

Parameter Identification (PID)

The PID mode allows access to certain data values, analog and digital inputs and outputs, calculated values, and system status information. Throughout the manual, there are references to PID values. PID Data Monitor and Record can be accessed from the scan tool through the Diagnostic Data Link menu.

Selecting Parameter Identification (PID)

Connect the scan tool to the data link connector (DLC). Turn off all accessories. If the vehicle is equipped with a power take off (PTO) system or auxiliary idle control, it must be turned off to carry out the self-tests.

- Carry out the necessary vehicle preparation and visual inspection. Refer to Section 3, [Quick Test Description](#).
- Refer to the scan tool manufacturers manual for instructions.
- Follow the operating instructions from the menu.
- Access and select the PIDs to begin monitoring.

Parameter Identification (PID) List

Acronym	Description	Measurement Unit
AAT	Ambient Air Temperature	Temperature °C/°F
AAT_V	Ambient Air Temperature Sensor Voltage	Voltage
APP1	Accelerator Pedal Position Sensor 1	Voltage/Percent
APP1 [APP_D]	Accelerator Pedal Position Sensor D	Percent
APP2	Accelerator Pedal Position Sensor 2	Voltage/Percent
APP2 [APP_E]	Accelerator Pedal Position Sensor E	Percent
B+	Battery Positive Voltage	Voltage
BARO	Barometric Pressure	Voltage/Pressure/kPa/ psi/Hz
BOO1	Brake Pedal Position	ON/OFF
BOO2	Brake Pressure Applied	ON/OFF
BOOSTP_EVAL	Boost Pressure Monitor Evaluated	Yes/No
BRKOVRR_ACTION	Number Of Drive Cycles Where Brake Override Accelerator Action Occurred	Numeric Value
BRKOVRRD_POSS	Number Of Drive Cycles In Which Brake Override Accelerator Action Possible	Numeric Value
CAC_T	Charge Air Cooler Temperature Bank 1, Sensor 1	Temperature °C/°F
CAC_V	Charge Air Cooler Voltage	Voltage
CC_VENTHOSE_ST	Crankcase Ventilation Hose Disconnection Sensor Status	Connected/Not Connected
CC_VENTHOSE_V	Crankcase Ventilation Hose Disconnection Sensor Voltage	Voltage
CLRDIST	Distance Traveled Since DTCs Cleared	km/miles
CLRWRMUP	Number of Warm Ups Since DTCs Cleared	Numeric Value
CYL_BAL_1-8	Fuel Balancing Quantity For Cylinders 1-8	Numeric Value
CYL_FUELMOD_1-8	Service Tool Fuel Multiplier For Cylinders 1-8	Percent
DEF_CONC	Diesel Exhaust Fluid Concentration	Percent
DEF_LEVEL	Diesel Exhaust Fluid Tank Level	Percent
DEF_TEMP	Diesel Exhaust Fluid Tank Temperature	Temperature °C/°F

Acronym	Description	Measurement Unit
DIST_BRKOVDR	Distance Since Brake Override Accelerator Action Occurred	km/miles
DIST_LAST_DPF	Distance Travelled Since Last Diesel Particulate Filter Regeneration	km/miles
DPF_DP	Diesel Particulate Filter Delta Pressure	Pressure/kPa/psi
DPF_INP	Diesel Particulate Filter Inlet Pressure	Pressure/kPa/psi
DPF_INP_V	Diesel Particulate Filter Bank 1 Inlet Pressure Sensor Voltage (Bank 1, Sensor 2)	Voltage
DPF_REGEN_PCT	Normalized Trigger For DPF Regeneration	Percent
DPF_REGN_AVGD	Average Distance Between DPF Regenerations	km/miles
DPF_REGN_STAT	Diesel Particulate Filter Regeneration Status	Active/Inactive
DPF_SOOT_INF	Diesel Particulate Filter Soot Concentration Inferred	Grams/Liter
DPF_V	Diesel Particulate Filter (Bank 1, Sensor 1)	Voltage
DTCCNT	DTC Count (Includes Those Needing No Action)	Numeric Value
EBP	Exhaust Pressure Sensor 1	Pressure/kPa/psi
EBP_V	Exhaust Pressure Sensor Voltage	Voltage
ECT	Engine Coolant Temperature Sensor	Temperature °C/°F
ECT1	Engine Coolant Temperature Sensor 1	Temperature °C/°F
ECT1_V	Engine Coolant Temperature Sensor 1	Voltage
ECT2	Engine Coolant Temperature Sensor 2	Temperature °C/°F
ECT2_V	Engine Coolant Temperature Sensor 2	Voltage
EGR_A_ACT	Actual Exhaust Gas Recirculation A Duty Cycle Or Position	Percent
EGRCBV	EGR Cooler Bypass Valve	Percent
EGRCBV_DSD	EGR Cooler Bypass Valve Position Desired	Percent
EGRCIT_V	EGR Cooler Inlet Voltage	Voltage
EGRCOT_V	EGR Cooler Outlet Temperature Sensor Voltage	Voltage
EGRTA	Exhaust Gas Recirculation Temperature Bank 1, Sensor 1	Temperature °C/°F
EGRTC	Exhaust Gas Recirculation Temperature Bank 1, Sensor 2	Temperature °C/°F
EGRTP_CMD	EGR Throttle Plate Commanded	Percent
EGRTP_MES	EGR Throttle Plate Measured	Percent
EGRTP_V	EGR Throttle Position	Voltage
EGRVP	Exhaust Gas Recirculation Valve Position	Voltage
EGRVPDES	EGR Valve Position Desired	Percent
EGR_A_ACT	Exhaust Valve Position Bank 1	Percent
EGT11	Exhaust Gas Temperature Bank 1, Sensor 1	Temperature °C/°F
EGT11_V	Exhaust Gas Temperature Voltage 11	Voltage
EGT12	Exhaust Gas Temperature Bank 1, Sensor 2	Temperature °C/°F
EGT12_V	Exhaust Gas Temperature Voltage 12	Voltage
EGT13	Exhaust Gas Temperature Bank 1, Sensor 3	Temperature °C/°F
EGT13_V	Exhaust Gas Temperature Voltage 13	Voltage
EGT14	Exhaust Gas Temperature Bank 1, Sensor 4	Temperature °C/°F
EGT14_V	Exhaust Gas Temperature Sensor Bank 1, Sensor 4	Voltage
ENG_CRANK	Engine Cranking	Active/Inactive

Acronym	Description	Measurement Unit
ENG_TIME_TOT	Total Engine Run Time	Time
ENGIDL_TIME_TOT	Total Idle Run Time	Time
ENGOFF_TIMER	Timer Since Engine Off	Time
EOT	Engine Oil Temperature	Temperature °C (°F)
EOT_V	Engine Oil Temperature Sensor Voltage	Voltage
ETC [TAC_PCT]	Commanded Throttle Actuator Control	Percent
EXHAUST_BRK	Exhaust Brake Control	Mode
EXHGAS_EVAL	Exhaust Gas Monitor Evaluated	Yes/No
EXH_MODE_ACTIVE	Active Engine Exhaust Operating Mode	Mode
EXH_SYS_REQ	Exhaust System Operating Function Requested	Mode
F_PCV	Fuel Pressure Control Valve	Percent
F_PCV_CUR	Fuel Pressure Control Valve Current - Measured	mA/A
F_VCV	Fuel Volume Control Valve	Percent
F_VCV_CUR	Fuel Volume Control Valve Current - Measured	mA/A
F_VCV_F	Fuel Volume Control Valve Status	No Fault/Short To Ground/ Short To VPWR/Open Circuit/Over Current
F_VCV_FLT	Fuel Volume Control Valve Status	No Fault/Yes Fault
FAN1	FAN1 Control Signal	ON/OFF
FAN2	FAN2 Control Signal	ON/OFF
FANDC	Fan Duty Cycle	Percent
FANSS	Cooling Fan Speed Sensor	RPM
FLI	Fuel Level	Percent
FLP	Low Side Fuel Pressure	Pressure/kPa/MPa/psi
FLP_V	Low Side Fuel Pressure Voltage	Voltage
FP	Fuel Pump	Percent/ON/OFF
FPL_CMD	Fuel Pump Lift Commanded State	ON/OFF
FPM	Fuel Pump Monitor	Percent
FRP	Fuel Rail Pressure	Voltage/Pressure/ kPa/MPa/psi
FRP_A	Fuel Rail Pressure A	Pressure/kPa/MPa/psi
FRP_DSD	Fuel Rail Pressure Desired	Pressure/kPa/MPa/psi
FRPC_STAT	Fuel Rail System Control Pressure Status	No Fault/Yes Fault
FRT	Fuel Rail Temperature	Temperature °C/°F
FRT_V	Fuel Rail Temperature Sensor Voltage	Voltage
FUELRATE	Fuel Rate	ml/min/lmin
FUEL_RATE	Engine Fuel Rate	ml/min/lmin
FUEL_TIMING	Main Injection Timing Relative To Top Dead Center	Degrees
GEAR	Gear Commanded By Module	GEAR
GLOWPLUG_RLY	Glow Plug Relay	ON/OFF
GP_LMP	Glow Plug Lamp	ON/OFF
GP_RELAY_CMD	Glow Plug Relay State - Commanded	ON/OFF

Acronym	Description	Measurement Unit
GP_V_CMD	Glow Plug Voltage Commanded	Voltage
IAT	Intake Air Temperature	Temperature °C/°F
IAT11	Intake Air Temperature Bank 1 Sensor 1	Temperature °C/°F
IAT11_V	Intake Air Temperature Bank 1 Sensor 1	Voltage
INERTIA_SW	Inertia Switch Crash Signal	Open/Closed
INJ_F	Injector Fault	No Fault/Yes Fault
INJ_Q_1-8_TOT	Total Injection Quantity Cylinders 1-8	mg
INJ1-8_OFF	Injector 1-8 Disable	Disable
KEYST	Ignition Key Status	ON/OFF
LOAD	Engine Load	Percent
LOW_FUEL	Low Fuel Warning Indication	Yes/No
LP_FUEL_SW	Low Pressure Fuel System Switch	Low/Not Low
MAF	Mass Air Flow	g/s
MAF_A	Mass Air Flow Sensor A	g/s
MAF_HZ	Mass Air Flow in Frequency	kHz
MAP	Manifold Absolute Pressure Sensor	Voltage
MAP_A	Manifold Absolute Pressure Sensor A	Pressure/kPa/psi
MAP_DMD	Manifold Absolute Pressure Demanded	Pressure/kPa/psi
MAP_V	Manifold Absolute Pressure Sensor	Voltage
MIL	Malfunction Indicator Lamp	ON/OFF
MIL_DIS	The Distance Travelled Since The MIL Was Activated	km/miles
MISF_EVAL	Misfire Monitor	Yes/No
MP_LRN	Learned Misfire Correction Profile	Yes/No
NMHC_CAT_EVAL	Nonmethane Hydrocarbons Catalyst Monitor Evaluated	Yes/No
NOx_ADAPT_FAC	NOx Sensor Adaptation Factor	Numeric Value
NOx_AFT_EVAL	Nitrogen Oxides Aftertreatment Monitor Evaluated	Yes/No
NOx_HTR	NOx Sensor Heater	ON/OFF
NOx11	Nitrogen Oxides Sensor Concentration Bank 1 Sensor 1	Numeric Value
NOx12	Nitrogen Oxides Sensor Concentration Bank 1 Sensor 2	Numeric Value
NOxLMP_TIME	Total Engine Run Time With Nitrogen Oxide Warning Active	Time
NOxNTE_IN	Inside Nitrogen Oxide Emissions Control Area	Yes/No
NOxNTE_OUT	Outside Nitrogen Oxide Emissions Control Area	Yes/No
O2_NOx_ADAP_1	Oxygen Output of NOx Sensor 1st Adaptation Factor	Numeric Value
O2_NOx_ADAP_2	Oxygen Output of NOx Sensor 2nd Adaptation Factor	Numeric Value
O2_PERCENT	Oxygen Concentration-Measured	Percent
O2S11_PCT	O2 Sensor Concentration Bank 1 Sensor 1	Percent
O2S12_PCT	O2 Sensor Concentration Bank 1 Sensor 2	Percent
O2S13_PCT	O2 Sensor Concentration Bank 1 Sensor 3	Percent
O2S14_PCT	O2 Sensor Concentration Bank 1 Sensor 4	Percent
OUTDR_TMP	Outdoor Air Temperature	Temperature °C/°F
PATSENABL	Vehicle Enable Status	Enabled/Disabled

Acronym	Description	Measurement Unit
PCM_TEMP	ECU Internal Temperature	Temperature °C/°F
PM11	Particulate Matter Sensor Normalized Output Value Bank 1 Sensor 1	Percent
PM11_ACTIVE	Particulate Matter Actively Measuring	Yes/No
PM11_REGEN	Particulate Matter Sensor Regenerating	Yes/No
PM_FILT_EVAL	Particulate Matter Filter Monitor Evaluated	Yes/No
PMNTE_IN	Inside Particulate Matter Emissions Control Area	Yes/No
PMNTE_OUT	Outside Particulate Matter Emissions Control Area	Yes/No
PTO_STATUS	Power Takeoff Active Status	ON/OFF
REDUCT_AVG_DMD	Average Reductant Consumption Demanded	ml/min
REDUCT_FRZEN	Reductant In The Reductant Tank Is Frozen	Yes/No
REDUCT_INJ_DC	Reductant Injector Duty Cycle	Percent
REDUCT_LHCUR	Reductant Tank Heater Current-Measured	uA/mA
REDUCT_LIN_HC	Reductant Line Heater Control	ON/OFF
REDUCT_LITERS	Reductant Tank Level Amount	Liters
REDUCT_OPMODE	Reductant Mode Based On Reductant Tank Level	Empty/Restricted/ Warning/OK/Full
REDUCT_PMP_DC	Reductant Pump Duty Cycle-Commanded	Percent
REDUCT_PRES_V	Reductant Pressure Sensor Voltage	Voltage
REDUCT_RATE	Average Reagent Consumption	ml/min
REDUCT_THCUR	Reductant Tank Heater Current-Measured	uA/mA
REDUCT_TNK_HC	Reductant Tank Heater Control	ON/OFF
REDUCT_TNK_LV	Reductant Tank Level	Percent
REDUCT_TNK_P	Reductant Line Pressure	Pressure/kPa/psi
REDUCT_TNK_T	Reductant Tank Temperature	Temperature °C/°F
REDUCT_WARN	Reductant Level Warning Indicator	State
RPM	Engine Revolutions Per Minute	RPM
RPMDSD	Desired Idle Speed RPM	RPM
RUNTM	Engine Run Time	Time
SCR_ADAPT_FAC	Selective Catalytic Reductant Adaptation Factor	Numeric Value
SCR_AMMONIA	Ammonia Level On Selective Catalytic Reductant	mg
TCBP	Measured Boost At Throttle Inlet Pressure Sensor	Pressure/kPa/psi
TCBP_V	Throttle Inlet Pressure Sensor Voltage	Voltage
TQ_ACT	Calculated Torque Output Of The Engine	Percent
TQ_DD	Requested Torque Output Of The Engine By Driver	Percent
TQ_ENGREF	Engine Reference Torque	Nm
TURBO_WGATE	turbocharger Wastegate	Percent
VAPORIZER_CMD	Vaporiser Glow Plug Relay State - Commanded	ON/OFF
VAPORIZER_MES	Vaporiser Glow Plug Relay State - Feedback	ON/OFF
VEHMODE	Vehicle Control Mode	State
VFDES	Volume Fuel Desired	Numeric Value
VGTD	Variable Geometry Turbocharger	Percent

Acronym	Description	Measurement Unit
VGT_POS_V	Variable Nozzle Turbo Position Sensor Voltage	Voltage
VPWR	Module Supply Voltage	Voltage
VREF	Reference Voltage	Voltage
VSS	Vehicle Speed	km/h/mph
WFS_V	Water In Fuel Sensor Voltage	Yes/No
WIF_ACTIVE	Water In Fuel Indicator Will Remain Active (On) Until A Detection Of Water NOT In Fuel	Yes/No

Reductant Dosage Control Module PID List

Acronym	Description	Manufacturer Units
AAT	Ambient Air Temperature	Temperature °C/ °F
APP_D	Accelerator Pedal Position Sensor D	Percent
BARO	Barometric Pressure	Pressure/kPa/psi
ECT	Engine Coolant Temperature Sensor	Temperature °C/ °F
ENGOFF_TIMER	Timer Since Engine Off	Time
LOAD	Engine Load	Percent
NOxLMP_TIME	Total Engine Run Time With Nitrogen Oxide Warning Active	Time
REDUCT_AVG_DMD	Average Reagent Consumption Demanded	ml/min/lmin
REDUCT_FRZEN	Reductant In Reductant Tank Is Frozen (Inferred)	Yes/No
REDUCT_INJ_DC	Reductant Injector Duty Cycle	Percent
REDUCT_LHCUR	Reductant Line Heater Current - Measured	Numeric Value
REDUCT_LIN_HC	Reductant Line Heater Control	ON/OFF
REDUCT_LINEP	Pressurization Of SCR Line	Percent
REDUCT_LINEST	Reductant Line Fill Status	Percent
REDUCT_LITERS	Reductant Tank Level Amount	Numeric Value
REDUCT_LONG_Q	Long Term Reductant Quantity	Numeric Value
REDUCT_PMP_DC	Reductant Pump Duty Cycle - Commanded	Percent
REDUCT_PRES_V	Reductant Pressure Sensor Voltage	Voltage
REDUCT_PUMP_HC	Reductant Pump Heater Control	ON/OFF
REDUCT_RATE	Average Reagent Consumption	ml/min/lmin
REDUCT_RV_DC	Reductant Reverting Valve Duty Cycle - Commanded	Percent
REDUCT_THCUR	Reductant Tank Heater Current - Measured	uA/mA
REDUCT_TNK_HC	Reductant Tank Heater Control	ON/OFF
REDUCT_TNK_LV	Reductant Tank Level	Percent
REDUCT_TNK_P	Reductant Line Pressure	Pressure/kPa/psi
REDUCT_TNK_T	Reductant Tank Temperature	Temperature °C/ °F
RPM	Engine Revolutions Per Minute	RPM

Acronym	Description	Manufacturer Units
SCR_CONSUM_DEV	Deviation Of Reagent Consumption Actual State	Yes/No
SCR_CONSUM_DEV1	Deviation Of Reagent Consumption Actual State 10K History (0 - 10,000 km Block)	Yes/No
SCR_CONSUM_DEV2	Deviation Of Reagent Consumption Actual State 20K History (10 - 20,000 km Block)	Yes/No
SCR_CONSUM_DEV3	Deviation Of Reagent Consumption Actual State 30K History (20 - 30,000 km Block)	Yes/No
SCR_CONSUM_DEV4	Deviation Of Reagent Consumption Actual State 40K History (30 - 40,000 km Block)	Yes/No
SCR_INCOR_REAG	Incorrect Reagent Actual State	Yes/No
SCR_INCOR_REAG1	Incorrect Reagent Actual State 10K History (0 - 10,000 km Block)	Yes/No
SCR_INCOR_REAG2	Incorrect Reagent Actual State 20K History (10 - 20,000 km Block)	Yes/No
SCR_INCOR_REAG3	Incorrect Reagent Actual State 30K History (20 - 30,000 km Block)	Yes/No
SCR_INCOR_REAG4	Incorrect Reagent Actual State 40K History (30 - 40,000 km Block)	Yes/No
SCR_IND_DIST_1D	Distance Travelled In Current 10K Block (0 - 10,000 km Block)	km/miles
SCR_IND_DIST_1N	Distance Travelled While Inducement System Active In Current 10K Block (0 - 10,000 km)	km/miles
SCR_IND_DIST_2N	Distance Travelled While Inducement System Active In 20K Block (10 - 20,000 km)	km/miles
SCR_IND_DIST_3N	Distance Travelled While Inducement System Active In 30K Block (20 - 30,000 km)	km/miles
SCR_IND_DIST_4N	Distance Travelled While Inducement System Active In 40K Block (30 - 40,000 km)	km/miles
SCR_INDUCE_SYS	SCR Inducement System Actual State	Yes/No
SCR_LEVEL_LOW	Empty Reagent Tank Actual State	Yes/No
SCR_LEVEL_LOW1	Empty Reagent Tank Actual State 10K History (0 - 10,000 km Block)	Yes/No
SCR_LEVEL_LOW2	Empty Reagent Tank Actual State 20K History (10 - 20,000 km)	Yes/No
SCR_LEVEL_LOW3	Empty Reagent Tank Actual State 30K History (20 - 30,000 km)	Yes/No
SCR_LEVEL_LOW4	Empty Reagent Tank Actual State 40K History (30 - 40,000 km)	Yes/No
SCR_MODE	Selective Catalyst Reductant Operation Mode	Mode
SCR_NOx_LEVEL	NOx Emission Too High Actual State	Yes/No
SCR_NOx_LEVEL1	NOx Emission Too High Actual State 10K History (0 - 10,000 km Block)	Yes/No
SCR_NOx_LEVEL2	NOx Emission Too High Actual State 20K History (10 - 20,000 km)	Yes/No
SCR_NOx_LEVEL3	NOx Emission Too High Actual State 30K History (20 - 30,000 km)	Yes/No
SCR_NOx_LEVEL4	NOx Emission Too High Actual State 40K History (30 - 40,000 km)	Yes/No
VPWR	Control Module Voltage	Voltage
VS	Vehicle Speed	RPM

SCAN TOOL — DRIVER OPERATED CONTROLS CHECK

PID	Operator Setting	Reading
AC_REQ	(A/C Controls)	

PID	Operator Setting	Reading
	MAX/NORM AC Or MIX/DEF With A/C Clutch ON	YES
	Floor Or Vent Or A/C Clutch OFF	NO
APP1	Accelerator Pedal Fully Released	0.82 Volts
	Accelerator Pedal Fully Applied	4.07 Volts
APP2	Accelerator Pedal Fully Released	0.39 Volts
	Accelerator Pedal Fully Applied	2.04 Volts
BOO1	Brake Applied	ON
	Brake Released	OFF
GEAR	Engine Running:	
	PRNDL In P	P
	PRNDL In R	R
	PRNDL In N	P
	PRNDL In D	1
	PRNDL In M	1
	PRNDL In 2	2
	PRNDL In 1	1