

# C.A.T.S. Tuner PCM EE Parameter List

## (ECM Configuration File Version DN)

### ECM Switch Parameters

VATS Select (F+B-Body) (X = Enabled)  
VATS Select (Y-Body) (X = Enabled)  
Transient Fuel Logic Enable (X=Enabled)  
BLM Blend (X = Enabled)  
CCP Disabled on Low TPS (X = Enabled)  
Traction Control (X = Enabled)  
C.A.R.S. Select (X = Enabled)  
Speed Density Mode (X= Enabled)  
Crank AIR Select (X = Enabled)  
TCC Off at Low TPS (X=Enabled)  
TCC Off at Very Low TPS (X=Enabled)  
TCC Release with Rapid TPS Decrease  
Gradual TCC Release (X=Enabled)  
Downshift Turns TCC Off (X = Enabled)  
Upshift Turns TCC Off (X = Enabled)  
Turn Off TCC if ASR On (X = Enabled)  
TCC Off at Large Neg. Slip (X=Enabled)  
Automatic Trans. Option (X = Enabled)  
Force Manual Mode in D2 (X = Enabled)  
ASR Downshift Inhibit (X = Enabled)  
ASR Upshift Inhibit (X = Enabled)  
Shift Solenoid A - 1st Gear (X=Enabled)  
Shift Solenoid A - 2nd Gear (X=Enabled)  
Shift Solenoid A - 3rd Gear (X=Enabled)  
Shift Solenoid A - 4th Gear (X=Enabled)  
Shift Solenoid B - 1st Gear (X=Enabled)  
Shift Solenoid B - 2nd Gear (X=Enabled)  
Shift Solenoid B - 3rd Gear (X=Enabled)  
Shift Solenoid B - 4th Gear (X=Enabled)  
Injector Fault, Cylinder 1, Error 1  
Injector Fault, Cylinder 2, Error 2  
Injector Fault, Cylinder 3, Error 3  
Injector Fault, Cylinder 4, Error 4  
Injector Fault, Cylinder 5, Error 5  
Injector Fault, Cylinder 6, Error 6  
Injector Fault, Cylinder 7, Error 7  
Injector Fault, Cylinder 8, Error 8  
MALF Indicator Lamp Fault, Error 11  
No DRP Fault, Error 12  
Left O2 Sensor Failure, Error 13  
Low Res. DRP Failure, Error 16  
Injector Intermittent Fault, Error 18  
Injector Failure, Error 19  
TPS Sensor High, Error 21  
TPS Sensor Low, Error 22  
MAT Sensor Low Failure, Error 23  
Vehicle Speed Diagnostic, Error 24  
MAT Sensor High Failure, Error 25  
CCP Electrical Failure, Error 26  
EGR Electrical Failure, Error 27  
Trans. Range Control Circuit, Error 28  
Air Pump Diagnostic, Error 29  
EGR Diagnostic, Error 32  
High MAP Diagnostic, Error 33  
Low MAP Diagnostic, Error 34  
Hi Res DRP Diagnostic, Error 36

Brake Switch Shorted Diag, Error 37  
Brake Switch Open Diag, Error 38  
Spark System Open Diagnostic, Error 41  
Spark System Diagnostic, Error 42  
Knock Sensor Diagnostic, Error 43  
Left O2 Sensor Lean, Error 44  
Left O2 Sensor Rich, Error 45  
VATS Diagnostic, Error 46  
Missing Spark Module, Error 47  
MAF System Diagnostic, Error 48  
Oil Temp. Low Diag - Error 52  
System Voltage High, Error 53  
Fuel System Lean, Error 55  
Trans. Temperature High Diag, Error 58  
Trans. Temperature Low Diag, Error 59  
A/C Low Charge Diagnostic, Error 61  
Oil Temp. High Diag - Error 62  
Right O2 Sensor Fail, Error 63  
Right O2 Sensor Lean, Error 64  
Right O2 Sensor Rich, Error 65  
A/C Press Sensor Diagnostic, Error 66  
A/C Press Sensor Diagnostic, Error 67  
A/C Relay Diagnostic, Error 68  
A/C Clutch Diagnostic, Error 69  
A/C Clutch Relay Diagnostic, Error 70  
A/C Evap. Temp. Diagnostic, Error 71  
No Vss Signal Diagnostic, Error 72  
Force Motor Current Diag, Error 73  
Traction Control Diagnostic, Error 74  
Trans System Voltage Diag, Error 75  
Fan 1 Diagnostic, Error 77  
Fan 2 Diagnostic, Error 78  
Trans Fluid Temp. High Diag, Error 79  
Transmission Slip, Error 80  
Trans Shift 'B' Diag, Error 81  
Trans Shift 'A' Diag, Error 82  
TCC Control Feedback Diag, Error 83  
3->2 Downshift Feedback Diag, Error 84  
TCC Stuck On Diagnostic, Error 85  
TCC Enable Error Diagnostic, Error 90  
Shift Light Diagnostic (Error 91)  
Oil Level Diagnostic, Error 96  
Vss Signal Diagnostic, Error 97

## **ECM Constants**

Cylinder Volume  
Injector Flow Rate  
MAP Threshold To Enable WOT  
Cool Thresh For TPS For WOT (HighTemp)  
Min. Cool. Temp. for Closed Loop  
Min Cool Temp for Closed Loop, Cold MAT  
Cold Closed Loop Timer Threshold  
Hot Closed Loop Timer Threshold  
Minimum BLM  
Maximum BLM  
Minimum Keep-Alive BLM  
Maximum Keep-Alive BLM  
BLM Cell MAP Boundary Hysteresis  
BLM Cell RPM Boundary Hysteresis  
Max Integrator  
Min. Integrator  
Individual Cyl. Fuel Trim Disable %TPS  
Minimum Injector Pulse Width  
Hi Temp Enrich Enable Coolant Temp.

Hi Temp Enrich Disable Coolant Temp.  
High Coolant Temp. Min. Enrich AFR  
High Temp. Enrich Enable Delay  
Baro Update RPM Threshold  
EGR Enable, Min. MAP  
EGR Enable, Min RPM  
EGR Enable, Max RPM  
EGR Enable Cool. Temp (Hi Startup MAT)  
EGR Enable Cool. Temp (Low Startup MAT)  
Fan Temp. Hysteresis - Low Vehicle Speed  
Fan Temp Hysteresis - High Vehicle Speed  
Fan High/Low Vehicle Speed Threshold  
Fan 1 On, Oil Temp, (Low RPM)  
Fan 1 On, Oil Temp , (High RPM)  
Fan 2 On, Oil Temp, (Low RPM)  
Fan 2 On, Oil Temp, (High RPM)  
Fan Enable, (High RPM, High Oil Temp)  
Fan 1 On High A/C Pressure Threshold  
Fan 1 Off High A/C Pressure Threshold  
Fan 1 Disable MPH, High A/C Pressure  
Fan 1 Enable MPH, High A/C Pressure  
Fan 2 On High A/C Pressure Threshold  
Fan 2 Off High A/C Pressure Threshold  
Fan 2 Disable MPH, High A/C Pressure  
Fan 2 Enable MPH, High A/C Pressure  
Fuel Cutoff Speed  
Fuel Resume Speed  
Fuel Cutoff RPM, 1st Gear  
Fuel Cutoff RPM, 2nd - 6th Gear  
Fuel Resume RPM, 1st Gear  
Fuel Resume RPM, 2nd - 6th Gear  
Error 32, Min Diff. MAP Test Value  
Speedometer Scalar  
Speedometer Scalar, Fraction  
Speedometer Scalar, (Scan Tool)  
Speed Pulses Per Driveshaft Revolution  
Time Between Pulses For 'Stop'  
Canister Purge Enable Cool. Temp.  
Min. Coolant Temp. For CAT Protect  
Min. Coolant Temp. To Enable C.A.R.S.  
RPM Threshold To Disable C.A.R.S.  
%TPS Threshold To Disable C.A.R.S.  
Low PRNDL Upshift Speed Threshold  
Low PRNDL Downshift Speed Threshold  
Maximum Line Pressure  
Kickdown Mode Enable TPS Threshold  
Kickdown Mode Disable TPS Threshold  
DFCO Enable RPM Threshold  
DFCO Disable RPM Threshold  
DFCO Enable MAP Threshold  
DFCO Disable MAP Threshold  
DFCO Disable RPM Decrease Threshold  
DFCO Enable Coolant Temp. Threshold  
DFCO Enable MPH Threshold  
DFCO Enable Delay Timer  
DFCO Spark Retard  
Knock Retard Enable Coolant Temp.  
Burst Knock Enable %Diff Air Flow Thresh  
Burst Knock Enable Coolant Temp. Thresh.  
Low Octane Comp. Attack Gain MAP Enable  
Low Octane Attack Gain Delta MAP Disable  
Low Octane Compensation Decay Gain  
Spark Advance Table Bias  
Spark Coolant Temp Correction Bias  
Spark Reference Angle  
Maximum Spark Advance  
Min. Coolant Temp. To Enable Air Pump

Closed Loop Idle Enable Vehicle Speed  
IAC Power Steering Anticipate Correction  
A/C Clutch Disable %TPS Threshold  
A/C Enable Evap. Temperature  
A/C Disable Evap. Temperature  
CAT Overtemp Threshold (Low Baro)  
CAT Overtemp Threshold (Mid Baro)  
CAT Overtemp Threshold (High Baro)  
CAT Overtemp AFR  
TCC Upshift Off Time  
TCC Downshift Off Time  
Vss Diagnostic Enable Min RPM  
Tach Signal High Period

## **Tables**

ECM Switch Table  
ECM Constant Table  
Main Spark Advance Vs. RPM Vs. MAP  
Extended Spark Advance Vs. RPM Vs. MAP  
Spark Correction Vs. MAP Vs. Coolant Temp.  
Closed TPS Spark Advance Vs. RPM  
Minimum Spark Advance Vs. RPM  
Crank Spark Advance Vs. Coolant Temp.  
Knock Fast Attack Rate Vs. RPM  
Knock Retard Recovery Rate Vs. RPM  
Max. Knock Retard Vs. RPM (in P.E.)  
Max. Knock Retard Vs. MAP (not in P.E.)  
Burst Knock Retard Vs. Coolant Temp.  
Low Octane Compensation Attack Gain Vs. RPM  
Low Octane Knock Retard Multiplier Vs. RPM  
Low Octane Knock Retard Multiplier Vs. MAP  
Low Octane Knock Retard Multiplier Vs. Cool. Temp.  
Traction Control Spark Retard Vs. RPM  
EGR Spark Advance Correction Vs Vacuum Vs RPM  
%TPS Threshold For WOT Vs. RPM Vs. Cool Temp  
Volumetric Efficiency Vs. RPM Vs. MAP  
Volumetric Efficiency Vs. RPM Vs. MAP (Ext.)  
Inverse Temperature Correction Term Vs. MAT  
Crank Volumetric Efficiency Vs. %TPS Vs. RPM  
Injector Offset Vs. Battery Voltage  
End of Injection Target Location Vs. Cool. Temp.  
Low Pulse Width Injector Offset Adder Vs. BPW  
%Change To Fuel/Air Ratio Vs. Cool. Temp. at WOT  
%Change To Fuel/Air Ratio Vs. RPM at WOT  
Open Loop AFR Vs Coolant Temp. Vs. MAP  
Closed Loop Fuel Timer Vs Coolant Temp.  
BLM Cell RPM Boundaries  
BLM Cell MAP Boundaries  
Individual Cylinder Fuel Trim Multiplier  
Fast O2 Rich/Lean Threshold Vs. CL Mode  
Base O2 Integrator Delay Vs. CL Mode  
CL Mode Value Vs. AirFlow  
DFCO Enable %TPS Threshold Vs. RPM  
IAC Target RPM Vs. Coolant Temp Vs. Gear  
IAC Park Position Vs. Coolant Temperature  
IAC Offset for A/C Anticipate Vs. A/C Pressure  
Idle Overspeed Spark Retard Vs. RPM Error  
Idle Underspeed Spark Advance Vs. RPM Error  
Throttle Follower IAC Offset Vs. MPH  
Crank AFR Vs Distrib. Refer. Pulse Vs Cool. Temp.  
Extended Crank AFR Vs DRP Vs Cool. Temp.  
Prime Pulse Width Vs. Coolant Temp.  
Added Prime Pulse Width Vs. Coolant Temp.  
Added Prime Pulse Enable Crank Time Vs. Cool. Temp

Initial Startup AFR Enrichment Vs. Coolant Temp.  
Fan Enable Coolant Temp Vs. Speed  
Normal Mode Up/Down Shift Points  
Performance Up/Down Shift Points  
Manual Mode Up/Down Shift Points  
Cruise Mode Up/Down Shift Points  
Kickdown Mode Up/Down Shift Points  
Cold Mode Upshift Speed Modifier Vs. %TPS  
Kickdown Mode Shift RPM Thresholds Vs. Mode  
Main Line Pressure 0 - 64 MPH  
Main Line Pressure 64 - 128 MPH  
Line Pressure Modifier In WOT Vs RPM  
Line Pressure Offset Vs %TPS Vs Gear (Norm Mode)  
Line Pressure Offset Vs. %TPS Vs. Gear (Perf Mode)  
Line Pressure Offset Vs %TPS Vs Gear (Manual Mode)  
Line Press Mod Vs. %TPS Vs. Trans. Temp, 2nd Gear  
Line Press Mod Vs. %TPS Vs. Trans. Temp, 3rd Gear  
Line Press Mod Vs. %TPS Vs. Trans. Temp, 4th Gear  
Down Shift Pressure Modifier 2 -> 1 Vs MPH  
Down Shift Pressure Modifier 3 -> 2 Vs MPH  
Down Shift Pressure Modifier 4 -> 3 Vs MPH  
Garage Shift Press Vs Trans Temp Vs RPM - Drive  
Garage Shift Press Vs Trans Temp Vs RPM - Reverse  
Force Motor Current Vs Press Vs Trans Temp, + Chng  
Force Motor Current Vs Press Vs Trans Temp, - Chng  
Shift Time Vs. %TPS Vs. Shift, Normal, Low Alt.  
Shift Time Vs. %TPS Vs. Shift, Normal, High Alt.  
Shift Time Vs. %TPS Vs. Shift, Perform., Low Alt.  
Shift Time Vs. %TPS Vs. Shift, Perform., High Alt.  
Reverse Lockout Enable/Disable Speeds  
TCC Normal Mode Engage MPH Vs. Gear Vs. %TPS  
TCC Normal Mode Release MPH Vs. Gear Vs. %TPS  
TCC Manual Mode Engage MPH Vs. Gear Vs. %TPS  
TCC Manual Mode Release MPH Vs. Gear Vs. %TPS  
TCC Hot Mode Engage MPH Vs. Gear Vs. %TPS  
TCC Hot Mode Release MPH Vs. Gear Vs. %TPS  
TCC Performance Mode Engage MPH Vs. Gear Vs. %TPS  
TCC Performance Mode Release MPH Vs. Gear Vs. %TPS  
TCC Cruise Mode Engage MPH Vs. Gear Vs. %TPS  
TCC Cruise Mode Release MPH Vs. Gear Vs. %TPS  
TCC WOT Forced Lock Speed Threshold Vs. Gear  
TCC Off Time For Shift Vs Shift  
TCC Apply Operating Point Vs. %TPS Vs. Gear  
TCC Apply Rate Vs. Gear Vs. %TPS  
TCC Release Operating Point Vs. %TPS Vs. Gear  
TCC Release Rate Vs. Gear Vs. %TPS  
MAF Sensor Calibration Table 1  
MAF Sensor Calibration Table 2  
MAF Sensor Calibration Table 3  
MAF Sensor Calibration Table 4