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.



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