

# C.A.T.S. Tuner ECM 5B Parameter List

## (ECM Configuration File Version Q)

### ECM Switch Parameters

VATS Select (X = Enabled)  
Min Cool Temp For Clsd Lp Diagnostic  
MAF Sensor Diagnostic (101)  
IAT Sensor Low Diagnostic (112)  
IAT Sensor High Diagnostic (113)  
ECT Sensor Low Diagnostic (117)  
ECT Sensor High Diagnostic (118)  
TPS Sensor Low Diagnostic (122)  
TPS Sensor High Diagnostic (123)  
Engine O2 Sensor Low Diagnostic (131)  
Engine O2 Sensor High Diagnostic (132)  
O2 Sensor Inactive Diagnostic (134)  
CAT O2 Sensor Low Diag. (137)  
CAT O2 Sensor High Diag. (138)  
CAT O2 Sensor Inactive Diag. (140)  
Fuel Trim Lean Diagnostic (171)  
Fuel Trim Rich Diagnostic (172)  
Boost Control Diagnostic (257)  
Injector Wiring Diagnostic (274)  
Misfire Diagnostic (300)  
Lost 18x Interrupts Diag. (321)  
Knock Diagnostic (325)  
Intermittent CAM Signal Diag. (341)  
CAM Sensor Diagnostic (342)  
EST Diagnostic (350)  
EST Line Inactive Diagnostic (361)  
EGR Flow Diagnostic (400)  
EGR Flow Diagnostic (401)  
EGR Flow Diagnostic (403)  
EGR Actuator Diagnostic (406)  
CAT Diagnostic (420)  
EGR Feedpipe Diagnostic (484)  
Vehicle Speed Diagnostic (501)  
VSS Sensor Low Diagnostic (502)  
A/C Pressure Switch Diagnostic (530)  
A/C Freon Low Diagnostic (531)  
Cruise Stepper Motor Diagnostic (550)  
Cruise Vacuum Diagnostic (558)  
Vent Diagnostic (561)  
VAC Diagnostic (562)  
Cruise Servo Switch Diagnostic (565)  
Cruise Switch Diagnostic (567)  
Cruise System Diagnostic (568)  
TCS PWM Diagnostic (571)  
ABS Serial Data Diagnostic (573)  
Cruise Power Management (599)  
Oil Changed Input Diagnostic (619)  
PROM Diagnostic (623)  
Software Reset (624)  
Hardware Reset (625)  
VATS Diagnostic (626)  
Passkey Frequency Diagnostic (629)  
Battery Voltage Diagnostic (630)

QDM1 Diagnostic (640)  
QDM2 Diagnostic (650)  
QDM3 Diagnostic (660)  
QDM4 Diagnostic (670)  
QDM5 Diagnostic (680)  
Brake Switch Diagnostic (703)  
PRNDL Switch Diagnostic (705)  
Trans Temp Sensor Low Diagnostic (712)  
Trans Temp Sensor High Diagnostic (713)  
TCC Diagnostic (740)  
Trans Solenoid B Diagnostic (755)

## **ECM Constants**

Performance Timer Enable Speed Threshold  
Perf. Timer Enable Delta TPS Threshold  
Spark Reference Angle  
Min. Cool. Temp. For Burst Knock Retard  
Max. RPM For Burst Knock Retard  
Delta TPS To Enable Burst Knock Retard  
Maximum Burst Knock Retard  
Burst Knock Retard Decrement  
Max Spark Retard (Not In Power Enrich.)  
Max Spark Retard (In Power Enrich.)  
Knock Recovery High LV8 Threshold  
Max. TPS For Closed Loop Idle RPM Cntrl.  
Max Speed For Clsd. Lp. Idle RPM Control  
Max Air Flow For Clsd. Lp. Idle Control  
IAC Steps Added For P/N-Drive (A/C Off)  
IAC Steps Added For P/N-Drive (A/C On)  
Idle Overspeed Error For Spark Retard  
Idle Overspeed Sprk Rtrd Gain (In Drive)  
Idle Overspeed Sprk Rtrd Gain (In P/N)  
Idle Underspeed Error For Spark Advance  
Idle Underspeed Spk Rtrd Gain (In Drive)  
Idle Underspeed Sprk Rtrd Gain (In P/N)  
Min. Air Temp To Enable A.I.R.  
Max. Air Temp To Enable A.I.R.  
Min. Coolant Temp To Enable A.I.R.  
Max. Coolant Temp To Enable A.I.R.  
Firm Ride Delay After Pos. Delta TPS  
Min. Neg. Delta MPH To Enable Firm Ride  
Min. Pos. Delta MPH To Enable Firm Ride  
Firm Ride Delay After Pos. Delta MPH  
Firm Ride Delay After Neg. Delta MPH  
Lower EGR Enable TPS Threshold  
Lower EGR Disable TPS Threshold  
Upper EGR Disable TPS Threshold  
Upper EGR Enable TPS Threshold  
Normal Kickdown Mode %TPS Enable Thresh.  
Normal Kickdown Mode %TPS Disable Thresh  
Sport Kickdown Mode %TPS Enable Thresh.  
Sport Kickdown Mode %TPS Disable Thresh  
Positive Delta TPS TCC Unlock Threshold  
Negative Delta TPS TCC Unlock Threshold  
TCC Delay Before Lock  
TCC Release Rate, Pos. Delta TPS Unlock  
TCC Release Rate For 3->4 Shift Unlock  
TCC Release Time During 3->4 Upshift  
TCC Initial Apply Duty Cycle  
TCC Initial Release Duty Cycle

Max Turbine Torque (TCC Locked)  
Traction Control RPM Enable Threshold  
Traction Control %TPS Disable Threshold  
Traction Control Cool Temp Enable Thresh  
Fan 2 On Coolant Temp. Threshold  
Fan 2 Off Coolant Temp. Threshold  
Fan 1 On Vehicle Speed Threshold  
Fan 1 Off Vehicle Speed Threshold  
Fan 1 On Coolant Temp. Threshold  
Fan 1 Off Coolant Temp. Threshold  
Closed Loop Timer Cold/Warm Threshold  
Cold Closed Loop Enable Timer  
Warm Closed Loop Enable Timer  
Min Coolant Temp. For Closed Loop Fuel  
Closed Loop Enable RPM Threshold  
Hot Open Loop Enable Coolant Temp.  
Hot Open Loop Disable Coolant Temp.  
Maximum BLM Value  
Minimum BLM Value (Off Idle)  
Minimum BLM Value (At Idle)  
Synch. Delta TPS Accel. Enrich. Thresh.  
Boost Control Loop Integrator Gain  
Boost Control Loop Proportional Gain  
Fuel Reduction MPH Enable (3rd Gear)  
Fuel Reduction MPH Enable (4th Gear)  
Overspeed Fuel Reduction Gain Factor  
Overspeed Spark Retard  
Overspeed Air/Fuel Ratio  
Minimum Fuel Injector Off Time  
Minimum Base Pulse Width  
Summer Fuel Cal. Delta Temp. Threshold  
Winter Fuel Cal. Delta Temp. Threshold  
Summer Fuel Injector Flow Rate  
Winter Fuel Injector Flow Rate  
CAT Protect Mode Enable Coolant Temp.  
Abusive Maneuver MPH Disable Thresh.  
Abusive Maneuver %TPS Enable Thresh.  
Abusive Maneuver RPM Enable Thresh.  
Abusive Maneuver %TPS Disable Thresh.  
Brake Torque Mode Disable Speed  
Brake Torque Mode Disable Torque  
DFCO Enable RPM Threshold  
DFCO Disable RPM Threshold  
DFCO Disable Neg. RPM Change Threshold  
DFCO Disable Upper TPS Threshold  
DFCO Disable Lower Speed Threshold  
Road Speed Constant  
Instrument Panel VSS Pulse Divisor  
Min. 3rd Gear RPM/VSS Ratio  
Max. 3rd Gear RPM/VSS Ratio  
Min. 4th Gear RPM/VSS Ratio  
Max. 4th Gear RPM/VSS Ratio

## **Tables**

ECM Switch Table  
ECM Constant Table  
Main Spark Advance Vs. RPM Vs. Load  
Low Octane Main Spark Advance Vs. RPM Vs. Load  
Base Cool Temp Spark Advance Compensation Vs Load  
EGR Spark Advance Vs RPM Vs Load

MAT Spark Advance Correction Vs. Load  
TCC Locked Spark Advance Vs RPM Vs Load  
Spark Retard Vs. RPM Vs. Excess Torque  
Knock Retard Attack Rate Vs. RPM  
Normal Knock Retard Recovery Rate Vs. RPM  
High LV8 Knock Retard Recovery Rate Vs. RPM  
Spark Advance/Retard Vs. Time in P. E.  
Power Enrich. Spark Advance Trim Vs. RPM  
Power Enrich. Spark Retard Trim Vs. RPM  
Power Enrich. TPS Threshold Vs. RPM  
Power Enrich. AFR Vs. Coolant Temp.  
Engine %Efficiency Vs. RPM Vs. AFR  
Open Loop AFR Vs. Load Vs. RPM  
Power Enrichment Trim Vs. RPM  
Power Enrichment Trim Vs. TPS  
BLM Cell RPM Boundaries  
BLM Cell MAF Boundaries  
Accel. Enrich. BPW Multiplier Vs. Delta TPS  
DTPS Accel. Enrich. Mult. Vs. Cool. Temp. In Drive  
DTPS Accel. Enrich. Mult. Vs. Cool. Temp. In P/N  
Delta TPS Accel. Enrich. Mult. Vs. Air Temp.  
Injector Offset Vs. Battery Voltage  
MAF Vs. Output Frequency Table 1  
MAF Vs. Output Frequency Table 2  
MAF Vs. Output Frequency Table 3  
MAF Vs. Output Frequency Table 4  
MAF Vs. Output Frequency Table 5  
MAF Vs. Output Frequency Table 6  
MAF Vs. Output Frequency Table 7  
MAF Vs. Output Frequency Table 8  
IAC Motor Park Position Vs. Load  
Idle Speed Vs. Coolant Temp. (In Drive)  
Idle Speed Vs. Coolant Temp. (In P/N)  
Idle Speed Offset for A/C Vs. MAT  
Pos Delta %TPS/sec For Firm Ride Vs. MPH Vs. Gear  
EGR Actuator Position (%Stroke) Vs. RPM Vs. Load  
EGR Actuator Position Multiplier Vs. Coolant Temp.  
EGR Position Mult. Vs. Load (In 4th, TCC Locked)  
EGR Position Mult. Vs. Load (In 3rd, TCC Locked)  
Normal Kickdown RPM Shift Points  
Normal Kickdown MPH Shift Points  
Sport Kickdown RPM Shift Points  
Sport Kickdown MPH Shift Points  
Normal Mode MPH Shift Points Vs. % TPS  
Sport Mode MPH Shift Points Vs. % TPS  
TCC Lock Speed Vs. % TPS, Normal Mode, 3rd Gear  
TCC Lock Speed Vs. % TPS, Cruise Mode, 3rd Gear  
TCC Lock Speed Vs. % TPS, Normal Mode, 4th Gear  
TCC Lock Speed Vs. % TPS, Cruise Mode, 4th Gear  
TCC Unlock Speed Vs. % TPS, Normal Mode, 3rd Gear  
TCC Unlock Speed Vs. % TPS, Cruise Mode, 3rd Gear  
TCC Unlock Speed Vs. % TPS, Normal Mode, 4th Gear  
TCC Unlock Speed Vs. % TPS, Cruise Mode, 4th Gear  
TCC Lock Speed Vs. % TPS, Sport Mode, 3rd Gear  
TCC Lock Speed Vs. % TPS, Sport Mode, 4th Gear  
TCC Unlock Speed Vs. % TPS, Sport Mode, 3rd Gear  
TCC Unlock Speed Vs. % TPS, Sport Mode, 4th Gear  
TCC %D.C. Apply Rate Vs. %TPS  
TCC %D.C. Release Rate Vs. %TPS  
Maximum Turbine Torque Vs. RPM, 1 -> 2 Upshift  
Maximum Turbine Torque Vs. RPM, 2 -> 3 Upshift  
Maximum Turbine Torque Vs. RPM, 3 -> 4 Upshift  
Maximum Turbine Torque Vs. Gear

Maximum Turbine Torque Multiplier Vs. RPM  
Maximum Turbine Torque Multiplier Vs. Air Temp.  
Maximum Turbine Torque Multiplier Vs. Engine Perf.  
Crank Fuel Pulse Width Vs. Coolant Temp.  
Crank Fuel Pulse Width Multiplier Vs. % TPS  
Crank Fuel Enleanment Multiplier Vs. RPM  
Crank Fuel BPW % Enleanment Vs. Load  
Overspeed Fuel Reduction AFR Mult. Vs. Cool. Temp.  
Fuel Cutoff / Resume RPM Limits Vs. Gear  
Throttle Follower Gain Vs. Vehicle Speed  
Max Throttle Follower Steps Vs. Vehicle Speed  
Command Air Flow Vs. RPM Vs. Gear  
Fuel Cutoff/Resume Vehicle Speeds (MPH) Vs. Gear  
Brake Torque Mode Enable Torque Threshold Vs Gear