



4.14 Throttle Position Sensor

4.14.1 Description

The sensor is a variable resistor, which is used to determine the position of the throttle plate and the rate of change in its angle. A software strategy within the ECM enables the closed throttle position to be learnt, enabling the sensor to be fitted without the need for adjustment. The signal is used by the ECM as part of the transient fuelling strategy and to determine the closed throttle position for idle speed control, in conjunction with road speed.

The signal is not only checked for range (exceeds a minimum or maximum threshold), but also for plausibility against MAF. If the load-monitoring fault is stored, it is indicative of a blocked air filter or collapsed air intake duct etc. It is also probable that the altitude adaptation factor is incorrect under these conditions.

| Throttle Position Sensor | | | | | | | | |
|--------------------------------|----------------|------------------------------------|---|--------------------------------------|------------------------|-----------------------------------|----------------------------|-----------------------|
| Component/ System | Fault Codes | Monitoring Strategy Description | Malfunction Criteria | Threshold value | Secondary Parameter | Enable Conditions | Time Required | MIL Illumination |
| Throttle Position Sensor | P0122 | range check (min) | voltage | < 0.195V (3.9%) | engine speed | > 400 rpm (for > 2.0 sec) | 0.05 sec/ continuous | two driving cycles |
| | P0123 | range check (max) | | > 4.83V (96%) | engine speed | 800 < rpm < 4000 | immediately/ continuous | |
| | P0101 | rationality check (low/high) | comparison of calculated load (engine speed and throttle position) to actual MAF signal | adaptation factor 1.5 < af < 0.35 | engine load ECT | 2.0 < TL msec < 6.5 > -9.75° C | | |

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.