



ABS, OBDII, and CAN Scan Tool

OTC3208



User guide

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Safety Precautions

This user guide describes the features of the tool and provides step-by-step instructions for operating the tool. Always refer to and follow safety messages and test procedures provided by the manufacturer of the vehicle and the tool.



Read and understand the user guide before operating the tool.

An undetected or uncorrected vehicle malfunction could cause a serious, even fatal, accident. Important safety information in this user guide is intended to protect the user, bystanders, and the vehicle.

Signal Words and Symbols



WARNING!

Indicates a possible hazardous situation that, if not avoided, could result in death or serious injury to operator or bystanders.



NOTICE

Indicates a condition that may result in lost information.

⇒ Indicates a single-step procedure.

Important Safety Messages

WARNING!



This tool may not detect every malfunction. Do not take chances with brakes, steering, or other vital functions of the vehicle. A serious accident could result.



Always wear ANSI-approved goggles for eye protection.

- Before testing a vehicle, make sure the transmission is in PARK (automatic transmission) or NEUTRAL (manual transmission) and the parking brake is set.
- Never lay tools on the vehicle battery.
- Battery acid can burn. If contacted, rinse with water or neutralize with a mild base such as baking soda. If you splash your eyes, flush with water and call a physician immediately.
- Never smoke or have open flames near vehicle. Vapors from gasoline and battery are explosive.

- Do not use the tool if internal circuitry has been exposed to moisture. Internal shorts could cause a fire and damage the vehicle or tool.
- Always turn the ignition key OFF when connecting or disconnecting electrical components unless otherwise instructed.
- Most vehicles are equipped with airbags. Follow vehicle service manual precautions. Serious injury or death could result from an unintended deployment.

WARNING!

A vehicle airbag can open for several minutes after the ignition has been turned off.

- Always follow vehicle manufacturer's warnings, cautions, and service procedures.

About the Tool

The tool allows you to retrieve and erase/reset diagnostic data from the vehicle control module. The diagnostic data can be used to help determine the cause of a vehicle malfunction. Use the tool to perform the following functions:

| Codes/Data | Erase/Reset | Retrieve |
|-------------------------------------|-------------|----------|
| Confirmed Codes | Erase | • |
| Pending Codes | Erase | • |
| Permanent Codes | — | • |
| View Data | — | • |
| MIL Status | — | • |
| I/M Monitors | Reset | • |
| View Freeze Data | Erase | • |
| VIN (Vehicle Identification Number) | — | • |

Tool Parts

| Part | Description |
|------------------|---|
| LCD display | 8 line by 21 character monochrome backlit LCD. |
| ▲ READ | Performs the Read Codes function and scrolls back through the screens. Press this key when an up arrow (↑) appears on the display. |
| ▼ ERASE | Performs the Erase Codes function and scrolls forward through the screens. Press this key when a down arrow (↓) appears on the display. |
| ↵ ENTER | Selects displayed item. |
| ← BACK | Returns to the previous screen. |
| OBD II Connector | Connects the tool to the vehicle connector. |

Icons

| Icon | Description |
|-----------|--|
| ↓ | Indicates additional information is available on next screen by using the ▼ ERASE key. |
| ↑ | Indicates additional information is available on previous screen by using the ▲ READ key. |
| CONFIRMED | Confirmed codes are reported when a component is indicating a malfunction is present. |

| | |
|----------------------|---|
| PENDING | Pending codes are reported when a problem occurs during the current or last completed drive cycle. |
| PERMANENT | Permanent codes are a special type of confirmed code that only the vehicle can erase. |
| x / y | Appears only when viewing codes. Indicates code sequence and quantity (code x of y). For example, "2 / 9" indicates that the 2nd of 9 codes reported by the computer module is being viewed. |
| ABS \$## Mod \$## | Appears only when viewing codes. Indicates the computer module that reported the code. ABS will appear if the code is an ABS code. Mod \$## appears when the code is a powertrain code. The Mod \$## is the name assigned to the vehicle control module reporting the code. |
| R/d E/r | Indicates that the ▲READ and ▼ERASE hot keys are active |

Connect the Tool

To connect the tool to the vehicle:

1. Locate the OBD II connector under the steering column. If the connector is not there, a label should be there indicating the whereabouts of the connector.
2. If necessary, remove the cover from the vehicle connector.
3. Turn the ignition switch to the ON position. Do not start the engine.
4. Plug the OBDII connector attached to the tool into the

vehicle connector.

The Tool automatically reads Codes and displays the data. When done viewing data, press **↵ ENTER** key to return to Diagnostic Menu.

NOTICE

If the vehicle returns a manufacturer specific code, the tool will ask if you wish to select the vehicle and then read ABS codes.

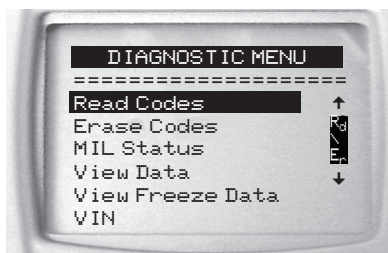


If the vehicle doesn't return a manufacturer specific code, the tool will ask if you wish to select a vehicle to read ABS codes. ABS is not supported for all vehicles.

Diagnostic Menu User Interface

To select functions:

1. From the Diagnostic Menu, press the **▲READ** or **▼ERASE** arrow key until the desired function is highlighted, then press **↵ ENTER** to retrieve and display the results.



- When complete, press **←BACK** to return to the Diagnostic Menu selection screen.

Read Codes

To read the codes:

- ⇒ Press and hold the **▲READ** key for 2 seconds then release it, or Select Read Codes from Diagnostic Menu.

If ABS is supported for your vehicle, a menu is shown to select either OBDII/EOBD, or ABS.

Select ABS to read ABS codes, and OBDII/EOBD to read emissions related powertrain codes. For codes other than ABS codes, the tool displays Confirmed, Pending, and Permanent Codes. Confirmed Trouble Codes are reported when a component, sensor, or other part of the vehicle is indicating a malfunction is present. The malfunction

must be present for a sufficient amount of time before the vehicle records and the Tool displays a Confirmed Trouble Code. Confirmed codes are indicated by the CONFIRMED icon. Pending Codes are only reported if a problem occurs during the current or last completed drive cycle. Pending Codes do not necessarily indicate a faulty component or system. Pending Codes convert to Confirmed Trouble Codes when an emissions problem persists long enough to be considered a real problem, not an anomaly. Pending Codes are indicated by a PENDING icon. Permanent Codes are special confirmed codes. Permanent Codes began being reported by vehicles beginning around 2010, so they are not supported by every vehicle. While Confirmed Codes can be erased by the tool, Permanent Codes cannot. Permanent Codes are erased by the vehicle when the vehicle has determined the fault is no longer present. Permanent Codes are indicated by a PERMANENT icon.

Vehicle Selection

Vehicle Selection will be displayed for Read Codes when a manufacturer specific DTC is retrieved from the vehicle.

Erase Codes

The Erase function performs the following:

- ✓ Erases codes (both Confirmed and Pending DTCs) when erasing OBDII/EOBD codes. Permanent codes can only be erased by the vehicle.
- ✓ May erase Freeze Data results depending on the vehicle.
- ✓ Sets I/M Monitors to not ready.

NOTICE

Perform Erase Codes function only after systems have been checked completely and DTCs have been written down.



To erase codes from the vehicle computer:

1. Set the ignition to Key On Engine Off. Do NOT start the vehicle. The engine should not be running.
2. Press and hold the ▼ERASE key for 3 seconds then

release, or select Erase Codes from Diagnostic Menu; press ← **ENTER**.

3. When the confirmation message appears on the display, choose one of the following options.
 - To proceed with the operation: Press ← **ENTER** for YES.
 - To cancel the operation and return to the Diagnostic Menu: Press ← **BACK** for NO.
4. If ABS is supported for your vehicle, a menu is shown to select either OBDII/EOBD, or ABS. Select ABS to erase ABS codes, and OBDII/EOBD to erase emissions related powertrain codes.

The Tool will automatically perform the Read Codes function after erasing codes. The Tool will then indicate the number of codes remaining.

NOTICE

If after erasing codes a DTC returns, the problem has not been fixed or other faults are present.



MIL Status

MIL (Malfunction Indicator Lamp) status indicates if the

vehicle computer is telling the MIL to illuminate when the engine is running.

- MIL ON indicates that the Malfunction Indicator Lamp should be ON.
- MIL OFF indicates that the Malfunction Indicator Lamp should be OFF.

I/M Monitors (Emissions)

Inspection/Maintenance

Monitors provide a snapshot of the Emission System operations by indicating that the I/M Monitors are Ready or Not Ready. For an I/M Monitor to be Ready, the vehicle must have completed a drive cycle (been driven long enough under proper conditions to have completed a drive cycle). A Monitor must be listed as Ready to pass an emissions test. If an I/M Monitor is Not Ready, it is because a drive cycle has not completed. The Tool will indicate Ready (ok), Not Ready (inc), or Not Applicable (n/a) for each I/M Monitor. The Tool supports the following I/M Monitors:

| Monitor | Expanded Name |
|-----------------|--|
| Misfire Monitor | Misfire Monitor |
| Fuel System Mon | Fuel System Monitor |
| Comp Component | Comprehensive Components Monitor |
| Catalyst Mon | Catalyst Monitor |
| Htd Catalyst | Heated Catalyst Monitor |
| Evap System Mon | Evaporative System Monitor |
| Sec Air System | Secondary Air System Monitor |
| A/C Refrig Mon | Air Conditioning Refrigerant Monitor |
| Oxygen Sens Mon | Oxygen Sensor Monitor |
| Oxygen Sens Htr | Oxygen Sensor Heater Monitor |
| EGR/VVT Sys Mon | Exhaust Gas Recirculation or Variable Valve Timing Monitor |
| NMHC Cat Mon | Non-Methane Hydrocarbon Catalyst |
| NOX Treat Mon | Nitrogen Oxide Treatment |
| Boost Pres Mon | Boost Pressure Monitor |
| Exhst Gas Sensr | Exhaust Gas Sensor |
| PM Filter Mon | Particulate Matter Filter |

This is a complete list of I/M Monitors supported by the Tool. The number of Monitors read by the Tool from your vehicle may vary. A diesel vehicle, for example, does not have an Oxygen Sensor Monitor. As a result, there will be no Oxygen Sensor Monitor status for a diesel vehicle.

Two types of I/M Monitors tests are:

- ❑ Since DTCs Cleared - shows status of the monitors since the DTCs were last erased.
- ❑ This Drive Cycle - shows status of monitors since the start of the current drive cycle. Refer to the vehicle service manual for more detailed information on emission-related monitors and their status.
- ✓ Some vehicles do not support This Drive Cycle. If vehicle supports both types of monitors the I/M Monitors Menu displays.

View Freeze Data

Displays a snapshot of operating conditions at the time the Diagnostic Trouble Code was created. See PID Definitions for more information.

VIN

The VIN function allows the tool to request the vehicle's VIN number.

The VIN function applies to model year 2000 and newer OBD II compliant vehicles.

System Setup

System Setup allows:

- Display contrast to be changed
- Tool information to be viewed
- Display to be checked
- Operation of the keypad to be checked
- Memory of the Tool to be checked
- Units of measure to be changed

View Data

The View Data function allows real time viewing of the vehicle's computer module's PID data. As the computer monitors the vehicle, information is simultaneously transmitted to the Tool. View Data allows the following items to be viewed on the Tool:

- ❑ Sensor data
- ❑ Operation of switches
- ❑ Operation of solenoids
- ❑ Operation of relays

Multiple PIDs may be sent if vehicle is equipped with more than one computer module (for example a powertrain control module [PCM] and a transmission control module [TCM]). The Tool identifies them by their identification names (ID) assigned by manufacturer.

Troubleshooting

- ❑ If a “LINK ERROR” message appears, cycle the ignition key to the OFF position for 10 seconds, then back ON, then press the ↵ **ENTER** key. Make sure the ignition key is in the ON not the ACCESSORY position.
- ❑ If the MIL Status is ON and the MIL is not illuminated with the engine running, then a problem exists in the MIL circuit.

PID Definitions

NOTICE



Although over 300 PIDS are available, the tool only displays the PIDs the vehicle supports.

| PID | PID Description |
|-----------------------|---|
| ABS FRP | Absolute Fuel Rail Pressure |
| ABS LOAD | Absolute Load Value |
| ABS TPS B, C | Throttle Position B, C |
| ABSLT TPS | Absolute Throttle Position |
| ACC POS D | Accelerator Pedal D, E, F |
| ACC POS REL | Relative Accelerator Pedal Position |
| AECD1_TIME1, TIME 2 | Total Run Time with EI-AECD #1 Timer 1 Active, #2 Timer Active |
| AECD10_TI-ME1, TIME 2 | Total Run Time with EI-AECD #10 Timer 1 Active, #2 Timer Active |

| PID | PID Description |
|-----------------------|---|
| AECD11_TI-ME1, TIME 2 | Total Run Time with EI-AECD #11 Timer 1 active, #2 Timer Active |
| AECD12_TI-ME1, TIME 2 | Total Run Time with EI-AECD #12 Timer 1 active, #2 Timer Active |
| AECD13_TI-ME1, TIME 2 | Total Run Time with EI-AECD #13 Timer 1 active, #2 Timer Active |
| AECD14_TI-ME1, TIME 2 | Total Run Time with EI-AECD #14 Timer 1 active, #2 Timer Active |
| AECD15_TI-ME1, TIME 2 | Total Run Time with EI-AECD #15 Timer 1 active, #2 Timer Active |
| AECD16_TI-ME1, TIME 2 | Total Run Time with EI-AECD #16 Timer 1 active, #2 Timer Active |
| AECD17_TI-ME1, TIME 2 | Total Run Time with EI-AECD #17 Timer 1 active, #2 Timer Active |
| AECD18_TI-ME1, TIME 2 | Total Run Time with EI-AECD #18 Timer 1 active, #2 Timer Active |
| AECD19_TIME1, TIME 2 | Total Run Time with EI-AECD #19 Timer 1 active, #2 Timer Active |
| AECD2_TIME1, TIME 2 | Total Run Time with EI-AECD #2 Timer 1 Active, #2 Timer Active |
| AECD20_TIME1, TIME 2 | Total Run Time with EI-AECD #20 Timer 1 active, #2 Timer Active |
| AECD3_TIME1, TIME 2 | Total Run Time with EI-AECD #3 Timer 1 Active, #2 Timer Active |
| AECD4_TIME1, TIME 2 | Total Run Time with EI-AECD #4 Timer 1 Active, #2 Timer Active |
| AECD5_TIME1, TIME 2 | Total Run Time with EI-AECD #5 Timer 1 Active, #2 Timer Active |
| AECD6_TIME1, TIME 2 | Total Run Time with EI-AECD #6 Timer 1 Active, #2 Timer Active |
| AECD7_TIME1, TIME 2 | Total Run Time with EI-AECD #7 Timer 1 Active, #2 Timer Active |

| PID | PID Description |
|------------------------|---|
| AECD8_TIME1, TIME 2 | Total Run Time with EI-AECD #8 Timer 1 Active, #2 Timer Active |
| AECD9_TIME1, TIME 2 | Total Run Time with EI-AECD #9 Timer 1 Active, #2 Timer Active |
| ALCOHOL | Alcohol Fuel Percent |
| BARO PRS | Barometric Pressure |
| BAT_PWR | Hybrid Battery Pack Remaining Life |
| BP_A_ACT, B_ ACT | Boost Pressure Sensor A, Sensor B |
| BP_A_CMD, B_ CMD | Commanded Boost Pressure A, Pressure B |
| BP_A_STAT, B_ STAT | Boost Pressure A Control Status, B Control Status |
| CACT 11, 12 | Charge Air Cooler Temperature Bank 1 Sensor 1 supported, Sensor 2 supported |
| CACT 21,22 | Charge Air Cooler Temperature Bank 2 Sensor 1 supported, Sensor 2 supported |
| CALC LOAD | Calculated Engine Load |
| CAT TEMP11, TEMP12 | Catalytic Converter Temp Bank1, Temp Bank 3 |
| CAT TEMP21, TEMP22 | Catalytic Converter Temp Bank2, Temp Bank 4 |
| CLR DIST | Distance since erase |
| CLR TIME | Minutes Run since Erase |
| CLR TRPS | Warmups Since Erase |
| CMD EQ RAT | Commanded Equivalence Ratio |
| COOLANT | Engine Coolant Temp |
| DPF_REG_ AVGD | Average Distance Between DPF Regen |
| DPF_REG_ AVGT | Average Time Between DPF Regen |
| DPF_REG_ STAT | Diesel Particulate Filter (DPF) Regen Status |
| DPF_REG_TYP | Diesel Particulate Filter (DPF) Regen Type |
| DPF_REGEN_ PCT | Normalized Trigger for DPF Regen |

| PID | PID Description |
|-------------------------|--|
| DPF1_DP, DPF2_DP | Diesel Particulate Filter (DPF) Bank 1 Delta Pressure Bank 2 Delta Pressure |
| DPF1_INP, DPF2_INP | Diesel Particulate Filter (DPF) Bank 1 Inlet Pressure, Bank 2 Inlet Pressure |
| DPF1_INT, DPF2_INT | DPF Bank 1 Inlet Temperature Sensor, Bank 2 Inlet Temperature Sensor |
| DPF1_OUTP, DPF2_OUTP | Diesel Particulate Filter (DPF) Bank 1 Outlet Pressure, Bank 2 Outlet Pressure |
| DPF1_OUTT, DPF2_OUTT | DPF Bank 1 Outlet Temperature Sensor, Bank 2 Outlet Temperature Sensor |
| ECT 1, 2 | Engine Coolant Temperature 1, Temperature 2 |
| EGR CMD | Comanded EGR |
| EGR ERR | Exhaust Gas Recirculation Error |
| EGR_A_ACT, B_ACT | Actual EGR A Duty Cycle/Position, B Duty Cycle/Position |
| EGR_A_CMD, B_CMD | Commanded EGR A Duty Cycle/Position, B Duty Cycle/Position |
| EGR_A_ERR, B_ERR | EGR A Error, B Error |
| EGRT 11, 21 | Exhaust Gas Recirculation Temperature Bank 1 Sensor 1, Bank 2 Sensor 1 |
| EGRT 12, 22 | Exhaust Gas Recirculation Temperature Bank 1 Sensor 2, Bank 2 Sensor 2 |
| EGT 11, 21 | Exhaust Gas Temperature (EGT) Bank 1 Sensor 1, Bank 2 Sensor 1 |
| EGT 12, 22 | Exhaust Gas Temperature (EGT) Bank 1 Sensor 2, Bank 2 Sensor 2 |
| EGT 13, 23 | Exhaust Gas Temperature (EGT) Bank 1 Sensor 3, Bank 2 Sensor 3 |
| EGT 14, 24 | Exhaust Gas Temperature (EGT) Bank 1 Sensor 4, Bank 2 Sensor 4 |
| EMIS_SUP | Emission requirements to which vehicle is designed |

| PID | PID Description |
|------------------|--|
| ENG RUN | Time Since Engine Start |
| ENG SPEED | Engine RPM |
| EOT | Engine Oil Temperature |
| EP_1, 2 | Exhaust Pressure Sensor Bank 1, Bank 2 |
| EQ RATIO | Equivalence Ratio |
| EVAP PURGE | Commanded EVAP Purge |
| EVAP VP | EVAP Vapor Pressure |
| EVAP VPA | Absolute EVAP Vapor Pressure |
| FRP_A, B | Fuel Rail Pressure A, B |
| FRP_A_CMD, B_CMD | Commanded Fuel Rail Pressure A, B |
| FRT_A, B | Fuel Rail Temperature A, B |
| FUEL LEVEL | Fuel Level Input |
| FUEL PRES | Fuel Rail Pressure |
| FUEL SYS 1, 2 | Fuel System 1 Loop Status, System 2 Loop Status |
| FUEL TYPE | Fuel Type |
| FUEL_RATE | Engine Fuel Rate |
| FUEL_TIMING | Fueling Injection Timing |
| GPL_STAT | Glow Plug Lamp Status |
| IAF_A_CMD, B_CMD | Commanded Intake Air Flow A Control, B Control |
| IAF_A_REL, B_REL | Relative Intake Air Flow A Position, B Position |
| IAT | Intake Air Temp |
| IAT 11, 21 | Intake Air Temperature Sensor Bank 1 Sensor 1, Bank 2 Sensor 1 |
| IAT 12, 22 | Intake Air Temperature Sensor Bank 1 Sensor 2, Bank 2 Sensor 2 |
| IAT 13, 23 | Intake Air Temperature Sensor Bank 1 Sensor 3, Bank 2 Sensor 3 |
| ICP_A, B | Injection Control Pressure A, B |
| ICP_A_CMD, B_CMD | Commanded Injection Control Pressure A, B |
| IDLE_TIME | Total Idle Run Time |

| PID | PID Description |
|----------------------------------|--|
| IGN ADV | Timing Advance |
| LAMBDA11, 21 | O2 Sensor Lambda Bank 1 Sensor 1, Bank 2 Sensor 1 |
| LAMBDA12, 22 | O2 Sensor Lambda Bank 1 Sensor 2, Bank 2 Sensor 2 |
| LT FTRM1 | Long Term Fuel Trim 1 or 3 |
| LT FTRM2 | Long Term Fuel Trim 2 or 4 |
| LT SEC FT1, 2, 3, 4 | Long Term Secondary O2 Sensor Fuel Trim 1, 2, 3, 4 |
| MAF, A, B | Mass Air Flow, A, B |
| MAP, A, B | Manifold Absolute Pressure, A, B |
| MIL DIST | MIL_DIST |
| MIL STATUS | Malfunction Indicator Lamp |
| MIL TIME | Minutes Run by MIL activated |
| MST | Manifold Surface Temperature |
| N/D_STAT | Auto Trans Neutral Drive Status |
| N/G_STAT | Manual Trans Neutral Gear Status |
| NNTE_Stat | NOx NTE control area status |
| NOX 11, 21 | NOx Sensor Concentration Bank 1 Sensor 1, Bank 2 Sensor 1 |
| NOX 12,22 | NOx Sensor Concentration Bank 1 Sensor 2, Bank 2 Sensor 2 |
| NOX LEVEL HI, HI1, HI2, HI3, HI4 | SCR inducement system actual state 10K history HI1 (0-10000 km), 10K history HI2 (10000-20000 km), 10K history HI3 (20000-30000 km), 10K history HI4 (30000-40000 km): NOx emission too high |
| NOX_ADS_DESUL | NOx Adsorber Desulfurization Status |
| NOX_ADS_REGEN | NOx Adsorber Regen Status |
| NWI_TIME | Total Run Time by the Engine while NOx warning mode is activated |
| O2S | O2 Voltage or Current indicates Bank/Sensor |
| O2S11_PCT, O2S21_PCT | O2 Sensor Concentration Bank 1 Sensor 1, Bank 2 Sensor 1 |

| PID | PID Description |
|---|---|
| O2S12_PCT, O2S22_PCT | O2 Sensor Concentration Bank 1 Sensor 2, Bank 2 Sensor 2 |
| OBD2_STAT | OBD Status |
| OUT_TEMP | Ambient Air Temp |
| PM 11, PM 21 | PM Sensor Mass Concentration Bank 1 Sensor 1, Bank 2 Sensor 1 |
| PNTE_Stat | PM NTE control area status |
| PTO_STATUS | PTO Status |
| PTO_STAT | Power Take Off (PTO) Status |
| PTO_TIME | Total Run Time With PTO Active |
| REAG_DEMD | Average Demanded Reagent Consumption |
| REAG_LVL | Reagent Tank Level |
| REAG_RATE | Average Reagent Consumption |
| REL_FRP | Relative Fuel Rail Pressure |
| REL_TPS | Relative Throttle Position |
| RUN_TIME | Total Engine Run Time |
| SCR REAG DEV, DEV1, DEV2, DEV3, DEV4 | SCR inducement system actual state 10K history DEV1 (0 - 10000 km), 10K history DEV2 (10000 - 20000 km), 10K history DEV3 (20000 - 30000 km), 10K history DEV4 (30000 - 40000 km): deviation of reagent consumption |
| SCR REAG LOW, LOW1, LOW2, LOW3, LOW4 | SCR inducement system actual state 10K history LOW1 (0 - 10000 km), 10K history LOW2 (10000 - 20000 km), 10K history LOW3 (20000 - 30000 km), 10K history LOW4 (30000 - 40000 km): reagent level too low |
| SCR RE-AG WRONG, WRONG1, WRONG2, WRONG3, WRONG4 | SCR inducement system actual state 10K history WRONG1 (0 - 10000 km), 10K history WRONG2 (10000 - 20000 km), 10K history WRONG3 (20000 - 30000 km), 10K history WRONG4 (30000 - 40000 km): incorrect reagent |
| SCR SYS ACTIVE | SCR inducement system actual state: inducement system active |

| PID | PID Description |
|---------------------------------|--|
| SCR_DIST_1D | Distance travelled in current 10K block (0 - 10000 km) |
| SCR_DIST_1N, 2N, 3N, 4N | Distance travelled while inducement system active in current 10K block 1N (0 - 10000 km), 20K block 2N (10 - 20000 km), 30K block 3N (20 - 30000 km), 40K block 4N (30 - 40000 km) |
| SECOND AIR | Secondary Air Status |
| ST_FTRM | Fuel Trim Bank/ Sensor |
| ST_FTRM1, 3 | Short Term Fuel Trim1 or 3 |
| ST_FTRM2, 4 | Short Term Fuel Trim2 or 4 |
| ST_SEC_FT1, 2, 3, 4 | Short Term Secondary O2 Sensor Fuel Trim 1, 2, 3, 4 |
| TAC_A_CMD, B_CMD | Commanded Throttle Actuator A Control, B Control |
| TAC_A_REL, B_REL | Relative Throttle A Position, B Position |
| TCA_CINP, TCB_CINP | Turbocharger Compressor Inlet Pressure Sensor A, Pressure Sensor B |
| TCA_CINT, TCB_CINT | Turbocharger A Compressor Inlet Temperature, Turbocharger B |
| TCA_COUTT, TCB_COUTT | Turbocharger A Compressor Outlet Temperature, Turbocharger B |
| TCA_RPM, TCB_RPM | Turbocharger A RPM, B RPM |
| TCA_TOUTT, TCB_TOUTT | Turbocharger A Turbine Outlet Temperature, Turbocharger B |
| TCA_TINT, TCB_TINT | Turbocharger A Turbine Inlet Temperature, Turbocharger B |
| THROT_CMD | Commanded Throttle Actuator Control |
| TP_G | Absolute Throttle Position G |
| TQ_ACT | Actual Engine - Percent Torque |
| TQ_DD | Driver's Demand Engine - Percent Torque |
| TQ_MAX1, MAX2, MAX3, MAX4, MAX5 | Engine percent torque at idle point 1, 2, 3, 4, 5 |
| TQ_REF | Engine Reference Torque |
| TROUB_CODE | Code causing the Freeze Frame |

| PID | PID Description |
|--------------------|---|
| VEH SPEED | Vehicle Speed |
| VGT_A_ACT | Variable geometry turbo A position |
| VGT_A_ACT, B_ACT | Variable Geometry Turbo A Position, Turbo B |
| VGT_A_CMD | Commanded variable geometry turbo A position |
| VGT_A_CMD, B_CMD | Commanded Variable Geometry Turbo A Position, Turbo B |
| VGT_A_STAT | Variable geometry turbo A control status |
| VGT_A_STAT, B_STAT | Variable Geometry Turbo A Control Status, Turbo B |
| VGT_B_ACT | Variable geometry turbo B position |
| VGT_B_CMD | Commanded variable geometry turbo B position |
| VGT_B_STAT | Variable geometry turbo B control status |
| VPWR | Control Module Voltage |
| WG_A_ACT | Wastegate A position |
| WG_A_ACT, B_ACT | Wastegate A Position, B Position |
| WG_A_CMD | Commanded wastegate A control |
| WG_A_CMD, B_CMD | Commanded Wastegate A Control, B Control |
| WG_B_ACT | Wastegate B position |
| WG_B_CMD | Commanded wastegate B control |