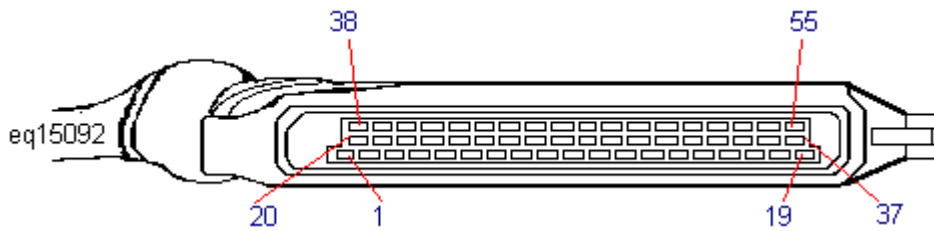


Number of ECM pins: 55



Pin	Connection	Test condition	Volts/Duty Cycle etc
1	ignition coil: t1	ignition on/running cranking/running dynamic volt drop	nbv 200 min 2.0 max
2	earth, ignition driver	ignition on	0.25 max
3	pump relay driver: t85	ignition on cranking/running	nbv 1.25 max
4	ISCV switching: t1	ignition on engine running (Variable) Cold: Hot: engine cold  engine hot no load  under load	nbv  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 switching: t1	ignition on	nbv
6	tachometer	engine running frequency	square wave signal one signal per ignition
7	AFS signal: t2	Ignition on Idle 2000 rpm 3000 rpm Snap accelerate engine running	0.20 to 0.30 0.75 to 1.50 2.00 to 2.50 2.00 to 3.50 3.00 to 4.50 AC waveform
8	CID signal: t2		
9	unused		
10	OS return: t4	engine running	0.25 max
11	unused		
12	AFS supply: t3	ignition on/running	5.0 ± 0.1
13	diagnostic socket : t15	cover of SD connector closed	10v +
14	earth, injector driver	ignition on	0.25 max
15	warning lamp (US only)	ignition on/running	nbv
16	injector pulse, cyls 2 and 4 (model year 89: cyls 1 and 3)	ignition on cranking cold running cold cranking hot running hot snap acceleration	nbv 11.0 to 12.0 ms 4.5 to 5.0 ms 4.0 to 4.5 ms 3.0 to 3.5 ms 6.0+ ms
17	injector pulse, cyls 1 and 3 (model year 89: cyls 2 and 4)	ignition on cranking cold running cold cranking hot running hot snap acceleration	nbv 11.0 to 12.0 ms 4.5 to 5.0 ms 4.0 to 4.5 ms 3.0 to 3.5 ms 6.0+ ms
18	battery supply: t30	ignition off	nbv
19	earth, main ECM and shield	ignition on/running	0.25 max

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20	unused		
21	unused		
22	unused		
23	OS relay driver : t85	engine running	1.25 max
24	earth, output drivers other than injector & ignition	ignition on/running	0.25 max
25	unused		
26	AFS return: t5	cranking/running	0.25 max
27	ignition switch: t15	ignition on	nbv
28	OS signal: t3	engine running	200 to 1000 mv
		Throttle fully-open	1.0v constant
		Fuel cut-off	0v constant
		Switching frequency	1 sec intervals (approx)
29	VSS	vehicle running	switching 0v to nbv
30	unused		
31	CID return: t1	engine running	0.25 max
32	fuel consumption meter		
33	kick down prevent, AT		
34	unused		
35	unused		
36	main relay driver: t85	ignition off	nbv
		ignition on/running	1.25 max
37	nbv supply from main relay: t87	ignition on/running	nbv
38	anti-theft system		
39	diagnostic socket : t18		
40	A/C pressure switch	ignition on	1.25 max
41	A/C motor switch	ignition on	nbv
42	AT drive selector	P/N position	1.25v
43	CO pot (AFS : t3)	ignition on/running	2.45 ± 0.5 (idle position)
44	ATS (AFS : t4)	ignition on/running	20°C 3.30 to 3.75
45	CTS signal: t2	ignition on/running	20°C 3.00 to 3.75
			80°C 1.00 to 1.30
46	unused		
47	CAS: t1	cranking:	AC 4.0v+ (peak to peak)
		idle:	AC 8.0v+ (peak to peak)
		cruise:	AC 14.0v+ (peak to peak)
48	CAS return: t2	cranking/running	0.25 max
49	unused		
50	unused		
51	Ignition timing intervention (Electronic transmission control) Note: temporarily switched on during AT downshifts		1.25 max (on)
52	TPS idle contact : t1	ignition on/running closed	0v
		open/part open	5.0v ± 0.1
53	TPS full-load contact : t3	ignition on/running closed/part open	5.0v ± 0.1
		fully open	0v
54	unused		
55	diagnostic socket : t20	cover of SD connector closed	1.25 max

< END >