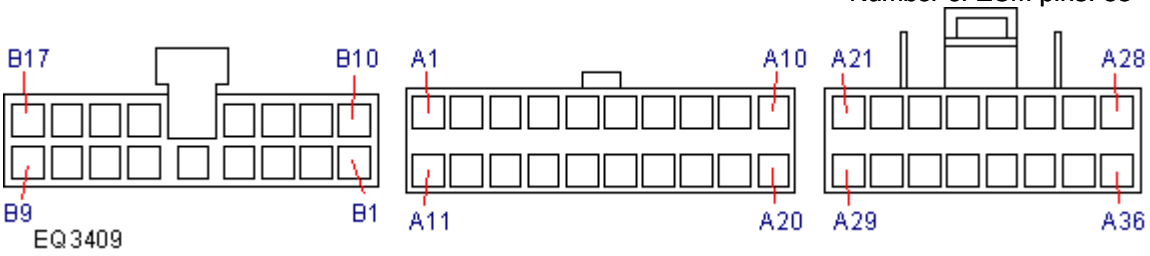
Number of ECM pins: 53




| Pin | Connection | Test condition | Volts/Duty Cycle etc |
|---|---|---|---|
| A1 | battery supply (fused) : t30 | ignition off/running | nbv |
| A2 | A/C clutch relay driver | ignition off | zero |
| A3 | unused | | |
| A4 | P/N switch (AT models) | | |
| A5 | unused | | |
| A6 | P/N switch (AT models) | | |
| A7 | cranking supply (fused) ignition switch : t50 | cranking | nbv |
| A8 | ignition output to amplifier : t1 | cranking/running | switching 0 to nbv |
| A9 | ignition output to amplifier : t2 (connected to ECM : tA8) | cranking/running | switching 0 to nbv |
| A10 | unused | | |
| A11 | fast idle solenoid driver : t1 | ignition on | nbv |
| | | engine running, rpm below 1800, CTS below -10° C | 0.25 max |
| A12 | unused | | |
| A13 | SD warning lamp : t1 | ignition on/running | |
| | | faults present | 1.25 max |
| | | no faults present | nbv |
| A14 | A/C pressure switch | | |
| A15 | RPM sensor signal : t2 | cranking: | AC 2.0v+ (peak to peak) |
| | | Idle: | AC 11.0v+ (peak to peak) |
| | | cruise: | AC 14.0v+ (peak to peak) |
| A16 | RPM sensor return : t1 | engine running | 0.25 max |
| A17 | alternator | engine running | nbv |
| A18 | VSS signal : t2 | ignition on | nbv to zero |
| | | vehicle moving | switching 0 to nbv |
| A19 | unused | | |
| A20 | CO pot signal : t3 | ignition on/running | 0 to 5.0 |
| A21 | CID sensor signal : t2 | cranking: | AC 2.0v+ (peak to peak) |
| | | Idle: | AC 11.0v+ (peak to peak) |
| | | cruise: | AC 14.0v+ (peak to peak) |
| A22 | TDC sensor signal : t2 | cranking: | AC 2.0v+ (peak to peak) |
| | | Idle: | AC 11.0v+ (peak to peak) |
| | | cruise: | AC 14.0v+ (peak to peak) |
| A23 | ATS signal : t2 | ignition on/running | 20 to 40°C 1.0 to 3.0 |
| A24 | TPS signal : t3 | ignition on/running | |
| | | closed | 0.5 |
| | | fully open | 4.50 approx |
| A25 | APS sensor signal : t3 | ignition on/running | |
| | | sea level | 3.0 |
| A26 | MAP sensor signal : t3 | WOT/ignition on | 2.75 to 2.95 |
| | | Idle speed | 0.6 to 0.8 apprx |
| A27 | sensor supply APS, MAP, TPS | ignition on/running | 5.0 ± 0.1 |
| A28 | sensor supply APS, MAP, TPS | ignition on/running | 5.0 ± 0.1 |
| A29 | CID return : t1 | cranking/running | 0.25 max |
| A30 | TDC sensor return : t1 | ignition on/running | 0.25 max |
| A31 | CTS signal : t2 | ignition on/running | 0 to 20°C 2.0 to 3.5 approx. |
| | | | 80 to 100°C 0.5 to 0.8 approx. |
| A32 | unused | | |

| | | | |
|---|---|---|---|
| A33 | unused | | |
| A34 | sensor return ATS : t1, CTS : t1, TPS : t1, APS sensor : t1 | ignition on/running | 0.25 max |
| A35 | MAP sensor return : t1 | ignition on/running | 0.25 max |
| A36 | SD connector: t2 | | |
| B1 | earth | ignition on/running | 0.25 max |
| B2 | earth (connected to ECM : tB1) | ignition on/running | 0.25 max |
| B3 | pump relay driver : t8 | ignition on | nbv |
| | | cranking/running | 1.25 max |
| B4 | pump relay driver : t8 (connected to ECM : tB3) | ignition on | nbv |
| | | cranking/running | 1.25 max |
| B5 | resonator control solenoid : t1 | ignition on | nbv |
| | | engine running above 3000 rpm | 0.25 max |
| B6 | A/T lock up solenoid | | |
| B7 | unused | | |
| B8 | earth | ignition on/running | 0.25 max |
| B9 | earth (connected to ECM : tB8) | ignition on/running | 0.25 max |
| B10 | ignition supply (fused) : t15 | ignition on/running | nbv |
| B11 | nbv supply from relay : t3 | ignition on | nbv |
| B12 | nbv supply from relay : t3 (connected to ECM : tB11) | ignition on | nbv |
| B13 | ISCV pulse : t1 | ignition on | nbv |
| | | engine running | variable (switching) |
| B14 | injector 4 pulse : t1 | ignition on | nbv |
| | | cranking cold | 3.0 to 4.0 ms |
| | | running cold | 3.0 to 4.0 ms |
| | | cranking warm | 2.1 to 2.6 ms |
| | | running warm | 2.1 to 2.6 ms |
| | | snap acceleration | 8.0+ ms |
| B15 | injector 3 pulse : t1 | ignition on | nbv |
| | | cranking cold | 3.0 to 4.0 ms |
| | | running cold | 3.0 to 4.0 ms |
| | | cranking warm | 2.1 to 2.6 ms |
| | | running warm | 2.1 to 2.6 ms |
| | | snap acceleration | 8.0+ ms |
| B16 | injector 2 pulse : t1 | ignition on | nbv |
| | | cranking cold | 3.0 to 4.0 ms |
| | | running cold | 3.0 to 4.0 ms |
| | | cranking warm | 2.1 to 2.6 ms |
| | | running warm | 2.1 to 2.6 ms |
| | | snap acceleration | 8.0+ ms |
| B17 | injector 1 pulse : t1 | ignition on | nbv |
| | | cranking cold | 3.0 to 4.0 ms |
| | | running warm | 3.0 to 4.0 ms |
| | | cranking warm | 2.1 to 2.6 ms |
| | | running warm | 2.1 to 2.6 ms |
| | | snap acceleration | 8.0+ ms |

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