Number of ECM pins: 55

Pin	Connection	Test condition	Volts/Duty Cycle etc	
1	coil negative: t1	ignition on	nbv	
		cranking/running	200 min	
		dynamic volt drop	2.0 max	
2	earth	ignition on/running	0.25 max	
3	relay driver: t85b	ignition on	nbv	
		cranking/running	1.25 max	
4	ISCV: t1	ignition on	nbv	
		engine running (variable)		
		engine running (variable)		Duty cycle
		Cold:	6.0 to 6.5	56 to 58%
		Hot:	7.0 to 9.0	40 to 44%
5	CFSV: t1	ignition on	nbv	
		snap accelerate	zero	
6	4 WD unit: t2/AT control unit			
7	AFS signal: t2	Ignition on	0.20 to 0.30	
		Idle	0.50 to 1.50	
		2000 rpm	1.75 to 2.25	
		3000 rpm	2.00 to 2.50	
		Snap accelerate	3.00 to 4.50	
		Fully open (off load)	4.50+	
8	HES signal: t2	engine running	2.50 (average)	
9	VSS	vehicle moving	switching 0 to nbv	
10	OS return	ignition on/running	0.25 max	
11	KS signal: t2	engine running, KS active	1.0 approx	
12	AFS supply: t3, TPS supply: t2	ignition on/running	5.0 ± 0.1	
13	diagnostic socket: tB			
14	earth	ignition on/running	0.25 max	
15	unused			
16	injector pulse, bank number 1	ignition on	nbv	
		cranking cold	11.0 to 12.0 ms	
		running cold	3.0 to 3.5 ms	
		cranking hot	4.0 to 4.5+ ms	
		running hot	2.0 to 2.8 ms	
		snap acceleration	6.0+ ms	
17	injector pulse, bank number 2	ignition on	nbv	
		cranking cold	11.0 to 12.0 ms	
		running cold	3.0 to 3.5 ms	
		cranking hot	4.0 to 4.5+ ms	
		running hot	2.0 to 2.8 ms	
		snap acceleration	6.0+ ms	
18	battery positive: t30	ignition off/on	nbv	
19	main ECM earth	ignition on/running	0.25 max	
20	coding earth (non-cat)	ignition on/running	0.25 max	
	(cat)	ignition on/running	5.0 ± 0.1	
21	coding earth (AT)	ignition on/running	0.25 max	
	(MT)	ignition on/running	5.0 ± 0.1	
22	fascia warning lamp	ignition on/running		
		lamp off, no fault :	nbv	
		lamp on, fault present :	0.25 max	
23	A/C cut-off solenoid			

24	earth	ignition on/running	0.25 max
25	unused		
26	sensor return : AFS, ATS, CO, CTS, TPS, OA	ignition on/running	0.25 max
27	ignition switch: t15	ignition on/running	nbv
28	OS signal : t3	ignition Key On	0.4 to 0.5
		engine running	200 to 1000 mv
		throttle fully-open	1.0 v constant
		fuel cut-off	0 v constant
		switching frequency	1 sec intervals (approx)
29	KS signal: t2	engine running, KS active	1.0 approx
30	KS return: t1	engine running, KS active	0.25 max
31	HES supply: t1	ignition on/running	nbv
32	on board computer: t24		
33	inlet manifold solenoid	idle speed	nbv
		4000 rpm+	0.25 max
		(AT : engage parking brake, AT selector in park)	
34	AT control unit: t25	engine running	
35	unused		
36	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	A/C cut-off switch		
41	A/C pressure switch		
42	ignition switch: t:50 (AT)	engine cranking	nbv
42	coding earth (MT)	ignition on/running	0.25 max
43	CO - non-Cat (AFS: t1)	ignition on/running	2.5 ± 0.5
44	ATS (AFS: t5)	ignition on/running	20°C 3.50 to 3.75
45	CTS: t2	ignition on/running	20°C 3.00 to 3.75
			80°C 1.00 to 1.30
46	octane adjuster: tA	ignition on/running	
		95 octane (brown)	0.9
		98 octane (brown)	1.6
47	earth (4x4)	ignition on/running	0.25 max
48	CAS return: t2	engine running	0.25 max
49	CAS signal: t1	idle speed	8.0 volts AC, peak to peak
50	unused		
51	AT control unit: t13		
52	unused		
53	TPS signal : t3	ignition on/running	
		Closed	0.35 to 0.87
		Fully open	4.25 +
54	oil temperature switch (transmission)	ignition on, inactive	nbv
		idle speed, inactive	nbv
		all vehicles, active	0.25 max
55	diagnostic socket : tG		

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