C5 Computer Diagnostic Codes

The ability to view engine operating data such as oil pressure and coolant temperature, in digital form on the instrument panel has been a feature of Corvettes since 1984. Starting in 1992, the instrument panel could display limited diagnostic data relating to the car's on-board computer systems.

The C5's capacity to display diagnostic codes is significantly expanded. The new Corvette has 11 "Computer Modules" that transmit diagnostics:

Powertrain Control Module (PCM)

Traction Control System (TCS), which combines traction control, ABS and, on cars built after 1997, the optional Active Handling System

Real Time Damping (RTD)

Body Control Module (BCM)

Instrument Panel Cluster (IPC)

Radio

Heating-ventilation-air conditioning (HVAC)

Left Door Control Module (LDCM)

Right Door Control Module (RDCM)

Seat Control Module (SCM)

Remote Function Actuation (RFA).

The Instrument Panel Cluster display, the 20-character fluorescent screen above the steering column that says **"Corvette by Chevrolet"** every time you start the car, is an important device. Its primary function is to display warning and status messages from the various modules. For cars built before 12/15/97, there are 48 of these warning/status messages. A few additional

messages come from cars built after that date and equipped with the Active Handling option. A list of the warning/status messages can be found in your Owner's Manual or in the Service Manual for your model year.

The display can show powertrain operating information and tire pressures by simply pressing different buttons on the Driver Information Center (DIC) to the right of the instrument panel. In addition, using the "options" button, you can configure the C5's keyless entry and security systems. Use of the display and buttons for these purposes is discussed in your Owner's Manual

Do-It-Yourself owners will be most interested in the display of diagnostic trouble codes for all modules that transmit them. The **"Diagnostic Display Mode"** is entered with the following procedure:

1) Turn on the ignition but don't start the engine.

2) Press the **"RESET"** button to turn off any warning messages

3) Press and hold **"OPTIONS"**

4) While holding **"OPTIONS"**, press **"FUEL"** four times within a 10-second period.

Initially, on-board diagnostics go into an "Automatic Mode" which shows diagnostic codes in a pre-set sequence: PCM - TCS - RTD - BCM - IPC - RADIO - HVAC - LDCM - RDCM - SCM - RFA. All codes will be displayed for each module. If none are present in a given module, you will see "No More Codes" on the display.

There are two kinds of diagnostic codes, "Current" and "History", designated with a letter suffix, "C" or "H". A current code indicates a malfunction is present in the module displaying data. A history code indicates a problem existed sometime in the last 40 or 50 ignition cycles. When not accompanied by a current code of the same number, it's potential evidence of a previous problem, now resolved, that was not removed by clearing the codes. More likely it's an indication of an intermittent malfunction.

Intermittent codes are the most challenging of the diagnostics. An intermittent code may have happened once, may have happened more than once but is inconsistent or may be happening on a regular basis but not at the time the codes are displayed. History codes can also be caused by a current malfunction in a system that is not operating at the time codes are displayed. An example is the rear window defogger which doesn't operate until the Body Control Module detects engine rpm. For history codes set by a module that does not operate with the key on and engine off, a special diagnostic tool called a "Scan Tester" is necessary to properly diagnose the malfunction.

Once the system has displayed all modules, it goes into the manual mode which allows selection of each module using combinations of Driver Information Center buttons. Manual mode can also be entered during the automatic sequence by pressing any button except **"E/M"**. Once the display shows "Manual Diagnostics", select a module by pressing the **"OPTIONS"** button to go forward or the **"TRIP"** button to go back. Once a module is selected, a code is displayed, and if more than one are present; press **"GAGES"** to go forward or **"FUEL"** to go back.

To exit the diagnostic mode at any time, press **"E/M"**. If you want to erase codes in a given module, press **"RESET"**.

To reset the codes once in manual mode, press and hold **"RESET"** until it displays "NO CODES". Press **"OPTIONS"** to go to the next module. Repeat the steps until you have reset the codes in all the computer modules. NOTE!! Only reset the codes IF you want to - it is NOT necessary to do this. Clearing a code does not repair a problem. You are simply erasing the evidence of it in the module's memory.

Once you have the codes, the next question is: What to do with the information? First, consult the factory service manual. Any serious C5 Do-It-Yourself owner should invest in the Corvette Service Manual of the appropriate model year. Unfortunately, it is an expensive set of three books totaling (1997 edition) 3890 pages and stacking 4 1/4 inches high. In spite of its cost and size, the Service Manual is a requirement if you want to understand and work on your C5. They are available through Chevrolet dealers and mail order sources, such as Ecklers and Mid America.

The diagnostics for some diagnostic codes call for a scan tester. Also known as "scan tools" or "scanners", these units are really hand-held diagnostic computers. A little larger than a portable cassette recorder, powered by the car battery and connected to the diagnostic link connector (DLC); they "scan" computer module data and display it on a small screen. Scan testers are operated by a small keypad. Software is usually in plug-in cartridges covering a specific model year.

Where you might get stuck needing one of these pieces of equipment is when the Service Manual calls for operating a specific module with a scan tester. If you are trying to solve a diagnostic code and determine that a scan tester is required but don't have access to one; take the car to a service facility for repairs.

Turn the key to the ON position, but don't start the engine. Clear any existing messages by pressing the RESET button. Hold the OPTIONS button down, and press the FUEL button 4 times. This will get you into the CODES section of the DIC. The computer will automatically display all the codes your car has created. It will cycle through each code every 3 seconds. Any code that ends in H is a

history code (something that has occurred in the past) but is fine now. Once the computer has finished going through all of it's codes, press RESET to enter Manual Configuration mode. It should start with a module and show "NO CODES" or "# CODES".

To optionally reset the codes once in manual mode, press and hold RESET until it displays "NO CODES". Press OPTIONS to go to the next module. Repeat the steps in this paragraph until you have reset the codes in all the computer modules. NOTE!! Only reset the codes IF you want to - it is NOT necessary to do this.

CODE LIST

10-PCM - Powertrain Control Module
P0101 Mass Air Flow (MAF) System Performance
P0102 Mass Air Flow (MAF) Sensor Circuit Low Frequency
P0103 Mass Air Flow (MAF) Sensor Circuit High Frequency
P0107 Manifold Pressure (MAP) Sensor Circuit Low Voltage
P0108 Manifold Pressure (MAP) Sensor Circuit High Voltage
P0112 Intake Air Temp (IAT) Sensor Circuit Low Voltage
P0113 Intake Air Temp (IAT) Sensor Circuit High Voltage
P0117 Engine Coolant Temp (ECT) Sensor Low Voltage
P0118 Engine Coolant Temp (ECT) Sensor High Voltage
P0118 Engine Coolant Temperature (ECT) Excessive Time to Closed Loop Fuel Control
P0131 Heated Oxygen Sensor (HO2S) Circuit Low Voltage Bank 1 Sensor 1
P0132 Heated Oxygen Sensor (HO2S) Circuit High Voltage Bank 1 Sensor 1
P0133 Heated Oxygen Sensor (HO2S) Slow Response Bank 1 Sensor 1
P0134 Heated Oxygen Sensor (HO2S) Circuit Insufficient Activity Bank 1 Sensor 1
P0135 Heated Oxygen Sensor (HO2S) Heater Circuit Bank 1 Sensor 1
P0137 Heated Oxygen Sensor (HO2S) Circuit Low Voltage Bank 1 Sensor 2
P0138 Heated Oxygen Sensor (HO2S) Circuit High Voltage Bank 1 Sensor 2
P0140 Heated Oxygen Sensor (HO2S) Circuit Insufficient Activity Bank 1 Sensor 2
P0141 Heated Oxygen Sensor (HO2S) Heater Circuit Bank 1 Sensor 2
P0151 Heated Oxygen Sensor (HO2S) Circuit Low Voltage Bank 2 Sensor 1
P0152 Heated Oxygen Sensor (HO2S) Circuit High Voltage Bank 2 Sensor 1
P0153 Heated Oxygen Sensor (HO2S) Slow Response Bank 2 Sensor 1
P0154 Heated Oxygen Sensor (HO2S) Circuit Insufficient Activity Bank 2 Sensor 1
P0155 Heated Oxygen Sensor (HO2S) Heater Circuit Bank 2 Sensor 1
P0157 Heated Oxygen Sensor (HO2S) Circuit Low Voltage Bank 2 Sensor 2
P0158 Heated Oxygen Sensor (HO2S) Circuit High Voltage Bank 2 Sensor 2

P0160 Heated Oxygen Sensor (HO2S) Circuit Insufficient Activity Bank 2 Sensor 2
P0161 Heated Oxygen Sensor (HO2S) Heater Circuit Bank 2 Sensor 2
P0171 Fuel Trim System Lean Bank 1
P0172 Fuel Trim System Rich Bank 1
P0174 Fuel Trim System Lean Bank 2
P0175 Fuel Trim System Rich Bank 2
P0230 Fuel Pump Control Circuit
P0300 Engine Misfire Detected
P0325 Knock Sensor (KS) System
P0327 Knock Sensor (KS) Circuit Front
P0332 Knock Sensor (KS) Circuit Rear
P0335 CKP Sensor Circuit
P0336 CKP Sensor Circuit Performance
P0341 CMP Circuit Performance
P0342 CMP Sensor Circuit Low Voltage
P0343 CMP Sensor Circuit High Voltage
P0351 Ignition Control #1 Circuit
P0352 Ignition Control #2 Circuit
P0353 Ignition Control #3 Circuit
P0354 Ignition Control #4 Circuit
P0355 Ignition Control #5 Circuit
P0356 Ignition Control #6 Circuit
P0357 Ignition Control #7 Circuit
P0358 Ignition Control #8 Circuit
P0410 AIR System
P0412 AIR Solenoid Relay Control Circuit
P0418 AIR Pump Relay Control Circuit
P0420 TWC System Low Efficiency Bank 1
P0430 TWC System Low Efficiency Bank 2
P0441 EVAP System No Flow During Purge
P0461 Fuel Level Sensor 1 Circuit Performance
P0462 Fuel Level Sensor 1 Circuit Low Voltage
P0463 Fuel Level Sensor 1 Circuit High Voltage
P0480 FC Relay 1 Control Circuit
P0481 FC Relay 2 and 3 Control Circuit
P0500 VSS Circuit (M/T)
P0506 Idle Speed Low
P0507 Idle Speed High
P0522 Engine Oil Pressure Sensor Circuit Low Voltage
P0523 Engine Oil Pressure Sensor Circuit High Voltage
P0530 A/C Refrigerant Pressure Sensor Circuit
P0562 System Voltage Low
P0563 System Voltage High
P0567 Cruise Resume Circuit
P0568 Cruise Set Circuit

P0571 Cruise Brake Switch Circuit (M/T)
P0601 PCM Memory
P0602 PCM Not Programmed
P0604 PCM RAM Performance
P0606 PCM Internal Communication Interrupted
P0608 VSS Output Circuit
P0650 MIL Control Circuit
P0654 Engine Speed Output Circuit
P0704 Clutch Switch Circuit (M/T)
P0705 Transmission Range Switch Circuit (A/T)
P0706 Transmission Range Switch Performance (A/T)
P0801 Reverse Inhibit Solenoid Control Circuit (M/T)
P0803 1-4 Upshift Solenoid Control Circuit (M/T)
P0804 1-4 Upshift Lamp Control Circuit (M/T)
P1111 Intake Air Temperature (IAT) Sensor Circuit Intermittent High Voltage
P1112 Intake Air Temperature (IAT) Sensor Circuit Intermittent Low Voltage
P1114 ECT Sensor Circuit Intermittent Low Voltage
P1115 ECT Sensor Circuit Intermittent High Voltage
P1120 TP Sensor 1 Circuit
P1125 APP System
P1133 Heated Oxygen Sensor (HO2S) Insufficient Switching Bank 1 Sensor 1
P1134 Heated Oxygen Sensor (HO2S) Transition Time Ratio Bank 1 Sensor 1
P1153 Heated Oxygen Sensor (HO2S) Insufficient Switching Bank 2 Sensor 1
P1154 Heated Oxygen Sensor (HO2S) Transition Time Ratio Bank 2 Sensor 1
P1220 TP Sensor 2 Circuit
P1221 TP Sensors 1, 2 Performance
P1258 Engine Coolant Over Temperature-Fuel Disabled
P1275 APP Sensor 1 Circuit
P1276 APP Sensor 1 Circuit Performance
P1280 APP Sensor 2 Circuit
P1281 APP Sensor 2 Circuit Performance
P1285 APP Sensor 3 Circuit
P1286 APP Sensor 3 Circuit Performance
P1380 EB (T) CM DTC Detected- Rough Road Data Unusable
P1381 Misfire Detected - No EB (T) CM/PCM Serial Data
P1415 AIR System Bank 1
P1416 AIR System Bank 2
P1431 Fuel Level Sensor 2 Circuit Performance
P1432 Fuel Level Sensor 2 Low Voltage
P1433 Fuel Level Sensor 2 High Voltage
P1441 Evaporative Emissions (EVAP) System Flow During Non-Purge
P1514 TAC System MAF Performance
P1515 Command vs Actual Throttle Position Performance (PCM Module)
P1516 Command vs Actual Throttle Position Performance (TAC Module)
P1517 TAC Module Processor
P1518 PCM to TAC Module Serial Data Circuit

P1539 A/C Clutch Status Circuit High Voltage
P1545 A/C Clutch Relay Control Circuit
P1546 A/C Clutch Status Circuit Low Voltage
P1571 ASR Desired Torque
P1574 Stop Lamp Control Circuit
P1575 Extended Travel Brake Switch Circuit High Voltage
P1626 Theft Deterrent System Fuel Enable Circuit
P1630 Theft Deterrent System PCM In Learn Mode
P1631 Theft Deterrent System Password Incorrect
P1635 5 Volt Reference #1 Circuit
P1639 5 Volt Reference #2 Circuit
P1644 Delivered Torque Output Circuit
P1652 Powertrain Induced Chassis Pitch Output Circuit

28-TCS - Traction Control System
C1214 Sol Valve Relay Contact or Coil CKT Open
C1217 BPMV Pump Motor Relay Contact CKT Open
C1221 LF Wheel Speed Sensor Input Signal is 0
C1222 RF Wheel Speed Sensor Input Signal is 0
C1223 LR Wheel Speed Sensor Input Signal is 0
C1224 RR Wheel Speed Sensor Input Signal is 0
C1225 RF Excessive Wheel Speed Variation
C1226 LF Excessive Wheel Speed Variation
C1227 LR Excessive Wheel Speed Variation
C1228 RR Excessive Wheel Speed Variation
C1232 LF Wheel Speed Circuit Open or Shorted
C1233 RF Wheel Speed Circuit Open or Shorted
C1234 LR Wheel Speed Circuit Open or Shorted
C1235 RR Wheel Speed Circuit Open or Shorted
C1236 Low System Supply Voltage
C1237 High System Supply Voltage
C1241 Magna Steer Circuit Malfunction
C1242 BPMV Pump Motor Ground Circuit Open
C1243 BPMV Pump Motor Stalled
C1255 EBTCM Internal Malfunction
CEBCM Internal Malfunction
C1261 LF Inlet Valve Solenoid Malfunction
C1262 LF Outlet Valve Solenoid Malfunction
C1263 RF Inlet Valve Solenoid Malfunction
C1264 RF Outlet Valve Solenoid Malfunction
C1265 LR Inlet Valve Solenoid Malfunction
C1266 LR Outlet Valve Solenoid Malfunction
C1267 RR Inlet Valve Solenoid Malfunction
C1268 RR Outlet Valve Solenoid Malfunction
C1273 RF TCS Master Cyl Isolation Valve Malfunction
C1274 RF TCS Prime Valve Malfunction

C1276 Delivered Torque Signal CKT Malfunction
C1277 Requested Torque Signal CKT Malfunction
C1278 TCS Temporarily Inhibited By PCM
C1281 Steering Sensor Uncorrelated Malfunction
C1286 Steering Sensor Bias Malfunction
C1287 Steering Sensor Rate Malfunction
C1291 Open Brake Lamp Sw Contacts During Deccel
C1293 DTC C1291/C1292 Set Curnt/Prev Ign Cylce
C1294 Brake Lamp Switch Circuit Always Active
C1295 Brake Lamp Switch Circuit Open
U1016 Loss of Communications with PCM
U1255 Generic Loss Communications
U1300 Class 2 Circuit Shorted to Ground
U1301 Class 2 Circuit Shorted to Battery

38-RTD - Real Time Damping
C1650 ESC Module Malfunction
C1658 EEPROM Calibration Malfunction
C1710 LF Shock Absorber Solenoid (Short to Voltage)
C1711 LF Shock Absorber Solenoid (Short to GND)
C1712 LF Shock Absorber Solenoid (Open Circuit)
C1715 RF Shock Absorber Solenoid (Short to Voltage)
C1716 RF Shock Absorber Solenoid (Short to GND)
C1717 RF Shock Absorber Solenoid (Open Circuit)
C1720 LR Shock Absorber Solenoid (Short to Voltage)
C1721 LR Shock Absorber Solenoid (Short to GND)
C1722 LR Shock Absorber Solenoid (Open Circuit)
C1725 RR Shock Absorber Solenoid (Short to Voltage)
C1726 RR Shock Absorber Solenoid (Short to GND)
C1727 RR Shock Absorber Solenoid (Open Circuit)
C1743 Loss of Vehicle Speed Signal
C1760 LF Position Sensor (Out of Range)
C1761 RF Position Sensor (Out of Range)
C1762 LR Position Sensor (Out of Range)
C1763 RR Position Sensor (Out of Range)
C1768 Position Sensor Supply Malfunction (Overcurrent)
C1780 Loss of Steering Position Signal
C1786 RTD Control Relay Malfunction
C1787 RTD Control Relay Circuit (Open or Short to GND)
C1788 RTD Control Relay Circuit (Short to Voltage)
C1790 Ride Control Switch (Out of Range)
C1791 Ride Control Switch (Contact Malfunction)

40-BCM -Body Control Module
B0432 Rear Defogger Relay Circuit
B0433 Rear Defogger Relay Circuit

B0502 RH DRL Relay Circuit
B0503 RH DRL Relay Circuit
B0507 LH DRL Relay Circuit
B0508 LH DRL Relay Circuit
B0605 BCM Internal Memory Function
B0844 BCM Temporarily Inhibit ABS
B2403 Front Fog Lamp Switch Circuit
B2408 Rear Fog Lamp Switch Circuit
B2482 Backup Lamp Relay Circuit
B2483 Backup Lamp Relay Circuit
B2527 Horn Relay Circuit
B2528 Horn Relay Circuit
B2573 Hatch Release Switch Circuit (Short to Voltage)
B2578 RF Turn Signal Monitor Circuit (Short to Voltage)
B2583 LF Turn Signal Monitor Circuit (Short to Voltage)
B2587 Column Lock/Unlock Drive (A)
B2588 Column Lock/Unlock Drive (A)
B2592 Column Lock/Unlock Drive (B)
B2583 Column Lock/Unlock Drive (B)
B2597 Traction Control System Switch Circuit
B2721 PASS-Key Detection Circuit
B2722 PASS-Key Detection Circuit
B2723 PASS-Key Detection Circuit
B2735 PASS-Key Programming Mode Active
U1016 Loss of Communications with PCM
U1096 Loss of Communications with IPC
U1255 Serial Data Line Malfunction

60-IPC - Instrument Panel Cluster
B0516 Speedometer Signal Circuit Malfunction
B0521 Tachometer Signal Circuit Malfunction
B1512 DIC Switch 1 Signal Short to GND "FUEL"
B1517 DIC Switch 2 Signal Short to GND "GAGES"
B1522 DIC Switch 3 Signal Short to GND "TRIP"
B1527 DIC Switch 4 Signal Short to GND "OPTIONS"
B1532 DIC Switch 5 Signal Short to GND "E/M"
B1537 DIC Switch 6 Signal Short to GND "RESET"
B1542 Oil Temperature Circuit Short to GND
B1543 Oil Temperature Circuit Open
U1016 Loss of Communications with PCM
U1040 Loss of Communications with TCS
U1056 Loss of Communications with RTD
U1064 Loss of Communications with BCM
U1128 Loss of Communications with Radio
U1153 Loss of Communications with HVAC
U1160 Loss of Communications with LDCM

U1161 Loss of Communications with RDCM
U1166 Loss of Communications with SCM
U1176 Loss of Communications with RFA
U1255 Serial Data Line Malfunction

80-Radio - Radio Not Found

99-HVAC - Heater, Ventilation, Air Conditioning
B0332 Outside Air Temp Sensor Short to GND
B0333 Outside Air Temp Sensor Open
B0337 Inside Air Temp Sensor Short to GND
B0338 Inside Air Temp Sensor Open
B0348 Sunload Temperature Sensor Open
B0361 Left Actuator Feedback Short to GND
B0363 Left Actuator Feedback Open
B0365 Right Actuator Feedback Short to GND
B0367 Right Actuator Feedback Open
B0441 Left Actuator Out of Range
B0446 Right Actuator Out of Range
B1016 Loss of Communications with PCM
U1064 Loss of Communications with BCM
U1096 Loss of Communications with IPC
U1255 Serial Data Line Malfunction

A0-LDCM - Left Door Control Module
B2202 Left Window Up Switch Fault
B2204 Left Window Down Switch Fault
B2206 Right Window Up Switch Fault
B2208 Right Window Down Switch Fault
B2222 LT Mirror Select Switch Fault
B2224 RT Mirror Select Switch Fault
B2226 Mirror Right Switch Fault
B2228 Mirror Left Switch Fault
B2232 Mirror Up Switch Fault
B2234 Mirror Down Switch Fault
B2236 Left Door Lock Switch Fault
B2238 Left Door Unlock Switch Fault
B2242 Memory 1 Switch Fault
B2244 Memory 2 Switch Fault
B2252 Key Cylinder Switch Fault
B2262 Horizontal Position Sensor Fit
B2264 Vertical Position Sensor Fault
B2272 Left Mirror Motor Fault
B2274 Window Motor Fault
B2276 Door Lock Motor/Mirror Heater Fit
B2282 Battery #1 Fault

B2284 Battery #2 Fault
B2286 +5V Reference Fault
U1064 Loss of Communications with BCM
U1096 Loss of Communications with IPC
U1255 Serial Data Line Malfunction

A1-RDCM - Right Door Control Module
B2203 Right Window Up Switch Fault
B2205 Right Window Down Switch Fault
B2237 Right Door Lock Switch Fault
B2239 Right Door Un-Lock Switch Fault
B2253 Key Cylinder Switch Fault
B2263 Horizontal Position Sensor Fit
B2265 Horizontal Position Sensor Fault
B2273 Right Mirror Motor Fault
B2275 Window Motor Fault
B2277 Door Lock Motor/Mirror Heater Fit
B2283 Battery #1 Fault
B2285 Battery #2 Fault
B2287 +5V Reference Fault
U1064 Loss of Communications with BCM
U1096 Loss of Communications with IPC
U1255 Serial Data Line Malfunction

A6-SCM - Seat Control Module
B0846 Battery 2 Out of Range
B0851 Battery 1 Out of Range
B2002 Fore/Aft Seat Motor Open or Short to GND
B2007 Front Vertical Seat Motor Open or Shorted
B2012 Rear Vertical Seat Motor Open or Shorted
B2172 Seat Front Up Switch Shorted to GND
B2177 Seat Front Down Switch Shorted to GND
B2182 Seat Rear Up Switch Shorted to GND
B2187 Seat Rear Down Switch Shorted to GND
B2192 Seat Forward Switch Shorted to GND
B2197 Seat Reverse Switch Shorted to GND
B2605 Seat Front Vertical Position Sensor Failure
B2606 Seat Rear Vertical Position Sensor Failure
B2607 Seat Horizontal Position Sensor Failure

B0-RFA - Remote Function Actuation
B0605 Receiver Internal Memory Malfunction
B2805 No Transmitters Programmed
C2100 Left Front TPM Sensor Malfunction
C2105 Right Front TPM Sensor Malfunction
C2110 Right Rear TPM Sensor Malfunction

C2115 Left Rear TPM Sensor Malfunction
C2120 TPM System Malfunction (No Sensors Received)
C2121 TPM System Programming Malfunction (No Sensors Programmed)
U1000 Loss of Communication Undetermined
U1016 Loss of Communication with PCM
U1064 Loss of Communication with BCM
U1096 Loss of Communication with IPC
U1255 Serial Data Line Malfunction