

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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| Cruise Set Switch | Cruise Resume / Accel Switch |
| TCC/Cruise Brake Pedal Switch | CPP Switch |
| Ignition 1 Signal | Non-Driven Wheel Speed |
| Torque Delivered Signal | Cruise Disengage 1 History |
| Desired Idle Speed | TP Indicated Angle |
| 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 | TP Desired Angle |
| APP Indicated Angle | Crank Request Signal |
| Starter Relay Command | Ignition Accessory Switch |
| VTD Fuel Disable | VTD Fuel Disable Until Ignition Off |
| VTD Auto Learn Timer | Generator F-Terminal Signal |
| A/C Relay Command | Engine Oil Pressure Switch |
| Engine Oil Level Switch | MIL Command |
| MIL Request by DTC | Fuel Pump Relay Command |
| MAP Sensor | Fuel Trim Cell |
| Injector PWM | Air Fuel Ratio |
| CKP Sensor | MAF Sensor |
| Fuel Tank Pressure Sensor | Fuel Tank Pressure |
| Start Up ECT | Engine Off Time |
| Start Up IAT | Catalytic Converter Protection Active |
| TWC Temperature Calculated | HO2S Bank 1 Sensor 1 Heater |
| HO2S Bank 1 Sensor 2 Heater | A/C Pressure Disable |
| A/C Off for WOT | FC Relay 1 Command |
| A/C High Side Pressure Sensor | Fuel Level Sensor |
| CKP Resync Counter | Total Knock Retard |
| Fuel Tank Level Remaining | Total Misfire |
| Misfire History Cylinder 1 | Misfire History Cylinder 2 |
| Misfire History Cylinder 3 | Misfire History Cylinder 4 |
| Misfire Current Cylinder 2 | Misfire Current Cylinder 1 |
| Misfire Current Cylinder 3 | Misfire Current Cylinder 4 |
| Cycles of Misfire Data | Case Diagnostic Learning |
| Reduced Engine Power | TAC Motor |
| Wide Open Throttle | TAC Forced Engine Shutdown |
| APP Sensor 1 | APP Sensor 2 |
| TP Sensor 1 | TP Sensor 2 |
| HO2S Bank 1 Sensor 1 | HO2S Bank 2 Sensor 2 |
| CMP Active Counter | Torque Request Signal |
| EVAP Purge Solenoid Command | Barometer |
| Engine Oil Life Remaining | Engine Run Time |
| DTC Set This Ignition | Misfire Current Cylinder 5 |
| Misfire Current Cylinder 6 | Misfire History Cylinder 5 |
| Misfire History Cylinder 6 | Mileage Since DTC Cleared |
| Mileage Since First Failure | Mileage Since Last Failure |
| Injector PWM Bank 1 Average | Injector PWM Bank 2 Average |

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| HO2S Bank 2 Sensor 1 | Knock Retard |
| Misfire Current Cylinder 7 | Misfire Current Cylinder 8 |
| Misfire History Cylinder 7 | Misfire History Cylinder 8 |
| Warm-Ups without Emission Faults | Warm-Ups without Non-Emission Faults |
| Cruise Inhibit Signal | Extended Travel Brake Switch |
| Decel Fuel Cutoff | EVAP Vent Solenoid Command |
| Fuel Trim Learn | Power Enrichment |
| ECM Reset | Loop Status |
| EVAP Test Result | EVAP Test Abort Reason |
| EVAP Test State | HO2S Bank 2 Sensor 1 Heater |
| HO2S Bank 2 Sensor 2 Heater | Engine Idling |
| A/C Request | Low Coolant Level |
| Cruise Brake Switch | TP Sensor |
| HO2S Bank 1 Sensor 2 | Desired Idle Speed |
| A/C Request Signal | A/C Pressure Disable |
| A/C Off for WOT | A/C Relay Command |
| BPP Circuit Signal | HO2S 1 Heater Command |
| HO2S 2 Heater Command | Change Engine Oil Indicator Command |
| Low Engine Oil Pressure Indicator Command | Engine Oil Level Switch |
| Cold Startup | EVAP Vent Solenoid Command |
| Fuel Volatility | RVS Request Signal |
| Starter Relay Command | EC Ignition Relay Command |
| Ignition Accessory Signal | Crank Request Signal |
| Engine Load | Engine Oil Pressure Sensor |
| MIL Circuit Commanded On | Vehicle Speed Circuit Commanded On |
| Starter Relay Circuit Commanded On | Fuel Pump Relay Circuit Commanded On |
| A/C Relay Circuit Commanded On | TP Sensor 1 Learned Minimum |
| TP Sensor 2 Learned Minimum | Engine Off Time |
| TAC Motor Command | CMP Solenoid Circuit Commanded On |
| Cylinder 2 Ignition Coil Commanded On | Cylinder 3 Ignition Coil Commanded On |
| Cylinder 1 Injector Circuit Commanded On | Cylinder 2 Injector Circuit Commanded On |
| Cylinder 3 Injector Circuit Commanded On | Cylinder 4 Injector Circuit Commanded On |
| Cylinder 5 Injector Circuit Commanded On | Cylinder 6 Injector Circuit Commanded On |
| EVAP Purge Solenoid Circuit Commanded On | EVAP Vent Solenoid Circuit Commanded On |
| FC Relay 1 Circuit Commanded On | FC Relay 2 and 3 Circuit Commanded On |
| CMP Sensor | HO2S 1 Heater Circuit Commanded On |
| HO2S 2 Heater Circuit Commanded On | EC Ignition Circuit Commanded On |
| Generator L-Terminal Circuit Commanded On | A/C Disengage 1 History |
| A/C Disengage 2 History | A/C Disengage 3 History |
| A/C Disengage 4 History | A/C Disengage 5 History |
| A/C Disengage 6 History | A/C Disengage 7 History |
| A/C Disengage 8 History | RVS Disable 1 History |
| RVS Disable 2 History | RVS Disable 3 History |
| RVS Disable 4 History | RVS Disable 5 History |
| RVS Disable 6 History | RVS Disable 7 History |
| RVS Disable 8 History | Knock Detected Cylinder 1 |
| Knock Detected Cylinder 2 | Knock Detected Cylinder 3 |
| Knock Detected Cylinder 4 | Knock Detected Cylinder 5 |
| Knock Detected Cylinder 6 | Injector 1 Disabled Due to Misfire |
| Injector 2 Disabled Due to Misfire | Injector 3 Disabled Due to Misfire |
| Injector 4 Disabled Due to Misfire | Injector 5 Disabled Due to Misfire |

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| Injector 6 Disabled Due to Misfire | IMT Valve Solenoid Circuit Commanded On |
| IMT Valve Feedback signal | IMT Valve Command Open/Closed |
| IMT Valve Command On/Off | IMT Valve Learn Enabled |
| Start Up ECT | Cylinder 7 Injector Circuit Commanded On |
| Cylinder 8 Injector Circuit Commanded On | Current Gear |
| Knock Detected Cylinder 7 | Knock Detected Cylinder 8 |
| Injector 7 Disabled Due to Misfire | Injector 8 Disabled Due to Misfire |
| Cruise Control Active | Cruise On/Off Switch |
| Cruise Set/Coast Switch | Cruise Resume/Accel Switch |
| Starter Relay Command | Wait to Start |
| A/C Relay Command | MIL Command |
| Fuel Pump Command | Water in Fuel Sensor |
| Generator L-Terminal Signal | Engine Oil Level Switch |
| Stop lamp Pedal Switch | Coolant Level Switch |
| PTO Enable | PTO Feedback Signal |
| PTO Engine Shutdown Signal | PTO Engage Relay Command |
| DTC Set this Ignition | A/C Low Pressure |
| A/C High Pressure Recirculation | A/C Secondary High Pressure Switch |
| A/C Request Signal | A/C Compressor |
| Balancing Rate Cylinder 1 | Balancing Rate Cylinder 2 |
| Balancing Rate Cylinder 3 | Balancing Rate Cylinder 4 |
| Balancing Rate Cylinder 5 | Balancing Rate Cylinder 6 |
| Balancing Rate Cylinder 7 | Balancing Rate Cylinder 8 |
| Calculated Fuel Rate | Main Injection Timing |
| 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 |
| Pilot Injector Cylinder 1 Command | Pilot Injector Cylinder 2 Command |
| Pilot Injector Cylinder 3 Command | Pilot Injector Cylinder 4 Command |
| Pilot Injector Cylinder 5 Command | Pilot Injector Cylinder 6 Command |
| Pilot Injector Cylinder 7 Command | Pilot Injector Cylinder 8 Command |
| 4WD Signal | 4WD Low Signal |
| 5 Volt Reference Circuit 1 Status | 5 Volt Reference Circuit 2 Status |
| Cruise Control Active | Cruise On / Off Switch |
| Cruise Resume / Accel Switch | Cruise Set / Coast Switch |
| Cruise Cancel Switch | MIL Command |
| Engine Oil Temperature Calculated | Energy Power Management Inhibit Reason |
| Generator L-Terminal Command | 5 Volt Reference 2 Circuit |
| 5 Volt Reference 1 Circuit | ECM Reset |
| MIL Command | PNP Switch |
| Traction Control Status | Catalytic Control Status |
| Cold Startup | EVAP Vent Solenoid Command |
| ECM Reset | Loops Status |
| Hot Open Loop | Deceleration Fuel Cutoff |
| Power Enrichment | Fuel Trim Learn |
| GEN L-Terminal Signal Command | GEN L-Terminal Signal |
| Reduced Engine Power | APP Sensors 1 and 2 |
| TP Sensors 1 and 2 | FC Relay 3 Command |
| FC Relay 2 Command | FC Relay 2 and 3 Command |
| FC Relay 1 Command | A/C Compressor Cycling Switch |

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| A/C High Side Pressure Switch | Ext. Travel BPP Signal |
| BPP Signal | Clutch Start Switch |
| Skip Shift Lamp Command | Skip Shift Solenoid Command |
| HO2S Bank 2 Sensor 2 Heater Command | HO2S Bank 2 Sensor 1 Heater Command |
| Low Engine Oil Pressure Indicator Command | Engine Oil Pressure Switch |
| Engine Oil Indicator Command | EVAP Vent Solenoid Command |
| Engine Off EVAP Test Conditions Met | 4WD Signal |
| 4WD Low Signal | PNP Switch |
| PTO Remote Start Request Signal | Catalytic Converter Protection |
| Fuel Pump Relay 2 Command | Fuel Pump Relay Command |
| Deceleration Fuel Cutoff | Hot Open Loop |
| Power Enrichment | Loop Status |
| Fuel Trim Learn | Gen L-Terminal Signal Command |
| Starter Relay Command | Gen L-Terminal Signal Command |
| Cylinder Deactivation System Command | Cylinder Deactivation Performance Test |
| TP Performance Test | MAP Performance Test 2 |
| MAP Performance Test 1 | MAF Performance Test |
| Brake Booster Pressure Sensor | Brake Booster Pressure |
| Engine Oil Pressure Sensor | CKP Active Counter |
| Torque Management Spark Retard | KS Active Counter |
| Vacuum Calculated | Air Flow Calculated |
| Distance Since DTC Cleared | Fail Counter |
| Pass Counter | Not Run Counter |
| Fuel Tank Pressure | APP Sensors |
| TP Sensor 2 | TP Sensor 1 |
| APP Sensor 2 | APP Sensor 1 |
| Injector PWM Bank 1 | Injector PWM Bank 2 |
| VTD Fuel Disable | PCM/VCM in VTD Fail Enable |
| VTD Password Learned | CKP Variation Learn Attempts |
| Fuel Tank Rated Capacity | Fuel Level Remaining |
| TCS Torque Request Signal | TCS Torque Delivered Signal |
| Fuel Sensor Right Tank | TWC Mon. Bank 1 Test Count |
| TWC Mon. Bank 2 Test Count | Cooling Fan Motor Commanded |
| 5 Volt Reference 1 | 5 Volt Reference 2 |
| HO2S Bank 1 Sensor 1 Heater Command | HO2S Bank 2 Sensor 1 Heater Command |
| EC Ignition Relay Feedback Signal | Brake Booster Pressure |
| Deactivation Inhibit TAC Ignition Voltage | Deactivation Inhibit TAC System DTC |
| Deactivation Inhibit APP High | Deactivation Inhibit APP Rate High |
| Deactivation Inhibit Brake Boost Pressure Sensor DTC | Deactivation Inhibit Low Brake Booster Vacuum |
| Deactivation Inhibit MAP Sensor DTC | Deactivation Inhibit Manifold Vacuum Low |
| Deactivation Inhibit Vehicle Speed Sensor DTC | Deactivation Inhibit Vehicle Speed Sensor Low with Torque Converter Clutch On |
| Deactivation Inhibit Engine RPM | Deactivation Inhibit Engine Coolant Temperature Sensor DTC |
| Deactivation Inhibit Engine Coolant Temperature Low | Deactivation Inhibit Engine Oil Temperature |
| Deactivation Inhibit Engine Oil Pressure Sensor DTC | Deactivation Inhibit Engine Oil Pressure |
| Deactivation Inhibit Torque Reduction | Deactivation Inhibit Cylinder Deactivation Solenoid DTC |
| Deactivation Inhibit Oil Aeration | Deactivation Inhibit Minimum Time On All Cylinders |
| Deactivation Inhibit Transmission DLC Override | Deactivation Inhibit Transmission Shifting |
| Deactivation Inhibit Transmission Range | Deactivation Inhibit Transmission Gear |
| Deactivation Inhibit Maximum Deactivation Time Exceeded | Deactivation Inhibit Hot Coolant Mode |

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| Deactivation Inhibit Piston Protection | Deactivation Inhibit TWC Over temperature Protection |
| Deactivation Inhibit Engine Over temperature Protection | Deactivation Inhibit Axle Torque Limiting |
| ECM Challenge Status | VTD Security Info Programmed |
| VTD Password Learn Enabled | VTD Auto Learn Counter |
| A/C High Side Pressure | Short Term Fuel Trim Average |
| Short Term Fuel Trim Test Average Bank 1 | Short Term Fuel Trim Test Average Bank 2 |
| Long Term Fuel Trim Test Average Bank 1 | Long Term Fuel Trim Test Average Bank 2 |
| Long Term Fuel Trim Test Average Bank 1 without Purge | Long Term Fuel Trim Test Average Bank 2 without Purge |
| Start Up IAT | Fan Speed |
| Desired Fan Speed | Cooling Fan Command |
| Ignition Off Time | Exh. CMP Command |
| Int. CMP Command | CMP Command |
| HO2S Bank 2 Sensor 2 Heater Command | HO2S Bank 1 Sensor 2 Heater Command |
| Exh. CMP Angle | Int. CMP Angle |
| Desired Exh. CMP | Desired Int. CMP |
| Exh. CMP Variance | Int. CMP Variance |
| Exh. CMP Active Counter | Int. CMP Active Counter |
| Transfer Case Ratio | Torque Delivered Signal |
| Hill Hold Solenoid 1 | Hill Hold Solenoid 2 |
| Generator Starter Field Current | Starter Generator Speed |
| Generator Starter Rotor Position | SGCM 12 Volt Converter |
| SGCM Converter Temperature | APM Voltage |
| Desired APM Voltage | Hybrid System Voltage |
| SGCM Internal Temperature | SGCM Inverter Temperature |
| DMCM Coolant Temperature | MAP Sensor |
| Intake Manifold Pressure | Startup Intake Air Temperature |
| Distance with Cylinders Deactivated | Distance with Cylinders Activated |
| Exhaust Pressure | Torque Request Inhibit - Fuel |
| Torque Request Inhibit - Spark | Torque Request Inhibit - TAC |
| Torque Request Inhibit - Minimum Torque | Torque Request Inhibit - TAC Limit |
| Torque Request Inhibit - Spark Advance | Torque Request Inhibit - Minimum Idle Inhibit |
| Transfer Case OSS | TB Idle Airflow Compensation |
| Engine Auto Stop Times | Engine Auto Start Times |
| DFCO Active Time | Desired Starter Gen Torque |
| Calculated Starter Generator Torque | ECM Des. Contactor Position |
| SGCM Des. Contactor Position | Economy Lamp Command |
| Hood Open Indicator Command | Hill Hold Indicator Command |
| Starter Generator Belt Slip | Starter Generator Speed |
| Hybrid Battery SoC | Desired Hybrid Battery SoC |
| Hybrid Battery Voltage | Hybrid Battery Current |
| Hybrid Battery Average Cell Temperature | Hybrid Battery Max Cell Temperature |
| Hybrid Battery Min Cell Temperature | Hybrid Battery Power Available |
| Brake Pressure Sensor | Engine Coolant Circulation Pump Relay Command |
| A/C Mode Request Signal | Engine Torque Actual |
| Axle Torque Commanded | Axle Torque Actual |
| Dry Axle Torque Request | Engine Torque Commanded |
| Auxiliary Transmission Fluid Pump Relay | Auxiliary Transmission Fluid Pump Command |
| Hybrid System Voltage | Calculated Hybrid Battery Voltage |
| Hybrid Battery Low Current Sensor | Hybrid Battery High Current Sensor |
| Hybrid Battery Low Current Sensor | Hybrid Battery High Current Sensor |
| Hybrid Battery Mod 1 Temperature | Hybrid Battery Mod 1 Temperature Sensor |

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| Hybrid Battery Mod 2 Temperature | Hybrid Battery Mod 2 Temperature Sensor |
| Hybrid Battery Mod 3 Temperature | Hybrid Battery Mod 3 Temperature Sensor |
| Hybrid Battery Mod 4 Temperature | Hybrid Battery Mod 4 Temperature Sensor |
| Hybrid Battery Mod 5 Temperature Sensor | Hybrid Battery Mod 5 Temperature |
| Hybrid Battery Mod 6 Temperature Sensor | Hybrid Battery 1 |
| Hybrid Battery 2 | Hybrid Battery 3 |
| Hybrid Battery Pack Fan Sensor | Hybrid Battery Pack Fan Commanded |
| Calculated Hybrid Battery Resistance | 12V Battery Estimated Temperature |
| Cylinder 4 Ignition Coil Commanded On | Cylinder 5 Ignition Coil Commanded On |
| Cylinder 6 Ignition Coil Commanded On | Cylinder 1 Ignition Coil Commanded On |
| Cylinder 1 Ignition Coil Short to Ground Test Status | Cylinder 1 Ignition Coil Open Circuit Test Status |
| Cylinder 1 Ignition Coil Short to Power Test Status | Cylinder 2 Ignition Coil Short to Ground Test Status |
| Cylinder 2 Ignition Coil Open Circuit Test Status | Cylinder 2 Ignition Coil Short to Power Test Status |
| Cylinder 3 Ignition Coil Short to Ground Test Status | Cylinder 3 Ignition Coil Open Circuit Test Status |
| Cylinder 3 Ignition Coil Short to Power Test Status | Cylinder 4 Ignition Coil Short to Ground Test Status |
| Cylinder 4 Ignition Coil Open Circuit Test Status | Cylinder 4 Ignition Coil Short to Power Test Status |
| Cylinder 5 Ignition Coil Short to Ground Test Status | Cylinder 5 Ignition Coil Open Circuit Test Status |
| Cylinder 5 Ignition Coil Short to Power Test Status | Cylinder 6 Ignition Coil Short to Ground Test Status |
| Cylinder 6 Ignition Coil Open Circuit Test Status | Cylinder 6 Ignition Coil Short to Power Test Status |
| Cylinder 7 Ignition Coil Commanded On | Cylinder 8 Ignition Coil Commanded On |
| Cylinder 7 Ignition Coil Short to Ground Test Status | Cylinder 7 Ignition Coil Open Circuit Test Status |
| Cylinder 7 Ignition Coil Short to Power Test Status | Cylinder 8 Ignition Coil Short to Ground Test Status |
| Cylinder 8 Ignition Coil Open Circuit Test Status | Cylinder 8 Ignition Coil Short to Power Test Status |
| Cylinder 1 Injector Circuit Short to Ground Test Status | Cylinder 1 Injector Circuit Open Circuit Test Status |
| Cylinder 2 Injector Circuit Short to Ground Test Status | Cylinder 2 Injector Circuit Open Circuit Test Status |
| Cylinder 2 Injector Circuit Short to Power Test Status | Cylinder 1 Injector Circuit Short to Power Test Status |
| Cylinder 3 Injector Circuit Short to Ground Test Status | Cylinder 3 Injector Circuit Open Circuit Test Status |
| Cylinder 3 Injector Circuit Short to Power Test Status | Cylinder 4 Injector Circuit Short to Ground Test Status |
| Cylinder 4 Injector Circuit Open Circuit Test Status | Cylinder 4 Injector Circuit Short to Power Test Status |
| Cylinder 5 Injector Circuit Short to Ground Test Status | Cylinder 5 Injector Circuit Open Circuit Test Status |
| Cylinder 5 Injector Circuit Short to Power Test Status | Cylinder 6 Injector Circuit Short to Ground Test Status |
| Cylinder 6 Injector Circuit Open Circuit Test Status | Cylinder 6 Injector Circuit Short to Power Test Status |
| Cylinder 7 Injector Circuit Short to Ground Test Status | Cylinder 7 Injector Circuit Open Circuit Test Status |
| Cylinder 7 Injector Circuit Short to Power Test Status | Cylinder 8 Injector Circuit Short to Ground Test Status |
| Cylinder 8 Injector Circuit Open Circuit Test Status | Cylinder 8 Injector Circuit Short to Power Test Status |
| HO2S 1 Heater Circuit Short to Ground Test Status | HO2S 1 Heater Circuit Open Circuit Test Status |
| HO2S 1 Heater Circuit Short to Power Test Status | HO2S 2 Heater Circuit Short to Ground Test Status |
| HO2S 2 Heater Circuit Open Circuit Test Status | HO2S 2 Heater Circuit Short to Power Test Status |
| MIL Circuit Short to Ground Test Status | MIL Circuit Open Circuit Test Status |
| MIL Circuit Short to Power Test Status | IMT Valve Solenoid Circuit Short to Ground Test Status |
| IMT Valve Solenoid Circuit Open Circuit Test Status | IMT Valve Solenoid Circuit Short to Power Test Status |
| Generator L-Terminal Circuit Short to Ground Test Status | Generator L-Terminal Circuit Open Circuit Test Status |
| Generator L-Terminal Circuit Short to Power Test Status | EC Ignition Circuit Short to Ground Test Status |
| EC Ignition Circuit Open Circuit Test Status | EC Ignition Circuit Short to Power Test Status |
| FC Relay 2 and 3 Circuit Short to Ground Test Status | FC Relay 2 and 3 Circuit Open Circuit Test Status |
| FC Relay 2 and 3 Circuit Short to Power Test Status | FC Relay 1 Circuit Short to Ground Test Status |
| FC Relay 1 Circuit Open Circuit Test Status | FC Relay 1 Circuit Short to Power Test Status |
| EVAP Vent Solenoid Circuit Short to Ground Test Status | EVAP Vent Solenoid Circuit Open Circuit Test Status |
| EVAP Vent Solenoid Circuit Short to Power Test Status | EVAP Purge Solenoid Circuit Short to Ground Test Status |
| EVAP Purge Solenoid Circuit Open Circuit Test Status | EVAP Purge Solenoid Circuit Short to Power Test Status |
| CMP Solenoid Circuit Short to Ground Test Status | CMP Solenoid Circuit Open Circuit Test Status |

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| CMP Solenoid Circuit Short to Power Test Status | A/C Relay Circuit Short to Ground Test Status |
| A/C Relay Circuit Open Circuit Test Status | A/C Relay Circuit Short to Power Test Status |
| Fuel Pump Relay Circuit Short to Ground Test Status | Fuel Pump Relay Circuit Open Circuit Test Status |
| Fuel Pump Relay Circuit Short to Power Test Status | Starter Relay Circuit Short to Ground Test Status |
| Starter Relay Circuit Open Circuit Test Status | Starter Relay Circuit Short to Power Test Status |
| Vehicle Speed Circuit Short to Ground Test Status | Vehicle Speed Circuit Open Circuit Test Status |
| Vehicle Speed Circuit Short to Power Test Status | Cruise Control Active |
| Transmission Fluid Temperature | Output Shaft Speed |
| TCC / Cruise Brake Pedal Switch | 5 Volt Reference Circuit 3 Status |
| Engine Oil Life Remaining | IAT Sensor 2 |
| Injector 2 Command | Injector 3 Command |
| Injector 4 Command | Total Fuel Trim Average |
| Calculated ECT - Closed Loop Fuel Control | Calculated ECT - Thermostat Diagnosis |
| HO2S 1 Sensing Element | HO2S 2 Sensing Element |
| Exh. CMP Angle | Int. CMP Angle |
| Desired Exh. CMP | Exh. CMP Variance |
| Int. CMP Variance | Desired Int. CMP |
| FRP Regulator Command | Post Inj. Cylinder 1 Command |
| Post Inj. Cylinder 2 Command | Post Inj. Cylinder 3 Command |
| Post Inj. Cylinder 4 Command | TCM Requested Torque |
| Boost Pressure | Boost Pressure Sensor |
| Cruise Release Clutch/TCC Pedal Switch | Cruise Control Active |
| A/C Request Signal | MIL Command |
| A/C Relay Command | EVAP Vent Solenoid Command |
| Fuel Pump Relay Command | Generator L-Terminal Signal |
| FC Relay 1 Command | Loop Status |
| Power Enrichment | VTD Fuel Disable |
| VTD Auto Learn Timer | Ignition Voltage |
| Manifold Absolute Pressure Sensor | TP Sensor |
| A/C High Side Pressure | A/C High Side Pressure Sensor |
| HO2 Bank 1 Sensor 1 | HO2 Bank 1 Sensor 2 |
| Generator F-Terminal | Fuel Tank Pressure Sensor |
| Fuel Tank Pressure | Fuel Level |
| CKP Active Counter | CMP Active Counter |
| Medium Resolution Re-Sync Counter | CMP Re-Sync Counter |
| EVAP Purge Solenoid Command | IAC Position |
| Fuel Trim Cell | Desired Idle Speed |
| Injector 1 Command | Injector 2 Command |
| Injector 3 Command | Injector 4 Command |
| Barometer | Air Fuel Ratio |
| Engine Oil Life Remaining | Engine Run Time |
| Number of DTCs | TWC Temperature Calculated |
| Knock Retard | Air Flow Calculated |
| Misfire History Cylinder 1 | Misfire History Cylinder 2 |
| Misfire History Cylinder 3 | Misfire History Cylinder 4 |
| Misfire Current Cylinder 2 | Misfire Current Cylinder 1 |
| Misfire Current Cylinder 3 | Misfire Current Cylinder 4 |
| Fuel Trim Index | Misfire Test Failures Since 1st Fail |
| EVAP Test Abort Reason | EVAP Test State |
| Start Up IAT | Cruise On/Off Switch |
| A/C Request Signal | Cruise Resume/Accelerate Switch |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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| Cruise Set/Coast Switch | Clutch Pedal Switch |
| Engine Shutoff Solenoid | Glow Plug Relay Command |
| Fuel Pump Relay Command | MIL Command |
| Service Throttle Sppn Lamp Command | A/C Relay Command |
| Fuel Temperature | APP Indicated Angle |
| Fuel Pump Relay Feedback Signal | APP Sensor 2 |
| APP Sensor 3 | Glow Plug Feedback Signal |
| Injection Pump Cam Reference Signal Missed | Boost Pressure Sensor |
| Start Up ECT | Desired Injection Pump Timing |
| Injection Pump Timing Signal | Calculated Fuel Rate |
| TDC Offset | CKP Sensor Pulses Missed |
| PCM / VCM in VTD Fail Enable | VTD Fuel Disable Until Ignition Off |
| VTD Auto Learn Timer | VTD Fuel Disable |
| APP Sensor 1 | Misfire Current Cylinder 5 |
| Misfire Current Cylinder 6 | Misfire Current Cylinder 7 |
| Misfire Current Cylinder 8 | Misfire History Cylinder 5 |
| Misfire History Cylinder 6 | Misfire History Cylinder 7 |
| Misfire History Cylinder 8 | Cruise Control Disengage 1 History |
| Cruise Control Disengage 2 History | Cruise Control Disengage 3 History |
| Cruise Control Disengage 4 History | Cruise Control Disengage 5 History |
| Cruise Control Disengage 6 History | Cruise Control Disengage 7 History |
| Cruise Control Disengage 8 History | PCM Reset |
| A/C Relay Command | GEN L-Terminal Signal Command |
| A/C Clutch Feedback Signal | A/C Request Signal |
| EVAP Vent Solenoid Command | TCC Brake Pedal Switch |
| VTD Fuel Disable | TCC Enable Solenoid Command |
| TCC PWM Solenoid Command | Fuel Trim Learn |
| Cold Startup | 4WD Low Signal |
| 4WD Signal | HO2 Bank 2 Sensor 1 |
| HO2 Bank 2 Sensor 2 | Desired EGR Position |
| Engine Oil Life Remaining | EGR Closed Valve Pintle Position |
| Short Term Fuel Trim Average Bank 1 | Long Term Fuel Trim Average Bank 1 |
| Short Term Fuel Trim Average Bank 2 | Warm-Ups without Emission Faults |
| Warm-Ups without Non-Emission Faults | Mileage Since DTC Cleared |
| Long Term Fuel Trim Average Bank 2 | Transmission Switch |
| Cycles of Misfire Data | EGR Position Sensor |
| EGR Solenoid Command | Torque Delivered Signal |
| Start Up ECT | Engine Load |
| Engine Oil Level | Fuel Composition Sensor |
| Extended Travel Brake Pedal Switch | Engine Oil Level Switch |
| Engine Oil Pressure Switch | Crank Request Signal |
| TCC Brake Pedal Switch | Engine Oil Pressure |
| FC Relay 2 Command | Air Pump Relay Command |
| A/C Relay CKT Open Short to Ground | Air Pump Relay CKT Open Short to Ground |
| EVAP Purge CKT Open Short to Ground | Module Driver Overvoltage |
| FC 1 Relay CKT Open Short to Ground | FC 2 Relay CKT Open Short to Ground |
| EVAP Vent CKT Open Short to Ground | Starter Relay Command |
| TCC Brake Pedal Switch | Cruise Inhibit Signal Command |
| Loop Status | Fuel Trim Learn |
| Desired Idle Speed | EGR Position Sensor |
| Fuel Tank Rated Capacity | CMP - Low to High |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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| MIL Command | Air Pump Relay Command |
| Cruise Inhibit Signal Command | DTC Set This Ignition |
| Barometer | Injector PWM Bank 2 Average |
| Fuel Tank Pressure Sensor | Desired IAC Position |
| EVAP Test Result | CMP Retard |
| CMP - High to Low | Desired IAC Airflow |
| A/C Relay Command | Air Solenoid Command |
| Desired EGR Position | Injector PWM Bank 1 Average |
| Non-Driven Wheel Speed | Odometer |
| Knock Retard | MAF Sensor |
| VTD Password | Fuel Level |
| MIL Command | Air Solenoid Command |
| Air Pump Relay Command | Cruise Inhibit Signal Command |
| Powertrain Induced Chassis Pitch Command | Starter Relay Command |
| Fuel Pump Relay Command | A/C Relay Command |
| EVAP Vent Solenoid Command | FC Relay 1 Command |
| FC Relay 2 and 3 Command | CMP Sensor |
| 24X Crank Sensor | CKP Sensor Status |
| CKP Sensor Signal Present | TFP Switch |
| PCM Reset | Fuel Pump Relay Command |
| MIL Command | Decel Fuel Cutoff |
| VTD Fuel Disable | Ignition Mode |
| EVAP Vent Solenoid Command | Engine Oil Level Switch |
| GEN L-Terminal Signal Command | CMP Sensor Signal Present |
| 3X Crank Sensor | MAF Sensor |
| 24X Crank Sensor | Low Speed Fan |
| High Speed Fan | A/C Request |
| A/C Off for WOT | A/C Pressure Disable |
| Non Volatile Memory | A/C Relay Command |
| Low Coolant Level | Brake Switch |
| Coolant Fan Relay Command | EVAP Purge Solenoid |
| DTC Set This Ignition | Clutch Pedal Switch |
| Extended Travel Brake Pedal Switch | Reverse Inhibit Solenoid Command |
| Traction Control Status | Cruise Release Brake Pedal Switch |
| Powertrain Induced Chassis Pitch Command | TCC Enable Solenoid Command |
| Skip Shift Lamp Command | Skip Shift Solenoid Command |
| Reduced Engine Power | Engine Oil Level Switch |
| Air Solenoid Command | Cruise Control Active |
| APP Average | Fuel Tank Level Remaining |
| MIL Command | Reduced Engine Power |
| TCC Enable Solenoid Command | Cruise Control Active |
| TCC PWM Solenoid Command | DTC Set This Ignition |
| PCM Reset | 4WD Signal |
| 4WD Low Signal | A/C Request Signal |
| A/C Clutch Feedback Signal | A/C Secondary High Pressure Switch |
| Generator L Terminal | Engine Coolant Level |
| Transmission Switch A | Transmission Switch B |
| Transmission Switch C | Transmission Switch P |
| FC Relay | Stepper Cruise |
| PC Enabled | 1-2 Solenoid |
| 2-3 Solenoid | Manifold Absolute Pressure |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

| | |
|--------------------------------|--------------------------------|
| Fuel Level Sensor | ESC Noise Channel |
| Barometric Pressure Sensor | ESC Active Counter |
| Purge Learned Memory | Low Octane Fuel Spark Modifier |
| MAF History Display | EGR Trip Samples |
| Decel EWMA | Misfiring Cylinder (Primary) |
| Misfiring Cylinder (Secondary) | Total Misfire |
| EGR Delta MAP Circulation | PRNDL A |
| PRNDL B | A/C Status |
| Set Switch | PRNDL C |
| High Electrical Load | Resume Switch |
| PRNDL P | A/C Clutch |
| Power Steering Pressure Switch | Park Neutral Switch |
| Cruise Brake Switch | Extended Travel Brake |
| Fast Idle Setting | PNP |
| EGR Vent Solenoid | 1-2 Solenoid |
| 2-3 Solenoid | STS Lamp |
| Transmission Hot Mode | TCC Release Press |
| Shift Mode Switch | EVAP Vacuum Switch |
| Traction Control | Traction Control |
| TFP Switch A | TFP Switch B |
| TFP Switch C | A/C Status |
| A/C Request | Engine Hot Lamp |
| Low Oil Lamp | Cruise Requested |
| Generator Lamp | Change Oil Lamp |
| Park Neutral Position | Fuel Pump Speed |
| TCC Brake Switch | HO2 Bank 1 Sensor 1 |
| HO2 Bank 2 Sensor 1 | Shift Solenoid A |
| Shift Solenoid B | Fuel Trim Learn |
| Shift Solenoid C | Rich/Lean Status |
| Traction Control | EVAP Vacuum Switch |
| EVAP Vacuum Switch | TWC Protection |
| Pass Key Fuel | Hot Open Loop |
| FC Relay 2 and 3 | FC Relay 1 |
| Power Enrichment | Knock Signal Present |
| RPM High Resolution Signal | Abuse Management |
| EGR Loop Status | Skip Shift Solenoid |
| Ignition Bypass | Reverse Inhibit |
| TCC Duty Cycle | TCC Enable |
| Fuel Trim Diag. Inhibit | Evap Vacuum Switch |
| Injector Fault | FC Relay 1 |
| FC Relay 2 and 3 | Air Pump |
| Engine Oil Level | A/C Clutch |
| Throttle at Idle | Cold Start Up |
| Loop Status | TCC Enable Shorted |
| TCC Duty Cycle Shorted | Driver 1 Status |
| CAM Pulse | Park Neutral Switch |
| Shift Mode | A/C High Pressure Switch |
| Oil Life Reset | Engine Oil Pressure |
| Knock Too Long | Ignition 1 Status |
| 1-2 Sol Shorted to Volts | 2-3 Sol Shorted to Volts |
| 3-2 Downshift Sol Shorted | 3-2 Downshift Sol Open |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|-------------------------------|--|
| 2-3 Sol Open/Short to GND | 1-2 Sol Open/Short to GND |
| Fan Control Relay 2 & 3 | TCC Enable |
| TCC Enable Short to GND | TWC Diagnostics |
| TCC DC Short to GND | PCM Ride Control |
| A/C Relay | PRND A Input |
| PRND B Input | PRND C Input |
| TR Switch Park/Neut | TR Switch Reverse |
| TR Switch Park/Neut | IC Circuit Cylinder 1 |
| IC Circuit Cylinder 2 | IC Circuit Cylinder 3 |
| IC Circuit Cylinder 4 | IC Circuit Cylinder 5 |
| IC Circuit Cylinder 6 | IC Circuit Cylinder 7 |
| IC Circuit Cylinder 8 | APP Sensor 1 Out-of-Range |
| APP Sensor 2 Out-of-Range | APP Sensor 3 Out-of-Range |
| TP Sensor 1 Out-of-Range | TP Sensor 2 Out-of-Range |
| TAC/PCM Communication | Cruise Switch |
| TP Sensors Disagree | APP Sensors 1 and 2 Disagree |
| APP Sensors 1 and 3 Disagree | APP Sensors 2 and 3 Disagree |
| Cruise Set/Coast | Cruise Resume/Accel |
| Stop Lamp Switch | Passkey Starter |
| IC Mode | Output Driver 1 Display |
| MIL Driver | Vehicle Speed Output Signal |
| Tachometer Driver | Delivered Torque Driver |
| Evap Purge Sol Driver | Driver 1 Ground |
| Output Driver 2 Display | PCM Ride Control Driver |
| A/C Relay Driver | Cruise Enable Driver |
| Shift Sol 1 Driver | Shift Sol 2 Driver |
| TCC Solenoid Driver | Driver 2 Ground |
| Output Driver 1 Display | MIL Driver |
| Vehicle Speed Output Signal | Tachometer Driver |
| Delivered Torque Driver | Evap Purge Sol Driver |
| Driver 1 Ground | Output Driver 2 Display |
| PCM Ride Control Driver | A/C Relay Driver |
| Cruise Enable Driver | Shift Sol 1 Driver |
| Shift Sol 2 Driver | TCC Solenoid Driver |
| Driver 2 Ground | Engine Oil Level |
| Injector 1 Fault | Injector 2 Fault |
| Injector 3 Fault | Injector 4 Fault |
| Injector 5 Fault | Injector 6 Fault |
| Injector 7 Fault | Injector 8 Fault |
| VTD Fuel Disable | IPC Fuel Disable |
| VTD Password | Auto Learn Timer |
| VTD Password Learn Mode | Rich to Lean Status Bn2 Sen 1 |
| Rich to Lean Status Bn1 Sen 1 | Rich to Lean Status Bn1 Sen 2 |
| Rich to Lean Status Bn1 Sen 3 | Fuel Trim Learn |
| Passkey Fuel | Passkey Input |
| Throttle at Idle | Fuel Pump Voltage Feedback A/D |
| Brake Booster Vacuum | Brake Booster Vacuum Sensor |
| Desired Torque Level | A/C Lowside Temperature |
| A/C Highside Temperature | Engine Oil Pressure |
| Outside Air Temp | # of 4X Ref Pulses Between CAM Counter |
| Ignition 1 Voltage | Ignition Voltage to ECM Side |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

| | |
|--|--|
| Lift Pump Volts | Trans Detent Relay (Auto Trans) |
| Supercharged Boost | Current IAC Memory |
| IAC Motor Position | Calculated A/C Load |
| Ignition Cycle Counter | Bank 2 O2 Crossover Counts |
| Bank 1 O2 Crossover Counts | Passkey 2 Input |
| Ref Low Voltage | EGR Pintle Position Error |
| Service Spark Retard | O2 Heater Time Activity Bank 1Sensor 1 |
| O2 Heater Time Activity Bank 1Sensor 2 | O2 Heater Time Activity Bank 1Sensor 3 |
| O2 Heater Time Activity Bank 2 Sensor 1 | O2 Response Lean/Rich Transitions Time Bank 1 Sensor 1 |
| O2 Response Lean/Rich Switches Bank 1 Sensor 1 | Catalyst Monitor EWMA Sample Counter Bank 1 |
| O2 Response Lean/Rich Transitions Time Bank 1 Sensor 2 | Diesel Fuel Injection Pump Solenoid Closure Time |
| RPM (Fine Resolution) | RPM Low Resolution Signal |
| Cylinder Mode Misfire Index | Misfire Cycle Delay Counter |
| O2 Lean/Rich Transitions | O2 Lean/Rich Average Time |
| O2 Rich/Lean Transitions | O2 Rich/Lean Average Time |
| O2 # of Rich/Lean to Lean/Rich Transitions Bank 1 Sensor 1 | O2 Response Lean/Rich Switches Bank 1 Sensor 2 |
| O2 Response Rich/Lean Transitions Time Bank 1 Sensor 2 | O2 Response Lean/Rich Transitions Time Bank 1 Sensor 2 |
| O2 Response Rich/Lean Switches Bank 2 Sensor 1 | O2 Response Lean/Rich Switches Bank 2 Sensor 1 |
| O2 Response Rich/Lean Transitions Time Bank 2 Sensor 1 | O2 Response Lean/Rich Transitions Time Bank 2 Sensor 1 |
| O2 Response Rich/Lean Switches Bank 1 Sensor 1 | O2 Response Rich/Lean Transition Time Bank 1 Sensor 1 |
| Misfire Test Passes Since 1st Fail | 3X Engine Speed Activity |
| Baro Pressure | 18X Crank Sensor |
| Knock Retard | Knock Counter |
| Crankshaft Position Sensor Low Resolution Angle | Crankshaft Position Sensor Engine Speed |
| Evap Tank Vacuum Filtered | Enhanced EVAP Fault History |
| HO2S Sensor 1 Bank 1 | HO2 Sensor 2 Bank 1 |
| HO2S Sensor 3 Bank 1 | HO2S Sensor 1 Bank 2 |
| Electronic Throttle Control Pedal Position | Electronic Throttle Control Pedal Position Sensor 1 Angle |
| Electronic Throttle Control Pedal Position Sensor 2 Angle | Electronic Throttle Control Pedal Position Sensor 3 Angle |
| Electronic Throttle Control Throttle Position Sensor 1 Angle | Electronic Throttle Control Throttle Position Sensor 2 Angle |
| Electronic Throttle Control Throttle Position Sensor 2 Raw | Electronic Throttle Control Throttle Position Sensor 1 Raw |
| Electronic Throttle Control Pedal Position Sensor 3 Raw | Electronic Throttle Control Pedal Position Sensor 2 Raw |
| Electronic Throttle Control Pedal Position Sensor 1 Raw | Odometer |
| Injector PWM Bank 1 | Injector PWM Bank 2 |
| Cylinder Air | # of EGR Adaptive Learn Matrix Cells Out of Range Low |
| Desired MAF/EGR Flow | Percent Desired Throttle Position |
| Percent Pedal Rotation | Current Octane Level |
| TAC Module Calibration ID Byte 1 | TAC Module Calibration ID Byte 2 |
| TAC Module Calibration ID Byte 3 | TAC Module Calibration ID Byte 4 |
| Fuel Tank Level Remaining | A/C Evap Temp |
| ESC Minimum Learned Noise Voltage | Traction Control Delivered Torque (if equipped) |
| Start Up Coolant Temp | Engine Speed at Misfire |
| Engine Load at Misfire | Engine Coolant Temperature at Misfire |
| Forced Motor Commanded Current | Speed Ratio |
| Speed Ratio | Loop Status |
| EVAP Vent Solenoid | Clutch Pedal Switch |
| CL Since Restart | Fuel Trim Enable |
| Rich/Lean Bank 2 | TCC Brake Switch |
| Rich/Lean Bank 1 | TR Switch C |
| TR Switch B | TR Switch A |
| Post HO2S | Pre HO2S |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|---|--|
| Injector Fault This Ignition | Valid Ref Pulse Occurred |
| Starter Enable | Low Oil Lamp |
| Spark Control | Ignition Crank |
| Reference Pulse Occurred | Injector F Fault Cylinder #5 |
| Injector G Fault Cylinder #4 | EVAP Canister Purge |
| TCC Enable | Injector H Fault Cylinder #3 |
| Lift Pump System | DTC Set This Ignition |
| Ignition 1 On | Ignition 1 Low |
| Ignition 1 High | Brake Switch |
| Vacuum Test at Power up | 4WD |
| 4WD Low | Weak Vacuum Test |
| 1-4 Shift Solenoid | Small Leak Test |
| Purge Leak Test | Cruise Requested |
| A/C Request | A/C Relay |
| A/C Evaporator Switch | A/C Secondary High Pressure Switch |
| Auto Recirculation Mode | Rich/Lean Status Bank 2 |
| VTD Fuel Disable | VTD Fuel Disable Until Ignition Off |
| VTD Auto Learn Timer | PCM/VCM in VTD Fail Enable |
| Engine Drag Control Status | ABS Drag Event |
| 1-2 Solenoid Open/Short to GND | 2-3 Solenoid Open/Short to GND |
| 1-2 Solenoid Open/Short to Ground | 2-3 Solenoid Open/Short to Ground |
| 3-2 Downshift Solenoid Open | TCC Enable Short to Volts |
| TCC Duty Cycle Short to Volts | PRND A Input |
| PRND B Input | PRND C Input |
| PRND P Input | APP Sensor 2 and APP Sensor 3 Disagree |
| APP Sensor 1 and APP Sensor 3 Disagree | APP Sensor 1 and APP Sensor 2 Disagree |
| TP Sensors Disagree | Injector Circuit Status Cylinder #1 |
| Injector Circuit Status Cylinder #1 | Injector Circuit Status Cylinder #1 |
| Injector Circuit Status Cylinder #2 | Injector Circuit Status Cylinder #2 |
| Injector Circuit Status Cylinder #2 | Injector Circuit Status Cylinder #3 |
| Injector Circuit Status Cylinder #3 | Injector Circuit Status Cylinder #3 |
| Injector Circuit Status Cylinder #4 | Injector Circuit Status Cylinder #4 |
| Injector Circuit Status Cylinder #4 | Injector Circuit Status Cylinder #5 |
| Injector Circuit Status Cylinder #5 | Injector Circuit Status Cylinder #5 |
| Injector Circuit Status Cylinder #6 | Injector Circuit Status Cylinder #6 |
| Injector Circuit Status Cylinder #6 | VTD Password Learn Mode |
| VTD Fuel Disable | Mass Air Flow Sensor 1 |
| Throttle Position Sensor | Wastegate Solenoid |
| Calculated Vacuum | TPS Learned Correction Factor |
| Fuel Injection Pump Injection Angle (Diesel) | Cylinder Mode Misfire Index Level (1st Peak) |
| Revolution Mode Misfire Index (Balance Time) | Wheel Acceleration Accel/Decel |
| Abnormal/Misfire Test Ratio | Total Misfire Per Test Special |
| # Of Failed Catalyst Misfire Tests Out of Last 16 | # Of Failed Catalyst Mis Tests Out of Last 16 Since Code Clear |
| # Of Failed Emission Misfire Tests Out of Last 16 | # Of Failed Emission Misfire Tests Out of Last 16 Since Code Clear |
| Revolution Mode Misfire Index Level | O2 Response Rich to Lean Average Time B2 S1 |
| Spark | EVAP Tank Vacuum Decay Slope |
| EVAP Tank Vacuum Pressure Slope | TAC Module S/W Level |
| TAC Module Calibration ID | Fuel Level |
| Start Up Intake Air Temperature | VTD Auto Learn Counter |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|---|---|
| VTD Auto Learn Timer | VTD Seed and Key Timer |
| Vehicle Security Status - Fuel Continued | Vehicle Security Status - Learning Enabled |
| Case Attempts to Learn This Ignition | Crank Pulse Count Error Leached |
| Sum Out of Range | Opposing Factor out Of Range |
| Factor Out of Range | Test in Progress |
| Error Learned this Ignition | Reference Period |
| Knock Sensor | Knock Retard |
| MAF Idle Diag No EGR | MAF Idle Diag Full EGR |
| Largest Positive MAF Error Diag | Lowest EGR Pressure Diag |
| EGR Pressure Delta | # of EGR Cells Out of Range High |
| EGR Adaptive Learn Matrix Cell Number | EVAP Service Bay Test Minimum Throttle Position |
| EVAP Service Bay Test Maximum Throttle Position | Catalyst Monitor Non-Volatile Mode Word # 2 - Code P0420 Test Initiation Condition Test |
| Catalyst Monitor Non-Volatile Mode Word # 2 - Code P0420 Test Enable | Catalyst Monitor Non-Volatile Mode Word # 2 - 1 Stage 1 Has Begun |
| Catalyst Monitor Non-Volatile Mode Word # 2 - 1 Stage 2 Has Begun | Catalyst Monitor Non-Volatile Mode Word # 2 - 1 At Least 1 Test For P0420 Has Completed |
| Catalyst Monitor Non-Volatile Mode Word # 2 - 1 At Least 1 More Test | Catalyst Monitor Non-Volatile Mode Word # 2 - 1 P0420 Warm-Up Requirements Are Met |
| Catalyst Monitor Non-Volatile Mode Word # 2 - 1 A Pcode Related to the Catalyst System is Set | Number of New Catalyst Monitor Test Completed |
| Intake Air Temperature Sensor Voltage | Desired Torque (Brake to PCM) |
| Delivered Torque (Eng. to Trans Input) | Fuel Level Sensor Right Tank |
| Calculated Engine Coolant Temperature | Knock/Octane Adjustment Factor |
| Number of Catalyst Test - Bank 1 | Catalyst Test Time Difference EWMA |
| Catalyst Test Fail Threshold | Last TAP |
| Engine RPM/MPH Ratio | TCC Mode |
| 4WD Lamp Shorted | 4WD Lamp Open |
| Slip Adapt Mode | Park Switch |
| Front Axle Requested | Front Axle Switch |
| Transfer Case Lock | Commanded Mode Indicator |
| Encoder Gear Position | Mode Switch Selected |
| ATC Slip Speed | Slip Adapt PWM |
| Last Adapt Highest PWM | TP Sensor |
| Front Propshaft Speed | Rear Propshaft Speed |
| Software ID | Ignition 3 |
| GM Part Number | Neutral Indicator Light |
| 4WD High Indicator Light | 4WD Low Indicator Light |
| 2WD High Indicator Light | Auto 4WD Indicator Light |
| Service 4WD Lamp | Encoder Circuit A |
| Encoder Circuit B | Encoder Circuit C |
| Encoder Circuit P | TFP Switch C |
| Generator L Terminal | TFP Switch B |
| Brake Switch | TFP Switch A |
| Crank Request | Cruise Release Switch |
| Engine Shutoff Solenoid | EVAP Vacuum Switch |
| Low Oil Lamp | Air Pump Relay |
| Auxiliary Fan | Air Pump Relay |
| Low Oil Lamp | FC Relay 1 |
| Tow/Haul Mode | Trailer Mode |
| Glow Plug System Type | Column Lock Fuel Disable - BCM DTC |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|--|--|
| Column Lock Fuel Disable - ABS DTC | Column Lock Fuel Disable - PCM BCM Communication |
| Clutch Anticipate Switch | A/C Relay |
| Starter Enable Relay | TCC Enable Solenoid |
| Air Pump Relay | FC Relay 1 |
| FC Relay 2 and 3 | 1-2 Solenoid |
| 2-3 Solenoid | Cruise Inhibited |
| GEN Lamp | EVAP Vent Solenoid |
| MIL | Low Oil Lamp |
| Engine Hot Lamp | EVAP Purge Solenoid |
| 3-2 Solenoid Open/Short to Ground | EVAP Test Inhibited |
| Fuel Slosh Detected | 3-2 Solenoid Short to Volts |
| 2nd Gear Start | Shift Mode |
| Air Active Test Air Injection | Air Active Test Passed |
| Air Active Test Inhibited | Air Passive Test Passed |
| Air Passive Test 1 Passed | Air Passive Test 2 Failed |
| Air Passive Test Inhibited | Air Passive Test Progress |
| TFP Switch A | Extended Travel Brake |
| PSP Switch | CKP Sensor Status |
| HVAC in Recirculation Mode | A/C Secondary High Pressure Switch |
| A/C Compressor Cycling Switch | EGR Circuit Status |
| Low Coolant Level | 1-2 Solenoid Short to Volts |
| 2-3 Solenoid Short to Volts | TCC Duty Cycle Short to Voltage |
| Tachometer Count History | TCS Circuit History |
| TCS Circuit Status | Cylinder#1 Injector Count Status |
| Cylinder#2 Injector Count Status | Cylinder#3 Injector Count Status |
| Cylinder#4 Injector Count Status | 1-2 Solenoid Open/Short to Ground |
| 2-3 Solenoid Open/Short to Ground | TCC Duty Cycle Open/Short to Ground |
| Cylinder#5 Injector Count Status | TCC Solenoid |
| TCC Duty Cycle Open Short to Ground | Cylinder#6 Injector Count Status |
| MIL | Cruise Inhibited |
| 1-2 Solenoid | 1-2 Solenoid Open/Short to Ground |
| 2-3 Solenoid Open/Short to Ground | 2-3 Solenoid |
| EVAP Vent Solenoid Driver | TCC Duty Cycle Short to Volts |
| Output Driver 1 Shorted | TCC Enable Short to Volts |
| APP Sensor 1 Out-of-Range | APP Sensor 2 Out-of-Range |
| APP Sensor 3 Out-of-Range | TP Sensor 1 Out-of-Range |
| TP Sensor 2 Out-of-Range | TAC/PCM Communication |
| APP Sensor 1 and APP Sensor 2 Disagree | APP Sensor 1 and APP Sensor 3 Disagree |
| APP Sensor 2 and APP Sensor 3 Disagree | TP Sensors Disagree |
| Cruise Switch | Cruise Set/Coast |
| Cruise Resume/Accel | TCC Brake Switch |
| Medium Resolution Engine Sync | TCS Status |
| KS Noise Channel | KS Idle Noise Learn |
| TCM Calibration ID | TCM Software ID |
| AWD Enabled | Motor A or B Short to Volts |
| Motor A or B Short to Ground | Motor Ground Circuit Open |
| Motor A or B Circuit Open | Rear Propshaft Signal Fault |
| Front Propshaft Signal Fault | Fuel Tank Remaining |
| # of Catalyst Mon Test Completed | CMP Sensor |
| Wastegate Solenoid Test | Wastegate Solenoid State |
| EPR Solenoid | EPR Solenoid Test |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|-------------------------------------|-------------------------------------|
| Service Throttle Soon Lamp | Engine Shutoff Solenoid |
| Engine Shutoff Solenoid Test | High Resolution |
| Shift Torque Mode | Crank Request |
| Ignition 0 | Transmission Range |
| 12 Volt Reference | Transmission Range |
| Cruise Requested | 5 Volt Reference A |
| TFP Switch A/B/C | TFP Switch |
| Loop Status | EVAP Vent Solenoid |
| FC 1 Relay CKT Short to Volts | A/C Relay CKT Short to Volts |
| FC 2 Relay CKT Short to Volts | EVAP Vent CKT Short to Volts |
| EVAP Purge CKT Short to Volts | Odometer 1 Overtemperature |
| Cruise Inhibit Reason | Cylinder 1 Injector Circuit History |
| Cylinder 2 Injector Circuit History | Cylinder 3 Injector Circuit History |
| Cylinder 4 Injector Circuit History | Cylinder 5 Injector Circuit History |
| Cylinder 6 Injector Circuit History | Engine Speed |
| Fuel Tank Pressure | Fuel Alcohol Content |
| Park/Neutral Switch | 5 Volt Reference B |
| 12 Volt Reference | Fuel Pump Relay Command |
| Park/Neutral Switch | Reverse Inhibit Solenoid Command |
| Fuel Gauge Circuit Status | Idle Control Circuit Status |
| Air Pump Relay Command | HO2S 1 |
| Middle Spark Modifier | High Spark Modifier |
| EGR Deceleration Threshold | Cruise Set Speed |
| Cruise Delta | AFO Signal |
| Battery Voltage | EVAP Tank Vacuum Filtered |
| C/C Direction Ckt. - High Volts | C/C Direction Ckt. - Open |
| C/C Direction Ckt. - Low Volts | C/C Direction Command |
| C/C Clutch - High Volt | C/C Clutch-Open |
| C/C Clutch - Low Volt | Cruise Clutch Command |
| Steering Solenoid-High Volts | Steering Solenoid-Open |
| Steering Solenoid-Low Volts | Steering Solenoid Command |
| IAC Motor Ckt. High Volt | IAC Motor Ckt. Open |
| IAC Motor Ckt. Low Volt | IAC Motor Command |
| Ignition Coil 1 and 4-High Volts | Ignition Coil 1 and 4-Open |
| Ignition Coil 1 and 4-Low Volts | Ignition Coil 1 and 4 Command |
| Ignition Coil 2 and 3-High Volts | Ignition Coil 2 and 3-Open |
| Ignition Coil 2 and 3-Low Volts | Ignition Coil 2 and 3 Command |
| Injector 1- High Volts | Injector 1- Open |
| Injector 1- Low Volts | Injector 1 Command |
| Injector 4-High Volts | Injector 4-Open |
| Injector 4-Low Volts | Injector 4 Command |
| Injector 2 -High Volts | Injector 2 -Open |
| Injector 2 -Low Volts | Injector 2 Command |
| Injector 3 -High Volts | Injector 3 -Open |
| Injector 3 -Low Volts | Injector 3 Command |
| EVAP Purge - High Volts | EVAP Purge - Open |
| EVAP Purge - Low Volts | EVAP Purge - Solenoid |
| Alternative Fuel Level | Fuel Temperature |
| Fuel Temperature Sensor | O2 Heater Current |
| HO2S Heater - High Volts | HO2S Heater - Open |
| HO2S Heater - Low Volts | HO2S Heater Command |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|--|--|
| Reference Voltage Low | Reference Voltage High |
| Fuel Indicator Lamp Command | Fuel Gauge Select Switch |
| Gasoline MIL Command | Alternative Fuel MIL Command |
| Fuel Gauge Relay Command | AFO Signal Command |
| Alt. Fuel Fuel Pump Relay Command | High Pressure Lockoff Solenoid Command |
| Low Pressure Lockoff Solenoid Command | Mixture Control Solenoid Command |
| Gass Mass | Desired Gass Mass Flow |
| Alternative Fuel Mileage Log | Gasoline Fuel Mileage Log |
| Gass Mass Sensor | Desired Gass Mass Flow |
| LPL Solenoid Output Circuit Status | HPL Solenoid Output Circuit Status |
| AFO Enable Circuit Status | MIL Output CKT Status |
| Deceleration Fuel Cutoff | Ignition 0 Signal |
| TFP Switch | Engine Hot Lamp Command |
| Starter Enable Relay Circuit Status | Change Engine Oil Lamp Circuit Status |
| Air Pump Relay Circuit Status | Boost Solenoid Circuit Status |
| 2-3 Solenoid Circuit Status | Driver Module 2 Status |
| Air Solenoid Circuit Status | EVAP Vent Solenoid Circuit Status |
| Driver Module 3 Status | Engine Hot Lamp Circuit Status |
| EVAP Purge Solenoid Circuit Status | Gen F Terminal Signal |
| Transmission Fluid Pump Switch | Extended Travel Brake Pedal Switch |
| Fuel Pump Relay Circuit History Status | EGR Solenoid Circuit History |
| Air Pump Relay Count Short to Volts | HO2 Sensor 1 Heater Command |
| Alternative Fuel Run Time Log | Gasoline Fuel Run Time Log |
| Engine Oil Life Remaining | Fuel Tank Pressure Sensor |
| Knock Sensor 1 | Air Solenoid Relay Command |
| Fuel Tank Pressure Sensor Voltage | Calculate Compression Output |
| Fuel Mode Lamp Circuit Status | AFO Enable Circuit Status |
| End of Line Test | FICM Odd Bank Circuit Status |
| FICM Even Bank Circuit Status | Fuel Rail Pressure Sensor |
| Fuel Tank Pressure Sensor | Fuel Mode Switchover Reason |
| Fuel Rail Pressure Sensor Voltage | Fuel Rail Pressure Sensor Voltage |
| Fuel Rail Pressure Sensor | HO2 Sensor 1 Heater Current |
| HO2 Sensor 2 Heater Current | Power Enrichment |
| Decel Fuel Cutoff | A/C Relay Circuit Status |
| EC Ignition Relay Command | HO2S Heater Bank 1 Sensor 1 |
| HO2S Heater Bank 1 Sensor 2 | HO2S Heater Bank 2 Sensor 1 |
| HO2S Heater Bank 2 Sensor 2 | Throttle at Idle |
| Traction Control Status | Catalyst Protection Mode |
| Fuel Pump Commanded On | Stoplamp Pedal Switch |
| MIL | Cruise Control Active |
| Cruise On/Off Switch | Cruise Resume / Accel Switch |
| Closed Loop | Cold Startup |
| O2 Ready Bank 1 Sensor 1 | EVAP Vent Solenoid Command |
| PCM Reset | Fuel Trim Learned |
| Loop Status | Power Enrichment |
| Knock Present | Decel Fuel Cutoff |
| Rich / Lean Bank 1 Sensor 1 | Power Enrichment |
| Fuel Trim Learn | Fan Low |
| Fan High | FC Relay 1 Command |
| FC Relay 2 Command | A/C Pressure Disable |
| Park / Neutral | A/C Off for WOT |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|---|---|
| A/C Relay Command | Idle RPM Above Desired |
| Idle RPM Below Desired | Rough Road Misfire Ignore Data |
| Idle Test Enable | Initial Brake Apply Signal |
| Decel Fuel Cutoff | MIL Command |
| MIL Command by DTC | Ignition Accessory Signal |
| Generator L-Terminal Signal Command | Generator L-Terminal Signal |
| Starter Relay Command | Crank Request Signal |
| Initial Brake Apply Signal | Moderate Brake Apply Signal |
| Reduced Engine Power | TAC Vehicle Speed Signal |
| A/C Disengage Reason | O2 Bank 1 Sensor 1 State - Collection Data |
| Knock Counter | Engine Odometer Since Code Clear or Memory Reset |
| First Odometer | Last Odometer |
| Failure Conditions Fail Counter (Number of Ignition Cycles with Failures) | Failure Conditions Pass Counter (Number of Diagnostic Passes) |
| Failure Conditions Not Run Counter | O2 Bank 1 Sensor 1 Response - Lean to Rich Total Time |
| O2 Bank 1 Sensor 1 Response - Rich to Lean Total Time | O2 Bank 1 Sensor 1 Response - Lean to Rich Average Time |
| Idle Speed Error | Weak Cylinder |
| O2 Bank 1 Sensor 1 Response - Rich to Lean Average Time | TEC Attempts to Learn |
| Vehicle Security Status | Lost Enable Criteria |
| Catalyst Damaging Misfire | TEC Learned Value Cylinder 1 |
| TEC Learned Value Cylinder 2 | TEC Learned Value Cylinder 3 |
| TEC Learned Value Cylinder 4 | Engine Off Time |
| Knock Sensor Fail Counter | Knock Sensor Sample Counter |
| Knock System Fail High Counter | Knock System Fail Low Counter |
| Knock System Sample Counter | Idle Catalyst Monitor O2 Storage EWMA Value |
| Idle Catalyst Monitor O2 Storage Fail Threshold | Reference Voltage 1 Signal |
| Reference Voltage 2 Signal | EC Ignition Relay Feedback Signal |
| Minimum Catalyst Temperature for ICMD Enable | Maximum Catalyst Temperature for ICMD Enable |
| Idle Catalyst Monitor Test State - Test Not Enabled | Idle Catalyst Monitor Test State - Test Running |
| Idle Catalyst Monitor Test State - Test Aborted | Idle Catalyst Monitor Test State - Test Complete |
| Idle Catalyst Monitor Reject Reason | Idle Catalyst Monitor Test Abort Reason |
| Idle Catalyst Monitor - Last Test Result | Idle Catalyst Monitor Stage Timer |
| Short Term Fuel Trim Average | Long Term Fuel Trim Average |
| 5 Volt Reference Voltage | Cruise Set/Coast Switch |
| Fuel Pump Relay Command | PRND Position |
| EGR Throttle Valve Solenoid Command | EGR Vent Solenoid Command |
| Intake Air Heater Feedback Signal | MIL Command |
| Intake Air Heater Relay Command | FRP Regulator Relay |
| Generator L-Terminal Signal | Stoplamp Pedal Switch |
| Water in Fuel | Low Coolant Level |
| Balancing Rate Cylinder 1 | Balancing Rate Cylinder 2 |
| Balancing Rate Cylinder 3 | Balancing Rate Cylinder 4 |
| Balancing Rate Cylinder 5 | Balancing Rate Cylinder 6 |
| Balancing Rate Cylinder 7 | Balancing Rate Cylinder 8 |
| Glow Plug Relay | Wait to Start |
| MIL Command | PTO Engine Shutdown Signal |
| PTO Feedback Signal | PTO Enable |
| PTO Engage Relay Command | High Idle Switch |
| Cam Signal Present | Crank Signal Present |
| Clutch Pedal Switch | Front Axle Switch |
| Reverse Enable | Battery Voltage |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|-------------------------------|-----------------------------------|
| Injector 5 Command | Injector 6 Command |
| Injector 7 Command | Injector 8 Command |
| FRP Regulator Command | Calculated Fuel Rate |
| Main Injection Timing | Main Injection Fuel Rate |
| TC Learned | PNP Switch |
| TP Sensor | TP Angle |
| MAP Sensor | MAP |
| Intake Air Temperature Sensor | Engine Coolant Temperature Sensor |
| Barometer | HO2 Sensor Bank 1 Sensor 1 |
| HO2 Sensor Bank 1 Sensor 3 | Long Term Fuel Trim Bank 1 |
| Fuel Trim Cell Bank 1 | Short Term Fuel Trim Bank 1 |
| HO2 Sensor XCounts Bank 1 | Engine Speed |
| Desired Idle Speed | IAC Position |
| Desired IAC | HO2 Sensor Bank 2 Sensor 1 |
| Long Term Fuel Trim Bank 2 | Fuel Trim Cell Bank 2 |
| Short Term Fuel Trim Bank 2 | HO2 Sensor XCounts Bank 2 |
| KS Activity | Knock Sensor |
| Spark Advance | Knock Retard |
| EVAP Duty Cycle | EGR Duty Cycle |
| Actual EGR Position | Desired EGR Position |
| EGR Sensor | Injector Average Bank 1 |
| Injector Average Bank 2 | Ignition 1 |
| Fuel Level | Intake Air Temperature |
| Engine Coolant Temperature | Air Fuel Ratio |
| Engine Run Time | Cam Retard |
| Cylinder Mode Index | Revolution Mode Misfire Index |
| Cycles of Misfire Data | Misfires per Cycle Status |
| 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 Failures | Total Misfire Pass |
| 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 |
| Number of Misfires | Number of Normals |
| Engine Load | Mass Air Flow |
| Loop Status | Fuel Tank Pressure |
| KS Adjust Factor | Current Gear |
| Shift Delay | Shift Pattern |
| Pressure Gear Ratio | Current Adapt Cell |
| Shift Time 1-2 | Shift Error 1-2 |
| Shift Time 2-3 | Shift Error 2-3 |
| Shift Time 3-4 | Shift Error 3-4 |
| Input Shaft Speed | Output Shaft Speed |
| Vehicle Speed | PCS Desired Current |
| PCS Actual Current | PCS Duty Cycle |
| TCC Duty Cycle | TCC Slip Speed |
| TCC Ramp | TCC Apply |
| TFT Sensor | TFT |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|---------------------------------|--|
| Turbine Speed | TAP 25% TP |
| TAP 31% TP | TAP 38% TP |
| TAP 44% TP | TAP 50% TP |
| TAP 56% TP | TAP 63% TP |
| TAP 69% TP | TAP 75% TP |
| TAP 81% TP | TAP 88% TP |
| TAP 94% TP | TAP 100% TP |
| Last Adapt Pressure | EVAP Vent Solenoid |
| Long Term Fuel Trim Enable | Rich / Lean Bank 2 |
| Rich / Lean Bank 1 | Rear HO2 Sensor |
| Front HO2 Sensor | Spark Control |
| EVAP Canister | EVAP Vacuum Switch |
| DTC This Ignition | Ignition 1 On |
| Ignition 1 Low | Ignition 1 High |
| Brake Switch | Hot Mode |
| 4WD | 4WD Low |
| Start of Shift | End of Shift |
| Upshift in Progress | Shift is Complete |
| Throttle Out of Range | Large Throttle Delta |
| Large Speed Delta | Transmission Range Switch |
| Last Shift Adapt | Power Enrichment |
| Throttle Kickdown | Cruise Mode |
| 3-2 Downshift Solenoid | Transmission Range Switch A |
| Transmission Range Switch B | Transmission Range Switch C |
| 1-2 Solenoid | 2-3 Solenoid |
| Maximum Adapt | Long Shift Delay |
| Long Shift Time | Weak Vacuum Test |
| Small Leak Test | Purge Val. Leak Test |
| A/C Request On | A/C Enable Relay |
| A/C Request | A/C Compressor |
| Solenoid A (1-2) Open Ckt | Solenoid A (2-3) Open Ckt |
| TCC Enable Open | TCC Open Ckt |
| PCS Off Low Volt | Part Number |
| Software Level First Digit | Software Level Second Digit |
| Part Number | Part Number |
| Engine Torque | Mass Air Flow Sensor Frequency |
| Start Up Intake Air Temperature | Fuel Level Sensor Voltage |
| Current Gear | Current Adapt Cell |
| Shift Time 1-2 | Shift Error 1-2 |
| Shift Time 2-3 | Shift Error 2-3 |
| Shift Time 3-4 | Shift Error 3-4 |
| Output Speed | Vehicle Speed |
| PCS Desired Current | PCS Actual Current |
| PCS Duty Cycle | TCC Duty Cycle |
| TCC Slip | Transmission Fluid Temperature Voltage |
| Transmission Fluid Temperature | Speed Ratio |
| 1-2 TAP 25% of TP | 1-2 TAP 31% of TP |
| 1-2 TAP 37% of TP | 1-2 TAP 44% of TP |
| 1-2 TAP 50% of TP | 1-2 TAP 56% of TP |
| 1-2 TAP 75% of TP | 1-2 TAP 81% of TP |
| 1-2 TAP 88% of TP | 1-2 TAP 94% of TP |

Wester's Garage ECM-Pro™ Enhanced Engine Parameters

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|---|-----------------------------------|
| 1-2 TAP 100% of TP | 2-3 TAP 25% of TP |
| 2-3 TAP 31% of TP | 2-3 TAP 37% of TP |
| 2-3 TAP 44% of TP | 2-3 TAP 50% of TP |
| Last TAP | EVAP Vent Solenoid |
| Clutch Switch | Closed Loop Since Restart |
| Long Term Fuel Trim Enable | Rich/Lean Bank 2 |
| Rich/Lean Bank 1 | Post HO2S |
| Pre HO2S | Spark Control |
| EVAP Canister | Ignition 1 On |
| Ignition 1 Low | Ignition 1 High |
| Brake Switch | Hot Mode |
| 4WD | 4WD Low |
| TCC Forced Off | TCC Enabled |
| Decel Fuel Mode | Transmission Range |
| Last Shift Adapt | Power Enrichment |
| Cruise Mode | 3-2 Downshift Solenoid |
| Excess Vacuum Test | Transmission Range Switch A |
| Transmission Range Switch B | Transmission Range Switch C |
| 1/2 Solenoid | 2/3 Solenoid |
| Maximum Adapt | Weak Vacuum Test |
| Small Leak Test | Small Leak Test |
| 1-2 Solenoid Open/Short to Ground | 2-3 Solenoid Open/Short to Ground |
| TCC Enable Open | TCC Open Ckt |
| 3-2 Downshift Solenoid Open | Power Take Off |
| 1-2 Solenoid Short to Volts | 2-3 Solenoid Short to Volts |
| TCC Enable Short | TCC Short Ckt |
| 3-2 Downshift Solenoid Shorted | A/C Request |
| A/C Clutch | A/C Evaporator Switch |
| A/C Secondary High Pressure Switch | Auxiliary Fan |
| Start Up Engine Coolant Temperature | HO2 Sensor Bank 1 Sensor 1 |
| Calibration Part Number | 1-2 TAP 25% of TP |
| 1-2 TAP 31% of TP | 1-2 TAP 37% of TP |
| 1-2 TAP 44% of TP | 1-2 TAP 50% of TP |
| 1-2 TAP 56% of TP | 1-2 TAP 63% of TP |
| 1-2 TAP 69% of TP | 1-2 TAP 75% of TP |
| 1-2 TAP 81% of TP | 1-2 TAP 88% of TP |
| 1-2 TAP 94% of TP | 1-2 TAP 100% of TP |
| 2-3 TAP 25% of TP | 2-3 TAP 31% of TP |
| 2-3 TAP 37% of TP | 2-3 TAP 44% of TP |
| 2-3 TAP 50% of TP | 2-3 TAP 56% of TP |
| 2-3 TAP 63% of TP | 2-3 TAP 69% of TP |
| 2-3 TAP 75% of TP | 2-3 TAP 81% of TP |
| 2-3 TAP 88% of TP | 2-3 TAP 94% of TP |
| 2-3 TAP 100% of TP | Operating Software Calibration |
| Operating Software Level | Engine Calibration |
| | |
| <i>Parameter List Last Updated June 9, 2009</i> | |