

# SENSOR OPERATING RANGE CHARTS

## 2001 Chevrolet Camaro

2001 ENGINE PERFORMANCE  
Sensor Operating Range Charts - Cars

### 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 will cause driveability problems.

NOTE: Unless stated otherwise in test procedure, perform all voltage tests with a Digital Volt-Ohmmeter (DVOM) with a minimum 10-megohm input impedance.

#### ECT SENSOR RESISTANCE (3.0L - CATERA)

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Temperature - °F (°C)	(1) Ohms
284 (140)	68-74
248 (120)	109-116
212 (100)	182-191
176 (80)	313-332
140 (60)	573-618
104 (40)	1118-1231
77 (25)	1941-2173
68 (20)	2351-2649
32 (0)	5466-6326
14 (-10)	8642-10,152
-4 (-20)	14,096-16,827
-40 (-40)	40,490-50,136

(1) - Measure resistance across sensor terminals.

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#### ECT & IAT SENSOR RESISTANCE (1.3L & 1.8L) (1) (2)

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Temperature - °F (°C)	(3) Ohms
176 (80)	315
158 (70)	435
140 (60)	580
122 (50)	810
113 (45)	940
104 (40)	1150
95 (35)	1360
86 (30)	1600
77 (25)	2000
68 (20)	2400
59 (15)	3000
50 (10)	3600
41 (5)	4600
32 (0)	5700
23 (-5)	7400
14 (-10)	9800
5 (-15)	12,700
-4 (-20)	16,000

(1) - Engine Coolant Temperature (ECT) sensor.

(2) - Intake Air Temperature (IAT) sensor.

(3) - Measure resistance across sensor terminals.

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ECT, IAT & TFT SENSOR RESISTANCE (EXCEPT 1.3L, 1.8L & 3.0L CATERA)

(1) (2) (3)

Temperature - °F (°C)	(4) Ohms
212 (100)	177
194 (90)	241
176 (80)	332
158 (70)	467
140 (60)	667
122 (50)	973
113 (45)	1188
104 (40)	1459
95 (35)	1802
86 (30)	2238
77 (25)	2796
68 (20)	3520
59 (15)	4450
50 (10)	5670
41 (5)	7280
32 (0)	9420
23 (-5)	12,300
14 (-10)	16,180
5 (-15)	21,450
-4 (-20)	28,680
-22 (-30)	52,700
-40 (-40)	100,700

- (1) - Engine Coolant Temperature (ECT) sensor.
- (2) - Intake Air Temperature (IAT) sensor.
- (3) - Transaxle Fluid Temperature (TFT) sensor.
- (4) - Measure resistance across sensor terminals.

IAT SENSOR RESISTANCE (3.0L - CATERA)

Temperature - °F (°C)	(1) Ohms
284 (140)	74-93
248 (120)	114-141
212 (100)	184-222
176 (80)	312-370
140 (60)	565-654
104 (40)	1096-1238
77 (25)	1900-2100
68 (20)	2290-2551
32 (0)	5119-5892
14 (-10)	7943-9307
-4 (-20)	12,660-15,120
-40 (-40)	35,140-43,760

- (1) - Measure resistance across sensor terminals.

FUEL LEVEL SENSOR VOLTAGE (5.7L - CORVETTE)

Fuel Level	Volts (Left Tank)	Volts (Right Tank)
Full	2.5	2.5
3/4	2.5	1.5
Half	2.5	Less Than 1.0
1/4	1.7	Less Than 1.0

Empty ..... Less Than 1.0 ..... Less Than 1.0

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FUEL PRESSURE SENSOR VOLTAGE (2.2L - CNG)

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psi (kPa)	Volts
0 (0) .....	0.50
125 (862) .....	0.63
438 (3021) .....	0.94
750 (5172) .....	1.25
1063 (7331) .....	1.56
1375 (9483) .....	1.88
1688 (11,641) .....	2.19
2000 (13,793) .....	2.50
2313 (15,952) .....	2.81
2625 (18,103) .....	3.13
2938 (20,262) .....	3.44
3250 (22,414) .....	3.75
3563 (24,572) .....	4.06
3875 (26,724) .....	4.38
4000 (27,586) .....	4.54

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FUEL TEMPERATURE SENSOR (2.2L - CNG)

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Temperature - °F (°C)	Ohms	Volts
302 (150) .....	77 .....	0.14
248 (120) .....	147 .....	0.26
212 (100) .....	240 .....	0.40
176 (80) .....	414 .....	0.66
158 (70) .....	556 .....	0.84
140 (60) .....	758 .....	1.08
122 (50) .....	1052 .....	1.39
113 (45) .....	1249 .....	1.57
104 (40) .....	1489 .....	1.76
95 (35) .....	1784 .....	1.97
86 (30) .....	2148 .....	2.20
77 (25) .....	2600 .....	2.43
68 (20) .....	3167 .....	2.68
59 (15) .....	3881 .....	2.93
50 (10) .....	4764 .....	3.18
41 (5) .....	5933 .....	3.42
32 (0) .....	7407 .....	3.65
23 (-5) .....	9311 .....	3.86
-4 (-20) .....	19,326 .....	4.38
-40 (-40) .....	57,536 .....	4.77
-58 (-50) .....	104,390 .....	4.87

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MAP SENSOR VOLTAGE (1.9L)

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Altitude Feet	(1) Volts
Below 1000 .....	3.8-5.5
1000-2000 .....	3.6-5.3
2000-3000 .....	3.5-5.1
3000-4000 .....	3.3-5.0
4000-5000 .....	3.2-4.8
5000-6000 .....	3.0-4.6
6000-7000 .....	2.9-4.5
7000-8000 .....	2.8-4.3

8000-9000 .....	2.6-4.2
9000-10,000 .....	2.5-4.0

(1) - Measured at sensor or as seen on scan tool.

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OXYGEN SENSOR VOLTAGE

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Condition	(1) Volts
Except Metro & Prizm	
Lean .....	0.1
Rich .....	1.0
Metro & Prizm	
Lean .....	0.1
Rich .....	0.9

(1) - Measure voltage between O2 sensor ground and signal terminals at PCM.

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