

# Injectronics

## TECHNICAL BULLETIN

### FORD – FALCON EF

#T0037

**Make:** Ford

**Model:** Falcon EF

**Subject:** Idle speed control system

The idle speed control system used on EF Falcons consists of an idle speed control valve located on the throttle body. The power train control module (P.C.M) controls the ISC valve to bypass air around the throttle body butterfly to control idle speed. Battery voltage is supplied from the main EFI relay to one terminal of the ISC valve and the PCM (pin 83) then grounds the other terminal of the ISC to energise the valve. For precise control the PCM varies the current for this circuit between 0 and 1 amps by changing the duty cycle of a fixed 160 Hz frequency signal.

Injectronics often receive calls from customers saying their car starts and runs but when allowed to return to a controlled idle the engine stalls. The reason for this is that the idle speed control circuit within the PCM fails to provide a circuit ground for the ISC valve.

To test ISC circuit operation, first check the ISC valve is receiving 12 volt supply. Then back probe PCM pin 83 and check that with the ignition on, a voltage of 6-13 volts should be present. At idle using an OSC a voltage pulse between 12 volts should be seen as shown in diagram one. The ISC valve resistance should be 8.5 – 10.5 ohms.

