	P0462	range check (min)	voltage	< 0.49V			10.0 sec/	
	P0463	range check (max)		> 4.294V			continuous	

If the above table does not include details of the following enabling conditions: - IAT, ECT, vehicle speed range, and time after engine start-up then the state of these parameters has no influence upon the execution of the monitor.