

## 4.5 Evaporative Emission System Monitoring - 0.020" (0.5mm) Diameter

### 4.5.1 Description

The evaporative emission monitoring system used for the Discovery 2001MY onwards permits the detection of leaks with a diameter of 0.020" or greater. This is achieved by means of a pressure test of the system. This is performed by the DMTL, which is an electrically operated pump fitted to the atmospheric air intake of the EVAP Canister. From the 2002MY this unit contains an electric heater to prevent condensate formation.

The test proceeds in 2 stages:-

- Reference Leak Measurement - The pump operates against the reference restriction within the DMTL. The ECM measures the current consumption of the pump motor during this phase.
- Leak Measurement (see diagram below) - The solenoid in the DMTL is operated in order to shut off normal purge airflow into the EVAP Canister. The pump can now pressurise the fuel tank and vapour handling system. The ECM again measures the current consumed by the pump motor and by comparing this with the reference current, determines if a leak is present or not. A high current indicates tight system and a low current indicates a leaking system.

