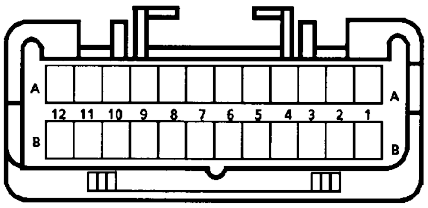
POWERTRAIN CONTROL MODULE CONNECTOR IDENTIFICATION

This powertrain control module voltage chart is for use with a digital voltmeter to further aid in diagnosis. Connect the Black (-) probe to a good chassis earth, and backprobe the powertrain control module terminal with the Red (+) probe. These voltages were derived from a known good vehicle. The voltages you get may vary due to low battery charge or other reasons, but they should be very close.

THE FOLLOWING CONDITIONS MUST BE MET BEFORE TESTING:

• Engine and Transmission at operating temperature • Closed Loop • Engine idling (for "Engine Run" column) • Diagnostic "Test" terminal not earthed • Tech 1 scan tool not installed • Accessories "OFF"



BACKPROBING VIEW OF PINK CONNECTOR

PIN	PIN FUNCTION	CKT #	WIRE COLOUR	NORMAL VOLTAGES	
				IGN "ON"	ENG RUN
A1	SYSTEM EARTH	750	B/R	*	*
A2	SYSTEM EARTH	750	B/R	*	*
A3	PRIMARY SERIAL DATA	1221	R/B	3-5	3-5
A4	FUSED IGNITION FEED	39	P/B	12	13
A5	NOT USED	-	-	-	-
A6	FUEL PUMP RELAY CONTROL	465	G/W	(1)	13
A7	TP SENSOR REFERENCE VOLTAGE	416	GY	5	5
A8	BATTERY VOLTAGE FEED	740	O/B	12	13
A9	NOT USED	-	-	-	-
A10	NOT USED	-	-	-	-
A11	NOT USED	-	-	-	-
A12	NOT USED	-	-	-	-

PIN	PIN FUNCTION	CKT #	WIRE COLOUR	NORMAL VOLTAGES	
				IGN "ON"	ENG RUN
B1	SYSTEM EARTH	750	B/R	*	*
B2	SYSTEM EARTH	750	B/R	*	*
B3	A/C PRESSURE SIGNAL	259	G/B	1-2	1-2
B4	INTAKE AIR TEMPERATURE SENSOR SIGNAL	472	BR	1.0 (3)	1.0 (3)
B5	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL	410	Y	1.9 (3)	1.9 (3)
B6	TRANSMISSION FLUID TEMPERATURE (TFT) SENSOR SIGNAL	1227	B/Y	1.8 (3)	1.8 (3)
B7	EGR, AC REFRIGERANT PRESSURE SENSOR REFERENCE VOLTAGE	415	V/W	5	5
B8	BATTERY VOLTAGE FEED	740	O/B	12	13
B9	NOT USED	-	-	-	-
B10	EGR PINTLE POSITION	1456	LG	.7	.7
B11	TP SENSOR SIGNAL	417	BLU	(5)	(5)
B12	INJECTOR VOLTAGE MONITOR LINE	481	R	12	13

(1) Battery voltage first 2 seconds
(3) Varies with temperature.
(5) 0.25 - 1.25 volts measured between terminals "B11" and "B1" or about 4.0 volts at wide open throttle.
* Less than 0.50 volt.

TV624683

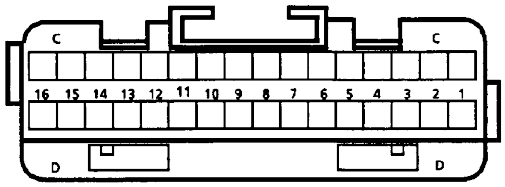
Figure 6C1-2A 20 PCM Connector Terminal End View (1 of 3)

POWERTRAIN CONTROL MODULE CONNECTOR IDENTIFICATION

This PCM voltage chart is for use with a digital voltmeter to further aid in diagnosis. Connect the Black (-) probe to a good chassis earth, and backprobe the PCM terminal with the Red (+) probe. These voltages were derived from a known good vehicle. The voltages you get may vary due to low battery charge or other reasons, but they should be very close.

THE FOLLOWING CONDITIONS MUST BE MET BEFORE TESTING:

• Engine and Transmission at operating temperature • Closed Loop • Engine idling (for "Engine Run" column) • Diagnostic "Test" terminal not earthed • Tech 2 scan tool not installed • Accessories "OFF"



BACKPROBING VIEW OF PINK CONNECTOR

PIN	PIN FUNCTION	CKT #	WIRE COLOUR	NORMAL VOLTAGES	
				IGN "ON"	ENG RUN
C1	TCC ENABLE SOLENOID CONTROL	422	GY/R	12	13
C2	1-2 SHIFT SOLENOID CONTROL	1222	LG	12	*
C3	2-3 SHIFT SOLENOID CONTROL	1223	Y/B	12	*
C4	CANISTER PURGE SOLENOID	428	G/Y	12	13
C5	VEHICLE SPEED OUTPUT TO SPEEDOMETER	123	V/W	0.1 OR 12	0.1 OR 13
C6	AUTOMATIC TRANSMISSION VEHICLE SPEED SENSOR SIGNAL HIGH	831	BLU/W	*	*
C7	IAC COIL "A" HIGH	441	L BLU	NOT	USE-ABLE
C8	IAC COIL "A" LOW	442	L BLU/B	NOT	USE-ABLE
C9	IAC COIL "B" LOW	444	LG/B	NOT	USE-ABLE
C10	IAC COIL "B" HIGH	443	LG/W	NOT	USE-ABLE
C11	TORQUE REQUEST	1426	O/W	4-5	4-5
C12	KNOCK SENSOR (ESC) SIGNAL INPUT	815	W/R	1.3 mVAC	19 mVAC
C13	3-2 CONTROL SOLENOID	897	G/W	12	*
C14	3-2 CONTROL FEEDBACK	897	G/W	12	*
C15	TCC PWM FEEDBACK	418	BR	12	13
C16	TCC SOLENOID PWM CONTROL	418	BR	12	13

PIN	PIN FUNCTION	CKT #	WIRE COLOUR	NORMAL VOLTAGES	
				IGN "ON"	ENG RUN
D1	MAF SENSOR INPUT	792	BR/W	4.8	4.2
D2	NOT USED	-	-	-	-
D3	CAMSHAFT POSITION SENSOR SIGNAL	630	B	4.8	4.4
D4	CRANKSHAFT 18X SIGNAL	647	L BLU/B	5 OR 0	2.7 TO 3.0
D5	AUTOMATIC TRANSMISSION VEHICLE SPEED SENSOR SIGNAL LOW	832	T	*	*
D6	NOT USED	-	-	-	-
D7	NOT USED	-	-	-	-
D8	NOT USED	-	-	-	-
D9	BYPASS CONTROL	424	T/B	0	4.7
D10	EST OUTPUT	423	W	0	2.0
D11	CRANKSHAFT REFERENCE LOW	453	B/R	*	*
D12	CRANKSHAFT REFERENCE HIGH	430	V	4.8	2.3
D13	RH OXYGEN SENSOR SIGNAL	1412	GY	450 mV	(4)
D14	RH OXYGEN SENSOR EARTH	1413	GY/B	*	*
D15	LH OXYGEN SENSOR SIGNAL	412	V	450 mV	(4)
D16	LH OXYGEN SENSOR EARTH	413	VB	*	*

(4) The voltage should vary between 100 mV - 1000 mV.

* Less than 0.50 volt.

TV624684

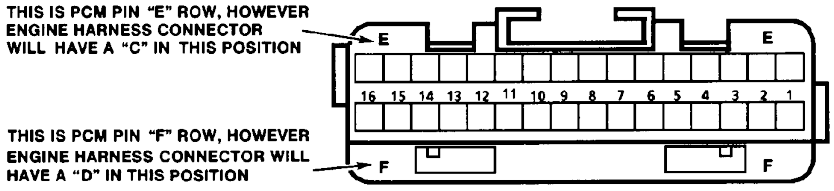
Figure 6C1-2A-21 PCM Connector Terminal End View (2 of 3)

POWERTRAIN CONTROL MODULE CONNECTOR IDENTIFICATION

This PCM voltage chart is for use with a digital voltmeter to further aid in diagnosis. Connect the Black (-) probe to a good chassis earth, and backprobe the PCM terminal with the Red (+) probe. These voltages were derived from a known good vehicle. The voltages you get may vary due to low battery charge or other reasons, but they should be very close.

THE FOLLOWING CONDITIONS MUST BE MET BEFORE TESTING:

• Engine and Transmission at operating temperature • Closed Loop • Engine idling (for "Engine Run" column) • Diagnostic "Test" terminal not earthed • Tech 1 scan tool not installed • Accessories "OFF"



BACKPROBING VIEW OF BLUE CONNECTOR

PIN	PIN FUNCTION	CKT #	WIRE COLOUR	NORMAL VOLTAGES	
				IGN "ON"	ENG RUN
E1	BOOST CONTROL SOLENOID DRIVER (SUPERCHARGER ONLY)	429	B/O	0V	0V
E2	FUEL INJECTOR #3 CONTROL	843	V	12	13
E3	FUEL INJECTOR #2 CONTROL	842	G	12	13
E4	FUEL INJECTOR #5 CONTROL	845	GY	12	13
E5	FUEL PUMP CONTROL MODULE (PWM) DRIVER (SUPERCHARGER ONLY)	411	LT. BLU	*	3.0 TO 3.4V
E6	PRNDL "A"	-	-	12	13
E7	PRNDL "B"	-	-	*	*
E8	PRNDL "C"	-	-	12	13
E9	EGR IGNITION FEED	439	P	12	13
E10	EGR CONTROL	435	V	12	13
E11	NOT USED	-	-	-	-
E12	OIL PRESSURE INPUT SIGNAL	31	BLU	*	13
E13	NOT USED	-	-	-	-
E14	PRESSURE CONTROL SOLENOID LOW	1229	GY/BLU	*	6.8
E15	PRESSURE CONTROL SOLENOID HIGH	1228	R	1.1	1.3
E16	ECT/TP SENSOR EARTH	452	B/Y	*	*

PIN	PIN FUNCTION	CKT #	WIRE COLOUR	NORMAL VOLTAGES	
				IGN "ON"	ENG RUN
F1	FUEL INJECTOR #4 CONTROL	844	BR/Y	12	13
F2	FUEL INJECTOR #1 CONTROL	841	BLU	12	13
F3	FUEL INJECTOR #6 CONTROL	846	Y	12	13
F4	AIR CONDITIONING RELAY CONTROL	366	LG/B	12	(2)
F5	START RELAY CONTROL	1434	GY/BLU	*	*
F6	ENGINE COOLING FAN RELAY HIGH SPEED CONTROL	304	BLU/W	12	(7)
F7	TORQUE ACHIEVED	1427	B/W	.9	3-6
F8	CRANKING SIGNAL INPUT	806	R/W	* (3)	* (3)
F9	RANGE SIGNAL "A"	1224	BR/Y	12	13
F10	RANGE SIGNAL "B"	1225	Y	0	0
F11	RANGE SIGNAL "C"	1226	GY	12	13
F12	ECONOMY/POWER SWITCH INPUT	774	BLU	(6)	(6)
F13	NOT USED	-	-	-	-
F14	DIAGNOSTIC TEST ENABLE	451	W/B	12	13
F15	PRNDL "P"	-	-	12	13
F16	IAT, TFT, EGR, A/C REFIGERANT PRESSURE SENSOR EARTH	469	B	*	*

(2) With air conditioning "ON" 0 volts, with air conditioning "OFF" 13 volts.
(3) 12 volts while engine is cranking.
(6) With transmission economy/power switch in economy position 12 volts, with switch in power position 0 volts.
(7) With engine cooling fan "ON" 0 volts, with engine cooling fan "OFF" 12 volts.
* Less than 0.05 volt.

TV624685

Figure 6C1-2A 22 PCM Connector Terminal End View (3 of 3)