K - SENSOR RANGE CHARTS

1990 Nissan 240SX

1990 ENGINE PERFORMANCE
Sensor Operating Range Charts

Nissan; 240SX, 300ZX, Axxess, Maxima, Pathfinder, Pickup, Pulsar, Sentra, Stanza, Van

INTRODUCTION

Sensor operating range information can help determine if a sensor is out of calibration. An out-of-calibration sensor may not set a trouble code, but it may cause driveability problems.

NOTE: All voltage tests should be performed with a Digital Volt-Ohmmeter (DVOM) with a minimum 10-megohm input impedance, unless stated otherwise in test procedure. To identify ECU terminals, see appropriate wiring diagram in L - WIRING DIAGRAMS article.

AIRFLOW METER VOLTAGE TEST TABLE

AIRFLOW METER VOLTAGE TEST (1)

Application	Terminal No.	Voltage
Axxess, Pathfinder, Pickup, Stanza & 240SX	16	1.0-3.0
Maxima	27	1.0-2.0
Pulsar NX & Sentra	15	.5-4.0
Van	31	1.6-3.1
300ZX	27	.8-1.6

(1) - Measure voltage between ground and indicated ECU terminal. Voltage should increase with an increase in airflow (RPM). DO NOT run engine at high RPM under no load.

AIR TEMPERATURE SENSOR VOLTAGE TEST TABLE

AIR TEMPERATURE SENSOR VOLTAGE TEST (1)

Application	Temperature °F (°C)	Volts
Axxess, Stanza, & 240SX	68 (20)	1.0-1.5
	176 (80)	.3
Pathfinder & Pickup	68 (20)	2.4
	176 (80)	.3

(1) - With engine running, measure voltage between ground and ECU terminal No. 26.

COOLANT TEMPERATURE SENSOR RESISTANCE TEST TABLE

COOLANT TEMPERATURE SENSOR RESISTANCE TEST (1)

Temperature °F (°C)	Ohms
68 (20)	2100-2900
176 (80)	300-330

(1) - Measure resistance across sensor terminals.

EXHAUST GAS TEMPERATURE SENSOR VOLTAGE TEST TABLE

EXHAUST GAS TEMPERATURE SENSOR VOLTAGE TEST (1)

Application	Terminal No.	Volts w/EGR Closed	Volts w/EGR Open
Axxess, Stanza & 240SX	8	1.0 or more	0-1.0
Maxima	39	1.0 or more	0-1.0
Pathfinder & Pickup			
2.4L	8	3.0-4.0	0-3.0
3.0L	8	1.0 or more	0-1.0
Pulsar NX & Sentra	7	1.0 or more	0-1.0
Van	111	1.0 or more	0-1.0
300ZX	39	4.5 or less	0-1.0

(1) - With engine running, measure voltage between ground and indicated ECU terminal.

FUEL TEMPERATURE SENSOR VOLTAGE TEST TABLE

FUEL TEMPERATURE SENSOR VOLTAGE TEST (1)

Application	Terminal No.	Volts
300ZX	36	0-5.0

(1) - With engine running, measure voltage between ground and indicated ECU terminal.

NEUTRAL/INHIBITOR SWITCH TEST TABLE

NEUTRAL/INHIBITOR SWITCH TEST (1)

Application	Terminal No.	Volts In Park/Neutral	Volts In All Other Positions
Axxess	35	0	Battery
Maxima	44	Battery	0
Pathfinder, Pickup Stanza & 240SX	35	0	6.0-7.0
Pulsar NX & Sentra	36	0	6.0-7.0
Van (2)	-----	-----	-----
300ZX	44	0	8.0-9.0

(1) - Turn ignition on. Check voltage between ground and indicated ECU terminal with transmission in indicated position.
(2) - Information not available from manufacturer for inhibitor

switch testing (automatic transmission). See I - SYSTEM/COMP TESTS article.

EXHAUST GAS (OXYGEN) SENSOR VOLTAGE TEST TABLE

EXHAUST GAS (OXYGEN) SENSOR VOLTAGE TEST (1)

Condition	Volts
Lean	.1
Rich	1.0

(1) - With engine running at normal operating temperature, measure voltage between oxygen sensor connector terminal and ground.

THROTTLE POSITION SENSOR VOLTAGE TEST (1)

Application	Terminal No.	Volts
Axxess, Stanza & 240SX	20	.4-4.0
Maxima	38	.5-4.0
Pathfinder & Pickup	20	.5-4.0
Pulsar NX & Sentra	19	.4-4.0
Van	19	.5-4.0
300ZX	38	.4-4.0

(1) - Turn ignition on. Measure voltage between ground and indicated ECU terminal. Observe voltage while opening and closing throttle valve.

VEHICLE SPEED SENSOR GROUND CONTINUITY TEST TABLE

VEHICLE SPEED SENSOR GROUND CONTINUITY TEST

Application	Terminal No.	Specification
Axxess, Pathfinder, Pickup, Stanza & 240SX	32	(1)
Maxima & 300ZX	53	(1)
Pulsar NX & Sentra	33	(1)
Van	29	(1)

(1) - Disconnect ECU connector. Check continuity between ground and indicated ECU terminal while turning drive wheels. Ohmmeter reading should fluctuate between continuity and infinity.