

K - SENSOR RANGE CHARTS

1993 Mitsubishi Montero

1993 ENGINE PERFORMANCE

Chrysler Corp./Mitsubishi Sensor Operating Range Charts

Dodge; Colt, Colt 200, Ram-50, Stealth
Eagle; Summit, Summit Wagon
Mitsubishi; Diamante, Eclipse, Expo/Expo LRV, Galant,
Mirage, Montero, Pickup, Precis, 3000GT
Plymouth; Colt, Colt 200, Colt Vista

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: Unless stated otherwise in test procedure, perform all voltage tests using a Digital Volt-Ohmmeter (DVOM) with a minimum 10-megohm input impedance. For connector and terminal identification, see L - WIRING DIAGRAMS article in this section.

AIRFLOW METER HERTZ TEST TABLE (1)

Condition	Hz
Colt, Colt 200, Mirage & Summit	
1.8L	
700 RPM	23-49
2000 RPM	51-91
Diamante	
700 RPM	21-47
2000 RPM	51-97
Eclipse	
1.8L	
700 RPM	25-40
2000 RPM	67-88
2.0L	
750 RPM	25-50
2000 RPM	
Non-Turbo	70-90
Turbo	60-85
Colt Vista, Expo & Summit Wagon	
1.8L	
750 RPM	23-49
2000 RPM	51-91
2.4L	
750 RPM	18-44
2000 RPM	43-83
Galant	
SOHC	
750 RPM	18-44
2000 RPM	64-104
Montero	
700 RPM	22-48
2000 RPM	60-100
Pickup & Ram-50	
2.4L	
750 RPM	40-60
2000 RPM	85-105
3.0L	

700 RPM	25-45
2000 RPM	70-90
Precis	
750 RPM	27-33
2000 RPM	60-80
Stealth & 3000GT	
700 RPM	25-50
2000 RPM	70-100

(1) - Measure hertz frequency with Multi-Use Tester (MUT).

COOLANT TEMPERATURE SENSOR RESISTANCE TABLE

Temperature °F (°C)	Ohms
Eclipse	
68 (20)	2200-2600
176 (80)	264-328
Pickup 2.4L & Ram-50 2.4L	
32 (0)	5900
68 (20)	2500
104 (40)	1100
176 (80)	300
All Others	
32 (0)	5800
68 (20)	2400
104 (40)	1100
176 (80)	300

EGR TEMPERATURE SENSOR RESISTANCE TEST TABLE (1) (2)

Temperature °F (°C)	Ohms
122 (50)	60-83
212 (100)	11-14

(1) - Measure resistance across disconnected sensor terminals.
(2) - Specifications apply to all models except Montero.

INTAKE AIR TEMPERATURE SENSOR RESISTANCE TABLE

Temperature °F (°C)	Ohms
Precis	
32 (0)	5400-6600
68 (20)	2300-2970
176 (80)	310-430
All Others	
32 (0)	6000
68 (20)	2700
176 (80)	400

OXYGEN SENSOR VOLTAGE TEST TABLE (1) (2)

Application	Volts
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All Models	
Lean	0.1
Rich	1.0

- (1) - Measure between sensor terminal No. 1 and ground.
(2) - Test at normal operating temperature.
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THROTTLE POSITION SENSOR (TPS)

Measure total and variable resistance between specified TPS connector terminals. See TPS TEST TERMINALS table. Total resistance should be 3500-6500 ohms. Variable resistance should change smoothly between 3500 and 6500 ohms as throttle valve is moved from closed to wide open throttle.

TPS TEST TERMINALS TABLE

Application	Terminals No.
Total Resistance	
Eclipse 1.8L	1 & 2
Eclipse 2.0L	2 & 3
All Others	1 & 4
Variable Resistance	
Colt Vista, Expo, Montero, Pickup 3.0L, Precis, Ram-50 3.0L & Summit Wagon	1 & 3
Eclipse 1.8L	2 & 3
Eclipse 2.0L	3 & 4
All Others	2 & 4

VEHICLE SPEED SENSOR CONTINUITY TEST TABLE (1)

Application	(2) Continuity
All Models	4 Changes Per Revolution

- (1) - Measure continuity at back of speedometer. See appropriate wiring diagram in L - WIRING DIAGRAMS article in this section.
(2) - With ECM connector disconnected, turn speedometer cable to cycle reed switch on and off.
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VEHICLE SPEED SENSOR VOLTAGE TEST TABLE (1)

Application	(2) Volts
All Models	
Ignition Switch Off	1 Or Less
Ignition Switch On	4.5-4.9

- (1) - Measure voltage at back of speedometer. See appropriate wiring diagram in L - WIRING DIAGRAMS article in this section.
(2) - With ECM connector disconnected, turn speedometer cable to cycle reed switch on and off.
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