

053

Make: Holden

Model: VS V6 Commodore

Subject: Engine cooling fan

The Injectronics technical staff often receives calls in regard to the operation of the 2-speed cooling fan system, fitted to VS V6 Commodores. It is used to cool the engine cooling system and the air conditioning condenser. The PCM provides power to the cooling fan through either a low or a high-speed relay.

To enable the low speed fan relay, the PCM sends a signal to the body control module (BCM). Once this signal is received, the BCM energises the low speed relay, allowing the cooling fan to operate at low speed and then sends a response signal back to the PCM indicating that the BCM has received this signal.

To determine whether cooling fan operation is required, the PCM looks at the air con request signal, that the engine coolant temperature is 104°C (fan will stay on until the temperature drops below 99°C) or if the PCM doesn't actually receive a coolant temperature sensor signal. To quickly check the fan circuit, put the system into diagnostic mode by bridging pins 5 and 6 on the diagnostic connector and then turning ignition on, the fan should run.

The high-speed fan relay is controlled solely by the PCM. The high speed is only activated if the BCM fails to respond to the request for the low fan speed, if the coolant temp sensor is faulty or if the engine coolant temperature exceeds 110°C.

