



Evaporative Emission System Monitoring – 0.020" (0.5mm) Diameter

Component/ System	Fault Codes	Monitoring Strategy Description	Malfunction Criteria	Threshold value	Secondary Parameter	Enable Conditions	Time Required	MIL Illumination
Pump Power Stage		circuit continuity - short to ground	voltage - drive off	voltage < 1/3 * Battery positive		positive < 17V		
		circuit continuity - short to battery positive	voltage - drive on	> 3.998V	battery voltage	• 15.47V (max for pump control)	0.07 sec/ continuous	
Leak Detection	P1483	circuit continuity - short to battery positive	voltage - drive on	voltage > 1/2 * Battery positive	engine speed	> 80 rpm	immediately/ continuous	No MIL illumination (leak detection defaults to enabled)
	P1482	circuit continuity - short to ground	voltage - drive off	voltage < 1/3 * Battery positive	battery voltage	7.5V < Battery positive < 17V		
	P1481	circuit continuity - open circuit	voltage - drive off	1/3 * Battery positive < voltage < 2/3 * Battery positive				
EVAP Canister Purge System (Discovery only)		over-pressure system using an ECM driven Pump			ECM state	In After Run for > 3.0 sec At Rest		four driving cycles
	P1452	Pump hardware Fault	pump ref. current	< 15.002 mA	engine state altitude factor ECT at engine start ambient temp. (calculated) EVAP canister	• 0.7266 • 2.25 °C 0.0 °C < Amb Temp < 40.0 °C < 3.0		
	P1453	Pump hardware Fault	pump ref. current	> 40.002 mA	purge vapour factor time after start vehicle speed battery voltage	• 4200 sec 0 mph 10.94V < Battery positive < 14.52V (for 3.0 sec)		
	P1450	Pump hardware Fault	pump current (during rough leak)	• ref current - 2.002 mA				