Injectronics

Remanufactured Automotive Electronics Components

TECHNICAL BULLETIN

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Make: Mazda / Toyota

Model: Various

Subject: Circuit opening relay

A five (5) terminal relay to control the fuel pump is used on many Nippon-Denso equipped vehicles, such as Mazda and Toyota. The operation is very simple with only one output being the fuel pump. The two inputs which pull in the relay are:

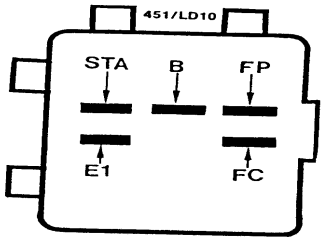
1. A ground path through the Air flow meter contacts when the air flow meter opens.
2. Supply voltage from the starter motor.

Tests:

1. If vehicle starts but stalls soon after cranking, In*jec*tronics suggests checking there is a ground path to the relay via the contacts in the air flow meter when you open the air flow meter flap.
2. To test relay off the vehicle, complete the following:

    a. Check that there is approx twenty (20) ohms between terminals STA and E1.
    b. Check that there are approx 100 ohms between terminals B and FC.
    c. Check that continuity does not exist between terminals B and FP.
    d. Apply battery voltage to terminals STA and earth to E1 and check that continuity exists between terminals b and FP (you should hear relay click in).
    e. Apply battery voltage to terminals B and earth to FC and check that continuity exists between terminals B and FP.

Looking into back of relay:



STA - Starter motor signal

E1 - Earth

B - Power supply

FB - to fuel pump

FC - Earth contacts inside Air flow meter

To perform a pump volume / pressure test there is usually a test connector that can be bridged.