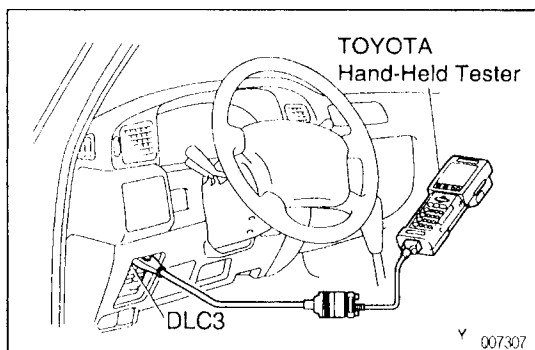
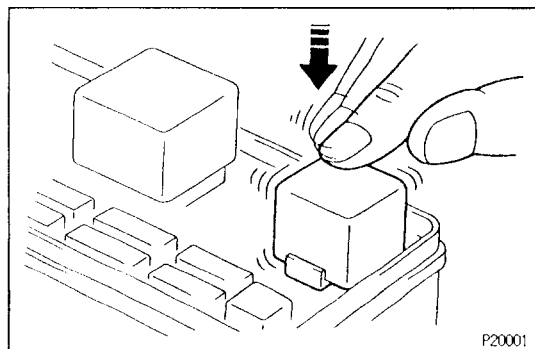
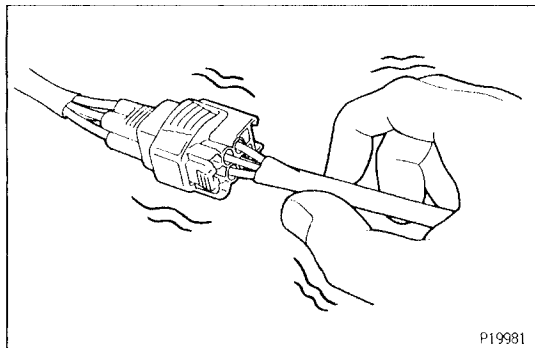
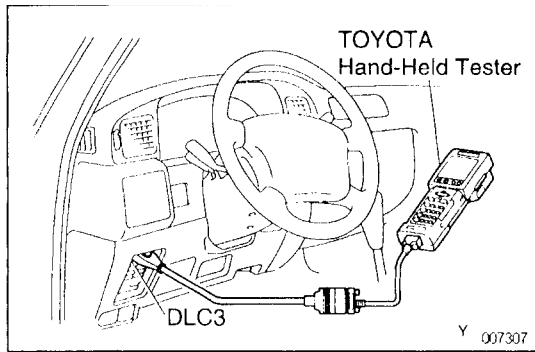




CHECK FOR INTERMITTENT PROBLEMS

TOYOTA hand-held tester only

By putting the vehicle's ECM in check mode, 1 trip detection logic is possible instead of 2 trip detection logic and sensitivity to detect open circuits is increased. This makes it easier to detect intermittent problems.

CLEAR DIAGNOSTIC TROUBLE CODES

See page [AT-38](#)

SET CHECK MODE

See page [AT-36](#)

DO A SIMULATION TEST

Using the symptom simulation (See page [IN-20](#)), apply vibration to and pull lightly on the wire harness, connector or terminals in the circuit indicated by the malfunction code. In this test, if the malfunction indicator lamp lights up, it indicates that the place where the wire harness, connector or terminals being pulled or vibrated has faulty contact. Check for the point for loose connection, dirt on the terminals, poor fit or other problems and repair as necessary.

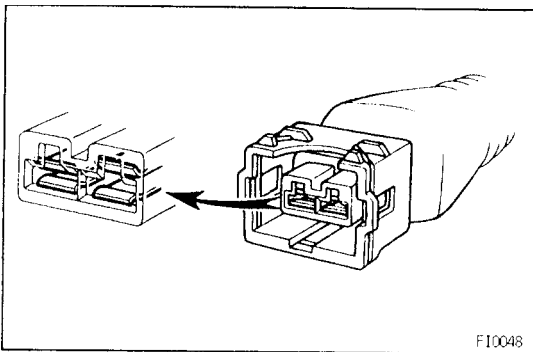
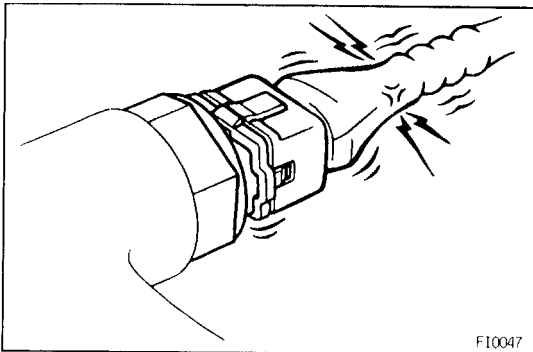
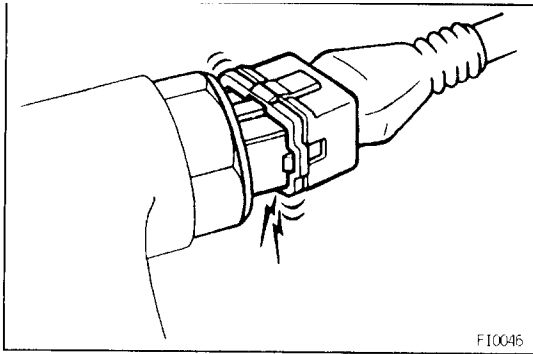
HINT: After canceling out the DTC in memory and setting the check mode, if the MIL does not go off after the engine is started, check thoroughly for faulty contact, etc., then try the check again. If the MIL still does not go off, check and replace the ECM.

DIAGNOSTIC TROUBLE CODE CLEARANCE

The following actions will erase the DTCs and freeze frame data.

1. Operating the OBD II scan tool (complying with SAE J 1978) or TOYOTA hand-held tester to erase the codes. (See the OBD II scan tool's instruction book for operating instructions.)
2. Disconnect the negative (-) terminal cable from the battery, or disconnect the EFI fuse.

NOTICE: If the TOYOTA hand-held tester switches the ECM from normal mode to check mode or vice-versa, or if the ignition switch is turned from ON to ACC or OFF during check mode, the DTCs and freeze frame data will be erased.



CONNECTOR CONNECTION AND TERMINAL INSPECTION

When checking for an open circuit or short circuit, it is important to check the connector connection and the condition of the terminals.

OPEN CIRCUIT:

This could be due to a disconnected wire harness, faulty contact in the connector, a connector terminal pulled out, etc.

HINT:

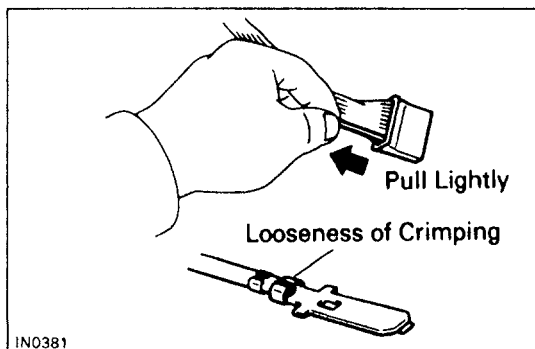
1. A wire rarely breaks in the middle of its length. Most cases occur at the connector. In particular, carefully check the connectors of sensors and actuators.
2. Faulty contact could be due to rusting of the connector terminals, to foreign materials entering the terminal or a drop in the contact pressure between the male and female terminals of the connector. Simply disconnecting and reconnecting the connectors once changes the condition of the connection and may result in a return to normal operation. Therefore, in troubleshooting, if no abnormality is found in the wire harness and connector check, but the problem disappears after the check, then the cause is considered to be in the wire harness or connectors.

SHORT CIRCUIT:

This could be due to a short circuit between the wire harness and the body ground or to a short inside the switch etc.

HINT:

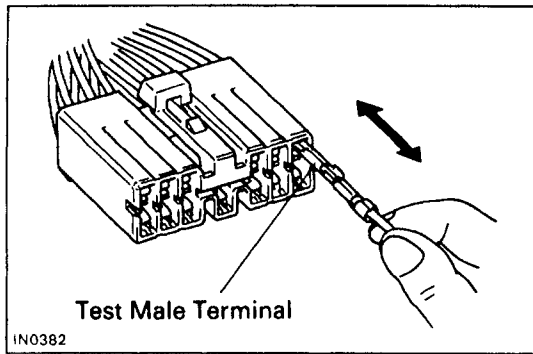
When there is a short between the wire harness and body ground, check thoroughly whether the wire harness is caught in the body or is clamped properly.



VISUAL CHECK AND CONTACT PRESSURE CHECK

- (a) Disconnect the connectors at both ends.
- (b) Check for rust or foreign material, etc. in the terminals of the connectors.
- (c) Check crimped portions for looseness or damage and check if the terminals are secured in the lock portion.

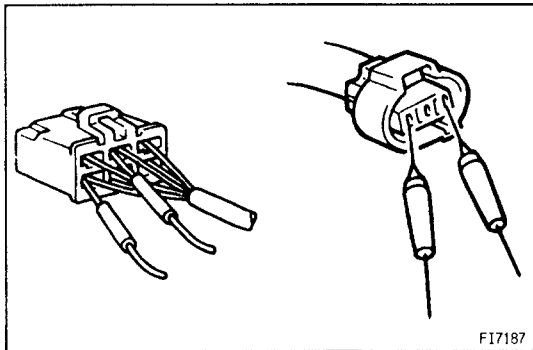
HINT: The terminals should not come out when pulled lightly.



- (d) Prepare a test male terminal and insert it in the female terminal, then pull it out.

NOTICE: When testing a gold-plated female terminal, always use a gold-plated male terminal.

HINT: When the test terminal is pulled out more easily than others, there may be poor contact in that section.



CONNECTOR HANDLING

When inserting tester probes into a connector, insert them from the rear of the connector. When necessary, use mini test leads. For water resistant connectors which cannot be accessed from behind, take good care not to deform the connector terminals.

–MEMO–