

P09222 - Engine Control Unit

Design Review

Status from Previous Team:

The following issues were brought to our attention in the READ ME FIRST - IMPORTANT document. Further explanation of these issues from the beginning of the quarter is given in that document which is attached. The status of this year's team is noted in the Updated Status column.

Issue	Updated Status
Missing TI voltage regulator	Remains
Hole diameters	Designed into new PCB layout
JTAG connector pinout	Remains
Cut trace	PCB Board being redesigned
Finish routing	Near Completion
Damaged pads and traces	PCB Board Being redesigned
O2 sensor circuitry	Simulation complete - see O2 Sensor Design Review.doc
Relay circuit concern	Simulations completed, Potential Problems Identified Proceeding to hardware analysis
Injector circuit concern	Alternative switch selected, Simulation Completed, Proceeding to hardware testing
Cam/Crank design change	Resolved with PCB Redesign
Fuses	Remains - Suggestions?
2.5V reference	Resolved - Removed from board

Current Team:

Issues

Current Status

Cost of IAR Embedded work bench (Apx. \$700)	Assistance sought from EE Department - Negative Result Replace memory intensive lookup tables with linear interpolation - tradeoff - precision not as good, lose speed
Relay circuit concern	Suggestions needed for Simulation Output Data See Simulation Testing.doc

