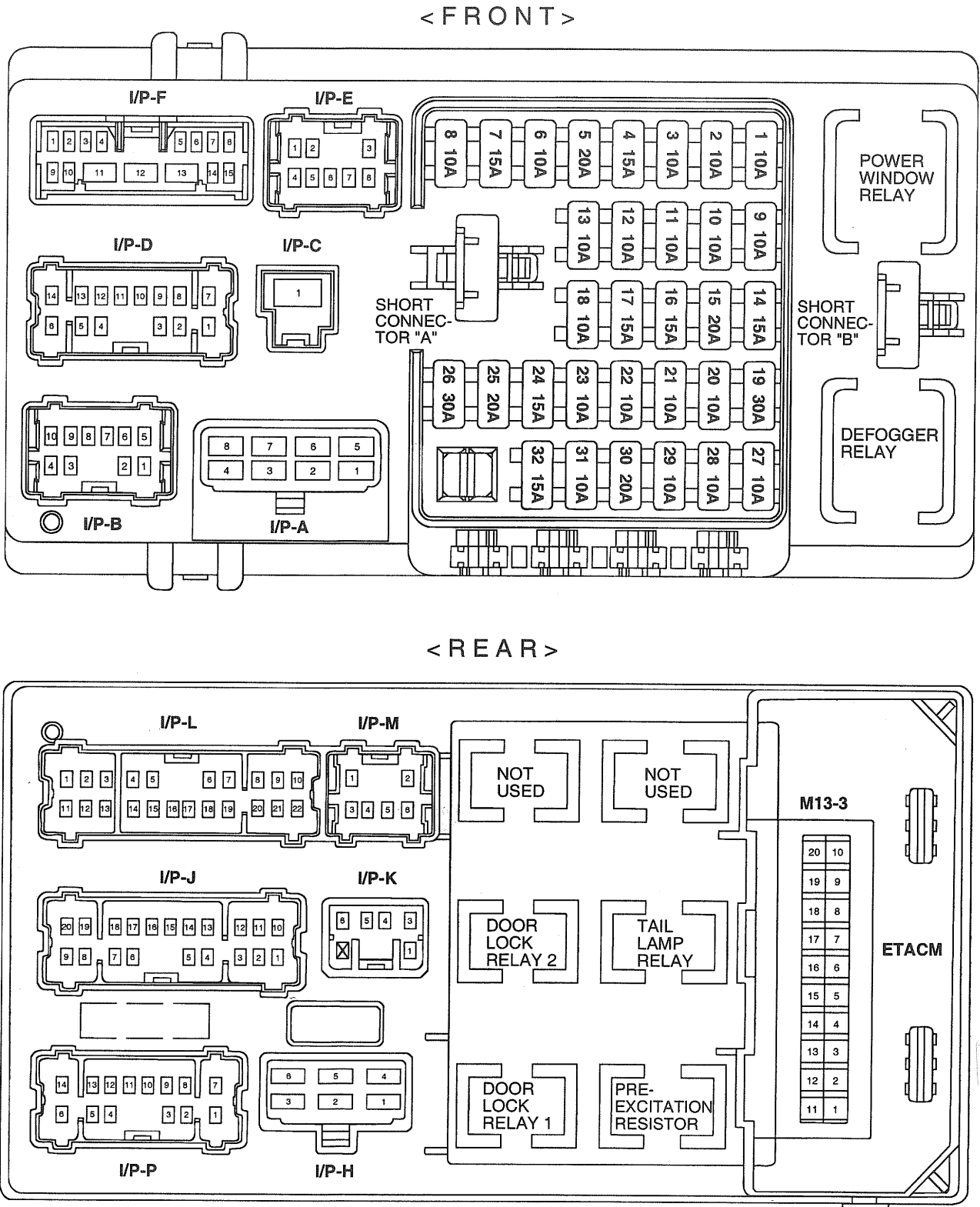


SCHEMATIC DIAGRAMS

AIR BAG SYSTEM(SRS).....	SD-214
ANTI-LOCK BRAKE SYSTEM.....	SD-114
AUDIO SYSTEM.....	SD-168
AUTO LIGHTS.....	SD-180
AUTOMATIC TRANSAXLE CONTROL SYSTEM(I4).....	SD-106
AUTOMATIC TRANSAXLE CONTROL SYSTEM(V6).....	SD-110
BACK-UP LAMPS.....	SD-202
BLOWER AND A/C CONTROLS(MANUAL).....	SD-220
BLOWER AND A/C CONTROLS(FULL AUTO).....	SD-226
BRAKE WARNING SYSTEM.....	SD-118
CHARGING SYSTEM.....	SD-72
CIGARETTE LIGHTER(POWER OUTLET).....	SD-122
COOLING SYSTEM.....	SD-76
COURTESY AND TAIL GATE LAMPS.....	SD-206
CRUISE CONTROL SYSTEM.....	SD-216
DATA LINK DETAILS.....	SD-56
DAYTIME RUNNING LIGHTS.....	SD-184
DIGITAL CLOCK.....	SD-124
ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM).....	SD-128
FRONT FOG AND REAR FOG LAMPS.....	SD-194
FRONT WIPER & WASHER.....	SD-140
FUEL FILLER OPENER.....	SD-166
FUSE AND RELAY INFORMATION.....	SD-2
GAUGES.....	SD-138
GROUND DISTRIBUTION.....	SD-36
HEAD LAMP LEVELING DEVICE.....	SD-188
HEAD LAMPS.....	SD-178
HORNS.....	SD-172
IGNITION SYSTEM(I4).....	SD-62
IGNITION SYSTEM(V6).....	SD-64
ILLUMINATIONS.....	SD-210
IMMOBILIZER CONTROL SYSTEM.....	SD-120
INDICATORS.....	SD-132
KEYLESS ENTRY SYSTEM.....	SD-174
MFI CONTROL SYSTEM (I4 WITH M/T).....	SD-78
MFI CONTROL SYSTEM (I4 WITH A/T).....	SD-88
MFI CONTROL SYSTEM (V6).....	SD-98
PASSENGER COMPARTMENT FUSE DETAILS.....	SD-18
POWER DISTRIBUTION.....	SD-8
POWER DOOR LOCKS.....	SD-146
POWER OUTSIDE MIRROR FOLDING SYSTEM.....	SD-152
POWER OUTSIDE MIRRORS.....	SD-150
POWER WINDOWS.....	SD-160
REAR BLOWER AND A/C CONTROLS.....	SD-232
REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM.....	SD-154
REAR WIPER & WASHER.....	SD-144
SEAT BELT TENSION REDUCER.....	SD-158
SEAT WARMER.....	SD-156
STARTING SYSTEM.....	SD-68
STOP LAMPS.....	SD-204
SUNROOF.....	SD-164
TAIL, PARKING AND LICENSE LAMPS.....	SD-198
TURN AND HAZARD LAMPS.....	SD-190
VEHICLE SPEED SENSOR.....	SD-60

FUSE AND RELAY INFORMATION E2HA0010

PASSENGER COMPARTMENT JUNCTION BLOCK LAYOUT

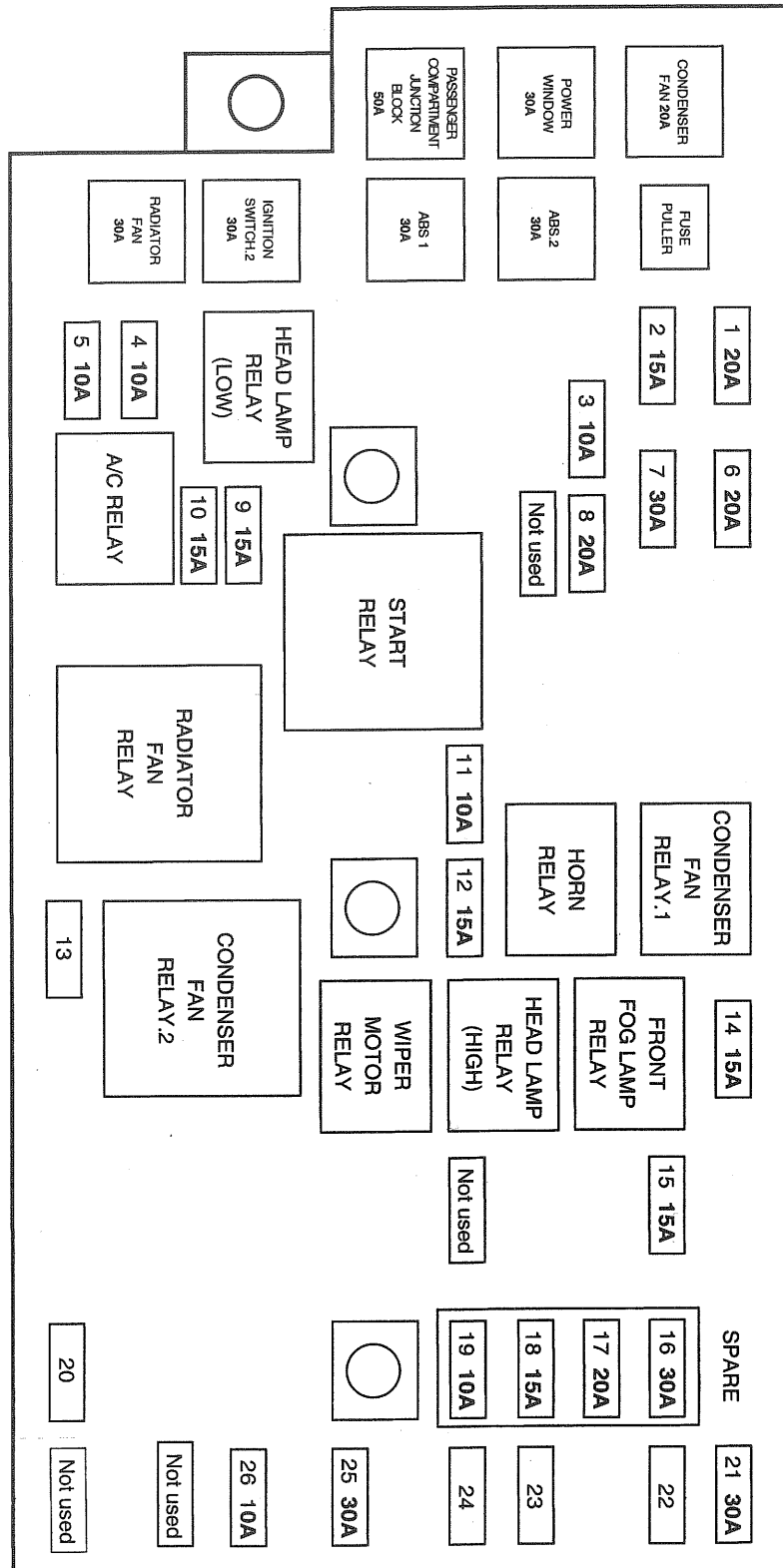


CIRCUIT

Fuse	Amperages	Circuit protected
1	10A	Immobilizer, Instrument cluster, Overhead console lamp
2	10A	Instrument cluster
3	10A	Hazard switch
4	15A	SRS control
5	20A	Power outlet
6	10A	Audio, Outside mirror & folding
7	15A	Cigarette lighter
8	10A	Seat belt tension reducer
9	10A	A/C, Outside mirror & folding
10	10A	A/C control
11	10A	Auto light, TCM, A/T pulse generator, Back-up lamp
12	10A	A/C control, Audio
13	10A	Room lamps, Instrument cluster
14	15A	Door lock relay
15	20A	AMP speaker
16	15A	Sunroof, Overhead console lamp
17	15A	Immobilizer, Fuel filler opener
18	10A	Rear fog lamp
19	30A	Defogger relay, Fuse 9
20	10A	Short connector 'B', Illumination lamps, Exterior lamps
21	10A	A/C, Sunroof, Rain sensor
22	15A	Rear A/C
23	10A	Hazard relay, Check connector, Data link connector
24	15A	Stop lamp switch
25	20A	Front wiper & washer
26	30A	Fuse (Ignition coil, ABS), Engine control relay
27	10A	B/Alarm relay, Cruise control, Transaxle range switch, starting (M/T)
28	10A	Head lamp, Exterior lamps
29	10A	Stop lamp switch, Cruise control
30	20A	Seat warmer
31	10A	AQS sensor, Head lamp leveling, Head lamp
32	15A	Rear wiper & Washer

ENGINE COMPARTMENT JUNCTION BLOCK

LAYOUT



< FRONT >

CIRCUIT

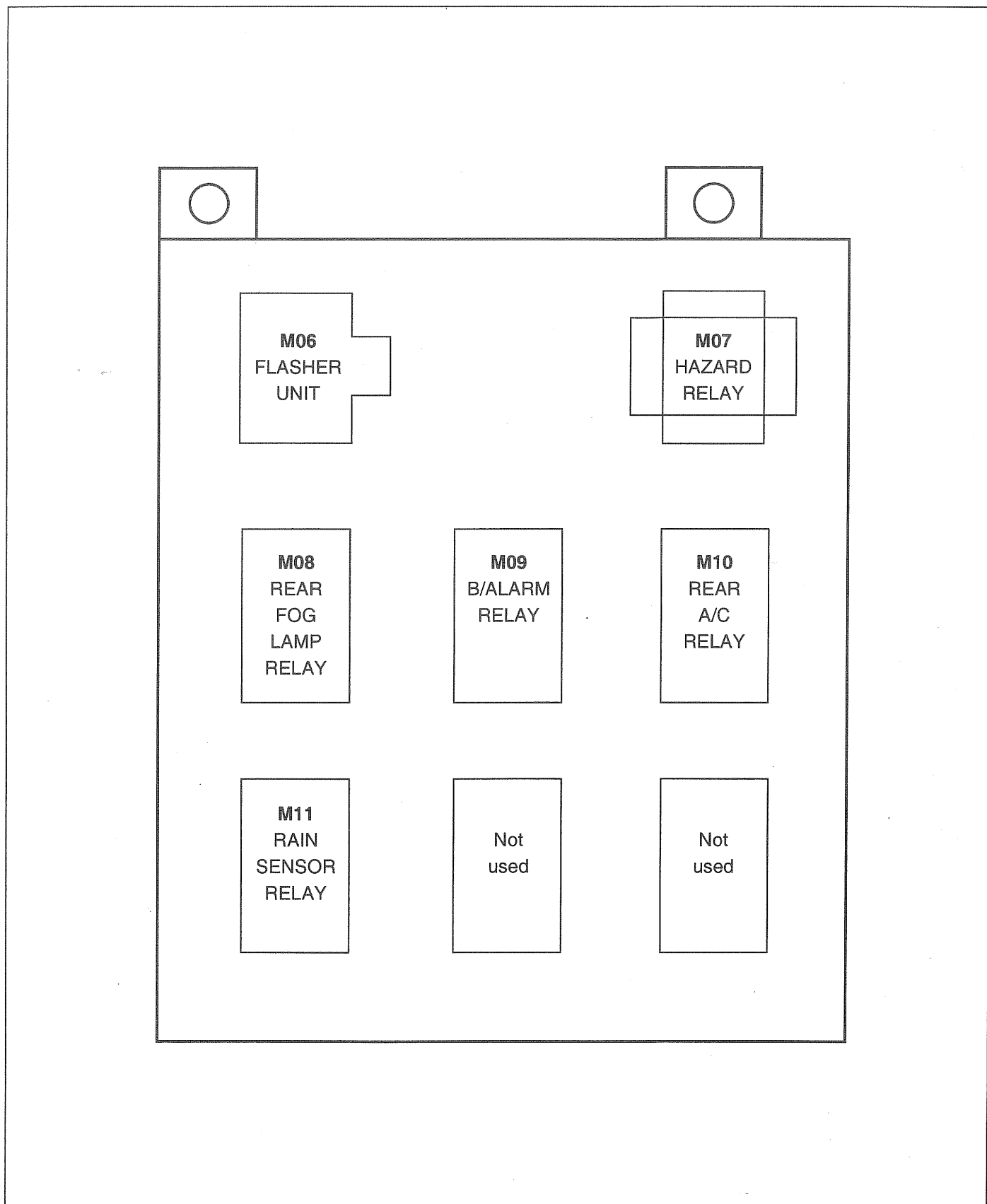
Fusible link & Fuse		Amperages	Circuit protected
CONDENSER FAN		20A	Condenser fan motor
POWER WINDOW		30A	Power window
IGNITION SWITCH 2		30A	Ignition switch (IG2, Start)
ABS 1		30A	ABS control
ABS 2		30A	ABS control
PASSENGER COMPARTMENT JUNCTION BLOCK 2		50A	Short connector "A", Fuse (12, 13, 14, 15, 16, 17, 19), Tail lamp relay
RADIATOR FAN		30A	Radiator fan motor
1	FUEL PUMP	20A	Fuel pump relay- motor
2	HEAD LAMP (LOW)	15A	Head lamps (Low)
3	ABS	10A	ABS control
4	INJECTOR	10A	Injector
5	A/C COMPRESSOR	10A	A/C control
6	A/T	20A	A/T control relay, TCM
7	MAIN	30A	Engine control relay
8	IGNITION COIL	20A	Ignition coil, Ignition failure sensor
9	OXYGEN SENSOR	15A	Oxygen sensor
10	ECM	15A	Generator, ECM
11	HORN	10A	Horn
12	HEAD LAMP (High)	15A	Head lamps (High)
13		Not used	
14	DRL	15A	DRL control
15	FRONT FOG LAMP	15A	Front fog lamps
16		30A	Spare
17		20A	Spare
18		15A	Spare
19		10A	Spare
20	BLOWER	30A	Blower relay
21	IGNITION SWITCH 1	30A	Ignition switch (ACC, IG1)
22		Not used	
23		Not used	
24		Not used	
25	PASSENGER COMPARTMENT JUNCTION BLOCK 1	30A	Fuse (22, 23, 24)
26	EGR	10A	ECM, Fuel pump relay, PCV, ISA, CKP, CAP
27		Not used	

LAYOUT

E2HA001C

PASSENGER COMPARTMENT RELAY BOX

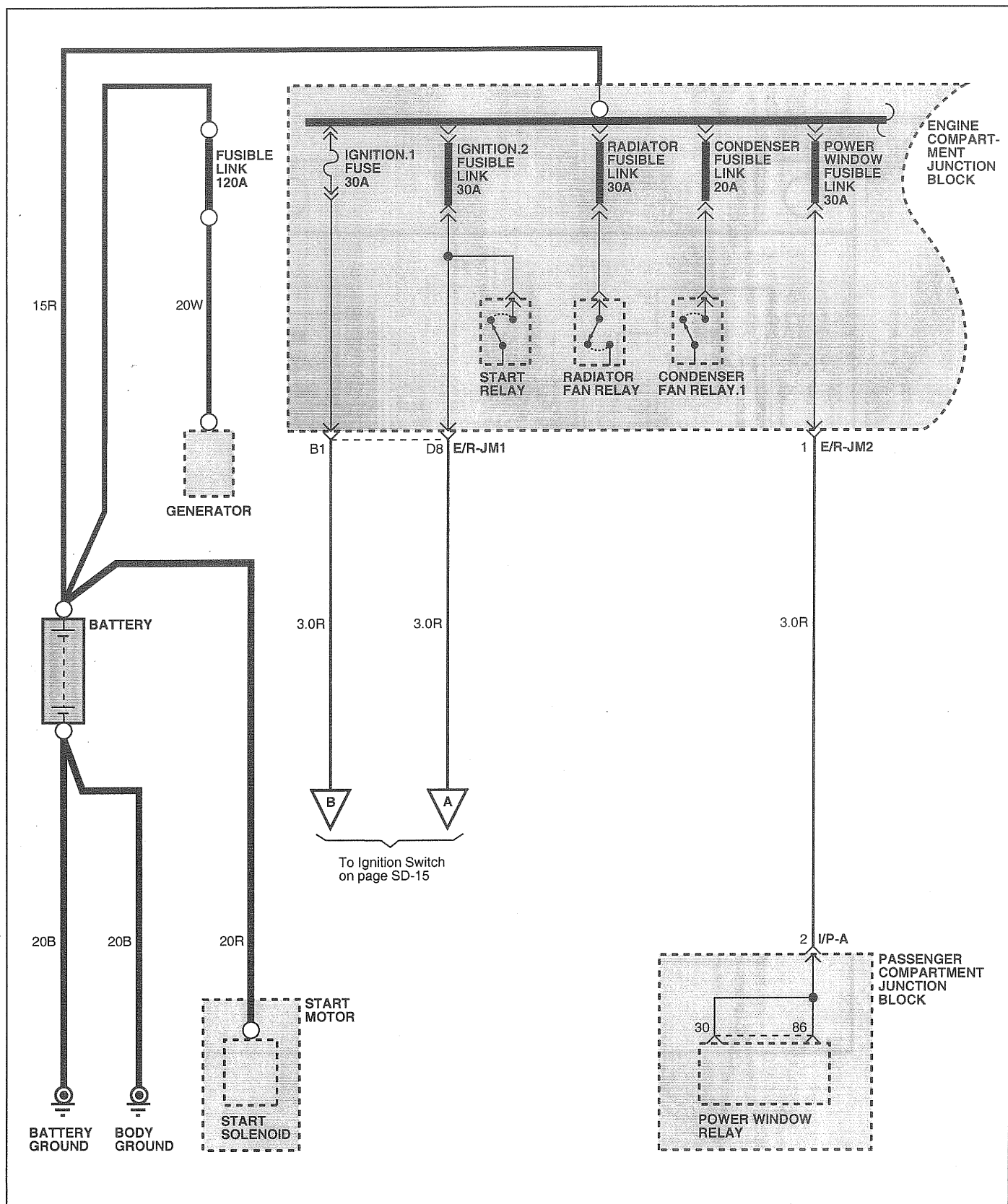
LAYOUT



POWER DISTRIBUTION

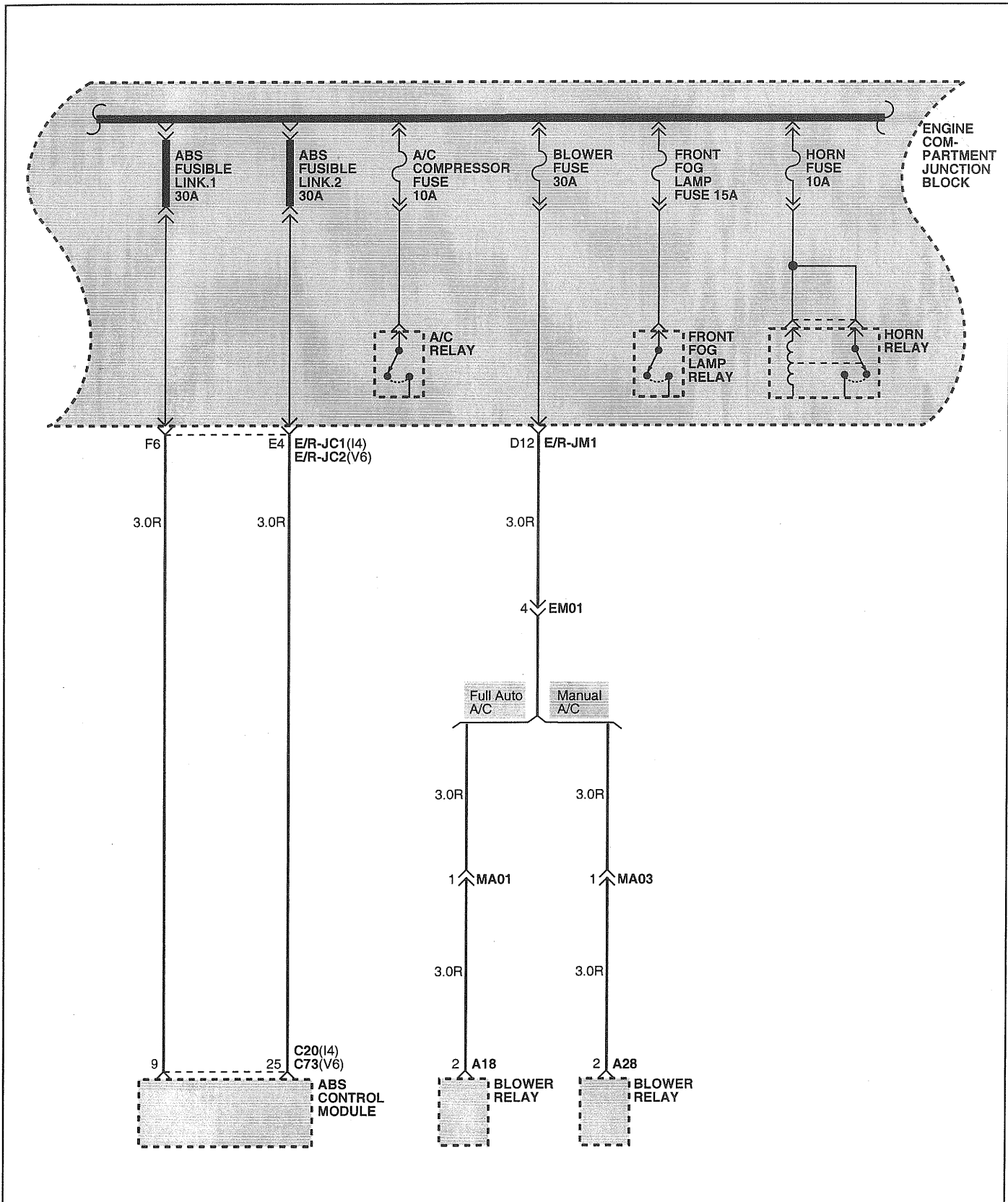
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POWER DISTRIBUTION (1)

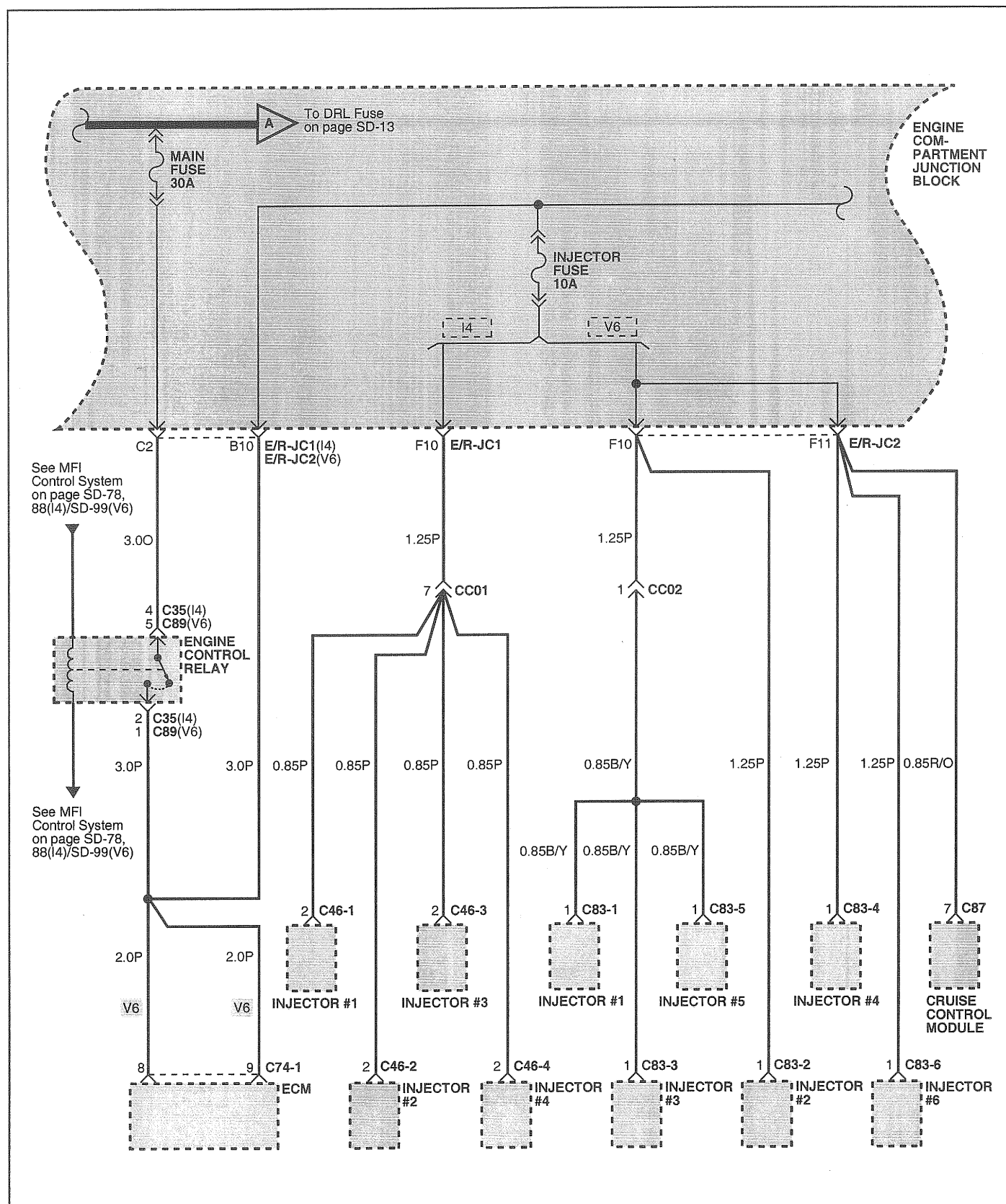


E2HA002A

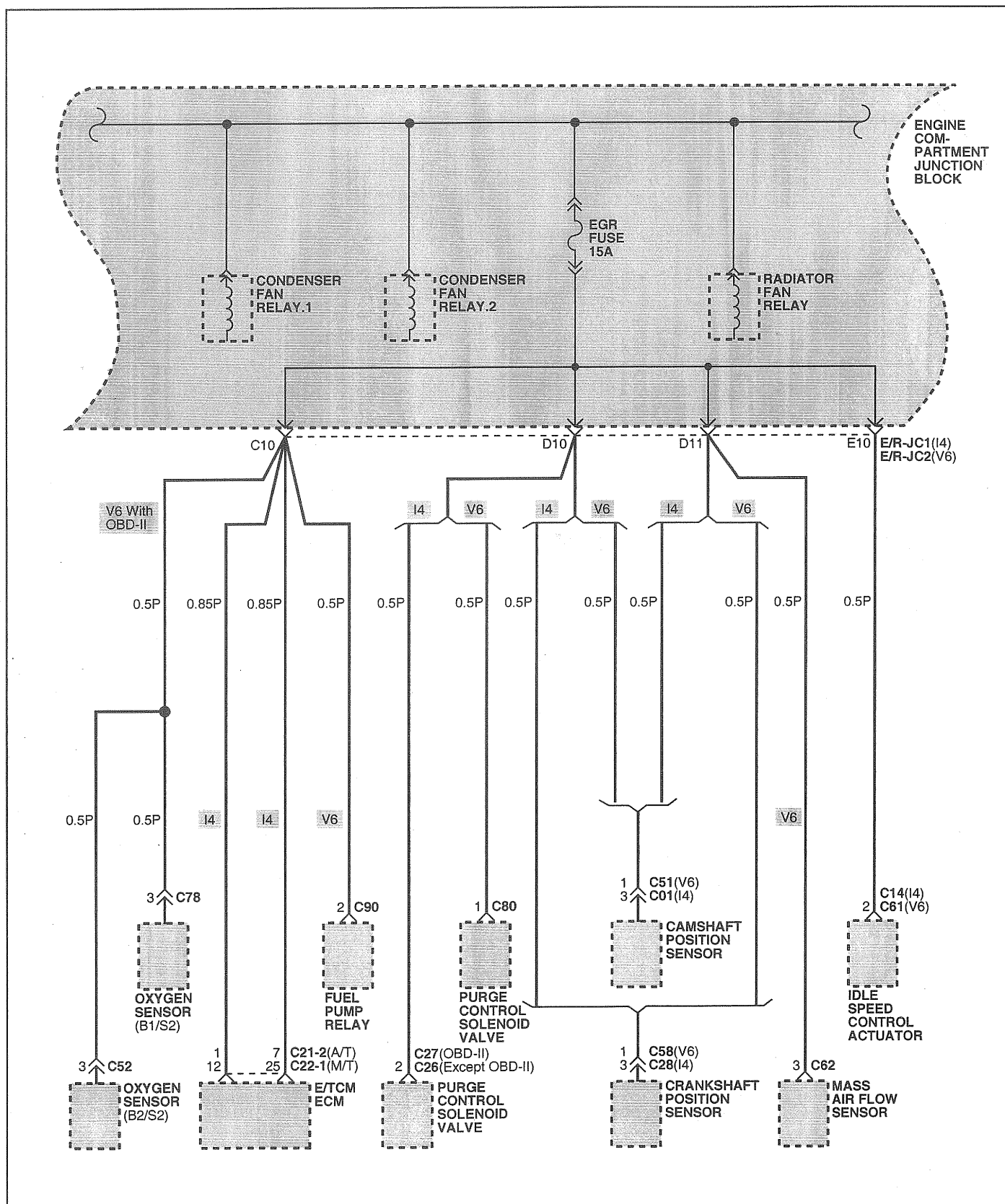
POWER DISTRIBUTION (2)



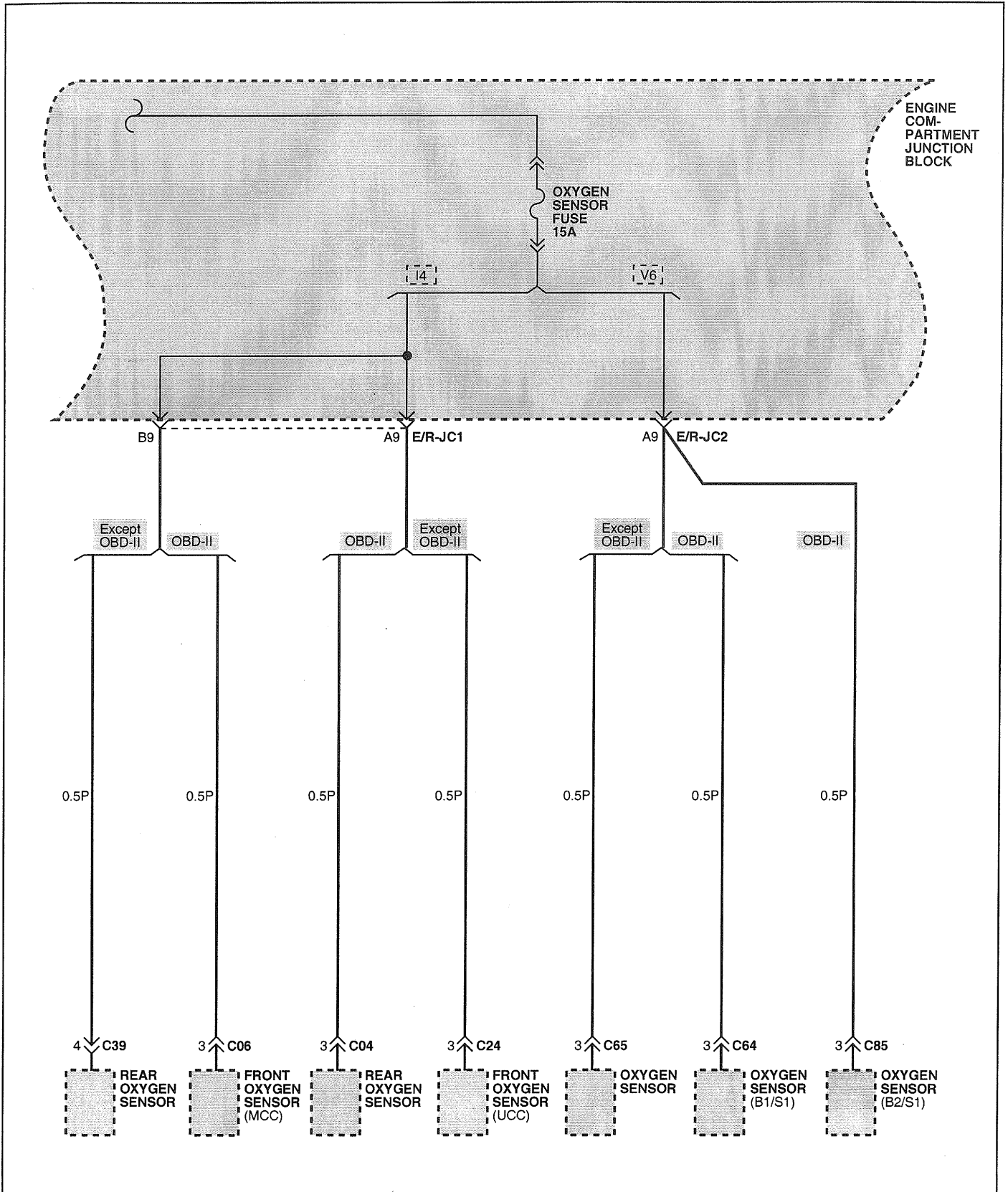
POWER DISTRIBUTION (3)



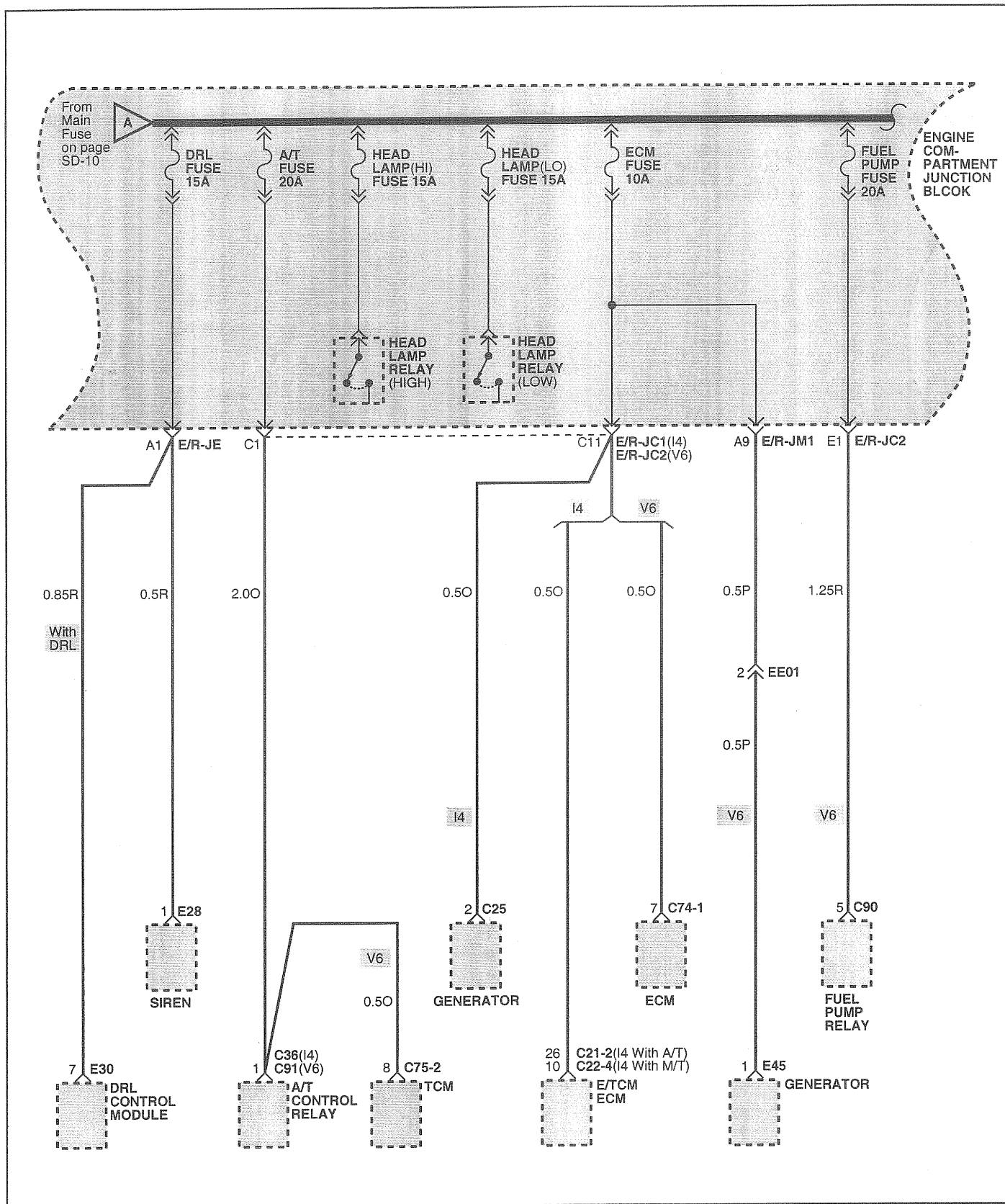
POWER DISTRIBUTION (4)



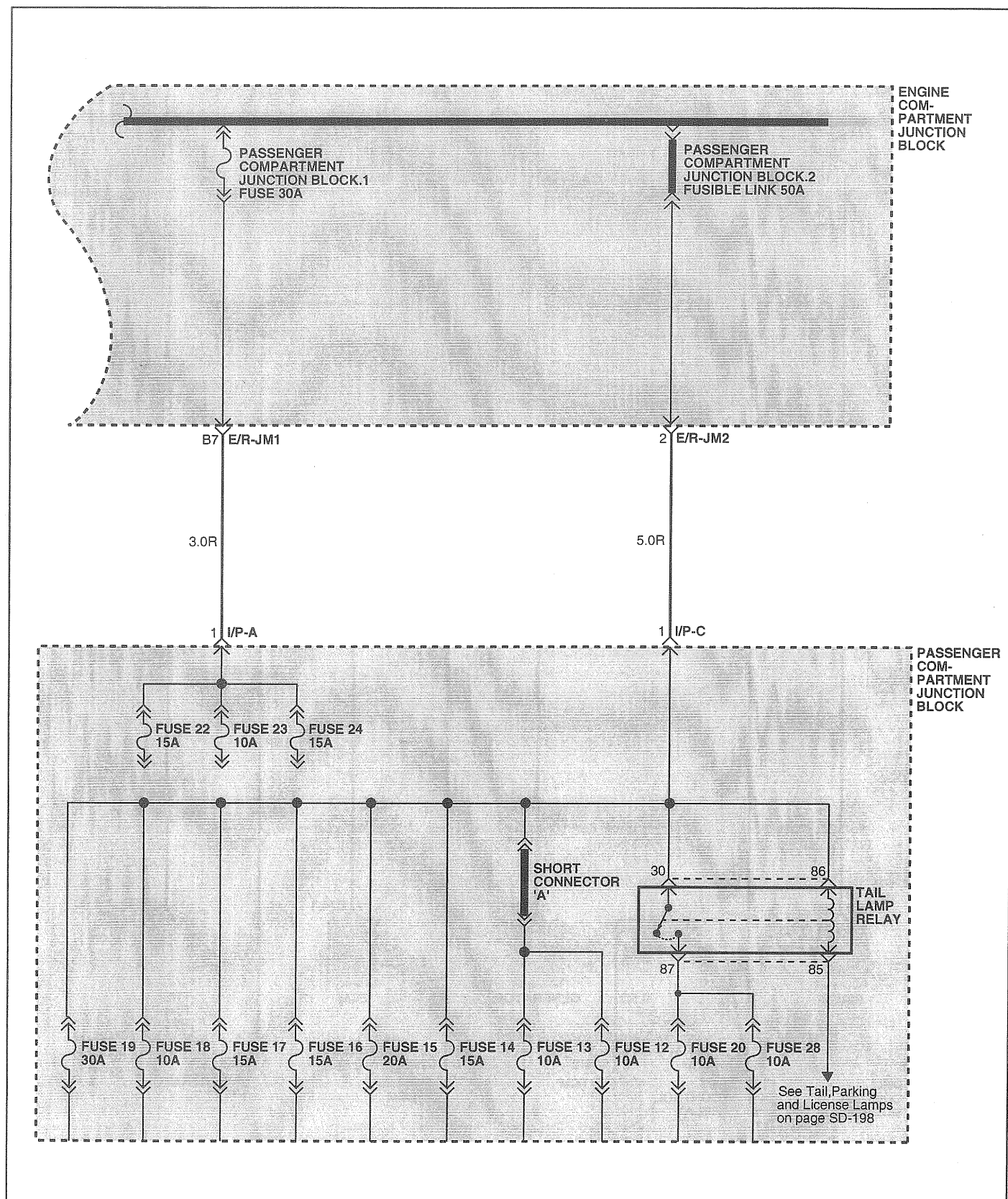
POWER DISTRIBUTION (5)



POWER DISTRIBUTION (6)



POWER DISTRIBUTION (7)



[illegible]

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
A18	Blower relay (Full Auto A/C)	CL-16
A28	Blower relay (Manual A/C)	CL-16
C01	Camshaft position sensor (I4)	CL-17
C04	Rear oxygen sensor (OBD-II)	CL-17
C06	Front oxygen sensor (OBD-II)	CL-17
C14	Idle speed actuator (I4)	CL-18
C20	ABS control module (I4)	CL-18
C21-2	E /TCM (I4 With A/T)	CL-18
C22-1	ECM (I4 With M/T)	CL-18
C22-4	ECM (I4 With M/T)	CL-18
C24	Front oxygen sensor (Except OBD-II)	CL-19
C25	Generator (I4)	CL-19
C26	Purge control solenoid valve (Except OBD-II)	CL-19
C27	Purge control solenoid valve (OBD-II)	CL-19
C28	Crankshaft position sensor (I4)	CL-19
C35	Engine control relay (I4)	CL-19
C36	A/T control relay (I4)	CL-19
C39	Rear oxygen sensor (Except OBD-II)	CL-20
C46-1	Injector #1 (I4)	CL-20
C46-2	Injector #2 (I4)	CL-20
C46-3	Injector #3 (I4)	CL-20
C46-4	Injector #4 (I4)	CL-20
C51	Camshaft position sensor (V6)	CL-20
C52	Oxygen sensor (B2/S2)	CL-21
C58	Crankshaft position sensor (V6)	CL-21
C61	Idle speed actuator (V6)	CL-21
C62	Mass air flow sensor (V6)	CL-21
C64	Oxygen sensor (B1/S1)	CL-21
C65	Oxygen sensor (V6)	CL-21
C73	ABS control module (V6)	CL-22

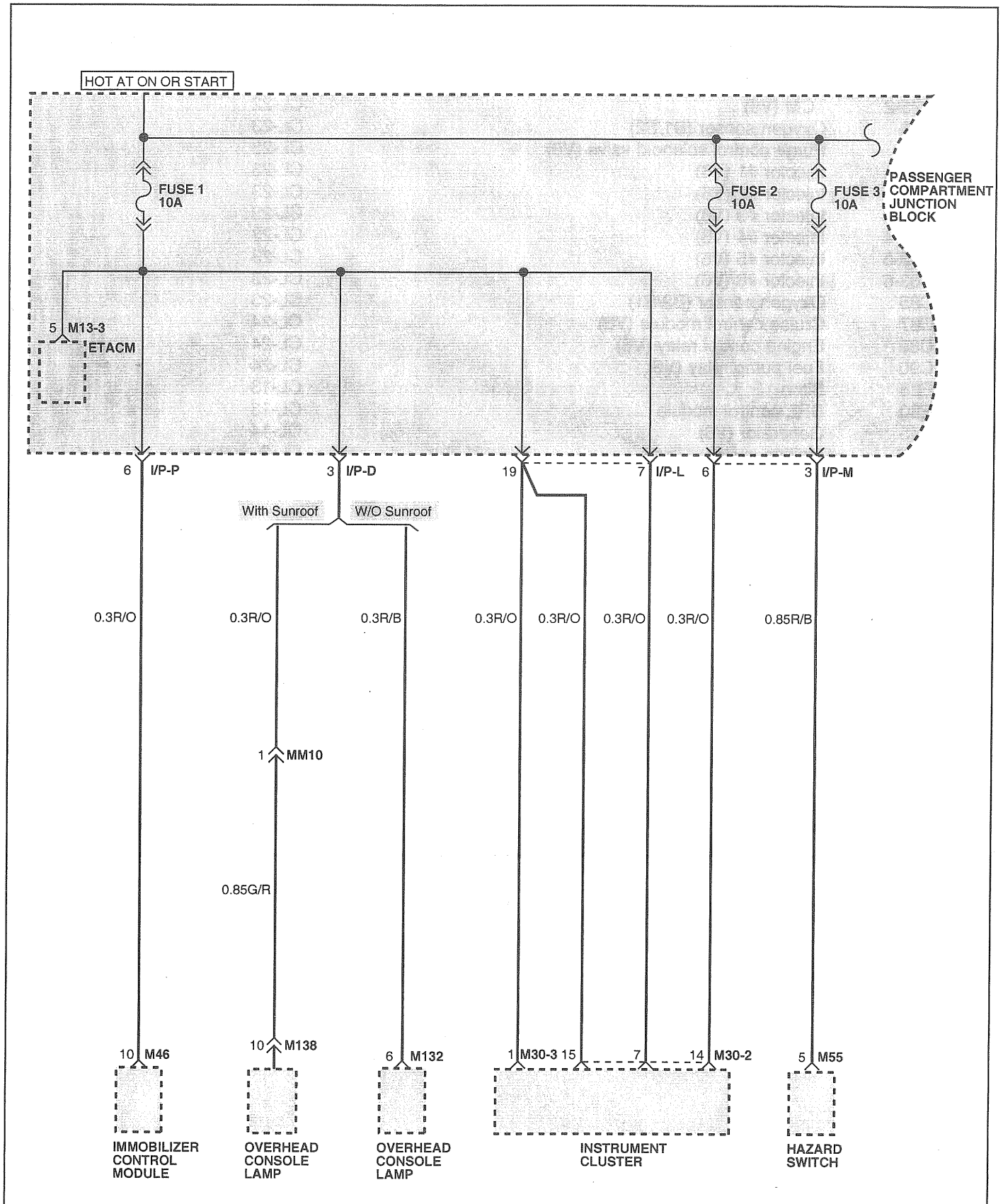
COMPONENT LOCATION INDEX (2)

Components		Location reference-page
C74-1	ECM (V6)	CL-22
C75-2	TCM (V6)	CL-22
C78	Oxygen sensor (B1/S2)	CL-23
C80	Purge control solenoid valve (V6)	CL-23
C83-1	Injector #1 (V6)	CL-23
C83-2	Injector #2 (V6)	CL-23
C83-3	Injector #3 (V6)	CL-23
C83-4	Injector #4 (V6)	CL-23
C83-5	Injector #5 (V6)	CL-23
C83-6	Injector #6 (V6)	CL-23
C85	Oxygen sensor (B2/S1)	CL-23
C87	Cruise control module (V6)	CL-24
C89	Engine control relay (V6)	CL-24
C90	Fuel pump relay (V6)	CL-24
E28	Siren	CL-13
E30	DRL control module	CL-13
E45	Generator (V6)	CL-14
M38	Ignition switch	CL-3
Connectors		
CC01		CL-24
CC02		CL-24
EE01		CL-14
EM01		CL-14
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
E/R-JM2		CL-14
I/P-A		CL-11
I/P-C		CL-11
I/P-H		CL-11
MA01		CL-9
MA03		CL-9

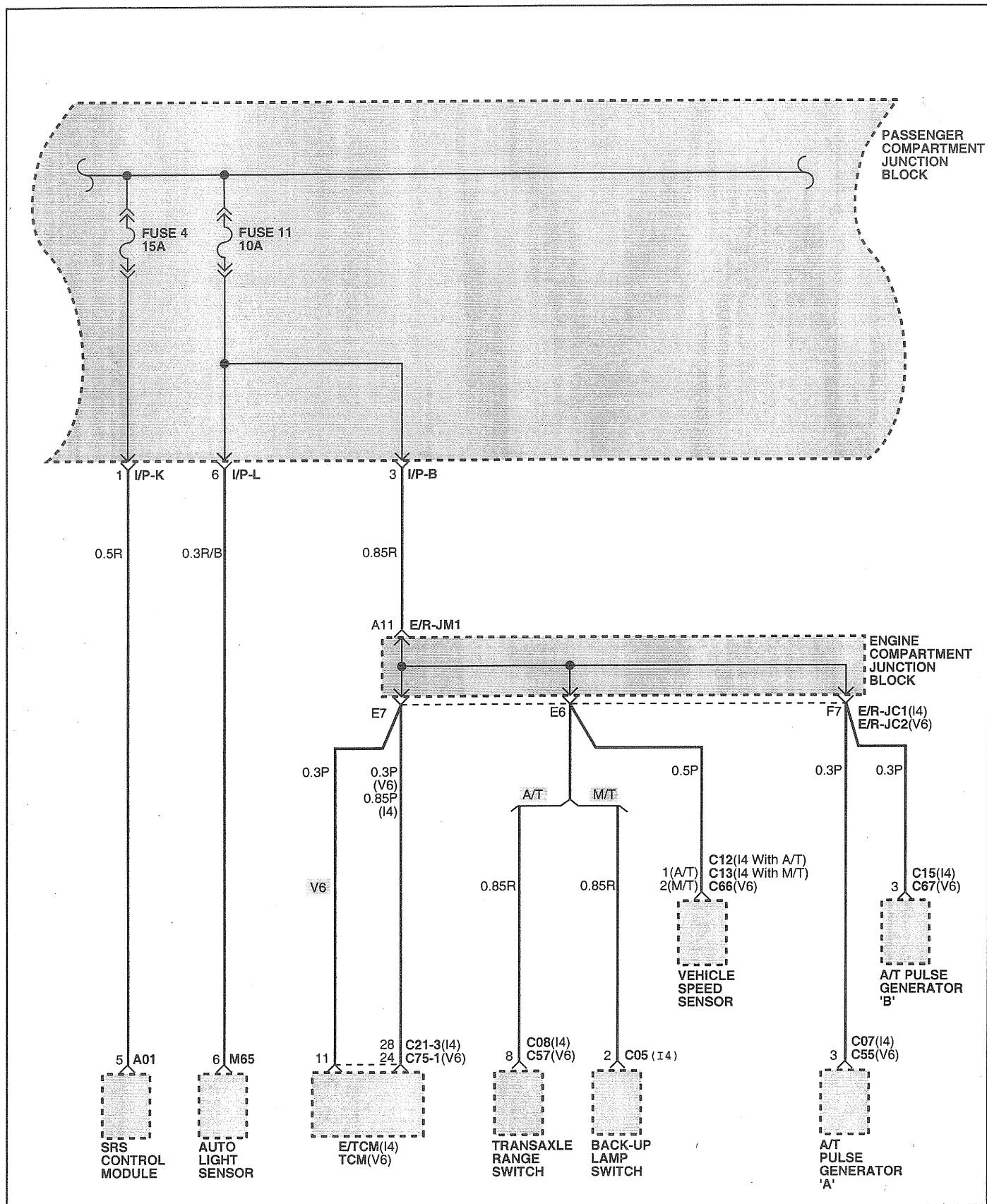
PASSENGER COMPARTMENT FUSE DETAILS

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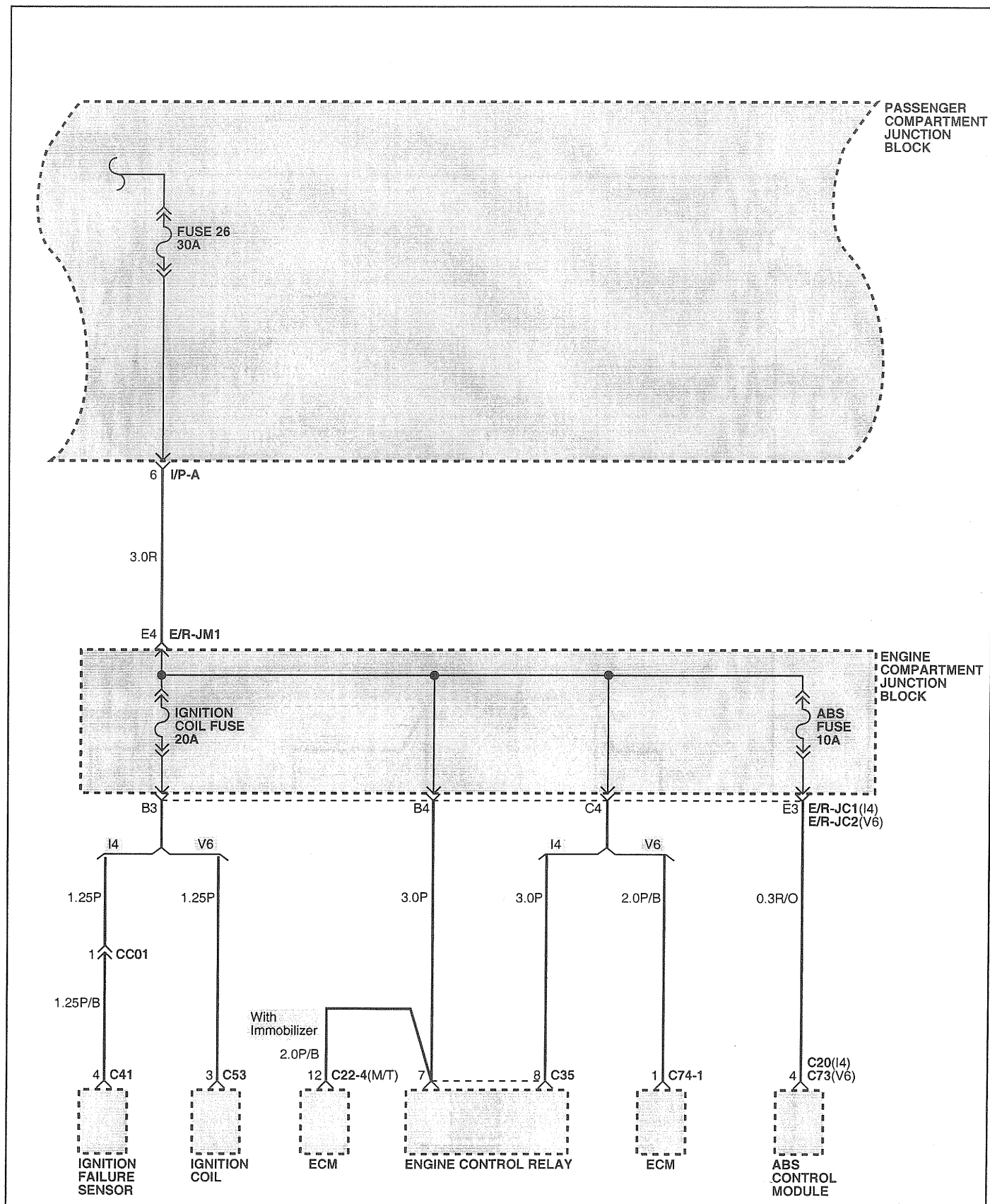
PASSENGER COMPARTMENT FUSE DETAILS (1)



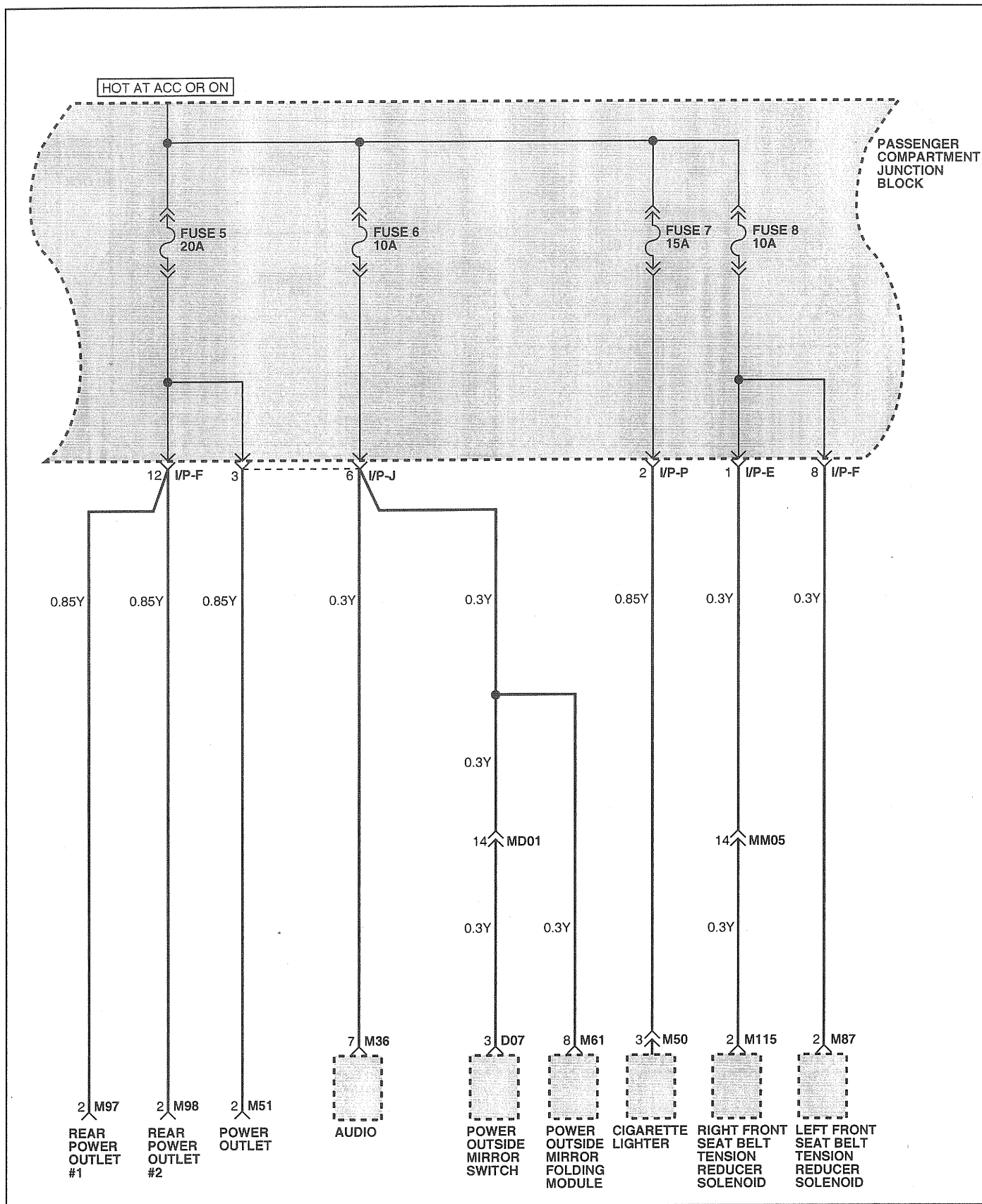
PASSENGER COMPARTMENT FUSE DETAILS (2)



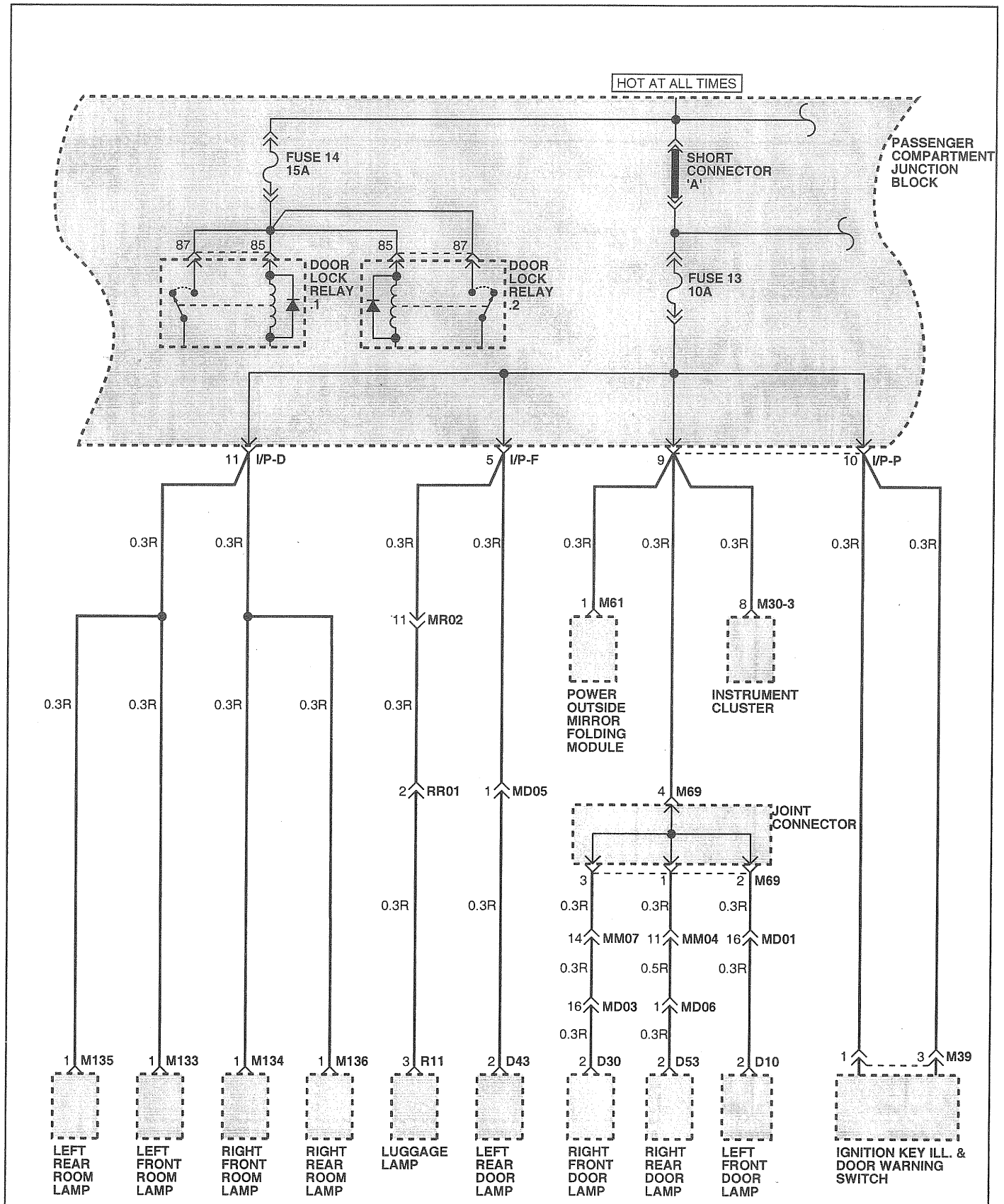
PASSENGER COMPARTMENT FUSE DETAILS (3)



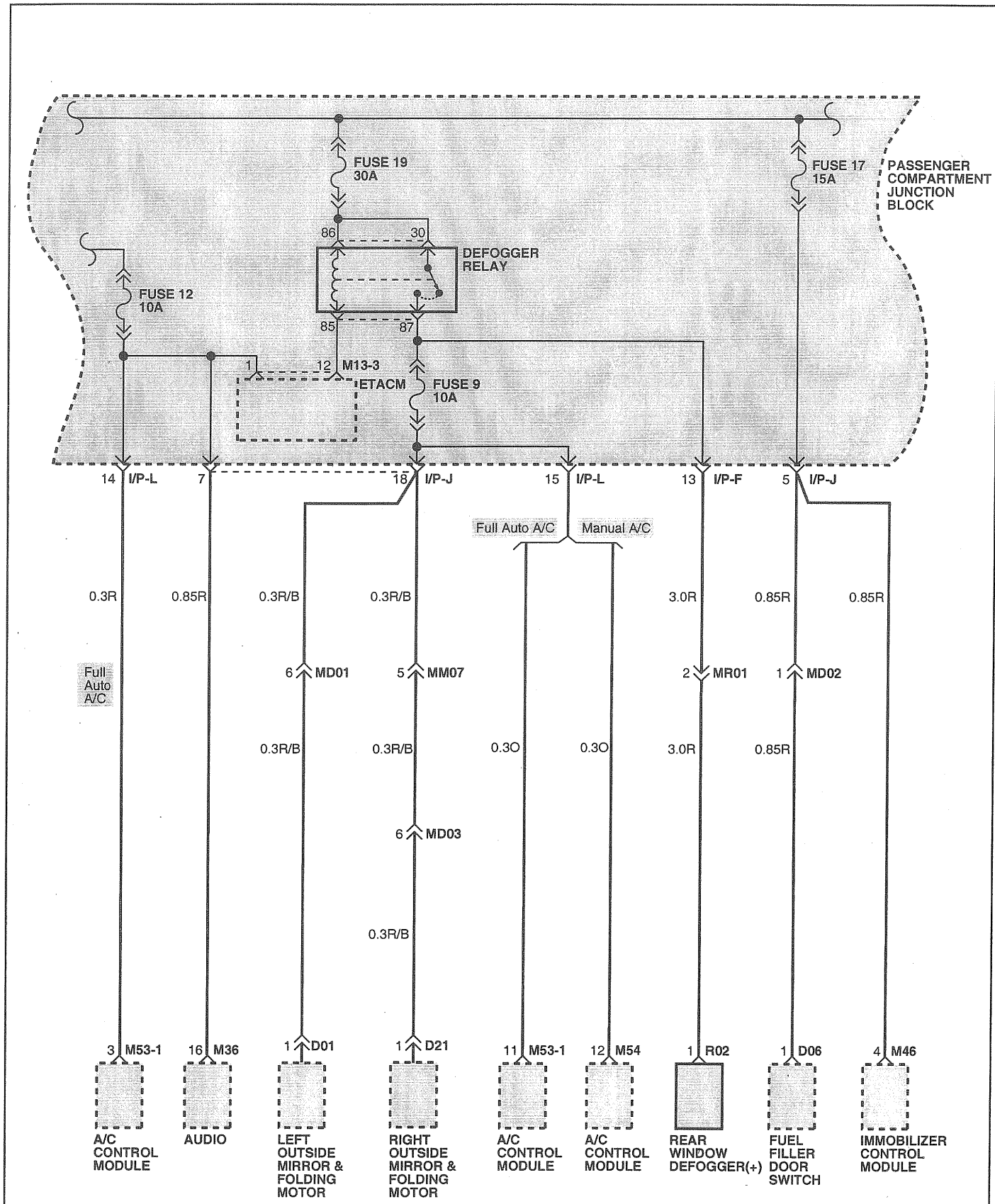
PASSENGER COMPARTMENT FUSE DETAILS (4)



PASSENGER COMPARTMENT FUSE DETAILS (5)

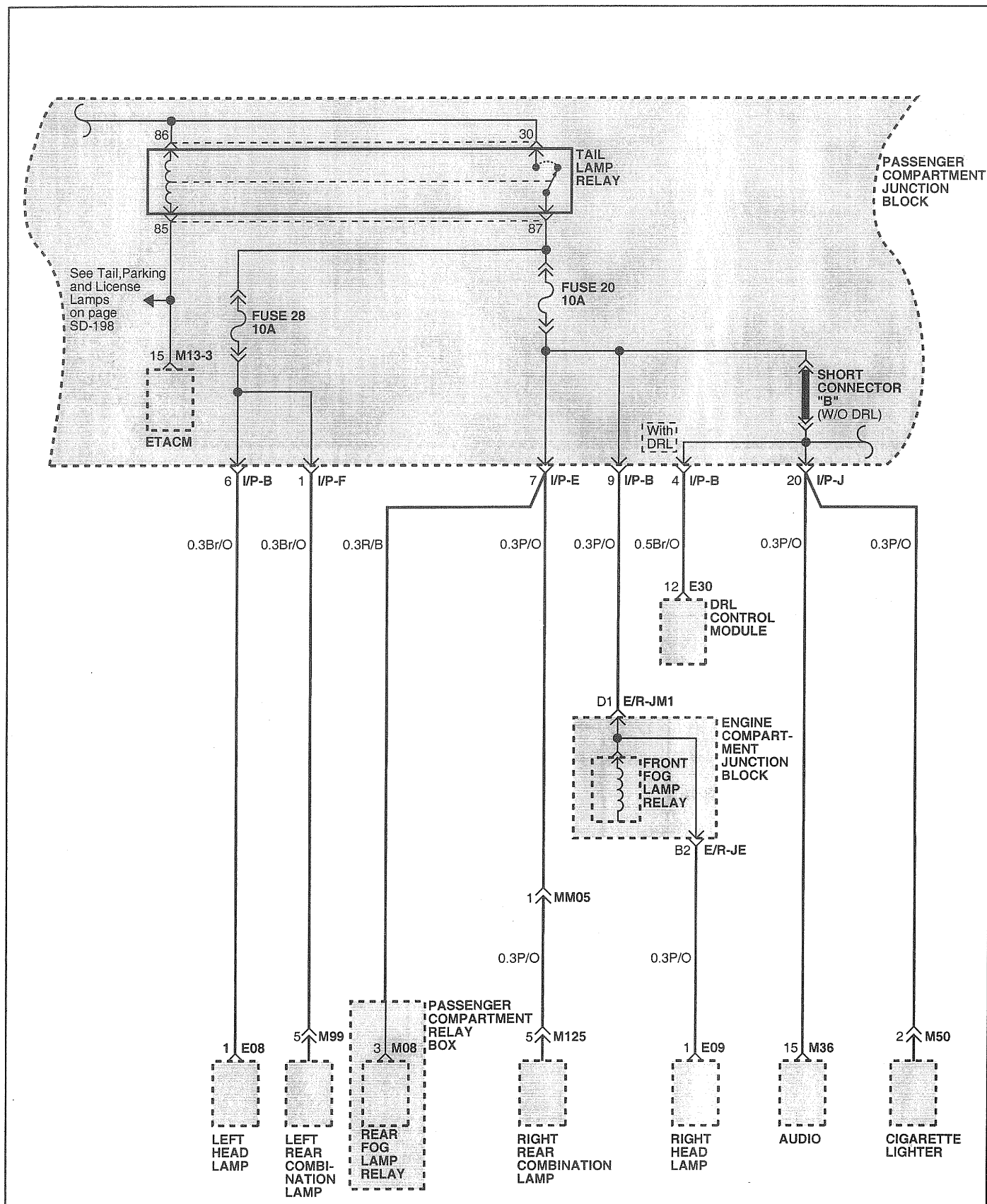


PASSENGER COMPARTMENT FUSE DETAILS (6)

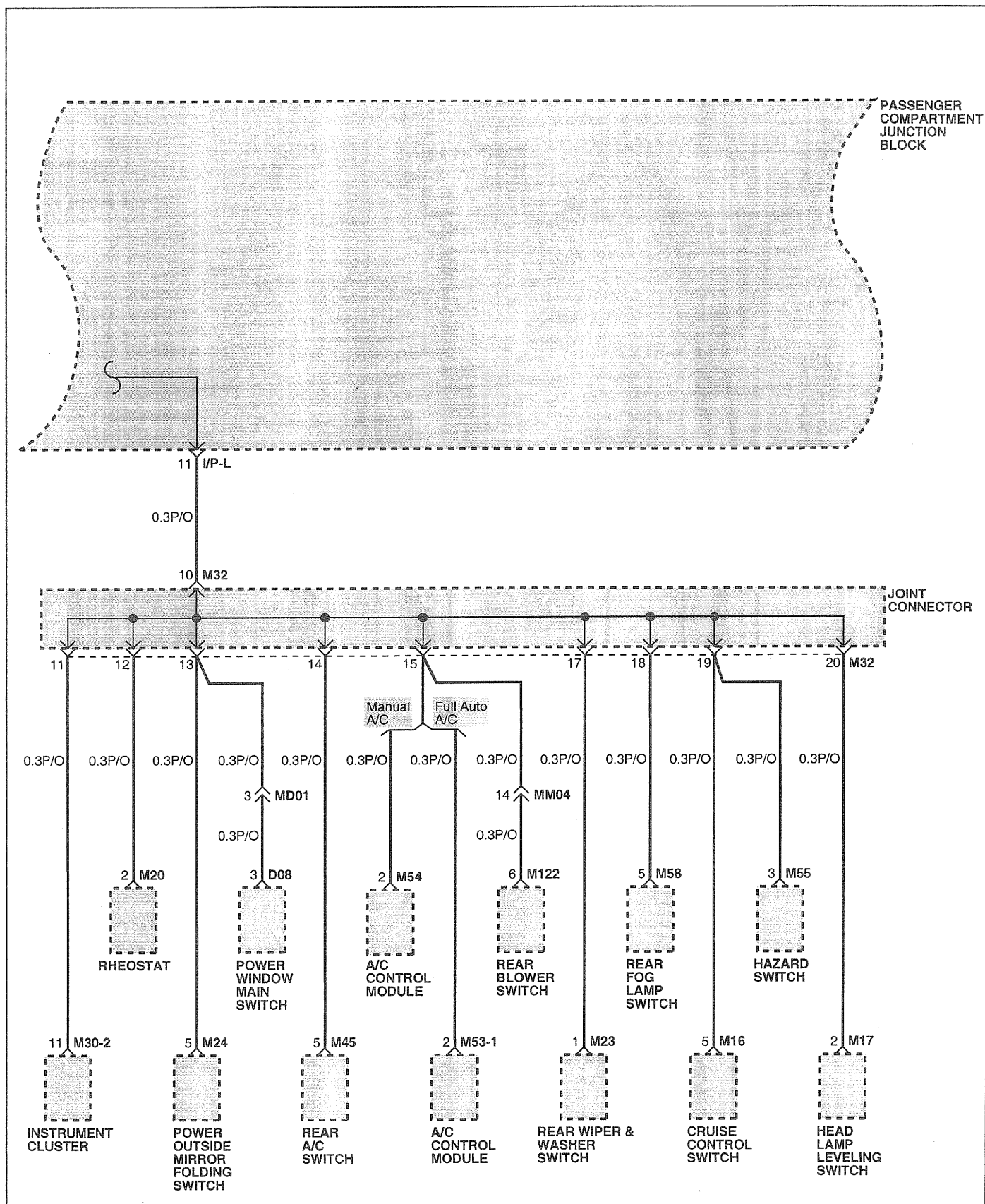


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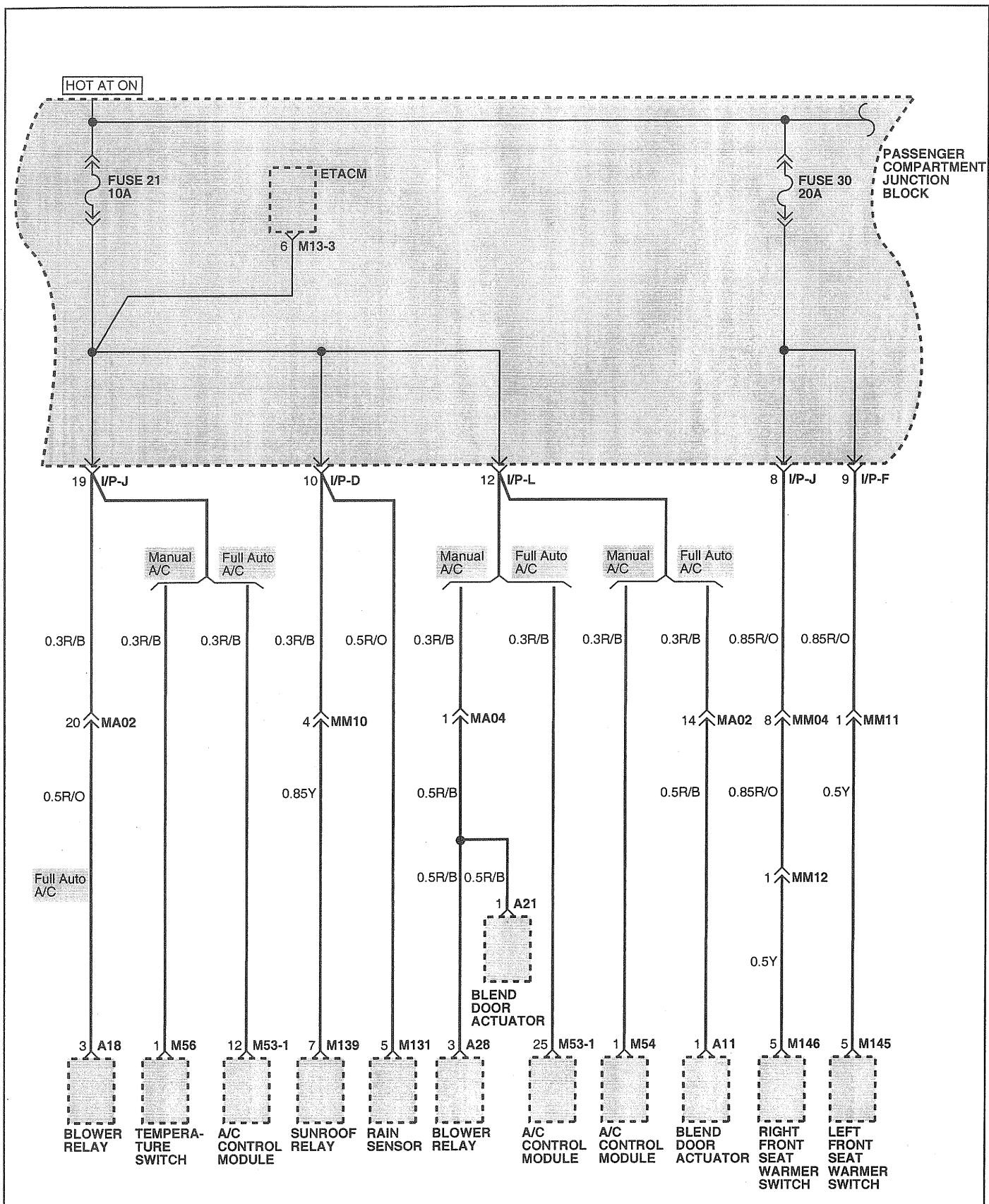
PASSENGER COMPARTMENT FUSE DETAILS (8)



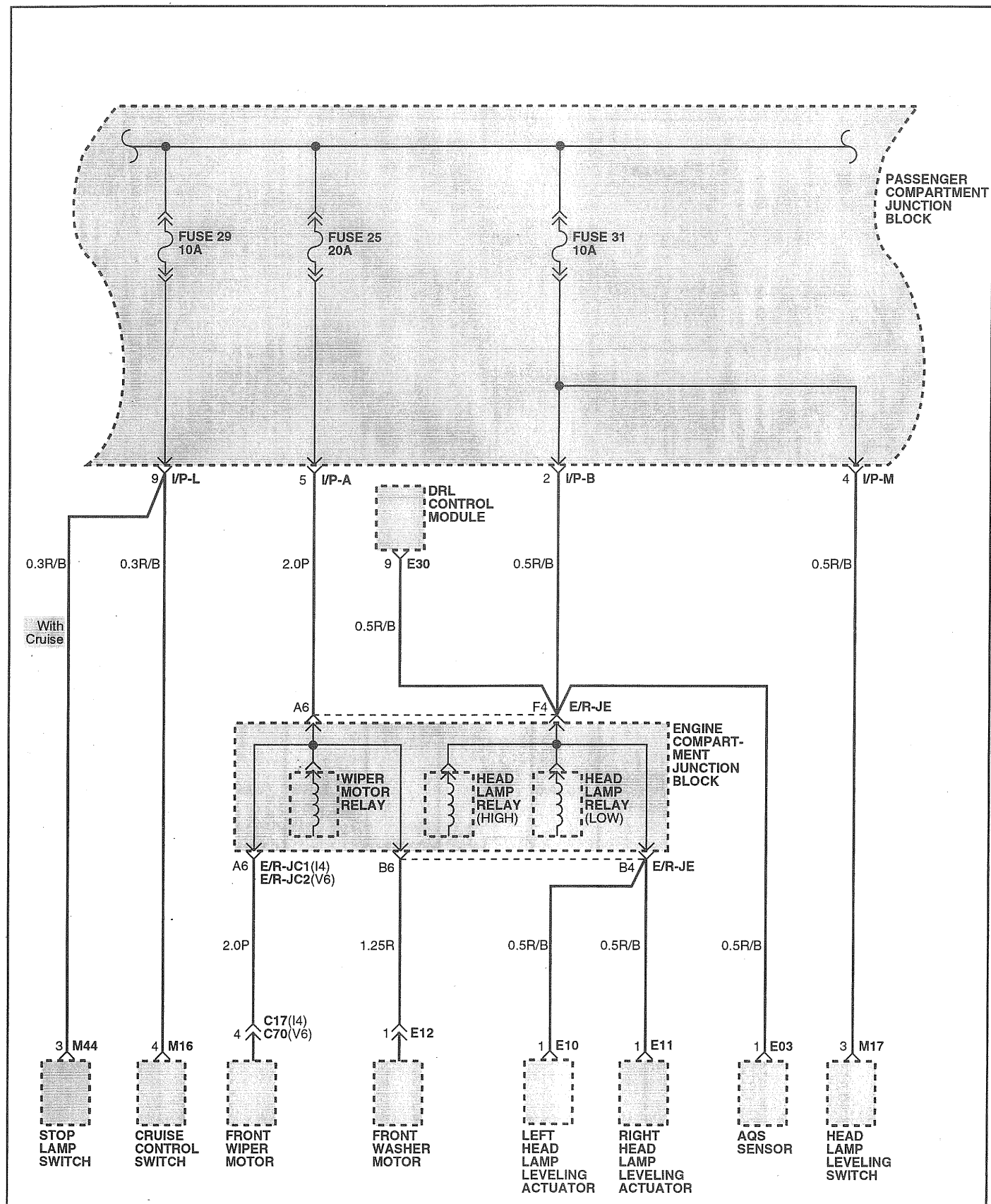
PASSENGER COMPARTMENT FUSE DETAILS (9)



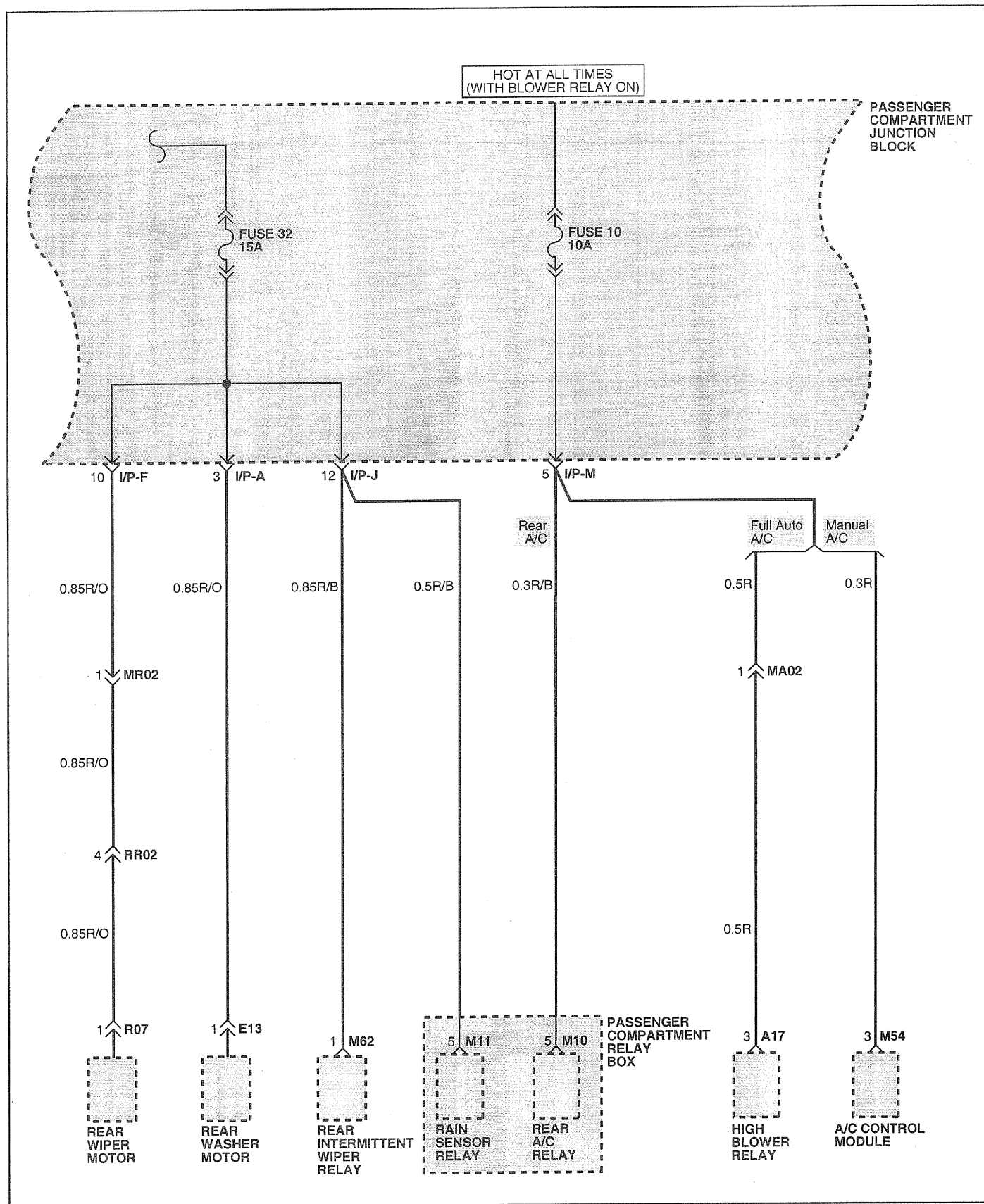
PASSENGER COMPARTMENT FUSE DETAILS (10)



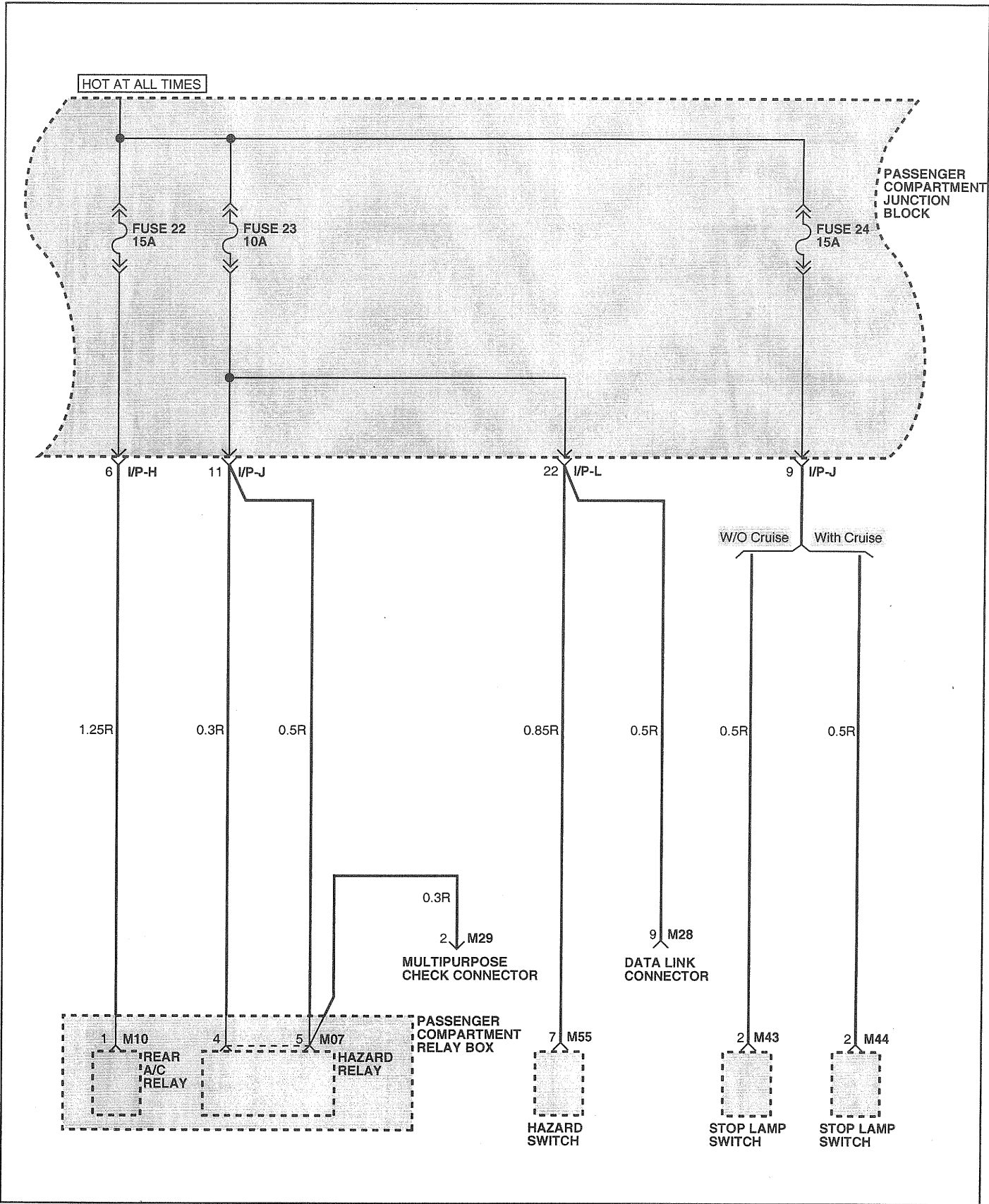
PASSENGER COMPARTMENT FUSE DETAILS (11)



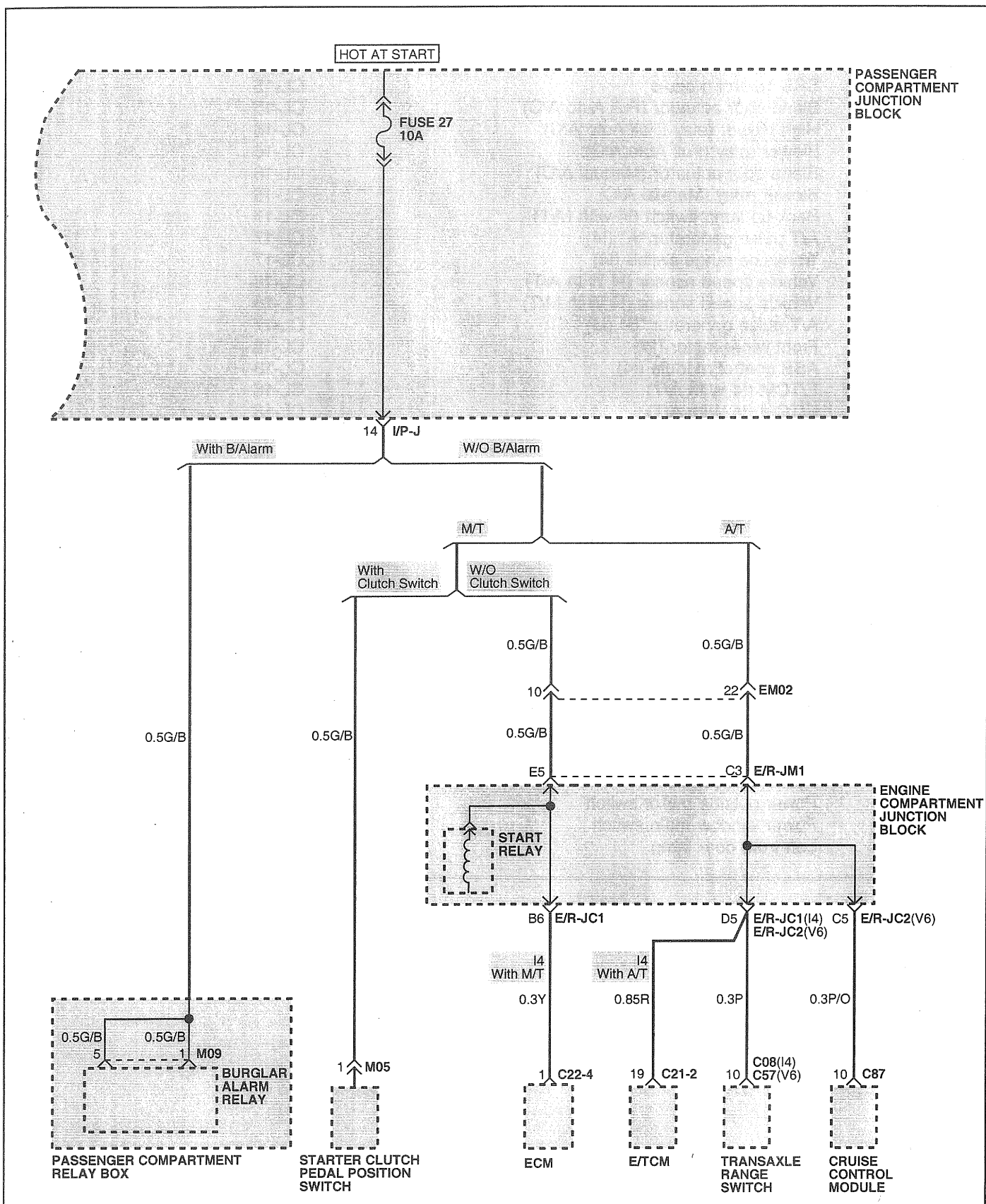
PASSENGER COMPARTMENT FUSE DETAILS (12)



PASSENGER COMPARTMENT FUSE DETAILS (13)



PASSENGER COMPARTMENT FUSE DETAILS (14)



COMPONENT LOCATION INDEX (1)

Components		Location reference-page
A01	SRS control module	CL-15
A11	Blend door actuator (Full Auto A/C)	CL-16
A17	High blower relay (Full Auto A/C)	CL-16
A18	Blower relay (Full Auto A/C)	CL-16
A21	Blend door actuator (Manual A/C)	CL-16
A28	Blower relay (Manual A/C)	CL-16
C05	Back-up lamp switch (I4 with M/T)	CL-17
C07	A/T pulse generator "A" (I4)	CL-17
C08	Transaxle range switch (I4)	CL-17
C12	Vehicle speed sensor (I4 With A/T)	CL-18
C13	Vehicle speed sensor (I4 With M/T)	CL-18
C15	A/T pulse generator "B" (I4)	CL-17
C17	Front wiper motor (I4)	CL-18
C20	ABS control module (I4)	CL-18
C21-2	E/TCM (I4 With A/T)	CL-18
C21-3	E/TCM (I4 With A/T)	CL-18
C21-4	E/TCM (I4 With A/T)	CL-18
C22-4	ECM (I4 with M/T)	CL-18
C35	Engine control relay (I4)	CL-19
C41	Ignition failure sensor	CL-20
C53	Ignition coil (V6)	CL-21
C55	A/T pulse generator "A" (V6)	CL-21
C57	Transaxle range switch (V6)	CL-21
C66	Vehicle speed sensor (V6)	CL-22
C67	A/T pulse generator "B" (V6)	CL-22
C70	Front wiper motor (V6)	CL-22
C73	ABS control module (V6)	CL-22
C74-1	ECM(V6)	CL-22
C75-1	TCM(V6)	CL-22
C87	Cruise control module (V6)	CL-24
D01	Left outside mirror & Folding motor	CL-25
D03	Left door AMP speaker	CL-25
D06	Fuel filler door switch	CL-25
D07	Power outside mirror switch	CL-25
D08	Power window main switch	CL-25
D10	Left front door lamp	CL-25

COMPONENT LOCATION INDEX (2)

Components		Location reference-page
D21	Right outside mirror & folding motor	CL-25
D23	Right front door AMP speaker	CL-25
D30	Right front door lamp	CL-26
D43	Left rear door lamp	CL-26
D53	Right rear door lamp	CL-26
E03	AQS sensor(Full Auto A/C)	CL-12
E08	Left head lamp	CL-12
E09	Right head lamp	CL-12
E10	Left head lamp leveling actuator	CL-12
E11	Right head lamp leveling actuator	CL-12
E12	Front washer motor	CL-13
E13	Rear washer motor	CL-13
M05	Starter clutch pedal position switch	CL-2
M07	Hazard relay	CL-2
M08	Rear fog lamp relay	CL-2
M09	Burglar alarm relay	CL-2
M10	Rear A/C relay	CL-2
M11	Rain sensor relay	CL-2
M16	Cruise control switch	CL-2
M17	Head lamp leveling switch	CL-2
M20	Rheostat	CL-2
M23	Rear wiper & washer switch	CL-2
M24	Power outside mirror folding switch	CL-2
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
M30-1	Instrument cluster	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M32	Joint connector	CL-3
M36	Audio	CL-3
M39	Ignition key ill and door warning switch	CL-3
M43	Stop lamp switch(W/O Cruise)	CL-4
M45	Rear A/C switch	CL-4
M50	Cigarette lighter	CL-4
M51	Power outlet	CL-4

COMPONENT LOCATION INDEX (3)

Components		Location reference-page
M53-1	A/C control module(Full Auto A/C)	CL-4
M54	A/C control module(Manual A/C)	CL-4
M55	Hazard switch	CL-4
M58	Rear fog lamp switch	CL-4
M61	Power outside mirror folding module	CL-5
M62	Rear intermittent wiper relay	CL-5
M65	Auto light sensor	CL-5
M69	Joint connector	CL-5
M87	Left front seat belt tension reducer solenoid	CL-6
M94	Left rear AMP speaker	CL-6
M97	Rear power outlet #1	CL-6
M98	Rear power outlet #2	CL-6
M99	Left rear combination lamp	CL-6
M115	Right front seat belt tension reducer solenoid	CL-7
M120	Right rear AMP speaker	CL-7
M122	Rear blower switch	CL-8
M131	Rain sensor	CL-8
M132	Overhead console lamp(W/O sunroof)	CL-8
M133	Left front room lamp	CL-8
M134	Right front room lamp	CL-8
M135	Left rear room lamp	CL-8
M136	Right rear room lamp	CL-8
M138	Overhead console lamp(With sunroof)	CL-8
M139	Sunroof relay	CL-8
M145	Left front seat warmer switch	CL-9
M146	Right front seat warmer switch	CL-9
R02	Rear window defogger(+)	CL-27
R07	Rear wiper motor	CL-27
R11	Luggage lamp	CL-27

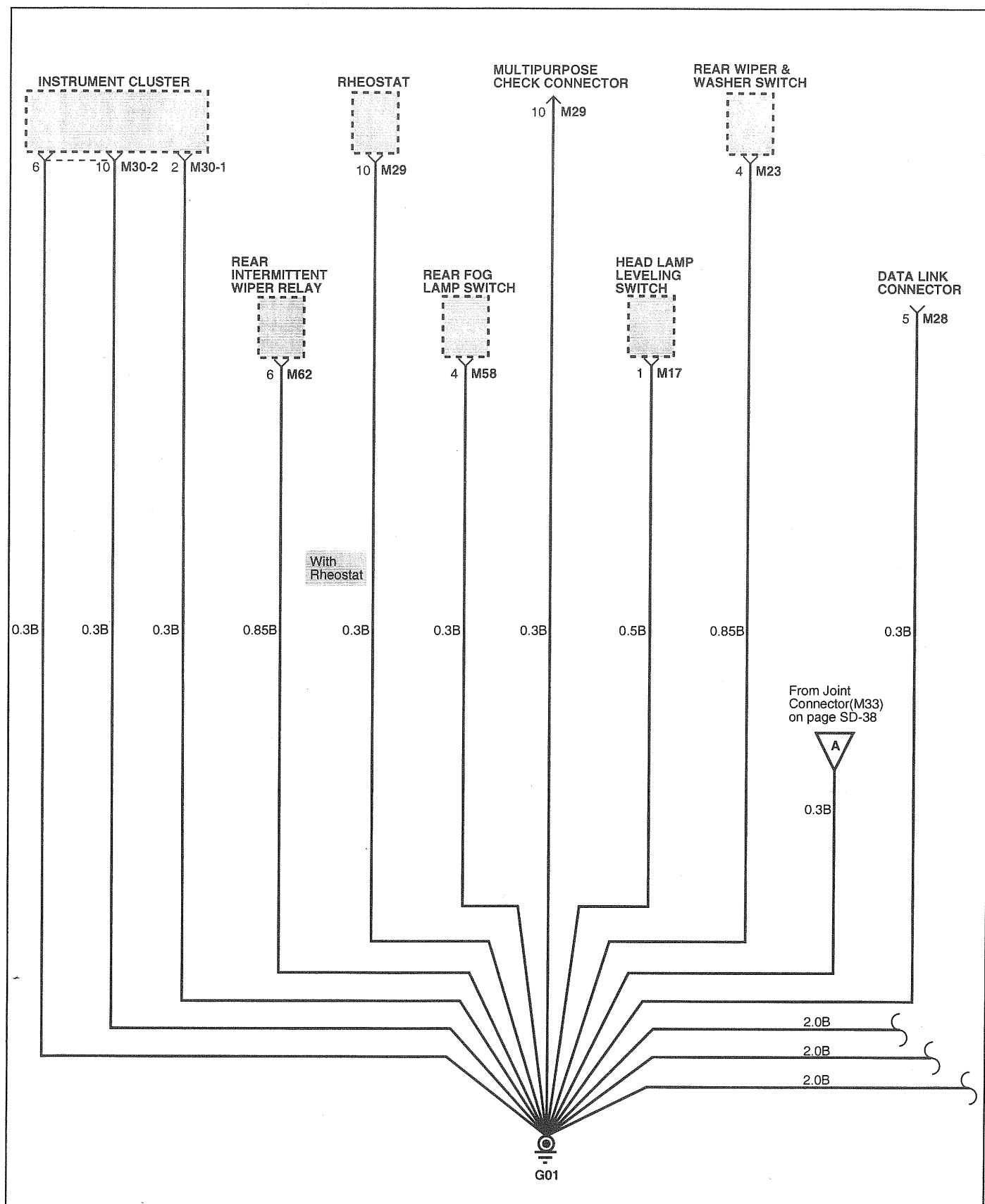
COMPONENT LOCATION INDEX (4)

Connectors	Location reference-page
CC01	CL-24
EM02	CL-14
E/R-JC1	CL-14
E/R-JC2	CL-14
E/R-JM1	CL-14
I/P-A	CL-11
I/P-B	CL-11
I/P-D	CL-11
I/P-E	CL-11
I/P-F	CL-11
I/P-J	CL-11
I/P-K	CL-11
I/P-L	CL-11
I/P-M	CL-11
I/P-P	CL-11
MA02	CL-9
MA04	CL-9
MD01	CL-9
MD02	CL-9
MD03	CL-10
MD05	CL-10
MD06	CL-10
MM04	CL-10
MM05	CL-10
MM07	CL-10
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MM11	CL-11
MM12	CL-11
MR01	CL-11
MR02	CL-11
RR01	CL-27
RR02	CL-27

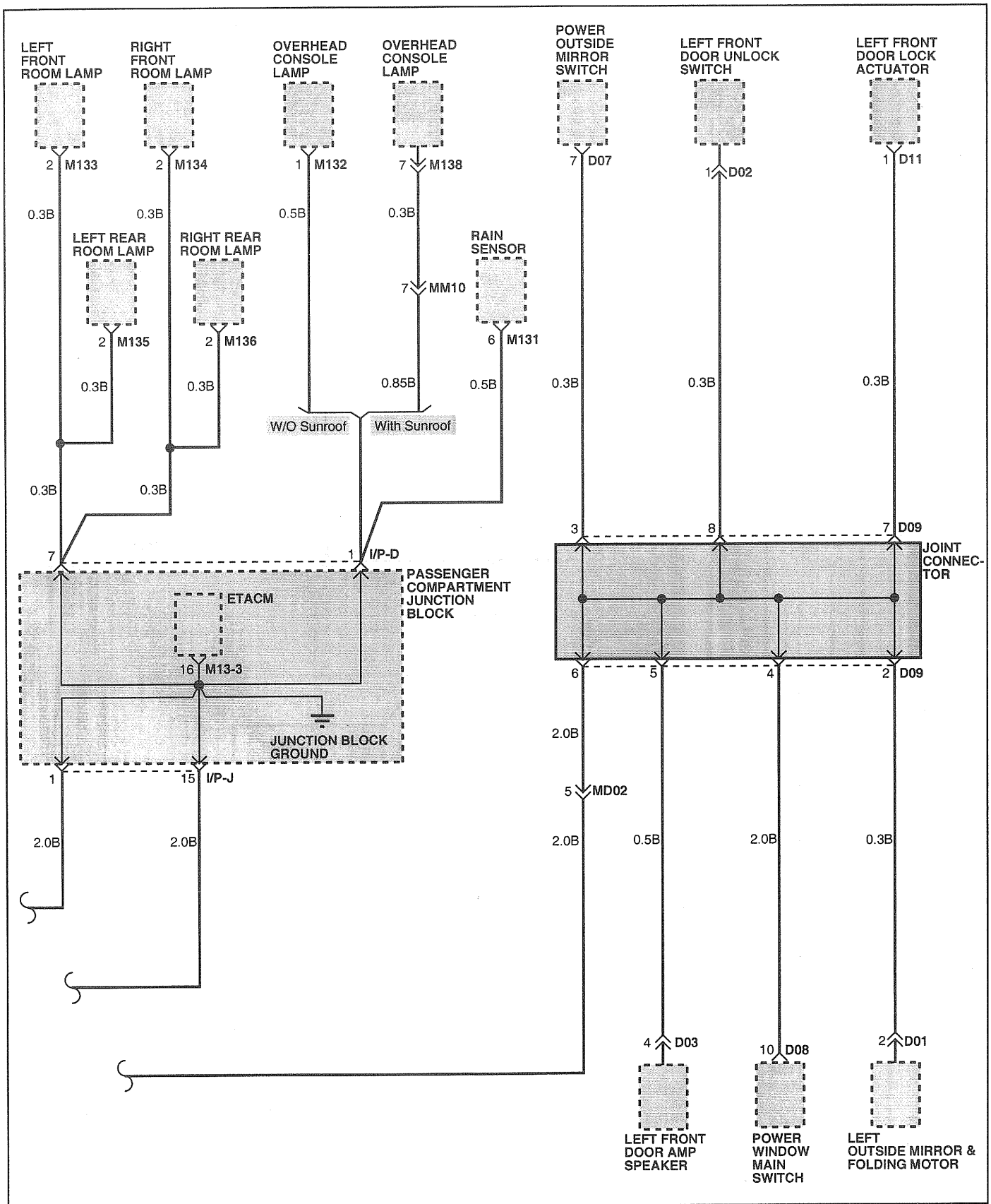
GROUND DISTRIBUTION

E2HA0040

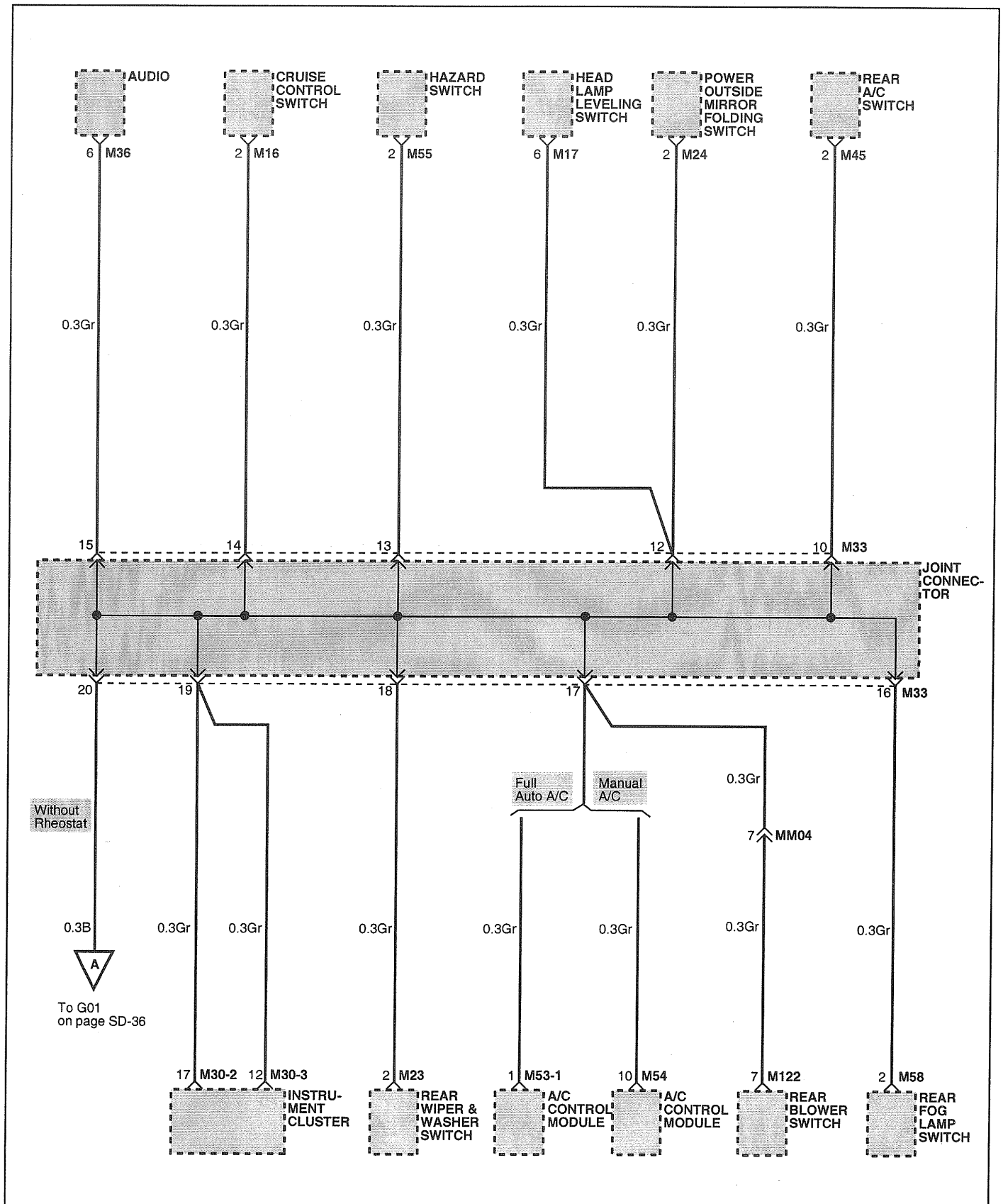
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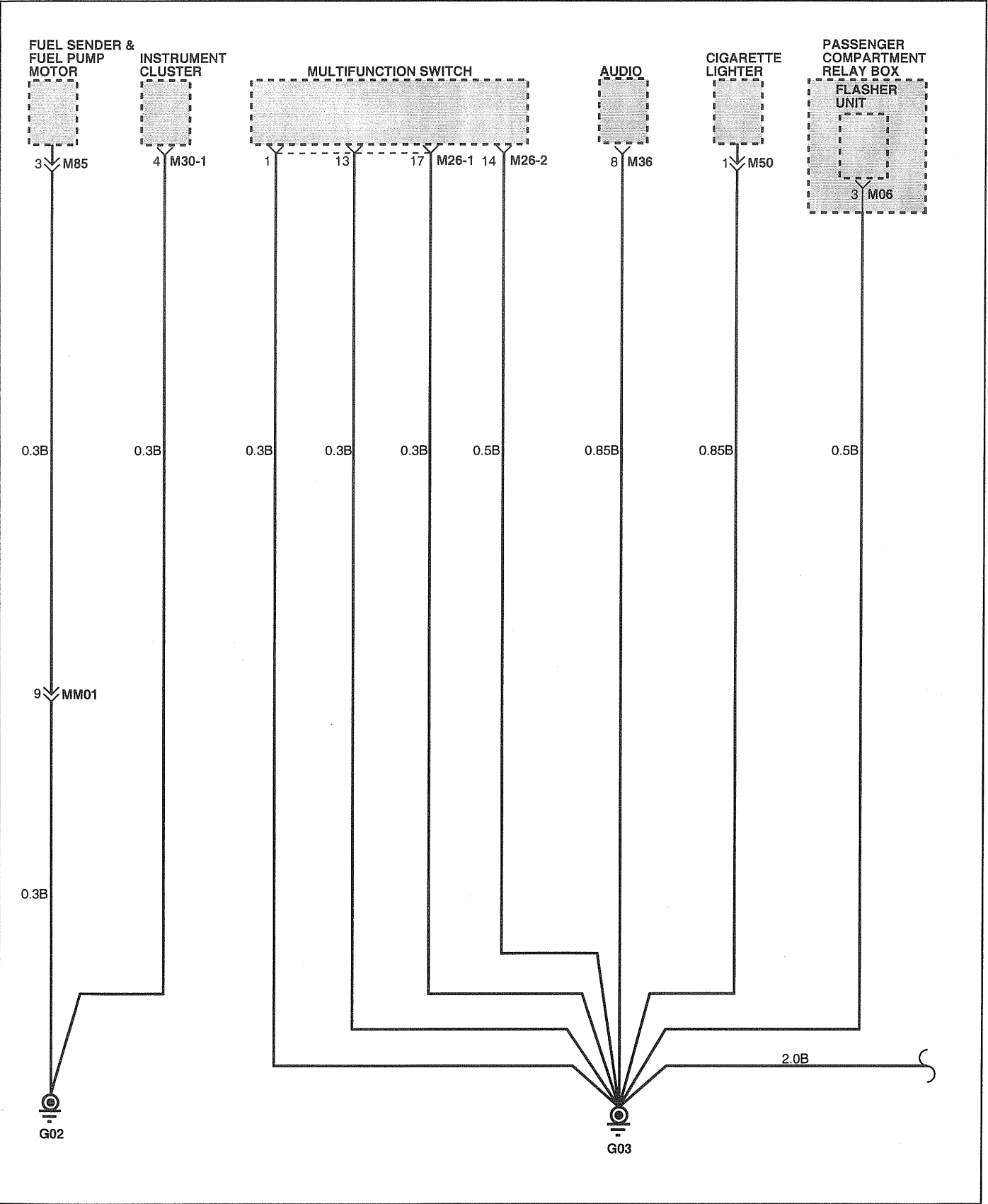
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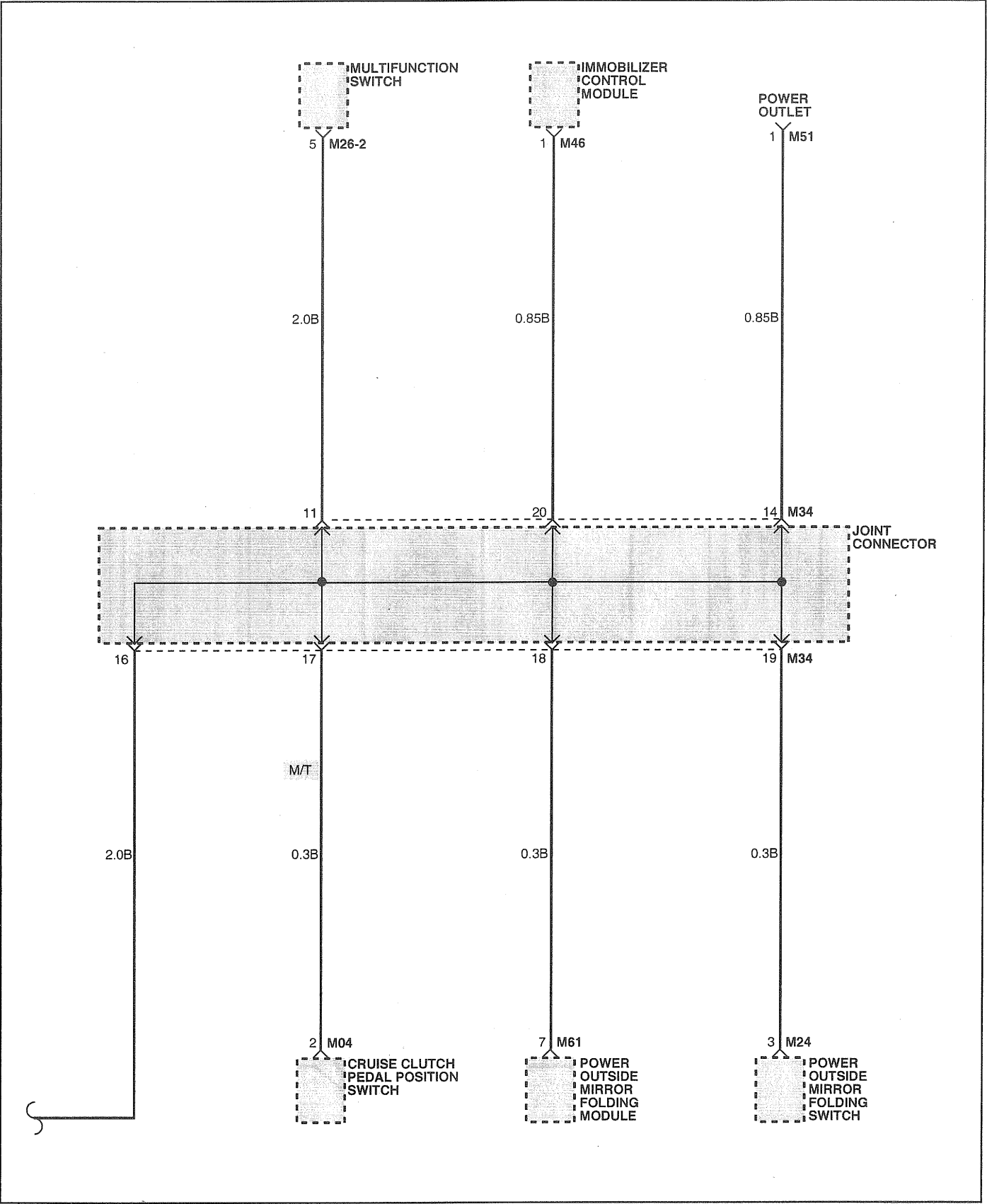
GROUND DISTRIBUTION (3)



GROUND DISTRIBUTION (4)



GROUND DISTRIBUTION (5)

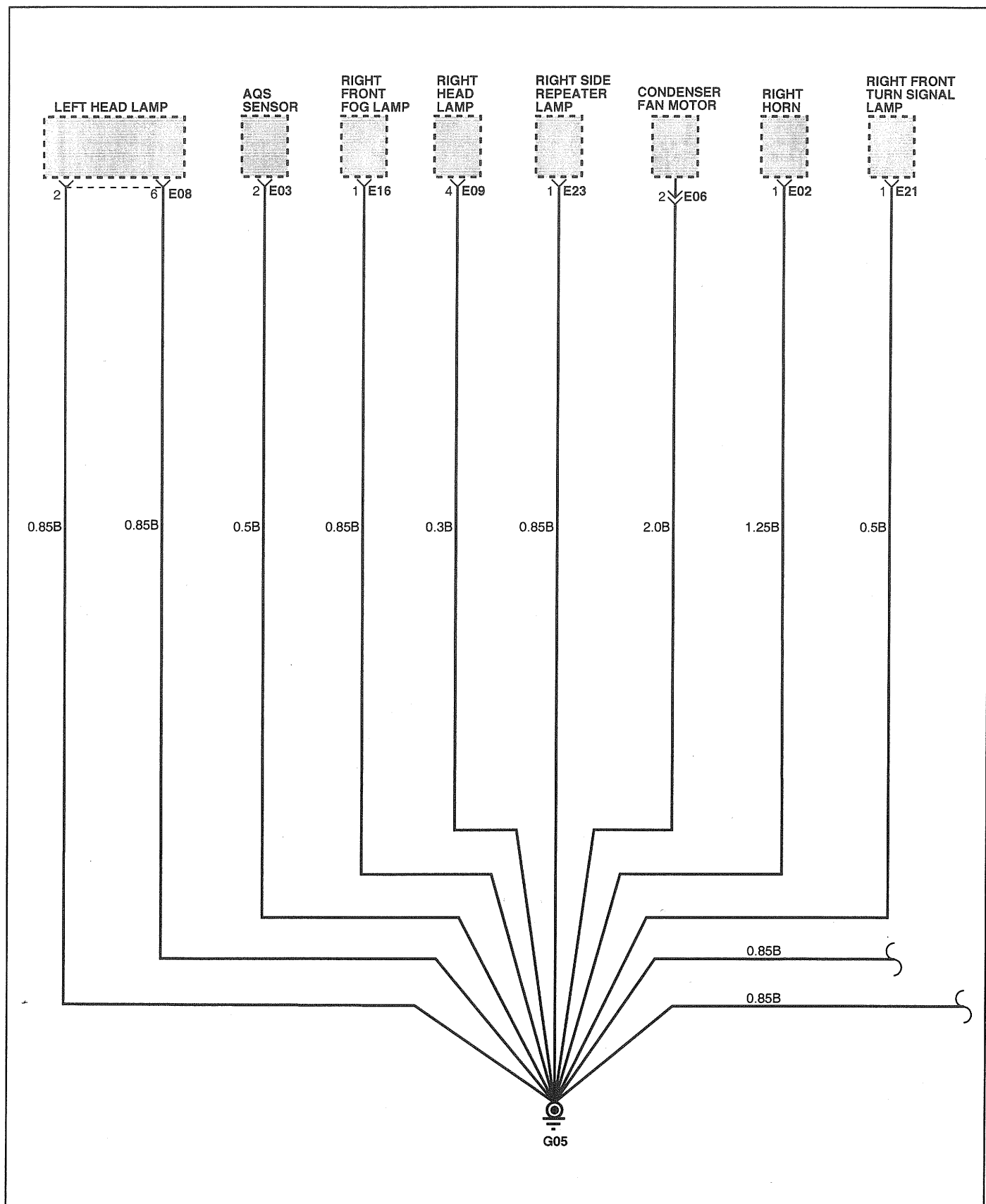


The diagram illustrates the electrical system for the 1990 Oldsmobile Cutlass Supreme, specifically focusing on the air conditioning and door lock actuators. The components and their wiring are as follows:

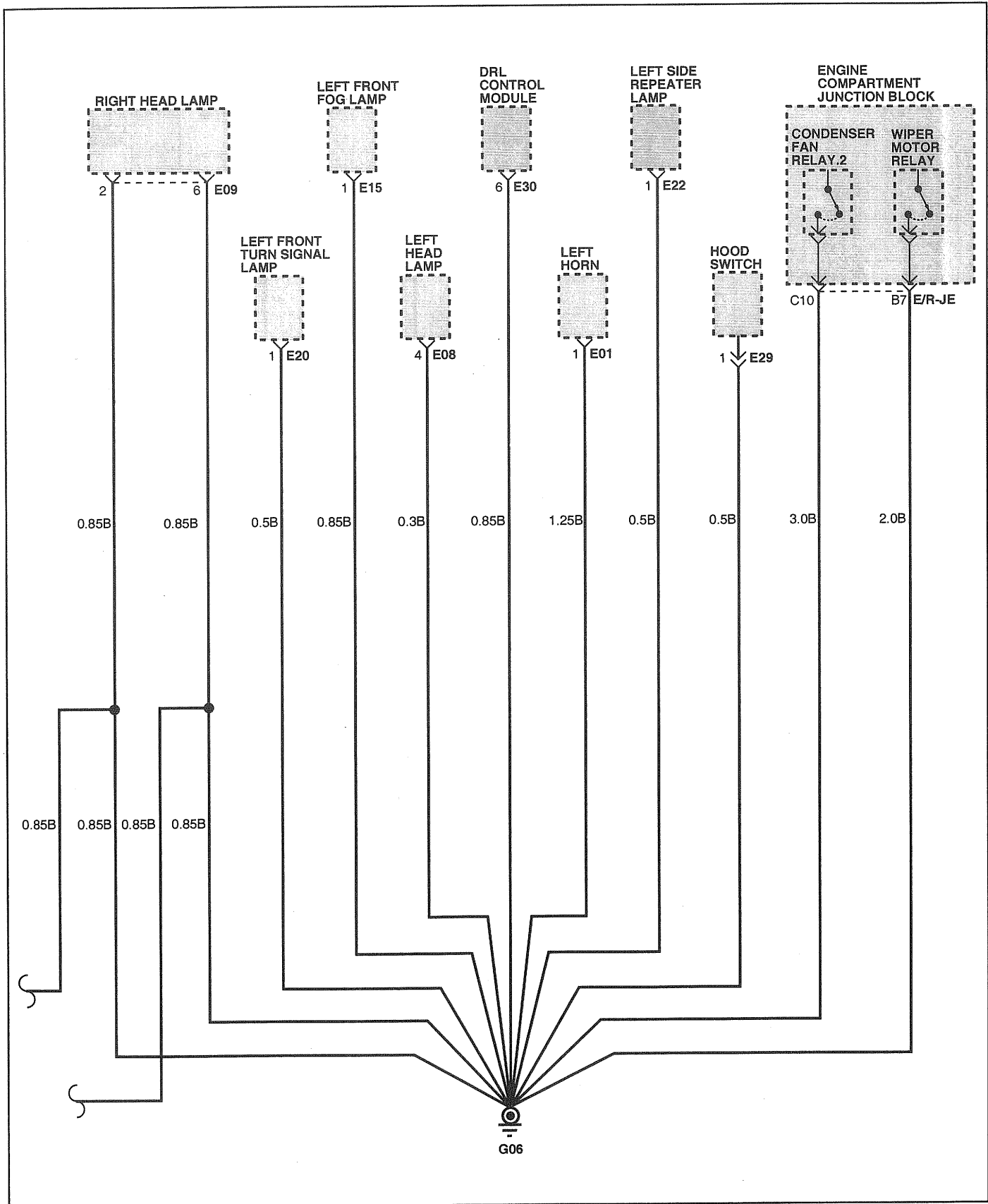
- POWER TRANSISTOR**: Connected to terminal 2 (A15) and terminal 3 (MA01).
- BLOWER RELAY**: Connected to terminal 5 (A18) and terminal 2 (MA01).
- BLOWER SWITCH**: Connected to terminal 3 (M57) and terminal 2 (MA01).
- A/C CONTROL MODULE**: Connected to terminal 9 (M54) and terminal 2 (MA01).
- THERMOSTATIC SWITCH**: Connected to terminal 1 (A22) and terminal 7 (MA04).
- RIGHT OUTSIDE MIRROR & FOLDING MOTOR**: Connected to terminal 2 (D21) and terminal 5 (MD04).
- RIGHT FRONT DOOR LOCK ACTUATOR**: Connected to terminal 3 (D31) and terminal 1 (M65).
- BLEND DOOR ACTUATOR**: Connected to terminal 2 (A11) and terminal 3 (MA01).
- HIGH BLOWER RELAY**: Connected to terminal 2 (A17) and terminal 2 (MA01).
- A/C CONTROL MODULE**: Connected to terminal 26 (M53-1) and terminal 2 (MA01).
- BLEND DOOR ACTUATOR**: Connected to terminal 2 (A21) and terminal 2 (MA01).
- RIGHT FRONT DOOR AMP SPEAKER**: Connected to terminal 4 (D23) and terminal 2 (MA01).
- RIGHT FRONT DOOR UNLOCK SWITCH**: Connected to terminal 1 (D22) and terminal 2 (MA01).
- TEMPERATURE SWITCH**: Connected to terminal 2 (M56) and terminal 2 (MA01).
- AUTO LIGHT SENSOR**: Connected to terminal 1 (M65) and terminal 2 (MA01).

The diagram also shows the wiring paths for the air conditioning system, including the Full Auto A/C and Manual A/C settings. The G04 ground point is connected to the bottom of the diagram.

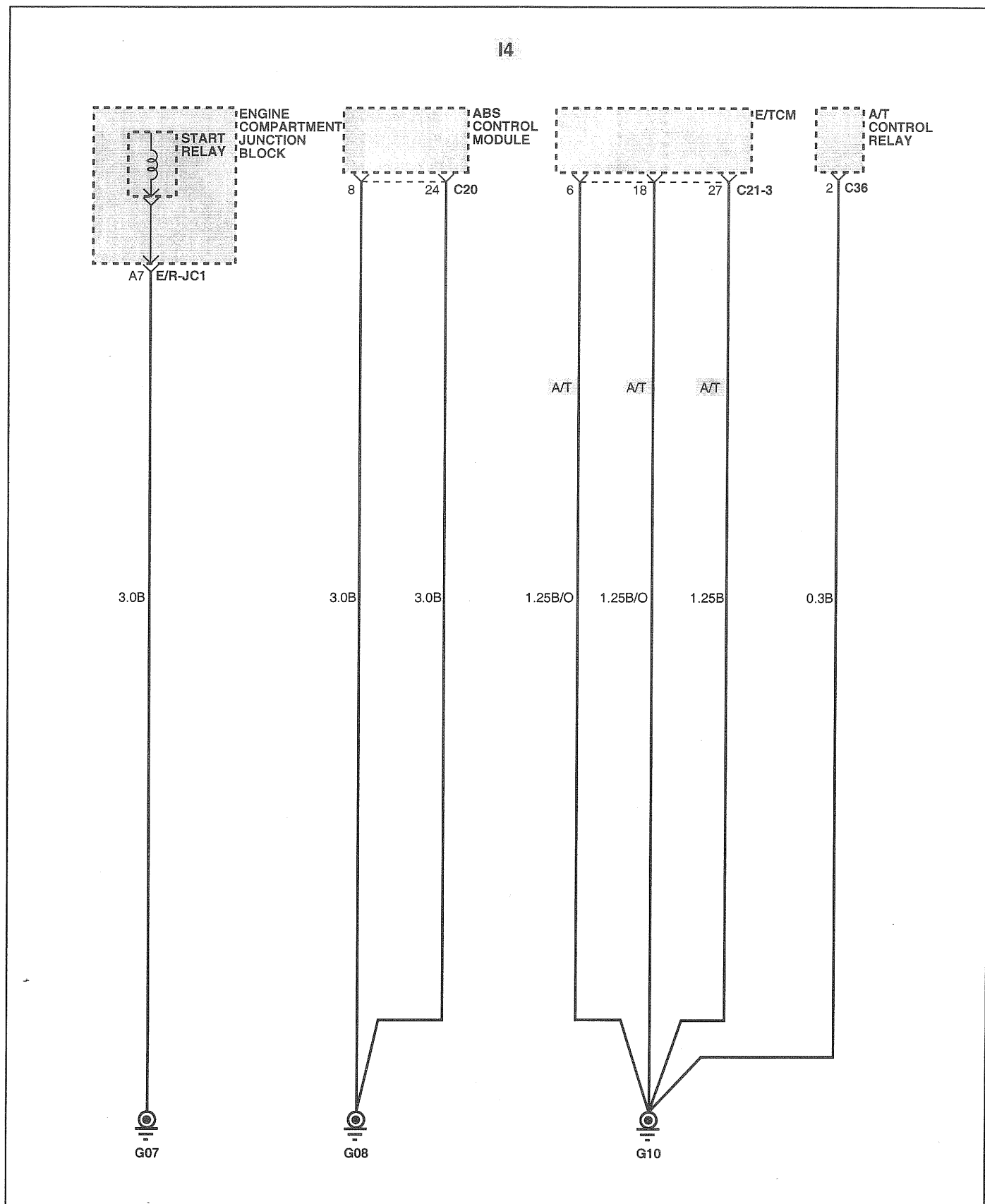
GROUND DISTRIBUTION (7)



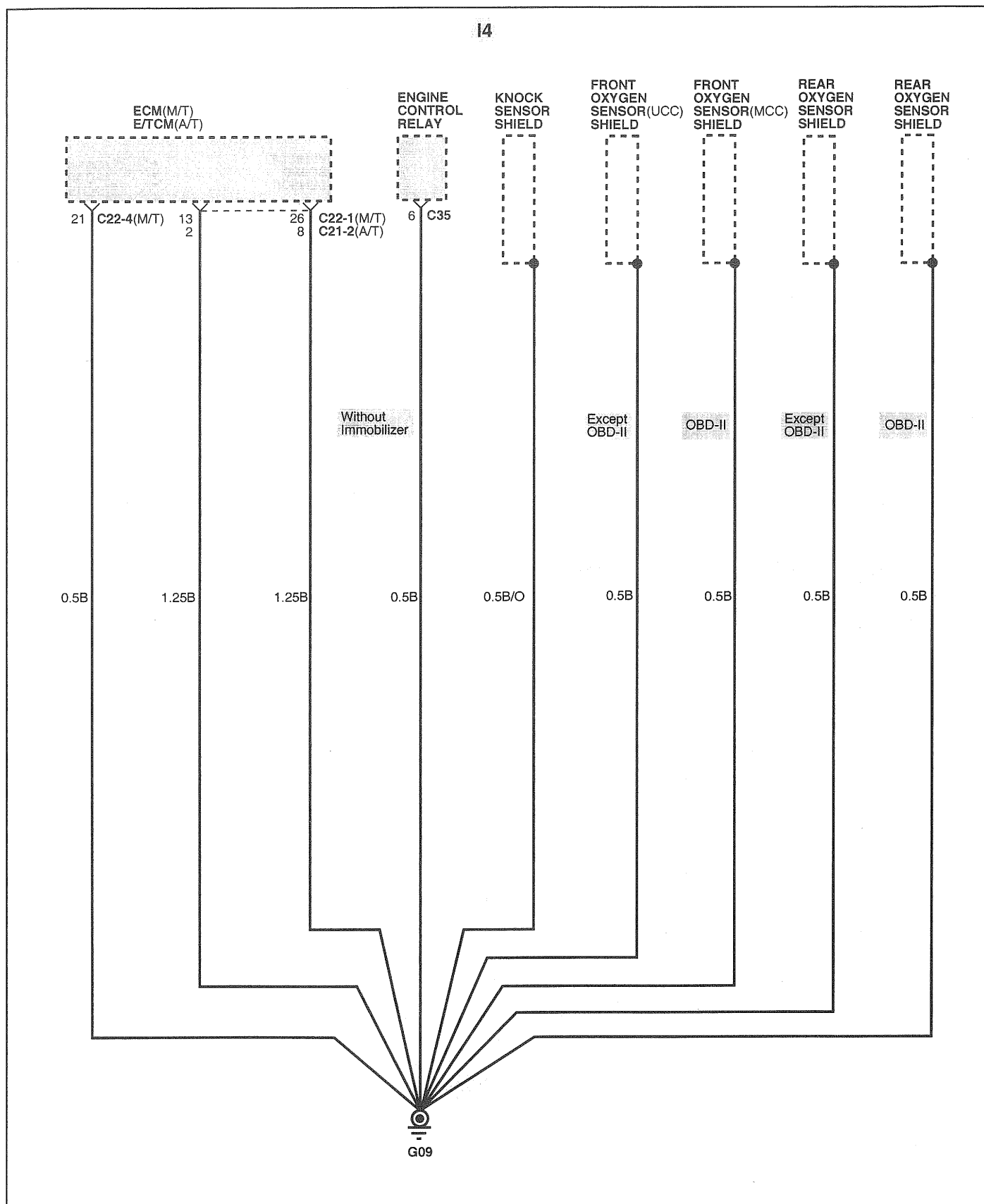
GROUND DISTRIBUTION (8)



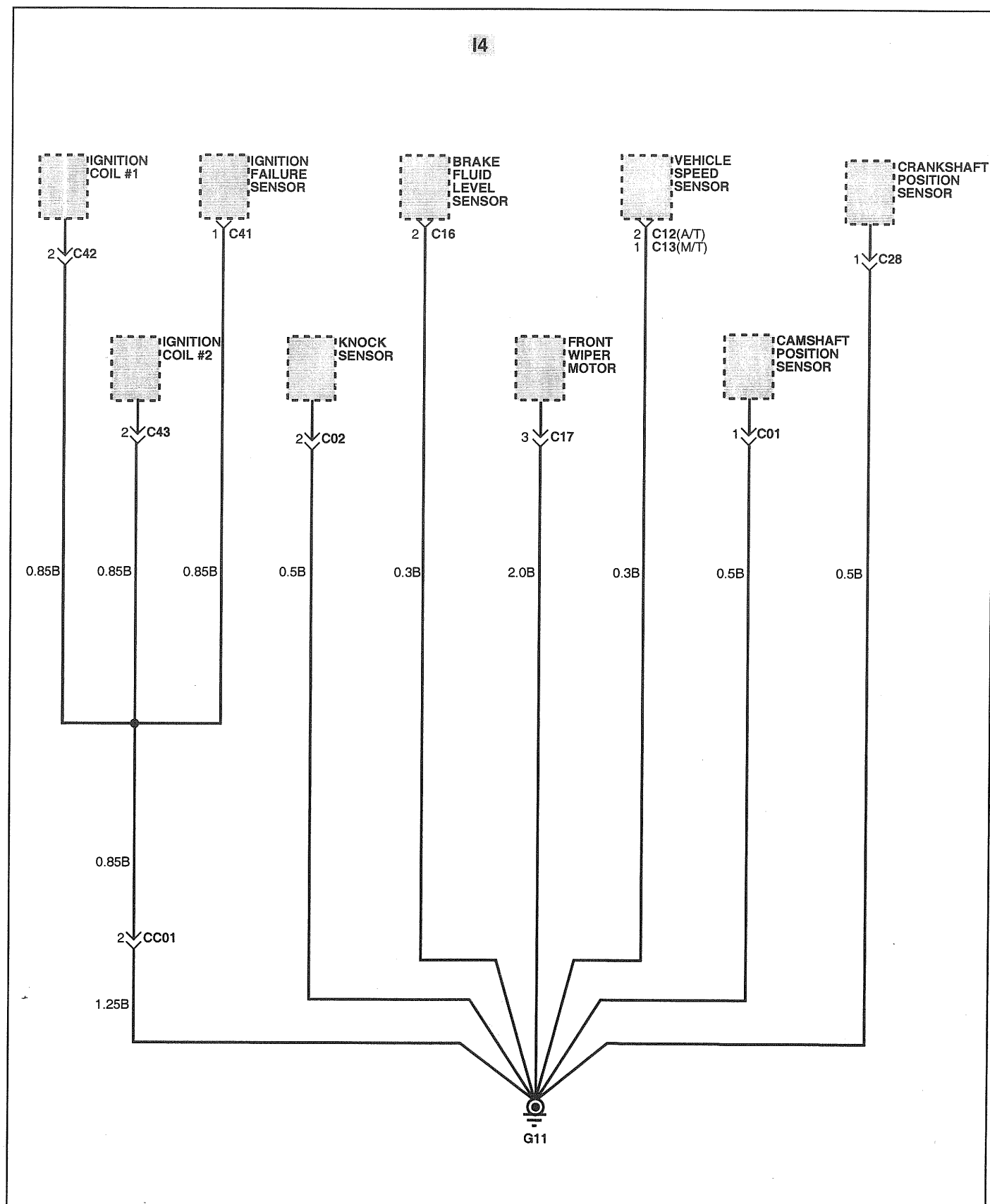
GROUND DISTRIBUTION (9)



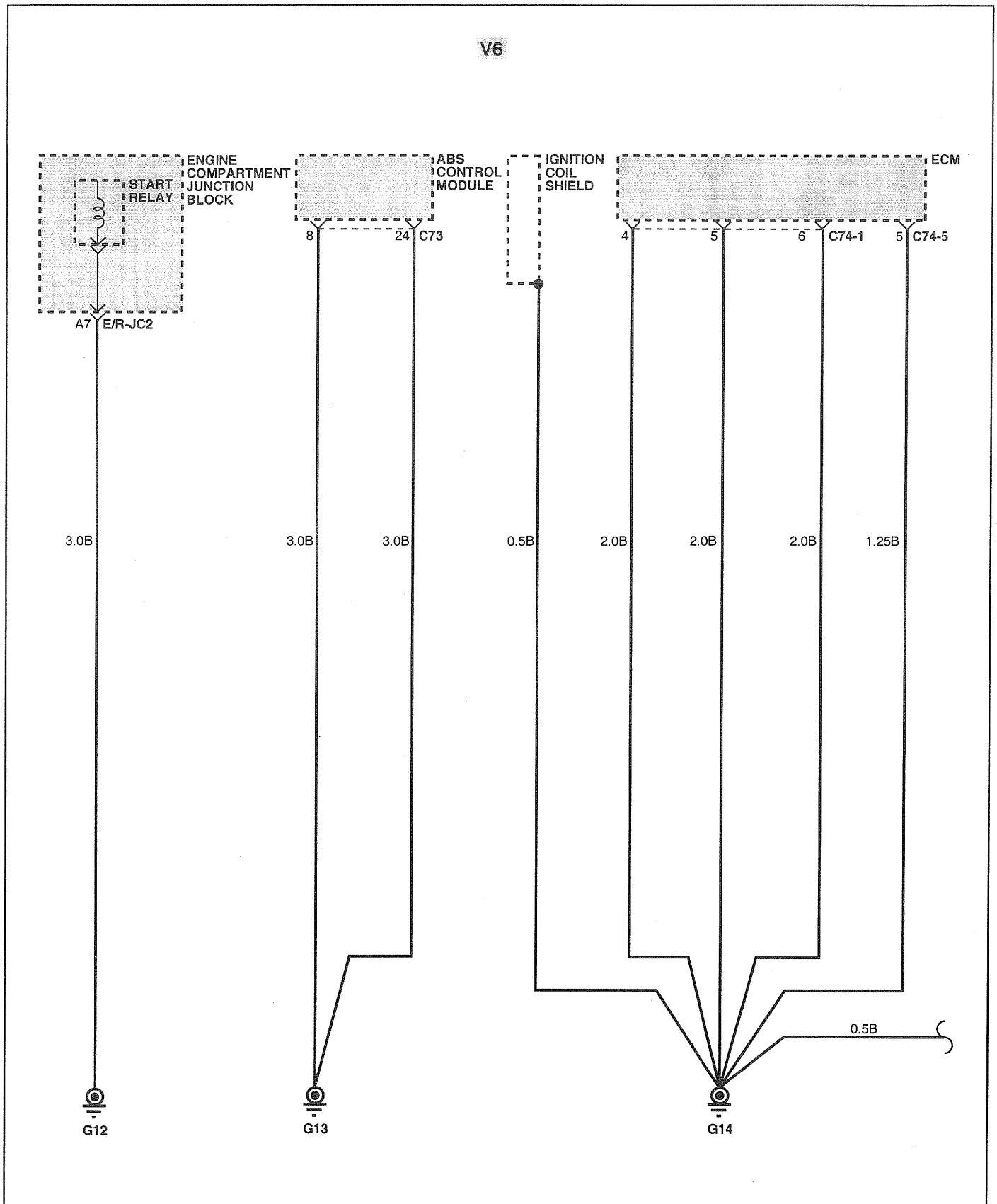
GROUND DISTRIBUTION (10)



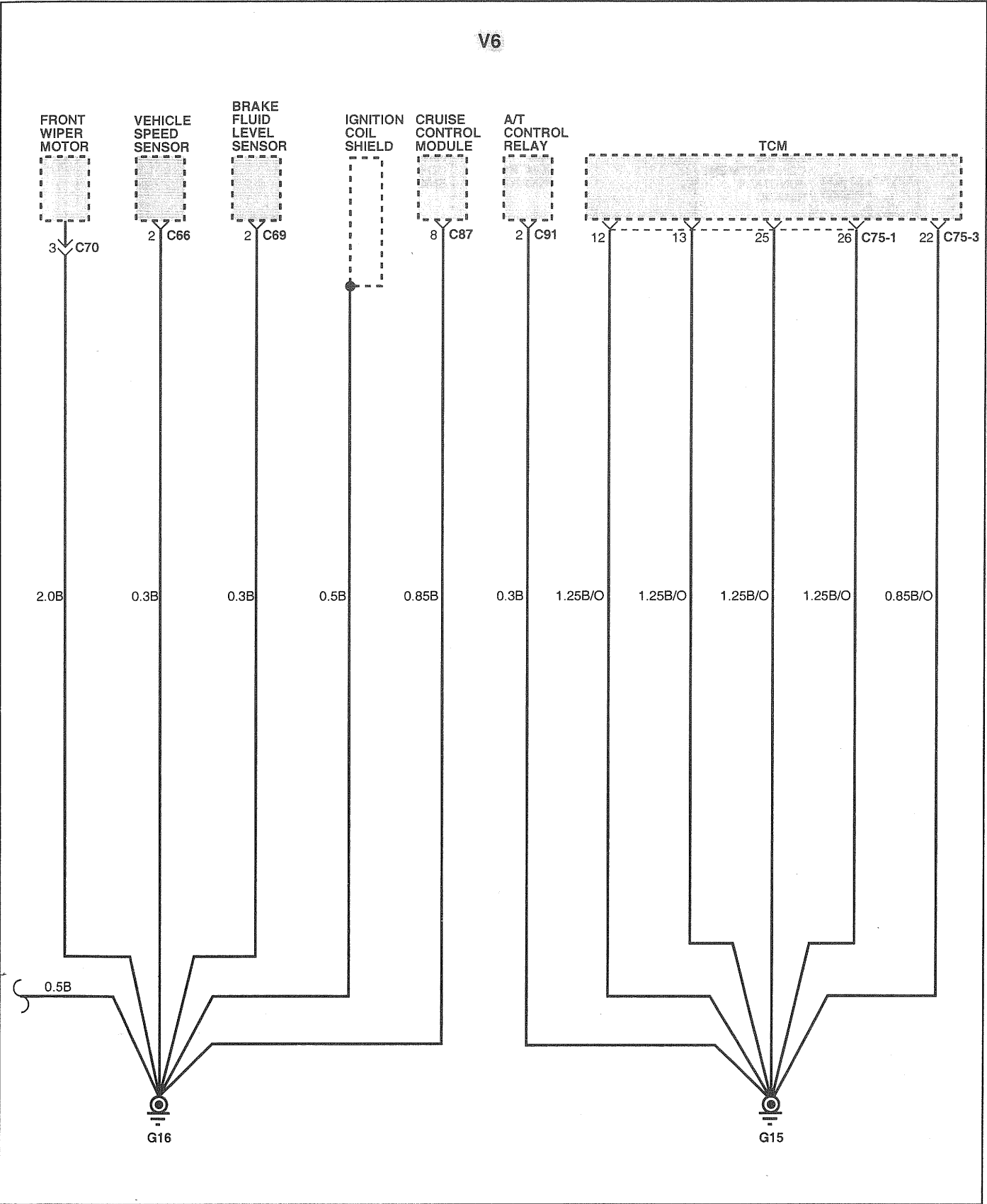
GROUND DISTRIBUTION (11)



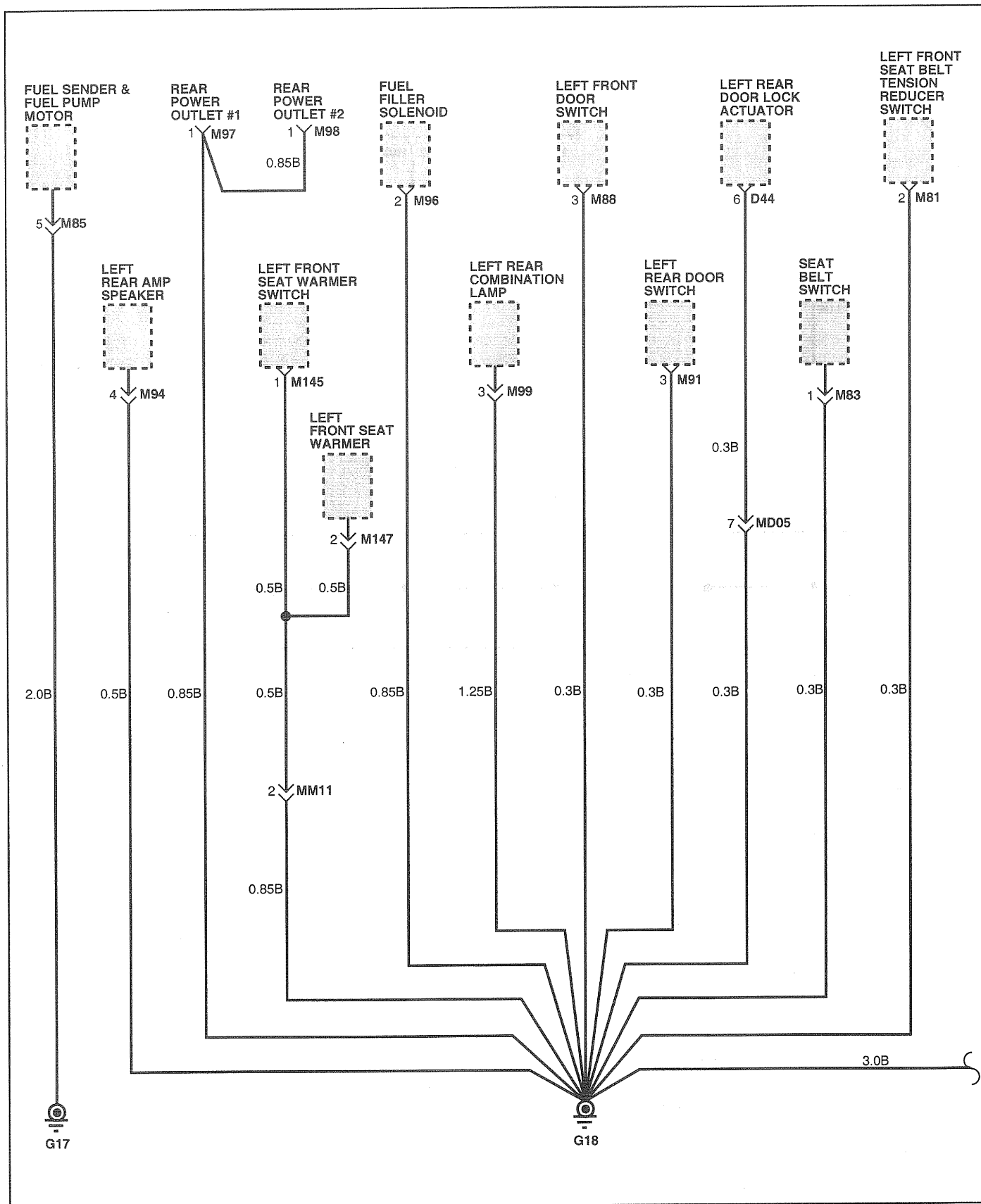
GROUND DISTRIBUTION (12)



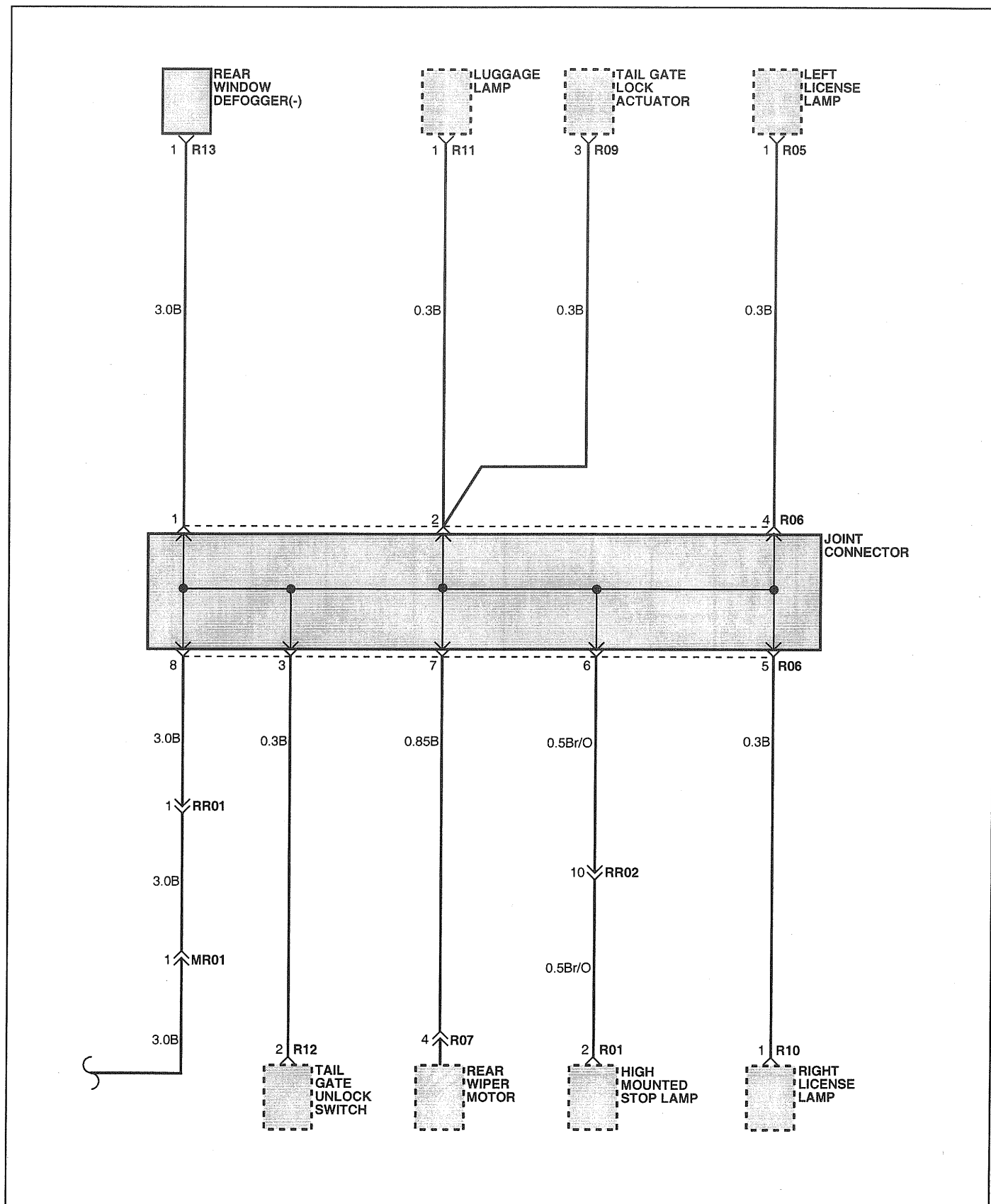
GROUND DISTRIBUTION (13)



GROUND DISTRIBUTION (14)



GROUND DISTRIBUTION (15)



This diagram illustrates the electrical wiring for the right side of a vehicle, showing the connection of various components to ground points G19 and G20. The components and their respective wire gauges and lengths are as follows:

- RIGHT REAR COMBINATION LAMP:** Connected to ground G19 via a 3-wire (M125) line, with a 1.25B gauge wire.
- RIGHT REAR DOOR LOCK ACTUATOR:** Connected to ground G19 via a 6-wire (D54) line, with a 0.3B gauge wire.
- REAR BLOWER SWITCH:** Connected to ground G19 via a 5-wire (M122) line, with a 1.25B gauge wire.
- RIGHT FRONT DOOR SWITCH:** Connected to ground G19 via a 3-wire (M116) line, with a 0.3B gauge wire.
- SRS CONTROL MODULE:** Connected to ground G20 via a 6-wire (A01) line, with a 0.5B gauge wire.
- RIGHT FRONT SEAT WARMER SWITCH:** Connected to ground G19 via a 1-wire (M146) line, with a 0.5B gauge wire.
- RIGHT FRONT SEAT WARMER:** Connected to ground G19 via a 2-wire (M148) line, with a 0.5B gauge wire.
- RIGHT REAR AMP SPEAKER:** Connected to ground G19 via a 4-wire (M120) line, with a 0.5B gauge wire.
- RIGHT FRONT SEAT BELT TENSION REDUCER SWITCH:** Connected to ground G19 via a 2-wire (M113) line, with a 0.3B gauge wire.
- RIGHT REAR DOOR SWITCH:** Connected to ground G19 via a 3-wire (M118) line, with a 0.3B gauge wire.

The ground points are labeled G19 and G20. The wire gauges are indicated by the 'B' suffix (e.g., 0.3B, 0.5B, 1.25B, 0.85B). The wire lengths are indicated by the 'L' suffix (e.g., 1.25L, 0.3L, 0.5L, 0.85L).

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
A01	SRS control module	CL-15
A11	Blend door actuator (Full Auto A/C)	CL-16
A15	Power transistor (Full Auto A/C)	CL-16
A17	High blower relay (Full Auto A/C)	CL-16
A18	Blower relay (Full Auto A/C)	CL-16
A21	Blend door actuator (Manual A/C)	CL-16
A22	Thermostatic switch (Manual A/C)	CL-16
C01	Camshaft position sensor (I4)	CL-17
C02	Knock sensor (I4)	CL-17
C12	Vehicle speed sensor (I4 With A/T)	CL-18
C13	Vehicle speed sensor (I4 With M/T)	CL-18
C16	Brake fluid level sensor (I4)	CL-18
C17	Front wiper motor (I4)	CL-18
C20	ABS control module (I4)	CL-18
C21-2	E/TCM (I4 With A/T)	CL-18
C21-3	E/TCM (I4 With A/T)	CL-18
C22-1	ECM (I4 With M/T)	CL-18
C22-4	ECM (I4 With M/T)	CL-18
C28	Crankshaft position sensor (I4)	CL-19
C35	Engine control relay (I4)	CL-19
C36	A/T control relay (I4)	CL-19
C41	Ignition failure sensor (I4)	CL-20
C42	Ignition coil #1 (I4)	CL-20
C43	Ignition coil #2 (I4)	CL-20
C66	Vehicle speed sensor (V6)	CL-22
C69	Brake fluid level sensor (V6)	CL-22
C70	Front wiper motor (V6)	CL-22
C73	ABS control module (V6)	CL-22
C74-1	ECM (V6)	CL-22
C74-5	ECM (V6)	CL-22
C75-1	TCM(V6)	CL-22
C75-3	TCM(V6)	CL-22
C87	Cruise control module (V6)	CL-24
C91	A/T control relay	CL-24
D01	Left outside mirror & folding motor	CL-25
D02	Left front door unlock switch	CL-25
D03	Left front door AMP speaker (With AMP speaker)	CL-25
D07	Power outside mirror switch	CL-25
D08	Power window main switch	CL-25
D09	Joint connector	CL-25

COMPONENT LOCATION INDEX (2)

Components		Location reference-page
D11	Left front door lock actuator	CL-25
D21	Right outside mirror & folding motor	CL-25
D22	Right front door unlock switch	CL-25
D23	Right front door AMP speaker (With AMP speaker)	CL-25
D29	Joint connector	CL-25
D31	Right front door lock actuator	CL-25
D44	Left rear door lock actuator	CL-26
D54	Right rear door lock actuator	CL-26
E01	Left horn	CL-12
E02	Right horn	CL-12
E03	AQS sensor (Full Auto A/C)	CL-12
E06	Condenser fan motor	CL-12
E08	Left head lamp	CL-12
E09	Right head lamp	CL-12
E15	Left front fog lamp	CL-13
E16	Right front fog lamp	CL-13
E20	Left front turn signal lamp	CL-13
E21	Right front turn signal lamp	CL-13
E22	Left side repeater lamp	CL-13
E23	Right side repeater lamp	CL-13
E29	Hood switch	CL-13
E30	DRL control module	CL-13
M04	Cruise clutch pedal position switch	CL-2
M06	Flasher unit	CL-2
M13-3	ETACM	CL-2
M16	Cruise control switch	CL-2
M17	Head lamp leveling switch	CL-2
M20	Rheostat	CL-2
M23	Rear wiper & Washer switch	CL-2
M24	Power outside mirror folding switch	CL-2
M26-1	Multifunction switch	CL-3
M26-2	Multifunction switch	CL-3
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
M30-1	Instrument cluster	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M33	Joint connector	CL-3
M36	Audio	CL-3

COMPONENT LOCATION INDEX (3)

Components		Location reference-page
M50	Cigarette lighter	CL-4
M51	Power outlet	CL-4
M53-1	A/C control module (Full Auto A/C)	CL-4
M55	Hazard switch	CL-4
M58	Rear fog lamp switch	CL-4
M61	Power outside mirror folding module	CL-5
M62	Rear intermittent wiper relay	CL-5
M65	Auto light sensor	CL-5
M81	Left front seat belt tension reducer switch	CL-5
M83	Seat belt switch	CL-5
M85	Fuel sender & Fuel pump motor	CL-5
M88	Left front seat belt tension reducer solenoid	CL-6
M91	Left rear door switch	CL-6
M94	Left rear AMP speaker (With AMP speaker)	CL-6
M96	Fuel filler solenoid	CL-6
M97	Rear power outlet #1	CL-6
M98	Rear power outlet #2	CL-6
M99	Left rear combination lamp	CL-6
M113	Right front seat belt tension reducer switch	CL-7
M116	Right front door switch	CL-7
M118	Right rear door switch	CL-7
M120	Right rear AMP speaker (With AMP speaker)	CL-7
M122	Rear blower switch	CL-8
M125	Right rear combination lamp	CL-8
M138	Overhead console lamp (With sunroof)	CL-8
R01	High-mounted stop lamp	CL-27
R05	Left license lamp	CL-27
R06	Joint connector	CL-27
R07	Rear wiper motor	CL-27
R09	Tail gate lock actuator	CL-27
R10	Right license lamp	CL-27
R11	Luggage lamp	CL-27
R12	Tail gate unlock switch	CL-27
R13	Rear window defogger (-)	CL-27

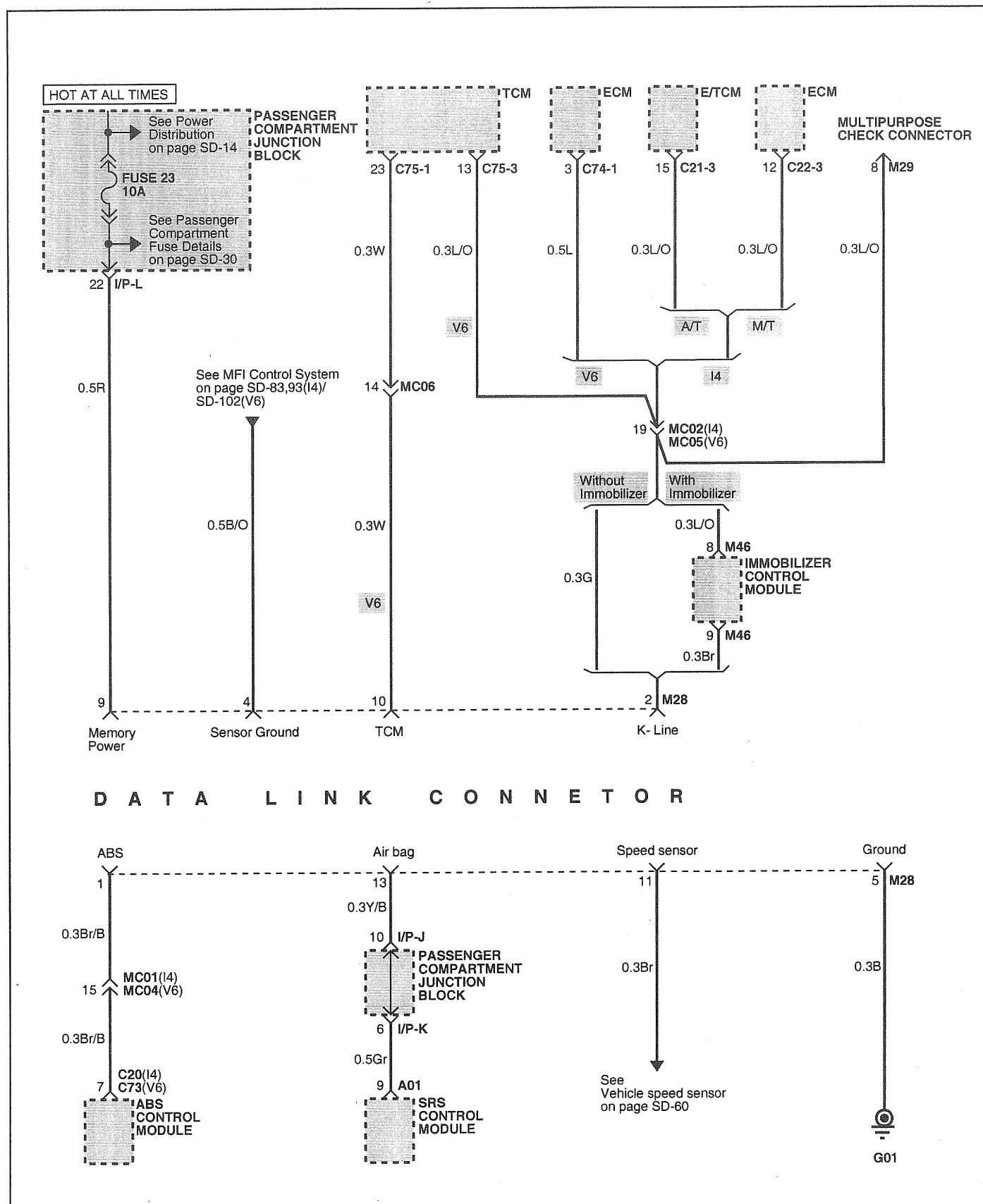
COMPONENT LOCATION INDEX (4)

Connectors	Location reference-page
CC01	CL-24
E/R-JE	CL-14
E/R-JC1	CL-14
E/R-JC2	CL-14
I/P-D	CL-11
I/P-J	CL-11
MA01	CL-9
MA04	CL-9
MD02	CL-9
MD04	CL-10
MD05	CL-10
MD06	CL-10
MM01	CL-10
MM04	CL-10
MM07	CL-10
MM10	CL-10
MR01	CL-11
RR01	CL-27
RR02	CL-27
Grounds	
G01	CL-28
G02	CL-28
G03	CL-28
G04	CL-28
G05	CL-28
G06	CL-28
G07	CL-28
G08	CL-28
G09	CL-29
G10	CL-29
G11	CL-29
G12	CL-29
G13	CL-29
G14	CL-29
G15	CL-29
G16	CL-29
G17	CL-29
G18	CL-29
G19	CL-30
G20	CL-30

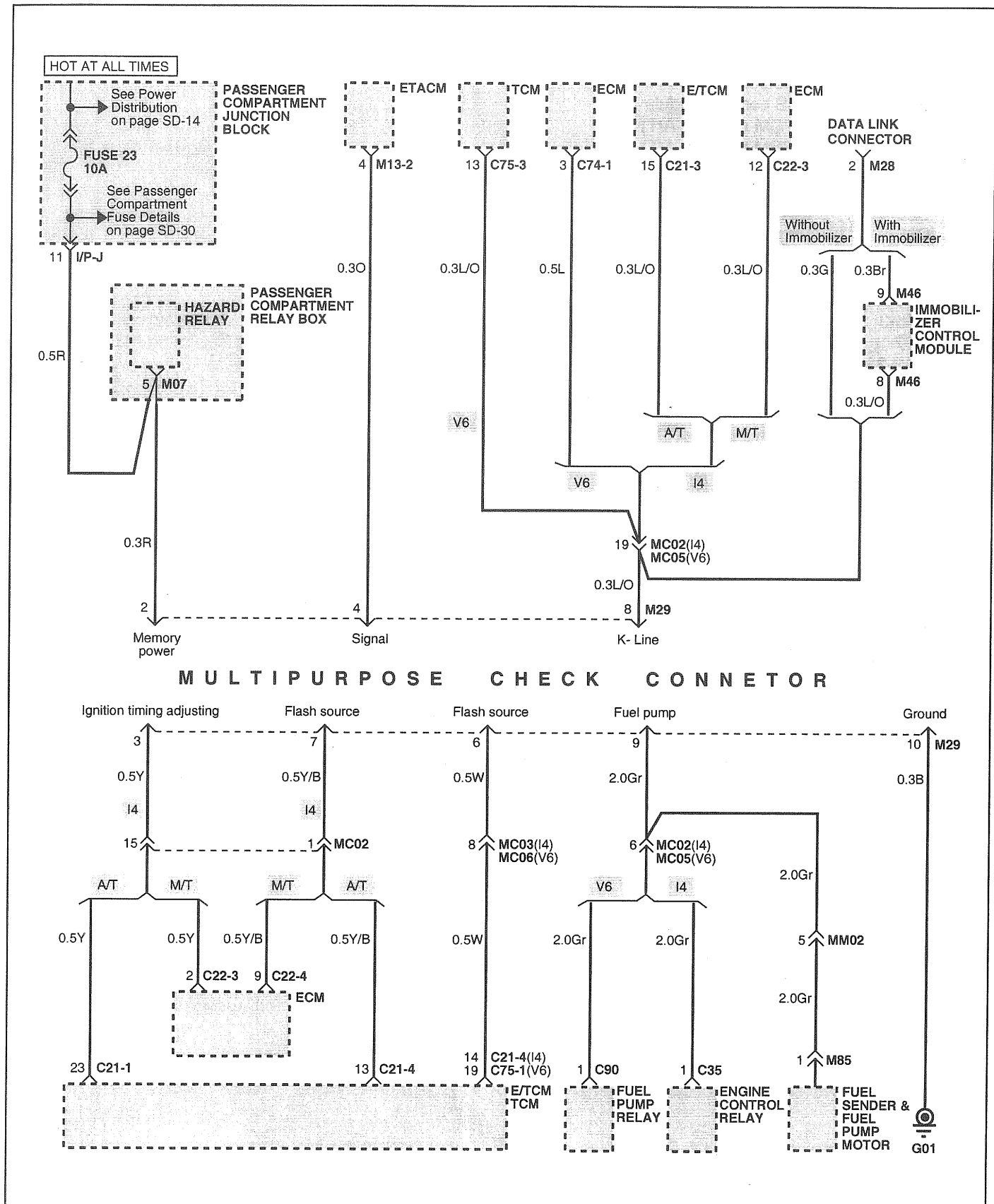
DATA LINK DETAILS

E2HA0050

DATA LINK CONNECTOR



MULTIPURPOSE CHECK CONNECTOR



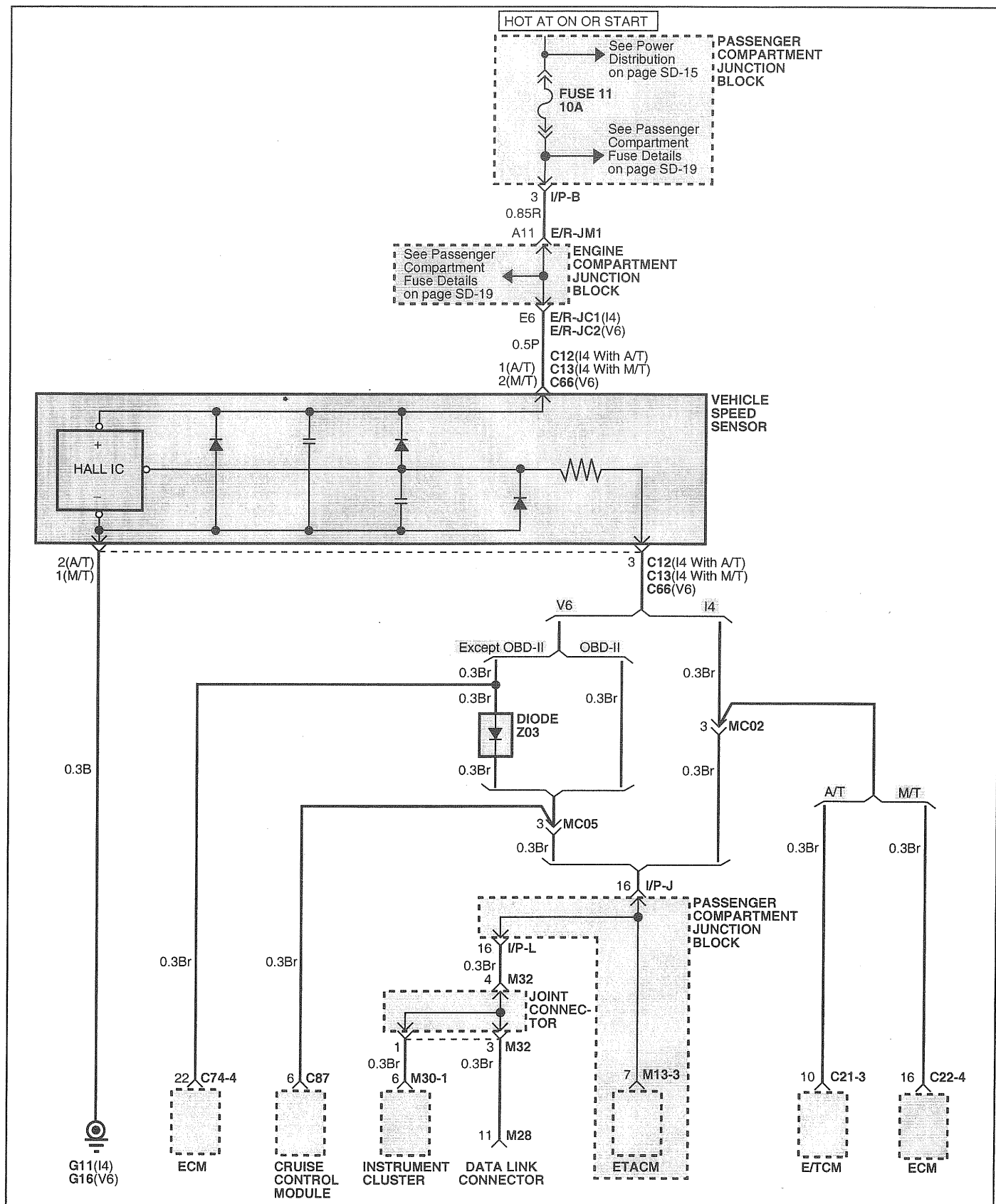
COMPONENT LOCATION INDEX

Components		Location reference-page
A01	SRS control module	CL-15
C20	ABS control module (I4)	CL-18
C21-1	E/TCM (I4 With A/T)	CL-18
C21-3	E/TCM (I4 With A/T)	CL-18
C21-4	E/TCM (I4 With A/T)	CL-18
C22-3	ECM (I4 With M/T)	CL-18
C22-4	ECM (I4 With M/T)	CL-18
C35	Engine control relay (I4)	CL-19
C73	ABS control module (V6)	CL-22
C74-1	ECM (V6)	CL-22
C75-1	TCM (V6)	CL-22
C75-3	TCM (V6)	CL-22
M07	Hazard relay	CL-2
M13-2	ETACM	CL-2
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
Connectors		
I/P-J		CL-11
I/P-K		CL-11
I/P-L		CL-11
MC01		CL-9
MC02		CL-9
MC04		CL-9
MC05		CL-9
MC06		CL-9
Grounds		
G01		CL-28

VEHICLE SPEED SENSOR

E2HA0070

VEHICLE SPEED SENSOR (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
C12	Vehicle speed sensor (I4 With A/T)	CL-18
C13	Vehicle speed sensor (I4 With M/T)	CL-18
C21-3	E/TCM (I4 With A/T)	CL-18
C22-4	ECM (I4 With M/T)	CL-18
C66	Vehicle speed sensor (V6)	CL-22
C74-4	ECM (V6)	CL-22
M28	Data link connector	CL-3
M30-1	Instrument cluster	CL-3
M34	Joint connector	CL-3
M70	Joint connector	CL-5
Connectors		
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JM1		CL-14
I/P-B		CL-11
I/P-J		CL-11
I/P-L		CL-11
MC02		CL-9
MC06		CL-9
Grounds		
G11		CL-29
G16		CL-29

Circuit Description

The vehicle speed sensor which is installed on the speedometer driven gear in the transaxle provides a pulse signal to the ECM and the ETACM.

Each of the module calculates the vehicle speed. In addition to the vehicle speed sensor, a wheel speed sensor installed on the right front wheel provides a direct analog pulse signal to the ECM and the ECM calculates the vehicle speed (V6 without ABS ONLY).

With the ignition switch in ON or START, battery voltage is supplied from fuse 11 to the vehicle speed sensor (VSS).

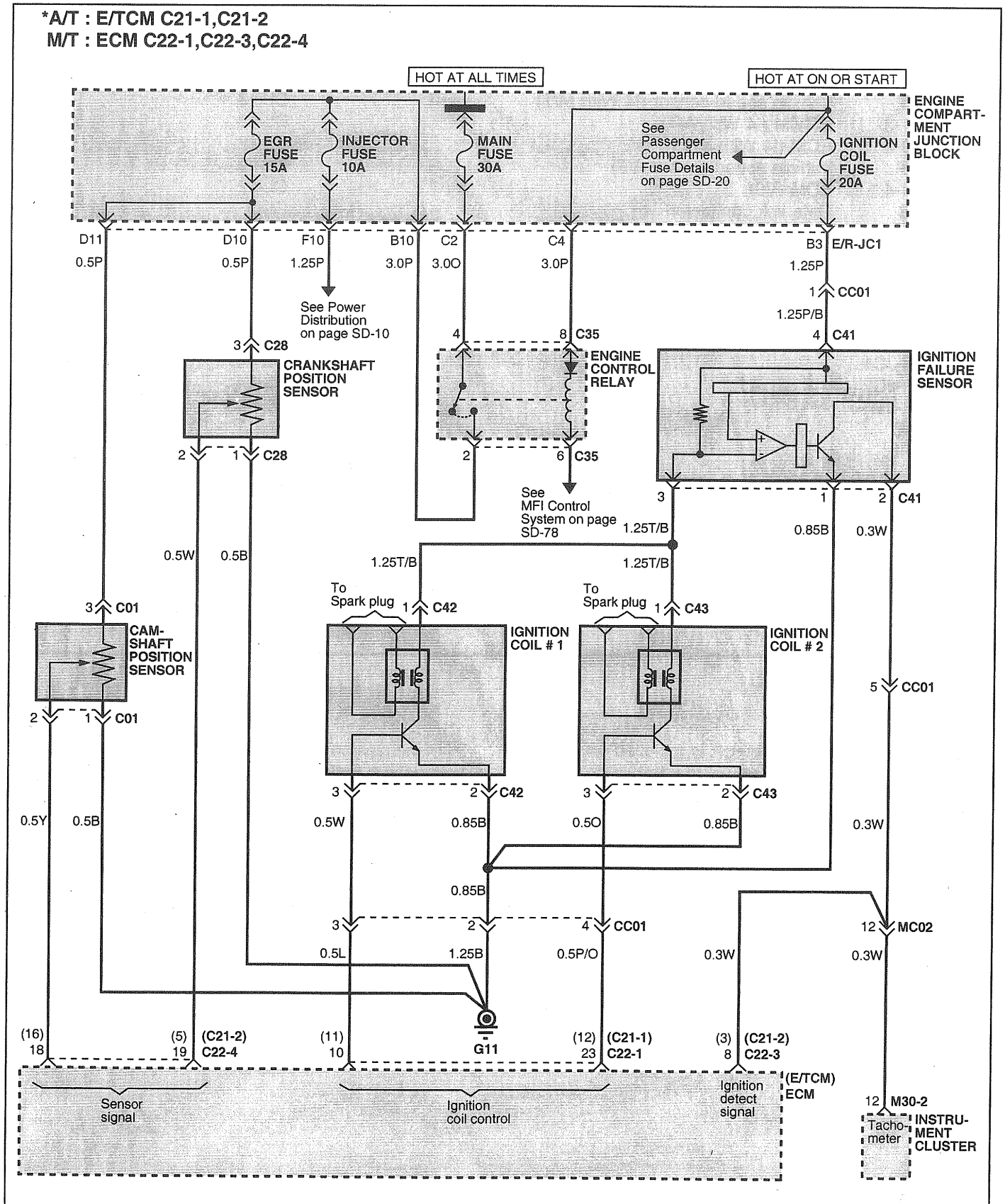
The sensor is grounded at G04.

The vehicle speed sensor (VSS) intermittently grounds the circuit, which generates a pulsed signal in it. The number of pulses per minute increases/decreases with the speed of the car.

IGNITION SYSTEM (I4)

E2HA0080

IGNITION SYSTEM (I4) (1)



E2HA008A

COMPONENT LOCATION INDEX

Components		Location reference-page
C01	Camshaft position sensor	CL-17
C21-1	E/TCM (A/T)	CL-18
C21-3	E/TCM (A/T)	CL-18
C22-1	ECM (M/T)	CL-18
C22-3	ECM (M/T)	CL-18
C22-4	ECM (M/T)	CL-18
C28	Crankshaft position sensor	CL-19
C35	Engine control relay	CL-19
C41	Ignition failure sensor	CL-20
C42	Ignition coil #1	CL-20
C43	Ignition coil #2	CL-20
M30-2	Instrument cluster	CL-3
Connectors		
CC01		CL-24
E/R-JC1		CL-14
MC02		CL-9
Grounds		
G11		CL-29

Circuit Description

With the ignition switch in On or START, battery voltage is applied to the ignition coils.

As the crankshaft turns, the engine control module (ECM) receives the sensor signals from the CKP sensor and CMP sensor. Based on these signal inputs, the engine control module (ECM) controls the ignition coils by turning the power transistor (built-in ignition coil) on and off.

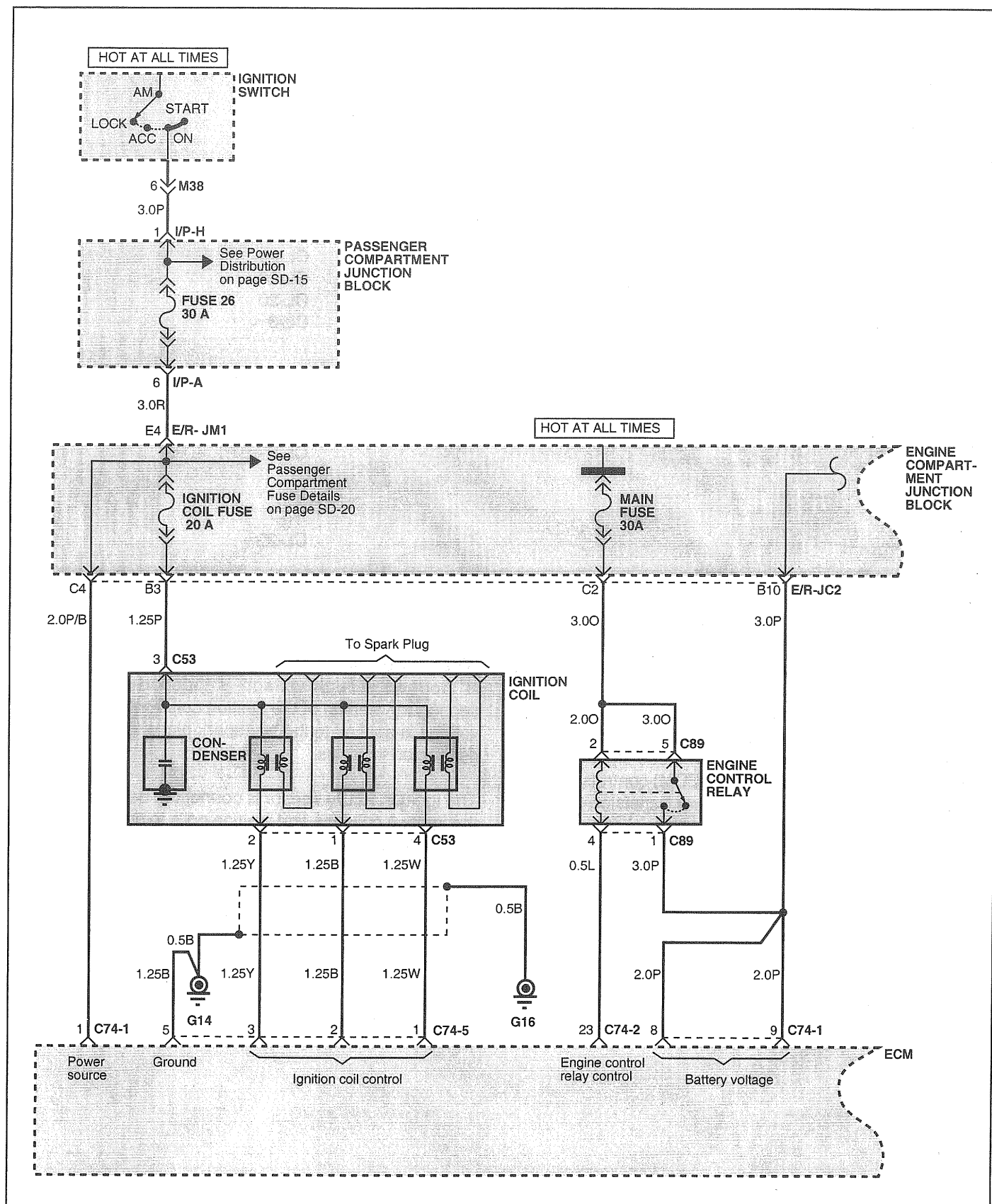
When current flow through the primary winding is stopped, a high voltage is induced in the secondary winding of the ignition coil. The high voltage is applied to the two spark plugs that are connected in series.

The ignition failure sensor is connected between the ignition coil fuse and ignition coils to detect ignition failure.

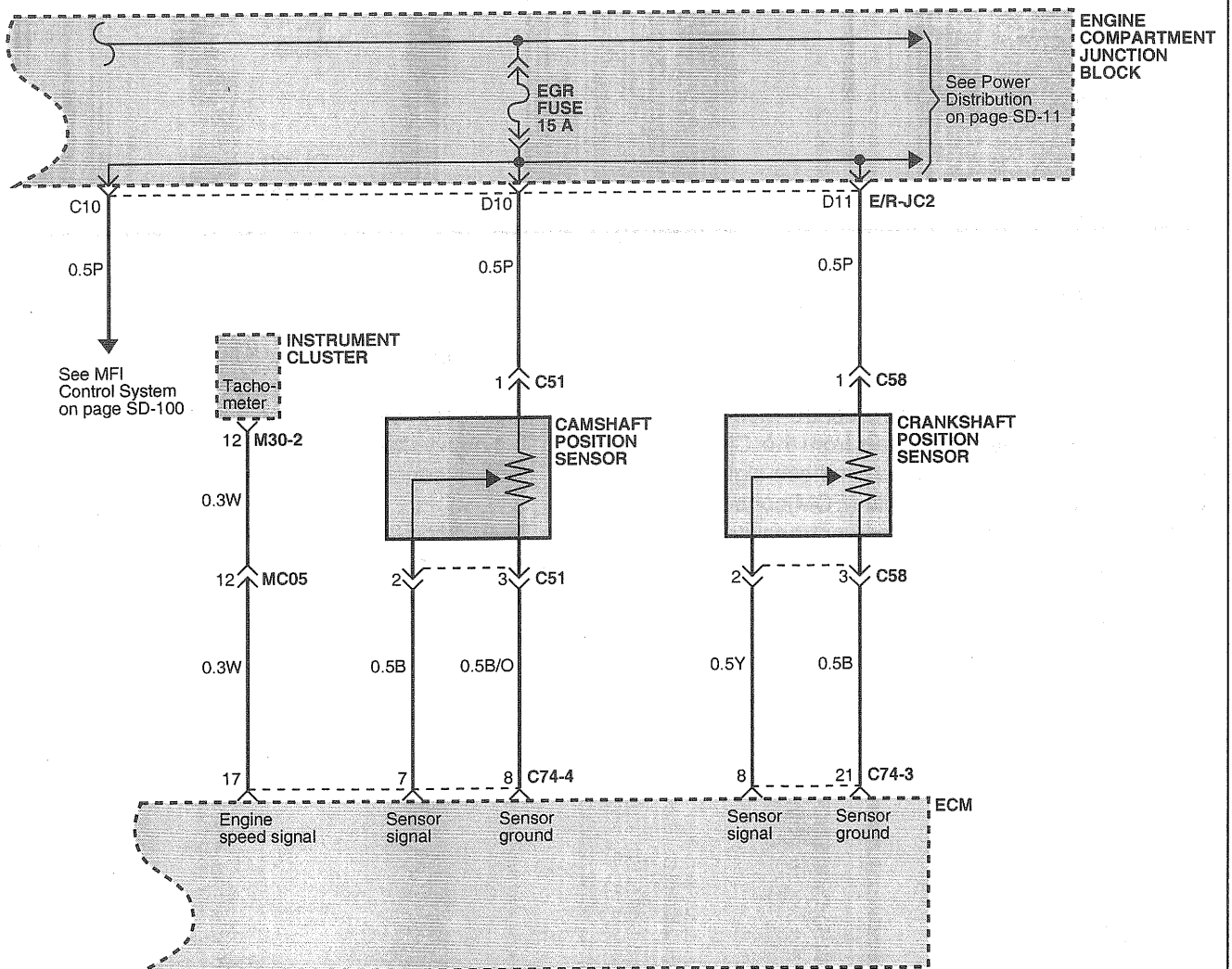
IGNITION SYSTEM (V6)

E2HA0090

IGNITION SYSTEM (V6) (1)



IGNITION SYSTEM (V6) (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
C51	Camshaft position sensor	CL-20
C53	Ignition coil	CL-21
C58	Crankshaft position sensor	CL-21
C74-1	ECM	CL-22
C74-2	ECM	CL-22
C74-3	ECM	CL-22
C74-4	ECM	CL-22
C74-5	ECM	CL-22
C89	Engine control relay	CL-24
M30-2	Instrument cluster	CL-3
M38	Ignition switch	CL-3
Connectors		
E/R-JC2		CL-14
E/R-JM2		CL-14
I/P-A		CL-11
I/P-H		CL-11
MC05		CL-9
Grounds		
G14		CL-29
G16		CL-29

Circuit Description

With the ignition switch in On or START, battery voltage is applied to the ignition coils.

As the crankshaft turns, the engine control module (ECM) receives the sensor signals from the CKP sensor and CMP sensor. Based on these signal inputs, the engine control module (ECM) controls the ignition coils by turning the power transistor (built-in ignition coil) on and off.

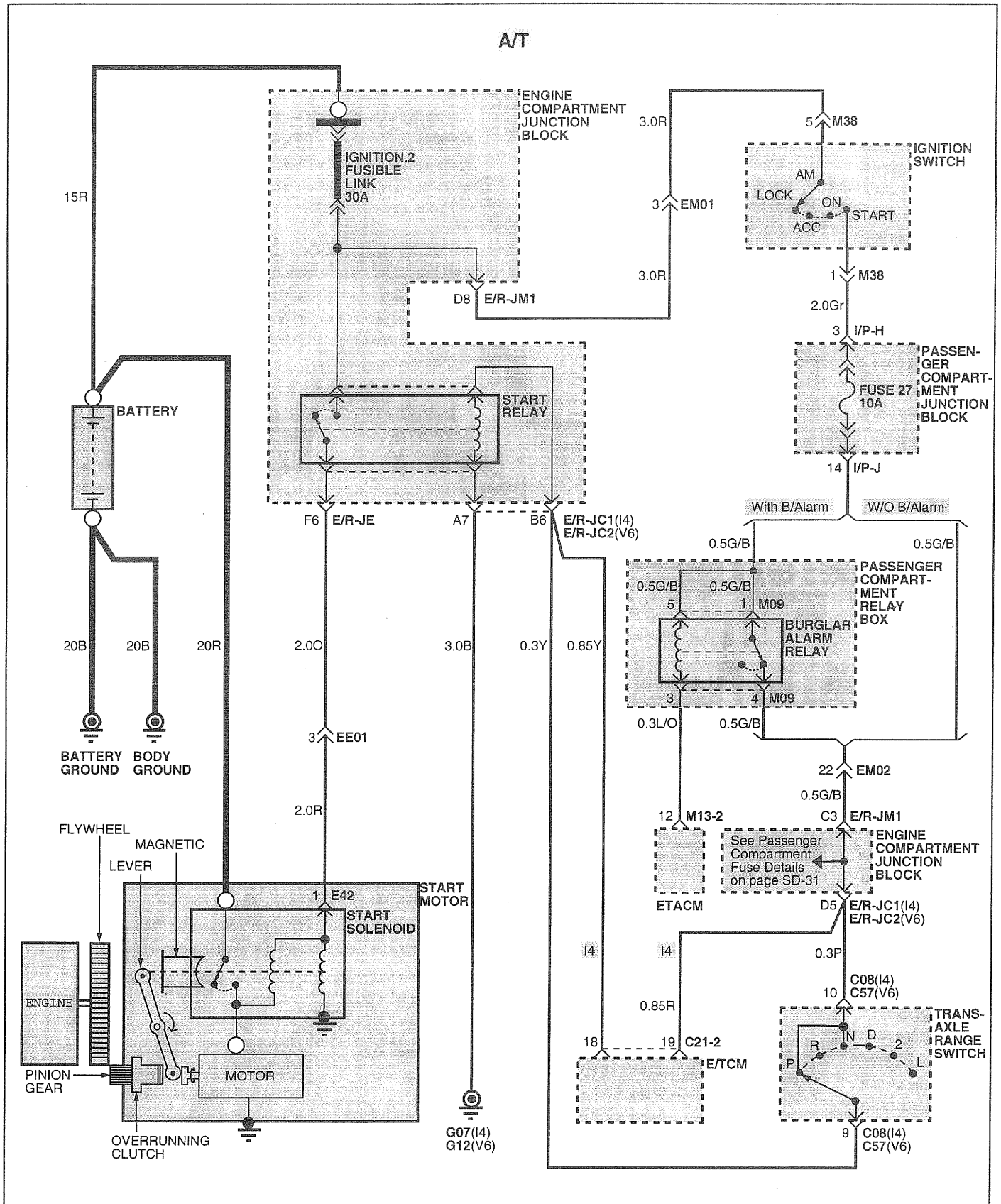
When current flow through the primary winding is stopped, a high voltage is induced in the secondary winding of the ignition coil. The high voltage is applied to the two spark plugs that are connected in series.

The ignition failure sensor is connected between the ignition coil fuse and ignition coils to detect ignition failure.

STARTING SYSTEM

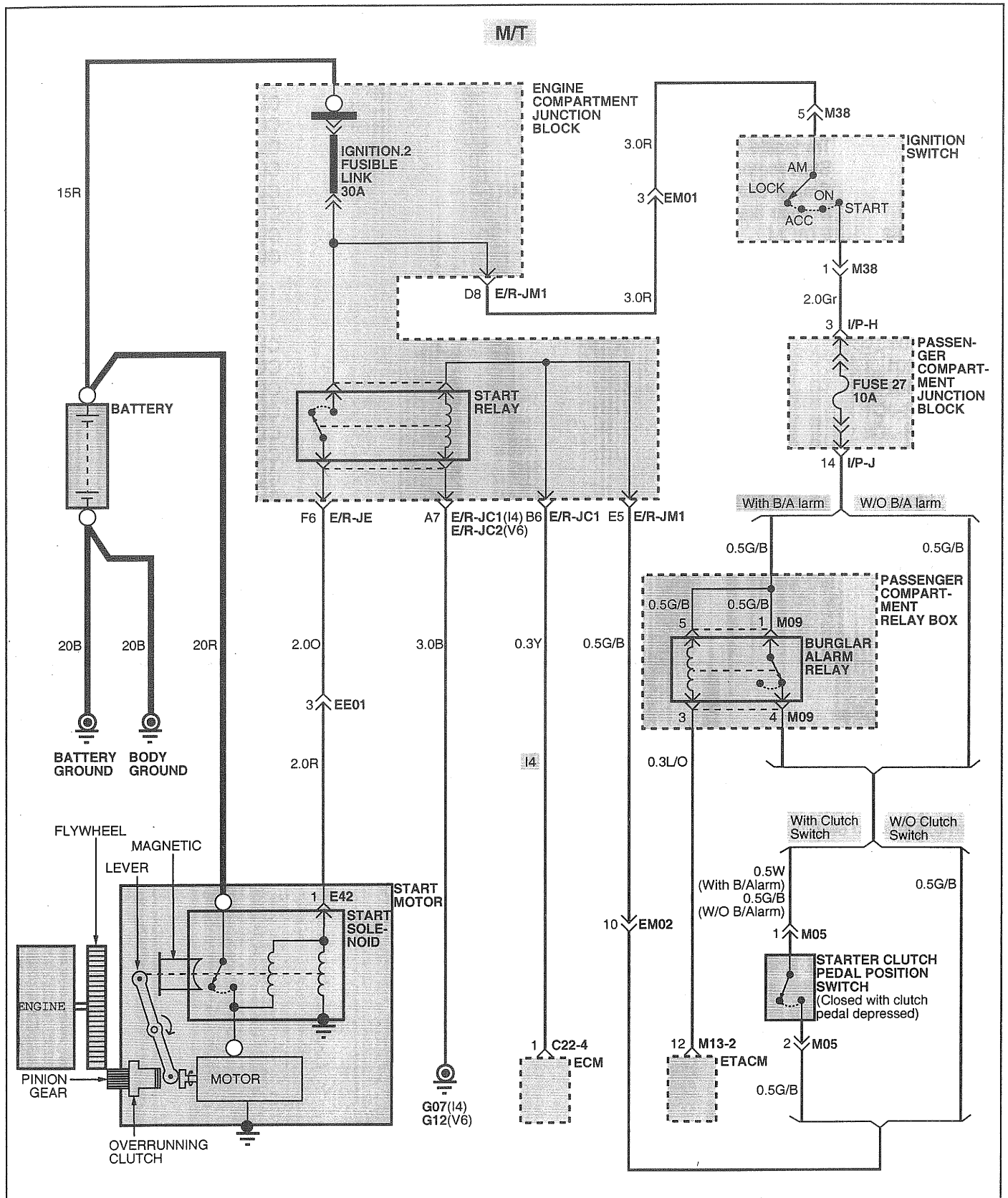
E2HA0110

STARTING SYSTEM (1)



E2HA011A

STARTING SYSTEM (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
C08	Transaxle range switch (I4)	CL-17
C21-2	E/TCM (I4 With A/T)	CL-18
C22-4	ECM (I4 With M/T)	CL-18
C57	Transaxle range switch (V6)	CL-21
E42	Start motor solenoid	CL-14
M05	Starter clutch pedal position switch(M/T)	CL-2
M09	Burglar alarm relay	CL-2
M13-2	ETACM	CL-2
M38	Ignition switch	CL-3
Connectors		
EE01		CL-14
EM01		CL-14
EM02		CL-14
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
I/P-H		CL-11
I/P-J		CL-11
Grounds		
G07		CL-28
G12		CL-29

Circuit Description

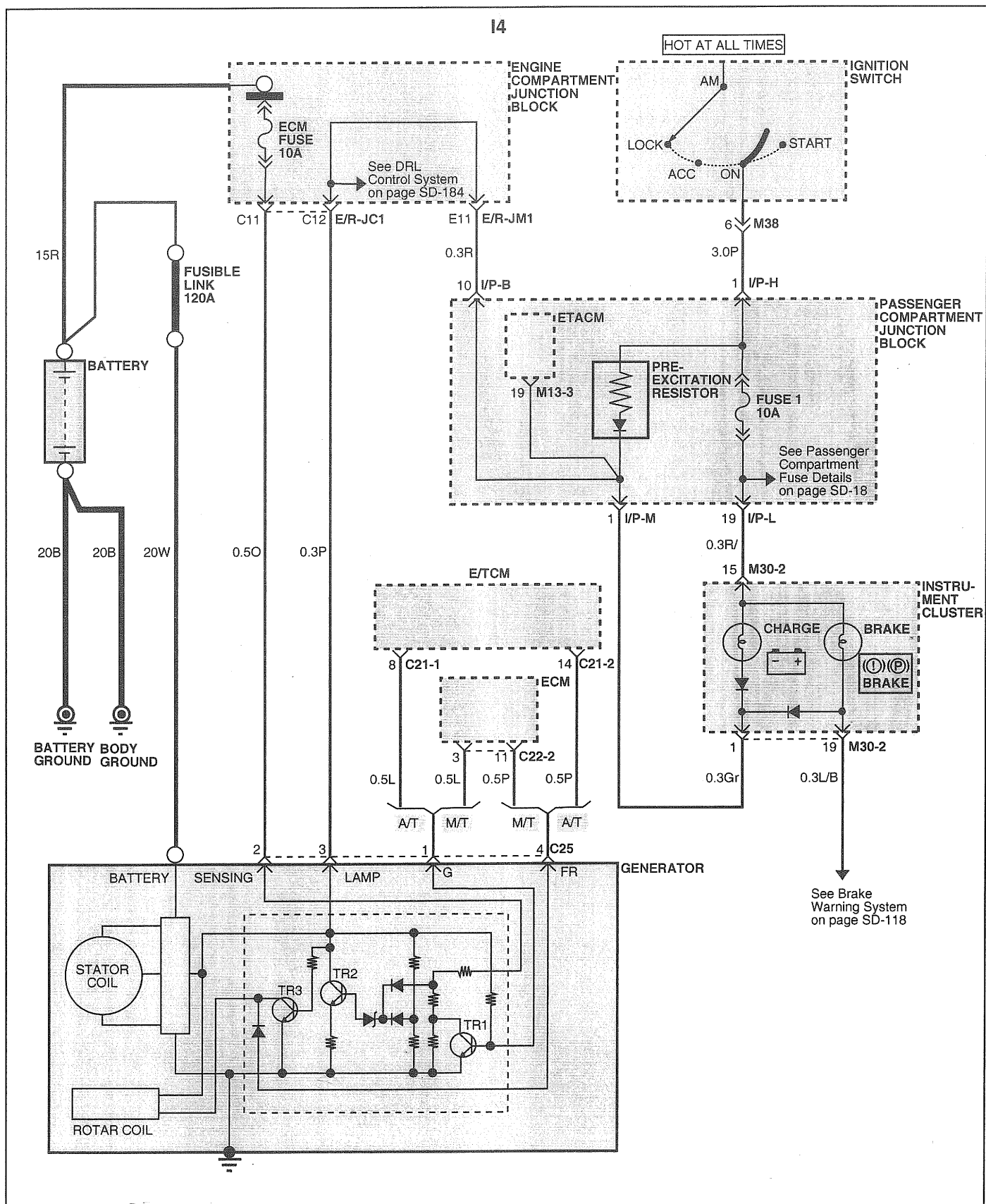
Battery voltage is applied at all times from the positive battery terminal to the ignition switch and the normally open start relay contacts.

When the ignition switch is turned to START and the transaxle range switch (automatic transaxle) in P/N position or starter clutch pedal position switch (Manual transaxle) is closed, battery voltage is applied to the starter relay coils through closed contact of the burglar alarm relay(with burglar alarm ONLY). The starter relay coils energize, the start relay contacts closed and battery voltage is applied to the starter solenoid. The motor engages to start the engine.

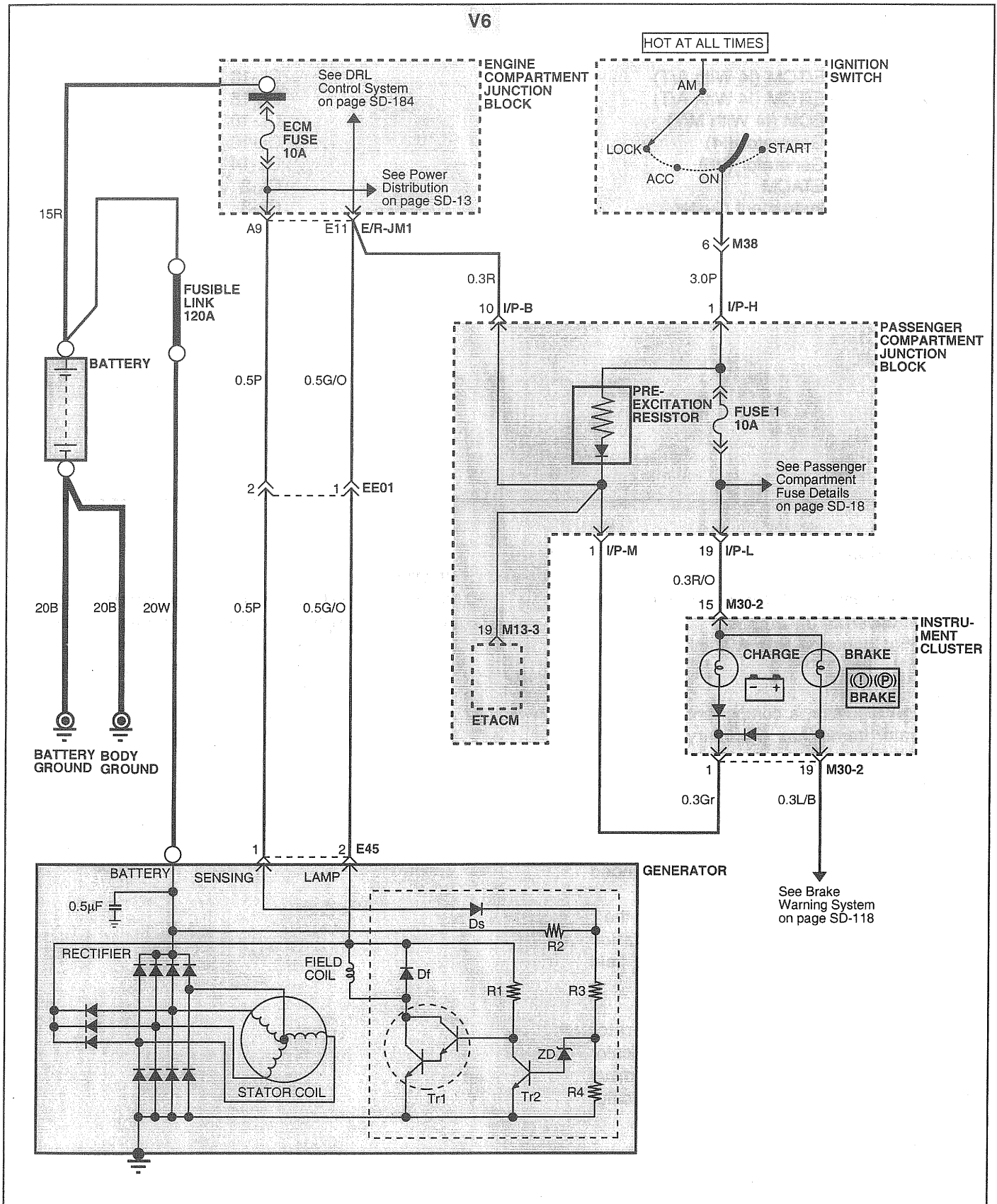
CHARGING SYSTEM

E2HA0100

CHARGING SYSTEM (1)



CHARGING SYSTEM (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
C21-1	E/TCM (I4 With A/T)	CL-18
C21-2	E/TCM (I4 With A/T)	CL-18
C22-2	ECM (I4 With M/T)	CL-18
C25	Generator (I4)	CL-19
E45	Generator (V6)	CL-14
M13-3	ETACM	CL-2
M30-2	Instrument cluster	CL-3
M38	Ignition switch	CL-3
Connectors		
EE01		CL-14
E/R-JC1		CL-14
E/R-JM1		CL-14
I/P-A		CL-11
I/P-B		CL-11
I/P-H		CL-11
I/P-L		CL-11
I/P-M		CL-11

Circuit Description

The generator generates AC voltage in its windings as it is belt-driven by the engine.

The rectifier converts this AC voltage to DC voltage.

The voltage regulator, a component included in the generator frame, has a primary function of controlling the generator's output to meet electrical system requirements. The regulator also controls the charge warning lamp.

With the engine not running and the ignition switch in ON, terminal L of the regulator is grounded internally and the indicator lights up.

A small amount of current provided by both the charge warning lamp and the pre-excitation resistor is used to "excite" the magnetic field windings to start the charging process.

With the engine running and the generator charging, terminal L voltage rises and the indicator goes out. If the generator fails to charge, terminal L remains below battery voltage and the indicator remains lit.

V6 ONLY

When electrical loads (head lamp, air conditioning system, etc) applied, the current into the rotor coil increased. The "FR" terminal in the generator monitor the above current change and send signals to the ECM.

According to the signals, the ECM controls the "G" terminal (Ground) in the generator.

E2HA0120



COMPONENT LOCATION INDEX

Components		Location reference-page
C21-1	E/TCM (I4 With A/T)	CL-18
C22-1	ECM (I4 With M/T)	CL-18
C35	Engine control relay (I4)	CL-19
C74-4	ECM (V6)	CL-22
C89	Engine control relay (V6)	CL-24
E06	Condenser fan motor	CL-12
E25	Radiator fan motor	CL-13
Connectors		
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JE		CL-14
Grounds		
G06		CL-28

Circuit Description

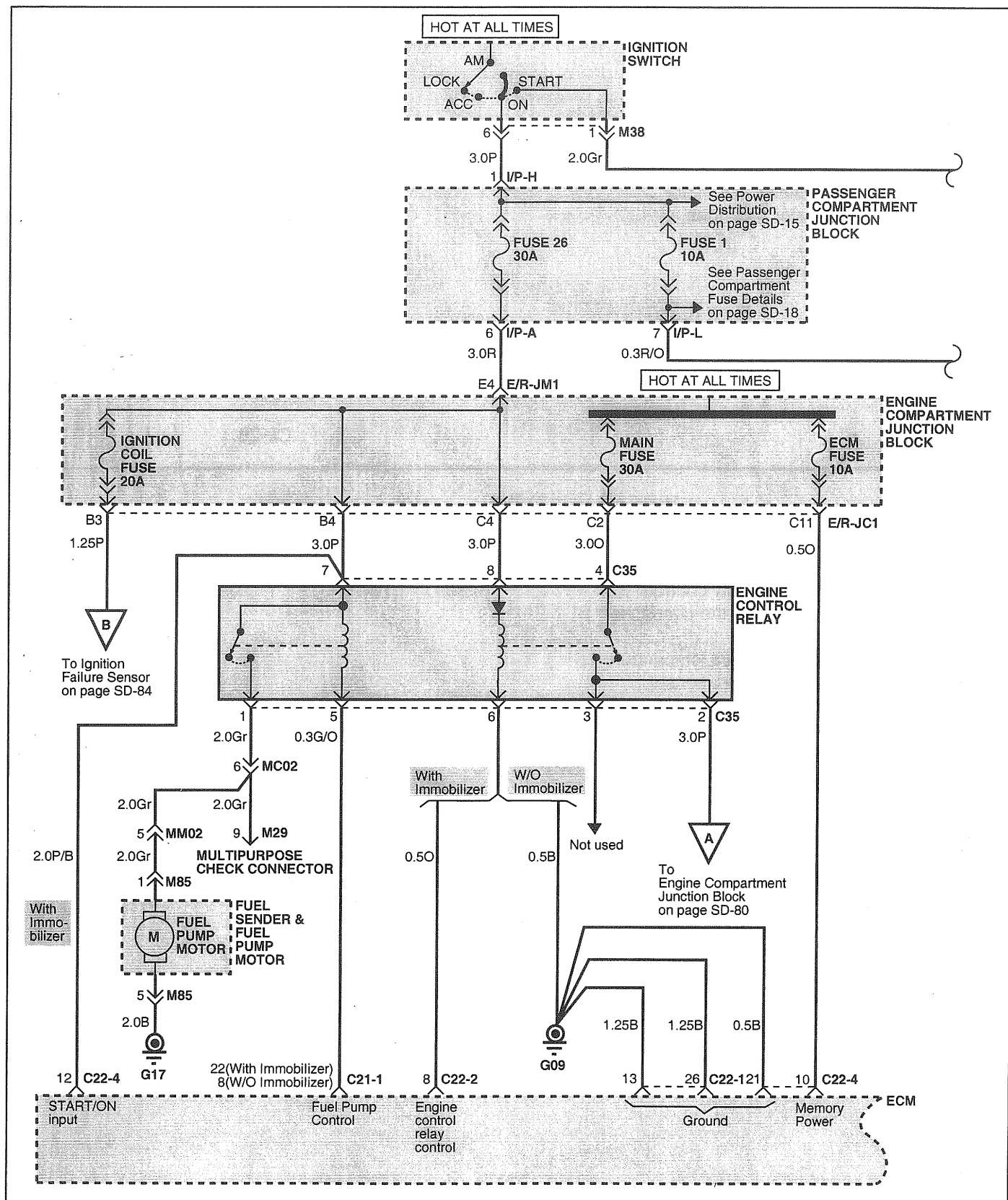
The engine control module (ECM)/engine transaxle control module (E/TCM) controls the operation of the radiator fan and the condenser fan.

The control module monitors coolant temperature through engine coolant temperature sensor.

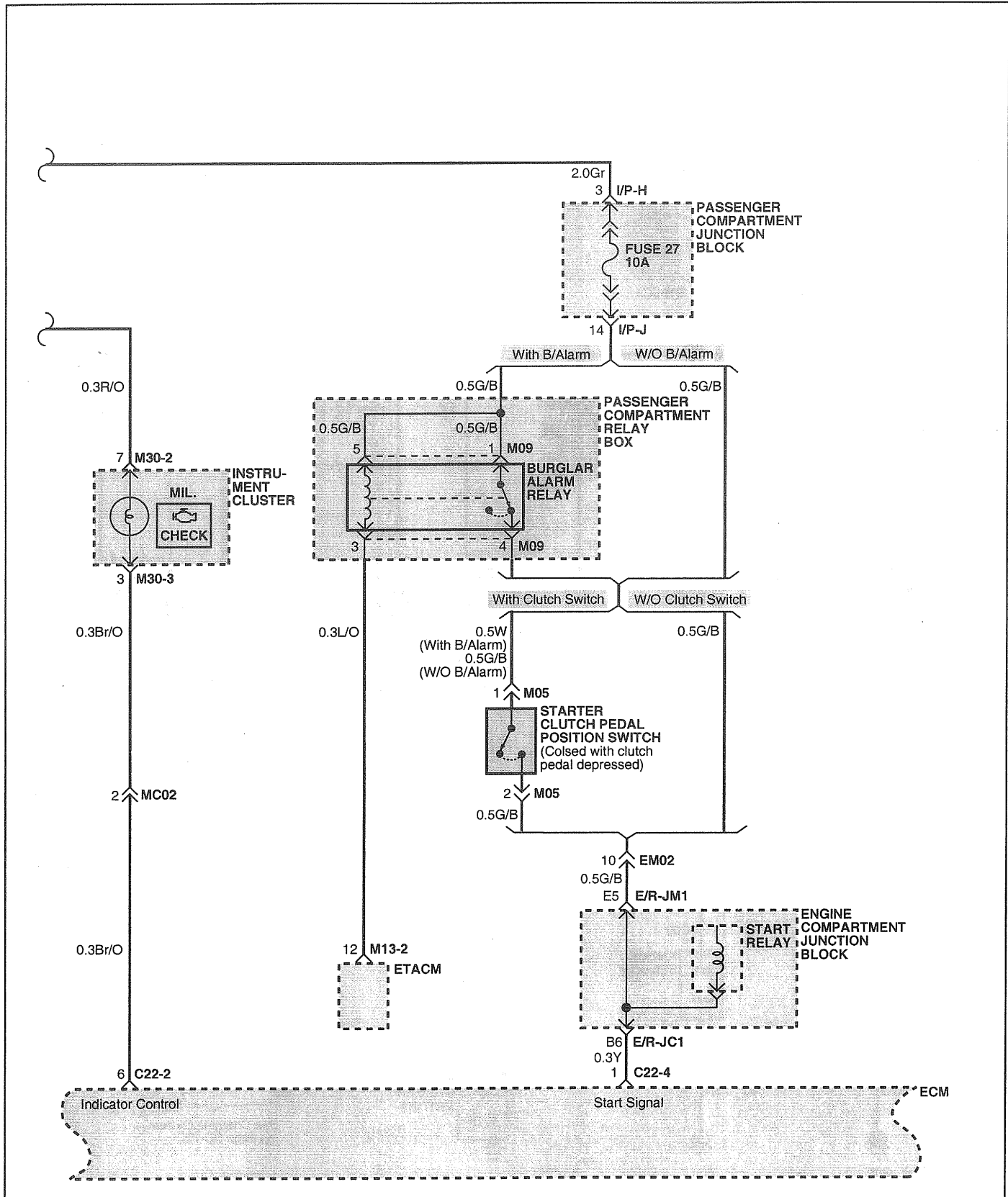
The module also monitors A/C operation through the A/C ON input and triple switch input. Using these signal inputs, the module will ground the coil of the appropriate relays to provide optimal fan operation.

MFI CONTROL SYSTEM (I4 WITH M/T) E2HA0130

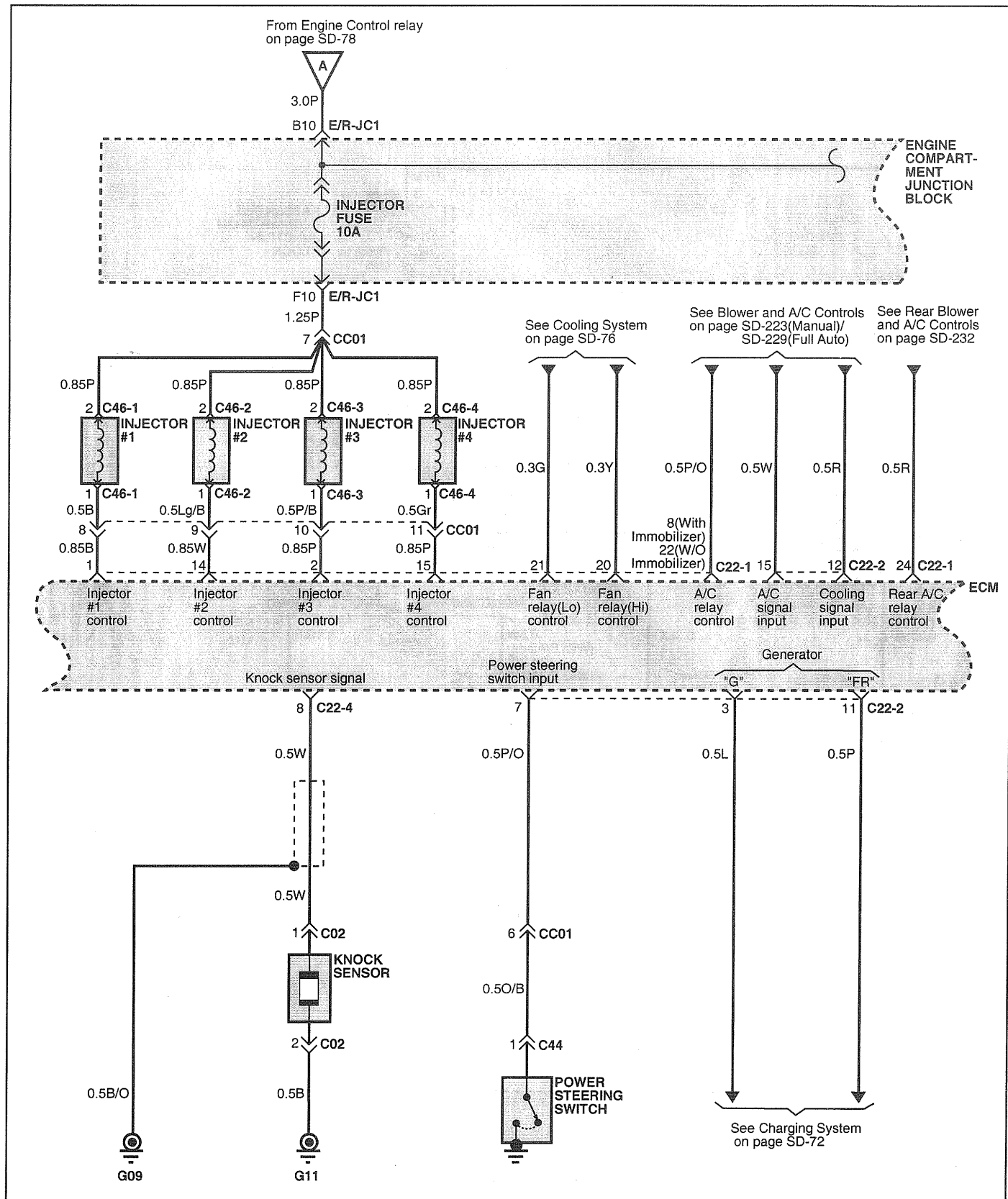
MFI CONTROL SYSTEM (I4 WITH M/T) (1)



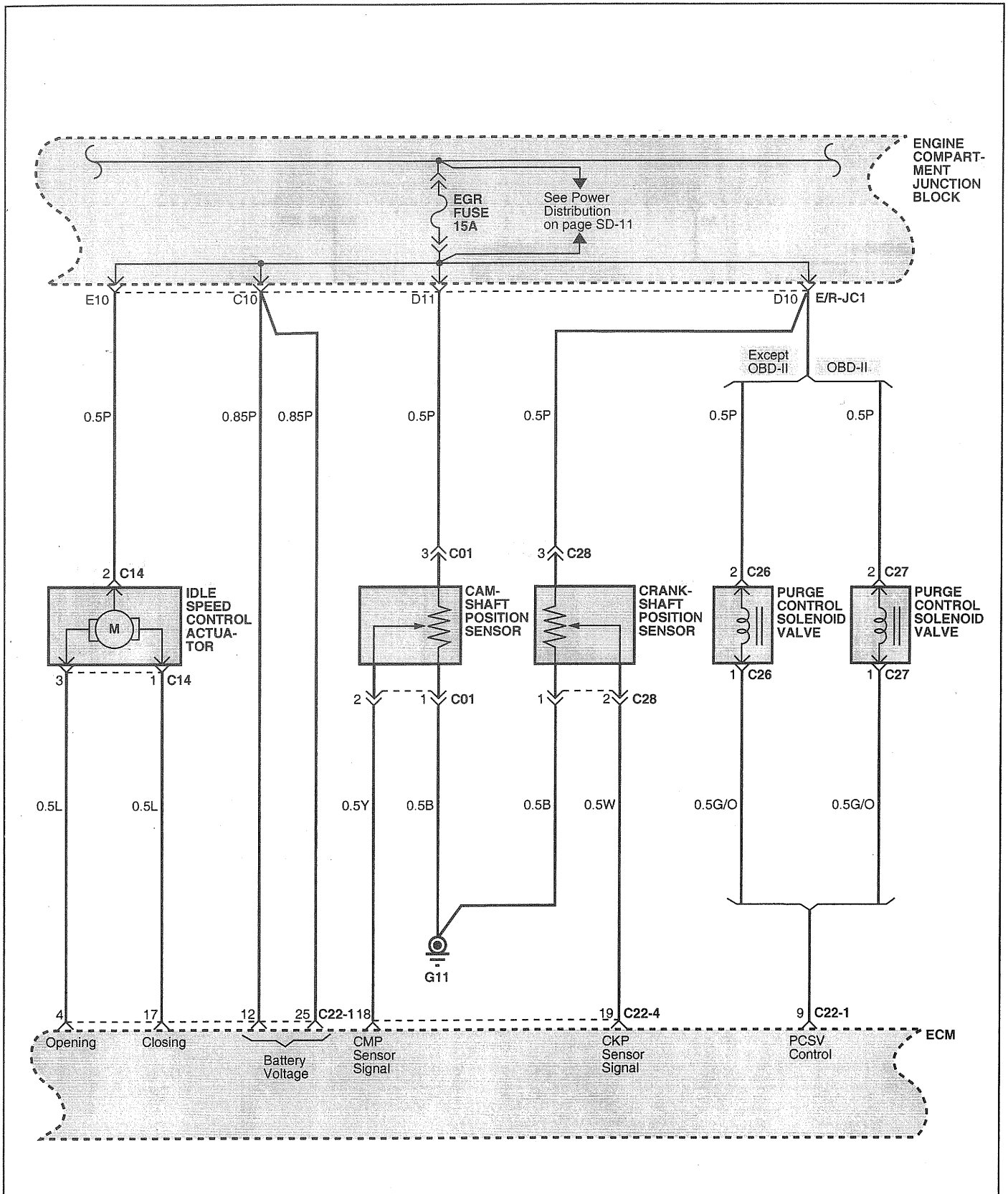
MFI CONTROL SYSTEM (I4 WITH M/T) (2)



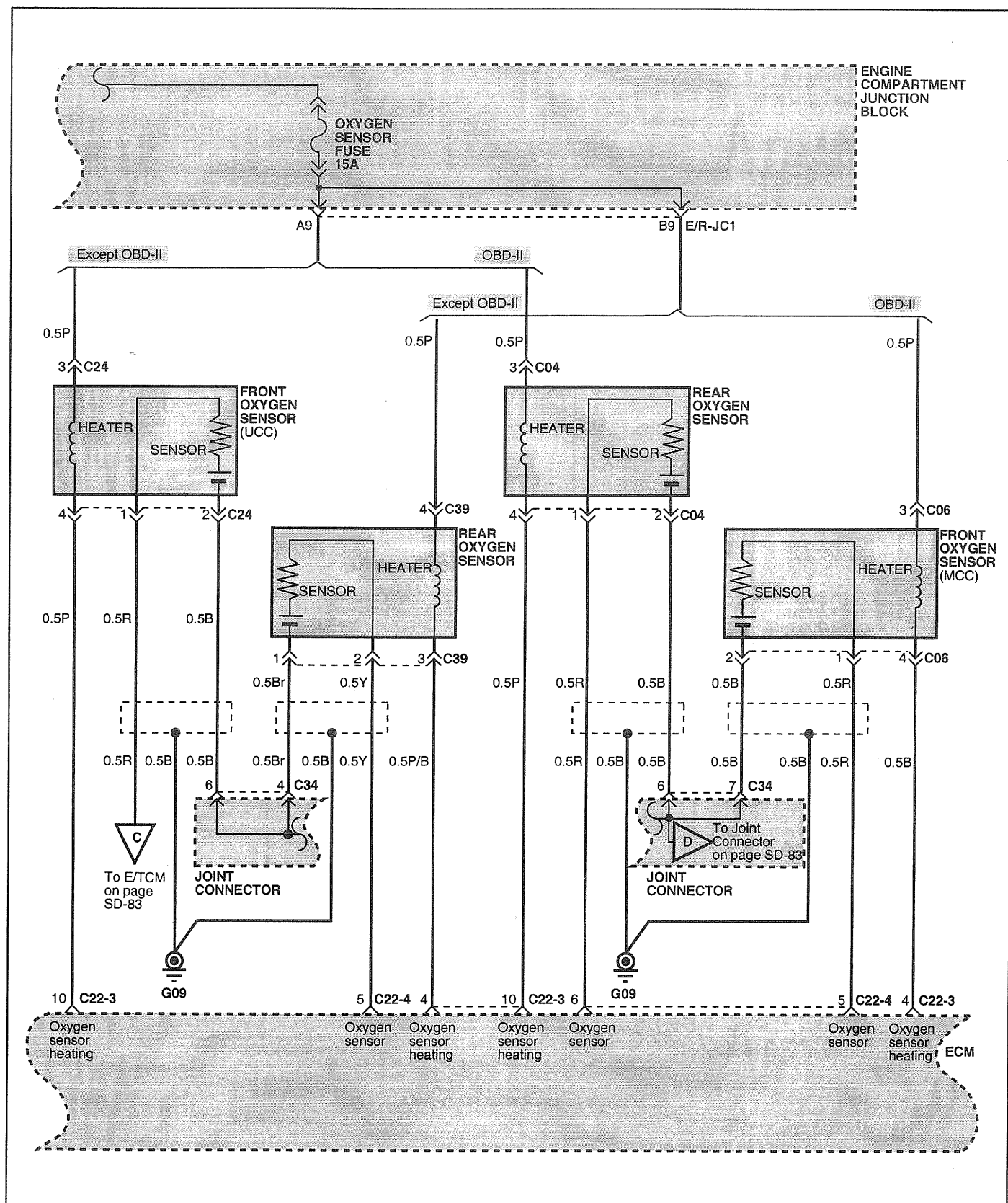
MFI CONTROL SYSTEM (I4 WITH M/T) (3)



MFI CONTROL SYSTEM (I4 WITH M/T) (4)

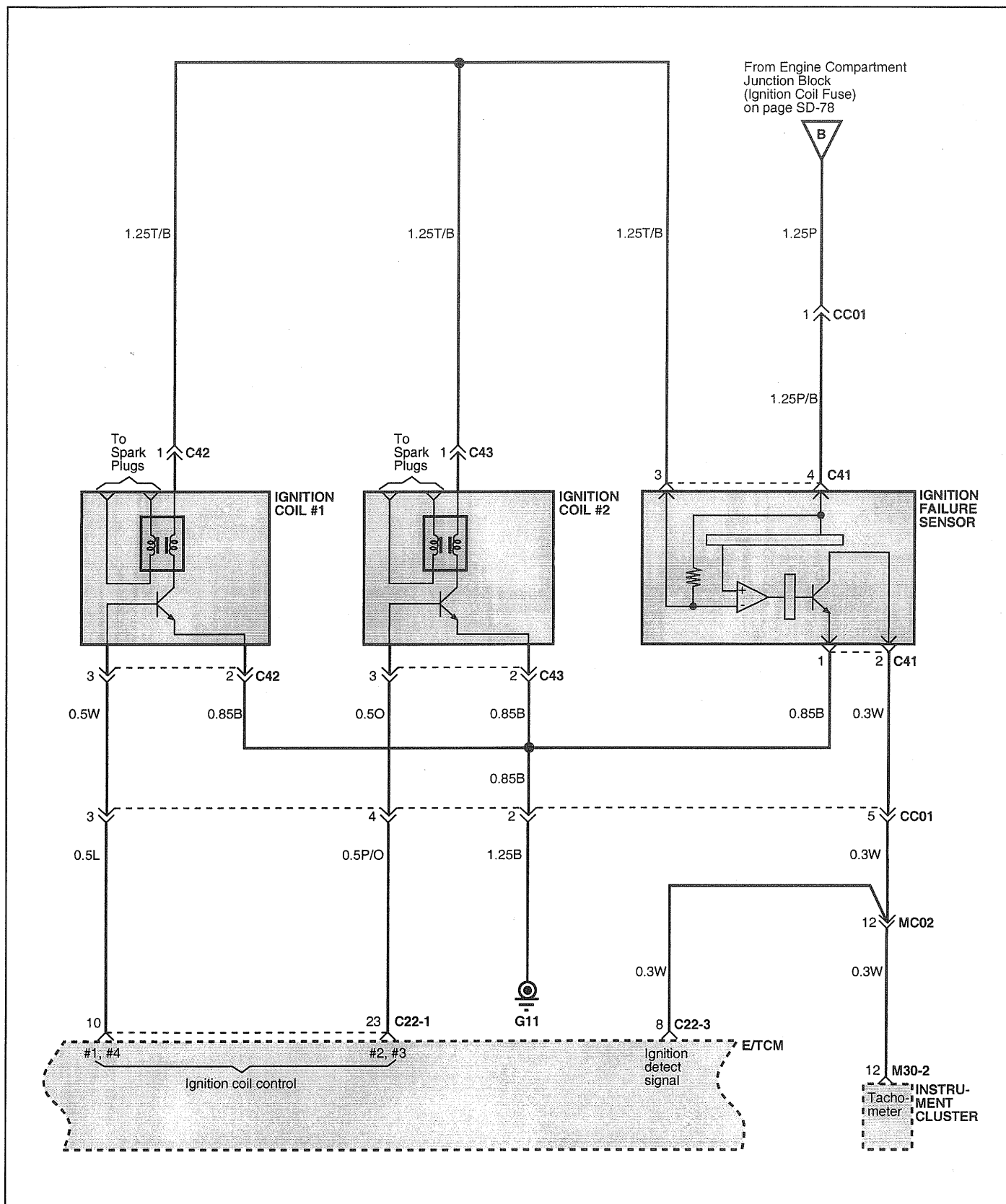


MFI CONTROL SYSTEM (I4 WITH M/T) (5)

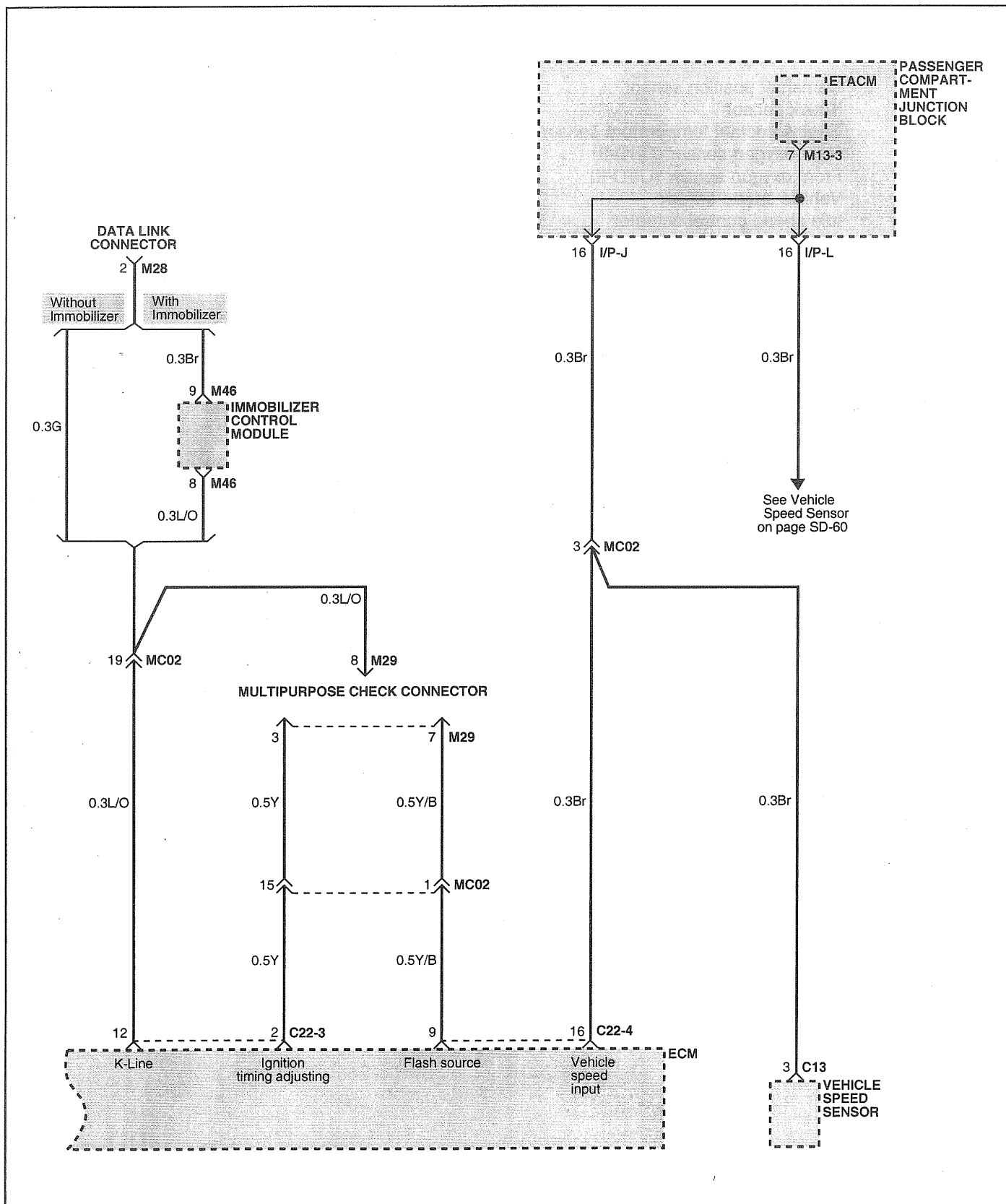


[illegible]

MFI CONTROL SYSTEM (I4 WITH M/T) (7)



MFI CONTROL SYSTEM (I4 WITH M/T) (8)



COMPONENT LOCATION INDEX (1)

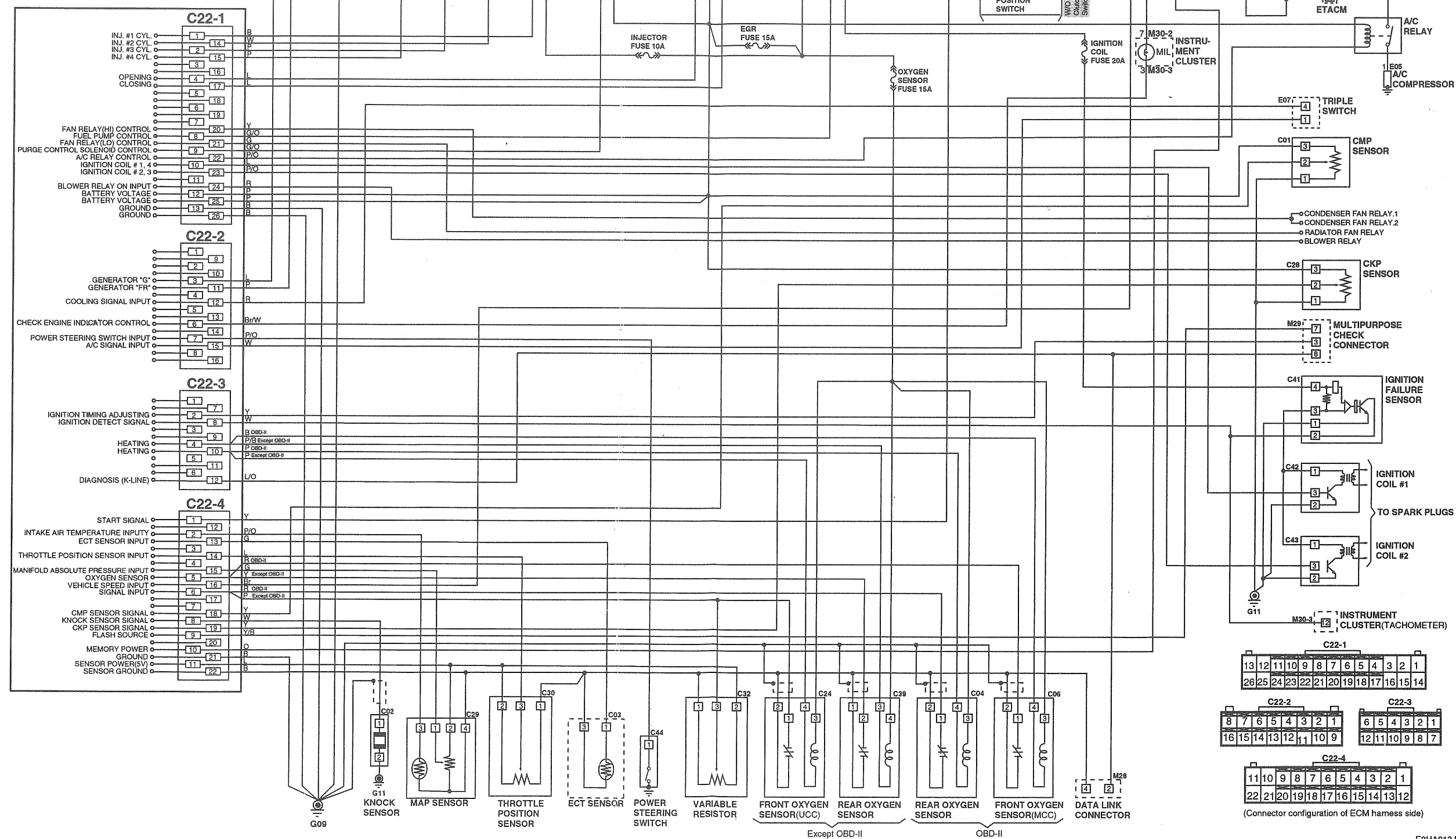
Components		Location reference-page
C01	Camshaft position sensor	CL-17
C02	Knock sensor	CL-17
C03	Engine coolant temperature sensor	CL-17
C04	Rear oxygen sensor (OBD-II)	CL-17
C06	Front oxygen sensor (OBD-II)	CL-17
C13	Vehicle speed sensor	CL-18
C14	Idle speed control actuator	CL-18
C22-1	ECM	CL-18
C22-2	ECM	CL-18
C22-3	ECM	CL-18
C22-4	ECM	CL-18
C24	Front oxygen sensor (Except OBD-II)	CL-19
C26	Purge control solenoid valve (Except OBD-II)	CL-19
C27	Purge control solenoid valve (OBD-II)	CL-19
C28	Crankshaft position sensor	CL-19
C29	Manifold absolute pressure sensor	CL-19
C30	Throttle position sensor	CL-19
C34	Joint connector	CL-19
C35	Engine control relay	CL-19
C39	Rear oxygen sensor (Except OBD-II)	CL-20
C41	Ignition failure sensor	CL-20
C42	Ignition coil #1	CL-20
C43	Ignition coil #2	CL-20
C44	Power steering switch	CL-20
C46-1	Injector #1	CL-20
C46-2	Injector #2	CL-20
C46-3	Injector #3	CL-20
C46-4	Injector #4	CL-20
M05	Starter clutch pedal position switch	CL-2
M09	Burglar alarm relay	CL-2
M13-2	ETACM	CL-2
M13-3	ETACM	CL-2
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M38	Ignition switch	CL-3
M85	Fuel sender & Fuel pump motor	CL-5

MFI CONTROL SYSTEM

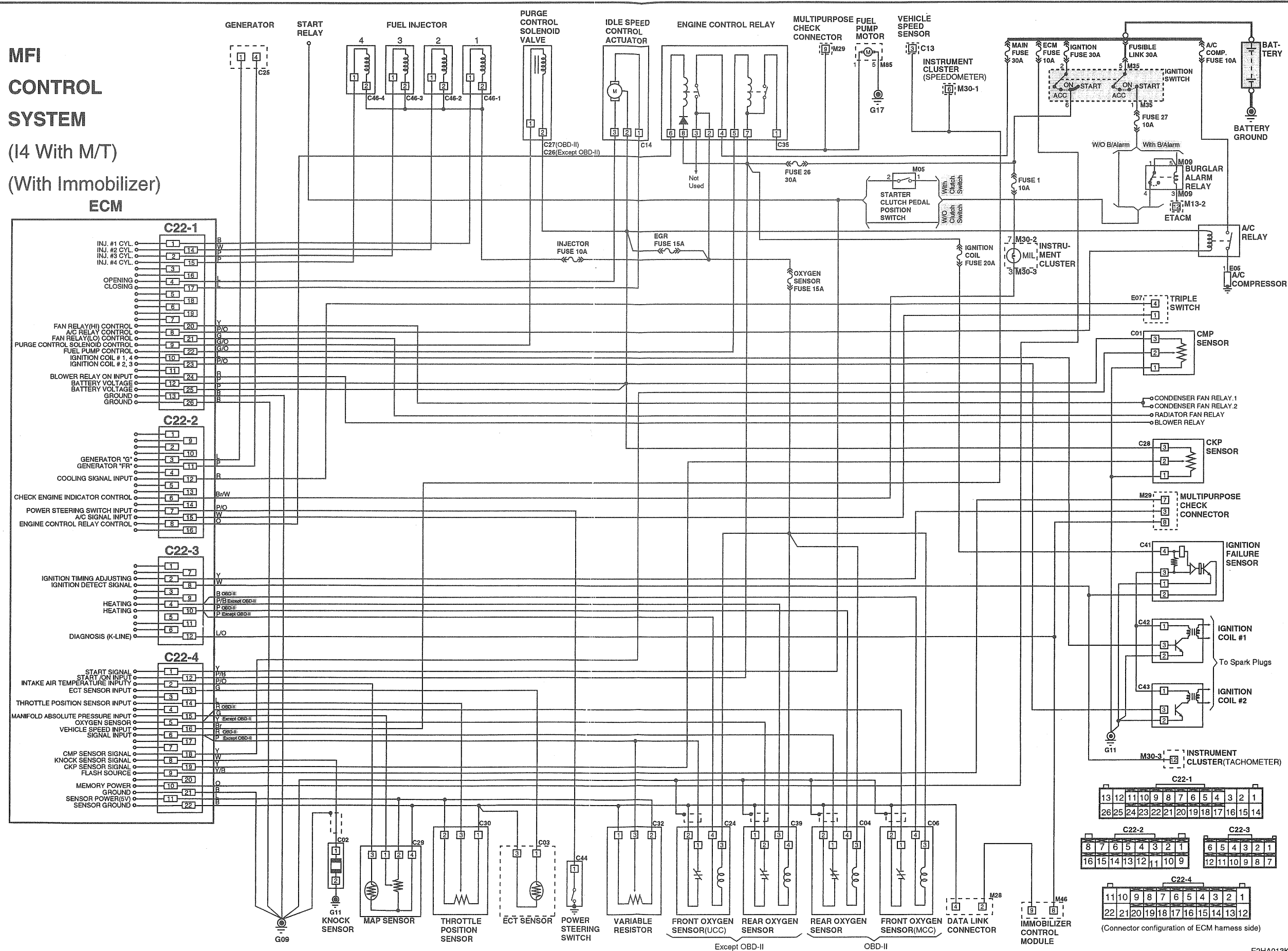
(I4 With M/T)

(Without Immobilizer)

ECM



MFI CONTROL SYSTEM (I4 With M/T) (With Immobilizer) **ECM**



COMPONENT LOCATION INDEX (2)

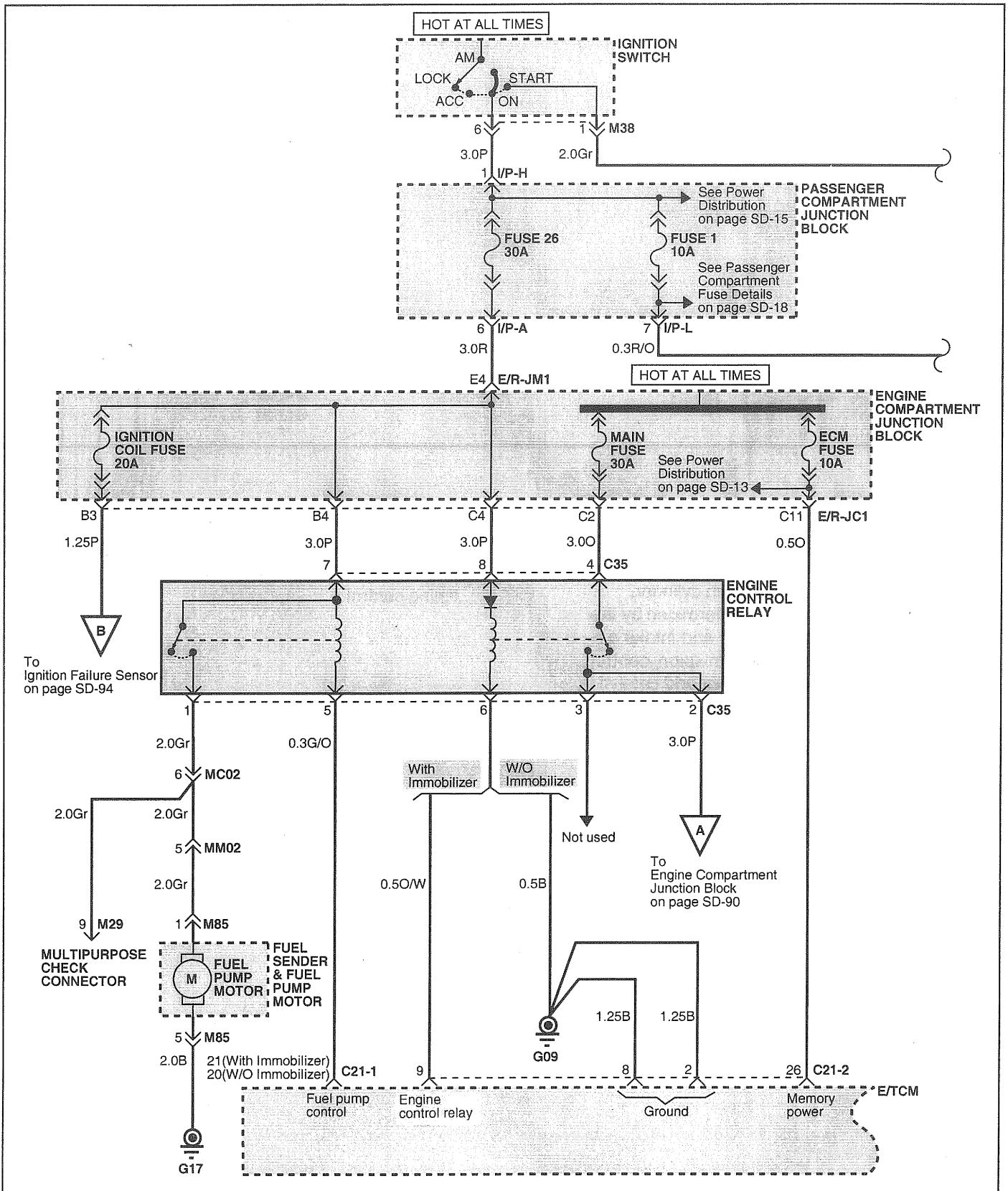
Connectors	Location reference-page
CC01	CL-24
EM02	CL-14
E/R-JC1	CL-14
E/R-JM1	CL-14
I/P-A	CL-11
I/P-H	CL-11
I/P-J	CL-11
I/P-L	CL-11
MC02	CL-9
MM02	CL-10
Grounds	
G09	CL-29
G11	CL-29
G17	CL-29

Circuit Description

The Multiport Fuel Injection (MFI) control system is an electronic fuel metering system with fuel injectors near the inlet port of each cylinder. The amount of fuel injection is determined by the ECM according to engine speed and intake air-flow quantity measured. The emission control system includes the oxygen sensor and catalytic converters.

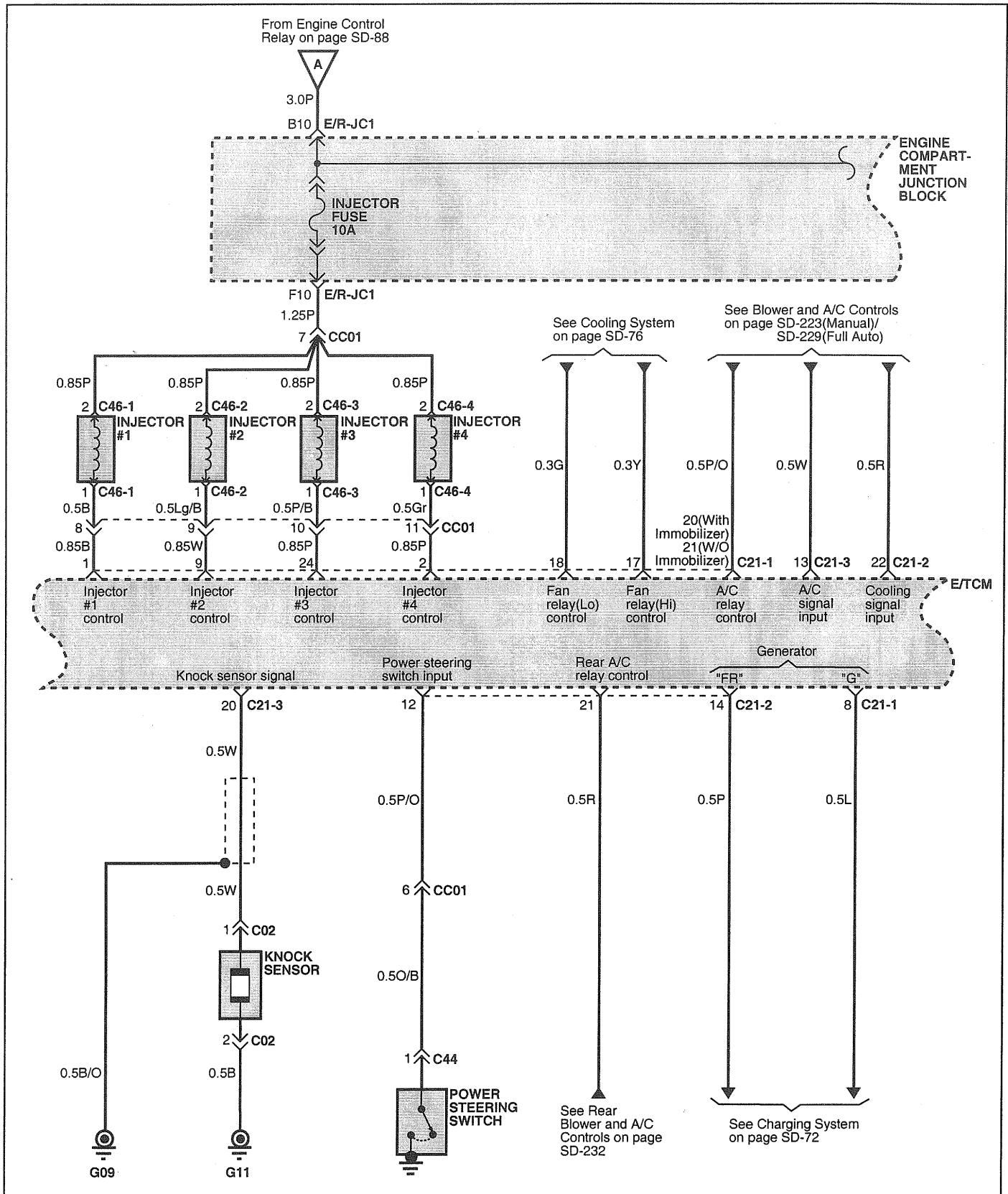
The MFI's three major functions are air-fuel mixture control, idle speed control, and ignition timing control.

MFI CONTROL SYSTEM (I4 WITH A/T) (1)

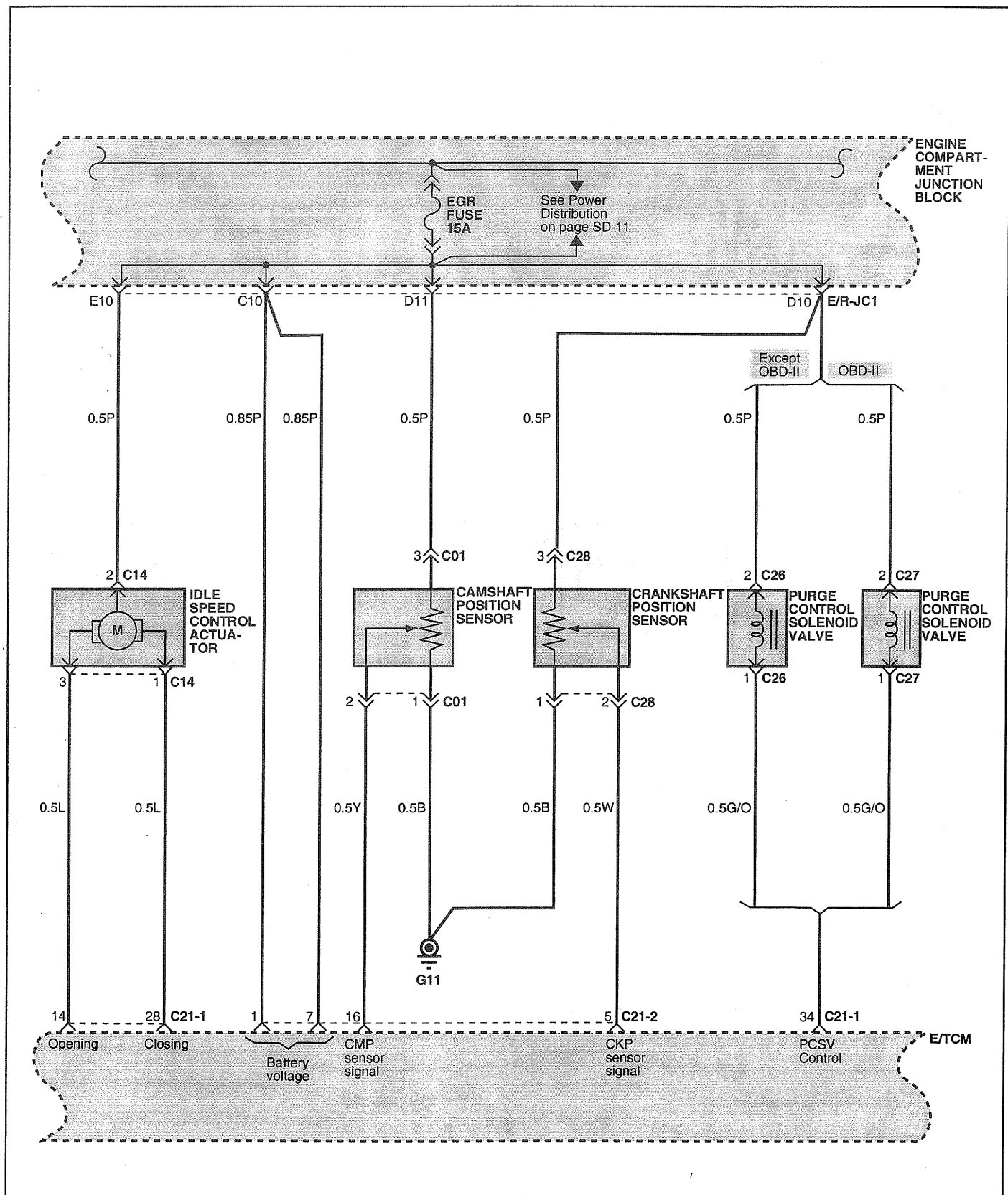


[illegible]

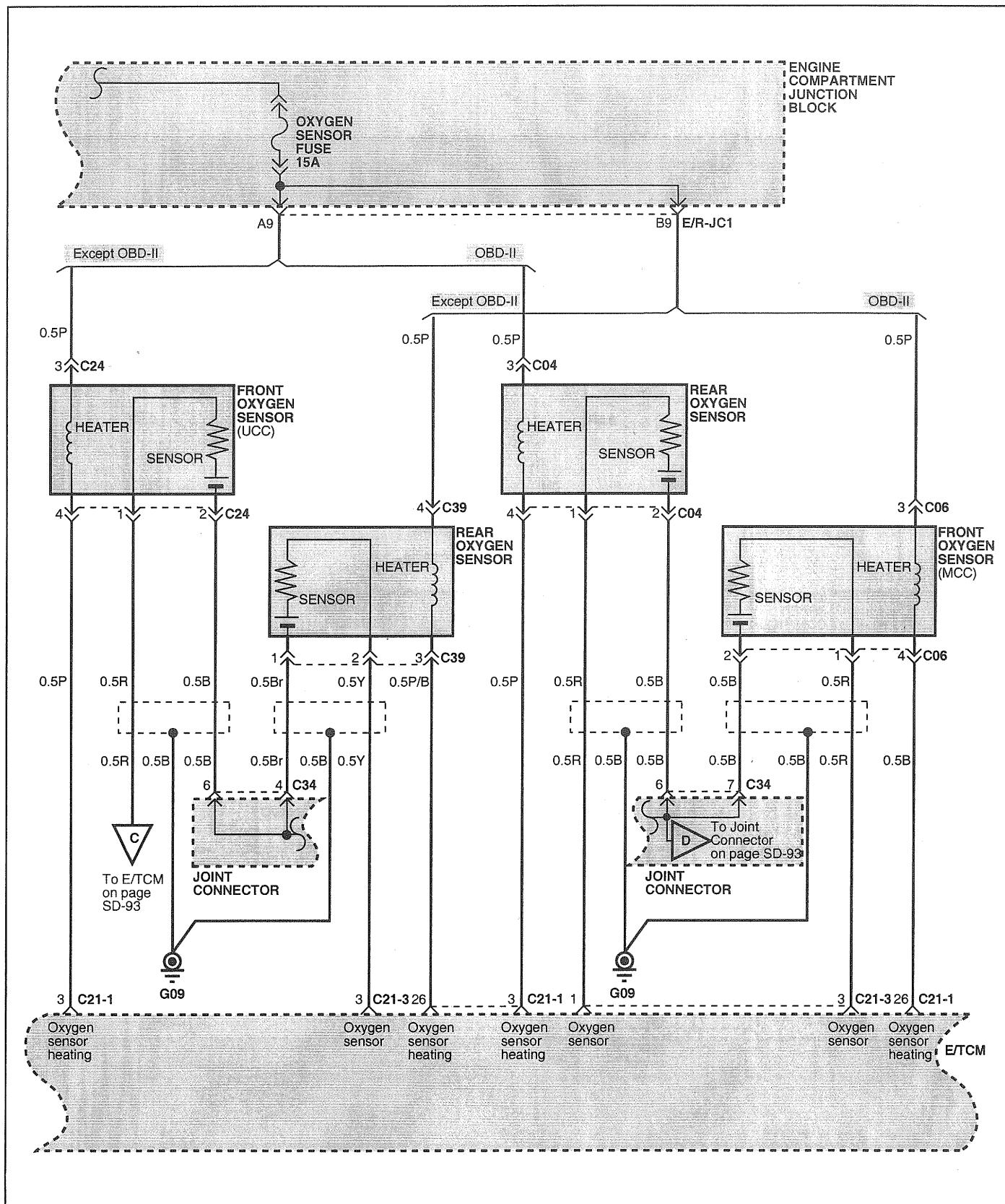
MFI CONTROL SYSTEM (I4 WITH A/T) (3)



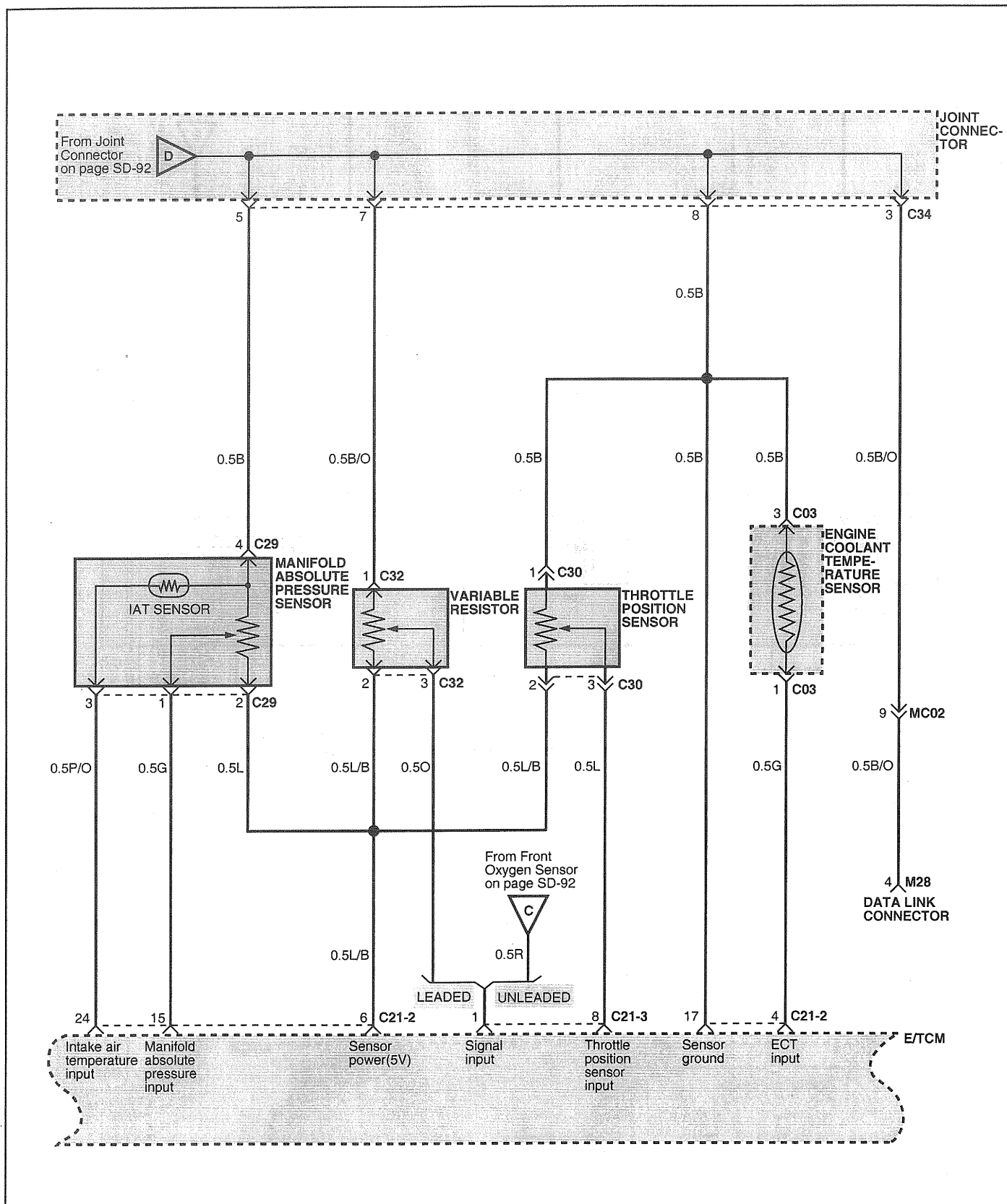
MFI CONTROL SYSTEM (I4 WITH A/T) (4)



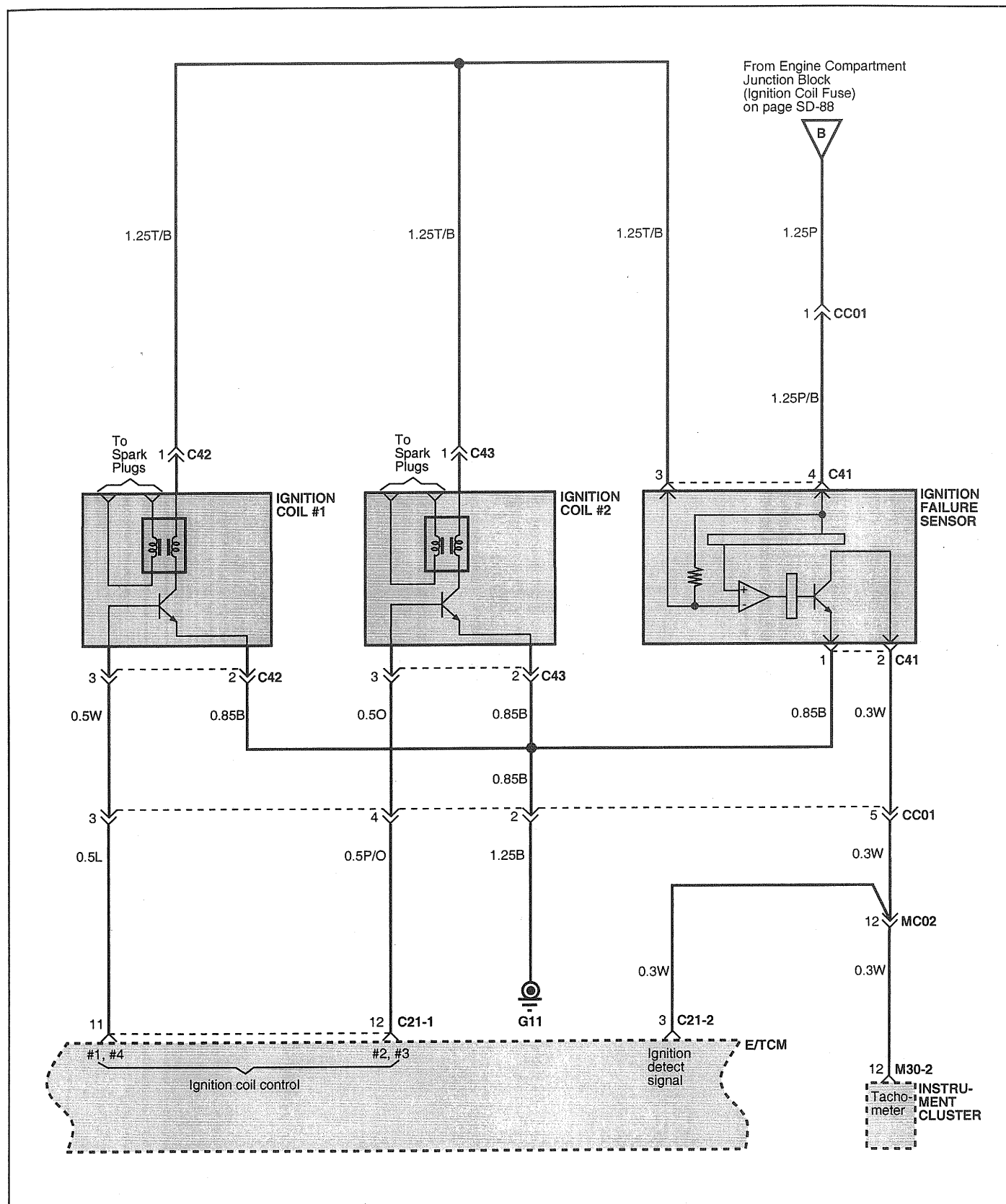
MFI CONTROL SYSTEM (I4 WITH A/T) (5)



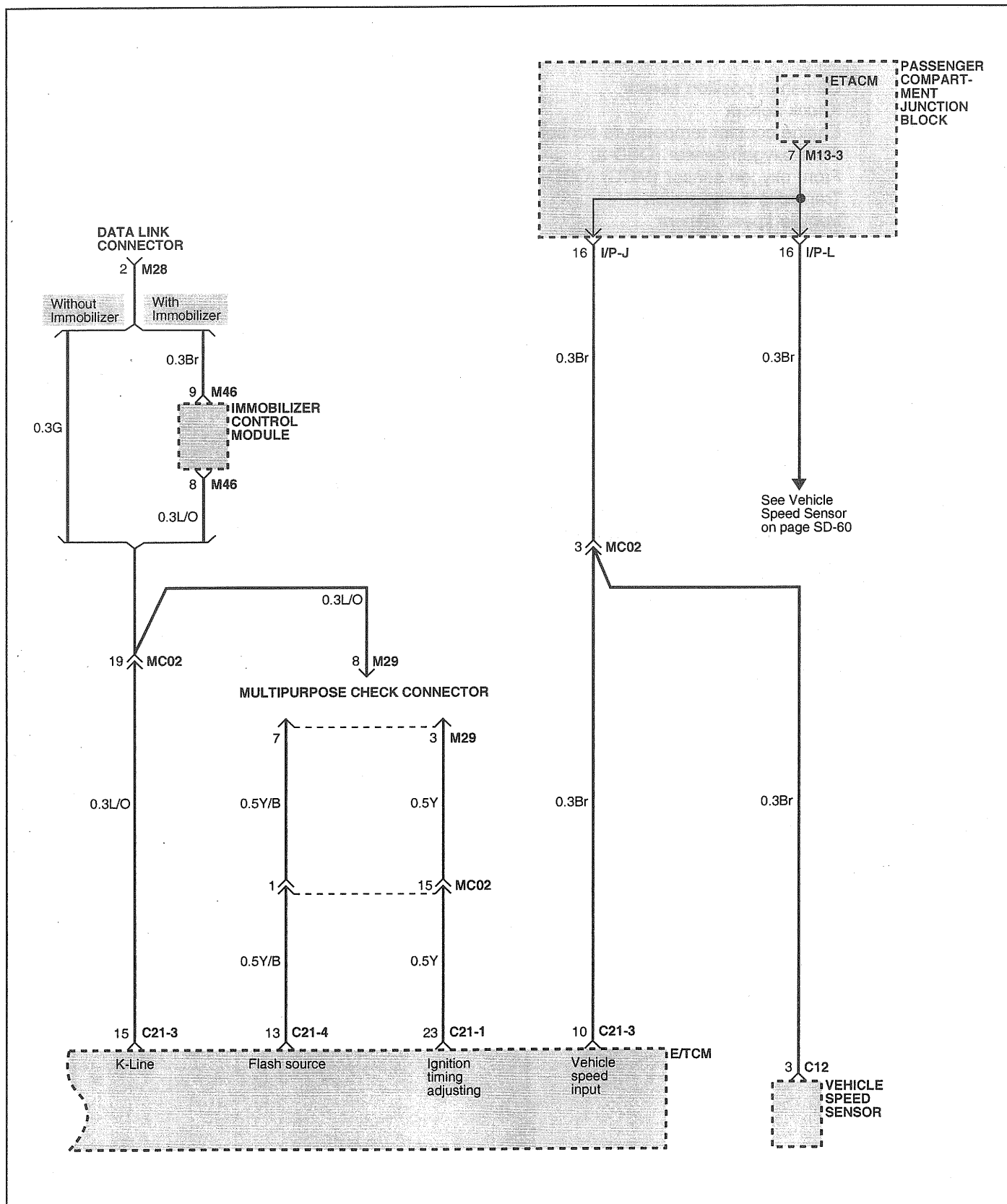
MFI CONTROL SYSTEM (I4 WITH A/T) (6)



MFI CONTROL SYSTEM (I4 WITH A/T) (7)



MFI CONTROL SYSTEM (I4 WITH A/T) (8)



COMPONENT LOCATION INDEX (1)

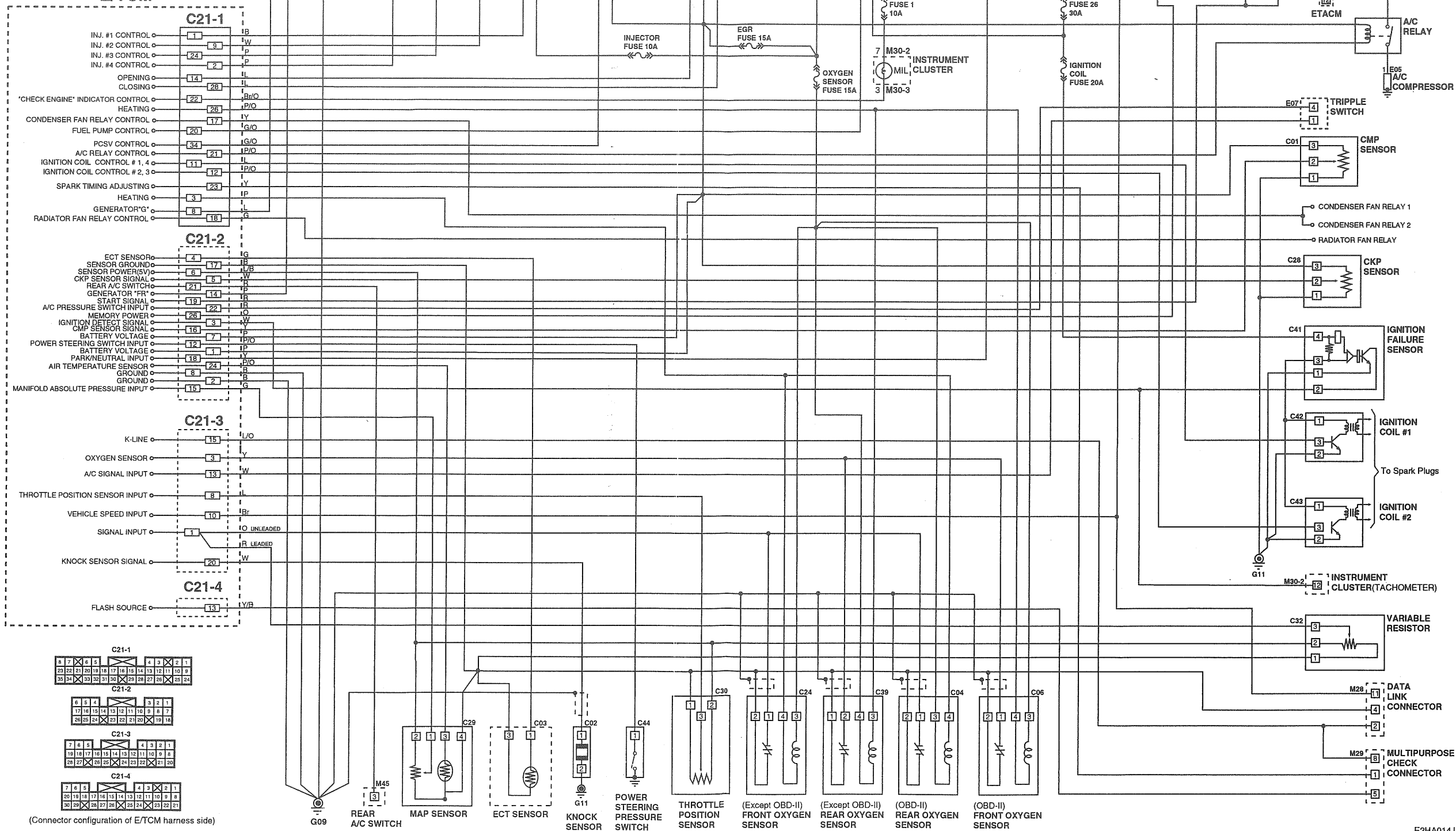
Components		Location reference-page
C01	Camshaft position sensor	CL-17
C02	Knock sensor	CL-17
C03	Engine coolant temperature sensor	CL-17
C04	Rear oxygen sensor (OBD-II)	CL-17
C06	Front oxygen sensor (MCC) (OBD-II)	CL-17
C08	Transaxle range switch	CL-17
C12	Vehicle speed sensor	CL-18
C14	Idle speed control actuator	CL-18
C21-1	E/TCM	CL-18
C21-2	E/TCM	CL-18
C21-3	E/TCM	CL-18
C21-4	E/TCM	CL-18
C24	Front oxygen sensor (UCC) (Except OBD-II)	CL-19
C26	Purge control solenoid valve (Except OBD-II)	CL-19
C27	Purge control solenoid valve (OBD-II)	CL-19
C28	Crankshaft position sensor	CL-19
C29	Manifold absolute pressure sensor	CL-19
C30	Throttle position sensor	CL-19
C34	Joint connector	CL-19
C35	Engine control relay	CL-19
C39	Rear oxygen sensor (Except OBD-II)	CL-20
C41	Ignition failure sensor	CL-20
C42	Ignition coil #1	CL-20
C43	Ignition coil #2	CL-20
C44	Power steering switch	CL-20
C46-1	Injector #1	CL-20
C46-2	Injector #2	CL-20
C46-3	Injector #3	CL-20
C46-4	Injector #4	CL-20
M09	Burglar alarm relay	CL-2
M13-2	ETACM	CL-2
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M38	Ignition switch	CL-3
M85	Fuel sender & Fuel pump motor	CL-5

MFI CONTROL SYSTEM

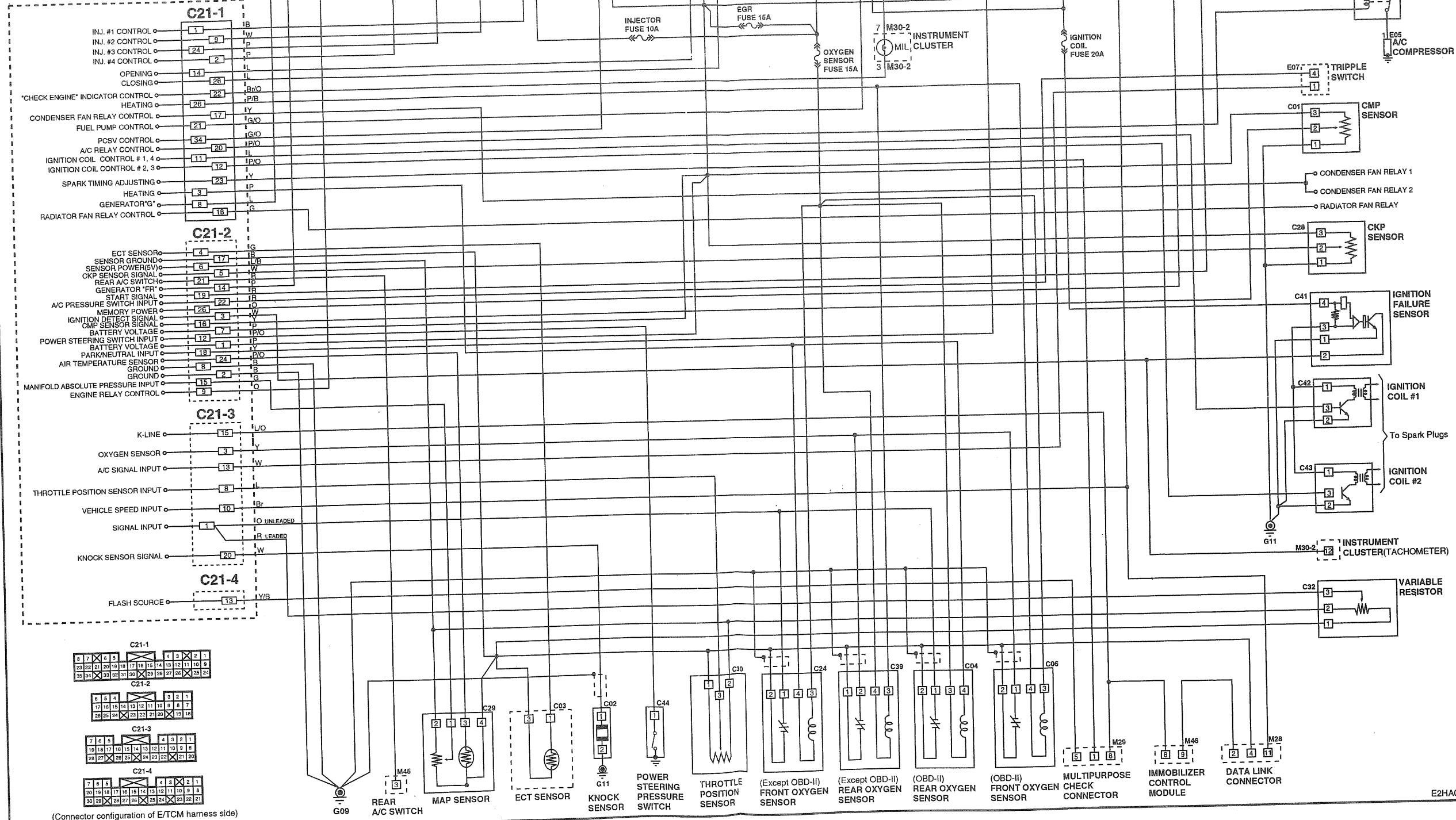
(I4 With A/T)

(Without Immobilizer)

E/TCM



MFI
CONTROL
SYSTEM
(I4 With A/T)
(With Immobilizer)
E/TCM



COMPONENT LOCATION INDEX (2)

Connectors	Location reference-page
CC01	CL-24
EM02	CL-14
E/R-JC1	CL-14
E/R-JM1	CL-14
I/P-A	CL-11
I/P-H	CL-11
I/P-J	CL-11
I/P-L	CL-11
MC02	CL-9
MM02	CL-10
Grounds	
G09	CL-29
G11	CL-29
G17	CL-29

Circuit Description

The Multiport Fuel Injection (MFI) control system is an electronic fuel metering system with fuel injectors near the inlet port of each cylinder.

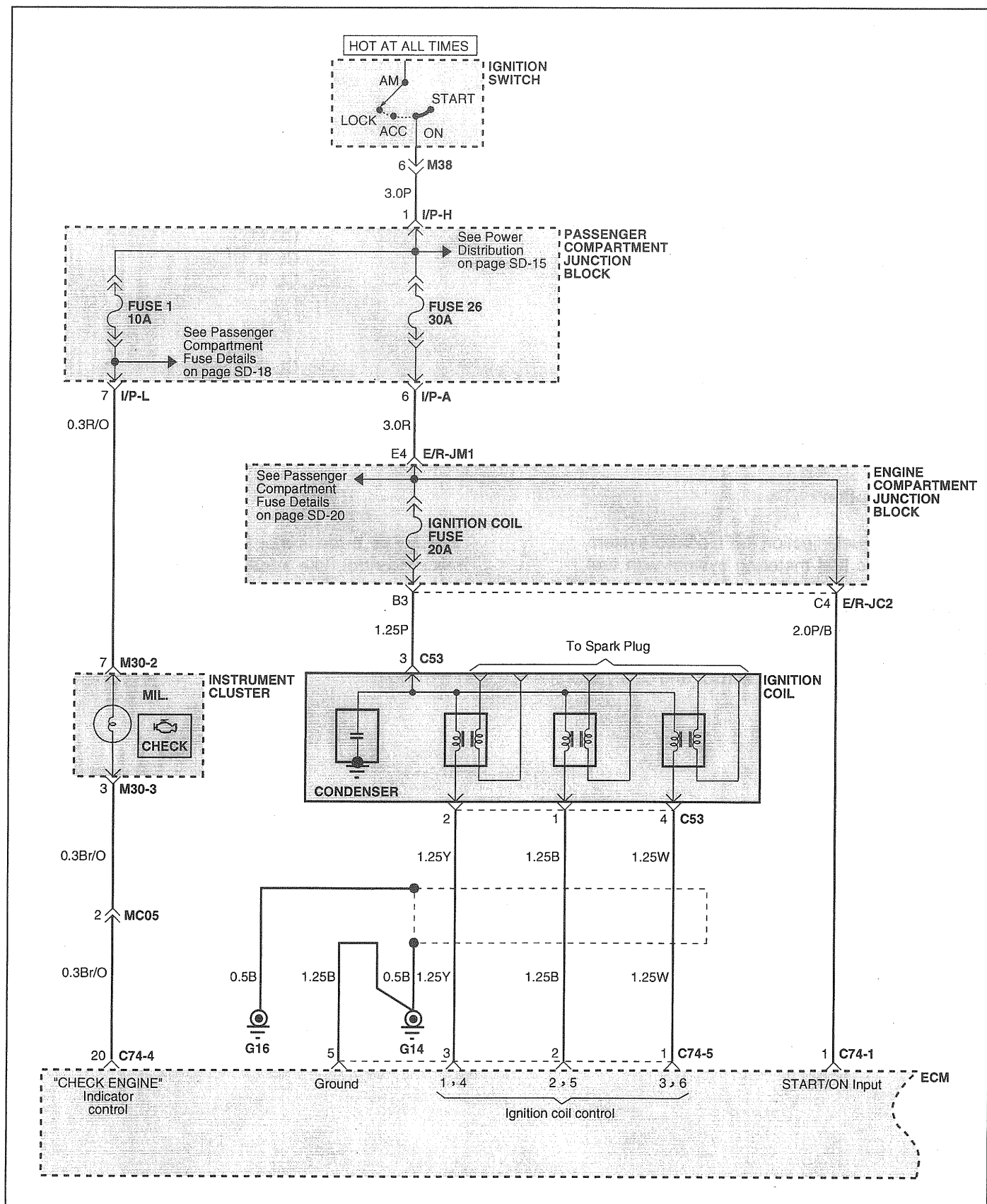
The amount of fuel injection is determined by the ECM according to engine speed and intake air-flow quantity measured. The emission control system includes the oxygen sensor and catalytic converters.

The MFI's three major functions are air-fuel mixture control, idle speed control, and ignition timing control.

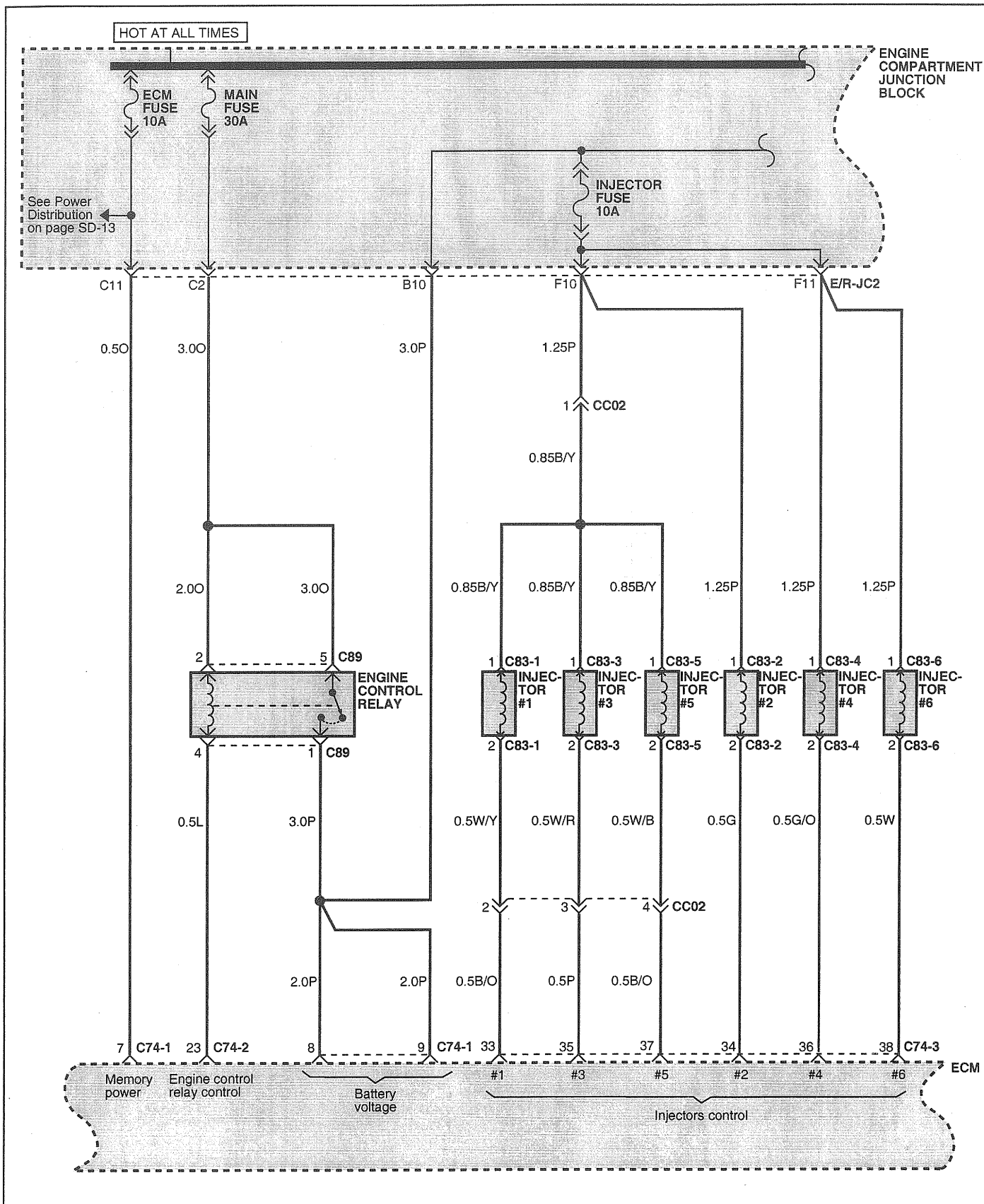
MFI CONTROL SYSTEM (V6)

E2HA0150

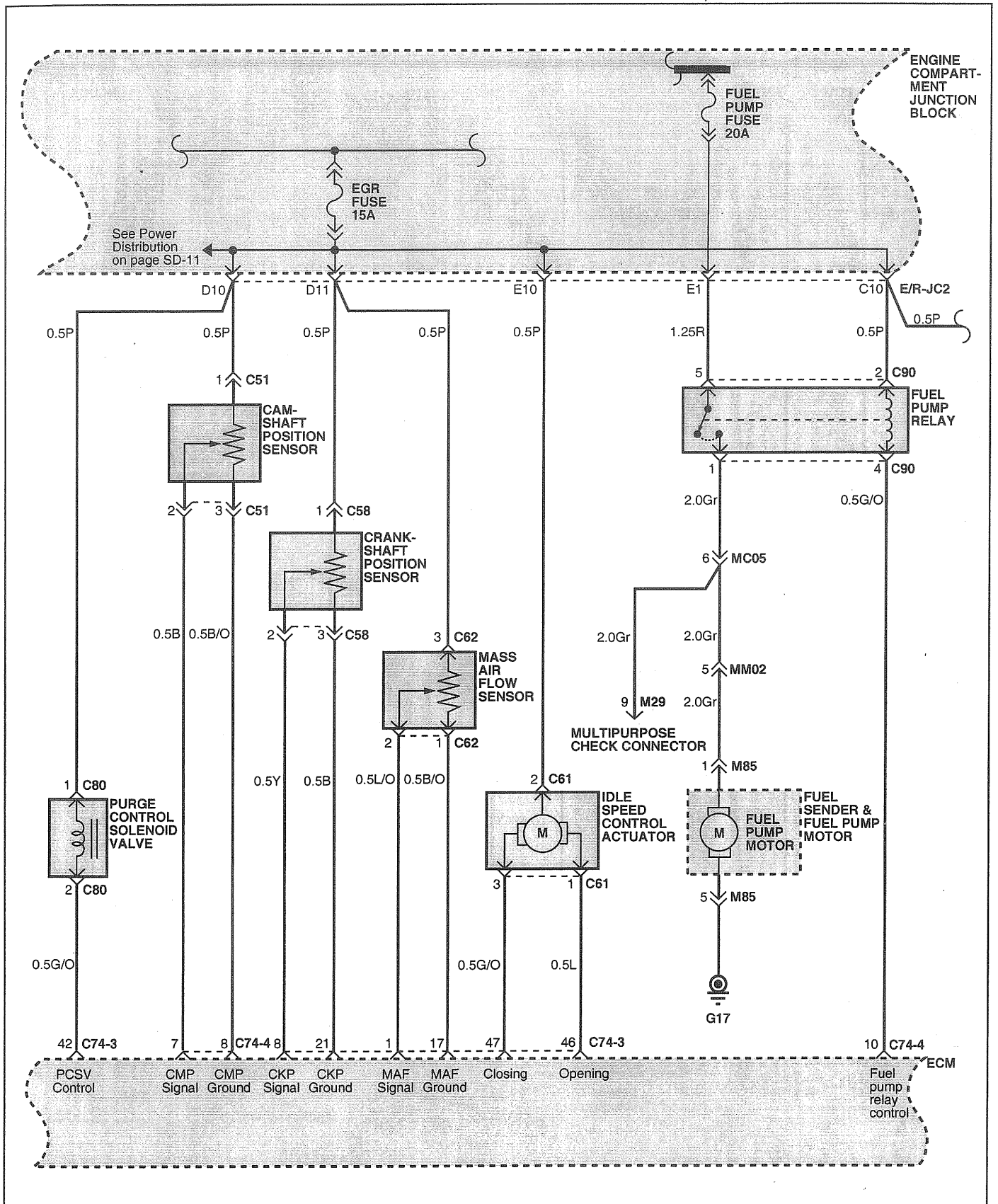
MFI CONTROL SYSTEM (V6) (1)



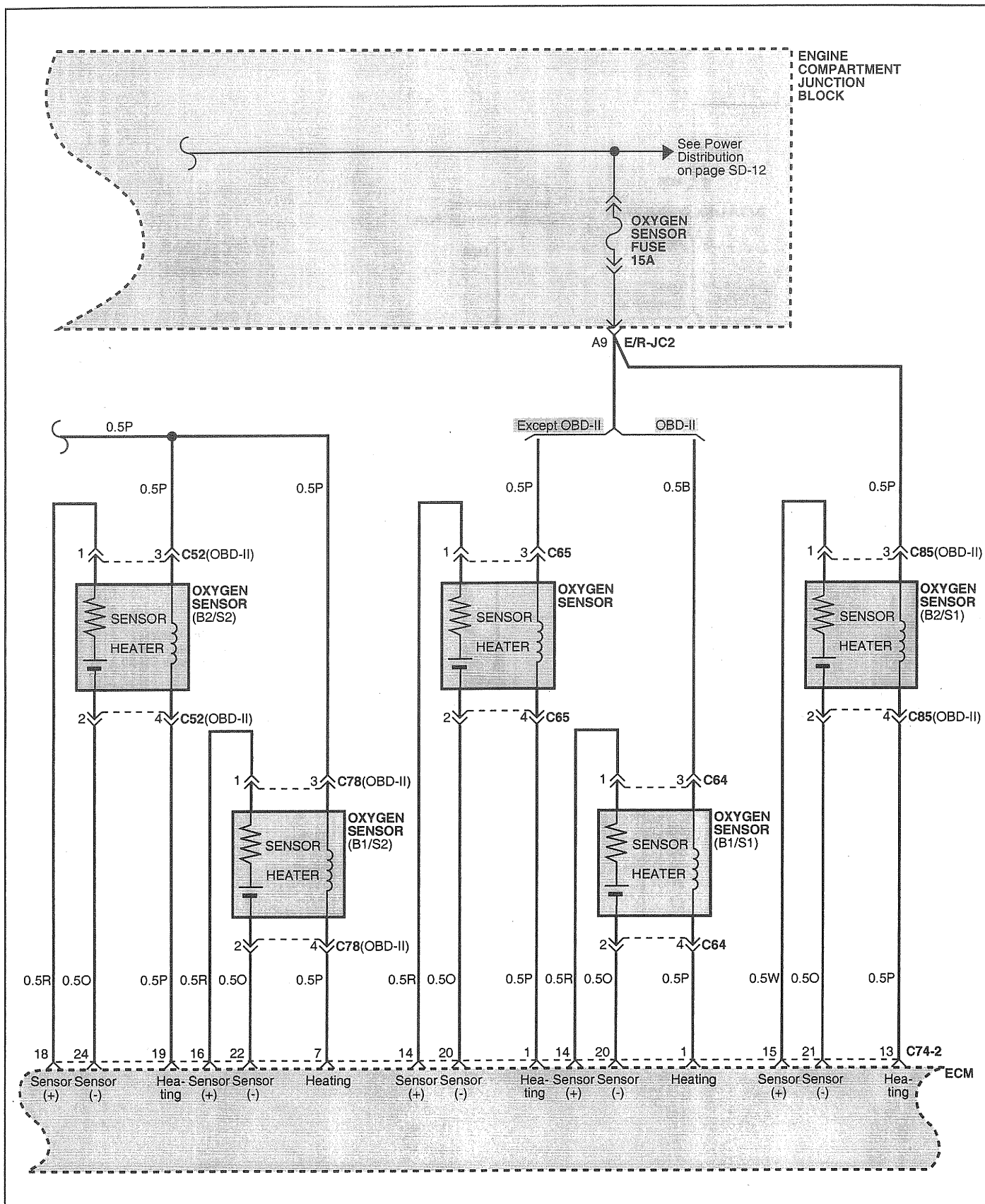
MFI CONTROL SYSTEM (V6) (2)



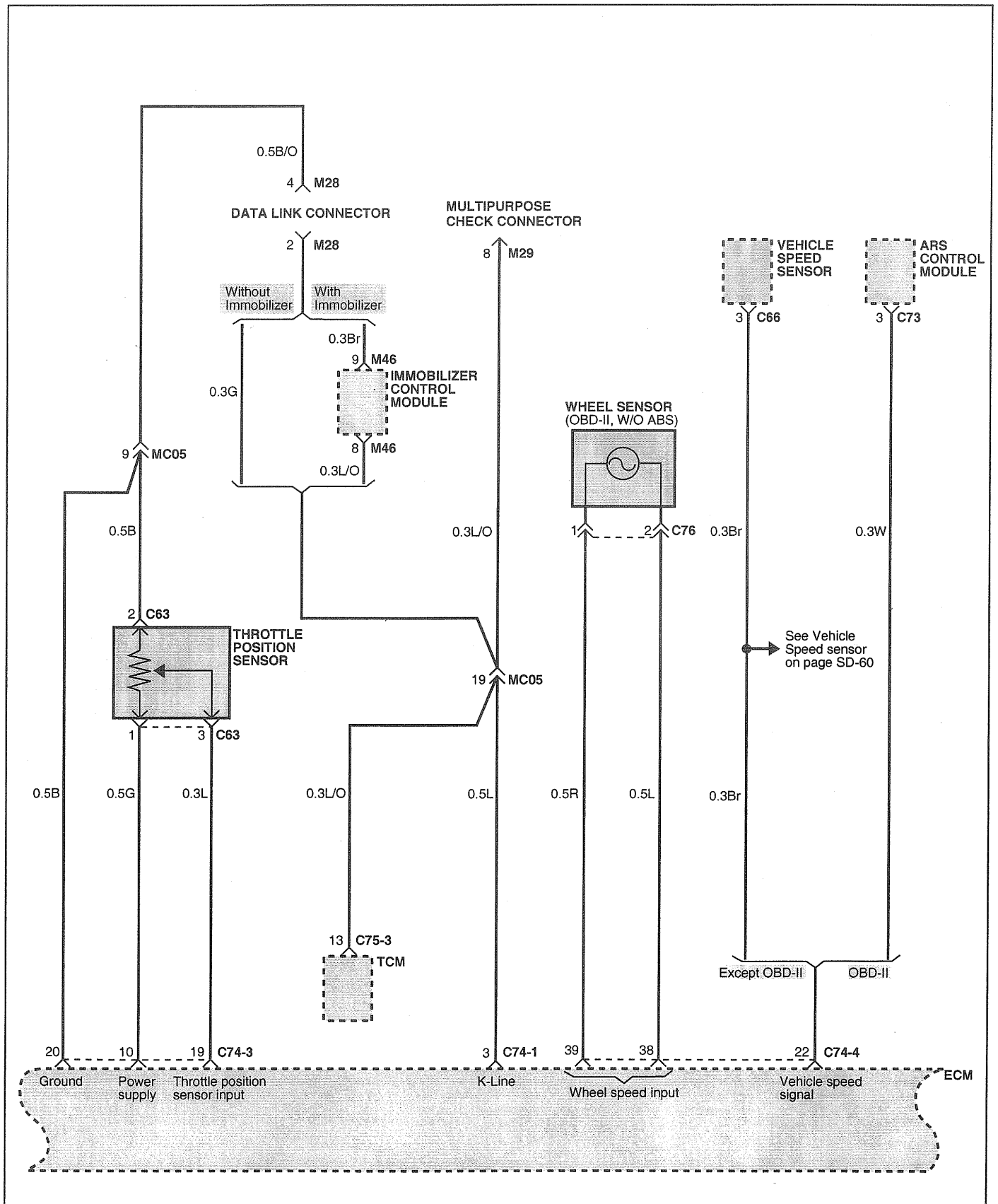
MFI CONTROL SYSTEM (V6) (3)



MFI CONTROL SYSTEM (V6) (4)



MFI CONTROL SYSTEM (V6) (5)



See Cooling System on page SD-76

See Blower and A/C Controls on page SD-223 (Manual) SD-229 (Full Auto)

INSTRUMENT CLUSTER

ENGINE COOLANT TEMPERATURE SENSOR & SENDER

INTAKE AIR TEMPERATURE SENSOR

ECM

Power Steering switch

POWER STEERING SWITCH

KNOCK SENSOR #1

KNOCK SENSOR #2

TCM

0.5G 0.5B/O 0.5B/O 0.3Y 0.3G 0.5W 0.3Y/B 0.5R 0.5P/O 0.3W 0.3W

24 25 22 23 C74-3 40 18 23 24 25 29 17 C74-4

ECT Sensor input ECT Sensor ground Air temperature input ATS ground Fan (High) control Fan (Low) control A/C signal input A/C "ON" input Cooling signal input A/C relay control Engine RPM signal

Communication area network

High Low

Ground

Knock sensor input

Shield ground

Knock sensor input

26 C74-3 36 37 C74-4 4 5 6 C74-1 30 29 48 31 32 C74-3

0.3Y 0.3O 0.3G 2.0B 2.0B 2.0B 0.5Y 0.5Br 0.5B 0.5B 0.5R 0.5B 0.5B 0.5R

1 C81

3 4 C75-3

1 2 3 C59-1

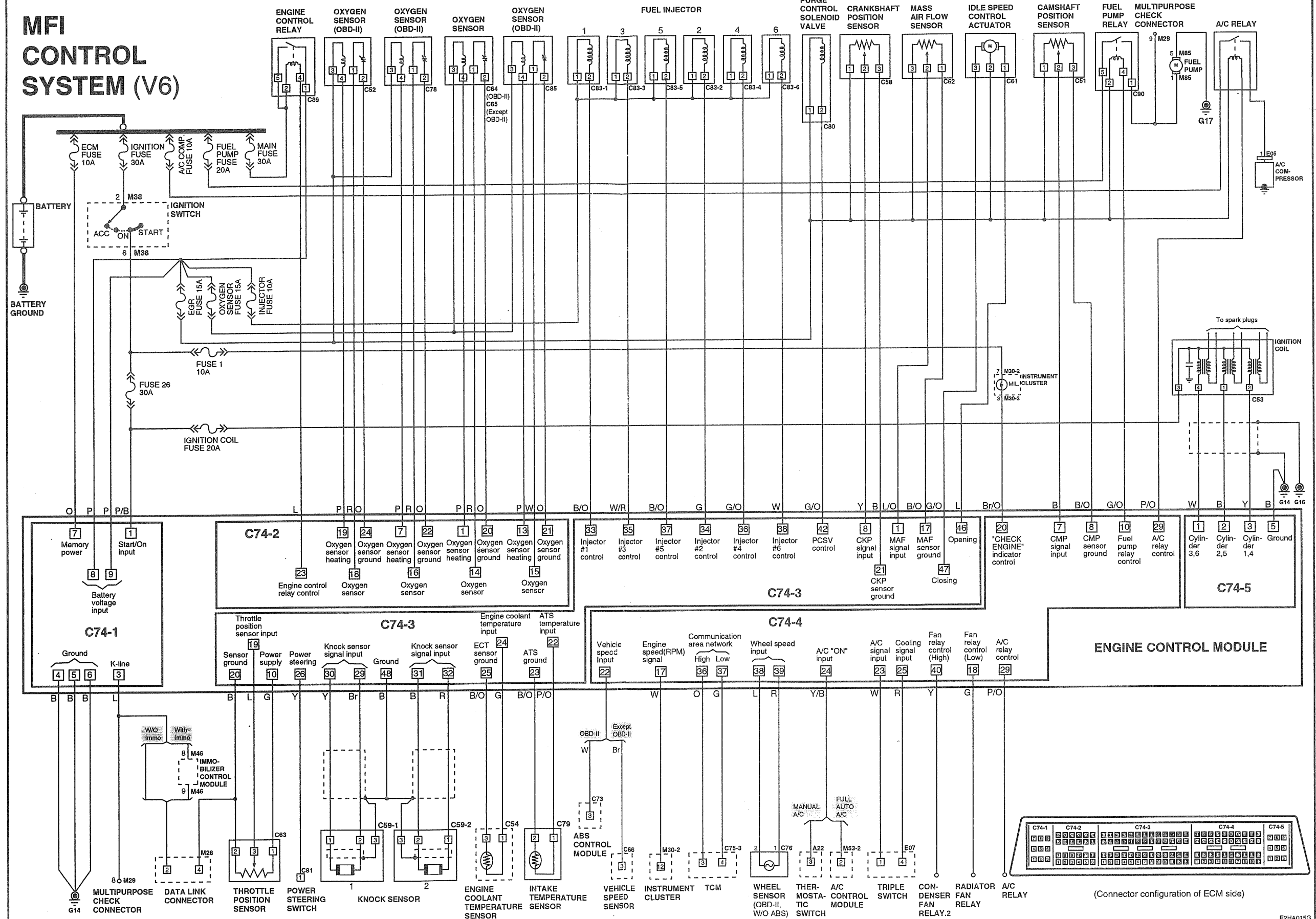
3 2 1 C59-2

G14

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
C51	Camshaft position sensor	CL-20
C52	Oxygen sensor (Bank1/Sensor2)	CL-21
C53	Ignition coil	CL-21
C54	Engine coolant temperature sensor & sender	CL-21
C58	Crankshaft position sensor	CL-21
C59-1	Knock sensor #1	CL-21
C59-2	Knock sensor #2	CL-21
C61	Idle speed control actuator	CL-21
C62	Mass air flow sensor	CL-21
C63	Throttle position sensor	CL-21
C64	Oxygen sensor (Bank1/Sensor1)	CL-21
C65	Oxygen sensor	CL-21
C66	Vehicle speed sensor	CL-22
C73	ABS control module	CL-22
C74-1	ECM	CL-22
C74-2	ECM	CL-22
C74-3	ECM	CL-22
C74-4	ECM	CL-22
C74-5	ECM	CL-22
C75-3	ECM	CL-22
C78	Oxygen sensor (Bank1/Sensor2)	CL-23
C80	Purge control solenoid valve	CL-23
C81	Power steering switch	CL-23
C83-1	Injector #1	CL-23
C83-2	Injector #2	CL-23
C83-3	Injector #3	CL-23
C83-4	Injector #4	CL-23
C83-5	Injector #5	CL-23
C83-6	Injector #6	CL-23
C85	Oxygen sensor (Bank2/Sensor1)	CL-23
C89	Engine control relay	CL-24
M28	Data link connector	CL-3
M30-3	Instrument cluster	CL-3
M38	Ignition switch	CL-3
M85	Fuel sender & Fuel pump motor	CL-5

MFI CONTROL SYSTEM (V6)



COMPONENT LOCATION INDEX (2)

Connectors	Location reference-page
E/R-JC2	CL-14
E/R-JM2	CL-14
I/P-A	CL-11
I/P-L	CL-11
CC02	CL-24
MC05	CL-9
Grounds	
G14	CL-29
G16	CL-29

Circuit Description

The Multiport Fuel Injection (MFI) control system is an electronic fuel metering system with fuel injectors near the inlet port of each cylinder.

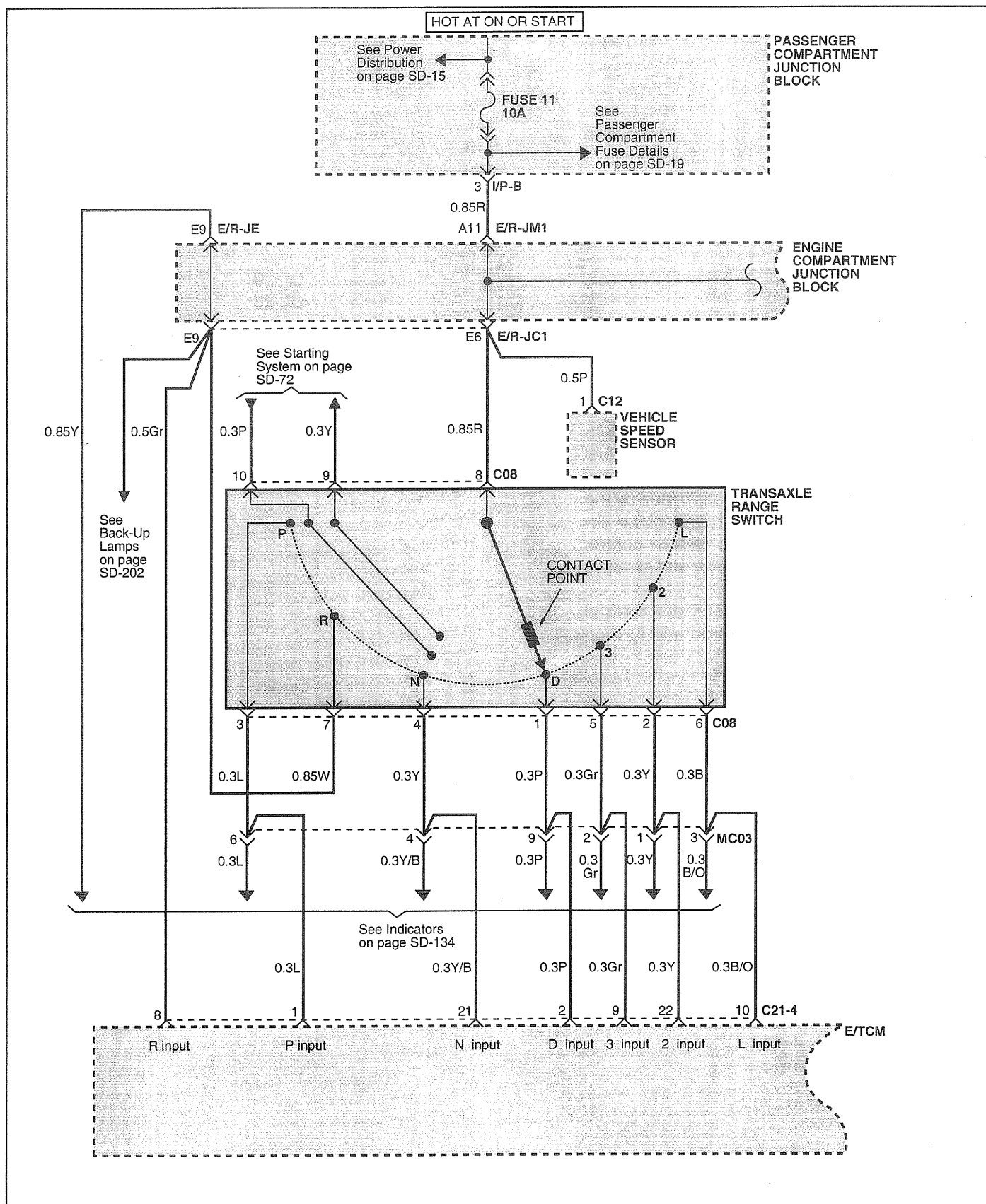
The amount of fuel injection is determined by the ECM according to engine speed and intake air-flow quantity measured. The emission control system includes the oxygen sensor and catalytic converters.

The MFI's three major functions are air-fuel mixture control, idle speed control, and ignition timing control.

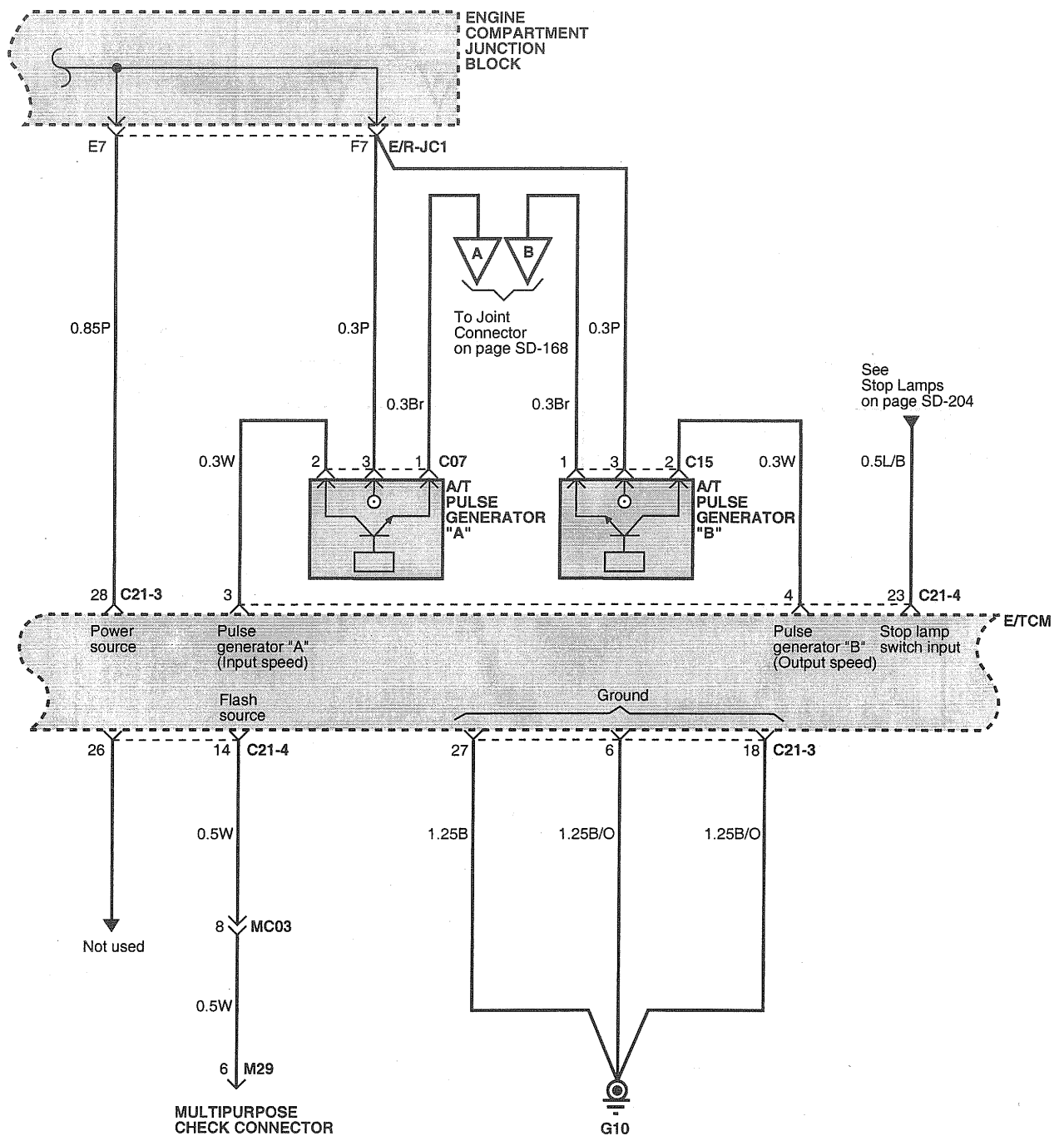
AUTOMATIC TRANSAXLE CONTROL SYSTEM (I4)

E2HA0160

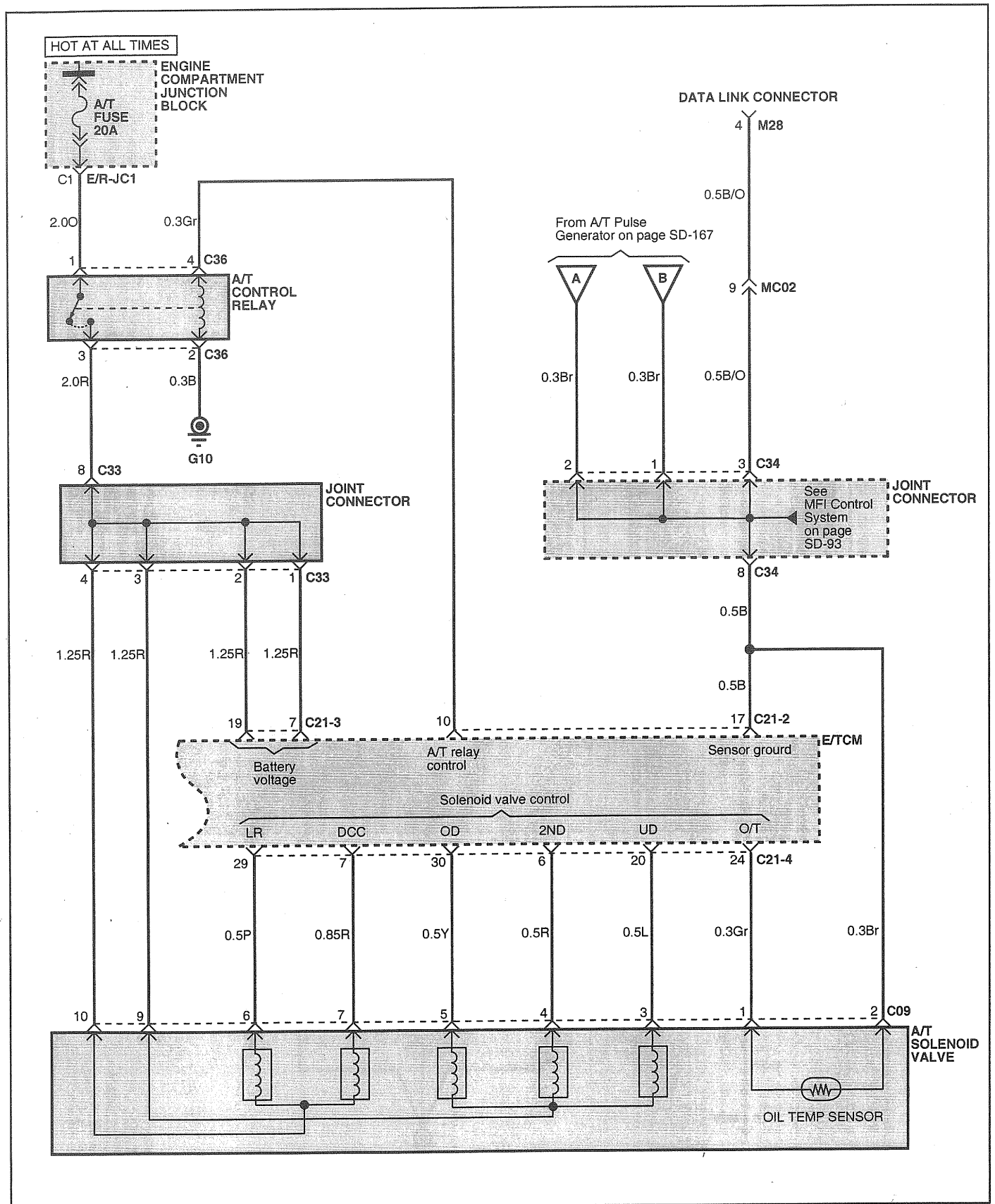
AUTOMATIC TRANSAXLE CONTROL SYSTEM (I4) (1)



AUTOMATIC TRANSAXLE CONTROL SYSTEM (I4) (2)



AUTOMATIC TRANSAXLE CONTROL SYSTEM (I4) (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
C07	A/T Pulse generator "A"	CL-17
C08	Transaxle range switch	CL-17
C09	A/T solenoid valve	CL-17
C12	Vehicle speed sensor	CL-18
C15	A/T pulse generator"B"	CL-17
C21-2	E/TCM	CL-18
C21-3	E/TCM	CL-18
C21-4	E/TCM	CL-18
C33	Joint connector	CL-19
C34	Joint connector	CL-19
C36	A/T control relay	CL-19
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
Connectors		
E/R-JC1		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
I/P-B		CL-11
I/P-J		CL-11
I/P-L		CL-11
MC02		CL-9
MA03		CL-9
Grounds		
G10		CL-29

Circuit Description

The transaxle control module provides precise gear shift timing and torque converter lock-up by controlling the operation of the automatic transaxle solenoid valves (Low & reverse solenoid valve, damper clutch control solenoid valve, over-driver solenoid valve, 2nd solenoid valve and under-drive solenoid valve).

The TCM controls the operation of these five solenoid valves based on input signals from the various sensors (for instance, pulse generator A,B).

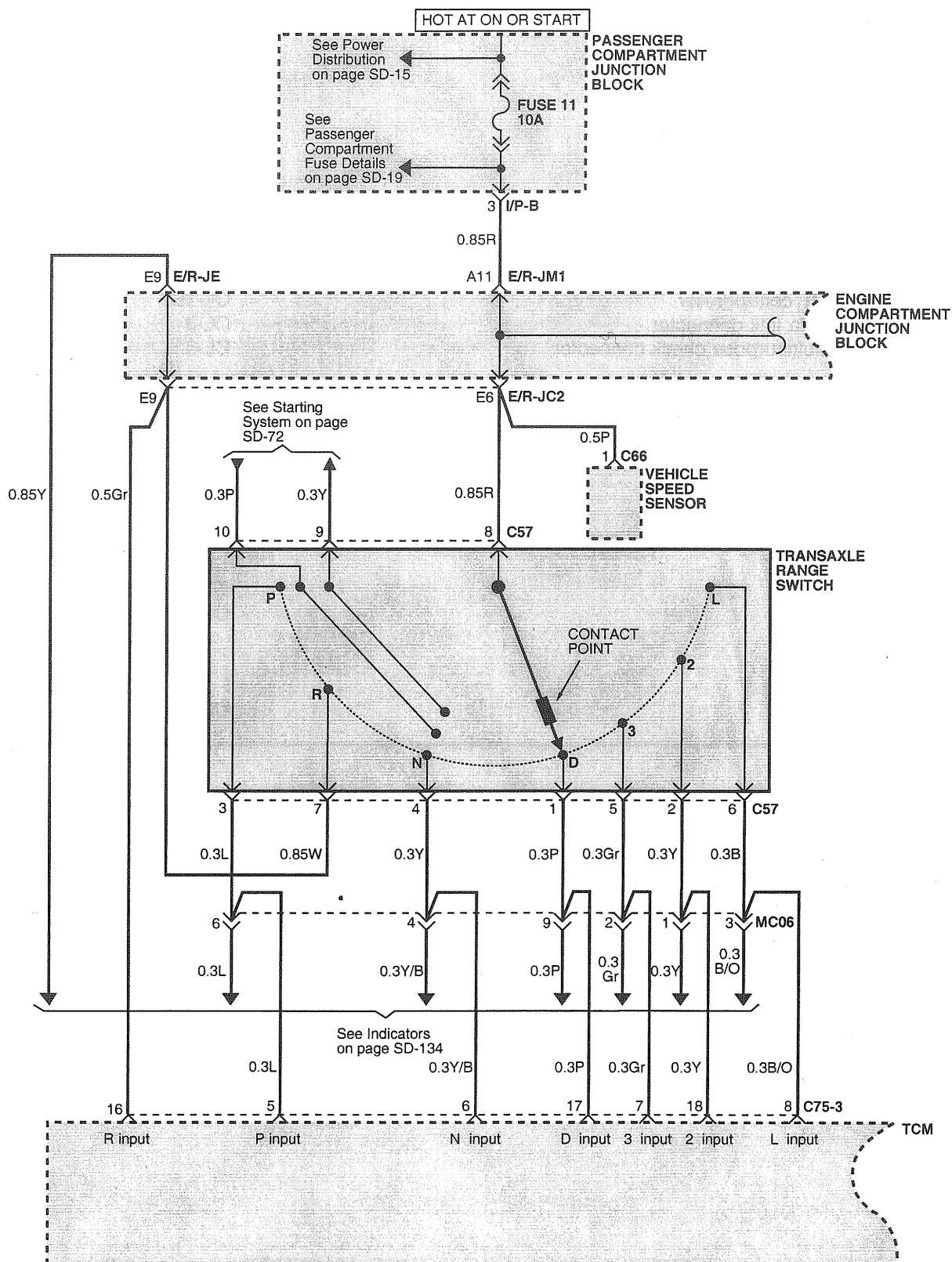
The transaxle control module has a built-in self diagnostic feature.

Refer to the Shop Manual, section ATM, for details.

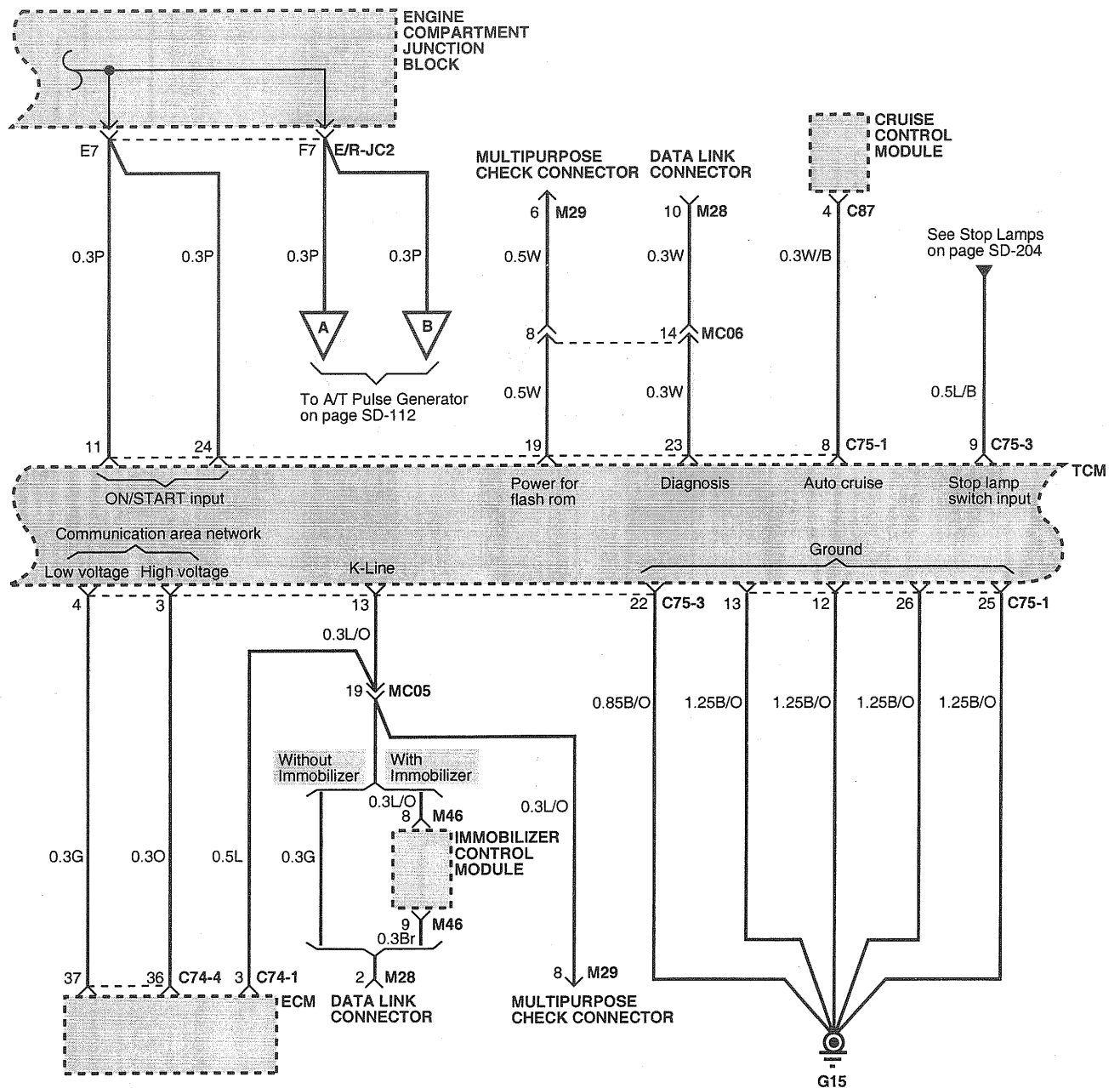
AUTOMATIC TRANSAXLE CONTROL SYSTEM (V6)

E2HA0170

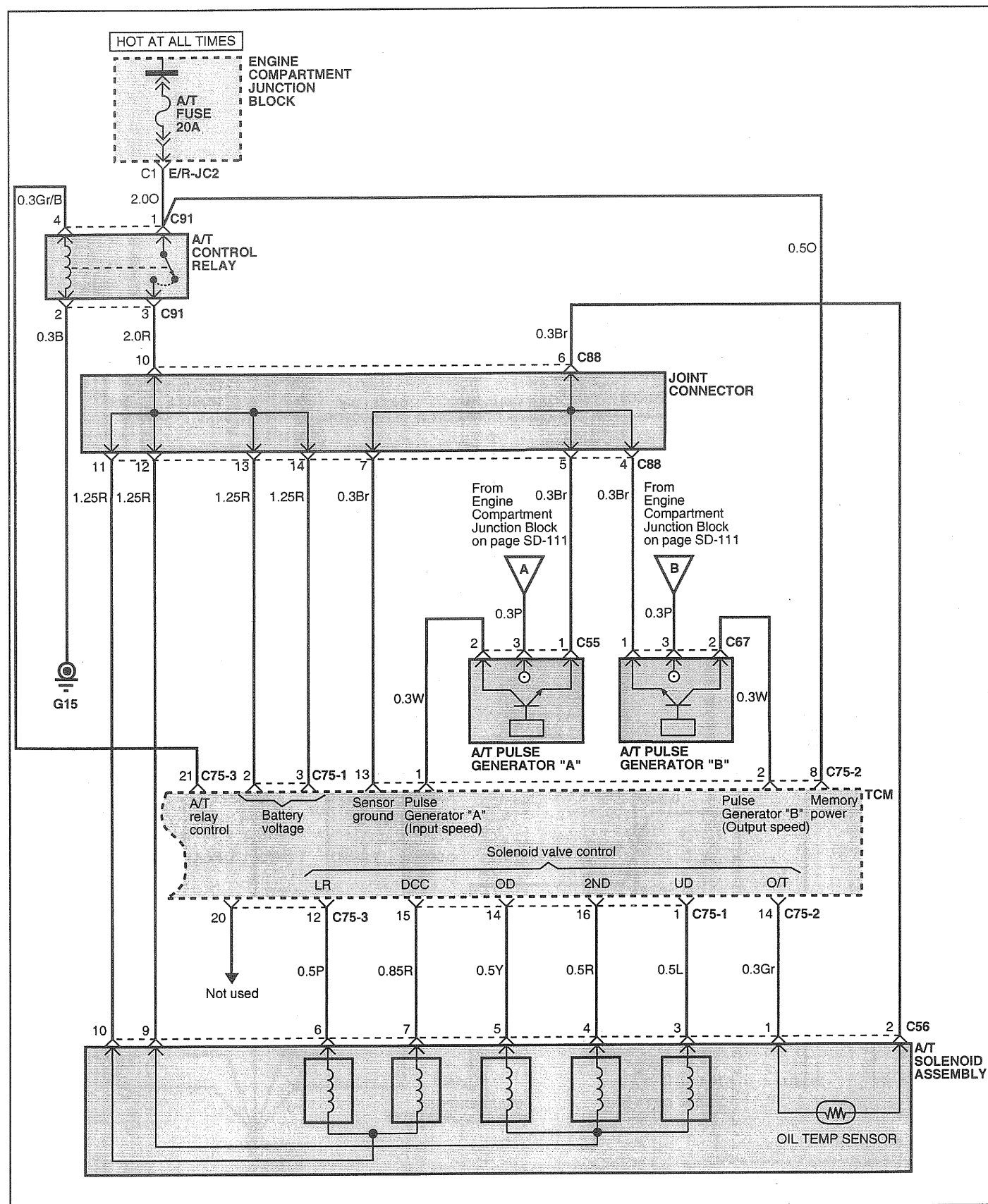
AUTOMATIC TRANSAXLE CONTROL SYSTEM (V6) (1)



AUTOMATIC TRANSAXLE CONTROL SYSTEM (V6) (2)



AUTOMATIC TRANSAXLE CONTROL SYSTEM (V6) (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
C55	A/T pulse generator "A"	CL-21
C56	A/T solenoid valve	CL-21
C57	Transaxle range switch	CL-21
C66	Vehicle speed sensor	CL-22
C67	A/T pulse generator "B"	CL-22
C74-1	ECM	CL-22
C74-4	ECM	CL-22
C75-1	TCM	CL-22
C75-2	TCM	CL-22
C75-3	TCM	CL-22
C87	Cruise control module	CL-24
C88	Joint connector	CL-24
C91	A/T control relay	CL-24
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
Connectors		
E/R-JC2		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
I/P-B		CL-11
MC05		CL-9
MC06		CL-9
Grounds		
G15		CL-29

Circuit Description

The transaxle control module provides precise gear shift timing and torque converter lock-up by controlling the operation of the automatic transaxle solenoid valves (Low & reverse solenoid valve, damper clutch control solenoid valve, over-driver solenoid valve, 2nd solenoid valve and under-drive solenoid valve).

The TCM controls the operation of these five solenoid valves based on input signals from the various sensors (for instance, pulse generator A,B).

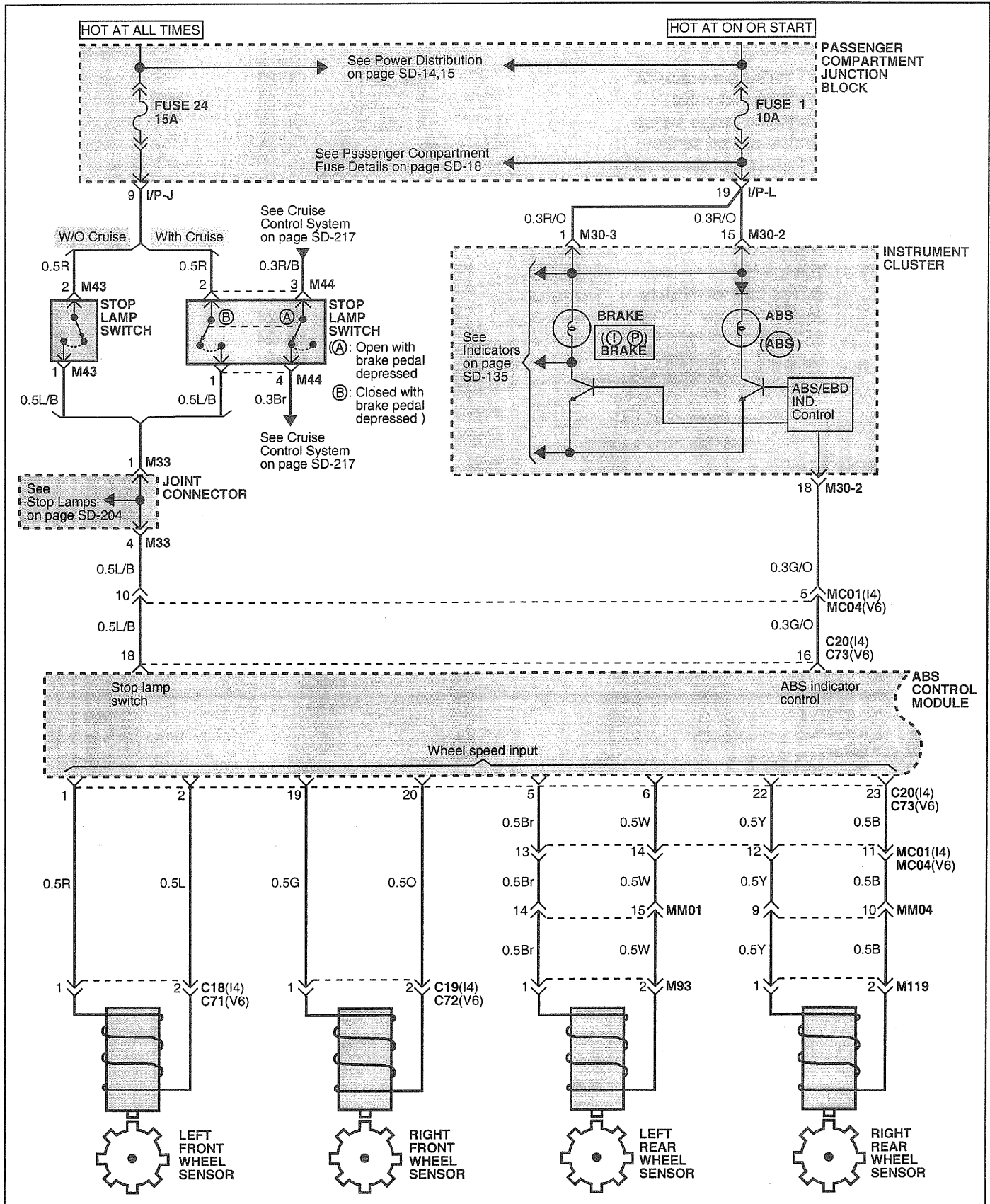
The transaxle control module has a built-in self diagnostic feature.

Refer to the Shop Manual, section ATM, for details.

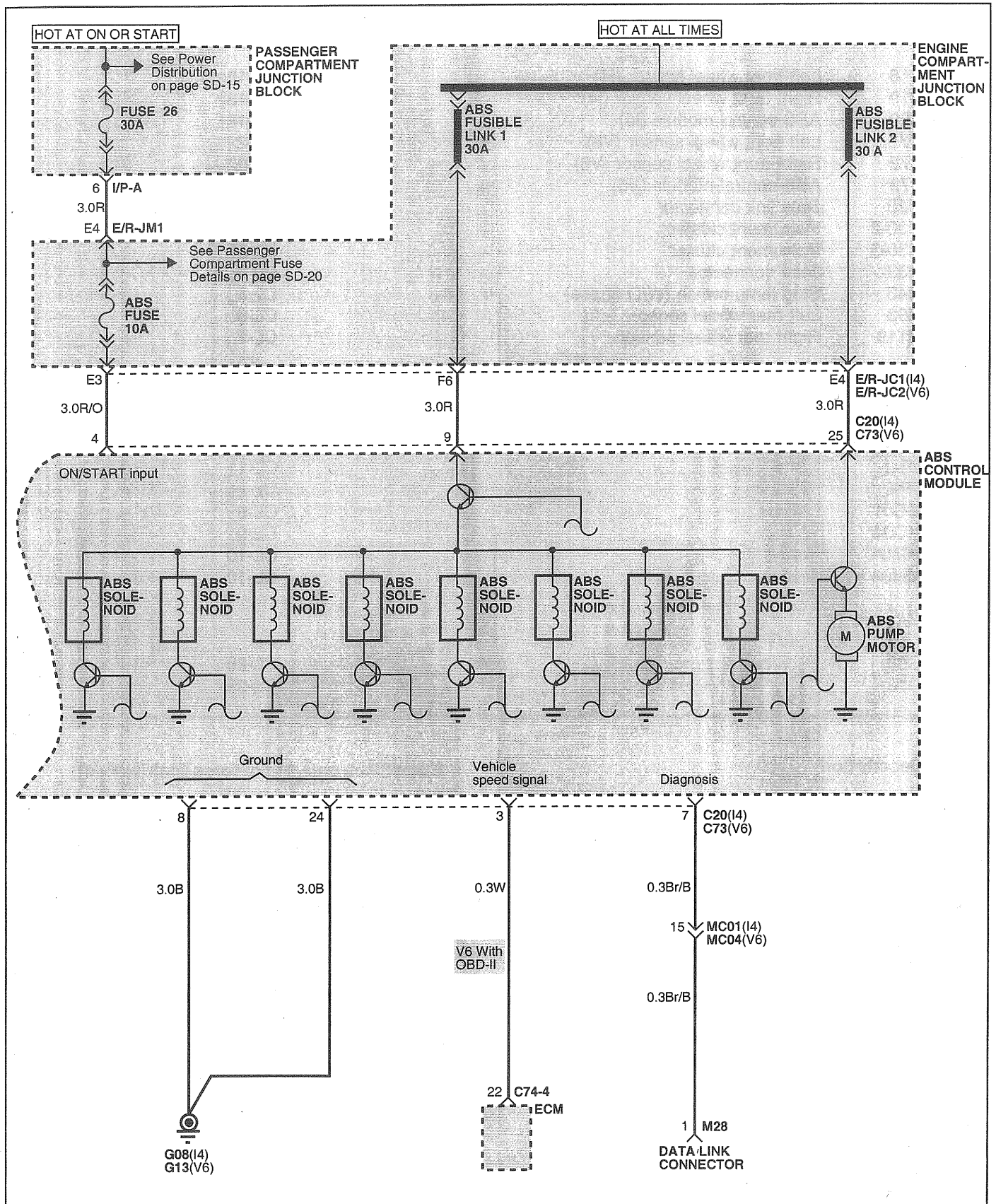
ANTI-LOCK BRAKE SYSTEM

E2HA0180

ANTI-LOCK BRAKE SYSTEM (1)



ANTI-LOCK BRAKE SYSTEM (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
C18	Left front wheel sensor (I4)	CL-18
C19	Right front wheel sensor (I4)	CL-18
C20	ABS control module (I4)	CL-18
C71	Left front wheel sensor (V6)	CL-22
C72	Right front wheel sensor (V6)	CL-22
C73	ABS control module (V6)	CL-22
M28	Data link connector	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M33	Joint connector	CL-3
M43	Stop lamp switch (W/O cruise)	CL-4
M93	Left rear wheel sensor	CL-6
M119	Right rear wheel sensor	CL-7
Connectors		
E/R-JC1		CL-14
E/R-JC2		CL-14
I/P-J		CL-11
I/P-L		CL-11
MC01		CL-9
MC04		CL-9
MM01		CL-10
MM04		CL-10
Grounds		
G08		CL-28
G13		CL-29

Circuit Description

The Anti-Lock Brake System (ABS) controls the hydraulic brake pressure of all four wheels during sudden braking and braking on hazardous road surfaces, preventing the wheels from locking. The ABS provides the following benefits:

- (1) Enables steering around obstacles with a greater degree of certainty during panic braking
- (2) Enables stopping during panic braking allowing stability and control even on curves.

In case a malfunction occurs in the anti-lock brake system, the system will operate as a normal brake system (fail-safe mode). A diagnosis function and fail-safe system have been included for serviceability.

EBD (Electronic Brake-force Distribution)

The EBD additionally applied instead of the proportioning valve to make the ideal distribution of a fluid pressure to the front and rear brake to prevent the brakes from skidding in the event of rear wheel lock and to obtain a higher brake efficiency within the range of service brake application.

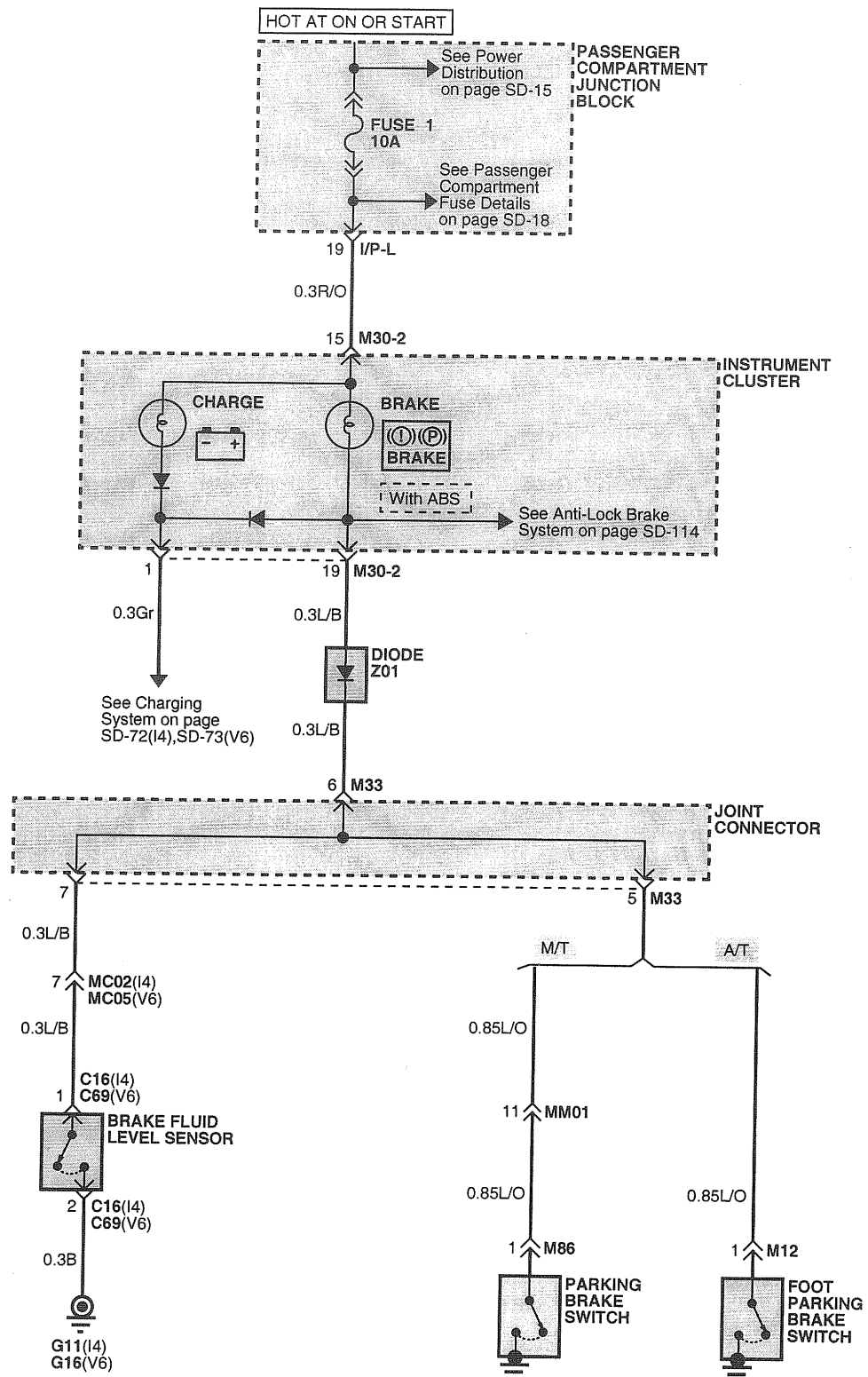
- (1) Function improvement of base-brake system.
- (2) Compensation of different friction coefficients.
- (3) Elimination of proportioning valve.
- (4) Failure recognition by warning lamp.

See section BRa of the shop manual for a complete diagnosis of the anti-lock brake system (ABS).

BRAKE WARNING SYSTEM

E2HA0190

BRAKE WARNING SYSTEM (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
C16	Brake fluid level sensor (I4)	CL-18
C69	Brake fluid level sensor (V6)	CL-22
M12	Foot parking brake switch (A/T)	CL-2
M30-2	Instrument cluster	CL-3
M33	Joint connector	CL-3
M86	Parking brake switch (M/T)	CL-5
Connectors		
I/P-L		CL-11
MC02		CL-9
MC05		CL-9
MM01		CL-10
Grounds		
G11		CL-29
G16		CL-29

Circuit Description

The brake warning light goes on to alert the driver that the parking brake is applied or that the brake fluid level is low. It also lights as a bulb test when the engine is cranked.

Parking Brake

With the ignition switch in ON or START, battery voltage is applied from fuse 1 to the brake warning warning light.

When the parking brake is applied, the switch closes and provides a ground for the light.

The brake warning light goes on to remind the driver that the parking brake is applied.

Brake Fluid Level

With the ignition switch in ON or START, battery voltage is applied from fuse 1 to the brake warning warning light.

If the brake fluid level is low, the brake fluid level switch closes and ground is provided to the circuit.

The brake warning light lights to warn the driver of low brake fluid level in the brake master cylinder. (Note : Check brake pad wear before adding fluid)

Bulb Check

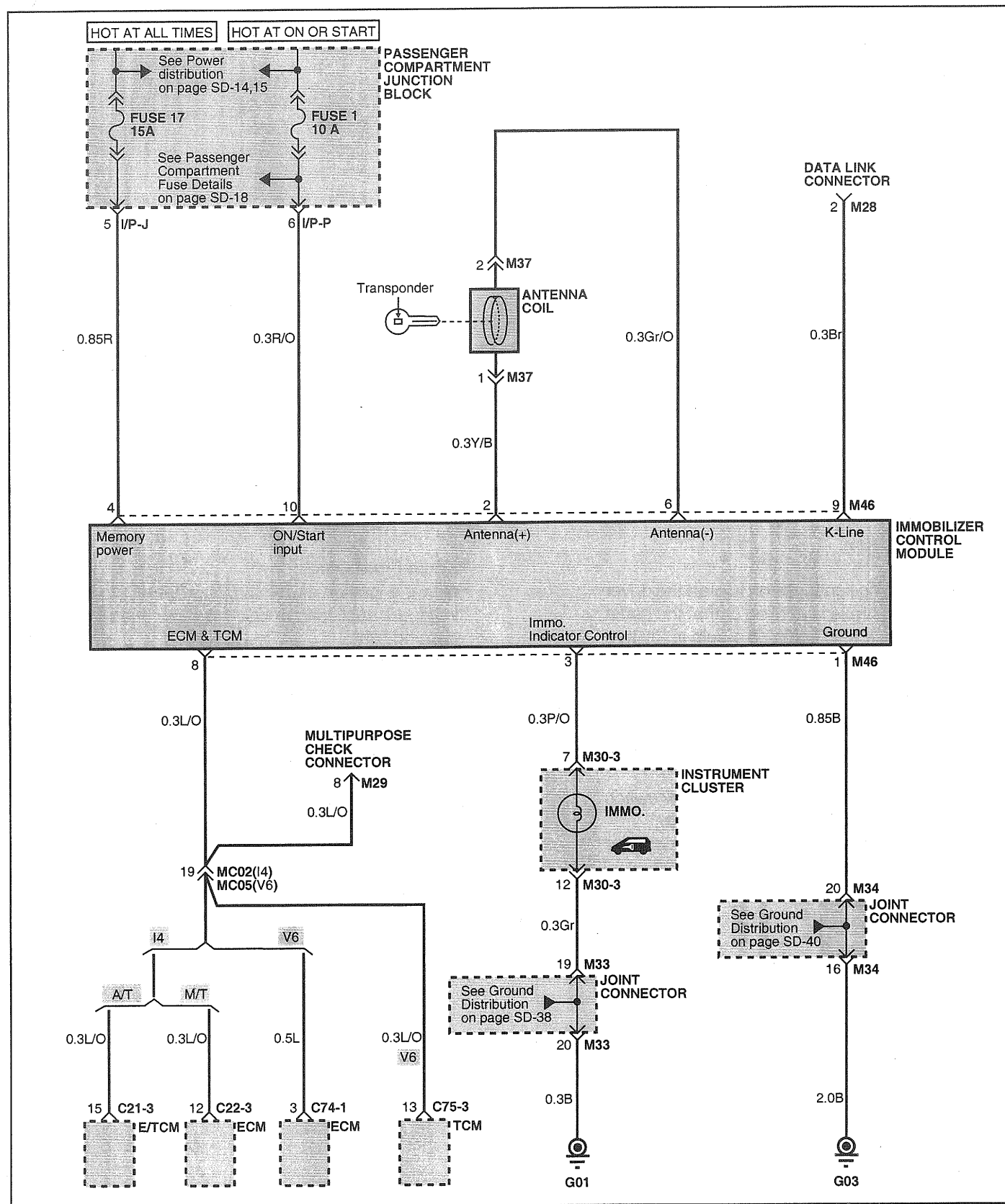
With the ignition switch in ON or START, battery voltage is applied to the brake warning light from fuse 1.

The generator will provide ground to the circuit until the engine is running. The brake warning light goes into test the brake warning light bulb and then goes off.

IMMOBILIZER CONTROL SYSTEM

E2HA0200

IMMOBILIZER CONTROL SYSTEM (1)



E2HA020A

COMPONENT LOCATION INDEX

Components		Location reference-page
C21-3	E/TCM (I4 With A/T)	CL-18
C22-3	ECM (I4 With M/T)	CL-18
C74-1	ECM (V6)	CL-22
C75-3	TCM (V6)	CL-22
M28	Data link connector	CL-3
M29	Multipurpose check connector	CL-3
M30-3	Instrument cluster	CL-3
M33	Joint connector	CL-3
M34	Joint connector	CL-3
Connectors		
I/P-J		CL-11
I/P-P		CL-11
MC02		CL-9
MC05		CL-9
Grounds		
G01		CL-28
G03		CL-28

Circuit Description

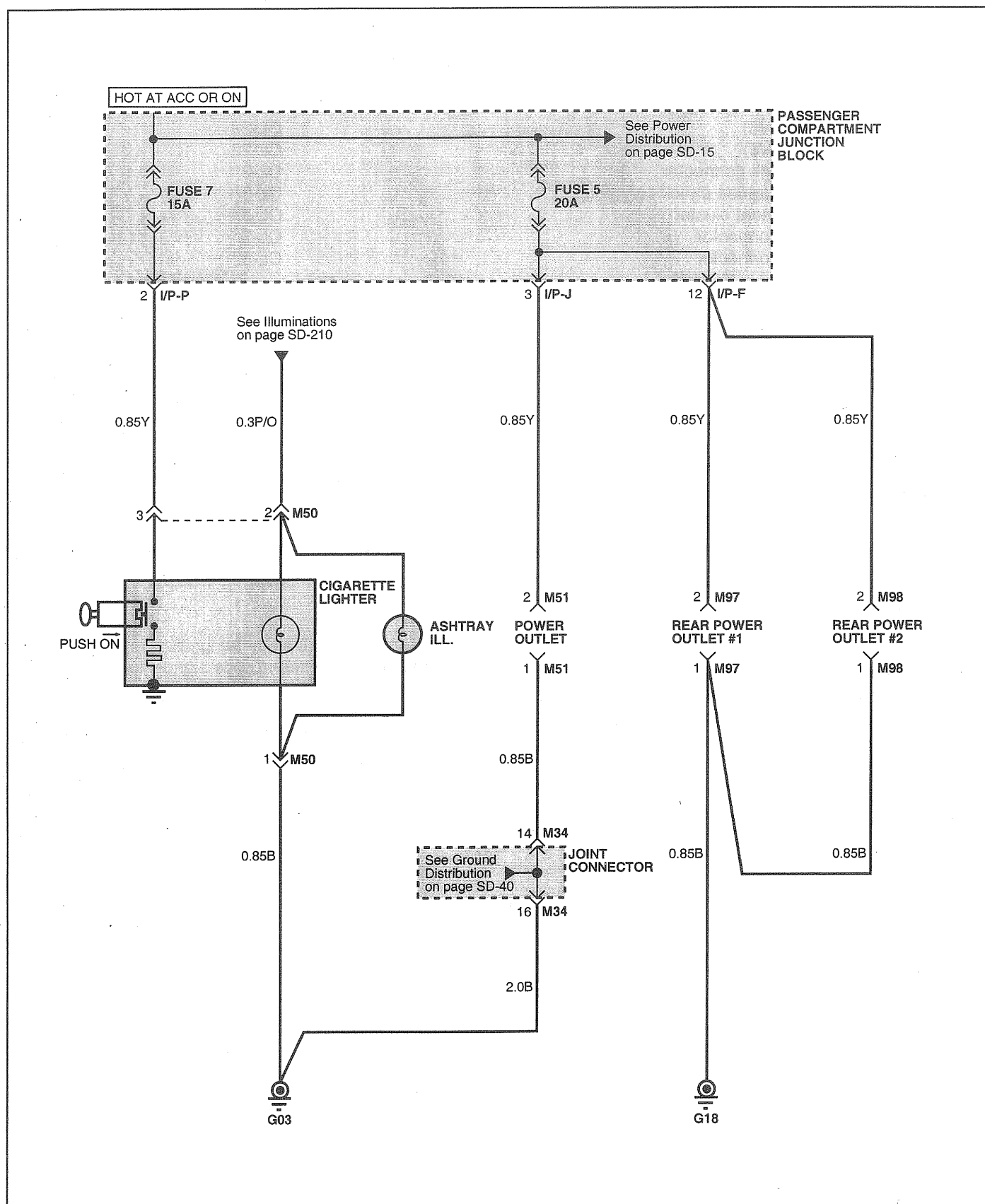
The immobilizer control system is an anti-theft device which enables the starting to be possible only when the mechanical and wireless secret codes, memorized in the Engine Control Module, and the Immobilizer Control Module(ICM) , are aligned simultaneously.

The transponder (built-in the ignition key) sends unique frequency secret code signals to the ICM through Antenna coils. The ICM compares the received code signals with memorized code. When the codes are aligned, the ICM sends signals to the ECM so that the starting is possible through fuel injection control.

CIGARETTE LIGHTER (POWER OUTLET)

E2HA0210

CIGARETTE LIGHTER (POWER OUTLET) (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
M34	Joint connector	CL-3
M50	Cigarette lighter	CL-4
M51	Power outlet	CL-4
M97	Rear power outlet #1	CL-6
M98	Rear power outlet #2	CL-6
Connectors		
I/P-F		CL-11
I/P-J		CL-11
I/P-P		CL-11
Grounds		
G03		CL-28
G18		CL-29

Circuit Description

With the ignition switch in ACC or ON, battery voltage is applied from fuse 7 to the cigarette lighter.

When you depress (push) the lighter, the lighter element completes the circuit to ground.

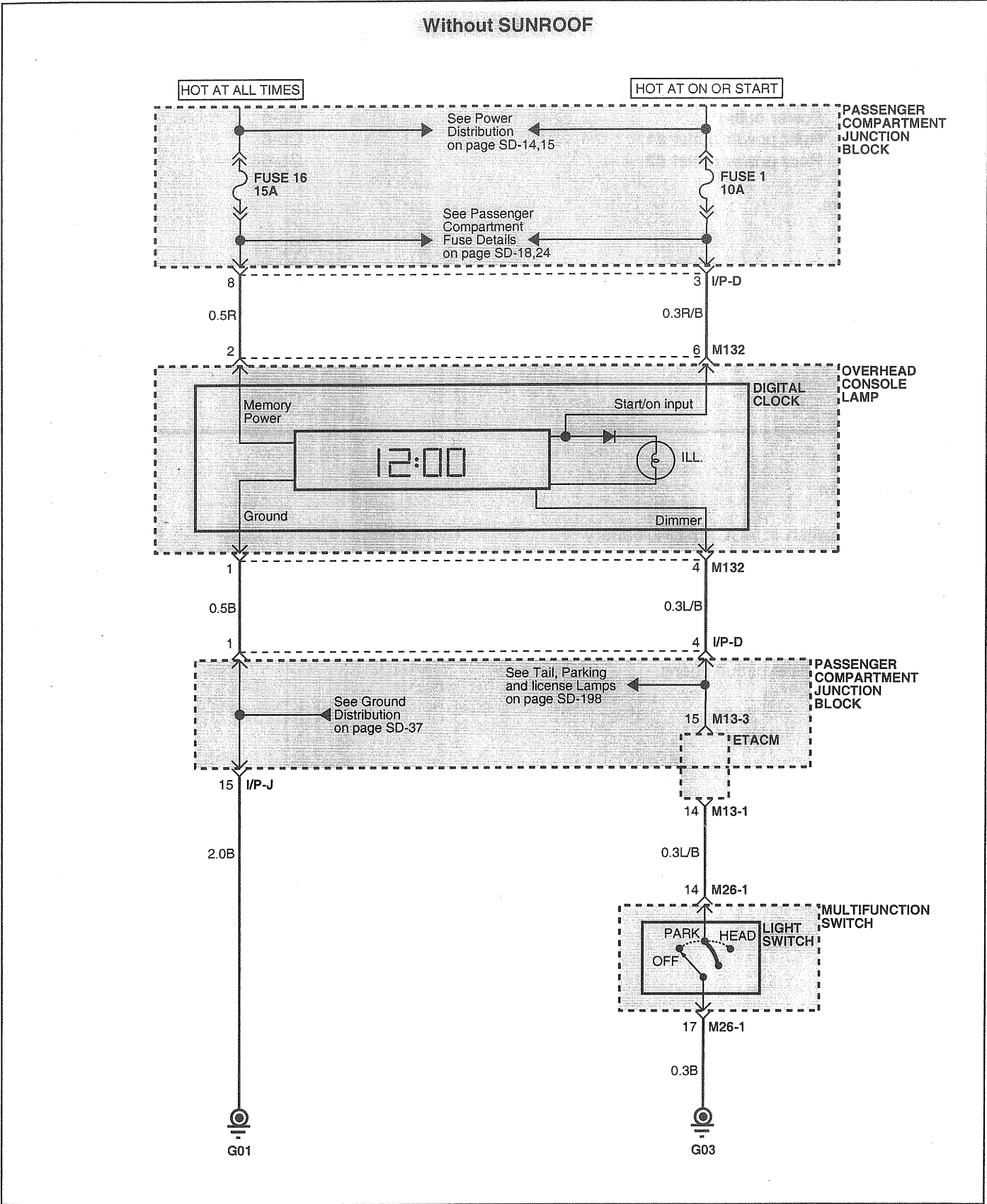
When the element becomes sufficiently heated, it is spring released and the circuit opens.

There are more power outlet jack and when a accessory jack is inserted, the circuits are completed.

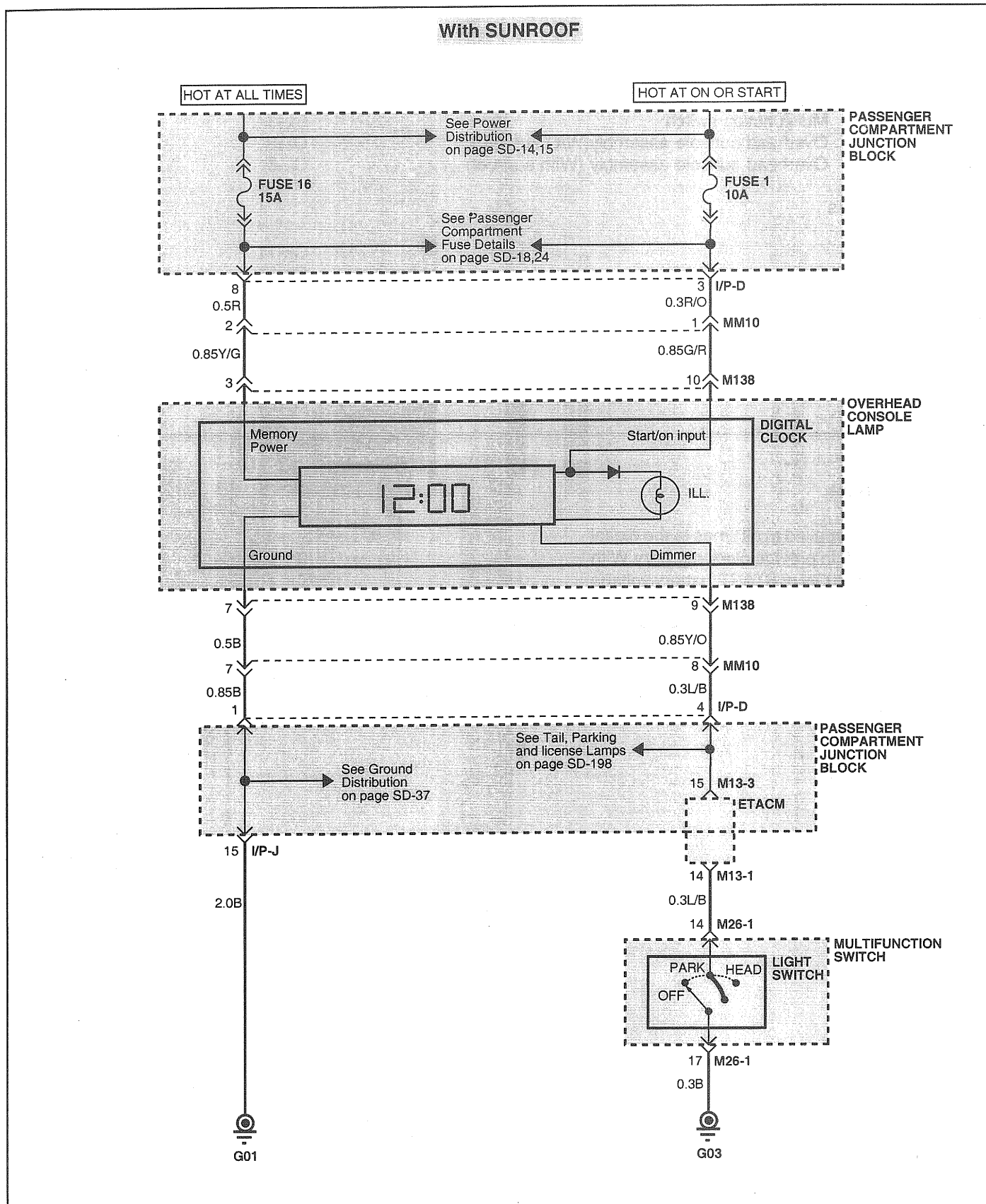
DIGITAL CLOCK

E2HA0220

DIGITAL CLOCK (1)



DIGITAL CLOCK (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
M13-1	ETACM	CL-2
M13-3	ETACM	CL-2
M26-1	Multifunction switch	CL-3
M132	Overhead console assembly(W/O sunroof)	CL-8
M138	Overhead console assembly (With sunroof)	CL-8
Connectors		
I/P-D		CL-11
I/P-J		CL-11
MM10		CL-10
Grounds		
G01		CL-28
G18		CL-28

Circuit Description

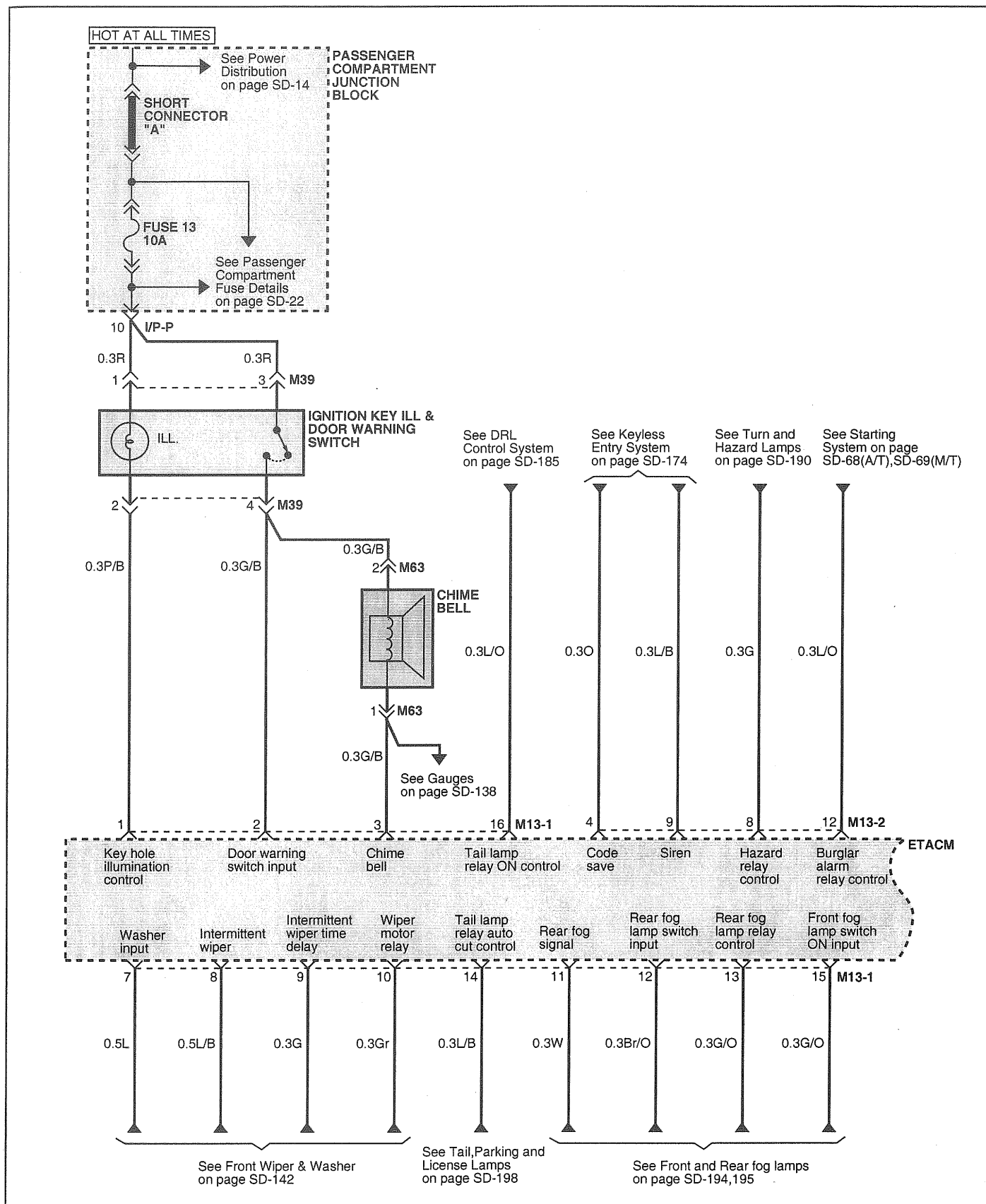
Battery voltage is applied at all times to the digital clock from fuse 16 to provide clock memory. With the ignition switch in ON or START, battery voltage is applied to the clock through fuse 1.

The digital clock lights up and displays the time. With the light switch in PARK or HEAD, the ETACM (Electric Time and Alarm Control Module) provides ground to the digital clock and the digital clock's display will dim.

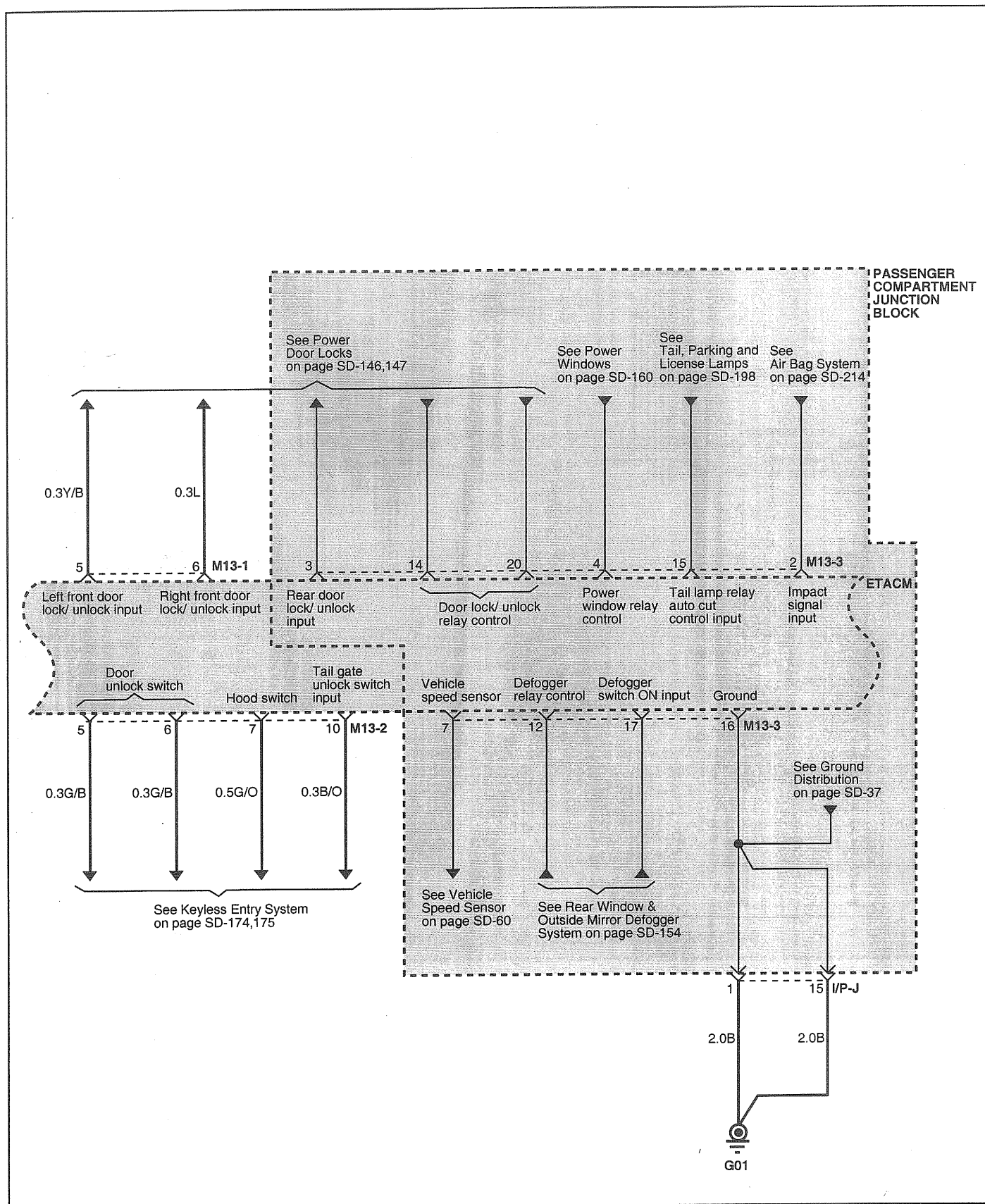
ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM)

E2HA0230

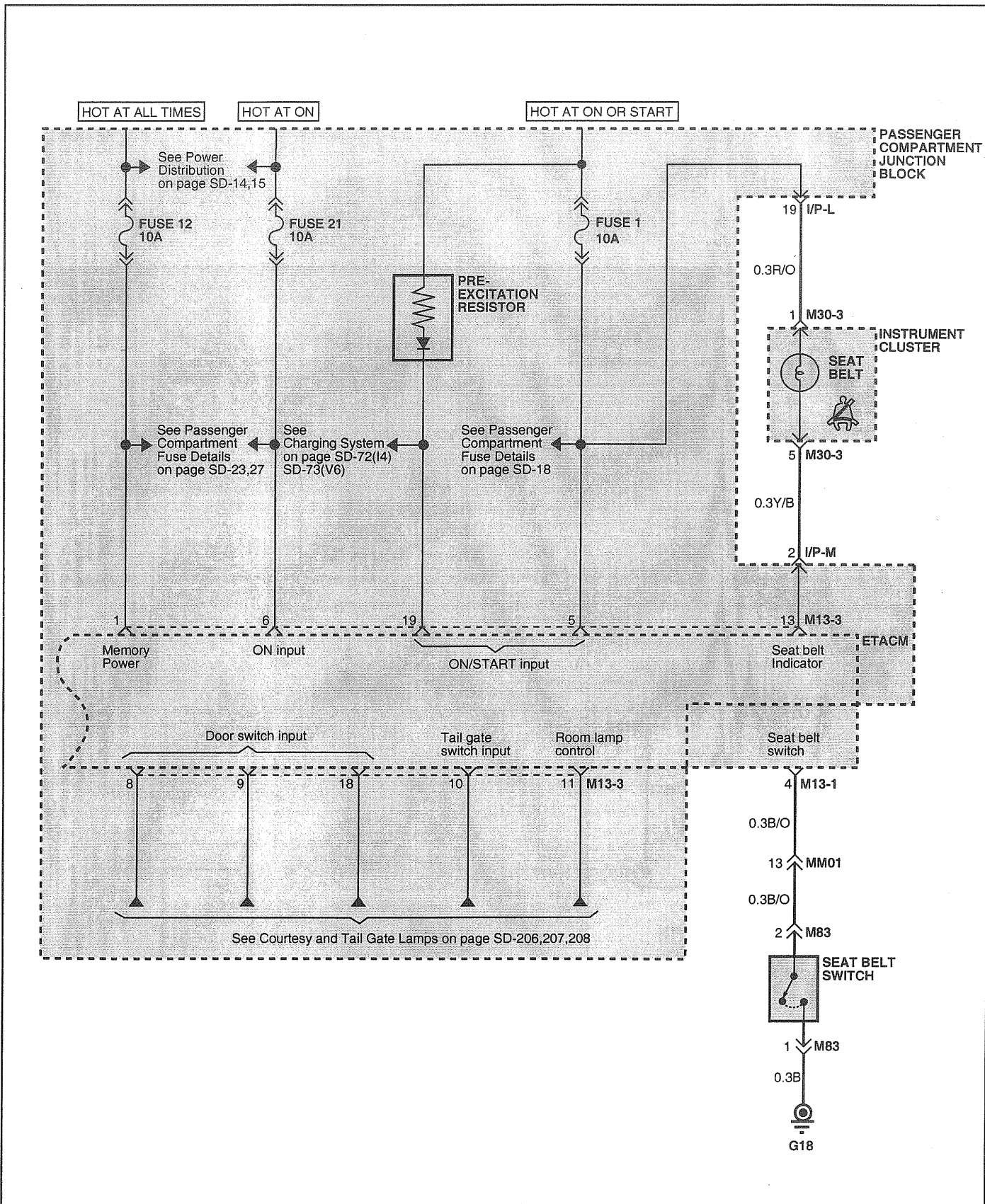
ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM) (1)



ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM) (2)



ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM) (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
M13-1	ETACM	CL-2
M13-2	ETACM	CL-2
M13-3	ETACM	CL-2
M30-3	Instrument cluster	CL-3
M39	Ignition key ILL. and door warning switch	CL-3
M83	Seat belt switch	CL-5
Connectors		
I/P-J		CL-11
I/P-L		CL-11
I/P-M		CL-11
I/P-P		CL-11
Grounds		
G01		CL-28
G18		CL-29

Circuit Description

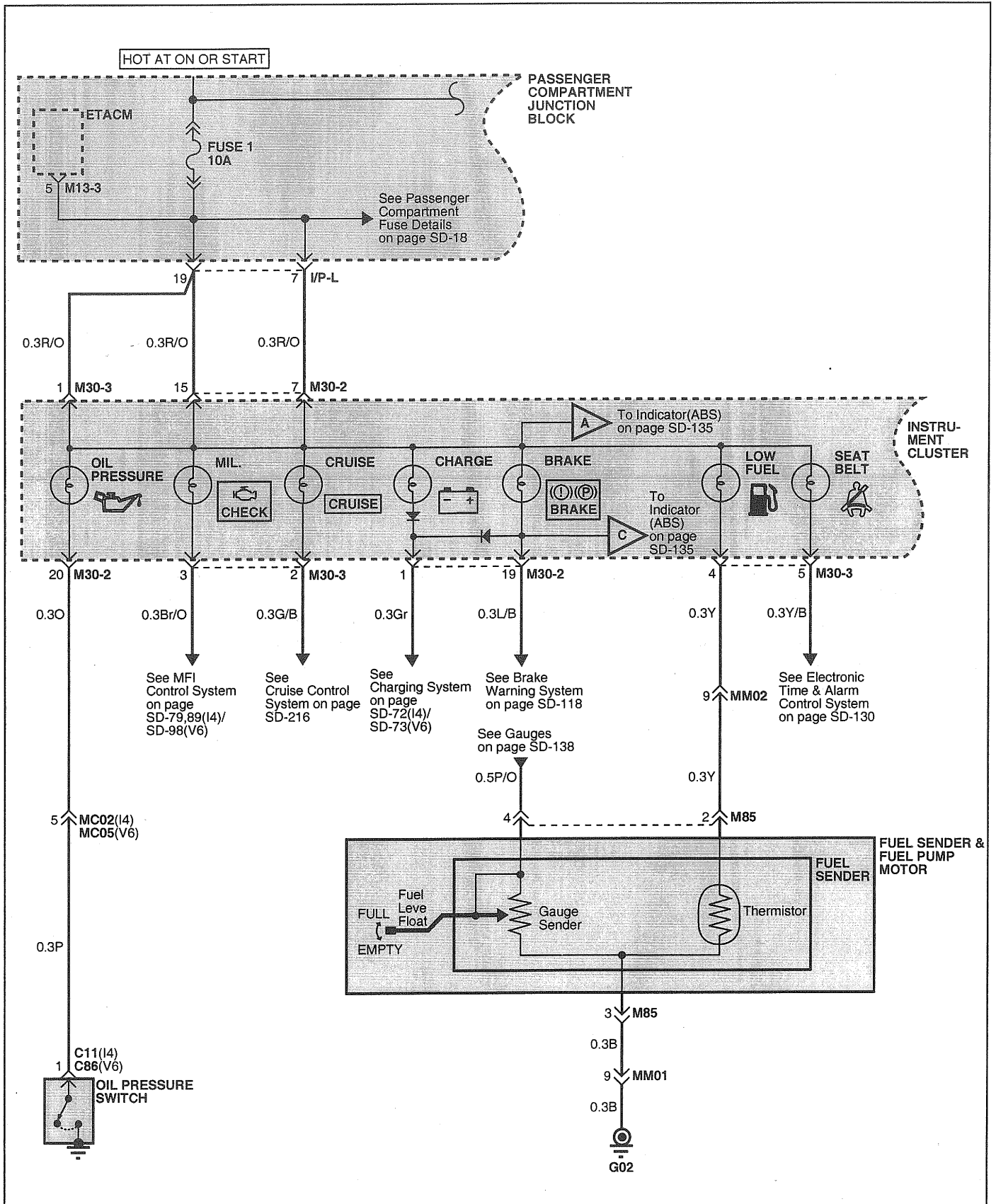
The electronic time and alarm control module (ETACM) controls the front wiper & washer, keyless entry & burglar alarm, power door lock, rear window defogger & out side mirror defogger, delay out room lamp, door warning, seat belt warning, ignition key hole illumination, door key hole illumination and tail lamp auto cut.

The module is supplied battery voltage at all times from fuse 12. Fuse 21 supplies battery voltage to the module whenever the ignition key is in ON. Fuse 1 supplies battery voltage to the module when the ignition is in ON or START. For details on the use of the various inputs and outputs, see the system indicated in the schematic diagram.

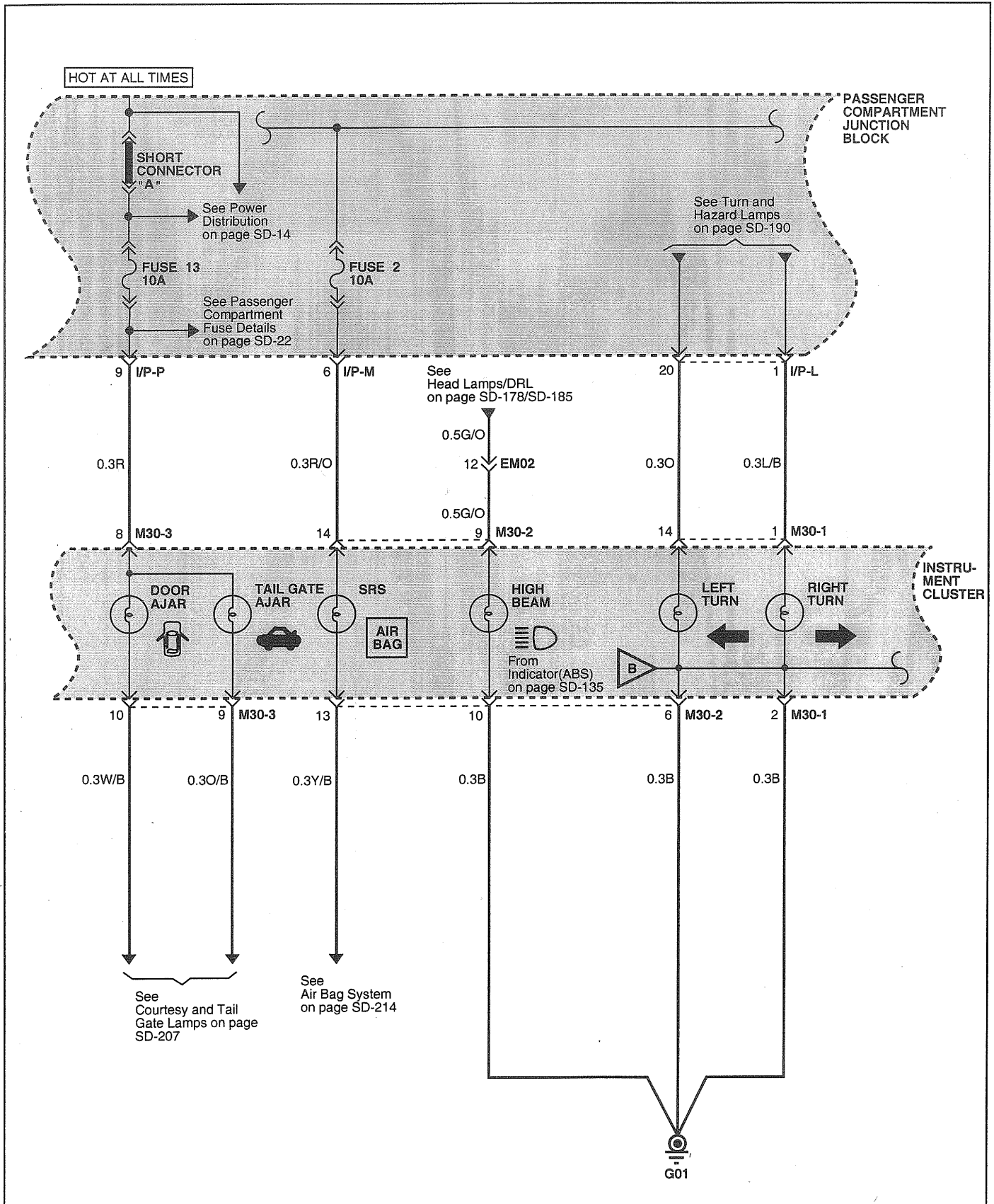
INDICATORS

E2HA0240

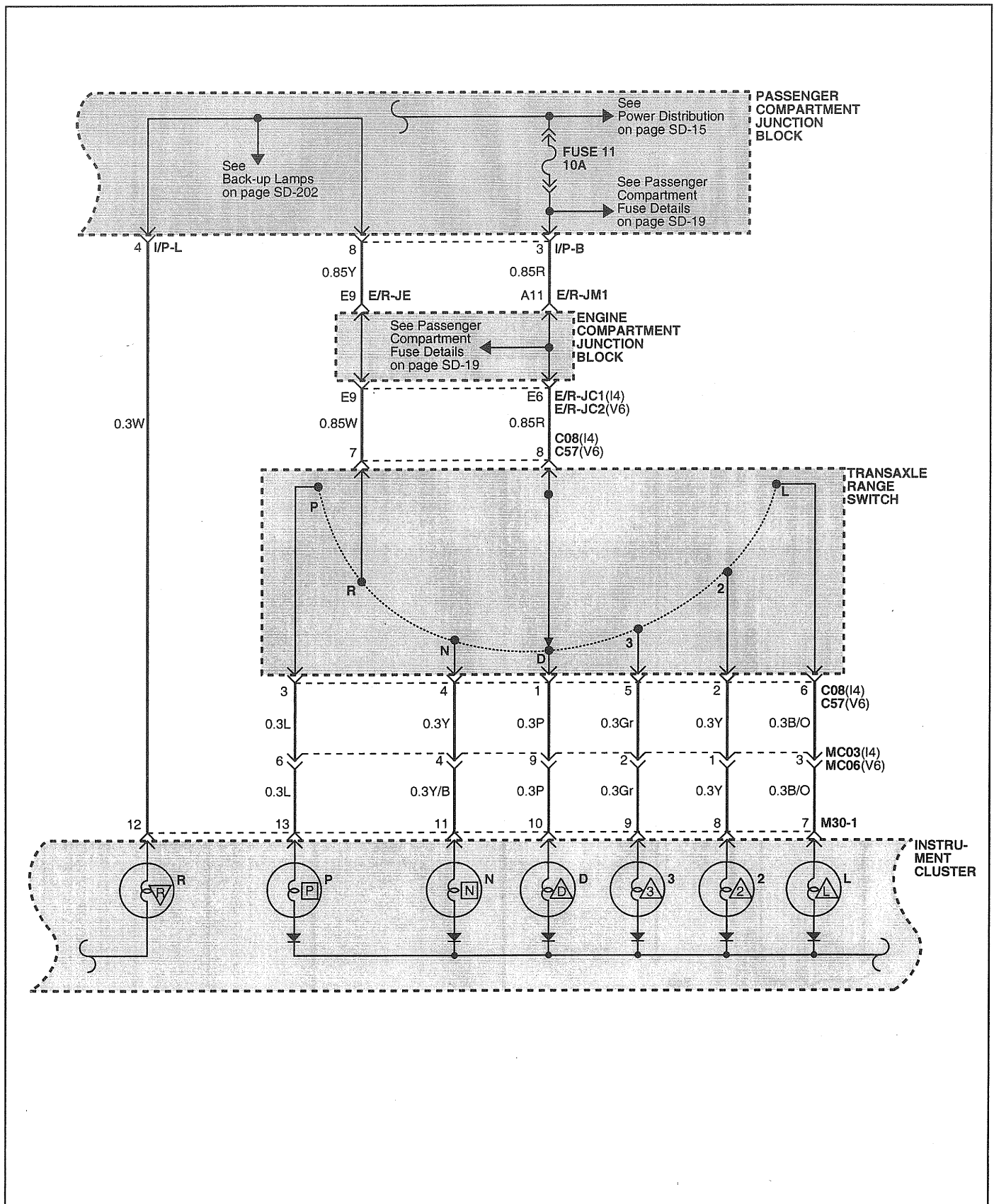
INDICATORS (1)



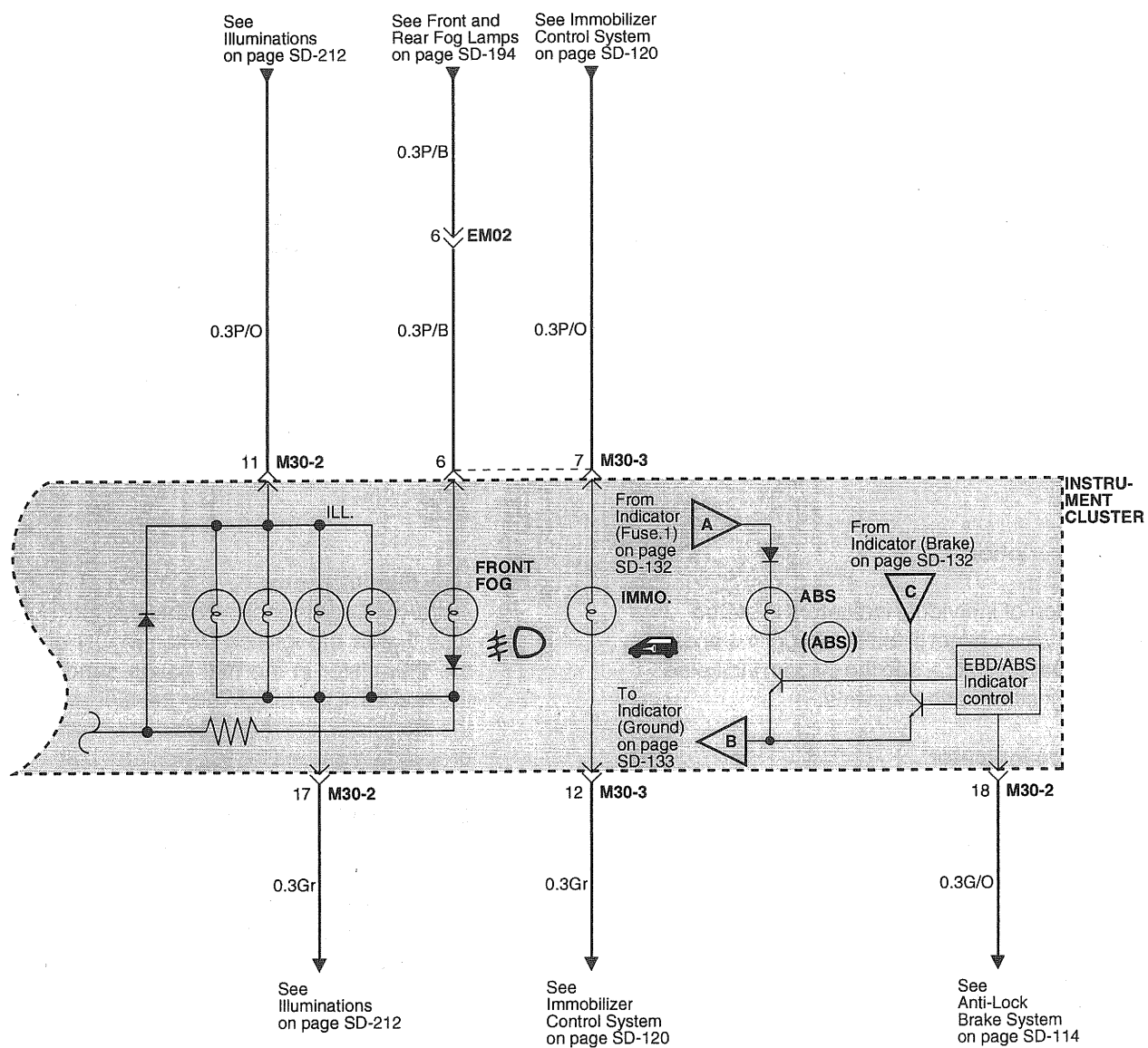
INDICATORS (2)



INDICATORS (3)



INDICATORS (4)



COMPONENT LOCATION INDEX

Components		Location reference-page
C08	Transaxle range switch(I4)	CL-17
C11	Oil pressure switch(I4)	CL-17
C57	Transaxle range switch(V6)	CL-21
C86	Oil pressure switch(V6)	CL-23
M30-1	Instrument cluster	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M34	Joint connector	CL-3
M85	Fuel sender & Fuel pump motor	CL-5
Connectors		
EM02		CL-14
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JM1		CL-14
I/P-B		CL-11
I/P-L		CL-11
I/P-M		CL-11
I/P-P		CL-11
MC02		CL-9
MC05		CL-9
MM01		CL-10
MM02		CL-10
Grounds		
G01		CL-28
G02		CL-28
G03		CL-28

Circuit Description

The operation of individual indicators is stated below. For indicators not listed below (for instance, door ajar, seat belt, etc.), see the system indicated by the circuit schematic diagrams.

Oil Pressure Indicator

Battery voltage is applied to the indicator bulb from fuse 1 with the ignition switch in ON or START. When the oil pressure is low, the oil pressure switch closes, providing a ground for the indicator bulb.

Due to the oil pressure not present when the engine is not running or ignition ON, the pressure switch remains closed.

Low Fuel Indicator

Battery voltage is applied to the indicator bulb from fuse 1 with the ignition switch in ON or START. the thermistor in the fuel gauge sender is near the bottom of the tank. When the fuel level is below the thermistor, the resistance of thermistor lowers, providing a ground for the indicator bulb.

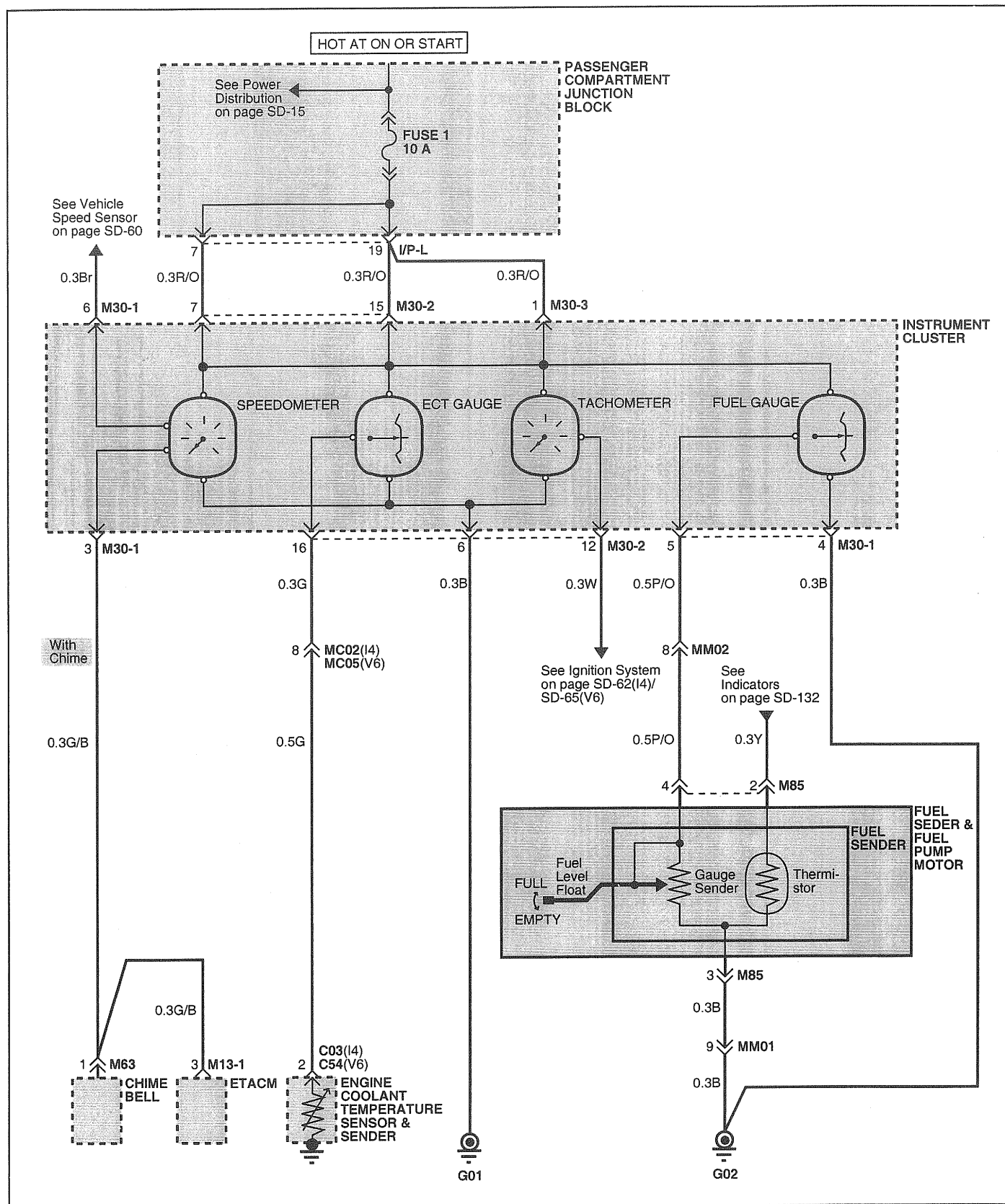
CHECK ENGINE Indicator

Battery voltage is applied to the indicator bulb from fuse 1 with the ignition in ON or START. The ground of the indicator is controlled by the engine control module. The control module will light the indicator when the engine is not running or when it detects a problem.

GAUGES

E2HA0250

GAUGES (1)



E2HA025A

COMPONENT LOCATION INDEX

Components		Location reference-page
C03	Engine coolant temperature sensor & sender(I4)	CL-17
C54	Engine coolant temperature sensor & sender(V6)	CL-21
M13-1	ETACM	CL-2
M30-1	Instrument cluster	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M85	Fuel sender & Fuel pump motor	CL-5
Connectors		
I/P-L		CL-11
MC02		CL-9
MC05		CL-9
MM01		CL-10
MM02		CL-10
Grounds		
G01		CL-28
G02		CL-28

Circuit Description

Speedometer

With the ignition switch in ON and START, the speedometer drive circuit receives pulses from the vehicle speed sensor.

The pulse rate increases as the car accelerates. The frequency and duration of these input pulses are measured and displayed by the speedometer.

Tachometer

The tachometer displays engine speed in rpm. Voltage pulses are taken from the ignition system and sent to the tachometer. The tachometer responds to the frequency of the voltage pulses, which vary according to engine speed. The ECM processes these pulses into a signal that causes the gauge needle to move.

Fuel Gauge

The pointer of the fuel gauge is moved by the magnetic fields of two coils. The coils are at right angles to each other.

Battery voltage is applied to the coils through fuse 1, generating the magnetic fields. The magnetic fields, controlled by the fuel gauge sender, causes the gauge needle to move.

As the resistance in the sender varies, current through the gauge coils changes.

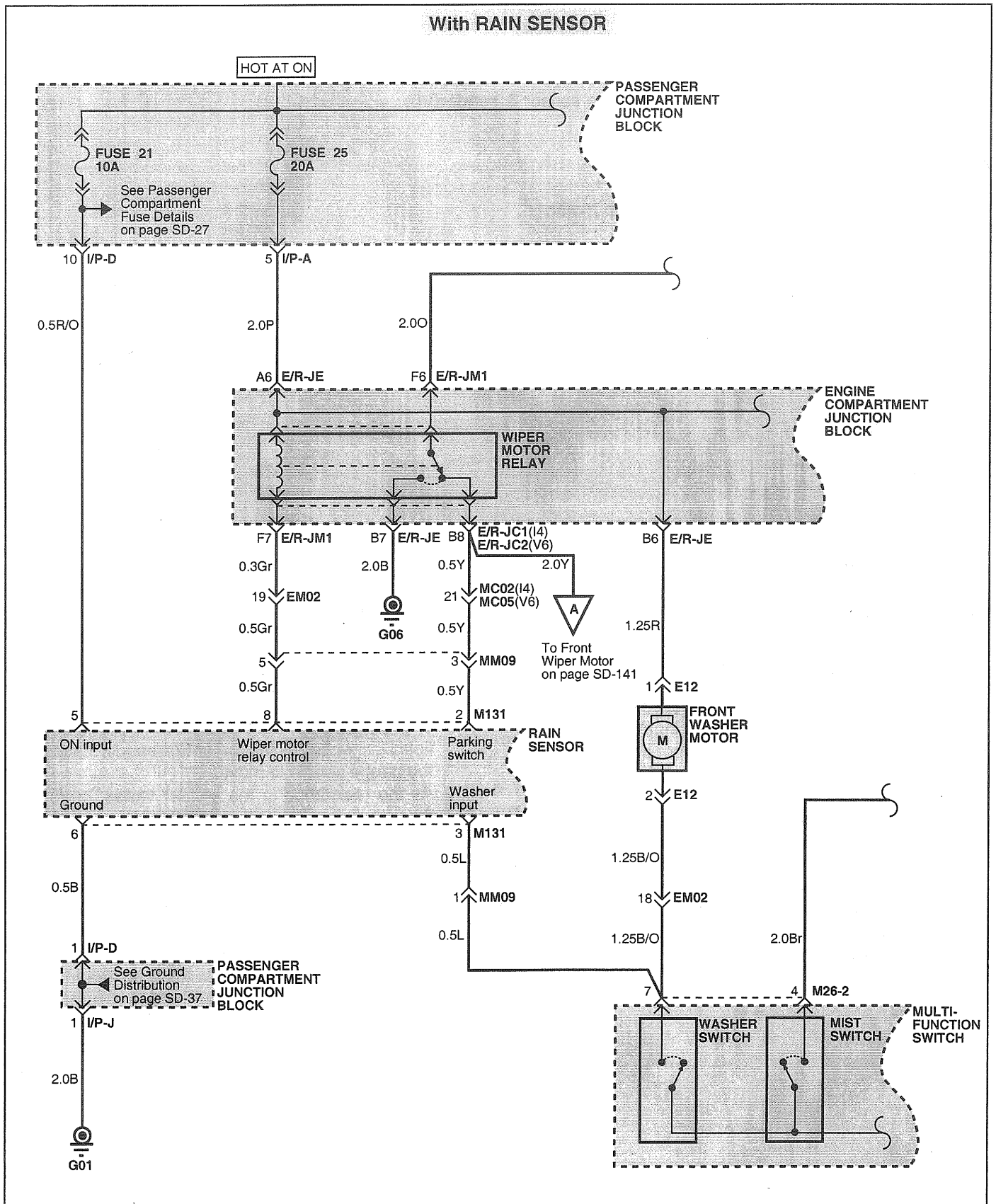
Engine Coolant Temperature Gauge

The pointer of the engine coolant temperature gauge is moved by the magnetic fields of two coils. The coils are at right angles to each other. Battery voltage is applied to the coils through fuse 1, generating the magnetic fields. The magnetic fields, controlled by the engine coolant temperature sender, cause the gauge needle to move. As the resistance in the sender varies, current through the gauge coils changes.

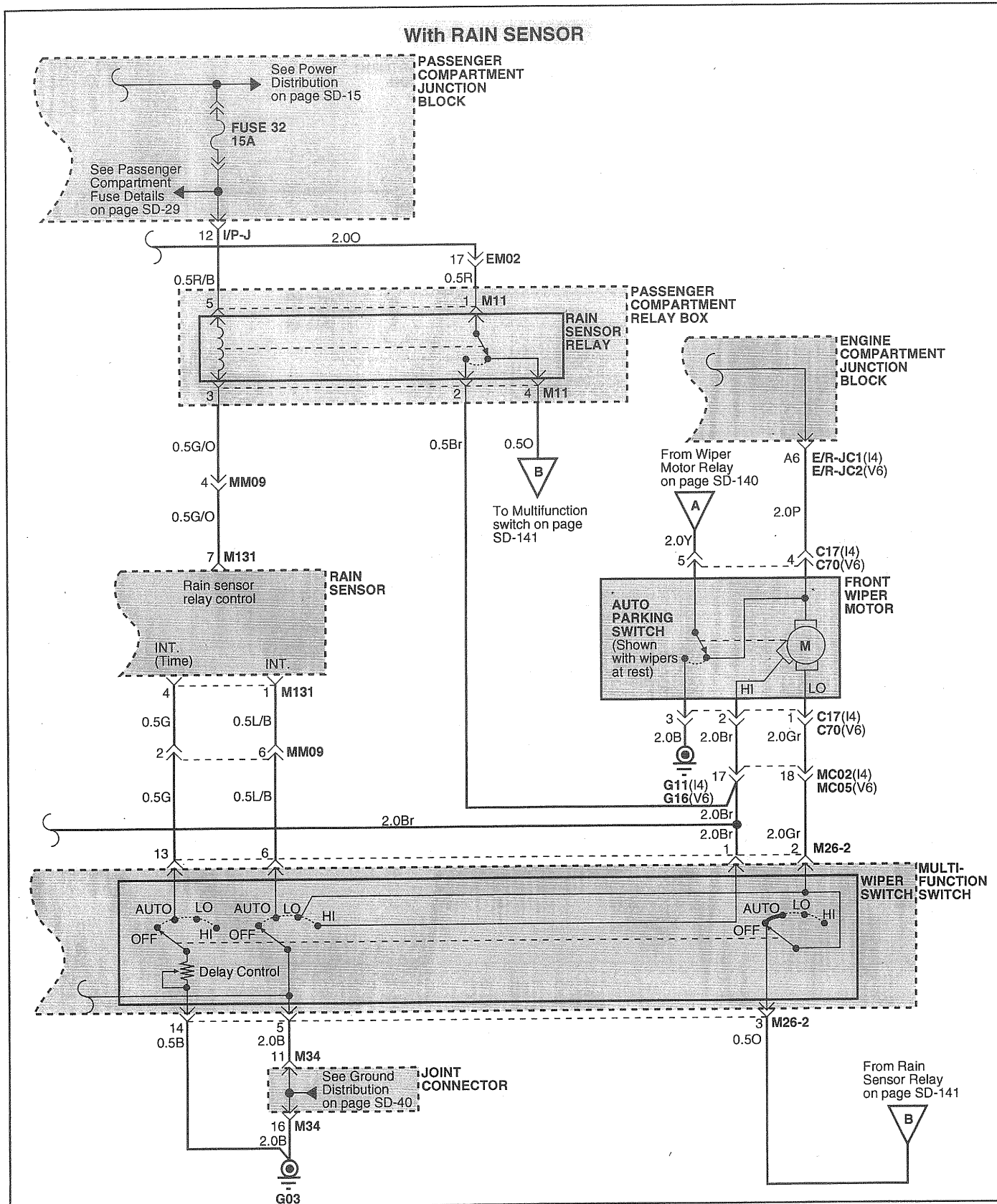
FRONT WIPER & WASHER

E2HA0260

FRONT WIPER & WASHER (1)



FRONT WIPER & WASHER (2)



[illegible]

COMPONENT LOCATION INDEX

Components		Location reference-page
C17	Front wiper motor (I4)	CL-18
C70	Front wiper motor (V6)	CL-22
E12	Front washer motor	CL-13
M11	Rain sensor relay	CL-2
M13-1	ETACM	CL-2
M26-2	Multifunction switch	CL-3
M34	Joint connector	CL-3
M131	Rain sensor	CL-8
Connectors		
EM02		CL-14
E/R-JC1, E/R-JC2, E/R-JE, E/R-JM1		CL-14
I/P-A, I/P-D, I/P-J		CL-11
MC02, MC05		CL-9
MM09		CL-10
Grounds		
G01, G03, G06		CL-28
G11, G16		CL-29

Circuit Description

All the function of the front wiper& washer circuits are controlled by the position of the wiper and washer switch in the multifunction switch. And the front wiper can be work automatically by the sensor signal of the rain sensor(With rain sensor).

WITHOUT RAIN SENSOR

ETACM controls the operation of the wiper motor relay when the wiper switch in INT or the washer switch pulled.

Wiper Operation

When the wiper switch in INT and ignition switch in ON, the wiper motor relay coil energized through ETACM. Battery voltage applied to the front wiper motor and the front wiper motor is grounded at G04 through closed contact of the wiper motor relay. When the wiper switch OFF and the front wiper is not in rest position, the front wiper motor is grounded at G11(I4)/ G16(V6) through auto parking switch in the front wiper motor and the front wiper goes to the rest position.

When the wiper switch in LOW or HI, battery voltage is supplied to the front motor directly and grounded through G03.

Washer Operation

When the washer switch is pulled, the front wiper wipes the window serveral times after the washer fluid sprays on to the front window.

WITH RAIN SENSOR

According to the amount of the rain, Rain sensor controls the operation of the wiper motor relay when the wiper switch in AUTO.

Wiper Operation

With the wiper switch in AUTO and ignition switch in ON, the wiper motor relay coil and rain sensor relay coil energized through rain sensor. Battery voltage applied to the front wiper motor and the front wiper motor is grounded G06 through closed contact of the wiper motor relay.

The front wiper motor is grounded at G11(I4)/ G16(V6) through auto parking switch in the front wiper motor when the rain is stopped and the front wiper is not in rest position.

When the wiper switch in LOW or HI, battery voltage is supplied to the front motor directly and grounded through G03.

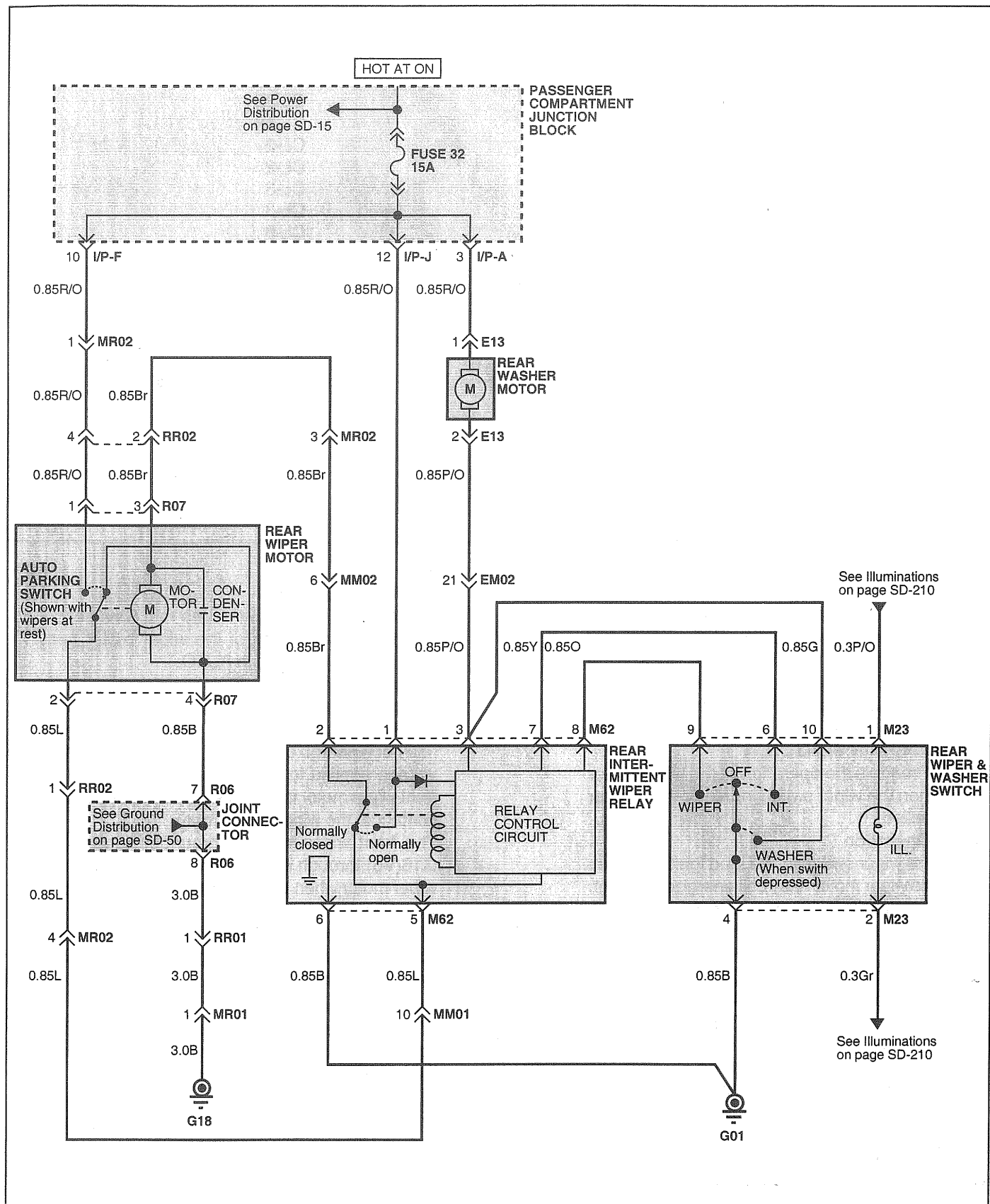
Washer Operation

When the washer switch is pulled, the front wiper wipes the window serveral times after the washer fluid sprays on to the front window.

REAR WIPER & WASHER

E2HA0270

REAR WIPER & WASHER (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
E13	Rear washer motor	CL-13
M23	Rear wiper & washer switch	CL-2
M62	Rear intermittent wiper relay	CL-5
R06	Joint connector	CL-27
R07	Rear wiper motor	CL-27
Connectors		
EM02		CL-14
I/P-A		CL-11
I/P-F		CL-11
I/P-J		CL-11
MM01		CL-10
MM02		CL-10
MR01		CL-11
MR02		CL-11
RR02		CL-27
Grounds		
G01		CL-28
G18		CL-29

Circuit Description

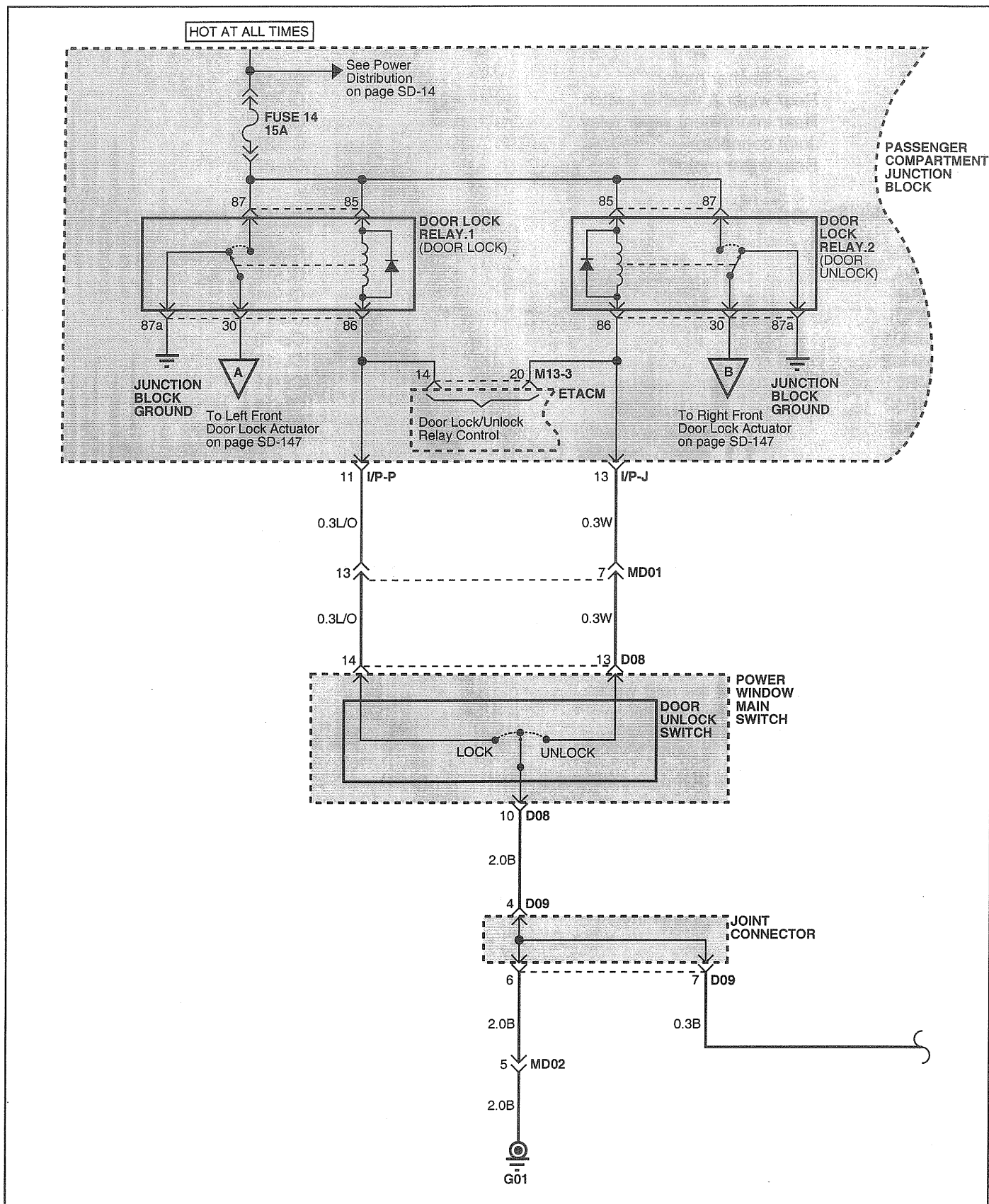
All function of the rear wiper and washer circuits are controlled by the position of the rear wiper and washer switch. The switch has 4 position ; OFF, WASHER, ON and INT.

1. When the ON(wiper) position is depressed, rear window wiper start to operate continuously.
2. When the INT position is depressed, the wiper operates serveral times intermittently.
3. When the WASHER position is depressed, the rear window wiper wipes the window serveral times after the washer fluid sprays onto the rear window.

POWER DOOR LOCKS

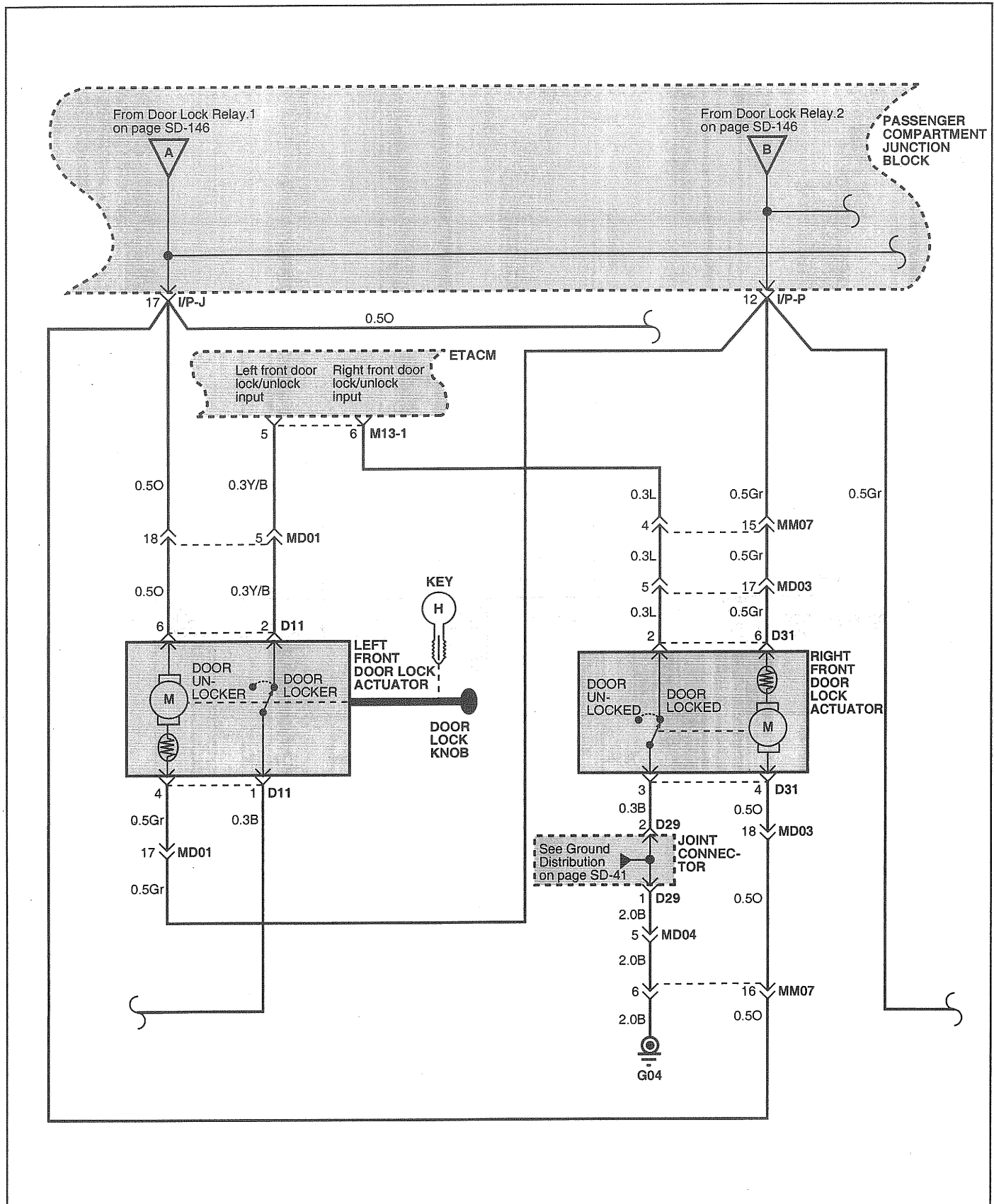
E2HA0280

POWER DOOR LOCKS (1)

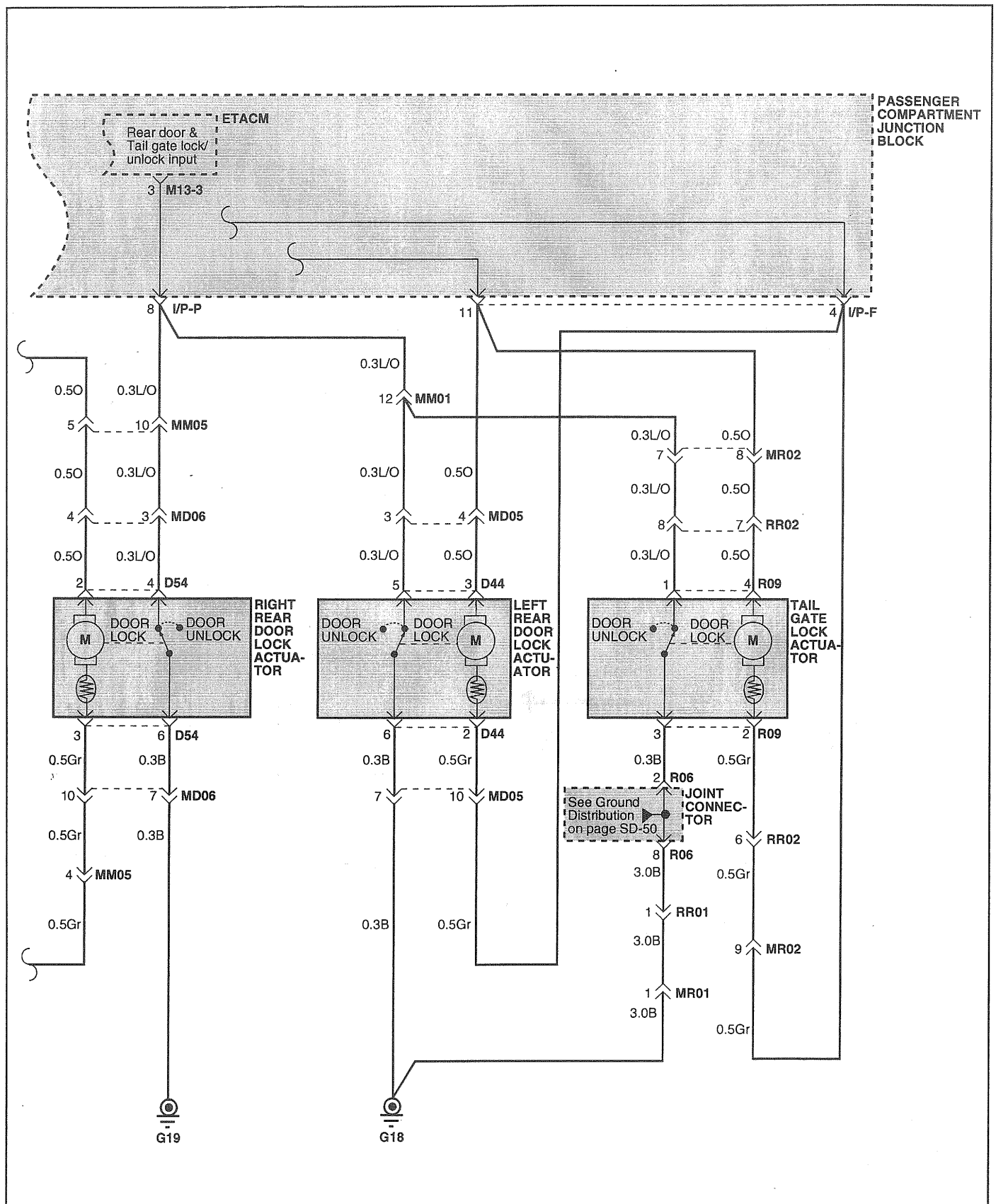


E2HA028A

POWER DOOR LOCKS (2)



POWER DOOR LOCKS (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
D08	Power window main switch	CL-25
D09	Joint connector	CL-25
D11	Left front door lock actuator	CL-25
D29	Joint connector	CL-25
D31	Right front door lock actuator	CL-25
D44	Left rear door lock actuator	CL-26
D54	Right rear door lock actuator	CL-26
M13-1	ETACM	CL-2
M13-3	ETACM	CL-2
R06	Joint connector	CL-27
R09	Tail gate lock actuator	CL-27
Connectors		
I/P-F		CL-11
I/P-J		CL-11
I/P-P		CL-11
MD01		CL-9
MD02		CL-9
MD03		CL-10
MD04		CL-10
MD05		CL-10
MD06		CL-10
MM05		CL-10
MM07		CL-10
MR02		CL-11
RR02		CL-27
Grounds		
G01		CL-28
G04		CL-28
G18		CL-29
G19		CL-29

Circuit Description

Battery voltage is applied at all times to the door lock relay 1, 2 through fuse 14. When locking the vehicle by using the door unlock switch in power window main switch, the door unlock switch will provide a ground to the lock relay 2 and the doors lock. When locking the doors by using the vehicle key or pushing down the lock knob, a signal will be sent to the electronic time and alarm control module. The control module will then ground the relay according to the vehicle speed and the doors lock.

The electronic time and alarm control module also has an input from the ignition key switch.

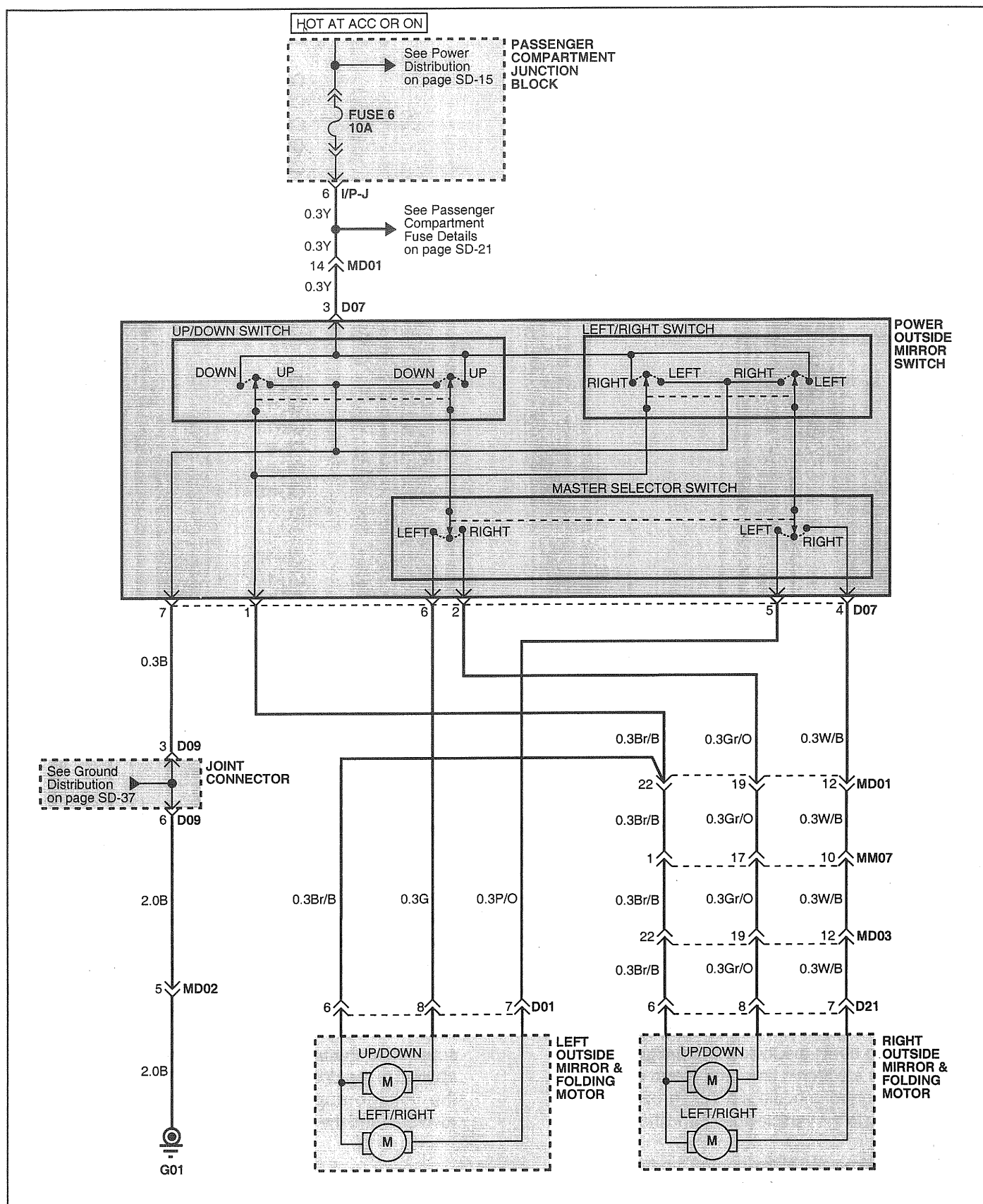
This input prevents the the doors from accidentally being locked when exiting the vehicle with ignition off and the key left in the ignition switch.

When you turn the driver's master switch assembly to the UNLOCK position, a path to ground is supplied to the unlock relay 1. Battery voltage is applied to the door lock actuators. The polarity of the voltage applied to the actuators is now reversed and the doors unlock.

POWER OUTSIDE MIRRORS

E2HA0290

POWER OUTSIDE MIRRORS (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
D01	Left outside mirror & Folding motor	CL-25
D07	Power outside mirror switch	CL-25
D09	Joint connector	CL-25
D21	Right outside mirror & Folding motor	CL-25
Connectors		
I/P-J		CL-11
MD01		CL-9
MD03		CL-10
MM07		CL-10
Grounds		
G01		CL-28

Circuit Description

The operation of the two outside mirrors is controlled by the power outside mirror switch. Each mirror has two reversible motors: One motor moves the mirror up and down, the other motor moves the mirror left and right.

The master selector switch in power door mirror control switch directs battery voltage to the right or left outside mirror.

With the ignition switch in ACC or ON, battery voltage is applied from fuse 6 to the power door mirror switch.

With the master selector switch in LEFT and the up/down switch in UP, battery voltage is applied to the up contacts of the up/down switch and to the left power mirror up/down motor.

Ground is provided to the up contacts of the up/down switch and the left power mirror up/down motor and the mirror goes up. In the DOWN position, battery voltage and ground are applied to the opposite sides of the motor.

The left/right switch works similarly to the up/down switch.

With the master selector switch in the RIGHT position, battery voltage and ground are applied to the right power mirror motors which then operate in a similar way.

E2HA0300

HOT AT ALL TIMES

HOT AT ACC OR ON

PASSENGER COMPARTMENT JUNCTION BLOCK

See Power Distribution on page SD-14,15

See Passenger Compartment Fuse Details on page SD-22

See Passenger Compartment Fuse Details on page SD-21

CIRCUIT CONTROL

POWER OUTSIDE MIRROR FOLDING MODULE

POWER OUTSIDE MIRROR FOLDING SWITCH

LEFT OUTSIDE MIRROR & FOLDING MOTOR

RIGHT OUTSIDE MIRROR & FOLDING MOTOR

JOINT CONNECTOR

G03

COMPONENT LOCATION INDEX

Components		Location reference-page
D01	Left outside mirror & folding motor	CL-25
D21	Right outside mirror & folding motor	CL-25
M24	Power outside mirror folding switch	CL-2
M34	Joint connector	CL-3
M61	Power outside mirror folding module	CL-3
Connectors		
I/P-J		CL-11
I/P-P		CL-11
MD01		CL-9
MD03		CL-10
MM07		CL-10
Grounds		
G03		CL-28

Circuit Description

The power outside mirror folding module controls the operation of the outside mirror folding and unfolding through relay coils control.

With the ignition switch in ACC or ON and the power outside mirror folding switch ON, the micro computer in the power outside mirror folding module sends signals to activate the transistor.

According to the signals the folding relay coil or unfolding relay coil is energized and battery voltage is applied to the appropriate relay contacts. The two folding mirror motors activate.

F2HA0310

HOT AT ALL TIMES

HOT AT ON OR START

PASSENGER COMPARTMENT JUNCTION BLOCK

See Power Distribution on page SD-14

See Passenger Compartment Fuse Details on page SD-18

See Charging System on page SD-72(14), SD-73(V6)

FUSE 19 30A

FUSE 1 10A

PRE-EXCITATION RESISTOR

DEFOGGER RELAY

ETACM

M13-3

M33-3

Defogger relay control

ON/START input

Engine Running input

Defogger switch input

FUSE 9 10A

I/P-F

I/P-J

I/P-L

Manual A/C

Full Auto A/C

REAR WINDOW DEFOGGER

LEFT OUT-SIDE MIRROR & FOLDING MOTOR

RIGHT OUT-SIDE MIRROR & FOLDING MOTOR

See Ground Distribution on page SD-37,41

JOINT CONNECTOR

JOINT CONNECTOR

JOINT CONNECTOR

See Ground Distribution on page SD-50

A/C CONTROL MODULE

DEFOGGER SWITCH

A/C CONTROL MODULE

DEFOGGER SWITCH

G18

G01

G04

COMPONENT LOCATION INDEX

Components		Location reference-page
D01	Left outside mirror & folding motor	CL-25
D09	Joint connector	CL-25
D21	Right outside mirror & folding motor	CL-25
D29	Joint connector	CL-25
D13-3	ETACM	CL-2
D53-1	A/C control module(Full Auto A/C)	CL-4
M54	A/C control module(Manual A/C)	CL-4
R02	Rear window defogger(+)	CL-27
R06	Joint connector	CL-27
R13	Rear window defogger(-)	CL-27
Connectors		
I/P-F		CL-11
I/P-J		CL-11
I/P-L		CL-11
MD01		CL-9
MD02		CL-9
MD03		CL-10
MD04		CL-10
MM07		CL-10
MR01		CL-11
RR01		CL-27
Grounds		
G01		CL-28
G04		CL-28
G18		CL-29

Circuit Description

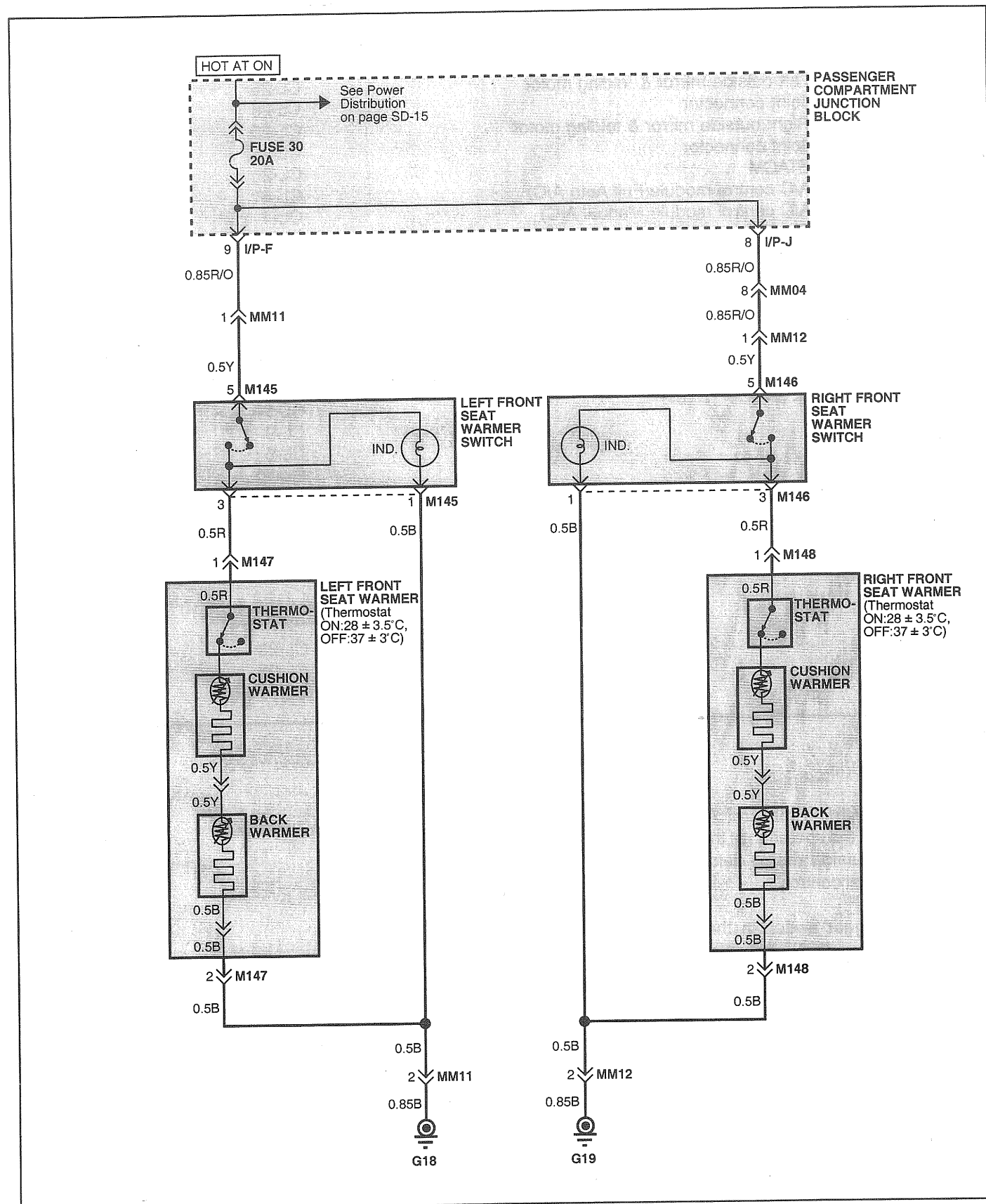
The ETACM(Electric Time and Alarm Control Module) controls the operation of the rear window defogger and outside mirror defogger through defogger relay coil control.

When the defogger switch in the A/C control module is depressed(ON), the defogger relay coil is energized through ETACM. Battery voltage is supplied to the rear window defogger and outside mirror defogger through the defogge relay contact.

SEAT WARMER

E2HA0320

SEAT WARMER (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
M145	Left front seat warmer switch	CL-9
M146	Right front seat warmer switch	CL-9
Connectors		
MM04		CL-10
MM11		CL-11
MM12		CL-11
Grounds		
G18		CL-28
G19		CL-30

Circuit Description

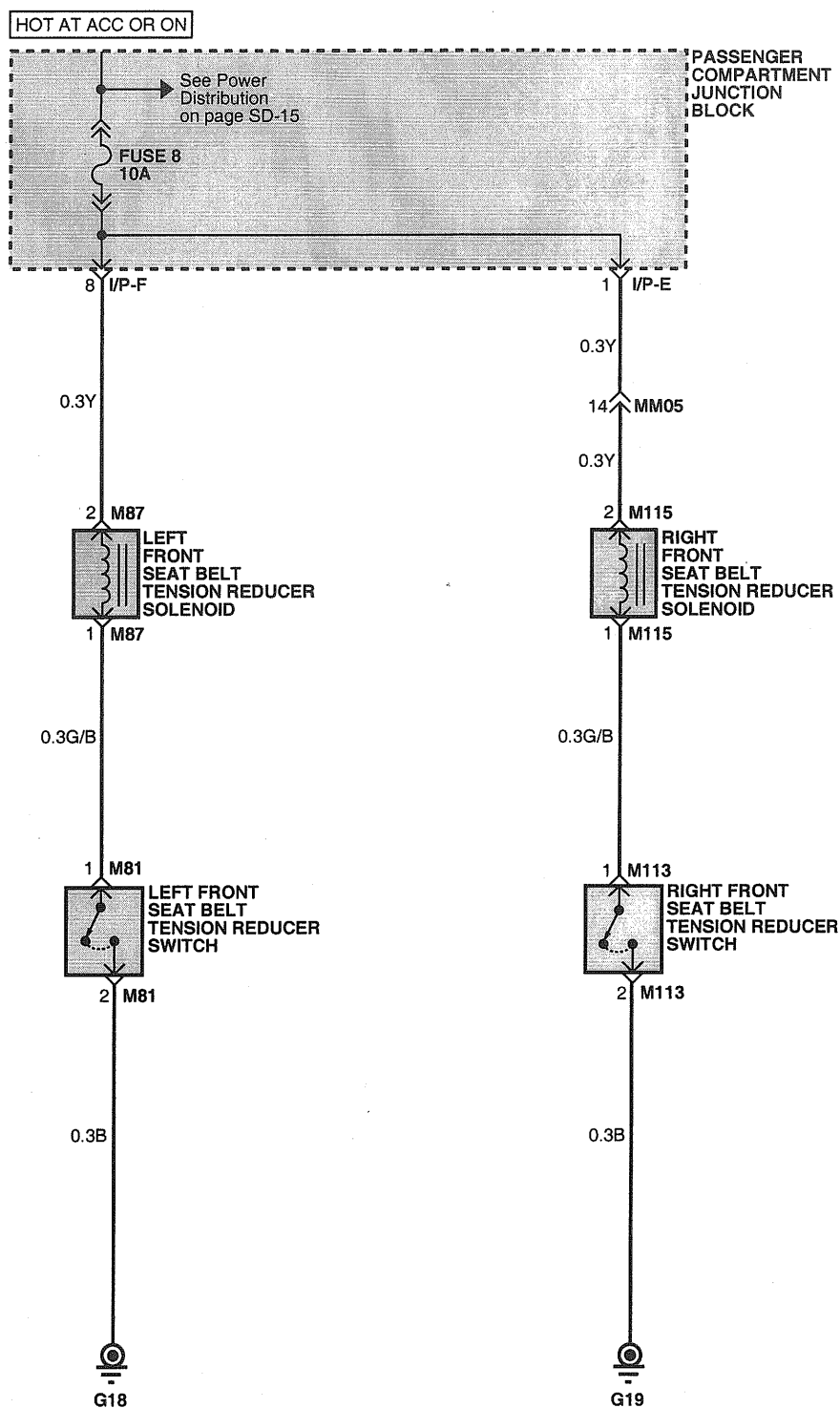
Fuse 30 supplies battery voltage to the Left/Right front seat warmer when the ignition switch is "ON" and the Left/Right front seat warmer switches are pushed(ON).

When each seat warmer switch is pushed, battery voltage supplied to the seat warmer and grounded through G18 and G19.

SEAT BELT TENSION REDUCER

E2HA0330

SEAT BELT TENSION REDUCER (1)

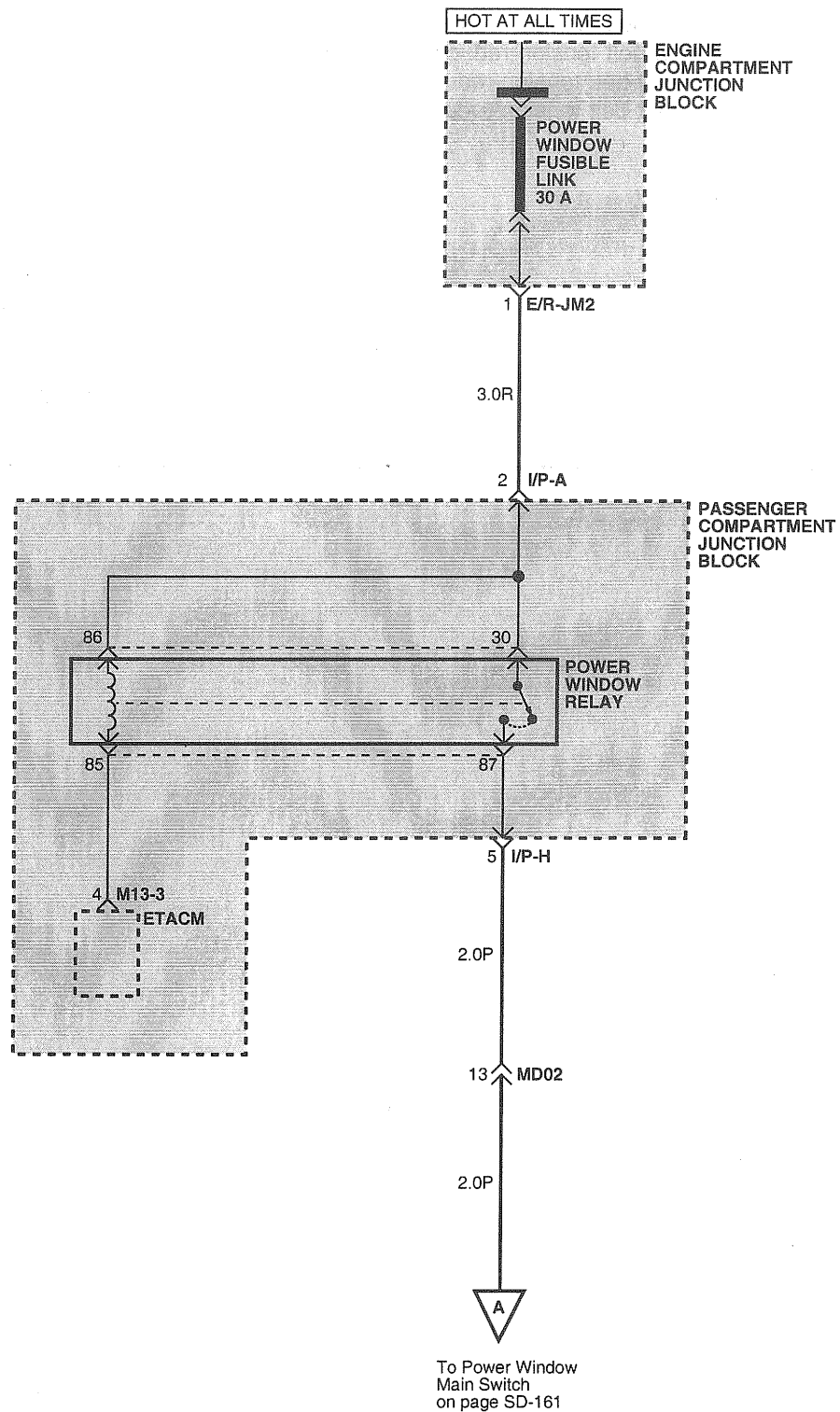


COMPONENT LOCATION INDEX

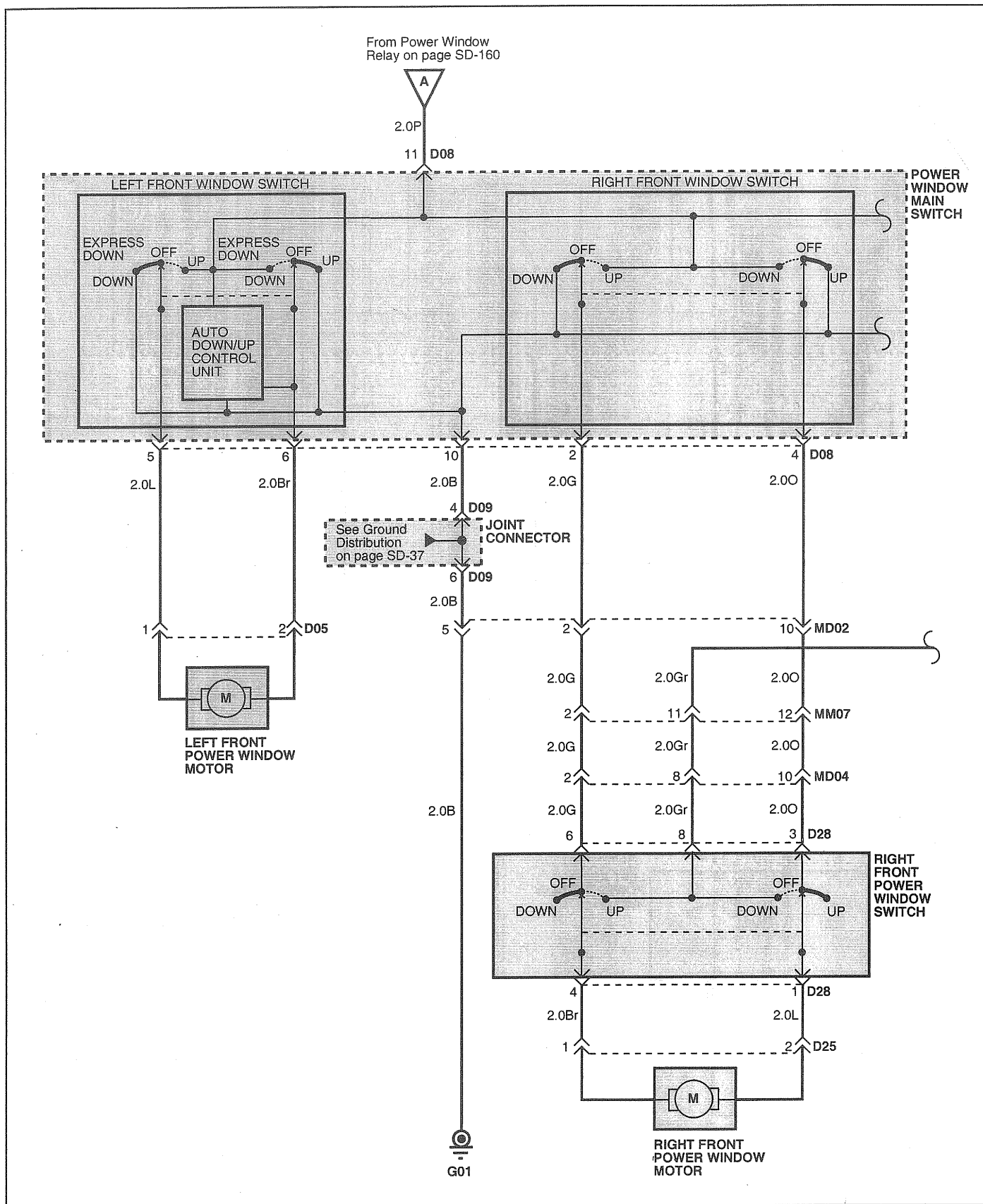
Components		Location reference-page
M81	Left front seat belt tension reducer switch	CL-5
M87	Left front seat belt tension reducer solenoid	CL-6
M113	Right front seat belt tension reducer switch	CL-7
M115	Right front seat belt tension reducer solenoid	CL-7
Connectors		
I/P-F		CL-11
I/P-E		CL-11
MM05		CL-10
Grounds		
G18		CL-29
G19		CL-30

POWER WINDOWS E2HA0340

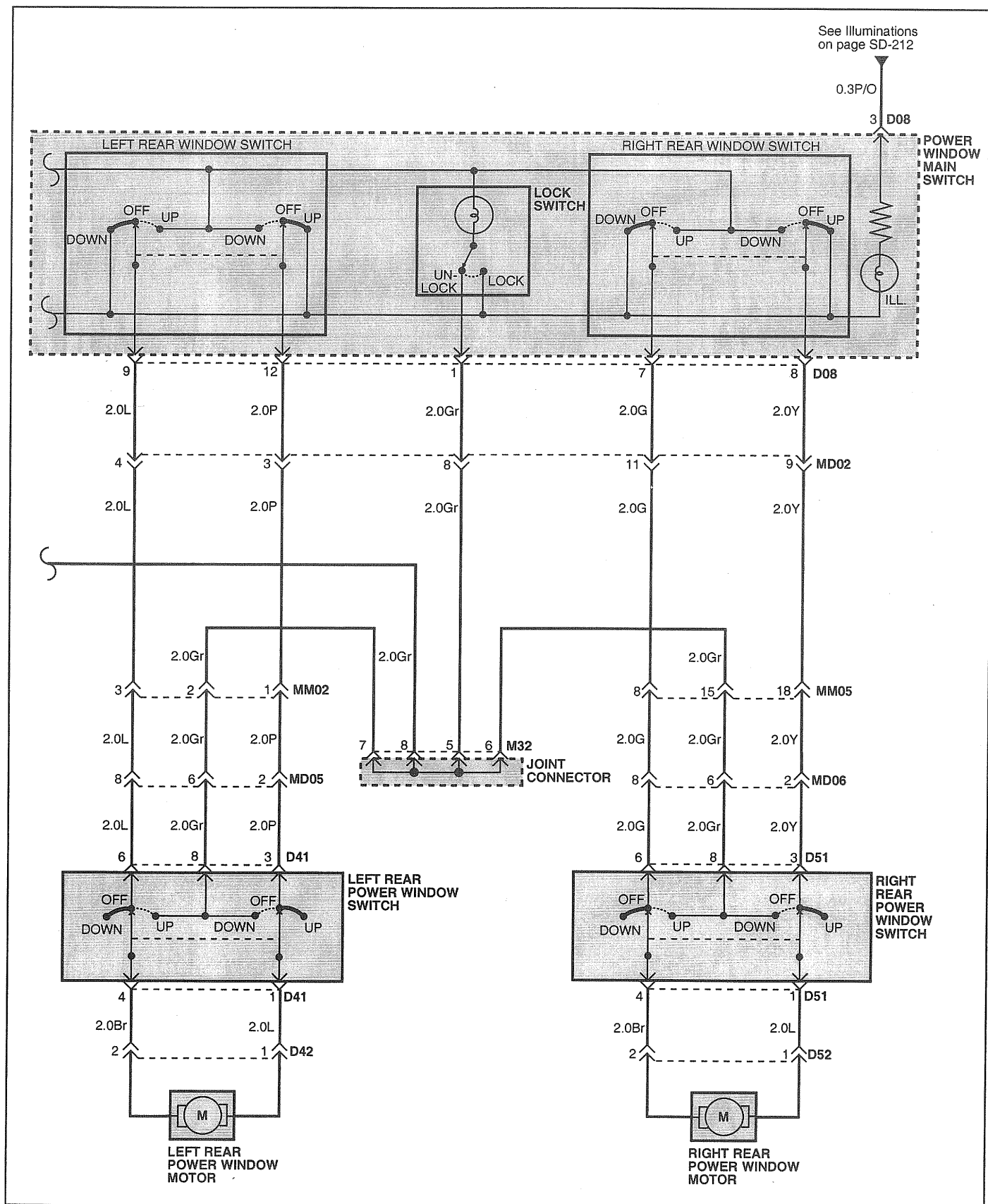
POWER WINDOWS (1)



POWER WINDOWS (2)



POWER WINDOWS (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
D05	Left front power window motor	CL-25
D08	Power window main switch	CL-25
D09	Joint connector	CL-25
D25	Right front power window motor	CL-25
D28	Right front power window switch	CL-26
D41	Left rear power window switch	CL-26
D42	Left rear power window motor	CL-26
D51	Right rear power window switch	CL-26
D52	Right rear power window motor	CL-26
Connectors		
E/R-JM2		CL-14
I/P-A		CL-11
I/P-H		CL-11
MD02		CL-9
MD04		CL-10
MD05		CL-10
MD06		CL-10
MM02		CL-10
MM05		CL-10
MM07		CL-10
Grounds		
G01		CL-28

Circuit Description

A permanent magnet motor operates each of the power windows. Each motor raises or lowers the glass when voltage is supplied to it. The direction the motor turns depends on the polarity of the supply voltage.

The power window main switch controls all the power window motors. Each window switch controls only one of the power window motors. If the lock switch is depressed, the rear power windows and right front power window cannot be controlled by their own window switches, but they can still be controlled from the power window main switch.

Power Window Main Switch Operation

Battery voltage is applied to the coil and the contacts of the power window relay at all times. The coil of the relay is grounded through the electronic time and alarm control module (ETACM) anytime the ignition switch is ON.

Battery voltage is then supplied to power window main switch through the closed relay contacts.

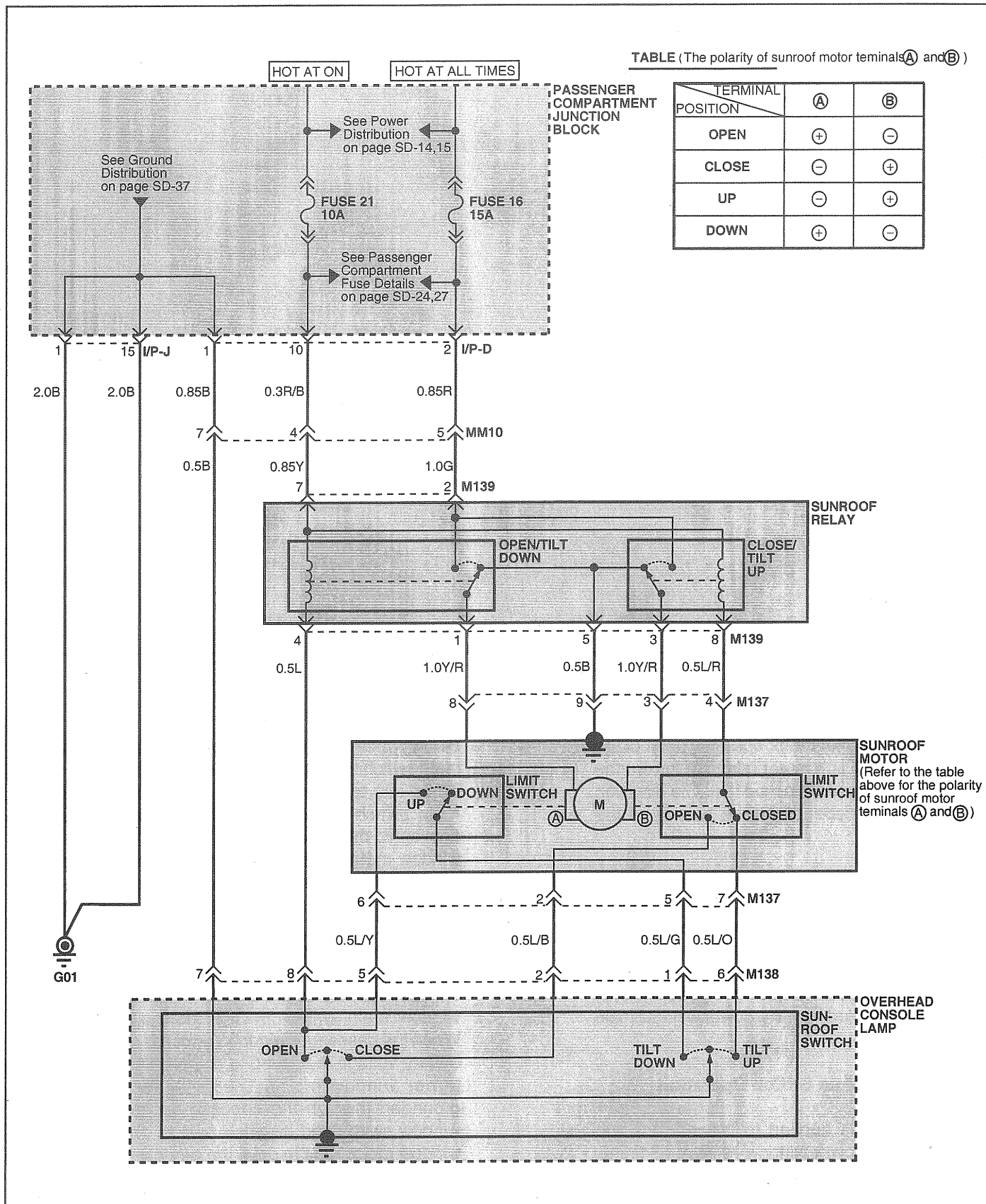
When any of the switches in the power window main switch are operated, battery voltage is applied to the power window motor. The power window motor is grounded through the opposite contact in the power window main switch.

The power window motor runs to drive the window.

With the power window relay energized, battery voltage is also supplied to the passenger window switches as long as the lock switch in the power window main switch is OFF (not depressed). When the passenger windows switch is operated, battery voltage is applied to one terminal of the power window motor. The other terminal is grounded through the opposite contact in the window switch and the main switch. The power window motor runs to drive the window.

SUNROOF E2HA0350

SUNROOF (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
M137	Sunroof motor	CL-8
M138	Overhead console lamp	CL-8
M139	Sunroof relay	CL-8
Connectors		
I/P-D		CL-11
I/P-J		CL-11
MM10		CL-10
Grounds		
G01		CL-28

Circuit Description

Battery voltage is supplied at all times to open/tilt down and close/tilt up sunroof relay contacts. Open/tilt down relay and close/tilt up relay coils are also supplied battery voltage when the ignition switch is in ON.

When the ignition key is turned on and the open switch is depressed, the open/tilt down relay is energized.

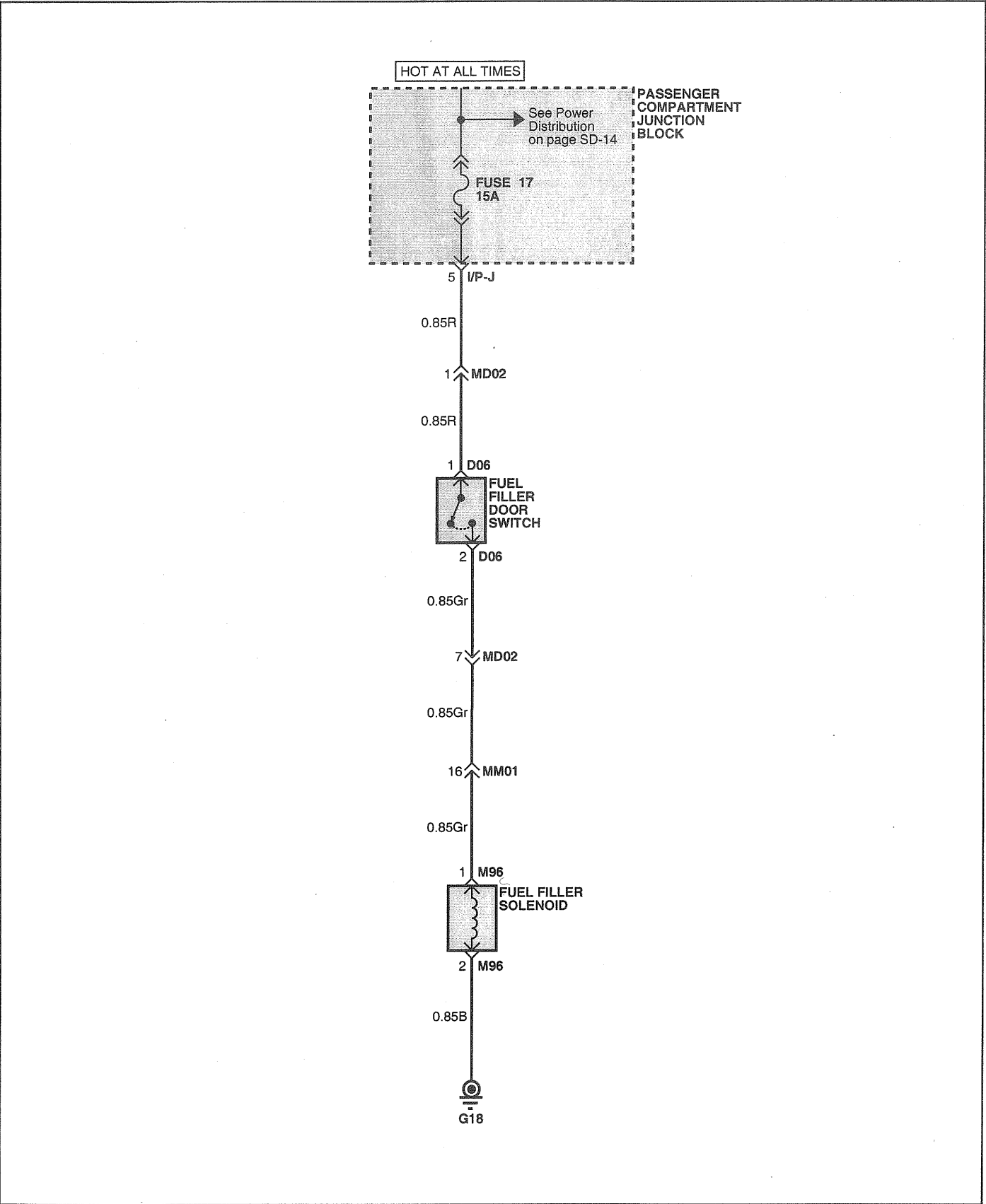
Battery voltage is then supplied to the sunroof motor through the open/tilt down relay contacts. The motor is grounded through close/tilt up relay contact.

When the ignition key is turned on and the close switch is depressed, the close/tilt up relay is energized through roof open/close limit switch. When the sunroof is open, the roof open/close limit switch always contacts the open position. The tilt up and tilt down switch works similarly to the open switch.

The polarity of the voltage applied to the sunroof motor through sunroof relay contacts is changed according the switch positions.

FUEL FILLER OPENER E2HA0360

FUEL FILLER OPENER (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
D06	Fuel filler door switch	CL-25
M96	Fuel filler solenoid	CL-6
Connectors		
I/P-J		CL-11
MD02		CL-9
MM01		CL-10
Grounds		
G18		CL-29

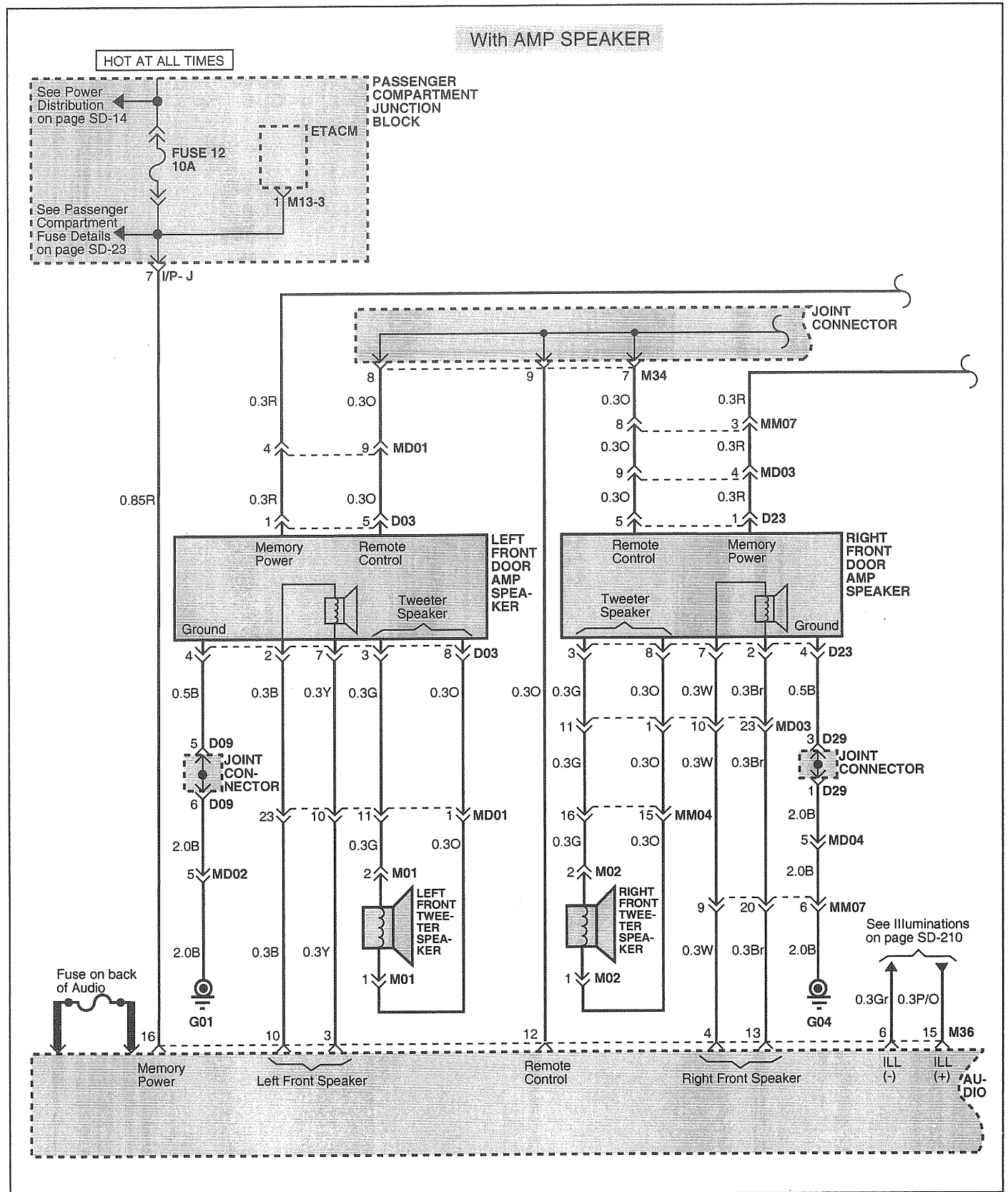
Circuit Description

Battery voltage is supplied at all times to the fuel filler door switch through fuse 17. When the fuel filler door switch is pushed(ON), currents are applied to the fuel filler solenoid and the fuel filler door is opened.

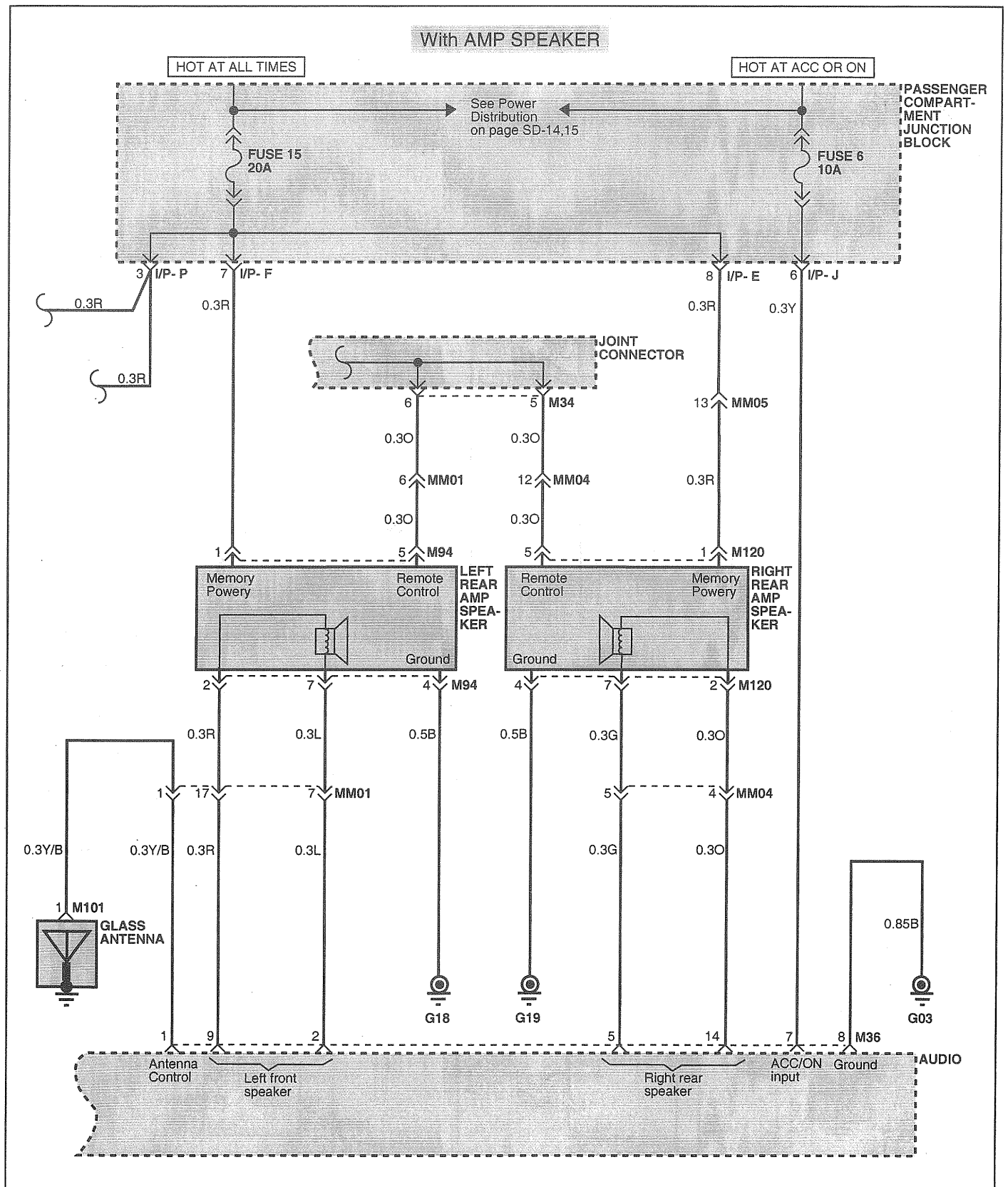
AUDIO

E2HA0370

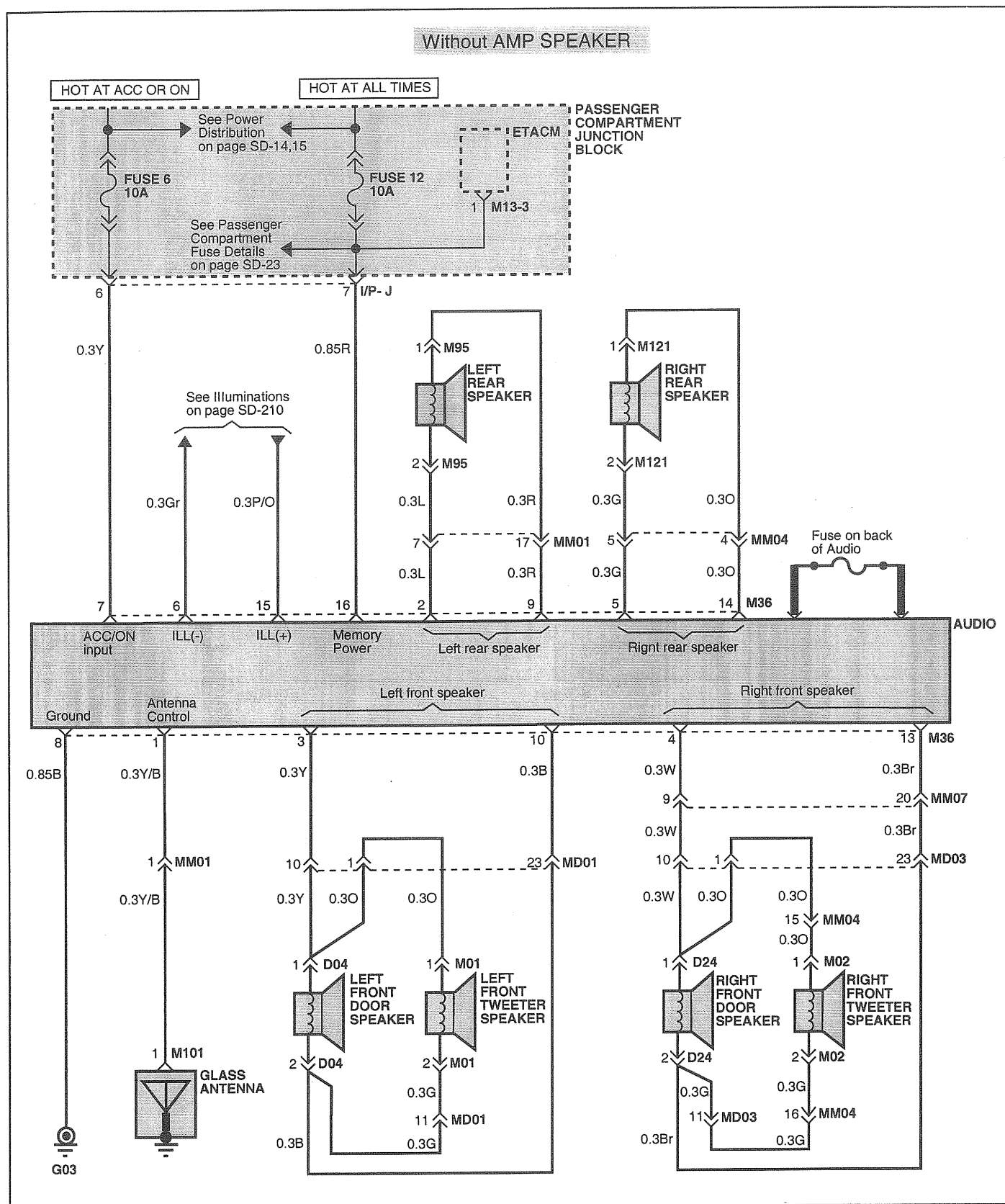
AUDIO (1)



AUDIO (2)



AUDIO (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
D03	Left front door AMP speaker (With AMP speaker)	CL-25
D04	Left front door speaker (With AMP speaker)	CL-25
D09	Joint connector	CL-25
D23	Right front door AMP speaker (With AMP speaker)	CL-25
D24	Right front door speaker (W/O AMP speaker)	CL-25
D29	Joint connector	CL-25
M01	Left front tweeter speaker	CL-2
M02	Right front tweeter speaker	CL-2
M34	Joint connector	CL-3
M94	Left rear AMP speaker (W/O AMP speaker)	CL-6
M95	Left rear speaker (W/O AMP speaker)	CL-6
M101	Glass antenna	CL-7
M120	Right rear AMP speaker (W/O AMP speaker)	CL-7
M121	Right rear speaker (W/O AMP speaker)	CL-7
Connectors		
I/P-E		CL-11
I/P-F		CL-11
I/P-J		CL-11
I/P-P		CL-11
MD02		CL-9
MD03		CL-10
MD04		CL-10
MM01		CL-10
MM04		CL-10
MM05		CL-10
MM07		CL-10
Grounds		
G01		CL-28
G03		CL-28
G04		CL-28
G18		CL-29
G19		CL-30

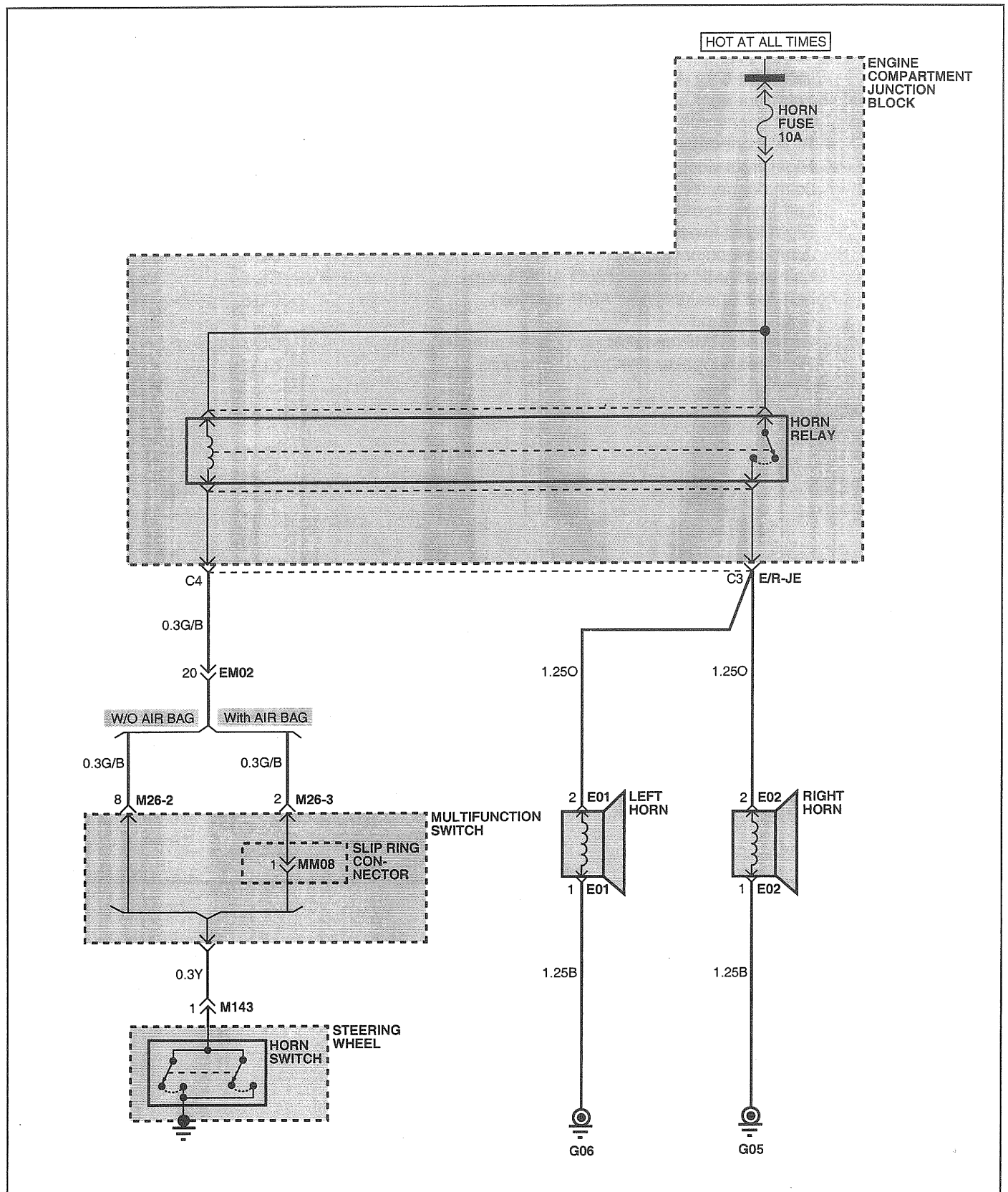
Circuit Description

The audio receives battery voltage at all times from fuse 12 to maintain memory functions.

Fuse 6 supplies battery voltage to the audio when the ignition switch is in ACC or ON for audio operation and displays. Fuse 15 supplies battery voltage to each of the four AMP speakers(With AMP speaker ONLY) at all times. The audio is grounded at G03.

HORNS E2HA0380

HORNS (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
E01	Left horn	CL-12
E02	Right horn	CL-12
M26-2	Multifunction switch	CL-3
M26-3	Multifunction switch	CL-3
M143	Horn switch	CL-4
Connectors		
EM02		CL-14
E/R-JE		CL-14
MM08		CL-10
Grounds		
G06		CL-28

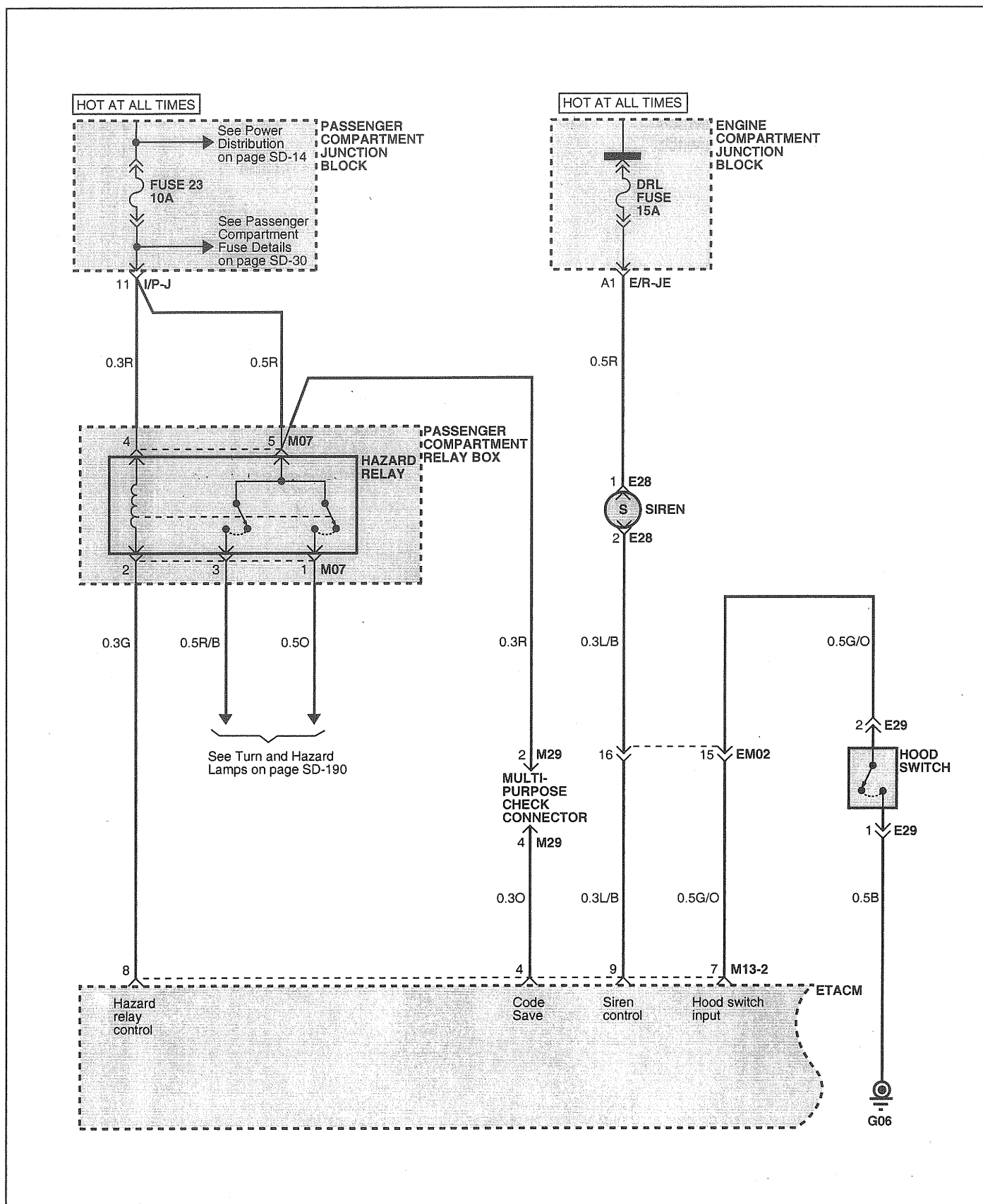
Circuit Description

Battery voltage is applied at all times to both the coil and the contacts of the horn relay. With the horn switch depressed, ground is provided to the coil of the horn relay through the horn switch. The relay contacts close and apply battery voltage to the horns. The horns sound.

KEYLESS ENTRY SYSTEM

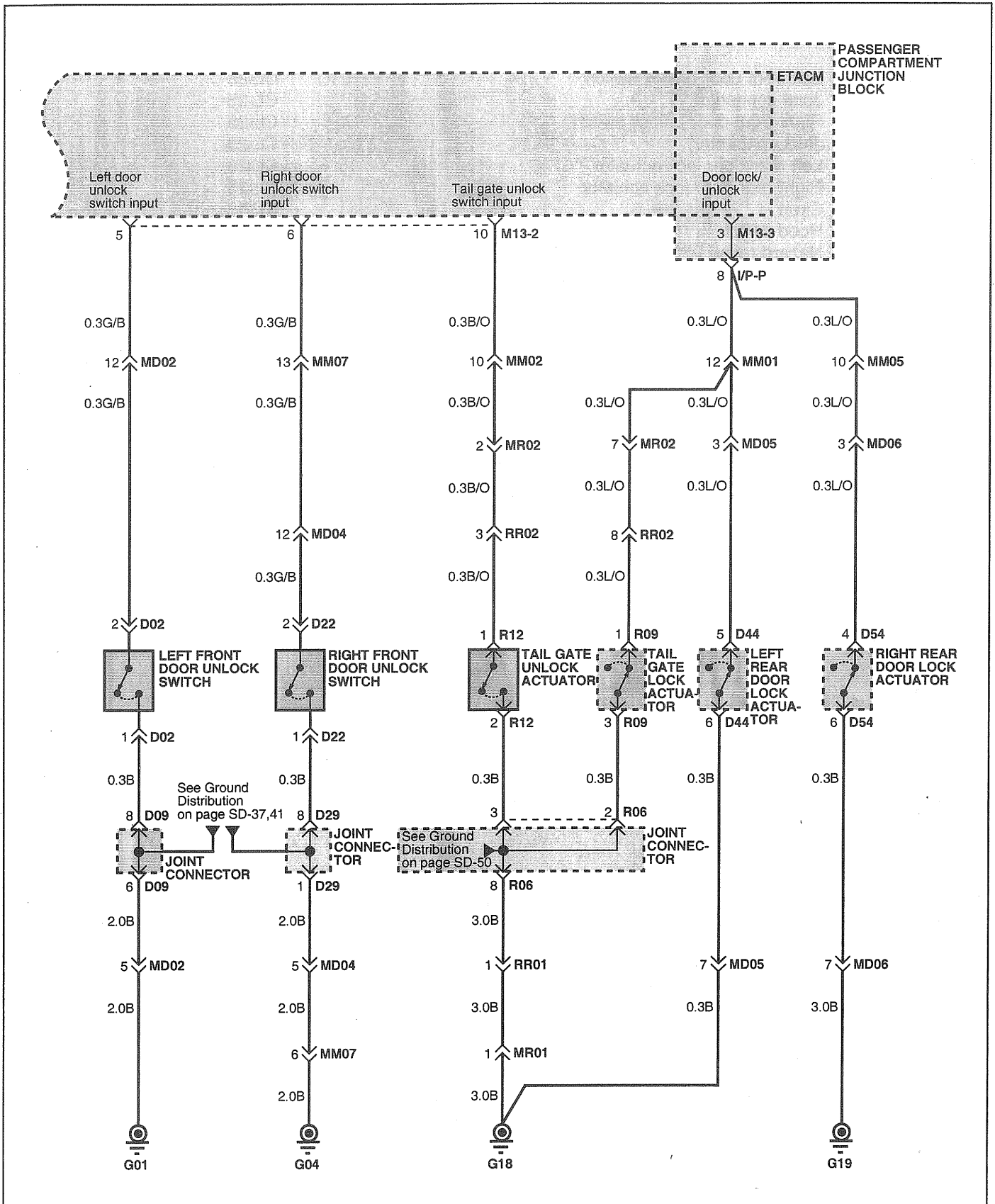
E2HA0390

KEYLESS ENTRY SYSTEM (1)



E2HA039A

KEYLESS ENTRY SYSTEM (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
D02	Left front door unlock switch	CL-25
D09	Joint connector	CL-25
D22	Right front door unlock switch	CL-25
D29	Joint connector	CL-25
D44	Left rear door lock actuator	CL-26
D54	Right rear door lock actuator	CL-26
E28	Siren	CL-13
E29	Hood switch	CL-13
M07	Hazard relay	CL-2
M13-2	ETACM	CL-2
M13-3	ETACM	CL-2
M29	Multipurpose check connector	CL-3
R06	Joint connector	CL-27
R09	Tail gate lock actuator	CL-27
R12	Tail gate unlock switch	CL-27
Connectors		
EM02		CL-14
E/R-JE		CL-14
I/P-P		CL-11
MD02		CL-9
MD04		CL-10
MD05		CL-10
MD06		CL-10
MM01		CL-10
MM02		CL-10
MM05		CL-10
MM07		CL-10
MR01		CL-11
MR02		CL-11
RR01		CL-27
RR02		CL-27
Grounds		
G01		CL-28
G04		CL-28
G06		CL-28
G18		CL-29

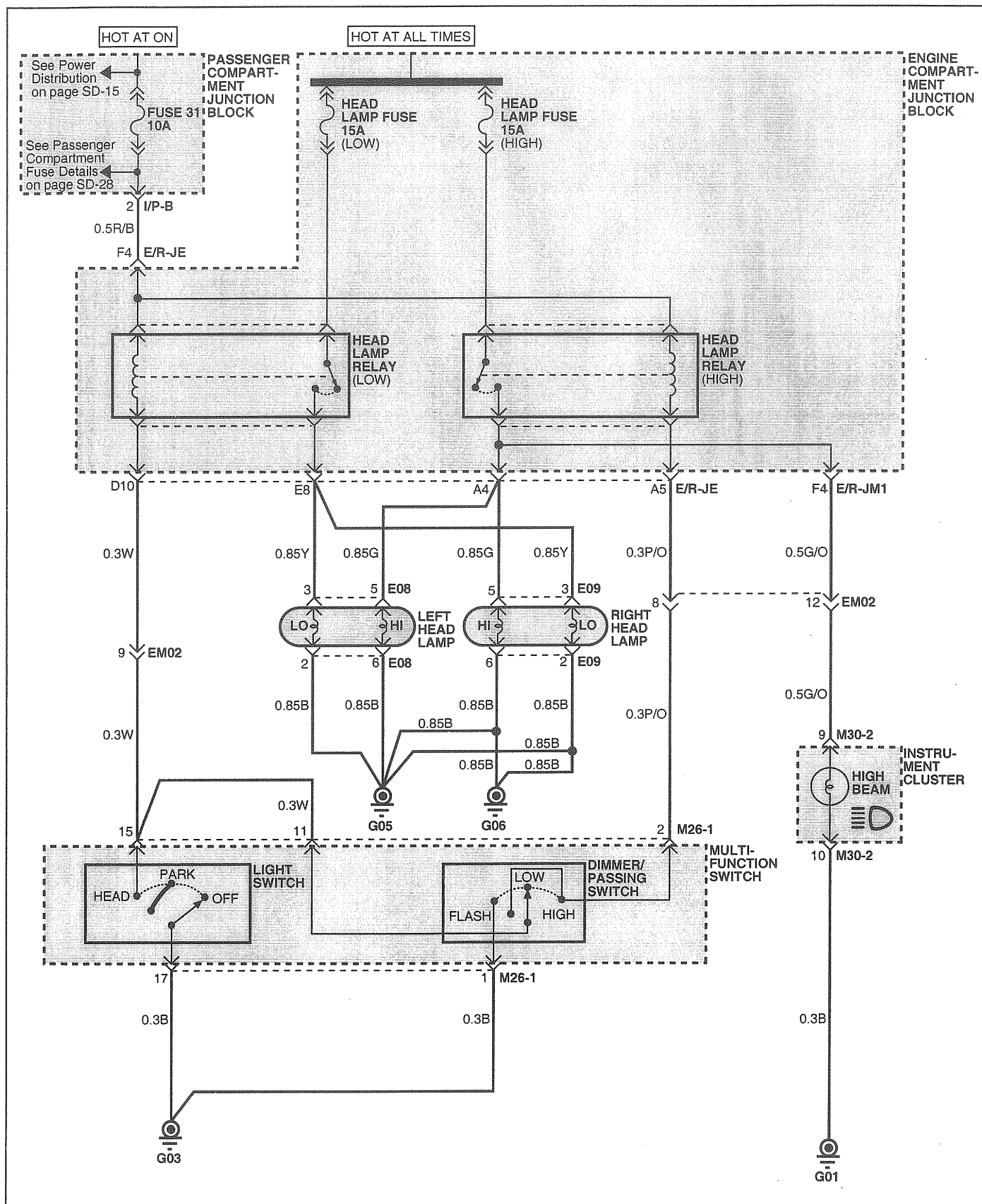
Circuit Description

The ETACM controls the keyless entry system. When the ETACM receives code signals from the keyless entry remocon, the ETACM compares the received code signals with memorized code. If the cods are aligned, the ETACM sends signals to the door modules and turn signal lamps. According to the signals, the turn signal lamps are flashed serveral times and the doors are opened.

HEAD LAMPS

E2HA0400

HEAD LAMPS (1)



E2HA040A

COMPONENT LOCATION INDEX

Components		Location reference-page
E08	Left head lamp	CL-12
E09	Right head lamp	CL-12
M26-1	Multifunction switch	CL-3
M30-2	Instrument cluster	CL-3
Connectors		
EM02		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
I/P-B		CL-11
Grounds		
G01		CL-28
G03		CL-28

Circuit Description**Low Beam Operation**

With the ignition switch in ON, battery voltage is applied to the coil of the head lamp relays (low and high) from fuse 31. When the light switch in HEAD, ground is provided to the coil of the low head lamp relay through the light switch. Battery voltage from the head lamps fuse(low) is then provided to the low beam headlamps through the closed contacts of the head lamp relay(low). The low beam head lamps light.

High Beam Operation

With the ignition switch in ON, battery voltage is applied to the coil of head lamp relays (low/ high) through fuse 31. When the light switch in HEAD, ground is provided to the coil of the low head lamp relay through the light switch. Battery voltage from the head lamp fuse is then provided to the low beam head lamps through the closed contacts of the head lamp relay (low).

When the dimmer/passing switch in HIGH, ground is provided to the high beam head lamps through the dimmer/passing switch and light switch. Ground is also provided to the high beam indicator in the instrument cluster.

Flash Operation

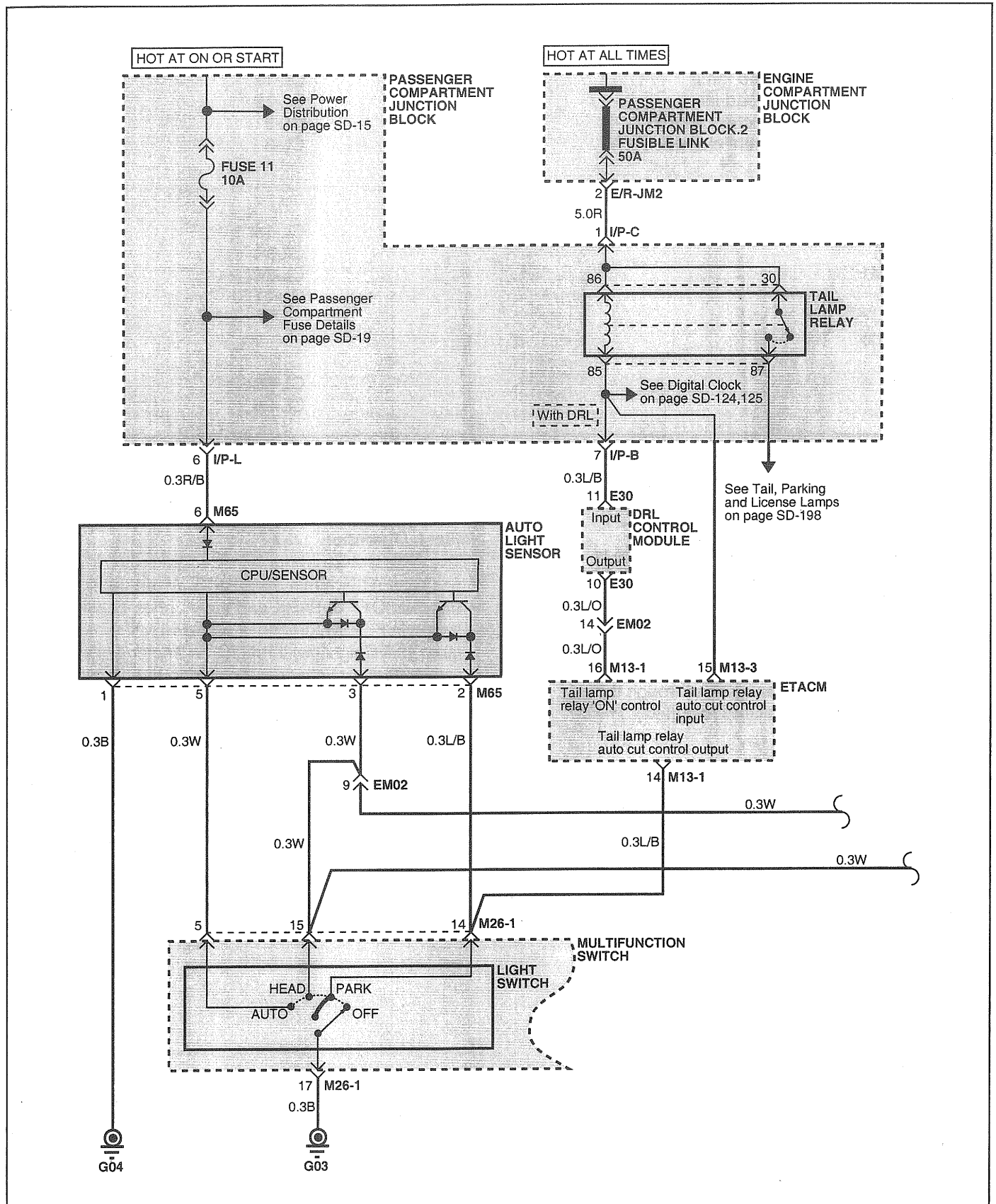
The flash feature works with the light switch in all positions (OFF, PARK or HEAD). When the light switch in OFF or PARK and the dimmer /passing switch in FLASH, ground is provided to the head lamp relays(high/low) through the dimmer/passing switch. Battery voltage is applied to the high/low beam head lamps and the beam indicator. When the light switch in HEAD and the dimmer /passing switch in FLASH, ground is provided to the head lamp relays(high/low) through the dimmer/passing switch and light switch. Battery voltage is applied to the high/low beam head lamps and the beam indicator.

The high beams and the high beam indicator light as long as the dimmer/ passing switch is held in the FLASH position.

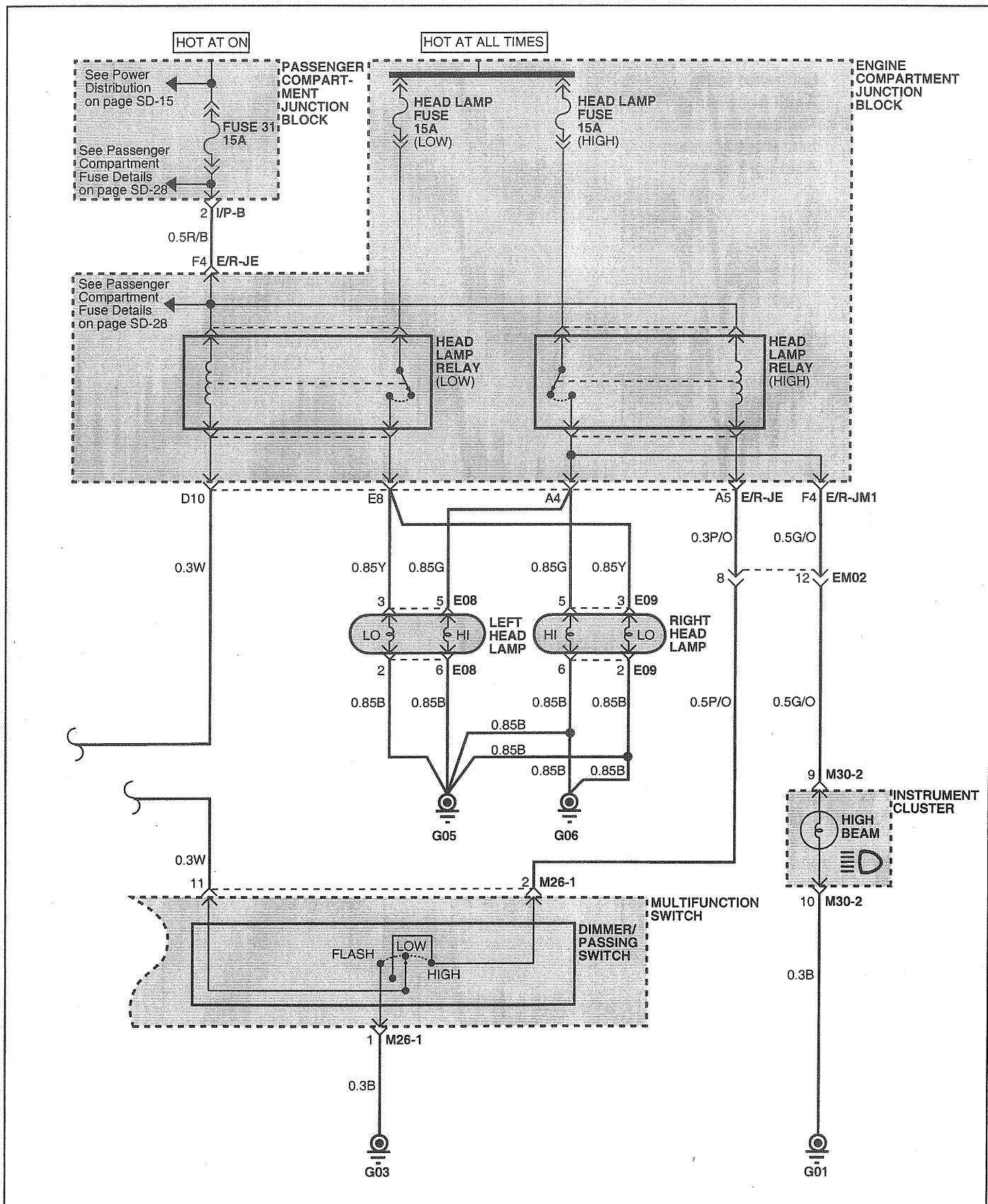
AUTO LIGHTS

E2HA0410

AUTO LIGHTS (1)



AUTO LIGHTS (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
E08	Left head lamp	CL-12
E09	Right head lamp	CL-12
M26-1	Multifunction switch	CL-3
M30-2	Instrument cluster	CL-3
M65	Auto light sensor	CL-5
Connectors		
EM02		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
E/R-JM2		CL-14
I/P-B		CL-11
I/P-C		CL-11
Grounds		
G01		CL-28
G03		CL-28
G04		CL-28

Circuit Description

For the visibility of driver, the auto light sensor controls automatically the head lamps and tail lamps through relay coil control. When the light switch in AUTO and the auto light sensor detects low intensity of illumination, ground is provided to the head lamp relays through auto light sensor. Battery voltage is supplied to the head lamps through head lamp fuses and head lamp relays(high/ low) contact.

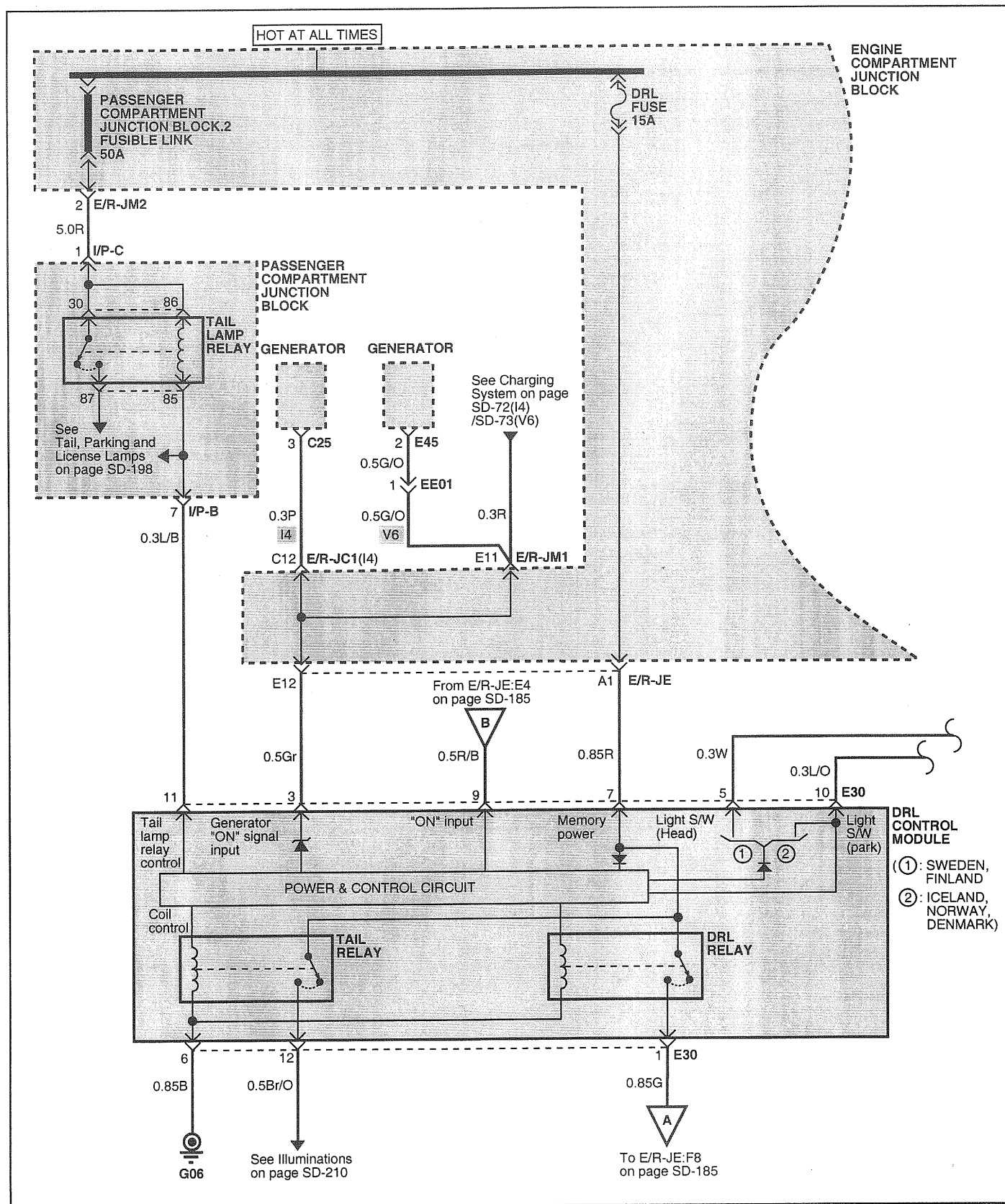
Auto light sensor sends output signals to the ETACM and the ETACM controls the tail lamp relay.

Of course, the head lamps and tail lamps can be controlled independently by using light switch and dimmer/passing switch.

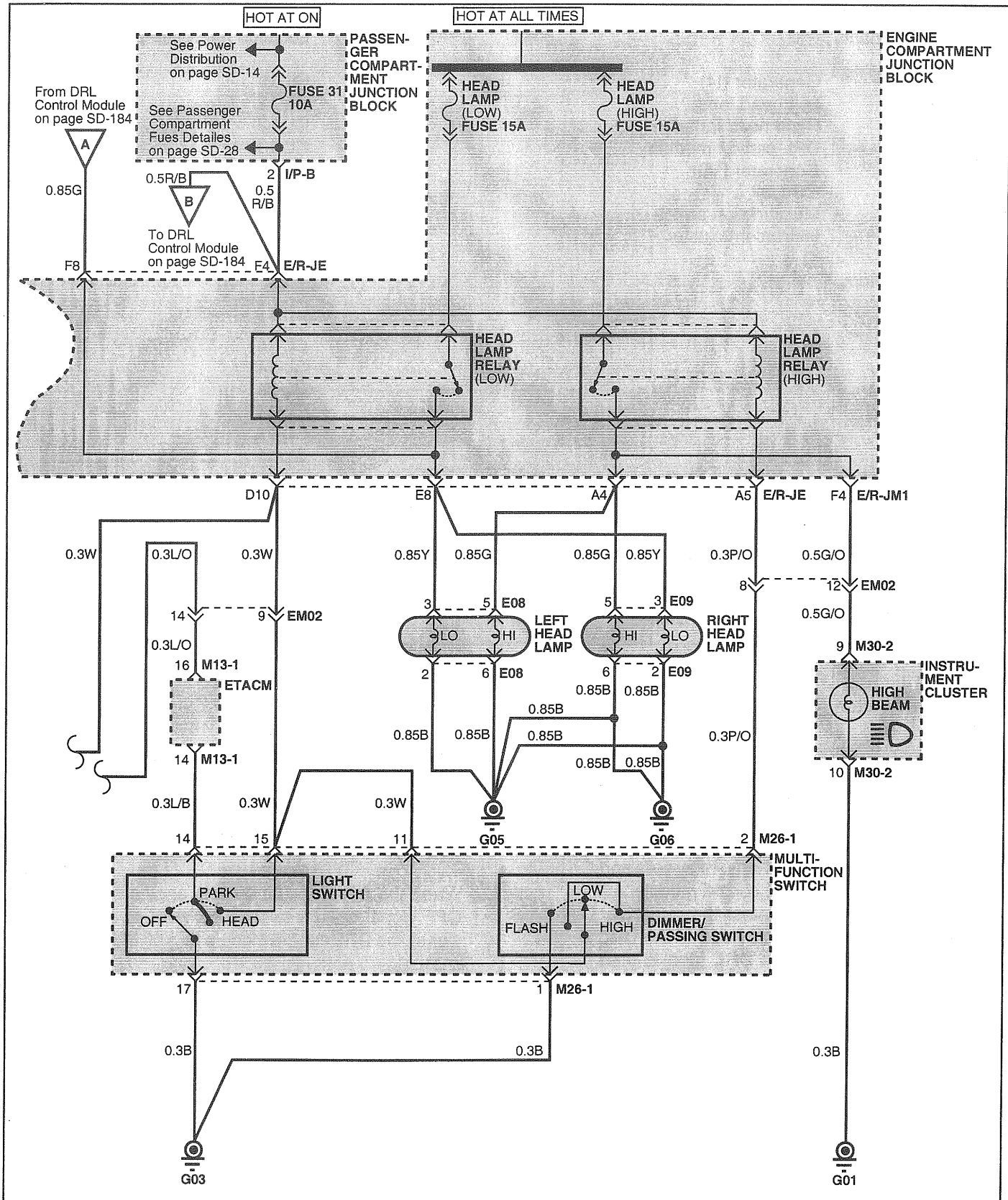
DAYTIME RUNNING LIGHTS

E2HA0420

DAYTIME RUNNING LIGHTS (1)



DAYTIME RUNNING LIGHTS (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
C25	Generator (I4)	CL-19
E08	Left head lamp	CL-12
E09	Right head lamp	CL-12
E30	DRL control module	CL-13
E45	Generator (V6)	CL-14
M13-1	ETACM	CL-2
M26-1	Multifunction switch	CL-3
M30-2	Instrument cluster	CL-3
Connectors		
EE01		CL-14
EM02		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
E/R-JM2		CL-14
I/P-B		CL-11
I/P-C		CL-11
Grounds		
G01		CL-28
G03		CL-28
G06		CL-28

Circuit Description

For the visibility of driver, the daytime running lights go on automatically when the engine is running.

With the ignition switch in ON position, battery voltage is applied to the head lamp relay coils and daytime running lights(DRL) control module. AS the DRL control module detect the generator running signals, ground is provided to the DRL relay. Battery voltage from DRL fuse is then provided to the low beam head lamp through DRL relay contact.

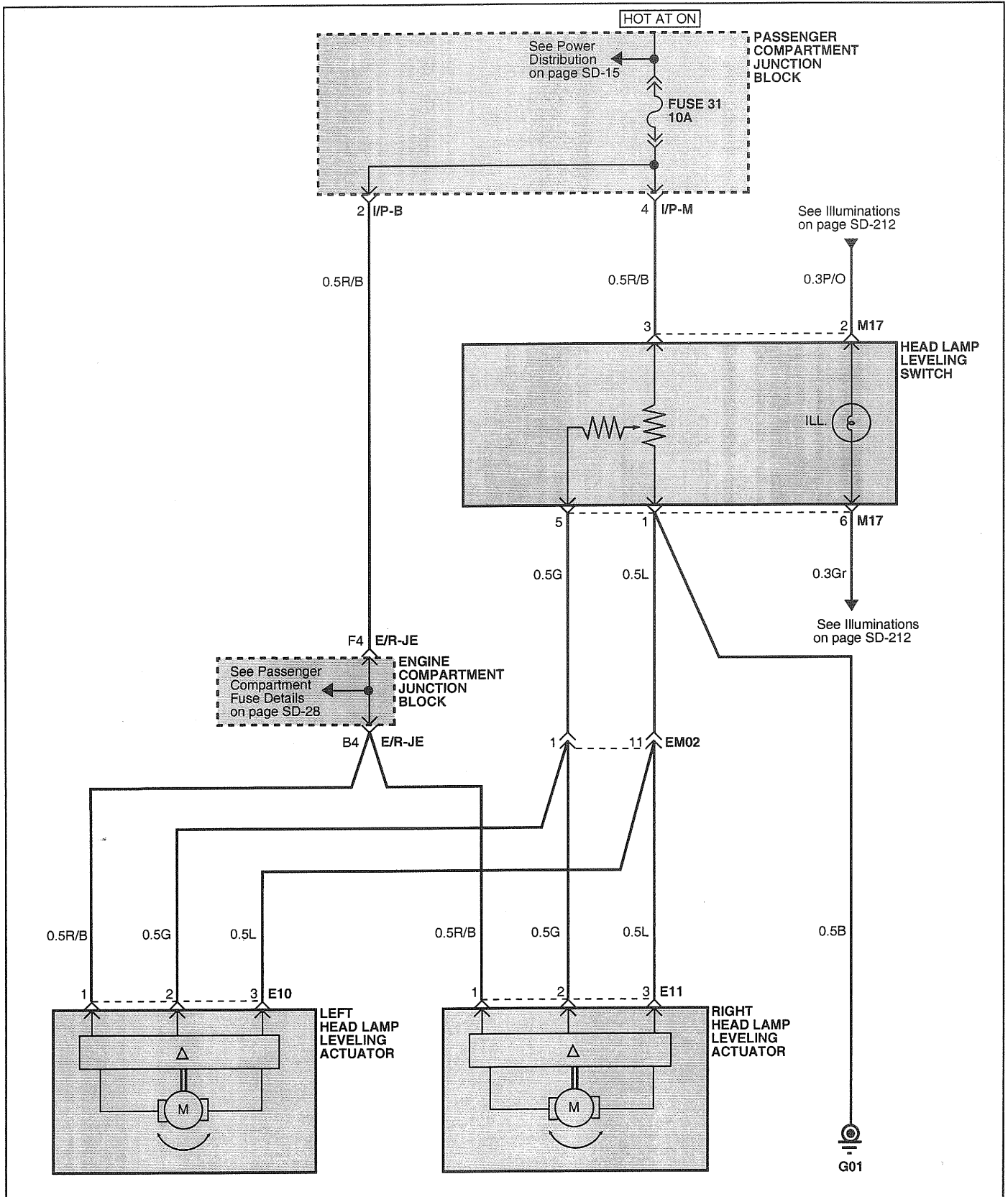
In addition to the DRL relay control, the DRL control module controls the tail relay(built-in DRL control module) coil. Battery voltage is applied to the closed contact of tail relay and the exterior lamps turn on.

When the DRL module detects engine running OFF signal or light switch ON(PARK or HEAD) signal, the DRL control module turn off the lights.

HEAD LAMP LEVELING DEVICE

E2HA0430

HEAD LAMP LEVELING DEVICE (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
E10	Left head lamp leveling actuator	CL-12
E11	Right head lamp leveling actuator	CL-12
M17	Head lamp leveling switch	CL-2
Connectors		
E/R-JE		CL-14
EM02		CL-14
I/P-B		CL-11
I/P-M		CL-11
Grounds		
G01		CL-28

Circuit Description

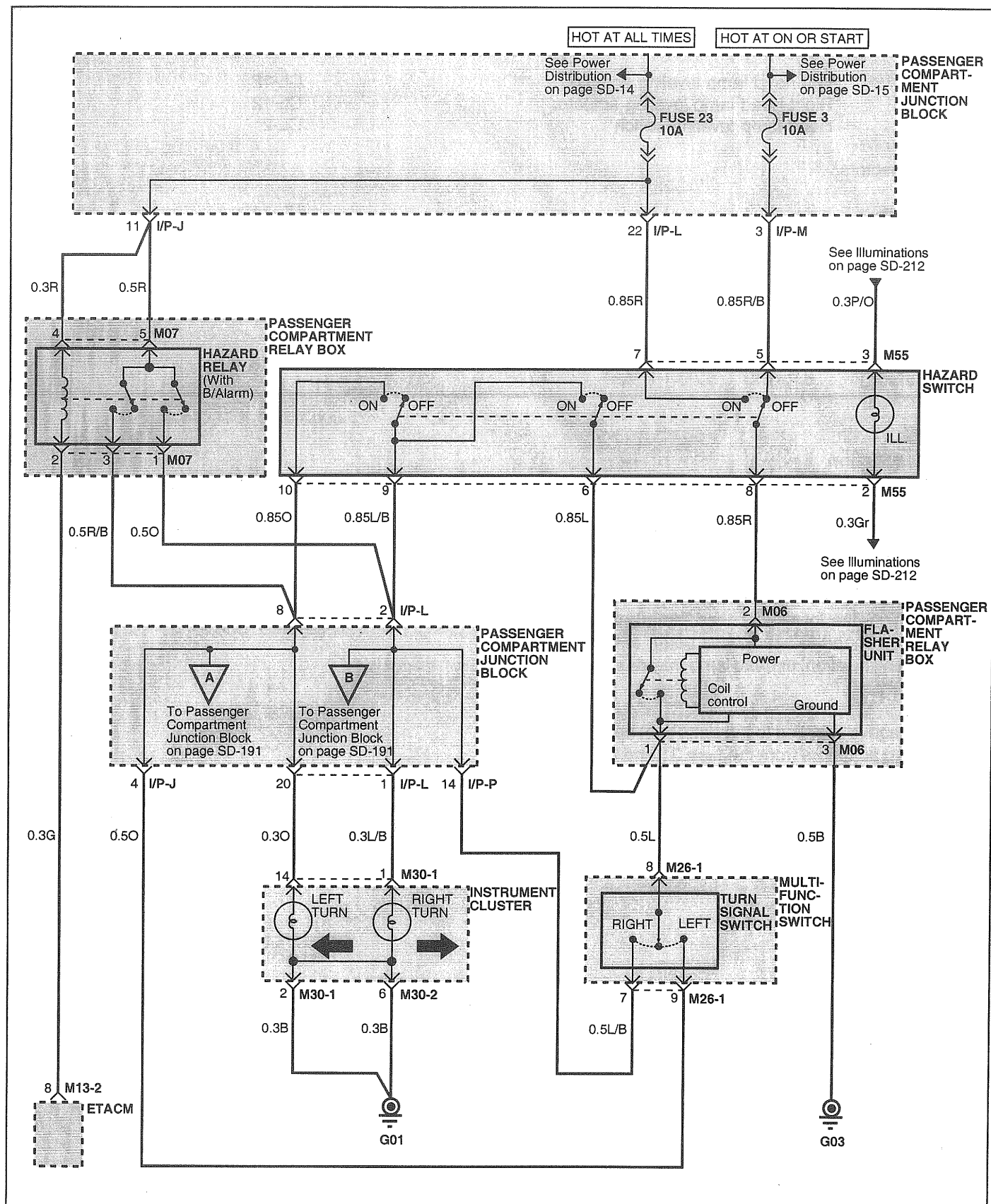
The head lamps should be aimed properly according to the number of the passengers and the loading weight in the luggage area. To adjust the headlamps beam level, turn the head lamp leveling switch. The higher the number of the switch position, the lower the head lamp beam level. Always keep the headlamps beam at the proper leveling position, or head lamp may dazzle other road users.

Battery voltage is supplied to the Left/Right head lamp leveling actuators from the fuse 31 and the beam level can be controlled through a variable resistor (bulit-in head lamp leveling switch).

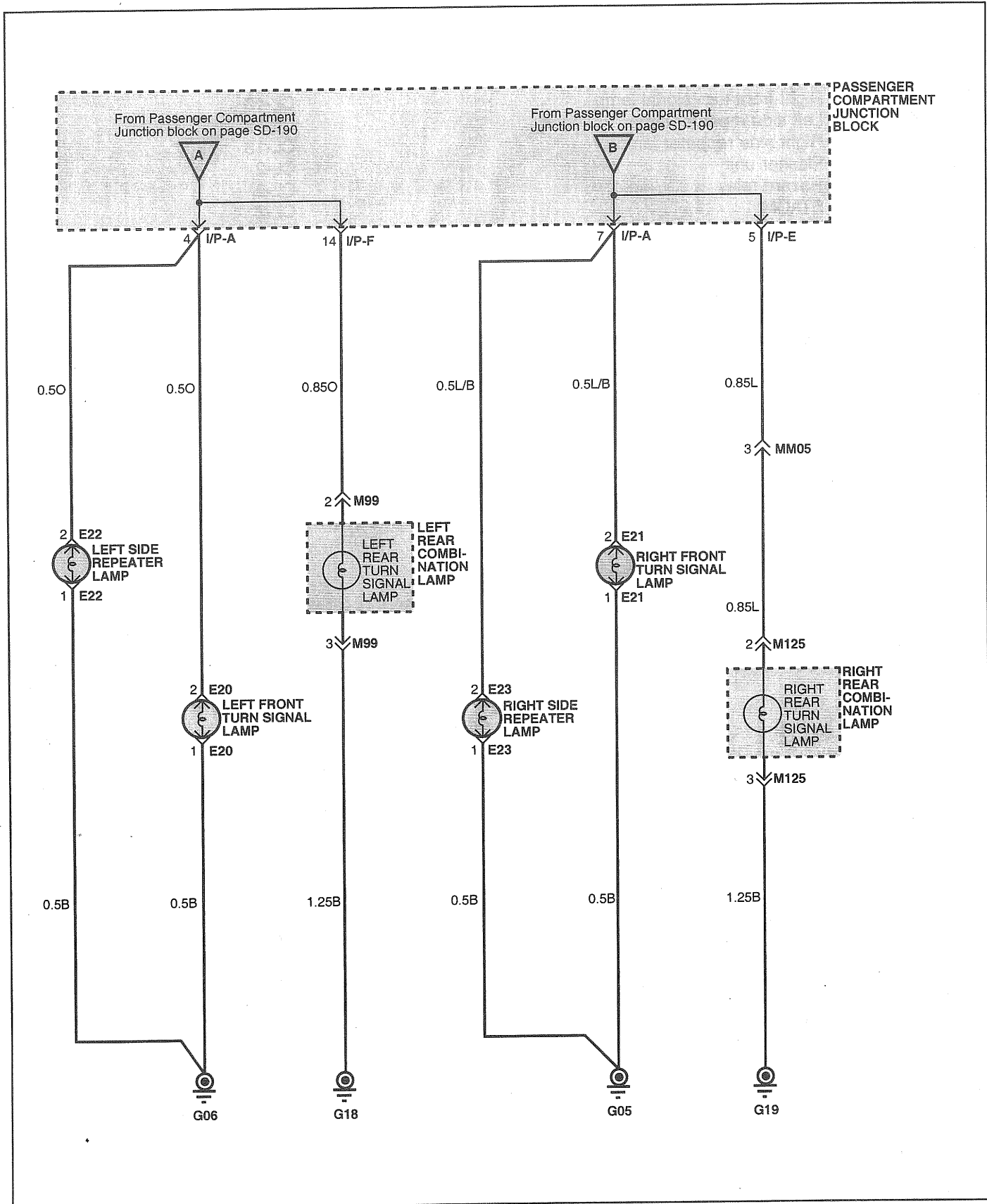
TURN AND HAZARD LAMPS

E2HA0440

TURN AND HAZARD LAMPS (1)



TURN AND HAZARD LAMPS (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
E20	Left front turn signal lamp	CL-13
E21	Right front turn signal lamp	CL-13
E22	Left side repeater lamp	CL-13
E23	Right side repeater lamp	CL-13
M06	Flasher unit	CL-2
M07	Hazard relay	CL-2
M13-2	ETACM	CL-2
M26-1	Multifunction switch	CL-3
M30-1	Instrument cluster	CL-3
M30-2	Instrument cluster	CL-3
M55	Hazard switch	CL-4
M99	Left rear combination lamp	CL-6
M125	Right rear combination lamp	CL-8
Connectors		
I/P-A		CL-11
I/P-E		CL-11
I/P-F		CL-11
I/P-J		CL-11
I/P-L		CL-11
I/P-M		CL-11
I/P-P		CL-11
Grounds		
G01		CL-28
G03		CL-28
G05		CL-28
G06		CL-28
G18		CL-29
G19		CL-30

Circuit Description

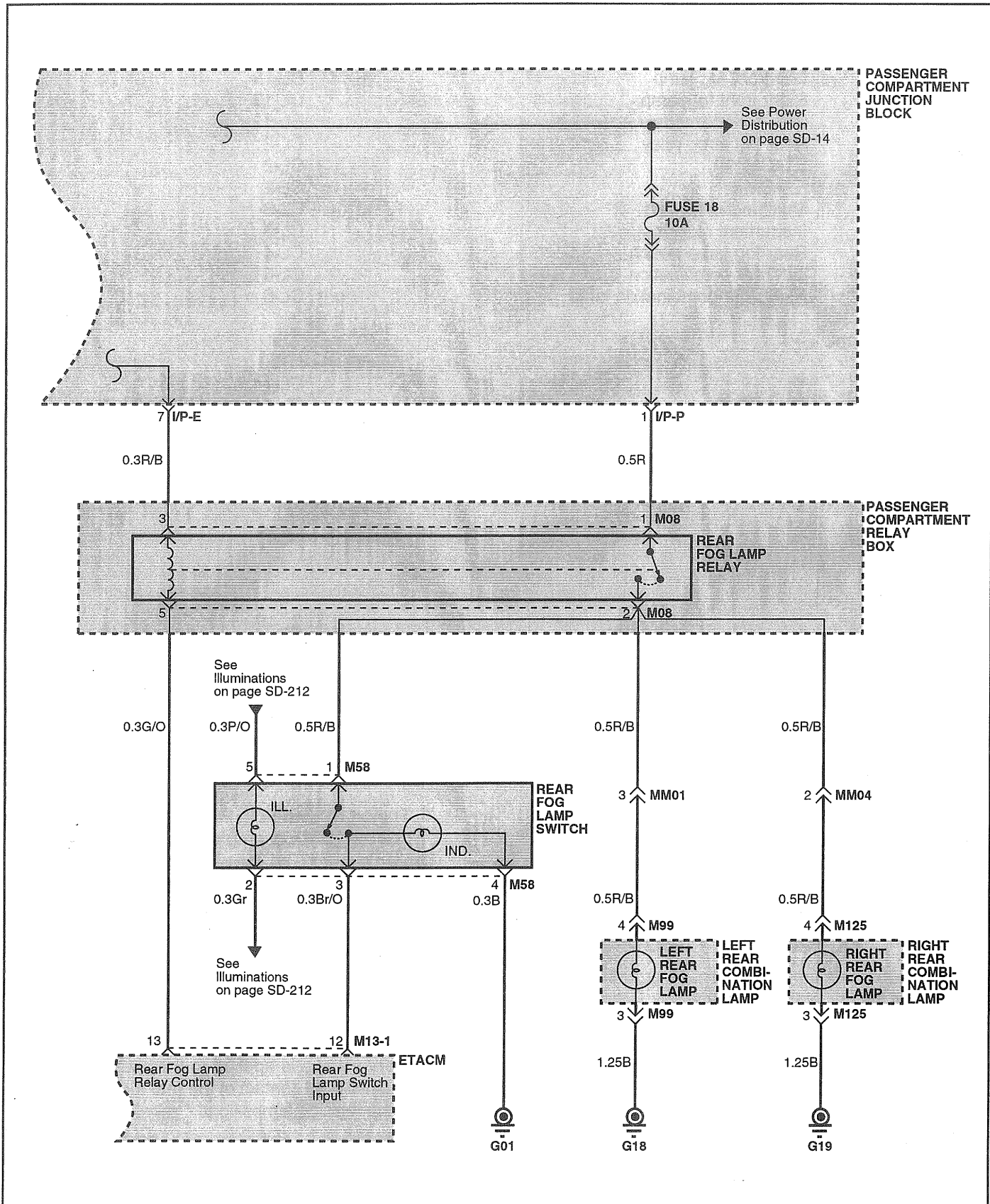
With the hazard switch in OFF, and ignition switch in ON or START, battery voltage is applied from fuse 3 to the flasher unit. The solid-state flasher unit senses the turn signal lamp switch position and alternately applies and removes battery voltage to the turn signal lamps through the coil in the flasher unit controls. Battery voltage is applied to the turn signal lamps, side repeater lamps and indicators dependent upon the turn signal lamp switch position.

With the hazard switch depressed (ON), battery voltage is applied from fuse 23 to the flasher unit. The solid-state flasher unit senses that the hazard switch is in the ON position and alternately applies and removes battery voltage to the turn signal lamps, side repeater lamps and indicators.

E2HA0450

[illegible]

FRONT AND REAR FOG LAMPS (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
E15	Left front fog lamp	CL-13
E16	Right front fog lamp	CL-13
E30	DRL control module	CL-13
M08	Rear fog lamp relay	CL-2
M13-1	ETACM	CL-2
M13-3	ETACM	CL-2
M26-1	Multifunction switch	CL-3
M30-3	Instrument cluster	CL-3
M58	Rear fog lamp switch	CL-4
M99	Left rear combination lamp	CL-6
M125	Right rear combination lamp	CL-8
Connectors		
EM02		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
E/R-JM2		CL-14
I/P-B		CL-11
I/P-C		CL-11
I/P-E		CL-11
I/P-P		CL-11
Grounds		
G01		CL-28
G03		CL-28
G06		CL-28
G18		CL-29
G19		CL-30

Circuit Description

FRONT FOG LAMPS OPERATION

When the Light switch in PARK or HEAD, the tail lamp relay coil is energized through the ETACM(Without DRL)/ DRL control module(With DRL) and battery voltage is applied to the front fog lamps relay from the closed contact of the tail lamp relay.

When the front fog lamp switch in ON, ground is provided to the coil of the fog lamp relay. Battery voltage from the front fog lamps fuse is then provided to the LEFT/RIGHT front fog lamps through the closed contact of the front fog lamp relay. The LEFT/RIGHT front fog lamps light.

REAR FOG LAMPS OPERATION

When the light switch in PARK or HEAD, the tail lamp relay coil is energized through ETACM and battery voltage is applied to the closed contact of the tail lamp relay.

1. The Light Switch in PARK.

When the front fog lamp switch ON and the rear fog lamp switch ON, the rear fog lamp relay coil is energized through the ETACM. Battery voltage is applied to the rear fog lamps through closed contact of the rear fog lamp relay and the rear fog lamps light.

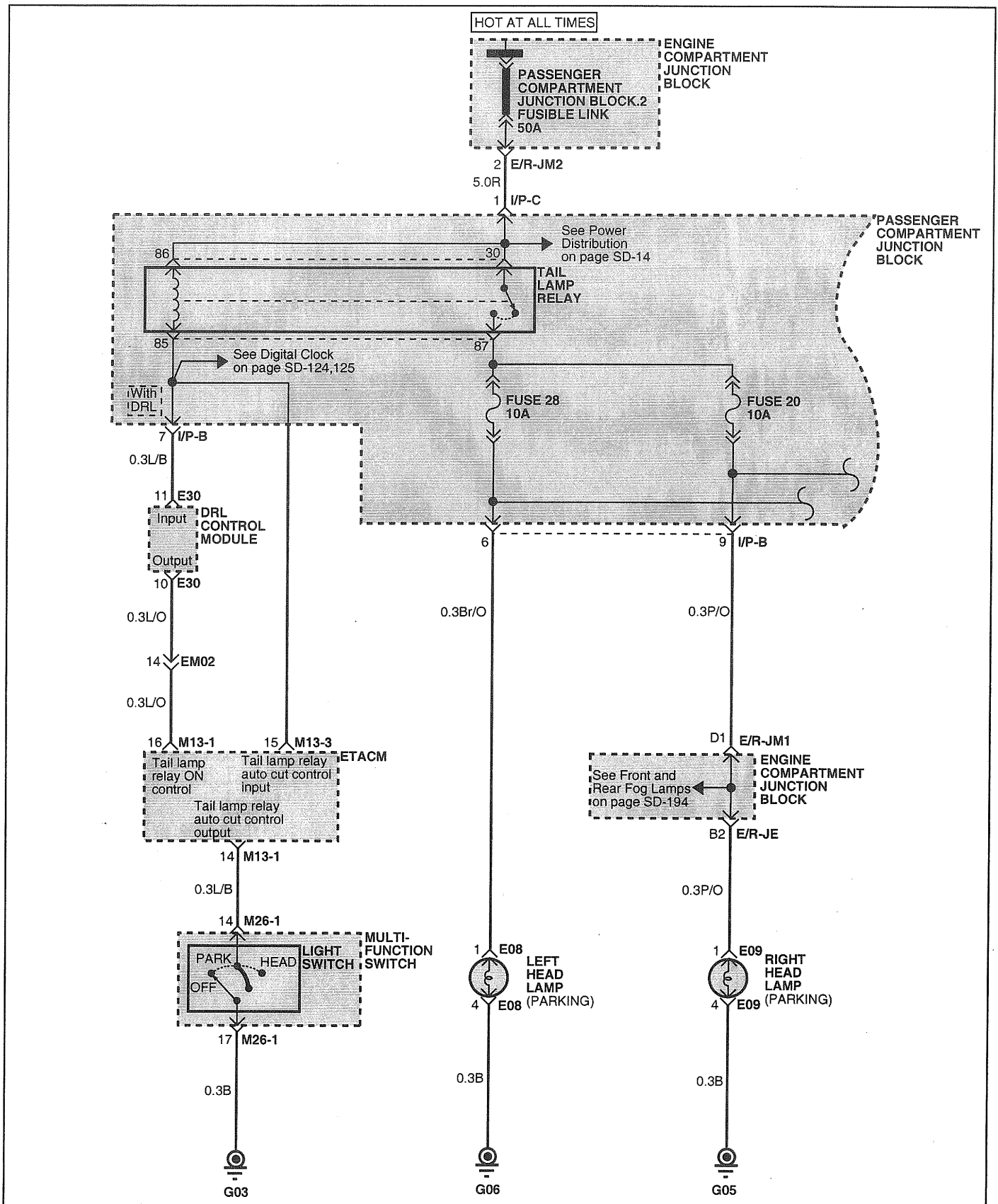
2. The Light Switch in HEAD.

When the rear fog lamp switch ON, the rear fog lamp relay coil is energized through the ETACM. Battery voltage is applied to the rear fog lamps through closed contact of the rear fog lamp relay and the rear fog lamps light.

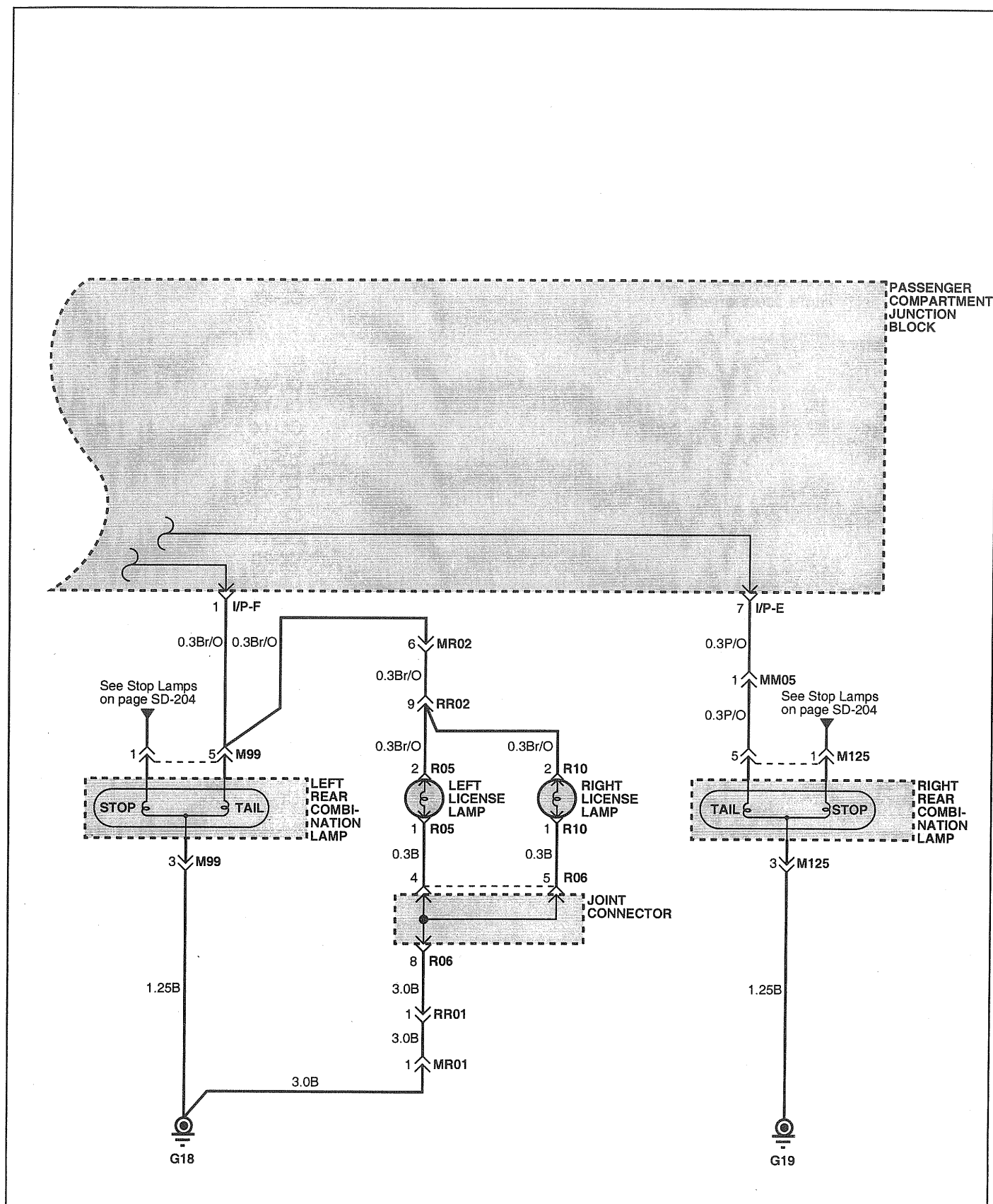
TAIL, PARKING AND LICENSE LAMPS

E2HA0470

TAIL, PARKING AND LICENSE LAMPS (1)



TAIL, PARKING AND LICENSE LAMPS (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
E08	Left head lamp	CL-12
E09	Right head lamp	CL-12
E30	DRL control module	CL-13
M13-1	ETACM	CL-2
M13-3	ETACM	CL-2
M26-1	Multifunction switch	CL-3
M99	Left rear combination lamp	CL-6
M125	Right rear combination lamp	CL-8
R05	Left license lamp	CL-27
R06	Joint connector	CL-27
R10	Right license lamp	CL-27
Connectors		
EM02		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
E/R-JM2		CL-14
I/P-B		CL-11
I/P-C		CL-11
I/P-E		CL-11
I/P-F		CL-11
MM05		CL-10
MR01		CL-11
MR02		CL-11
RR01		CL-27
RR02		CL-27
Grounds		
G05		CL-28
G06		CL-28
G18		CL-29
G19		CL-30

Circuit Description

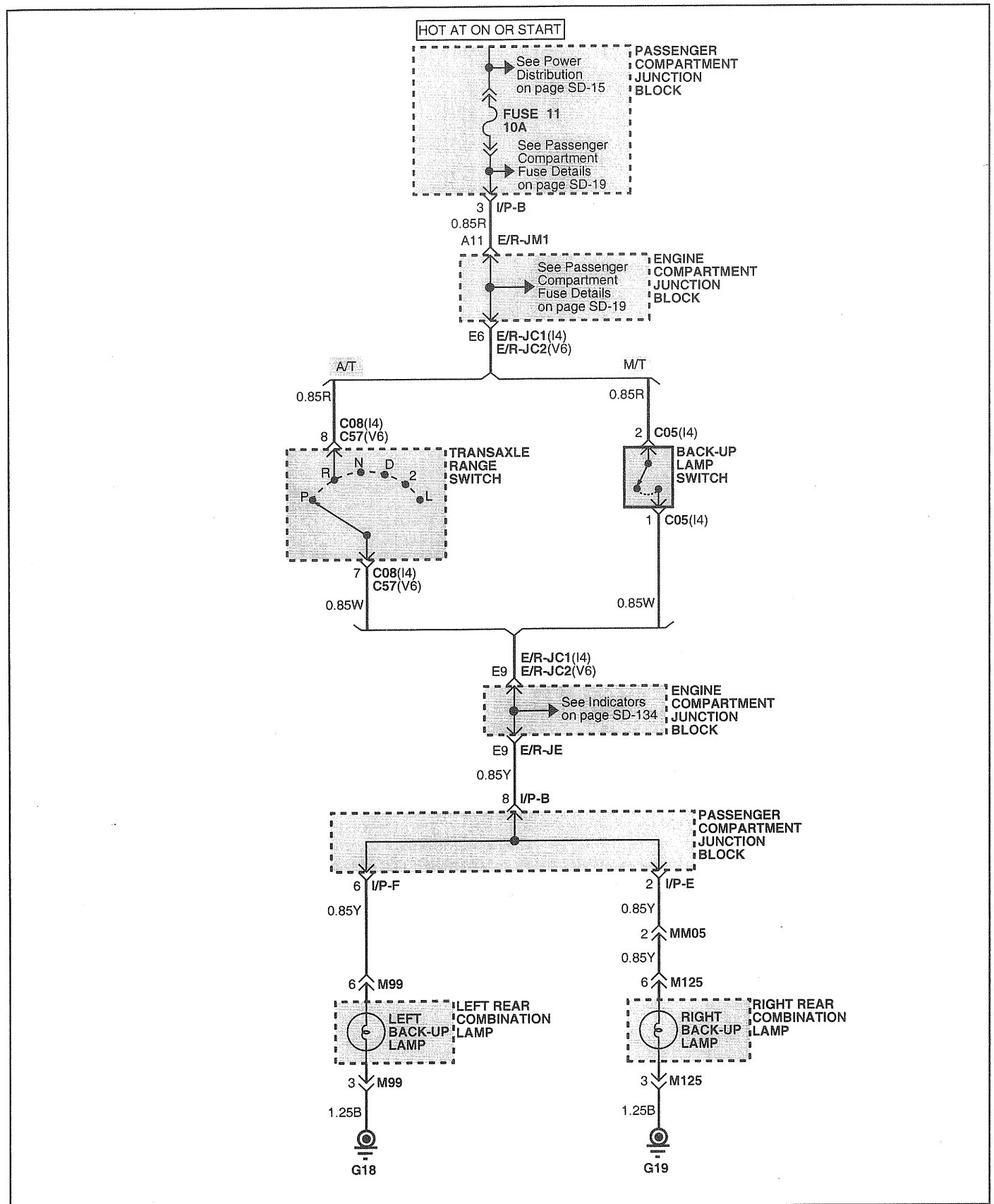
Battery voltage is applied at all times to the coil and contacts of the tail lamp relay from the power 2 fusible link. With the light switch in PARK or HEAD, the coil of the tail lamp relay is grounded through the ETACM(Without DRL)/DRL module (With DRL). Battery voltage from fuse 20 and fuse 28 is then provided to the lamps (tail lamps, park lamp and license lamp) through the tail lamp relay contact and all the lamps go on.

There is a newly adopted system called tail lamp auto turn off system controlled by ETACM. When the light switch in PARK, the ignition switch is removed from the ignition key hole and the left front door opened, the ETACM calculates the condition and turn off the tail lamps automatically.

BACK-UP LAMPS

E2HA0480

BACK-UP LAMPS (1)



E2HA048A

COMPONENT LOCATION INDEX

Components		Location reference-page
C05	Back-up lamp switch (I4 With M/T)	CL-17
C08	Transaxle range switch (I4 With A/T)	CL-17
C57	Transaxle range switch (V6)	CL-21
M99	Left rear combination lamp	CL-6
M125	Right rear combination lamp	CL-8
Connectors		
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14
I/P-B		CL-11
I/P-E		CL-11
I/P-F		CL-11
MM05		CL-10
Grounds		
G18		CL-29
G19		CL-30

Circuit Description

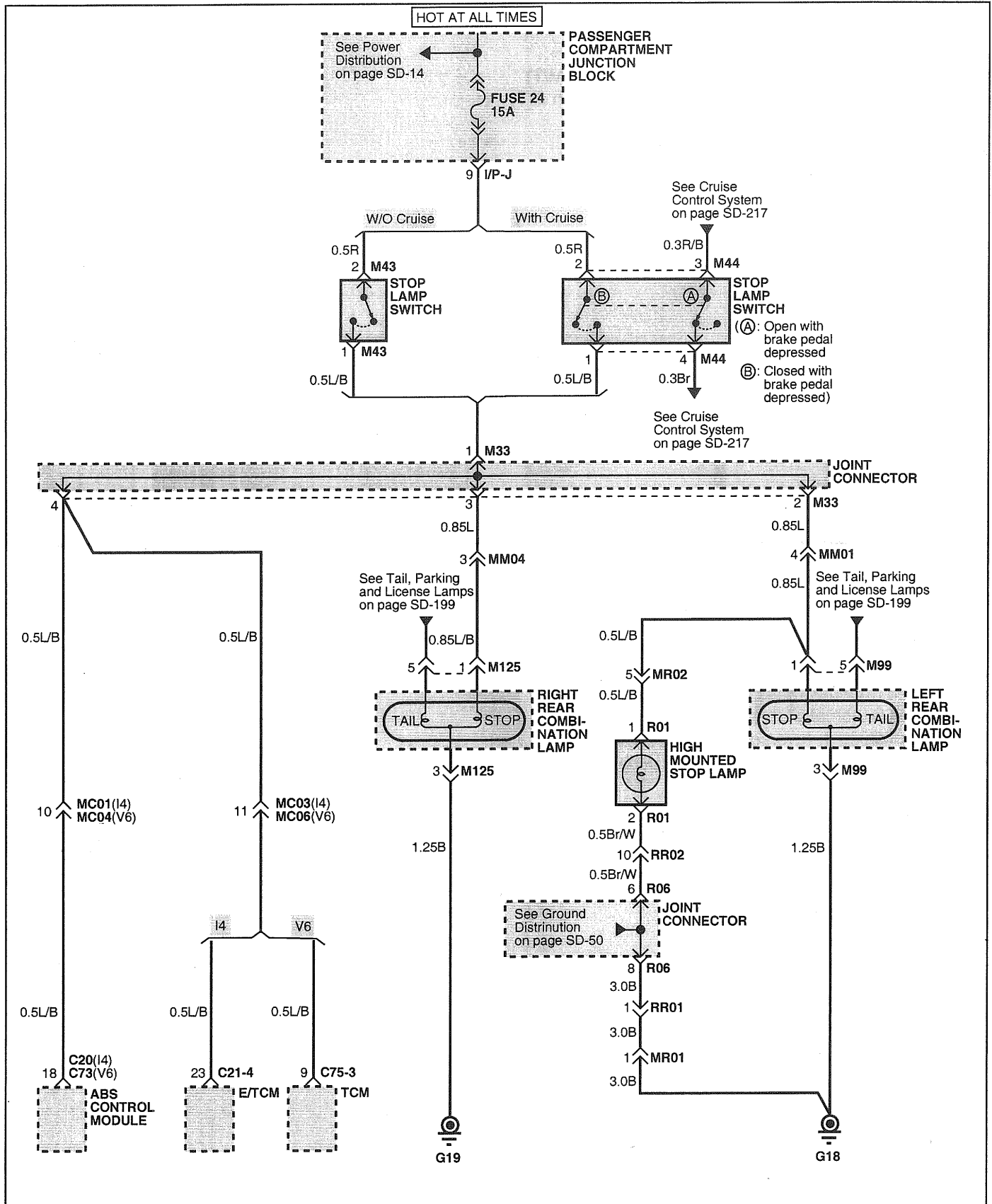
With the ignition switch in ON or START, battery voltage is applied from fuse 11 to the back-up lamps switch (manual transaxle) or the transaxle range switch (automatic transaxle).

With the transaxle in reverse, battery voltage is applied to the back-up lamps and the back-up lamps go on.

STOP LAMPS

E2HA0490

STOP LAMPS (1)



COMPONENT LOCATION INDEX

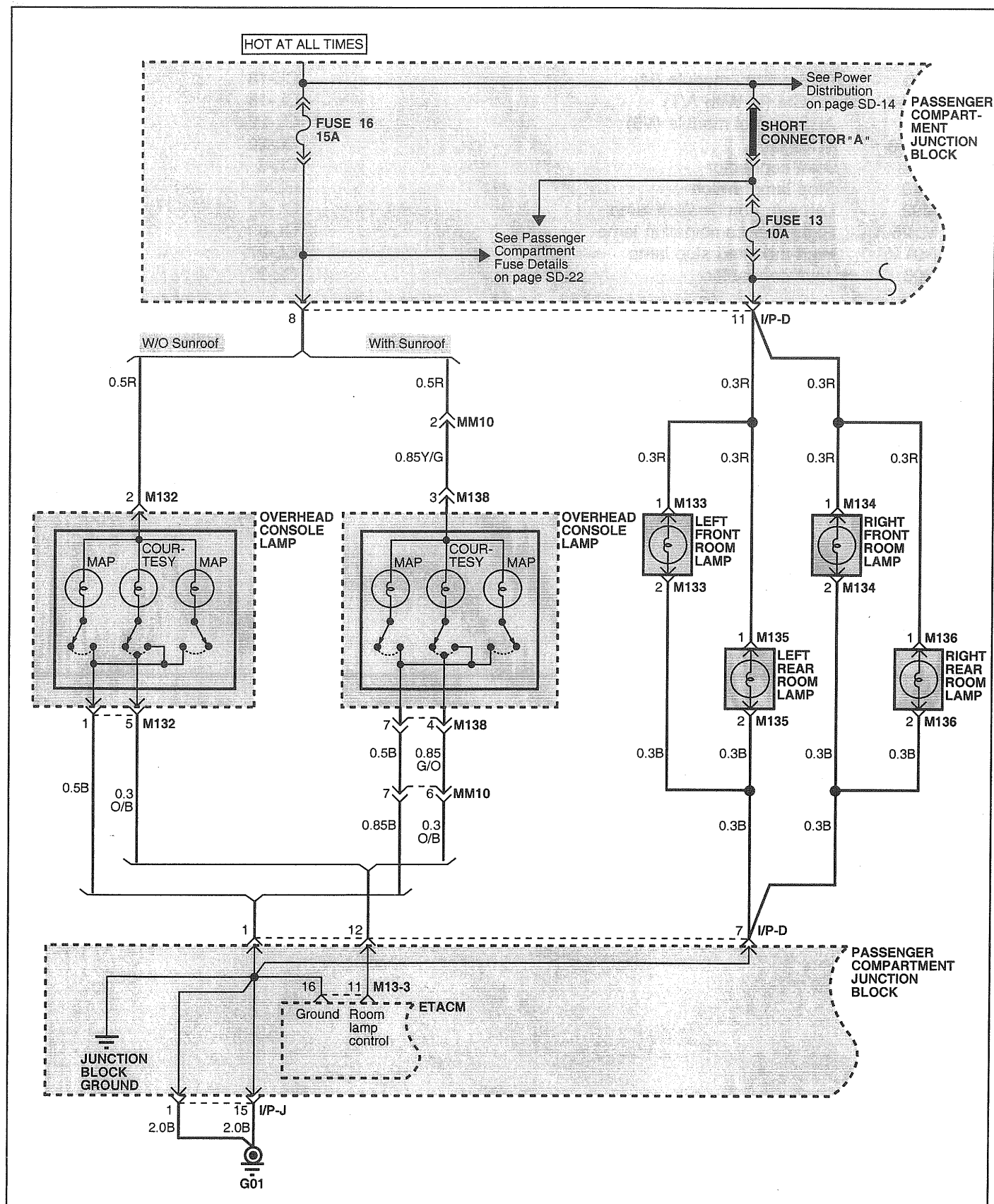
Components		Location reference-page
C20	ABS control module (I4)	CL-18
C21-4	E/TCM (I4 With A/T)	CL-18
C73	ABS control module (V6)	CL-22
C75-3	TCM(V6)	CL-22
M33	Joint connector	CL-3
M43	Stop lamp switch	CL-4
M99	Left rear combination lamp	CL-6
M125	Right rear combination lamp	CL-8
R01	High-mounted stop lamp	CL-27
R06	Joint connector	CL-27
Connectors		
I/P-J		CL-11
MC01		CL-9
MC03		CL-9
MC04		CL-9
MC06		CL-9
MM01		CL-10
MR01		CL-11
MR02		CL-11
RR01		CL-27
Grounds		
G18		CL-29
G19		CL-30

Circuit Description

Battery voltage is applied to the stop lamp switch at all times from fuse 24. With the brake pedal depressed, the stop lamp switch is closed and battery voltage is applied to all the stop lamps (stop lamps and high-mounted stop lamp) and lamps go on.

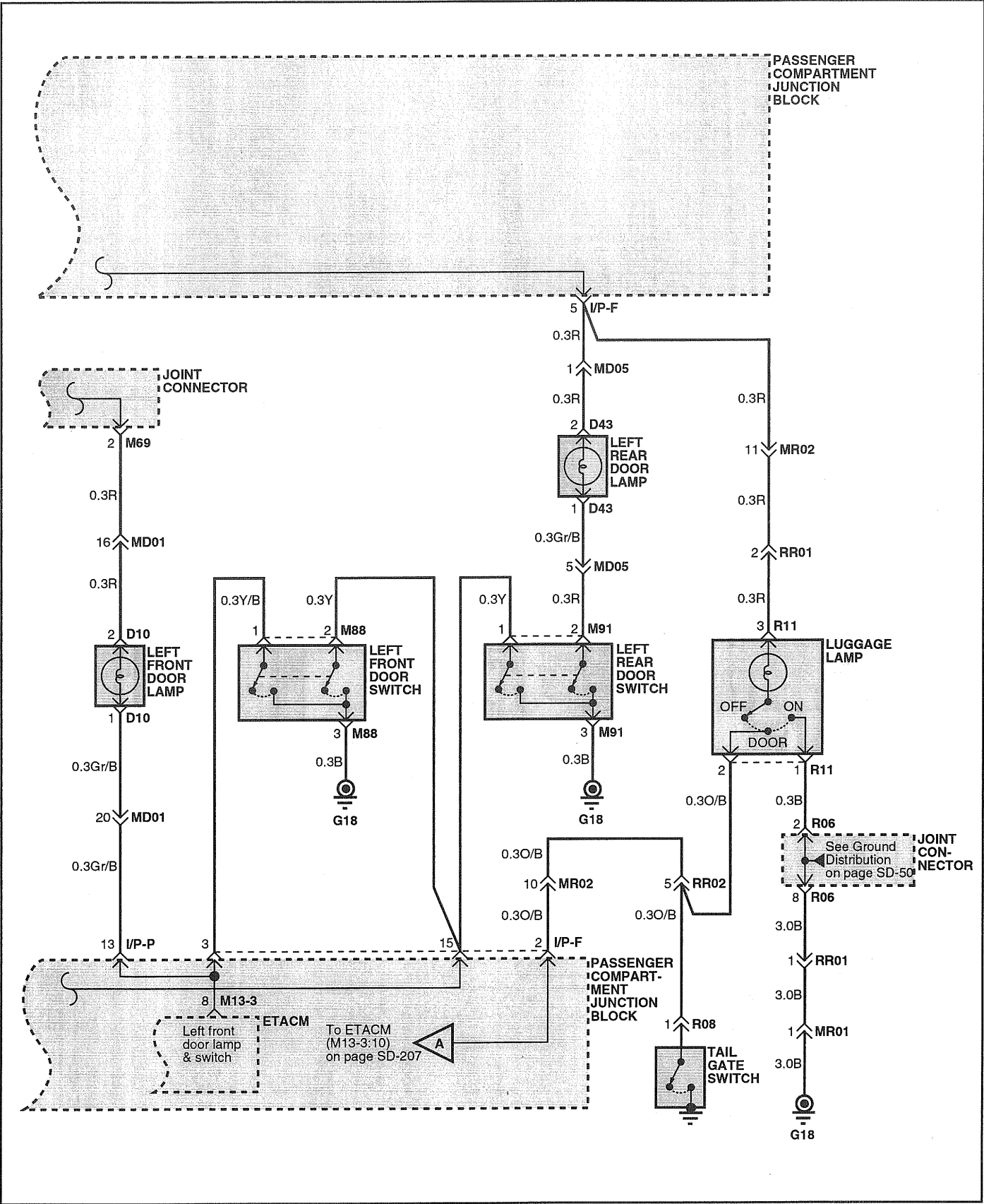
COURTESY AND TAIL GATE LAMPS E2HA0500

COURTESY AND TAIL GATE LAMPS (1)



[illegible]

COURTESY AND GATE LAMPS (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
D10	Left front door lamp	CL-25
D30	Right front door lamp	CL-26
D43	Left rear door lamp	CL-26
D53	Right rear door lamp	CL-26
M13-3	ETACM	CL-2
M30-3	Instrument cluster	CL-3
M69	Joint connector	CL-5
M88	Left front door switch	CL-6
M91	Left rear door switch	CL-6
M116	Right front door switch	CL-7
M118	Right rear door switch	CL-7
M138	Overhead console lamp (With sunroof)	CL-8
R06	Joint connector	CL-27
R08	Tail gate switch	CL-27
R11	Luggage lamp	CL-27
Connectors		
I/P-D, I/P-E, I/P-F, I/P-L, I/P-P		CL-11
MD01		CL-9
MD03, MD05, MD06		CL-10
MM05, MM07, MM10		CL-10
MR01, MR02		CL-11
RR01, RR02		CL-27
Grounds		
G01		CL-28
G18		CL-29
G19		CL-30

Circuit Description

The ETACM receives several switch signals (for instance, front & rear door switch signal, tail gate switch signal) and controls the operation of the lamps.

Battery voltage is applied at all times to the overhead console lamp, room lamps, door lamps and luggage room lamp.

Battery voltage is applied at all times to the door ajar and tail gate ajar warning indicators. When the appropriate switch (see schematic) is closed, a ground path is provided to the respective lamp through ETACM. The lamp goes on.

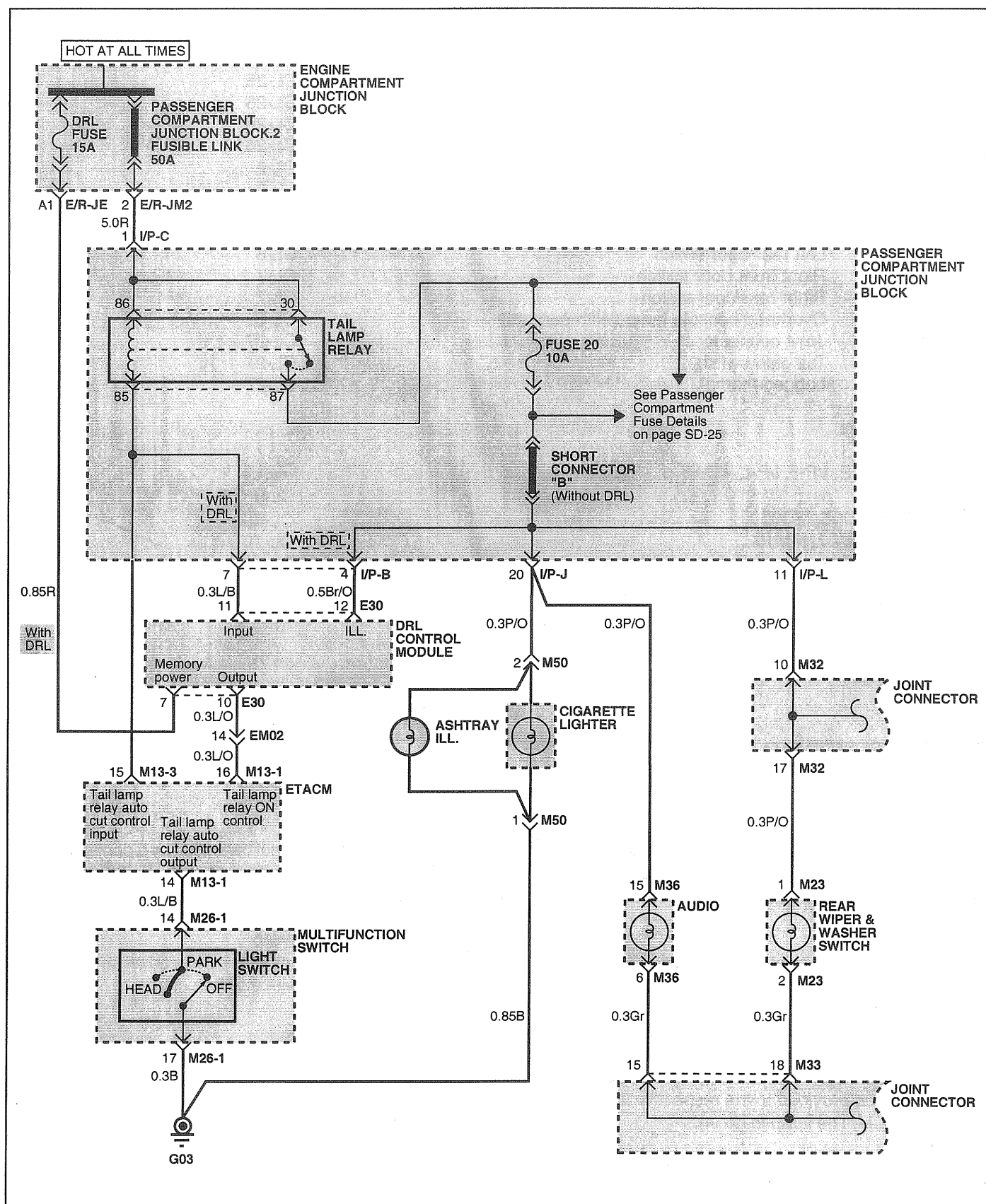
The map lamps are not controlled by a door switch. They are turned on and off manually. The room lamps can be controlled by the door switches or turned on manually, depending on the position of the room lamps switch.

The room lamps can also be turned off so that it will not come on with the door opens.

ILLUMINATIONS

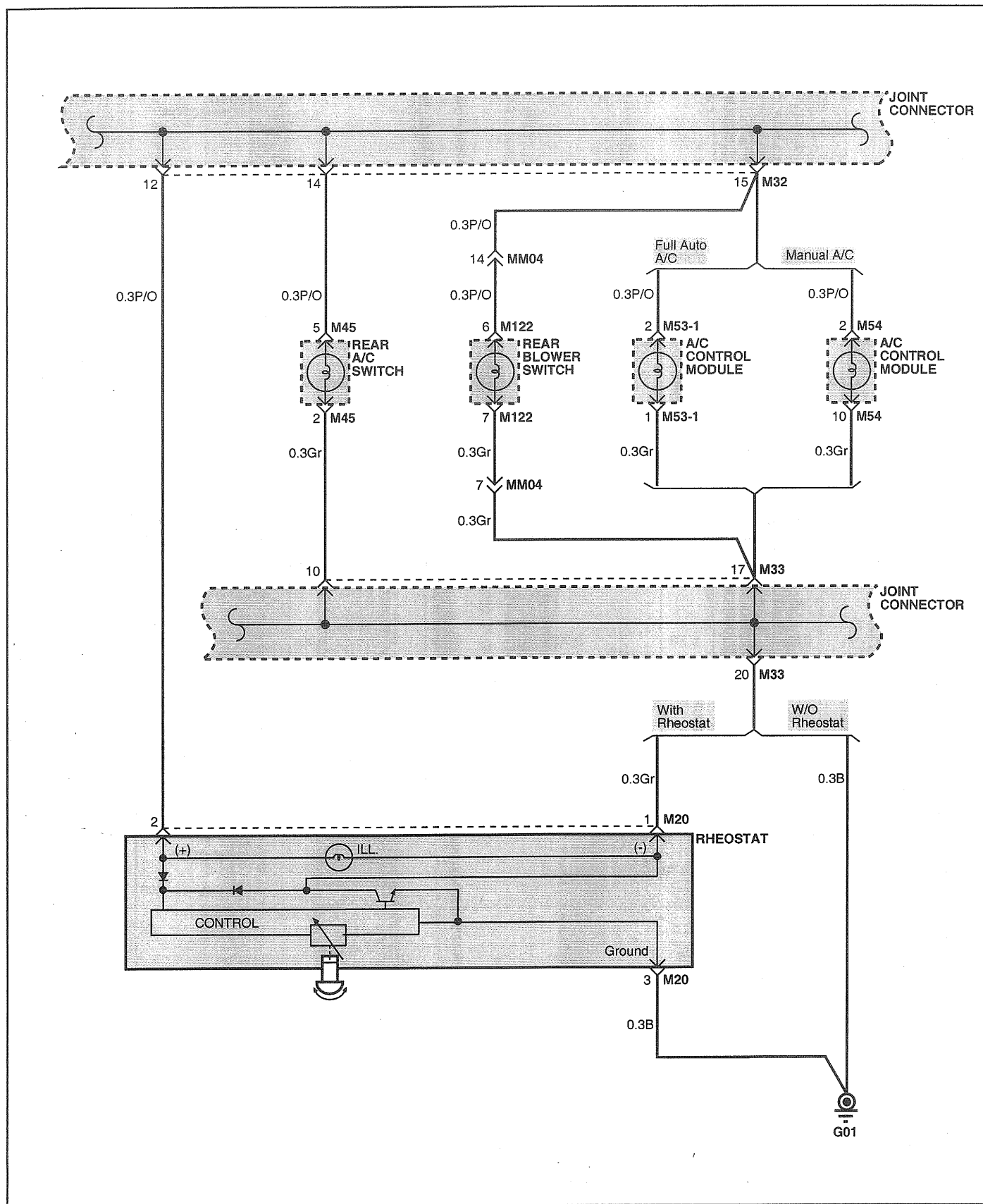
E2HA0510

ILLUMINATIONS (1)

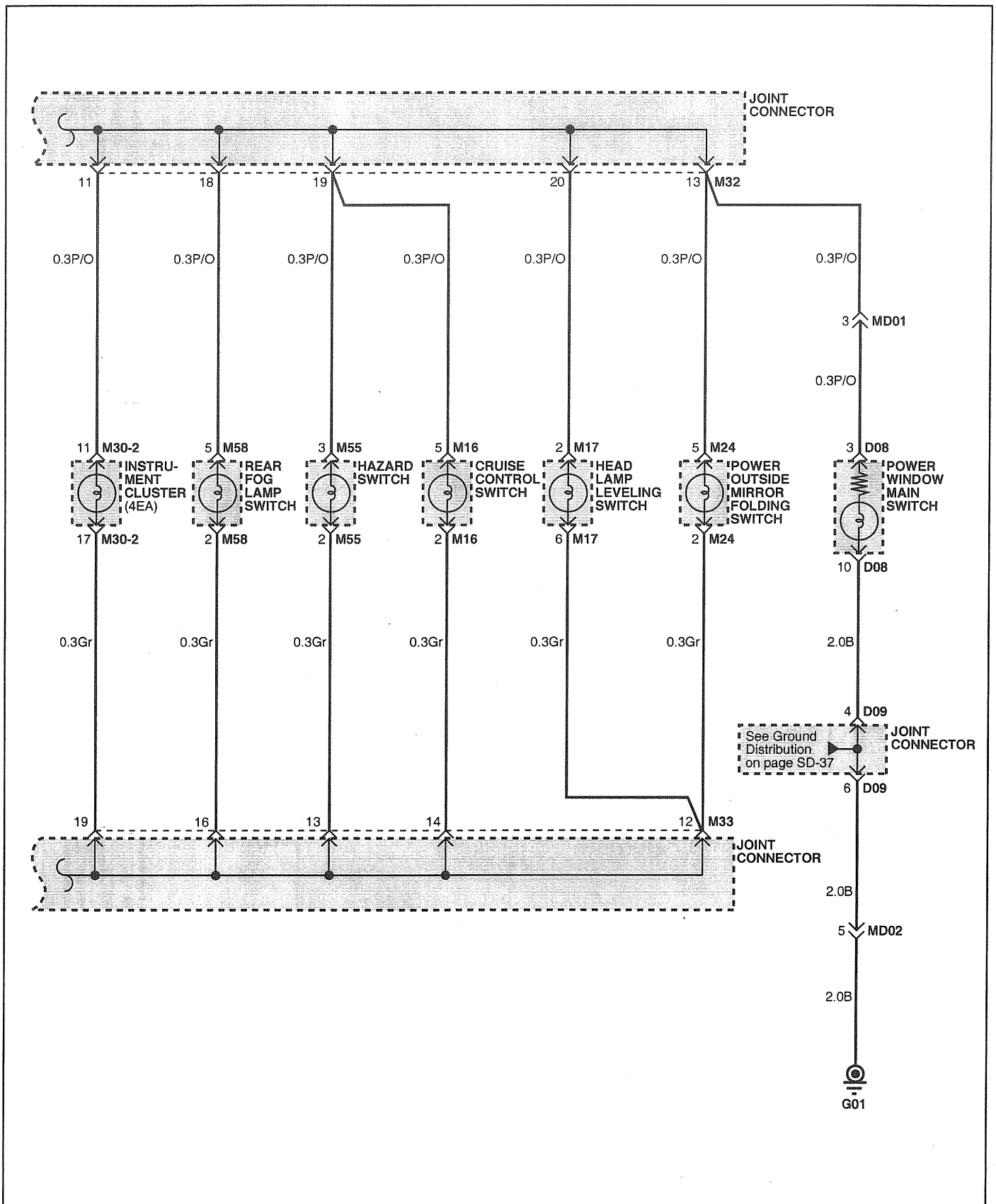


E2HA051A

ILLUMINATIONS (2)



ILLUMINATIONS (3)



COMPONENT LOCATION INDEX

Components		Location reference-page
D08	Power window main switch	CL-25
D09	Joint connector	CL-25
E30	DRL control module	CL-13
M13-1	ETACM	CL-2
M13-3	ETACM	CL-2
M16	Cruise control switch	CL-2
M17	Head lamp leveling switch	CL-2
M20	Rheostat	CL-2
M23	Rear wiper & washer switch	CL-2
M24	Power outside mirror folding switch	CL-2
M26-1	Multifunction switch	CL-3
M30-2	Instrument cluster	CL-3
M32	Joint connector	CL-3
M33	Joint connector	CL-3
M36	Audio	CL-3
M50	Cigarette lighter	CL-4
M53-1	A/C control module	CL-4
M55	Hazard switch	CL-4
M58	Rear fog lamp switch	CL-4
M122	Rear blower switch	CL-8
Connectors		
EM02		CL-14
E/R-JM2		CL-14
I/P-B		CL-11
I/P-C		CL-11
I/P-L		CL-11
I/P-J		CL-11
MD01		CL-9
MD02		CL-9
Grounds		
G01		CL-28
G03		CL-28

Circuit Description

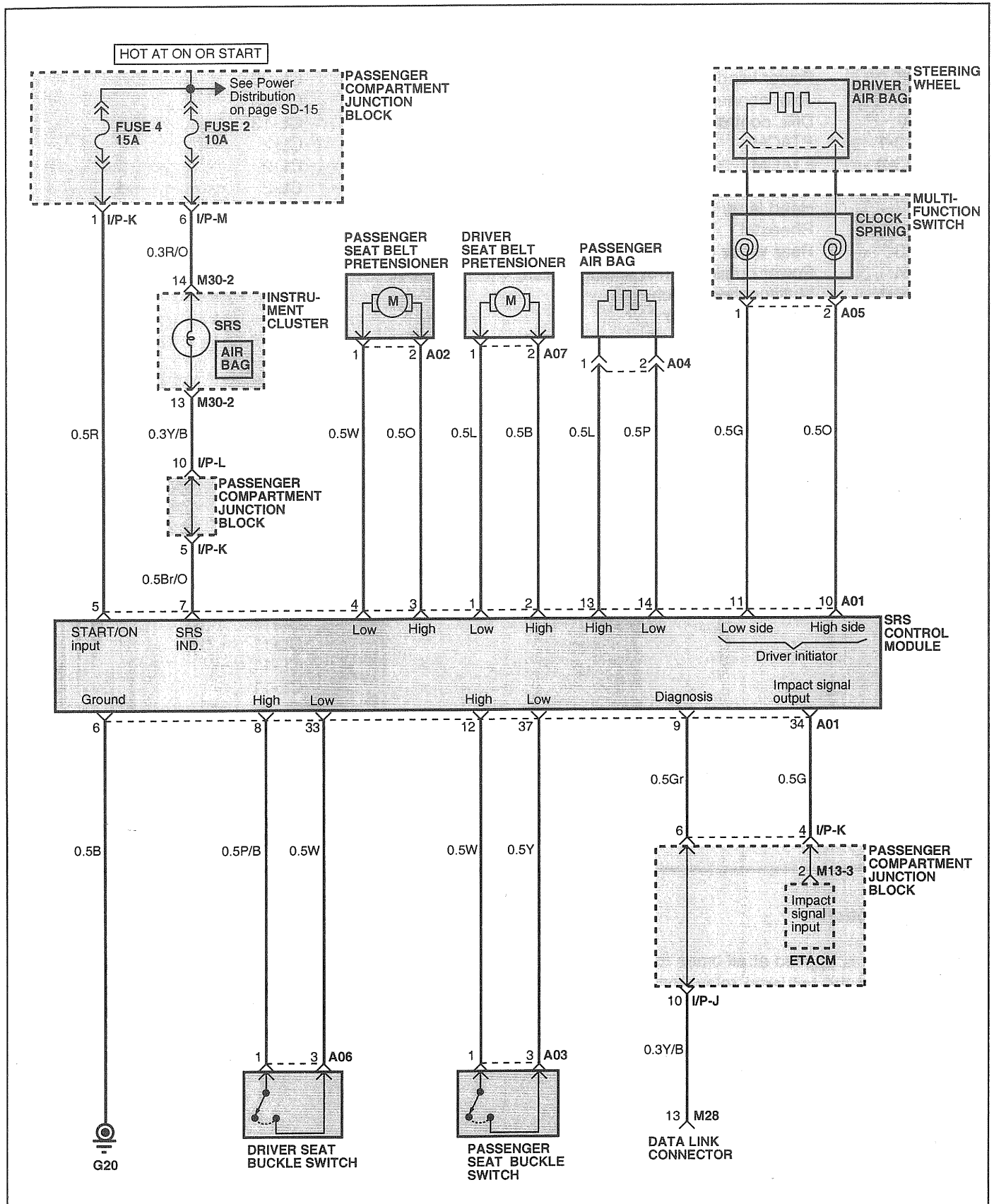
Battery voltage is applied at all times to the coil and contacts of the tail lamp relay from the tail lamp fuse. With the light switch in PARK or HEAD, ground is provided to the tail lamp relay coil through the ETACM(Without DRL)/DRL control module (With DRL).

Battery voltage from fuse 20 is then provided to the illumination lamps through the closed contact of the tail lamp relay. Ground is provided to the illumination lamps through the rheostat. The rheostat controls intensity of the illumination lamp's light.

AIR BAG SYSTEM

E2HA0520

AIR BAG SYSTEM (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
A01	SRS control module	CL-15
A02	Passenger seat belt pretensioner	CL-15
A03	Passenger seat buckle switch	CL-15
A04	Passenger air bag	CL-15
A05	Driver air bag	CL-15
A06	Driver seat buckle switch	CL-15
A07	Driver seat belt pretensioner	CL-16
M13-3	ETACM	CL-2
M30-2	Instrument cluster	CL-3
Connectors		
I/P-J		CL-11
I/P-K		CL-11
I/P-L		CL-11
I/P-M		CL-11
Grounds		
G20		CL-30

Circuit Description

Only authorized service personnel should do work on or around the supplemental restraint system (SRS) components. Service personnel should read section 56a of the service manual carefully before starting work on the supplemental restraint system (SRS).

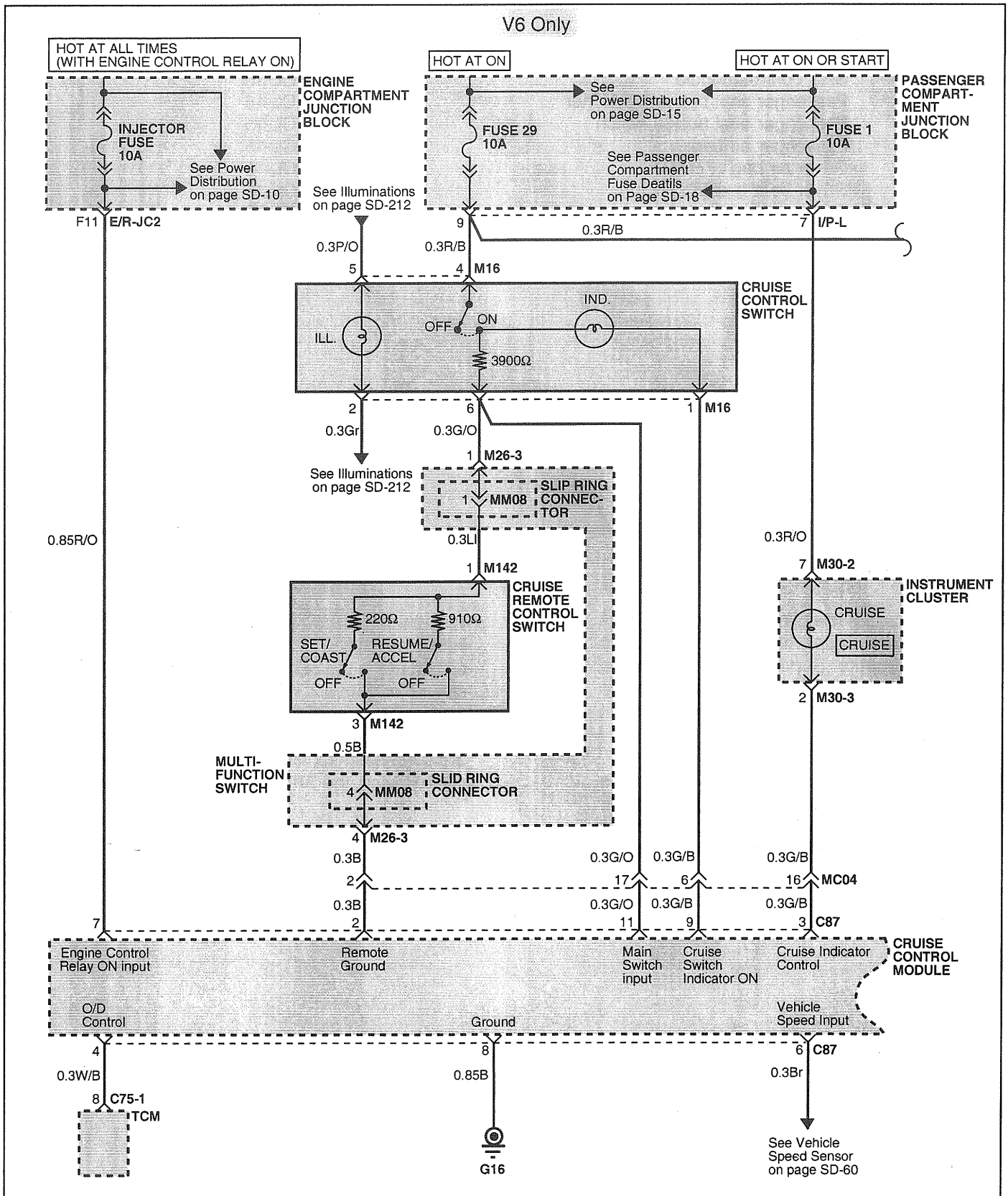
The supplemental restraint system (SRS) is a safety device which when used in conjunction with the seat belts is designed to protect the driver and front seat passenger by deploying when the car receives a frontal impact exceeding a certain set limit.

With the ignition switch in ON or START, battery voltage is applied to the SRS control module from fuse 4 and to the SRS indicator in the instrument cluster from fuse 2. When the ignition switch is turned ON, the SRS indicator in the instrument cluster will flash six times. If the SRS indicator does not flash six times, stays on or comes on while driving, the SRS is not working properly.

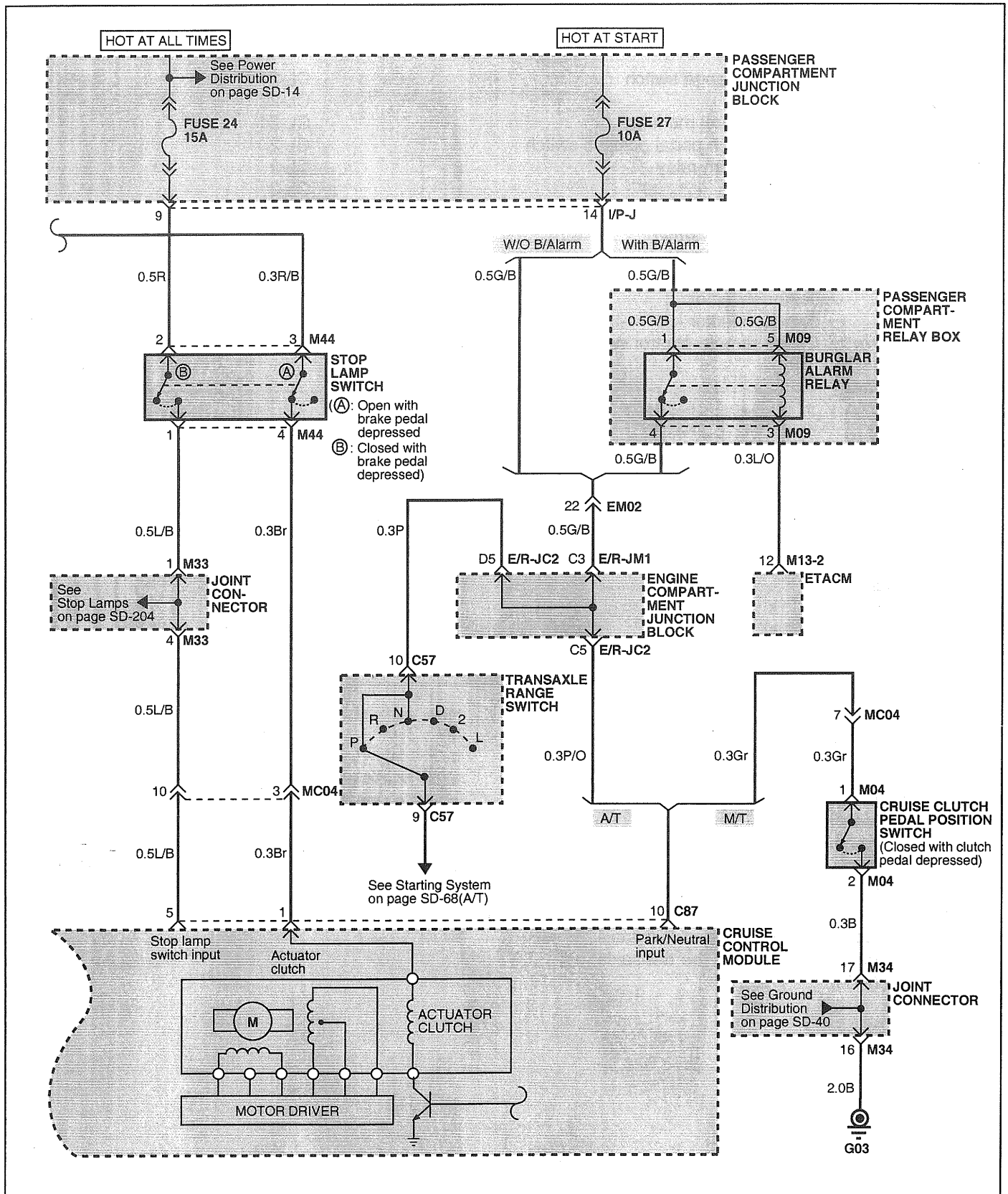
CRUISE CONTROL SYSTEM

E2HA0530

CRUISE CONTROL SYSTEM (1)



CRUISE CONTROL SYSTEM (2)



COMPONENT LOCATION INDEX

Components		Location reference-page
C57	Transaxle range switch	CL-21
C75-1	TCM	CL-22
C87	Cruise control module	CL-24
M04	Cruise clutch pedal position switch	CL-2
M09	Burglar alarm relay	CL-2
M13-2	ETACM	CL-2
M16	Cruise control switch	CL-2
M26-3	Multifunction switch	CL-3
M30-2	Instrument cluster	CL-3
M30-3	Instrument cluster	CL-3
M33	Joint connector	CL-3
M34	Joint connector	CL-3
M142	Cruise remote control switch	CL-9
Connectors		
E/R-JC2		CL-14
E/R-JM1		CL-14
EM02		CL-14
I/P-L		CL-11
MC04		CL-9
MM08		CL-10
Grounds		
G03		CL-28
G06		CL-28

Circuit Description

The cruise control system uses mechanical and electrical devices to maintain vehicle speed at a driver selected setting.

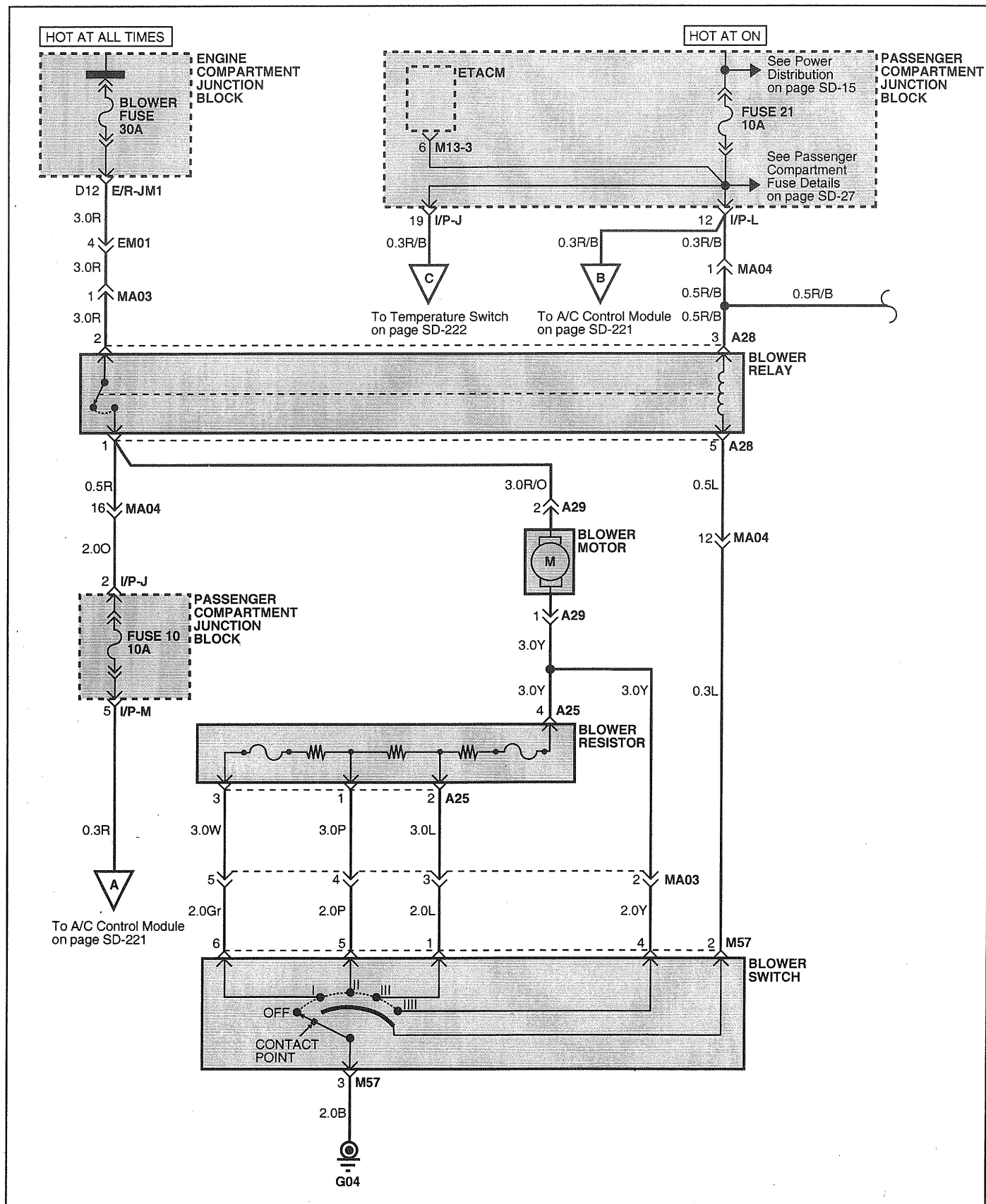
The cruise control module receives signals from the cruise control switch, the stop lamp switch, transaxle range switch(A/T)/cruise clutch pedal position switch (M/T) and the cruise remote control switch. The cruise control module sends signals to the cruise control actuator and the transaxle control module(A/T).

With cruise engaged, the cruise control module sends a signal to the transaxle control module that prevents the transaxle from continuously downshifting and upshifting to maintain the set vehicle speed when going up a long grade or hill.

BLOWER AND A/C CONTROLS (MANUAL)

E2HA0540

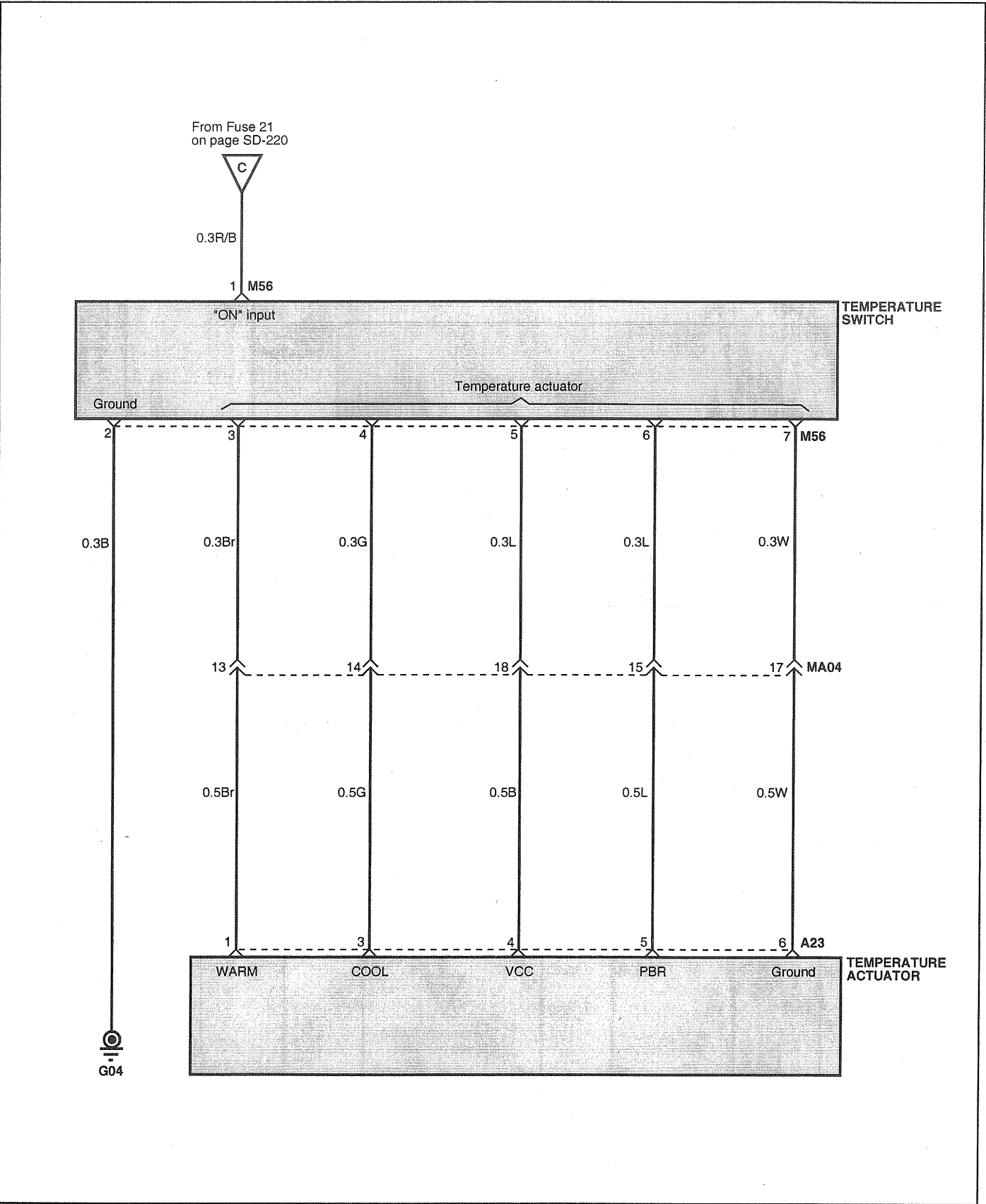
BLOWER AND A/C CONTROLS (MANUAL) (1)



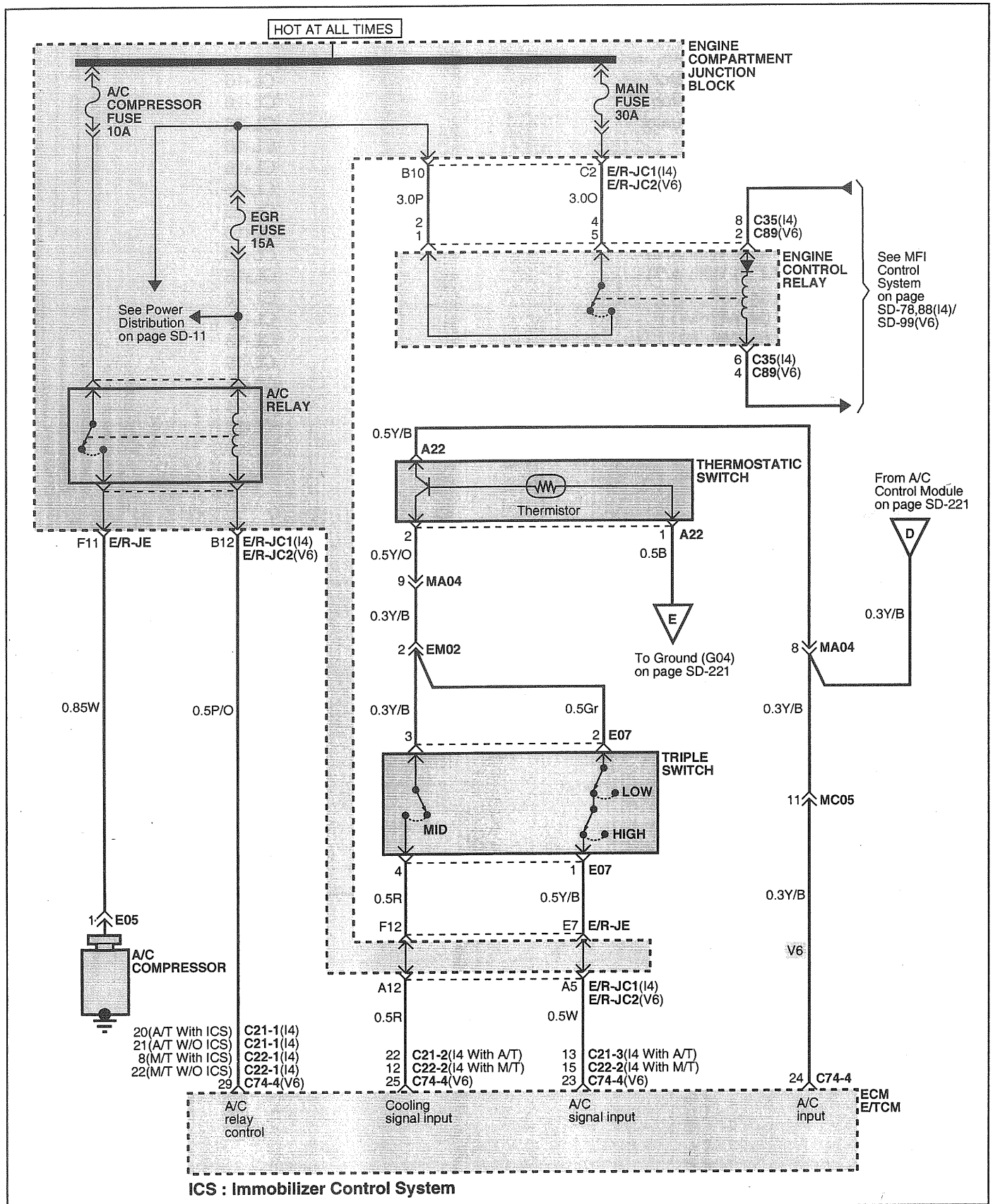
The diagram illustrates the electrical connections for the A/C Control Module. Key components and their connections are as follows:

- Blend Door Actuator:**
 - 'ON' input:** Connected to terminal 1 A21 via a 0.5R/B wire.
 - Ground:** Connected to terminal 2.
 - VENT:** Connected to terminal 3 via a 0.5R/O wire.
 - B/L:** Connected to terminal 4 via a 0.5W wire.
 - FLOOR:** Connected to terminal 5 via a 0.5R/O wire.
 - MIX:** Connected to terminal 6 via a 0.5L/O wire.
 - DEF:** Connected to terminal 7 A21 via a 0.5B/O wire.
- Intake Actuator:**
 - Ground:** Connected to terminal 9.
 - REC:** Connected to terminal 13 via a 0.3Br/B wire.
 - FRE:** Connected to terminal 5 via a 0.3Br/O wire.
 - Thermostatic switch:** Connected to terminal 11 via a 0.3Y/B wire.
 - ILL(+):** Connected to terminal 2 via a 0.3P/O wire.
 - ILL(-):** Connected to terminal 10 via a 0.3Gr wire.
 - Defogger switch:** Connected to terminal 4 via a 0.3L/B wire.
- A/C Control Module:**
 - Blend door actuator:** Connected to terminals 6, 7, 8, 14, and 15.
 - Intake actuator:** Connected to terminals 13 and 5.
 - Thermostatic switch:** Connected to terminal 11.
 - ILL(+):** Connected to terminal 2.
 - ILL(-):** Connected to terminal 10.
 - Defogger switch:** Connected to terminal 4.
- Other Connections:**
 - From Fuse 21 on page SD-220:** Connected to terminal 1 via a 0.3R/B wire.
 - From Fuse 10 on page SD-220:** Connected to terminal 3 via a 0.3R wire.
 - From Thermostatic Switch on page SD-223:** Connected to terminal 7 via a 0.5B wire.
 - To Thermostatic Switch on page SD-223:** Connected to terminal 11 via a 0.5B wire.
 - See Illuminations on page SD-211:** Connected to terminals 2 and 10.
 - See Rear Window & Outside Mirror Defogger System on page SD-154:** Connected to terminals 4 and 12.

BLOWER AND A/C CONTROLS (MANUAL) (3)



BLOWER AND A/C CONTROLS (MANUAL) (4)



COMPONENT LOCATION INDEX

Components		Location reference-page
A21	Blend door actuator	CL-16
A22	Thermostatic switch	CL-16
A23	Temperature actuator	CL-16
A25	Blower resistor	CL-16
A26	Intake actuator	CL-16
A28	Blower relay	CL-16
A29	Blower motor	CL-16
C21-1	E/TCM (I4 With A/T)	CL-18
C21-2	E/TCM (I4 With A/T)	CL-18
C21-3	E/TCM (I4 With A/T)	CL-18
C22-1	ECM (I4 With M/T)	CL-18
C22-2	ECM (I4 With M/T)	CL-18
C22-3	ECM (I4 With M/T)	CL-18
C35	Engine control relay (I4)	CL-19
C74-4	ECM (V6)	CL-22
C89	Engine control relay (V6)	CL-24
E05	A/C compressor	CL-12
E07	Triple switch	CL-12
M13-3	ETACM	CL-2
Connectors		
EM01		CL-14
EM02		CL-14
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JE		CL-14
I/P-J		CL-11
I/P-L		CL-11
I/P-M		CL-11
MA03		CL-9
MA04		CL-9
MC05		CL-9
Ground		
G04		CL-28

Circuit Description

Blower Control

When the ignition switch is ON, battery voltage is applied to the coil of the blower relay. With the blower switch in any position except OFF, ground is provided to the coil of the blower relay through the blower switch. Battery voltage is then applied to the blower motor through the closed contacts of the blower relay, ground is provided to the blower motor through the blower resistor and blower switch for the desired blower motor speed.

As the blower switch is moved from OFF to position 4, resistors in the resistor block are bypassed. Decreasing the resistance will increase the current applied to the blower motor. This increases the blower motor speed. When the fan switch is in position 4, all of the resistors are bypassed. The maximum current is now applied to the blower motor so that it runs at the highest speed.

A/C Control

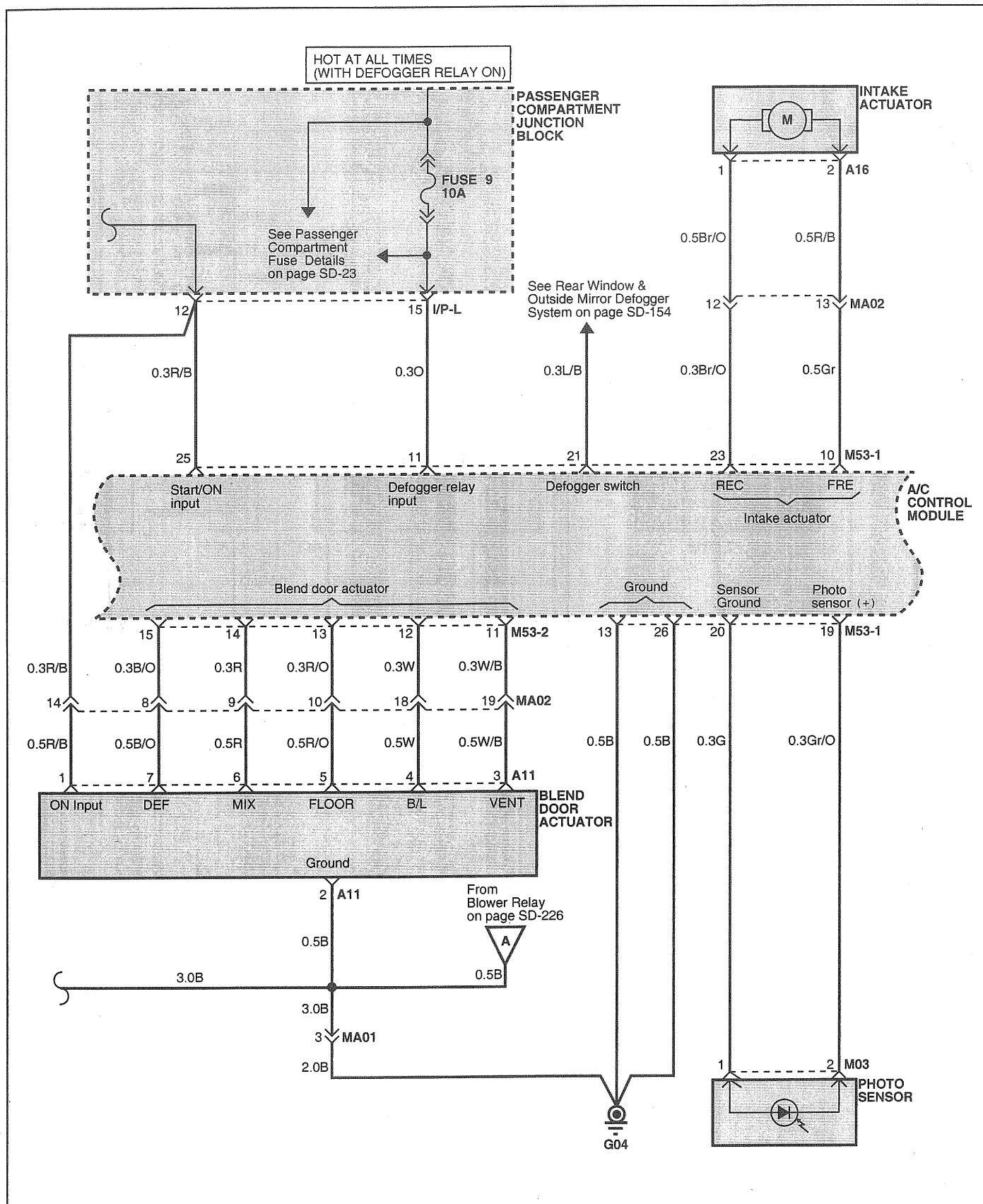
With the ignition switch in ON, battery voltage is applied to the coil of the blower relay from fuse 21. With the blower switch in any position except OFF, ground is provided to the coil of the blower relay through the blower switch. With the A/C switch in ON, the engine control module (ECM) will ground the coil of the A/C relay after a short delay to adjust idle speed.

Battery voltage will then be applied to the magnetic clutch of the compressor from A/C compressor fuse, to make the A/C compressor run.

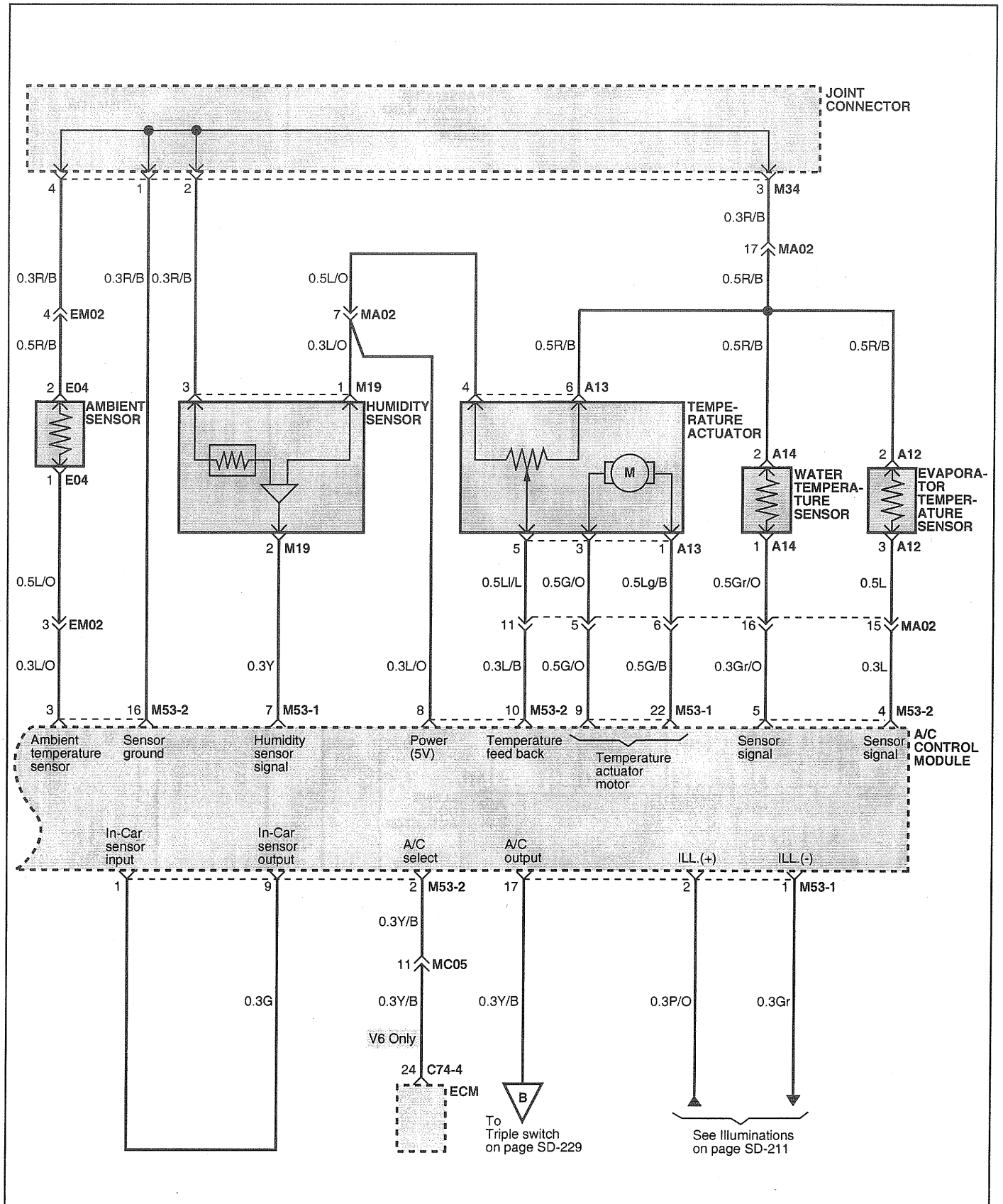
BLOWER AND A/C CONTROLS (FULL AUTO) (1)



BLOWER AND A/C CONTROLS (FULL AUTO) (2)



BLOWER AND A/C CONTROLS (FULL AUTO) (3)



Wiring Diagram for A/C System

Legend:

- 20(A/T With ICS)
- 21(A/T W/O ICS)
- 8(M/T With ICS)
- 22(M/T W/O ICS)
- 29
- 22 C21-1(I4)
- 12 C22-2(I4 with M/T)
- 25 C74-4(V6)
- 13 C21-3(I4 with A/T)
- 15 C22-2(I4 with M/T)
- 23 C74-4(V6)

Key Components and Connections:

- Engine Compartment Junction Block:**
 - MAIN FUSE 30A:** Connected to B10 (3.0P) and C2 (3.0O).
 - E/R-JC1(I4) / E/R-JC2(V6):** Connected to C2 (3.0O) and C35(I4) / C89(V6).
 - ENGINE CONTROL RELAY:** Connected to C35(I4) / C89(V6) and C35(I4) / C89(V6).
- A/C System:**
 - A/C COMPRESSOR FUSE 10A:** Connected to F11 (E/R-JE) and F12 (F12).
 - EGR FUSE 15A:** Connected to B12 (E/R-JC1(I4) / E/R-JC2(V6)) and B12 (E/R-JC1(I4) / E/R-JC2(V6)).
 - A/C RELAY:** Connected to F11 (E/R-JE) and F12 (F12).
 - A/C COMPRESSOR:** Connected to F11 (E/R-JE) and F12 (F12).
- Control Modules:**
 - ECM E/TCM:** Connected to A5 (E/R-JC1(I4) / E/R-JC2(V6)) and A5 (E/R-JC1(I4) / E/R-JC2(V6)).
 - From A/C Control Module on page SD-228:** Connected to B (0.3Y/B) and EM02 (2).
 - TRIPLE SWITCH:** Connected to E07 (2) and E07 (1).

*** ICS : Immobilizer Control System**

COMPONENT LOCATION INDEX (1)

Components		Location reference-page
A11	Blend door actuator	CL-16
A12	Evaporator temperature sensor	CL-16
A13	Temperature actuator	CL-16
A14	Water temperature sensor	CL-16
A15	Power transistor	CL-16
A16	Intake actuator	CL-16
A17	High blower relay	CL-16
A18	Blower relay	CL-16
A19	Blower motor	CL-16
C21-2	E/TCM (I4 With A/T)	CL-18
C21-3	E/TCM (I4 With A/T)	CL-18
C22-1	ECM (I4 With M/T)	CL-18
C22-2	ECM (I4 With M/T)	CL-18
C35	Engine control relay (I4)	CL-19
C74-4	ECM (V6)	CL-22
C89	Engine control relay (V6)	CL-24
E03	AQS sensor	CL-12
E04	Ambient sensor	CL-12
E05	A/C compressor	CL-12
E07	Triple switch	CL-12
M03	Photo sensor	CL-2
M34	Joint connector	CL-3
M53-1	A/C control module	CL-4
M53-2	A/C control module	CL-4
Connectors		
EM01		CL-14
EM02		CL-14
E/R-JC1		CL-14
E/R-JC2		CL-14
E/R-JE		CL-14
E/R-JM1		CL-14

COMPONENT LOCATION INDEX (2)

Connectors	Location reference-page
I/P-B	CL-11
I/P-J	CL-11
I/P-L	CL-11
I/P-M	CL-11
MA01	CL-9
MA02	CL-9
MC05	CL-9
Grounds	
G04	CL-28

Circuit Description

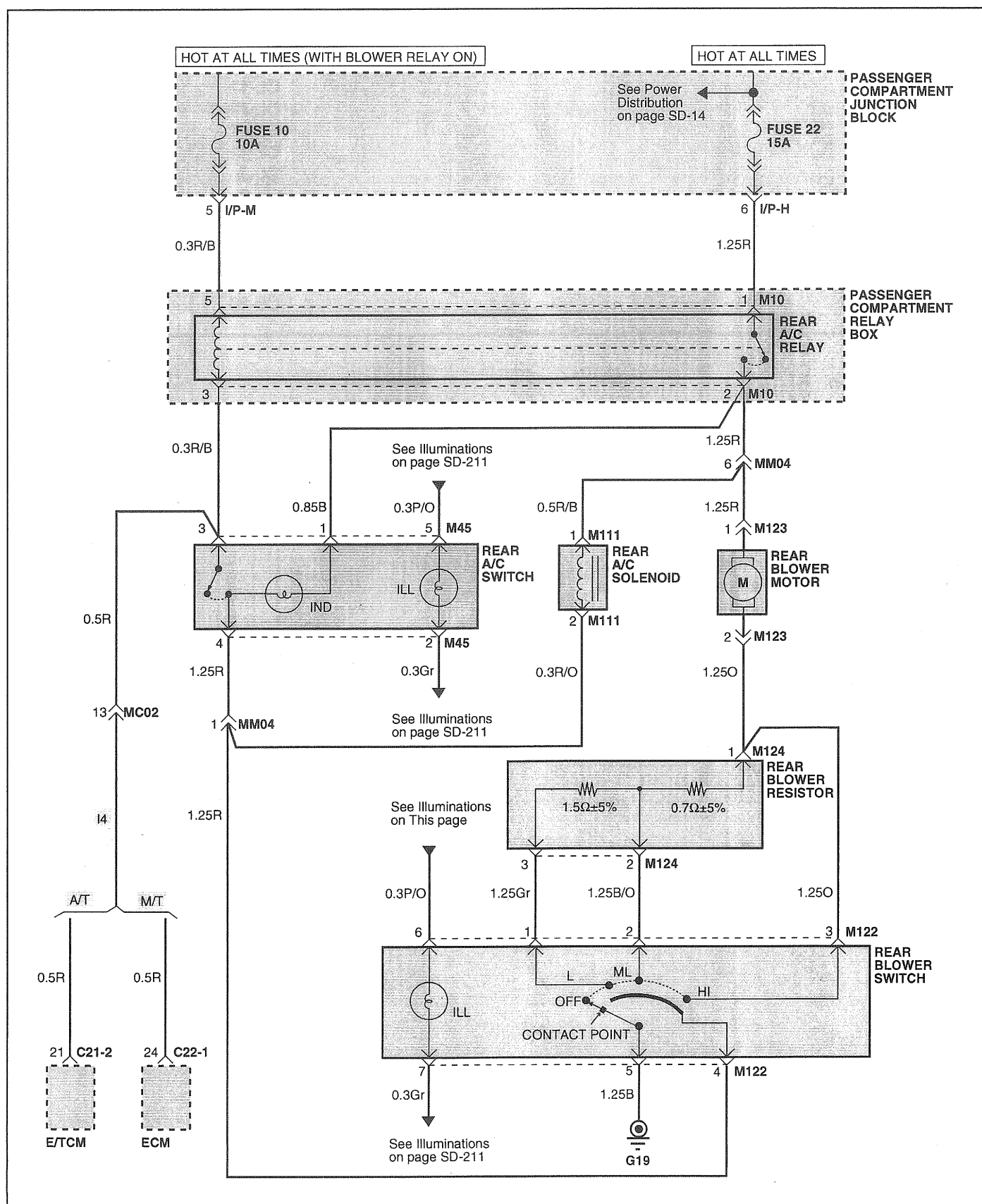
The A/C control module receives inputs from the A/C sensor (for instance, photo sensor, AQS sensor, humidity sensor, evaporator sensor, water temperature sensor, ambient sensor, etc) and controls the function of air conditioning system.

The A/C control module and various sensors provide accurate control of air mixture using blend door actuator, temperature actuator and intake actuator under all operating conditions.

The blower motor runs at the highest speed when the high blower relay coil is energized through A/C control module.

The function of the power transistor is that of the blower resistor in manual A/C. The power transistor is controlled by the input currents applied to the power transistor BASE terminal.

REAR BLOWER AND A/C CONTROLS (1)



COMPONENT LOCATION INDEX

Components		Location reference-page
C21-2	E/TCM (I4 With A/T)	CL-18
C22-1	ECM (I4 With M/T)	CL-18
M10	Rear A/C relay	CL-2
M111	Rear A/C solenoid	CL-7
M122	Rear blower switch	CL-8
M124	Rear blower resistor	CL-8
Connectors		
I/P-H		CL-11
I/P-M		CL-11
MC02		CL-9
MM04		CL-10
Grounds		
G19		CL-30

Circuit Description

When the blower relay ON, the rear A/C switch pushed and the rear blower switch in any position except OFF, the rear A/C relay coil energized. Battery voltage then supplied to the rear blower motor through the closed contact of the rear A/C relay, ground is provided to the rear blower motor through the rear blower resistor L/ML or HI. When the rear blower switch in HI, all of the resistors are by passed and the maximum current is applied to the rear blower motor so that it runs at the highest speed.