

# C.A.T.S. Tuner ECM 6E Parameter List

## (ECM Configuration File Version BT)

### ECM Switch Parameters

VATS Select, X = Enabled  
Normally Open Fan Request Input  
Sliding Filter for Airflow, X = Enabled  
Open Loop Purge  
Single Fire Mode  
Dual Air Valve  
Cansiter Purge when Output Energized  
C.A.R.S. Select (X = Enabled)  
Manual/Auto Transmission, X = Manual  
4th Gear Switch N.O.  
TCC Control, (X = RPM else MPH)  
Unlock TCC in Decel Fuel C/O  
TCC Locked Highway Spark Enable Check  
4th Gear Highway Mode Spark Check  
TCC/Shift Light Control (0 = TCC)  
No Ref. Pulse Diag. (Error 12)  
O2 Sensor Diag. (Error 13)  
ECT Sensor High Diag. (Error 14)  
ECT Sensor Low Diag. (Error 15)  
TPS Sensor High Diag. (Error 21)  
TPS Sensor Low Diag. (Error 22)  
MAT Sensor Low Diagnostic (Error 23)  
Vehicle Speed Diag. (Error 24)  
MAT Sensor High Diagnostic (Error 25)  
EGR Diagnostic (Error 32)  
MAF Sensor High (Error 33)  
MAF Sensor Low (Error 34)  
MAF Burnoff Diag. (Error 36)  
Cylinder Select Diagnostic (Error 41)  
EST Monitor Diagnostic (Error 42)  
Knock Diagnostic (Error 43)  
O2 Sensor Lean Diagnostic (Error 44)  
O2 Sensor Rich Diagnostic (Error 45)  
VATS Diagnostic (Error 46)  
EPROM Diagnostic (Error 51)  
Missing CalPack Diagnostic (Error 52)  
Over-Voltage Diagnostic (Error 53)  
Fuel Pump Voltage Diagnostic (Error 54)

### ECM Constants

Initial Spark Advance  
Cool Compensation Spark Table Bias  
Min RPM for Highway Mode Spark  
Load Value to Disable Highway Mode Spark  
Min Coolant Temp for Highway Mode Spark  
Highway Mode Spark Enable Delay  
Spark Advance Added in ALDL Mode  
Max Spark Advance  
Knock Retard Enable RPM Threshold  
Knock Retard Delay Time  
Stall Saver Spark Disable RPM Threshold  
Fuel Cutoff Speed  
Fuel Resume Speed  
Fuel Cutoff Engine Speed  
Fuel Resume Engine Speed  
Injector Flow Rate, Single Fire  
Injector Flow Rate, Double Fire

Display Injector Flow Rate  
Stoichiometric Air Fuel Ratio  
Hot O2 Closed Loop Timer  
Warm O2 Closed Loop Timer  
Cold O2 Closed Loop Timer  
Closed Loop Fuel Enable Coolant Temp.  
Minimum Delta TPS For Accel. Enrich.  
Min Delta TPS A.E. Async Pulse Width  
Minimum Delta LV8 For Accel. Enrich.  
Max Accel. Enrich. Async Pulse Width  
DFCO Enable RPM Threshold  
DFCO Disable RPM Threshold  
DFCO Enable Load Threshold  
DFCO Disable Load Threshold  
Max. RPM Decrease/12.5ms To Stay In DFCO  
DFCO Enable TPS Threshold  
DFCO Disable Vss Threshold  
DFCO Enable Coolant Temp.  
Decel Enlean Enable Diff. TPS Threshold  
Decel Enlean Enable Diff. Load Threshold  
Decel Enlean BPW Factor (Low DRP's)  
Decel Enlean BPW Factor (High DRP's)  
Min Speed for Highway Mode Fuel  
Load Value to Disable Highway Mode Fuel  
Min Coolant Temp for Highway Mode Fuel  
Highway Mode Fuel Enable Delay  
Max Time in Highway Fuel Mode  
Minimum BLM value  
Maximum BLM value  
Min. Coolant Temp for BLM Update  
Max. Coolant Temp for BLM Update  
BLM - Update Rate  
BLM Update Cell Amount  
BLM Update - Min Pos. Integrator Error  
BLM Update - Min Neg. Integrator Error  
Minimum Integrator Value  
Maximum Integrator Value  
Startup Enrichment Decay Rate  
Min Coolant Temp. For High Temp P.E. AFR  
Idle Speed Adder in Park/Neutral  
Idle Speed Adder A/C On  
IAC Startup Park Position  
IAC Startup Delay Time  
Warm Park IAC Steps Adder - A/C On  
IAC Control Deadband RPM Error (in P/N)  
IAC Control Deadband RPM Error (Drive)  
IAC Learn - Min Coolant Temp  
IAC Learn - Max Coolant Temp  
Throt. Follower IAC Steps Added in Drive  
EGR On, (TPS)  
EGR Off, (TPS)  
Min. MAT to Enable EGR  
MAF High Diagnostic (Error 33) Threshold  
TCC Unlock Speed (Low Gears)  
TCC Lock Speed (Low Gears)  
TCC Unlock Speed (High Gear)  
TCC Lock Speed (High Gear)  
TCC Unlock Prevention Speed  
TCC Enable Coolant Temp. Threshold  
Min. Load Limit for TCC Lock, Low Speed  
Min. Load Limit for TCC Lock, High Speed  
TCC Min Load Limit Hysteresis  
TCC Min Load Limit High/Low Speed Thresh  
Shift Light Enable Coolant Temp. Thresh.  
Shift Light Enable Vehicle Speed Thresh.  
Shift Light Enable %TPS Threshold  
Shift Light Enable RPM Threshold  
Shift Light Disable RPM Threshold  
Shift Light Force On RPM Threshold  
Shift Light Force On Disable RPM Thresh

Min Canister Purge Duty Cycle (Low TPS)  
Canister Purge - Coolant Temp. Enable  
Canister Purge - Vehicle Speed Enable  
Canister Purge - TPS Enable  
Canister Purge - Vehicle Speed Disable  
Canister Purge - TPS Disable  
AIR Divert Enable Coolant Temp.  
AIR Divert O2 mV Rich/Lean Thresh Reduc.  
Default MAF Maximum %TPS Value  
Default MAF IAC Scale Factor  
Minimum Default MAF Value  
Number of Cylinders

## **Tables**

ECM Switch Table  
ECM Constant Table  
Main Spark Advance Vs. RPM Vs. Load  
Cool Compensation Spark Vs. Load Vs. Cool. Temp.  
Spark Advance In Power Enrich. Vs. RPM  
Knock Attack Rate Vs. RPM (Deg/msec)  
Knock Recovery Rate Vs. RPM (%/sec)  
Maximum Knock Retard Vs RPM In P.E.  
Maximum Knock Retard Vs Load, (Not In P. E.)  
Highway Mode Spark Advance Vs. Load  
Start Up Spark Advance Vs. Coolant Temp.  
Startup Spark Advance Decay Step Vs. Cool. Temp.  
Startup Spark Advance Decay Delay Vs. Cool. Temp.  
Stall Saver Spark Enable RPM Thresholds  
%TPS To Enable Power Enrich. Vs RPM (Normal)  
%TPS To Enable Power Enrich Vs RPM (Hot)  
P. E. %ChangeTo Fuel/Air Ratio Vs Coolant Temp.  
P. E. %Change To Fuel/Air Ratio Vs RPM  
Open Loop Fuel/Air Ratio %Change Vs.Load  
Open Loop Fuel/Air Ratio %Change Vs. Coolant Temp.  
Startup Fuel/Air Ratio %Change Vs. Coolant Temp.  
Startup Enrich Decay Amount Vs. Startup Cool Temp.  
Startup Enrich Decay Delay Vs. Startup Cool Temp.  
Highway Mode AFR Vs. Load  
Injector Pulse Width Correction vs Battery Voltage  
Low Pulse Width Injector Offset Vs. BPW  
Accel. Enrich %BPW Factor Vs Async Pulse  
No. of Accel Enrich Async Pulses Vs. Coolant Temp.  
Accel. Enrich. Async Factor Vs. Coolant Temp.  
LV8 Accel. Enrich. Factor Vs. Delta LV8  
LV8 Accel Enrich Coolant Factor Vs. Coolant Temp.  
LV8 Accel. Enrich. Decay Rate Vs. Coolant Temp.  
Crank Fuel Pulse Width Vs. Coolant Temp.  
Crank Fuel Pulse Width Multiplier Vs. TPS  
Crank Fuel PW Multiplier Vs. Ref. Pulses (1-16)  
Crank Fuel PW Multiplier Vs. Ref. Pulses (>17)  
BLM Cell RPM Boundaries  
BLM Cell MAF Boundaries  
Integrator Delay Vs. Airflow  
Integrator Delay Multiplier Vs. Error  
Rich/Lean O2 Count Offset Vs. Coolant Temp.  
Fast O2 Rich/Lean Threshold Vs. MAF  
Rich/Lean O2 Count Offset Vs. Coolant Temp.  
O2 Error Reduction Gain Vs. Airflow  
Upper Zero Error Reference for Slow O2 R/L Vs. MAF  
Lower Zero Error Reference for Slow O2 R/L Vs. MAF  
Warm IAC Park (Steps) vs Coolant  
Desired Idle Speed vs Coolant Temp.  
EGR % Duty Cycle Vs. LV8 Vs. RPM  
EGR Duty Cycle Multiplier Vs. Coolant Temp.  
Fan Control Coolant Temperatures  
Fan PWM % Duty Cycle Vs. ECT  
Mass Air Flow 1

Mass Air Flow 2

Mass Air Flow 3

Mass Air Flow 4

Mass Air Flow 5

Mass Air Flow 6

Maximum Mass Air Flow Vs. RPM, (Diag)

Default MAF Value per %TPS Vs. RPM

TCC Lower Load Limit Vs. Speed (High Gear)

TCC Upper Load Limit Vs. Speed (High Gear)

TCC Lower Load Limit Vs. Speed (Low Gears)

TCC Upper Load Limit Vs. Speed (Low Gears)

Shift Light On %TPS Threshold Vs. RPM

Shift Light Off %TPS Threshold Vs. RPM