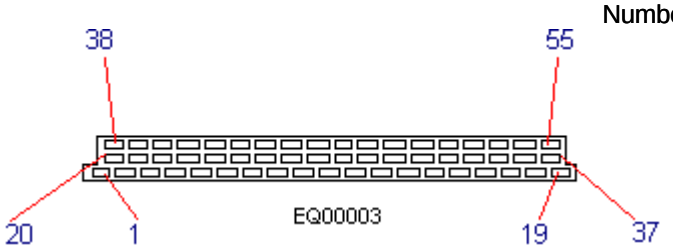
Number of ECM pins: 55



Pin	Connection	Test condition	Volts/Duty Cycle etc
1	amplifier control signal: t2	engine cranking/running	switching 0 to 5.0v
2	SD warning lamp driver	engine running	
		faults present	0.25 max
		no faults present	nbv
3	pump relay driver: t85	ignition on	nbv
		cranking/running	1.25 max
4	ISCV signal: t1	ignition on	nbv
		idle speed	duty cycle 30 to 40%
5	CFSV: t1	ignition on	nbv
		engine running, active	switching
6	tachometer		
7	AFS signal : t3	ignition on	1.40
		idle	1.90 to 2.25
		snap accelerate	3.00+
8	Cylinder ID (CID) signal: t2	engine running	2.50 (average)
9	VSS	vehicle moving	switching zero to 12v.
10	OS earth	engine running	0.25 max
11	knock sensor signal: t1	KS active	1.0 approx (peak to peak)
12	CID, TPS, barometric supply: t2	ignition on/running	5.0 ± 0.1
13	SD plug		
14	earth	ignition on/running	0.25 max
15	unused		
16	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
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	0.25 max
20	amplifier control signal: t7	engine cranking/running	switching 0 to 5.0v
21	WCS switching wire:: t1	engine running	
		not actuated by ECM	nbv
		actuated by ECM	0.25 max
22	ISCV signal: t3	ignition on	nbv
		idle speed	duty cycle 30 to 40%
23	unused		
24	earth	ignition on/running	0.25 max
25	AFS (hot wire burn-off): t4	coolant above 31°, rpm above 1000, switch off engine	hot wire glows for 1.5 seconds
26	AFS return: t2	ignition on/running	0.25 max
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	unused		
30	ATS, CTS, KS return: t1	ignition on/running	0.25 max
31	unused		
32	unused		
33	unused		
34	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
35	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
36	main relay driver: t85	ignition off	nbv
		ignition on	1.25 max
37	nbv supply from relay: t87	ignition on/running	nbv
38	unused		
39	unused		
40	unused		
41	unused		
42	unused		
43	unused		
44	ATS signal: t2	ignition on/running	20° C 3.00 to 3.50
45	CTS signal: t2	ignition on/running	80° C 1.00 to 1.30
			20° C 3.00 to 3.50
46	Barometric pressure signal	ignition on/running	
47	CAS return: t2	cranking/running	0.25 max
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	unused		
50	unused		
51	unused		
52	antitheft device		
53	TPS signal : t3	ignition on/running	
		Closed	0.35 to 0.87
		Fully open	4.25 +
54	unused		
55	SD plug		

< END >