

Injectronics

TECHNICAL BULLETIN

HOLDEN – COMMODORE VL

#T0002

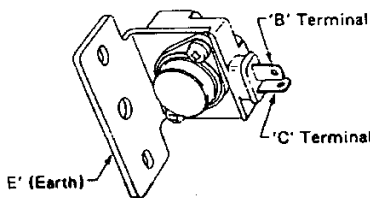
Make: Holden

Model: Commodore

Subject: Power transistors

The VL power transistor (and other similar types) is mounted on the side of the distributor and its function is to switch the ignition coil to produce spark for the system. It responds to output from the engine management ECM which controls ignition timing and dwell.

The power transistor has three connections:



- Base (B) - Connects to pin 5 of ECM
- Emitter (E) - Connects to ground
- Collector (C) - Connects to negative side of coil

The control pin (base) is connected to pin 5 on the ECM. The ECM generates a pulse to turn on and off the power stage (approximately 2 volts), which in turn creates the primary ignition waveform. When the voltage is high, the transistor sinks current.

Testing the power transistor can be done on the vehicle:

To test when no spark:

1. Put a spark gap in coil lead.
2. Pull the 'T' plug off the power transistor, turn it upside down and slip back on to the connector. The bottom pin should now be exposed (B terminal).
3. Turn ignition key on to provide +12 volts to the coil.
4. The transistor can now be manually switched because control from the ECM has now been disconnected.
5. Connect a LED tester to the positive battery terminal and the other end of the LED tester can be lightly tapped onto the exposed connector (base) of the power transistor. Spark should now be evident (LED tester is used for current control).
6. Do not directly connect battery power to the base of the transistor. Only use a LED tester with appropriate current limited resistor.
7. If the spark is still not evident, Injctronics suggests testing the coil, coil lead and power supply to coil. If these test ok then the power transistor may be faulty.