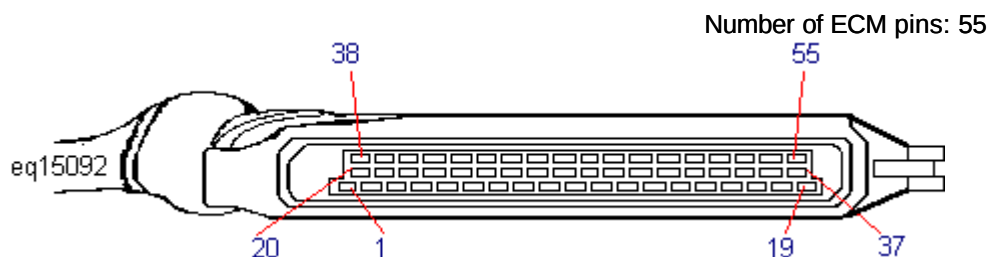


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Pin	Connection	Test condition	Volts/Duty Cycle etc
1	amplifier control signal: t1	engine cranking/running	switching 0 to 5.0v
2	First gear recognition	ignition on/engine running Transmission in Neutral	nbv 0.25 max.
3	pump relay driver: t85b	ignition on cranking/running	nbv 1.25 max
4	ISCV: t1	ignition on engine running: cold hot engine cold engine hot no load under load	nbv variable 6.0 to 6.5 7.0 to 9.0 frequency 100-110 duty cycle 56-58% frequency 100-110 duty cycle 40-44% frequency 100-110 duty cycle 44-50%
5	CFSV: t1	ignition on engine running, snap accelerate	nbv zero
6	unused		
7	AFS signal : t3	ignition on idle snap accelerate	1.40 1.90 to 2.25 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, CID supply: t2	ignition on/running	5.0 ± 0.1
13	SD socket : tB		
14	earth (injectors)	engine running	0.25 max
15	unused		
16	injector pulse, cyl 3: t1	ignition on cranking cold cranking hot cold idle hot idle	nbv 11.0 to 12.0 ms 3.1+ ms 4.5+ ms 3.1 to 3.3 ms
17	injector pulse, cyl 1: t1	ignition on cranking cold cranking hot cold idle hot idle	nbv 11.0 to 12.0 ms 3.1+ ms 4.5+ ms 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	unused		
21	WCS switching wire:: t1	engine running not actuated by ECM actuated by ECM	nbv 0.25 max
22	SD warning lamp: H1	engine running	

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		faults present	0.25 max
		no faults present	nbv
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	sensor return: t2	ignition on/running	0.25 max
31	Hot start valve switch: t1	ignition on/running	nbv
		high fuel temperature	0.25 max.
32	on board computer: t24		
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	relay driver: t85	ignition off	nbv
		ignition on	1.25 max
37	nbv supply from main relay: t87	ignition on/running	nbv
38	unused		
39	unused		
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	unused		
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	unused		
51	unused		
52	Reverse gear recognition	ignition on/engine running	
		Transmission in Neutral	nbv
		Transmission in Reverse gear	0.25 max.
53	TPS signal : t3	ignition on/running	
		Closed	0.35 to 0.87
		Fully open	4.25 +
54	unused		
55	diagnostic socket: tG		

< END >