

I've read poor quality/old spark plugs, bad fuel, ignition wires, etc are all potential sources of cylinder misfires. Before running out to replace things with no method to my madness, I'm hoping to get some guidance on the highest probability cause(s) at lowest cost and start from there. Recommendations on particular brands (or ones to avoid) as also much appreciated.

I sat in the car, at 2006 Prius with unknown mileage on the engine for 15-20 minutes with the car intermittently idling and there were no problems. Also, kept foot on accelerator to keep it humming around 2,000 RPM and everything was fine. On other hand, the engine sounded awful after putting the car reverse and then pulling forward into the parking space.

Not sure if this rules out bad fuel as the source of the problem, but thought information worth passing along.

Techstream generates the following codes: P0300, P0302, P0303, P0304, C1241, B1421 and B1271.

Below I've provided additional data from Techstream that may be helpful. Thank you in advance for any help you can offer.

ENGINE AND ECT LIVE:

ored Data

Engine and ECT Live

DTC Monitors are Complete.

View Monitors

Diagnostic Code:

MIL:ON

| Code | Description | Current | Pending | History | Permanent | Summary |
|-------|---|---------|---------|---------|-----------|---------|
| P0300 | Random/Multiple Cylinder Misfire Detected | X | | X | | |
| P0302 | Cylinder 2 Misfire Detected | X | X | X | | |
| P0303 | Cylinder 3 Misfire Detected | X | | X | | |
| P0304 | Cylinder 4 Misfire Detected | X | | X | | |

ored Data

Engine and ECT Live

Monitor Information

MIL:ON

Cumulative Monitor - monitor status from the last DTC clear or monitor reset event.

Current Monitor - current monitor trip information.

Click the Cumulative/Current column header for more information.

Cumulative Monitor

Current Monitor

| Monitor | Cumulative | Result | Details | Summary |
|---------------------------------|------------|--------|---------|---------|
| Misfire | Available | | | ∞ |
| Fuel System | Available | | | ∞ |
| Composition Parts | Available | | | ∞ |
| Catalyst Efficiency | Complete | Pass | | |
| Heated Catalyst | N/A | | | N/A |
| Evaporative System | Complete | Pass | | |
| Secondary Air System | N/A | | | N/A |
| A/C System | N/A | | | N/A |
| O2 Sensor | Complete | Pass | | |
| O2 Sensor Heater | N/A | | | N/A |
| Exhaust Gas Recirculation / VVT | N/A | | | N/A |
| Thermostat | | | | |

P0300

Freeze Frame Data

P0300 Random/Multiple Cylinder Misfire Detected



Current FFD | Pending FFD |

| Parameter | Value | Unit | Parameter | Value | Unit |
|-----------------------------|---------|------------|-----------------------------|---------|----------|
| Vehicle Speed | 7 | MPH | Knock Feedback Value | -3.0 | deg (CA) |
| Engine Speed | 1308 | rpm | Knock Correct Learn Value | 21.7 | deg (CA) |
| Catalyst Load | 72.1 | % | VVT Control Status #1 | ON | |
| Vehicle Load | 42.7 | % | Catalyst Temp B1S1 | 455.5 | F |
| MAF | 8.32 | gm/sec | Catalyst Temp B1S2 | 198.3 | F |
| Atmosphere Pressure | -1 | psi(gauge) | Closed Throttle Position SW | OFF | |
| Coolant Temp | 172 | F | Engine Oil Pressure SW | OFF | |
| Intake Air | 73 | F | Time after DTC Cleared | 7063 | min |
| Ambient Temperature | 54 | F | Distance from DTC Cleared | 2579 | mile |
| Engine Run Time | 44 | s | Warmup Cycle Cleared DTC | 105 | |
| Initial Engine Coolant Temp | 161.2 | F | TC and TE1 | OFF | |
| Initial Intake Air Temp | 74.7 | F | Ignition Trig. Count | 0 | |
| Battery Voltage | 13.8 | V | Cylinder #1 Misfire Count | 0 | |
| Accelerator Idle Position | OFF | | Cylinder #2 Misfire Count | 0 | |
| Throttle Sensor Volt % | 21.5 | % | Cylinder #3 Misfire Count | 0 | |
| Throttle Sensor #2 Volt % | 55.2 | % | Cylinder #4 Misfire Count | 0 | |
| ST1 | OFF | | All Cylinders Misfire Count | 0 | |
| System Guard | ON | | Misfire RPM | 2175 | rpm |
| Open Side Malfunction | OFF | | Misfire Load | 0.46 | g/rev |
| Throttle Idle Position | OFF | | Misfire Margin | -71.10 | % |
| Throttle Require Position | 1.0 | V | Electric Fan Motor | OFF | |
| Throttle Sensor Position | 4.3 | % | Idle Fuel Cut | OFF | |
| Throttle Position No. 1 | 1.0 | V | FC TAU | OFF | |
| Throttle Position No. 2 | 2.7 | V | Requested Engine Torque | 4.75 | kW |
| Throttle Position Command | 1.0 | V | HV Target Engine Speed | 1300 | rpm |
| Throttle Sens Open Pos #1 | 0.7 | V | Actual Engine Torque | 30 | Nm |
| Throttle Sens Open Pos #2 | 1.8 | V | Estimated Engine Torque | 56 | Nm |
| Throttle Sens Open #1(AD) | 1.0 | V | Engine Run Time | 45 | s |
| Throttle Motor | ON | | Request Engine Run Time | 7.7 | s |
| Throttle Motor Current | 0.6 | A | Judge Time Engine Ignition | 2.9 | s |
| Throttle Motor DUTY | 21.5 | % | Judge Time Engine Output | 0.0 | s |
| Throttle Motor Duty (Open) | 8 | % | Estimated Intake Port Temp | 172 | F |
| Throttle Motor Duty (Close) | 0 | % | Fuel Level | Not Emp | |
| Throttle Fully Close Learn | 0.6 | V | ISC Learning | Incml | |
| ETCS Actuator Power | ON | | F/C for Engine Stop Req | OFF | |
| +BM Voltage | 13.9 | | Engine Independent | Not Opr | |
| Actuator Power Supply | ON | | Racing Operation | Not Opr | |
| Electromagnetic Clutch | OFF | | Request Warm-up | Request | |
| Fail Safe Drive | OFF | | Engine Independent Control | Not Opr | |
| Fail Safe Drive (Main CPU) | OFF | | Tank Outlet Water Temp | 118 | F |
| Injector (Port) | 5.50 | ms | Water Flow Valve | 4.49 | V |
| Injection Volum (Cylinder1) | 0.183 | ml | ISC Learning Value | 3.12 | L/s |
| Fuel Pump/Speed Status | ON | | Direction Value 1 | 4.499 | V |
| Vacuum Pump | OFF | | Direction Value 2 | 0.000 | V |
| EVAP (Purge) VSV | 0.0 | % | | | |
| Evap Purge Flow | 0.0 | % | | | |
| Purge Density Learn Value | 0.000 | | | | |
| EVAP System Vent Valve | OFF | | | | |
| Tank Bypass VSV | OFF | | | | |
| EVAP Purge VSV | OFF | | | | |
| Target Air-Fuel Ratio | 0.992 | | | | |
| AF Lambda B1S1 | 0.997 | | | | |
| AFS Voltage B1S1 | 3.28 | V | | | |
| O2S B1S2 | 0.68 | V | | | |
| O2S Impedance B1S2 | 1753.69 | ohm | | | |
| Short FT B1S1 | 1.5 | % | | | |
| Long FT B1S1 | 0.7 | % | | | |
| Total FT #1 | 0.000 | | | | |
| Fuel System Status #1 | CL | | | | |
| Fuel System Status #2 | Unused | | | | |
| IGN Advance | -10.5 | deg | | | |

P0302

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------|-------------|-------------|-------------|-------------|-------------|
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.0 0 | -100.0 0 | -100.0 0 | -100.0 0 | -100.0 0 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |
| Requested Engine Torque | kW | 14.00 | 14.25 | 13.75 | 13.75 | 13.75 |
| HV Target Engine Speed | rpm | 1800 | 1800 | 1800 | 1800 | 1800 |
| Actual Engine Torque | Nm | 58 | 53 | 53 | 52 | 57 |
| Estimated Engine Torque | Nm | 70 | 68 | 66 | 66 | 66 |
| Engine Run Time | s | 255 | 255 | 255 | 255 | 255 |
| Request Engine Run Time | s | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| Judge Time Engine Ignition | s | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Judge Time Engine Output | s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Estimated Intake Port Temp | F | 181 | 181 | 181 | 181 | 181 |
| Fuel Level | | Not Emp | Not Emp | Not Emp | Not Emp | Not Emp |
| ISC Learning | | Compl | Compl | Compl | Compl | Compl |
| F/C for Engine Stop Req | | OFF | OFF | OFF | OFF | OFF |
| Engine Independent | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Racing Operation | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Request Warm-up | | Not Req | Not Req | Not Req | Not Req | Not Req |
| Engine Independent Control | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Tank Outlet Water Temp | F | 136 | 136 | 136 | 136 | 136 |
| Water Flow Valve | V | 4.49 | 4.49 | 4.49 | 4.49 | 4.49 |
| ISC Learning Value | L/s | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 |
| Direction Value 1 | V | 4.499 | 4.499 | 4.499 | 4.499 | 4.499 |
| Direction Value 2 | V | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

CONTINUED

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------------|------------|------------|------------|------------|------------|
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | ml | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |
| Fuel Pump/Speed Status | | ON | ON | ON | ON | ON |
| Vacuum Pump | | OFF | OFF | OFF | OFF | OFF |
| EVAP (Purge) VSV | % | 94.5 | 100.0 | 100.0 | 100.0 | 100.0 |
| Evap Purge Flow | % | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 |
| Purge Density Learn Value | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| EVAP System Vent Valve | | OFF | OFF | OFF | OFF | OFF |
| Tank Bypass VSV | | OFF | OFF | OFF | OFF | OFF |
| EVAP Purge VSV | | ON | ON | ON | ON | ON |
| Target Air-Fuel Ratio | | 0.992 | 0.992 | 0.992 | 0.992 | 0.992 |
| AF Lambda B1S1 | | 0.996 | 0.996 | 0.988 | 0.993 | 0.997 |
| AFS Voltage B1S1 | V | 3.34 | 3.35 | 3.31 | 3.31 | 3.36 |
| O2S B1S2 | V | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| O2S Impedance B1S2 | ohm | 187.07 | 186.75 | 186.10 | 185.12 | 184.80 |
| Short FT B1S1 | % | 1.5 | 0.0 | 0.7 | 0.7 | 0.0 |
| Long FT B1S1 | % | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| Total FT #1 | | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 |
| Fuel System Status #1 | | CL | CL | CL | CL | CL |
| Fuel System Status #2 | | Unuse d | Unuse d | Unuse d | Unuse d | Unuse d |
| IGN Advance | deg | 18.5 | 19.0 | 19.0 | 19.0 | 19.0 |
| Knock Feedback Value | deg (CA) | -3.0 | -3.0 | -3.0 | -3.0 | -3.3 |
| Knock Correct Learn Value | deg (CA) | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| VVT Control Status #1 | | ON | ON | ON | ON | ON |
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.00 | -100.00 | -100.00 | -100.00 | -100.00 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |

CONTINUED

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|------------|-------|-------|-------|-------|-------|
| Vehicle Speed | MPH | 39 | 38 | 39 | 39 | 39 |
| Engine Speed | rpm | 1790 | 1785 | 1807 | 1787 | 1850 |
| Calculate Load | % | 90.1 | 87.8 | 87.0 | 87.0 | 86.2 |
| Vehicle Load | % | 49.8 | 49.8 | 48.6 | 49.0 | 47.8 |
| MAF | gm/sec | 13.26 | 13.26 | 13.10 | 13.00 | 13.14 |
| Atmosphere Pressure | psi(gauge) | -1 | -1 | -1 | -1 | -1 |
| Coolant Temp | F | 181 | 181 | 181 | 181 | 181 |
| Intake Air | F | 73 | 73 | 73 | 73 | 73 |
| Ambient Temperature | F | 61 | 61 | 61 | 61 | 61 |
| Engine Run Time | s | 240 | 240 | 241 | 241 | 241 |
| Initial Engine Coolant Temp | F | 136.6 | 136.6 | 136.6 | 136.6 | 136.6 |
| Initial Intake Air Temp | F | 102.7 | 102.7 | 102.7 | 102.7 | 102.7 |
| Battery Voltage | V | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 |
| Accelerator Idle Position | | OFF | OFF | OFF | OFF | OFF |
| Throttle Sensor Volt % | % | 27.0 | 27.0 | 26.6 | 26.6 | 26.6 |
| Throttle Sensor #2 Volt % | % | 61.9 | 61.9 | 61.5 | 61.5 | 61.5 |
| ST1 | | OFF | OFF | OFF | OFF | OFF |
| System Guard | | ON | ON | ON | ON | ON |
| Open Side Malfunction | | OFF | OFF | OFF | OFF | OFF |
| Throttle Idle Position | | OFF | OFF | OFF | OFF | OFF |
| Throttle Require Position | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Sensor Position | % | 10.9 | 10.9 | 10.5 | 10.5 | 10.5 |
| Throttle Position No.1 | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Position No.2 | V | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Throttle Position Command | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Sens Open Pos #1 | V | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Throttle Sens Open Pos #2 | V | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Throttle Sens Open #1(AD) | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Motor | | ON | ON | ON | ON | ON |
| Throttle Motor Current | A | 0.7 | 0.7 | 0.9 | 0.3 | 0.8 |
| Throttle Motor DUTY | % | 27.0 | 27.0 | 26.6 | 26.2 | 26.2 |
| Throttle Motor Duty (Open) | % | 8 | 11 | 15 | 5 | 12 |
| Throttle Motor Duty (Close) | % | 0 | 0 | 0 | 0 | 0 |
| Throttle Fully Close Learn | V | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| ETCS Actuator Power | | ON | ON | ON | ON | ON |
| +BM Voltage | | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 |
| Actuator Power Supply | | ON | ON | ON | ON | ON |
| Electromagnetic Clutch | | OFF | OFF | OFF | OFF | OFF |
| Fail Safe Drive | | OFF | OFF | OFF | OFF | OFF |
| Fail Safe Drive (Main CPU) | | OFF | OFF | OFF | OFF | OFF |
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | ml | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |

C1241

[illegible]

Thank you, particularly if you made it this far through the post! I really appreciate it.

| | | DTC Related Information | | | | | | | | | |
|-----------------|----------------|-------------------------|-----------|------|------|-------------|----|------|--------------|--------|--|
| System | Monitor Status | DTC | Curr Conf | Pend | Hist | Test Failed | SB | Ro B | Calibration | Update | |
| Engine and ECT | Com | P0300 | X | | X | 2 | | | 34709000 | Yes | |
| | | P0302 | X | X | X | 2 | | | | | |
| | | P0303 | X | | X | 2 | | - | | | |
| | | P0304 | X | | X | 2 | | | | | |
| ABS/VSC/TRAC | - | C1241 | X | | | 2 | | - | - | | |
| Air Conditioner | - | B1421 | X | | | 2 | | - | - | | |
| Gateway | - | B1271 | | | X | 2 | | - | - | | |
| HV Battery | - | | | | | | | - | 898904709000 | No | |

C1241 Low Battery Positive Voltage or Abnormally High Battery Positive Voltage



Dual Data List

[illegible]

P0300 Random/Multiple Cylinder Misfire Detected

Freeze Frame Data

P0300 Random/Multiple Cylinder Misfire Detected



Current FFD | Pending FFD |

| Parameter | Value | Unit | Parameter | Value | Unit |
|-----------------------------|---------|------------|-----------------------------|---------|----------|
| Vehicle Speed | 7 | MPH | Knock Feedback Value | -3.0 | deg (CA) |
| Engine Speed | 1308 | rpm | Knock Correct Learn Value | 21.7 | deg (CA) |
| Catalyst Load | 72.1 | % | VVT Control Status #1 | ON | |
| Vehicle Load | 42.7 | % | Catalyst Temp B1S1 | 455.5 | F |
| MAF | 8.32 | gm/sec | Catalyst Temp B1S2 | 198.3 | F |
| Atmosphere Pressure | -1 | psi(gauge) | Closed Throttle Position SW | OFF | |
| Coolant Temp | 172 | F | Engine Oil Pressure SW | OFF | |
| Intake Air | 73 | F | Time after DTC Cleared | 7063 | min |
| Ambient Temperature | 54 | F | Distance from DTC Cleared | 2579 | mile |
| Engine Run Time | 44 | s | Warmup Cycle Cleared DTC | 105 | |
| Initial Engine Coolant Temp | 161.2 | F | TC and TE1 | OFF | |
| Initial Intake Air Temp | 74.7 | F | Ignition Trig. Count | 0 | |
| Battery Voltage | 13.8 | V | Cylinder #1 Misfire Count | 0 | |
| Accelerator Idle Position | OFF | | Cylinder #2 Misfire Count | 0 | |
| Throttle Sensor Volt % | 21.5 | % | Cylinder #3 Misfire Count | 0 | |
| Throttle Sensor #2 Volt % | 55.2 | % | Cylinder #4 Misfire Count | 0 | |
| ST1 | OFF | | All Cylinders Misfire Count | 0 | |
| System Guard | ON | | Misfire RPM | 2175 | rpm |
| Open Side Malfunction | OFF | | Misfire Load | 0.46 | g/rev |
| Throttle Idle Position | OFF | | Misfire Margin | -71.10 | % |
| Throttle Require Position | 1.0 | V | Electric Fan Motor | OFF | |
| Throttle Sensor Position | 4.3 | % | Idle Fuel Cut | OFF | |
| Throttle Position No.1 | 1.0 | V | FC TAU | OFF | |
| Throttle Position No.2 | 2.7 | V | Requested Engine Torque | 4.75 | kW |
| Throttle Position Command | 1.0 | V | HV Target Engine Speed | 1300 | rpm |
| Throttle Sens Open Pos #1 | 0.7 | V | Actual Engine Torque | 30 | Nm |
| Throttle Sens Open Pos #2 | 1.8 | V | Estimated Engine Torque | 56 | Nm |
| Throttle Sens Open #1(AD) | 1.0 | V | Engine Run Time | 45 | s |
| Throttle Motor | ON | | Request Engine Run Time | 7.7 | s |
| Throttle Motor Current | 0.6 | A | Judge Time Engine Ignition | 2.9 | s |
| Throttle Motor DUTY | 21.5 | % | Judge Time Engine Output | 0.0 | s |
| Throttle Motor Duty (Open) | 8 | % | Estimated Intake Port Temp | 172 | F |
| Throttle Motor Duty (Close) | 0 | % | Fuel Level | Not Emp | |
| Throttle Fully Close Learn | 0.6 | V | ISC Learning | Incmpl | |
| ETCS Actuator Power | ON | | F/C for Engine Stop Req | OFF | |
| +BM Voltage | 13.9 | | Engine Independent | Not Opr | |
| Actuator Power Supply | ON | | Racing Operation | Not Opr | |
| Electromagnetic Clutch | OFF | | Request Warm-up | Request | |
| Fail Safe Drive | OFF | | Engine Independent Control | Not Opr | |
| Fail Safe Drive (Main CPU) | OFF | | Tank Outlet Water Temp | 118 | F |
| Injector (Port) | 5.50 | ms | Water Flow Valve | 4.49 | V |
| Injection Volum (Cylinder1) | 0.183 | ml | ISC Learning Value | 3.12 | L/s |
| Fuel Pump/Speed Status | ON | | Direction Value 1 | 4.499 | V |
| Vacuum Pump | OFF | | Direction Value 2 | 0.000 | V |
| EVAP (Purge) VSV | 0.0 | % | | | |
| Evap Purge Flow | 0.0 | % | | | |
| Purge Density Learn Value | 0.000 | | | | |
| EVAP System Vent Valve | OFF | | | | |
| Tank Bypass VSV | OFF | | | | |
| EVAP Purge VSV | OFF | | | | |
| Target Air-Fuel Ratio | 0.992 | | | | |
| AF Lambda B1S1 | 0.997 | | | | |
| AFS Voltage B1S1 | 3.28 | V | | | |
| O2S B1S2 | 0.68 | V | | | |
| O2S Impedance B1S2 | 1753.69 | ohm | | | |
| Short FT B1S1 | 1.5 | % | | | |
| Long FT B1S1 | 0.7 | % | | | |
| Total FT #1 | 0.000 | | | | |
| Fuel System Status #1 | CL | | | | |
| Fuel System Status #2 | Unused | | | | |
| IGN Advance | -10.5 | deg | | | |

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Freeze Frame Data

P0302 Cylinder 2 Misfire Detected

*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------|---------|---------|---------|---------|---------|
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |
| Requested Engine Torque | kW | 14.00 | 14.25 | 13.75 | 13.75 | 13.75 |
| HV Target Engine Speed | rpm | 1800 | 1800 | 1800 | 1800 | 1800 |
| Actual Engine Torque | Nm | 58 | 53 | 53 | 52 | 57 |
| Estimated Engine Torque | Nm | 70 | 68 | 66 | 66 | 66 |
| Engine Run Time | s | 255 | 255 | 255 | 255 | 255 |
| Request Engine Run Time | s | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| Judge Time Engine Ignition | s | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Judge Time Engine Output | s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Estimated Intake Port Temp | F | 181 | 181 | 181 | 181 | 181 |
| Fuel Level | | Not Emp | Not Emp | Not Emp | Not Emp | Not Emp |
| ISC Learning | | Compl | Compl | Compl | Compl | Compl |
| F/C for Engine Stop Req | | OFF | OFF | OFF | OFF | OFF |
| Engine Independent | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Racing Operation | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Request Warm-up | | Not Req | Not Req | Not Req | Not Req | Not Req |
| Engine Independent Control | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Tank Outlet Water Temp | F | 136 | 136 | 136 | 136 | 136 |
| Water Flow Valve | V | 4.49 | 4.49 | 4.49 | 4.49 | 4.49 |
| ISC Learning Value | L/s | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 |
| Direction Value 1 | V | 4.499 | 4.499 | 4.499 | 4.499 | 4.499 |
| Direction Value 2 | V | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Freeze Frame Data
P0302 Cylinder 2 Misfire Detected

Continued

*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------------|------------|------------|------------|------------|------------|
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | mi | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |
| Fuel Pump/Speed Status | | ON | ON | ON | ON | ON |
| Vacuum Pump | | OFF | OFF | OFF | OFF | OFF |
| EVAP (Purge) VSV | % | 94.5 | 100.0 | 100.0 | 100.0 | 100.0 |
| Evap Purge Flow | % | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 |
| Purge Density Learn Value | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| EVAP System Vent Valve | | OFF | OFF | OFF | OFF | OFF |
| Tank Bypass VSV | | OFF | OFF | OFF | OFF | OFF |
| EVAP Purge VSV | | ON | ON | ON | ON | ON |
| Target Air-Fuel Ratio | | 0.992 | 0.992 | 0.992 | 0.992 | 0.992 |
| AF Lambda B1S1 | | 0.996 | 0.996 | 0.988 | 0.993 | 0.997 |
| AFS Voltage B1S1 | V | 3.34 | 3.35 | 3.31 | 3.31 | 3.36 |
| O2S B1S2 | V | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| O2S Impedance B1S2 | ohm | 187.0 | 186.7 | 186.1 | 185.1 | 184.8 |
| Short FT B1S1 | % | 1.5 | 0.0 | 0.7 | 0.7 | 0.0 |
| Long FT B1S1 | % | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| Total FT #1 | | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 |
| Fuel System Status #1 | | CL | CL | CL | CL | CL |
| Fuel System Status #2 | | Unuse d | Unuse d | Unuse d | Unuse d | Unuse d |
| IGN Advance | deg | 18.5 | 19.0 | 19.0 | 19.0 | 19.0 |
| Knock Feedback Value | deg (CA) | -3.0 | -3.0 | -3.0 | -3.0 | -3.3 |
| Knock Correct Learn Value | deg (CA) | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| VVT Control Status #1 | | ON | ON | ON | ON | ON |
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|------------|-------|-------|-------|-------|-------|
| Vehicle Speed | MPH | 39 | 38 | 39 | 39 | 39 |
| Engine Speed | rpm | 1790 | 1785 | 1807 | 1787 | 1850 |
| Calculate Load | % | 90.1 | 87.8 | 87.0 | 87.0 | 86.2 |
| Vehicle Load | % | 49.8 | 49.8 | 48.6 | 49.0 | 47.8 |
| MAF | gm/sec | 13.26 | 13.26 | 13.10 | 13.00 | 13.14 |
| Atmosphere Pressure | psi(gauge) | -1 | -1 | -1 | -1 | -1 |
| Coolant Temp | F | 181 | 181 | 181 | 181 | 181 |
| Intake Air | F | 73 | 73 | 73 | 73 | 73 |
| Ambient Temperature | F | 61 | 61 | 61 | 61 | 61 |
| Engine Run Time | s | 240 | 240 | 241 | 241 | 241 |
| Initial Engine Coolant Temp | F | 136.6 | 136.6 | 136.6 | 136.6 | 136.6 |
| Initial Intake Air Temp | F | 102.7 | 102.7 | 102.7 | 102.7 | 102.7 |
| Battery Voltage | V | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 |
| Accelerator Idle Position | | OFF | OFF | OFF | OFF | OFF |
| Throttle Sensor Volt % | % | 27.0 | 27.0 | 26.6 | 26.6 | 26.6 |
| Throttle Sensor #2 Volt % | % | 61.9 | 61.9 | 61.5 | 61.5 | 61.5 |
| ST1 | | OFF | OFF | OFF | OFF | OFF |
| System Guard | | ON | ON | ON | ON | ON |
| Open Side Malfunction | | OFF | OFF | OFF | OFF | OFF |
| Throttle Idle Position | | OFF | OFF | OFF | OFF | OFF |
| Throttle Require Position | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Sensor Position | % | 10.9 | 10.9 | 10.5 | 10.5 | 10.5 |
| Throttle Position No.1 | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Position No.2 | V | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Throttle Position Command | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Sens Open Pos #1 | V | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Throttle Sens Open Pos #2 | V | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Throttle Sens Open #1(AD) | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Motor | | ON | ON | ON | ON | ON |
| Throttle Motor Current | A | 0.7 | 0.7 | 0.9 | 0.3 | 0.8 |
| Throttle Motor DUTY | % | 27.0 | 27.0 | 26.6 | 26.2 | 26.2 |
| Throttle Motor Duty (Open) | % | 8 | 11 | 15 | 5 | 12 |
| Throttle Motor Duty (Close) | % | 0 | 0 | 0 | 0 | 0 |
| Throttle Fully Close Learn | V | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| ETCS Actuator Power | | ON | ON | ON | ON | ON |
| +BM Voltage | | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 |
| Actuator Power Supply | | ON | ON | ON | ON | ON |
| Electromagnetic Clutch | | OFF | OFF | OFF | OFF | OFF |
| Fail Safe Drive | | OFF | OFF | OFF | OFF | OFF |
| Fail Safe Drive (Main CPU) | | OFF | OFF | OFF | OFF | OFF |
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | ml | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |

Freeze Frame Data

P0300 Random/Multiple Cylinder Misfire Detected



Current FFD | Pending FFD |

| Parameter | Value | Unit | Parameter | Value | Unit |
|-----------------------------|---------|------------|-----------------------------|---------|----------|
| Vehicle Speed | 7 | MPH | Knock Feedback Value | -3.0 | deg (CA) |
| Engine Speed | 1308 | rpm | Knock Correct Learn Value | 21.7 | deg (CA) |
| Calculated Load | 72.1 | % | VVT Control Status #1 | ON | |
| Vehicle Load | 42.7 | % | Catalyst Temp B1S1 | 455.5 | F |
| MAF | 8.32 | gm/sec | Catalyst Temp B1S2 | 198.3 | F |
| Atmosphere Pressure | -1 | psi(gauge) | Closed Throttle Position SW | OFF | |
| Coolant Temp | 172 | F | Engine Oil Pressure SW | OFF | |
| Intake Air | 73 | F | Time after DTC Cleared | 7063 | min |
| Ambient Temperature | 54 | F | Distance from DTC Cleared | 2579 | mile |
| Engine Run Time | 44 | s | Warmup Cycle Cleared DTC | 105 | |
| Initial Engine Coolant Temp | 161.2 | F | TC and TE1 | OFF | |
| Initial Intake Air Temp | 74.7 | F | Ignition Trig. Count | 0 | |
| Battery Voltage | 13.8 | V | Cylinder #1 Misfire Count | 0 | |
| Accelerator Idle Position | OFF | | Cylinder #2 Misfire Count | 0 | |
| Throttle Sensor Volt % | 21.5 | % | Cylinder #3 Misfire Count | 0 | |
| Throttle Sensor #2 Volt % | 55.2 | % | Cylinder #4 Misfire Count | 0 | |
| ST1 | OFF | | All Cylinders Misfire Count | 0 | |
| System Guard | ON | | Misfire RPM | 2175 | rpm |
| Open Side Malfunction | OFF | | Misfire Load | 0.46 | g/rev |
| Throttle Idle Position | OFF | | Misfire Margin | -71.10 | % |
| Throttle Require Position | 1.0 | V | Electric Fan Motor | OFF | |
| Throttle Sensor Position | 4.3 | % | Idle Fuel Cut | OFF | |
| Throttle Position No. 1 | 1.0 | V | FC TAU | OFF | |
| Throttle Position No. 2 | 2.7 | V | Requested Engine Torque | 4.75 | kW |
| Throttle Position Command | 1.0 | V | HV Target Engine Speed | 1300 | rpm |
| Throttle Sens Open Pos #1 | 0.7 | V | Actual Engine Torque | 30 | Nm |
| Throttle Sens Open Pos #2 | 1.8 | V | Estimated Engine Torque | 56 | Nm |
| Throttle Sens Open #1(AD) | 1.0 | V | Engine Run Time | 45 | s |
| Throttle Motor | ON | | Request Engine Run Time | 7.7 | s |
| Throttle Motor Current | 0.6 | A | Judge Time Engine Ignition | 2.9 | s |
| Throttle Motor DUTY | 21.5 | % | Judge Time Engine Output | 0.0 | s |
| Throttle Motor Duty (Open) | 8 | % | Estimated Intake Port Temp | 172 | F |
| Throttle Motor Duty (Close) | 0 | % | Fuel Level | Not Emp | |
| Throttle Fully Close Learn | 0.6 | V | ISC Learning | Incml | |
| ETCS Actuator Power | ON | | F/C for Engine Stop Req | OFF | |
| +BM Voltage | 13.9 | | Engine Independent | Not Opr | |
| Actuator Power Supply | ON | | Racing Operation | Not Opr | |
| Electromagnetic Clutch | OFF | | Request Warm-up | Request | |
| Fail Safe Drive | OFF | | Engine Independent Control | Not Opr | |
| Fail Safe Drive (Main CPU) | OFF | | Tank Outlet Water Temp | 118 | F |
| Injector (Port) | 5.50 | ms | Water Flow Valve | 4.49 | V |
| Injection Volum (Cylinder1) | 0.183 | ml | ISC Learning Value | 3.12 | L/s |
| Fuel Pump/Speed Status | ON | | Direction Value 1 | 4.499 | V |
| Vacuum Pump | OFF | | Direction Value 2 | 0.000 | V |
| EVAP (Purge) VSV | 0.0 | % | | | |
| Evap Purge Flow | 0.0 | % | | | |
| Purge Density Learn Value | 0.000 | | | | |
| EVAP System Vent Valve | OFF | | | | |
| Tank Bypass VSV | OFF | | | | |
| EVAP Purge VSV | OFF | | | | |
| Target Air-Fuel Ratio | 0.992 | | | | |
| AF Lambda B1S1 | 0.997 | | | | |
| AFS Voltage B1S1 | 3.28 | V | | | |
| O2S B1S2 | 0.68 | V | | | |
| O2S Impedance B1S2 | 1753.89 | ohm | | | |
| Short FT B1S1 | 1.5 | % | | | |
| Long FT B1S1 | 0.7 | % | | | |
| Total FT #1 | 0.000 | | | | |
| Fuel System Status #1 | CL | | | | |
| Fuel System Status #2 | Unused | | | | |
| IGN Advance | -10.5 | deg | | | |

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------|---------|---------|---------|---------|---------|
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |
| Requested Engine Torque | kW | 14.00 | 14.25 | 13.75 | 13.75 | 13.75 |
| HV Target Engine Speed | rpm | 1800 | 1800 | 1800 | 1800 | 1800 |
| Actual Engine Torque | Nm | 58 | 53 | 53 | 52 | 57 |
| Estimated Engine Torque | Nm | 70 | 68 | 66 | 66 | 66 |
| Engine Run Time | s | 255 | 255 | 255 | 255 | 255 |
| Request Engine Run Time | s | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| Judge Time Engine Ignition | s | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Judge Time Engine Output | s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Estimated Intake Port Temp | F | 181 | 181 | 181 | 181 | 181 |
| Fuel Level | | Not Emp | Not Emp | Not Emp | Not Emp | Not Emp |
| ISC Learning | | Compl | Compl | Compl | Compl | Compl |
| F/C for Engine Stop Req | | OFF | OFF | OFF | OFF | OFF |
| Engine Independent | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Racing Operation | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Request Warm-up | | Not Req | Not Req | Not Req | Not Req | Not Req |
| Engine Independent Control | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Tank Outlet Water Temp | F | 136 | 136 | 136 | 136 | 136 |
| Water Flow Valve | V | 4.49 | 4.49 | 4.49 | 4.49 | 4.49 |
| ISC Learning Value | L/s | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 |
| Direction Value 1 | V | 4.499 | 4.499 | 4.499 | 4.499 | 4.499 |
| Direction Value 2 | V | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------------|------------|------------|------------|------------|------------|
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | ml | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |
| Fuel Pump/Speed Status | | ON | ON | ON | ON | ON |
| Vacuum Pump | | OFF | OFF | OFF | OFF | OFF |
| EVAP (Purge) VSV | % | 94.5 | 100.0 | 100.0 | 100.0 | 100.0 |
| Evap Purge Flow | % | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 |
| Purge Density Learn Value | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| EVAP System Vent Valve | | OFF | OFF | OFF | OFF | OFF |
| Tank Bypass VSV | | OFF | OFF | OFF | OFF | OFF |
| EVAP Purge VSV | | ON | ON | ON | ON | ON |
| Target Air-Fuel Ratio | | 0.992 | 0.992 | 0.992 | 0.992 | 0.992 |
| AF Lambda B1S1 | | 0.996 | 0.996 | 0.988 | 0.993 | 0.997 |
| AFS Voltage B1S1 | V | 3.34 | 3.35 | 3.31 | 3.31 | 3.36 |
| O2S B1S2 | V | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| O2S Impedance B1S2 | ohm | 187.07 | 186.75 | 186.10 | 185.12 | 184.80 |
| Short FT B1S1 | % | 1.5 | 0.0 | 0.7 | 0.7 | 0.0 |
| Long FT B1S1 | % | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| Total FT #1 | | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 |
| Fuel System Status #1 | | CL | CL | CL | CL | CL |
| Fuel System Status #2 | | Unuse d | Unuse d | Unuse d | Unuse d | Unuse d |
| IGN Advance | deg | 18.5 | 19.0 | 19.0 | 19.0 | 19.0 |
| Knock Feedback Value | deg (CA) | -3.0 | -3.0 | -3.0 | -3.0 | -3.3 |
| Knock Correct Learn Value | deg (CA) | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| VVT Control Status #1 | | ON | ON | ON | ON | ON |
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.00 | -100.00 | -100.00 | -100.00 | -100.00 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |

ored Data **Engine and ECT Live**

DTC Monitors are **Complete.**

[View Monitors](#)

Diagnostic Code:

MIL:ON

| | Code | Description | Curre nt | Pendin g | Histor y | Permane nt | Summa ry |
|--|-------|---|-------------|-------------|-------------|---------------|-------------|
| | P0300 | Random/Multiple Cylinder Misfire Detected | X | | X | | |
| | P0302 | Cylinder 2 Misfire Detected | X | X | X | | |
| | P0303 | Cylinder 3 Misfire Detected | X | | X | | |
| | P0304 | Cylinder 4 Misfire Detected | X | | X | | |

red Data **Engine and ECT Live**

Monitor Information

MIL:ON

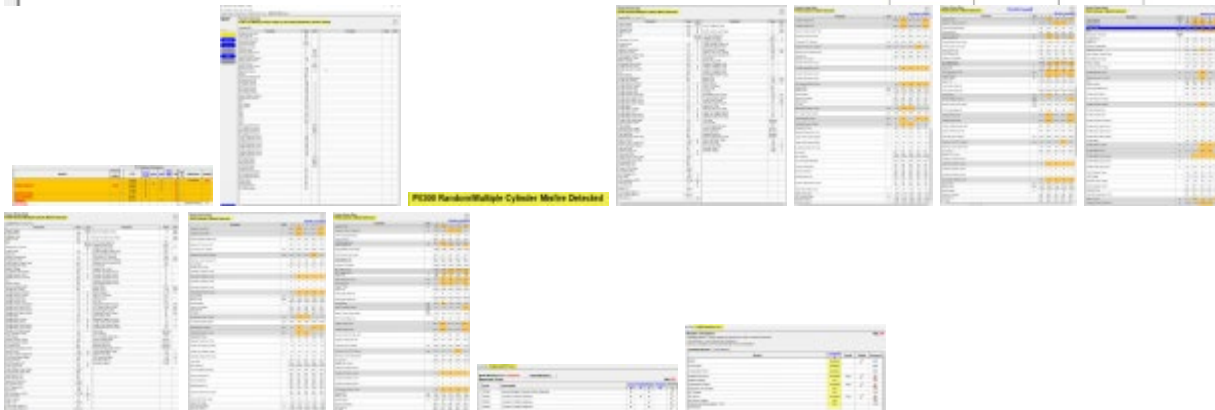
Cumulative Monitor - monitor status from the last DTC clear or monitor reset event.

Current Monitor - current monitor trip information.

Click the Cumulative/Current column header for more information.

Cumulative Monitor | **Current Monitor**

| Monitor | Cumulativ e | Result | Details | Summary |
|---------------------------------|----------------|--------|---------|---------|
| Misfire | Available | | | ∞ |
| Fuel System | Available | | | ∞ |
| Composition Parts | Available | | | ∞ |
| Catalyst Efficiency | Complete | Pass | | |
| Heated Catalyst | N/A | | | N/A |
| Evaporative System | Complete | Pass | | |
| Secondary Air System | N/A | | | N/A |
| A/C System | N/A | | | N/A |
| O2 Sensor | Complete | Pass | | |
| O2 Sensor Heater | N/A | | | N/A |
| Exhaust Gas Recirculation / VVT | N/A | | | N/A |
| Thermostat | | | | |



| System | Monitor Status | DTC Related Information | | | | | | | Ro B | Calibration | Update |
|-----------------|----------------|-------------------------|-----------|------|------|-------------|----|---|--------------|-------------|--------|
| | | DTC | Curr Conf | Pend | Hist | Test Failed | SB | | | | |
| Engine and ECT | Com | P0300 | X | | X | | 2 | | 34709000 | Yes | |
| | | P0302 | X | X | X | | 2 | | | | |
| | | P0303 | X | | X | | 2 | | | | |
| | | P0304 | X | | X | | 2 | | | | |
| ABS/VSC/TRAC | - | C1241 | X | | | | 2 | - | - | | |
| Air Conditioner | - | B1421 | X | | | | 2 | - | - | | |
| Gateway | - | B1271 | | | X | | 2 | - | - | | |
| HV Battery | - | | | | | | | - | 898904709000 | No | |

Freeze Frame Data
C1241 Low Battery Positive Voltage or Abnormally High Battery Positive Voltage



Dose Data List

[illegible]

P0300 Random/Multiple Cylinder Misfire Detected

Freeze Frame Data

P0300 Random/Multiple Cylinder Misfire Detected



Current FFD | Pending FFD |

| Parameter | Value | Unit | Parameter | Value | Unit |
|-----------------------------|---------|------------|-----------------------------|---------|----------|
| Vehicle Speed | 7 | MPH | Knock Feedback Value | -3.0 | deg (CA) |
| Engine Speed | 1308 | rpm | Knock Correct Learn Value | 21.7 | deg (CA) |
| Catalyst Load | 72.1 | % | VVT Control Status #1 | ON | |
| Vehicle Load | 42.7 | % | Catalyst Temp B1S1 | 455.5 | F |
| MAF | 8.32 | gm/sec | Catalyst Temp B1S2 | 198.3 | F |
| Atmosphere Pressure | -1 | psi(gauge) | Closed Throttle Position SW | OFF | |
| Coolant Temp | 172 | F | Engine Oil Pressure SW | OFF | |
| Intake Air | 73 | F | Time after DTC Cleared | 7063 | min |
| Ambient Temperature | 54 | F | Distance from DTC Cleared | 2579 | mile |
| Engine Run Time | 44 | s | Warmup Cycle Cleared DTC | 105 | |
| Initial Engine Coolant Temp | 161.2 | F | TC and TE1 | OFF | |
| Initial Intake Air Temp | 74.7 | F | Ignition Trig. Count | 0 | |
| Battery Voltage | 13.8 | V | Cylinder #1 Misfire Count | 0 | |
| Accelerator Idle Position | OFF | | Cylinder #2 Misfire Count | 0 | |
| Throttle Sensor Volt % | 21.5 | % | Cylinder #3 Misfire Count | 0 | |
| Throttle Sensor #2 Volt % | 55.2 | % | Cylinder #4 Misfire Count | 0 | |
| ST1 | OFF | | All Cylinders Misfire Count | 0 | |
| System Guard | ON | | Misfire RPM | 2175 | rpm |
| Open Side Malfunction | OFF | | Misfire Load | 0.46 | g/rev |
| Throttle Idle Position | OFF | | Misfire Margin | -71.10 | % |
| Throttle Require Position | 1.0 | V | Electric Fan Motor | OFF | |
| Throttle Sensor Position | 4.3 | % | Idle Fuel Cut | OFF | |
| Throttle Position No.1 | 1.0 | V | FC TAU | OFF | |
| Throttle Position No.2 | 2.7 | V | Requested Engine Torque | 4.75 | kW |
| Throttle Position Command | 1.0 | V | HV Target Engine Speed | 1300 | rpm |
| Throttle Sens Open Pos #1 | 0.7 | V | Actual Engine Torque | 30 | Nm |
| Throttle Sens Open Pos #2 | 1.8 | V | Estimated Engine Torque | 56 | Nm |
| Throttle Sens Open #1(AD) | 1.0 | V | Engine Run Time | 45 | s |
| Throttle Motor | ON | | Request Engine Run Time | 7.7 | s |
| Throttle Motor Current | 0.6 | A | Judge Time Engine Ignition | 2.9 | s |
| Throttle Motor DUTY | 21.5 | % | Judge Time Engine Output | 0.0 | s |
| Throttle Motor Duty (Open) | 8 | % | Estimated Intake Port Temp | 172 | F |
| Throttle Motor Duty (Close) | 0 | % | Fuel Level | Not Emp | |
| Throttle Fully Close Learn | 0.6 | V | ISC Learning | Incmpl | |
| ETCS Actuator Power | ON | | F/C for Engine Stop Req | OFF | |
| +BM Voltage | 13.9 | | Engine Independent | Not Opr | |
| Actuator Power Supply | ON | | Racing Operation | Not Opr | |
| Electromagnetic Clutch | OFF | | Request Warm-up | Request | |
| Fail Safe Drive | OFF | | Engine Independent Control | Not Opr | |
| Fail Safe Drive (Main CPU) | OFF | | Tank Outlet Water Temp | 118 | F |
| Injector (Port) | 5.50 | ms | Water Flow Valve | 4.49 | V |
| Injection Volum (Cylinder1) | 0.183 | ml | ISC Learning Value | 3.12 | L/s |
| Fuel Pump/Speed Status | ON | | Direction Value 1 | 4.499 | V |
| Vacuum Pump | OFF | | Direction Value 2 | 0.000 | V |
| EVAP (Purge) VSV | 0.0 | % | | | |
| Evap Purge Flow | 0.0 | % | | | |
| Purge Density Learn Value | 0.000 | | | | |
| EVAP System Vent Valve | OFF | | | | |
| Tank Bypass VSV | OFF | | | | |
| EVAP Purge VSV | OFF | | | | |
| Target Air-Fuel Ratio | 0.992 | | | | |
| AF Lambda B1S1 | 0.997 | | | | |
| AFS Voltage B1S1 | 3.28 | V | | | |
| O2S B1S2 | 0.68 | V | | | |
| O2S Impedance B1S2 | 1753.69 | ohm | | | |
| Short FT B1S1 | 1.5 | % | | | |
| Long FT B1S1 | 0.7 | % | | | |
| Total FT #1 | 0.000 | | | | |
| Fuel System Status #1 | CL | | | | |
| Fuel System Status #2 | Unused | | | | |
| IGN Advance | -10.5 | deg | | | |

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Freeze Frame Data

P0302 Cylinder 2 Misfire Detected

*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------|---------|---------|---------|---------|---------|
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |
| Requested Engine Torque | kW | 14.00 | 14.25 | 13.75 | 13.75 | 13.75 |
| HV Target Engine Speed | rpm | 1800 | 1800 | 1800 | 1800 | 1800 |
| Actual Engine Torque | Nm | 58 | 53 | 53 | 52 | 57 |
| Estimated Engine Torque | Nm | 70 | 68 | 66 | 66 | 66 |
| Engine Run Time | s | 255 | 255 | 255 | 255 | 255 |
| Request Engine Run Time | s | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| Judge Time Engine Ignition | s | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Judge Time Engine Output | s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Estimated Intake Port Temp | F | 181 | 181 | 181 | 181 | 181 |
| Fuel Level | | Not Emp | Not Emp | Not Emp | Not Emp | Not Emp |
| ISC Learning | | Compl | Compl | Compl | Compl | Compl |
| F/C for Engine Stop Req | | OFF | OFF | OFF | OFF | OFF |
| Engine Independent | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Racing Operation | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Request Warm-up | | Not Req | Not Req | Not Req | Not Req | Not Req |
| Engine Independent Control | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Tank Outlet Water Temp | F | 136 | 136 | 136 | 136 | 136 |
| Water Flow Valve | V | 4.49 | 4.49 | 4.49 | 4.49 | 4.49 |
| ISC Learning Value | L/s | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 |
| Direction Value 1 | V | 4.499 | 4.499 | 4.499 | 4.499 | 4.499 |
| Direction Value 2 | V | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Freeze Frame Data
P0302 Cylinder 2 Misfire Detected

Continued

*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------------|------------|------------|------------|------------|------------|
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | mi | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |
| Fuel Pump/Speed Status | | ON | ON | ON | ON | ON |
| Vacuum Pump | | OFF | OFF | OFF | OFF | OFF |
| EVAP (Purge) VSV | % | 94.5 | 100.0 | 100.0 | 100.0 | 100.0 |
| Evap Purge Flow | % | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 |
| Purge Density Learn Value | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| EVAP System Vent Valve | | OFF | OFF | OFF | OFF | OFF |
| Tank Bypass VSV | | OFF | OFF | OFF | OFF | OFF |
| EVAP Purge VSV | | ON | ON | ON | ON | ON |
| Target Air-Fuel Ratio | | 0.992 | 0.992 | 0.992 | 0.992 | 0.992 |
| AF Lambda B1S1 | | 0.996 | 0.996 | 0.988 | 0.993 | 0.997 |
| AFS Voltage B1S1 | V | 3.34 | 3.35 | 3.31 | 3.31 | 3.36 |
| O2S B1S2 | V | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| O2S Impedance B1S2 | ohm | 187.0 | 186.7 | 186.1 | 185.1 | 184.8 |
| Short FT B1S1 | % | 1.5 | 0.0 | 0.7 | 0.7 | 0.0 |
| Long FT B1S1 | % | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| Total FT #1 | | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 |
| Fuel System Status #1 | | CL | CL | CL | CL | CL |
| Fuel System Status #2 | | Unuse d | Unuse d | Unuse d | Unuse d | Unuse d |
| IGN Advance | deg | 18.5 | 19.0 | 19.0 | 19.0 | 19.0 |
| Knock Feedback Value | deg (CA) | -3.0 | -3.0 | -3.0 | -3.0 | -3.3 |
| Knock Correct Learn Value | deg (CA) | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| VVT Control Status #1 | | ON | ON | ON | ON | ON |
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|------------|-------|-------|-------|-------|-------|
| Vehicle Speed | MPH | 39 | 38 | 39 | 39 | 39 |
| Engine Speed | rpm | 1790 | 1785 | 1807 | 1787 | 1850 |
| Calculate Load | % | 90.1 | 87.8 | 87.0 | 87.0 | 86.2 |
| Vehicle Load | % | 49.8 | 49.8 | 48.6 | 49.0 | 47.8 |
| MAF | gm/sec | 13.26 | 13.26 | 13.10 | 13.00 | 13.14 |
| Atmosphere Pressure | psi(gauge) | -1 | -1 | -1 | -1 | -1 |
| Coolant Temp | F | 181 | 181 | 181 | 181 | 181 |
| Intake Air | F | 73 | 73 | 73 | 73 | 73 |
| Ambient Temperature | F | 61 | 61 | 61 | 61 | 61 |
| Engine Run Time | s | 240 | 240 | 241 | 241 | 241 |
| Initial Engine Coolant Temp | F | 136.6 | 136.6 | 136.6 | 136.6 | 136.6 |
| Initial Intake Air Temp | F | 102.7 | 102.7 | 102.7 | 102.7 | 102.7 |
| Battery Voltage | V | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 |
| Accelerator Idle Position | | OFF | OFF | OFF | OFF | OFF |
| Throttle Sensor Volt % | % | 27.0 | 27.0 | 26.6 | 26.6 | 26.6 |
| Throttle Sensor #2 Volt % | % | 61.9 | 61.9 | 61.5 | 61.5 | 61.5 |
| ST1 | | OFF | OFF | OFF | OFF | OFF |
| System Guard | | ON | ON | ON | ON | ON |
| Open Side Malfunction | | OFF | OFF | OFF | OFF | OFF |
| Throttle Idle Position | | OFF | OFF | OFF | OFF | OFF |
| Throttle Require Position | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Sensor Position | % | 10.9 | 10.9 | 10.5 | 10.5 | 10.5 |
| Throttle Position No.1 | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Position No.2 | V | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Throttle Position Command | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Sens Open Pos #1 | V | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 |
| Throttle Sens Open Pos #2 | V | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Throttle Sens Open #1(AD) | V | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Throttle Motor | | ON | ON | ON | ON | ON |
| Throttle Motor Current | A | 0.7 | 0.7 | 0.9 | 0.3 | 0.8 |
| Throttle Motor DUTY | % | 27.0 | 27.0 | 26.6 | 26.2 | 26.2 |
| Throttle Motor Duty (Open) | % | 8 | 11 | 15 | 5 | 12 |
| Throttle Motor Duty (Close) | % | 0 | 0 | 0 | 0 | 0 |
| Throttle Fully Close Learn | V | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| ETCS Actuator Power | | ON | ON | ON | ON | ON |
| +BM Voltage | | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 |
| Actuator Power Supply | | ON | ON | ON | ON | ON |
| Electromagnetic Clutch | | OFF | OFF | OFF | OFF | OFF |
| Fail Safe Drive | | OFF | OFF | OFF | OFF | OFF |
| Fail Safe Drive (Main CPU) | | OFF | OFF | OFF | OFF | OFF |
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | ml | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |

Freeze Frame Data

P0300 Random/Multiple Cylinder Misfire Detected



Current FFD | Pending FFD |

| Parameter | Value | Unit | Parameter | Value | Unit |
|-----------------------------|---------|------------|-----------------------------|---------|----------|
| Vehicle Speed | 7 | MPH | Knock Feedback Value | -3.0 | deg (CA) |
| Engine Speed | 1308 | rpm | Knock Correct Learn Value | 21.7 | deg (CA) |
| Calculated Load | 72.1 | % | VVT Control Status #1 | ON | |
| Vehicle Load | 42.7 | % | Catalyst Temp B1S1 | 455.5 | F |
| MAF | 8.32 | gm/sec | Catalyst Temp B1S2 | 198.3 | F |
| Atmosphere Pressure | -1 | psi(gauge) | Closed Throttle Position SW | OFF | |
| Coolant Temp | 172 | F | Engine Oil Pressure SW | OFF | |
| Intake Air | 73 | F | Time after DTC Cleared | 7063 | min |
| Ambient Temperature | 54 | F | Distance from DTC Cleared | 2579 | mile |
| Engine Run Time | 44 | s | Warmup Cycle Cleared DTC | 105 | |
| Initial Engine Coolant Temp | 161.2 | F | TC and TE1 | OFF | |
| Initial Intake Air Temp | 74.7 | F | Ignition Trig. Count | 0 | |
| Battery Voltage | 13.8 | V | Cylinder #1 Misfire Count | 0 | |
| Accelerator Idle Position | OFF | | Cylinder #2 Misfire Count | 0 | |
| Throttle Sensor Volt % | 21.5 | % | Cylinder #3 Misfire Count | 0 | |
| Throttle Sensor #2 Volt % | 55.2 | % | Cylinder #4 Misfire Count | 0 | |
| ST1 | OFF | | All Cylinders Misfire Count | 0 | |
| System Guard | ON | | Misfire RPM | 2175 | rpm |
| Open Side Malfunction | OFF | | Misfire Load | 0.46 | g/rev |
| Throttle Idle Position | OFF | | Misfire Margin | -71.10 | % |
| Throttle Require Position | 1.0 | V | Electric Fan Motor | OFF | |
| Throttle Sensor Position | 4.3 | % | Idle Fuel Cut | OFF | |
| Throttle Position No. 1 | 1.0 | V | FC TAU | OFF | |
| Throttle Position No. 2 | 2.7 | V | Requested Engine Torque | 4.75 | kW |
| Throttle Position Command | 1.0 | V | HV Target Engine Speed | 1300 | rpm |
| Throttle Sens Open Pos #1 | 0.7 | V | Actual Engine Torque | 30 | Nm |
| Throttle Sens Open Pos #2 | 1.8 | V | Estimated Engine Torque | 56 | Nm |
| Throttle Sens Open #1(AD) | 1.0 | V | Engine Run Time | 45 | s |
| Throttle Motor | ON | | Request Engine Run Time | 7.7 | s |
| Throttle Motor Current | 0.6 | A | Judge Time Engine Ignition | 2.9 | s |
| Throttle Motor DUTY | 21.5 | % | Judge Time Engine Output | 0.0 | s |
| Throttle Motor Duty (Open) | 8 | % | Estimated Intake Port Temp | 172 | F |
| Throttle Motor Duty (Close) | 0 | % | Fuel Level | Not Emp | |
| Throttle Fully Close Learn | 0.6 | V | ISC Learning | Incml | |
| ETCS Actuator Power | ON | | F/C for Engine Stop Req | OFF | |
| +BM Voltage | 13.9 | | Engine Independent | Not Opr | |
| Actuator Power Supply | ON | | Racing Operation | Not Opr | |
| Electromagnetic Clutch | OFF | | Request Warm-up | Request | |
| Fail Safe Drive | OFF | | Engine Independent Control | Not Opr | |
| Fail Safe Drive (Main CPU) | OFF | | Tank Outlet Water Temp | 118 | F |
| Injector (Port) | 5.50 | ms | Water Flow Valve | 4.49 | V |
| Injection Volum (Cylinder1) | 0.183 | ml | ISC Learning Value | 3.12 | L/s |
| Fuel Pump/Speed Status | ON | | Direction Value 1 | 4.499 | V |
| Vacuum Pump | OFF | | Direction Value 2 | 0.000 | V |
| EVAP (Purge) VSV | 0.0 | % | | | |
| Evap Purge Flow | 0.0 | % | | | |
| Purge Density Learn Value | 0.000 | | | | |
| EVAP System Vent Valve | OFF | | | | |
| Tank Bypass VSV | OFF | | | | |
| EVAP Purge VSV | OFF | | | | |
| Target Air-Fuel Ratio | 0.992 | | | | |
| AF Lambda B1S1 | 0.997 | | | | |
| AFS Voltage B1S1 | 3.28 | V | | | |
| O2S B1S2 | 0.68 | V | | | |
| O2S Impedance B1S2 | 1753.89 | ohm | | | |
| Short FT B1S1 | 1.5 | % | | | |
| Long FT B1S1 | 0.7 | % | | | |
| Total FT #1 | 0.000 | | | | |
| Fuel System Status #1 | CL | | | | |
| Fuel System Status #2 | Unused | | | | |
| IGN Advance | -10.5 | deg | | | |

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------|---------|---------|---------|---------|---------|
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.0 | -100.0 | -100.0 | -100.0 | -100.0 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |
| Requested Engine Torque | kW | 14.00 | 14.25 | 13.75 | 13.75 | 13.75 |
| HV Target Engine Speed | rpm | 1800 | 1800 | 1800 | 1800 | 1800 |
| Actual Engine Torque | Nm | 58 | 53 | 53 | 52 | 57 |
| Estimated Engine Torque | Nm | 70 | 68 | 66 | 66 | 66 |
| Engine Run Time | s | 255 | 255 | 255 | 255 | 255 |
| Request Engine Run Time | s | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| Judge Time Engine Ignition | s | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Judge Time Engine Output | s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Estimated Intake Port Temp | F | 181 | 181 | 181 | 181 | 181 |
| Fuel Level | | Not Emp | Not Emp | Not Emp | Not Emp | Not Emp |
| ISC Learning | | Compl | Compl | Compl | Compl | Compl |
| F/C for Engine Stop Req | | OFF | OFF | OFF | OFF | OFF |
| Engine Independent | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Racing Operation | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Request Warm-up | | Not Req | Not Req | Not Req | Not Req | Not Req |
| Engine Independent Control | | Not Opr | Not Opr | Not Opr | Not Opr | Not Opr |
| Tank Outlet Water Temp | F | 136 | 136 | 136 | 136 | 136 |
| Water Flow Valve | V | 4.49 | 4.49 | 4.49 | 4.49 | 4.49 |
| ISC Learning Value | L/s | 3.12 | 3.12 | 3.12 | 3.12 | 3.12 |
| Direction Value 1 | V | 4.499 | 4.499 | 4.499 | 4.499 | 4.499 |
| Direction Value 2 | V | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Freeze Frame Data

P0302 Cylinder 2 Misfire Detected



*N/A=Not Available

| Parameter | Unit | -3 | -2 | -1 | 0 | 1 |
|-----------------------------|-------------|------------|------------|------------|------------|------------|
| Injector (Port) | ms | 6.78 | 6.40 | 6.40 | 6.40 | 6.27 |
| Injection Volum (Cylinder1) | ml | 0.228 | 0.228 | 0.220 | 0.217 | 0.217 |
| Fuel Pump/Speed Status | | ON | ON | ON | ON | ON |
| Vacuum Pump | | OFF | OFF | OFF | OFF | OFF |
| EVAP (Purge) VSV | % | 94.5 | 100.0 | 100.0 | 100.0 | 100.0 |
| Evap Purge Flow | % | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 |
| Purge Density Learn Value | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| EVAP System Vent Valve | | OFF | OFF | OFF | OFF | OFF |
| Tank Bypass VSV | | OFF | OFF | OFF | OFF | OFF |
| EVAP Purge VSV | | ON | ON | ON | ON | ON |
| Target Air-Fuel Ratio | | 0.992 | 0.992 | 0.992 | 0.992 | 0.992 |
| AF Lambda B1S1 | | 0.996 | 0.996 | 0.988 | 0.993 | 0.997 |
| AFS Voltage B1S1 | V | 3.34 | 3.35 | 3.31 | 3.31 | 3.36 |
| O2S B1S2 | V | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| O2S Impedance B1S2 | ohm | 187.07 | 186.75 | 186.10 | 185.12 | 184.80 |
| Short FT B1S1 | % | 1.5 | 0.0 | 0.7 | 0.7 | 0.0 |
| Long FT B1S1 | % | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| Total FT #1 | | 0.042 | 0.042 | 0.042 | 0.042 | 0.042 |
| Fuel System Status #1 | | CL | CL | CL | CL | CL |
| Fuel System Status #2 | | Unuse d | Unuse d | Unuse d | Unuse d | Unuse d |
| IGN Advance | deg | 18.5 | 19.0 | 19.0 | 19.0 | 19.0 |
| Knock Feedback Value | deg (CA) | -3.0 | -3.0 | -3.0 | -3.0 | -3.3 |
| Knock Correct Learn Value | deg (CA) | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| VVT Control Status #1 | | ON | ON | ON | ON | ON |
| Catalyst Temp B1S1 | F | 988.0 | 993.0 | 993.0 | 993.0 | 997.7 |
| Catalyst Temp B1S2 | F | 639.0 | 640.2 | 640.2 | 640.2 | 641.5 |
| Closed Throttle Position SW | | OFF | OFF | OFF | OFF | OFF |
| Engine Oil Pressure SW | | OFF | OFF | OFF | OFF | OFF |
| Time after DTC Cleared | min | 7042 | 7042 | 7042 | 7042 | 7042 |
| Distance from DTC Cleared | mile | 2574 | 2574 | 2574 | 2574 | 2574 |
| Warmup Cycle Cleared DTC | | 104 | 104 | 104 | 104 | 104 |
| TC and TE1 | | OFF | OFF | OFF | OFF | OFF |
| Ignition Trig. Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #1 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #2 Misfire Count | | 78 | 86 | 94 | 0 | 4 |
| Cylinder #3 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| Cylinder #4 Misfire Count | | 0 | 0 | 0 | 0 | 0 |
| All Cylinders Misfire Count | | 148 | 156 | 164 | 166 | 170 |
| Misfire RPM | rpm | 2175 | 2175 | 2175 | 2175 | 2175 |
| Misfire Load | g/rev | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| Misfire Margin | % | -100.00 | -100.00 | -100.00 | -100.00 | -100.00 |
| Electric Fan Motor | | OFF | OFF | OFF | OFF | OFF |
| Idle Fuel Cut | | OFF | OFF | OFF | OFF | OFF |
| FC TAU | | OFF | OFF | OFF | OFF | OFF |

ored Data **Engine and ECT Live**

DTC Monitors are **Complete**.

[View Monitors](#)

Diagnostic Code:

MIL:ON

| | Code | Description | Current | Pending | History | Permanent | Summary |
|--|-------|---|---------|---------|---------|-----------|---------|
| | P0300 | Random/Multiple Cylinder Misfire Detected | X | | X | | |
| | P0302 | Cylinder 2 Misfire Detected | X | X | X | | |
| | P0303 | Cylinder 3 Misfire Detected | X | | X | | |
| | P0304 | Cylinder 4 Misfire Detected | X | | X | | |

red Data **Engine and ECT Live**

Monitor Information

MIL:ON

Cumulative Monitor - monitor status from the last DTC clear or monitor reset event.

Current Monitor - current monitor trip information.

Click the Cumulative/Current column header for more information.

Cumulative Monitor | **Current Monitor**

| Monitor | Cumulative | Result | Details | Summary |
|---------------------------------|------------|--------|---------|---------|
| Misfire | Available | | | ∞ |
| Fuel System | Available | | | ∞ |
| Composition Parts | Available | | | ∞ |
| Catalyst Efficiency | Complete | Pass | | |
| Heated Catalyst | N/A | | | N/A |
| Evaporative System | Complete | Pass | | |
| Secondary Air System | N/A | | | N/A |
| A/C System | N/A | | | N/A |
| O2 Sensor | Complete | Pass | | |
| O2 Sensor Heater | N/A | | | N/A |
| Exhaust Gas Recirculation / VVT | N/A | | | N/A |
| Thermostat | | | | |

Life's given me a swift kick in the balls and I really appreciate any help you can offer. House and all personal belongings destroyed by fire Feb. 8, 2015; Had to fight USAA insurance company for almost four years to get personal property benefits (still haven't received all home benefits); loan mortgage servicer, LoanCare, who holds *more* money in an escrow account from insurance loss proceeds than I owe on the mortgage - is wrongfully withholding money to rebuild our home despite sending over 2,500 pages of requested documentation (contractor invoices, lien waivers, etc.), - so house still not rebuilt.

Now LoanCare is trying to foreclose on our "lot" - even though they technically can't since they already have more than enough money to pay off the mortgage with escrow funds, since I stopped payments; Paid over \$120K to rent a cockroach-infested apartment so cramped our two teenage daughters share a bed and, adding insult to injury, I paid over \$50K in mortgage interest over past five years for money I'm *not* borrowing since the loan servicers not releasing funds for rebuild.

Oh, and getting back to the Prius, the mechanic who replaced the engine this summer after I failed to check the oil regularly (every 5,000 miles is a bad rule of thumb, especially for older vehicles) **installed an engine without a VIN or serial**, which is illegal in Georgia, and means it's likely stolen. I've contacted the police and they aren't doing anything about it. So

Apologies for the rant...

