

Troubleshooting

Engine Control Module Terminal Arrangement

ECM CONNECTOR A (26P)

1	2	3	4	5	6	7	8	9	10	11	12	13
INJ1	INJ2	INJ3	VSV	FLR1	ESOL	MIL	ACC	FS O2SHTC	RS O2SHTC	IGN COIL1	PG1	IGP1
14	15	16	17	18		20	21	22	23	24	25	26
INJ4	INJ5	INJ6	2WBS	MTR TW		IAB CS	PCS	FP O2SHTC	RP O2SHTC	IGN COIL2	PG2	LG1

Wire side of female terminals

ECM CONNECTOR A (26P)

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1	BRN	INJ1 (No. 1 FUEL INJECTOR)	Drives No. 1 fuel injector	With engine running: pulses
2	RED	INJ2 (No. 2 FUEL INJECTOR)	Drives No. 2 fuel injector	
3	BLU	INJ3 (No. 3 FUEL INJECTOR)	Drives No. 3 fuel injector	
4	BLK/YEL	VSV (EVAP CONTROL CANISTER VENT SHUT VALVE)	Drives EVAP control canister vent shut valve	With ignition switch ON (II): battery voltage
5	GRN/BLK	FLR1 (FUEL PUMP RELAY)	Drives fuel pump relay	0 V for two seconds after turning ignition switch ON (II), then battery voltage
6	GRN	ESOL (EGR CONTROL SOLENOID VALVE)	Drives EGR control solenoid valve	With EGR operating during driving with fully warmed up engine: duty controlled With EGR not operating: battery voltage
7	BLU	MIL (MALFUNCTION INDICATOR LAMP)	Drives MIL	With MIL turned ON: 0 V With MIL turned OFF: battery voltage
8	RED/BLU	ACC (A/C CLUTCH RELAY)	Drives A/C clutch relay	With compressor ON: 0 V With compressor OFF: battery voltage
9	GRY	FSO2SHTC (FRONT SECONDARY HEATED OXYGEN SENSOR HEATER CONTROL)	Drives front secondary heated oxygen sensor heater	With ignition switch ON (II): battery voltage With fully warmed up engine running: 0 V
10	LT GRN	RSO2SHTC (REAR SECONDARY HEATED OXYGEN SENSOR HEATER CONTROL)	Drives rear secondary heated oxygen sensor heater	With ignition switch ON: battery voltage With fully warmed up engine running: pulses
11	PNK	IGN COIL1 (No. 1 IGNITION COIL part of IGNITION CONTROL MODULE)	Sends ignition pulse	With ignition switch ON (II): 0 V With engine running: pulses
12	BLK	PG1 (POWER GROUND)	Ground for the ECM power circuit	Less than 1.0 V at all times
13	YEL/BLK	IGP1 (POWER SOURCE)	Power source for the ECM control circuit	With ignition switch ON (II): battery voltage With ignition switch OFF: 0 V
14	YEL	INJ4 (No. 4 FUEL INJECTOR)	Drives No. 4 fuel injector	With engine running: pulses
15	BLK/RED	INJ5 (No. 5 FUEL INJECTOR)	Drives No. 5 fuel injector	
16	WHT/BLU	INJ6 (No. 6 FUEL INJECTOR)	Drives No. 6 fuel injector	
17	ORN	2WBS (EVAP BYPASS SOLENOID VALVE)	Drives EVAP bypass solenoid valve	With ignition switch ON (II): battery voltage
18	YEL/GRN	MTR TW	Sends engine coolant temperature signal.	With ignition switch ON (II): pulses
20	PNK/BLU	IABCS (IAB CONTROL SOLENOID VALVE)	Drives IAB control solenoid valve	With engine speed below 4,800 rpm: battery voltage With engine speed above 4,800 rpm: 0 V
21	RED/YEL	PCS (EVAP PURGE CONTROL SOLENOID VALVE)	Drives EVAP purge control solenoid valve	With engine running, engine coolant below 149°F (65°C): battery voltage With engine running, engine coolant above 149°F (65°C): 0 V
22	GRN/RED	FPO2SHTC (FRONT PRIMARY HEATED OXYGEN SENSOR HEATER CONTROL)	Drives front primary heated oxygen sensor heater	With ignition switch ON (II): battery voltage With fully warmed up engine running: 0 V
23	ORN/BLK	RPO2SHTC (REAR PRIMARY HEATED OXYGEN SENSOR HEATER CONTROL)	Drives rear primary heated oxygen sensor heater	With ignition switch ON (II): battery voltage With fully warmed up engine running: 0 V
24	BRN	IGN COIL2 (No. 2 IGNITION COIL part of IGNITION CONTROL MODULE)	Sends ignition pulse	With ignition switch ON (II): 0 V With engine running: pulses
25	BLK	PG2 (POWER GROUND)	Ground for the ECM power circuit	Less than 1.0 V at all times
26	BRN/BLK	LG1 (LOGIC GROUND)	Ground for the ECM control circuit	Less than 1.0 V at all times



ECM CONNECTOR B (16P)

1 VTP SWF	2 IGN COIL6	3 VTP SWR	4 ATPPN NTSW*	5 CYP 2P	6 CYP 1P	7 CKP 2P	8 CKP 1P
9 LG2	10 IGN COIL5	11 IGN COIL4	12 IGN COIL3	13 CYP 2M	14 CYP 1M	15 CKP 2M	16 CKP 1M

Wire side of female terminals

ECM CONNECTOR B (16P)

NOTE: Standard battery voltage is 12 V.

*: M/T

Terminal number	Wire color	Terminal name	Description	Signal
1	BLU	VTP SWF (FRONT VTEC PRESSURE SWITCH)	Detects VTEC pressure switch signal	With engine at low rpm: 0 V With engine at high rpm: battery voltage
2	RED	IGN COIL6 (No. 6 IGNITION COIL part of IGNITION CONTROL MODULE)	Sends ignition pulse	With ignition switch ON (II): 0 V With engine running: pulses
3	BLU/BLK	VTP SWR (REAR VTEC PRESSURE SWITCH)	Detects VTEC pressure switch signal	With engine at low rpm: 0 V With engine at high rpm: battery voltage
4	RED	ATP PN (A/T GEAR POSITION SWITCH)	Detects A/T gear position switch signal	In N or P position: 0 V In any other position: approx. 5 V
4*	LT GRN	NT SW (NEUTRAL SWITCH)	Detects neutral switch signal	In neutral position: 0 V In any other position: approx. 5 V
5	ORN	CYP 2P (CYP SENSOR 2 P SIDE)	Detects CYP sensor 2	With engine running: pulses
6	WHT	CYP 1P (CYP SENSOR 1 P SIDE)	Detects CYP sensor 1	With engine running: pulses
7	ORN/BLU	CKP 2P (CKP SENSOR 2 P SIDE)	Detects CKP sensor 2	With engine running: pulses
8	BLU/GRN	CKP 1P (CKP SENSOR 1 P SIDE)	Detects CKP sensor 1	With engine running: pulses
9	BRN/BLK	LG2 (LOGIC GROUND)	Ground for the ECM control circuit	Less than 1.0 V at all times
10	GRY	IGN COIL5 (No. 5 IGNITION COIL part of IGNITION CONTROL MODULE)	Sends ignition pulse	With ignition switch ON (II): 0 V With engine running: pulses
11	GRN	IGN COIL4 (No. 4 IGNITION COIL part of IGNITION CONTROL MODULE)	Sends ignition pulse	With ignition switch ON (II): 0 V With engine running: pulses
12	BLU	IGN COIL3 (No. 3 IGNITION COIL part of IGNITION CONTROL MODULE)	Sends ignition pulse	With ignition switch ON (II): 0 V With engine running: pulses
13	ORN/BLU	CYP 2M (CYP SENSOR 2 M SIDE)	Ground for CYP sensor 2	
14	WHT/BLU	CYP 1M (CYP SENSOR 1 M SIDE)	Ground for CYP sensor 1	
15	WHT/BLU	CKP 2M (CKP SENSOR 2 M SIDE)	Ground for CKP sensor 2	
16	BLU/YEL	CKP 1M (CKP SENSOR 1 M SIDE)	Ground for CKP sensor 1	

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Troubleshooting

- Engine Control Module Terminal Arrangement (cont'd)

ECM CONNECTOR C (12P)

1	2	3	4	5	6
IGP2	ACS	PDSW	MTCLS*	SCS	STS
7	8	9	10	11	12
VSS	NEP	PHRST F	PHRST R	MFPLS F	MFPLS R

Wire side of female terminals

ECM CONNECTOR C (12P)

NOTE: Standard battery voltage is 12 V.

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Terminal number	Wire color	Terminal name	Description	Signal
1	YEL/BLK	IGP2 (POWER SOURCE)	Power source for the ECM control circuit	With ignition switch ON (II): battery voltage With ignition switch OFF: 0 V
2	BLU/BLK	ACS (A/C SWITCH SIGNAL)	Detects A/C switch signal	With A/C switch ON: 0 V With A/C switch OFF: approx. 10 V
3	RED/GRN	PDSW (A/C PRESSURE SWITCH B)	Detects A/C pressure switch B signal	With A/C pressure switch B ON: 0 V With A/C pressure switch B OFF: approx. 5 V
4*	PNK	MTCLS (M/T CLUTCH SWITCH)	Detects M/T clutch switch signal	With ignition switch ON (II) and clutch pedal depressed: approx. 5 V With ignition switch ON (II) and clutch pedal released: 0 V
5	BLU	SCS (SERVICE CHECK SIGNAL)	Detects service check connector signal (the signal causing a DTC indication)	With the connector connected: 0 V With the connector disconnected: about 5 V or battery voltage
6	BLK/WHT	STS (STARTER SWITCH SIGNAL)	Detects starter switch signal	With starter switch ON: battery voltage With starter switch OFF: 0 V
7	ORN	VSS (VEHICLE SPEED SENSOR)	Detects VSS signal	With ignition switch ON (II) and rear wheels turning: cycles 0 – 5 V
8	GRN	NEP (ENGINE SPEED PULSE)	Outputs engine speed pulse	With engine running: pulses
9	GRN/YEL	PHRST F (FRONT PEAK HOLD RESET)	Sends peak hold reset signal	With engine running: pulses
10	GRN/BLK	PHRST R (REAR PEAK HOLD RESET)	Sends peak hold reset signal	With engine running: pulses
11	YEL/RED	MFPLS F (FRONT MISFIRE PULSE)	Detects misfire pulse	With engine running: pulses
12	YEL	MFPLS R (REAR MISFIRE PULSE)	Detects misfire pulse	With engine running: pulses



ECM CONNECTOR D (22P)

1	2	3	4	5	6	7	8	9	10	11
VBU	KSR	ECS	K-LINE	ALTF	PTANK	ECT	IAT	MAP	VCC2	SG2
12	13			16	17	18	19	20		
TPS	KSF			FS 02S	RS 02S	FP 02S	RP 02S	EGRL		

Wire side of female terminals

ECM CONNECTOR D (22P)

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1	WHT/YEL	VBU (VOLTAGE BACK UP)	Power source for the ECM control circuit Power source for the DTC memory	Battery voltage at all times
2	RED/BLU	KSR (REAR KNOCK SENSOR KS1)	Detects knock sensor signal	With engine knocking: pulses
3	WHT/BLK	ECS (AIR PUMP ELECTRIC CURRENT SENSOR)	Detects air pump electric current sensor signal	With ignition switch ON (II): 0.5 V With air pump working: about 2 – 5 V
4	YEL/GRN	K-LINE (DLC)	Sends or detects PGM tester and OBD II scan tool signal	With ignition switch ON (II): about 5 V
5	WHT/RED	ALTF (ALTERNATOR FR SIGNAL)	Detects alternator FR signal	With fully warmed up engine running: 0 V – 5 V (depending on electrical load)
6	BLU	PTANK (FUEL TANK PRESSURE SENSOR)	Detects fuel tank pressure sensor	With fuel fill cap opened: about 2.5 V
7	RED/WHT	ECT (ENGINE COOLANT TEMPERATURE SENSOR)	Detects ECT sensor signal	With ignition switch ON (II): about 0.1 – 4.8 V (depending on engine coolant temperature)
8	RED/YEL	IAT (INTAKE AIR TEMPERATURE SENSOR)	Detects IAT sensor signal	With ignition switch ON (II): about 0.1 – 4.8 V (depending on intake air temperature)
9	WHT/YEL	MAP (MANIFOLD ABSOLUTE PRESSURE SENSOR)	Detects MAP sensor signal	With ignition switch ON (II): about 3 V During idling: about 1.0 V (depending on engine speed)
10	YEL/BLU	VCC2 (SENSOR VOLTAGE)	Provides sensor voltage	With ignition switch ON (II): about 5 V With ignition switch OFF: 0 V
11	GRN/BLU	SG2 (SENSOR GROUND)	Sensor ground	
12	RED/BLK	TPS (THROTTLE POSITION SENSOR)	Detects TP sensor signal	With throttle fully open: about 4.5 V With throttle fully closed with fully warmed up engine: about 0.5 V
13	WHT	KSF (FRONT KNOCK SENSOR KS2)	Detects knock sensor signal	With engine knocking: pulses
16	GRN	O2S FS (FRONT SECONDARY OXYGEN SENSOR)	Detects secondary oxygen sensor signal	With throttle fully opened with fully warmed up engine: above 0.6 V With throttle quickly closed: below 0.4 V
17	WHT/RED	O2S RS (REAR SECONDARY OXYGEN SENSOR)	Detects secondary oxygen sensor signal	With throttle fully opened with fully warmed up engine: above 0.6 V With throttle quickly closed: below 0.4 V
18	BLU/RED	O2S FP (FRONT PRIMARY OXYGEN SENSOR)	Detects primary oxygen sensor signal	With throttle fully opened with fully warmed up engine: above 0.6 V With throttle quickly closed: below 0.4 V
19	WHT	O2S RP (REAR PRIMARY OXYGEN SENSOR)	Detects primary oxygen sensor signal	With throttle fully opened with fully warmed up engine: above 0.6 V With throttle quickly closed: below 0.4 V
20	WHT/BLK	EGRL (EGR VALVE LIFT SENSOR)	Detects EGR valve lift sensor signal	During idling without vacuum: about 1.2 V With 27 kPa (200 mmHg, 8 in.Hg): about 4.3 V

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Troubleshooting

Engine Control Module Terminal Arrangement (cont'd)

ECM CONNECTOR F (26P)

1	2	3	4		6	7	8	9	10	11	12	13
VCC1	SG1	IMO CODE	FLR2		BKSW2	CC RESSW	CC SETSW	CC MSW	CC ATSSW CCCLSW*	CCIL	AP2	AP1
14	15	16	17	18	19	20	21	22	23	24	25	
VCC3	SG3	BKSW1	MTSL	VREF	VT SOLF	VT SOLR	ATSDL B	ATSDL A	APR	TCS SDL	SAVS	

Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

*: M/T

ECM CONNECTOR F (26P)

Terminal number	Wire color	Terminal name	Description	Signal
1	YEL/WHT	VCC1 (SENSOR VOLTAGE)	Provides sensor voltage	With ignition switch ON (II): about 5 V With ignition switch OFF: 0 V
2	GRN/WHT	SG1 (SENSOR GROUND)	Sensor ground	
3	BRN	IMO CODE (IMMOBILIZER CODE)	Detects immobilizer signal	
4	RED	FLR2 (FUEL PUMP RELAY 2)	Drives fuel pump relay	With engine at low rpm: battery voltage With engine at high rpm: 0 V
6	GRY	BKSW2 (BRAKE SWITCH 2)	Detects brake switch 2 signal	With brake pedal released and cruise control main switch ON: battery voltage With brake pedal depressed: 0 V
7	LT GRN/BLK	CC RESSW (CRUISE CONTROL RESUME SWITCH)	Detects resume switch signal	With resume switch released: 0 V With resume switch depressed: battery voltage
8	LT GRN/RED	CC SETSW (CRUISE CONTROL SET SWITCH)	Detects set switch signal	With set switch released: 0 V With set switch depressed: battery voltage
9	LT GRN	CC MSW (CRUISE CONTROL MAIN SWITCH)	Power source for the cruise control system	With cruise control main switch ON: battery voltage With cruise control main switch OFF: 0 V
10	BLU/ORN	CC ATSSW (CRUISE CONTROL A/T GEAR POSITION SWITCH)	Detects A/T gear position switch signal	In <u>D</u> , <u>3</u> or <u>2</u> position: 0 V In any other position: approx. 8 V
10*	BLU/ORN	CC CLSW (CRUISE CONTROL CLUTCH SWITCH)	Detects clutch switch signal	With clutch pedal released: approx. 8 V With clutch pedal depressed: 0 V
11	BLU/BLK	CCIL (CRUISE CONTROL INDICATOR LIGHT)	Drives cruise control indicator light	With cruise control ON: 0 V With cruise control OFF: battery voltage
12	YEL/RED	AP2 (ACCELERATOR POSITION SENSOR CIRCUIT 2)	Detects accelerator position sensor circuit 2 signal	With accelerator fully open: about 4.5 V With accelerator fully closed: about 0.5 V
13	BLU/RED	AP1 (ACCELERATOR POSITION SENSOR CIRCUIT 1)	Detects accelerator position sensor circuit 1 signal	With accelerator fully open: about 4.5 V With accelerator fully closed: about 0.5 V
14	YEL/WHT	VCC3 (SENSOR VOLTAGE)	Provides sensor voltage	With ignition switch ON (II): about 5 V With ignition switch OFF: 0 V
15	GRN/WHT	SG3 (SENSOR GROUND)	Sensor ground	
16	GRN/WHT	BKSW1 (BRAKE SWITCH 1)	Detects brake switch 1 signal	With brake pedal released: 0 V With brake pedal depressed: battery voltage
17	RED/WHT	MTSL (REVERSE LOCKOUT RELAY OUT)	Drives reverse lockout relay	With vehicle speed above 13 mph (20 km/h): 0 V With vehicle speed below 9 mph (15 km/h): battery voltage
18	BLU	VREF (REFERENCE VOLTAGE)	Provides reference voltage to TCM	With ignition switch ON (II): about 5 V With ignition switch OFF: 0 V
19	BLU/YEL	VT SOLF (FRONT VTEC SOLENOID VALVE)	Drives front VTEC solenoid valve	With engine at low rpm: 0 V With engine at high rpm: battery voltage
20	GRN/YEL	VT SOLR (REAR VTEC SOLENOID VALVE)	Drives rear VTEC solenoid valve	With engine at low rpm: 0 V With engine at high rpm: battery voltage
21	LT GRN/YEL	ATSDL B (A/T FI DATA LINE B)	Detects data from the TCM	With engine running: pulses
22	WHT/YEL	ATSDL A (A/T FI DATA LINE A)	Sends data to the TCM	With engine running: pulses
23	BLU/WHT	APR (AIR PUMP RELAY)	Drives air pump relay	With ignition switch ON (II): 0 V With air pump working: battery voltage
24	RED/BLU	TCSSDL (TCS DATA LINE)	Interface for TCS control unit	With engine running: pulses
25	RED	SAVS (AIR CONTROL SOLENOID VALVE)	Drives air control valve	With ignition switch ON (II): battery voltage With air pump working: 0 V



ECM CONNECTOR G (12P)

	2			3	4	5
	IGM1			IGM2	PM1	PM2
	7	8	9	10	11	12
	PGM1	PGM2	COM1	COM2	PM3	PM4

Wire side of female terminals

ECM CONNECTOR G (12P)

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
2	GRN/RED	IGM1 (POWER SOURCE)	Power source for throttle valve control motor	With ignition switch ON (II): battery voltage With ignition switch OFF: 0 V
3	GRN/RED	IGM2 (POWER SOURCE)	Power source for throttle valve control motor	With ignition switch ON (II): battery voltage With ignition switch OFF: 0 V
4	BRN	PM1 (MOTOR PHASE OUT 1)	Sends pulse to throttle valve control motor	With ignition switch ON (II): 0 V or pulses With ignition switch OFF: 0 V
5	WHT/GRN	PM2 (MOTOR PHASE OUT 2)	Sends pulse to throttle valve control motor	With ignition switch ON (II): 0 V or pulses With ignition switch OFF: 0 V
7	BLK	PGM1 (POWER GROUND)	Power ground for throttle valve control motor	
8	BLK	PGM2 (POWER GROUND)	Power ground for throttle valve control motor	
9	ORN	COM1 (COMMON POWER SOURCE FOR MOTOR PHASE 1 and 3)	Sends power source to throttle valve control motor	With ignition switch ON (II): pulses With ignition switch OFF: 0 V
10	GRN	COM2 (COMMON POWER SOURCE FOR MOTOR PHASE 2 and 4)	Sends power source to throttle valve control motor	With ignition switch ON (II): pulses With ignition switch OFF: 0 V
11	YEL	PM3 (MOTOR PHASE OUT 3)	Sends pulse to throttle valve control motor	With ignition switch ON (II): 0 V or pulses With ignition switch OFF: 0 V
12	RED	PM4 (MOTOR PHASE OUT 4)	Sends pulse to throttle valve control motor	With ignition switch ON (II): 0 V or pulses With ignition switch OFF: 0 V