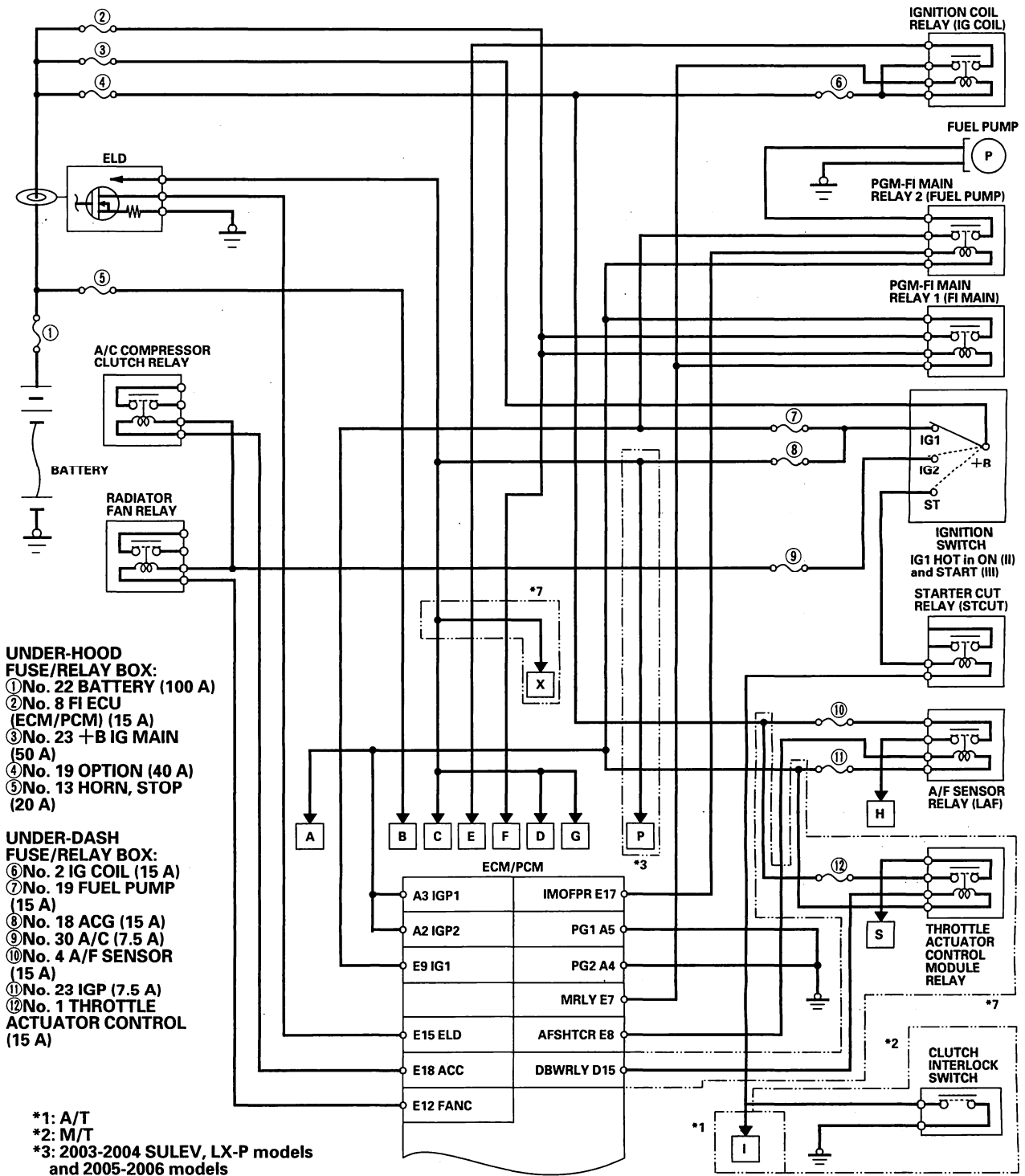




ECM/PCM Electrical Connections

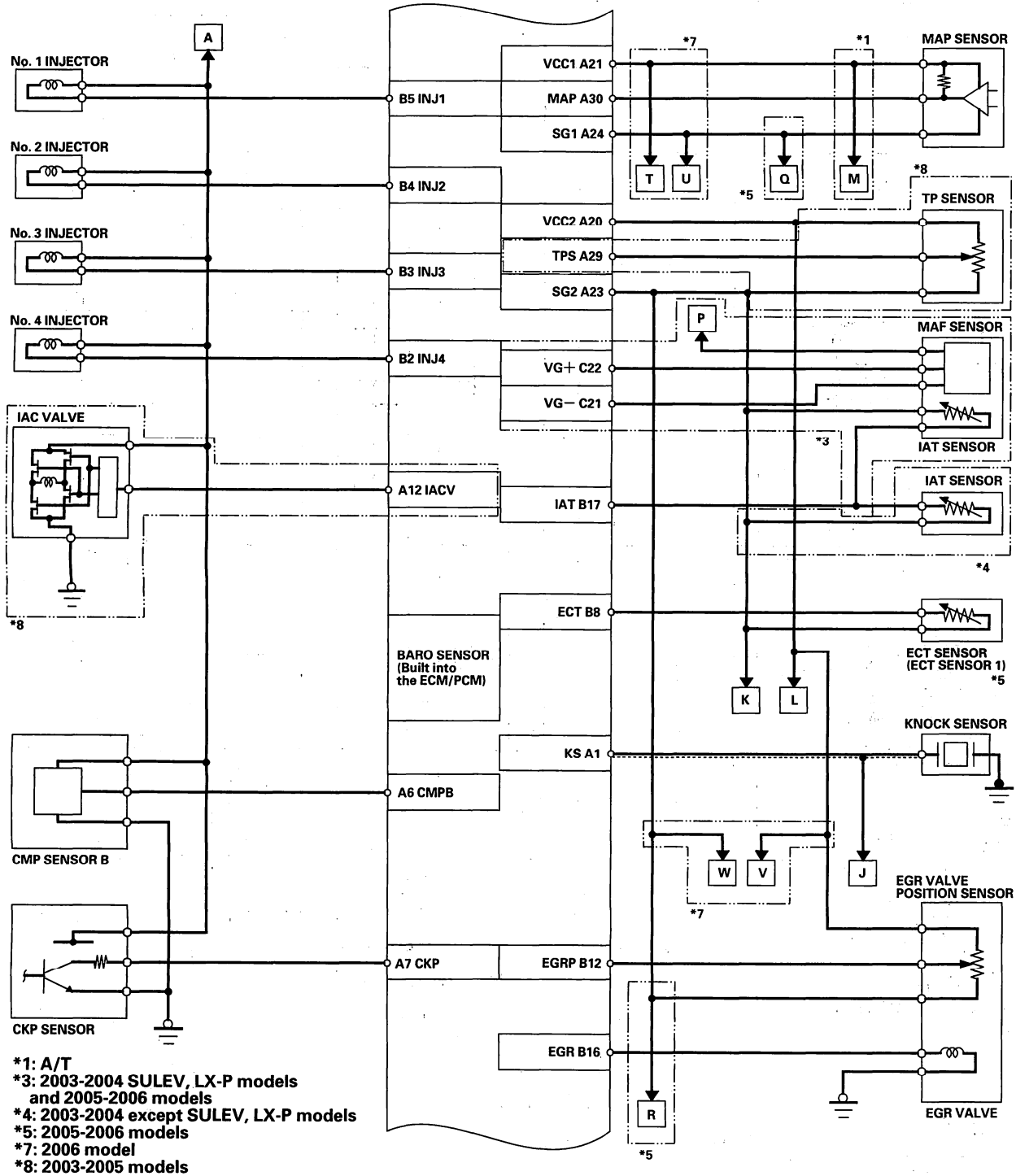


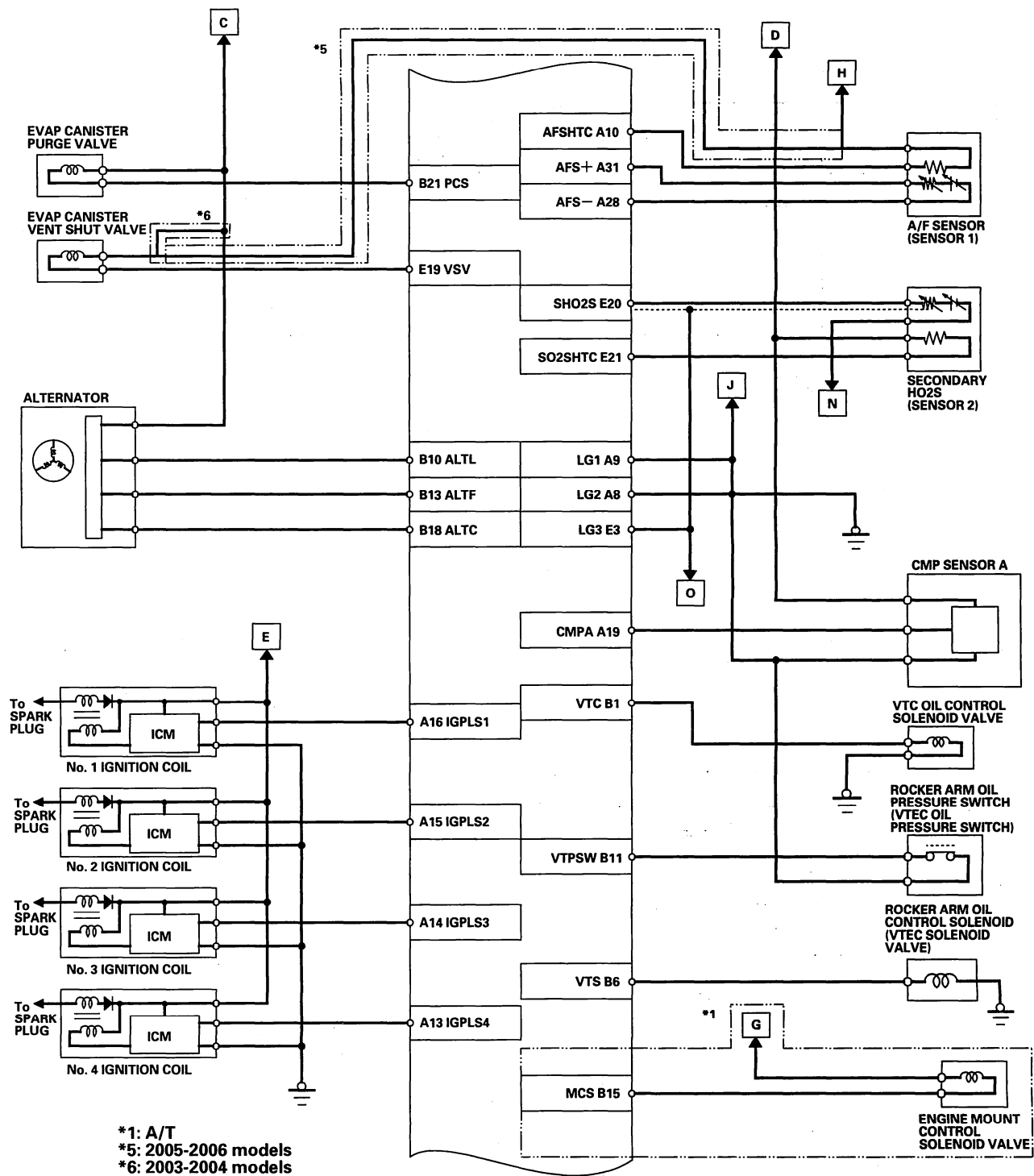
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Fuel and Emissions Systems

System Description (cont'd)

ECM/PCM Electrical Connections (cont'd)



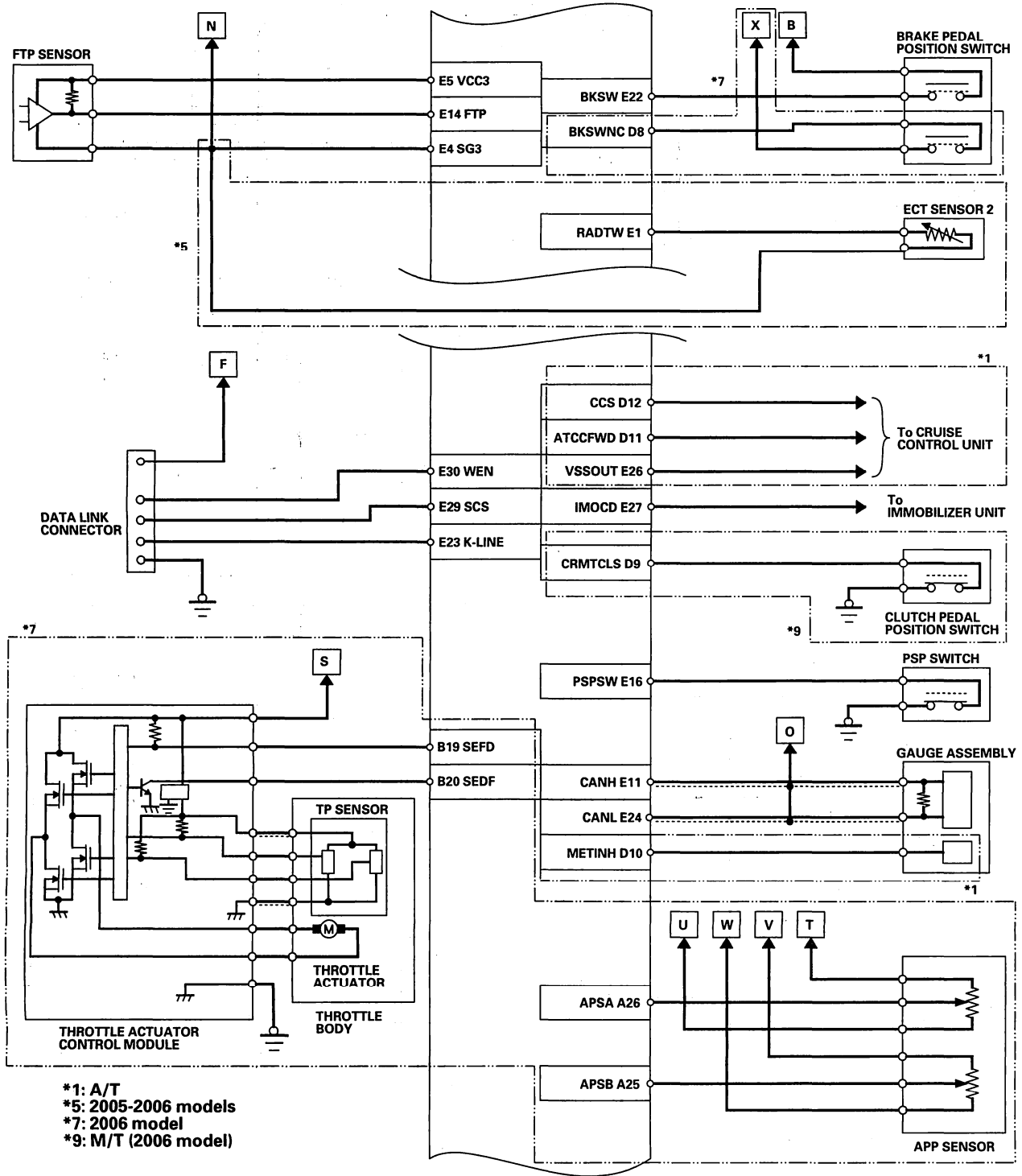


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Fuel and Emissions Systems

System Description (cont'd)

ECM/PCM Electrical Connections (cont'd)



Fuel and Emissions Systems

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector A (31P)

1 KS	2 IGP2	3 IGP1	4 PG2	5 PG1	6 CMPB	7 CKP	8 LG2	9 LG1	
10 AFS HTC	12 IACV	13 IGPLS4	14 IGPLS3	15 IGPLS2	16 IGPLS1	18 NC	19 CMPA	20 VCC2	21 VCC1
23 SG2	24 SG1	25 APSB	26 APSA	28 AFS-	29 TPS	30 MAP	31 AFS+		

Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1	RED/BLU	KS (KNOCK SENSOR)	Detects knock sensor signal	With engine knocking: pulses
2	YEL/BLK	IGP2 (POWER SOURCE)	Power source for ECM/PCM circuit	With ignition switch ON (II): battery voltage With ignition switch OFF: about 0 V
3	YEL/BLK	IGP1 (POWER SOURCE)	Power source for ECM/PCM circuit	With ignition switch ON (II): battery voltage With ignition switch OFF: about 0 V
4	BLK	PG2 (POWER GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
5	BLK	PG1 (POWER GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
6	GRN	CMPB (CAMSHAFT POSITION SENSOR B)	Detects CMP sensor B signal	With engine running: pulses With the ignition switch ON (II): about 5.0 V
7	BLU	CKP (CRANKSHAFT POSITION SENSOR)	Detects CKP sensor signal	With engine running: pulses With the ignition switch ON (II): about 5.0 V
8	BRN/YEL	LG2 (LOGIC GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
9	BRN/YEL	LG1 (LOGIC GROUND)	Ground circuit for ECM/PCM	Less than 1.0 V at all times
10	GRN	AFSHTC (AIR FUEL RATIO (A/F) SENSOR HEATER CONTROL)	Drives A/F sensor heater	With ignition switch ON (II): battery voltage With fully warmed up engine running: about 0 V
12 ^a	BLK/RED	IACV (IDLE AIR CONTROL (IAC) VALVE)	Drives IAC valve	With engine running: duty controlled
13	BRN	IGPLS4 (No. 4 IGNITION COIL PULSE)	Drives No. 4 ignition coil	With ignition switch ON (II): about 0 V With engine running: pulses
14	WHT/BLU	IGPLS3 (No. 3 IGNITION COIL PULSE)	Drives No. 3 ignition coil	
15	BLU/RED	IGPLS2 (No. 2 IGNITION COIL PULSE)	Drives No. 2 ignition coil	
16	YEL/GRN	IGPLS1 (No. 1 IGNITION COIL PULSE)	Drives No. 1 ignition coil	
18	BLK/BLU	NC (OUTPUT SHAFT (COUNTERSHAFT) SPEED SENSOR)	Detects output shaft (countershaft) speed sensor signal	With ignition switch ON (II): about 0 V or about 5.0 V While driving: about 2.5 V
19	BLU/WHT	CMPA (CAMSHAFT POSITION SENSOR A)	Detects CMP sensor A signal	With engine running: pulses With ignition switch ON (II): about 5.0 V

* 6: 2003-2005 models



ECM/PCM Inputs and Outputs at Connector A (31P)

1 KS	2 IGP2	3 IGP1	4 PG2	5 PG1	6 CMPB	7 CKP	8 LG2	9 LG1	
10 AFS HTC	12 IACV	13 IGPLS4	14 IGPLS3	15 IGPLS2	16 IGPLS1	18 NC	19 CMPA	20 VCC2	21 VCC1
23 SG2	24 SG1	25 APSB	26 APSA	28 AFS-	29 TPS	30 MAP	31 AFS+		

Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
20	YEL/BLU	VCC2 (SENSOR VOLTAGE)	Provides sensor voltage	With ignition switch ON (II): about 5.0 V With ignition switch OFF: about 0 V
21	YEL/RED	VCC1 (SENSOR VOLTAGE)	Provides sensor voltage	With ignition switch ON (II): about 5.0 V With ignition switch OFF: about 0 V
23	GRN/YEL	SG2 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
24	GRN/WHT	SG1 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
25 ^{*7}	RED/YEL	APSB (ACCELERATOR PEDAL POSITION (APP) SENSOR B)	Detects APP sensor B signal	With ignition switch ON (II) and accelerator pedal pressed: about 2.3 V With ignition switch ON (II) and accelerator pedal released: about 0.2 V
26 ^{*7}	RED/BLU	APSA (ACCELERATOR PEDAL POSITION (APP) SENSOR A)	Detects APP sensor A signal	With ignition switch ON (II) and accelerator pedal pressed: about 4.5 V With ignition switch ON (II) and accelerator pedal released: about 0.5 V
28	RED/YEL	AFS- (AIR FUEL RATIO (A/F) SENSOR, SENSOR 1 -SIDE)	Detects A/F sensor (sensor 1) signal	
29 ^{*6}	RED/BLK	TPS (THROTTLE POSITION SENSOR)	Detects TP sensor signal	With throttle fully open: about 4.5 V With throttle fully closed: about 0.5 V
30	GRN/RED	MAP (MANIFOLD ABSOLUTE PRESSURE SENSOR)	Detects MAP sensor signal	With ignition switch ON (II): about 3.0 V At idle: about 1.0 V (depending on engine speed)
31	RED	AFS+ (AIR FUEL RATIO (A/F) SENSOR, SENSOR 1 +SIDE)	Detects A/F sensor (sensor 1) signal	

* 6: 2003-2005 models

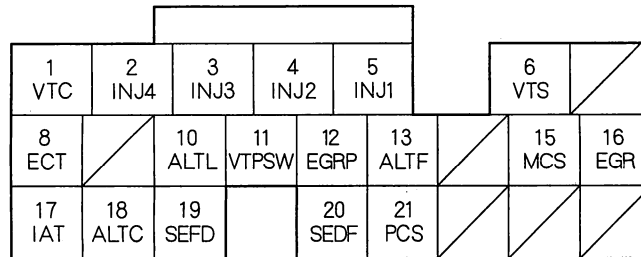
* 7: 2006 model

(cont'd)

Fuel and Emissions Systems

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector B (24P)



Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1	BLU/WHT	VTC (VTC OIL CONTROL SOLENOID VALVE)	Drives VTC oil control solenoid valve	With ignition switch ON (II): 0 V
2	YEL	INJ4 (No. 4 INJECTOR)	Drives No. 4 injector	At idle: duty controlled With ignition switch ON (II): battery voltage
3	BLU	INJ3 (No. 3 INJECTOR)	Drives No. 3 injector	
4	RED	INJ2 (No. 2 INJECTOR)	Drives No. 2 injector	
5	BRN	INJ1 (No. 1 INJECTOR)	Drives No. 1 injector	
6	GRN/YEL	VTS (ROCKER ARM OIL CONTROL SOLENOID (VTEC SOLENOID VALVE))	Drives rocker arm oil control solenoid (VTEC solenoid valve)	
8	RED/WHT	ECT (ENGINE COOLANT TEMPERATURE SENSOR (ENGINE COOLANT TEMPERATURE SENSOR 1)*)	Detects ECT sensor (ECT sensor 1)*) signal	With ignition switch ON (II): about 0.1—4.8 V (depending on engine coolant temperature) With fully warmed up engine: about 0.5—0.7 V
10	WHT/BLU	ALTL (ALTERNATOR L SIGNAL)	Detects alternator signal	With ignition switch ON (II): about 0 V With engine running: battery voltage
11	BLU/BLK	VTPSW (ROCKER ARM OIL PRESSURE SWITCH (VTEC OIL PRESSURE SWITCH))	Detects rocker arm oil pressure switch (VTEC oil pressure switch) signal	With engine at low speed: about 0 V With engine at high speed: battery voltage
12	WHT/BLK	EGRP (EXHAUST GAS RECIRCULATION (EGR) VALVE POSITION SENSOR)	Detects EGR valve position sensor signal	With engine running: 1.2—3.0 V (depending on EGR valve lift)
13	WHT/RED	ALTF (ALTERNATOR FR SIGNAL)	Detects alternator FR signal	With engine running: about 0—5.0 V (depending on electrical load)
15**	BLU/YEL	MCS (ENGINE MOUNT CONTROL SOLENOID VALVE)	Drives engine mount control solenoid valve	At idle: about 0 V Above idle: battery voltage With ignition switch ON (II): battery voltage
16	BLU/RED	EGR (EXHAUST GAS RECIRCULATION (EGR) VALVE)	Drives EGR valve	With EGR operating: duty controlled With EGR not operating: about 0 V
17	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)
18	WHT/GRN	ALTC (ALTERNATOR CONTROL)	Sends alternator control signal	With engine running and fully warmed up: about 8.0 V
19**	GRN	SEFD (THROTTLE ACTUATOR CONTROL SERIAL SIGNAL)	Sends throttle actuator control serial signal	
20**	BLU	SEFD (THROTTLE ACTUATOR CONTROL SERIAL SIGNAL)	Detects throttle actuator control serial signal	
21	YEL/BLU	PCS (EVAPORATIVE EMISSION CANISTER PURGE VALVE)	Drives EVAP canister purge valve	With engine running, engine coolant below 131° F (55° C): battery voltage With engine running, engine coolant above 131° F (55° C): duty controlled

* 2: A/T

* 4: 2005-2006 models

* 7: 2006 model



ECM/PCM Inputs and Outputs at Connector C (22P)

1 LSA	2 SHC		3 SHE	4 SHB	5 SHD	6 SHA	7 LSC
	9 ATPD3	10 OP3 SW	11 ATP 2/1	12 ATP RVS	13 OP2 SW	14 ATFT	15 LSB
	17 ATPD	18 ATP FWD	19 NM	20 ATPN		21 VG-	22 VG+

Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1 ^{*2}	RED/BLK	LSA (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE A)	Drives A/T clutch pressure control solenoid valve A	With ignition switch ON (II): duty controlled
2 ^{*2}	GRN	SHC (SHIFT SOLENOID VALVE C)	Drives shift solenoid valve C	With engine running in Neutral and 1, or in D or D3 (in 1st, 3rd and 5th gears): battery voltage With engine running in Park, R, 2, or D or D3 (in 2nd, 4th gears): about 0 V
2 ^{*3}	BLU/WHT			
3 ^{*2}	YEL	SHE (SHIFT SOLENOID VALVE E)	Drives shift solenoid valve E	With engine running in Park, R: battery voltage With engine running in Neutral, or in D, D3, 2, and 1: about 0 V
3 ^{*3}	RED/BLK			
4 ^{*2}	GRN/WHT	SHB (SHIFT SOLENOID VALVE B)	Drives shift solenoid valve B	With engine running in Park, R, Neutral, 2, and 1, or D, D3 (in 1st, 2nd gears): battery voltage With engine running in D, D3 (in 3rd, 4th, 5th gears): about 0 V
4 ^{*3}	RED			
5 ^{*2}	GRN/RED	SHD (SHIFT SOLENOID VALVE D)	Drives shift solenoid valve D	With engine running in 2 or D, D3 (in 2nd, 5th gears): battery voltage With engine running in Park, R, Neutral, 1, or D, D3 position (in 1st, 3rd, 4th, gears): about 0 V
5 ^{*3}	GRN/RED			
6 ^{*2}	BLU/BLK	SHA (SHIFT SOLENOID VALVE A)	Drives shift solenoid valve A	With engine running in R and 1, or D, D3 (in 1st, 4th, 5th gears): battery voltage With engine running in Park, Neutral and 2, or D, D3 (in 2nd, 3rd gears): about 0 V
7 ^{*2}	BLU/YEL	LSC (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE C)	Drives A/T clutch pressure control solenoid valve C	With ignition switch ON (II): duty controlled
9 ^{*2}	RED	ATPD3 (TRANSMISSION RANGE SWITCH D3)	Detects transmission range switch D3 signal input	In D3: about 0 V In any other position: battery voltage
10 ^{*2}	BLU/WHT	OP3SW (3RD CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 3rd clutch transmission fluid pressure switch signal output	With ignition switch ON (II): about 5.0 V With 3rd clutch pressure: about 0 V
11 ^{*2}	GRN/RED	ATP2/1 (TRANSMISSION RANGE SWITCH 2ND/1ST)	Detects transmission range switch 2/1 signal input	In 2/1: about 0 V In any other position: battery voltage
12 ^{*2}	RED/WHT	ATPRVS (TRANSMISSION RANGE SWITCH R)	Detects transmission range switch R signal input	In R: about 0 V In any other position: battery voltage
13 ^{*2}	BLU/RED	OP2SW (2ND CLUTCH TRANSMISSION FLUID PRESSURE SWITCH)	Detects 2nd clutch transmission fluid pressure switch signal input	With ignition switch ON (II): about 5.0 V With 2nd clutch pressure: about 0 V
14 ^{*2}	RED/YEL	ATFT (ATF TEMPERATURE SENSOR)	Detects ATF temperature sensor signal input	With ignition switch ON (II): about 0.2—4.8 V (depending on ATF temperature)

* 2: A/T

* 3: M/T (2005-2006 models)

(cont'd)

Fuel and Emissions Systems

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector C (22P)

1 LSA	2 SHC		3 SHE	4 SHB	5 SHD	6 SHA	7 LSC
	9 ATPD3	10 OP3 SW	11 ATP 2/1	12 ATP RVS	13 OP2 SW	14 ATFT	15 LSB
	17 ATPD	18 ATP FWD	19 NM	20 ATPN		21 VG-	22 VG+

Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
15 ²	BRN/WHT	LSB (A/T CLUTCH PRESSURE CONTROL SOLENOID VALVE B)	Drives A/T clutch pressure control solenoid valve B	With ignition switch ON (II): duty controlled
15 ³	RED/WHT			
17 ²	YEL/GRN	ATPD (TRANSMISSION RANGE SWITCH D)	Detects transmission range switch D signal	In D: about 0 V In any other position: battery voltage
18 ²	BLU/YEL	ATPFWD (TRANSMISSION RANGE SWITCH D, D3, 2)	Detects transmission range switch D, D3, 2 signal	In D, D3, and 2: about 0 V In any other position: battery voltage
19 ²	WHT/RED	NM (INPUT SHAFT (MAINSHAFT) SPEED SENSOR)	Detects input shaft (mainshaft) speed sensor signal	With ignition switch ON (II): about 0 V or about 5.0 V With engine running in Neutral: about 2.5 V
20 ²	RED/BLK	ATPN (TRANSMISSION RANGE SWITCH NEUTRAL)	Detects transmission range switch Neutral signal	In Neutral: about 0 V In any other position: battery voltage
21 ¹	BLK/RED	VG- (MASS AIR FLOW (MAF) SENSOR -SIDE)	Ground for MAF sensor signal	
22 ¹	RED/GRN	VG+ (MASS AIR FLOW (MAF) SENSOR +SIDE)	Detects MAF sensor signal	At idle: 1.1–1.6 V

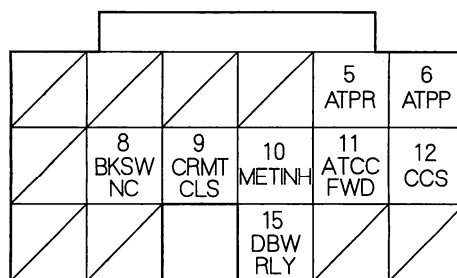
* 1: 2003-2004 SULEV, LX-P models and 2005-2006 models

* 2: A/T

* 3: M/T (2005-2006 models)



ECM/PCM Inputs and Outputs at Connector D (17P)



Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
5 ^{*2}	WHT	ATPR (TRANSMISSION RANGE SWITCH R)	Detects transmission range switch R signal	In R: about 0 V In any other position: battery voltage
6 ^{*2}	BLU/RED	ATPP (TRANSMISSION RANGE SWITCH PARK)	Detects transmission range switch Park signal	In Park: about 0 V In any other position: battery voltage
8 ^{*7}	BRN/BLK	BKSWNC (BRAKE PEDAL POSITION SWITCH)	Detects brake pedal position switch signal	With ignition switch ON (II) and brake pedal released: battery voltage With ignition switch ON (II) and brake pedal pressed: about 0 V
9 ^{*8}	LT BLU	CRMTCLS (CRUISE CLUTCH PEDAL POSITION SIGNAL)	Detects cruise clutch pedal position switch signal	With ignition switch ON (II) and clutch pedal released: about 0 V With ignition switch ON (II) and clutch pedal pressed: battery voltage
10 ^{*2}	GRN	METINH (METER DISPLAY INHIBIT SIGNAL)	Sends inhibit signal	With ignition switch ON (II): battery voltage
11 ^{*2}	PNK	ATCCFWD (TRANSMISSION RANGE SWITCH CRUISE CONTROL FWD SIGNAL)	Sends Park and D3 transmission range switch signal to cruise control unit	In D, D3: about 0 V In any other than D, D3: battery voltage
12 ^{*2}	BLU/BLK	CCS (CRUISE CONTROL SIGNAL)	Detects cruise control signal	With cruise control on: pulses
15 ^{*7}	BRN/YEL	DBWRLY (THROTTLE ACTUATOR CONTROL MODULE RELAY)	Drives throttle actuator control module relay	With ignition switch ON (II): about 0 V

* 2: A/T

* 7: 2006 model

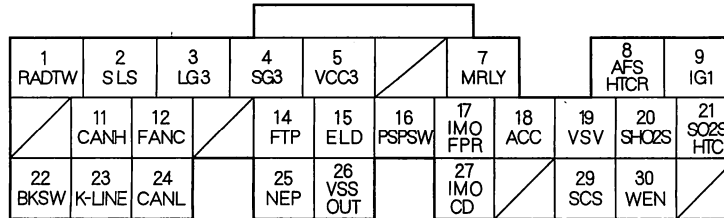
* 8: M/T (2006 model)

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Fuel and Emissions Systems

System Description (cont'd)

ECM/PCM Inputs and Outputs at Connector E (31P)



Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
1**	YEL/RED	RADTW (RADIATOR FAN CONTROL)	Detects ECT sensor 2 signal	With ignition switch ON (II): 0.1–4.9 V (depending on engine coolant temperature)
2**	YEL/BLK	SLS (SHIFT LOCK SOLENOID)	Drives shift lock solenoid	With ignition switch ON (II), in the Park position, brake pedal pressed, and accelerator released: about 0 V
3	BRN/YEL	LG3 (LOGIC GROUND)	Ground for ECM/PCM control circuit	Less than 1.0 V at all times
4	GRN/BLK	SG3 (SENSOR GROUND)	Sensor ground	Less than 1.0 V at all times
5	YEL/GRN	VCC3 (SENSOR VOLTAGE)	Provides sensor voltage	With ignition switch ON (II): about 5.0 V With ignition switch OFF: about 0 V
7	RED/BLK	MRLY (PGM-FI MAIN RELAY)	Drives PGM-FI main relay 1 (FI MAIN) Power source for DTC memory	With ignition switch ON (II): about 0 V With ignition switch OFF: battery voltage
8	PNK	AFSHTCR (AIR FUEL RATIO (A/F) SENSOR HEATER CONTROL RELAY)	Drives A/F sensor heater relay	With ignition switch ON (II): about 0 V
9	BLK/YEL	IG1 (IGNITION SIGNAL)	Detects ignition signal	With ignition switch ON (II): battery voltage With ignition switch OFF: about 0 V
11	WHT	CANH (CAN COMMUNICATION SIGNAL HIGH)	Sends communication signal	With ignition switch ON (II): pulses
12	GRN	FANC (RADIATOR FAN CONTROL)	Drives radiator fan relay	With radiator fan running: about 0 V With radiator fan stopped: battery voltage
14	LT GRN	FTP (FUEL TANK PRESSURE (FTP) SENSOR)	Detects FTP sensor signal	With ignition switch ON (II) and fuel fill cap off: about 2.5 V
15	BLU/BLK	ELD (ELECTRICAL LOAD DETECTOR)	Detects ELD signal	With ignition switch ON (II): about 0.1–4.8 V (depending on electrical load)
16	BLU/YEL	PSPSW (POWER STEERING PRESSURE SWITCH SIGNAL)	Detects PSP switch signal	At idle with steering wheel straight ahead: about 0 V At idle with steering wheel at full lock: battery voltage
17	GRN/YEL	IMOFPR (IMMOBILIZER FUEL PUMP RELAY)	Drives PGM-FI main relay 2 (FUEL PUMP)	0 V for 2 seconds after turning ignition switch ON (II), then battery voltage
18	RED	ACC (A/C CLUTCH RELAY)	Drives A/C clutch relay	With compressor ON: about 0 V With compressor OFF: battery voltage
19	LT GRN/RED	VSV (EVAPORATIVE EMISSION (EVAP) CANISTER VENT SHUT VALVE)	Drives EVAP canister vent shut valve	With ignition switch ON (II): battery voltage
20	WHT/RED	SHO2S (SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S) SENSOR 2)	Detects secondary HO2S (sensor 2) signal	With throttle fully closed at idle and fully warmed up engine: above 0.6 V With throttle quickly closed: below 0.4 V

* 2: A/T

* 4: 2005-2006 models



ECM/PCM Inputs and Outputs at Connector E (31P)

1 RADTW	2 SLS	3 LG3	4 SG3	5 VCC3	6 /	7 MRLY	8 AFS HTCR	9 IG1	10 /	11 CANH	12 FANC	13 /	14 FTP	15 ELD	16 PSPSW	17 IMO FPR	18 ACC	19 VSV	20 SHO2S	21 SO2S HTC
22 BKSW	23 K-LINE	24 CANL	25 NEP	26 VSS OUT	27 IMO CD	28 /	29 SCS	30 WEN	31 /											

Wire side of female terminals

NOTE: Standard battery voltage is 12 V.

Terminal number	Wire color	Terminal name	Description	Signal
21	BLK/WHT	SO2SHTC (SECONDARY HEATED OXYGEN SENSOR (SECONDARY HO2S) HEATER CONTROL)	Drives secondary HO2S heater	With ignition switch ON (II): battery voltage With fully warmed up engine running: duty controlled
22	WHT/BLK	BKSW (BRAKE PEDAL POSITION SWITCH)	Detects brake pedal position switch signal	With brake pedal released: about 0 V With brake pedal pressed: battery voltage
23	BLU	K-LINE	Sends and receives HDS signals	With ignition switch ON (II) and the HDS disconnected: pulses or battery voltage
24	RED	CANL (CAN COMMUNICATION SIGNAL LOW)	Sends the communication signal	With ignition switch ON (II): pulses
25	BLU/RED	NEP	Not used	
26	BLU/WHT	VSSOUT (VEHICLE SPEED SENSOR OUTPUT SIGNAL)	Sends vehicle speed sensor signal	Depending on vehicle speed: pulses With ignition switch ON (II): battery voltage
27	RED/BLU	IMOCD (IMMOBILIZER CODE)	Detects immobilizer signal	
29	BRN	SCS (SERVICE CHECK SIGNAL)	Detects service check signal	With the service check signal shorted using HDS: about 0 V With the service check signal open: about 5.0 V
30	RED/WHT	WEN (WRITE ENABLE SIGNAL)	Detects write enable signal	With ignition switch ON (II): about 0 V

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