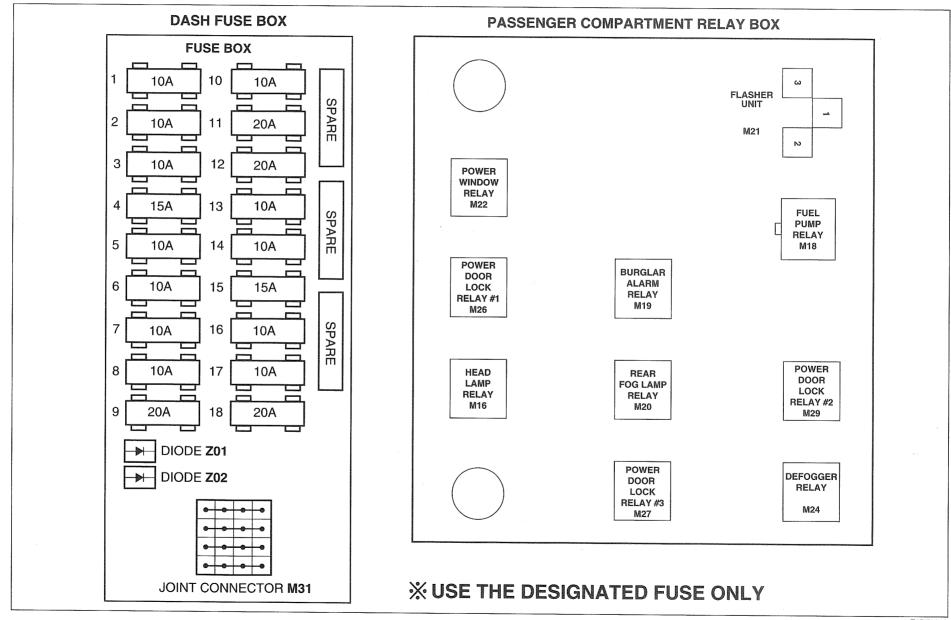
# SCHEMATIC DIAGRAMS

ACOUSTIC WARNING SYSTEM	SD95-11
AIR BAG SYSTEM (SRS)	SD56-1
ANTI-LOCK BRAKE SYSTEM(ABS)	.SD58-1
AUDIO SYSTEM	SD96-1
AUTOMATIC TRANSAXLE CONTROL SYSTEM	.SD45-1
BACK-UP LAMPS	.SD92-9
BLOWER & A/C CONTROLS	.SD97-1
CHARGING SYSTEM	SD37-1
COOLING SYSTEM	.SD25-1
COURTESY LAMPS	.SD92-19
DASH FUSE BOX DETAILS	.SD12-1
DATA LINK DETAILS	SD20-1
DAYTIME RUNNING LIGHTS	.SD95-7
DIGITAL CLOCK & CIGARETTE LIGHTER	.SD94-9
ETACS (ELECTRONIC TIME & ALARM CONTROL SYSTEM)	.SD95-1
FRONT FOG & REAR FOG LAMPS	.SD92-3
FUEL FILTER HEATING SYSTEM (DIESEL)	.SD36-5
FUSE & RELAY INFORMATION	.SD10-1
GROUND DISTRIBUTION	SD13-1
HEAD LAMP LEVELING DEVICE	.SD92-21
HEAD LAMP WASHER	.SD92-23
HEAD LAMPS	.SD92-1

HORNS	SD96-3
ILLUMINATIONS	SD94-5
IMMOBILIZER CONTROL SYSTEM	SD95-5
INDICATORS & GAUGES	SD94-1
MFI CONTROL SYSTEM (EXCEPT DIESEL)	SD31-1
MFI CONTROL SYSTEM (DIESEL)	SD31-7
MFI CONTROL SYSTEM (CARBURETOR)	SD31-13
POWER DISTRIBUTION	SD11-1
POWER DOOR LOCKS	SD81-1
POWER OUTSIDE MIRRORS	SD87-1
POWER WINDOWS.	SD82-1
REAR WINDOW & OUTSIDE MIRROR DEFOGGERS	SD87-3
SEAT BELT WARNING & CHIME (WITHOUT ETACS)	SD89-1
SEAT WARMER	SD88-1
SHIFT & KEY LOCK SYSTEM	SD46-1
STARTING SYSTEM	SD36-1
STOP LAMPS	SD92-1
TAIL, PARKING & LICENSE LAMPS	SD92-1
TURN & HAZARD LAMPS	SD92-7
VEHICLE SPEED SENSOR	SD43-1
WIPER & WASHER	SD98-1



## **FUSE & RELAY INFORMATIONS (1)**



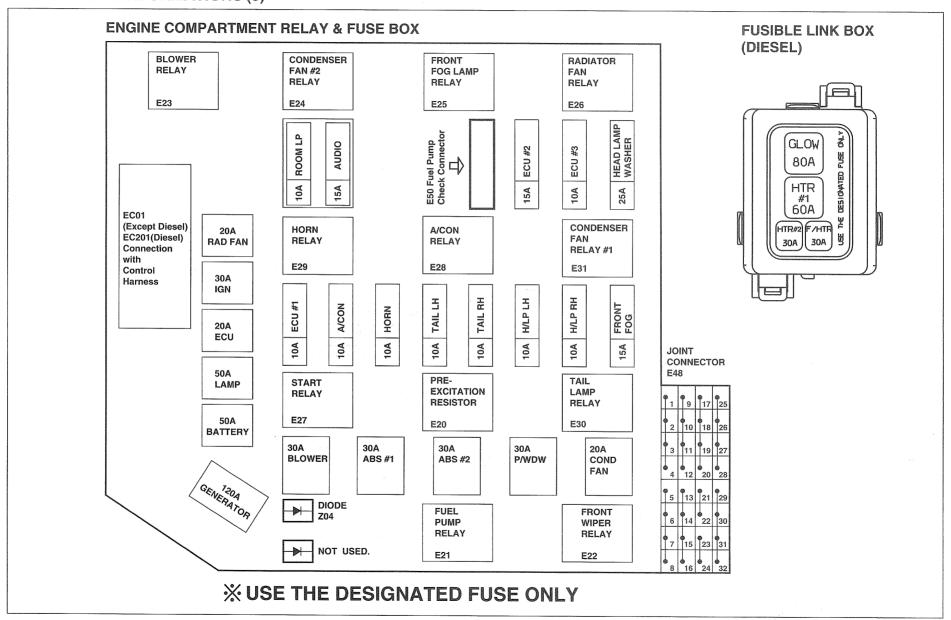
## **FUSE & RELAY INFORMATIONS (2)**

#### CIRCUIT

FUSE	AMPERAGES	Related Circuit
1	10A	Hazard switch, Back-up lamp switch, Transaxle range switch, A/T shift & key lock control
2	10A	ETACM, Pre-Excitation resistor, Seat belt timer, Instrument cluster
3	10A	Instrument cluster
4	15A	Air bag
5	10A	ECM, PCM, A/T shift lever, Transaxle range switch, Mass air flow sensor, Vehicle speed sensor, Fuel filter warning switch
6	10A	Power door lock
7	10A	Hazard switch, ETACM
8	10A	Stop lamp switch, A/T shift lever, A/T key interlock solenoid
9	20A	Rear window defogger
10	10A	Head lamp, Power window, Head lamp leveling, Head lamp washer, ETACM, Front fog lamp, Blower control, Rear intermittent washer, Fuel filter relay, A/C switch
11	20A	Front wiper & washer
12	20A	Seat warmer
13	10A	ABS control, ABS bleeding
14	10A	Digital clock, Audio, A/T shift & key lock control
15	15A	Cigarette lighter
16	10A	Power outside mirror switch
17	10A	Rear window & outside mirror defogger
18	20A	Rear wiper

# **X USE THE DESIGNATED FUSE ONLY**

#### **FUSE & RELAY INFORMATIONS (3)**



## **FUSE & RELAY INFORMATIONS (4)**

#### **ENGIEN COMPARTMENT RELAY & FUSE BOX CIRCUIT**

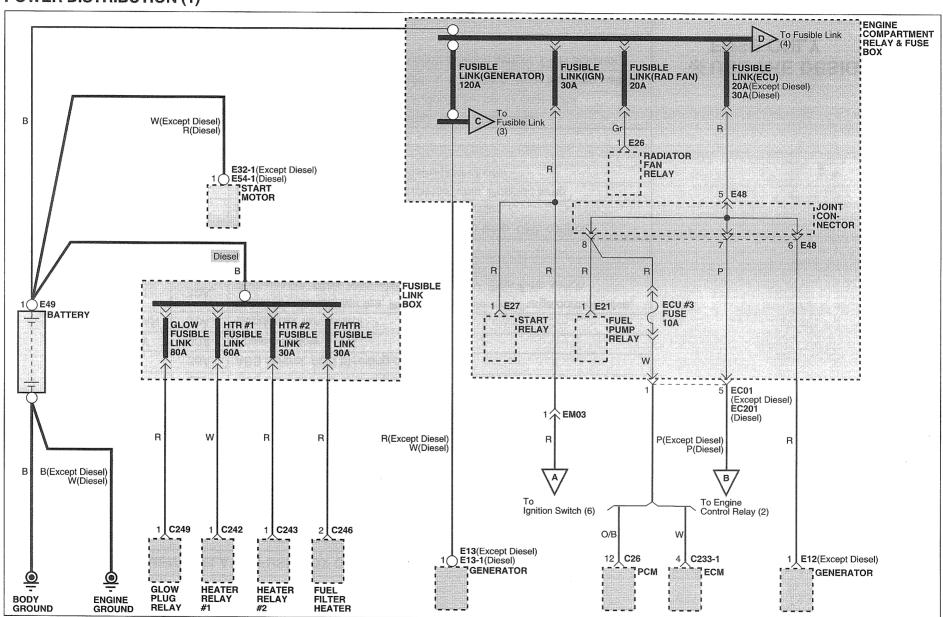
DESCI	ESCRIPTION (A) RELATED CIRCUIT		RELATED CIRCUIT	
	GENERATOR	120A	Charging (Generator)	
	BATTERY	50A	Fuse 6,7,8,9, Horn fuse, Room lamp fuse	
	LAMP	50A	Head lamp fuse, Front fog lamp fuse, Tail lamp relay, H/LP washer fuse	
ECU		20A/30A	Engine control relay, Generator, Fuel pump relay, ECU #3 fuse	
	IGN	30A	Ignition power source, Start relay	
FUSIBLE	RAD FAN	20A	Radiator fan control	
LINK	BLOWER	30A	Blower control	
	ABS	30A	ABS control, ABS bleeding connector	
	ABS	30A	ABS control, ABS bleeding connector	
	P/WDW	30A	Power window	
	COND FAN	20A	Condenser fan control	
ECU #1 10		104	SMATRA, Condenser fan, PCM, Oxygen sensor, Purge control valve,	
		10A	Radiator fan, Glow plug relay, Heater relay, Stop lamp switch	
	A/CON	10A	A/C relay	
	HORN	10A	Horn relay	
	TAIL LH	10A	Illumination lamps, Position lamps, license lamp, DRL control,	
	I AIL LO	IUA	Left rear combination lamp, H/LP washer relay	
	TAIL RH	10A	Right rear combination lamp, License lamp, Position lamp	
FUSE	H/LP LH	10A	Left head lamp, DRL control, Instrument cluster	
FUSE	H/LP RH	10A	Right head lamp	
	FRONT FOG	15A	Front fog lamp relay	
	ROOM LP	10A	Instrument cluster, Courtesy lamp, Trunk room lamp,	
	TIOOW EI	10/1	ETACM, DLC, Door warning, Multipurpose check connector	
	AUDIO	15A	Audio, Digital clock, Power antenna, A/C switch, Rear fog lamp switch	
	ECU #2	15A	Idle speed actuator, PCM, Camshaft position sensor, EGR actuator,	
	EUU #2	ACI	Throttle plate actuator	
	ECU #3	10A	ECM, PCM	
	H/L WASHER   25A   Head lamp washer motor			
F/PU	F/PUMP CHK (E50) Fuel pump relay, Fuel pump motor			

## FUSIBLE LINK BOX CIRCUIT(DIESEL)

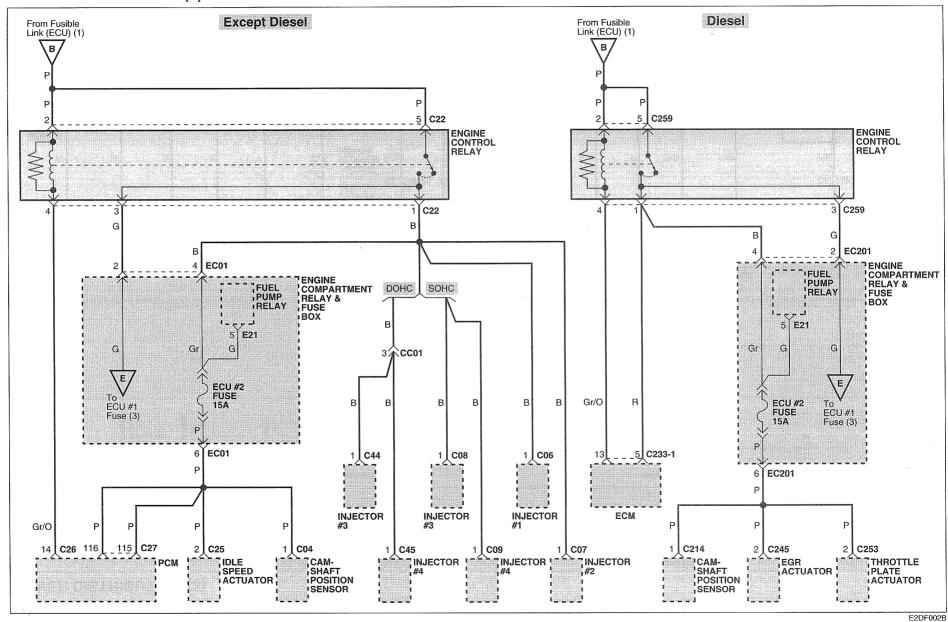
DESCRIPTION	(A)	RELATED CIRCUIT
GLOW	80A	Glow plug relay
HTR #1	60A	Heater relay #1
HTR #2	30A	Heater relay #2
F/HTR	30A	Fuel filter heater

**% USE THE DESIGNATED**FUSE ONLY

## **POWER DISTRIBUTION (1)**

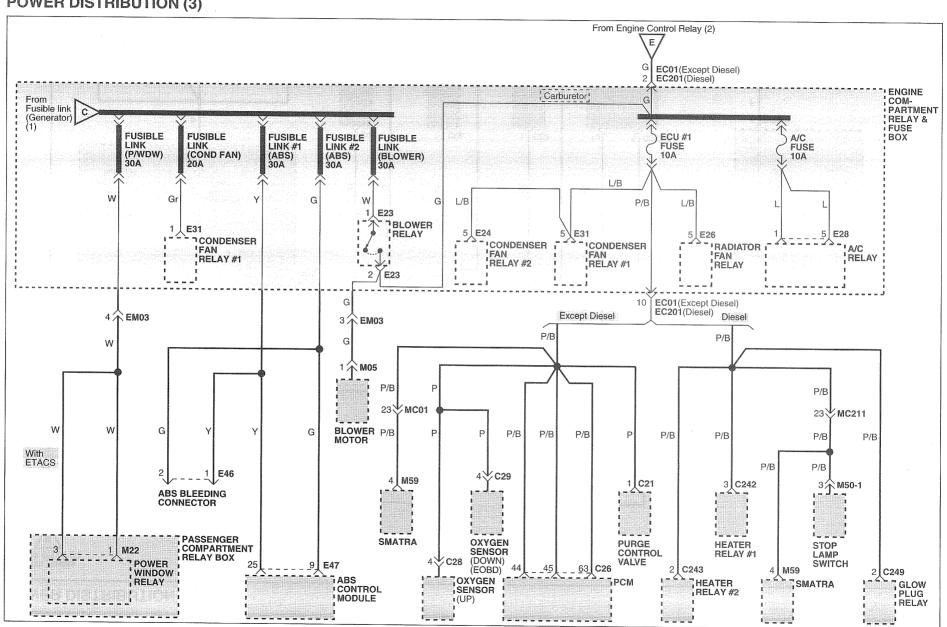


#### **POWER DISTRIBUTION (2)**

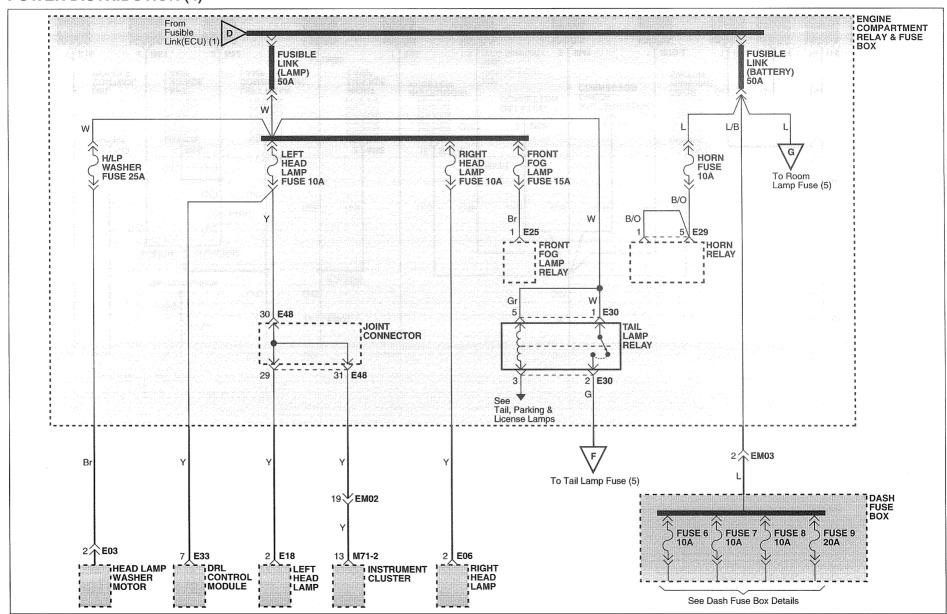


E2DF002C

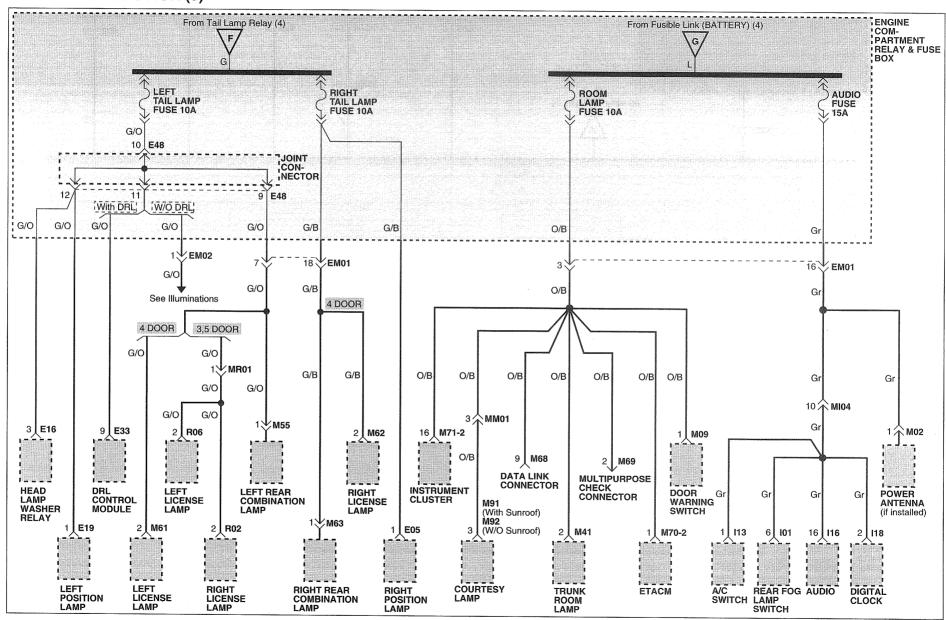
#### **POWER DISTRIBUTION (3)**



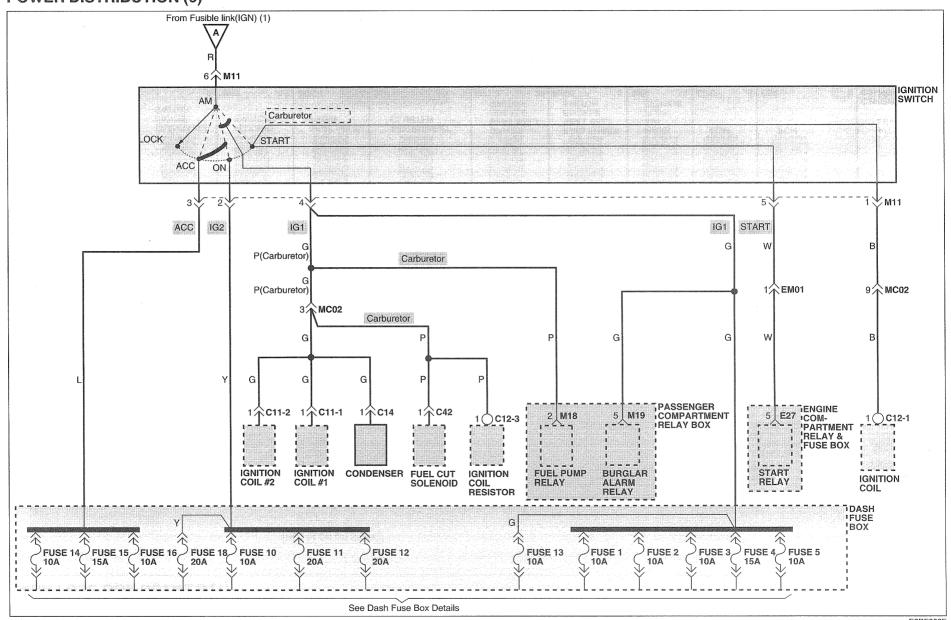
## **POWER DISTRIBUTION (4)**



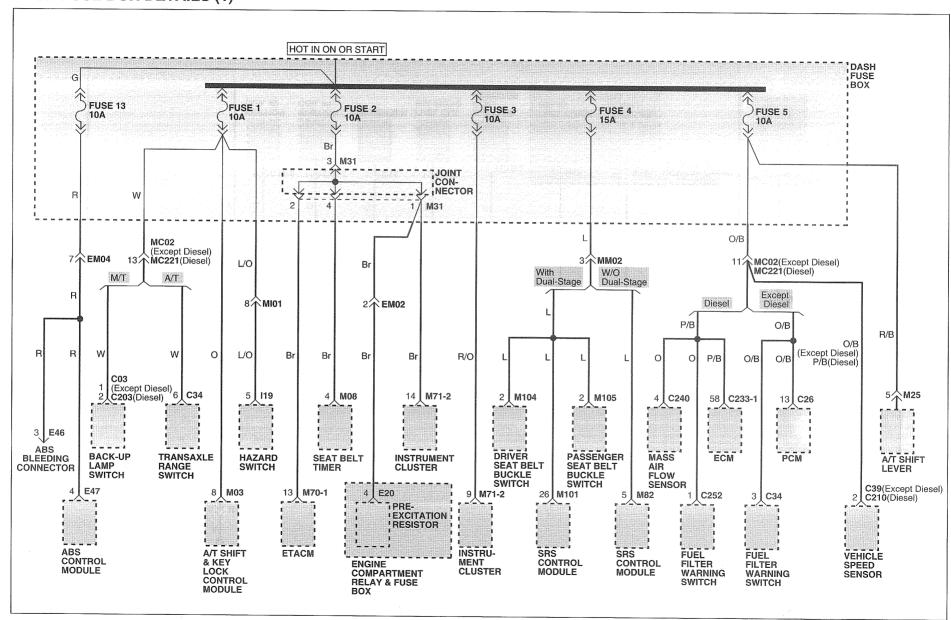
## **POWER DISTRIBUTION (5)**



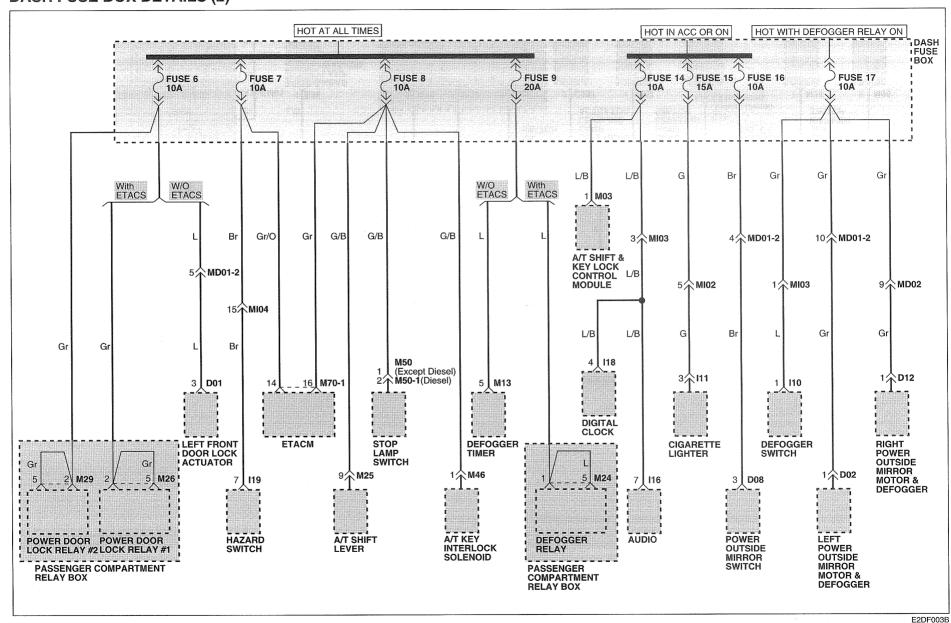
#### **POWER DISTRIBUTION (6)**



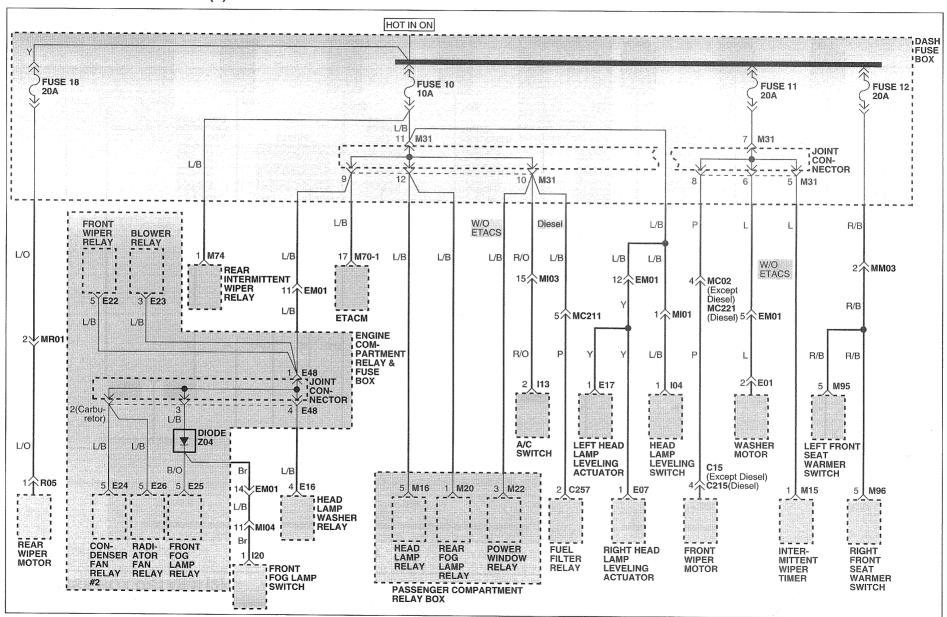
## **DASH FUSE BOX DETAILS (1)**



#### **DASH FUSE BOX DETAILS (2)**

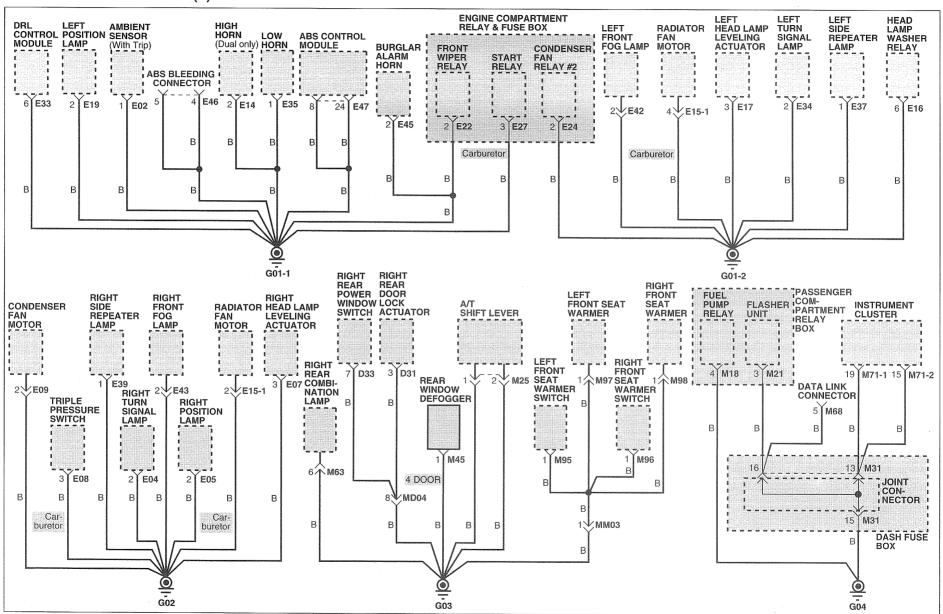


## **DASH FUSE BOX DETAILS (3)**

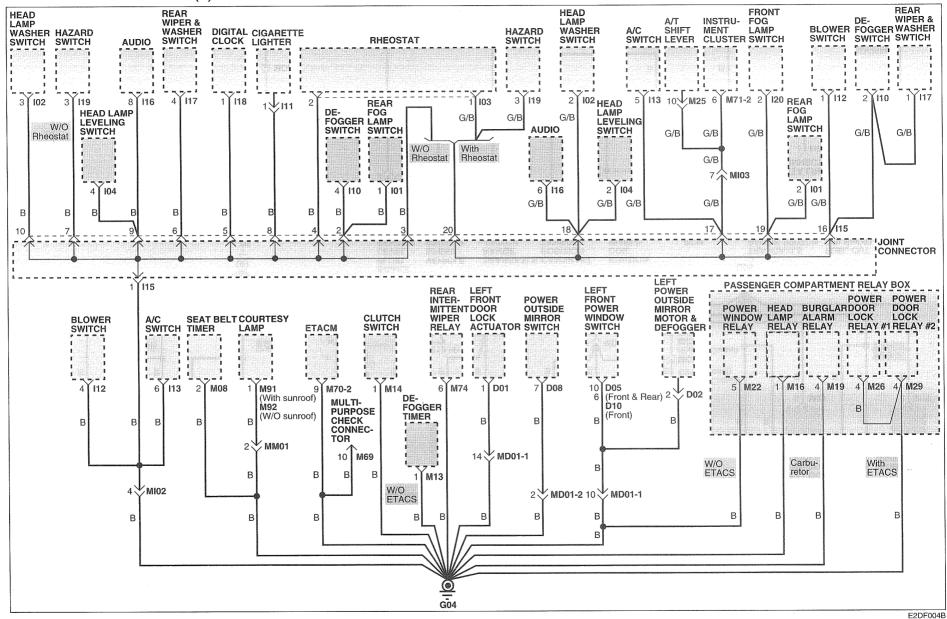


SD12-4	DASH FUSE BOX DETAILS
MEMO	

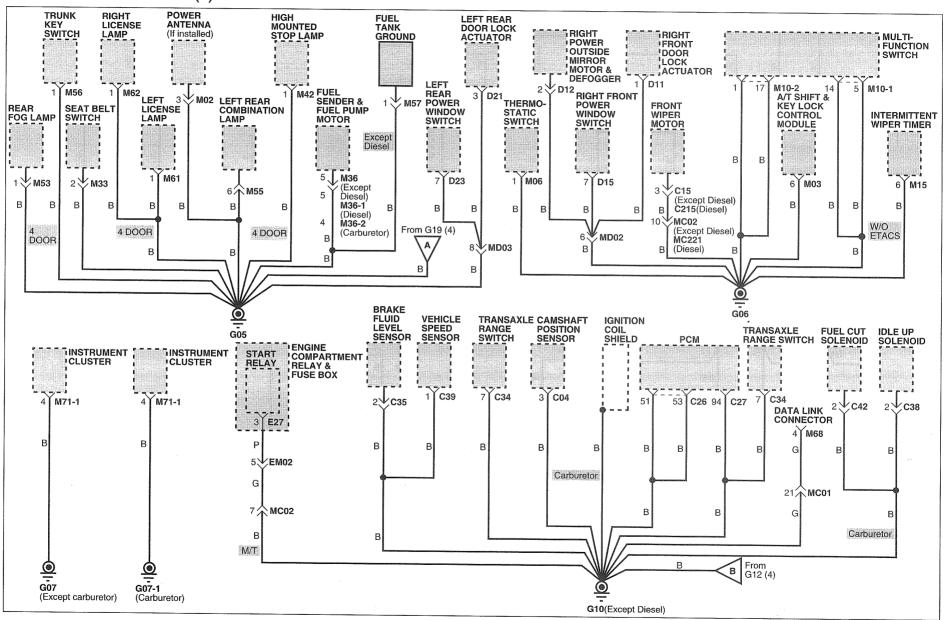
#### **GROUND DISTRIBUTION (1)**



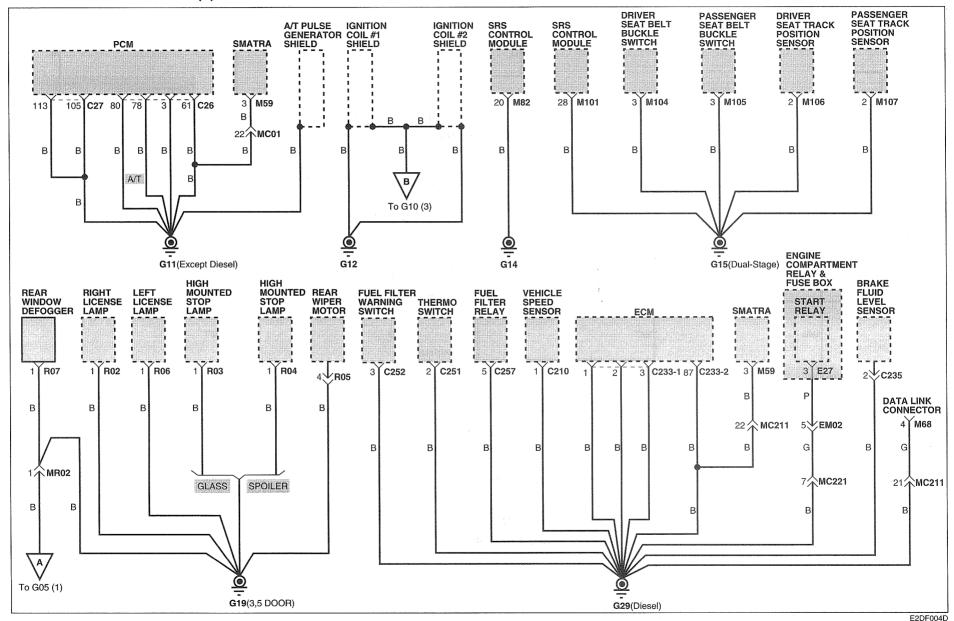
#### **GROUND DISTRIBUTION (2)**



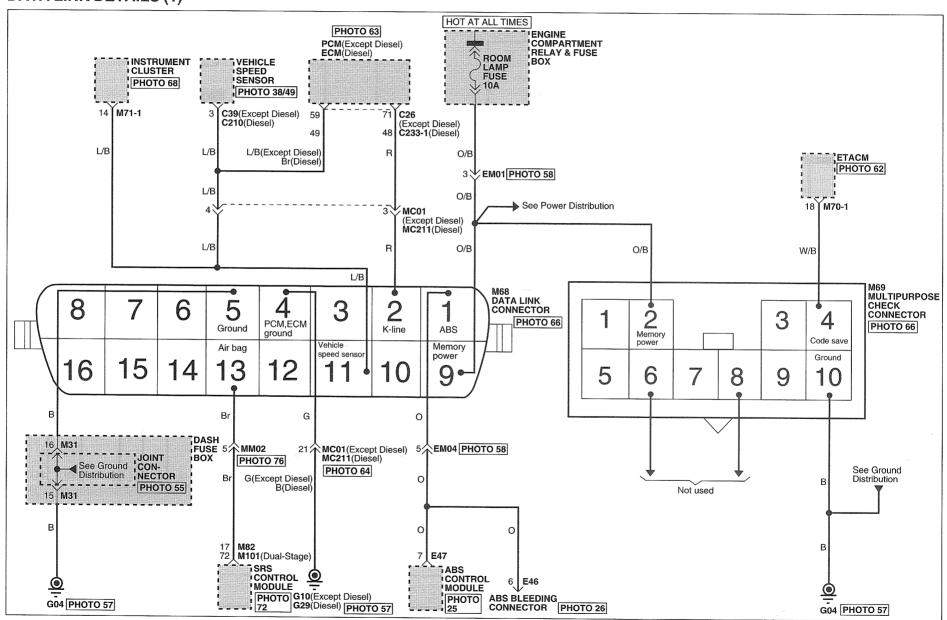
#### **GROUND DISTRIBUTION (3)**



#### **GROUND DISTRIBUTION (4)**



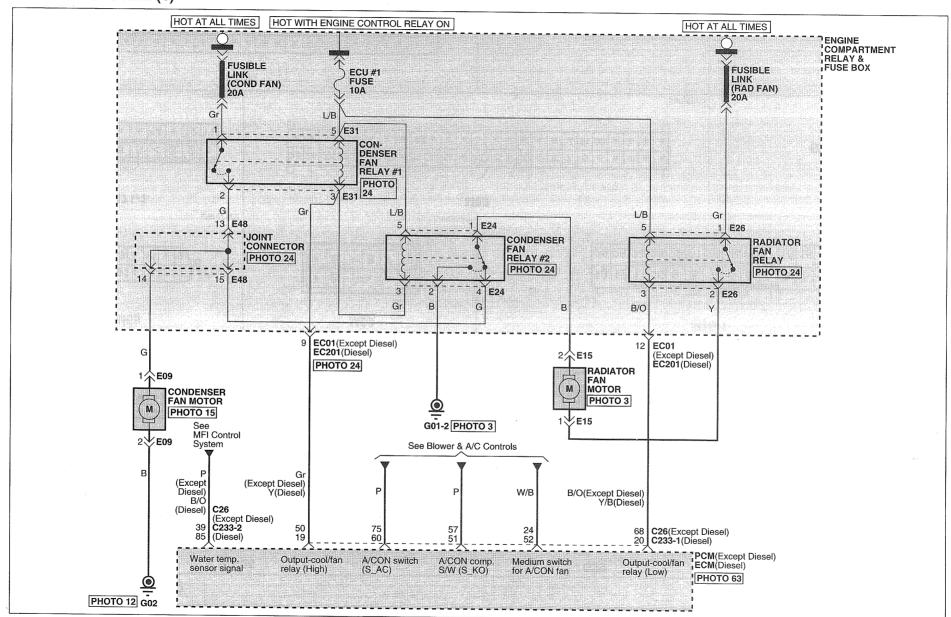
## **DATA LINK DETAILS (1)**



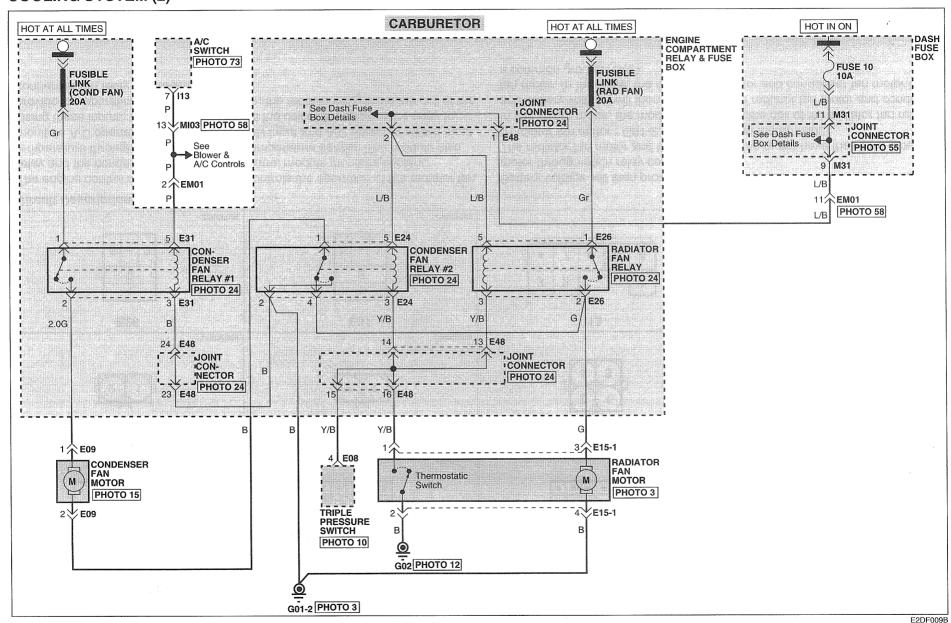
## DATA LINK DETAILS (2)

DATA LINK DETAILS (2)				
C	26	C39	C210	
1     2     *     80     79     78     *     *     75     *     *       3     *     61     60     59     *     57     *     55     57       *     42     *     *     39     *     37     36     38       4     5     24     *     21     20     19     18     17     1	k         *         71         70         69         68         *         *         *         63           k         53         52         51         50         49         48         47         46         45         44           5         34         33         32         31         30         29         28         27         26         25           6         15         14         13         12         11         *         *         8         7         6	3 2 1	3 2 1	
	CR81F002	CR03F029	CR03F029	
C23	33-1	E46	E47	
* * * * * * * * * * * * * * * * * * *	6 17 18 19 20 21 * 23 24 5 4 * * * * * * * * * * * * 54 * * * 58 59 60 61 62 * * * 76 77 78 79 80 81 2 1	1 2 3 4 5 6	9 8 7 6 5 4 * 2 1 16 * * * * * * * * * * 2 25 24 23 22 * 20 19 18 *	
	CR81F001	CR06M006	CR25F001	
M68	M69	M70-1		
* * * 5 4 * 2 1 * * * * * * * * * * * * * * * * *	* 2	13 12 11 10 9 8 7 6 5 4 3 2 1 26 25 24 23 22 21 20 19 18 17 16 15 14		
CR16F022	CR10M003		CR26F003	
M71-1  10 9 8 7 6 5 4 3 2 1  20 19 * * * * 14 * 12 11	25 24 23 22 21 20 19 * 17 16 15 *	82  13 12 * 10 9 8 7 6 5 * * * *  * * * * * * * * * 31 30 * * * *	BLANK	
CR20F021		CR50F002		
M101				
* * * * * * * * * * * * * * * * * * *	38 37 36 35 34 33 32 * * * * * * * 63 * * * * 58 57 56 55 54 53 52 51	BLANK	BLANK	
	CR75F006		ESDESSE	

## **COOLING SYSTEM (1)**



#### **COOLING SYSTEM (2)**



#### **COOLING SYSTEM (3)**

C	26	C233-1	
* 61 60 59 * 57 * 55 * 5	*       71       70       69       68       *       *       *       *       63         3       52       51       50       49       48       47       46       45       44         4       33       32       31       30       29       28       27       26       25         5       14       13       12       11       *       *       8       7       6	*       *       *       *       *       11       12       13       *       15       16       17       18       19       20       21       *       23       24       5       4         *	
	CR81F002		CR81F001
E09	E15	E15-1	E24
2 1		2 1 4 3	1 2 5 4 3
CR03F029	CR03F029	CR04F013	CR05F005
E26	E31	113	
1 2 5 * 3	1 2 5 * 3	3 2 1 1 * 7 6 5 4	BLANK
CR05F005	CR05F00	CR08F010	

#### **Circuit Description**

The engine control module (PCM,ECM) controls the operation of the radiator fan relay and the condenser fan relay. The control module monitors coolant. temperature through the engine coolant temperature sensor. The module also monitors A/C operation through the A/C ON input and A/C pressure switch input . Using these inputs, the module will ground the coil of the appropriate relay to provide fan operation. In high speed mode, the module will ground the coil of the condenser fan relay and radiator fan relay.

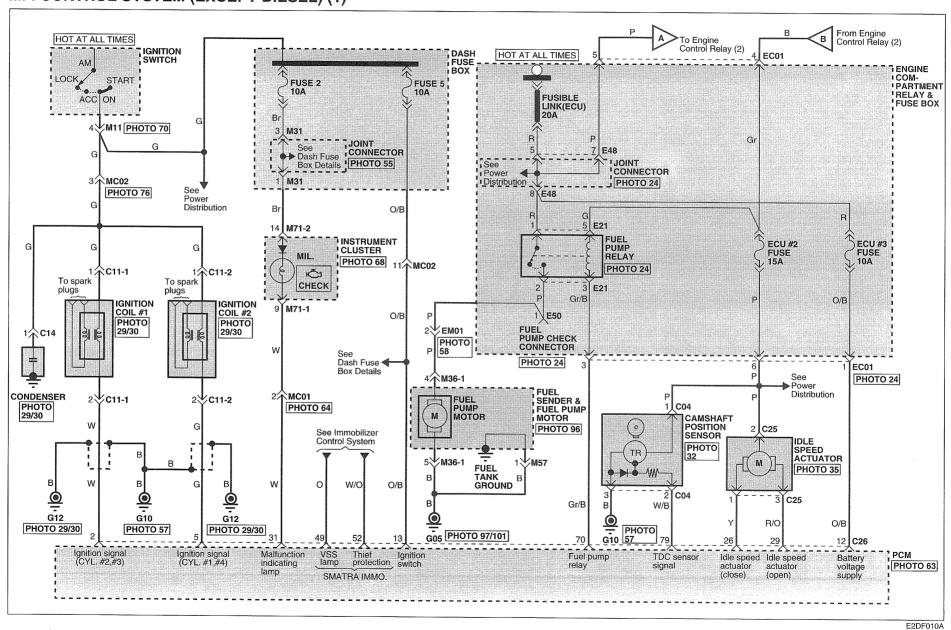
Battery voltage will then provided to the condenser fan motor and radiator fan motor through each relay contact.

The radiator fan motor and the condenser fan motor have their own ground (Radiator fan motor : G01-2, Condenser fan motor : G02).

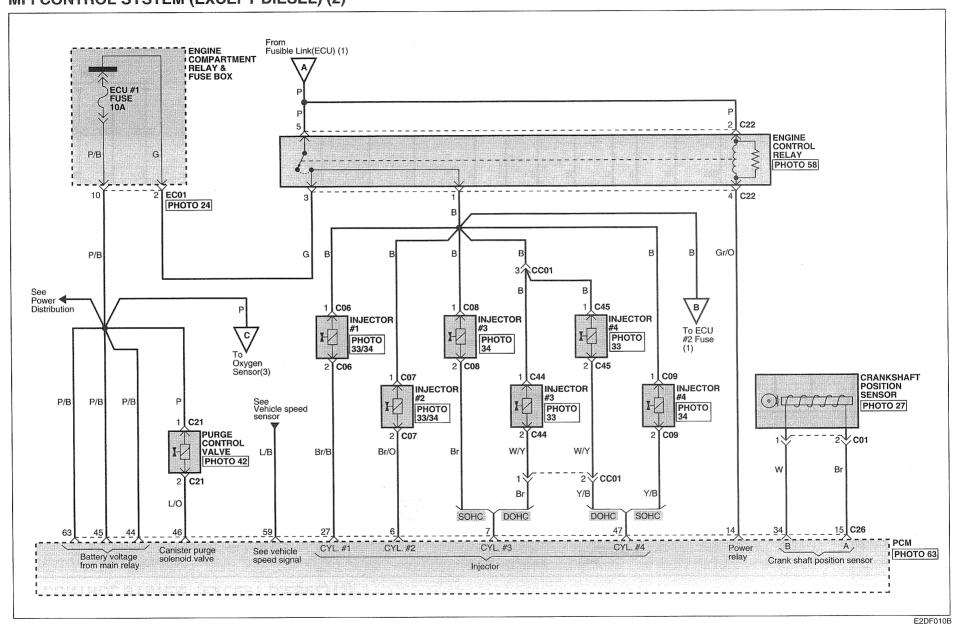
In low speed mode, the module will ground the coil of the radiator fan relay and battery voltage will then supplied to the radiator fan motor and condenser fan motor. In this case, the radiator fan motor and condenser fan motor have a common ground (G02).

SD25-4	COOLING SYSTEM
MEMO	

## MFI CONTROL SYSTEM (EXCEPT DIESEL) (1)

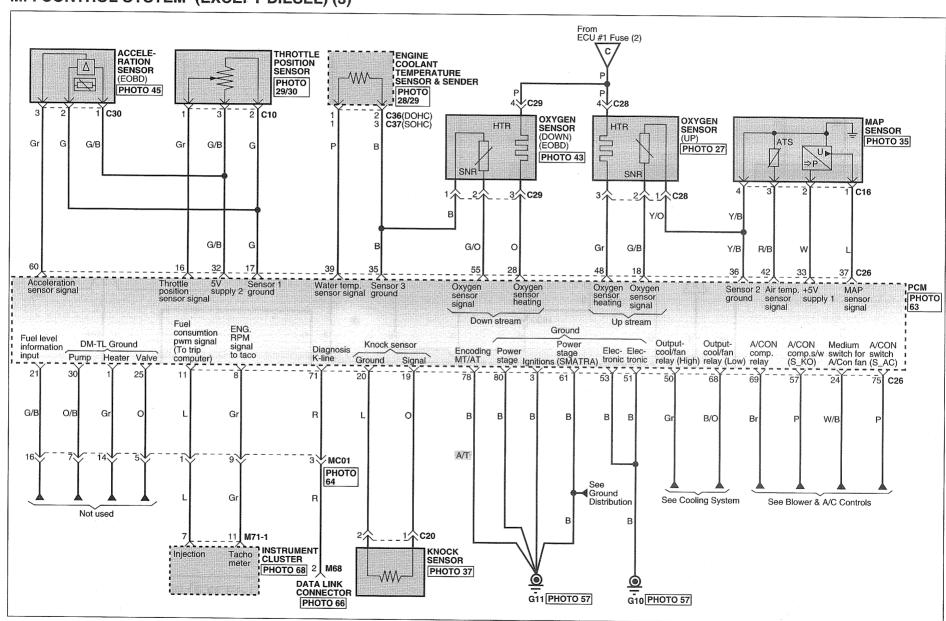


#### MFI CONTROL SYSTEM (EXCEPT DIESEL) (2)

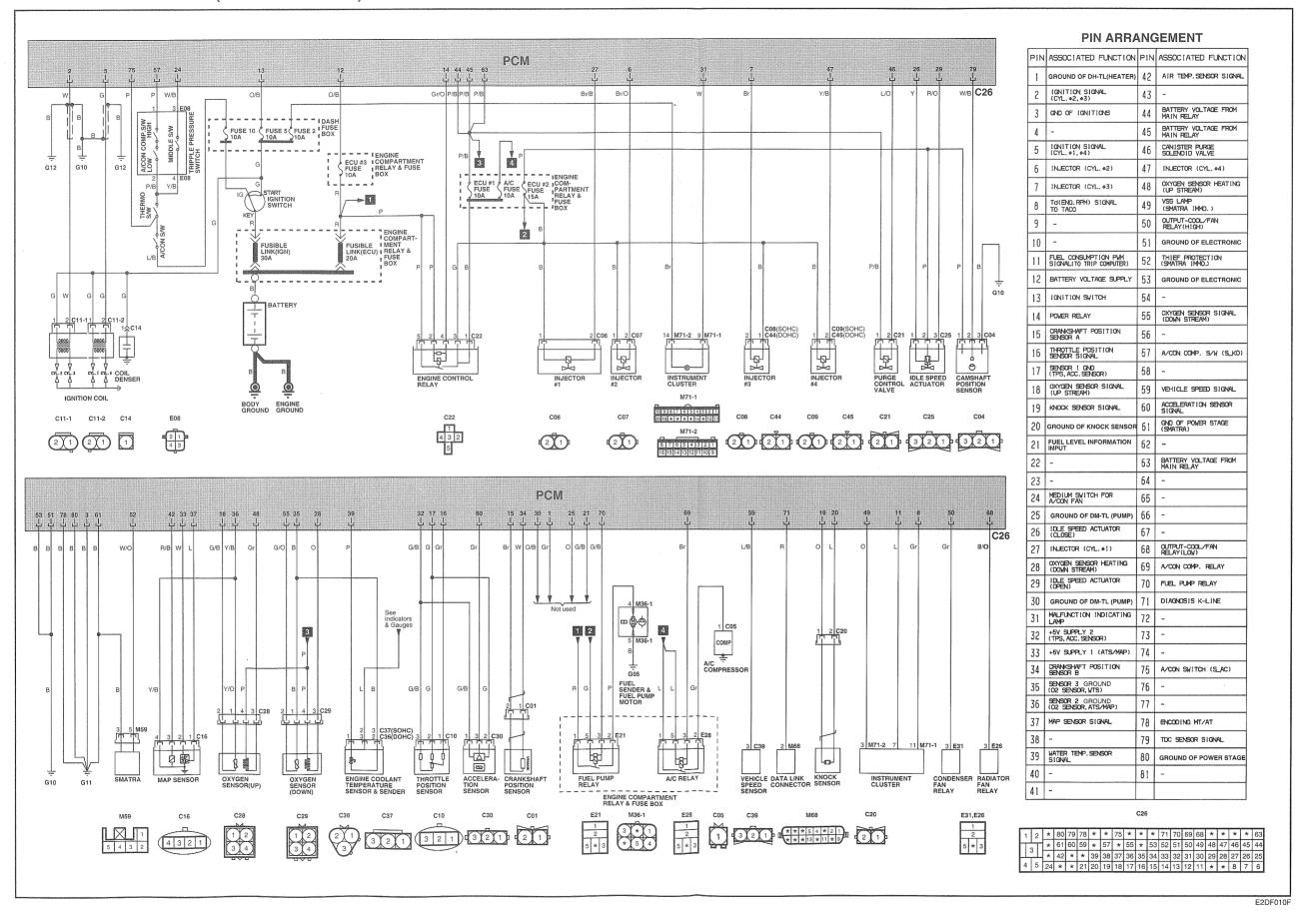


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## MFI CONTROL SYSTEM (EXCEPT DIESEL) (3)



## MFI CONTROL SYSTEM (EXCEPT DIESEL)



## MFI CONTROL SYSTEM (EXCEPT DIESEL) (4)

isin i condition of circum (m/com			
C01	C04	C05	C06
2 1	3 2 1		[(2)(1)]
CR02F041	CR03F029	CR01F020	CR02F073
C07	C08	C09	C10
	[(2)(1)]	[(2)(1)]	3 2 1
		·	
CR02F073	CR02F073	CR02F073	CR03F063
C11-1	C11-2	C14	C16
(2)(1)	(2)(1)	(1)	(4321)
CR02F081	CR02F043	CR01F029	CR04F053
C20	C21	C22	C25
		TT.	
		4 3 2	3 1 2 1 1
$\frac{2}{1}$			
		5	at e
CR02F041	CR02F04	CR05F007	CR03F029
	26	C28	C29
1 2 * 80 79 78 * * 75 *	* * 71 70 69 68 * * * 63		
* 61 60 59 * 57 * 55	* 53 52 51 50 49 48 47 46 45 44	$\begin{bmatrix} 1 & 2 \end{bmatrix}$	
	35 34 33 32 31 30 29 28 27 26 25	3 4	
4 5 24 * * 21 20 19 18 17 1	16 15 14 13 12 11 * * 8 7 6		
	CR81F002	□	□ ✓ □ CR04M008
	CHSTFOO		C1104101000

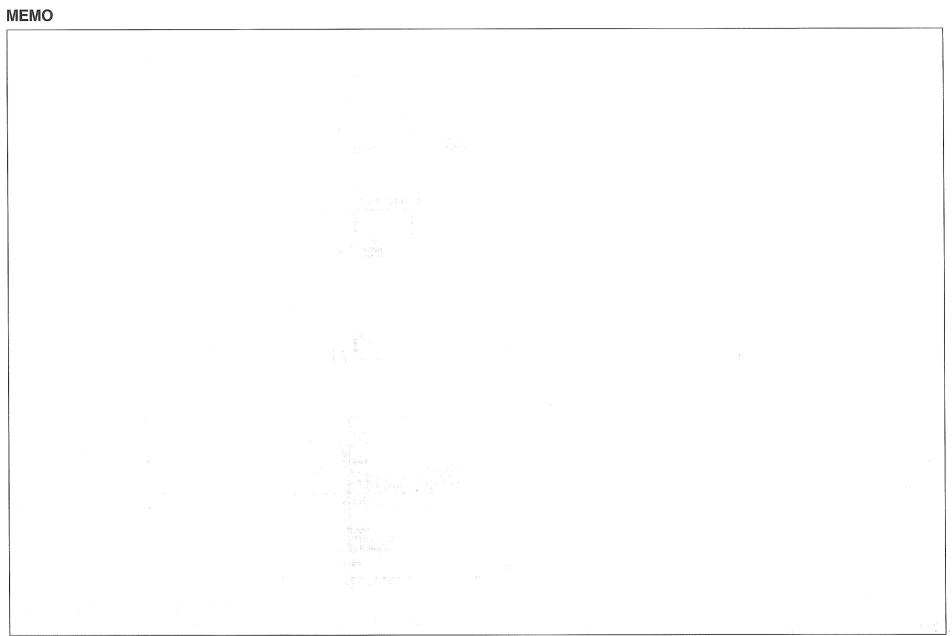
## MFI CONTROL SYSTEM (EXCEPT DIESEL) (5)

C30	C36	C37	C44
		<b>U3</b> 1	<b>V44</b>
3 2 1	2 1	3 2 1	
CR03F003	CR03F020	CR03F071	CR02F056
C45	E21	E28	E50
	1 2 5 * 3	1 2 5 * 3	Located in Engine Compartment Fuse & Relay Box
CR02F066	CR05F005	CR05F005	
M11	M36-1	M52	M57
3 2 1 6 5 4	3 * 1 * 5 4		1
CR06F037	. CR06F011	CR04F070	CR01F006
M68	M71-1	M71-2	
* * * 5 4 * 2 1 * * * * * * * * * * * * * * * * *	10 9 8 7 6 5 4 3 2 1 20 19 * * * * 14 * 12 11	8 7 6 5 4 3 2 1	BLANK
CR16F022	CR20F021	CR16F017	
Circuit Description			

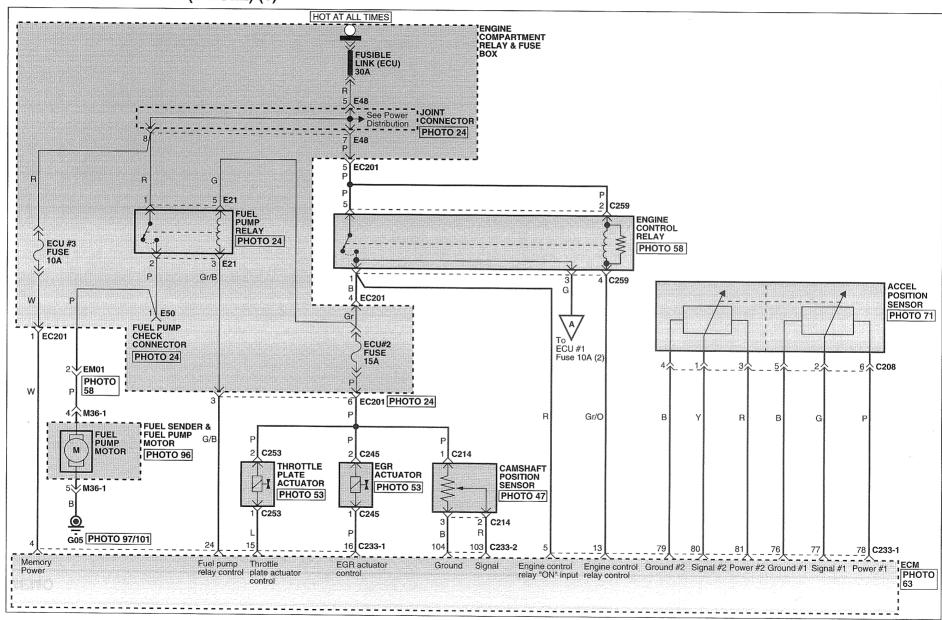
#### Circuit Description

The Multiport Fuel Injection (MFI) control system is an electronic fuel metering system with fuel injectors near the inlet ports of each cylinder. The amount of fuel injection is determined by the PCM. The emission control system includes oxygen sensors and catalystic converters (unleaded fuel only).

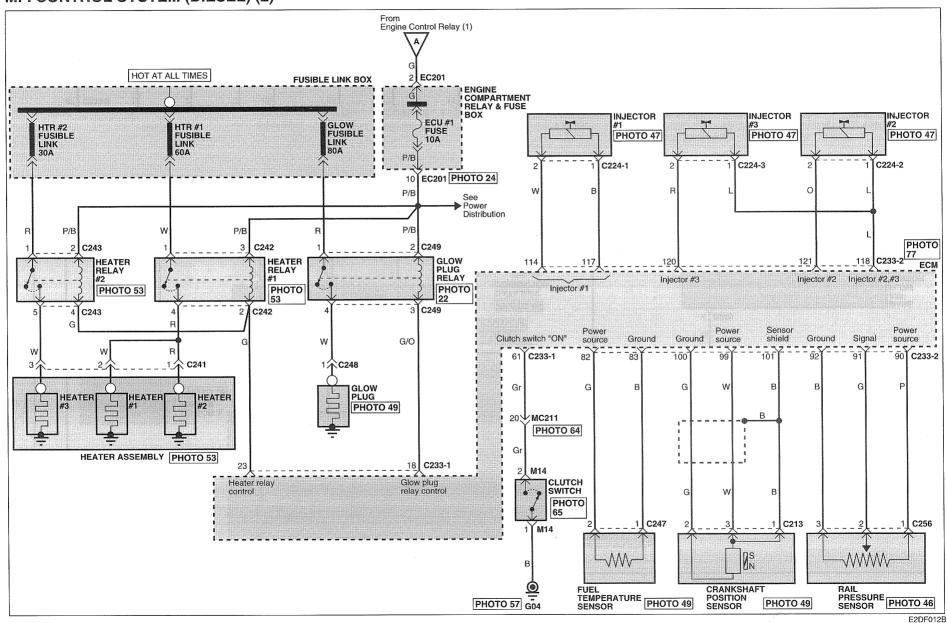
The MFI's three major functions are air-fuel mixture, idle speed control and ignition timing control. Refer to the shop manual, section FL for details.



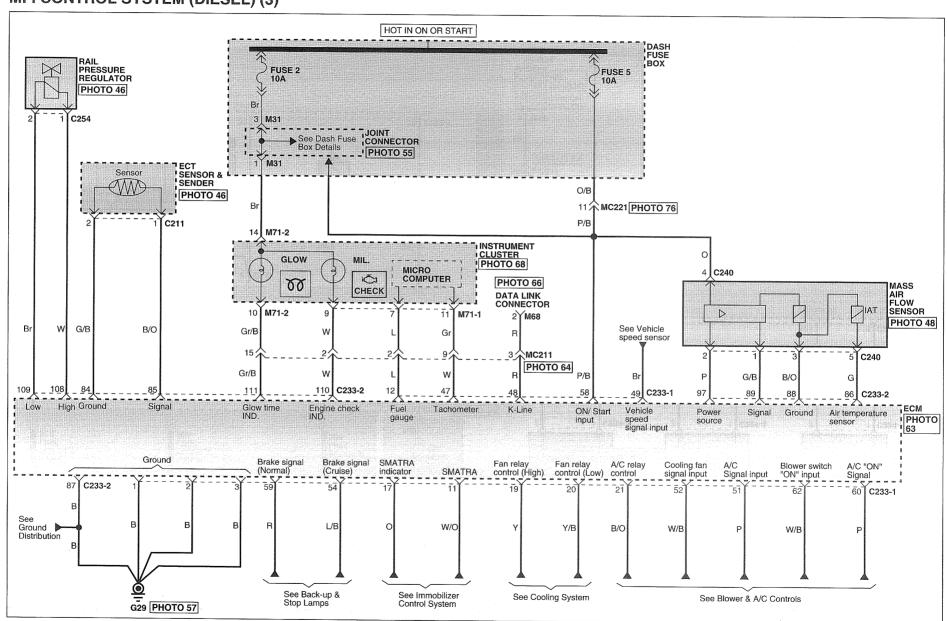
## MFI CONTROL SYSTEM (DIESEL) (1)



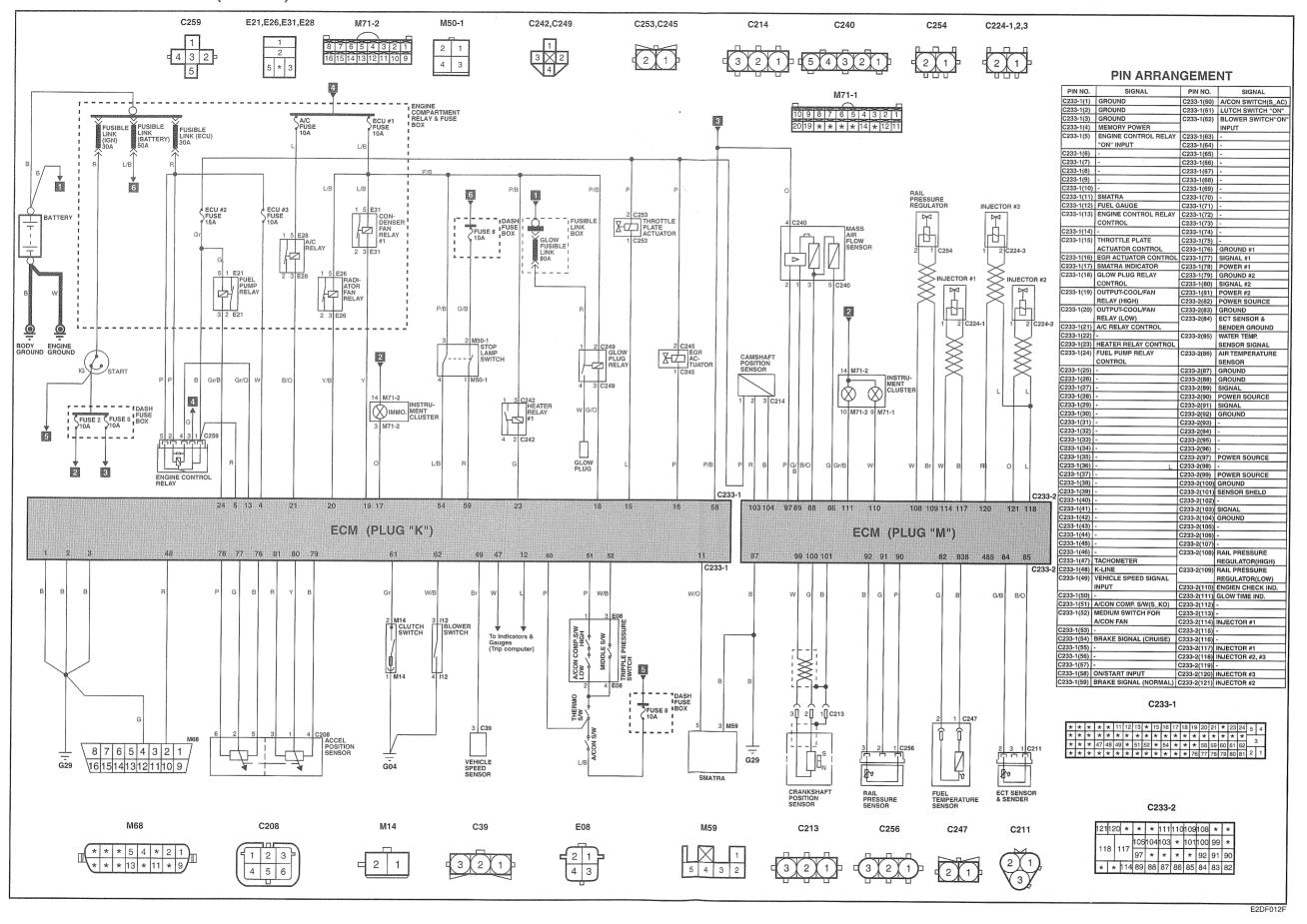
## MFI CONTROL SYSTEM (DIESEL) (2)



## MFI CONTROL SYSTEM (DIESEL) (3)



## MFI CONTROL SYSTEM (DIESEL)



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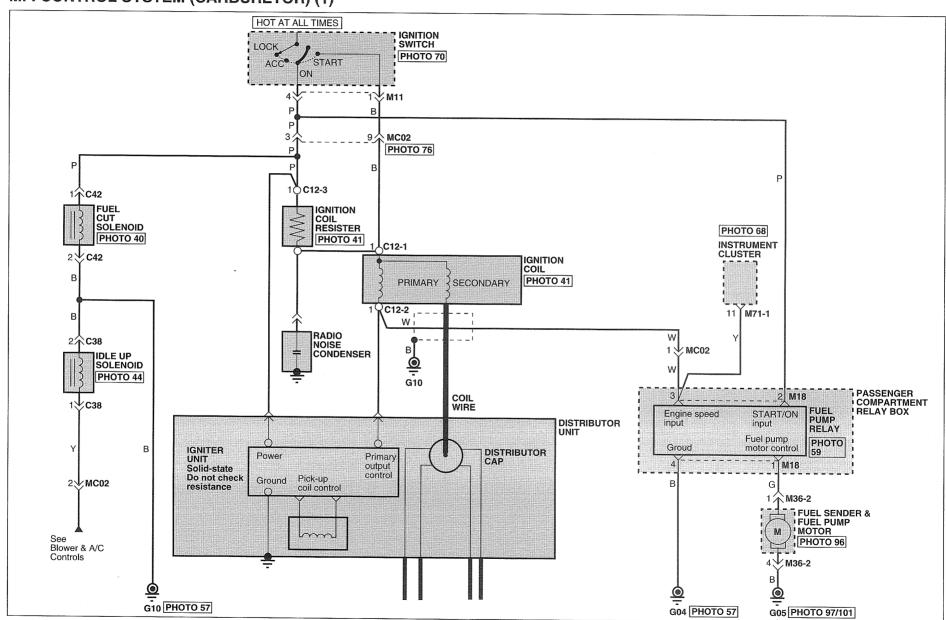
#### MFI CONTROL SYSTEM (DIESEL) (4) C213 C214 C208 C211 5 CR03F020 CR03F082 CR03F082 CR06M011 C224-3 C224-1 C224-2 BLANK CR02F121 CR02F121 CR02F121 C233-2 C233-1 \* 1111110109108 \* 121120 118 | 117 114 89 88 87 86 85 84 83 82 CR40f007 CR81F001 C242 C243 C241 C240 CR05F022 CR03F096 CR04F067 CR05F032 C248 C249 C245 C247 CR02F041 CR01F039 CR04F067 CR02F041

# MFI CONTROL SYSTEM (DIESEL) (5)

CR02F041	CR02F121	CR03F084	1
			100
E21	E50	M14	100
			· · · · · · · · · · · · · · · · · · ·
1 2 5 * 3	Located in Engine Compartment Fuse & Relay Box	CR02F046	3 * 1 * 5 4
M68	M71-1	M71-2	CR06F011
* * * 5 4 * 2 1 * * * 13 * 11 * 9	10 9 8 7 6 5 4 3 2 1 20 19 * * * * 14 * 12 11	8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	BLANK
OTTO OZZ	CH20F021	CR16F017	

SD31-12	MFI CONTROL SYSTEM (DIESEL)
MEMO	

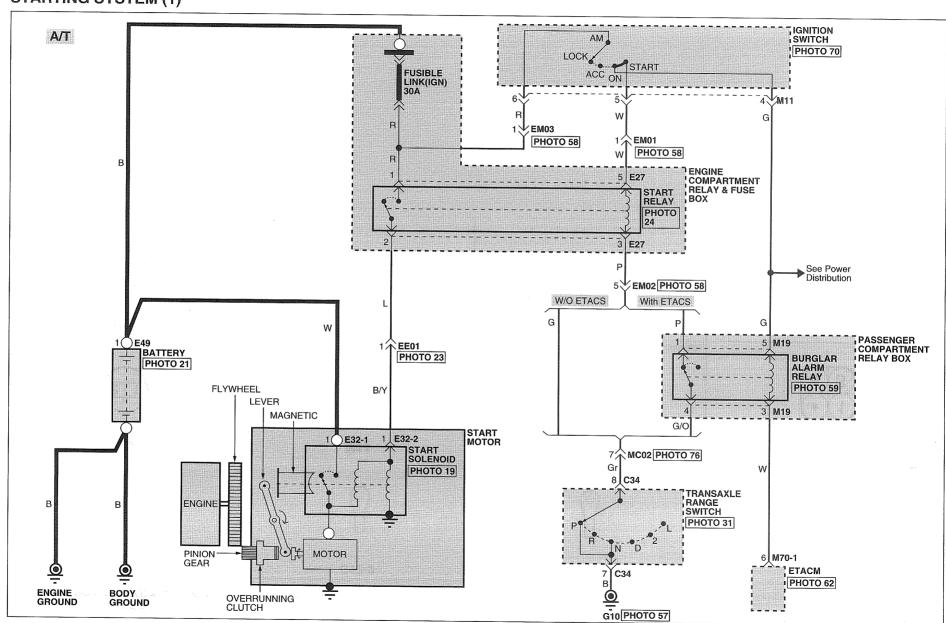
# MFI CONTROL SYSTEM (CARBURETOR) (1)



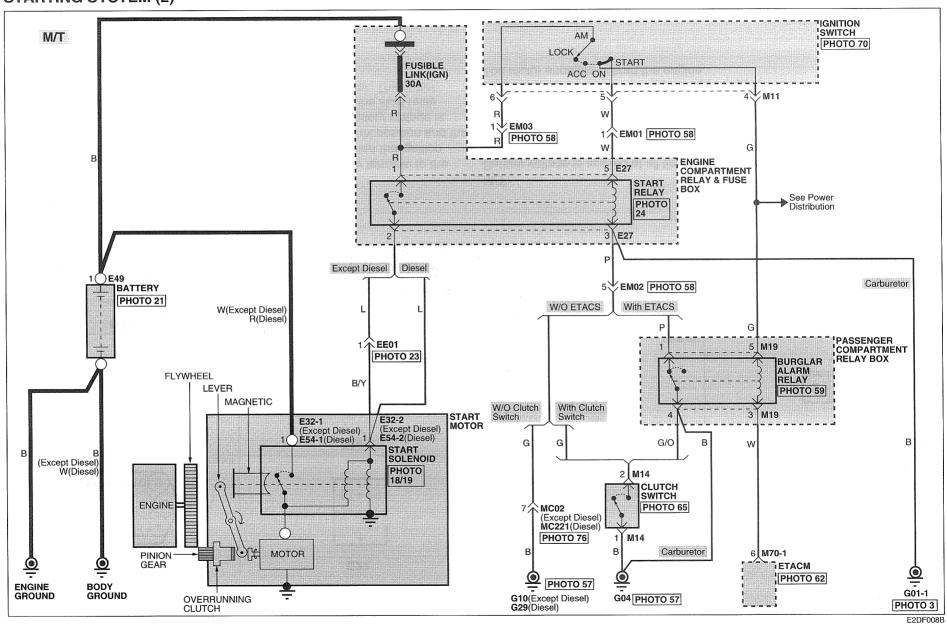
MFI CONTROL SYSTEM (CARBURETOR) (2)

C12-1	C12-2	C12-3		C38	
				1 2	
CR01F002	CR01F002	5110	CR01F002	WAOC O	CR02F
C42	M11	M18		M36-2	
2 1	3 2 1 6 5 4	2 1 4 3		* 1 4 3	
CR02F024	CR06F037		CR04F001		CR04F0
M17-1					
10 9 8 7 6 5 4 3 2 1 20 19 * * * * 14 * 12 11	BLANK	BLANK		BLANK	
:					
					,

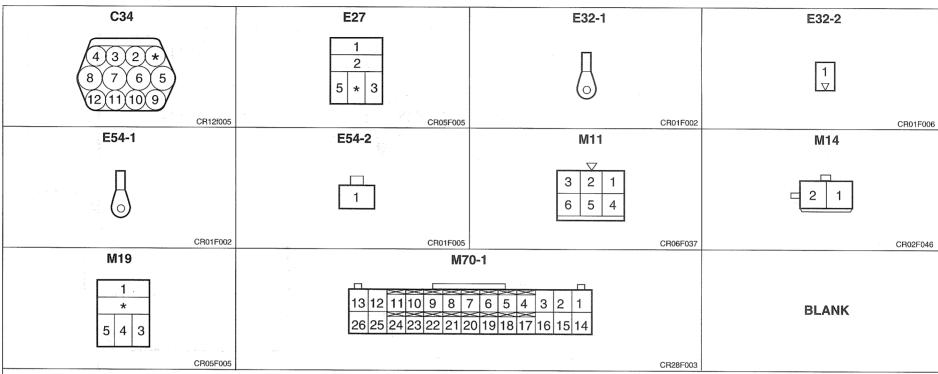
## **STARTING SYSTEM (1)**



### **STARTING SYSTEM (2)**



### STARTING SYSTEM (3)



#### **Circuit Description**

#### A/T

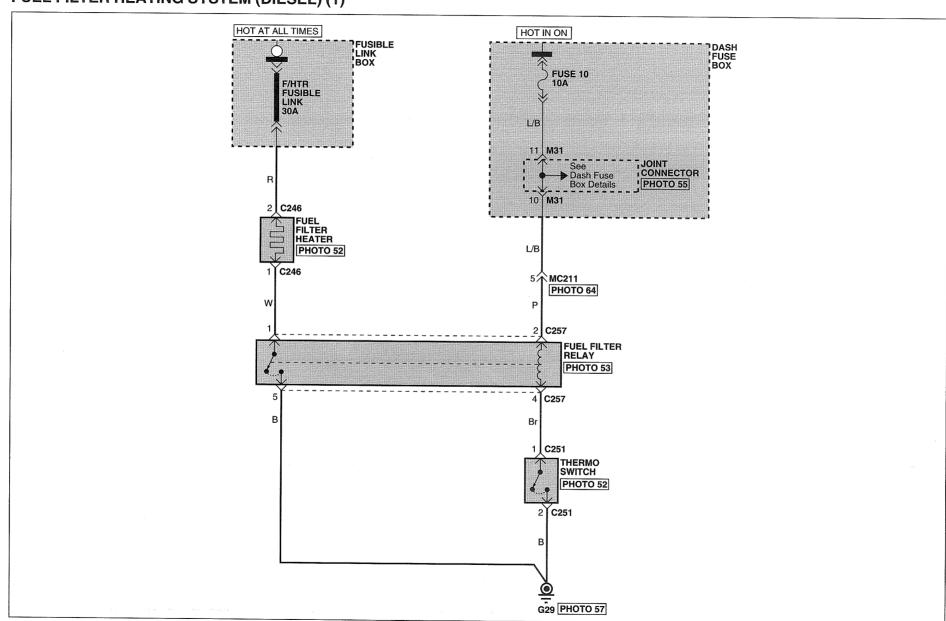
Battery voltage is applied at all times from the positive battery terminal to the ignition switch and the normally open start relay contacts. When the ignition switch is turned to START, transaxle range switch is in the P/N position and the burglar alarm relay contact closed (controlled by ETACM), battery voltage is applied to the start relay coils. The start relay coils energize, the start relay contacts close, and battery voltage is applied to the start motor. The motor engages to start the engine.

#### M/T

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, the starter clutch pedal position switch is closed, and the burglar alarm relay contact closed (controlled by ETACM), battery voltage is applied to the start relay coils. The start relay coils energize, the start relay contacts close, and battery voltage is applied to the start motor. The motor engages to start the engine.

SD36-4		SIARINGSYSIE
MEMO		
	-	

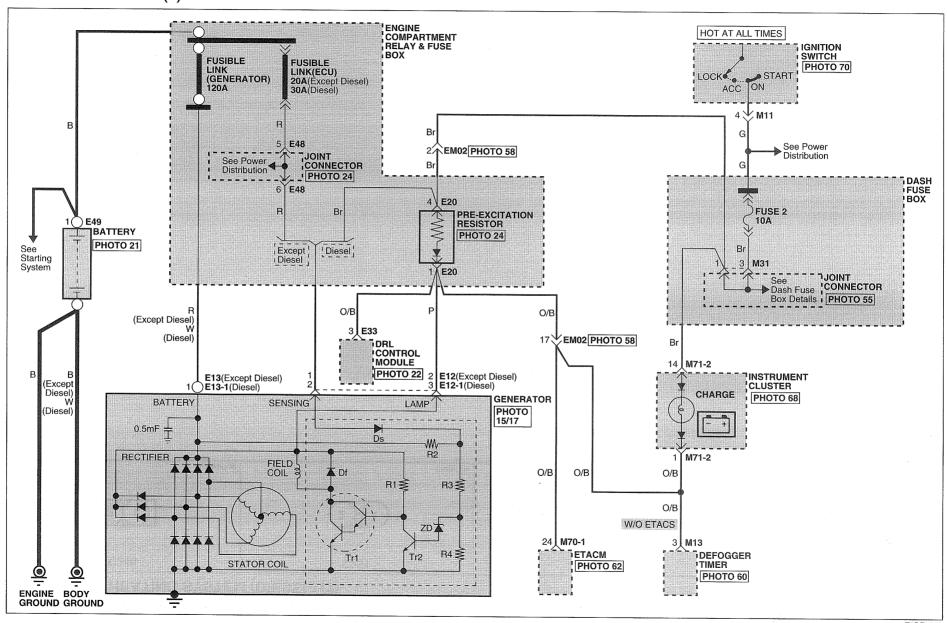
# FUEL FILTER HEATING SYSTEM (DIESEL) (1)



## **FUEL FILTER HEATING SYSTEM (DIESEL) (2)**

C246	C251	C257	
2 1	2 1	1 n 4 * 2 5	BLANK
CR02F138	CR02F139	CR05F02	2
	(1985년 - 1985년 - 1985년 - 1985년 - 1985		

### **CHARGING SYSTEM (1)**



### **CHARGING SYSTEM (2)**

E12	E12-1	E13	E13-1
2 1	3 2 *		
CR02F002	CR03F102	CR01F002	CR01F002
E20	E33	M11	M11
1 2 * 4 *	6 5 4 3 2 1 12 11 10 9 8 7		3 2 1 6 5 4
CR05F005	CR12F012		CR06F037
	7 6 5 4 3 2 1 20 19 18 17 16 15 14	M71-2  8 7 6 5 4 3 2 1  16 15 14 13 12 11 10 9	BLANK
	CR26F003	CR16F017	

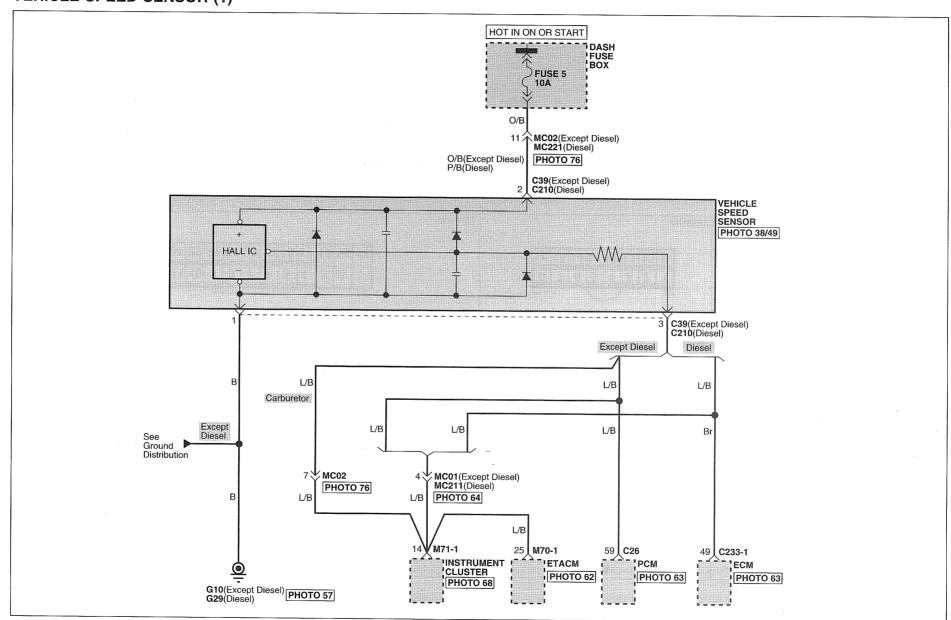
#### **Circuit Description**

The generator generates AC voltage in its windings by a belt driven by the engine. The rectifier converts this AC voltage to DC voltage. The voltage regulator, a component which is 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. Fuse 2 supplies battery voltage to the charge warning indicator.

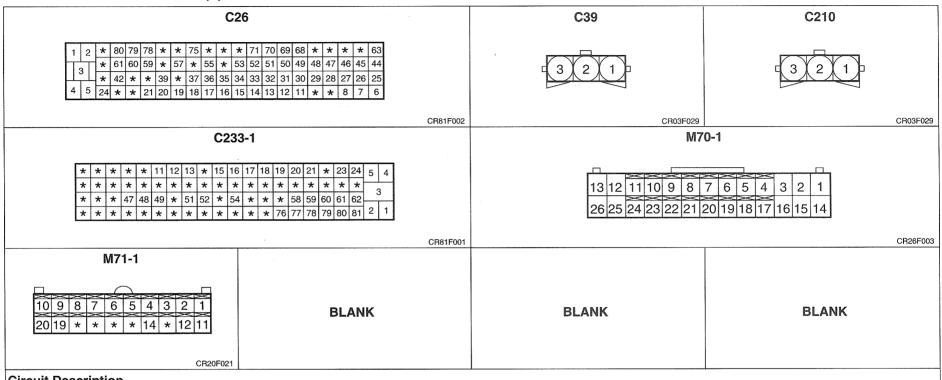
With the engine not running and the ignition switch in ON, terminal L of the regulator is grounded internally and the indicator lights up.

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 lights.

# **VEHICLE SPEED SENSOR (1)**



### **VEHICLE SPEED SENSOR (2)**

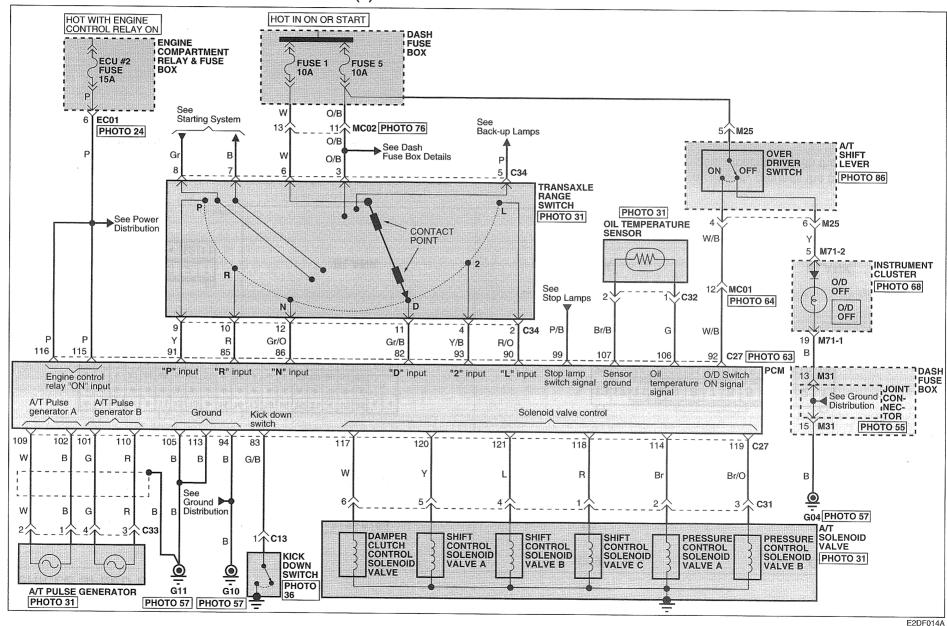


### **Circuit Description**

The vehicle speed sensor, located on the speedometer driven gear in the transaxle, generates pulse signals that indicate the vehicle's speed and provides signals to the control modules to calcaulate the vehicle speed.

The vehicle speed sensor (VSS) intermittently grounds the circuits. The number of pulses per minute increase/decrease with the speed of the car.

### **AUTOMATIC TRANSAXLE CONTROL SYSTEM (1)**



## **AUTOMATIC TRANSAXLE CONTROL SYSTEM (2)**

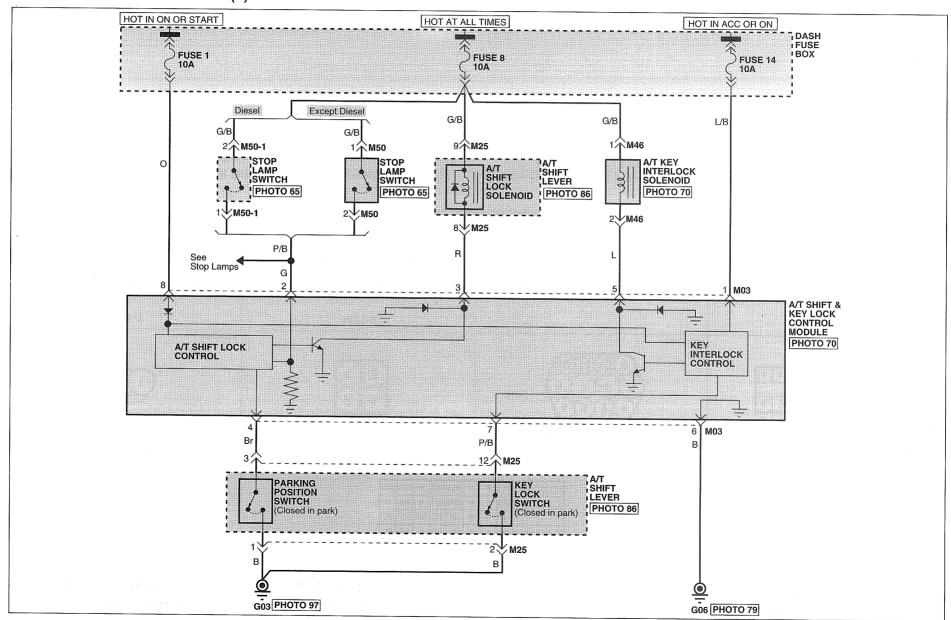
C13	C2	7	C31
	82 83 * 85 86 * 90 91 92 93 94 * 106 107 * 109 110 *	* *   117   118	3 2 1 6 5 4
CR01F020		CR40F005	CR06F033
C32	C33	C34	M25
2 1	2 1	4 3 2 * 8 7 6 5 12 11 10 9	6 5 4 3 2 1 * * * 12 11 10 9 8 *
CR02F006		CR12F005	CR15F001
M71-1	M71-2		
10 9 8 7 6 5 4 3 2 1 20 19 * * * * 14 * 12 11	8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	BLANK	BLANK
CR20F021	CR16F017		

### **Circuit Description**

The PCM provides precise gear shift timing and torque converter lock up by controlling the operation of the automatic transaxle solenoid valves (the Damper clutch control solenoid valve, the shift control solenoid valve A, B and C, and the pressure control solenoid valve A and B).

The PCM operates these solenoid valves based on input signals from various sensors (for instance, pulse generators and oil temperature sensor). The PCM has a built-in self diagnostic feature.

## SHIFT & KEY LOCK SYSTEM (1)



### SHIFT & KEY LOCK SYSTEM (2)

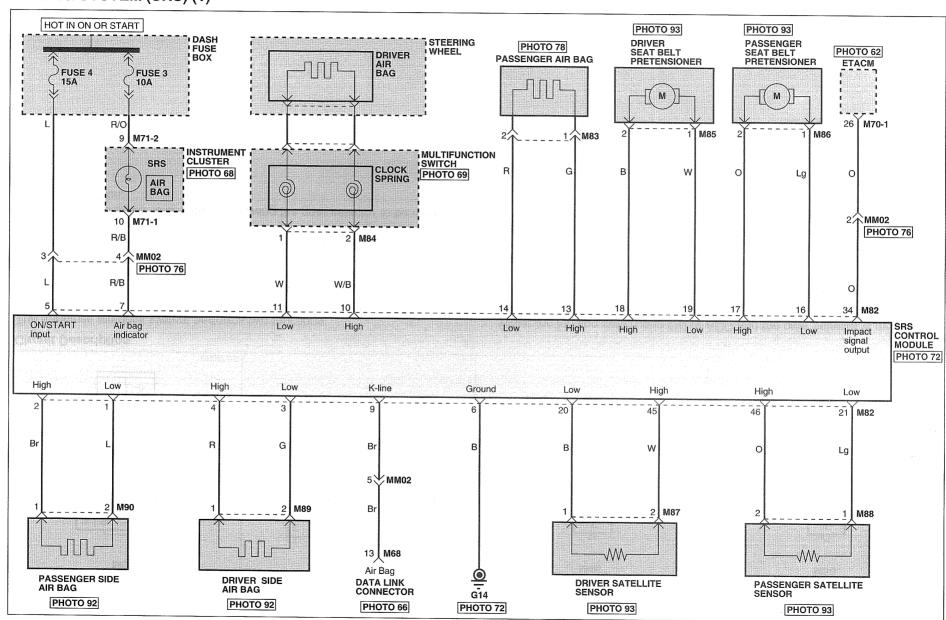
M03	M25	M46	M50
3 2 1 8 7 6 5 4	6 5 4 3 2 1	1 2	1 2
CR08F005	CR15F001	CR02F007	CR02F012
M50-1  2 1  4 3	BLANK	BLANK	BLANK
CR04F016			

#### **Circuit Description**

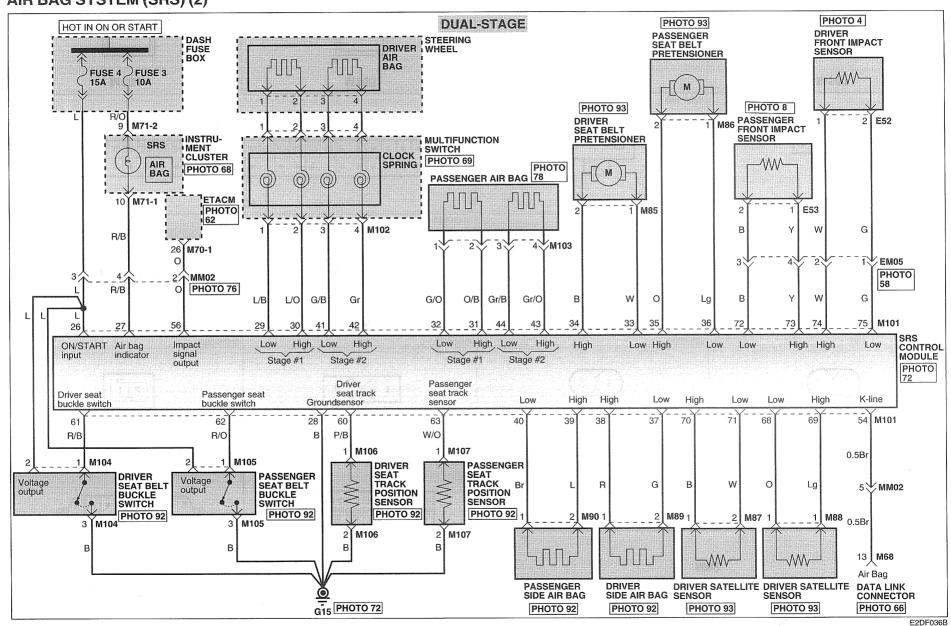
The transaxle interlock system performs two functions; it allows the ignition key to be removed only with the transaxle in PARK, and allows the transaxle to be released from PARK with only the brake pedal depressed. The transaxle and key lock control module receives voltage from fuse 14 with the ignition switch in ACC or ON, and from fuse 1 in ON or START. With the ignition switch in ON, the park position switch closed and the brake pedal switch depressed, the transaxle and key lock control module grounds the shift lock solenoid. The solenoid is energized, allowing the gear selector to be moved out of the PARK position.

When the ignition switch is in ON or ACC and the gear selector is moved to PARK, the key lock switch is closed and the transaxle and key lock control module de-energizes the key lock solenoid. This allows the ignition key to be removed. In case the shift lock solenoid does not energize and release the gear selector when the brake pedal is depressed, a button beneath the console can be accessed by removing the plug at the top of the console and inserting a thin instrument to manually release the gear selector from PARK.

# AIR BAG SYSTEM (SRS) (1)



#### AIR BAG SYSTEM (SRS) (2)



# AIR BAG SYSTEM (SRS) (3)

M68 M71-2 M82	AIII DAG 3 13 1 E W (3N3) (3)			
CRUSTICAL   STATE	M68	M71-2	M	82
M83				* * * * * * * 45 46 * * * *
M83	CR16F022	CR16F017		CDE0E007
Total   Tota	M83		M85	
M88 M89 M90  CR02F13 CR02F13 CR02F058 CR02F058  M101  M102 M103  X X X X X X X X X X X X X X X X X X X	1 2		2 1	2 1
M87 M88 M89 M90  CRO2F113 CRO2F058 CRO2F058  M101  M102  M102  M103  * * * * * * * * * * * * * * * * * * *		CR02F048	CR02F027	CR02F027
CROSFOSS  M101  CROSF113  CROSF13  CROSFOSS  M102  M103  ** * * * * * * * * * * * * * * * * *	M87			
M101	2 1			21
X				
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 * * * * * * * * * * * * * * * * *	IAI I		W1102	M103
M104 M105 M106 M107  ———————————————————————————————————	26 27 28 29 30 31 32 33 34 35 36 37 38	39 40 41 42 43 44 * * * * * * *	4 3 2 1	4 3 2 1
CR03F069 CR03F069 CR02F031 CR02F031				CR04F008
CR03F069 CR03F069 CR02F031 CR02F031	IVI7 04	M105	M106	M107
CR03F069 CR03F069 CR02F031 CR02F031	3 2 1	3 2 1	2 1	2 1
	CR03F069	CR03F069	CR02F031	

### AIR BAG SYSTEM (SRS) (4)

### **Circuit Description**

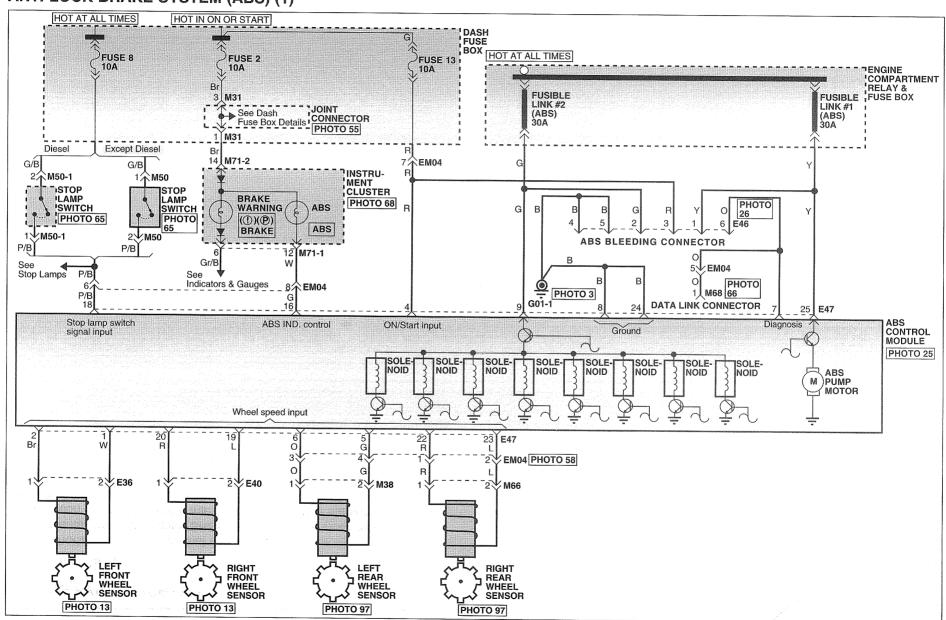
Only authorized service personnel should do work on or around the supplemental restraint system (SRS) components. Service personnel should read section 56a of the service manual carefully before starting work on the supplemental restraint system (SRS).

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 the air bags when the car receives a frontal impact exceeding a certain set limit.

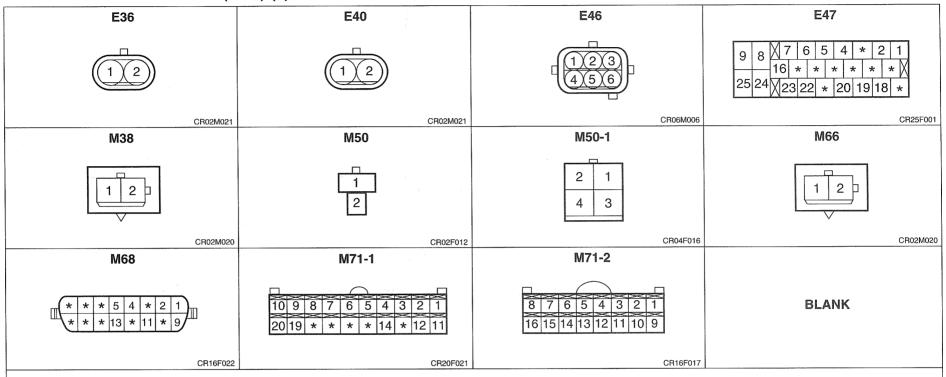
With the ignition switch in ON or START, battery voltage is applied to the SRS control module from fuse 4 and to the SRS indicator in the instrument cluster from fuse 3.

When the ignition switch is turned to the ON position, the SRS indicator in the instrument cluster will flash six times. If the SRS indicator does not flash six times, or stays ON, or comes on while driving, the SRS is not working properly.

### **ANTI-LOCK BRAKE SYSTEM (ABS) (1)**



### **ANTI-LOCK BRAKE SYSTEM (ABS) (2)**



#### **Circuit Description**

#### ABS

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:

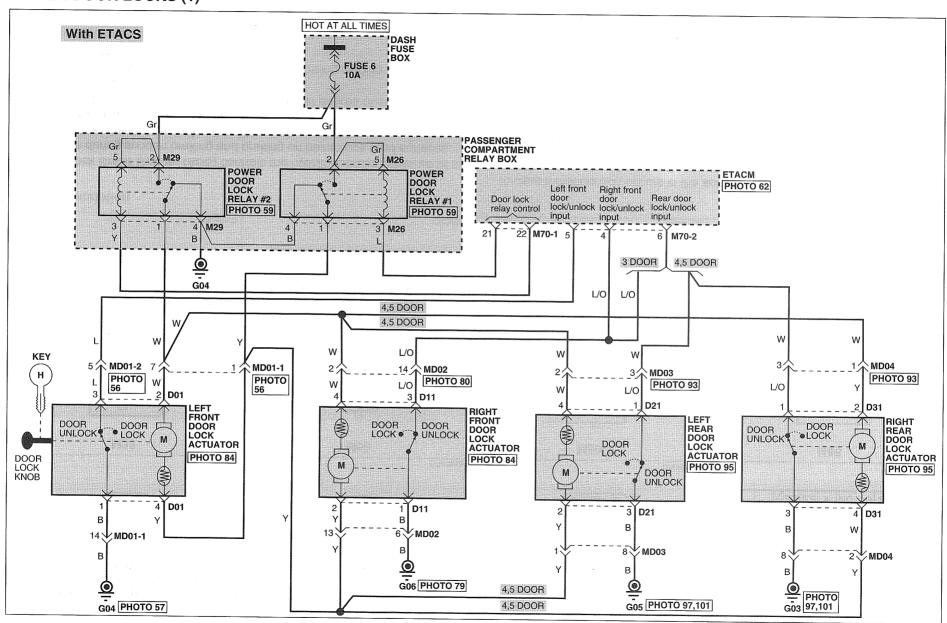
- (1) Enables steering around obstacles with a greater degree of certainty during panic braking.
- (2) Enables stopping during panic braking while allowing stability and control, even on curves.

In case a malfunction occurs in the anti-lock brake system, the system will operate as a normal brake (fail safe mode).

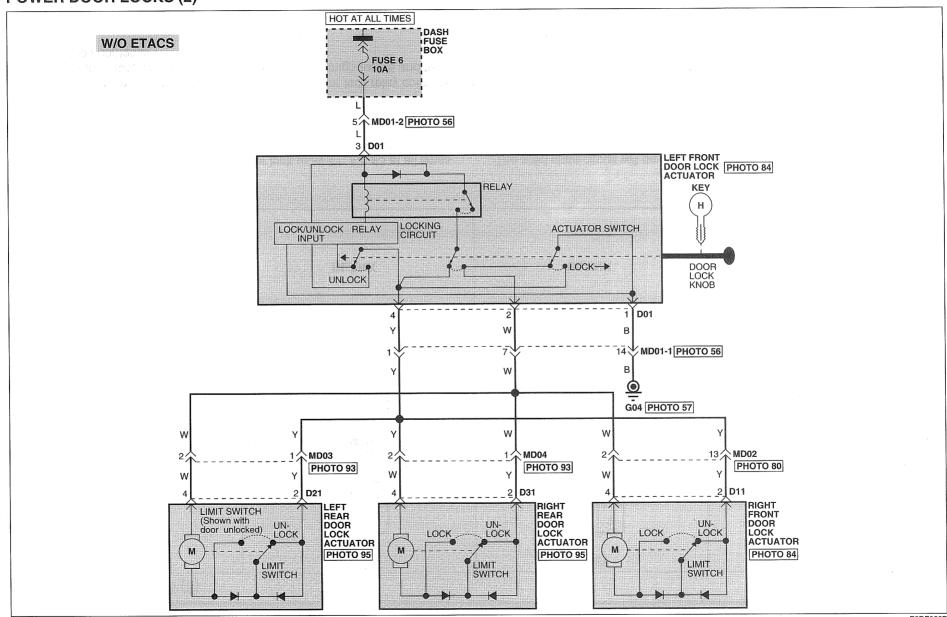
A diagnosis function and fail-safe system have been included for serviceability.

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### **POWER DOOR LOCKS (1)**



### **POWER DOOR LOCKS (2)**



## **POWER DOOR LOCKS (3)**

D01	D11	D21	D31
2 1 4 3	2 1 4 3	2 1 4 3	2 1 4 3
CR04F001	CR04F001	CR04F001	CR04F001
M26	M29		70-1
1 2 5 4 3	1 2 5 4 3	13 12 11 10 9 8 7 26 25 24 23 22 21 20	6     5     4     3     2     1       0     19     18     17     16     15     14
CR02F046	CR02F046		CR25F003
M70-2  8 7 6 5 4 3 2 1  16 15 14 13 12 11 10 9	BLANK	BLANK	BLANK
CR16F008			
Circuit Decemention			

#### Circuit Description

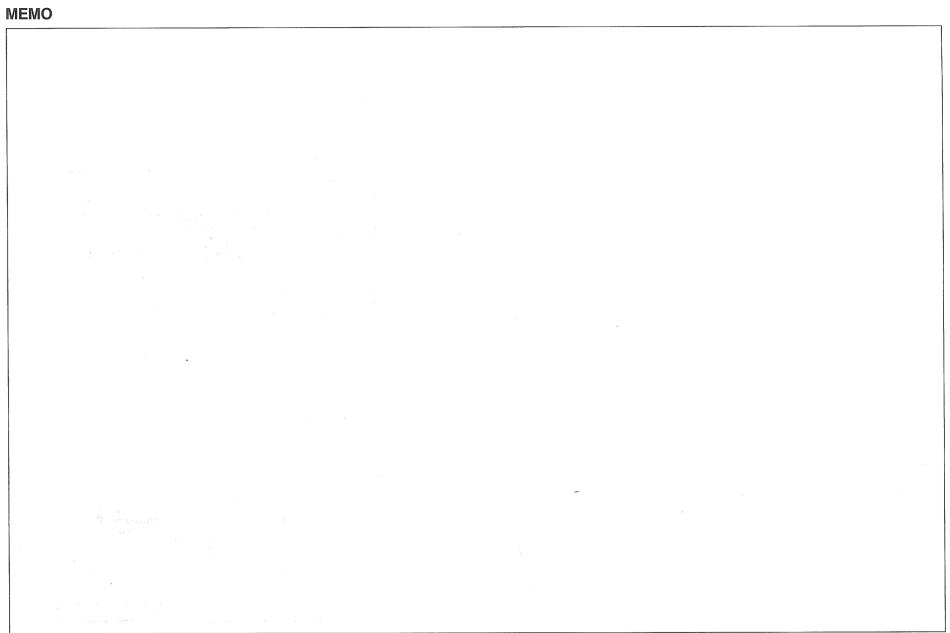
#### With ETACS

Battery voltage is supplied to the power door lock relay #1, #2, #3 at all times from fuse 6. There is a metal rod that links the left door lock switch and the left door locking actuator. When the left door lock switch is pushed to lock, the metal rod then pushes the actuator switches inside the door lock actuator to the lock position.

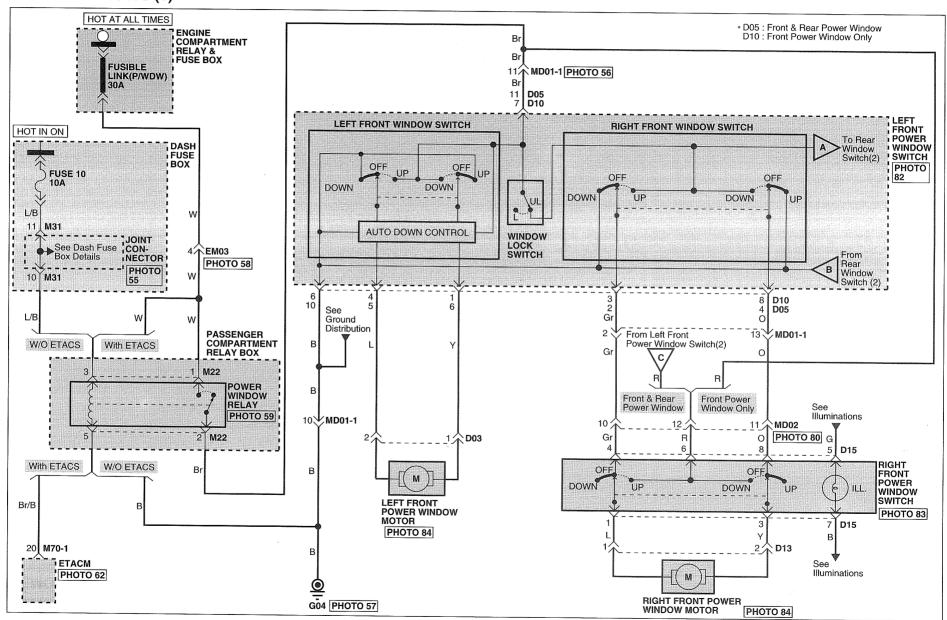
The ETACM receives the lock input, controls the two door lock relay coils and then battery voltage is supplied to the door lock actuators through fuse 6 and the two door lock relay contacts.

The solid state circuit will de-energize the relay coil when the limit switches in the door lock a actuators move to the unlock position.

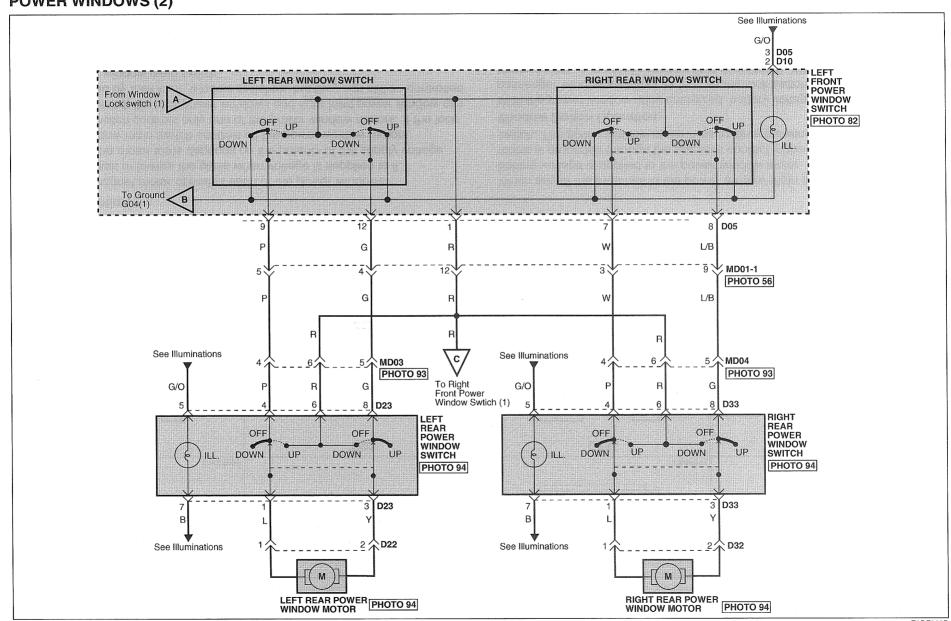
The door locks work similarly when the left door lock switch is pushed to unlock, except that the electrical current goes through each motor in the opposite direction.



# **POWER WINDOWS (1)**



### **POWER WINDOWS (2)**



## **POWER WINDOWS (3)**

D03	D05	D10	D13
2 1	6 5 4 3 2 1	3 2 1 1 8 7 6 * 4	2 1
CR02F001	CR14F019	CR08F010	CR02F001
D15	D22	D23	D32
3 * 1 8 7 6 5 4	2 1	3     *     1       8     7     6     5     4	2 1
CR08F010	CR02F001	CR08F010	CR02F001
D33	M22	M7	
3 2 1 8 7 6 5 4	1 2 5 * 3	13 12 11 10 9 8 7 26 25 24 23 22 21 2	7 6 5 4 3 2 1 0 19 18 17 16 15 14
CR08F010			CR26F003

#### 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 can not 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 ETACM anytime the ignition switch is ON. Battery voltage is then supplied to the power window main switch through the closed relay contacts.

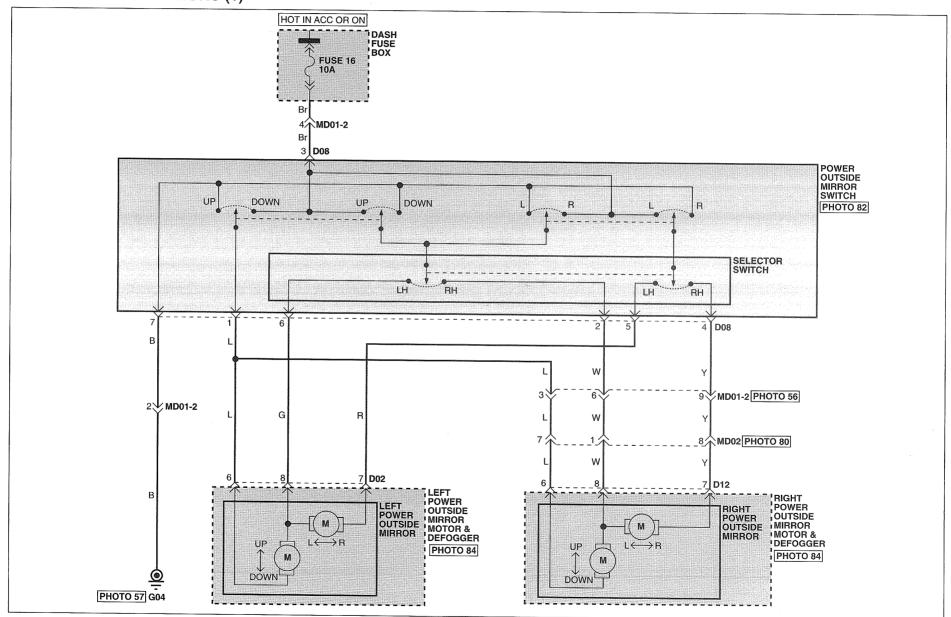
When any of the switches in the power window main switch are operated, battery voltage is applied to the power window motor. The power window motor is grounded through the opposite contact in the power window main switch. The power window motor runs to dirve the window.

### Window Switch Operation

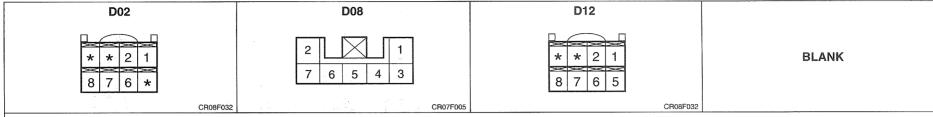
With the power window relay energized, battery voltage is supplied to the passenger window switches as long as the lock switch in the power outside mirror switch is in unlock position (not depressed). When the passenger windows switch is operated, battery voltage is applied to one terminal of the power 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.

SD82-4	POWER WINDOWS
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# **POWER OUTSIDE MIRRORS (1)**



### **POWER OUTSIDE MIRRORS (2)**



#### **Circuit Description**

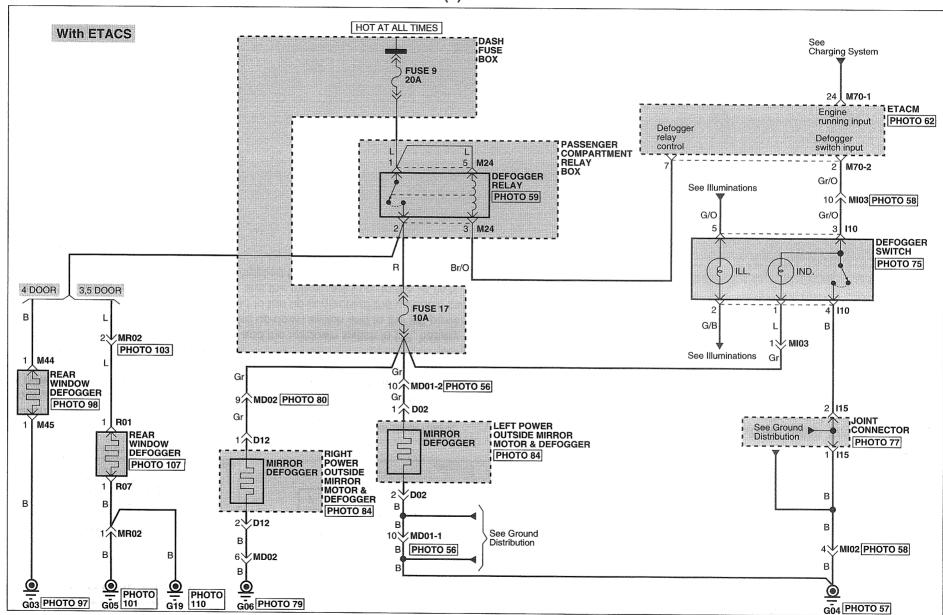
The operation of the two outside mirrors is controlled by the power door mirror switch. Each mirror has two reversible motors, one motor moves the mirror up and down, the other motor moves the mirror left and right. The master selector switch in power door mirror control switch directs battery voltage to the right or left outside mirror. With the ignition switch in ACC or ON, battery voltage is applied from fuse 16 to the power outside 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.

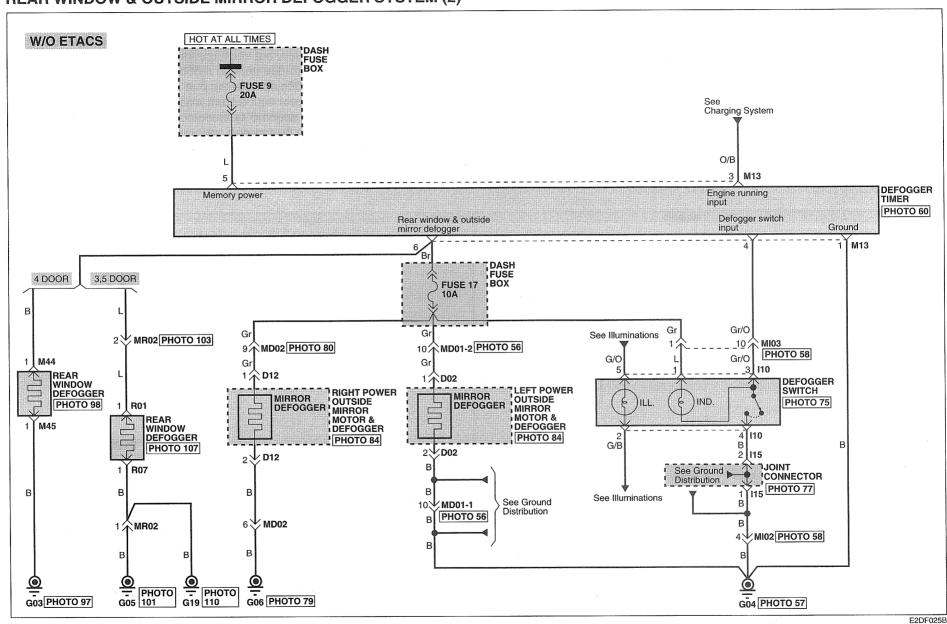
The left/right switch works similarly to the up/down switch. With the master selector switch in the RIGHT position, battery voltage and ground are applied to the right power mirror motors which then operate in a similar way.

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## **REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM (1)**



## **REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM (2)**



# **REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM (3)**

D02 D12				
* * 2 1 8 7 6 * CR08F032  CR08F032  CR08F032	D02	D12		l10
8410	_ ·	~ ·	BLANK	
M13 M24 M44 M45	CR08F032	CR08F032		CR06F017
	M13	M24	M44	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			1 🗸	1 🗸
CR06F002 CR05F005 CR01F006		CR05F005	CR01F006	CR01F006
M70-1 M70-2 R01 / R07	M70-1		M70-2	
13 12 11 10 9 8 7 6 5 4 3 2 1 26 25 24 23 22 21 20 19 18 17 16 15 14		<del>1521      </del>	XXXXXXX	1 🗸
CR26F003 CR16F008		CR26F003	CR16F008	CR01F040

#### Circuit Description

#### W/O ETACS

Battery voltage is supplied to the rear window defogger timer at all times from fuse 9. When the engine is running, battery voltage is also supplied from the generator to the solid state controller. Depressing the rear defogger switch (when the engine is running) momentarily grounds the on/off input terminal of the timer and the solid state controller turns on the rear window defogger, Left/Right power outside mirror defogger and the rear defogger indicator. The solid state controller will turn the rear defogger off after approximately 20 minutes. Depressing the rear defogger switch when the rear defogger is on causes the timer The ETACM will turn the rear defogger off after approximately 20 minutes. to turn the rear defogger off.

#### With ETACS

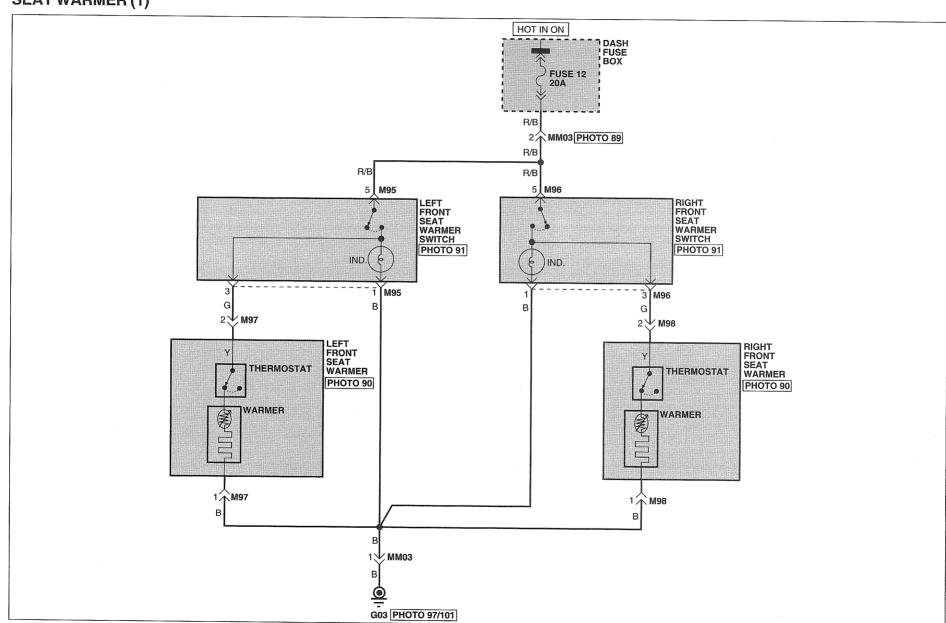
Battery voltage is supplied to the defogger relay coils and contacts at all times from fuse 9 and battery voltage is also supplied from the generator to the ETACM when the engine is running. The rear defogger switch on (depressing) signal is provided to the ETACM and then ETACM provide ground to the defogger relay coil.

Fuse 9 supply battery voltage to the rear window defogger and Left/Right power outside mirror defogger through defogger relay contacts.

Depressing the rear defogger switch when the rear defogger is on causes the ETACM to turn the rear defogger off.

SD87-6	REAR WINDOW & OUTSIDE MIRROR DEFOGGER SYSTEM
MEMO	
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# **SEAT WARMER (1)**



## **SEAT WARMER (2)**

M95	M96	М97	M98
* 1 * 5 * 3	* 1 * 5 * 3	1 2	
CR06F010	CR06F010	CR02M006	CR02M006

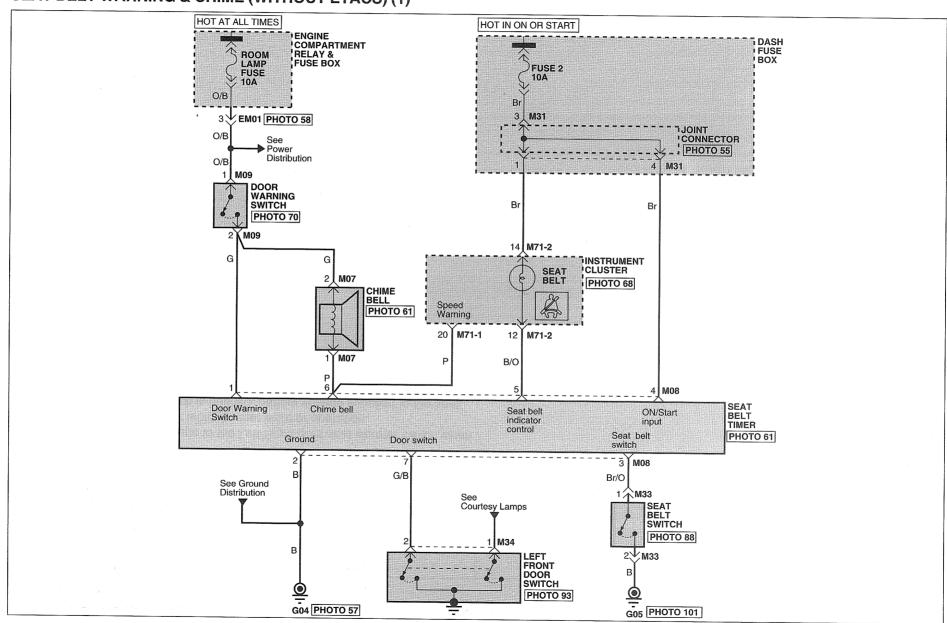
#### Circuit Description

Fuse 12 supplies battery voltage to the Left/Right front seat warmer switch when the ignition switch is in ON for left/right seat warmer operation.

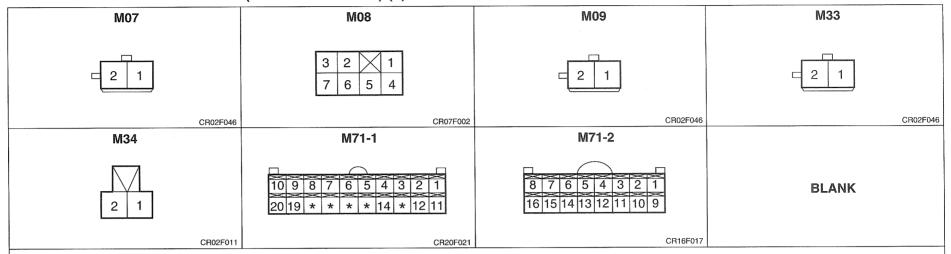
When each seat warmer switch is pushed, battery voltage supplied to the seat warmer and grounded at G03.

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# SEAT BELT WARNING & CHIME (WITHOUT ETACS) (1)



### **SEAT BELT WARNING & CHIME (WITHOUT ETACS) (2)**



#### **Circuit Description**

#### **Key Remain Warning**

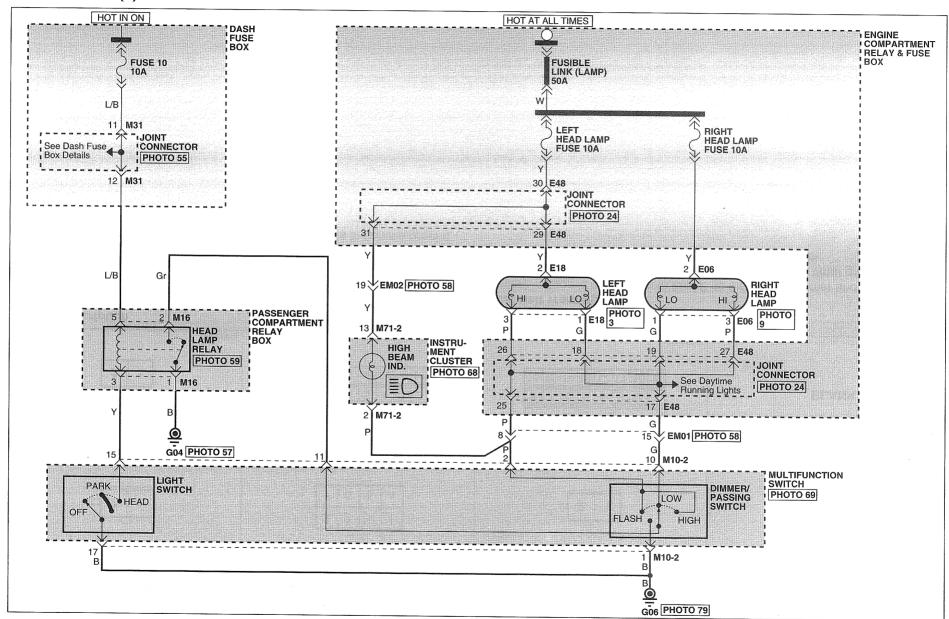
When the left front door is open and the key in the ignition key hole, battery voltage is supplied to the seat belt timer and chime bell through door warning switch and room lamp fuse.

According to the above signals the seat belt timer controls the chime ground terminal and the chime sounds.

#### **Seat Belt Warning**

Battery voltage is supplied from fuse 2 to the seat belt timer and the fasten belt indicator with the ignition in ON or START. The seat belt timer grounds the chime and the indicator as dictated by the seat belt switch.

### **HEAD LAMPS (1)**



### HEAD LAMPS (2)

E06	E18	M10-2	M16
1 3 2	1 2	9 8 7 6 * * * 2 1 * 17 16 15 14 * * 11 10	1 2 5 * 3
CR03F007	CR03F007	CR18F004	CR05F005
M71-2			
8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	BLANK	BLANK	BLANK

#### **Circuit Description**

#### **Low Beam Operation**

With the ignition switch in ON and the light switch in HEAD position, battery voltage is applied to the coil of the head lamp relay from fuse 10 and then ground HEAD). With the light switch in OFF or PARK and the head lamp dimmer switch is provided to the coil of the head lamp relay through the light switch. Battery voltage from fusible link (Lamp) is then provided to the Left/Right head lamp through Left/Right head lamp fuses. The low beam head lamp illuminates when the Dimmer/Passing switch is in low position.

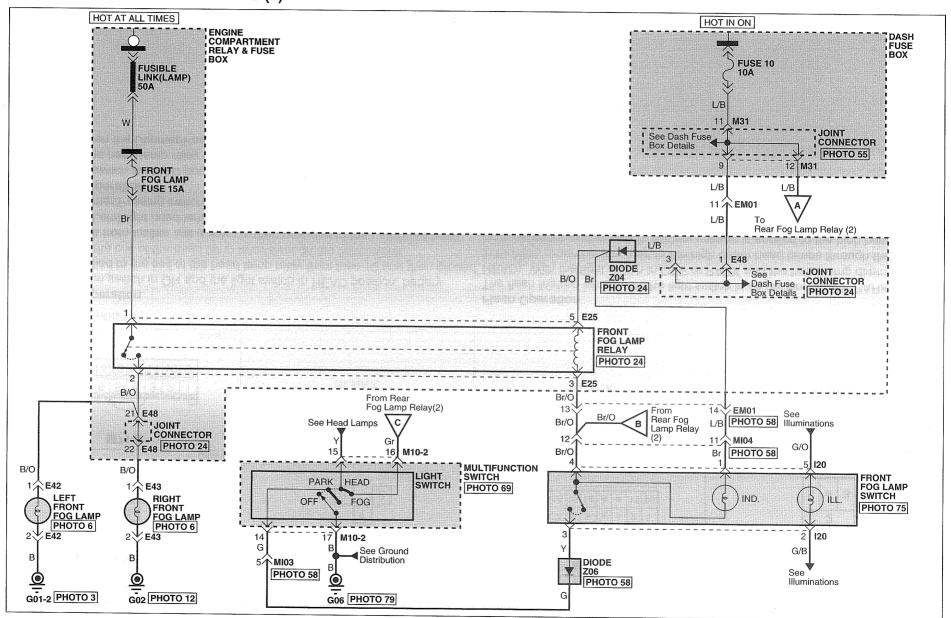
#### **High Beam Operation**

With the light switch in HEAD position and ignition switch in ON, battery voltage is applied to the head lamp relay coil from fuse 10. The high beam head lamps illuminates when the Dimmer/Passing switch is in FLASH or HIGH position.

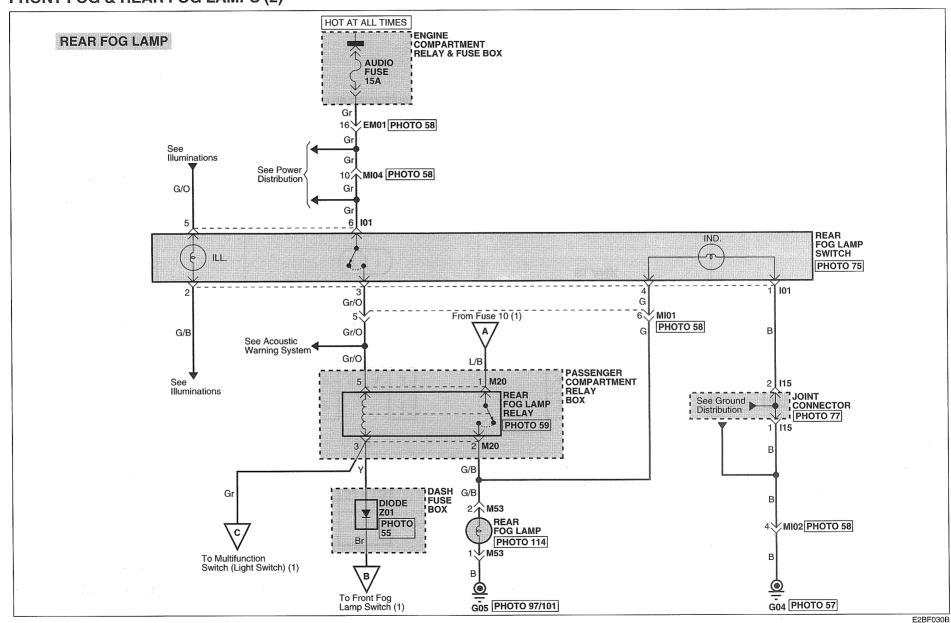
#### Flash Operation

The flash feature works with the light switch in all positions(OFF, PARK or in FLASH, ground is provided to the high beam head lamps through the head lamp dimmer/passing switch. Battery voltage is applied to the high beam head lamp and the beam indicator, and the high beams and the high beam indicator illuminate as long as the switch is held in the FLASH position.

## FRONT FOG & REAR FOG LAMPS (1)



### FRONT FOG & REAR FOG LAMPS (2)



### FRONT FOG & REAR FOG LAMPS (3)

E25	E30	E33	E42
1 2 5 * 3	1 2 5 * 3	6 5 4 3 2 1 12 11 10 9 8 7	2 1
CR05F005	CR05F005	CR12F012	CR02F078
E43	<b>I</b> 01	120	M10-2
2 1	2 1 6 5 4 3	2 1 1 * 5 4 3	9 8 7 * * * * 2 1 * 17 16 15 14 * * 11 10
CR02F078	CR06F017	CR06F017	CR18F004
M20	M53	5.00, 67	Ch16F004
1 2 5 * 3	2 1	BLANK	BLANK
CR05F005	CR02F006		
Circuit Description			

#### Circuit Description

#### W/O REAR FOG LAMPS

With the Light switch in PARK or HEAD position, battery voltage is applied to the fog lamp relay coils from the fuse 10. When the front fog lamp switchis ON, ground is provided to the coil of the fog lamp relay through a diode. Battery from the front fog lamp fuse is then provided to the Left/Right front fog through the closed contact of the front fog lamp relay. The Left/Rightfront fog lamps light.

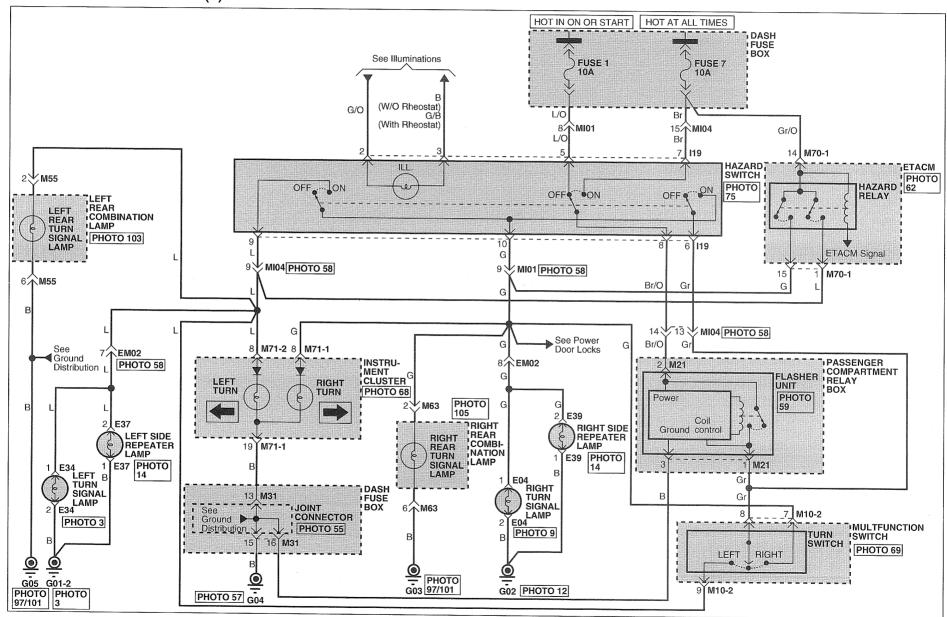
#### With REAR FOG LAMPS

- 1. With the light switch in PARK position and front fog lamp switch is ON,the ground (G06) is provided to the rear fog lamp relay coils. When the rearfog lamp switch is ON, the rear fog lamp relay coil is energized and the battery voltage is applied to the rear fog lamps through the closed rear fog lamprelay contacts.
- 2. With the light switch in HEAD or FOG position, the ground (G06) is provided to the rear fog lamp relay coils.

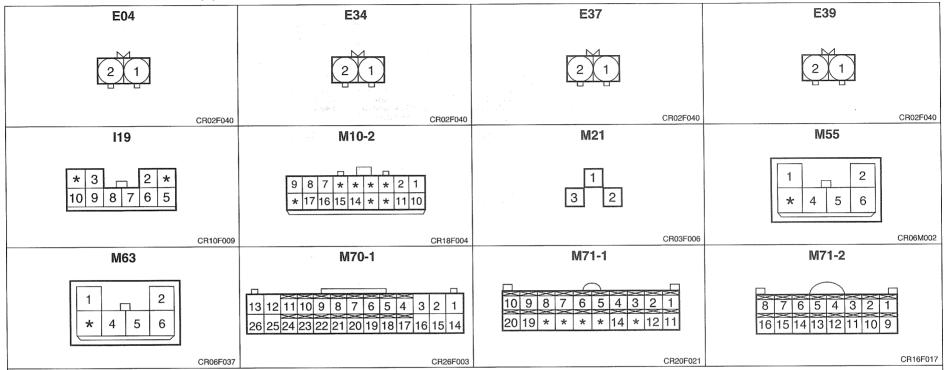
When the rear fog lamp switch is ON, the rear fog lamp relay coil is energized. Battery voltage is supplied to the rear fog lamps through the closed rear fo lamp relay contacts and then the lamps light.

SD92-6	FRONT FOG & REAR FOG LAMPS
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### **TURN & HAZARD LAMPS (1)**



#### TURN & HAZARD LAMPS (2)



#### **Circuit Description**

#### **Turn Signal Lamps**

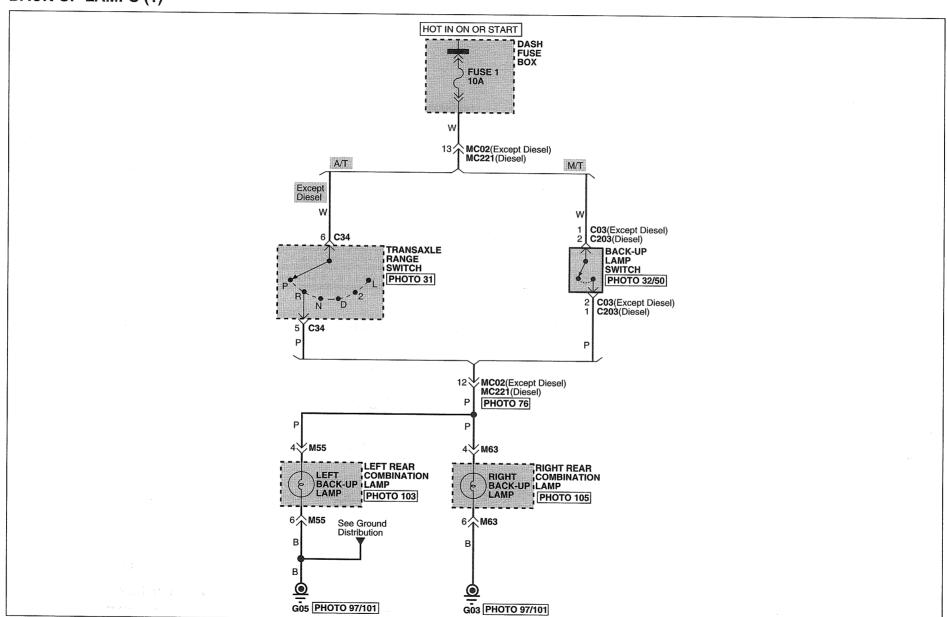
With the hazard switch in OFF, and ignition switch in ON or START, battery voltage is applied from fuse 1 to the flasher unit. The solid-state flasher unit senses the turn switch position through the coil control and alternately applies and removes battery voltage to the turn switch.

Voltage is applied to the left turn or right turn lamps and indicators depending on the turn switch position.

#### **Hazard Lamps**

With the hazard switch depressed (ON), battery voltage is applied from fuse 7 to the flasher. The soild -state flasher unit senses that the hazard switch is in the ON position and alternately applies and removes battery voltage to the left turn and right turn lamps and both indicators in the instrument cluster.

### **BACK-UP LAMPS (1)**



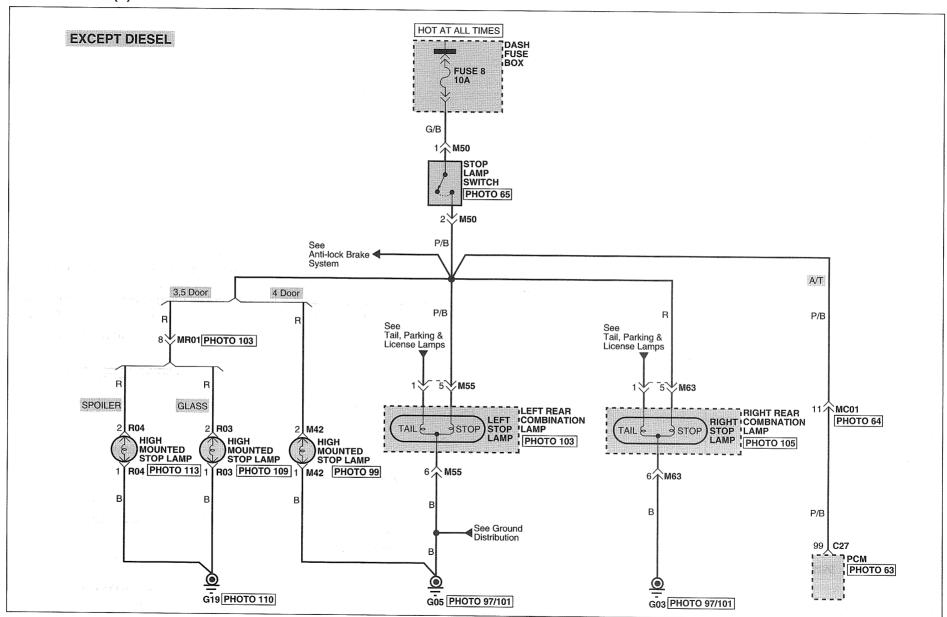
## BACK-UP LAMPS (2)

C03	C34	C203	M55
2 1	4 (3 (2 *) 8 7 6 5 12 11 10 9	2 1	1 2 * 4 5 6
CR02F040	CR12F005	CR02F040	CR06M002
M63			
1 2 * 4 5 6	BLANK	BLANK	BLANK
CR06M002			

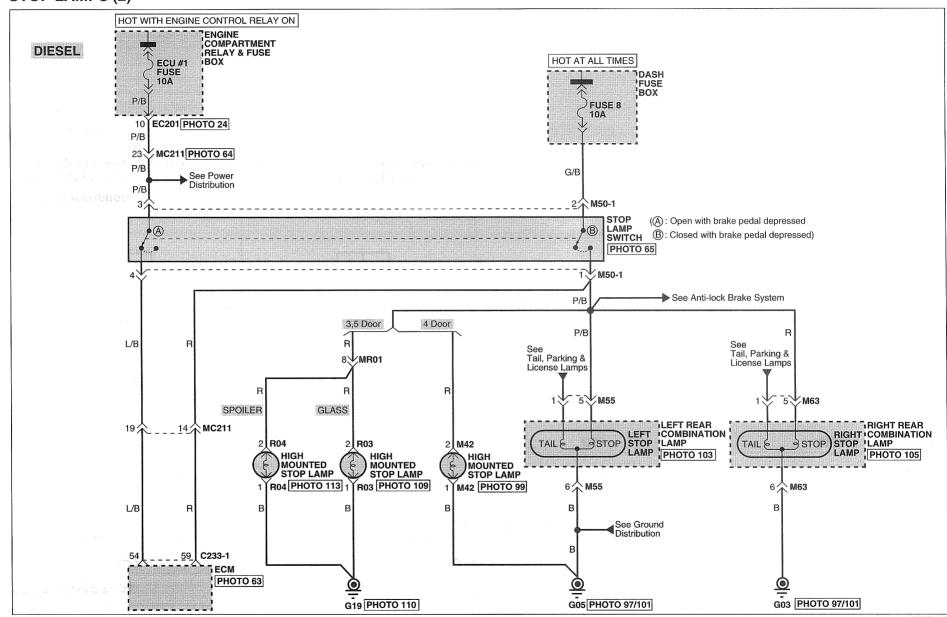
### **Circuit Description**

With the ignition switch in ON or START, battery voltage is applied from fuse 1 to the back-up lamp 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 (1)



### STOP LAMPS (2)



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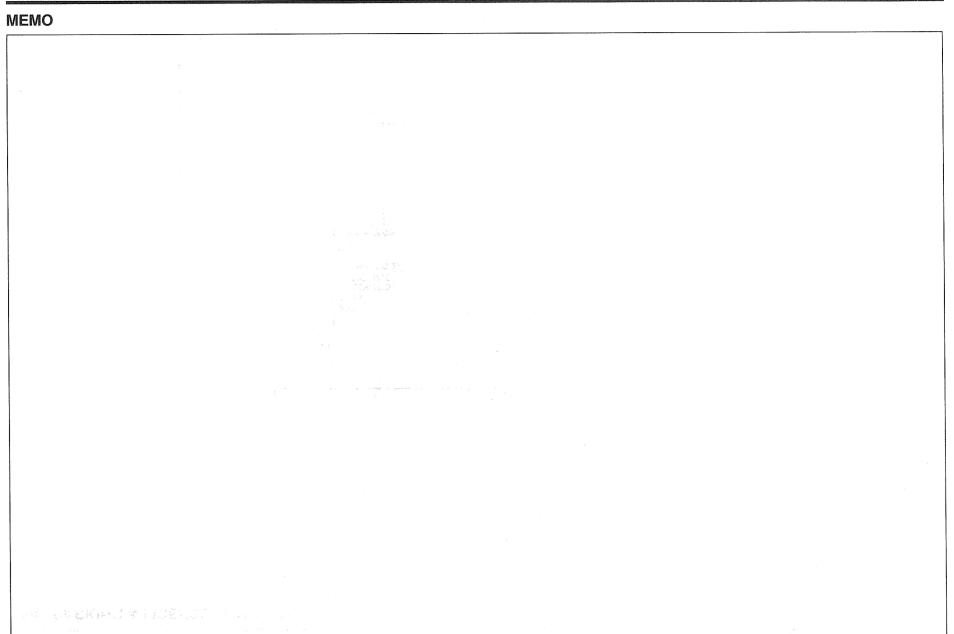
# STOP LAMPS (3)

C27	C23	33-1	C31
82 83 * 85 86 * * 114 115 116 90 91 92 93 94 * * * * 99 * 101 102 * * 105 106 107 * 109 110 * * 113 119 120 121	* * * * * * 11 12 13 * 15 * * * * * * * * * * * * * * * * 47 48 49 * 51 52 * * * * * * * * * * * * *	2 1	
CR04F005		CR81F001	CR02F046
M50	M50-1	C55	M63
1 2	2 1 4 3	1 2 * 4 5 6	1 2 2 * 4 5 6
CR02F012	CR04F016	CR06M002	CR06M002
R03	R04		O NOTINGE
2 1	2 1 BLANK		BLANK
CR02F046	CR02F010		
Circuit Deceriation		the second secon	L

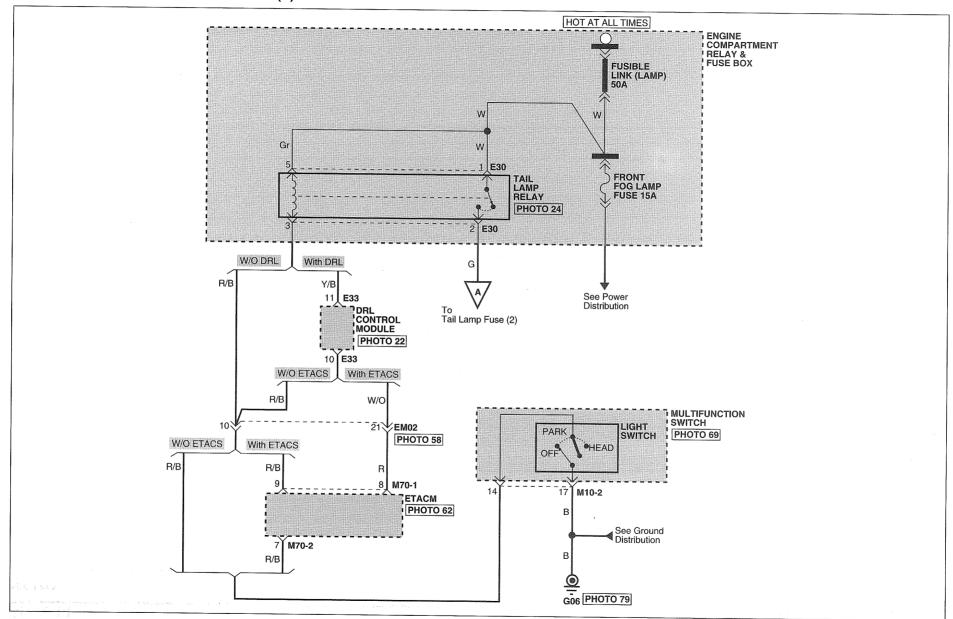
#### Circuit Description

Battery voltage is applied to the stop lamp switch at all times from fuse 8. With the brake pedal depressed, the stop lamp switch is closed and battery voltage is applied to all the sop lamps (Left/Right stop lamps and high mounted stop lamps) and the lamps go on.

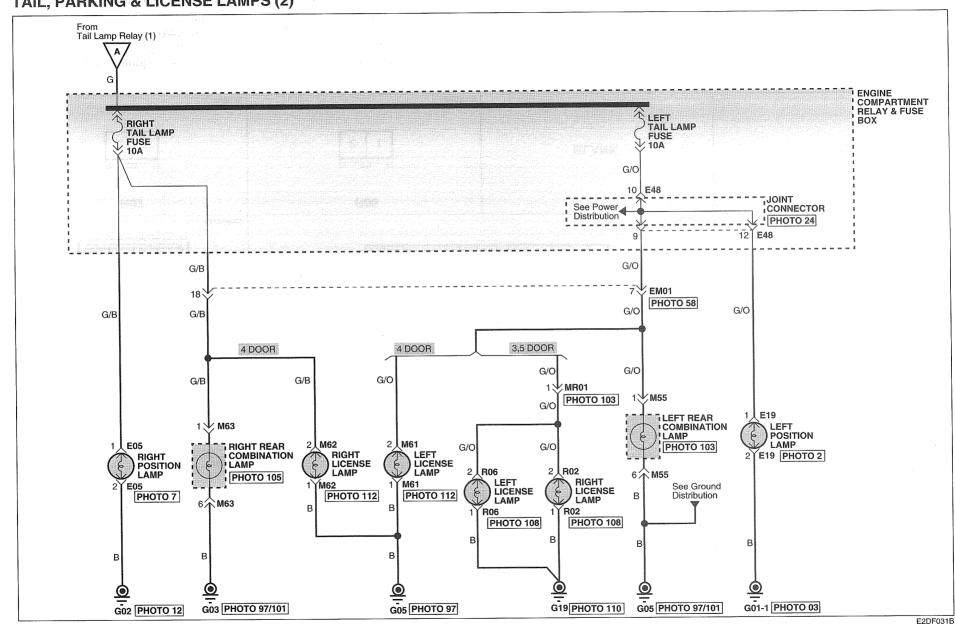
SD92-14 STOP LAMPS



## **TAIL, PARKING & LICENSE LAMPS (1)**



### TAIL, PARKING & LICENSE LAMPS (2)

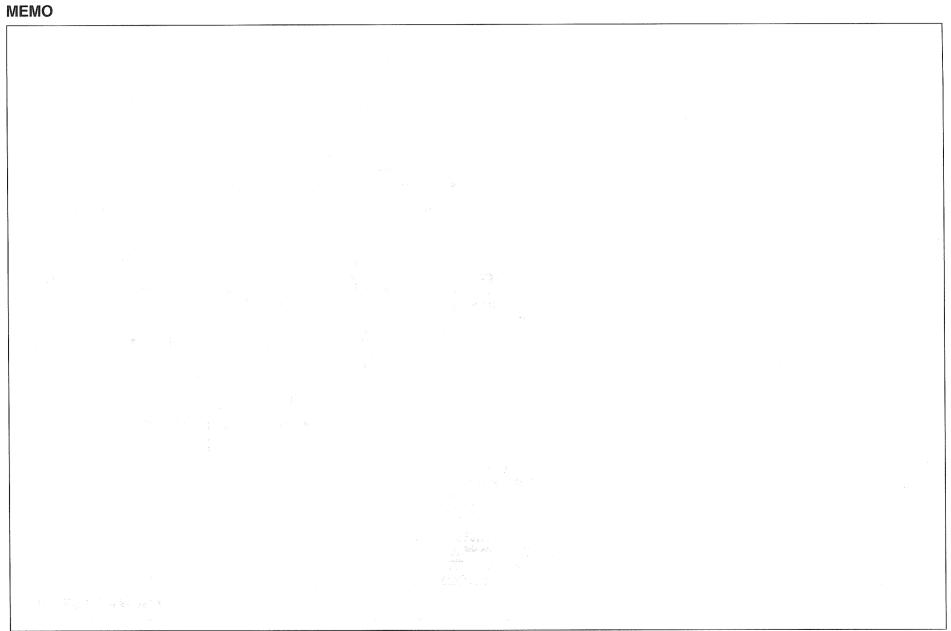


# **TAIL, PARKING & LICENSE LAMPS (3)**

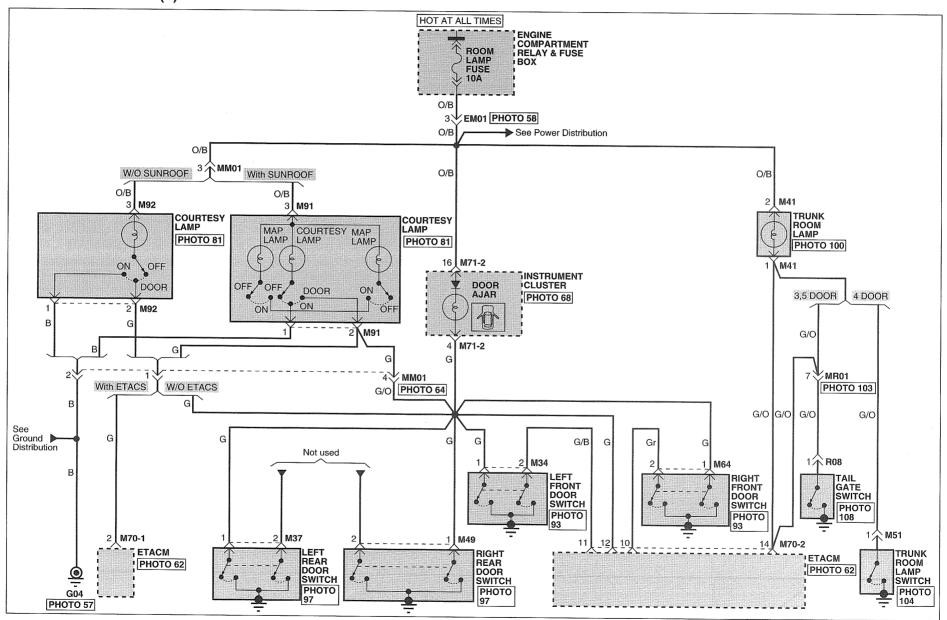
E05	E19	E30	E33
2 1	2 1 5 * 3		6 5 4 3 2 1 1211 10 9 8 7
CR02F040	CR02F040	CR05F005	CR12F01:
M10-2	M55	M61	M62
9 8 7 * * * * 2 1 * 17 16 15 14 * * 11 10	1 2 * 4 5 6	2 1	2 1
CR18F004	CR06M002	CR02F129	CR02F129
M63	M7	0-1	M70-2
1 2 2 * 4 5 6	13 12 11 10 9 8 26 25 24 23 22 21 2	8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	
CR06M002		CR04F070	CR01F006
R02	R06	·	
2 1	2 1	BLANK	BLANK
CR02F129	CR02F129		
Circuit Description	011021 129		

#### Circuit Description

Battery voltage is applied at all times to the coil and contacts of the tail lamp relay. With the light switch in PARK or HEAD, the coil of the tail lamp relay is grounded through the light switch. Battery voltage from the Left/Right tail lamp fuse is then provided to the lamps (Left/Right tail lamps, Left/Right park lamps and license lamp) through the tail lamp relay contact, and all the lamps illuminate.



### **COURTESY LAMPS (1)**



### **COURTESY LAMPS (2)**

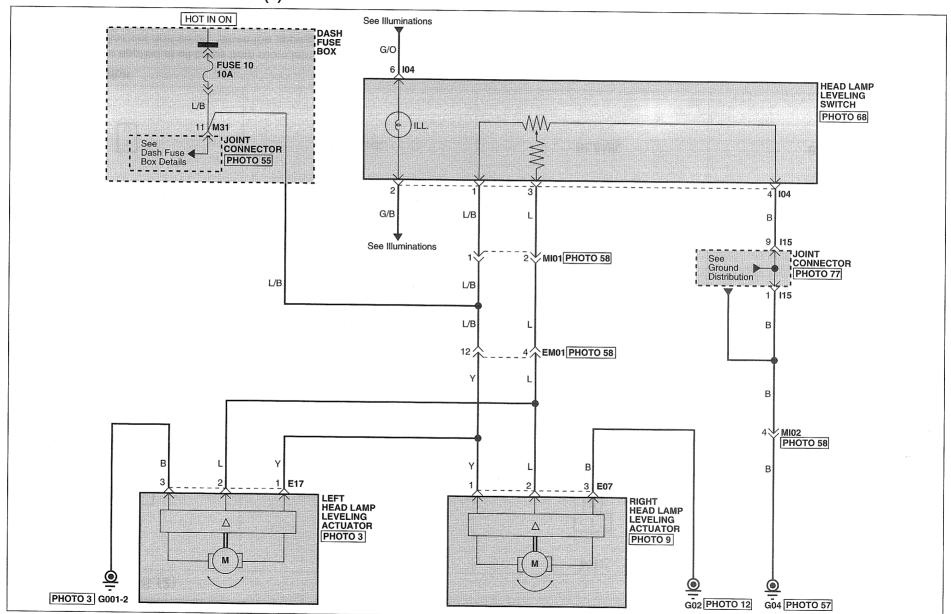
M34	M37	M41	M49
2 1	* 1	1 2 V	* 1
CR02F011	CR02F011	CR02F015	CR02F011
M51	M64	M70	D-1
1	2 1	13 12 11 10 9 8 7 26 25 24 23 22 21 20	
CR01F043	CR02F011		CR26F003
M70-2	M71-2	M91	M92
8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	3 2 1	3 2 1
CR16F008	CR16F017	CR03F026	CR03F007
R08			
1 🗸	BLANK	BLANK	BLANK
CR01F006			
Circuit Description			

#### **Circuit Description**

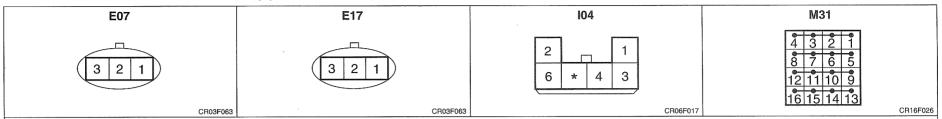
ajar, warning indicators and so on. When the appropriate switch (see schematic) is closed, a ground path is provided to the respective lamps, causing the lamps to The front room lamp can also be turned off so it will not come on with the go on.

Battery voltage is applied at all times from room lampfuse to the trunk lamp, door The front room lamp can be controlled by the door switches or turned on manually, depending on the position of the front room lamp switch. door open.

## **HEAD LAMPS LEVELING DEVICE (1)**



### **HEAD LAMPS LEVELING DEVICE (2)**

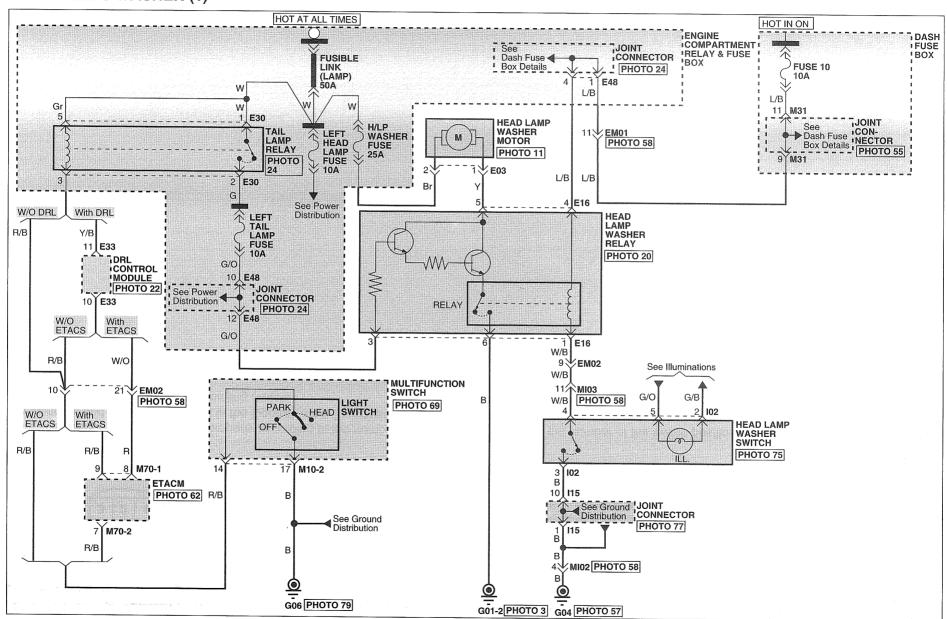


#### **Circuit Description**

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 head lamps beam level, turn the beam leveling switch.

The higher the number of the switch position, the lower the head lamp beam level, Always keep the head lamps beam at the proper leveling poition, or head lamp may dazzle other road users.

### **HEAD LAMPS WASHER (1)**



### **HEAD LAMPS WASHER (2)**

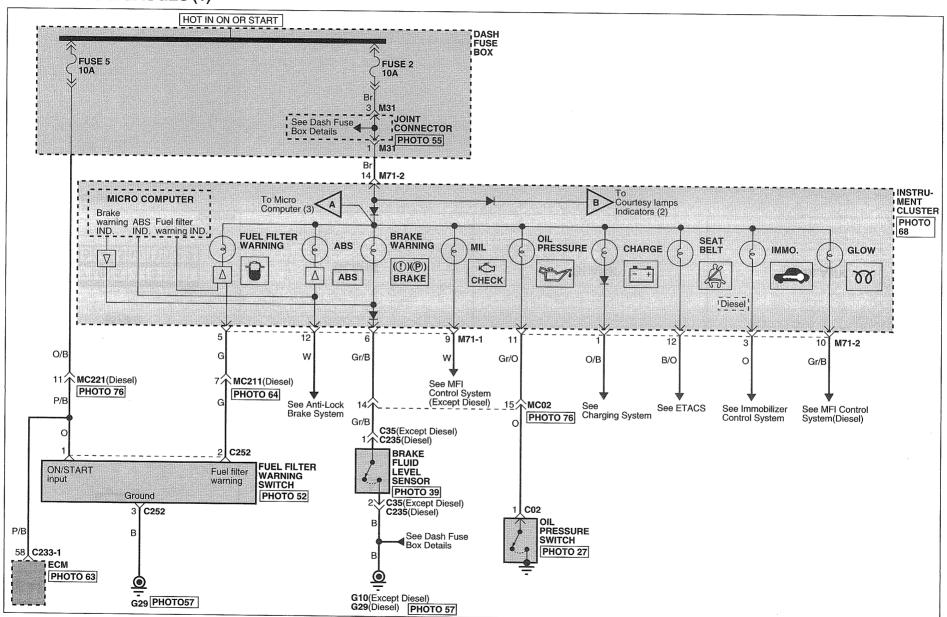
E03	E16	E30	E33
2 1	3 * 1		
CR02F04	CR06F009	CR05F005	CR12F012
102	M10-2	M7	0-1
2	9 8 7 * * * * 2 1 * 17 16 15 14 * * 11 10	13 12 11 10 9 8 26 25 24 23 22 21 2	7 6 5 4 3 2 1 20 19 18 17 16 15 14 CR26F003
M70-2  8 7 6 5 4 3 2 1  16 15 14 13 12 11 10 9	BLANK	BLANK	BLANK

### Circuit Description

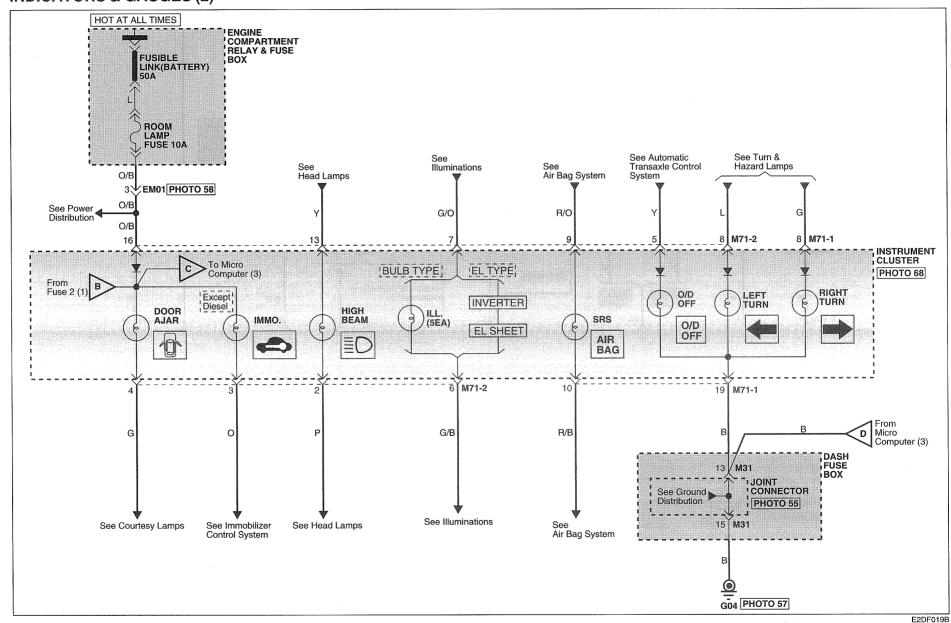
head lamp washer relay through the tail lamp relay contact.

With the light switch in PARK or HEAD position, battery voltage is supplied to the When head lamp washer switch is closed, ground (G01-2) is provided to the head lamp washer motor through the head lamp washer relay contact and then the motor operated.

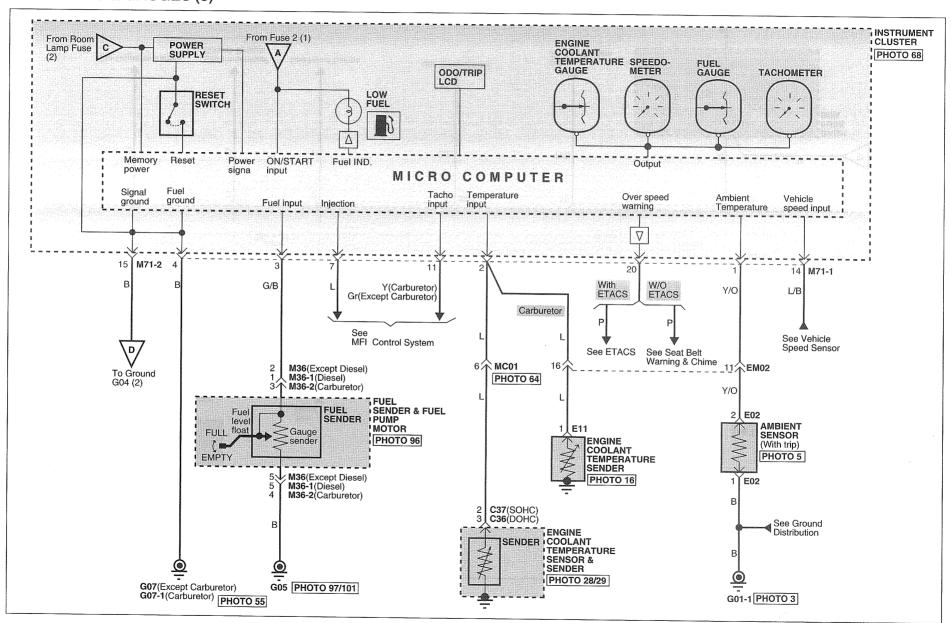
## **INDICATORS & GAUGES (1)**



# **INDICATORS & GAUGES (2)**



### **INDICATORS & GAUGES (3)**



#### **INDICATORS & GAUGES (4)**

C02 / E11	C35	C36	C37	C252
1 🗸	2 1	2 1	3 2 1	3 2 1
CR01F006	CR02F041	CR03F020	CR03F071	CR03F097
E02	M36	M36-1	M71-1	M71-2
2 1	3 2 *	3 * 1 * 5 4	10 9 8 7 6 5 4 3 2 1 20 19 * * * * 14 * 12 11	8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9
CR02F001	CR05F023	CR06F011	CR20F021	CR16F017

#### **Circuit Description**

#### Speedometer

With the ignition switch in ON and START, the speedometer drive circuits receive pulse from the vehicle speed sensor (VSS). 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's is needle to move.

#### **Check Engine & Oil pressure Indicator**

Battery voltage is applied to the indicator bulb from fuse 2 with the ignition switch in ON or START. The ground of the check engine 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. When the oil pressure is low, the oil pressure switch closes, providing a ground for the oil pressure indicator bulb.

#### Fuel Gauge & Indicator

The pointer of the fuel gauge moves by the magnetic field of two coils. The coils are at right angles to each other.

Battery voltage is applied to the coils through fuse 2, generating a magnetic field. The magnetic field, controlled by the fuel gauge sender, causes the gauge's needle to move. As the resistance in the sender varies, current through the gauge coils change.

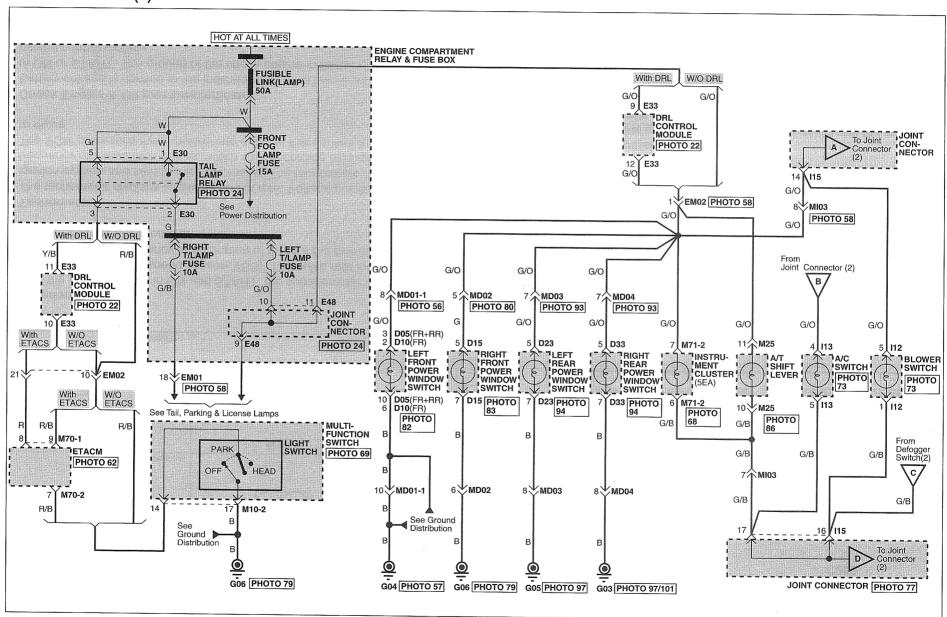
When the fuel level is below the thermistor, the resistance of the thermistor varies, providing a ground for the low fuel indicator bulb.

#### **Engine Coolant Temperature Gauge**

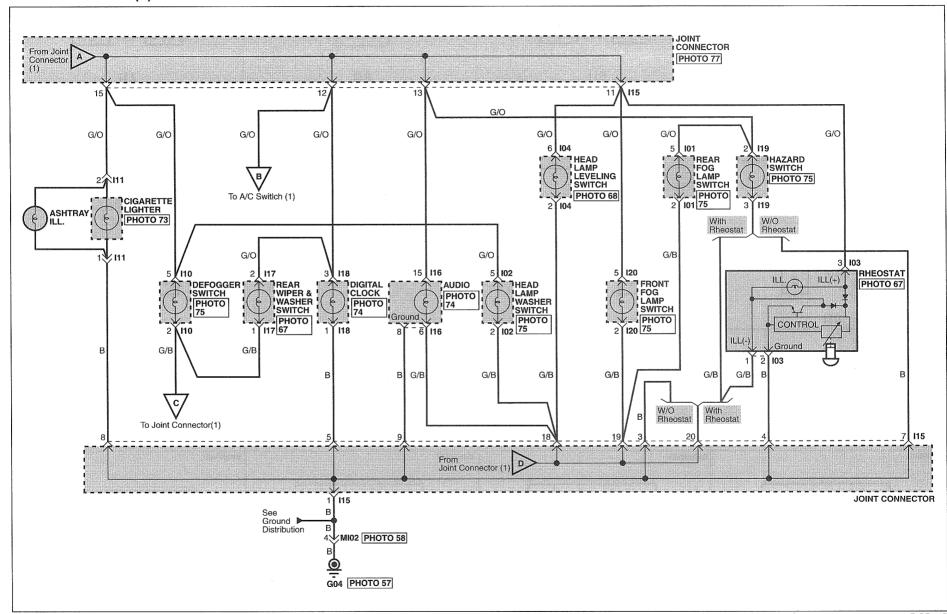
The pointer of the engine coolant temperature gauge moves by the magnetic field of two coils. The coils are at right angles to each other.

Battery voltage is applied to the coils through fuse 2, generating a magnetic field. The magnetic field, controlled by the engine coolant temperature sender, cause the gauge's needle to move. As the resistance in the sender varies, current through the gauge coils change.

### **ILLUMINATIONS (1)**



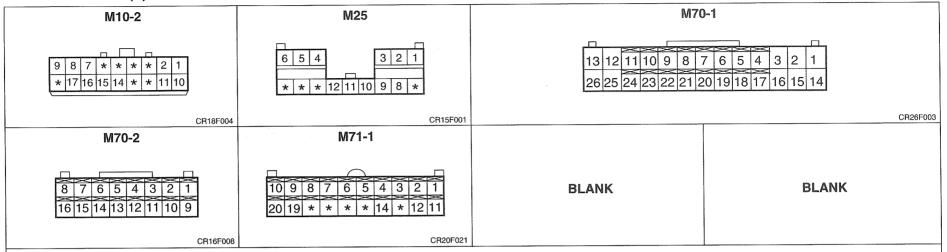
## **ILLUMINATIONS (2)**



# **ILLUMINAIONS (3)**

LECIMITATIONS (3)			
D05	D10	D15	D23
6 5 4 3 2 1 * * 12 11 10 9 8 7	3 2 1 8 7 6 * 4	3     *     1       8     7     6     5     4	3 * 1 8 7 6 5 4
CR14F019	CR08F010	CR08F010	CR08F010
D33	E30	E33	I01
3 2 1 8 7 6 5 4	1 2 5 * 3	6 5 4 3 2 1 12 11 10 9 8 7	2 1 6 5 4 3
CR08F010	CR05F005	CR12F012	CR06F017
102	103	104	l10
2 * * * * * * * * * * * * * * * * * * *	3 2 1	2 1 6 * 4 3	2 1 1 * 5 4 3
CR06F017	CR03F026	CR06F017	CR06F017
l11	l12	113	I16
3 2 1 CR03F026	4 3 2 1 8 7 6 5	3 2 1 1 * 7 6 5 4	7 6 5 4 O 3 2 1 16 15 14 13 * * 10 9 8
I17	CR08F003	CR08F010	CR16F025
'''	l18	l19	120
4 * 2 1 1 10 9 * * 6 *	2 1 4 3	* 3	2 1 1 * 5 4 3
CR10F014	CR04F001	CR10F009	CR06F017
			E2DF035C

## **ILLUMINATIONS (4)**



### **Circuit Description**

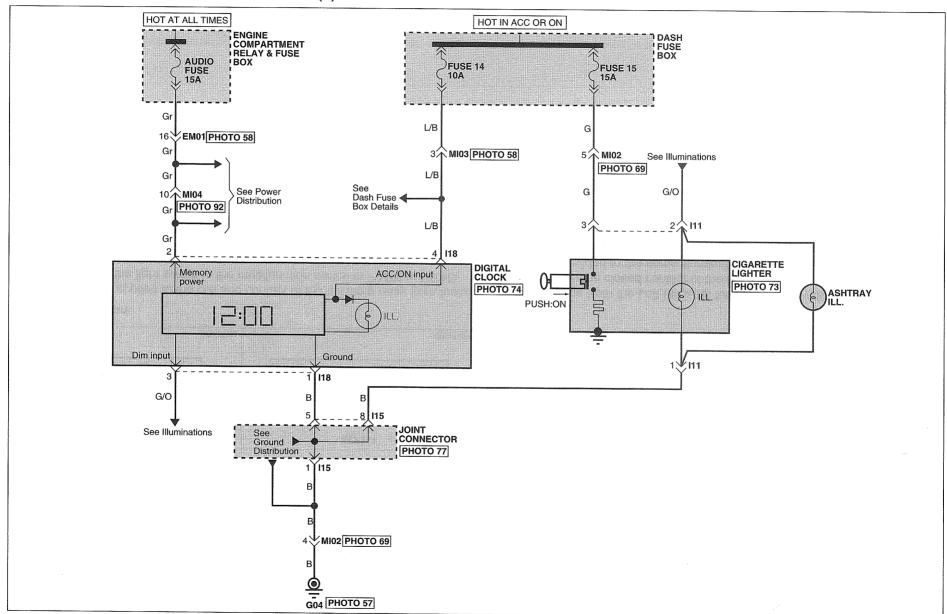
Battery voltage is applied to the coil and contact of the tail lamp relay from fusible link (Lamp). With the light switch in the multifunction switch in PARK or HEAD, ground is provided to the tail lamp relay coil through the light switch.

Battery voltage from the Left tail lamp fuse is then provided to the illumination lamps through the closed contact of the tail lamp relay.

Ground is provided to the some illumination lamps through the rheostat.

The rheostat controls the brightness of the illumination lamp's light.

# **DIGITAL CLOCK & CIGARETTE LIGHTER (1)**



# **DIGITAL CLOCK & CIGARETTE LIGHTER (2)**



### **Circuit Description**

#### DIGITAL CLOCK

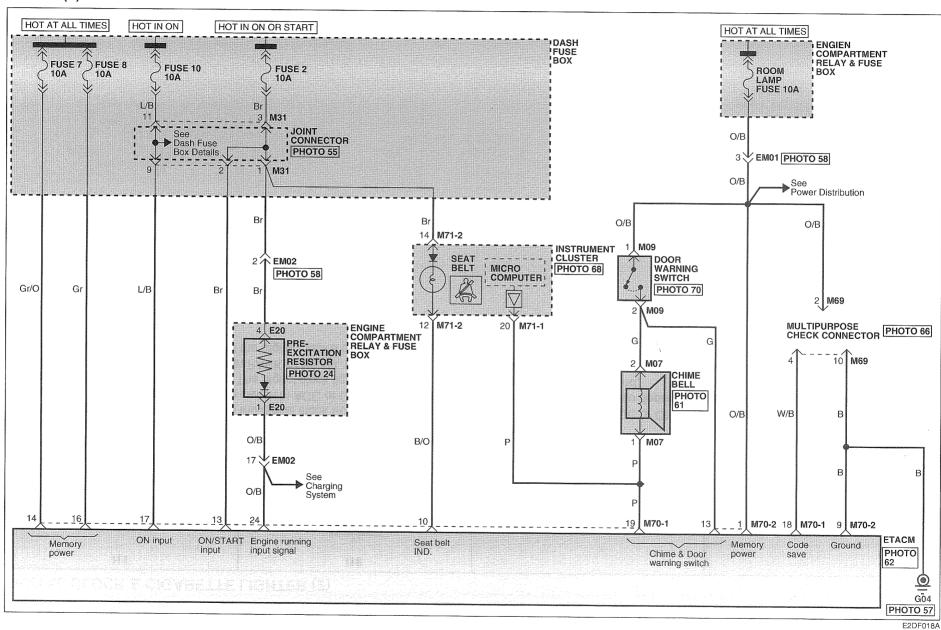
Battery voltage is applied at all times to the digital clock from audio fuse to provide clock memory. With the ignition switch in ACC or ON, battery voltage is applied to the clock through fuse 14. The digital clock lights up and displays the time. With the light switch in PARK or HEAD, the light switch provides ground to the digital clock and the digital clock's display will dim.

#### **CIGARETTE LIGHTER**

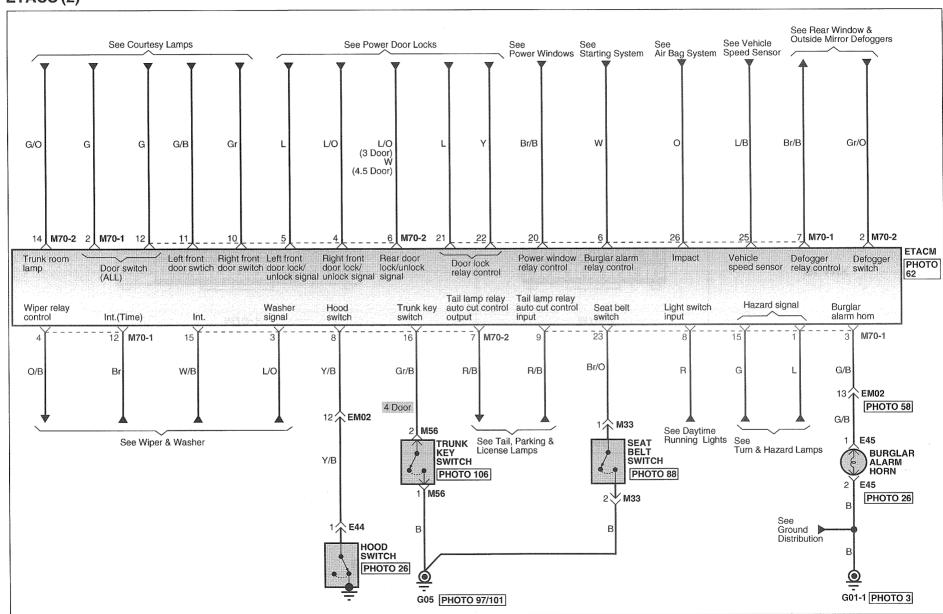
With the ignition switch in ACC or ON, battery voltage is applied from fuse 15 to the cigarette lighter. When you depress (push) the lighter, the lighter element completes the circuit to ground.

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

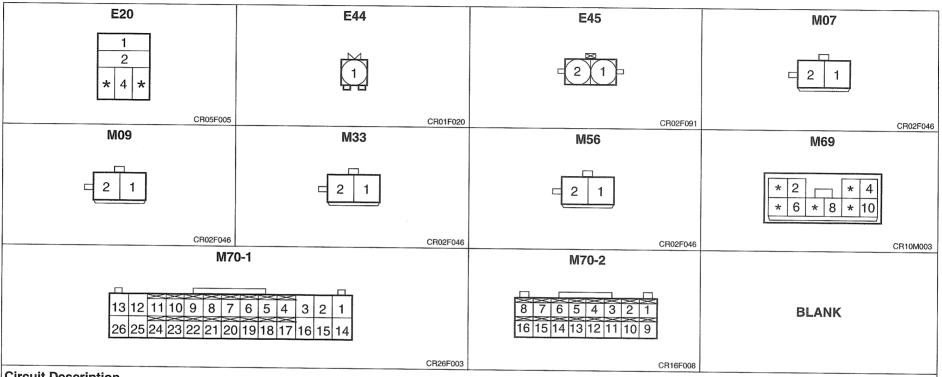
## ETACS (1)



## ETACS (2)



## ETACS (3)



## **Circuit Description**

The electronic time and alarm control module (ETACM) operates the front wiper, the front washer, chime bell, rear window defogger and so on.

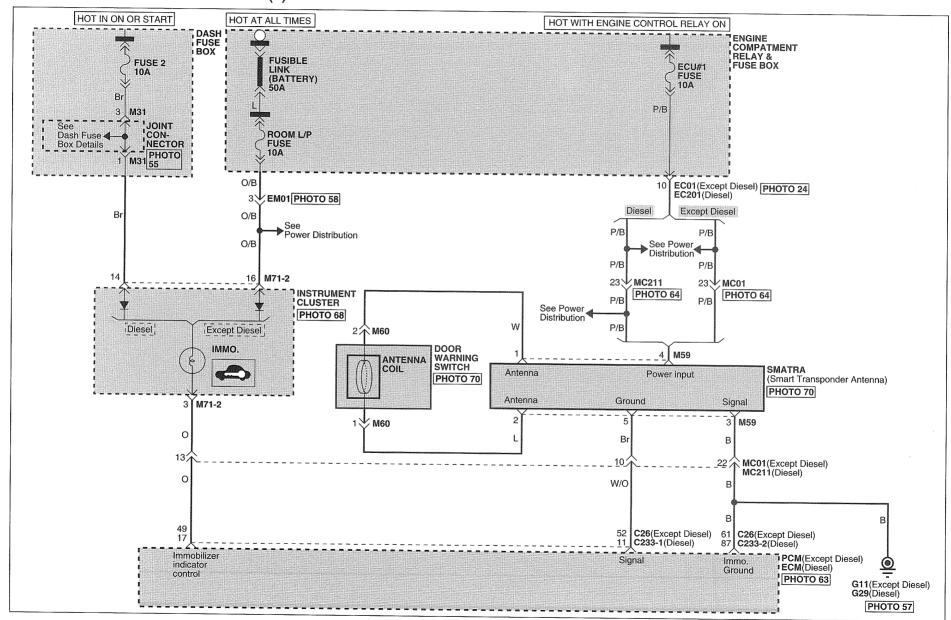
Fuse 2 supplies battery voltage to the module when ignition is in ON or START.

Fuse 10 supplies battery voltage to the module whenever the key is in ON. For details on the use of the various inputs and outputs, refer to the Shop Manual, section BE details.

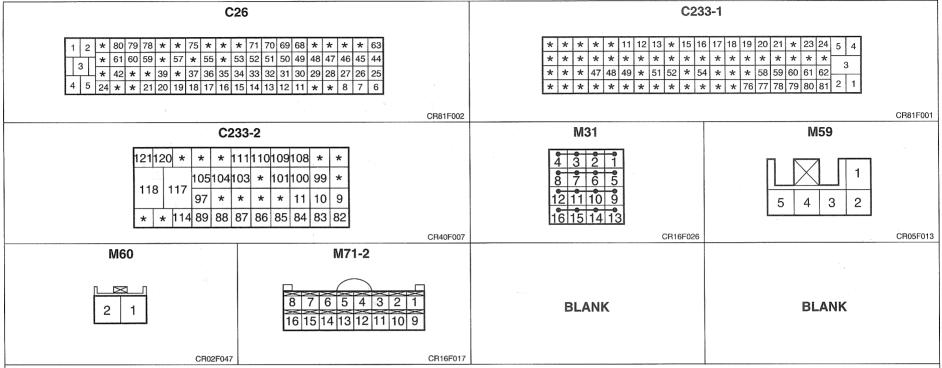
SD95-4	ETACS
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MEMO

## **IMMOBILIZER CONTROL SYSTEM (1)**



### **IMMOBILIZER CONTROL SYSTEM (2)**

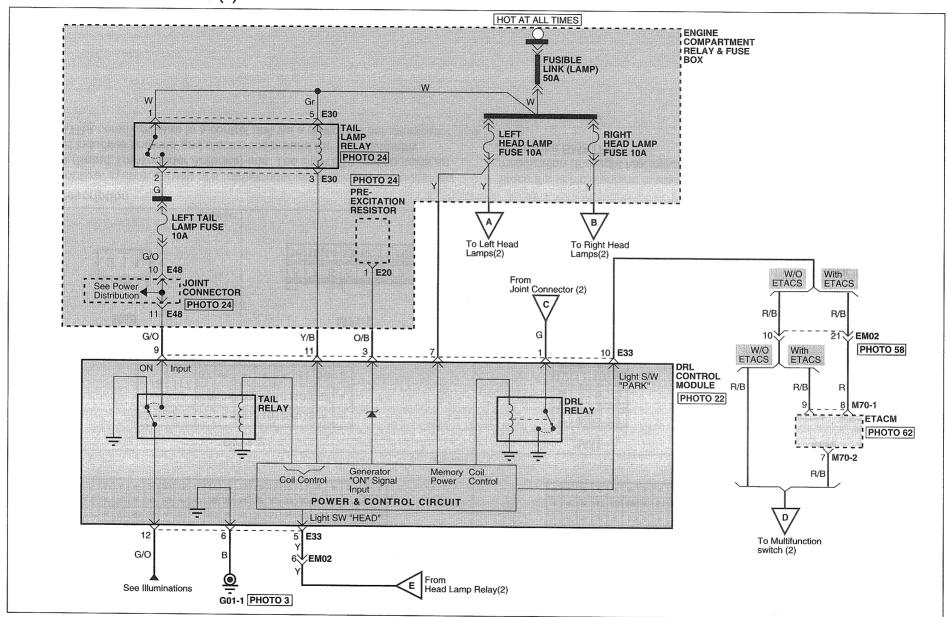


### **Circuit Description**

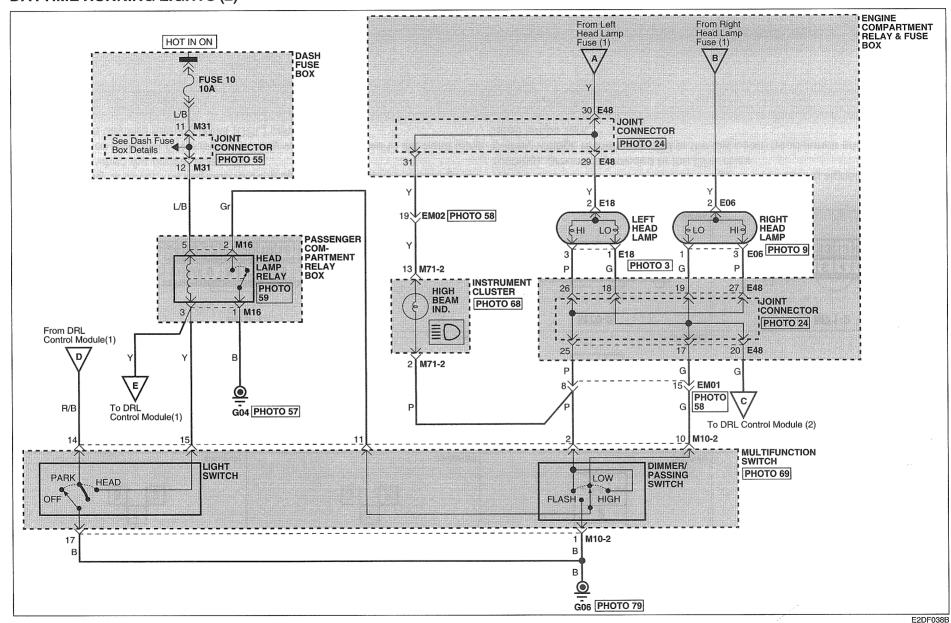
The immobilizer system consist of a transponder inside the key head and the SMATRA (Smart Transponder Antenna) unit. The SMATRA unit contains an integrated inductive antenna and electronics around the lock assembly. The SMATRA communicates to a control unit via a dedicated communication line.

Since the vehicle engine management system is able to control engine mobilization (throught fuel injection control), it is the most suitable unit to control the SMATRA.

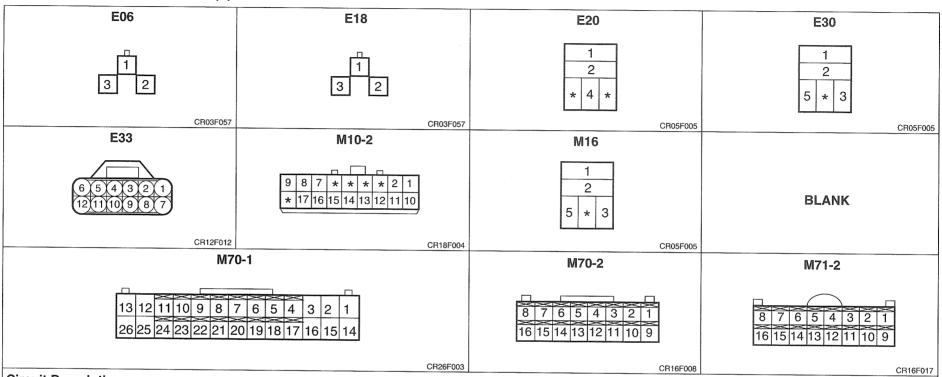
## **DAYTIME RUNNING LIGHTS (1)**



## **DAYTIME RUNNING LIGHTS (2)**



## **DAYTIME RUNNING LIGHTS (3)**



### **Circuit Description**

For the visibility of driver, the daytime running lights (head lamp low beam) go on As the DRL control module detects the generator running signals (engine is automatically when the engine is running.

With the ignition switch in ON position, battery voltage is applied to the head lamp battery voltage is then provided to the low beam head lamps and the low beam relay coils and daytime running lights (DRL) control module.

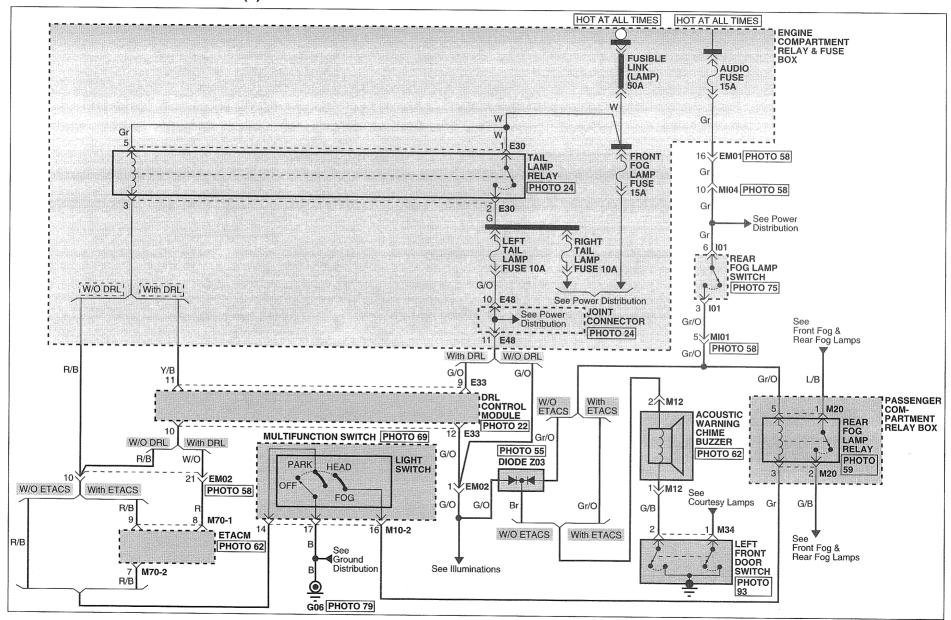
running), ground is provided to the DRL relay.

head lamps light.

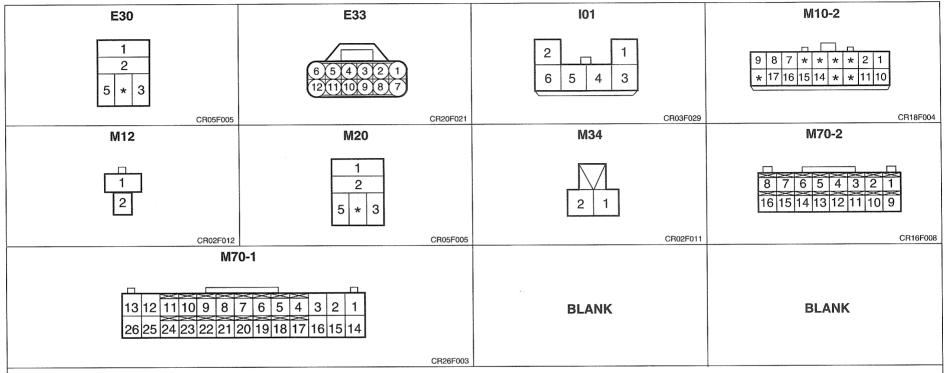
SD95-10	DAYTIME RUNNING LIGHT
МЕМО	

MEMO

## **ACOUSTIC WARNING SYSTEM (1)**



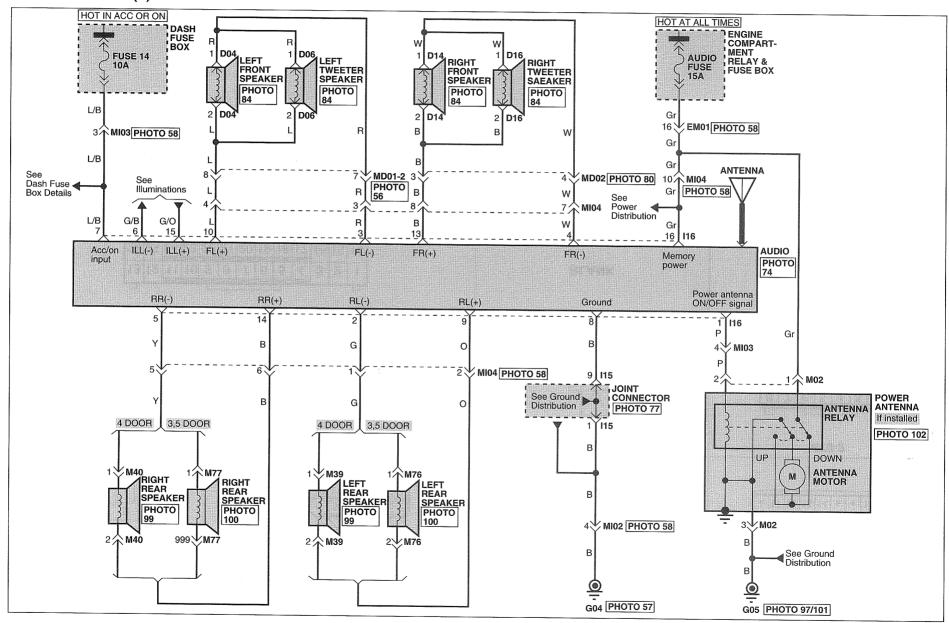
## **ACOUSTIC WARNING SYSTEM (2)**



## **Circuit Description**

- 1. With the light switch in PARK or HEAD position, battery voltage is supplied to the acoustic warning chime buzzer through left tail lamp fuse and diode. The acoustic warning buzzer sounds when the left front door switch is closed (door opened).
- 2. With the light switch in HEAD or FOG position and rear fog lamp switch is in ON position, battery voltage is applied to the acoustic warning buzzer and then the buzzer sounds.

## **AUDIO SYSTEM (1)**



# **AUDIO SYSTEM (2)**

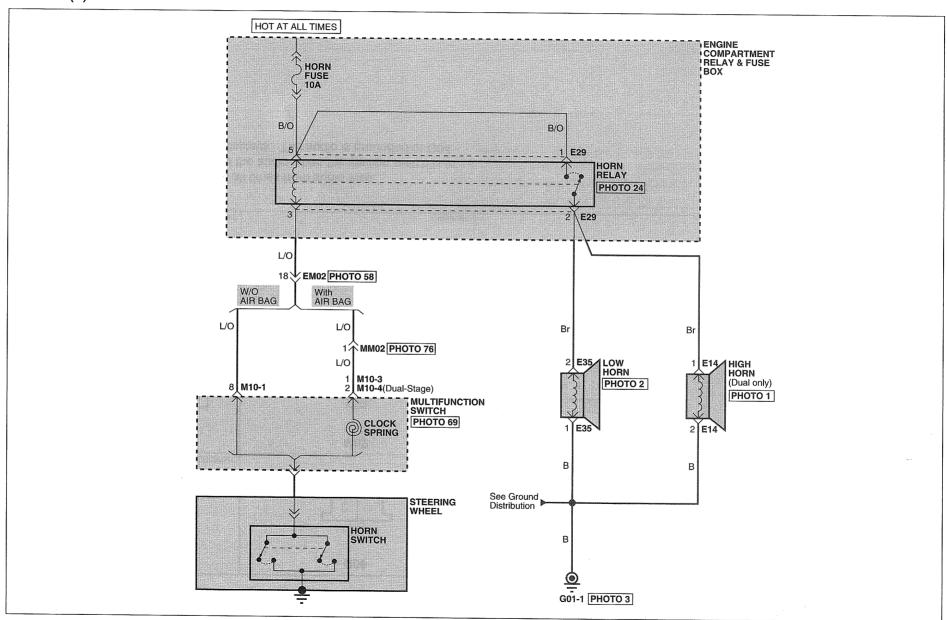
D04	D06	D14	D16
2 1	2 1	2 1	2 1
CR02F047	CR02F010	CR02F047	CR02F010
I16	M02	M39	M40
7 6 5 4 O 3 2 1 16 15 14 13 * * 10 9 8	3 2 1 CR03F007	1 2 CR02M037	1 2 CR02F037
CR16F025 M76	M77	CHU2/MU3/	Unuzrus/
2 1	2 1	BLANK	BLANK
CR02F047	CR02F047		

## **Circuit Description**

The audio receives battery voltage at all times from audio fuse.

Audio fuse supplies battery voltage to the audio when the ignition switch is in ACC or ON for audio operation and displays. The audio is grounded at G04.

# HORNS (1)



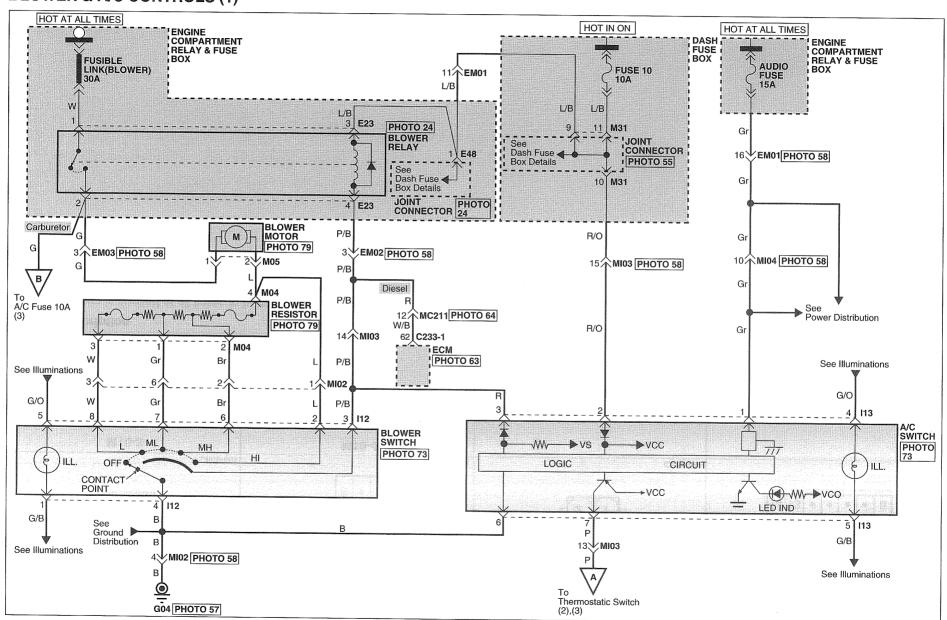
HORNS (2)

			M16
E14	E29	E35	INIIO
2 1	1 2 5 * 3	2 1	7 6 5 4 3 2 1 14 13 * * * * 8
CR02F09		CR02F091	5,1,1100
M10-3	M10-4		
* * * 1 CR04F05	2 <b>*</b>	BLANK	BLANK

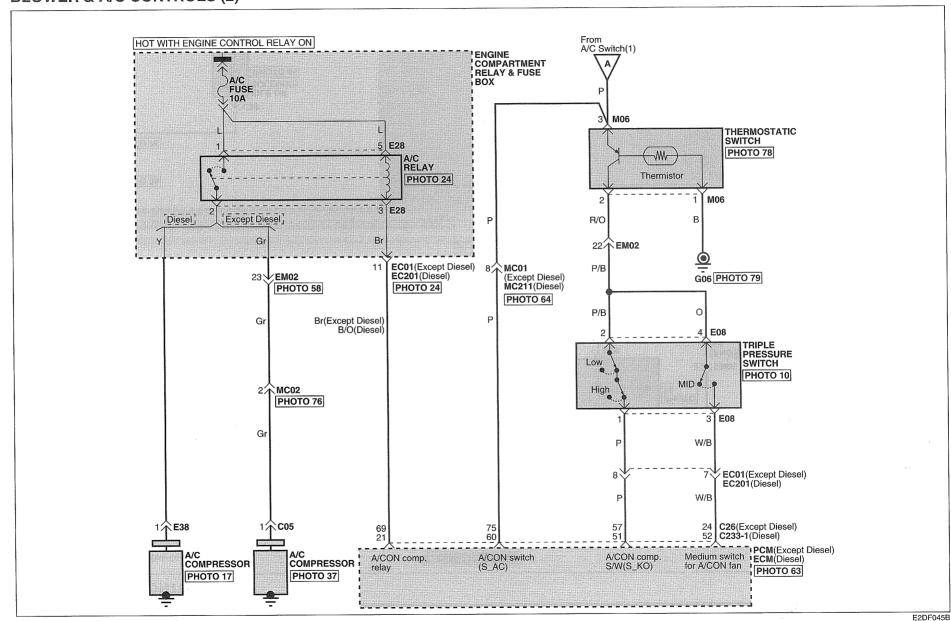
# **Circuit Description**

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 battery voltage is applied to the horn, and the horn sounds.

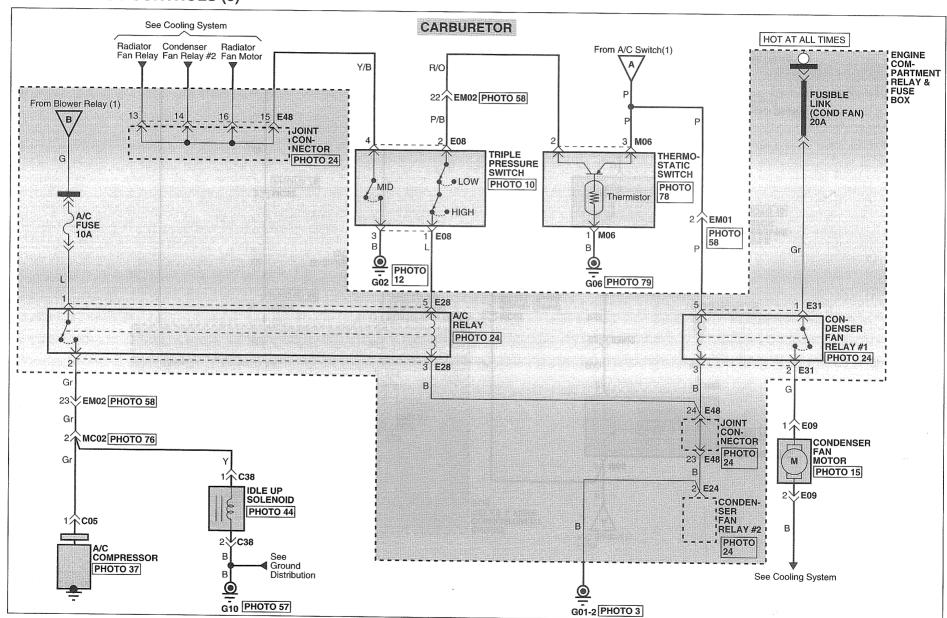
# **BLOWER & A/C CONTROLS (1)**



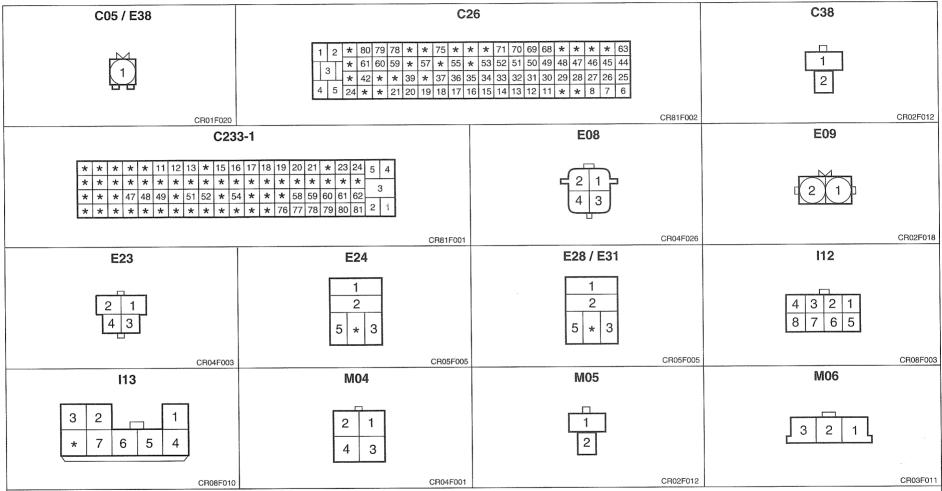
## **BLOWER & A/C CONTROLS (2)**



# **BLOWER & A/C CONTROLS (3)**



### **BLOWER & A/C CONTROLS (4)**

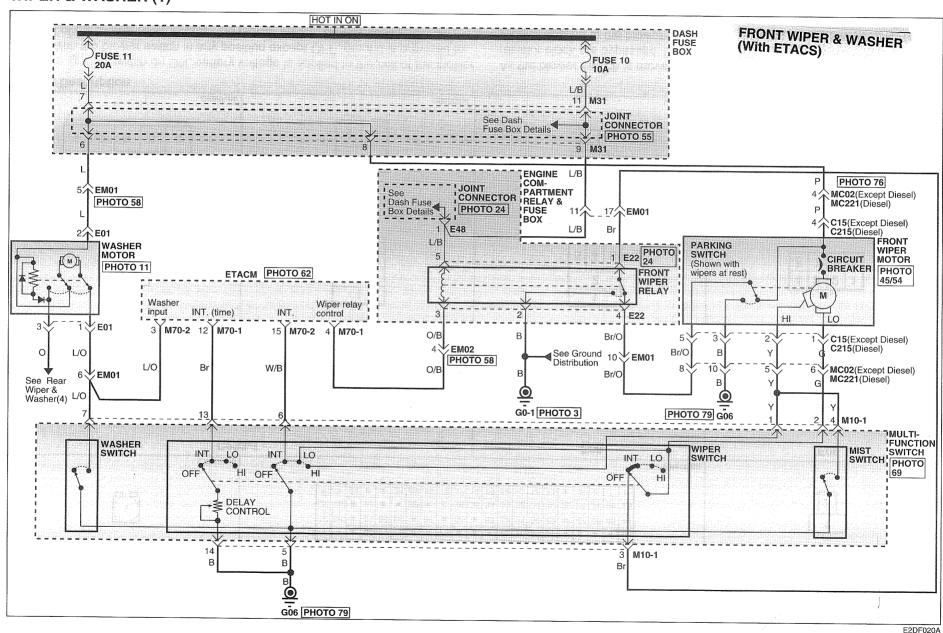


#### **Circuit Description**

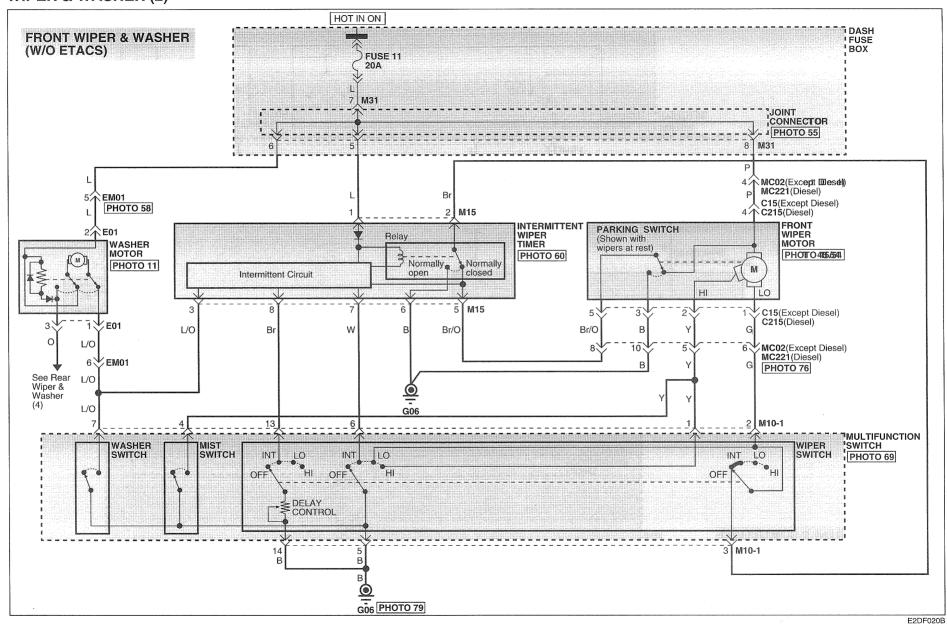
With the ignition switch on ON, battery voltage is applied to the coil of the blower relay. With the blower switch in any position except OFF, ground is provided to the coil of the blower relay through the blower switch. Battery voltage is then applied to the blower motor through the closed contacts 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 HJ, recisistors int the resistor block are bypassed. Decreasing the resistance willingreasetthe voltage applied to the blower motor. This increases the blower mutter speed. When the fan switch is in position HI, all of the resistors are bypassed. The maximum voltage is now applied to the blower motor so that is runs at the highest speed.

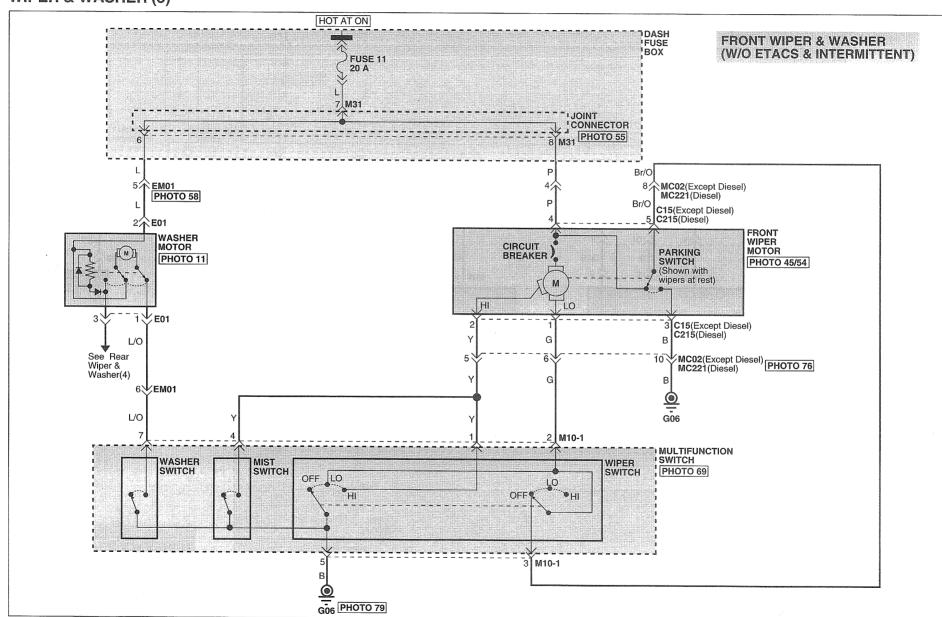
## WIPER & WASHER (1)



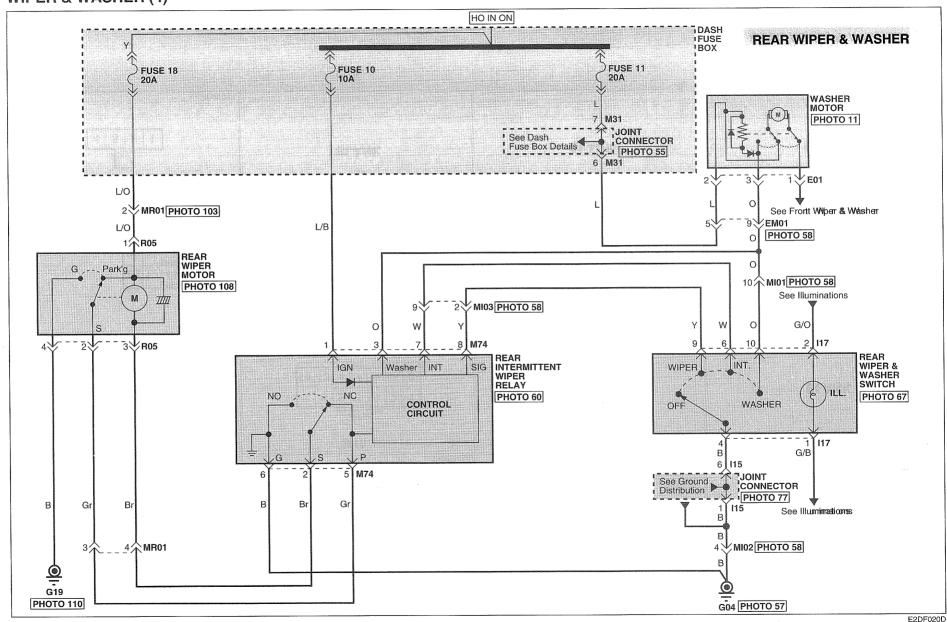
## WIPER & WASHER (2)



## WIPER & WASHER (3)



### WIPER & WASHER (4)



# WIPER & WASHER (5)

WIPER & WASHER (5)			
C15	C215	E01	E28
3 2 1	3 2 1	2 1	1 2 5 4 3
CR06F016	CR06F016 M10-1	CR03F062	CR05F00
4 * 2 1 1 10 9 * * 6 *	7 6 5 4 3 2 1 14 13 * * * * 8	<b>M15</b> * 3 2 1  8 7 6 5	BLANK
CR10F014 M7	CR14F010	M70-2	M74
	7 6 5 4 3 2 1 20 19 18 17 16 15 14	8 7 6 5 4 3 2 1 16 15 14 13 12 11 10 9	* 3 2 1 8 7 6 5
R05		31101000	Сновног
4 3 2 1	BLANK	BLANK	BLANK
CR04F010			

### WIPER & WASHER (6)

#### **Circuit Description**

#### FRONT WIPER & WASHER

All functions of the front wiper/washer circuit are controlled by the position of the front wiper and washer switches.

The wiper switch has 4 positions: OFF, INT, LO and HI.

#### Wiper Operation

I. Low and High Position

The front wiper motor has separate brushes for low and high speed operation. When the wiper switch is in LO or HI position, one of two brushes is connected to ground through the wiper switch in the multifunction switch.

II. INT Position

When the wiper switch is turned to INT, the intermittent input of the ETACS is grounded and this will provide ground to the low speed brush of the front wiper motor long enough to move the wipers out of the park position.

The remainder of the wipers' sweep is controlled by the park circuit. The cycle repeats as long as the wiper switch is in INT. The pause interval between sweeps is determined by the solid-state timer in the ETACM.

The timer is reset at the end of each sweep when the park switch returns to the at-rest position.

III. OFF position

When the wiper switch is turned OFF and the wipers are not at rest (out of PARK), the low speed brush of the front wiper motor is grounded through the wiper switch, and the park switch of the front wiper motor.

#### Washer operation

The front wiper motor operates as long as the washer switch is pressed. The WASH input to the ETACM is grounded when the washer switch is operated. And this will then provide ground to the low speed brushes of the front wiper motor.

#### **REAR WIPER & WASHER**

All functions of the rear wiper/washer circuit are controlled by the position of the rear wiper & washer switch and the rear intermittent wiper relay (has it own internal control circuit and controls the relay contracts).

The rear window wiper and washer are turned on by depressing the button. Washer fluid is sprayed on the glass as long as the button is depressed.

- 1. When the "wiper" switch is depressed, the rear window wiper starts to operate continuously.
- 2. When the "washer" switch is depressed, the rear window wiper wipes the window several times after the washer fluid sprays onto the rear window.