GM Enhanced Parameters

of 4x Ref Pulses between CAM Counter
OF EGR ADAPTIVE LEARN MATRIX CELLS OUT OF RANGE High
OF EGR ADAPTIVE LEARN MATRIX CELLS OUT OF RANGE LOW
1-2 Adapt High Cell
1-2 Adapt Low Cell
1-2 Shift Desired WOT RPM
1-2 Shift Time
1-2 Shift Time Error
1-2 Shift WOT RPM Adapt
2-1 Shift Time
2-3 Adapt High Cell
2-3 Adapt Low Cell
2-3 Shift Time
2-3 Shift Time Error
2-3 Solenoid Circuit Status
3-2 Shift Time
3-4 Adapt High Cell
3-4 Adapt Low Cell
3-4 Shift Time
3-4 Shift Time Error
4-3 Shift Time
A/C Evap Temp
A/C Highside Temperature
A/C Lowside Temperature
A/C Relay Circuit Status
Abnormal/Misfire Test Ratio
Actual Diesel Injection Pump Timing
Actual EGR Position
Adaptive Knock Retardr
Adaptive Pressure Mod 2
Adaptive Pressure Mod 2-2
Adaptive Pressure Mod 2-3
Adaptive Pressure Mod 3
Adaptive Pressure Mod 3-1
Adaptive Pressure Mod 3-2
Adaptive Pressure Mod 3-3
Air Conditioner Pressure
Air Fuel Ratio
Air Pump Diag. Percent Lean Time
Air Pump Diag. Percent Rich Time
Air Pump Diagnostic Active Time
AIR Pump Relay
AIR Solenoid
AIR Solenoid Circuit Status
Alternator F-Terminal Voltage or Generator PWM
APP Average
APP Indicated Angle
APP Sensor 1 Angle
APP Sensor 1 Volts
APP Sensor 2 Angle
APP Sensor 2 Volts
APP Sensor 3 Angle
APP Sensor 3 Volts
ATC Slip Speed
Auxiliary Input Status
Average Air Flow When Rear O2 Went Active
Averaged front oxygen sensor
Averaged Rear Oxygen Sensor
Bank 1 HO2S Crossover Counts
Bank 2 HO2S Crossover Counts
BARO
Barometric Pressure
Base Pulse Width

Battery Voltage
BLM cell 0. Closed throttle, low MAP
BLM cell 1. Closed throttle, low MAP
BLM cell 2. open throttle, low MAP
BLM cell3. open throttle, high MAP
Boost Solenoid Circuit Status
Brake Booster Vacuum
Calculated A/C Load
Calculated Barometric Pressure
Calculated Converter Temperature
Calculated EGR Percent
Calculated Engine Coolant Temperature
Calculated Engine Load
Calculated Engine Torque
Calculated Flow
Calculated Vacuum
CAM Engine Speed Activity
CAM Re-Syncs Counter
CAM Signal Input - High
CAM Signal Input - Low
Catalyst Damaging Misfire Timer
Catalyst EWMA Samples
Catalyst Monitor Average Deviation
Catalyst Monitor EWMA Sample Counter Bank 1
Catalyst Monitor Filtered Deviation Difference
Catalyst Monitor Non-Volatile Average Airflow
Catalyst Monitor Non-Volatile Storage of Converter Temperature at idle
Catalyst monitor Oxygen Sensor
Catalyst Monitor Oxygen Storage Difference Value
Catalyst Monitor Oxygen Storage EWMA Value
Catalyst Monitor Oxygen Storage Fail Threshold
Catalyst Test Fail Threshold
Catalyst Test Time Difference EWMA
CCP Purge Duty Cycle
Change Engine Oil Lamp Circuit Status
CKP Sensor Status
Closed Loop Integrator Value
CMP Retard
Commanded Line Pressure
Commanded Pressure
Controlled Canister Perge Solenoid
Converter Test Samples
Coolant Gauge Command
Coolant Temperature
Coolant Temperature Sensor
Crank Ref Missed (Diesel) TDC Offset
CRANKSHAFT POSITION SENSOR LOW RESOLUTION ANGLE
Cruise Delta
Cruise Disengage 1 History
Cruise Disengage 2 History
Cruise Disengage 3 History
Cruise Disengage 4 History
Cruise Disengage 5 History
Cruise Disengage 6 History
Cruise Disengage 7 History
Cruise Disengage 8 History
Cruise Inhibit Reason
Cruise Inhibit Signal Circuit Status
Cruise Switch A/D Input Voltage
Cruise Vehicle Set Speed
Current Adaptive Cell
Current Command Gear
Current Gear
Current IAC Memory
Current Octane Level

Current TAP (Transmission Adaptive Pressure) Cell
Cycles of Misfire Data
Cyl. #1 Injector Ckt. Status
Cyl. #2 Injector Ckt. Status
Cyl. #3 Injector Ckt. Status
Cylinder 1 IC Circuit Status
Cylinder 1 Injector Circuit History
Cylinder 1 Injector Circuit Status
Cylinder 2 IC Circuit Status
Cylinder 2 Injector Circuit History
Cylinder 2 Injector Circuit Status
Cylinder 3 IC Circuit Status
Cylinder 3 Injector Circuit History
Cylinder 3 Injector Circuit Status
Cylinder 4 IC Circuit Status
Cylinder 4 Injector Circuit History
Cylinder 4 Injector Circuit Status
Cylinder 5 IC Circuit Status
Cylinder 5 Injector Circuit History
Cylinder 5 Injector Circuit Status
Cylinder 6 IC Circuit Status
Cylinder 6 Injector Circuit History
Cylinder 6 Injector Circuit Status
Cylinder Air
Cylinder Mode Misfire Index
Cylinder Mode Misfire Index Level (1st peak)
Default: Force Motor Commanded Current
Delivered Engine Torque
Delivered Torque
Desired Air Fuel Ratio
Desired Diesel Injection Pump Timing
Desired EGR Position
Desired Gear
Desired Gear Turbine Slip Speed
Desired IAC
Desired IAC Position
Desired Idle
Desired Idle Air Control Airflow
Desired Idle Speed
Desired Linear EGR Position
Desired Torque
Desired Torque Level
Diesel Fuel Injection Pump Solenoid Closure Time
Driver Module 1 Status
Driver Module 2 Status
Driver Module 3 Status
Driver Module 4 Status
ECT Sensor
EGR Adaptive Learn matrix Cell Number
EGR Circuit History
EGR Circuit Status
EGR Decel EWMA Threshold
EGR Decel Filter
EGR Delta MAP Calculation
EGR Desired Position
EGR Duty Cycle
EGR pintle position
EGR Pintle Position Error
EGR Position
EGR Position Sensor
EGR Pressure Delta
EGR Sensor
EGR Solenoid Circuit History
EGR Solenoid Circuit Status
EGR Solenoid Circuit Status

EGR Test Count
Electronic Spark Advance Modifier
Electronic Spark Control Activity
Engine Coolant Temperature
Engine Coolant Temperature
Engine Coolant Temperature at Misfire
Engine Coolant Temperature at startup
Engine Coolant Temperature at startup
Engine Load at Misfire
Engine Oil Life Remaining
Engine Oil Pressure
Engine Oil Temperature
Engine RPM/MPH Ratio
Engine Run Time
Engine Speed
Engine Speed at Misfire
Engine Torque
Enhanced Evap Fault History
ESC Active Counter
ESC Diagnostic Pass Counter
EST1 Volts at Fail
EST2 Volts at Fail
EVAP Duty Cycle
EVAP Fault History
EVAP Purge Sol.
EVAP Purge Solenoid Circuit Status
Evap Tamk Vacuum Decay Slope
Evap Tank Pressure Decay Slope
Evap Tank Vacuum Decay Slope
Evap Tank Vacuum Filtered
EVAP Test Abort Reason
EVAP Test Result
EVAP Test State
EVAP Vent Sol.
EVAP Vent Solenoid Circuit Status
EVO Duty Cycle
EVO Feedback Voltage
Exhaust Oxygen Sensor
Fail Counter
Fast Idle Setting
FC Relay 1 Circuit Status
FC Relay 2 and 3 Circuit Status
Force Motor Actual Current
Force Motor Current Error
Force Motor Current Ref
Force Motor Duty Cycle
Front Propshaft Speed
Fuel Cutoff
Fuel Injection Pump Injection Angle
Fuel Level
Fuel Level
Fuel Level Sensor
Fuel Level Sensor Right Tank
Fuel Pressure (Gage)
Fuel Pump Ckt. History
Fuel Pump Ckt. Status
Fuel Pump Relay Circuit History Status
Fuel Pump Relay Circuit Status
Fuel Pump Voltage
Fuel Pump Voltage Feedback
Fuel Rate
Fuel System Status Bank 1
Fuel Tank Level Remaining
Fuel Tank Pressure
Fuel Tank Rated Capacity

Fuel Temperature
Fuel Trim Cell
Fuel Trim Cell Bank 1
Fuel Trim Cell Bank 2
Fuel Trim Index
Fuzzy Down Shift Quadrant
Garage Shift Adapt
Garage Shift Adapt-Drive High
Garage Shift Adapt-Drive Low
Garage Shift Adapt-Reverse High
Garage Shift Adapt-Reverse Low
Gear Box Ratio
Gear Box Torque
Glow Plug System Type
Glow Plug Voltage
Grade Load Shift Quadrant
High Cell Data Pressure
High MAP RAT Fail Count
High Spark Modifier
HO2S Bank 1 Sensor 1
HO2S Bank 1 Sensor 2
HO2S Bank 2 Sensor 1
HO2S Bank 2 Sensor 2
HO2S Sensor 1 Bank 1
HO2S Sensor 1 Bank 2
HO2S Sensor 2 Bank 1
HO2S Sensor 3 Bank 1
HO2S Xcounts Bank 1
HO2S Xcounts Bank 2
IAC Learned Position with A/C
IAC Motor Desired Position
IAC Motor Present Position
IAC Position
IAT Sensor
Idle Air Control Motor Position
Idle Diagnostic Filtered RPM Error
Ignition 0 Input Voltage
Ignition 0 Voltage
Ignition 1 Voltage
Ignition Cycle Counter
Ignition Timing Advance
Ignition Voltage
Ingition 1 Voltage From PPSW
Injection Pump CAM Ref Missed
Injector Pulse Width #1
Injector Pulse Width #2
Injector Pulse Width #3
Injector Pulse Width #4
Injector Pulse Width Average Bank 1
Injector Pulse Width Average Bank 2
Injector Pulse Width Bank 1
Injector Pulse Width Bank 2
Injector PWM Average Bank 1
Injector PWM Average Bank 2
Input Speed
Intake Air Temperature
Intake Air Temperature
Knock Retard
Knock Sensor
Knock Sensor Active Counter
Knock Sensor Minimum Learned Noise
Knock Sensor Noise Channel
Knock Sensor Voltage
Knock/Octane Adjust
KS Activity

KS Adjust Factor
Largest Positive MAF Error
Last Adapt Highest PWM
Last Adaptive Pressure
Last Shift Time
Last Shift Time Error
Last Tap
Lift Pump Volts
Linear EGR Closed Valve Pintel Postion
Linear Exhaust Gas Recirculation Feedback
Linear Exhaust Gas Recirculation Normalized
Long Term Fuel Trim Accel
Long Term Fuel Trim Bank 1
Long Term Fuel Trim Bank 1
Long Term Fuel Trim Bank 2
Long Term Fuel Trim Bank 2
Long Term Fuel Trim Cruise
Long Term Fuel Trim Decal
Long Term Fuel Trim Idle
Lopp Status
Low Oil Lamp Circuit Status
LOW RESOLUTION SIGNAL
Low Spark Modifier
Lowest EGR Pressure
MAF Frequency
MAF Idle Diagnostic Full EGR
MAF Idle Diagnostic No EGR
Manifold Absolute Pressure
Manifold Absolute Pressure (MAP)
Manifold Air Temperature
Mass Air Flow
Mass Air Flow Rate
Mass Air Flow Raw Input Frequency
Mass Air Flow Sensor 1
Maximum number of failed emission tests out of last 16
Maximum Throttle Position
Medium Resolution Engine Speed Activity
Medium Resolution Re-Syncs Counter
Mid Spark Modifier
MIL Circuit Status
Mileage Since First Fail
Mileage Since Last Code Clear
Mileage Since last Fail
Minimum Throttle Position
Misfire Current #1
Misfire Current #2
Misfire Current #3
Misfire Current #4
Misfire Current #5
Misfire Current #6
Misfire Current #7
Misfire Current #8
Misfire Current Cylinder #1
Misfire Current Cylinder #2
Misfire Current Cylinder #3
Misfire Current Cylinder #4
Misfire Current Cylinder #5
Misfire Current Cylinder #6
Misfire Current Cylinder #7
Misfire Current Cylinder #8
Misfire Cycle Delay Counter
Misfire Failures
Misfire History #1
Misfire History #2
Misfire History #3

Misfire History #4
Misfire History #5
Misfire History #6
Misfire History #7
Misfire History #8
Misfire History Cylinder #1
Misfire History Cylinder #2
Misfire History Cylinder #3
Misfire History Cylinder #4
Misfire History Cylinder #5
Misfire History Cylinder #6
Misfire History Cylinder #7
Misfire History Cylinder #8
Misfires per Cycle Status
No Results Counter
Non-Driven Wheel Speed
Number of Catalyst Tests Bank 1
Number Of DTC(s)
Number of Fail Emission MIS Tests out of Las 16
Number of Failed Catalyst Misfire Tests of Last 16
Number of Failed Catalyst Misfire Tests of Last 16 since code Clear
Number of Misfires
Number of Normals
O2 Average Bias Voltage
O2 Heater Time to Activity Bank 2 Sensor 3
O2 Heater Time to Activity Bank 2 Sensor 3
O2 Heater Time to Activity Sensor 1
O2 Heater Time to Activity Sensor 2
O2 Lean/Rich Average Time
O2 Lean/Rich Transitions
O2 Response Lean to Rich Switches Bank 1 Sensor 1
O2 Response Lean to Rich Switches Bank 1 Sensor 2
O2 Response Lean to Rich Switches Bank 2 Sensor 1
O2 Response Lean to Rich Transition Time Bank 1 Sensor 1
O2 Response Rich to Lean Average Time Bank 2 Sensor 1
O2 Response Rich to Lean Switches Bank 1 Sensor 1
O2 Response Rich to Lean Switches Bank 1 Sensor 2
O2 Response Rich to Lean Switches Bank 2 Sensor 1
O2 Response Rich to Lean Transition Time Bank 1 Sensor 1
O2 Response Rich to Lean Transition Time Bank 1 Sensor 2
O2 Response Rich to Lean Transition Time Bank 2 Sensor 1
O2 Rich/Lean Average Time
O2 Rich/Lean Transitions
O2 Sensor - Bank 1 Sensor 1
O2 Sensor - Bank 1 Sensor 1
O2 Sensor - Bank 1 Sensor 2
O2 Sensor - Bank 1 Sensor 2
O2 Sensor - Bank 1 Sensor 3
O2 Sensor - Bank 1 Sensor 3
O2 Sensor - Bank 1 Sensor 4
O2 Sensor - Bank 2 Sensor 1
O2 Sensor - Bank 2 Sensor 1
O2 Sensor - Bank 2 Sensor 2
O2 Sensor - Bank 2 Sensor 2
O2 Sensor - Bank 2 Sensor 3
O2 Sensor - Bank 2 Sensor 4
OBD Requirements
Odometer
Output Speed
Outside Air Temperature
Pass Counter
Passkey II Input Time Period
PC (Pressure Control) Solenoid Duty Cycle
PCS Actual Current
PCS Desired Current

PCS Duty Cycle
Present Gear Ratio
Pressure Control Actual Current
Pressure Control Reference Circuit
Pressure Torque Signal
PRND A Input
PRND B Input
PRND C Input
PRND P Input
PRND Position
PRNDL
PRNDL A
PRNDL B
PRNDL C
PRNDL P
Puge Learned Memory
Purge Long Term Fuel Trim #1
Purge Long Term Fuel Trim #2
Purge Long Term Fuel Trim #3
Purge Long Term Fuel Trim #4
Rear O2 Current Non-Volatile
REAR O2 FAIL TIME LEFT
Rear O2 Time to Activity
Rear Propshaft Speed
Ref. Low Voltage
Revolution Mode Misfire Index
Revolution Mode Misfire Index (Balance Time)
Revolution Mode Misfire Index Level
Rich/Lean to Lean/Rich Ratio Sen. 1
Service Spark Retard
Shift Adapt pressure
Shift Delay
Shift Error 1-2
Shift Error 2-3
Shift Error 3-4
Shift Pattern
Shift Pressure
Shift RPM
Shift Time 1 2
Shift Time 1-2
Shift Time 2 3
Shift Time 2-3
Shift Time 3-4
Shift Time Error 1 2
Shift Time Error 2 3
Shift Time Error for 1-2 Shift
Shift Time Error for 2-3 Shift
Shift Time Error for 3-4 Shift
Shift Time Error for Latest Shift
Shift Time Pressure Error
Shift Torque
Short Term Fuel Trim Bank 1
Short Term Fuel Trim Bank 1
Short Term Fuel Trim Bank 2
Short Term Fuel Trim Bank 2
Slip Adapt PWM
Solenoid Duty Cycle
Spark
Spark Advance
Spark Advance From Reference
Speed Ratio
Start Up Engine Coolant Temperature
Start Up Intake Air Temperature
Start Up Intake Air Temperature
Starter Enable Relay Circuit Status

Startup Coolant Temperature
Steady State Adapt 2nd Gear
Steady State Adapt Pressure
Steady State Adaptive-1st Gear
Steady State Adaptive-2nd Gear W/TCC
Steady State Adaptive-3rd Gear
Steady State Adaptive-3rd Gear W/TCC
Steady State Adaptive-4th Gear
Steady State Adaptive-4th Gear W/TCC
Steady State Adaptive-Reverse
Steady State Mode
Steady State Slip Accumulator
SuperCharger Boost
TAC Module Calibrated ID
TAC Module Calibration ID Byte 1
TAC Module Calibration ID Byte 2
TAC Module Calibration ID Byte 3
TAC Module Calibration ID Byte 4
TAC Module S/W Level
Tachometer Circuit History
Tachometer Circuit Status
Tachometer Ckt. History
Tachometer Ckt. Status
TCC Apply Time
TCC Duty Cycle
TCC Mode
TCC Pressure Commanded
TCC PWM Duty Cycle
TCC Ramp Off Time
TCC Slip
TCC Slip Speed
TCS Circuit History
TCS Circuit Status
TDC Offset
TFP Range
TFP Sw.
TFP Sw. A/B/C
TFT Sensor
TFT Sensor Voltage
Throttle Angle At Shift
Throttle Position #2 or Applied Pedal Position
Throttle Position #3 or Applied Pedal Position
Throttle Position Angle
Throttle Position Desired Angle
Throttle Position Sensor
Throttle Position Sensor Normalized in Degrees
Throttle Position Sensor Normalized in Pecent
Throttle Position Voltage
Time of Latest 1-2 Shift
Time of Latest 2-3 Shift
Time of Latest 3-4 Shift
Time of Latest Shift
Torque Management Spark Retard
Total Misfire Current Count
Total Misfire Failures Since First Fail
Total Misfire Pass
Total Misfire Passes Since First Fail
Total Misfires per Test Special
TP Angle
TP Sensor
TP Sensor 1 Angle
TP Sensor 1 Volts
TP Sensor 2 Angle
TP Sensor 2 Volts
TPS Learned Correction Factor Percent

TR Sw.
TR Switch
Traction Control Delivered Torque
Traction Control Shift Quadrant
Traction Control System PWM Input
Transaxle Oil Temperature
Transmission Diagnostic Code Set
Transmission Fluid Temperature
Transmission Input Shaft Speed
Transmission Input Speed
Transmission Oil Life
Transmission Oil Temperature
Transmission Output Shaft Speed
Transmission Output Speed
Transmission Pressure
Transmission Range
Transmission Range
Transmission Range Range Park/Reverse/Neutral/Overdrive/Drive 3/Drive 2/Low/Invalid
Transmission Steady State Clutch Slip Speed
Transmission Temp
Transmission Temp Sensor
Transmission Temperature
Transmission Temperature Sensor
Turbine Speed
Turbo Boost Pressure
TWC Monitor Average Deviation Difference Failure Threshold
TWC Monitor Deviation Difference Failure Threshold
Unfiltered ABS Speed (LF)
Unfiltered ABS Speed (Rear)
Unfiltered ABS Speed (RF)
Vehicle Speed
Vehicle Theft Deterrent Auto Learn Counter
Vehicle Theft Deterrent Seed and KeyTimer
Vehicle Theft Deterrent Timer
Warm up cycles without a non-emission fault
Warm up cycles without an emission fault
Wheel Acceleration Acel/Decel
Z-Body: Filtered Grade Load
Z-Body: shift Fail Counter
Z-Body: Steady State Ratio Fail Counter

*Not all enhanced parameters will be available for every vehicle.