

# H - TESTS W/O CODES

## 1998 Toyota Supra

1998 ENGINE PERFORMANCE  
Toyota - Trouble Shooting - No Codes

Avalon, Camry, Celica, Corolla, Land Cruiser, LX470, RAV4,  
Sienna, Supra, Tacoma, Tercel, T100, 4Runner

### INTRODUCTION

Before diagnosing symptoms or intermittent faults, perform steps in appropriate F - BASIC TESTING article and appropriate G - TESTS W/CODES article. Use this article to diagnose driveability problems existing when a Diagnostic Trouble Code (DTC) is not present.

NOTE: Some driveability problems may have been corrected by manufacturer with a revised Engine Control Module (ECM). Check with manufacturer for latest ECM application.

Symptom checks can direct the technician to malfunctioning component(s) for further diagnosis. A symptom should lead to a specific component, system test or adjustment.

Use intermittent test procedures to locate driveability problems that DO NOT occur when the vehicle is being tested. These test procedures should also be used if an intermittent trouble code was present, but no problem was found during self-diagnostic testing.

### SYMPTOMS

#### SYMPTOM DIAGNOSIS

Symptom checks cannot be used properly unless the problem occurs while the vehicle is being tested. To reduce diagnostic time, ensure steps in appropriate F - BASIC TESTING and appropriate G - TESTS W/CODES articles were performed before diagnosing a symptom. Symptoms available for diagnosis are as follows:

- \* Does Not Start
- \* Difficult To Start
- \* Poor Idling
- \* Poor Driveability
- \* Engine Stalls

#### DOES NOT START

- Engine Does Not Crank
- \* Check battery and battery cables.
  - \* Check starter.
  - \* Check starter relay.

- No Initial Combustion
- \* Check ECM power source circuit with ignition on.
  - \* Check fuel pump control circuit.
  - \* Check for defective ECM, wiring or connections.
  - \* Check engine immobilizer system (if equipped).
  - \* Check for defective fuel pump switch (if equipped).

- No Complete Combustion
- \* Check fuel pump control circuit.

## DIFFICULT TO START

Difficult To Start, Cranks Normal

- \* Check starter signal circuit to STA terminal at ECM.
- \* Check fuel pump control circuit.
- \* Check engine compression.

Difficult To Start When Cold

- \* Check starter signal circuit to STA terminal at ECM.
- \* Check fuel pump control circuit.

Difficult To Start When Hot

- \* Check starter signal circuit to STA terminal at ECM.
- \* Check fuel pump control circuit.

## POOR IDLING

High Idle Speed

- \* Check A/C signal circuit.
- \* Check ECM power source circuit with ignition on.

Low Idle Speed

- \* Check A/C signal circuit.
- \* Check fuel pump control circuit.

Rough Idle

- \* Check engine compression.
- \* Check fuel pump control circuit.

Surging

- \* Check ECM power source circuit with ignition on.
- \* Check fuel pump control circuit.

## POOR DRIVEABILITY

Hesitation/Poor Acceleration

- \* Check fuel pump control circuit.
- \* Check for faulty automatic transaxle/transmission.

Surging

- \* Check fuel pump control circuit.

## ENGINE STALLS

Engine Stalls After Start

- \* Check fuel pump control circuit.
- \* Check engine immobilizer system (if equipped).

Engine Stalls During A/C Operation

- \* Check A/C signal circuit.
- \* Check for defective ECM, wiring or connections.

## INTERMITTENTS

### INTERMITTENT PROBLEM DIAGNOSIS

Intermittent fault testing requires duplicating circuit or component failure to identify the problem. These procedures may lead to the computer setting a fault code (on some systems) which may help in diagnosis.

If problem vehicle does not produce fault codes, monitor

voltage or resistance values using a DVOM while attempting to reproduce conditions causing intermittent fault. A status change on DVOM indicates a fault has been located.

Use a DVOM to pinpoint faults. When monitoring voltage, ensure ignition switch is in ON position or engine is running. Ensure ignition switch is in OFF position or negative battery cable is disconnected when monitoring circuit resistance. Status changes on DVOM during test procedures indicate area of fault.

## TEST PROCEDURES

### Intermittent Simulation

To reproduce the conditions creating an intermittent fault, use the following methods:

- \* Lightly vibrate component. See VIBRATION METHOD.
- \* Heat component. See HEATING METHOD.
- \* Wiggle or bend wiring harness. See VIBRATION METHOD.
- \* Spray component with water. See WATER SPRINKLING METHOD.

Monitor circuit/component voltage or resistance while simulating intermittent. If engine is running, monitor for Diagnostic Trouble Codes (DTCs). Use test results to identify a faulty component or circuit.

## VIBRATION METHOD

### Wiring Harness Testing

Using DVOM, monitor suspected circuit or component. Lightly shake wiring harness while noting fluctuation in DVOM reading. Inspect component connector harness for stretched areas. Inspect wiring harness at area where it goes through the body.

### Component, Relay & Sensor Testing

Using DVOM, monitor suspected circuit or component. Lightly vibrate suspected component, relay or sensor while noting fluctuation in DVOM reading.

### Electrical Connector Testing

Using DVOM, monitor suspected circuit or component. Lightly shake electrical connector while noting fluctuation in DVOM reading. Visually inspect electrical connector for damage.

## HEATING METHOD

### Component Testing

Heat the suspected component with a hair dryer while checking for a malfunction to exist. DO NOT apply heat directly to the components in the Engine Control Module (ECM). DO NOT heat any component to more than 140°F (60°C).

## WATER SPRINKLING METHOD

**CAUTION:** Ensure vehicle does not have any water leaks before using water sprinkling method. If water leak exists, use care when applying water that no water is sprayed directly on any electronic components.

Spray outside of vehicle and front of radiator with water while checking for a malfunction to exist. DO NOT spray water directly into engine compartment. The temperature and humidity may be changed

by spraying water onto the front of the radiator. DO NOT directly spray electronic components with water.