G - TESTS W/CODES

1993 Mitsubishi

CODE 11: OXYGEN (O2) SENSOR, 4-WIRE O2 SENSOR

NOTE: For component terminal identification, see TERMINAL IDENTIFICATION. For wiring diagrams, see L - WIRING DIAGRAMS article in this section.

1) If using scan tester, go to step 3. Disconnect O2 sensor connector. Install Test Harness (MB998464) between O2 sensor and O2 sensor connector. Use DVOM to check resistance between specified O2 sensor connector heater terminals. See O2 SENSOR 4-WIRE CONNECTOR TERMINAL ID table. O2 sensor resistance should be 20 ohms at 68øF (20øC). If resistance is not as specified, replace O2 sensor. If resistance is as specified, go to next step.

2) Using jumper wires, apply 12 volts to specified O2 sensor connector heater terminals. See O2 SENSOR 4-WIRE CONNECTOR TERMINAL ID table. Using DVOM, check voltage between specified O2 sensor connector output terminals, while repeatedly racing engine. If voltage is not .6-1.0 volt, replace O2 sensor. If voltage is .6-1.0 volt, go to step 5.

O2 SENSOR 4-WIRE CONNECTOR TERMINAL ID TABLE

Application	(1) Heater Terminals	Output Terminals
1.5L	1 & 3	2 & 4
1.8L	2 & 4	1 & 3

(1) - First terminal listed is positive. Second terminal listed is negative.

3) Start and warm engine to operating temperature. Using scan tester, read O2 sensor voltage. While monitoring scan tester, accelerate to 4000 RPM. Suddenly decelerate. Scan tester should read .3 volt or less. Suddenly accelerate. Scan tester should read .5-1.0 volt. If voltage is not as specified, replace O2 sensor. If voltage is as specified, go to next step.

4) While monitoring scan tester, accelerate to 2000 RPM and decelerate to 700 RPM (idle). Scan tester should switch between .6-1.0 volt and .4 volt or less. If voltage is not as specified, replace O2 sensor. If voltage is as specified, go to next step.

5) Disconnect O2 sensor connector. Disconnect MPI relay connector. Using DVOM, check for continuity between specified O2 sensor connector terminals and MPI connector terminals. See O2 SENSOR TO MPI WIRING HARNESS TERMINAL ID table. If continuity does not exist, repair wiring harness as necessary. If continuity exists, go to step 7.

O2 SENSOR TO MPI WIRING HARNESS TERMINAL ID TABLE

O2 Sensor	MPI

Application	Terminals	Terminals
1.5L	1	2
1.8L	2	2

6) Turn ignition switch to ON position. Using DVOM, check voltage between specified O2 sensor connector terminal and chassis ground. See O2 SENSOR CONNECTOR VOLTAGE CIRCUIT ID table. If system voltage does not exist, repair wiring harness as necessary. If system voltage exists, go to next step.

7) Using DVOM, check for continuity between specified O2 sensor connector terminals and ECM connector terminals. See O2 SENSOR TO ECM WIRING HARNESS TERMINAL ID table. If continuity does not exist on either circuit, repair appropriate circuit for open or short to ground as necessary. If continuity exists, go to next step.

O2 SENSOR TO ECM WIRING HARNESS TERMINAL ID TABLE

Application	O2 Sensor Terminals	ECM Terminals
1.5L	3	56
	4	35
1.8L	3	5
	4	35

8) Disconnect O2 sensor connector. Using DVOM, check for continuity between specified O2 sensor connector terminal and chassis ground. See O2 SENSOR CONNECTOR GROUND CIRCUIT ID table. If continuity does not exist, repair wiring harness as necessary. If no system or component malfunctions occur in preceding tests, condition required to set fault is not present at this time. Test is complete. Intermittent problem may exist. See H - TESTS W/O CODES article in this section.

O2 SENSOR CONNECTOR GROUND CIRCUIT ID TABLE

Application	Terminal No.
1.8L	1
1.5L	2