

Holden Commodore VE 3.6L V6 2006 – 2009

ECM Pindata Table

Connector A				
Terminal	Wire Colour	Component	Condition	Voltage
A1	LG	Exhaust Camshaft Actuator Solenoid (Bank 1) Control Signal	Ignition ON / Engine Running / Varying RPM	Wave Form
A2	V	Intake Camshaft Actuator Solenoid (Bank 1) Control Signal	Ignition ON / Engine Running / Varying RPM	Wave Form
A4	Y/B	Fuel Injector # 6 Control	Ignition ON / Engine Running	Wave Form
A5	DG/W	EVAP Canister Purge Solenoid Control Signal	Ignition ON / Engine Running	Wave Form
A7	O/L	Intake Camshaft Position Sensor (Bank 1) Signal	Ignition ON / Engine Running	Wave Form
A9	V	Exhaust Camshaft Position Sensor (Bank 2) Signal	Ignition ON / Engine Running	Wave Form
A10	O/W	Alternator 'L' Terminal (Field Control) Signal	Ignition ON	Wave Form
A11	BR	Engine Oil Level Switch (OLS) Signal	Ignition ON / Engine Oil Level Correct	0 V approx.
A12	SB/W	Intake Manifold Runner Solenoid Control Signal	Ignition ON / Engine Idling	Wave Form
			Ignition ON / Driving / High RPM	Wave Form
A13	P	Reference Low Even Ignition Coils	—	0.06 V or less
A15	GR	Camshaft Position Sensors (CMP) Reference Voltage	Ignition ON	5.0 V
A24	Y	Throttle Actuator Motor Control (Positive)	Ignition ON / Engine Running	Wave Form
A25	W/B	Exhaust Camshaft Actuator Solenoid (Bank 2) Control Signal	Ignition ON / Engine Running / Varying RPM	Wave Form
A26	P/B	Fuel Injector # 3 Control	Ignition ON / Engine Running	Wave Form
A28	BR/W	Fuel Injector # 5 Control	Ignition ON / Engine Running	Wave Form
A30	V/W	Alternator 'F' Terminal (Field Duty Cycle) Signal	Ignition ON / Engine Running	Wave Form
A33	Y/R	Intake Camshaft Position Sensor (Bank 2) Signal	Ignition ON / Engine Running	Wave Form
A34	DG	Exhaust Camshaft Position Sensor (Bank 1) Signal	Ignition ON / Engine Running	Wave Form
A35	Y/L	Crankshaft Position Sensor (CKP) Signal	Ignition ON / Engine Running	Wave Form
A39	GR	Throttle Position Sensor (TPS) Reference Voltage	Ignition ON	5.0 V
A40	GR	Engine Oil Pressure Sensor (OPS) Reference Voltage	Ignition ON	5.0 V
A41	P/B	Camshaft Position Sensors (CMP) Reference Low	—	0.06 V or less
A43	BR/R	Engine Oil Pressure Sensor (OPS) Reference Low	—	0.06 V or less
A44	B	Engine Oil Level / Engine Coolant Temp Sensors (OLS, ECT) Reference Low	—	0.06 V or less

Holden Commodore VE 3.6L V6 2006 – 2009

ECM Pindata Table

A45	V/W	Crankshaft Position Sensor (CKP) Reference Voltage	Ignition ON	5.0 V
A46	V	Crankshaft Position Sensor (CKP) Reference Low	—	0.06 V or less
A48	BR	Throttle Actuator Motor Control (Negative)	Ignition ON / Engine Running	Wave Form
A49	O/B	Intake Camshaft Actuator Solenoid (Bank 2) Control Signal	Ignition ON / Engine Running / Varying RPM	Wave Form
A50	SB/B	Fuel Injector # 4 Control	Ignition ON / Engine Running	Wave Form
A51	BR/B	Fuel Injector # 1 Control	Ignition ON / Engine Running	Wave Form
A52	LG/B	Fuel Injector # 2 Control	Ignition ON / Engine Running	Wave Form
A55	V	Ignition Coil # 1 Control Signal	Ignition ON / Engine Running	Wave Form
A56	SB	Ignition Coil # 3 Control Signal	Ignition ON / Engine Running	Wave Form
A57	G/R	Ignition Coil # 5 Control Signal	Ignition ON / Engine Running	Wave Form
A59	DL	RH Knock Sensor (Bank 1) Signal	Ignition ON / Engine Running	A/C V
A60	BR	LH Knock Sensor (Bank 2) Ground	—	0.06 V or less
A61	BR/W	Engine Oil Pressure Sensor (OPS) Signal	Ignition ON / Engine Running	1 to 4 V (increases with pressure)
A67	BR/Y	RHF HO2S (Bank 1 Sensor 1) Floating Ground	Ignition ON / Engine Running	2.5 V approx.
A68	W	RHF HO2S (Bank 1 Sensor 1) Pump Current	—	Not Usable
A69	O	LHF HO2S (Bank 2 Sensor 1) Input Pump Current	—	Not Usable
A70	V	LHF HO2S (Bank 2 Sensor 1) Nernst Signal	Ignition ON / Engine Running / Closed Loop	0.45 V approx.
A72	LG	LHF HO2S (Bank 2 Sensor 1) Heater Switched Ground	Ignition ON / Engine Running	Wave Form
A78	V	Reference Low Odd Ignition Coils	—	0.06 V or less
A79	O/W	Ignition Coil # 2 Control Signal	Ignition ON / Engine Running	Wave Form
A80	DG/W	Ignition Coil # 4 Control Signal	Ignition ON / Engine Running	Wave Form
A81	SB/W	Ignition Coil # 6 Control Signal	Ignition ON / Engine Running	Wave Form
A82	Y/G	Engine Coolant Temperature (ECT) Sensor Signal	Ignition ON / Coolant Temperature @ 0°C	4.0 V or more
			Ignition ON / Coolant Temperature @ 80°C	2.0 V or less
A83	GR	RH Knock Sensor (Bank 1) Ground	—	0.06 V or less
A84	SB	LH Knock Sensor (Bank 2) Signal	Ignition ON / Engine Running	A/C V

Holden Commodore VE 3.6L V6 2006 – 2009

ECM Pindata Table

A85	G/Y	Engine Oil Temperature (EOT) Sensor Signal	Ignition ON / Oil Temperature @ 20°C	3.5 V or more
			Ignition ON / Oil Temperature @ 80°C	2.0 V or less
A88	BR/B	Throttle Position Sensor (TPS) Ground	—	0.06 V or less
A89	V	Throttle Position Sensor 2 (TPS2) Signal	Ignition ON / Idle	4.0 V or more
			Ignition ON / WOT	1.0 V or less
A90	DG	Throttle Position Sensor 1 (TPS1) Signal	Ignition ON / Idle	1.0 V or less
			Ignition ON / WOT	4.0 V or more
A91	LG	RHF HO2S (Bank 1 Sensor 1) Input Pump Current	—	Not Usable
A92	V/W	RHF HO2S (Bank 1 Sensor 1) Nernst Signal	Ignition ON / Engine Running / Closed Loop	0.45 V approx.
A93	BR/R	LHF HO2S (Bank 2 Sensor 1) Floating Ground	Ignition ON / Engine Running	2.5 V approx.
A94	V/W	LHF HO2S (Bank 2 Sensor 1) Pump Current	—	Not Usable
A96	GR/W	RHF HO2S (Bank 1 Sensor 1) Heater Switched Ground	Ignition ON / Engine Running	Wave Form
Connector B				
Terminal	Wire Colour	Component	Condition	Voltage
B1	B	ECU Ground	—	0.06 V or less
B2	B	ECU Ground	—	0.06 V or less
B3	P/L	Ignition Voltage 1	Ignition ON	Battery V
B4	B	ECU Ground	—	0.06 V or less
B5	P/L	Ignition Voltage 2	Ignition ON	Battery V
B6	P/L	Ignition Voltage 3	Ignition ON	Battery V
B7	GR/W	RHR H02S (Bank 1 Sensor 2) Heater Switched Ground	Ignition ON / Engine Running	Wave Form / Battery V
B9	BR/Y	Fuel Pump Sensor Primary and Secondary Reference Low	—	0.06 V or less
B10	DG/W	Fuel Pump Relay Control	Ignition ON / Engine Running	Battery V
B11	BR/G	Sensor Ground (ACPS)	—	0.06 V or less
B13	Y	MAF Sensor Signal	Ignition ON	1.0 V approx.
B15	L/W	Accelerator Pedal Position Sensor 1 (APP1) Signal	Ignition ON / Accel Pedal RELEASED	1.0 V approx.
			Ignition ON / Accel Pedal DEPRESSED	4.0 V or more
B16	BR/W	Clutch Switch Cruise Cancel Signal (Manual Only)	Ignition ON / Clutch Pedal RELEASED	Battery V
			Ignition ON / Clutch Pedal DEPRESSED	0 V

Holden Commodore VE 3.6L V6 2006 – 2009

ECM Pindata Table

B17	O/B	Park/Neutral Switch Signal (Auto Only)	Ignition ON / Park/Neutral	0 V
			Ignition ON / Gear Selected	Battery V
	DG	Clutch / Start Signal (Manual Only)	Ignition ON / Clutch Pedal RELEASED	5 V
			Ignition ON / Clutch Pedal DEPRESSED	0 V
B18	LG	Reverse Switch Signal	Ignition ON / Brake Pedal OFF	5 V
			Ignition ON / Brake Pedal ON	0 V
B20	O/W	LHR H02S (Bank 2 Sensor 2) Heater Switched Ground	Ignition ON / Engine Running	Wave Form / Battery V
B21	BR/W	Malfunction Indicator Light (MIL) Control (to Instruments)	Ignition ON / Check Engine Light OFF	Battery V
			Ignition ON / Check Engine Light ON	0.06 V or less
B22	BR/W	MAF / IAT Sensor Ground	—	0.06 V or less
B23	BR/G	RHR H02S (Bank 1 Sensor 2) Sensor Ground	—	0.06 V or less
B24	BR/R	LHR H02S (Bank 2 Sensor 2) Sensor Ground	—	0.06 V or less
B25	SB	Accelerator Pedal Position Sensor 2 (APP2) Signal	Ignition ON / Accel Pedal RELEASED	0.5 V approx.
			Ignition ON / Accel Pedal DEPRESSED	4.8 V or more
B26	SB	Fuel Level Sensor 2 (Secondary) Signal	Ignition ON / Fuel Tank Full	1.0 V approx.
			Ignition ON / Fuel Tank Empty	4.0 V approx.
B34	BR	Accelerator Pedal Position Sensor 1 (APP1) Ground	—	0.06 V or less
B35	GR	A/C Refrigerant Pressure Sensor (ACPS) Reference Voltage	Ignition ON	5.0 V
B36	V	Fuel Level Sensor 1 (Primary) Signal	Ignition ON / Fuel Tank Full	4.0 V approx.
			Ignition ON / Fuel Tank Empty	1.0 V approx.
B38	V	RHR H02S (Bank 1 Sensor 2) Sensor Signal	Ignition ON / Engine Cranking	Wave Form
B39	O/B	A/C Refrigerant Pressure Sensor (ACPS) Signal	Ignition ON / Engine Running	0 to 5 V (increases with pressure)
B41	DL	Accessory Wake Up Signal from BCM	Accessory / Ignition ON	Battery V
B42	BR/B	GMLAN Serial Data - CAN Bus High	—	—
B45	L/B	High Speed Cooling Fan Relay Control	Ignition ON / Both Cooling Fans OFF	Battery V
			Ignition ON / Both Cooling Fans ON HIGH	0 V

Holden Commodore VE 3.6L V6 2006 – 2009

ECM Pindata Table

B46	DG	Low Speed Cooling Fan Control	Ignition ON / Both Cooling Fans OFF	Battery V
			Ignition ON / Both Cooling Fans ON LOW	0 V
B47	V	Accelerator Pedal Position Sensor 2 (APP2) Ground	—	0.06 V or less
B48	BR/Y	Accelerator Pedal Position Sensor 2 (APP2) Reference Voltage	Ignition ON	5.0 V
B49	W/B	Accelerator Pedal Position Sensor 1 (APP1) Reference Voltage	Ignition ON	5.0 V
B50	BR/R	Intake Air Temperature Sensor (IAT) Signal	Ignition ON / Air Temperature @ 0°C	4.0 V or more
			Ignition ON / Air Temperature @ 10°C - 80°C	4.0 V or less
B51	V	LHR H02S (Bank 2 Sensor 2) Sensor Signal	Ignition ON / Engine Running	Wave Form
B52	W/L	Brake Switch Signal	Ignition ON / Brake OFF	Battery V
			Ignition ON / Brake ON	0 V
B54	P	Crank / Run Ignition Signal	Ignition ON / Engine Cranking	Battery V
B55	BR	GMLAN Serial Data - CAN Bus Low	—	—
B56	O/B	Battery Voltage	—	Battery V
B57	Y	Starter Relay Control	Ignition ON / Engine Cranking	Battery V
B58	BR	Main / Powertrain Relay Control	Ignition ON / Engine Running	Battery V