



Performance
PROGRAMMER

GM Truck 4.8L, 5.3L, 6.0L & 8.1L



Reprogram **4**
Power

JET Performance Products

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GENERAL PREPARATION

1. Turn OFF all power draining accessories; Radio, Cell Phone chargers, A/C, etc.
2. Turn your headlights off when programming your vehicle for added safety against battery failure. See your owner's manual for vehicle specific information regarding your headlights.
3. Your vehicle may be equipped with daytime running lights and/or sensors that turn the headlights on automatically while the ignition is on. Please check your owner's manual for the proper procedure on temporarily disabling these lights to eliminate this extra drain on your battery during the programming process. This is sometimes done by pressing the "dome override" button two to four times or in the case of automatic headlights turning the headlight switch to the left.

4. Temporarily disable OnStar (If equipped).

To help prevent any disruption of the programming procedure you will need to temporarily disable the OnStar system in your vehicle. To accomplish this you will need to remove one or more fuse(s) associated with the OnStar system. The fuse panel will be located under the hood on the driver's side behind the battery.

When the OnStar system is disabled, the indicator light (on the dash or rearview mirror) will not be lit. Double check to make sure that this light does not come on while the key is in the ON position (engine not running).

For 1999-2002 Vehicles Remove the following fuses:
SEO1 (Special Equipment Option, On Star)

NOTE: For 1999-2002 GM VEHICLES: If the previous step did not turn off the OnStar light on the dash you will need to remove these four fuses from behind the fuse block access door on the drivers side edge of dash.

SEO IGN (Special Equipment Option, Ignition)

For 2003- & up Vehicles Remove the following fuses:
INFO (Vehicle Communications Interface module)
RADIO (Entertainment System)

NOTE: FOR 2003- & up GM vehicles: If a failure occurs during the reading of the stock program you will get an error message "STOCK READ FAILED" turn the ignition key to the off position, unplug the programmer and remove the following fuses: **FROM THE FUSE BLOCK UNDER THE HOOD Remove:**

TBC BATT (Body Control Module)
TBC IGN 1 (Body Control Module)
SEO B1 (Special Equipment Option, Battery)

FROM THE FUSE BLOCK LOCATED ON THE DRIVERS SIDE EDGE OF THE DASH Remove:
SEO ACCY (Special Equipment options/Accy)
TBC 2A (Body Control Module)
TBC 2B (Body Control Module)
TBC 2C (Body Control Module)
TBC ACCY (Body Control Module)

ATTENTION TRAILBLAZER, ENVOY & RAINIER OWNERS:

Your vehicle requires the removal of additional fuses to ensure the programming process is uninterrupted by any other controllers in the vehicle.

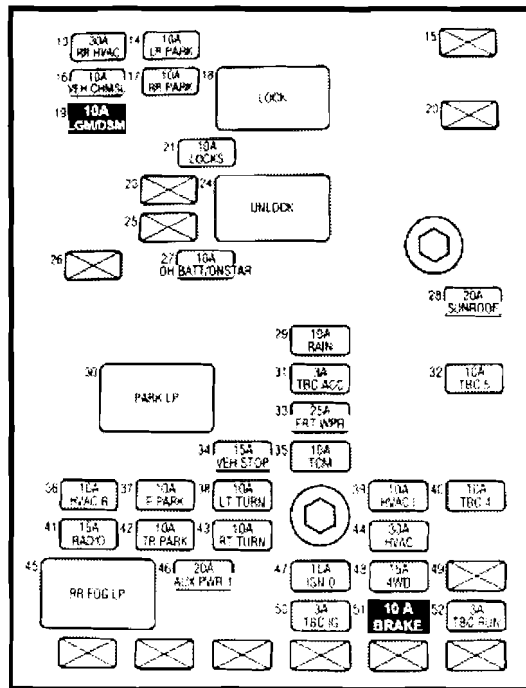
For 2003- & up Envoy, Trailblazer and Rainier:

Locate the rear fuse center mounted under the driver side rear seat. Remove the top plastic cover by pulling up on the unit. Next remove the 2nd cover to gain access to the fuse box by pushing the locking clips in on both sides of the cover.

Next remove the fuses numbered 19 LGM/DSM and 51 BRAKE (see fig. 1).

Continue with the instructions in the programmer manual. After programming is complete, replace the two fuses before starting the vehicle.

Fig. 1



INSTALLATION INSTRUCTIONS OVERVIEW

Your vehicle has an onboard computer that controls the engine and transmission. The JET programmer reprograms your factory computer according to your specifications with JET Performance Products Tuning.

To reprogram your vehicle's computer, simply plug the programmer cable into the vehicle's diagnostic connector, located under the dash panel on the driver's side. Set the parking brake. Next, turn the ignition key to RUN but do not start the engine. It will then identify your vehicle and ask a series of questions on its LCD screen.

When completed, turn the key to OFF and disconnect the cable from the diagnostic connector. Now you're "Engineered for Power".

JET Performance Product's tuning can be stored in only one vehicle. When you install JET Performance Product's tuning program into your vehicle, the programmer reads and stores your vehicle's factory programming. You can use the Programmer to restore your stock programming if it should ever become necessary.

You may also reconnect your programmer at any time to modify the programming. Simply reconnect the JET Performance programmer, answer the necessary questions, and program your vehicle.

PROGRAMMING INSTRUCTIONS

1. Locate the Data Link Connector (DLC) under the driver's side of the dash panel.
2. Plug the Programmer cable into the DLC. Make sure the cable is plugged in completely to **ensure** a good connection.
3. Set the parking brake to turn off the DRLs (DayLight Running Lamps)

IMPORTANT:

- **DO NOT LEAVE THE VEHICLE WHILE PROGRAMMING IS IN PROGRESS.**
- **MAKE SURE THE VEHICLE BATTERY IS FULLY CHARGED BEFORE PROGRAMMING.**
- **THE KEY MUST REMAIN IN THE RUN POSITION, WITHOUT THE ENGINE RUNNING, DURING THE ENTIRE PROGRAMMING PROCESS.**
- **IF THE VEHICLE HAS BEEN PROGRAMMED USING ANOTHER MANUFACTURERS PROGRAMMER, YOU MUST RETURN THE VEHICLE TO STOCK PROGRAMMING BEFORE USING THE JET PROGRAMMER.**
- **DO NOT DISTURB OR UNPLUG THE CABLE UNTIL THE PROGRAMMER INSTRUCTS YOU TO DO SO.**

- DO NOT OPERATE ELECTRICAL ACCESSORIES (RADIO, WINDOWS, WIPERS, ETC.) WHILE PROGRAMMING.
 - IF THE VEHICLE IS EQUIPPED WITH AN ONSTAR SYSTEM, MAKE SURE THE SYSTEM TEMPORARILY DISABLED. (See Page 1)
 - DO NOT ATTEMPT PROGRAMMING WHILE THE VEHICLE IS CONNECTED TO A BATTERY CHARGER.
4. The programmer will perform some self tests and then the following will appear on the screen

TURN IGNTN ON, PRESS ANY KEY

Now turn the ignition key to the RUN position (BUT DO NOT START THE VEHICLE).

Press any key and the following screen will appear:

**Y PROGRAMMING
N SCAN TOOL**

5. Press **Y** to enter Programming Functions and continue with **step 6 UNLESS THE FOLLOWING MESSAGES APPEAR:**

- "NOT FOR THIS VEHICLE" Call JET Customer Service
- "SOFTWARE NEEDS TO BE UPDATED" Call JET Customer Service
- RESTORE FACTORY PROGRAMMING This message will appear after you have previously updated your vehicle with the JET Programmer, answer Y to this option to return your vehicle to its stock programming answer N to continue.

Press **N** to enter Scan Tool Functions (see Page 8)

ENGINE TUNING

6. Press **Y** to install **JET EZ Programming** (The JET EZ Programming option is engineered to give you the best performance with the easiest installation. By selecting this option the JET Performance Programmer will download the most up to date JET Performance tuning software to increase horsepower and torque based on your fuel grade selection. In addition, automatic transmission equipped vehicles will get improved shifting patterns and increased shift firmness. JET EZ Tuning is a great choice when you want more power without the need for custom tuning.)

Press **N** to enter **Custom Programming Options** (The Custom Programming option on the JET Performance Programmer allows the user to install JET Performance Engine tuning based on your fuel grade selection. In addition it allows the user to select custom changes such as shift points, shift firmness, rev limits, and speed limiters based on tire ratings. If you have changed the tires or gears on your vehicle and need to correct the speedometer because of the changes this is the program you will want to use.)

7. Use **Arrow keys** to scroll through fuel grade options and press **Y** to select. Premium fuel is recommended for maximum performance

AUTOMATIC TRANSMISSION

8. Press **Y** if you have an automatic transmission; if you had previously selected **JET EZ** Programming, programming will begin immediately see **step 21**, if you are doing Custom Programming continue with **step 9**.

NOTE: If you have an 8.1L, the next screen will ask: Allison Transmission Y/N?

If you have an Allison Transmission equipped truck, no transmission, tire or gear modifications are available. Select Y and go to step 12. If you don't have the Allison Transmission, select N and continue with transmission modifications.

Press **N** if you have a manual transmission and please note the following; If you had previously selected **JET EZ** Programming, programming will begin see **step 21**, If you are doing Custom Programming continue with **step 9**.

SHIFT POINTS

This allows you to change the Wide Open Throttle (WOT) shift points in your Automatic transmission for the 1-2, 2-3 and 3-4 shift points. You can select to increase or decrease your shift points based on the mile per hour you want raise or lower the shift points.

NOTE: If you raise your shift points more than 1 or 2 MPH it may be necessary to raise the RPM Limiter also.

9. Press **Y** to modify shift points and continue with step 10, Press **N** to leave shift points stock and continue with **step 11**
10. Press **Y** to modify 1-2 shift, use **Arrow** keys to move mph up or down and press **Y** to select, do the same for 2-3, 3-4 shifts. Press **N** to leave stock.

SHIFT FIRMNESS

11. Press **Y** to increase shift firmness, Press **N** to leave stock.

RPM LIMITER

Allows you to change the Factory programmed RPM limiter in your vehicle by increasing the limit 100 RPM at a time up to the maximum change of 800 RPM. As noted in the shift point section it may be necessary to change this if you change the shift points.

12. Press **Y** to modify RPM limiter and continue with **step 13**, Press **N** to leave RPM limits stock and continue with **step 14**
13. Press **Arrow** keys to select RPM limit change and press **Y**

SPEED LIMITER

This allows you to modify the factory speed limit that is programmed into your computer. Most vehicles have speed limiters based on the tires that are installed on the vehicle from the factory. Each tire has a speed rating that is indicated by a letter designation. For your safety and the safety of others never exceed the speed rating on your tires or the posted legal speed limit at any time. In the case where a reduced speed limiter is required, JET has included the option to lower the speed limiter.

14. Press **Y** to Modify Speed Limiter and continue with **step 15**, Press **N** to leave stock and continue to **step 16**
15. Press **Arrow** Keys to modify speed limiter based on tire rating and press **Y**

MODIFIED TIRE SIZE

Use this selection to fix your speedometer and shift points if you have changed your tire size. You can select from 24 to 44 inch tire sizes in half inch increments.

NOTE: *If your vehicle is equipped with traction control, exceeding 34 inch tire sizes may cause the traction control to not work correctly. In ALL vehicles : Some tire sizes, depending on what gear is in the vehicle, may cause shifting problems even with the correct setting on the programmer. This usually occurs with tires larger than 38 inches.*

16. Press **Y** to correct for tire size changes and continue with **step 17**, Press **N** for no changes and continue with **step 18**

17. Press **Arrow** Keys to select correct tire size and press Y.

MODIFIED GEAR RATIO

***Use this selection if you have changed the gear ratio in the differential .
The selections include both factory and aftermarket gear ratios that may
or may not be available for your vehicle.***

18. Press Y to correct for gear ratio changes and continue with **step 19**, Press N for no changes and continue with **step 20**

19. Press **Arrow** Keys to select correct gear ratio and press Y

MODIFY CHOICES

20. Press Y to modify choices, Press N if choices are correct and programming will begin.
21. Programming has begun, **do not disturb the cable, key position or operate anything in the vehicle during the programming process.**

NOTE: During programming, vehicles equipped with driver information centers will display various service messages - these are nothing to be concerned about and will go away when programming is complete.

22. When programming is complete, the Programmer will display Programming Complete, turn the ignition key off and unplug the cable from the Data link connector (DLC).
23. That's it! Programming is now complete. Please store your JET Performance Programmer in a safe dry place in its original packaging. You will need the programmer in the future to return your vehicle to stock or modify your settings.
24. If you had to previously disable your On Star system, reinstall the fuses that you removed to the correct locations.
25. Start the vehicle and verify that the service engine light is NOT on. If your vehicle will not start, see below for details on what to do if your vehicle won't start after programming.
26. NOTE: Your vehicle may run poorly for the first 10-15 minutes after programming, poor idle quality will be the most noticeable issue. This will go away in a short period of time and is nothing to be concerned about.

What To Do If Your Vehicle Won't Start After Programming

In some vehicles with the Vehicle Anti-Theft System (VATS), the programming process will set an error in the VATS module which will prevent vehicle from starting. To clear this error disconnect the ground (-) cable from your battery for one half hour. Then re-connect the ground cable to the battery and start the vehicle.

JET SCAN TOOL INSTRUCTIONS

The JET Performance Programmer also functions as a Scan Tool for GM OBDII equipped vehicles. This allows the user to read and clear any stored data trouble codes in the system and monitor 15 different outputs from the vehicle.

We have included a list of DTC's so you will know what code is stored in your vehicle. (This list may or may not include all available codes for all vehicles. Check a factory repair manual for your vehicle.)

Please NOTE: The Scan Tool included in the JET Performance Programmer is included as a convenience only. The interpretation of these codes and their effects are best left to an experienced automotive technician. **The JET technical department WILL NOT help you interpret or diagnose any codes, please see your local dealer or technician.**

Connecting the JET Programmer Scan Tool:

1. Locate the Data Link Connector (DLC) under the driver's side of the dash panel.
2. Plug the Programmer cable into the DLC. Make sure the cable is plugged in completely to ensure a good connection.
3. The programmer will perform some self tests and then the following will appear on the screen.

TURN IGNTN ON PRESS ANY KEY

Now turn the ignition key to the **RUN** position but **do not start** the vehicle and the following screen will appear:

Y PROGRAMMING

N SCAN TOOL

4. Press N to continue to the Scan Tool section of the JET Programmer and the following screen will appear:

Y DTC READER

N MONITORING

5. Press Y to continue and get DTC's or N to continue to the real time monitoring.

If you selected **Y** and there are any **DTC's** stored in the system they will be displayed in numerical order, use the arrow keys to scroll through any stored codes. If no **DTC's** are found the message on the screen will read **NO DTCS** stored. You can press any key to continue to the **CLEAR DTCS** screen. Press **N** and the programmer will return to the starting screen..

6. If there are **DTC's** stored and you want to clear them continue to the **CLEAR DTCS Y/N** screen and select **Y**.

If you selected **N** you now will be in the real time monitoring mode

7. You will now need to start the vehicle to get the readings. After you have started the vehicle you can access and view the information by using the UP and DOWN arrow keys to get to the next parameter. You can exit the monitoring anytime by pressing the N key. After you are finished with your monitoring session simply turn the vehicle off and unplug the programmer.

P0010 A Camshaft Pos Actuator Circuit Bank 1
 P0011 A Camshaft Pos Timing - Over Advanced Bank 1
 P0012 A Camshaft Pos Timing - Over Retarded Bank 1
 P0013 B Camshaft Pos Actuator Circuit Bank 1
 P0014 B Camshaft Pos Timing - Over Advanced Bank 1
 P0015 B Camshaft Pos Timing - Over Retarded Bank 1
 P0020 A Camshaft Pos Actuator Circuit Bank 2
 P0021 A Camshaft Pos Timing - Over Advanced Bank 2
 P0022 A Camshaft Pos Timing - Over Retarded Bank 2
 P0023 B Camshaft Pos Actuator Circuit Bank 2
 P0024 B Camshaft Pos Timing - Over Advanced Bank 2
 P0025 B Camshaft Pos Timing - Over Retarded Bank 2
 P0030 HO2S Heater Control Circuit Bank 1 Sensor 1
 P0031 HO2S Heater Circuit Low Voltage Bank 1 Sensor 1
 P0032 HO2S Heater Circuit High Voltage Bank 1 Sensor 1
 P0033 Turbo Charger Bypass Valve Ctrl Circuit
 P0034 Turbo Charger Bypass Valve Ctrl Circuit Lo
 P0035 Turbo Charger Bypass Valve Ctrl Circuit Hi
 P0036 HO2S Heater Control Circuit Bank 1 Sensor 2
 P0037 HO2S Heater Circuit Low Voltage Bank 2 Sensor 2
 P0038 HO2S Heater Circuit High Voltage Bank 1 Sensor 2
 P0042 HO2S Heater Ctrl Circuit Bank 1 Sensor 3
 P0043 HO2S Heater Ctrl Circuit Lo Bank 1 Sensor 3
 P0044 HO2S Heater Ctrl Circuit Hi Bank 1, Sensor 3
 P0050 HO2S Heater Circuit Bank 2 Sensor 1
 P0051 HO2S Heater Circuit Low Voltage Bank 2 Sensor 1
 P0052 HO2S Heater Circuit High Voltage Bank 2 Sensor 1
 P0056 HO2S Heater Circuit Bank 2 Sensor 2
 P0057 HO2S Heater Circuit Low Voltage Bank 2 Sensor 2
 P0058 HO2S Heater Circuit High Voltage Bank 2 Sensor 2
 P0062 HO2S Heater Ctrl Circuit Bank 2, Sensor 3
 P0063 HO2S Heater Ctrl Circuit Lo Bank 2, Sensor 3
 P0064 HO2S Heater Ctrl Circuit Hi Bank 2, Sensor 3
 P0065 Air Assisted Injector Ctrl Range/Perf
 P0066 Air Assisted Injector Ctrl Circuit/Circuit Lo
 P0067 Air Assisted Injector Ctrl Circuit Hi
 P0070 Ambient Air Temp Sensor Circuit
 P0071 Ambient Air Temp Sensor Range/Perf
 P0072 Ambient Air Temp Sensor Circuit Lo Input
 P0073 Ambient Air Temp Sensor Circuit Hi Input
 P0074 Ambient Air Temp Sensor Circuit Intermittent
 P0075 Intake Valve Ctrl Circuit Bank 1
 P0076 Intake Valve Ctrl Circuit Lo Bank 1
 P0077 Intake Valve Ctrl Circuit Hi Bank 1
 P0078 Exhaust Valve Ctrl Circuit Bank 1
 P0079 Exhaust Valve Ctrl Circuit Lo Bank 1
 P0080 Exhaust Valve Ctrl Circuit Hi Bank 1
 P0081 Intake Valve Ctrl Circuit Bank 2
 P0082 Intake Valve Ctrl Circuit Lo Bank 2
 P0083 Intake Valve Ctrl Circuit Hi Bank 2
 P0084 Exhaust Valve Ctrl Circuit Bank 2
 P0085 Exhaust Valve Ctrl Circuit Lo Bank 2
 P0086 Exhaust Valve Ctrl Circuit Hi Bank 2
 P0087 Fuel Rail/Sys Pres - Too Lo
 P0088 Fuel Rail/Sys Pres - Too Hi

P0089 Fuel Pres Regulator Perf
 P0090 Fuel Pres Regulator Ctrl Circuit
 P0091 Fuel Pres Regulator Ctrl Circuit Lo
 P0092 Fuel Pres Regulator Ctrl Circuit Hi
 P0093 Fuel Sys Leak Detected - Large Leak
 P0094 Fuel Sys Leak Detected - Small Leak
 P0100 MAF Sensor Ckt. Insufficient Activity
 P0101 Mass Air Flow (MAF) Sensor Performance
 P0102 Mass Air Flow (MAF) Sensor Circuit Low Frequency
 P0103 Mass Air Flow (MAF) Sensor Circuit High Frequency
 P0104 Mass Air Flow Circuit Intermittent
 P0105 MAP Sensor Circuit Insufficient Activity
 P0106 Manifold Absolute Pressure (MAP) System Performance
 P0107 Manifold Absolute Pressure (MAP) Sensor Circuit Low Voltage
 P0108 Manifold Absolute Pressure (MAP) Sensor Circuit High Voltage
 P0109 Manifold Absolute Pressure Circuit Intermittent
 P0110 Intake Air Temperature (IAT) Sensor Circuit
 P0111 Intake Air Temperature (IAT) Sensor Performance
 P0112 Intake Air Temperature (IAT) Sensor Circuit Low Voltage
 P0113 Intake Air Temperature (IAT) Sensor Circuit High Voltage
 P0114 Intake Air Temperature Circuit Intermittent
 P0115 Engine Coolant Temperature (ECT) Sensor Circuit
 P0116 Engine Coolant Temperature (ECT) Sensor Performance
 P0117 Engine Coolant Temperature (ECT) Sensor Circuit Low Voltage
 P0118 Engine Coolant Temperature (ECT) Sensor Circuit High Voltage
 P0119 Engine Coolant Temperature Circuit Intermittent
 P0120 TP System Performance
 P0121 TP Sensor Circuit Insufficient Activity
 P0122 Throttle Position (TP) Sensor Circuit Low Voltage
 P0123 Throttle Position (TP) Sensor Circuit High Voltage
 P0124 Throttle Position Sensor 1 Circuit Intermittent
 P0125 Engine Coolant Temperature (ECT) Insufficient for Closed Loop Fuel Control
 P0126 Insufficient ECT for Stable Operation
 P0127 Intake Air Temperature Too Hi
 P0128 Coolant Thermostat
 P0130 HO2S Circuit Closed Loop (CL) Performance Bank 1 Sensor 1
 P0131 HO2S Circuit Low Voltage Bank 1 Sensor 1
 P0132 HO2S Circuit High Voltage Bank 1 Sensor 1
 P0133 HO2S Slow Response Bank 1 Sensor 1
 P0134 HO2S Circuit Insufficient Activity Bank 1 Sensor 1
 P0135 HO2S Heater Performance Bank 1 Sensor 1
 P0136 HO2S Circuit Bank 1 Sensor 2
 P0137 HO2S Circuit Low Voltage Bank 1 Sensor 2
 P0138 HO2S Circuit High Voltage Bank 1 Sensor 2
 P0139 HO2S Slow Response Bank 1 Sensor 2
 P0140 HO2S Circuit Insufficient Activity Bank 1 Sensor 2
 P0141 HO2S Heater Performance Bank 1 Sensor 2
 P0142 HO2S Circuit Bank 1 Sensor 3
 P0143 HO2S Circuit Low Voltage Bank 1 Sensor 3
 P0144 HO2S Circuit High Voltage Bank 1 Sensor 3
 P0145 HO2S Circuit Bank 1 Sensor 2 Slow Response
 P0146 HO2S Circuit Insufficient Activity Bank 1 Sensor 3
 P0147 HO2S Heater Performance Bank 1 Sensor 3
 P0148 Fuel Delivery Error
 P0149 Fuel Timing Error

P0150 Oxy Sensor Circuit Bank 2, Sensor 1
 P0151 Oxy Sensor Circuit Lo Voltage Bank 2, Sensor 1
 P0152 Oxy Sensor Circuit Hi Voltage Bank 2, Sensor 1
 P0153 Oxy Sensor Circuit Slow Response Bank 2, Sensor 1
 P0154 Oxy Sensor Circuit No Activity Detected Bank 2, Sensor 1
 P0155 Heated Oxy Sensor Heater Circuit Bank 2, Sensor 1111
 P0156 Oxy Sensor Circuit Bank 2, Sensor
 P0157 Oxy Sensor Circuit Lo Voltage Bank 2, Sensor 2
 P0158 Oxy Sensor Circuit Hi Voltage Bank 2, Sensor 2
 P0159 Oxy Sensor Circuit Slow Response Bank 2, Sensor 2
 P0160 Oxy Sensor Circuit No Activity Detected Bank 2, Sensor 2
 P0161 Heated Oxy Sensor Heater Circuit Bank 2, Sensor 2
 P0162 Oxy Sensor Circuit Bank 2, Sensor 3
 P0163 Oxy Sensor Circuit Lo Voltage Bank 2, Sensor 3
 P0164 Oxy Sensor Circuit Hi Voltage Bank 2, Sensor 3
 P0165 Oxy Sensor Circuit Slow Response Bank 2, Sensor 3
 P0166 Oxy Sensor Circuit No Activity Detected Bank 2, Sensor 3
 P0167 Heated Oxy Sensor Heater Circuit Bank 2, Sensor 3
 P0168 Eng Fuel Temp Hi
 P0169 Incorrect Fuel Composition
 P0170 Fuel Trim Error Bank 1
 P0171 Fuel Trim System Lean Bank 1
 P0172 Fuel Trim System Rich Bank 1
 P0173 Fuel Trim Bank 2
 P0174 Fuel Trim System Lean Bank 2
 P0175 Fuel Trim System Rich Bank 2
 P0176 Fuel Composition Sensor Circuit
 P0177 Fuel Composition Sensor Circuit Performance
 P0178 Fuel Composition Sensor Circuit Low Voltage
 P0179 Fuel Composition Sensor Circuit High Voltage
 P0180 Fuel Temperature Sensor 1 Circuit
 P0181 Fuel Temp. Sensor 1 Circuit Performance
 P0182 Fuel Temperature Sensor Circuit Low Voltage
 P0183 Fuel Temperature Sensor Circuit High Voltage
 P0184 Fuel Temperature Sensor 1 Circuit Intermittent
 P0185 Fuel Temperature Sensor 2 Circuit
 P0186 Fuel Temp. Sensor 2 Circuit Performance
 P0187 Fuel Temperature Sensor 2 Circuit Low Voltage
 P0188 Fuel Temperature Sensor 2 Circuit High Voltage
 P0189 Fuel Temperature Sensor 2 Circuit Intermittent
 P0190 Fuel Rail Pressure Sensor Circuit
 P0191 Fuel Rail Pressure Sensor Circuit Performance
 P0192 Fuel Rail Pressure Sensor Circuit Low Voltage
 P0193 Fuel Rail Pressure Sensor Circuit High Voltage
 P0194 Fuel Rail Pressure Sensor Circuit Intermittent
 P0195 Engine Oil Temperature Sensor
 P0196 Engine Oil Temperature Sensor Performance
 P0197 Engine Oil Temperature Sensor Low Voltage
 P0198 Engine Oil Temperature Sensor High
 P0199 Engine Oil Temperature Sensor Intermittent
 P0200 Injector Control Circuit
 P0201 Injector 1 Control Circuit
 P0202 Injector 2 Control Circuit
 P0203 Injector 3 Control Circuit
 P0204 Injector 4 Control Circuit
 P0205 Injector 5 Control Circuit
 P0206 Injector 6 Control Circuit
 P0207 Injector 7 Control Circuit
 P0208 Injector 8 Control Circuit
 P0209 Injector 9 Control Circuit
 P0210 Injector 10 Control Circuit

P0211 Injector 11 Control Circuit
 P0212 Injector 12 Control Circuit
 P0213 Cold Start Injector 1
 P0214 Cold Start Injector 2
 P0215 Engine Shutoff Control Circuit
 P0216 Injection Timing Control Circuit
 P0217 Engine Overtemp Condition
 P0218 Transmission Fluid Overtemperature
 P0219 Engine Overspeed Condition
 P0220 APP Sensor 2 Circuit
 P0221 APP Sensor 2 Circuit Performance
 P0222 APP Sensor 2 Circuit Low Voltage
 P0223 APP Sensor 2 Circuit High Voltage
 P0224 Throttle Position Sensor 2 Intermittent
 P0225 APP Sensor 3 Circuit
 P0226 APP Sensor 3 Circuit Performance
 P0227 APP Sensor 3 Circuit Low Voltage
 P0228 APP Sensor 3 Circuit High Voltage
 P0229 Throttle Position Sensor 3 Intermittent
 P0230 Fuel Puma Relay Control Cir
 P0231 Fuel Puma Feedback Circuit Low Voltage
 P0232 Fuel Puma Feedback Circuit High Voltage
 P0233 Fuel Pump Secondary Circuit Intermittent
 P0234 TC Engine Overboost Condition
 P0235 Turbocharger Boost Sensor 1 Circuit
 P0236 TC Boost System
 P0237 TC Boost Sensor Circuit Low Voltage
 P0238 TC Boost Sensor Circuit High Voltage
 P0239 Turbocharger Boost Sensor 2 Circuit
 P0240 Turbocharger Boost Sensor 2 Performance
 P0241 Turbocharger Boost Sensor 2 Circuit Low Voltage
 P0242 Turbocharger Boost Sensor 2 Circuit High Voltage
 P0243 Turbocharger Wastegate Solenoid 1
 P0244 Turbocharger Wastegate Solenoid 1 Performance
 P0245 Turbocharger Wastegate Solenoid 1 Low Voltage
 P0246 Turbocharger Wastegate Solenoid 1 High Voltage
 P0247 Turbocharger Wastegate Solenoid 2
 P0248 Turbocharger Wastegate Solenoid 2 Performance
 P0249 Turbocharger Wastegate Solenoid 2 Low Voltage
 P0250 Turbocharger Wastegate Solenoid 2 High Voltage
 P0251 Injection Pump Fuel Metering Control "A" Malfunction (Cam/Rotor/Injector)
 P0252 Injection Pump Fuel Metering Control "A" Range/Performance (Cam/Rotor/Injector)
 P0253 Injection Pump Fuel Metering Control "A" Low (Cam/Rotor/Injector)
 P0254 Injection Pump Fuel Metering Control "A" High (Cam/Rotor/Injector)
 P0255 Injection Pump Fuel Metering Control "A" Intermittent (Cam/Rotor/Injector)
 P0256 Injection Pump Fuel Metering Control "B" Malfunction (Cam/Rotor/Injector)
 P0257 Injection Pump Fuel Metering Control "B" Range/Performance (Cam/Rotor/Injector)
 P0258 Injection Pump Fuel Metering Control "B" Low (Cam/Rotor/Injector)
 P0259 Injection Pump Fuel Metering Control "B" High (Cam/Rotor/Injector)
 P0260 Injection Pump Fuel Metering Control "B" Intermittent (Cam/Rotor/Injector)
 P0261 Cylinder 1 Injector Circuit Low
 P0262 Cylinder 1 Injector Circuit High
 P0263 Cylinder 1 Contribution/Balance Fault
 P0264 Cylinder 2 Injector Circuit Low
 P0265 Cylinder 2 Injector Circuit High
 P0266 Cylinder 2 Contribution/Balance Fault
 P0267 Cylinder 3 Injector Circuit Low
 P0268 Cylinder 3 Injector Circuit High
 P0269 Cylinder 3 Contribution/Balance Fault
 P0270 Cylinder 4 Injector Circuit Low

P0271 Cylinder 4 Injector Circuit High
 P0272 Cylinder 4 Contribution/Balance Fault
 P0273 Cylinder 5 Injector Circuit Low
 P0274 Cylinder 5 Injector Circuit High
 P0275 Cylinder 5 Contribution/Balance Fault
 P0276 Cylinder 6 Injector Circuit Low
 P0277 Cylinder 6 Injector Circuit High
 P0278 Cylinder 6 Contribution/Balance Fault
 P0279 Cylinder 7 Injector Circuit Low
 P0280 Cylinder 7 Injector Circuit High
 P0281 Cylinder 7 Contribution/Balance Fault
 P0282 Cylinder 8 Injector Circuit Low
 P0283 Cylinder 8 Injector Circuit High
 P0284 Cylinder 8 Contribution/Balance Fault
 P0285 Cylinder 9 Injector Circuit Low
 P0286 Cylinder 9 Injector Circuit High
 P0287 Cylinder 9 Contribution/Balance Fault
 P0288 Cylinder 10 Injector Circuit Low
 P0289 Cylinder 10 Injector Circuit High
 P0290 Cylinder 10 Contribution/Balance Fault
 P0291 Cylinder 11 Injector Circuit Low
 P0292 Cylinder 11 Injector Circuit High
 P0293 Cylinder 11 Contribution/Balance Fault
 P0294 Cylinder 12 Injector Circuit Low
 P0295 Cylinder 12 Injector Circuit High
 P0296 Cylinder 12 Contribution/Range Fault
 P0300 Engine Misfire Detected
 P0301 Cylinder 1 Misfire Detected
 P0302 Cylinder 2 Misfire Detected
 P0303 Cylinder 3 Misfire Detected
 P0304 Cylinder 4 Misfire Detected
 P0305 Cylinder 5 Misfire Detected
 P0306 Cylinder 6 Misfire Detected
 P0307 Cylinder 7 Misfire Detected
 P0308 Cylinder 8 Misfire Detected
 P0309 Cylinder 9 Misfire Detected
 P0311 Cylinder 11 Misfire Detected
 P0312 Cylinder 12 Misfire Detected
 P0320 Ignition/Distributor Engine Speed Input Circuit Malfunction
 P0321 Ignition/Distributor Engine Speed Input Circuit Range/Performance
 P0322 IC Module 4X Reference CKT No Frequency
 P0323 Ignition/Distributor Engine Speed Input Circuit Intermittent
 P0325 PCM Knock Sensor Circuit
 P0326 Knock Sensor CKT Excessive Spark Retard
 P0327 Knock Sensor Circuit Low Voltage
 P0328 Knock Sensor 1 Circuit High Input (Bank 1 or Single Sensor)
 P0329 Knock Sensor 1 Circuit Intermittent (Bank 1 or Single Sensor)
 P0330 Knock Sensor (KS) Circuit Bank 2
 P0331 Knock Sensor 2 Circuit Range/Performance (Bank 2)
 P0332 Knock Sensor 2 Circuit Low Input (Bank 2)
 P0333 Knock Sensor 2 Circuit High Input (Bank 2)
 P0334 Knock Sensor 2 Circuit Intermittent (Bank 2)
 P0335 CKP Sensor A Circuit Performance
 P0336 Crankshaft Position (CKP) Sensor A Performance
 P0337 Crankshaft Position (CKP) Sensor Circuit Low Duty Cycle
 P0338 Crankshaft Position (CKP) Sensor Circuit High Duty Cycle
 P0339 Crankshaft Position (CKP) Sensor Circuit Intermittent
 P0340 Camshaft Position (CMP) Sensor Circuit
 P0341 Camshaft Position (CMP) Sensor Performance
 P0342 Camshaft Position Sensor Circuit Low Input
 P0343 Camshaft Position Sensor Circuit High Input
 P0344 Camshaft Position Sensor Circuit Intermittent
 P0350 Ignition Coil Primary/Secondary Circuit Malfunction
 P0351 Ignition Coil 1 Control Circuit
 P0352 Ignition Coil 2 Control Circuit
 P0353 Ignition Coil 3 Control Circuit
 P0354 Ignition Coil 4 Control Circuit
 P0355 Ignition Coil 5 Control Circuit
 P0356 Ignition Coil 6 Control Circuit
 P0357 Ignition Coil 7 Control Circuit
 P0358 Ignition Coil 8 Control Circuit
 P0359 Ignition Coil I Primary/Secondary Circuit Malfunction
 P0360 Ignition Coil J Primary/Secondary Circuit Malfunction
 P0361 Ignition Coil K Primary/Secondary Circuit Malfunction
 P0362 Ignition Coil L Primary/Secondary Circuit Malfunction
 P0370 Timing Reference High Resolution Signal A Malfunction
 P0371 IC 24X Reference CKT Too Many Pulses
 P0372 IC 24X Reference Circuit Missing Pulses
 P0373 Timing Reference High Resolution Signal A Intermittent/Erratic Pulses
 P0374 Timing Reference High Resolution Signal A No Pulses
 P0375 Timing Reference High Resolution Signal B Malfunction
 P0376 Timing Reference High Resolution Signal B Too Many Pulses
 P0377 Timing Reference High Resolution Signal B Too Few Pulses
 P0378 Timing Reference High Resolution Signal B Intermittent/Erratic Pulses
 P0379 Timing Reference High Resolution Signal B No Pulses
 P0380 Glow Plug/Heater Circuit "A" Malfunction
 P0381 Glow Plug/Heater Indicator Circuit Malfunction
 P0382 Exhaust Gas Recirculation Flow Malfunction
 P0385 Crankshaft Position (CKP) Sensor B Circuit
 P0386 Crankshaft Position (CKP) Sensor B Performance
 P0387 Crankshaft Position Sensor B Circuit Low Input
 P0388 Crankshaft Position Sensor B Circuit High Input
 P0389 Crankshaft Position Sensor B Circuit Intermittent
 P0400 Exhaust Gas Recirculation Flow Malfunction
 P0401 Exhaust Gas Recirculation (EGR) Flow Insufficient
 P0402 Exhaust Gas Recirculation Flow Excessive Detected
 P0403 Exhaust Gas Recirculation (EGR) Solenoid Control Circuit
 P0404 Exhaust Gas Recirculation (EGR) Open Position Performance
 P0405 Exhaust Gas Recirculation (EGR) Position Sensor Circuit Low Voltage
 P0406 Exhaust Gas Recirculation Sensor A Circuit High
 P0407 Exhaust Gas Recirculation Sensor B Circuit Low
 P0408 Exhaust Gas Recirculation Sensor B Circuit High
 P0410 Secondary Air Injection (AIR) System
 P0411 Secondary Air Injection (AIR) System
 P0412 Secondary Air Injection (AIR) Solenoid Relay Control Circuit Bank 1
 P0413 Secondary Air Injection System Switching Valve A Circuit Open
 P0414 Secondary Air Injection System Switching Valve A Circuit Shorted
 P0415 Secondary Air Injection System Switching Valve B Circuit Malfunction
 P0416 Secondary Air Injection System Switching Valve B Circuit Open
 P0417 Secondary Air Injection System Switching Valve B Circuit Shorted
 P0418 Secondary Air Injection (AIR) Pump Relay Control Circuit Bank 1
 P0419 Secondary Air Injection (AIR) Pump Relay Control Circuit Bank 2
 P0420 Catalyst System Low Efficiency
 P0421 Warm Up Catalyst Efficiency Below Threshold (Bank 1)
 P0422 Catalyst System Low Efficiency Bank 1
 P0423 Heated Catalyst Efficiency Below Threshold (Bank 1)
 P0424 Heated Catalyst Temperature Below Threshold (Bank 1)
 P0430 Catalyst System Low Efficiency Bank 2
 P0431 Warm Up Catalyst Efficiency Below Threshold (Bank 2)
 P0432 Catalyst System Low Efficiency Bank 2

P0433 Heated Catalyst Efficiency Below Threshold (Bank 2)
 P0434 Heated Catalyst Temperature Below Threshold (Bank 2)
 P0440 Evaporative Emission (EVAP) System
 P0441 Evaporative Emission Control System Incorrect Purge Flow
 P0442 Evaporative Emission (EVAP) System Small Leak Detected
 P0443 EVAP Purge Solenoid Valve 1 Control CKT
 P0444 Evaporative Emission Control System Purge Control Valve Circuit Open
 P0445 Evaporative Emission Control System Purge Control Valve Circuit Shorted
 P0446 EVAP Vent Solenoid Valve Control System
 P0447 Evaporative Emission Control System Vent Control Circuit Open
 P0448 Evaporative Emission Control System Vent Control Circuit Shorted
 P0449 Evaporative Emission (EVAP) Vent Solenoid Control Circuit
 P0450 Fuel Tank Pressure Sensor Circuit
 P0451 Evaporative Emission Control System Pressure Sensor Range/Performance
 P0452 Fuel Tank Pressure Sensor Circuit Low Voltage
 P0453 Fuel Tank Pressure Sensor Circuit High Voltage
 P0454 Evaporative Emission Control System Pressure Sensor Intermittent
 P0455 Evaporative Emission (EVAP) System Leak Detected
 P0460 Fuel Level Sensor Circuit
 P0461 Fuel Level Sensor Performance
 P0462 Fuel Level Sensor Circuit Low Voltage
 P0463 Fuel Level Sensor Circuit High Voltage
 P0464 Fuel Level Sensor Circuit Intermittent
 P0465 Purge Flow Sensor Circuit Malfunction
 P0466 Purge Flow Sensor Circuit Range/Performance
 P0467 Purge Flow Sensor Circuit Low Input
 P0468 Purge Flow Sensor Circuit High Input
 P0469 Purge Flow Sensor Circuit Intermittent
 P0470 Exhaust Pressure Sensor Malfunction
 P0471 Exhaust Pressure Sensor Range/Performance
 P0472 Exhaust Pressure Sensor Low
 P0473 Exhaust Pressure Sensor High
 P0474 Exhaust Pressure Sensor Intermittent
 P0475 Exhaust Pressure Control Valve Malfunction
 P0476 Exhaust Pressure Control Valve Range/Performance
 P0477 Exhaust Pressure Control Valve Low
 P0478 Exhaust Pressure Control Valve High
 P0479 Exhaust Pressure Control Valve Intermittent
 P0480 Cooling Fan Relay 1 Control Circuit
 P0481 Cooling Fan Relay 2 Control Circuit
 P0482 Cooling Fan 3 Control Circuit Malfunction
 P0483 Cooling Fan Rationality Check Malfunction
 P0484 Cooling Fan Circuit Over Current
 P0485 Cooling Fan Power/Ground Circuit Malfunction
 P0500 Vehicle Speed Sensor (VSS) Circuit
 P0501 Vehicle Speed Sensor Range/Performance
 P0502 Vehicle Speed Sensor (VSS) Circuit Low Input
 P0503 Vehicle Speed Sensor (VSS) Circuit Intermittent
 P0505 Idle Control System Malfunction
 P0506 Idle Speed Low
 P0507 Idle Speed High
 P0510 Closed Throttle Position Switch Malfunction
 P0512 Start Switch Circuit
 P0520 Engine Oil Pressure Sensor/Switch Circuit Malfunction
 P0521 Engine Oil Pressure Sensor/Switch Circuit Range/Performance
 P0522 Engine Oil Pressure Sensor/Switch Circuit Low Voltage
 P0523 Engine Oil Pressure Sensor/Switch Circuit High Voltage
 P0530 A/C Refrigerant Pressure Sensor Circuit Malfunction
 P0531 A/C Refrigerant Pressure Sensor Circuit Range/Performance
 P0532 Air Conditioning (A/C) Refrigerant Pressure Sensor Circuit Low Voltage
 P0533 Air Conditioning (A/C) Refrigerant Pressure Sensor Circuit High Voltage
 P0534 Air Conditioner Refrigerant Charge Loss
 P0550 Power Steering Pressure (PSP) Switch Circuit
 P0551 Power Steering Pressure Sensor Circuit Range/Performance
 P0552 Power Steering Pressure Sensor Circuit Low Input
 P0553 Power Steering Pressure Sensor Circuit High Input
 P0554 Power Steering Pressure Sensor Circuit Intermittent
 P0560 System Voltage
 P0561 System Voltage Unstable
 P0562 System Voltage Low
 P0563 System Voltage High
 P0565 Cruise Control On Signal Malfunction
 P0566 Cruise Control Off Signal Malfunction
 P0567 Cruise Control Resume Signal Malfunction
 P0568 Cruise Control Set Signal Malfunction
 P0569 Cruise Control Coast Signal Malfunction
 P0570 Cruise Control Accel Signal Malfunction
 P0571 Cruise Control Brake Switch Circuit
 P0573 Cruise Control/Brake Switch A Circuit High
 P0574 Vehicle Speed Too High - Cruise Control Disabled
 P0575 Cruise Control Related Malfunction
 P0576 Cruise Control Related Malfunction
 P0577 Cruise Control Related Malfunction
 P0578 Cruise Control Related Malfunction
 P0579 Cruise Control Related Malfunction
 P0580 Cruise Control Related Malfunction
 P0600 Serial Communication Link Malfunction
 P0601 Control Module Read Only Memory (ROM)
 P0602 Control Module Not Programmed
 P0603 Control Module Long Term Memory Reset
 P0604 Control Module Random Access Memory (RAM)
 P0605 Control Module Programming Read Only Memory (ROM)
 P0606 Control Module Internal Performance
 P0608 Control Module VSS Output "A" Malfunction
 P0609 Control Module VSS Output "B" Malfunction
 P0615 Starter Relay Control Circuit
 P0620 Generator Control Circuit Malfunction
 P0621 Generator L-Terminal Circuit
 P0622 Generator F-Terminal Circuit
 P0650 Malfunction Indicator Lamp (MIL) Control Circuit
 P0654 Engine RPM Output Circuit Malfunction
 P0655 Engine Hot Lamp Output Control Circuit Malfunction
 P0656 Fuel Level Output Circuit Malfunction
 P0700 Transmission Control System Malfunction
 P0701 Transmission Control System Range/Performance
 P0702 Transmission Control System Electrical
 P0703 Brake Switch Circuit Malfunction
 P0704 Clutch Switch Input Circuit Malfunction
 P0705 Trans Range Switch Circuit
 P0706 Trans Range Switch Performance
 P0707 Transmission Range Sensor Circuit Low Input
 P0708 Transmission Range Sensor Circuit High Input
 P0709 Transmission Range Sensor Circuit Intermittent
 P0710 Transmission Fluid Temperature Sensor Circuit Malfunction
 P0711 TFT Sensor Circuit Range/Performance
 P0712 Transmission Fluid Temperature (TFT) Sensor Circuit Low Input
 P0713 Transmission Fluid Temperature (TFT) Sensor Circuit High Input
 P0714 Transmission Fluid Temperature Sensor Circuit Intermittent
 P0715 Input/Turbine Speed Sensor Circuit Malfunction

P0716 Input Speed Sensor Circuit Intermittent
 P0717 Input Speed Sensor Circuit Low Input
 P0718 Input/Turbine Speed Sensor Circuit Intermittent
 P0719 Brake Switch Circuit Low Input
 P0720 Output Speed Sensor Circuit Malfunction
 P0721 Output Speed Sensor Range/Performance
 P0722 Output Speed Sensor Circuit Low Input
 P0723 Output Speed Sensor Intermittent
 P0724 Brake Switch Circuit High Input
 P0725 Engine Speed Input Circuit
 P0726 Engine Speed Input Circuit Range/Performance
 P0727 Engine Speed Circuit No Signal
 P0728 Engine Speed Input Circuit Intermittent
 P0730 Incorrect Gear Ratio
 P0731 Incorrect 1st Gear Ratio
 P0732 Incorrect 2nd Gear Ratio
 P0733 Incorrect 3rd Gear Ratio
 P0734 Incorrect 4th Gear Ratio
 P0735 Gear 5 Incorrect ratio
 P0736 Reverse incorrect gear ratio
 P0740 TCC Enable Solenoid Circuit Electrical
 P0741 TCC System Stuck Off
 P0742 TCC System Stuck On
 P0743 TCC Enable Solenoid Circuit Electrical
 P0744 Torque Converter Clutch Circuit Intermittent
 P0745 Pressure Control Solenoid Malfunction
 P0746 Pressure Control Solenoid Performance or Stuck Off
 P0747 Pressure Control Solenoid Stuck On
 P0748 Pressure Control Solenoid Circuit Electrical
 P0749 Pressure Control Solenoid Intermittent
 P0750 Shift Solenoid A Malfunction
 P0751 1-2 Shift Solenoid Valve Performance - No First or Fourth Gear
 P0752 1-2 Shift Solenoid Valve Performance - No Second or Third Gear
 P0753 1-2 Shift Solenoid Circuit Electrical
 P0754 Shift Solenoid A Intermittent
 P0755 Shift Solenoid B Malfunction
 P0756 2-3 Shift Solenoid Valve Performance - No First or Second Gear
 P0757 2-3 Shift Solenoid Valve Performance - No Third or Fourth Gear
 P0758 2-3 Shift Solenoid Circuit Electrical
 P0759 Shift Solenoid B Intermittent
 P0760 Shift Solenoid C Malfunction
 P0761 Shift Solenoid C Performance or Stuck Off
 P0762 Shift Solenoid C Stuck On
 P0763 Shift Solenoid C Electrical
 P0764 Shift Solenoid C Intermittent
 P0765 Shift Solenoid D Malfunction
 P0766 Shift Solenoid D Performance or Stuck Off
 P0767 Shift Solenoid D Stuck On
 P0768 Shift Solenoid D Electrical
 P0769 Shift Solenoid D Intermittent
 P0770 Shift Solenoid E Malfunction
 P0771 Shift Solenoid E Performance or Stuck Off
 P0772 Shift Solenoid E Stuck On
 P0773 Shift Solenoid E Electrical
 P0774 Shift Solenoid E Intermittent
 P0780 Shift Malfunction
 P0781 1-2 Shift Malfunction
 P0782 2-3 Shift Malfunction
 P0783 3-4 Shift Malfunction
 P0784 4-5 Shift Malfunction

P0785 3-2 Shift Solenoid Circuit Electrical
 P0786 Shift/Timing Solenoid Range/Performance
 P0787 Shift/Timing Solenoid Low
 P0788 Shift/Timing Solenoid High
 P0789 Shift/Timing Solenoid Intermittent
 P0790 Normal/Performance Switch Circuit Malfunction
 P0801 Reverse Inhibit Control Circuit Malfunction
 P0803 1-4 Upshift (Skip Shift) Solenoid Control Circuit Malfunction
 P0804 1-4 Upshift (Skip Shift) Lamp Control Circuit Malfunction
 P1031 HO2S Heater Current Monitor Control Circuit Banks 1 and 2 Sensor 1
 P1032 HO2S Heater Warm Up Control Circuit Banks 1 and 2 Sensor 1
 P1105 Secondary Vacuum Sensor Circuit
 P1106 Manifold Absolute Pressure (MAP) Sensor Circuit Intermittent High Voltage
 P1107 Manifold Absolute Pressure (MAP) Sensor Circuit Intermittent Low Voltage
 P1108 BARC to MAP Sensor Comparison High
 P1109 Secondary Port Throttle System
 P1111 Intake Air Temperature (IAT) Sensor Circuit Intermittent High Voltage
 P1112 Intake Air Temperature (IAT) Sensor Circuit Intermittent Low Voltage
 P1113 Intake Resonance Switchover Solenoid Control Circuit
 P1114 Engine Coolant Temperature (ECT) Sensor Circuit Intermittent Low Voltage
 P1115 Engine Coolant Temperature (ECT) Sensor Circuit Intermittent High Voltage
 P1116 ECT Signal Unstable or Intermittent
 P1117 Engine Coolant Temp. Signal Out-Of-Range Low
 P1118 Engine Coolant Temp. Signal Out-Of-Range High
 P1119 ECT Signal Out-Of-Range With TFT Sensor
 P1120 Throttle Position (TP) Sensor 1 Circuit
 P1121 Throttle Position (TP) Sensor Circuit Intermittent High Voltage
 P1122 Throttle Position (TP) Sensor Circuit Intermittent Low Voltage
 P1125 APP System
 P1130 HO2S Circuit Low Variance Bank 1 Sensor 1
 P1131 HO2S Circuit Low Variance Bank 1 Sensor 2
 P1132 HO2S Circuit Low Variance Bank 2 Sensor 1
 P1133 HO2S Insufficient Switching Bank 1 Sensor 1
 P1134 HO2S Transition Time Ratio Bank 1 Sensor 1
 P1135 HO2S Lean Mean Bank 1 Sensor 1
 P1136 HO2S Rich Mean Bank 1 Sensor 1
 P1137 HO2S Bank 1 Sensor 2 Lean System or Low Voltage
 P1138 HO2S Bank 1 Sensor 2 Rich or High Voltage
 P1139 HO2S Insuff. Switching Bank 1 Sensor 2
 P1140 HO2S Transition Time Ratio Bank 1 Sensor 2
 P1141 HO2S Heater Control Circuit Bank 1 Sensor 2
 P1143 HO2S Bank 1 Sensor 3 Lean System or Low Voltage
 P1144 HO2S Bank 1 Sensor 3 Rich or High Voltage
 P1145 HO2S Cross Counts Bank 1 Sensor 3
 P1153 HO2S Insufficient Switching Bank 2 Sensor 1
 P1154 HO2S Transition Time Ratio Bank 2 Sensor 1
 P1155 HO2S Lean Mean Bank 2 Sensor 1
 P1156 HO2S Rich Mean Bank 2 Sensor 1
 P1157 HO2S Bank 2 Sensor 2 Lean System or Low
 P1158 HO2S Bank 2 Sensor 2 Rich or High Voltage
 P1159 HO2S Cross Counts Bank 2 Sensor 2
 P1161 HO2S Heater Control Circuit Bank 2 Sensor 2
 P1163 HO2S Bank 2 Sensor 3 Lean System or Low Voltage
 P1164 HO2S Bank 2 Sensor 3 Rich or High Voltage
 P1165 HO2S Cross Counts Bank 2 Sensor 3
 P1170 Bank to Bank Fuel Trim Offset
 P1171 Fuel System Lean During Acceleration
 P1185 Engine Oil Temperature Circuit
 P1186 EOT Circuit Performance

P1187 EOT Sensor Ckt. Low Voltage
 P1188 EOT Sensor Ckt. High Voltage
 P1189 Engine Oil Pressure (EOP) Switch Circuit
 P1190 Engine Vacuum Leak
 P1191 Intake Air Duct Air Leak
 P1200 Injector Control Circuit
 P1201 (Alt. Fuel) Gas Mass Sensor Circuit Range/Performance
 P1202 (Alt. Fuel) Gas Mass Sensor Circuit Low Frequency
 P1203 (Alt. Fuel) Gas Mass Sensor Circuit High Frequency
 P1211 Mass Air Flow Circuit Intermittent High
 P1212 Mass Air Flow Circuit Intermittent Low
 P1214 Injection Pump Timing Offset
 P1215 Ground Fault Detection Indicated
 P1216 Fuel Solenoid Response Time Too Short
 P1217 Fuel Solenoid Response Time Too Long
 P1218 Injection Pump Calibration Circuit
 P1219 Throttle Position Sensor Reference Voltage
 P1220 Throttle Position (TP) Sensor 2 Circuit
 P1221 Fuel Pump Secondary Circuit Low
 P1222 Injector Control Circuit Intermittent
 P1225 Injector Circuit Cylinder 2 Intermittent
 P1228 Injector Circuit Cylinder 3 Intermittent
 P1231 Injector Circuit Cylinder 4 Intermittent
 P1234 Injector Circuit Cylinder 5 Intermittent
 P1237 Injector Circuit Cylinder 6 Intermittent
 P1240 Injector Circuit Cylinder 7 Intermittent
 P1243 Injector Circuit Cylinder 8 Intermittent
 P1245 Intake Plenum Switchover Valve
 P1250 Early Fuel Evaporation Heater Circuit
 P1257 Supercharger System Overboost
 P1258 Engine Coolant Overtemperature - Protection Mode Active
 P1260 Last Test Failed Failed SCC ENTER:More Info.
 P1270 Accelerator Pedal Position Sensor A/D Converter Error
 P1271 Accelerator Pedal Position (APP) Sensor 1-2 Correlation
 P1272 Accelerator Pedal Position Sensor 2
 P1273 Accelerator Pedal Position Sensor 1
 P1274 Injectors Wired Incorrectly
 P1275 Accelerator Pedal Position (APP) Sensor 1 Circuit
 P1276 Accelerator Pedal Position Sensor 1 Circuit Performance
 P1277 Accelerator Pedal Position Sensor 1 Circuit Low Voltage
 P1278 Accelerator Pedal Position Sensor 1 Circuit High Voltage
 P1280 Accelerator Pedal Position (APP) Sensor 2 Circuit
 P1281 Accelerator Pedal Position Sensor 2 Circuit Performance
 P1282 Accelerator Pedal Position Sensor 2 Circuit Low Voltage
 P1283 Accelerator Pedal Position Sensor 2 Circuit High Voltage
 P1285 Accelerator Pedal Position Sensor 3 Circuit
 P1286 Accelerator Pedal Position Sensor 3 Circuit Performance
 P1287 Accelerator Pedal Position Sensor 3 Circuit Low Voltage
 P1288 Accelerator Pedal Position Sensor 3 Circuit High Voltage
 P1300 Ignitor Circuit
 P1305 Ignition Coil 2 Primary Feedback Circuit
 P1310 Ignition Coil 3 Primary Feedback Circuit
 P1315 Ignition Coil 4 Primary Feedback Circuit
 P1320 IC 4X Reference Circuit Intermittent
 P1321 Electronic Ignition System Fault Line
 P1322 EI System or Ignition Control Extra or Missing
 P1323 IC 24X Reference Circuit Low Frequency
 P1324 Crank RPM Too Low
 P1335 CKP Circuit
 P1336 Crankshaft Position (CKP) System Variation Not Learned
 P1345 Crankshaft Position (CKP)-Crankshaft Position (CMP) Correlation
 P1346 Intake Camshaft Position (CMP) Sensor System Performance
 P1350 Ignition Control System
 P1351 Ignition Coil Control Circuit High Voltage
 P1352 IC Output High/Pulse Detected when GND_Cyl. 2
 P1353 IC Output High/Pulse Detected when GND_Cyl. 3
 P1354 IC Output High/Pulse Detected when GND_Cyl. 4
 P1355 IC Output High/Pulse Detected when GND_Cyl. 5
 P1356 IC Output High/Pulse Detected when GND_Cyl. 6
 P1357 IC Output High/Pulse Detected when GND_Cyl. 7
 P1358 IC Output High/Pulse Detected when GND_Cyl. 8
 P1359 Ignition Coil Group 1 Control Circuit
 P1360 Ignition Coil Group 2 Control Circuit
 P1361 Ignition Coil Control Circuit Low Voltage
 P1362 IC Cylinder 2 Not Toggling After Enable
 P1363 IC Cylinder 3 Not Toggling After Enable
 P1364 IC Cylinder 4 Not Toggling After Enable
 P1365 IC Cylinder 5 Not Toggling After Enable
 P1366 IC Cylinder 6 Not Toggling After Enable
 P1367 IC Cylinder 7 Not Toggling After Enable
 P1368 IC Cylinder 8 Not Toggling After Enable
 P1370 IC 4X Reference Circuit Too Many Pulses
 P1371 IC 4X Reference Circuit Too Few Pulses
 P1372 Crankshaft Position (CKP) Sensor A-B Correlation
 P1374 3X Reference Circuit
 P1375 IC 24X Reference Circuit High Voltage
 P1376 Ignition Ground Circuit
 P1377 IC Cam Pulse To 4X Reference Pulse
 P1380 Misfire Detected - Rough Road Data Not Available
 P1381 Misfire Detected - No Communication with Brake Control Module
 P1390 Wheel Speed Sensor 1 - G - Sensor Circuit
 P1391 Wheel Speed Sensor 1 - G - Sensor Circuit Performance
 P1392 Wheel Speed Sensor 1 - G - Sensor Circuit Low Voltage
 P1393 Wheel Speed Sensor 1 - G - Sensor Circuit High Voltage
 P1394 Wheel Speed Sensor 1 - G - Sensor Circuit Intermittent
 P1395 Wheel Speed Sensor 2 - G - Sensor Circuit
 P1396 Wheel Speed Sensor 2 - G - Sensor Circuit Performance
 P1397 Wheel Speed Sensor 2 - G - Sensor Circuit Low Voltage
 P1398 Wheel Speed Sensor 2 - G - Sensor Circuit High Voltage
 P1399 Wheel Speed Sensor 2 - G - Sensor Circuit Intermittent
 P1403 Exhaust Gas Recirculation System Valve 1
 P1404 Exhaust Gas Recirculation (EGR) Closed Position Performance
 P1405 Exhaust Gas Recirculation System Valve 3
 P1406 EGR Valve Pintle Position Circuit
 P1407 EGR Air Intrusion in Exhaust Supply to EGR Valve
 P1408 Intake Manifold Pressure Sensor Circuit
 P1409 EGR Vacuum System Leak
 P1410 Fuel Tank Pressure System
 P1415 Secondary Air Injection (AIR) System Bank 1
 P1416 Secondary Air Injection (AIR) System Bank 2
 P1418 Secondary Air Injection System Relay A Control Circuit High
 P1420 Intake Air Low Pressure Switch Circuit Low Voltage
 P1421 Intake Air Low Pressure Switch Circuit High Voltage
 P1423 Intake Air High Pressure Switch Circuit High Voltage
 P1431 Fuel Level Sensor 2 Circuit Performance
 P1432 Fuel Level Sensor 2 Circuit Low Voltage
 P1433 Fuel Level Sensor 2 Circuit High Voltage
 P1441 Evaporative Emission (EVAP) System Flow During Non-Purge
 P1442 EVAP Vacuum Sw High Voltage During Ign. On

P1450 Barometric Pressure Sensor Circuit
 P1451 Barometric Press. Sensor Performance
 P1460 Cooling Fan Control System
 P1460 Misfire Detected With Low Fuel Level
 P1480 Cooling Fan 1 Control Circuit High
 P1483 Engine Cooling System Performance
 P1500 Starter Signal Circuit
 P1501 Theft Deterrent System
 P1501 Vehicle Speed Sensor Circuit Intermittent
 P1502 Theft Deterrent Fuel Enable Signal Not Received
 P1503 Theft Deterrent Fuel Enable Signal Not Correct
 P1504 Vehicle Speed Output Circuit
 P1508 Idle Speed Low - Idle Air Control (IAC) System Not Responding
 P1509 Idle Speed High - Idle Air Control (IAC) System Not Responding
 P1510 Throttle Control System Performance - Throttle Limitation Active
 P1511 Throttle Control System - Backup System Performance
 P1514 Airflow to TP Sensor Correlation High
 P1515 Electronic Throttle System Throttle Position
 P1516 Throttle Actuator Control (TAC) Module Throttle Actuator Position Performance
 P1517 Electronic Throttle Module
 P1518 Electronic Throttle Module to PCM Communication
 P1519 Throttle Actuator Control (TAC) Module Internal Circuit
 P1520 Transmission Range Switch Circuit
 P1521 Transmission Engaged at High Throttle Angle
 P1522 Park/Neutral to Drive/Reverse at High RPM
 P1523 Throttle Closed Position Performance
 P1524 Throttle Closed Position Performance
 P1525 Throttle Body Service Required
 P1526 Minimum Throttle Position Not Learned
 P1527 Transmission Range to Pressure Switch Correlation
 P1528 Governor
 P1529 Heated Windshield Request Problem
 P1530 Throttle Actuator Control (TAC) Module Internal Circuit
 P1531 A/C Low Side Temperature Sensor Fault
 P1532 A/C Evaporator Temp. Sens. Ckt. Low Voltage
 P1533 A/C Evaporator Temp. Sens. Ckt. High Voltage
 P1534 A/C High Side Temp. Sensor Low Voltage
 P1535 A/C High Side Temperature Sensor Circuit
 P1536 Engine Coolant Overtemperature - Air Conditioning (A/C) Disabled
 P1537 A/C Request Circuit Low Voltage
 P1538 A/C Request Circuit High Voltage
 P1539 A/C Clutch Status Circuit High Voltage
 P1540 Air Conditioning (A/C) Refrigerant Overpressure - Air Conditioning (A/C) Disabled
 P1541 A/C High Side Over Temperature
 P1542 A/C System High Pressure High Temperature
 P1543 A/C System Performance
 P1544 A/C Refrigerant Condition Very Low
 P1545 Air Conditioning (A/C) Clutch Relay Control Circuit
 P1546 A/C Clutch Status Circuit Low Voltage
 P1547 A/C System Performance Degraded
 P1548 A/C Recirculation Circuit
 P1554 Cruise Control Feedback Circuit
 P1555 Electronic Variable Orifice Output
 P1558 Cruise Control Servo Indicates Low
 P1559 Cruise Control Power Management Mode
 P1560 Transaxle Not in Drive - Cruise Control Disabled
 P1561 Cruise Vent Solenoid
 P1562 Cruise Vacuum Solenoid
 P1563 Cruise Vehicle Speed/Set Speed Difference Too High
 P1564 Vehicle Acceleration Too High - Cruise Control Disabled
 P1565 Cruise Servo Position Sensor
 P1566 Engine RPM Too High - Cruise Control Disabled
 P1567 Active Banking Control Active - Cruise Control Disabled
 P1568 Cruise Servo Stroke Greater than Commanded in Cruise
 P1569 Cruise Servo Stroke High While not in Cruise
 P1570 Traction Control Active - Cruise Control Disabled
 P1571 Traction Control Torque Request Circuit
 P1572 ASR Active Circuit Low Too Long
 P1573 PCM/EBTCM Serial Data Circuit
 P1574 Stoplamp Switch Circuit
 P1575 Extended Travel Brake Switch Circuit
 P1576 BBV Sensor Ckt. High Voltage
 P1577 BBV Sensor Ckt. Low Voltage
 P1578 BBV Sensor Ckt. Low Vacuum
 P1579 P/N to D/R at High Throttle Angle - Power Reduction Mode Active
 P1580 Cruise Move Circuit Low Voltage
 P1581 Cruise Move Circuit High Voltage
 P1582 Cruise Direction Circuit Low Voltage
 P1583 Cruise Direction Circuit High Voltage
 P1584 Cruise Control Disabled
 P1585 Cruise Control Inhibit Output Circuit
 P1586 Cruise Control Brake Switch 2 Circuit
 P1587 Cruise Control Clutch Control Circuit Low
 P1588 Cruise Control Clutch Control Circuit High
 P1599 Engine Stall or Near Stall Detected
 P1600 TCM Internal Watchdog Operation
 P1601 Serial Comm. Problem with Device 1
 P1602 Knock Sensor (KS) Module Performance
 P1603 Loss of SDM Serial Data
 P1604 Loss of IPC Serial Data
 P1605 Loss of HVAC Serial Data
 P1606 Serial Communication Problem with Device 6
 P1607 Serial Communication Problem with Device 7
 P1608 Serial Communication Problem with Device 8
 P1609 Loss of TCS Serial Data
 P1610 Loss of PZM Serial Data
 P1611 Loss of CVRTD Serial Data
 P1612 Loss of IPM Serial Data
 P1613 Loss of DIM Serial Data
 P1614 Loss of RPM Serial Data
 P1615 Loss of VTD Serial Data
 P1617 Engine Oil Level Switch Circuit
 P1619 Engine Oil Life Monitor Reset Circuit
 P1620 Low Coolant Circuit
 P1621 Control Module Long Term Memory Performance
 P1622 Cylinder Select
 P1623 Transmission Temp Pull-Up Resistor
 P1624 Customer Snapshot Requested - Data Available
 P1625 TCM System Reset
 P1626 Theft Deterrent Fuel Enable Signal Not Received
 P1627 A/D Performance
 P1628 ECT Pull-Up Resistor
 P1629 Theft Deterrent System - Cranking Signal
 P1630 Theft Deterrent Learn Mode Active
 P1631 Theft Deterrent Start Enable Signal Not Correct
 P1632 Theft Deterrent Fuel Disable Signal Received
 P1633 Ignition 0 Switch Circuit
 P1634 Ignition 1 Switch Circuit
 P1635 5 Volt Reference Circuit
 P1636 PCM Stack Overrun
 P1637 Generator L - Terminal Circuit



WHAT TO DO BEFORE TAKING YOUR VEHICLE IN FOR SERVICE

If a problem occurs that may require you to take your vehicle to a mechanic or dealership for service, first remove the JET Program and program back to stock. If the problem goes away when you remove the JET Performance Product, call JET and we will troubleshoot the product. However, if returning to stock does *not* cure your problem, there is nothing wrong with your JET Performance Product and you will need to have your vehicle serviced.

Anytime a diagnostic machine is to be used, the vehicle must be back to stock. Diagnostic machines expect to find the original stock program and often cannot correctly analyze the problem if other devices are installed. Failure to reinstall your system back to stock can result in unnecessary and costly repairs not covered by JET. Before you have any work done on the vehicle that you feel may have been related to the JET Programmer, please call JET at 714-848-5515.

Limited Warranty

JET Performance Products warrants Chips, Modules and Programmers to be free from defects in material and workmanship under normal use and if properly installed. This limited lifetime warranty is to the original purchaser for as long as he or she owns the vehicle on which the product was originally installed, provided all information requested is furnished. If found to be defective as mentioned above, it will be replaced or repaired at the sole discretion of JET if returned prepaid along with proof of date of purchase.

All other products and services performed by JET are warranted in defects in material and workmanship for a period of 6 months from date of purchase. This warranty is to the original purchaser for as long as he or she owns the vehicle on which the product was originally installed. Repair, Replacement, or Credit will be based on the date of purchase. Costs for labor are specifically excluded and are the sole responsibility of the purchaser.

This warranty does not apply to Custom Programming or any product incorrectly installed, modified by the purchaser, or to any product that has been subjected to misuse, negligence or accident.

To obtain warranty service and Return Authorization Number, contact our Customer Service Department at 714-848-5515 between 8 am and 5 pm Pacific Standard Time, Monday through Friday.

Defective Products may be brought or sent prepaid (with Return Number) to JET Performance Products, 17491 Apex Circle, Huntington Beach, CA 92647.