H - TESTS W/O CODES

1998 Mitsubishi Galant

1998 ENGINE PERFORMANCE
Mitsubishi - Trouble Shooting - No Codes

Diamante, Eclipse, Galant, Mirage, Montero, Montero Sport, 3000GT

INTRODUCTION

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

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

Symptom checks can direct 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 vehicle is being tested. These test procedures should also be used if an intermittent DTC was present, but no problem was found during self-diagnostic testing.

NOTE: For specific testing procedures, see G - TESTS W/CODES article. For specifications, see D - ADJUSTMENTS or C - SPECIFICATIONS article.

SYMPTOMS

SYMPTOM DIAGNOSIS

Symptom checks cannot be used unless problem occurs while vehicle is being tested. Before using this article to diagnose any symptom, perform basic diagnostic procedures in F - BASIC TESTING article and self-diagnostics in G - TESTS W/CODES article in order to reduce diagnostic time. The following symptoms are available for diagnosis:

* Difficult To Start/No Start (Cranks Okay)
* Rough Or Unstable Idle
* Engine Hesitates Or Poor Acceleration
* Engine Surges
* Detonation Or Knocking
* Poor Fuel Mileage

DIFFICULT TO START/NO START (CRANKS OKAY)

* Check idle air control (DC) motor (if applicable).
* Check idle air control (stepper) motor (if applicable).
* Check ignition switch.
* Check camshaft position sensor.
* Check crankshaft position sensor.
* Check park/neutral position switch (A/T).
* Check volume airflow sensor.
* Check engine coolant temperature sensor.

* Check power supply to PCM.
* Check fuel pressure.
* Check ignition timing.
* Check for disconnected or damaged vacuum hoses.
* Check for control relay malfunction.
* Check for SFI system malfunction.
* Check for fuel pump drive control system malfunction.
* Check for ignition coil malfunction.
* Check for power transistor malfunction (if applicable).
* Check for fuel injector malfunction.
* Check for PCM malfunction.
* Ensure electrical harness, connectors and wires are not broken, bent or loose.

ROUGH OR UNSTABLE IDLE

* Check intake air temperature sensor.
* Check EVAP purge control solenoid valve (if applicable).
* Check vehicle speed sensor.
* Check engine coolant temperature sensor.
* Check barometric pressure sensor (if applicable).
* Check manifold absolute pressure sensor (if applicable).
* Check ignition switch.
* Check throttle position sensor.
* Check camshaft position sensor.
* Check crankshaft position sensor.
* Check power steering oil pressure switch (if applicable).
* Check A/C switch and power relay (if applicable).
* Check park/neutral position switch (A/T).
* Check heated oxygen sensor.
* Check volume airflow sensor.
* Check fuel pressure.
* Check for disconnected or damaged vacuum hoses.
* Check for SFI system malfunction.
* Check idle air control (DC) motor (if applicable).
* Check idle air control (stepper) motor (if applicable).
* Check for fuel injector malfunction.
* Check for power transistor malfunction (if applicable).
* Check for vehicle speed sensor malfunction.
* Check for PCM malfunction.
* Ensure electrical harness, connectors and wires are not broken, bent or loose.

ENGINE HESITATES OR POOR ACCELERATION

* Check intake air temperature sensor.
* Check engine coolant temperature sensor.
* Check barometric pressure sensor (if applicable).
* Check manifold absolute pressure sensor (if applicable).
* Check ignition switch.
* Check ignition coil.
* Check EGR control solenoid valve (if applicable).
* Check throttle position sensor.
* Check camshaft position sensor.
* Check crankshaft position sensor.
* Check power steering oil pressure switch (if applicable).
* Check A/C switch and power relay (if applicable).
* Check park/neutral position switch (A/T).
* Check heated oxygen sensor.
* Check volume airflow sensor.
* Check fuel pressure.
* Check for disconnected or damaged vacuum hoses.
* Check for SFI system malfunction.

* Check idle air control (DC) motor (if applicable).
* Check idle air control (stepper) motor (if applicable).
* Check for fuel injector malfunction.
* Check for power transistor malfunction (if applicable).
* Check A/C switch and power relay (if applicable).
* Check for PCM malfunction.
* Ensure electrical harness, connectors and wires are not broken, bent or loose.

ENGINE SURGES

* Check engine coolant temperature sensor.
* Check EGR control solenoid valve (if applicable).
* Check fuel pressure.
* Check for fuel injector malfunction.

DETONATION OR KNOCKING

* Check for knock sensor malfunction (if applicable).
* Check volume airflow sensor.
* Check for engine cooling system problems.
* Check fuel quality.
* Check intake air temperature sensor.
* Check barometric pressure sensor (if applicable).
* Check manifold absolute pressure sensor (if applicable).
* Check ignition coil.
* Check power transistor (if applicable).
* Check for EGR system malfunction.

POOR FUEL MILEAGE

* Check intake air temperature sensor.
* Check engine coolant temperature sensor.
* Check barometric pressure sensor (if applicable).
* Check manifold absolute pressure sensor (if applicable).
* Check ignition switch.
* Check throttle position sensor.
* Check camshaft position sensor.
* Check crankshaft position sensor.
* Check power steering oil pressure switch (if applicable).
* Check A/C switch and power relay (if applicable).
* Check park/neutral position switch (A/T).
* Check heated oxygen sensor.
* Check volume airflow sensor.
* Check fuel pressure.
* Check for SFI system malfunction.
* Check idle air control (DC) motor (if applicable).
* Check idle air control (stepper) motor (if applicable).
* Check for fuel injector malfunction.
* Check for power transistor malfunction (if applicable).

INTERMITTENTS

INTERMITTENT PROBLEM DIAGNOSIS

Intermittent fault testing requires duplicating circuit or component failure to identify problem. These procedures may lead to computer setting a Diagnostic Trouble Code (DTC) which may help in diagnosis.

If problem vehicle does not produce DTCs, 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. See J - PIN VOLTAGE CHARTS article. When monitoring voltage, ensure ignition switch is in ON position or engine is running. Ensure ignition switch is in OFF position when monitoring circuit resistance. Status changes on DVOM during test procedures indicate area of fault.

TEST PROCEDURES

Intermittent Simulation

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

* Lightly vibrate component.
* Heat component.
* Wiggle or bend wiring harness.
* Spray component with water mist.
* Remove/apply vacuum source.

Monitor circuit/component voltage or resistance while simulating intermittent fault. If engine is running, monitor for diagnostic trouble codes. Use test results to identify a faulty component or circuit.