



Thermostat Monitoring

Component/ System	Fault Codes	Monitoring Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameter	Enable Conditions	Time Required	MIL Illumination								
Thermostat stuck open	P0126	engine not fully warm and temperature drop across the radiator less than a threshold	engine coolant temperature - radiator outlet temperature (TKA)	<ul style="list-style-type: none"> •45°C @ -10 °C TKA •40 °C @ 0 °C TKA •45 °C @ 10 °C TKA •30 °C @ 20 °C TKA •30 °C @ 30 °C TKA •25 °C @ 40 °C TKA •25 °C @ 50 °C TKA •25 °C @ 60 °C TKA 	ECT sensor plausibility test ECT time after Start engine Speed vehicle Speed ORFCO engine State airflow after start ECT at start transfer Gears	complete < 81.75 °C > from 220 sec @ 40 °C TKA to 270 sec @ -10 °C TKA > 400 rpm > 15.54 mph not True not Idle •from 3.0 kg @ 40 °C TKA to 10.0 kg @ -10 °C TKA -9.75 °C •start temperature •81.75°C high Range	1.0 sec/ continuous	two driving cycles								
				> 140.25 °C			1.0 sec/ continuous	two driving cycles								
Radiator Outlet Temperature Sensor	P1118	circuit continuity range check (max)	voltage resistance	< -33.0 °C	intake air temperature	> -32.25 °C										
	P1117	range check (min)														
	P0116	checks for higher than expected engine temperature. Potential fault determined by the Power	power up check engine coolant temperature at start	<table border="1"> <tr> <td>intake air temp at start</td> <td>factor</td> </tr> <tr> <td>-30 °C</td> <td>0.9961</td> </tr> <tr> <td>-15 °C</td> <td>0.9727</td> </tr> <tr> <td>0 °C</td> <td>0.9492</td> </tr> </table>	intake air temp at start	factor	-30 °C	0.9961	-15 °C	0.9727	0 °C	0.9492	> ECT at stop - (50.25 x Factor)	radiator outlet temperature at start absolute value of (radiator outlet temperature at start - intake air temperature at start) time after start	< 39.75 °C < 9.75 °C	7.54 sec/ continuous
intake air temp at start	factor															
-30 °C	0.9961															
-15 °C	0.9727															
0 °C	0.9492															
Engine Coolant Temperature Sensor High Sided Rationality Check Range Rover Only																



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		up check at engine start and confirmed by driving check		10 °C 15 °C 20 °C 25 °C 30 °C 35 °C 45 °C 55 °C 65 °C	radiator outlet temperature at stop ECT at stop transfer gears	> -9.75 °C > 66.75 °C high range		
			driving check engine coolant temperature	> 102.0 °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.