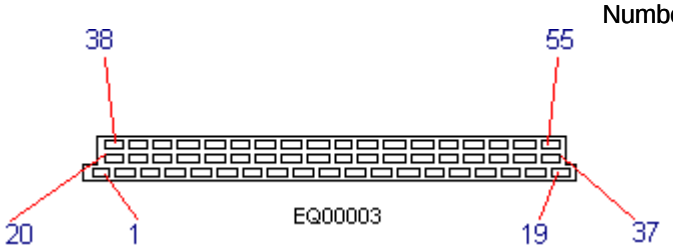
Number of ECM pins: 55



Pin	Connection	Test condition	Volts/Duty Cycle etc
1	amplifier control signal: t1	engine cranking/running	switching 0 to 5.0v
2	unused		
3	pump relay driver: t85b	ignition on	nbv
		cranking/running	1.25 max
4	ISCV: t1	ignition on	nbv
		engine running:	variable
		cold	6.0 to 6.5
		hot	7.0 to 9.0
		engine cold	frequency 100-110
			duty cycle 56-58%
		engine hot	
		no load	frequency 100-110
			duty cycle 40-44%
		under load	frequency 100-110
			duty cycle 44-50%
5	CFSV: t1	ignition on	nbv
		engine running,	
		snap accelerate	zero
6	unused		
7	AFS signal : t3	ignition on	1.40
		idle	1.90 to 2.25
		snap accelerate	3.00+
8	Cyl ID signal: t2	engine running	2.50 (average)
9	VSS	vehicle moving	switching zero to 12v.
10	earth	engine running	0.25 max
11	knock sensor signal: t1	KS active	1.0 approx (peak to peak)
12	TPS supply: t2	ignition on/running	5.0 ± 0.1
13	SD socket : tB		
14	earth	ignition on/engine running	0.25 max
15	injector pulse, cyl 5: t1	ignition on	nbv
		cranking cold	11.0 to 12.0 ms
		cranking hot	3.1+ ms
		cold idle	4.5+ ms
		hot idle	3.1 to 3.3 ms
16	injector pulse, cyl 2: t1	ignition on	nbv
		cranking cold	11.0 to 12.0 ms
		cranking hot	3.1+ ms
		cold idle	4.5+ ms
		hot idle	3.1 to 3.3 ms
17	injector pulse, cyl 1: t1	ignition on	nbv
		cranking cold	11.0 to 12.0 ms
		cranking hot	3.1+ ms
		cold idle	4.5+ ms
		hot idle	3.1 to 3.3 ms
18	battery positive: t30	ignition off/on	nbv
19	earth (main ECM)	ignition on/running	0.25 max
20	amplifier control signal: t7	engine cranking/running	switching 0 to 5.0v
21	amplifier control signal: t3	engine cranking/running	switching 0 to 5.0v
22	SD warning lamp: H1	engine running	

		faults present	0.25 max
		no faults present	nbv
23	unused		
24	earth	ignition on/running	0.25 max
25	A/C compressor driver		
26	unused		
27	ignition switch t15	ignition on/running	nbv
28	oxygen sensor signal: t1	ignition Key On	0.4 to 0.5 volts
		engine running	200 to 1000 mv
		Throttle fully-open	1.0 volt constant
		Fuel cut-off	zero volt constant
		Switching frequency	1 sec intervals (approx)
29	knock sensor signal: t1	KS active	1.0 approx (peak to peak)
30	earth	ignition on/running	0.25 max
31	unused		
32	unused		
33	injector pulse, cyl 6: t1	ignition on	nbv
		cranking cold	11.0 to 12.0 ms
		cranking hot	3.1+ ms
		cold idle	4.5+ ms
		hot idle	3.1 to 3.3 ms
34	injector pulse, cyl 4: t1	ignition on	nbv
		cranking cold	11.0 to 12.0 ms
		cranking hot	3.1+ ms
		cold idle	4.5+ ms
		hot idle	3.1 to 3.3 ms
35	injector pulse, cyl 3: t1	ignition on	nbv
		cranking cold	11.0 to 12.0 ms
		cranking hot	3.1+ ms
		cold idle	4.5+ ms
		hot idle	3.1 to 3.3 ms
36	unused		
37	nbv supply from relay: t87	ignition on/running	nbv
38	Traction Control (TC) signal		
39	vehicle coding		
40	A/C compressor signal		
41	A/C high pressure switch		
42	earth	ignition on/running	0.25 max
43	tachometer		
44	ATS signal: t2	ignition on/running	80° 1.00 to 1.30
			20° 3.00 to 3.50
45	CTS signal: t2	ignition on/running	80° 1.00 to 1.30
			20° 3.00 to 3.50
46	main relay driver: t85	ignition off	nbv
		ignition on	1.25 max
47	unused		
48	CAS signal: t1	cranking:	AC 4.0v+ (peak to peak)
		idle:	AC 8.0v+ (peak to peak)
		cruise:	AC 14.0v+ (peak to peak)
49	CAS earth	engine running	0.25 max
50	Input signal, load reduction	Traction Control	
51	unused		
52	unused		
53	TPS signal : t3	ignition on/running	
		Closed	0.35 to 0.87
		Fully open	4.25 +
54	output signal, load signal	Traction Control	
55	diagnostic socket: tG		

< END >