

Fig. 03.2

Engine Control Module

Pin	Description and Characteristic
PH-9	BRAKE CANCEL SWITCH; NORMALLY CLOSED/ GROUND WHEN ACTIVATED
PH-10	SENSOR GROUND 1; GROUND
PH-12	SENSOR GROUND 2; GROUND
PH-13	FUEL PUMP DRIVE SIGNAL (TO REM); PWM, 150 Hz, NORMAL POSITIVE DUTY CYCLE RANGE = 4% - 51%
PH-17	FUEL PUMP DRIVE SIGNAL (TO REM); PWM, 150 Hz, NORMAL POSITIVE DUTY CYCLE RANGE = 4% - 51%
PH-23	AIR CONDITIONING PRESSURE SENSOR
PH-34	AIR CONDITIONING COMPRESSOR CLUTCH RELAY DRIVE; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-47	SPEED CONTROL SWITCH REQUEST; STEPPED RESISTANCE
PH-48	COOLING FAN MODULE CONTROL; PWM, 14.1 Hz, POSITIVE DUTY CYCLE RANGE 7% - 96%
PH-51	IGNITION COIL ACTIVATE - CYLINDER 2; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-52	IGNITION COIL ACTIVATE - CYLINDER 4; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-53	IGNITION COIL ACTIVATE - CYLINDER 8; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-54	IGNITION COIL ACTIVATE - CYLINDER 1; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-55	IGNITION COIL ACTIVATE - CYLINDER 3; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-56	IGNITION COIL ACTIVATE - CYLINDER 5; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-57	IGNITION COIL ACTIVATE - CYLINDER 6; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-113	FUEL INJECTOR DRIVE - CYLINDER 3; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-114	FUEL INJECTOR DRIVE - CYLINDER 4; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-115	FUEL INJECTOR DRIVE - CYLINDER 1; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-116	FUEL INJECTOR DRIVE - CYLINDER 2; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-117	FUEL INJECTOR DRIVE - CYLINDER 5; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-118	FUEL INJECTOR DRIVE - CYLINDER 6; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-119	FUEL INJECTOR DRIVE - CYLINDER 8; TO ACTIVATE, ECM SWITCHES CIRCUIT TO GROUND
PH-120	AIR CONDITIONING PRESSURE SENSOR SIGNAL; NOMINAL 0 - 5 V, TRANSDUCER - VOLTAGE INCREASES AS PRESSURE INCREASES
PH-121	IGNITION MONITOR BANK 1; PULSED SIGNAL, 3 PULSES PER ENGINE CYCLE
PH-122	IGNITION MONITOR BANK 2; PULSED SIGNAL, 3 PULSES PER ENGINE CYCLE
PH-131	IGNITION MONITOR BANK 3; PULSED SIGNAL, 3 PULSES PER ENGINE CYCLE
PH-132	IGNITION MONITOR BANK 4; PULSED SIGNAL, 3 PULSES PER ENGINE CYCLE

Rear Electronic Module

Pin	Description and Characteristic
B+	BATTERY POWER SUPPLY (LOGIC); B+
CRH-03	LOGIC GROUND; GROUND
CRH-11-10	FUEL PUMP (1) DRIVE SIGNAL; PWM, 150 Hz, NORMAL POSITIVE DUTY CYCLE RANGE = 4% - 51%
CRH-11-10	LOGIC GROUND; GROUND
CRH-11-25	LOGIC GROUND; GROUND
CRH-11-26	LOGIC GROUND; GROUND
CR12-08	IGNITION SWITCHED POWER SUPPLY (1) (FUEL PUMP CONTROL); B+
CR13-01	SCP NETWORK *
CR13-02	SCP NETWORK *
CR13-03	SCP NETWORK *
CR13-04	SCP NETWORK *
CR13-05	SCP NETWORK *
CR13-06	SCP NETWORK *
CR13-07	SCP NETWORK *
CR13-08	SCP NETWORK *
CR13-09	SCP NETWORK *
CR13-10	SCP NETWORK *
CR13-11	SCP NETWORK *
CR13-12	SCP NETWORK *
CR13-13	SCP NETWORK *
CR13-14	SCP NETWORK *
CR13-15	SCP NETWORK *
CR13-16	SCP NETWORK *
CR13-17	SCP NETWORK *
CR13-18	SCP NETWORK *
CR13-19	SCP NETWORK *
CR13-20	SCP NETWORK *
CR13-21	SCP NETWORK *
CR13-22	SCP NETWORK *
CR13-23	SCP NETWORK *
CR13-24	SCP NETWORK *
CR13-25	SCP NETWORK *
CR13-26	SCP NETWORK *
CR13-27	SCP NETWORK *
CR13-28	SCP NETWORK *
CR13-29	SCP NETWORK *
CR13-30	SCP NETWORK *
CR13-31	SCP NETWORK *
CR13-32	SCP NETWORK *
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CR13-41	SCP NETWORK *
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CR13-86	SCP NETWORK *
CR13-87	SCP NETWORK *
CR13-88	SCP NETWORK *
CR13-89	SCP NETWORK *
CR13-90	SCP NETWORK *
CR13-91	SCP NETWORK *
CR13-92	SCP NETWORK *
CR13-93	SCP NETWORK *
CR13-94	SCP NETWORK *
CR13-95	SCP NETWORK *
CR13-96	SCP NETWORK *
CR13-97	SCP NETWORK *
CR13-98	SCP NETWORK *
CR13-99	SCP NETWORK *
CR13-100	SCP NETWORK *

NOTE: Refer to the Appendix at the rear of this book for Network Messages.

COMPONENTS

Component	Connector(s)	Connector Description	Location
AIR CONDITIONING PRESSURE SENSOR	EC11	3-WAY / BLACK	ENGINE COMPARTMENT / BULKHEAD / PASSENGER SIDE
BRAKE CANCEL SWITCH	CR77	2-WAY / BLACK	ADJACENT TO INDICATOR / LH SIDE
COOLING FAN MODULE AND MOTOR	GC11	2-WAY / GREY	TOP OF BRAKE PEDAL
	GC20	2-WAY / GREY	RADIATOR COOLING FAN
ENGINE CONTROL MODULE	PH	13-WAY / BLACK	ENGINE COMPARTMENT / BULKHEAD / PASSENGER SIDE
FUEL INJECTOR 1	L3	2-WAY / BLACK	FUEL RAIL INTAKE MANIFOLD
FUEL INJECTOR 2	L4	2-WAY / BLACK	FUEL RAIL INTAKE MANIFOLD
FUEL INJECTOR 3	L5	2-WAY / BLACK	FUEL RAIL INTAKE MANIFOLD
FUEL INJECTOR 4	L6	2-WAY / BLACK	FUEL RAIL INTAKE MANIFOLD
FUEL INJECTOR 5	L7	2-WAY / BLACK	FUEL RAIL INTAKE MANIFOLD
FUEL INJECTOR 6	L8	2-WAY / BLACK	FUEL RAIL INTAKE MANIFOLD
FUEL INJECTOR 8	L9	2-WAY / BLACK	FUEL RAIL INTAKE MANIFOLD
FUEL PUMP	FR4	2-WAY / BLACK	FUEL TANK, RH SIDE
FUEL PUMP RELAY			REAR POWER DISTRIBUTION FUSE BOX - R6
IGNITION CAPACITOR	PR4	2-WAY / BLACK	ENGINE COMPARTMENT / BULKHEAD / CENTER
IGNITION MODULE AND COIL 1	PR2	4-WAY / BLACK	RH CYLINDER HEAD
IGNITION MODULE AND COIL 2	PR6	4-WAY / BLACK	LH CYLINDER HEAD
IGNITION MODULE AND COIL 3	PR3	4-WAY / BLACK	RH CYLINDER HEAD
IGNITION MODULE AND COIL 4	PR7	4-WAY / BLACK	LH CYLINDER HEAD
IGNITION MODULE AND COIL 5	PR4	4-WAY / BLACK	RH CYLINDER HEAD
IGNITION MODULE AND COIL 6	PR8	4-WAY / BLACK	LH CYLINDER HEAD
REAR ELECTRONIC MODULE	CR4	26-WAY / NATURAL	TRUNK / RH REAR
	CR11	12-WAY / BLACK	
	CR12	12-WAY / BLACK	
	CR71	17-WAY / BLACK	
	CR73	4-WAY / BLACK	
	CR3	4-WAY / BLACK	
	CR5	4-WAY / BLACK	
	CR80	8-WAY / BLACK	
	CR81	8-WAY / BLACK	
	CR82	12-WAY / BLACK	
	CR83	4-WAY / BLACK	
	CR84	8-WAY / BLACK	
	CR87	8-WAY / BLACK	
	CR89	16-WAY / BLACK	
STEERING WHEEL SPEED CONTROL SWITCHES			STEERING WHEEL

HARNES IN-LINE CONNECTORS

Connector	Connector Description / Location
EC21	2-WAY / BLACK; ENGINE HARNESS TO COOLING FAN MODULE
EC46	2-WAY / BLACK; ENGINE COMPARTMENT HARNESS TO CABIN HARNESS
EC55	10-WAY / BLACK; REAR ENGINE COMPARTMENT HARNESS TO CABIN HARNESS
EC56	25-WAY / BLACK; REAR ENGINE COMPARTMENT HARNESS TO CABIN HARNESS
EC91	8-WAY / GREY; CABIN HARNESS TO FUEL INJECTOR HARNESS
FR72	13-WAY / BLACK; ENGINE HARNESS TO FUEL INJECTOR LINK
FR79	8-WAY / BLACK; ENGINE COMPARTMENT HARNESS TO INSTRUMENT PANEL HARNESS
FR86	22-WAY / BLACK; ENGINE COMPARTMENT HARNESS TO INSTRUMENT PANEL HARNESS
PH41	42-WAY / BLACK; ENGINE HARNESS TO ENGINE COMPARTMENT HARNESS
PH42	8-WAY / BLACK; ENGINE HARNESS TO ENGINE COMPARTMENT HARNESS

GROUND	Location
G23	TRUNK / RH SIDE / ADJACENT TO BATTERY
G24	TRUNK / RH SIDE / REAR ELECTRONIC MODULE
G28	ENGINE COMPARTMENT / RH SIDE / REARWARD OF SUSPENSION TOWER
G30	ENGINE COMPARTMENT / LH SIDE / REARWARD OF SUSPENSION TOWER

GROUND	Location
G21	ENGINE COMPARTMENT / ADJACENT TO INDICATOR / RH SIDE
G22	CABIN / RH A POST
G25	CABIN / ABOVE LEFT FOOTWELL
G26	CABIN / BELOW RIGHT FOOTWELL
G27	CABIN / BELOW LEFT FOOTWELL
G29	REAR OF ENGINE / REAR SEAT / CABIN / RH SIDE
G31	REAR OF ENGINE / ADJACENT TO HOOD RELEASE
G32	CABIN / RH A POST
G33	ENGINE COMPARTMENT / TOP OF SUSPENSION TOWER / PASSENGER SIDE
G34	ENGINE COMPARTMENT / TOP OF SUSPENSION TOWER / PASSENGER SIDE

FOR CONTROL MODULE PIN-OUT INFORMATION, UNFOLD PAGE TO LEFT.

Pin	Input	Output	B+	Battery Voltage	PG	SS	SG	Power Ground	S	Sensor / Signal Supply	CAN Network	D	D2	DZB Network	DZ	D2B Network	Pulse Width Modulated	Serial and Encoded Data	V	Voltage (DC)	PWM	Pulse Width Modulated	
PH-9																							
PH-10																							
PH-12																							
PH-13																							
PH-17																							
PH-23																							
PH-34																							
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PH-120																							
PH-121																							
PH-122																							
PH-131																							
PH-132																							

CAUTION: The information on this data page is furnished to aid the user in understanding circuit operation. THIS INFORMATION SHOULD BE USED FOR REFERENCE ONLY.

NOTE: The values listed are approximately those that can be expected at the control module connector pins with all circuit connections made and all components connected and fitted.

Refer to the front of this book for detailed information and illustrations regarding the location and identification of harnesses, relays, fuses, grounds, control modules and control module pins.