

# ELECTRICAL SYSTEM

## SECTION EL

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

### CONTENTS

<b>PRECAUTIONS</b> .....	4	Aiming Adjustment .....	56
Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" .....	4	<b>PARKING, LICENSE AND TAIL LAMPS</b> .....	57
Wiring Diagrams and Trouble Diagnosis .....	4	System Description .....	57
<b>HARNESS CONNECTOR</b> .....	5	Schematic .....	58
Description .....	5	Wiring Diagram - TAIL/L - .....	59
<b>STANDARDIZED RELAY</b> .....	7	CONSULT-II Inspection Procedure .....	62
Description .....	7	CONSULT-II Application Items .....	63
<b>POWER SUPPLY ROUTING</b> .....	9	Trouble Diagnoses .....	64
Schematic .....	9	<b>STOP LAMP</b> .....	65
Wiring Diagram - POWER - .....	10	Wiring Diagram - STOP/L - .....	65
Inspection .....	17	<b>BACK-UP LAMP</b> .....	66
<b>GROUND</b> .....	18	Wiring Diagram - BACK/L - .....	66
Ground Distribution .....	18	<b>FRONT FOG LAMP</b> .....	67
<b>COMBINATION SWITCH</b> .....	29	System Description .....	67
Check .....	29	Wiring Diagram - F/FOG - .....	68
Replacement .....	30	Aiming Adjustment .....	73
<b>STEERING SWITCH</b> .....	31	<b>TURN SIGNAL AND HAZARD WARNING LAMPS</b> .....	74
Check .....	31	System Description .....	74
<b>HEADLAMP (FOR USA)</b> .....	32	Wiring Diagram - TURN - .....	76
Component Parts and Harness Connector		Trouble Diagnoses .....	78
Location .....	32	Electrical Components Inspection .....	78
System Description .....	32	<b>ILLUMINATION</b> .....	79
Schematic .....	35	System Description .....	79
Wiring Diagram - H/LAMP - .....	36	Schematic .....	80
CONSULT-II Inspection Procedure .....	40	Wiring Diagram - ILL - .....	81
CONSULT-II Application Items .....	41	<b>INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS</b> .....	87
Trouble Diagnoses .....	41	System Description .....	87
Bulb Replacement .....	44	Schematic .....	90
Aiming Adjustment .....	44	Wiring Diagram - INT/L - .....	91
<b>HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM</b> - .....	46	CONSULT-II Inspection Procedure .....	95
Component Parts and Harness Connector		CONSULT-II Application Items .....	96
Location .....	46	Trouble Diagnoses for Interior Lamp Timer .....	97
System Description .....	46	<b>METERS AND GAUGES</b> .....	105
Schematic .....	49	Component Parts and Harness Connector	
Wiring Diagram - DTRL - .....	50	Location .....	105
Trouble Diagnoses .....	55	System Description .....	105
Bulb Replacement .....	56	Combination Meter .....	107
		Schematic .....	109

# CONTENTS (Cont'd)

Wiring Diagram - METER - .....	110	Window Antenna Repair .....	176
Meter/Gauge Operation and Odo/Trip Meter		<b>POWER SUNROOF</b> .....	178
Segment Check in Diagnosis Mode .....	111	System Description .....	178
Trouble Diagnoses .....	112	Wiring Diagram - SROOF - .....	179
Electrical Components Inspection .....	119	CONSULT-II Inspection Procedure .....	180
<b>WARNING LAMPS</b> .....	121	CONSULT-II Application Items .....	181
Schematic .....	121	Trouble Diagnoses .....	181
Wiring Diagram - WARN - .....	122	<b>DOOR MIRROR</b> .....	183
Electrical Components Inspection .....	126	Wiring Diagram - MIRROR - .....	183
<b>A/T INDICATOR</b> .....	127	<b>TRUNK LID AND FUEL FILLER LID OPENER</b> .....	184
Wiring Diagram - AT/IND - .....	127	Wiring Diagram - T&FLID - .....	184
<b>WARNING CHIME</b> .....	129	<b>TELEPHONE (PRE WIRE)</b> .....	185
Component Parts and Harness Connector		Wiring Diagram - PHONE - .....	185
Location .....	129	<b>POWER SEAT</b> .....	186
System Description .....	129	Schematic .....	186
Wiring Diagram - CHIME - .....	131	Wiring Diagram - SEAT - .....	187
CONSULT-II Inspection Procedure .....	134	<b>HEATED SEAT</b> .....	190
CONSULT-II Application Items .....	135	Wiring Diagram - HSEAT - .....	190
Trouble Diagnoses .....	136	<b>AUTOMATIC SPEED CONTROL DEVICE (ASCD)</b> ...	191
<b>FRONT WIPER AND WASHER</b> .....	143	Component Parts and Harness Connector	
System Description .....	143	Location .....	191
Wiring Diagram - WIPER - .....	145	System Description .....	192
Removal and Installation .....	146	Schematic .....	194
Washer Nozzle Adjustment .....	147	Wiring Diagram - ASCD - .....	195
Washer Tube Layout .....	147	Fail-safe System .....	199
<b>HORN</b> .....	148	CONSULT-II Inspection Procedure .....	199
Wiring Diagram - HORN - .....	148	CONSULT-II Self-diagnostic Results .....	200
<b>CIGARETTE LIGHTER</b> .....	149	CONSULT-II Data Monitor .....	201
Wiring Diagram - CIGAR - .....	149	Trouble Diagnoses .....	202
<b>CLOCK</b> .....	150	Electrical Component Inspection .....	214
Wiring Diagram - CLOCK - .....	150	ASCD Wire Adjustment .....	215
<b>REAR WINDOW DEFOGGER</b> .....	151	<b>POWER WINDOW</b> .....	216
Component Parts and Harness Connector		System Description .....	216
Location .....	151	Schematic .....	218
System Description .....	151	Wiring Diagram - WINDOW - .....	219
Wiring Diagram - DEF - .....	152	CONSULT-II Inspection Procedure .....	223
CONSULT-II Inspection Procedure .....	154	CONSULT-II Application Items .....	224
CONSULT-II Application Items .....	155	Trouble Diagnoses .....	225
Trouble Diagnoses .....	156	<b>POWER DOOR LOCK</b> .....	229
Electrical Components Inspection .....	159	Component Parts and Harness Connector	
Filament Check .....	160	Location .....	229
Filament Repair .....	161	System Description .....	229
<b>AUDIO</b> .....	162	Schematic .....	230
System Description .....	162	Wiring Diagram - D/LOCK - .....	231
Schematic .....	163	CONSULT-II Inspection Procedure .....	236
Wiring Diagram - AUDIO - .....	165	CONSULT-II Application Items .....	237
Trouble Diagnoses .....	172	Trouble Diagnoses .....	238
Inspection .....	173	<b>MULTI-REMOTE CONTROL SYSTEM</b> .....	247
<b>AUDIO ANTENNA</b> .....	174	Component Parts and Harness Connector	
System Description .....	174	Location .....	247
Wiring Diagram - W/ANT - .....	175	System Description .....	247
Location of Antenna .....	176	Schematic .....	250

# CONTENTS (Cont'd)

Wiring Diagram - MULTI - .....	251	System Description.....	322	GI
CONSULT-II Inspection Procedure.....	255	System Composition.....	322	
CONSULT-II Application Items .....	256	Wiring Diagram - NATS -.....	323	MA
Trouble Diagnoses.....	257	CONSULT-II .....	324	MA
ID Code Entry Procedure .....	272	Trouble Diagnoses.....	326	
Remote Controller Battery Replacement.....	276	How to Replace NVIS (NATS) IMMU.....	339	EM
<b>THEFT WARNING SYSTEM .....</b>	<b>277</b>	<b>ELECTRICAL UNITS LOCATION.....</b>	<b>340</b>	
Component Parts and Harness Connector		Engine Compartment.....	340	
Location .....	277	Passenger Compartment.....	341	LC
System Description.....	278	<b>HARNES LAYOUT .....</b>	<b>344</b>	
Schematic .....	282	How to Read Harness Layout .....	344	
Wiring Diagram - THEFT -.....	284	Outline.....	345	EC
CONSULT-II Inspection Procedure.....	290	Main Harness.....	346	
CONSULT-II Application Item .....	291	Engine Room Harness .....	349	FE
Trouble Diagnoses.....	292	Engine Control Harness .....	352	FE
<b>SMART ENTRANCE CONTROL UNIT .....</b>	<b>310</b>	Body Harness .....	354	
Description .....	310	Body No. 2 Harness .....	356	CL
CONSULT-II .....	312	Tail Harness .....	358	
Schematic .....	314	Room Lamp Harness.....	359	
Smart Entrance Control Unit Inspection Table .....	316	Front Door Harness .....	360	MT
<b>INTEGRATED HOMELINK TRANSMITTER .....</b>	<b>318</b>	Rear Door Harness.....	362	
Wiring Diagram - TRNSMT - .....	318	<b>BULB SPECIFICATIONS .....</b>	<b>364</b>	
Trouble Diagnoses.....	319	Headlamp.....	364	AT
<b>NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM</b>		Exterior Lamp .....	364	
<b>- NATS) .....</b>	<b>321</b>	Interior Lamp.....	364	AX
Component Parts and Harness Connector		<b>WIRING DIAGRAM CODES (CELL CODES).....</b>	<b>365</b>	
Location .....	321			SU
				BR
				ST
				RS
				BT
				HA
				SC
				<b>EL</b>
				IDX

## PRECAUTIONS

Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

### Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

NFEL0001

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER" used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. The SRS system composition which is available to NISSAN MODEL A33 is as follows (The composition varies according to optional equipment.):

- For a frontal collision  
The Supplemental Restraint System consists of driver air bag module (located in the center of the steering wheel), front passenger air bag module (located on the instrument panel on passenger side), seat belt pre-tensioners, a diagnosis sensor unit, warning lamp, wiring harness and spiral cable.
- For a side collision  
The Supplemental Restraint System consists of front side air bag module (located in the outer side of front seat), satellite sensor, diagnosis sensor unit (one of components of air bags for a frontal collision), wiring harness, warning lamp (one of components of air bags for a frontal collision).

Information necessary to service the system safely is included in the **RS section** of this Service Manual.

#### **WARNING:**

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance should be performed by an authorized NISSAN dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by intentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the RS section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. Spiral cable and wiring harnesses covered with yellow insulation or tape either just before the harness connectors or for the complete harness are related to the SRS.**

### Wiring Diagrams and Trouble Diagnosis

NFEL0002

When you read wiring diagrams, refer to the following:

- GI-11, "HOW TO READ WIRING DIAGRAMS"
- EL-9, "POWER SUPPLY ROUTING" for power distribution circuit

When you perform trouble diagnosis, refer to the following:

- GI-35, "HOW TO FOLLOW TEST GROUP IN TROUBLE DIAGNOSIS"
- GI-25, "HOW TO PERFORM EFFICIENT DIAGNOSIS FOR AN ELECTRICAL INCIDENT"

Check for any Service bulletins before servicing the vehicle.

## Description

NFEL0003

NFEL0003S01

### HARNESS CONNECTOR (TAB-LOCKING TYPE)

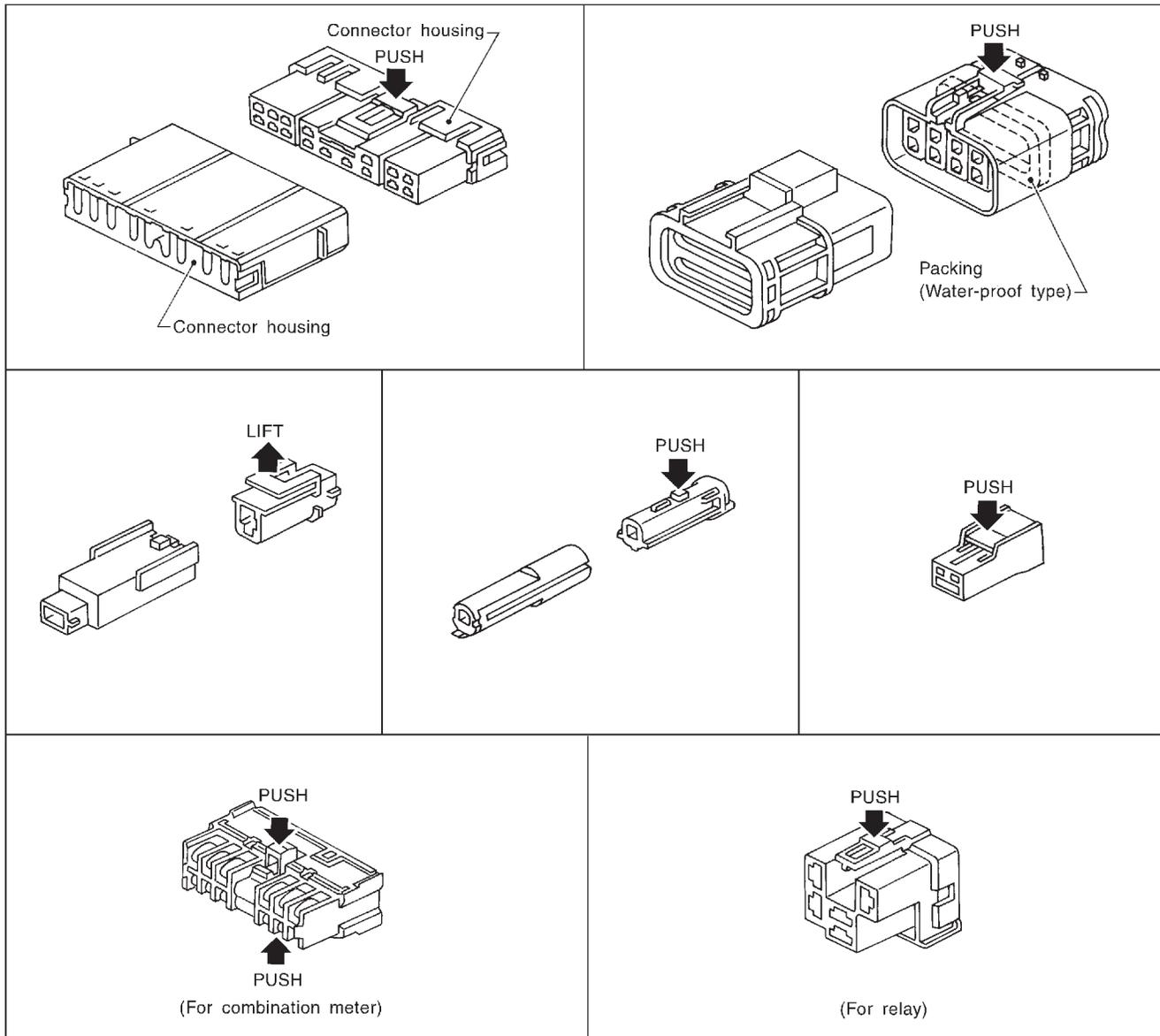
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

Refer to the next page for description of the slide-locking type connector.

**CAUTION:**

**Do not pull the harness or wires when disconnecting the connector.**

[Example]



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC

**EL**

SEL769DA

IDX

# HARNESS CONNECTOR

Description (Cont'd)

## HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

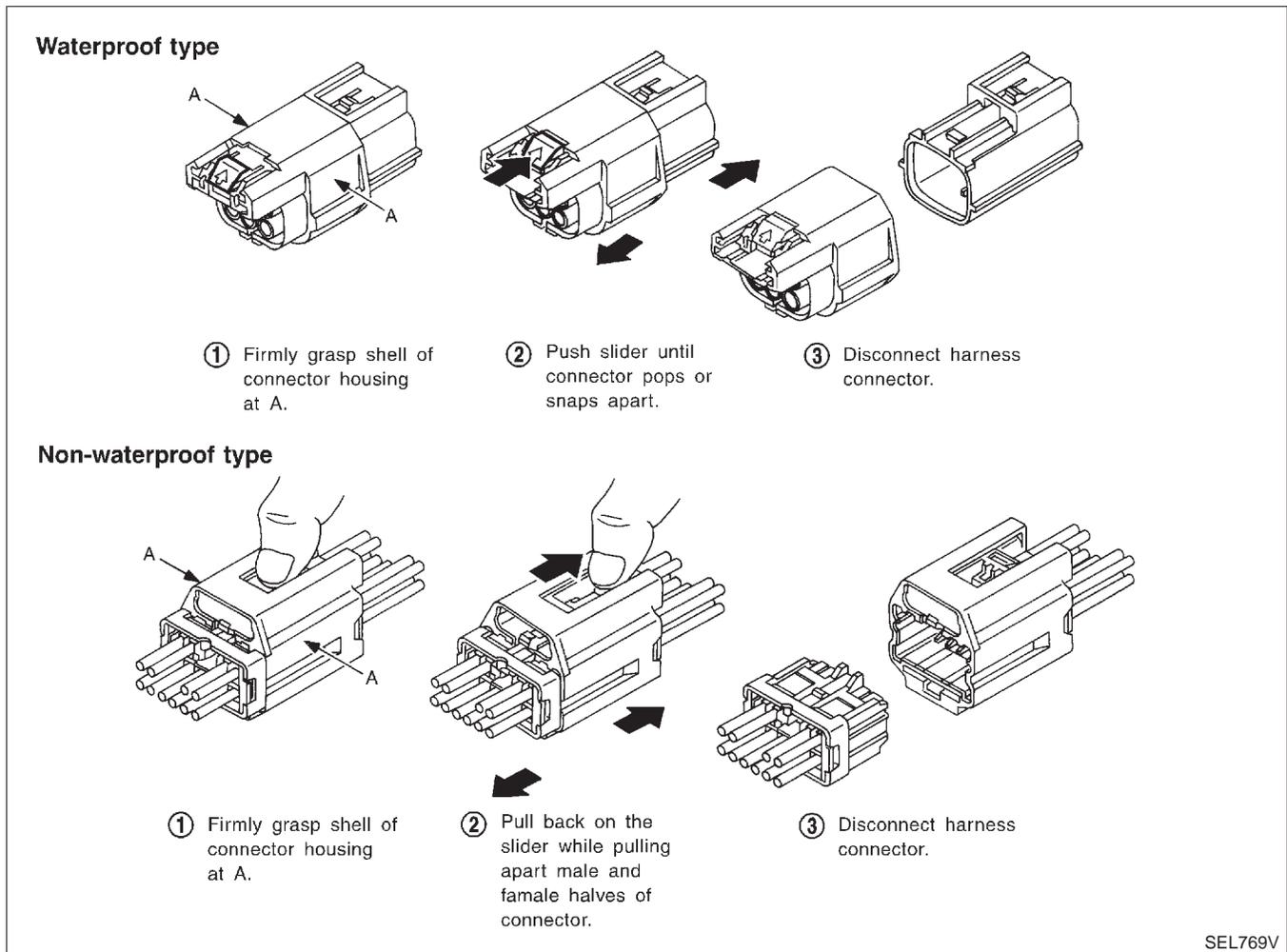
=NFEL0003S02

- A new style slide-locking type connector is used on certain systems and components, especially those related to OBD.
- The slide-locking type connectors help prevent incomplete locking and accidental looseness or disconnection.
- The slide-locking type connectors are disconnected by pushing or pulling the slider. Refer to the illustration below.

### CAUTION:

- Do not pull the harness or wires when disconnecting the connector.
- Be careful not to damage the connector support bracket when disconnecting the connector.

[Example]



SEL769V

# STANDARDIZED RELAY

Description

## Description

### NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

Relays can mainly be divided into three types: normal open, normal closed and mixed type relays.

NFEL0004

NFEL0004S01

GI

MA

EM

LC

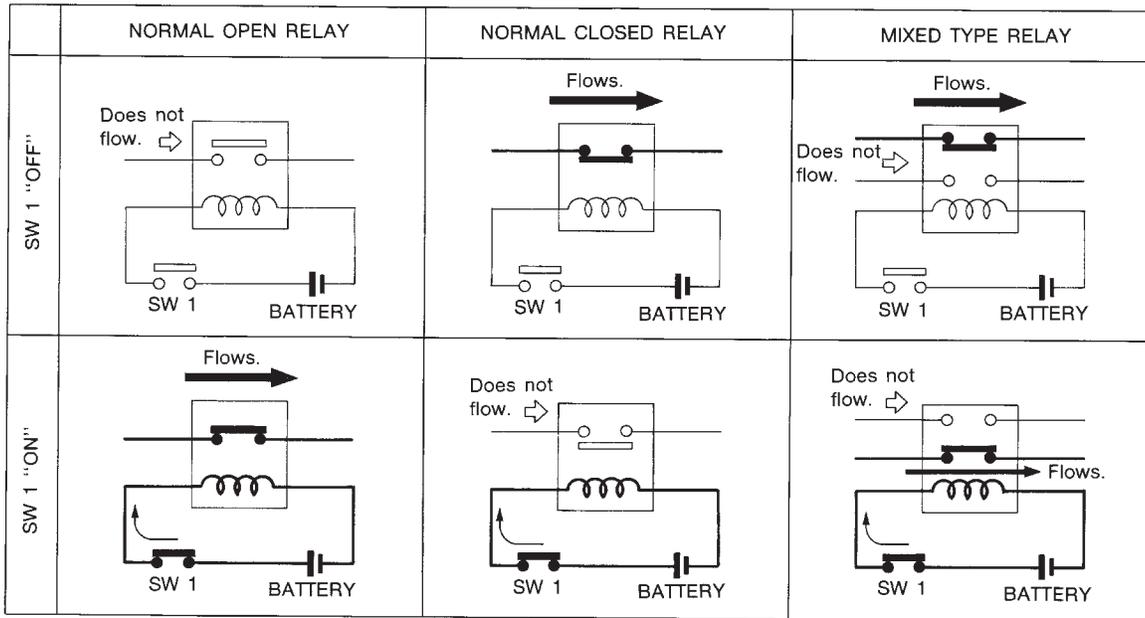
EC

FE

CL

MT

SEL881H



### TYPE OF STANDARDIZED RELAYS

NFEL0004S02

AT

1M	1 Make	2M	2 Make
1T	1 Transfer	1M-1B	1 Make 1 Break

AX

SU

BR

ST

RS

BT

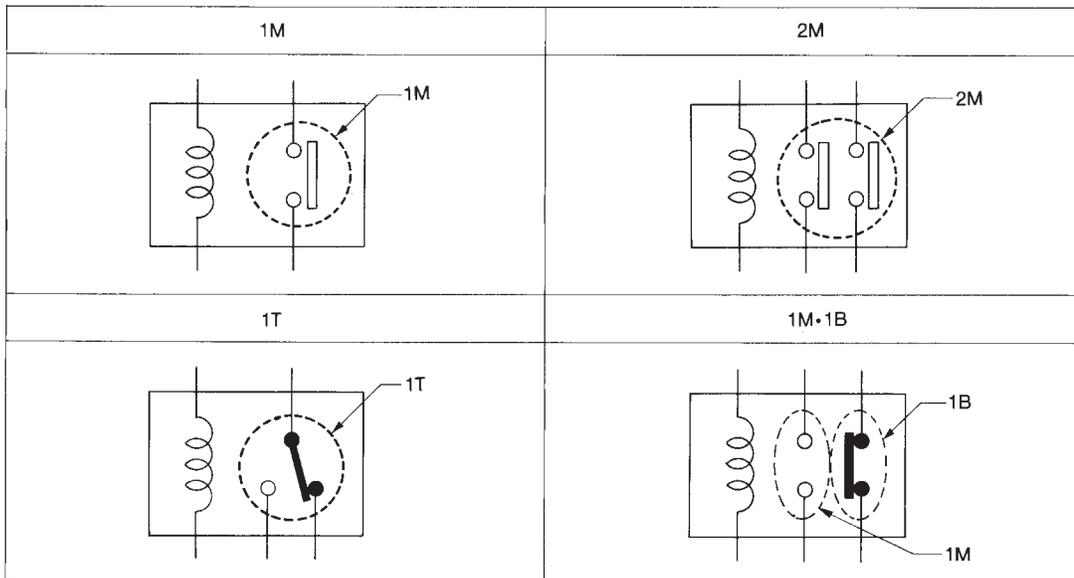
HA

SC

SEL882H

EL

IDX



# STANDARDIZED RELAY

Description (Cont'd)

Type	Outer view	Circuit	Connector symbol and connection	Case color
1T				BLACK
2M				BROWN
1M•1B				GRAY
1M				BLUE

The arrangement of terminal numbers on the actual relays may differ from those shown above.

SEL188W



# POWER SUPPLY ROUTING

Wiring Diagram — POWER —

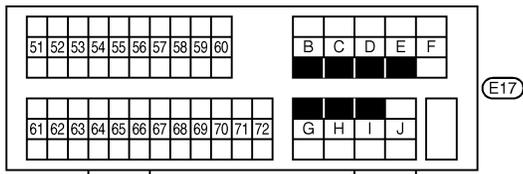
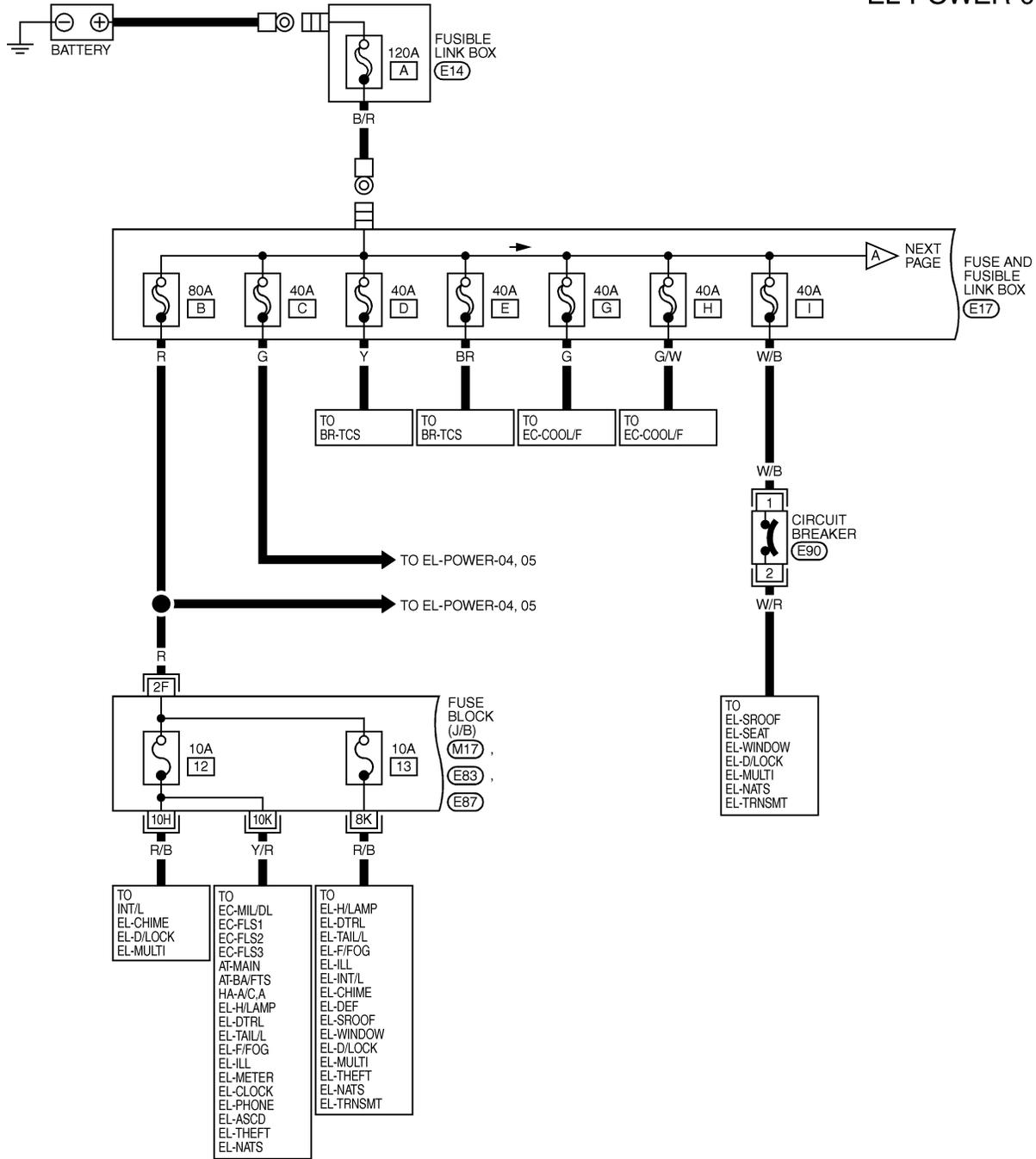
## Wiring Diagram — POWER —

### BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

NFEL0006

NFEL0006S01

EL-POWER-01



REFER TO THE FOLLOWING.

(M17), (E83), (E87)

- FUSE BLOCK -  
- JUNCTION BOX (J/B)

1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16		17	18	19	20	
21	22	23	24	25	26	27	28	29	30	31



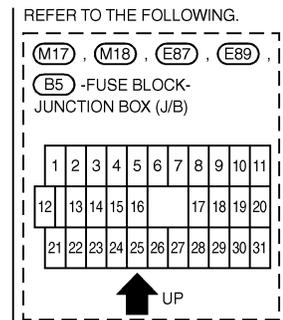
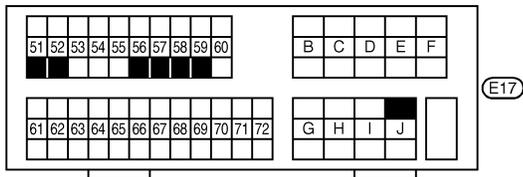
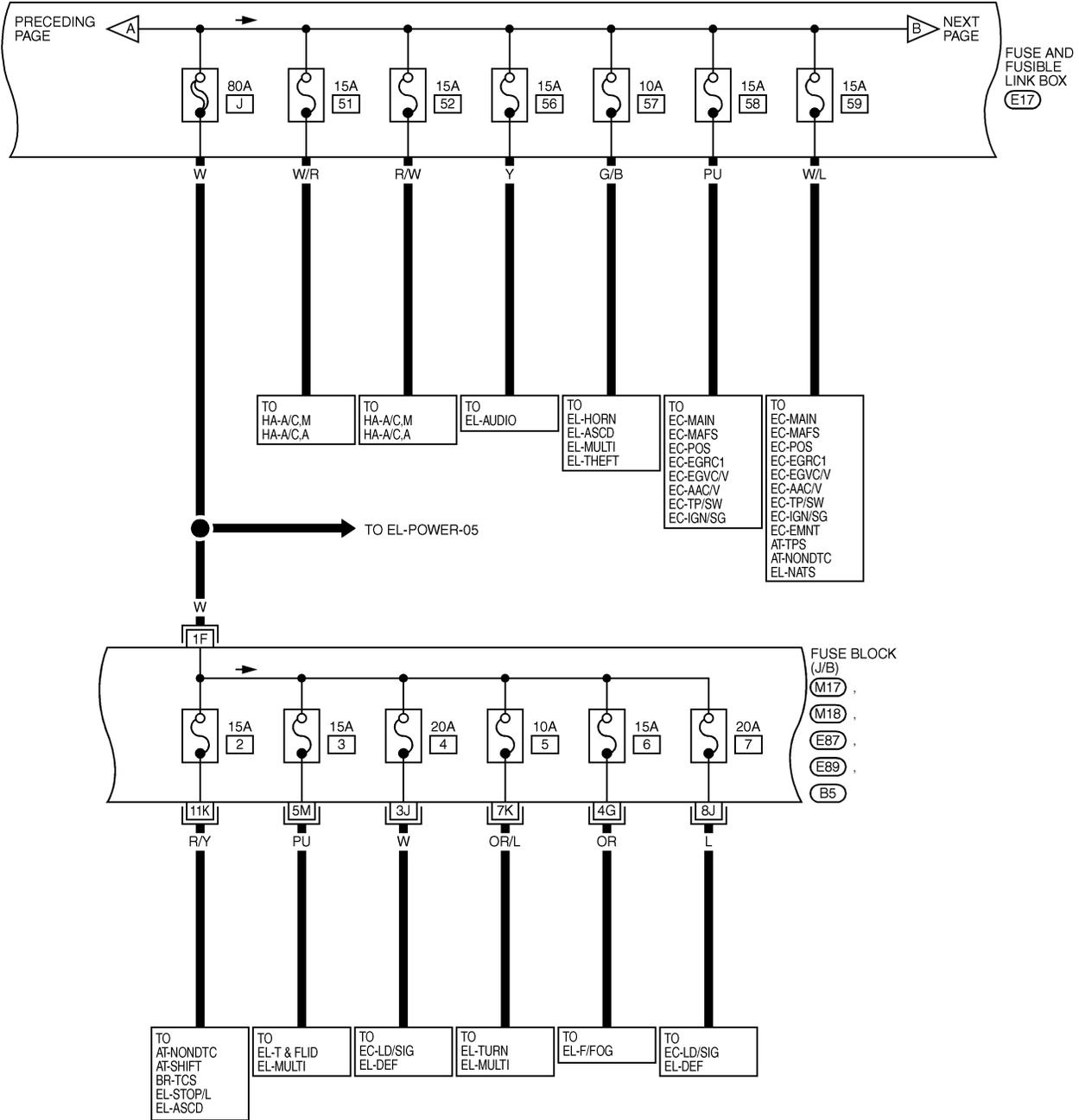
MEL611L

# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

## EL-POWER-02

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

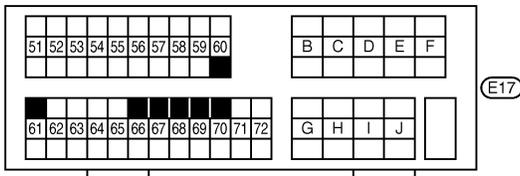
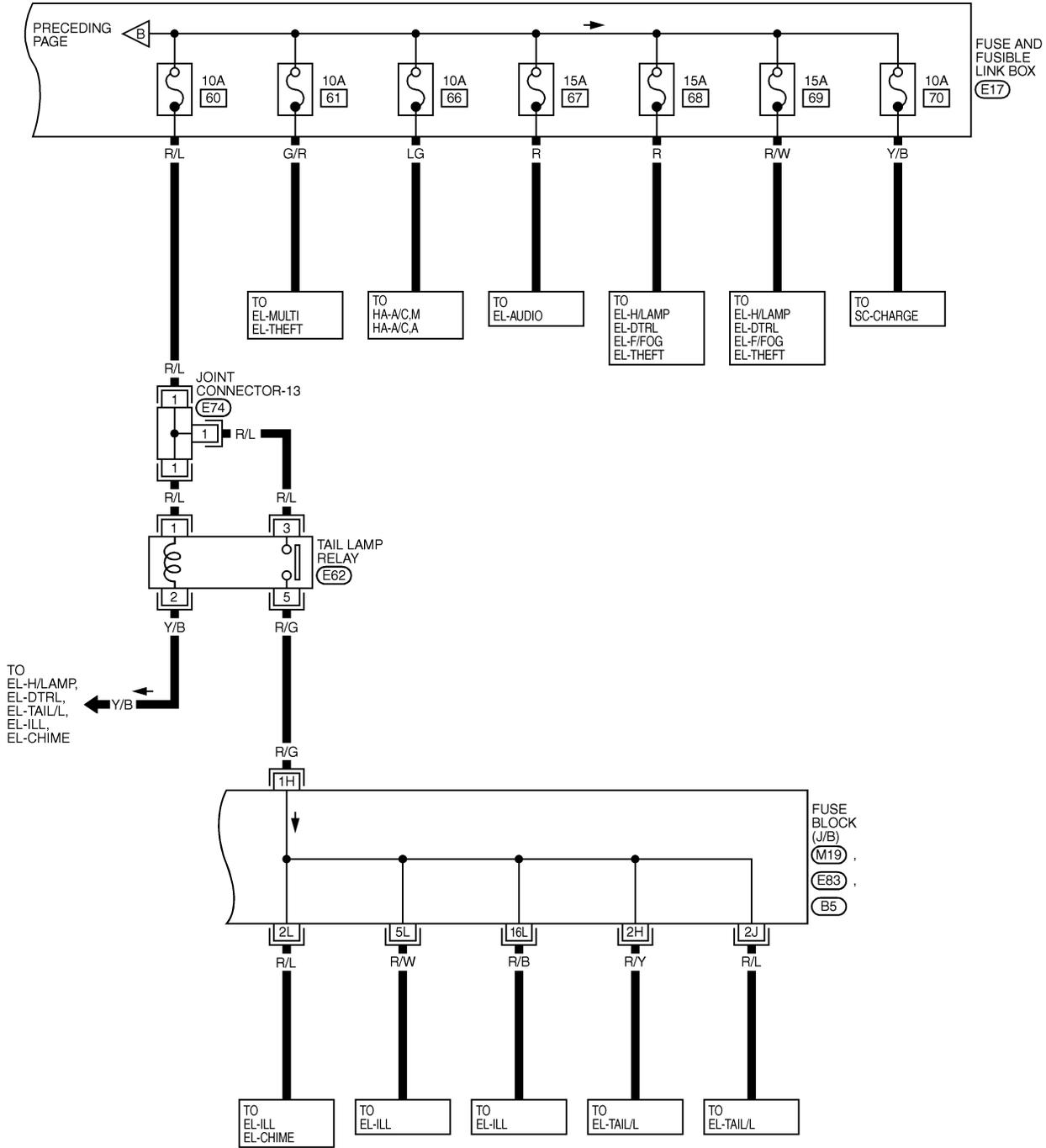


MEL636L

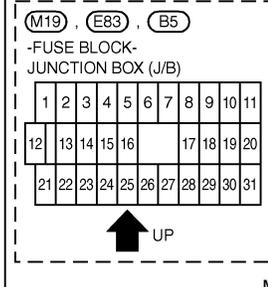
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-03



REFER TO THE FOLLOWING.



MEL219K

# POWER SUPPLY ROUTING

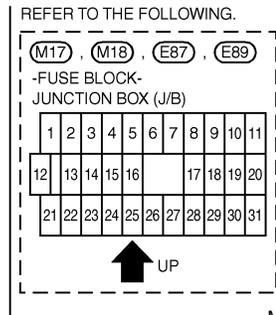
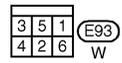
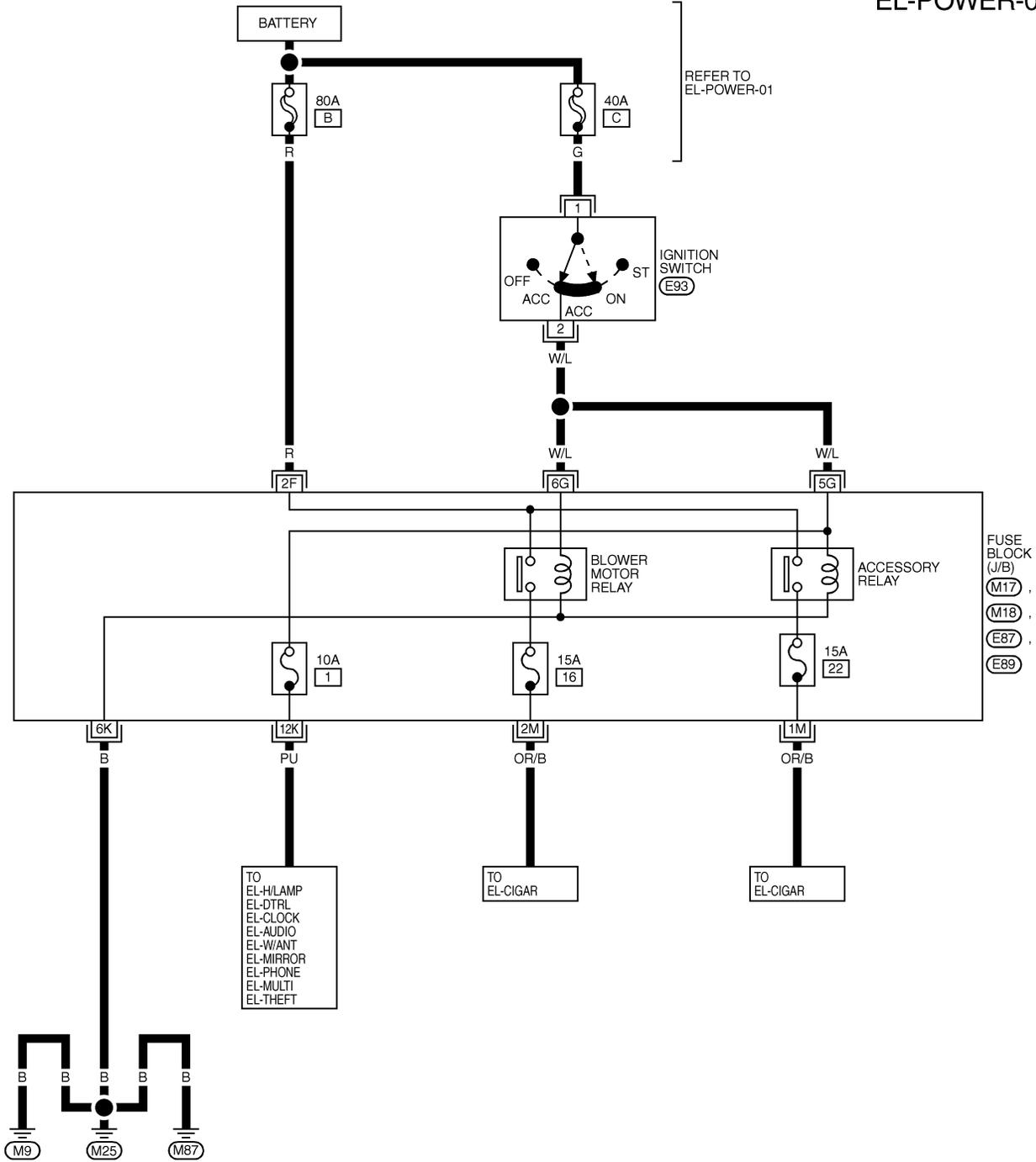
Wiring Diagram — POWER — (Cont'd)

## ACCESSORY POWER SUPPLY — IGNITION SW. IN "ACC" OR "ON"

NFEL0006S02

EL-POWER-04

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX



MEL220K

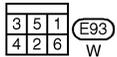
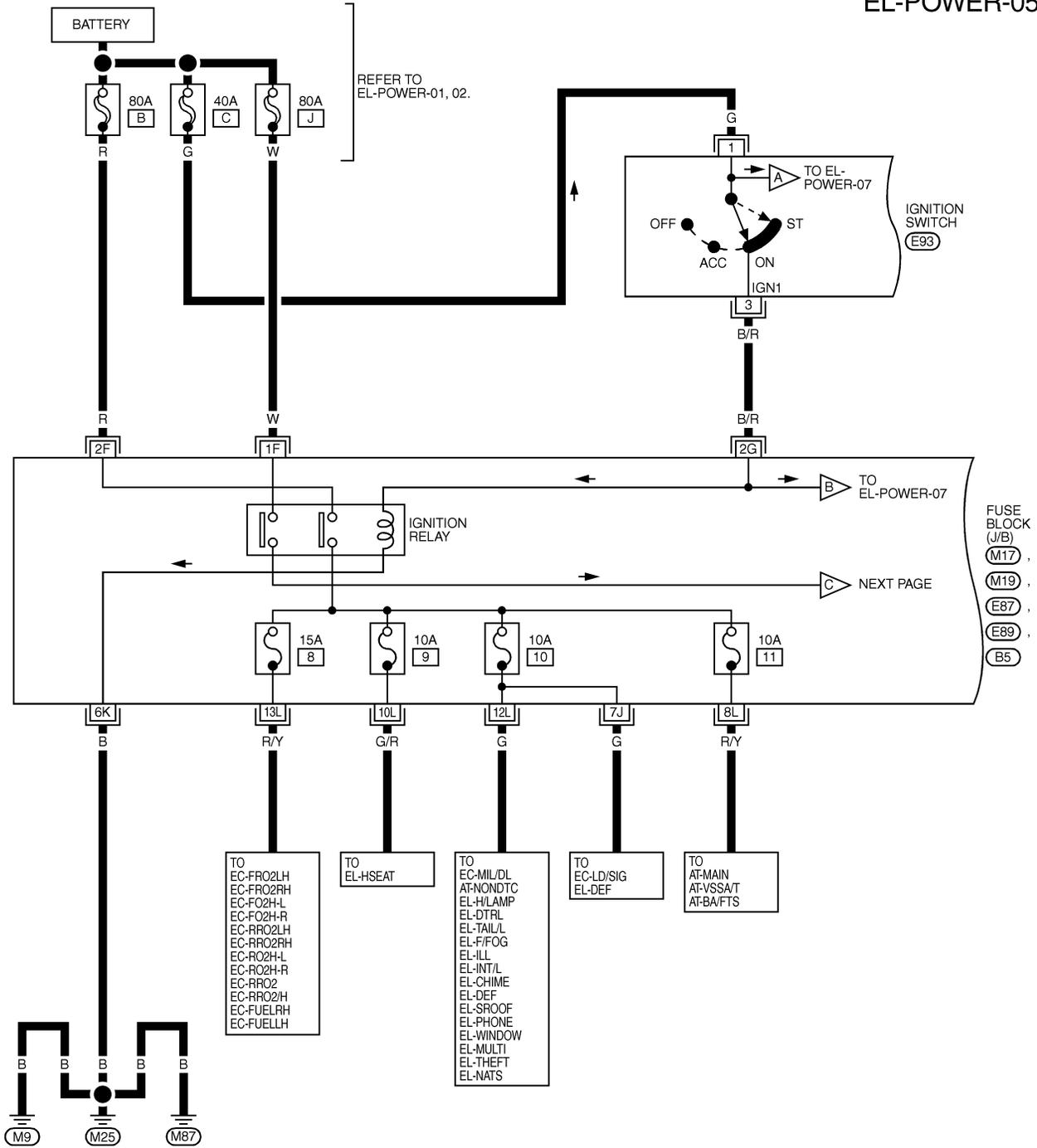
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

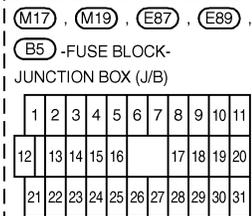
## IGNITION POWER SUPPLY — IGNITION SW. IN "ON" AND/OR "START"

NFEL0006S03

EL-POWER-05



REFER TO THE FOLLOWING.

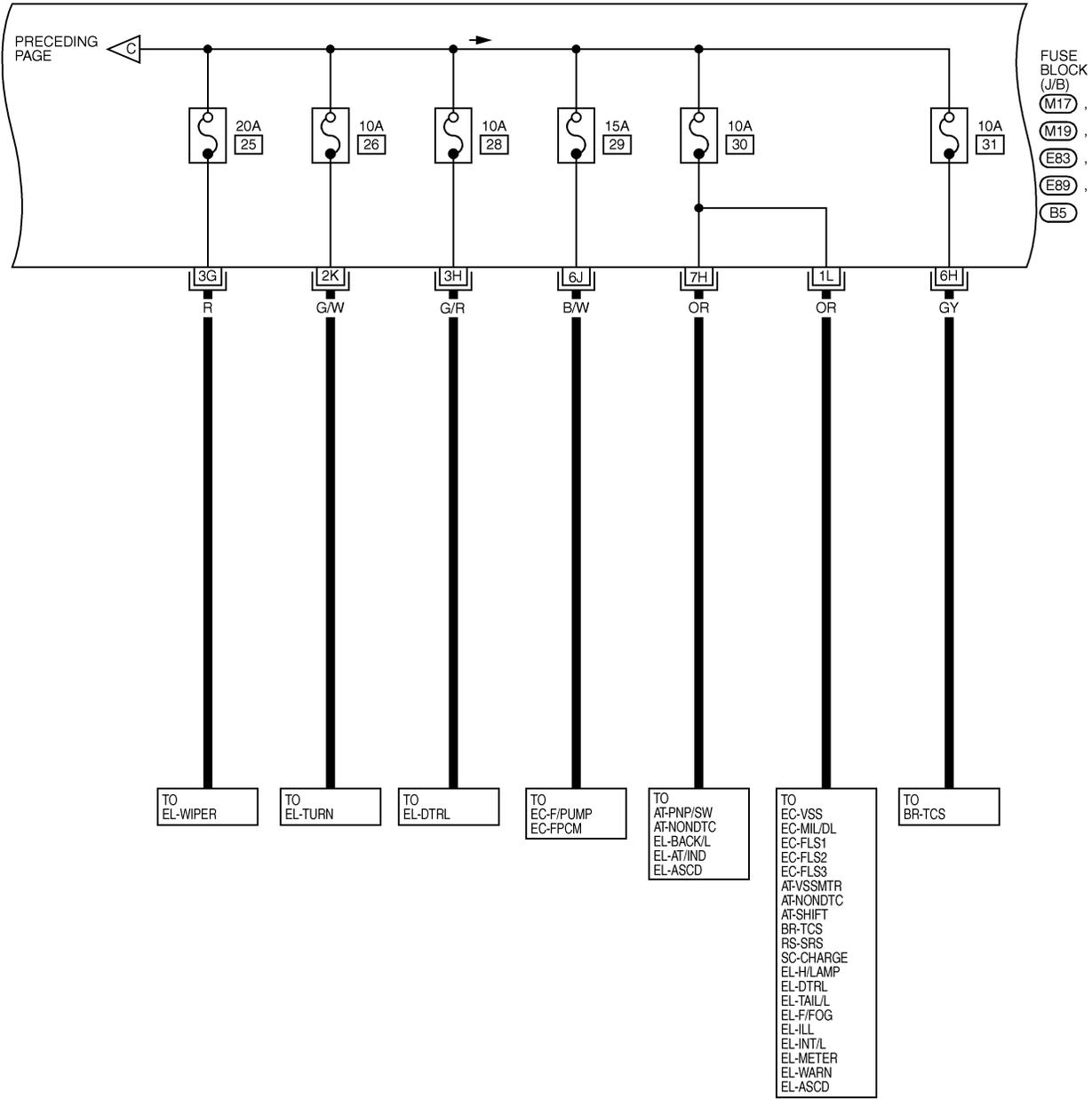


MEL637L

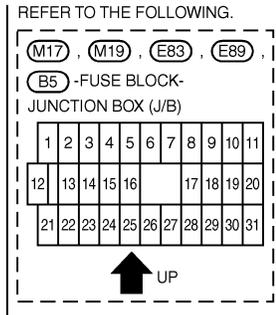
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-06



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

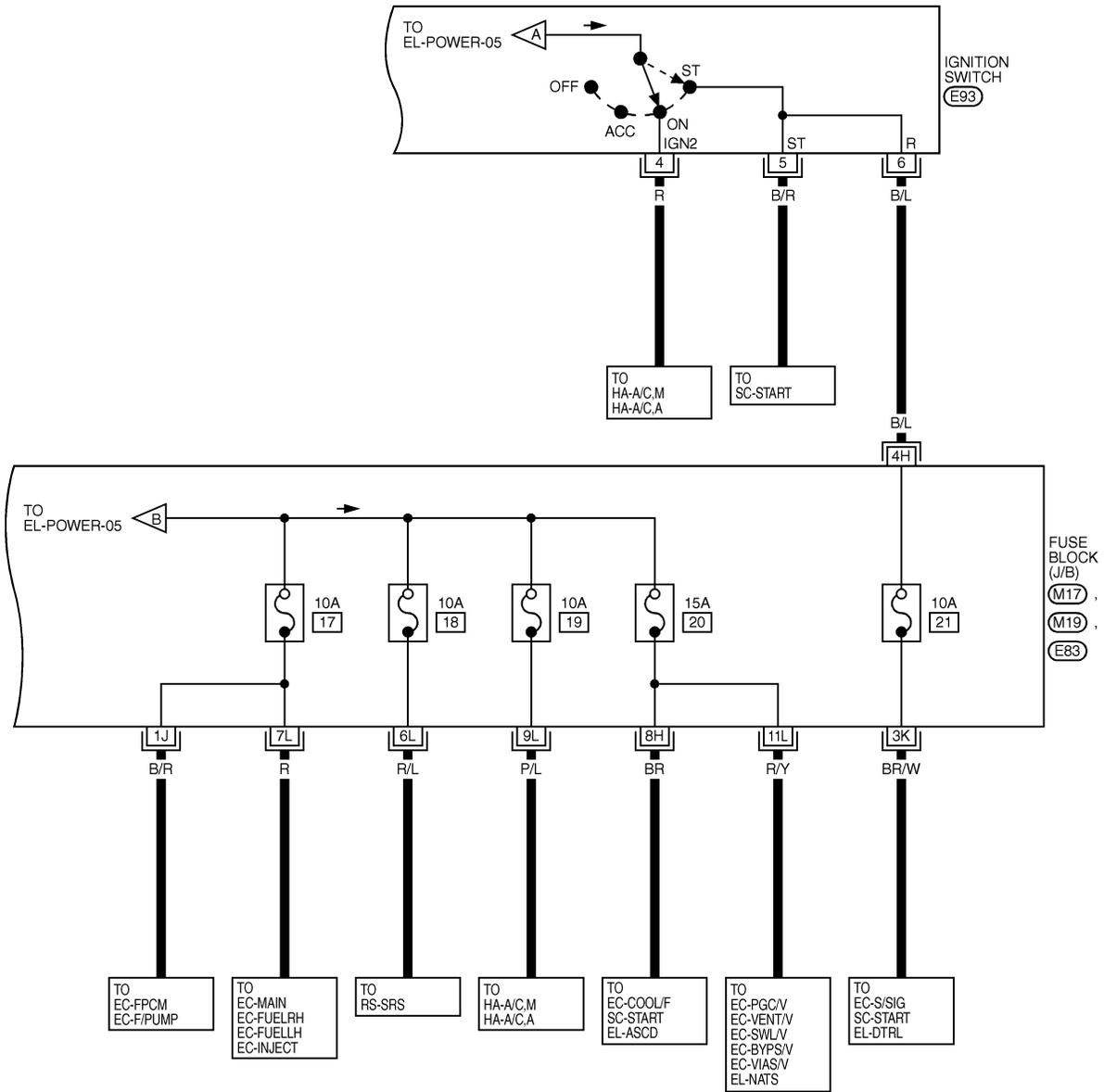


MEL638L

# POWER SUPPLY ROUTING

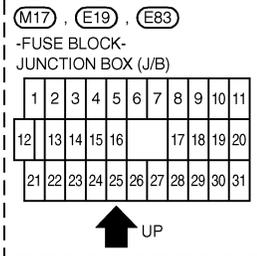
Wiring Diagram — POWER — (Cont'd)

EL-POWER-07

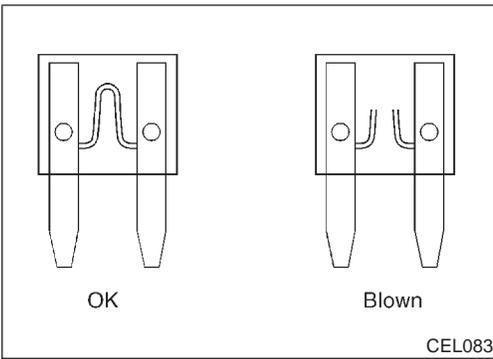


3	5	1	E93 W
4	2	6	

REFER TO THE FOLLOWING.



MEL639L



## Inspection

### FUSE

NFEL0007

NFEL0007S01

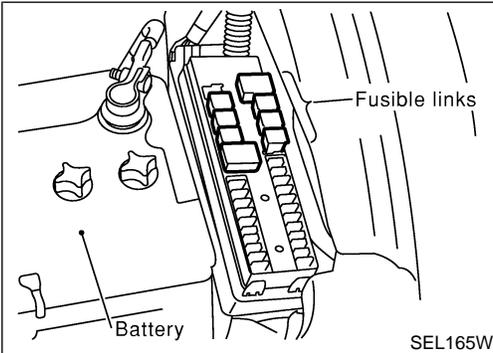
- If fuse is blown, be sure to eliminate cause of problem before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for "ELECTRICAL PARTS (BAT)" if vehicle is not used for a long period of time.

GI

MA

EM

LC



### FUSIBLE LINK

NFEL0007S02

A melted fusible link can be detected either by visual inspection or by feeling with finger tip. If its condition is questionable, use circuit tester or test lamp.

EC

#### CAUTION:

- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of problem.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring harness, vinyl or rubber parts.

FE

CL

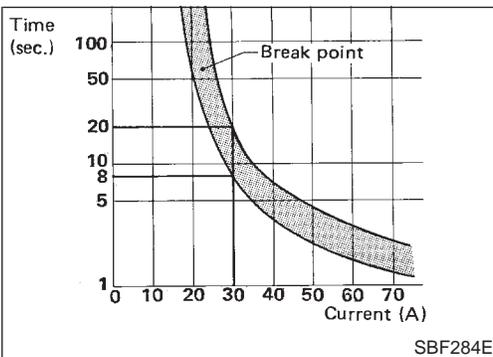
MT

AT

AX

SU

BR



### CIRCUIT BREAKER

NFEL0007S03

For example, when current is 30A, the circuit is broken within 8 to 20 seconds.

ST

RS

BT

HA

SC

EL

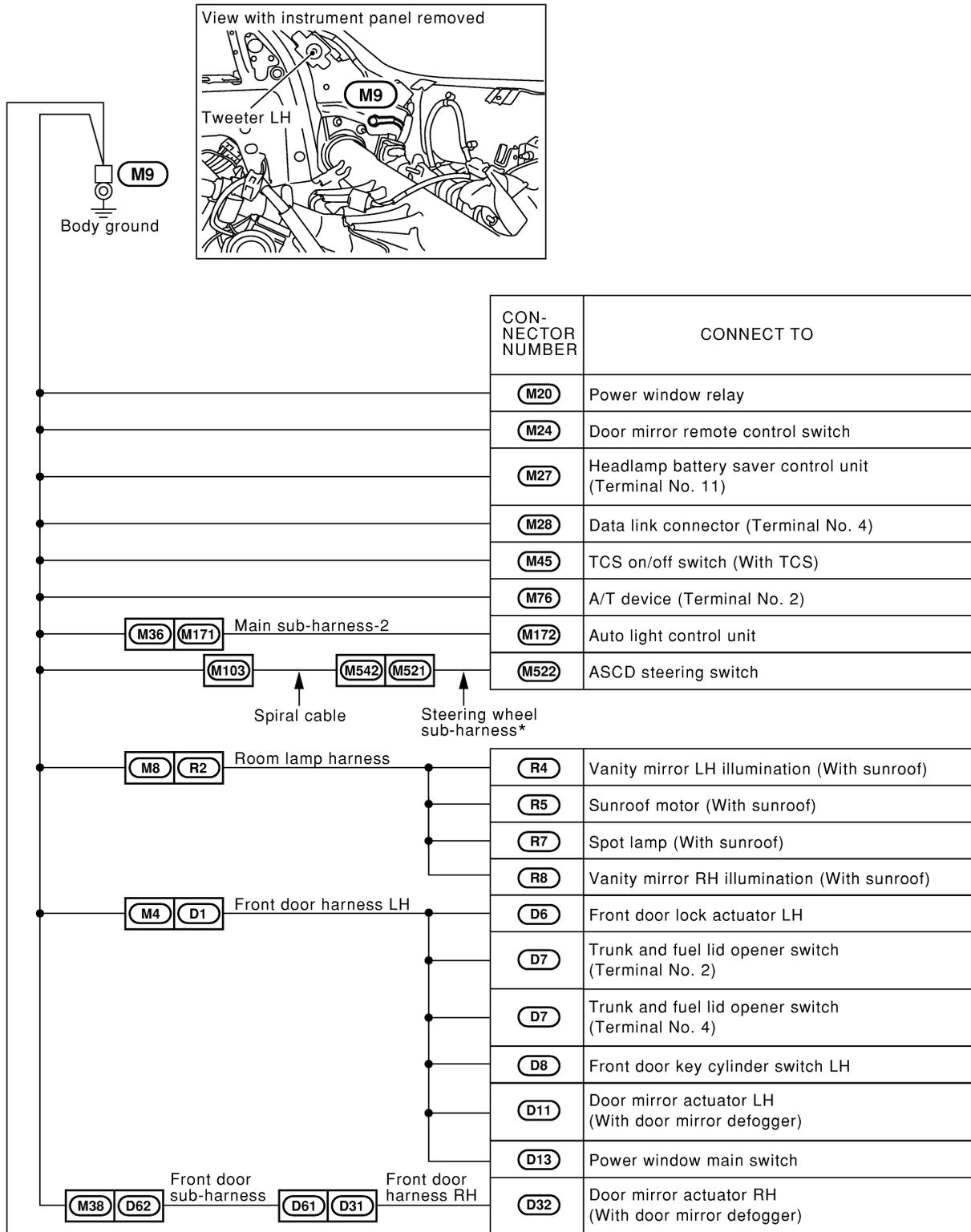
IDX

## Ground Distribution

NFEL0008

NFEL0008S01

### MAIN HARNESS

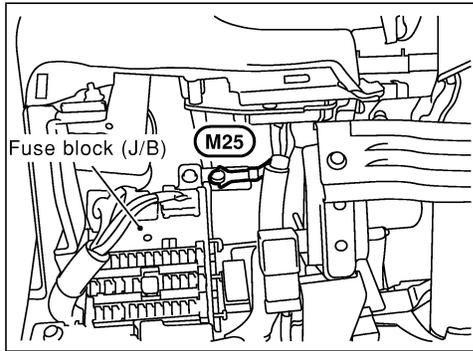
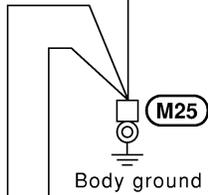


▲ A

Next page

\* : This sub-harness is not shown in "Harness Layout", EL section.

**A** Preceding page



GI

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BR

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RS

BT

HA

SC

**EL**

IDX

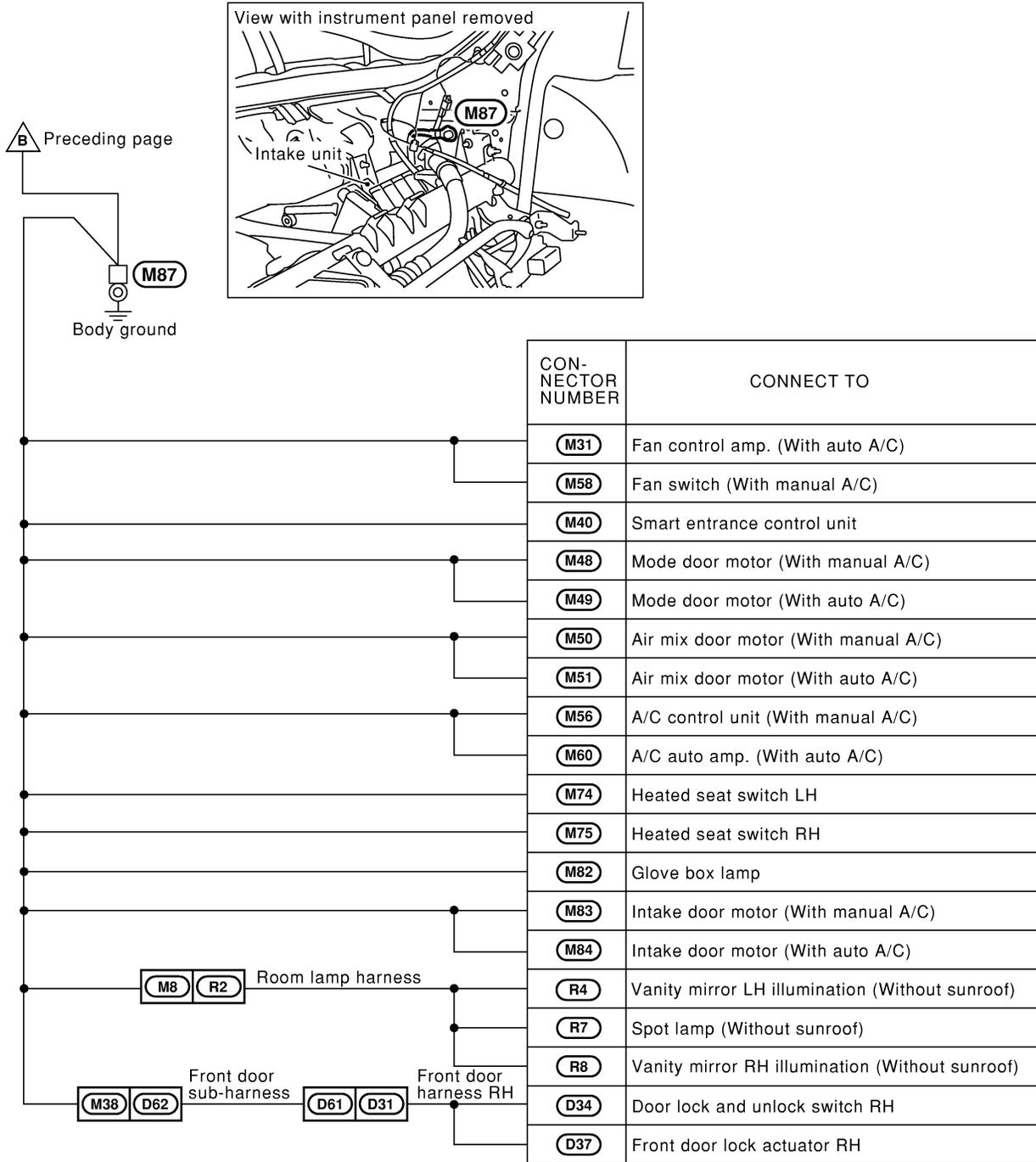
CON-NECTOR NUMBER	CONNECT TO
M16	Telephone
M17	Fuse block (J/B) (Terminal No. 6K) • Accessory relay • Blower motor relay • Ignition relay
M21	Combination flasher unit
M23	Illumination control switch
M26	Headlamp battery saver control unit (Terminal No. 4)
M32	Combination meter (Terminal No. 30) • A/T indicator (With A/T) • Turn signal indicator
M34	Combination meter (Terminal No. 59) • Air bag warning lamp • Fuel gauge • Water temp. gauge • Tachometer • Odo/trip meter
M52	ASCD control unit
M53	Cigarette lighter
M72	Ashtray illumination
M76	A/T device (Terminal No. 6)
M78	Power socket
M112	Air bag diagnosis sensor unit
M152	Clock

M30 M151 Main sub-harness-1

**B** Next page

# GROUND

Ground Distribution (Cont'd)



MEL340K

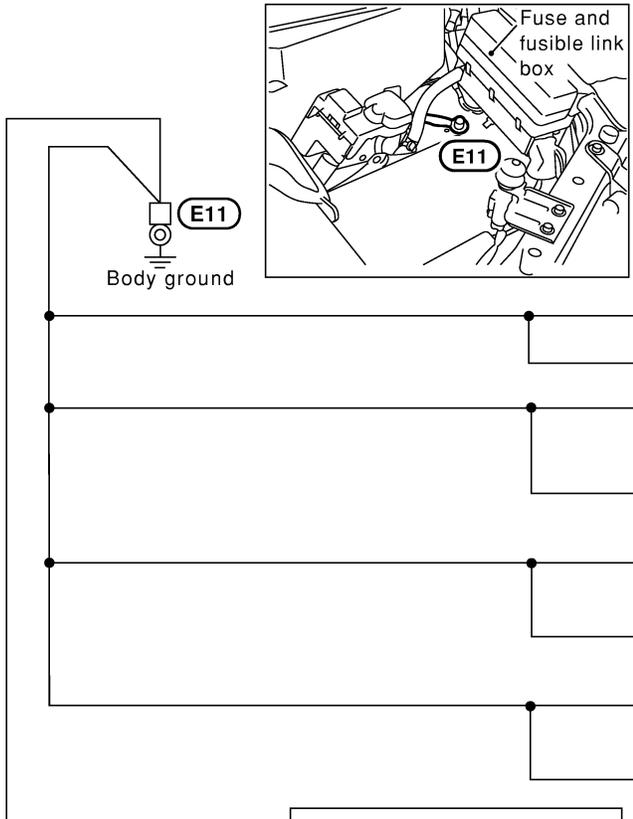
# GROUND

Ground Distribution (Cont'd)

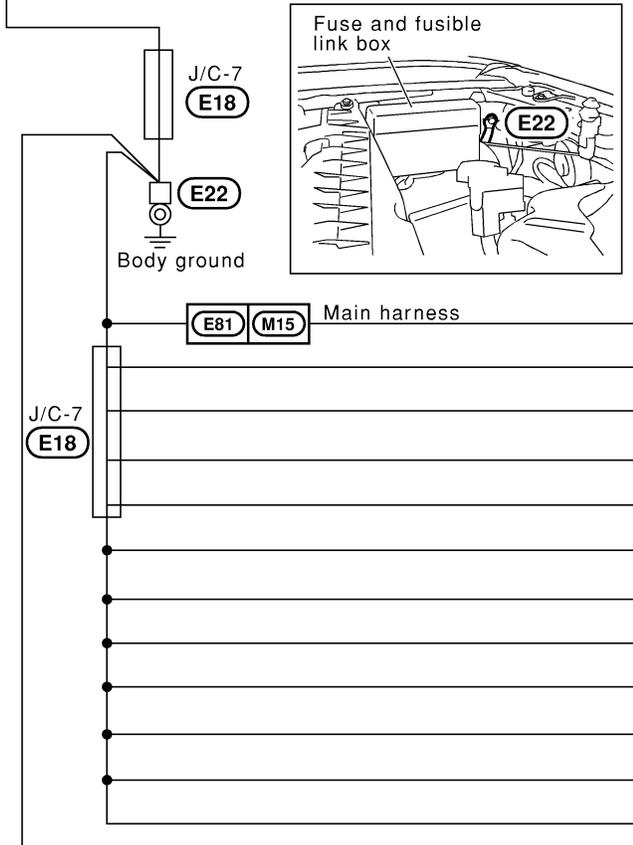
## ENGINE ROOM HARNESS

NFEL0008S02

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX



CON-NECTOR NUMBER	CONNECT TO
E33	ABS solenoid valve relay (With TCS)
E118	ABS solenoid valve relay (Without TCS)
E9	ABS control unit (Without TCS) (Terminal No. 28)
E91	ABS/TCS control unit (With TCS) (Terminal No. 28)
E9	ABS control unit (Without TCS) (Terminal No. 29)
E91	ABS/TCS control unit (With TCS) (Terminal No. 29)
E9	ABS control unit (Without TCS) (Terminal No. 39)
E91	ABS/TCS control unit (With TCS) (Terminal No. 39)



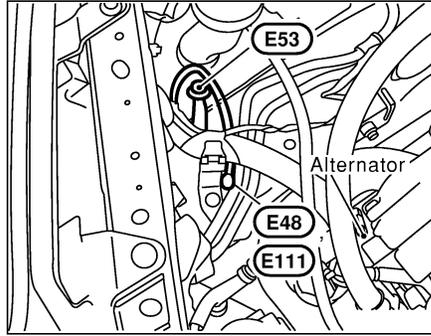
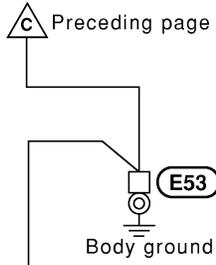
CON-NECTOR NUMBER	CONNECT TO
M59	A/C auto amp. (For Canada with auto A/C)
E23	Front side marker lamp LH
E78	Front wiper motor
E96	Combination switch (Front wiper switch)
E103	Blower motor relay
E24	Parking lamp and front turn signal lamp LH
E25	Front fog lamp LH
E28	Cooling fan relay-2
E38	Cooling fan motor-1
E63	Theft warning horn relay-2
E84	Clutch interlock switch (With M/T)
E100	Combination switch (Lighting switch)

C/ Next page

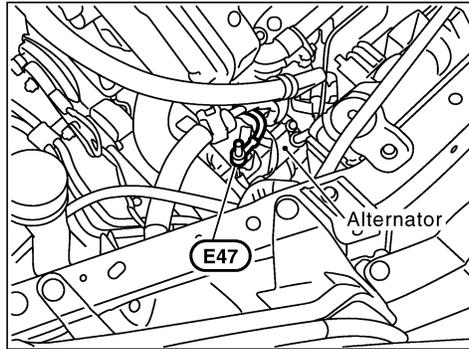
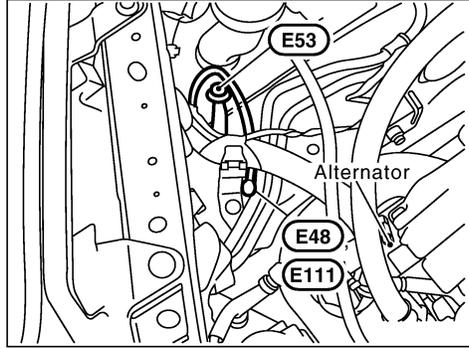
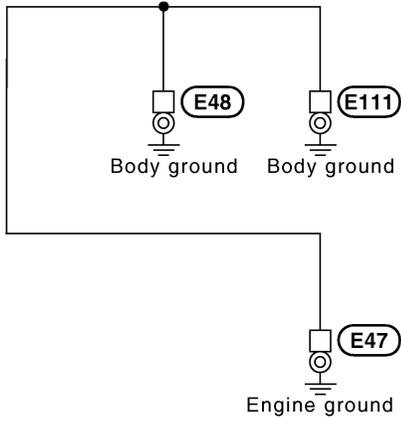
MEL341K

# GROUND

Ground Distribution (Cont'd)



CON-NECTOR NUMBER	CONNECT TO
E1	Brake fluid level switch
E26	Hood switch
E31	Cooling fan relay-3
E97	Combination switch (Lighting switch)
E42	Washer level switch
E43	Cooling fan motor-2
E44	Front fog lamp RH
E45	Parking lamp and front turn signal lamp RH
E49	Front side marker lamp RH
E59	Daytime light control unit (For Canada)
E69	Door mirror defogger relay (With door mirror defogger)



GI

MA

EM

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BR

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RS

BT

HA

SC

**EL**

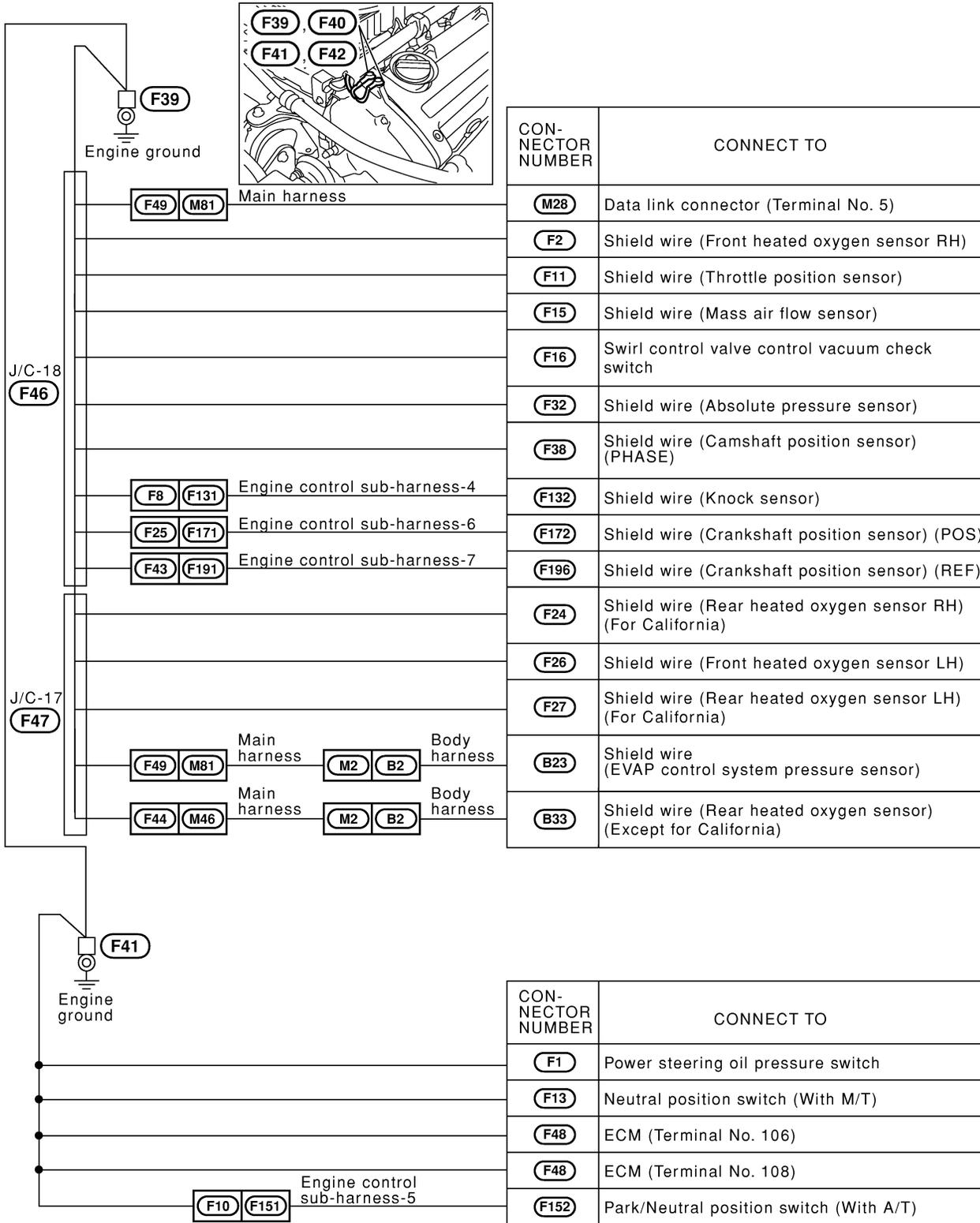
IDX

# GROUND

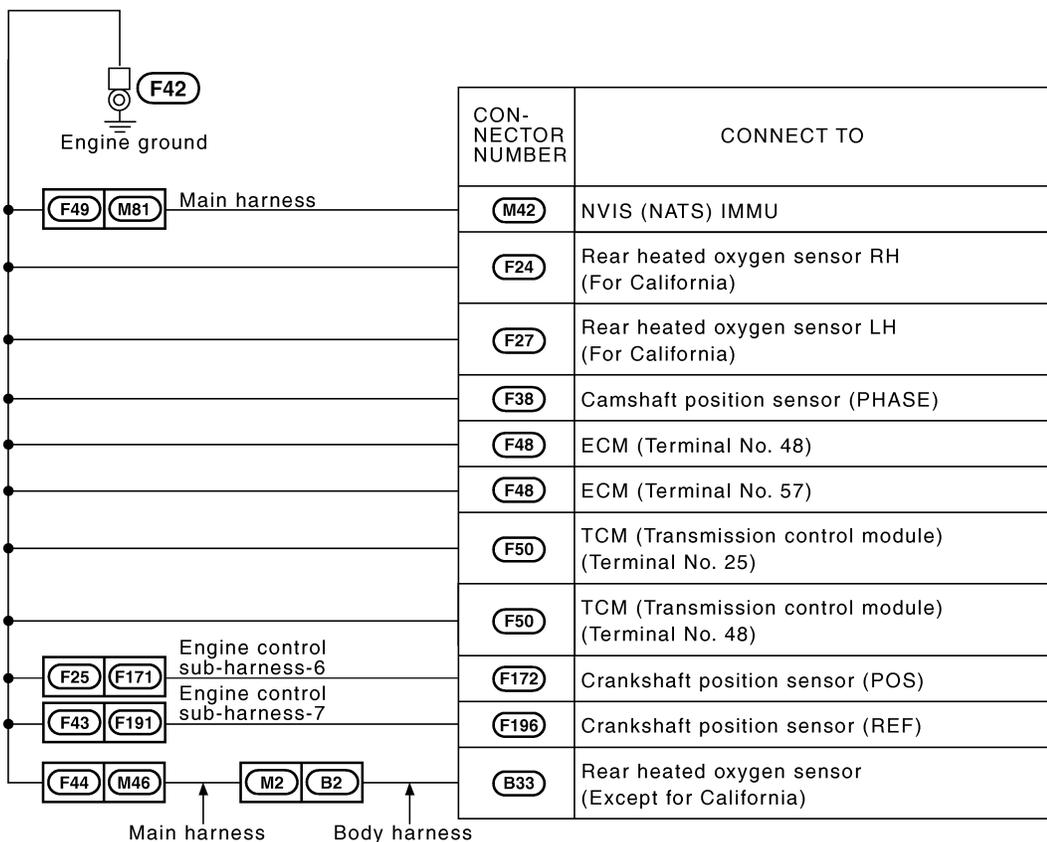
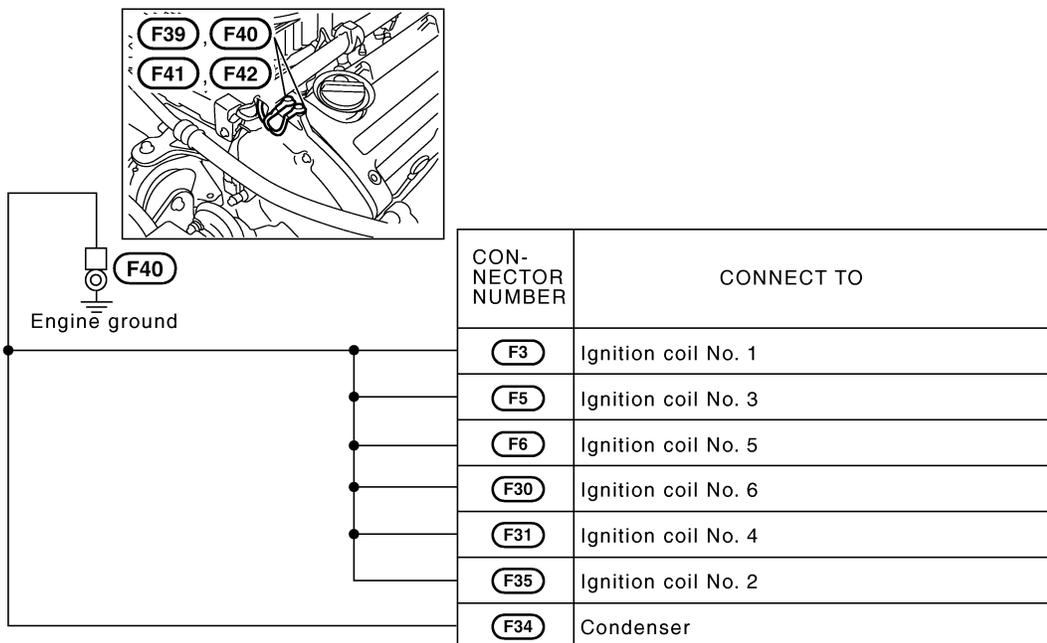
Ground Distribution (Cont'd)

## ENGINE CONTROL HARNESS

NFEL0008S03



MEL344K



GI

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**EL**

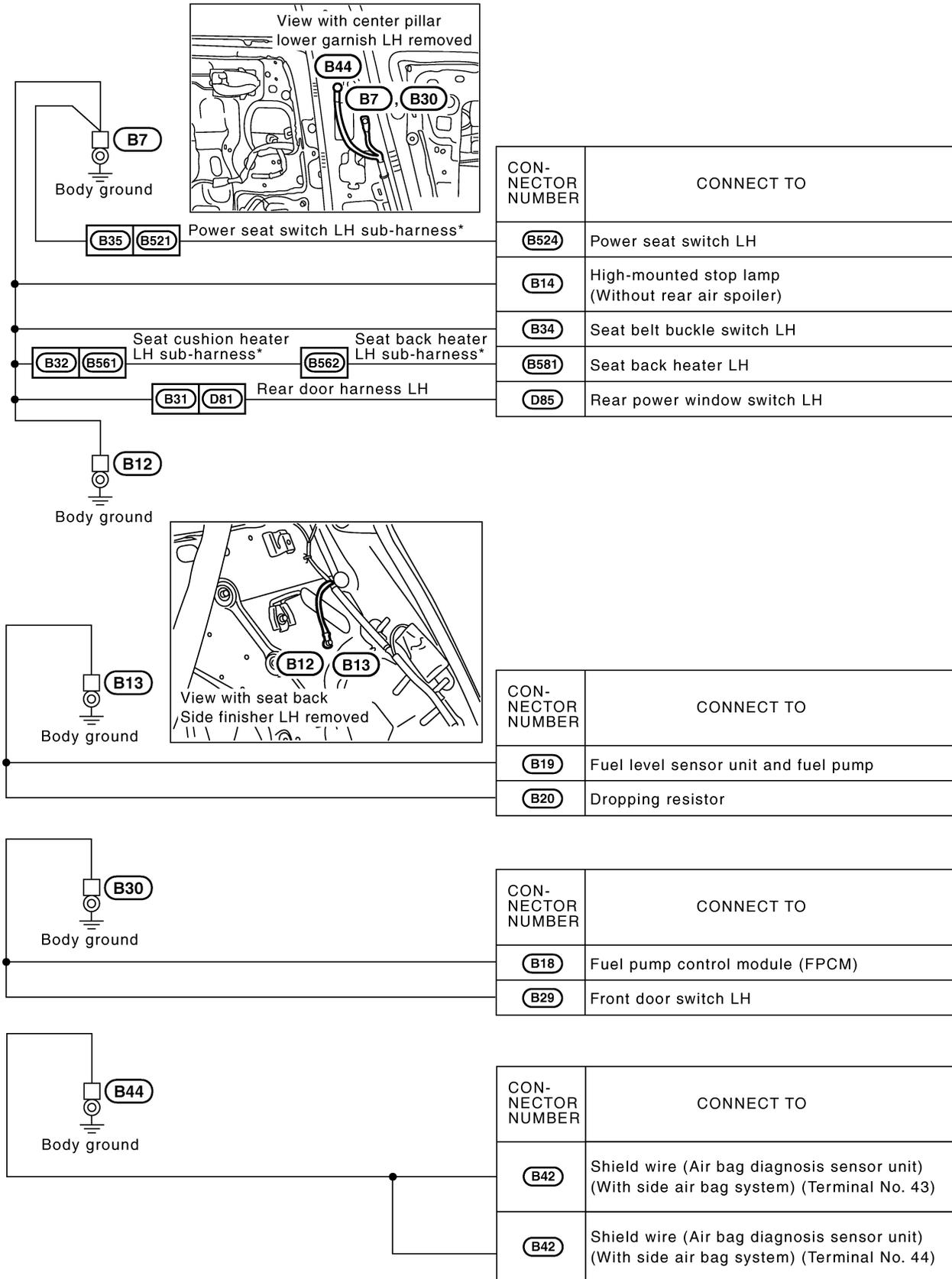
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# GROUND

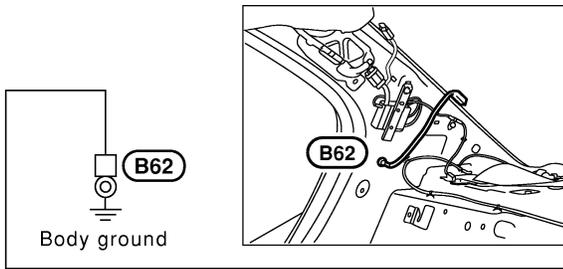
Ground Distribution (Cont'd)

## BODY HARNESS

NFEL0008S04



\*: This sub-harness is not shown in "Harness layout", EL-section.

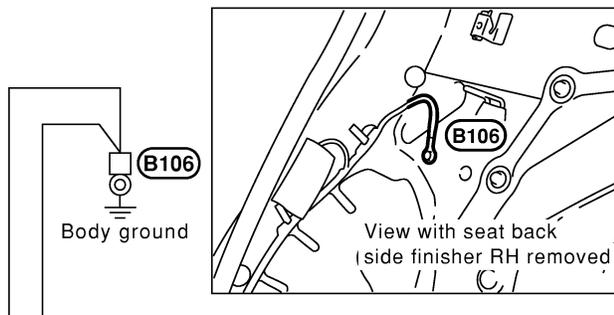


CON-NECTOR NUMBER	CONNECT TO
B61	Rear window defogger (-)

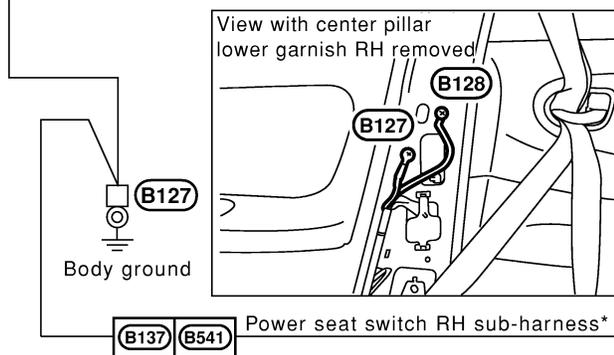
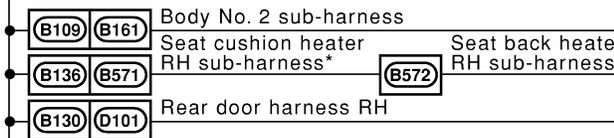
MEL347K

## BODY NO. 2 HARNESS

NFEL0008S05



CON-NECTOR NUMBER	CONNECT TO
B123	Woofer (With BOSE system)
B108	Trunk lid key cylinder switch
B110	License lamp RH
B111	License lamp LH
B124	BOSE speaker amp. (With BOSE system)
B129	Front door switch RH
B162	High-mounted stop lamp (With rear air spoiler)
B591	Seat back heater RH
D102	Rear power window switch RH



CON-NECTOR NUMBER	CONNECT TO
B543	Power seat switch RH

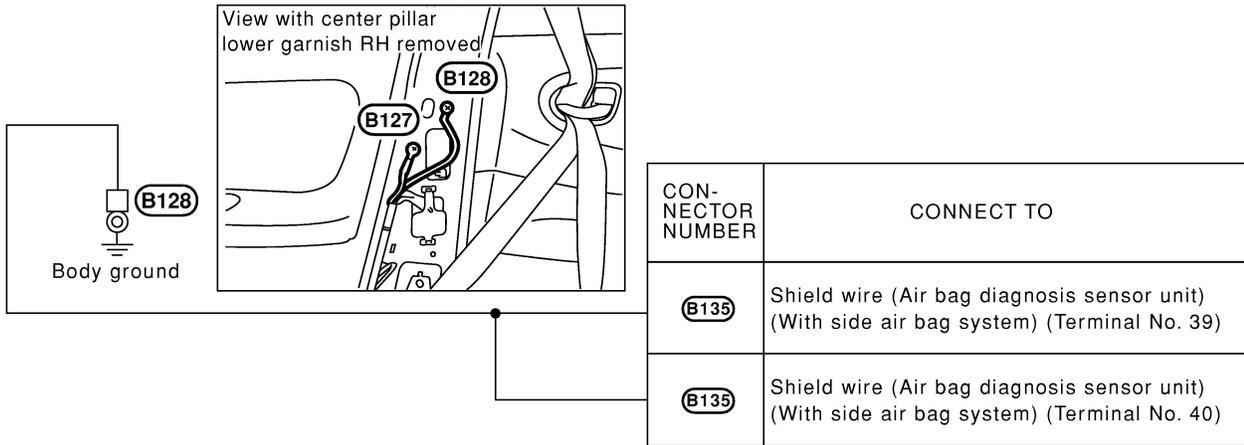
\*: This sub-harness is not shown in "Harness layout", EL-section.

MEL654K

GI  
 MA  
 EM  
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 EC  
 FE  
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 BR  
 ST  
 RS  
 BT  
 HA  
 SC  
 EL  
 IDX

# GROUND

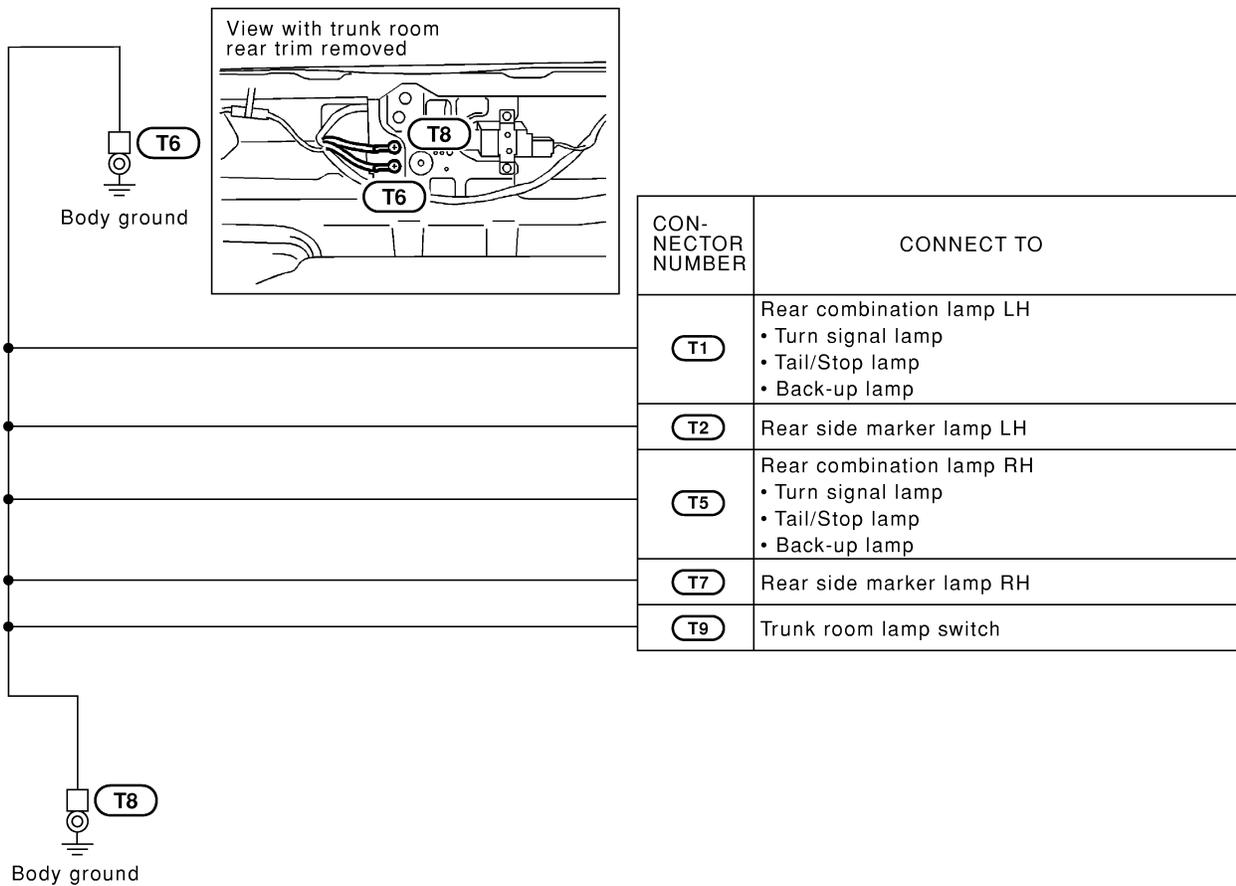
Ground Distribution (Cont'd)



MEL348K

## TAIL HARNESS

NFEL0008S06



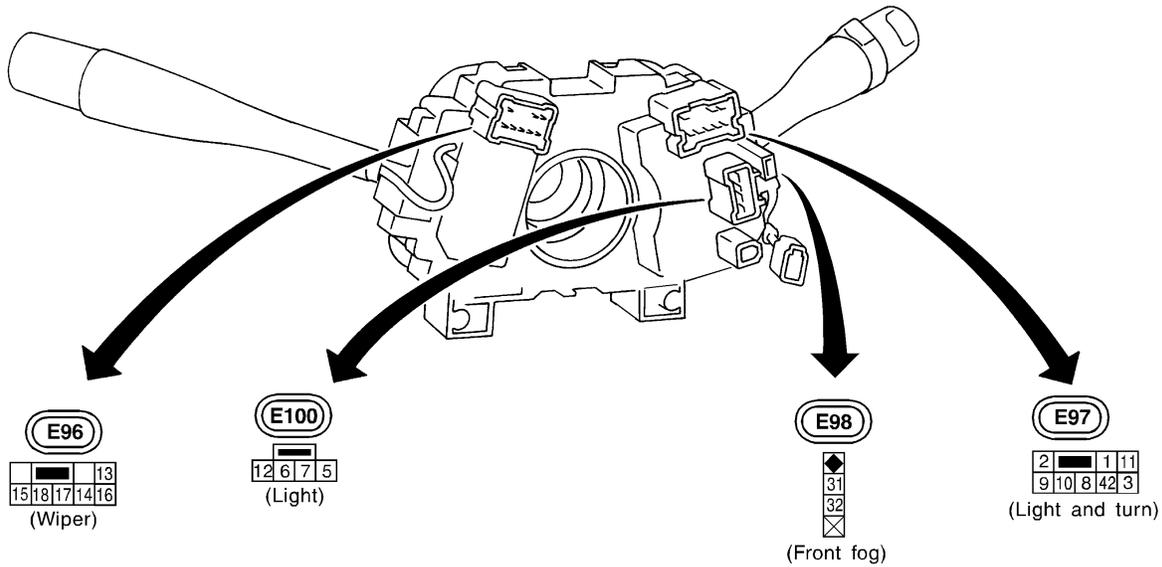
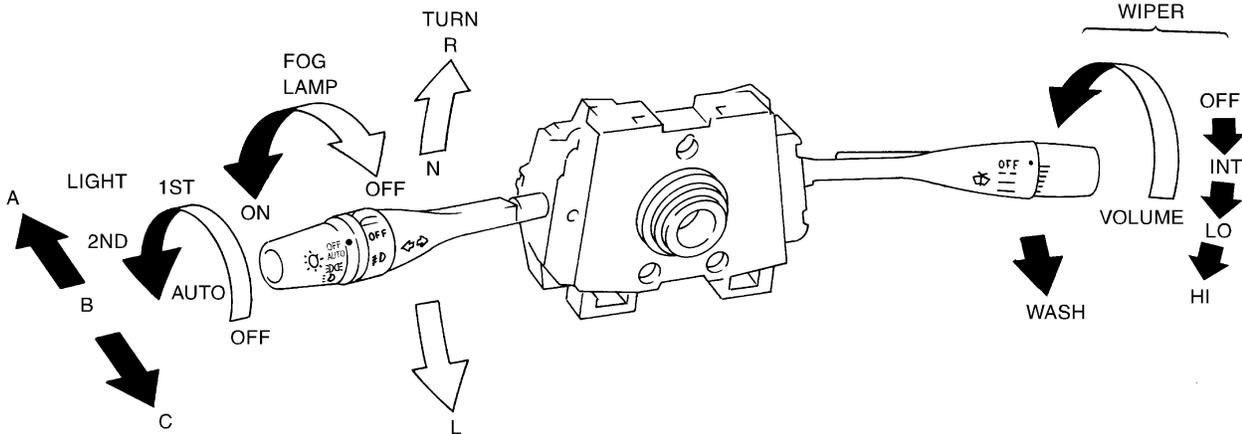
MEL655K

# COMBINATION SWITCH

Check

## Check

NFEL0009



LIGHTING SWITCH

	OFF	AUTO	1ST	2ND
5			<input type="checkbox"/>	<input type="checkbox"/>
11			<input type="checkbox"/>	<input type="checkbox"/>
8				<input type="checkbox"/>
12				<input type="checkbox"/>
42		<input type="checkbox"/>		
(8)		<input type="checkbox"/>		

	A	B	C
(5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(12)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FRONT WIPER AND WASHER SWITCH

	LO	AUTO STOP	AMP	WASH	HI	EARTH
OFF	<input type="checkbox"/>	<input type="checkbox"/>				
INT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
LO	<input type="checkbox"/>					<input type="checkbox"/>
HI					<input type="checkbox"/>	<input type="checkbox"/>
WASH			<input type="checkbox"/>			<input type="checkbox"/>

WIPER AMP. terminals: 14, 15, 13, 16, 17, 18

VARIABLE INTERMITTENT WIPER VOLUME



FRONT FOG LAMP SWITCH

	OFF	ON
31		<input type="checkbox"/>
32		<input type="checkbox"/>

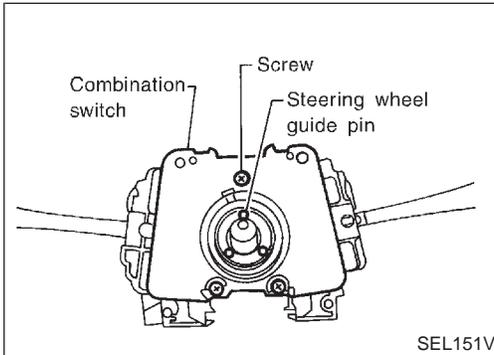
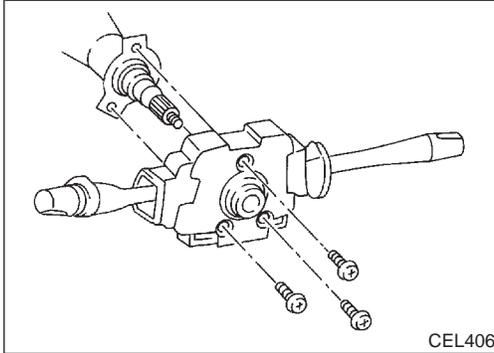
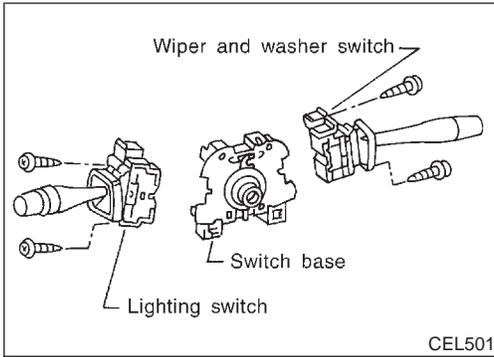
TURN SIGNAL LAMP SWITCH

	L	N	R
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- GI
- MA
- EM
- LC
- EC
- FE
- CL
- MT
- AT
- AX
- SU
- BR
- ST
- RS
- BT
- HA
- SC
- EL
- IDX

# COMBINATION SWITCH

## Replacement

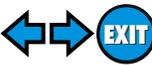


## Replacement

For removal and installation of spiral cable, refer to RS-22, <sup>NFEL0010</sup> "Installation — Air Bag Module and Spiral Cable".

- Each switch can be replaced without removing combination switch base.
- To remove combination switch base, remove base attaching screw.
- Before installing the steering wheel, align the steering wheel guide pins with the screws which secure the combination switch as shown in the left figure.

# STEERING SWITCH



Check

## Check

NFEL0011

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

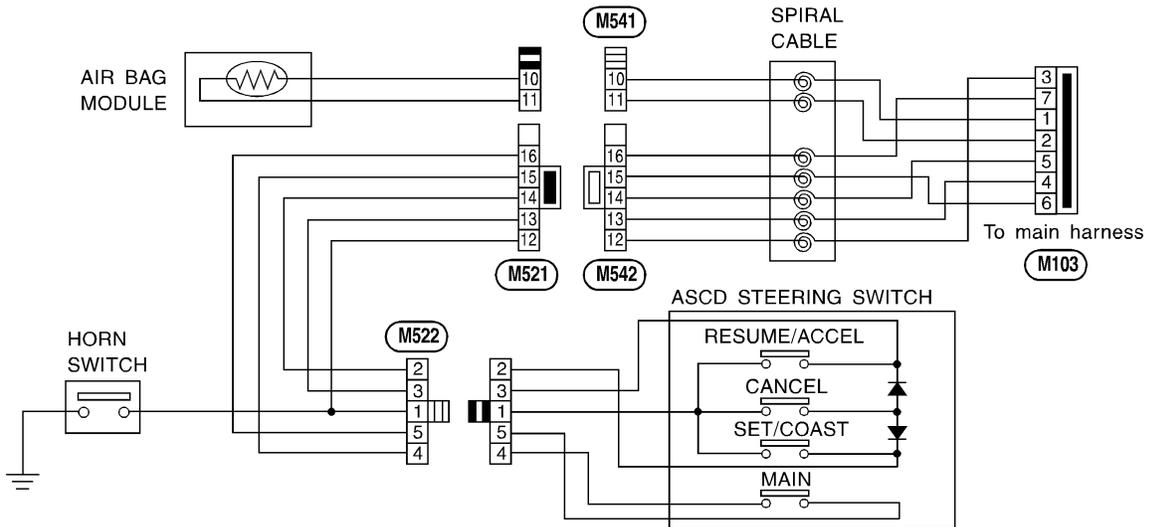
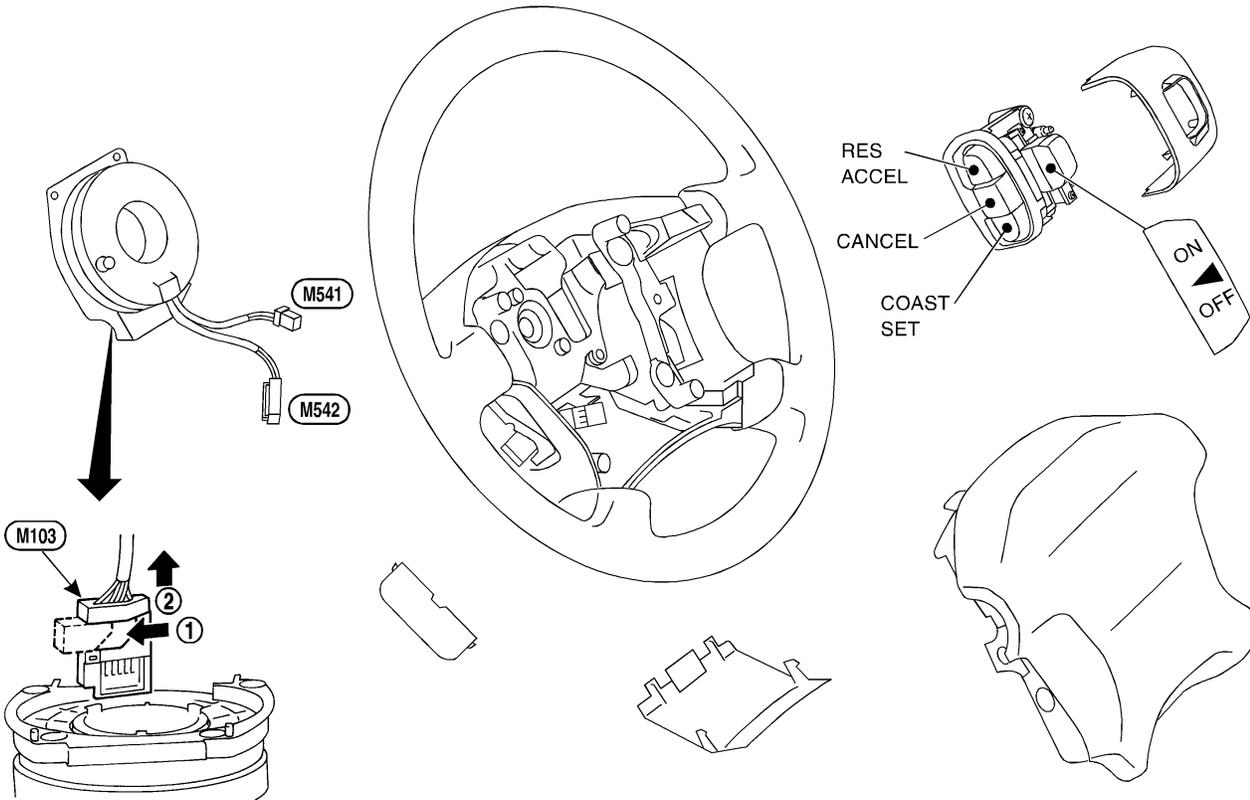
BT

HA

SC

**EL**

IDX



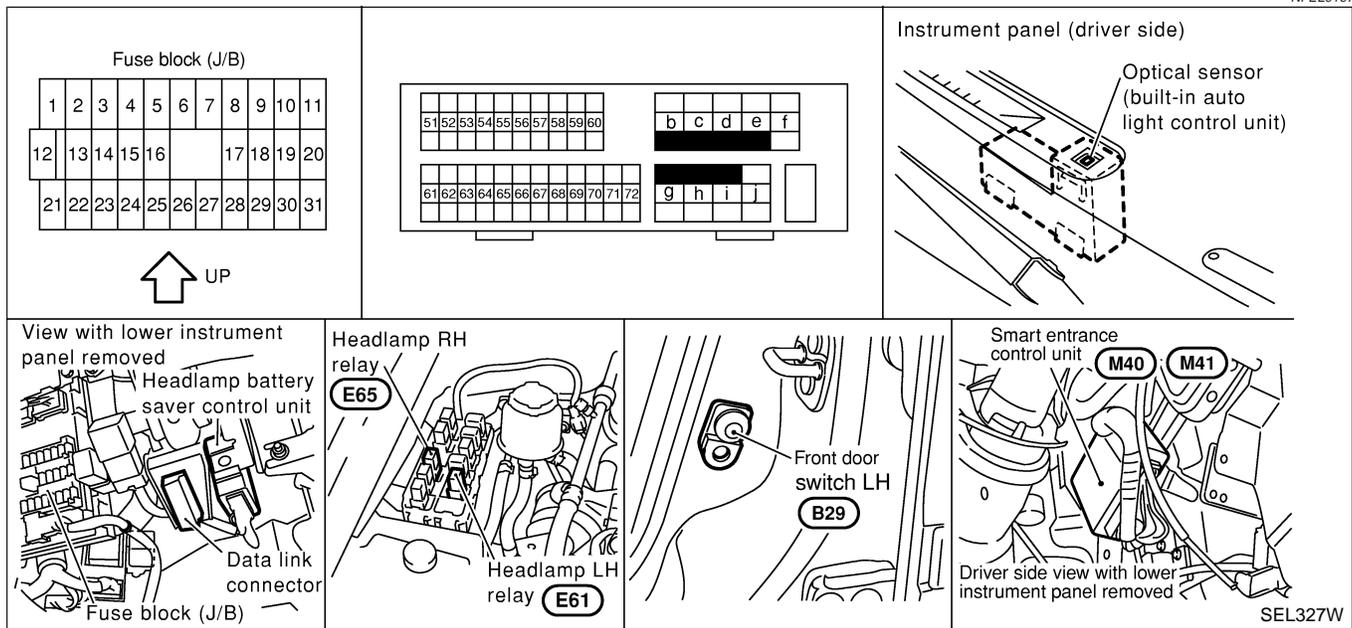
MEL336K

# HEADLAMP (FOR USA)

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NFEL0197



## System Description

NFEL0198

The headlamp operation is controlled by the lighting switch which is built into the combination switch and headlamp battery saver control unit. And the headlamp battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

### OUTLINE

NFEL0198S01

Power is supplied at all times

- to headlamp LH relay terminals 1 and 5
- through 15A fuse (No. 68, located in the fuse and fusible link box), and
- to headlamp RH relay terminals 1 and 5
- through 15A fuse (No. 69, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 12, located in the fuse block (J/B)].

When the ignition switch is in the ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 30, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 10A fuse [No. 10, located in the fuse block (J/B)].

Ground is supplied

- to headlamp battery saver control unit terminals 4 and 11
- through body grounds M9, M25 and M87.

When lighting switch is in 2ND position, ground is supplied

- to headlamp LH relay terminal 2 from headlamp battery saver control unit terminal 2
- through headlamp battery saver control unit terminal 3,
- to lighting switch terminal 12, and
- to headlamp RH relay terminal 2 from headlamp battery saver control unit terminal 8
- through headlamp battery saver control unit terminal 9, and
- to lighting switch terminal 12.

Headlamp relays (LH and RH) are then energized.

## LOW BEAM OPERATION

NFEL0198S02

When the lighting switch is turned to the 2ND position and placed in LOW ("B") position, power is supplied

- from terminal 3 of each headlamp relay
- to terminal 3 of each headlamp

Ground is supplied

- to headlamp LH terminal 2
- through lighting switch terminals 7 and 5
- through body grounds E11, E22 and E53, and
- to headlamp RH terminal 2
- through lighting switch terminal 10 and 8
- through body grounds E11, E22 and E53.

With power and ground supplied, the headlamp(s) will illuminate.

## HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

NFEL0198S03

When the lighting switch is turned to the 2ND position and placed in HIGH ("A") position or PASS ("C") position, power is supplied

- from terminal 3 of each headlamp relay
- to terminal 3 of each headlamp, and
- to combination meter terminal 26 for the HIGH BEAM indicator.

Ground is supplied

- to headlamp LH terminal 1
- through lighting switch terminals 6 and 5
- through body grounds E11, E22 and E53, and
- to headlamp RH terminal 1
- to combination meter terminal 27 for the HIGH BEAM indicator
- through lighting switch terminals 9 and 8
- through body grounds E11, E22 and E53.

With power and ground supplied, the high beams and the high beam indicator illuminate.

## BATTERY SAVER CONTROL

NFEL0198S04

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps illuminate, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 2 of the headlamp LH and RH relay from headlamp battery saver control unit terminals 2 and 8 is terminated.

Then the headlamps are turned off.

The headlamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated.

When the lighting switch is turned from OFF to 2ND after headlamps are turned to off by the battery saver control, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and then,
- to headlamp LH and RH relays terminal 2 from headlamp battery saver control unit terminals 2 and 8,
- through headlamp battery saver control unit terminals 3 and 9, and
- to lighting switch terminal 12.

Then headlamps illuminate again.

## AUTO LIGHT OPERATION

NFEL0198S06

The auto light control unit has an optical sensor inside it that detects outside brightness.

When lighting switch is in "AUTO" position, ground is supplied

- to auto light control unit terminal 10
- from lighting switch terminal 42.

When ignition switch is turn to "ON" or "START" position and

- Outside brightness is darker than prescribed level or

GI

MA

EM

LC

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SU

BR

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RS

BT

HA

SC

EL

IDX

## HEADLAMP (FOR USA)

### *System Description (Cont'd)*

---

- After 20 seconds delay, outside brightness becomes darker than prescribed level

Ground is supplied

- to headlamp relay LH and RH terminals 2
- through battery saver control unit
- from auto light control unit terminal 6, and
- to tail lamp relay terminal 2
- through battery saver control unit
- from auto light control unit terminal 7.

Then both headlamp relays and tail lamp relay are energized, headlamps (low or high) and tail lamps are illuminate according to switch position.

Auto light operation allows headlamps and tail lamps to go off when

- Ignition switch is turned to "OFF" position or
- Outside brightness is brighter than prescribed level or
- After 20 seconds delay, outside brightness becomes brighter than the prescribed level.

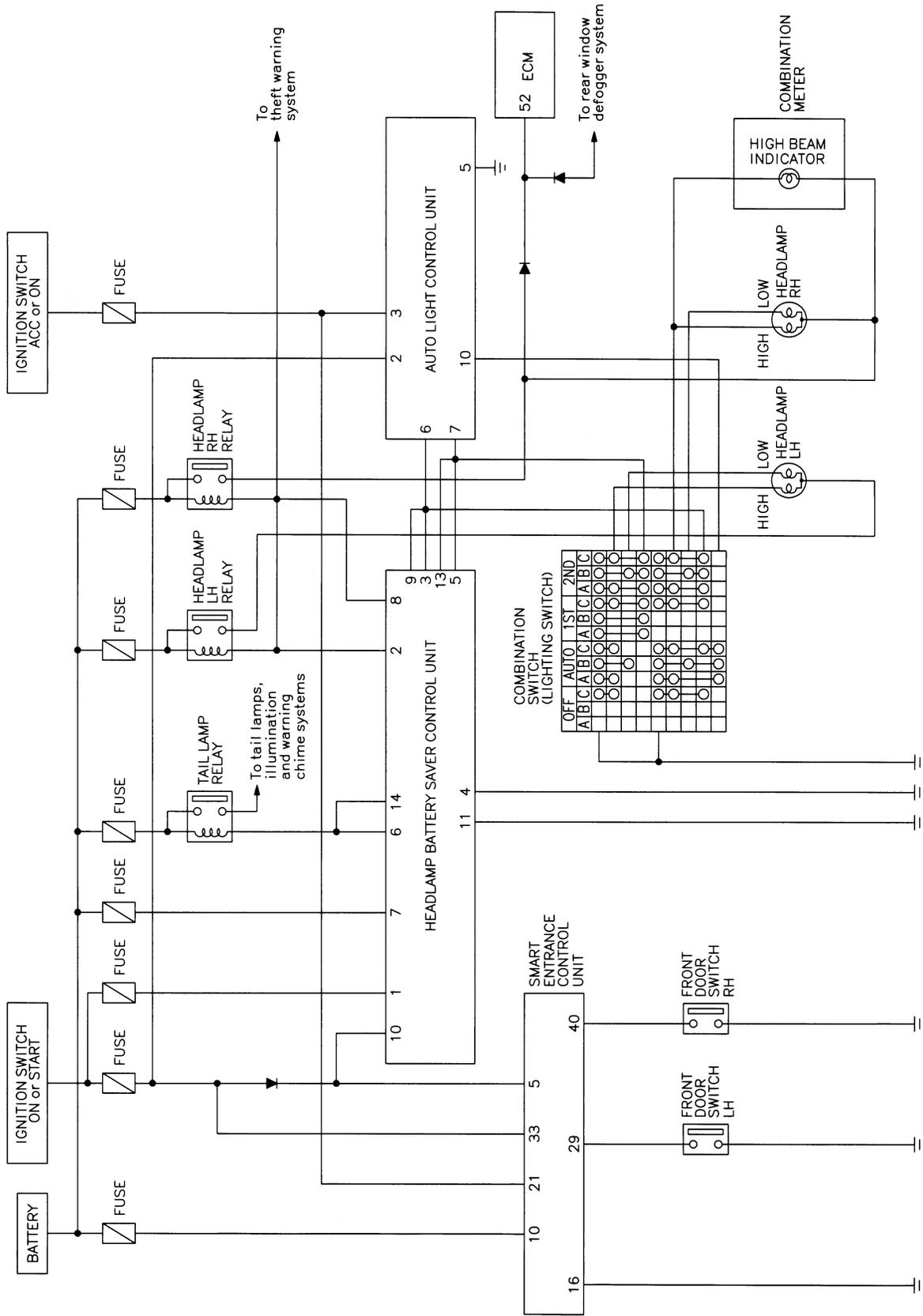
For parking license and tail lamp auto operation, refer to "PARKING, LICENSE AND TAIL LAMPS".

### **THEFT WARNING SYSTEM**

The theft warning system will flash the high beams if the system is triggered. Refer to "THEFT WARNING SYSTEM" (EL-280). NFEL0198S05

## Schematic

NFEL0199



GI  
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IDX

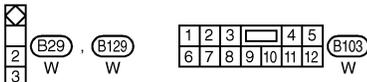
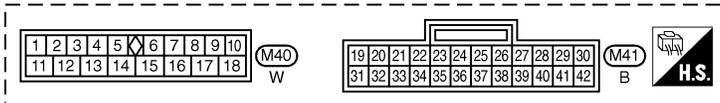
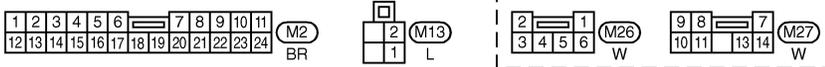
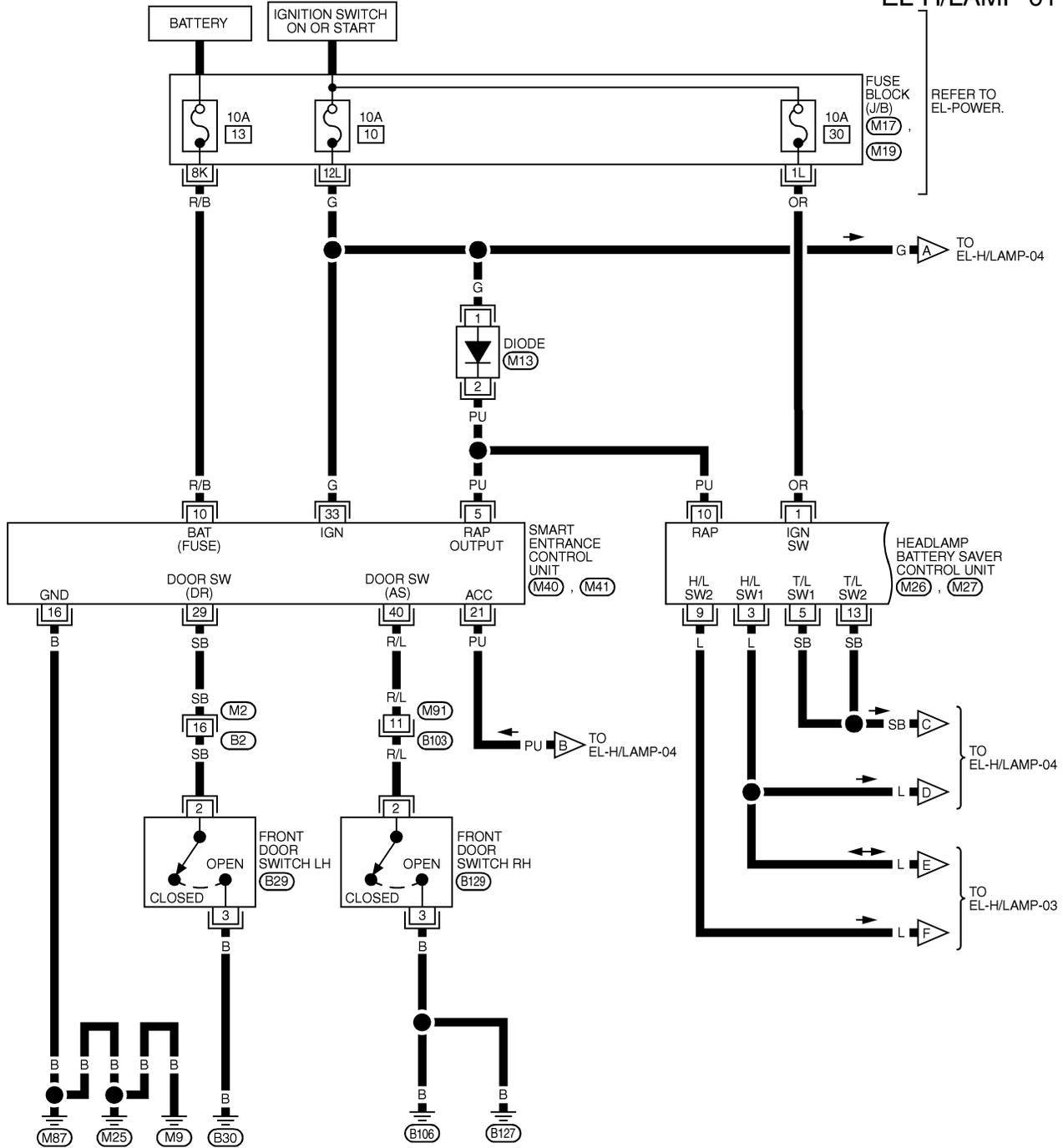
# HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP —

## Wiring Diagram — H/LAMP —

NFEL0013

EL-H/LAMP-01



REFER TO THE FOLLOWING.

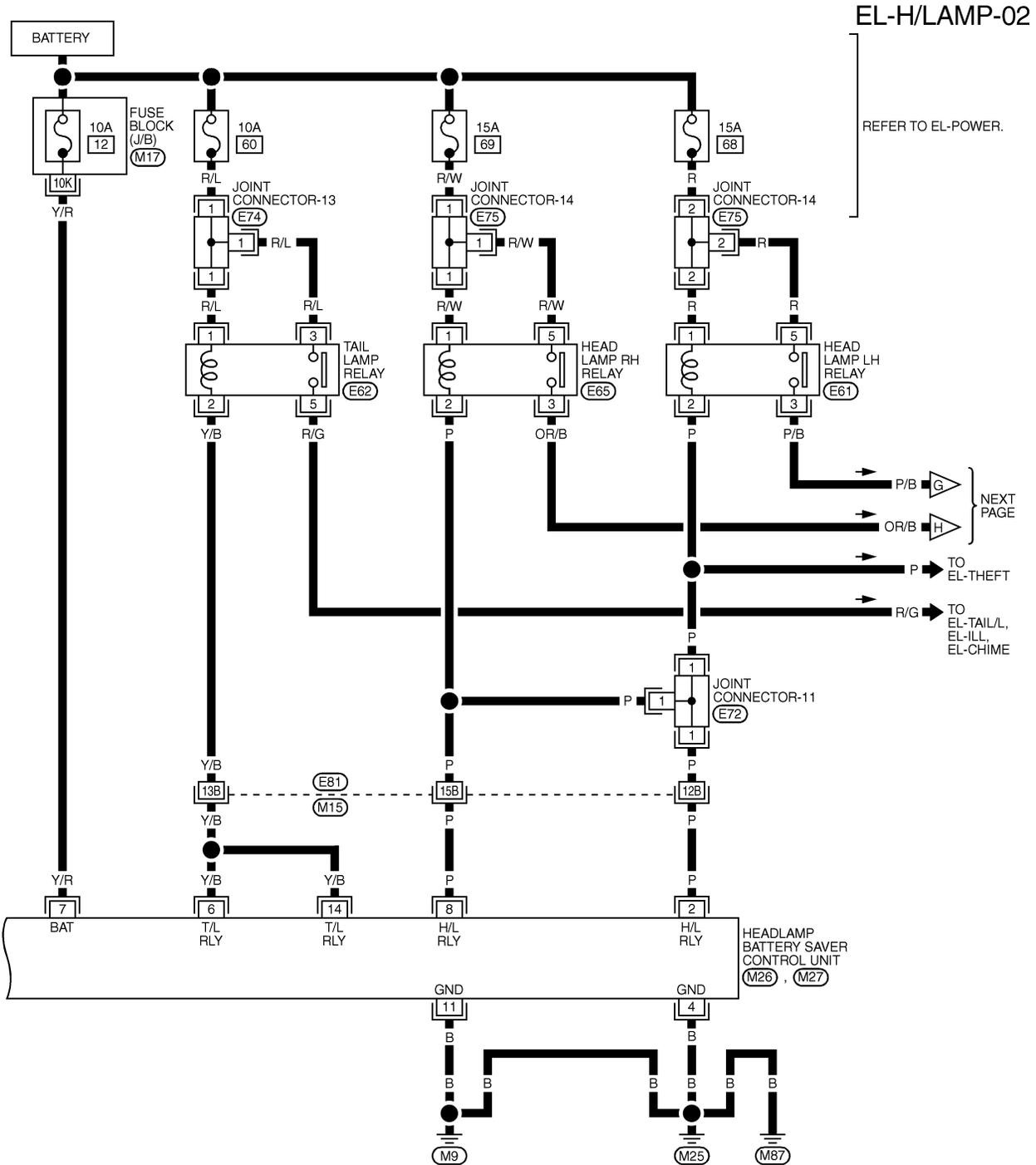
(M17) - FUSE BLOCK-JUNCTION BOX (J/B)

(M19) - FUSE BLOCK-JUNCTION BOX (J/B)

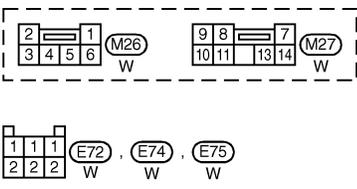
MEL596L

# HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP — (Cont'd)



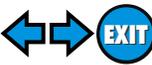
GI  
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LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX



REFER TO THE FOLLOWING.  
 (M15) , (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

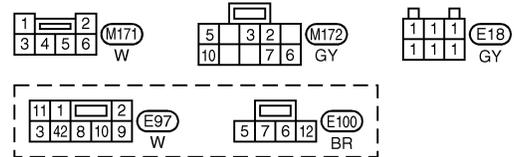
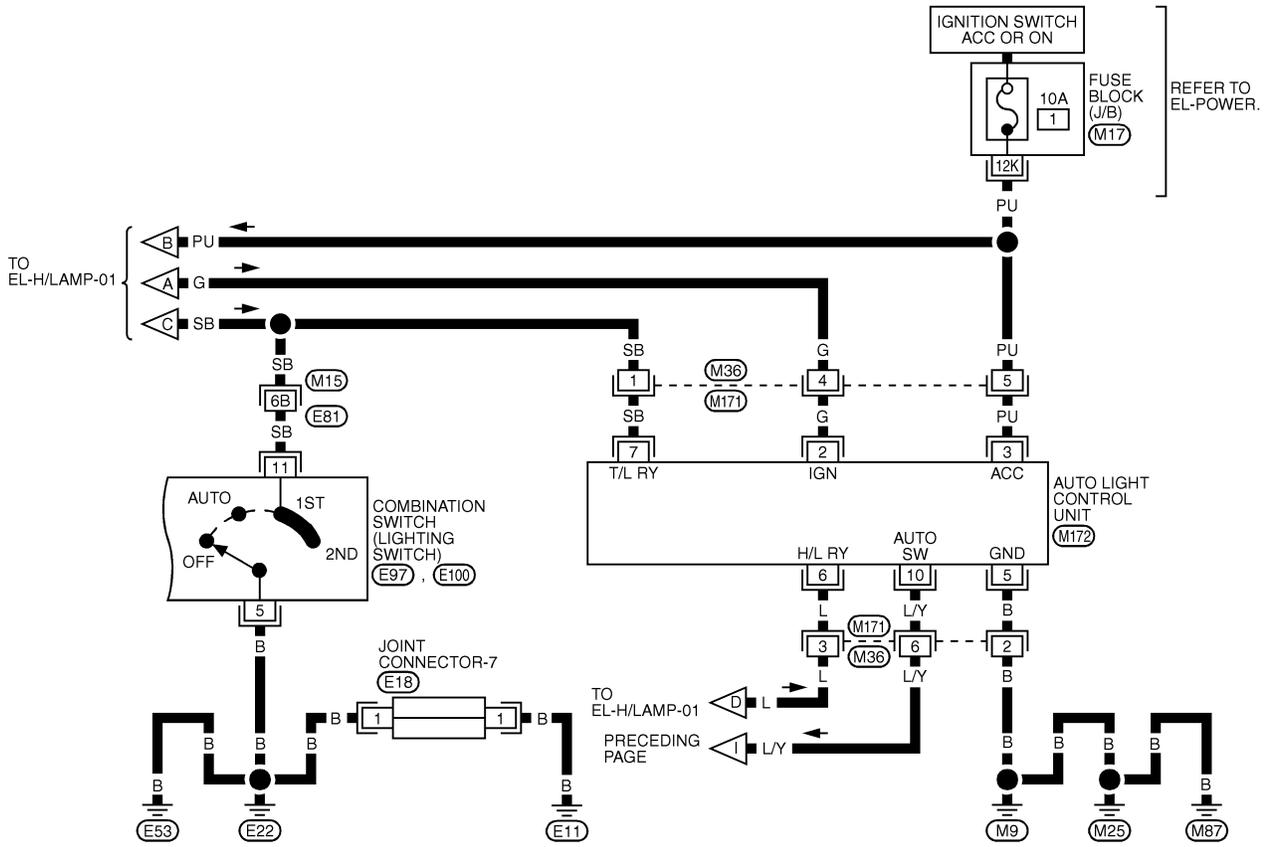


# HEADLAMP (FOR USA)



Wiring Diagram — H/LAMP — (Cont'd)

## EL-H/LAMP-04



REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

MEL229K

### SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

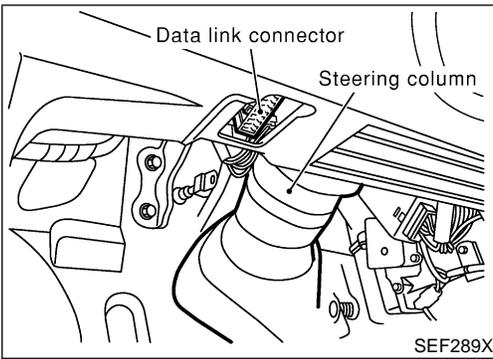
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
5	PU	HEADLAMP BATTERY SAVER CONTROL UNIT	WHEN HEADLAMP BATTERY SAVER TIMER IS OPERATED	12V
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V

GI  
 MA  
 EM  
 LC  
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 EL  
 IDX

SEL035X

# HEADLAMP (FOR USA)

CONSULT-II Inspection Procedure

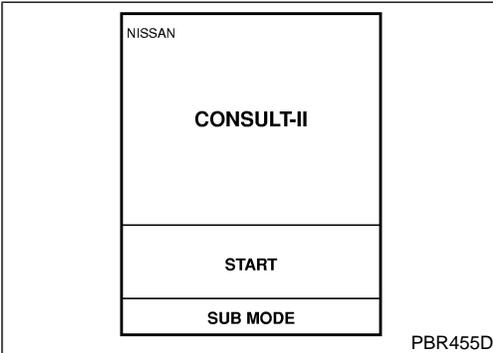


## CONSULT-II Inspection Procedure "RETAINED PWR"

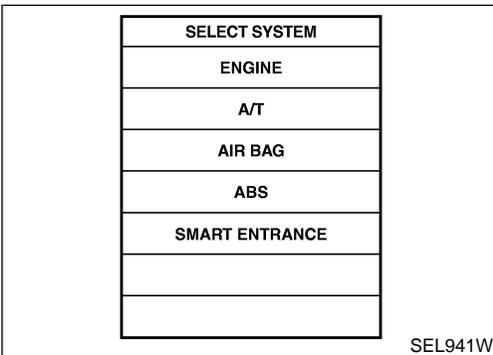
NFEL0200

NFEL0200S01

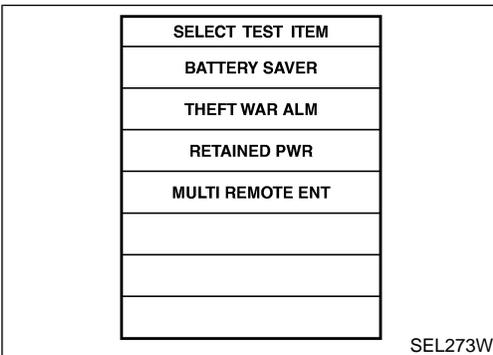
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



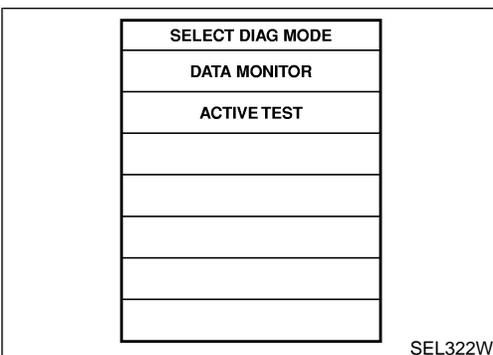
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Touch "RETAINED PWR".



7. Select diagnosis mode.  
"DATA MONITOR" and "ACTIVE TEST" are available.

## CONSULT-II Application Items

### “RETAINED PWR” Data Monitor

NFEL0201

NFEL0201S01

NFEL0201S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.

### Active Test

NFEL0201S0102

Test Item	Description
RETAINED PWR	<p>This test is able to supply RAP signal (power) from smart entrance control unit to power window system, power sunroof system and headlamp battery saver control unit. Those systems can be operated when turning on “RETAINED PWR” on CONSULT-II screen even if the ignition switch is tuned OFF.</p> <p><b>NOTE:</b>  <b>During this test, CONSULT-II can be operated with ignition switch “OFF” position. “RETAINED PWR” should be turned “ON” or “OFF” on CONSULT-II screen when ignition switch is ON. Then turn ignition switch OFF for checking retained power operation. CONSULT-II might be stuck if “RETAINED PWR” is turned “ON” or “OFF” on CONSULT-II screen when ignition switch is OFF.</b></p>

## Trouble Diagnoses

NFEL0202

Symptom	Possible cause	Repair order
Neither headlamp operates.	<ol style="list-style-type: none"> <li>1. 10A fuse</li> <li>2. Lighting switch</li> <li>3. Headlamp battery saver control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check 10A fuse [No. 12, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 7 of headlamp battery saver control unit.</li> <li>2. Check Lighting switch.</li> <li>3. Check headlamp battery saver control unit.</li> </ol>
LH headlamp (low and high beam) does not operate, but RH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. 15A fuse</li> <li>3. Headlamp LH relay</li> <li>4. Headlamp LH relay circuit</li> <li>5. Lighting switch</li> <li>6. Lighting switch ground circuit</li> <li>7. Headlamp battery saver control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check 15A fuse (No. 68, located in fusible link and fuse box). Verify battery positive voltage is present at terminals 1 and 5 of headlamp LH relay.</li> <li>3. Check headlamp LH relay.</li> <li>4. Check harness between headlamp LH relay and headlamp LH. Check harness between headlamp LH relay and headlamp battery saver control unit.</li> <li>5. Check lighting switch.</li> <li>6. Check harness between LH headlamp and ground.</li> <li>7. Check headlamp battery saver control unit.</li> </ol>
RH headlamp (low and high beam) does not operate, but LH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. 15A fuse</li> <li>3. Headlamp RH relay</li> <li>4. Headlamp RH relay circuit</li> <li>5. Lighting switch</li> <li>6. Lighting switch ground circuit</li> <li>7. Headlamp battery saver control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check 15A fuse (No. 69, located in fusible link and fuse box). Verify battery positive voltage is present at terminals 1 and 5 of headlamp RH relay.</li> <li>3. Check headlamp RH relay.</li> <li>4. Check harness between headlamp RH relay and headlamp RH. Check harness between headlamp RH relay and headlamp battery saver control unit.</li> <li>5. Check lighting switch.</li> <li>6. Check harness between RH headlamp and ground.</li> <li>7. Check headlamp battery saver control unit.</li> </ol>
LH high beam does not operate, but LH low beam does operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in LH high beams circuit</li> <li>3. Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check the harness between lighting switch and LH headlamp for an open circuit.</li> <li>3. Check lighting switch.</li> </ol>

# HEADLAMP (FOR USA)

## Trouble Diagnoses (Cont'd)

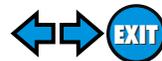
Symptom	Possible cause	Repair order
LH low beam does not operate, but LH high beam does operate.	<ol style="list-style-type: none"> <li>Bulb</li> <li>Open in LH low beams circuit</li> <li>Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>Check bulb.</li> <li>Check the harness between lighting switch and LH headlamp for an open circuit.</li> <li>Check lighting switch.</li> </ol>
RH high beam does not operate, but RH low beam does operate.	<ol style="list-style-type: none"> <li>Bulb</li> <li>Open in RH high beams circuit</li> <li>Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>Check bulb.</li> <li>Check the harness between lighting switch and RH headlamp for an open circuit.</li> <li>Check lighting switch.</li> </ol>
RH low beam does not operate, but RH high beam does operate.	<ol style="list-style-type: none"> <li>Bulb</li> <li>Open in RH low beams circuit</li> <li>Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>Check bulb.</li> <li>Check the harness between lighting switch and RH headlamp for an open circuit.</li> <li>Check lighting switch.</li> </ol>
High beam indicator does not work.	<ol style="list-style-type: none"> <li>Bulb</li> <li>Open in high beam circuit</li> </ol>	<ol style="list-style-type: none"> <li>Check bulb in combination meter.</li> <li>Check the harness between headlamp RH relay and combination meter for an open circuit. Check the harness between combination meter and combination switch for an open circuit.</li> </ol>
Battery saver control does not operate properly.	<ol style="list-style-type: none"> <li>RAP signal circuit</li> <li>Door switch LH or RH circuit</li> <li>Lighting switch circuit</li> <li>Headlamp battery saver control unit</li> <li>Smart entrance control unit</li> </ol>	<ol style="list-style-type: none"> <li>Check RAP signal.               <ol style="list-style-type: none"> <li>(With CONSULT-II) Check RAP signal with CONSULT-II. Use "ACTIVE TEST" mode, "RETAINED PWR" in "SMART ENTRANCE". (Refer to EL-40.) If NG, go to the step b. below.</li> <li>Verify 12 positive voltage from smart entrance control unit is present at terminal 10 of battery saver control unit:                   <ul style="list-style-type: none"> <li>Within 45 seconds after ignition switch turns off.</li> <li>When front door LH and RH is closed.</li> </ul> </li> <li>Check harness between smart entrance control unit and LH or RH door switch for open or short circuit. Check LH or RH door switch ground circuit. Check LH or RH door switch.</li> <li>Check harness between headlamp battery saver control unit terminals 5 or 13 and lighting switch terminal 11 for open or short circuit. Check harness between lighting switch terminal 5 and ground. Check lighting switch.</li> <li>Check headlamp battery saver control unit.</li> <li>Check smart entrance control unit. (EL-316)</li> </ol> </li> </ol>

## BATTERY SAVER CONTROL UNIT INSPECTION TABLE

NFEL0202S01

Terminal No.	Wire color	Item	Condition		Voltage (Approximate value)	
1	OR	Ignition ON power supply	Ignition switch	OFF or ACC	Less than 1V	
				ON or START	Battery voltage	
2	P	Headlamp LH relay	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	
					Within 45 seconds after ignition switch is turned OFF or ACC	Less than 1V
				ON or START		Less than 1V
			Headlamps illuminate by auto light control.		Less than 1V	

# HEADLAMP (FOR USA)



*Trouble Diagnoses (Cont'd)*

Terminal No.	Wire color	Item	Condition		Voltage (Approximate value)		
3	L	Headlamp switch	Lighting switch	Except PASS or 2ND	Battery voltage	GI	
				PASS or 2ND	Less than 1V	MA	
			Headlamps illuminate by auto light control.			Less than 1V	
4	B	Ground	—		—	EM	
5	SB	Tail lamp switch	Lighting switch	OFF	Battery voltage		
				1ST or 2ND		Less than 1V	LC
6	Y/B	Tail lamp relay	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage	EC
					Within 45 seconds after ignition switch is turned OFF or ACC	Less than 1V	FE
				ON or START		Less than 1V	CL
			Headlamps illuminate by auto light control.			Less than 1V	MT
7	Y/R	Power supply	—		Battery voltage		
8	P	Headlamp RH relay	Ignition switch (with lighting switch except OFF or 1ST)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage	AT
					Within 45 seconds after ignition switch is turned OFF or ACC	Less than 1V	AX
				ON or START		Less than 1V	SU
			Headlamps illuminate by auto light control.			Less than 1V	BR
9	L	Headlamp switch	Lighting switch	Except PASS or 2ND	Battery voltage	ST	
				PASS or 2ND	Less than 1V		
			Headlamps illuminate by auto light control.			Less than 1V	RS
10	PU	RAP signal	Ignition switch	OFF or ACC (After more than 45 seconds with ignition switch turned OFF or ACC)	Less than 1V	BT	
				ON or START		Battery voltage	HA
11	B	Ground	—		—		
13	SB	Tail lamp switch	Lighting switch	OFF	Battery voltage		
				1ST or 2ND		Less than 1V	SC

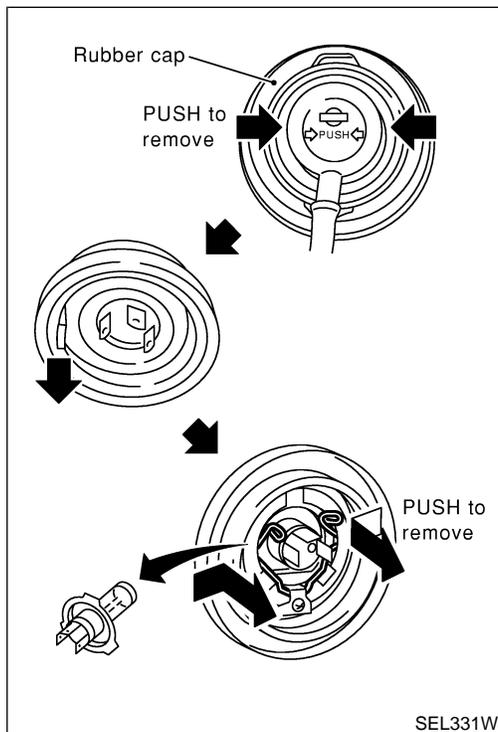
EL

IDX

# HEADLAMP (FOR USA)

## Trouble Diagnoses (Cont'd)

Terminal No.	Wire color	Item	Condition			Voltage (Approximate value)
14	Y/B	Tail lamp relay	Ignition switch (with lighting switch 1ST or 2ND)	OFF or ACC	More than 45 seconds after ignition switch is turned OFF or ACC	Battery voltage
					Within 45 seconds after ignition switch is turned OFF or ACC	Less than 1V
				ON or START	Less than 1V	
			Headlamps illuminate by auto light control.			



## Bulb Replacement

NFEL0015

The headlamp is a semi-sealed beam type which uses a replaceable halogen bulb. The bulb can be replaced from the engine compartment side without removing the headlamp body.

- **Grasp only the plastic base when handling the bulb. Never touch the glass envelope.**

1. Disconnect the battery cable.
2. Disconnect the harness connector from the back side of the bulb.
3. Pull off the rubber cap.
4. Remove the headlamp bulb carefully. Do not shake or rotate the bulb when removing it.
5. Install in the reverse order of removal.

### CAUTION:

**Do not leave headlamp reflector without bulb for a long period of time. Dust, moisture, smoke, etc. entering headlamp body may affect the performance of the headlamp. Remove headlamp bulb from the headlamp reflector just before a replacement bulb is installed.**

## Aiming Adjustment

NFEL0016

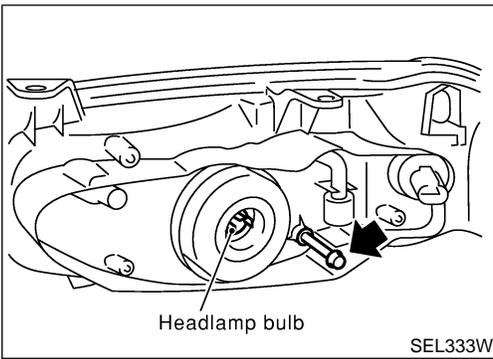
**For details, refer to the regulations in your own country.**

Before performing aiming adjustment, check the following.

- 1) Keep all tires inflated to correct pressures.
- 2) Place vehicle on flat surface.
- 3) See that there is no-load in vehicle (coolant, engine oil filled up to correct level and full fuel tank) other than the driver (or equivalent weight placed in driver's position).

# HEADLAMP (FOR USA)

Aiming Adjustment (Cont'd)

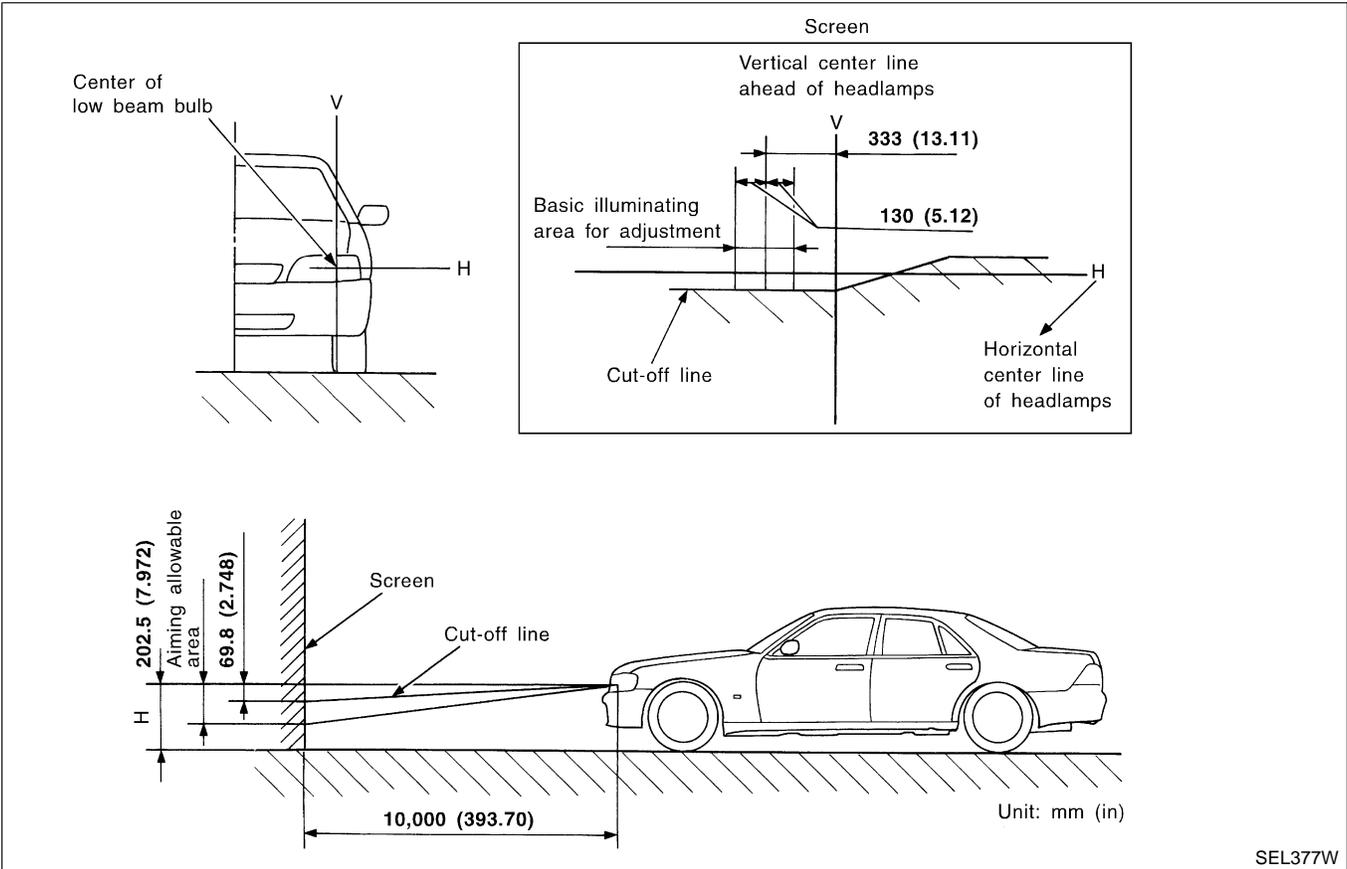


## LOW BEAM

NFEL0016S02

1. Turn headlamp low beam on.
2. Use adjusting screws to perform aiming adjustment.
  - **First tighten the adjusting screw all the way and then make adjustment by loosening the screw.**

GI  
MA  
EM  
LC



EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS

If the vehicle front body has been repaired and/or the headlamp assembly has been replaced, check aiming. Use the aiming chart shown in the figure.

- **Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.**

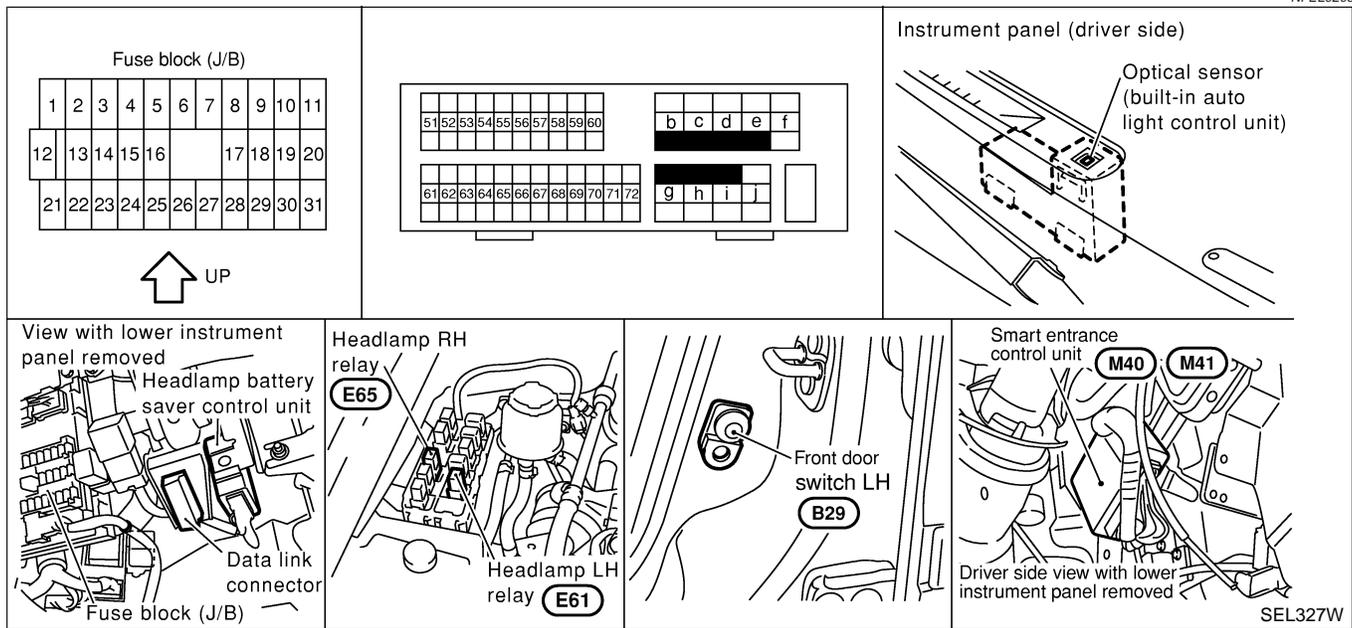
BT  
HA  
SC

EL

IDX

## Component Parts and Harness Connector Location

NFEL0203



## System Description

NFEL0204

The headlamp system for Canada vehicles contains a daytime light control unit that activates the high beam headlamps at approximately half illumination whenever the engine is running. If the parking brake is applied before the engine is started the daytime lights will not be illuminated. The daytime lights will illuminate once the parking brake is released. Thereafter, the daytime lights will continue to operate when the parking brake is applied.

And battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

Power is supplied at all times

- to headlamp LH relay terminals 1 and 5
- through 15A fuse (No. 68, located in the fuse and fusible link box), and
- to headlamp RH relay terminals 1 and 5
- through 15A fuse (No. 69, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 12, located in the fuse block (J/B)].

Ground is supplied

- to daytime light control unit terminal 16 and
- to headlamp battery saver control unit terminals 4 and 11

When the ignition switch is in the ON or START position, power is also supplied

- to daytime light control unit terminal 3,
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 10A fuse [No. 10, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 30, located in the fuse block (J/B)].

When the ignition switch is in the START position, power is supplied

- to daytime light control unit terminal 2
- through 10A fuse [No. 21, located in the fuse block (J/B)].

## HEADLAMP OPERATION

When lighting switch is in 2ND position, ground is supplied

- to headlamp LH relay terminal 2 from headlamp battery saver control unit terminal 2

NFEL0204S01

- through headlamp battery saver control unit terminal 3, and
- to lighting switch terminal 12, and
- to headlamp RH relay terminal 1 from headlamp battery saver control unit terminal 8
- through headlamp battery saver control unit terminal 9, and
- to lighting switch terminal 12.

GI

MA

Headlamp relays (LH and RH) are then energized.

## Low Beam Operation

NFEL0204S0103 EM

When the lighting switch is turned to 2ND and LOW (“B”) positions, ground is supplied

- to terminal 2 of the headlamp LH
- through daytime light control unit terminals 11 and 15
- through lighting switch terminals 10 and 8
- through body grounds E11, E22 and E53.

LC

EC

Ground is also supplied

- to terminal 2 of the headlamp RH
- through daytime light control unit terminals 8 and 12
- through lighting switch terminals 7 and 5
- through body grounds E11, E22 and E53.

FE

CL

With power and ground supplied, the low beam headlamps illuminate.

## High Beam Operation/Flash-to-pass Operation

NFEL0204S0104 MT

When the lighting switch is turned to 2ND and HIGH (“A”) or PASS (“C”) positions, ground is supplied

- to terminal 1 of LH headlamp
- through daytime light control unit terminals 10 and 14, and
- to combination meter terminal 27 for the HIGH BEAM indicator
- through lighting switch terminals 9 and 8
- through body grounds E11, E22 and E53.

AT

AX

Ground is also supplied

- to terminal 1 of RH headlamp
- through daytime light control unit terminals 9 and 13
- through lighting switch terminals 6 and 5
- through body grounds E11, E22 and E53.

SU

BR

With power and ground supplied, the high beam headlamps and HIGH BEAM indicator illuminate.

ST

## BATTERY SAVER CONTROL

NFEL0204S02

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated, The RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

RS

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 2 of headlamp LH and RH relays from headlamp battery saver control unit terminals 2 and 8 is terminated.

BT

Then headlamps are turned off.

The headlamps are turned off when LH or RH door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while headlamps are illuminated.

HA

When the lighting switch is turned from OFF to 2ND after headlamps are turned to off by the battery saver control, ground is supply

SC

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to headlamp LH and RH relays terminal 2 from headlamp battery saver control unit terminals 2 and 8,
- through headlamp battery saver control unit terminals 3 and 9, and
- to lighting switch terminal 12.

EL

Then headlamps illuminate again.

IDX

## AUTO LIGHT OPERATION

NFEL0204S05

For auto light operation, refer to “HEADLAMP” (EL-33).

# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

System Description (Cont'd)

## DAYTIME LIGHT OPERATION

NFEL0204S03

With the engine running, the lighting switch in the OFF or 1ST position and parking brake released, power is supplied

- through daytime light control unit terminal 7
- to terminal 3 of RH headlamp
- through terminal 1 of RH headlamp
- to daytime light control unit terminal 9
- through daytime light control unit terminal 6
- to terminal 3 of LH headlamp.

Ground is supplied to terminal 1 of LH headlamp.

- through daytime light control unit terminals 10 and 16
- through body grounds E11, E22 and E53.

Because the high beam headlamps are now wired in series, they operate at half illumination.

## OPERATION

NFEL0204S04

After starting the engine with the lighting switch in the “OFF” or “1ST” position, the headlamp high beam automatically turns on. Lighting switch operations other than the above are the same as conventional light systems.

Engine		With engine stopped									With engine running								
		OFF			1ST			2ND			OFF			1ST			2ND		
Lighting switch		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Headlamp	High beam	X	X	O	X	X	O	O	X	O	△*	△*	O	△*	△*	O	O	X	O
	Low beam	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	O	X
Clearance and tail lamp		X	X	X	O	O	O	O	O	O	X	X	X	O	O	O	O	O	O
License and instrument illumination lamp		X	X	X	O	O	O	O	O	O	X	X	X	O	O	O	O	O	O

A: “HIGH BEAM” position

B: “LOW BEAM” position

C: “FLASH TO PASS” position

O : Lamp “ON”

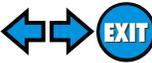
X : Lamp “OFF”

△ : Lamp dims. (Added functions)

\*: When starting the engine with the parking brake released, the daytime light will come ON.

When starting the engine with the parking brake pulled, the daytime light won't come ON.

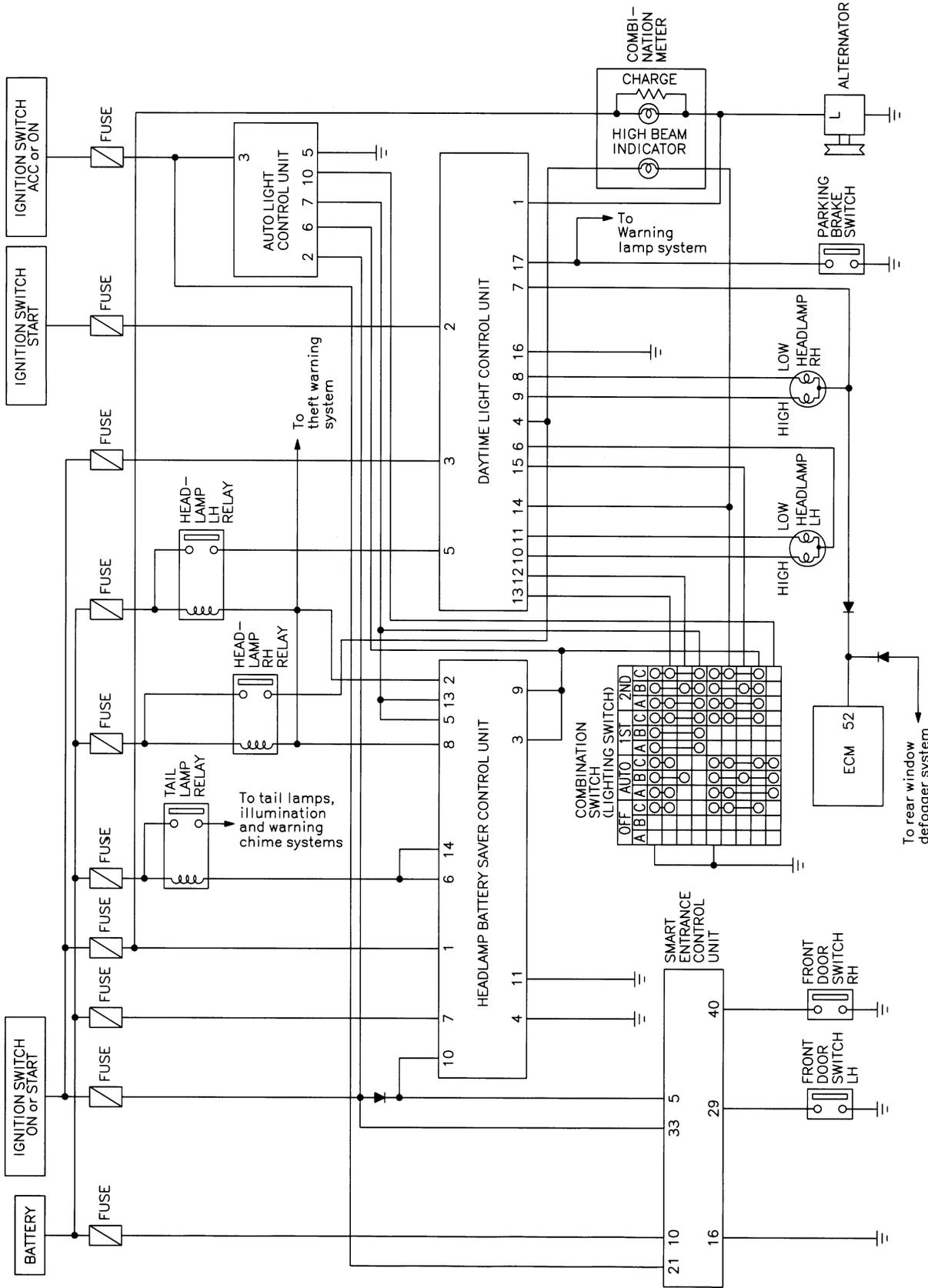
# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —



Schematic

## Schematic

NFEL0205

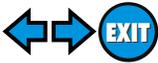


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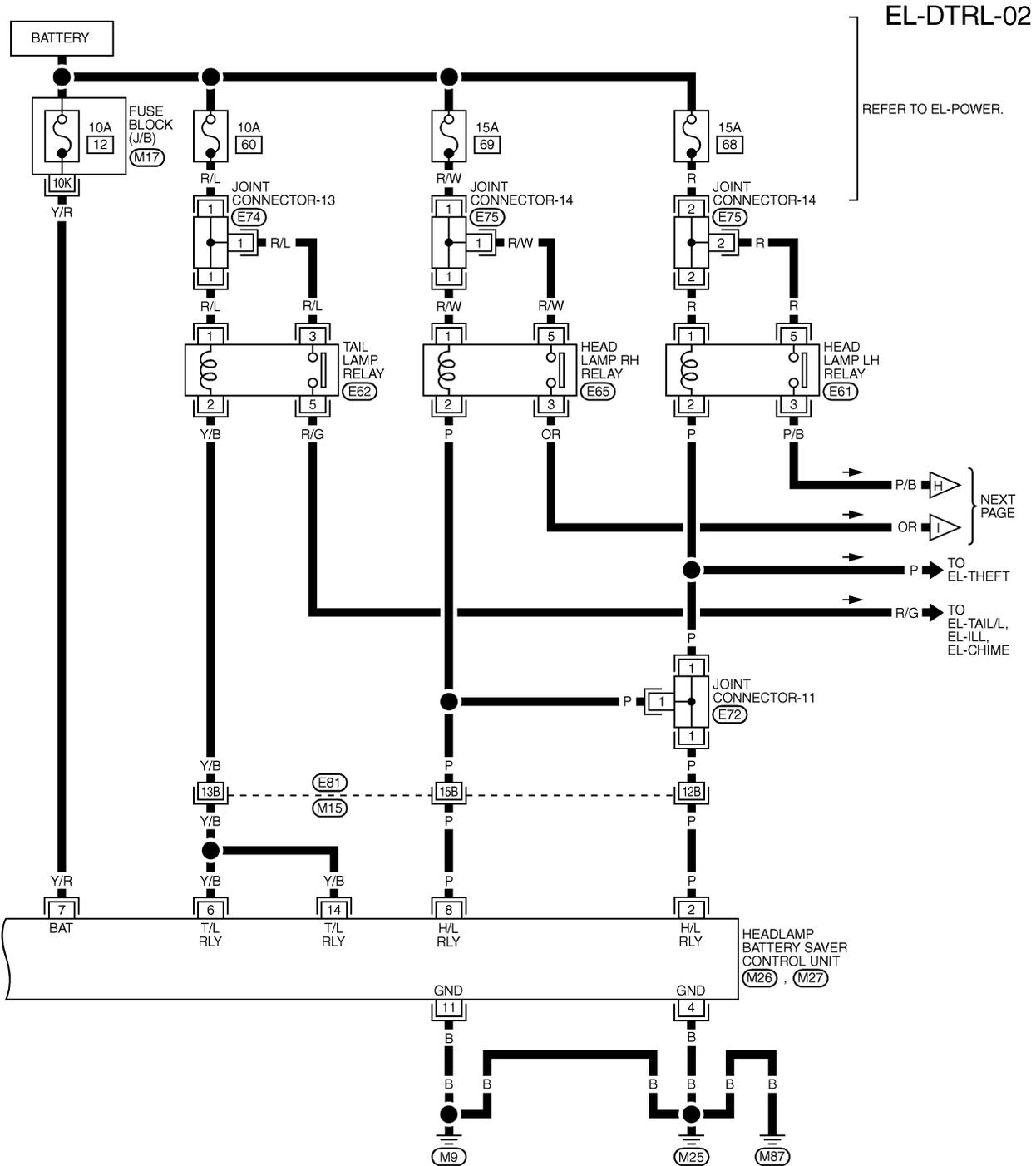
MEL598L



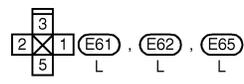
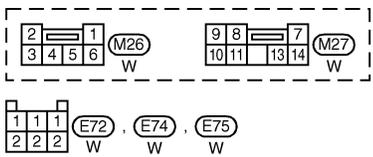
# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —



Wiring Diagram — DTRL — (Cont'd)



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BR  
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BT  
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SC  
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IDX

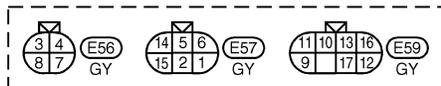
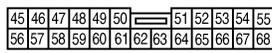
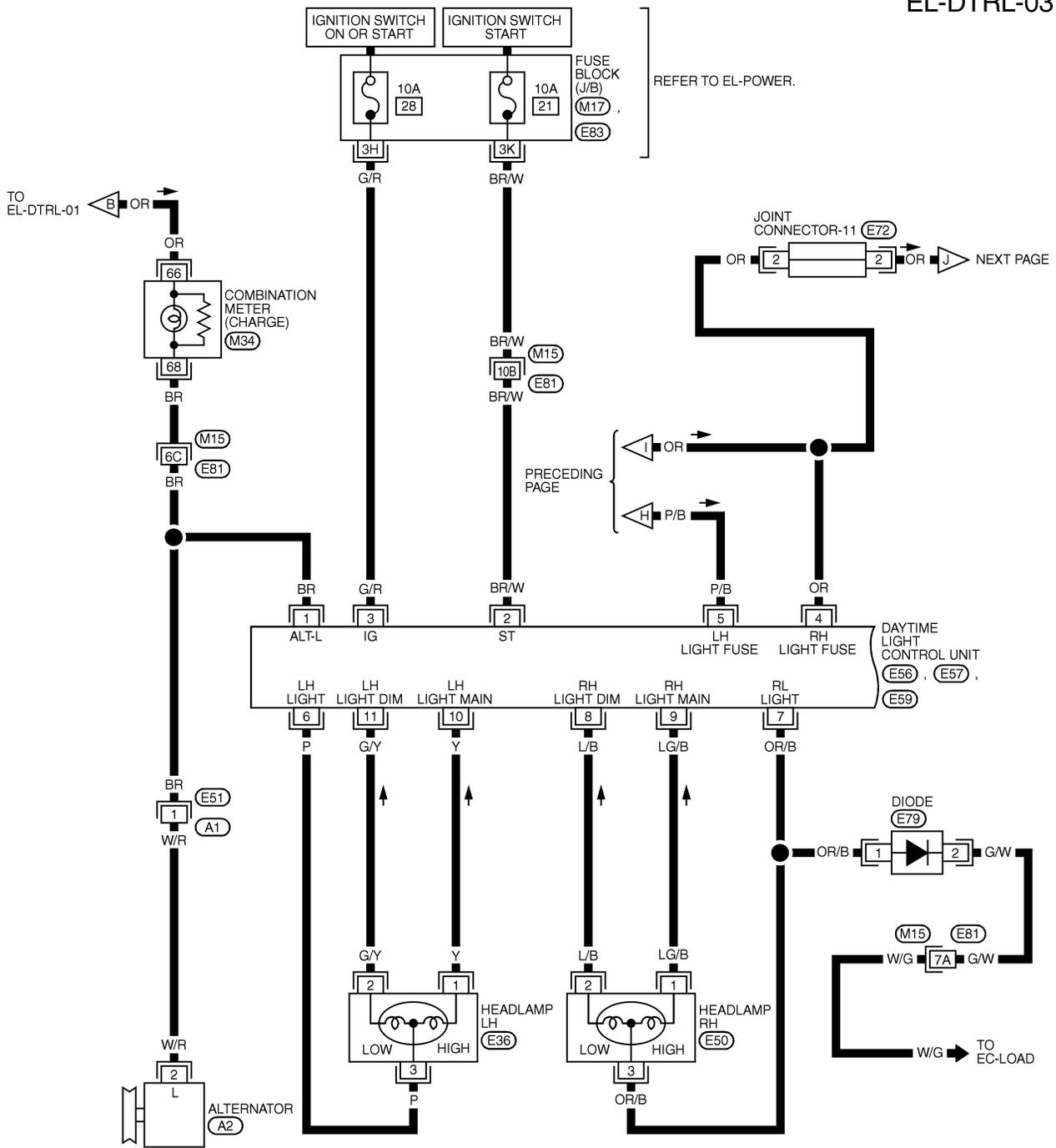


REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-JUNCTION BOX (J/B)

# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-03



REFER TO THE FOLLOWING.

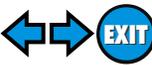
(M15), (E81) -SUPER MULTIPLE JUNCTION (SMJ)

(M17) -FUSE BLOCK-JUNCTION BOX (J/B)

(E83) -FUSE BLOCK-JUNCTION BOX (J/B)

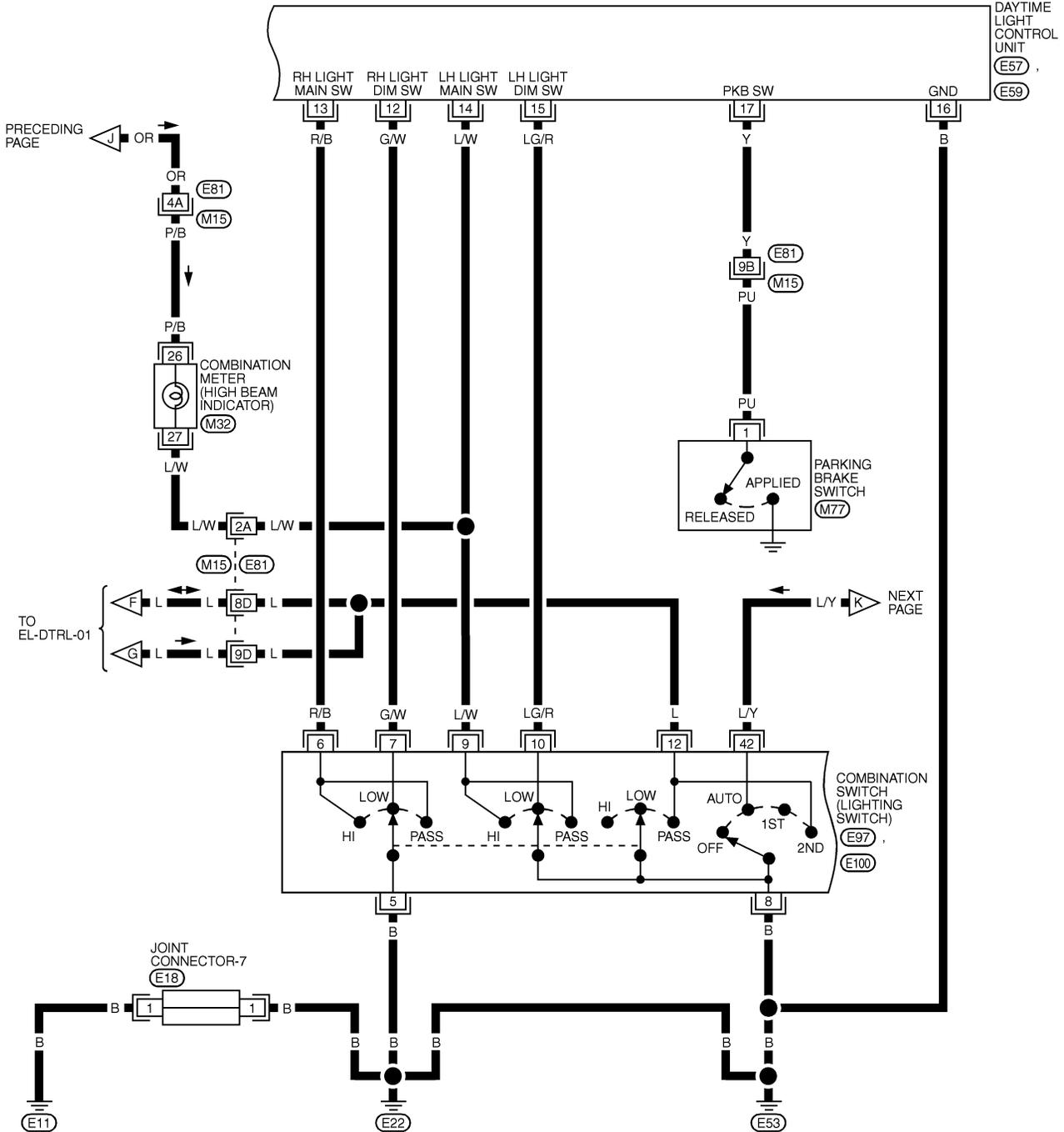
MEL600L

# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

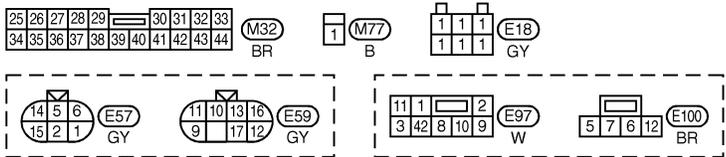


Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-04



GI  
MA  
EM  
LC  
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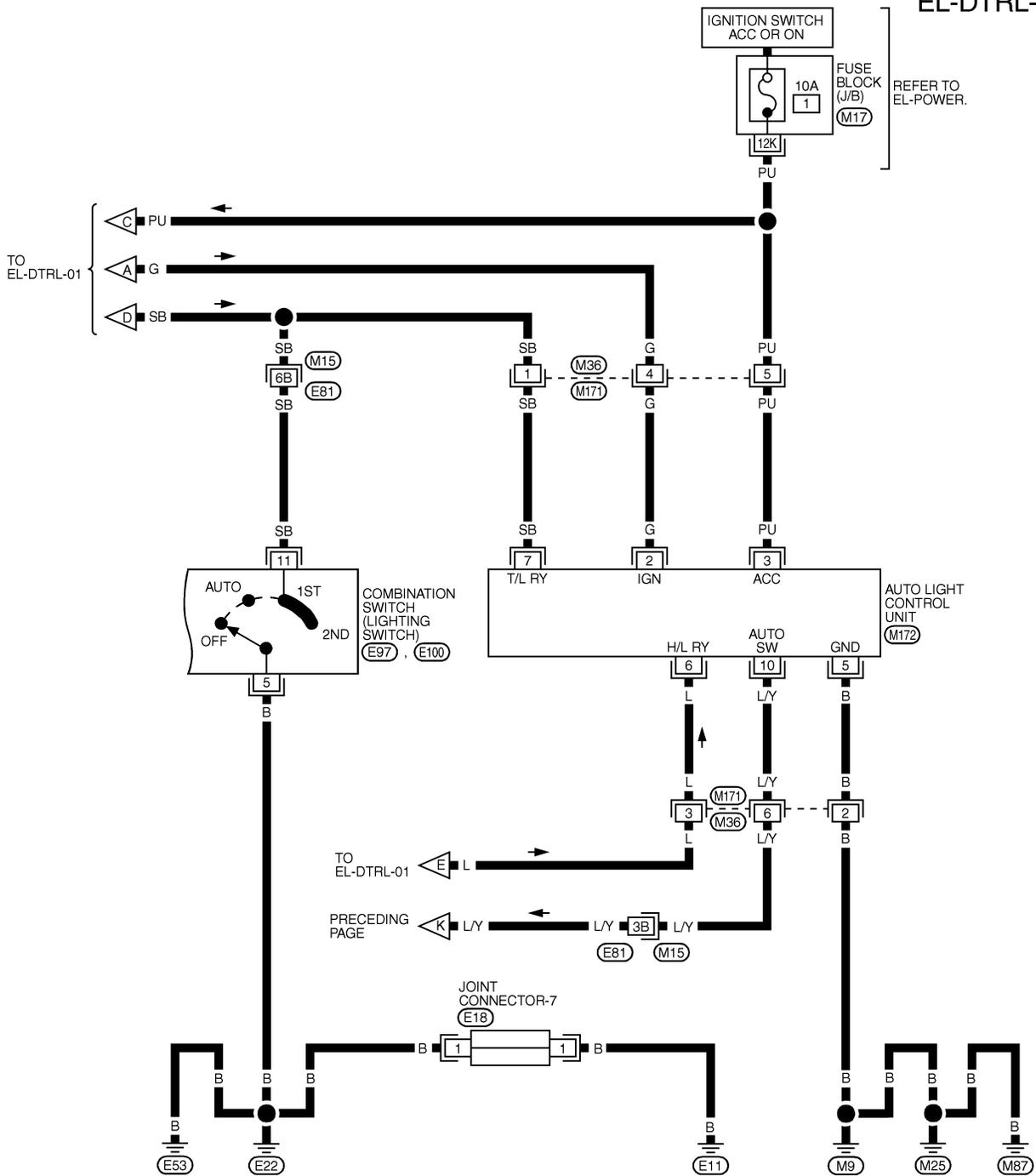
REFER TO THE FOLLOWING.  
(M15), (E81) -SUPER  
MULTIPLE JUNCTION (SMJ)

MEL717L

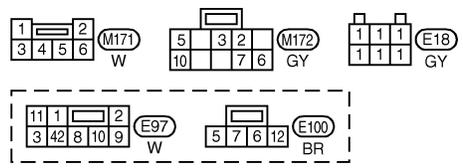
# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-05



REFER TO EL-POWER.



REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

## Trouble Diagnoses

NFEL0206

### DAYTIME LIGHT CONTROL UNIT INSPECTION TABLE

NFEL0206S01

Terminal No.	Wire color	Item	Condition	Voltage (Approximate values)	
1	BR	Alternator	 When turning ignition switch to "ON"	Less than 1V	GI
			 When engine is running	Battery voltage	MA
			 When turning ignition switch to "OFF"	Less than 1V	EM
2	BR/W	Start signal	 When turning ignition switch to "ST"	Battery voltage	LC
			 When turning ignition switch to "ON" from "ST"	Less than 1V	EC
			 When turning ignition switch to "OFF"	Less than 1V	FE
3	G/R	Power source	 When turning ignition switch to "ON"	Battery voltage	CL
			 When turning ignition switch to "ST"	Battery voltage	MT
			 When turning ignition switch to "OFF"	Less than 1V	AT
4	OR	Power source	 When turning ignition switch to "ON"	Battery voltage	AX
			 When turning ignition switch to "OFF"	Battery voltage	SU
5	P/B	Power source	 When turning ignition switch to "ON"	Battery voltage	BR
			 When turning ignition switch to "OFF"	Battery voltage	ST
6	P	LH headlamp control (ground)	When lighting switch is turned to the 2ND position with "LOW BEAM" position	Less than 1V	RS
			 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) <b>CAUTION:</b> Block wheels and ensure selector lever is in N or P position.	Approx. half battery voltage	BT

HA

SC

EL

IDX

# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Trouble Diagnoses (Cont'd)

Terminal No.	Wire color	Item	Condition	Voltage (Approximate values)
9	LG/B	RH hi beam	When lighting switch is turned to the 2ND position with "HI BEAM" position	Battery voltage
			 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) <b>CAUTION:</b> <b>Block wheels and ensure selector lever is in N or P position.</b>	Approx. half battery voltage
10	Y	LH hi beam	When turning lighting switch to "HI BEAM"	Battery voltage
			 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) <b>CAUTION:</b> <b>Block wheels and ensure selector lever is in N or P position.</b>	Battery voltage
12 15	G/W L/W	Lighting switch (Lo beam)	When turning lighting switch to "LOW BEAM"	Battery voltage
13 14	R/B L/W	Lighting switch (Hi beam)	When turning lighting switch to "HI BEAM"	Battery voltage
			When turning lighting switch to "FLASH TO PASS"	Battery voltage
16	B	Ground	—	—
17	Y	Parking brake switch	 When parking brake is released	Battery voltage
			When parking brake is set	Less than 1.5V

## BATTERY SAVER CONTROL UNIT INSPECTION TABLE

Refer to "HEADLAMP (FOR USA)" EL-42.

NFEL0206S02

## Bulb Replacement

Refer to "HEADLAMP (FOR USA)" (EL-44).

NFEL0022

## Aiming Adjustment

Refer to "HEADLAMP (FOR USA)" (EL-44).

NFEL0023

## System Description

NFEL0207

The parking, license and tail lamp operation is controlled by the lighting switch which is built into the combination switch and headlamp battery saver control unit. The battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

Power is supplied at all times

- to tail lamp relay terminals 1 and 3
- through 10A fuse (No. 60, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 12, located in the fuse block (J/B)].

When ignition switch is in ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 30, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 10A fuse [No. 10, located in the fuse block (J/B)].

Ground is supplied to headlamp battery saver control unit terminals 4 and 11.

### LIGHTING OPERATION BY LIGHTING SWITCH

When lighting switch is in 1ST (or 2ND) position, ground is supplied

- to tail lamp relay terminal 2 from headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 5 and 13, and
- through lighting switch and body grounds E11, E22 and E53.

Tail lamp relay is then energized and the parking, side marker and tail lamps illuminate.

### LIGHTING OPERATION BY AUTO LIGHT CONTROL SYSTEM

When lighting switch is in AUTO position, ground is supplied

- to tail lamp relay terminal 2 from headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 5 and 13, and
- through auto light control unit terminal 7.

Tail lamp relay is then energized and the parking, license side marker and tail lamps illuminate.

### BATTERY SAVER CONTROL

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while parking, license side marker and tail lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 2 of the tail lamp relay from headlamp battery saver control unit terminals 6 and 14 is terminated.

Then the parking, license side marker and tail lamps are turned off.

The parking, license side marker and tail lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while parking, license side marker and tail lamps are illuminated.

When the lighting switch is turned from OFF to 1ST (or 2ND) after the parking, license side marker and tail lamps are turned off by the battery saver control, ground is supplied.

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11 or auto light control unit terminal 7, and then
- to tail lamp relay terminal 2 from headlamp battery saver control unit terminals 6 and 14.

Then the parking, license side marker and tail lamps illuminate again.

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NFEL0207S01

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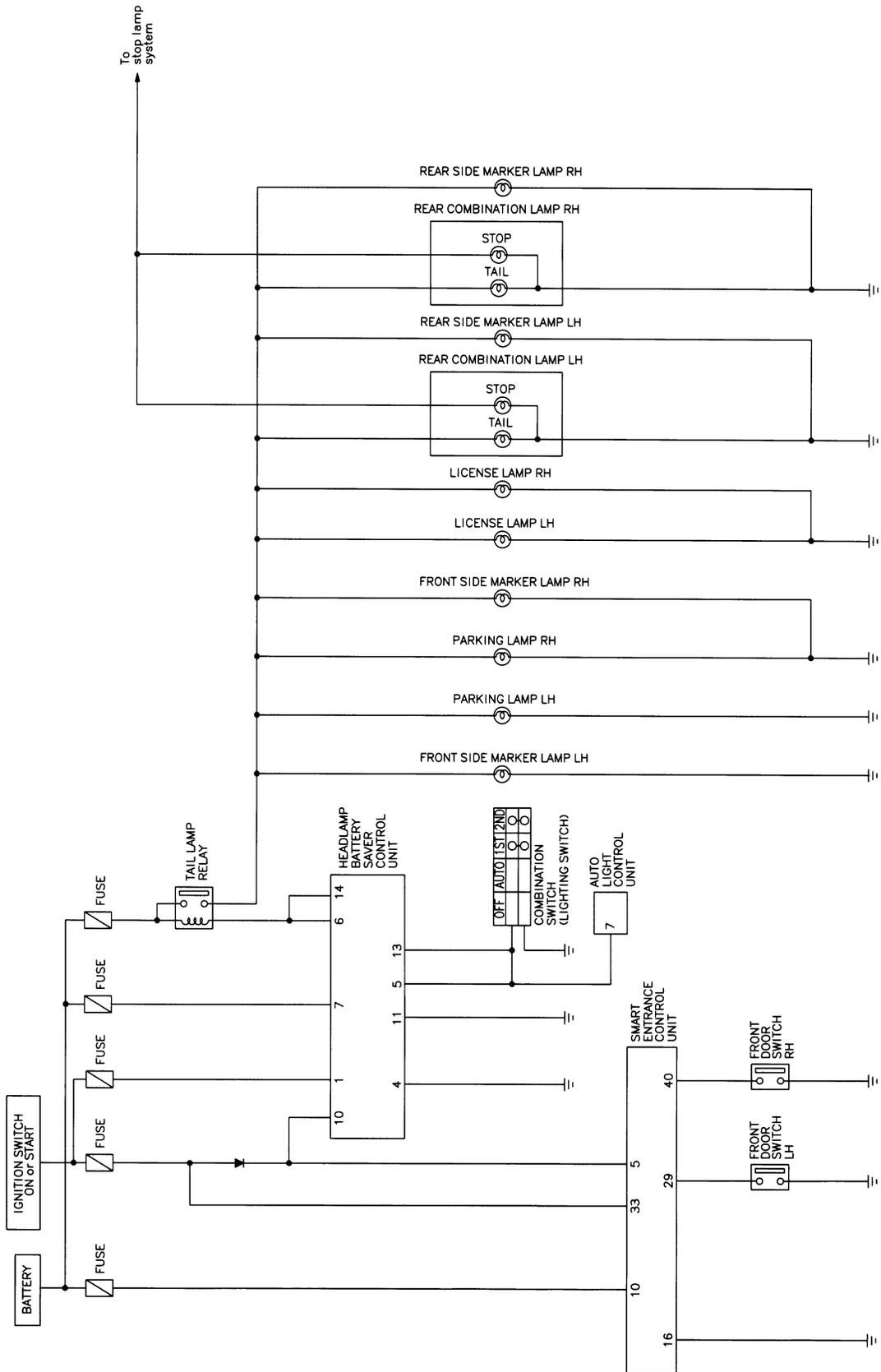
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# PARKING, LICENSE AND TAIL LAMPS

Schematic

## Schematic

NFEL0208



MEL601L

# PARKING, LICENSE AND TAIL LAMPS

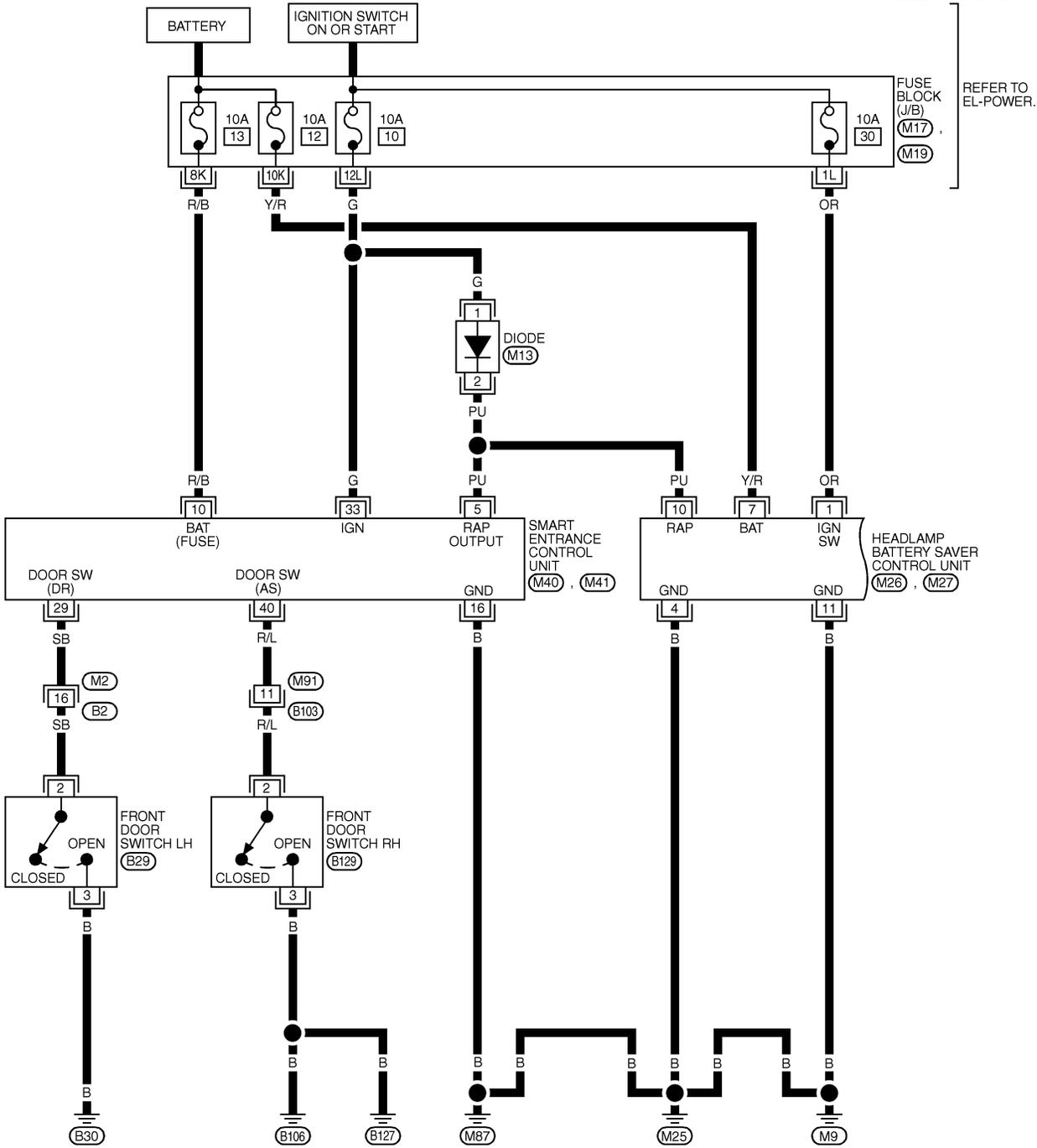
Wiring Diagram — TAIL/L —

## Wiring Diagram — TAIL/L —

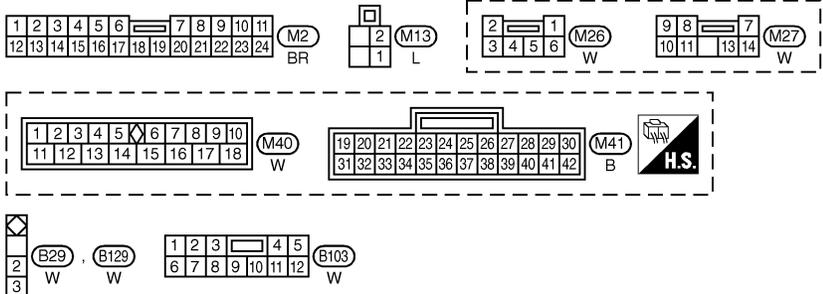
NFEL0024

EL-TAIL/L-01

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REFER TO EL-POWER.

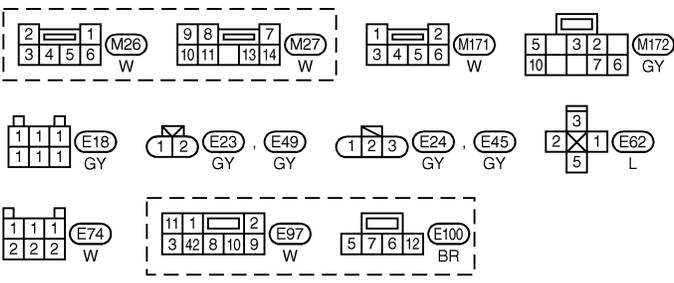
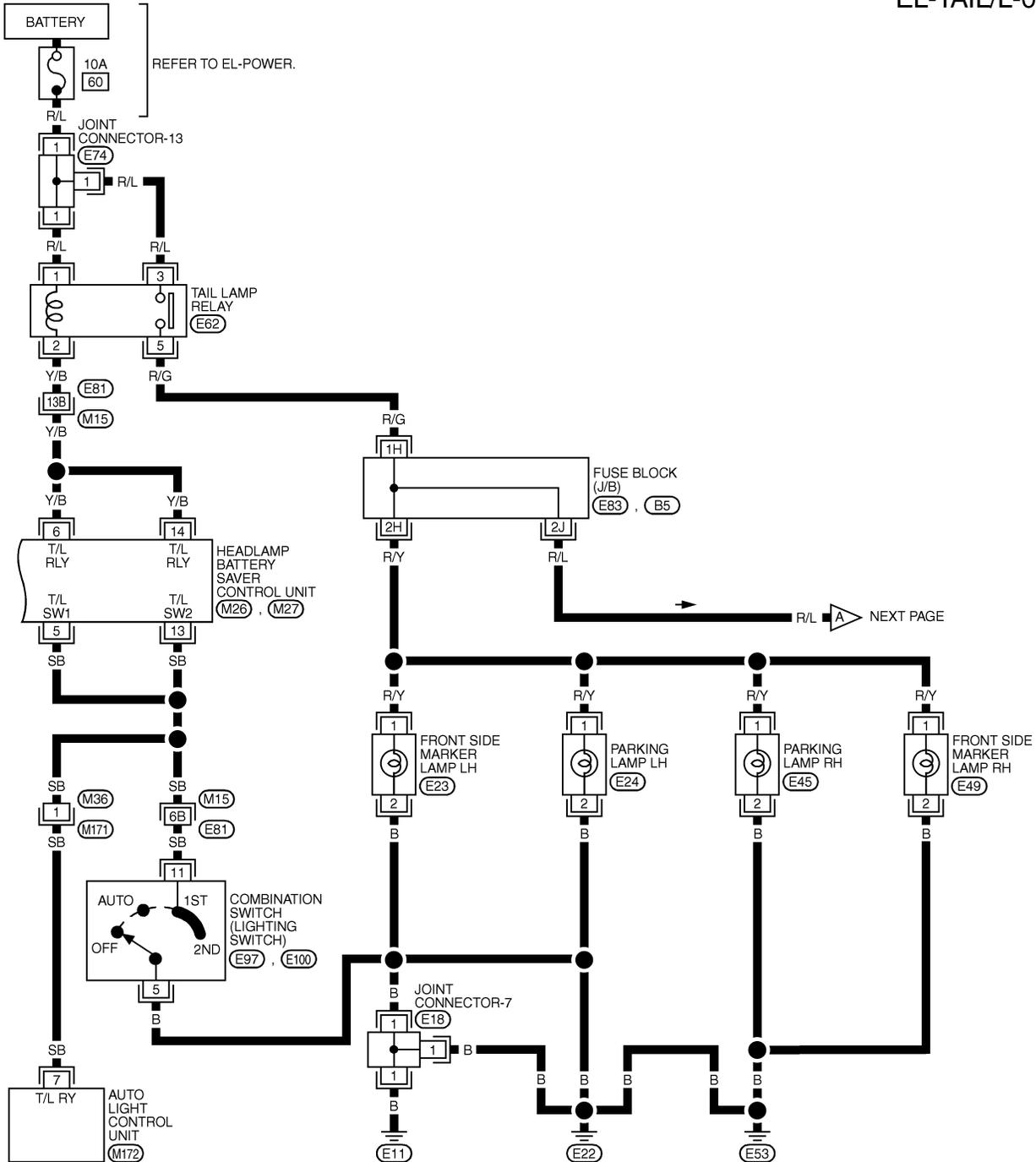


REFER TO THE FOLLOWING.  
**(M17)** - FUSE BLOCK-JUNCTION BOX (J/B)  
**(M19)** - FUSE BLOCK-JUNCTION BOX (J/B)

# PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

EL-TAIL/L-02



REFER TO THE FOLLOWING.

- (M15) , (E81) -SUPER MULTIPLE JUNCTION (SMJ)
- (E83) -FUSE BLOCK-JUNCTION BOX (J/B)
- (B5) -FUSE BLOCK-JUNCTION BOX (J/B)

MEL246K



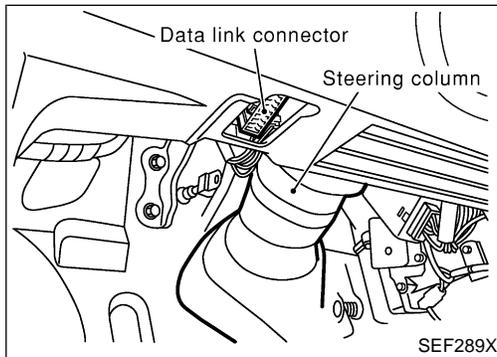
# PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
5	PU	HEADLAMP BATTERY SAVER CONTROL UNIT	WHEN HEADLAMP BATTERY SAVER TIMER IS OPERATED	12V
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V

SEL035X

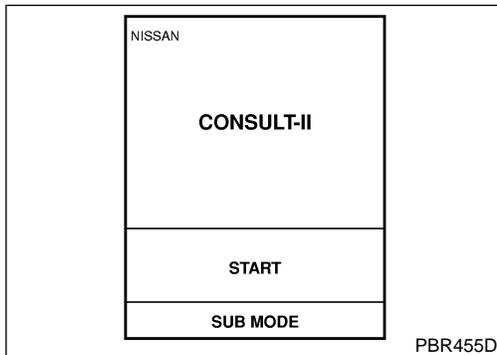


## CONSULT-II Inspection Procedure "RETAINED PWR"

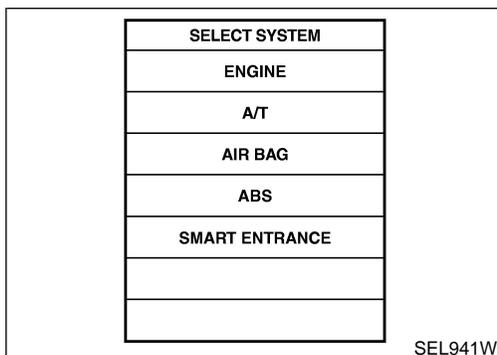
NFEL0209

NFEL0209S01

1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



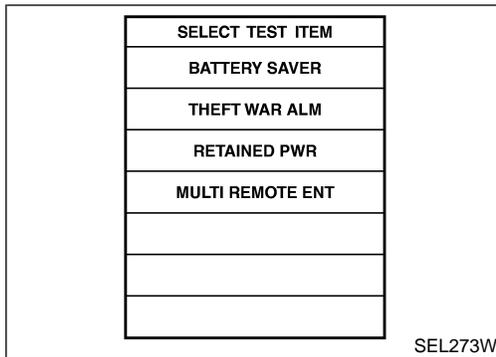
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".

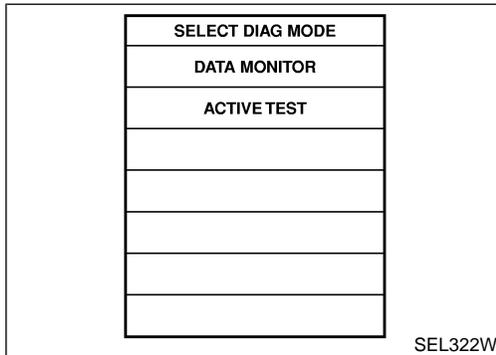
# PARKING, LICENSE AND TAIL LAMPS

CONSULT-II Inspection Procedure (Cont'd)



SEL273W

6. Touch "RETAINED PWR".



SEL322W

7. Select diagnosis mode.  
"DATA MONITOR" and "ACTIVE TEST" are available.

## CONSULT-II Application Items

### "RETAINED PWR" Data Monitor

NFEL0210  
NFEL0210S01  
NFEL0210S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.

### Active Test

NFEL0210S0102

Test Item	Description
RETAINED PWR	<p>This test is able to supply RAP signal (power) from smart entrance control unit to power window system, power sunroof system and headlamp battery saver control unit. Those systems can be operated when turning on "RETAINED PWR" on CONSULT-II screen even if the ignition switch is tuned OFF.</p> <p><b>NOTE:</b> During this test, CONSULT-II can be operated with ignition switch "OFF" position. "RETAINED PWR" should be turned "ON" or "OFF" on CONSULT-II screen when ignition switch is ON. Then turn ignition switch OFF for checking retained power operation. CONSULT-II might be stuck if "RETAINED PWR" is turned "ON" or "OFF" on CONSULT-II screen when ignition switch is OFF.</p>

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# PARKING, LICENSE AND TAIL LAMPS

Trouble Diagnoses

## Trouble Diagnoses

=NFEL0211

Symptom	Possible cause	Repair order
No lamps operate (including headlamps).	<ol style="list-style-type: none"> <li>1. 10A fuse</li> <li>2. Lighting switch</li> <li>3. Headlamp battery saver control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check 10A fuse [No. 12, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 7 of headlamp battery saver control unit.</li> <li>2. Check lighting switch.</li> <li>3. Check headlamp battery saver control unit. (EL-42)</li> </ol>
No parking, side marker, license and tail lamps operate, but headlamps do operate.	<ol style="list-style-type: none"> <li>1. 10A fuse</li> <li>2. Tail lamp relay</li> <li>3. Tail lamp relay circuit</li> <li>4. Lighting switch</li> <li>5. Lighting switch circuit</li> <li>6. Headlamp battery saver control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check 10A fuse (No. 60, located in fusible and fuse block). Verify battery positive voltage is present at terminals 1 and 3 of tail lamp relay.</li> <li>2. Check tail lamp relay.</li> <li>3. Check harness between headlamp battery saver control unit terminals 6 and 14 and tail lamp relay terminal 2. Check harness between tail lamp relay terminal 5 and fuse block.</li> <li>4. Check lighting switch.</li> <li>5. Check harness between lighting switch terminal 11 and headlamp battery saver control unit terminals 5 and 13. Check harness between lighting switch terminal 5 and ground.</li> <li>6. Check headlamp battery saver control unit. (EL-42)</li> </ol>
Battery saver control does not operate properly.	<ol style="list-style-type: none"> <li>1. RAP signal circuit</li> <li>2. Driver or passenger side door switch circuit</li> <li>3. Lighting switch circuit</li> <li>4. Headlamp battery saver control unit</li> <li>5. Smart entrance control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check RAP signal. <ol style="list-style-type: none"> <li>a. (With CONSULT-II) Check RAP signal with CONSULT-II. Use "ACTIVE TEST" mode, "RETAINED PWR" in "SMART ENTRANCE". (Refer to EL-62.) If NG, go to the step b. below.</li> <li>b. Verify 12 positive voltage from smart entrance control unit is present at terminal 10 of battery saver control unit: <ul style="list-style-type: none"> <li>● Within 45 seconds after ignition switch turns off.</li> <li>● When front door LH and RH is closed.</li> </ul> </li> </ol> </li> <li>2. Check harness between smart entrance control unit and driver or passenger side door switch for open or short circuit. Check driver or passenger side door switch ground circuit. Check driver or passenger side door switch.</li> <li>3. Check harness between headlamp battery saver control unit terminals 5 or 13 and lighting switch terminal 11 for open or short circuit. Check harness between lighting switch terminal 5 and ground. Check lighting switch.</li> <li>4. Check headlamp battery saver control unit. (EL-42)</li> <li>5. Check smart entrance control unit. (EL-316)</li> </ol>

# STOP LAMP

Wiring Diagram — STOP/L —

## Wiring Diagram — STOP/L —

NFEL0025

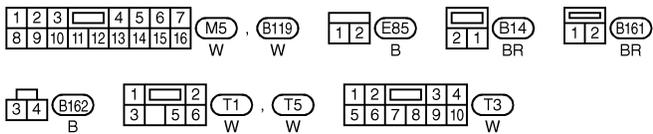
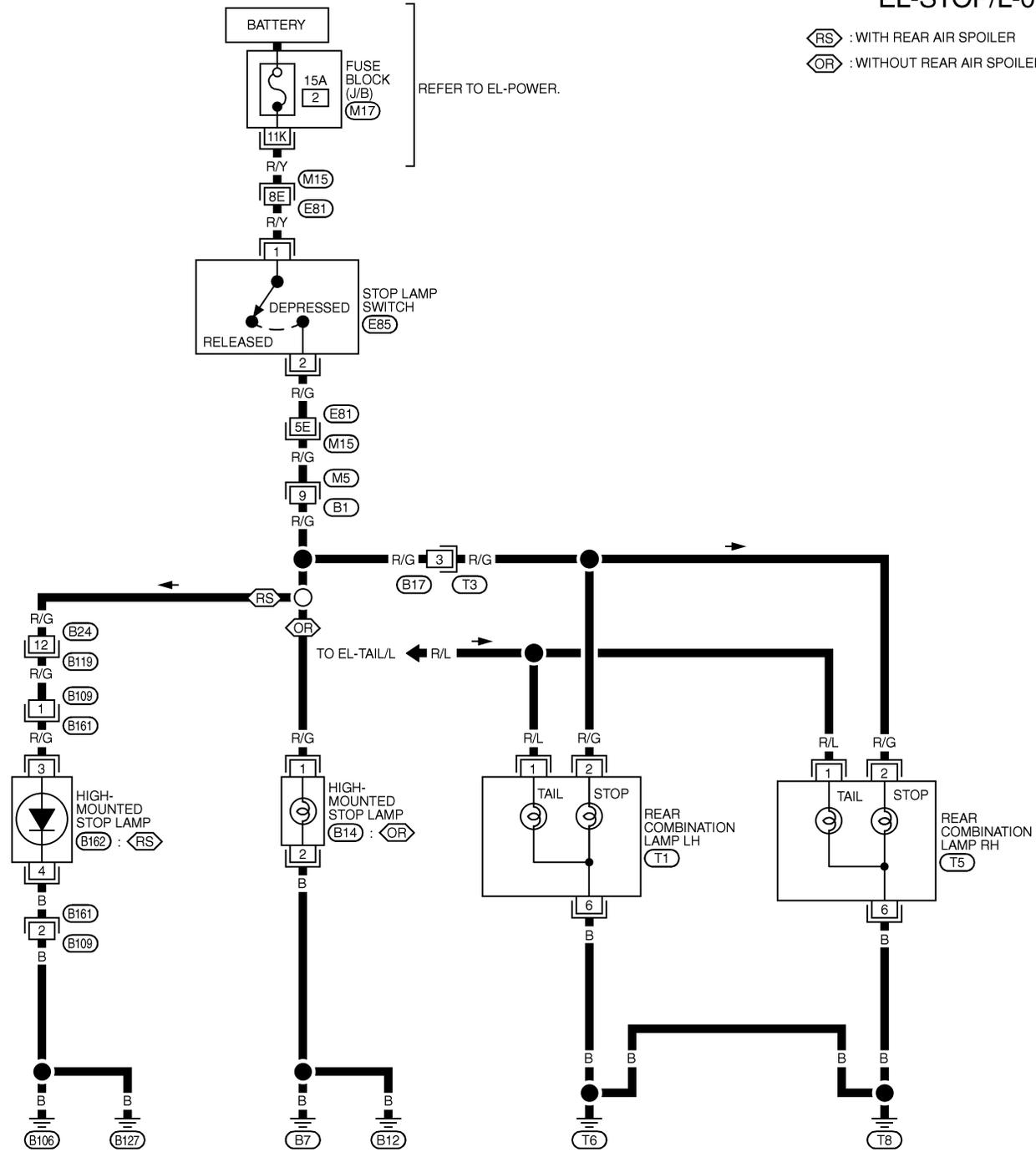
### EL-STOP/L-01

- : WITH REAR AIR SPOILER
- : WITHOUT REAR AIR SPOILER

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BT  
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SC

**EL**

IDX



REFER TO THE FOLLOWING.  
 (M15) . (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

MEL248K



## System Description

NFEL0164

NFEL0164S01

### OUTLINE

Power is supplied at all times

- to headlamp RH relay terminals 1 and 5
- through 15A fuse (No. 69, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 12, located in the fuse block (J/B)], and
- to front fog lamp relay terminal 3
- through 15A fuse (No. 6, located in the fuse and fusible link box).

When ignition switch is in ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 30, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 10A fuse [No. 10, located in the fuse block (J/B)].

Ground is supplied to headlamp battery saver control unit terminals 4 and 11.

When lighting switch is in 2ND position, ground is supplied

- to headlamp RH relay terminal 2 from headlamp battery saver control unit terminal 8.
- through headlamp battery saver control unit terminal 9, and
- through lighting switch, and body grounds E11, E22 and E53.

Headlamp RH relay is then energized.

### FOG LAMP OPERATION

The fog lamp switch is built into the combination switch. The lighting switch must be in the 2ND position and LOW ("B") position for fog lamp operation.

With the fog lamp switch in the ON position, ground is supplied

- to fog lamp relay terminal 2
- through the fog lamp switch, lighting switch and body grounds E11, E22 and E53.

The fog lamp relay is energized and power is supplied

- from fog lamp relay terminal 5
- to terminal 1 of each fog lamp.

Ground is supplied to terminal 2 of each fog lamp through body grounds E11, E22 and E53.

With power and ground supplied, the fog lamps illuminate.

### BATTERY SAVER CONTROL

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while fog lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 1 of headlamp RH relay from headlamp battery saver control unit terminal 8 is terminated.

Then fog lamps are turned to off.

Fog lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while fog lamps are illuminated.

When the lighting switch is turned from OFF to 1st or 2ND after fog lamps are turned off by the battery saver control, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and then
- to headlamp RH relay terminal 2 from headlamp battery saver control unit terminal 8.
- through headlamp battery saver control unit terminal 9
- through lighting switch, and body grounds E11, E22 and E53.

Then the fog lamps illuminate again.

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# FRONT FOG LAMP

Wiring Diagram — F/FOG —

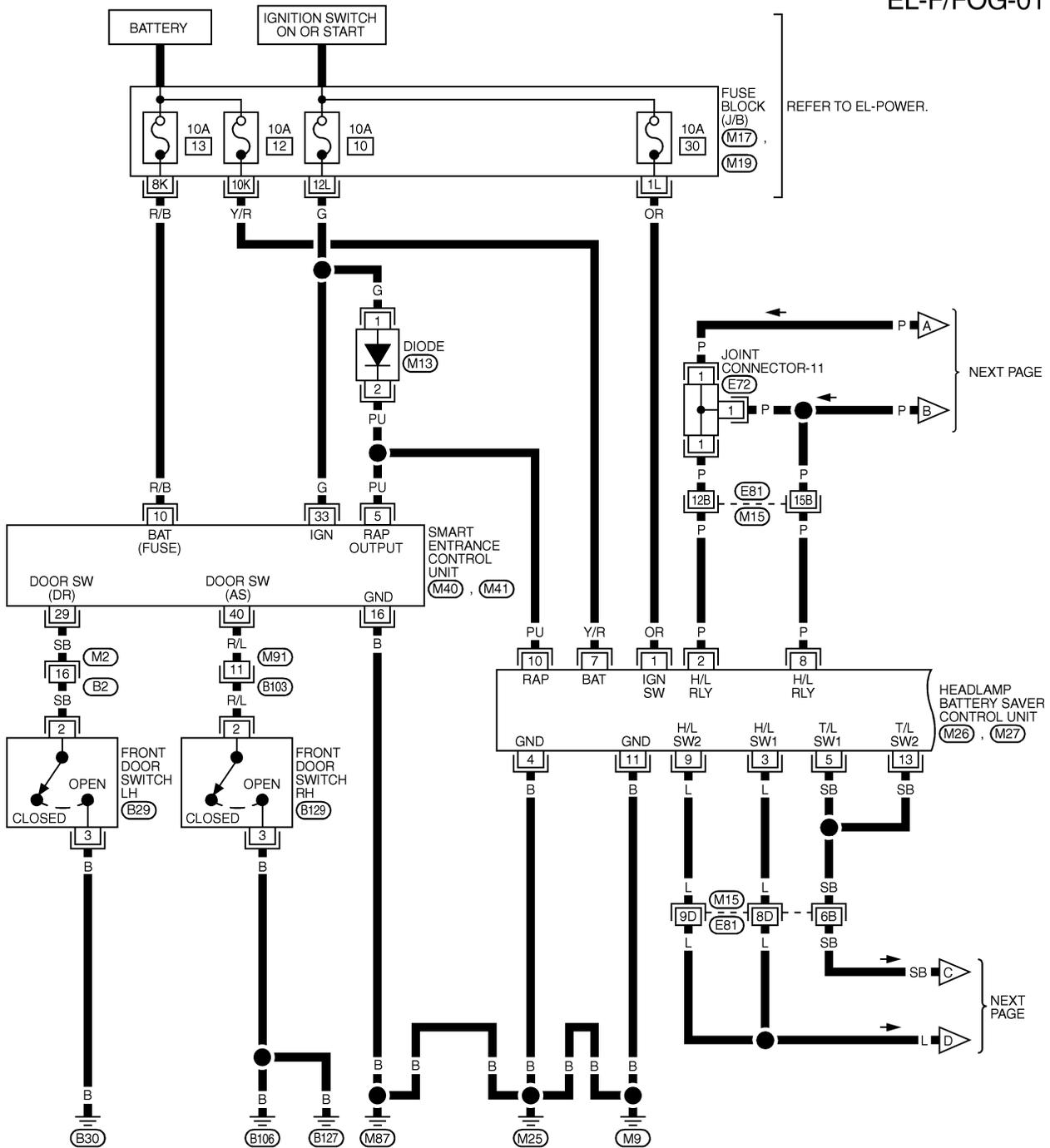
## Wiring Diagram — F/FOG —

NFEL0028

NFEL0028S01

FOR USA

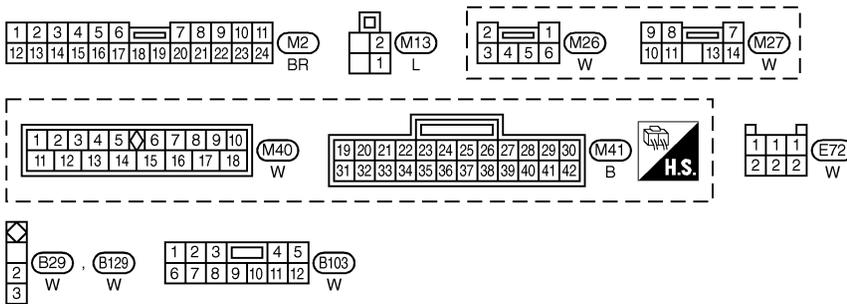
EL-F/FOG-01



REFER TO EL-POWER.

NEXT PAGE

NEXT PAGE

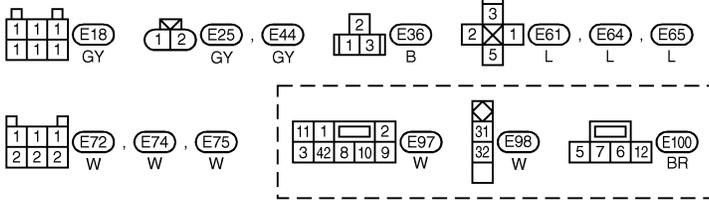
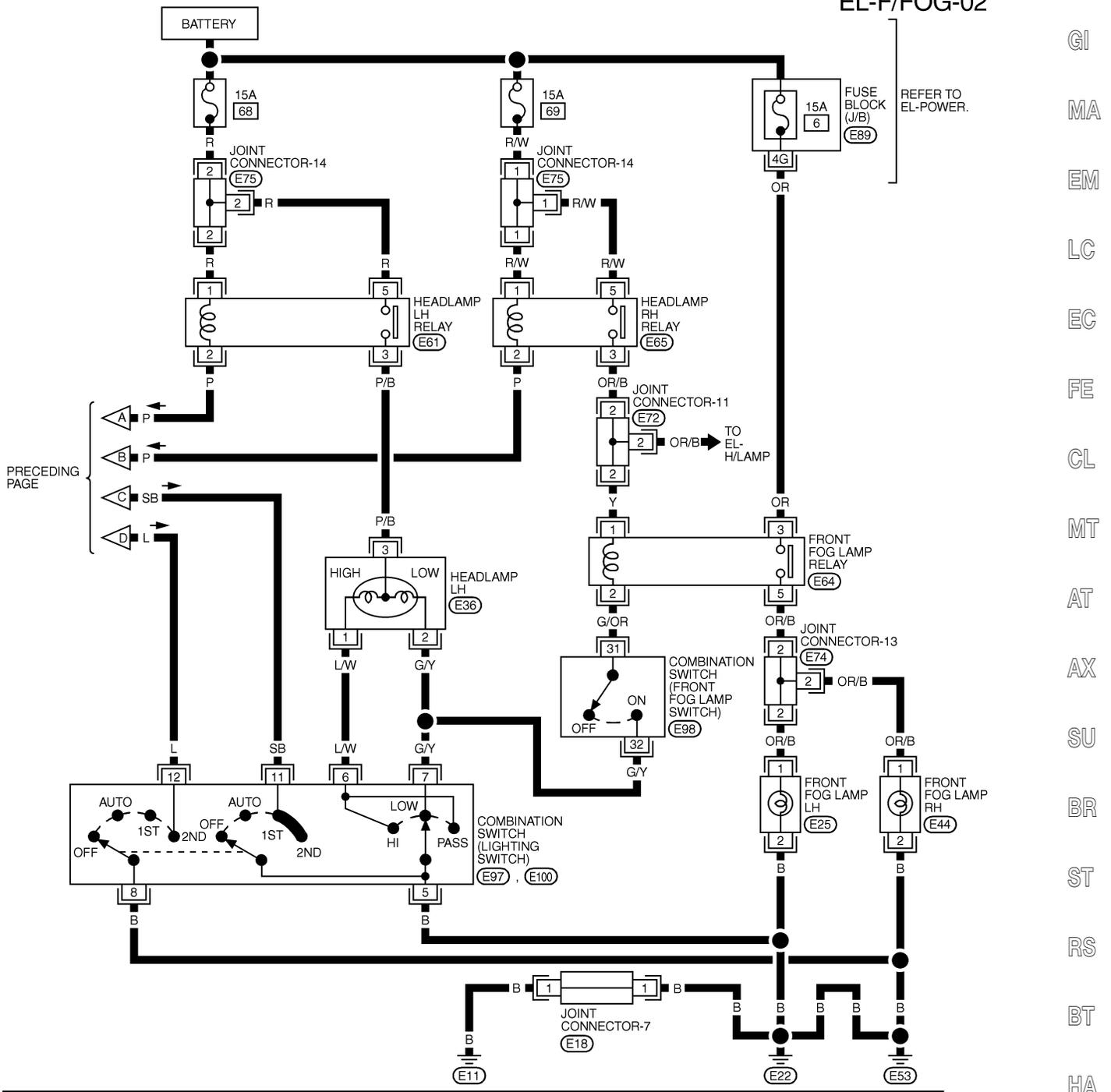


REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)  
 (M19) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

# FRONT FOG LAMP

Wiring Diagram — F/FOG — (Cont'd)

EL-F/FOG-02



REFER TO THE FOLLOWING.  
 (E89) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

EL

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MEL252K

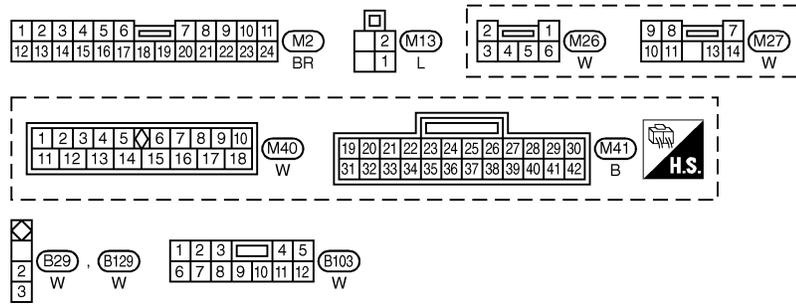
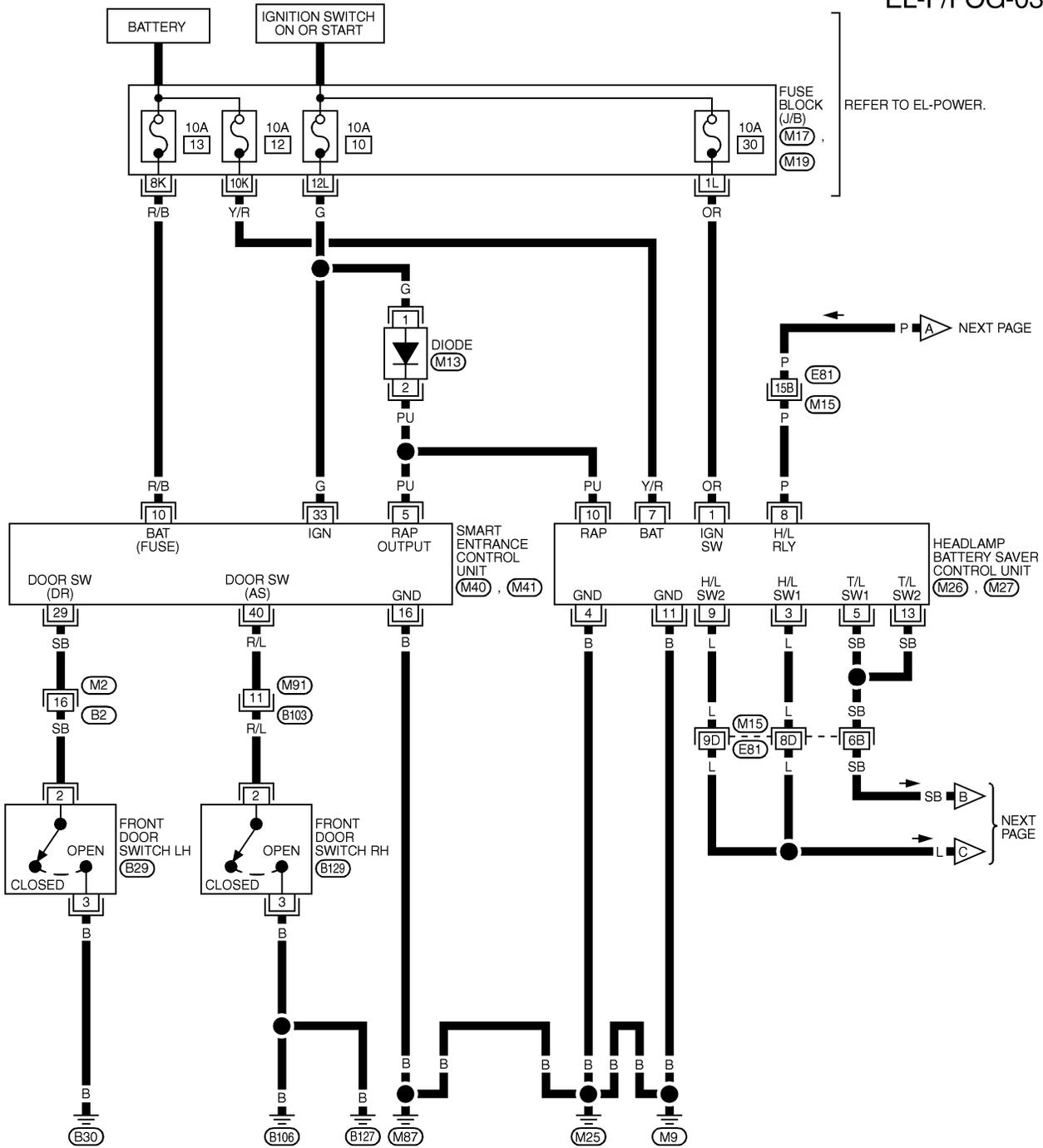
# FRONT FOG LAMP

Wiring Diagram — F/FOG — (Cont'd)

FOR CANADA

NFEL0028S02

EL-F/FOG-03



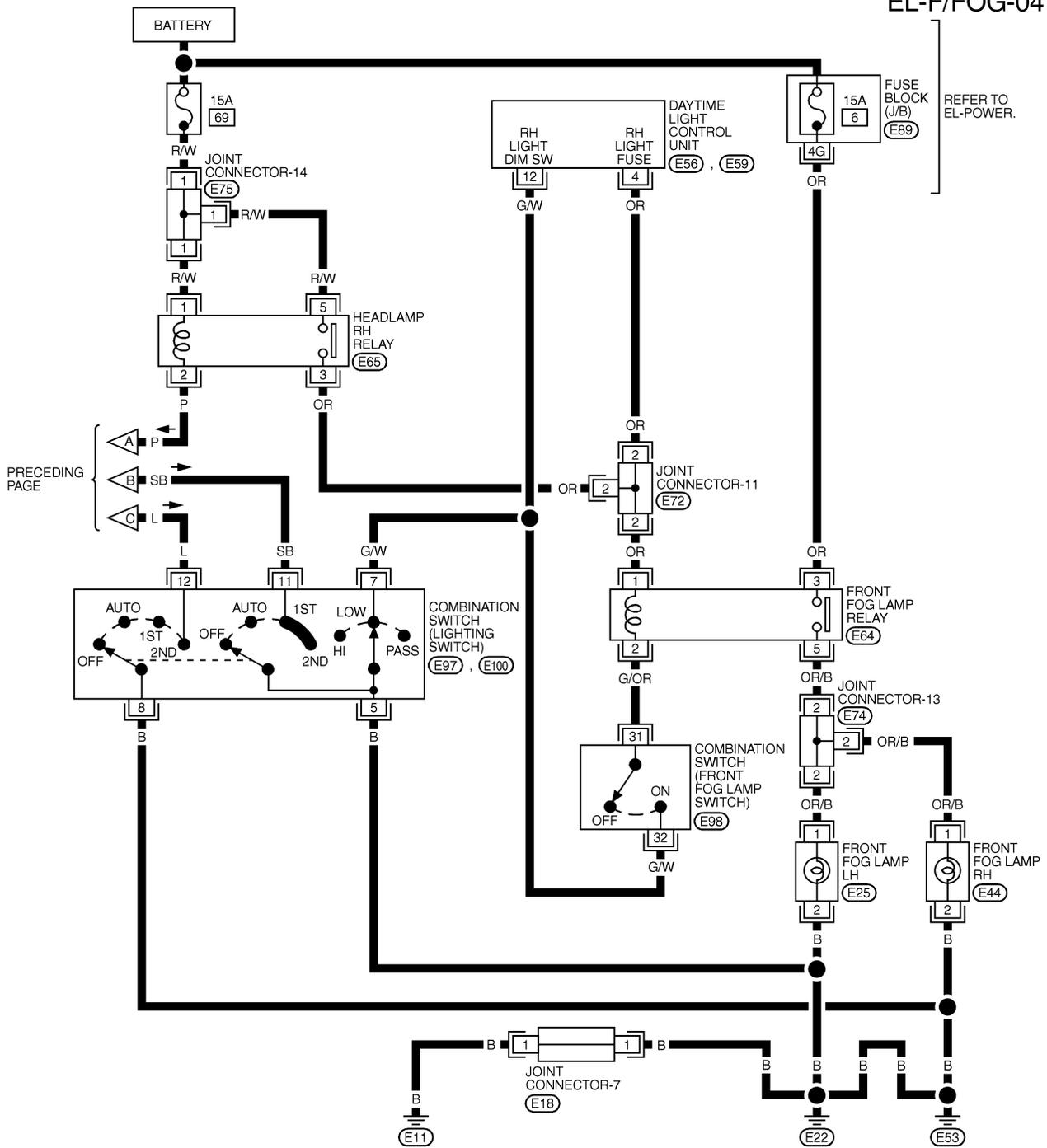
REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)  
 (M19) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

MEL604L

# FRONT FOG LAMP

Wiring Diagram — F/FOG — (Cont'd)

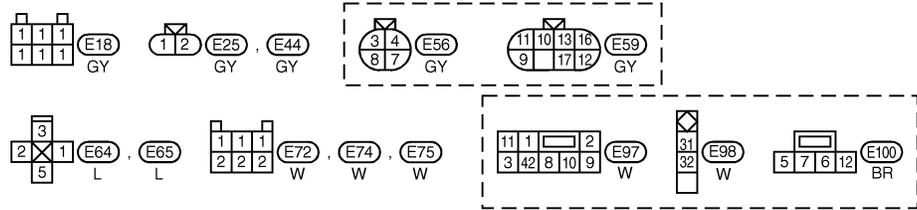
EL-F/FOG-04



PRECEDING PAGE

REFER TO EL-POWER.

REFER TO THE FOLLOWING.  
 (E89) - FUSE BLOCK-JUNCTION BOX (J/B)



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 SC

**EL**

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MEL254K

# FRONT FOG LAMP

Wiring Diagram — F/FOG — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
5	PU	HEADLAMP BATTERY SAVER CONTROL UNIT	WHEN HEADLAMP BATTERY SAVER TIMER IS OPERATED	12V
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V

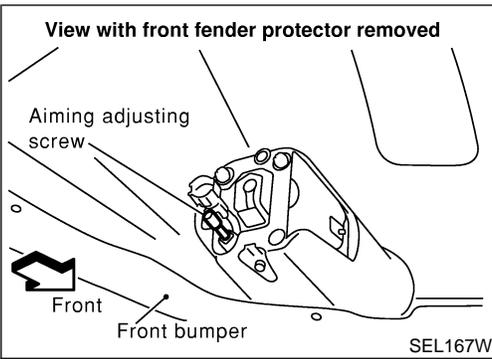
SEL035X

**NOTE:**

For CONSULT-II Inspection Procedure, refer to "HEADLAMP (FOR USA)" (EL-40).

For CONSULT-II Application Items, refer to "HEADLAMP (FOR USA)" (EL-41).

Trouble Diagnoses for battery saver control, refer to "HEADLAMP (FOR USA)" (EL-41).



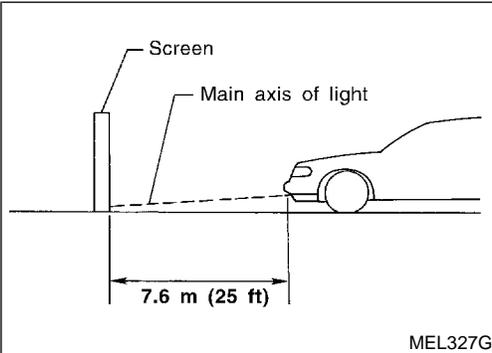
## Aiming Adjustment

=NFEL0029

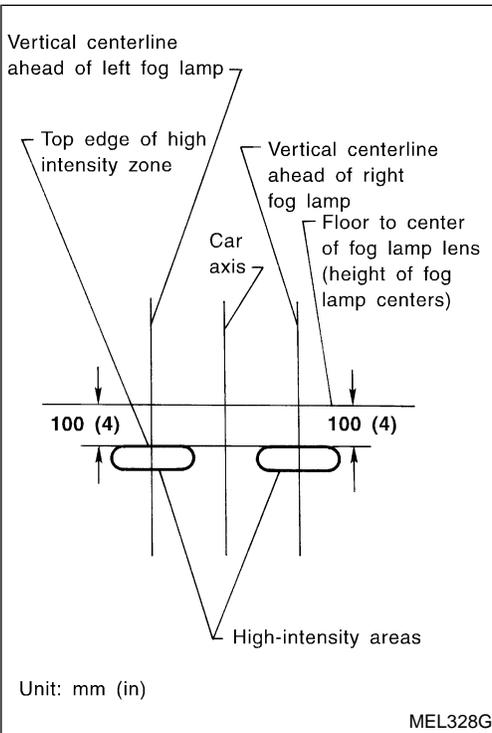
Before performing aiming adjustment, make sure of the following.

- 1) Keep all tires inflated to correct pressure.
- 2) Place vehicle on level ground.
- 3) See that vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in driver's seat.

Adjust aiming in the vertical direction by turning the adjusting screw.



1. Set the distance between the screen and the center of the fog lamp lens as shown at left.
2. Remove front fog lamp rim. For detail, refer to "BODY END" in BT section.
3. Turn front fog lamps ON.



4. Adjust front fog lamps so that the top edge of the high intensity zone is 100 mm (4 in) below the height of the fog lamp centers as shown at left.
- When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.

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## System Description

NFEL0030

### TURN SIGNAL OPERATION

NFEL0030S01

With the hazard switch in the OFF position and the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 26, located in the fuse block (J/B)]
- to hazard switch terminal 2
- through terminal 1 of the hazard switch
- to combination flasher unit terminal 1
- through terminal 3 of the combination flasher unit
- to turn signal switch terminal 1.

Ground is supplied to combination flasher unit terminal 2 through body grounds M9, M25 and M87.

### LH Turn

NFEL0030S0101

When the turn signal switch is moved to the LH position, power is supplied from turn signal switch terminal 3 to

- front turn signal lamp LH terminal 3
- combination meter terminal 25
- rear combination lamp LH terminal 5.

Ground is supplied to the front turn signal lamp LH terminal 2 through body grounds E11, E22 and E53.

Ground is supplied to the rear combination lamp LH terminal 6 through body grounds T6 and T8.

Ground is supplied to combination meter terminal 30 through body grounds M9, M25 and M87.

With power and ground supplied, the combination flasher unit controls the flashing of the LH turn signal lamps.

### RH Turn

NFEL0030S0102

When the turn signal switch is moved to the RH position, power is supplied from turn signal switch terminal 2 to

- front turn signal lamp RH terminal 3
- combination meter terminal 29
- rear combination lamp RH terminal 5.

Ground is supplied to the front turn signal lamp RH terminal 2 through body grounds E11, E22 and E53.

Ground is supplied to the rear combination lamp RH terminal 6 through body grounds T6 and T8.

Ground is supplied to combination meter terminal 30 through body grounds M9, M25 and M87.

With power and ground supplied, the combination flasher unit controls the flashing of the RH turn signal lamps.

### HAZARD LAMP OPERATION

NFEL0030S02

Power is supplied at all times to hazard switch terminal 3 through:

- 10A fuse [No. 5, located in the fuse block (J/B)].

With the hazard switch in the ON position, power is supplied

- through terminal 1 of the hazard switch
- to combination flasher unit terminal 1
- through terminal 3 of the combination flasher unit
- to hazard switch terminal 4.

Ground is supplied to combination flasher unit terminal 2 through body grounds M9, M25 and M87.

Power is supplied through terminal 5 of the hazard switch to

- front turn signal lamp LH terminal 3
- combination meter terminal 25
- rear combination lamp LH terminal 5.

Power is supplied through terminal 6 of the hazard switch to

- front turn signal lamp RH terminal 3
- combination meter terminal 29
- rear combination lamp RH terminal 5.

# TURN SIGNAL AND HAZARD WARNING LAMPS

System Description (Cont'd)

Ground is supplied to terminal 2 of each front turn signal lamp through body grounds E11, E22 and E53.  
Ground is supplied to terminal 6 of each rear combination lamp through body grounds T6 and T8.  
Ground is supplied to combination meter terminal 30 through body grounds M9, M25 and M87.  
With power and ground supplied, the combination flasher unit controls the flashing of the hazard warning lamps.

GI

## MULTI-REMOTE CONTROL SYSTEM OPERATION

MA

NFEL0030S03

Power is supplied at all times

- through 10A fuse [No. 5, located in the fuse block (J/B)]
- to multi-remote control relay terminals 1, 6 and 3.

EM

Ground is supplied to multi-remote control relay terminal 2, when the multi-remote control system is triggered through the smart entrance control unit.

LC

Refer to "MULTI-REMOTE CONTROL SYSTEM", EL-247.

The multi-remote control relay is energized.

EC

Power is supplied through terminal 7 of the multi-remote control relay

- to front turn signal lamp LH terminal 3
- to combination meter terminal 25
- to rear combination lamp LH terminal 5.

FE

Power is supplied through terminal 5 of the multi-remote control relay

- to front turn signal lamp RH terminal 3
- to combination meter terminal 29
- to rear combination lamp RH terminal 5.

CL

MT

Ground is supplied to terminal 2 of each front turn signal lamp through body grounds E11, E22 and E53.

Ground is supplied to terminal 6 of each rear combination lamp through body grounds T6 and T8.

Ground is supplied to combination meter terminal 30 through body grounds M9, M25 and M87.

AT

With power and ground supplied, the smart entrance control unit controls the flashing of the hazard warning lamps.

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

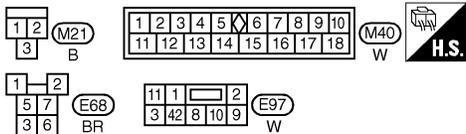
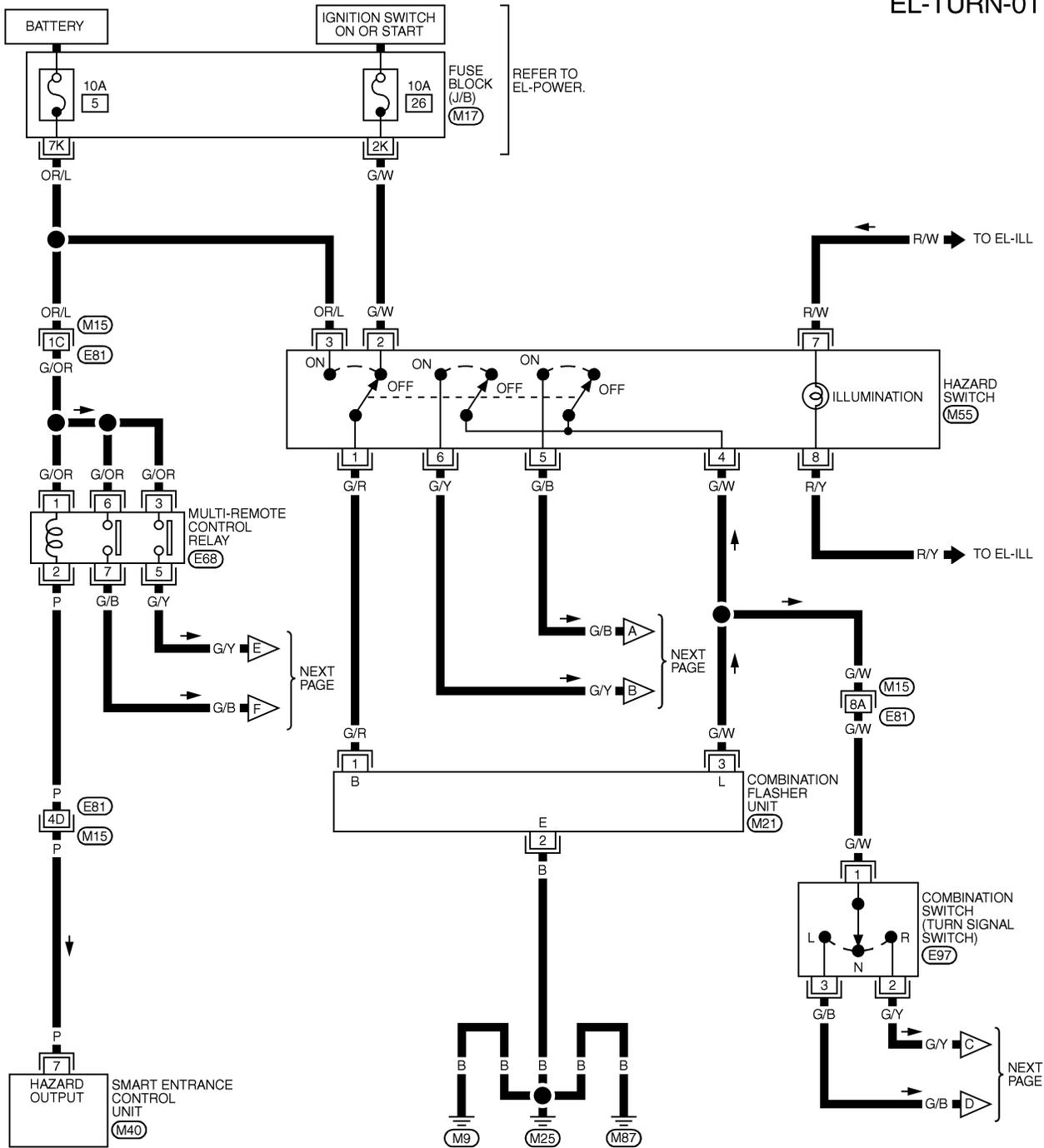
# TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —

## Wiring Diagram — TURN —

NFEL0032

EL-TURN-01



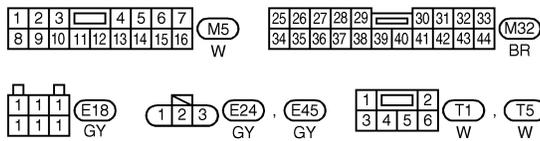
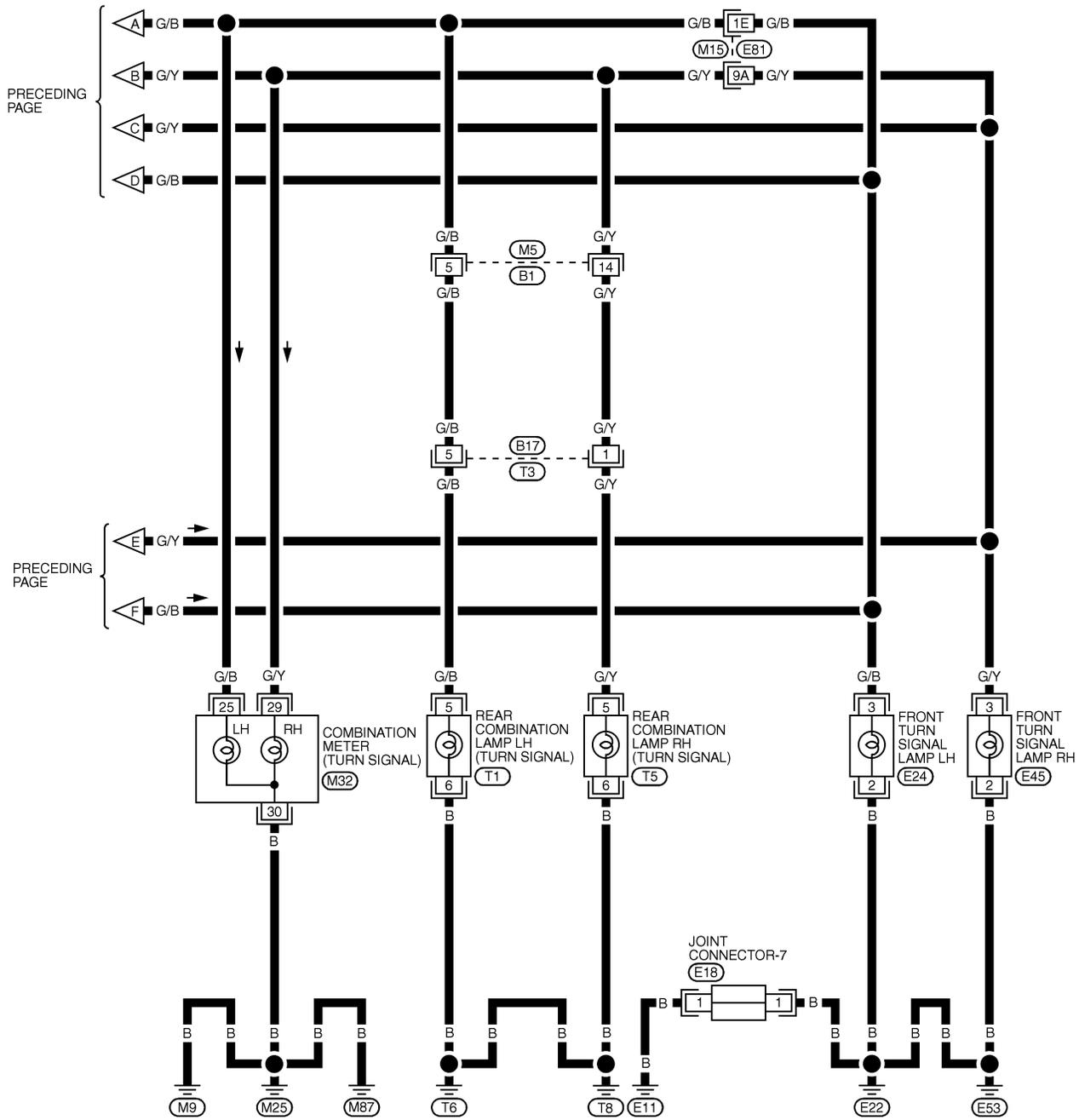
REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

MEL240K

# TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN — (Cont'd)

EL-TURN-02



REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)

GI  
 MA  
 EM  
 LC  
 EC  
 FE  
 CL  
 MT  
 AT  
 AX  
 SU  
 BR  
 ST  
 RS  
 BT  
 HA  
 SC  
 EL  
 IDX

MEL241K

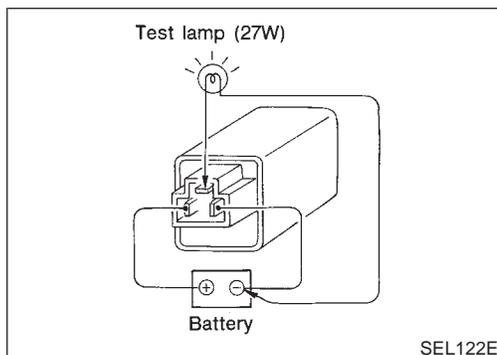
# TURN SIGNAL AND HAZARD WARNING LAMPS

Trouble Diagnoses

## Trouble Diagnoses

NFEL0033

Symptom	Possible cause	Repair order
Turn signal and hazard warning lamps do not operate.	<ol style="list-style-type: none"> <li>1. Hazard switch</li> <li>2. Combination flasher unit</li> <li>3. Open in combination flasher unit circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check hazard switch.</li> <li>2. Refer to combination flasher unit check.</li> <li>3. Check wiring to combination flasher unit for open circuit.</li> </ol>
Turn signal lamps do not operate but hazard warning lamps operate.	<ol style="list-style-type: none"> <li>1. 10A fuse</li> <li>2. Hazard switch</li> <li>3. Turn signal switch</li> <li>4. Open in turn signal switch circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check 10A fuse [No. 26, located in fuse block (J/B)]. Turn ignition switch ON and verify battery positive voltage is present at terminal 2 of hazard switch.</li> <li>2. Check hazard switch.</li> <li>3. Check turn signal switch.</li> <li>4. Check the wire between combination flasher unit terminal 3 and turn signal switch terminal 1 for open circuit.</li> </ol>
Hazard warning lamps do not operate but turn signal lamps operate.	<ol style="list-style-type: none"> <li>1. 10A fuse</li> <li>2. Hazard switch</li> <li>3. Open in hazard switch circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check 10A fuse [No. 5, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 3 of hazard switch.</li> <li>2. Check hazard switch.</li> <li>3. Check the wire between combination flasher unit terminal 3 and hazard switch terminal 4 for open circuit.</li> </ol>
Front turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Grounds E11, E22 and E53</li> <li>3. Front turn signal lamp circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check grounds E11, E22 and E53.</li> <li>3. Check the wire between combination switch and front turn signal lamp.</li> </ol>
Rear turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Grounds T6 and T8</li> <li>3. Rear turn signal lamp circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check grounds T6 and T8.</li> <li>3. Check the wire between combination switch and rear turn signal lamp.</li> </ol>
LH and RH turn indicators do not operate.	<ol style="list-style-type: none"> <li>1. Ground</li> </ol>	<ol style="list-style-type: none"> <li>1. Check grounds M9, M25 and M87.</li> </ol>
LH or RH turn indicator does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Turn indicator circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb in combination meter.</li> <li>2. Check the wire between hazard switch and combination meter.</li> </ol>



### Electrical Components Inspection COMBINATION FLASHER UNIT CHECK

NFEL0034

NFEL0034S01

- Before checking, ensure that bulbs meet specifications.
- Connect a battery and test lamp to the combination flasher unit, as shown. Combination flasher unit is properly functioning if it blinks when power is supplied to the circuit.

## System Description

NFEL0035

The illumination lamp operation is controlled by the lighting switch which is built into the combination switch and headlamp battery saver control unit. The battery saver system is controlled by the headlamp battery saver control unit and smart entrance control unit.

Power is supplied at all times

- to tail lamp relay terminals 1 and 3
- through 10A fuse (No. 60, located in the fuse and fusible link box), and
- to headlamp battery saver control unit terminal 7
- through 10A fuse [No. 12, located in the fuse block (J/B)].

When ignition switch is in ON or START position, power is supplied

- to headlamp battery saver control unit terminal 1
- through 10A fuse [No. 30, located in the fuse block (J/B)], and
- to headlamp battery saver control unit terminal 10, and
- to smart entrance control unit terminal 33
- through 10A fuse [No. 10, located in the fuse block (J/B)].

Ground is supplied to headlamp battery saver control unit terminals 4 and 11.

### LIGHTING OPERATION BY LIGHTING SWITCH

NFEL0035S01

When lighting switch is 1ST (or 2ND) position, ground is supplied

- to tail lamp relay terminal 2 from headlamp battery saver control unit terminals 6 and 14
- through headlamp battery saver control unit terminals 5 and 13, and
- through lighting switch and body grounds E11, E22 and E53.

Tail lamp relay is then energized and illumination lamps illuminate.

The lighting switch must be in the 1ST or 2ND position for illumination.

The illumination control switch that controls the amount of current to the illumination system. As the amount of current increases, the illumination becomes brighter.

The ground for all of the components except for door mirror remote control switch, clock, grove box lamp, ashtray and rear power window switch are controlled through terminals 2 and 3 of the illumination control switch and body grounds M9, M25 and M87.

### BATTERY SAVER CONTROL

NFEL0035S02

When the ignition switch is turned from ON (or START) to OFF (or ACC) positions while illumination lamps are illuminated, the RAP signal is supplied to terminal 10 of the headlamp battery saver control unit from smart entrance control unit terminal 5.

After counting 45 seconds by the RAP signal from the smart entrance control unit to headlamp battery saver control unit, the ground supply to terminal 2 of the tail lamp relay from headlamp battery saver control unit terminals 6 and 14 is terminated.

Then illumination lamps are turned off.

Illumination lamps are turned off when driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned from ON (or START) to OFF (or ACC) positions while illumination lamps are illuminated.

When the lighting switch is turned from OFF to 1ST (or 2ND) after illumination lamps are turned off by the battery saver control, ground is supplied

- to headlamp battery saver control unit terminals 5 and 13 from lighting switch terminal 11, and
- to tail lamp relay terminal 2 from headlamp battery saver control unit terminals 6 and 14.

Then illumination lamps illuminate again.

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

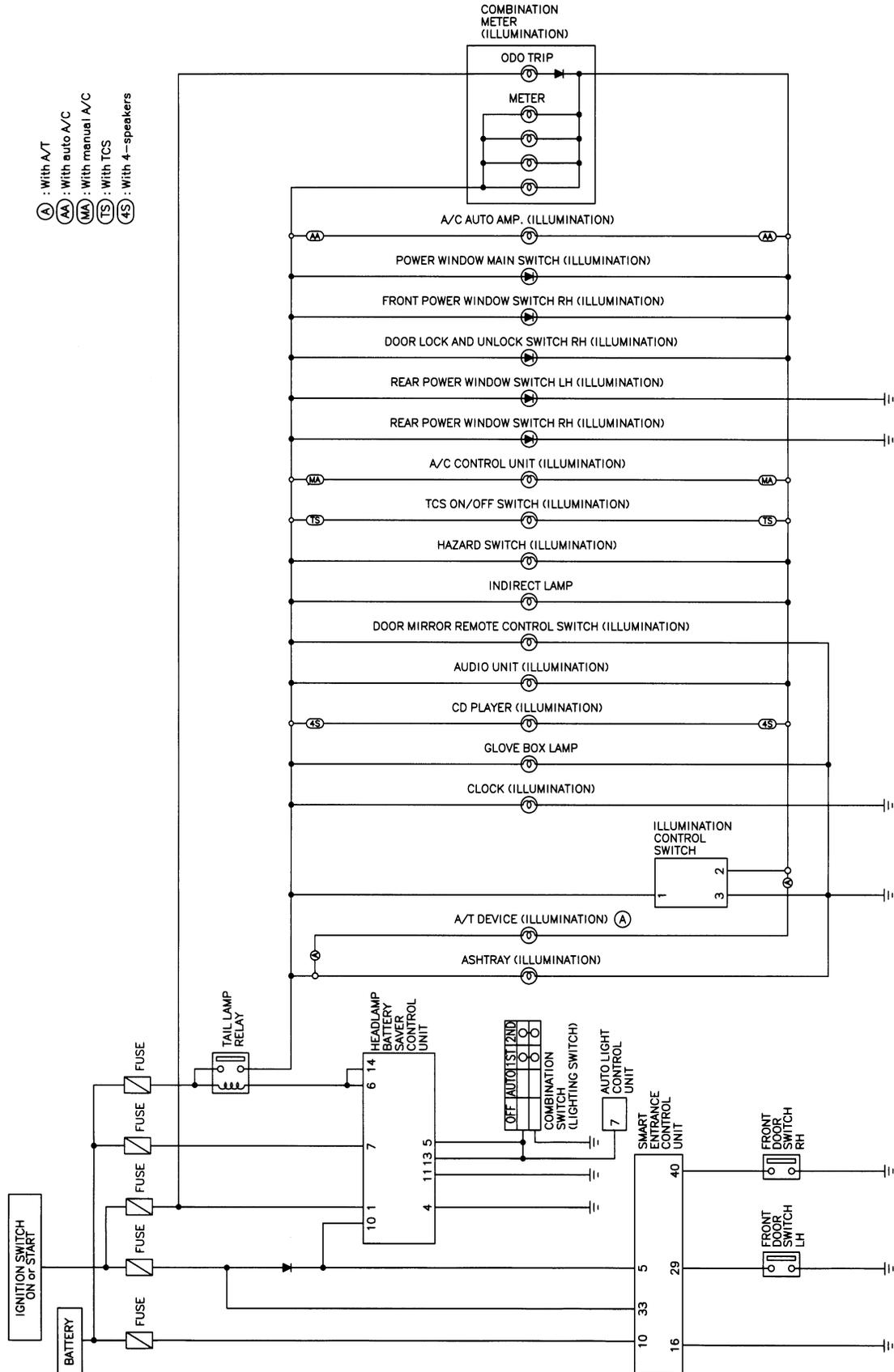
IDX

# ILLUMINATION

Schematic

NFEL0036

## Schematic



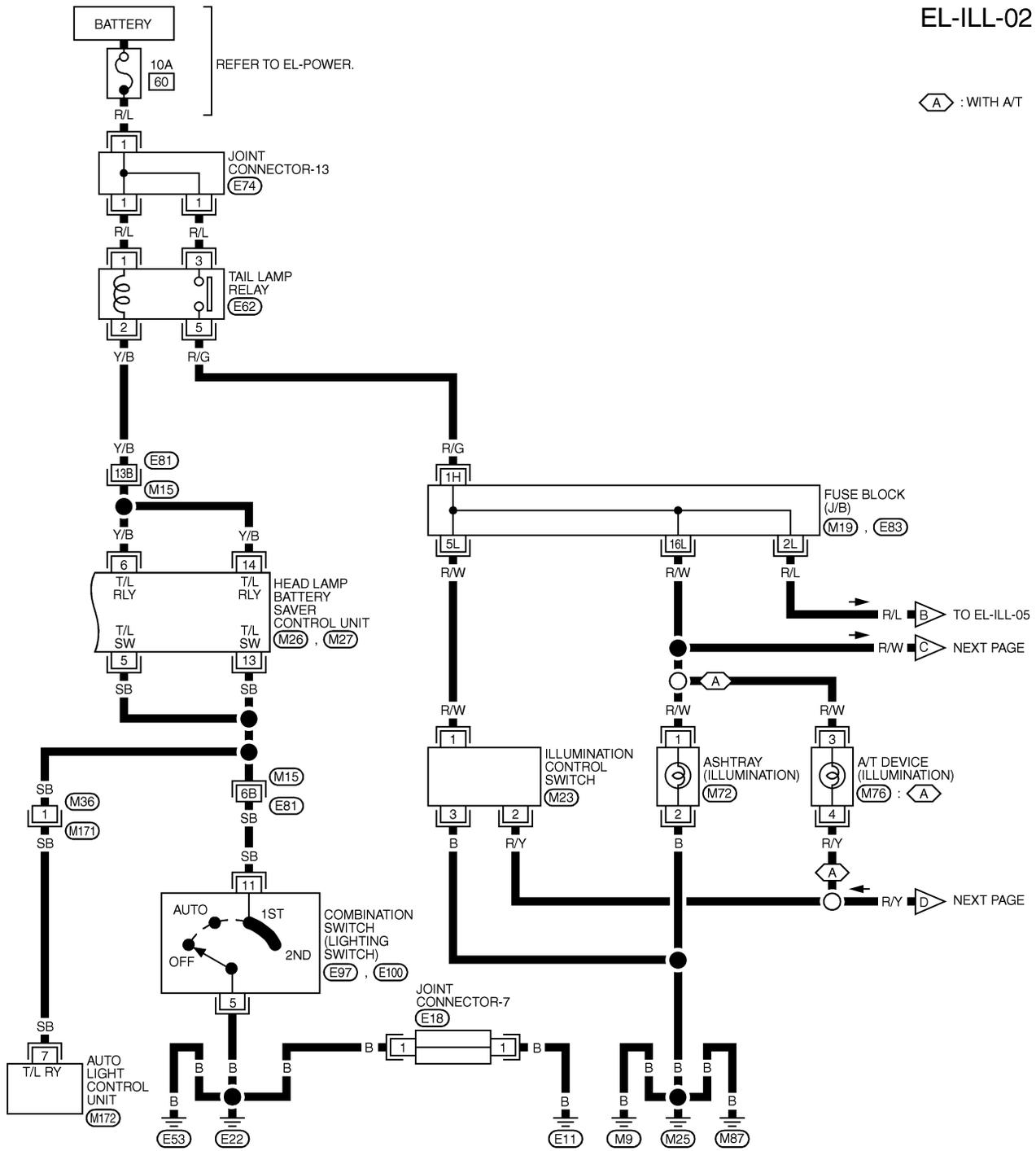
MEL605L



# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

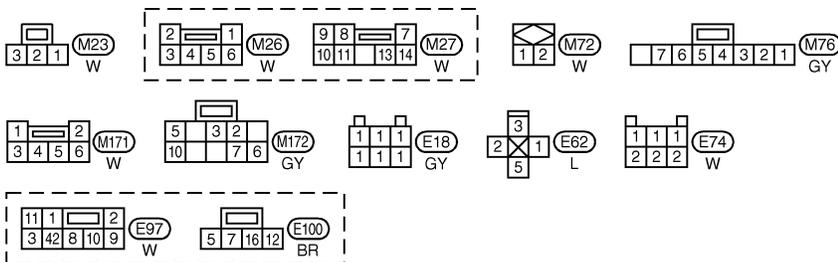
EL-ILL-02



⬠ A : WITH AT

REFER TO THE FOLLOWING.

(M15) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M19) , (E83) -FUSE BLOCK-  
 JUNCTION BOX (J/B)



MEL719L

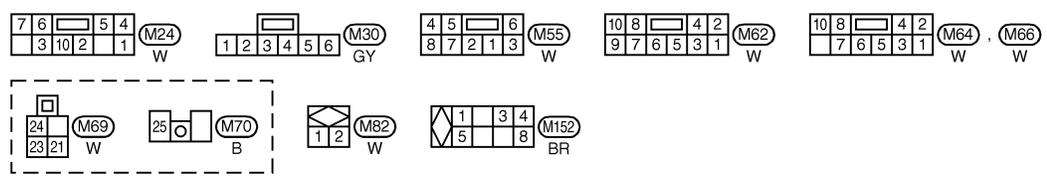
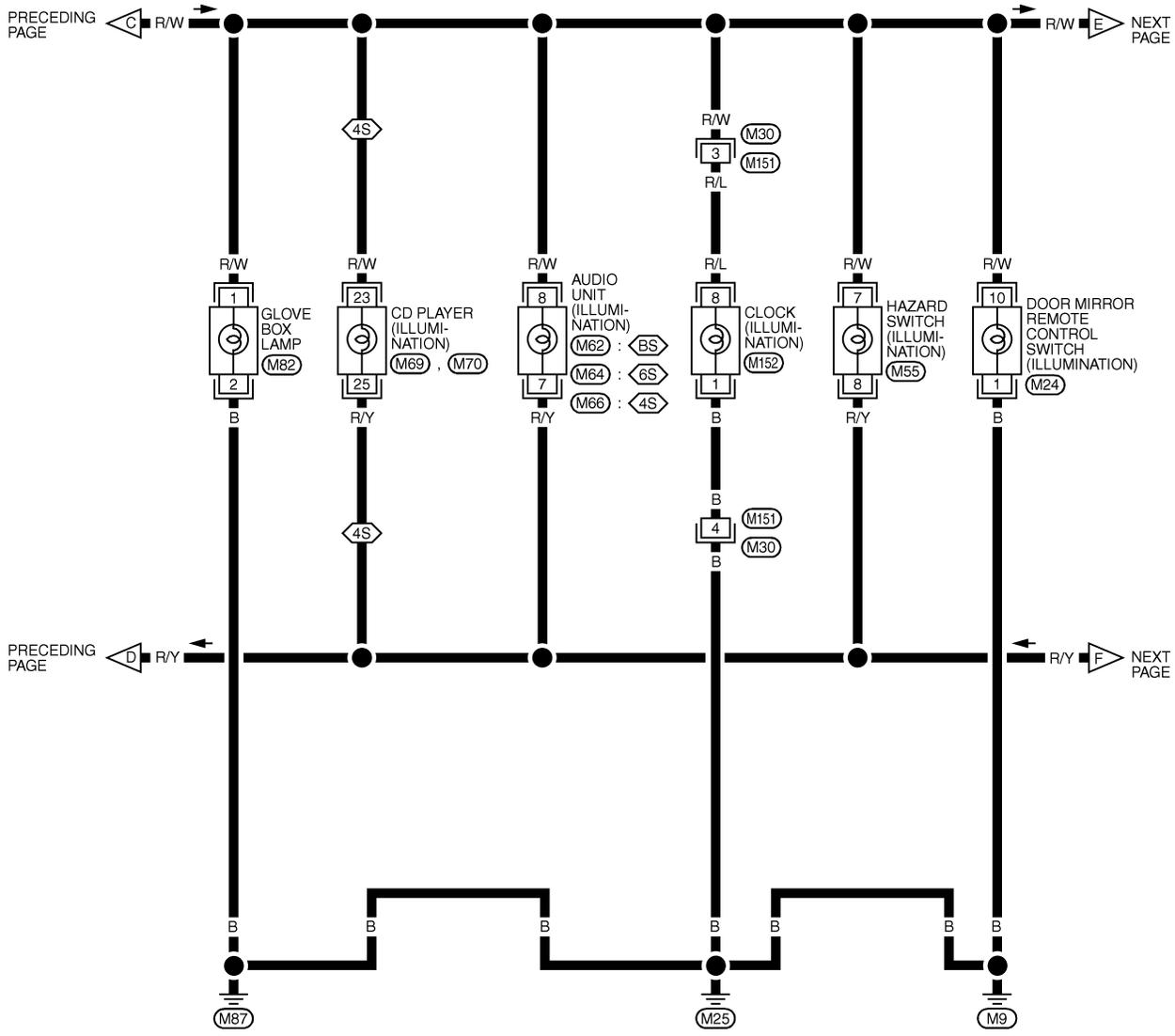
# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

## EL-ILL-03

- : WITH BOSE SYSTEM
- : WITH 6 SPEAKERS
- : WITH 4 SPEAKERS

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

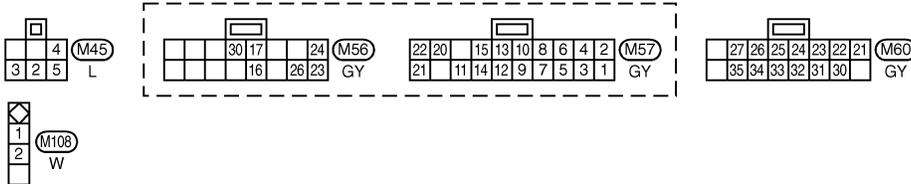
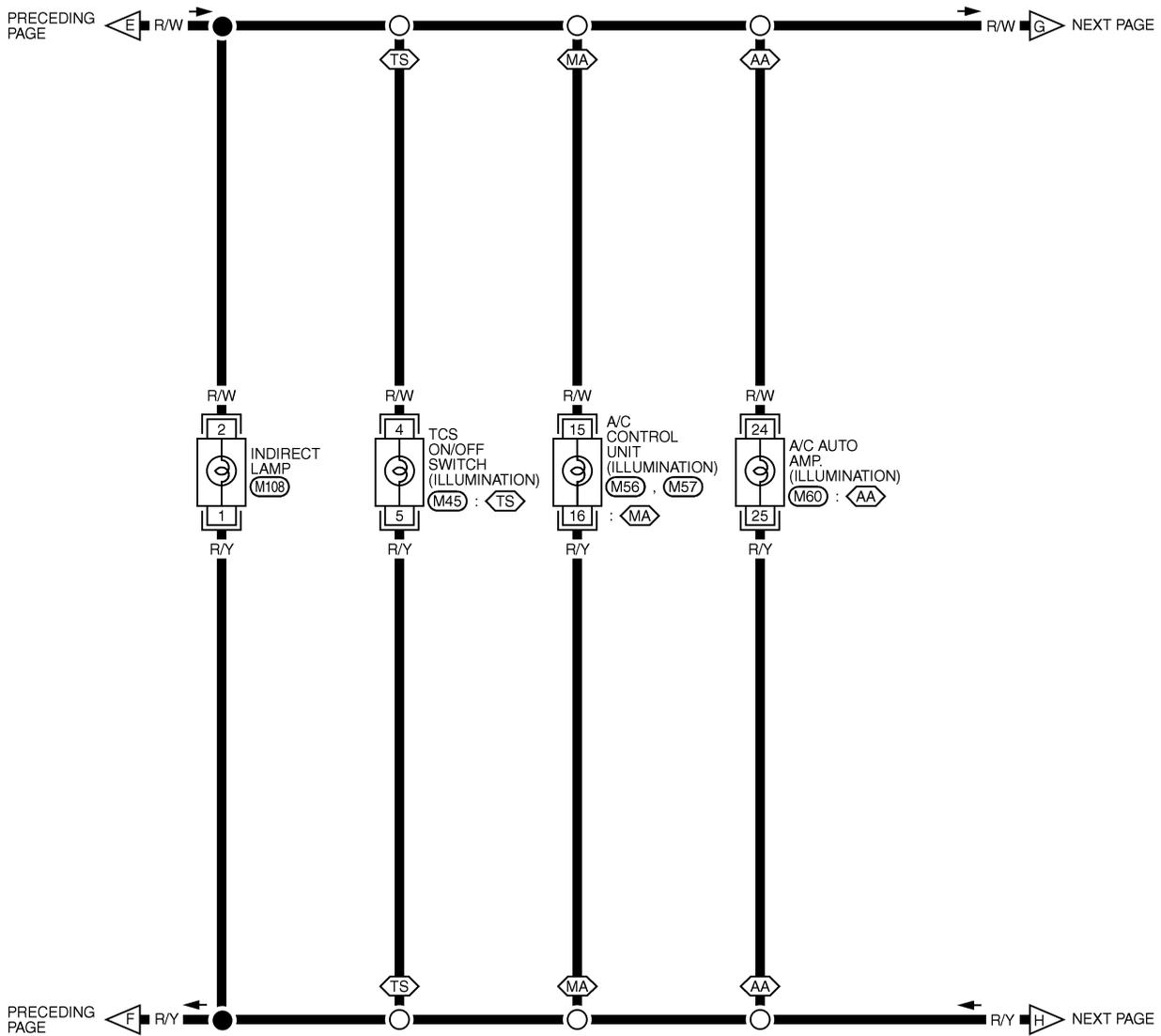


# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-04

- : WITH AUTO A/C
- : WITH MANUAL A/C
- : WITH TCS

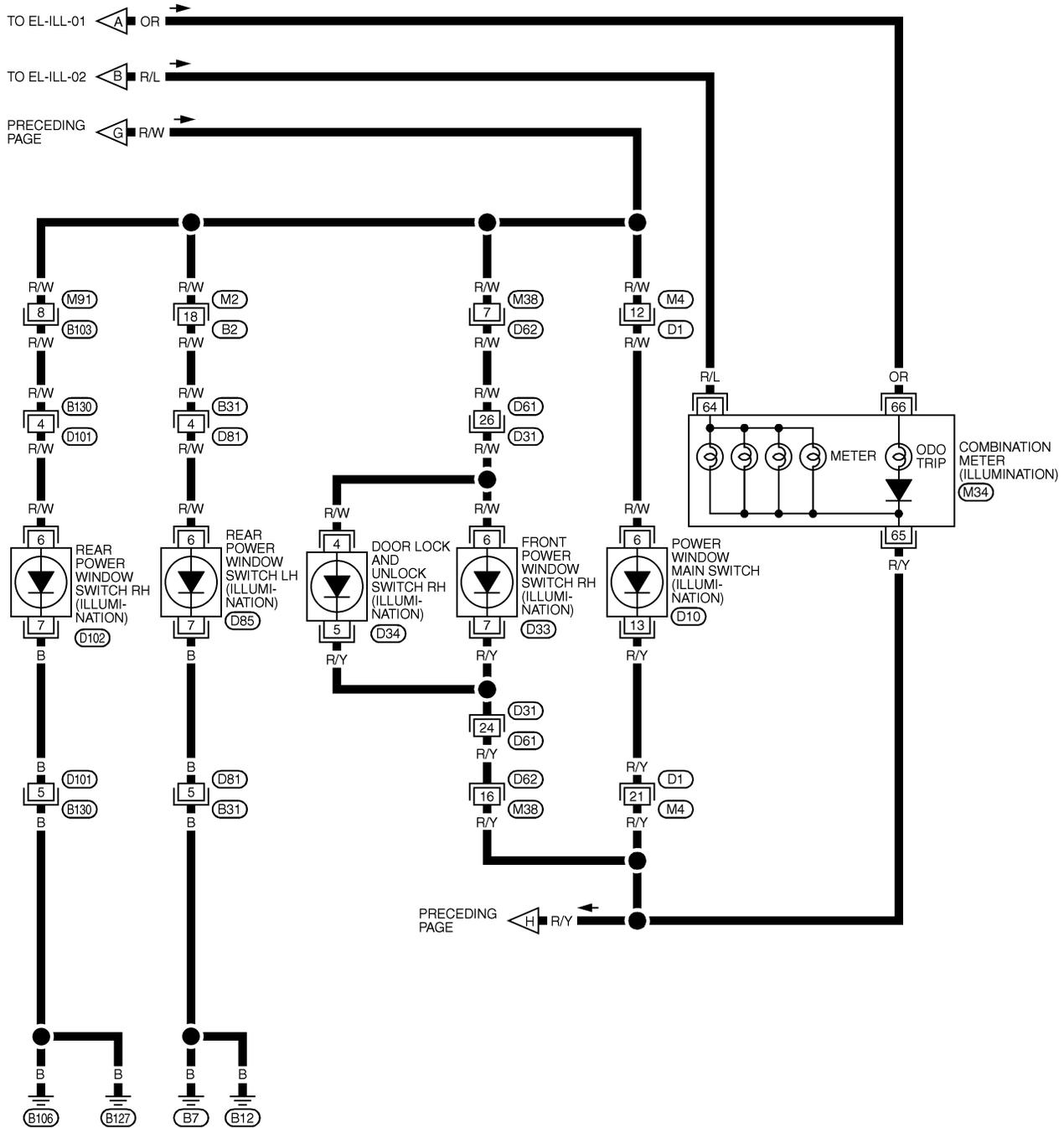


MEL259K

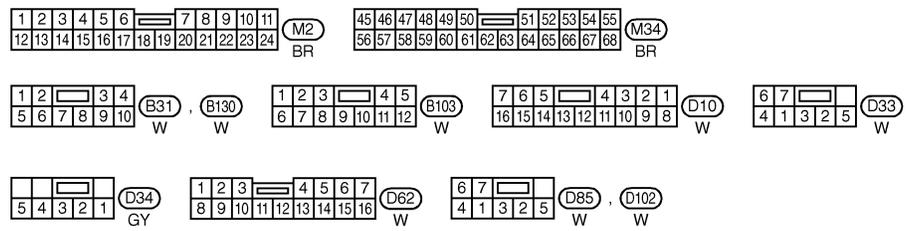
# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-05



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA



REFER TO THE FOLLOWING.  
(M4), (D1) -SUPER  
MULTIPLE JUNCTION (SMJ)  
(B31), (D61) -SUPER  
MULTIPLE JUNCTION (SMJ)

EL  
IDX

MEL260K

# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
5	PU	HEADLAMP BATTERY SAVER CONTROL UNIT	WHEN HEADLAMP BATTERY SAVER TIMER IS OPERATED	12V
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V

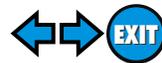
SEL035X

**NOTE:**

For CONSULT-II Inspection Procedure, refer to "PARKING, LICENSE AND TAIL LAMPS" (EL-62).

For CONSULT-II Application Items, refer to "PARKING, LICENSE AND TAIL LAMPS" (EL-63).

Trouble Diagnoses for battery saver control, refer to "PARKING, LICENSE AND TAIL LAMPS" (EL-64).



## System Description

### POWER SUPPLY AND GROUND

NFEL0165

NFEL0165S01

Power is supplied at all times:

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 2 and
- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to smart entrance control unit terminal 10.

GI

MA

EM

When the key is removed from ignition key cylinder, power is interrupted:

- through key switch terminal 1
- to smart entrance control unit terminal 32.

LC

With the ignition key switch in the ON or START position, power is supplied:

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to smart entrance control unit terminal 33.

EC

Ground is supplied:

- to smart entrance control unit terminal 16
- through body grounds terminals M9, M25 and M87.

FE

When the front driver side door is opened, ground is supplied:

- through body ground B30
- to front door switch LH terminal 3
- from front door switch LH terminal 2
- to smart entrance control unit terminal 29.

CL

MT

When the front passenger side door is opened, ground is supplied:

- through body grounds B106 and B127
- to front door switch RH terminal 3
- from front door switch RH terminal 2
- to smart entrance control unit terminal 40.

AT

AX

When any other door (except front door) is opened, ground is supplied to smart entrance control unit terminal 28 in the same manner as the front door switch.

SU

When the front driver side door is unlocked, the smart entrance control unit receives a ground signal:

- through body grounds terminals M9, M25 and M87
- to front door lock actuator LH (door unlock sensor) terminal 4
- from front door lock actuator LH (door unlock sensor) terminal 2
- to smart entrance control unit terminal 36.

BR

ST

When a signal, or combination of signals is received by the smart entrance control unit, ground is supplied:

- through smart entrance control unit terminal 8
- to interior lamp terminal 2.

RS

With power and ground supplied, the interior lamp illuminates.

BT

### SWITCH OPERATION

NFEL0165S02

When interior lamp switch is ON, ground is supplied:

- through case grounds of interior lamp
- to interior lamp.

HA

And power is supplied:

- to interior lamp terminal 1
- from smart entrance control unit terminal 17.

SC

When spot lamp (LH and/or RH) is ON, ground is supplied:

- through body grounds M9, M25 and M87
- to spot lamp terminal 2.

IDX

And power is supplied:

- to spot lamp terminal 1
- from smart entrance control unit terminal 17.

When vanity mirror illumination (LH and/or RH) is ON, ground is supplied:

EL

## System Description (Cont'd)

---

- through body grounds M9, M25 and M87
- to vanity mirror illuminations (LH and RH) terminals 2.

And power is supplied:

- to vanity mirror illuminations (LH and RH) terminals 1
- from smart entrance control unit terminal 17.

When rear door switch LH and/or RH is ON (door is opened), ground is supplied:

- through case ground of the rear door switch
- from the rear door switch terminal 1
- to front step lamp LH and RH terminals 2.

And power is supplied:

- to front step lamp LH and RH terminals 1
- from smart entrance control unit terminal 17.

When front door switch LH and/or RH is ON (door is opened), ground is supplied:

- through body grounds B30, and/or B106 and B127
- to the front door switch terminal 3
- from the front door switch terminal 2
- to smart entrance control unit terminal 29 and/or 40
- from smart entrance control unit terminal 28
- to front step lamp LH and RH terminals 2.

And power is supplied:

- to front step lamp LH and RH terminals 1
- from smart entrance control unit terminal 17.

When trunk room lamp switch is ON (trunk lid is opened), ground is supplied:

- through body grounds T6 and T8
- to trunk room lamp switch terminal 2
- from trunk room lamp switch terminal 1
- to trunk room lamp terminal 2

And power is supplied:

- to trunk room lamp terminal 1
- from smart entrance control unit terminal 17.

With power and ground supplied, interior lamps turn ON.

## INTERIOR LAMP TIMER OPERATION

When interior lamp switch is in the "DOOR" position, the smart entrance control unit keeps the interior lamp illuminated for about 30 seconds when:

- unlock signal is supplied from driver's door unlock sensor while all doors are closed and key is out of ignition key cylinder
- unlock signal is supplied from multi-remote controller while driver's door is locked and all doors are closed
- key is removed from ignition key cylinder while all doors are closed
- driver's door is opened and then closed while key is out of the ignition key cylinder. (However, if the driver's door is closed with the key inserted in the ignition key cylinder after the driver's door is opened with the key removed, the timer is operated.)

The timer is canceled when:

- driver's door is locked,
- driver's door is opened, or
- ignition switch is turned ON.

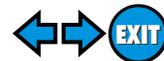
When driver's door is locked, interior room lamp timer is canceled as described before.

However, ignition key hole illumination remains on for about 30 seconds after driver's door has been locked.

## ON-OFF CONTROL

When the driver side door, front passenger door, rear LH or RH door is opened, the interior room lamp turns on while the interior room lamp switch is in the "DOOR" position.

When any door is opened, step lamps turn ON.



## BATTERY SAVER

NFEL0165S05

The lamp turns off automatically when interior lamp, step lamp, trunk room lamp, spot lamp and/or vanity mirror illumination is illuminated with the ignition key is in OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in ON position for more than 10 minutes.

After lamps turn OFF by the battery saver system, the lamps illuminate again when:

- driver's door is locked or unlocked,
- door is opened or closed,
- key is removed from ignition key cylinder or inserted in ignition key cylinder,
- trunk lid is opened.

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

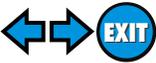
BT

HA

SC

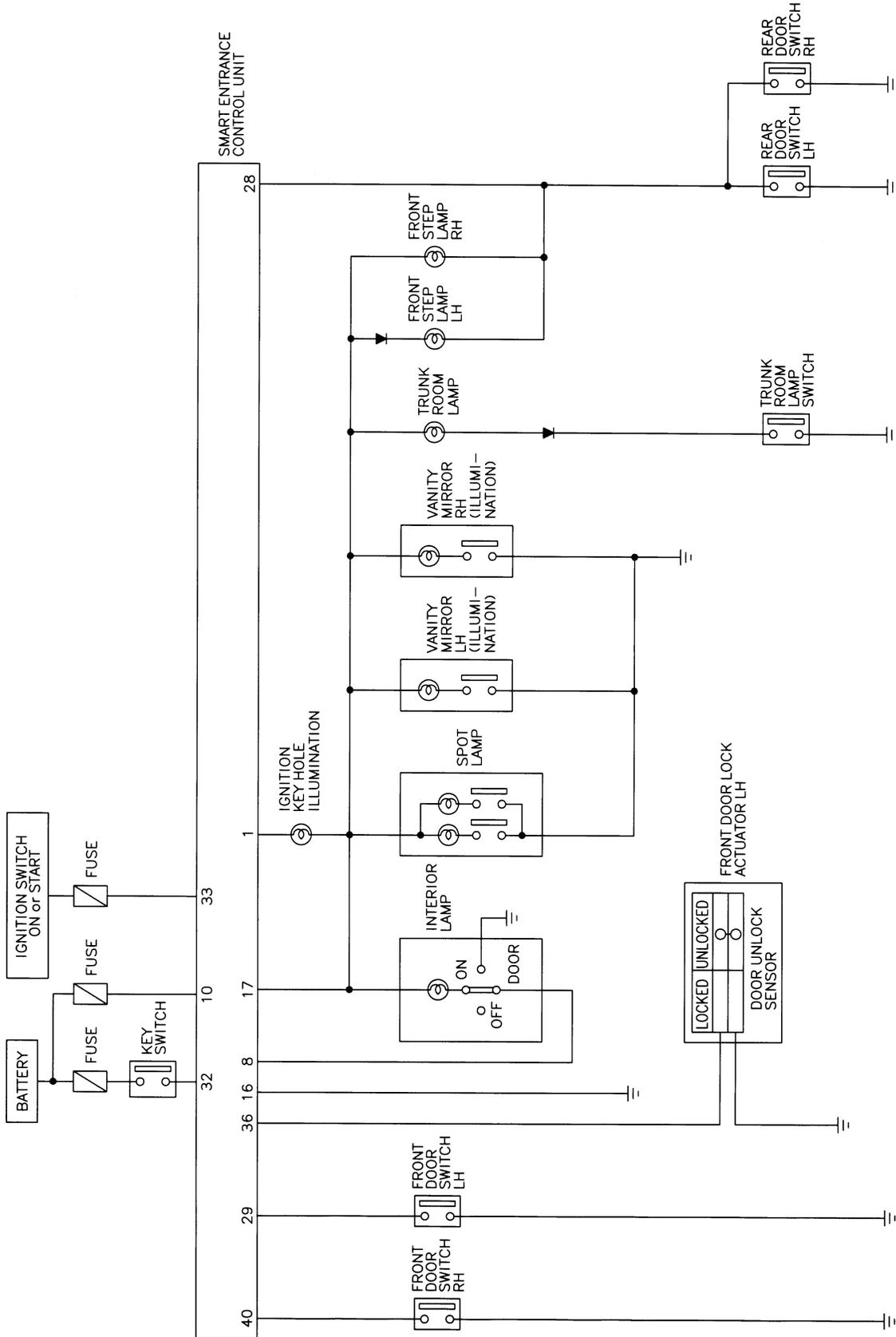
**EL**

IDX



## Schematic

NFEL0212

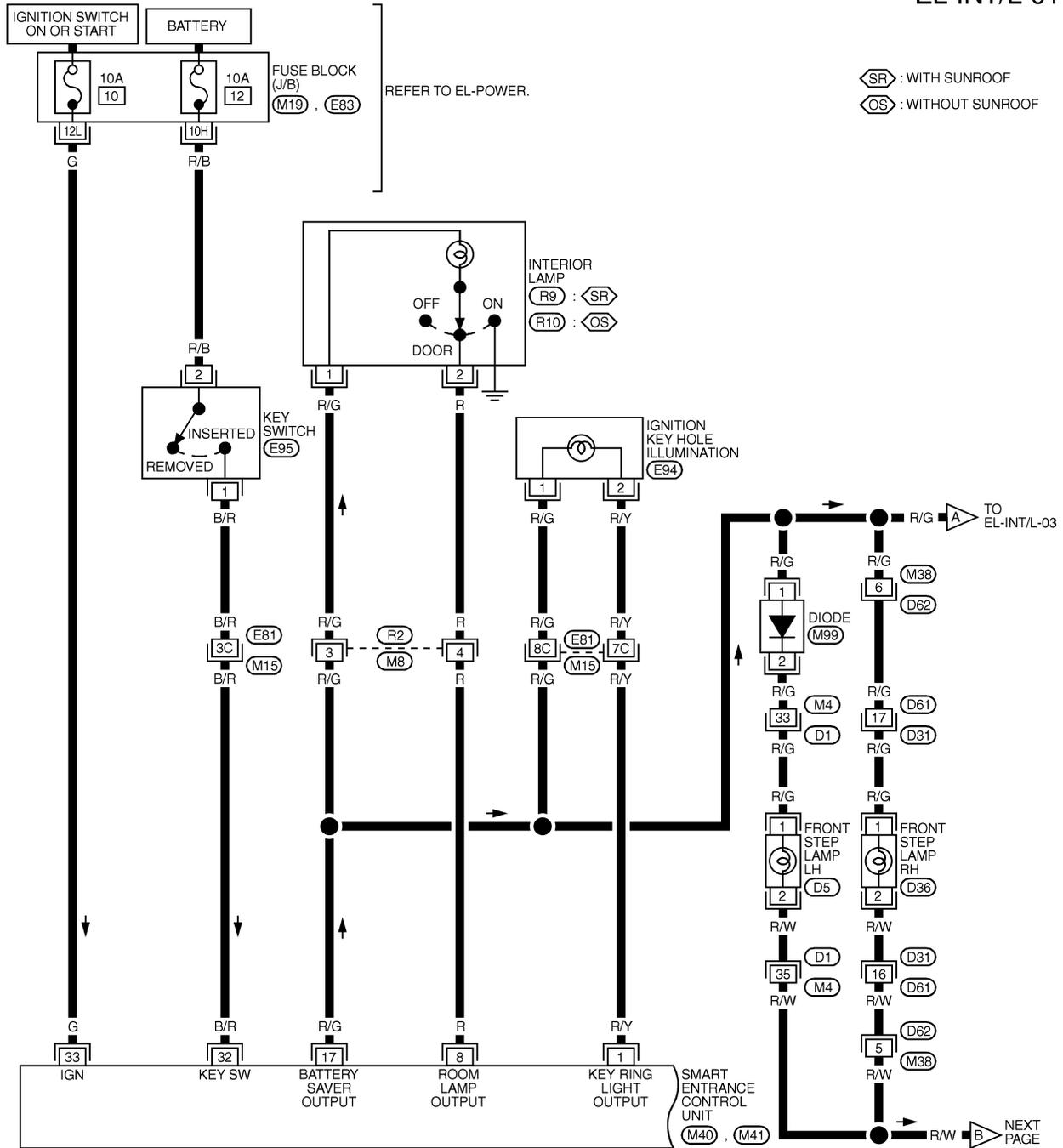


MEL607L

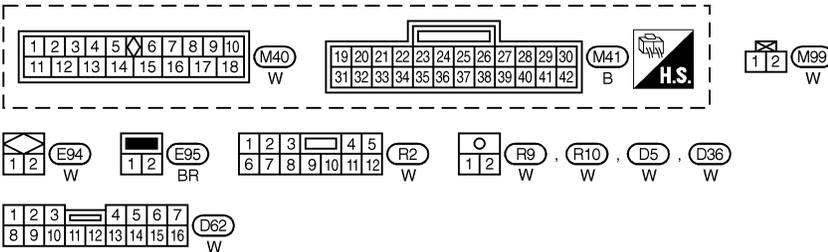
## Wiring Diagram — INT/L —

NFEL0163

EL-INT/L-01



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA



REFER TO THE FOLLOWING.

(M4), (D1) -SUPER MULTIPLE JUNCTION (SMJ)

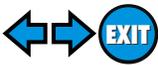
(M15), (E81) -SUPER MULTIPLE JUNCTION (SMJ)

(D31), (D61) -SUPER MULTIPLE JUNCTION (SMJ)

(M19) -FUSE BLOCK-JUNCTION BOX (J/B)

(E83) -FUSE BLOCK-JUNCTION BOX (J/B)

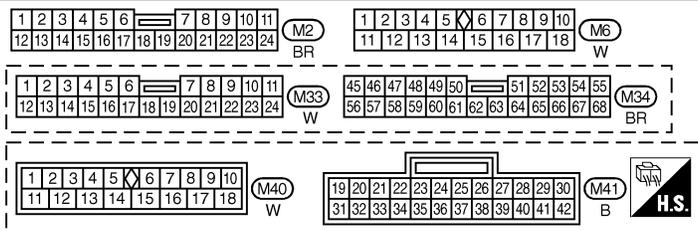
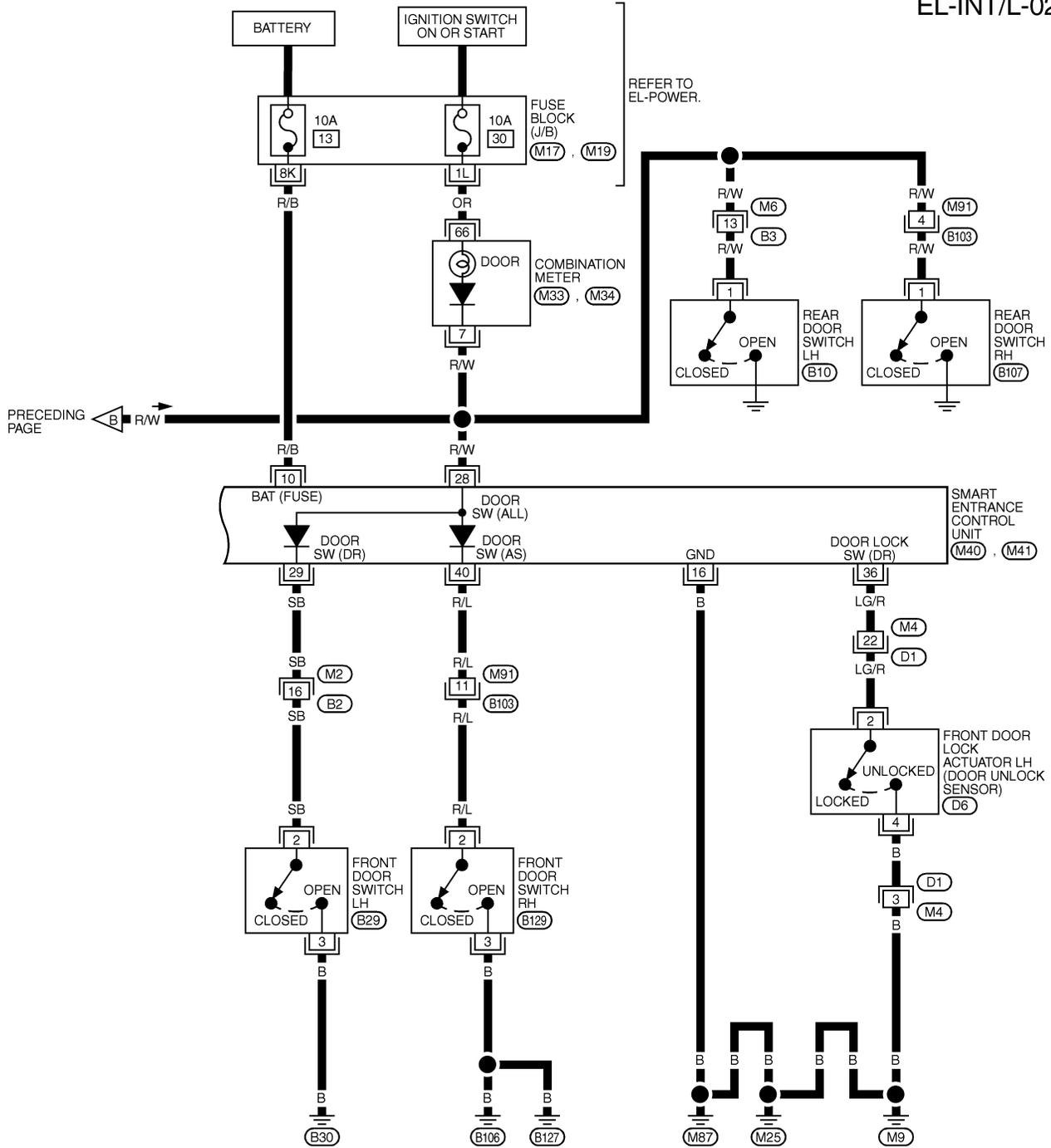
SC  
EL  
IDX



# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-02

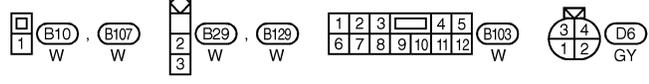


REFER TO THE FOLLOWING.

(M4) , (D1) -SUPER MULTIPLE JUNCTION (SMJ)

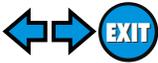
(M17) -FUSE BLOCK-JUNCTION BOX (J/B)

(M19) -FUSE BLOCK-JUNCTION BOX (J/B)



MEL608L

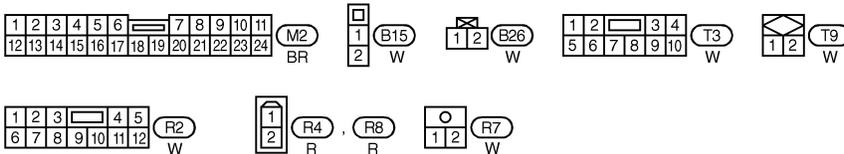
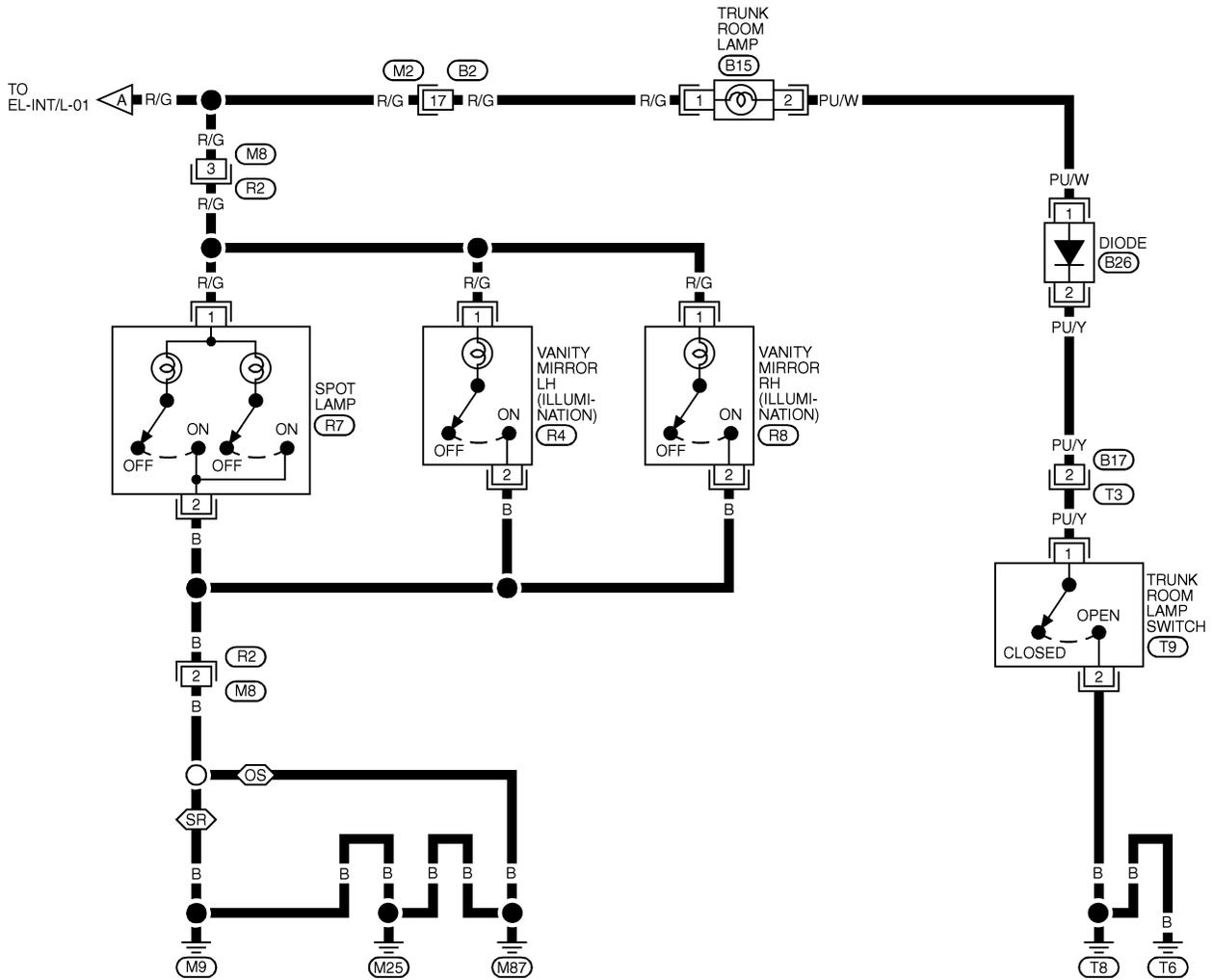
# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS



Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-03

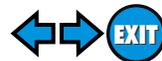
◊SR◊ : WITH SUNROOF  
 ◊OS◊ : WITHOUT SUNROOF



GI  
 MA  
 EM  
 LC  
 EC  
 FE  
 CL  
 MT  
 AT  
 AX  
 SU  
 BR  
 ST  
 RS  
 BT  
 HA  
 SC  
 EL  
 IDX

MEL263K

# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

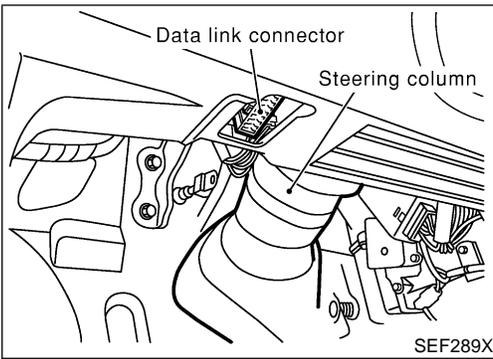


Wiring Diagram — INT/L — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	R/Y	IGNITION KEY HOLE ILLUMINATION	FOR 30 SECONDS AFTER DRIVER DOOR IS LOCKED	0V
			30 SECONDS PASSED AFTER DRIVER DOOR IS LOCKED	12V
8	R	INTERIOR LAMP	WHEN INTERIOR LAMP IS OPERATED USING REMOTE CONTROLLER. (LAMP SWITCH IN "DOOR" POSITION)	0V → 12V
10	R/B	POWER SOURCE (FUSE)	—	12V
16	B	GROUND	—	—
17	R/G	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOES NOT OPERATE → OPERATE	12V → 0V
28	R/W	REAR DOOR SWITCHES	OFF (CLOSED) → ON (OPEN)	5V → 0V
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
32	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER	12V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
36	LG/R	DOOR LOCK SWITCH	DRIVER DOOR: LOCKED → UNLOCKED	5V → 0V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V

SEL036X

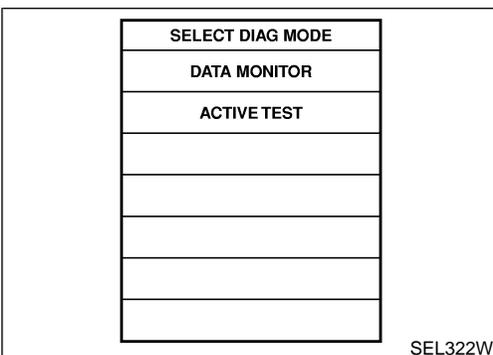
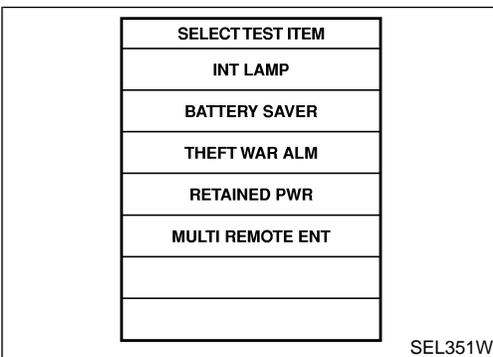
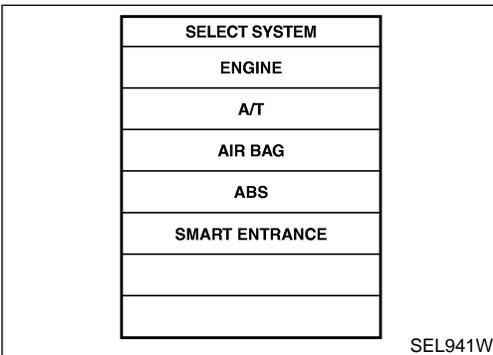
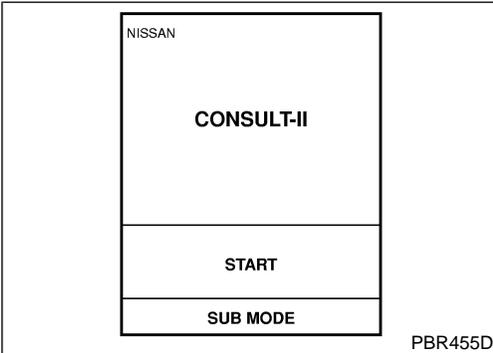


## CONSULT-II Inspection Procedure

=NFEL0213

### “INT LAMP”/“BATTERY SAVER”

NFEL0213S01



1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.

3. Turn ignition switch “ON”.
4. Touch “START”.

5. Touch “SMART ENTRANCE”.

6. Touch “INT LAMP” or “BATTERY SAVER”.

7. Select diagnosis mode.  
“DATA MONITOR” and “ACTIVE TEST” are available for “INT LAMP” and “BATTERY SAVER”.

GI

MA

EM

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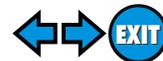
HA

SC

**EL**

IDX

# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS



CONSULT-II Application Items

## CONSULT-II Application Items

### “INT LAMP”

NFEL0214

#### Data Monitor

NFEL0214S01

NFEL0214S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
DOOR SW DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (All).
LOCK SIG DR	Indicates [ON/OFF] condition of front door unlock sensor LH.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.

#### Active Test

NFEL0214S0102

Test Item	Description
INT LAMP	This test enables to check interior lamp operation. When touch “ON” on CONSULT-II screen. <ul style="list-style-type: none"> <li>Interior lamp turns on when the switch is in DOOR or ON. (Smart entrance control unit supplies power and ground to interior lamp.)</li> </ul>
IGN ILLUM	This test enables to check ignition key hole illumination operation. The illumination turns on when touch “ON” on CONSULT-II screen.

### “BATTERY SAVER”

NFEL0214S02

#### Data Monitor

NFEL0214S0201

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
DOOR SW DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (ALL).
LOCK SIG DR	Indicates [ON/OFF] condition of front door unlock sensor LH.
TRUNK SW	Indicates [ON/OFF] condition of trunk switch.

#### Active Test

NFEL0214S0202

Test Item	Description
BATTERY SAVER	This test enables to check interior lamp, front step lamps, spot lamp, vanity mirror illuminations and trunk room lamp operations. When touch “ON” on CONSULT-II screen. <ul style="list-style-type: none"> <li>Interior lamp turns on when the switch is in ON. (Smart entrance control unit supplies power to interior lamp.)</li> <li>Front step lamps turn on when any doors are open. (Smart entrance control unit supplies power to front step lamps.)</li> <li>Spot lamp, vanity mirror illuminations, trunk room lamp turn on when the switch is in ON. (Smart entrance control unit supplies power to Spot lamp, vanity mirror illuminations, trunk room lamp.)</li> </ul>

## Trouble Diagnoses for Interior Lamp Timer

=NFEL0215

### DIAGNOSTIC PROCEDURE 1

NFEL0215S01

**SYMPTOM: Interior lamp timer does not operate.**

GI

#### 1 CHECK IGNITION ON SIGNAL

MA

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LC

EC

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BT

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IDX

**With CONSULT-II**

Check ignition switch ON signal ("IGN ON SW") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
IGN ON SW	ON

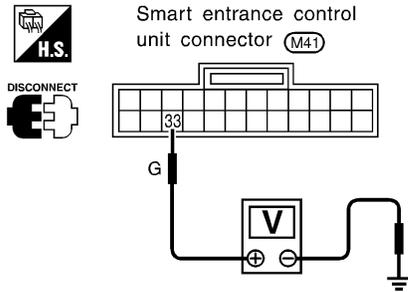
When ignition switch is ON:  
**IGN ON SW ON**

When ignition switch is OFF:  
**IGN ON SW OFF**

SEL318W

**Without CONSULT-II**

Check voltage between smart entrance control unit harness connector terminal 33 and ground.



Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
33	Ground	0V	0V	Battery voltage

SEL380W

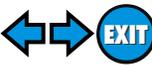
**OK or NG**

OK ► GO TO 2.

NG ► **Check the following.**

- 10A fuse [No. 10, located in fuse block (J/B)]
- Harness for open or short between smart entrance control unit and fuse

# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS



Trouble Diagnoses for Interior Lamp Timer (Cont'd)

<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>						
<p> <b>With CONSULT-II</b> Check driver door switch signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th colspan="2">MONITOR</th> </tr> </thead> <tbody> <tr> <td>DOOR SW-DR</td> <td>OFF</td> </tr> </tbody> </table> <div style="margin-left: 20px;"> <p>When driver's door is open: <b>DOOR SW-DR ON</b></p> <p>When driver's door is closed: <b>DOOR SW-DR OFF</b></p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL319W</p>		DATA MONITOR		MONITOR		DOOR SW-DR	OFF
DATA MONITOR							
MONITOR							
DOOR SW-DR	OFF						
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 29 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M41)</p> </div> <div style="margin-left: 20px;"> <p><b>H.S.</b></p> <p>CONNECT</p> </div> <div style="margin-left: 20px;"> <p><b>Voltage [V]:</b></p> <p>Condition of driver's door: <b>CLOSED</b> Approx. 5</p> <p>Condition of driver's door: <b>OPENED</b> 0</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL324W</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>							
OK	▶ GO TO 4.						
NG	▶ GO TO 3.						

<b>3</b>	<b>CHECK DRIVER SIDE DOOR SWITCH</b>
<p>Check continuity between door switch terminals 2 and 3.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Door switch driver side connector (B29)</p> </div> <div style="margin-left: 20px;"> <p><b>T.S.</b></p> <p>DISCONNECT</p> </div> <div style="margin-left: 20px;"> <p><b>Continuity:</b></p> <p>Door switch is pushed. No</p> <p>Door switch is released. Yes</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL325W</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>	
OK	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>● Driver side door switch ground circuit and condition</li> <li>● Harness for open or short between smart entrance control unit and driver side door switch</li> </ul>
NG	▶ Replace driver side door switch.

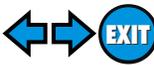
<b>4</b>	<b>CHECK FRONT LH DOOR UNLOCK SENSOR INPUT SIGNAL</b>																
<p><b>④ With CONSULT-II</b> Perform "LOCK SIG DR" in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr><th colspan="2" style="text-align: center;">DATA MONITOR</th></tr> <tr><th style="width: 80%;">MONITOR</th><th></th></tr> </thead> <tbody> <tr><td>LOCK SIG DR</td><td style="text-align: center;">OFF</td></tr> </tbody> </table> </div> <div> <p>When front LH door is locked: <b>LOCK SIG DR OFF</b></p> <p>When front LH door is unlocked: <b>LOCK SIG DR ON</b></p> </div> </div> <p style="text-align: right;">SEL344W</p>				DATA MONITOR		MONITOR		LOCK SIG DR	OFF								
DATA MONITOR																	
MONITOR																	
LOCK SIG DR	OFF																
<p><b>⊗ Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 36 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M4)</p> <p>LG/R</p> </div> <div style="text-align: center;"> </div> <div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr><th rowspan="2"></th><th colspan="2">Terminals</th><th rowspan="2">Condition</th><th rowspan="2">Voltage [V]</th></tr> <tr><th>(+)</th><th>(-)</th></tr> </thead> <tbody> <tr><td rowspan="2">Front LH door</td><td rowspan="2" style="text-align: center;">36</td><td rowspan="2" style="text-align: center;">Ground</td><td style="text-align: center;">Locked</td><td style="text-align: center;">Approx. 5</td></tr> <tr><td style="text-align: center;">Unlocked</td><td style="text-align: center;">0</td></tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL223W</p> <p style="text-align: center;"><b>OK or NG</b></p>					Terminals		Condition	Voltage [V]	(+)	(-)	Front LH door	36	Ground	Locked	Approx. 5	Unlocked	0
	Terminals		Condition		Voltage [V]												
	(+)	(-)															
Front LH door	36	Ground	Locked	Approx. 5													
			Unlocked	0													
OK		▶	GO TO 6.														
NG		▶	GO TO 5.														

<b>5</b>	<b>CHECK FRONT LH DOOR UNLOCK SENSOR</b>		
<p>1. Disconnect front door unlock sensor LH harness connector. 2. Check continuity between door unlock sensor LH terminals.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Front door lock actuator LH (door unlock sensor) connector</p> <p>(D6)</p> </div> <div style="text-align: center;"> </div> <div> <p><b>Continuity:</b> Condition: Locked No Condition: Unlocked Yes</p> </div> </div> <p style="text-align: right;">SEL224W</p> <p style="text-align: center;"><b>OK or NG</b></p>			
OK		▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door unlock sensor LH ground circuit</li> <li>● Harness for open or short between smart entrance control unit and door unlock sensor LH</li> </ul>
NG		▶	Replace door unlock sensor LH.

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# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

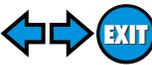


Trouble Diagnoses for Interior Lamp Timer (Cont'd)

<b>6</b>	<b>CHECK DOOR SWITCHES INPUT SIGNAL</b>																							
<p> <b>With CONSULT-II</b> Check door switches ("DOOR SW ALL") in "DATA MONITOR" mode with CONSULT-II.</p>																								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>DOOR SW-ALL</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		DOOR SW-ALL	OFF	<p>When any doors are open: <b>DOOR SW-ALL ON</b></p> <p>When all doors are closed: <b>DOOR SW-ALL OFF</b></p>																
DATA MONITOR																								
MONITOR																								
DOOR SW-ALL	OFF																							
SEL323W																								
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminals 28 or 40 and ground.</p>																								
		<table border="1" style="margin: auto;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front RH door switch</td> <td rowspan="2">40</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> <tr> <td rowspan="2">Rear door switches</td> <td rowspan="2">28</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> </tbody> </table>			Terminals		Condition	Voltage [V]	(+)	(-)	Front RH door switch	40	Ground	Open	0	Closed	Approx. 5	Rear door switches	28	Ground	Open	0	Closed	Approx. 5
	Terminals		Condition		Voltage [V]																			
	(+)	(-)																						
Front RH door switch	40	Ground	Open	0																				
			Closed	Approx. 5																				
Rear door switches	28	Ground	Open	0																				
			Closed	Approx. 5																				
SEL328W																								
<b>OK or NG</b>																								
OK	▶	GO TO 8.																						
NG	▶	GO TO 7.																						

<b>7</b>	<b>CHECK DOOR SWITCHES</b>																		
<p>1. Disconnect door switch harness connector. 2. Check continuity between door switch terminals 2 and 3 or 1 and ground.</p>																			
<p>Door switch connector</p> <p>Front RH : </p>		<p>Door switch connector</p> <p>Rear LH : </p> <p>Rear RH : </p>																	
SEL329W		<table border="1" style="margin: auto;"> <thead> <tr> <th></th> <th>Terminals</th> <th>Condition</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front door switch RH</td> <td rowspan="2">2 - 3</td> <td>Closed</td> <td>No</td> </tr> <tr> <td>Open</td> <td>Yes</td> </tr> <tr> <td rowspan="2">Rear door switches</td> <td rowspan="2">1 - Ground</td> <td>Closed</td> <td>No</td> </tr> <tr> <td>Open</td> <td>Yes</td> </tr> </tbody> </table>			Terminals	Condition	Continuity	Front door switch RH	2 - 3	Closed	No	Open	Yes	Rear door switches	1 - Ground	Closed	No	Open	Yes
	Terminals	Condition	Continuity																
Front door switch RH	2 - 3	Closed	No																
		Open	Yes																
Rear door switches	1 - Ground	Closed	No																
		Open	Yes																
<b>OK or NG</b>																			
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door switch ground circuit or door switch ground condition</li> <li>● Harness for open or short between smart entrance control unit and door switch</li> </ul>																	
NG	▶	Replace door switch.																	

# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS



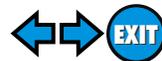
Trouble Diagnoses for Interior Lamp Timer (Cont'd)

<b>8</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>							
<p><b>④ With CONSULT-II</b> Check key switch ("KEY ON SWITCH") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> </thead> <tbody> <tr> <td style="padding: 5px;">KEY ON SW</td> <td style="padding: 5px;">ON</td> </tr> </tbody> </table> <div style="margin-left: 20px;"> <p>When key is inserted to ignition key cylinder: <b>KEY ON SW ON</b></p> <p>When key is removed from ignition key cylinder: <b>KEY ON SW OFF</b></p> </div> </div> <div style="text-align: right; margin-top: 10px;">SEL315W</div>			DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR								
MONITOR								
KEY ON SW	ON							
<p><b>⊗ Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 32 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 40%;"> <p>Smart entrance control unit connector (M4)</p> <p>B/R</p> </div> <div style="width: 30%;"> <p>CONNECT</p> <p>⊕ : Approx. 12V</p> <p>⊖ : 0V</p> </div> <div style="width: 25%;"> <p><b>Voltage [V]:</b> Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> </div> </div> <div style="text-align: right; margin-top: 10px;">SEL193W</div>								
<b>OK or NG</b>								
OK	▶	Replace smart entrance control unit.						
NG	▶	GO TO 9.						

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IDX

<b>9</b>	<b>CHECK KEY SWITCH (INSERT)</b>	
<p>Check continuity between terminals 1 and 2.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 40%;"> <p>Key switch connector (E95)</p> </div> <div style="width: 30%;"> <p>DISCONNECT</p> <p>⊕ : Yes</p> <p>⊖ : No</p> </div> <div style="width: 25%;"> <p><b>Continuity:</b> Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> </div> </div> <div style="text-align: right; margin-top: 10px;">SEL311W</div>		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between smart entrance control unit and key switch</li> </ul>
NG	▶	Replace key switch.

# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS



Trouble Diagnoses for Interior Lamp Timer (Cont'd)

## DIAGNOSTIC PROCEDURE 2

NFEL0215S02

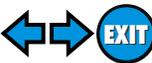
**SYMPTOM:** Interior lamp timer does not cancel properly.

<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>															
<p> <b>With CONSULT-II</b> Check ignition switch ON signal ("IGN ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>																
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>IGN ON SW</td> <td>ON</td> </tr> </tbody> </table>		DATA MONITOR		MONITOR		IGN ON SW	ON									
DATA MONITOR																
MONITOR																
IGN ON SW	ON															
<p>When ignition switch is ON: <b>IGN ON SW ON</b></p> <p>When ignition switch is OFF: <b>IGN ON SW OFF</b></p>																
SEL318W																
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 33 and ground.</p>																
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M41)</p> </div> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Terminals</th> <th colspan="3">Ignition switch position</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>OFF</th> <th>ACC</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>33</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div>		Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	33	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position														
(+)	(-)	OFF	ACC	ON												
33	Ground	0V	0V	Battery voltage												
SEL380W																
<b>OK or NG</b>																
OK	▶	GO TO 2.														
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>														

<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>								
		<p> <b>With CONSULT-II</b> Check driver door switch signal ("DOOR SW DR") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; align-items: flex-start;"> <table border="1" style="margin-right: 20px;"> <thead> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> </thead> <tbody> <tr><td>DOOR SW-DR</td><td>OFF</td></tr> </tbody> </table> <div style="margin-top: 10px;"> <p>When driver's door is open: <b>DOOR SW-DR ON</b></p> <p>When driver's door is closed: <b>DOOR SW-DR OFF</b></p> </div> </div>	DATA MONITOR		MONITOR		DOOR SW-DR	OFF	<p>GI</p> <p>MA</p> <p>EM</p> <p>LC</p> <p>EC</p>
DATA MONITOR									
MONITOR									
DOOR SW-DR	OFF								
		SEL319W							
		<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 29 and ground.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M41)</p> </div> <div style="margin-right: 20px;"> <p><b>H.S.</b></p> <p>CONNECT</p> </div> <div style="margin-right: 20px;"> <p><b>OFF</b></p> </div> <div> <p><b>Voltage [V]:</b></p> <p>Condition of driver's door: <b>CLOSED</b> Approx. 5</p> <p>Condition of driver's door: <b>OPENED</b> 0</p> </div> </div>	<p>FE</p> <p>CL</p> <p>MT</p> <p>AT</p> <p>AX</p>						
		OK or NG	SEL324W						
OK	▶	GO TO 4.	SU						
NG	▶	GO TO 3.	BR <p>ST</p> <p>RS</p> <p>BT</p> <p>HA</p> <p>SC</p>						

<b>3</b>	<b>CHECK DRIVER SIDE DOOR SWITCH</b>		
		<p>Check continuity between terminals 2 and 3.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Door switch driver side connector (B29)</p> </div> <div style="margin-right: 20px;"> <p><b>T.S.</b></p> <p>DISCONNECT</p> </div> <div> <p><b>Continuity:</b></p> <p>Door switch is pushed. No</p> <p>Door switch is released. Yes</p> </div> </div>	<p>EL</p>
		OK or NG	SEL325W
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Driver side door switch ground circuit and condition</li> <li>● Harness for open or short between smart entrance control unit and driver side door switch</li> </ul>	<p>EL</p>
NG	▶	Replace driver side door switch.	<p>IDX</p>

# INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS



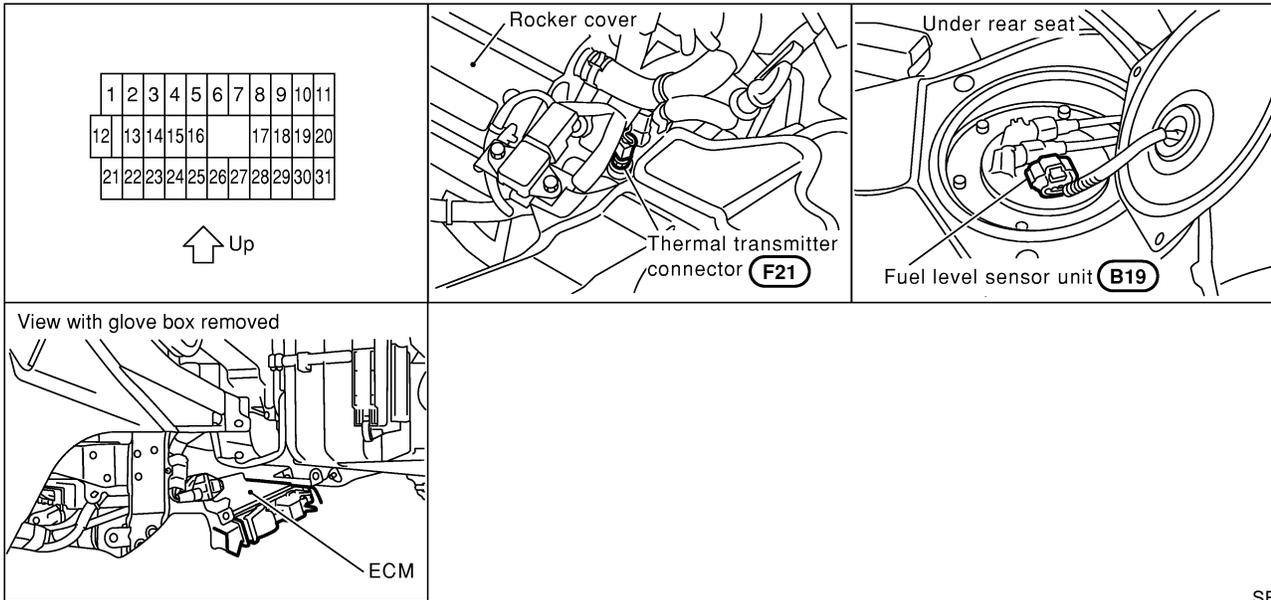
Trouble Diagnoses for Interior Lamp Timer (Cont'd)

<b>4</b>	<b>CHECK FRONT LH DOOR UNLOCK SENSOR INPUT SIGNAL</b>																
<p> <b>With CONSULT-II</b> Check door unlock sensor LH signal ("LOCK SIG DR") in "DATA MONITOR" mode with CONSULT-II.</p>																	
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>LOCK SIG DR</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		LOCK SIG DR	OFF	<p>When front LH door is locked: <b>LOCK SIG DR OFF</b></p> <p>When front LH door is unlocked: <b>LOCK SIG DR ON</b></p>									
DATA MONITOR																	
MONITOR																	
LOCK SIG DR	OFF																
SEL344W																	
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 36 and ground.</p>																	
			<table border="1" style="margin: auto;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front LH door</td> <td rowspan="2">36</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table>		Terminals		Condition	Voltage [V]	(+)	(-)	Front LH door	36	Ground	Locked	Approx. 5	Unlocked	0
	Terminals		Condition		Voltage [V]												
	(+)	(-)															
Front LH door	36	Ground	Locked	Approx. 5													
			Unlocked	0													
SEL223W																	
<b>OK or NG</b>																	
OK	▶	Replace smart entrance control unit.															
NG	▶	GO TO 5.															

<b>5</b>	<b>CHECK FRONT LH DOOR UNLOCK SENSOR</b>		
<p>1. Disconnect front LH door unlock sensor harness connector. 2. Check continuity between door unlock sensor terminals.</p>			
<p>Front door lock actuator LH (door unlock sensor) connector</p>			<p><b>Continuity:</b> Condition: Locked No Condition: Unlocked Yes</p>
SEL224W			
<b>OK or NG</b>			
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● LH door unlock sensor ground circuit</li> <li>● Harness for open or short between smart entrance control unit and LH door unlock sensor</li> </ul>	
NG	▶	Replace LH door unlock sensor.	

## Component Parts and Harness Connector Location

NFEL0041



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT

SEL168W

## System Description

NFEL0042

### UNIFIED CONTROL METER

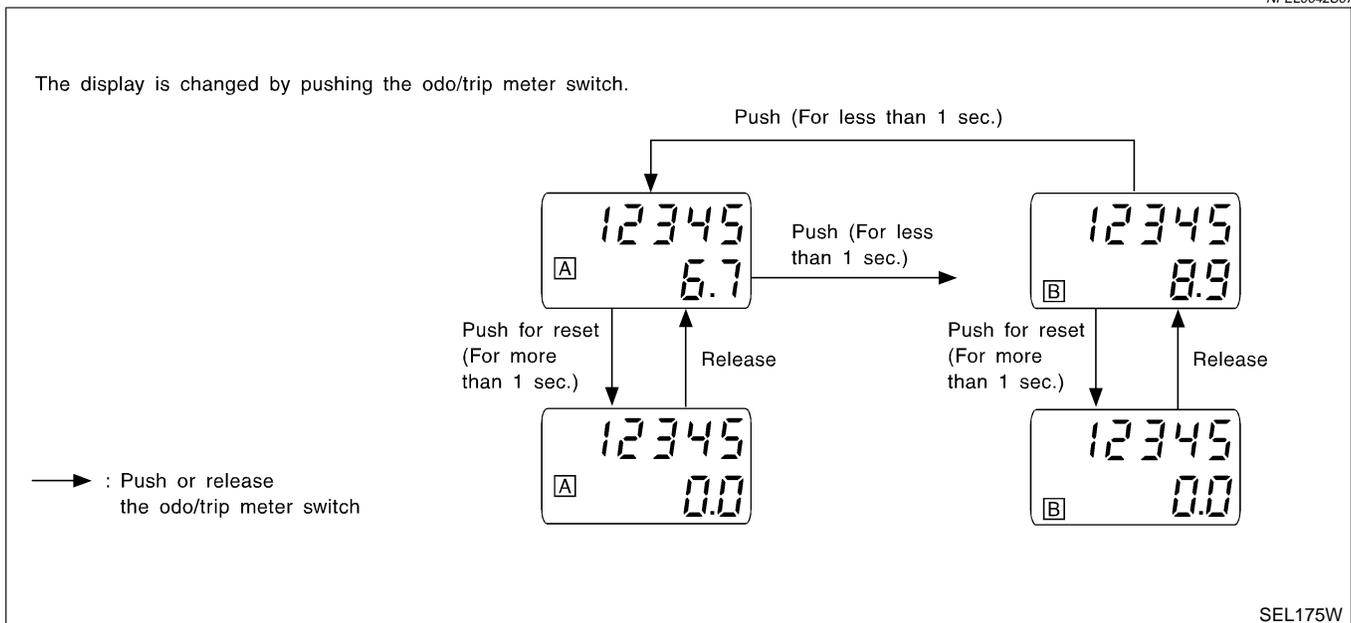
- Speedometer, odo/trip meter, tachometer, fuel gauge and water temperature gauge are controlled totally by control unit built-in combination meter.
- Digital meter is adopted for odo/trip meter.\*  
\*The record of the odo meter is kept even if the battery cable is disconnected. The record of the trip meter is erased when the battery cable is disconnected.
- Odo/trip meter is indicated for about 30 seconds after ignition switch has been turned OFF.
- Odo/trip meter segment can be checked in diagnosis mode.
- Meter/gauge can be checked in diagnosis mode.

NFEL0042S06

AT  
AX  
SU  
BR

### HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER

NFEL0042S07



ST  
RS  
BT  
HA  
SC  
EL  
IDX

SEL175W

#### NOTE:

Turn ignition switch to the "ON" position to operate odo/trip meter.

## POWER SUPPLY AND GROUND CIRCUIT

NFEL0042S08

Power is supplied at all times

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to combination meter terminal 62.

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 30, located in the fuse block (J/B)]
- to combination meter terminal 66.

Ground is supplied

- to combination meter terminal 59
- through body grounds M9, M25 and M87.

## WATER TEMPERATURE GAUGE

NFEL0042S01

The water temperature gauge indicates the engine coolant temperature. The reading on the gauge is based on the resistance of the thermal transmitter.

As the temperature of the coolant increases, the resistance of the thermal transmitter decreases. A variable ground is supplied to terminal 18 of the combination meter for the water temperature gauge. The needle on the gauge moves from "C" to "H".

## TACHOMETER

NFEL0042S02

The tachometer indicates engine speed in revolutions per minute (rpm).

The tachometer is regulated by a signal

- from terminal 25 of the ECM
- to combination meter terminal 16 for the tachometer.

## FUEL GAUGE

NFEL0042S03

The fuel gauge indicates the approximate fuel level in the fuel tank.

The fuel gauge is regulated by a variable ground signal supplied

- to combination meter terminal 17 for the fuel gauge
- from terminal 2 of the fuel level sensor unit
- through terminal 5 of the fuel level sensor unit and
- through body ground B13.

## SPEEDOMETER

NFEL0042S04

The combination meter provides a voltage signal to the vehicle speed sensor for the speedometer.

The voltage is supplied

- from combination meter terminal 15 for the speedometer
- to terminal 1 of the vehicle speed sensor.

The speedometer converts the voltage into the vehicle speed displayed.

# METERS AND GAUGES

Combination Meter

## Combination Meter

NFEL0043

NFEL0043S01

### CHECK

GI

MA

EM

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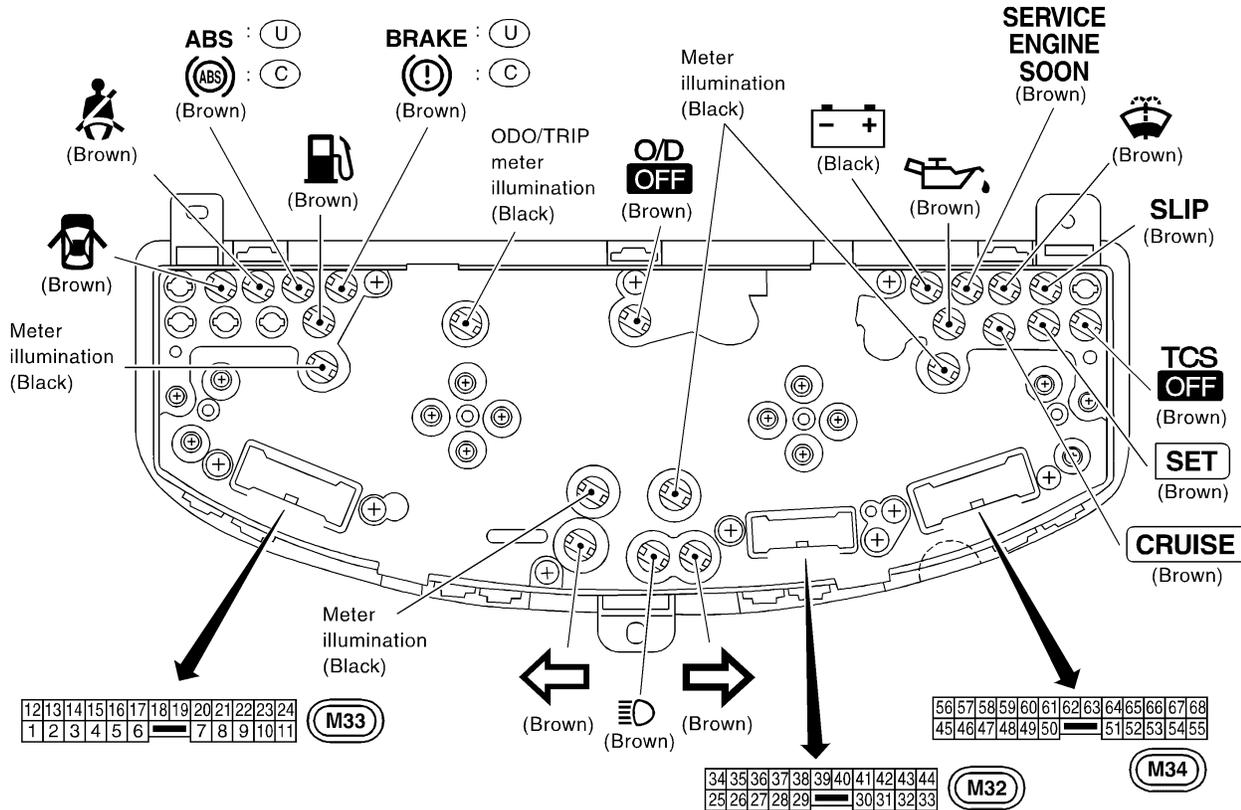
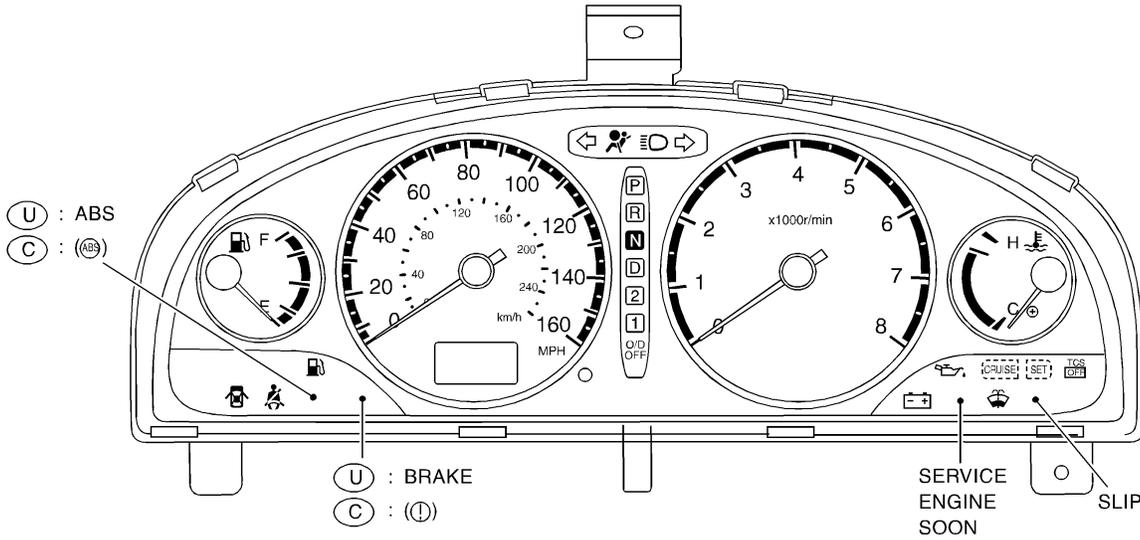
BT

HA

SC

EL

IDX



Bulb socket color	Bulb wattage
Brown	1.4W
Black	3W

( ): Bulb socket color

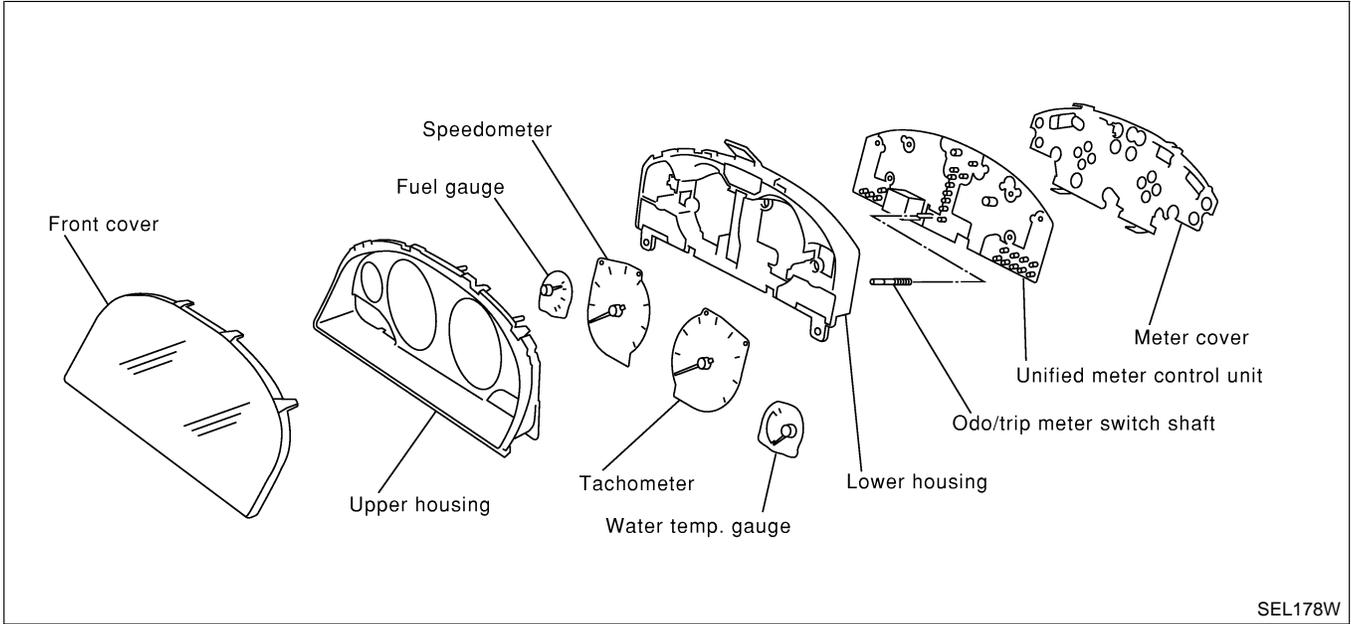
U : For USA  
C : For Canada

# METERS AND GAUGES

Combination Meter (Cont'd)

## CONSTRUCTION

NFEL0043S04

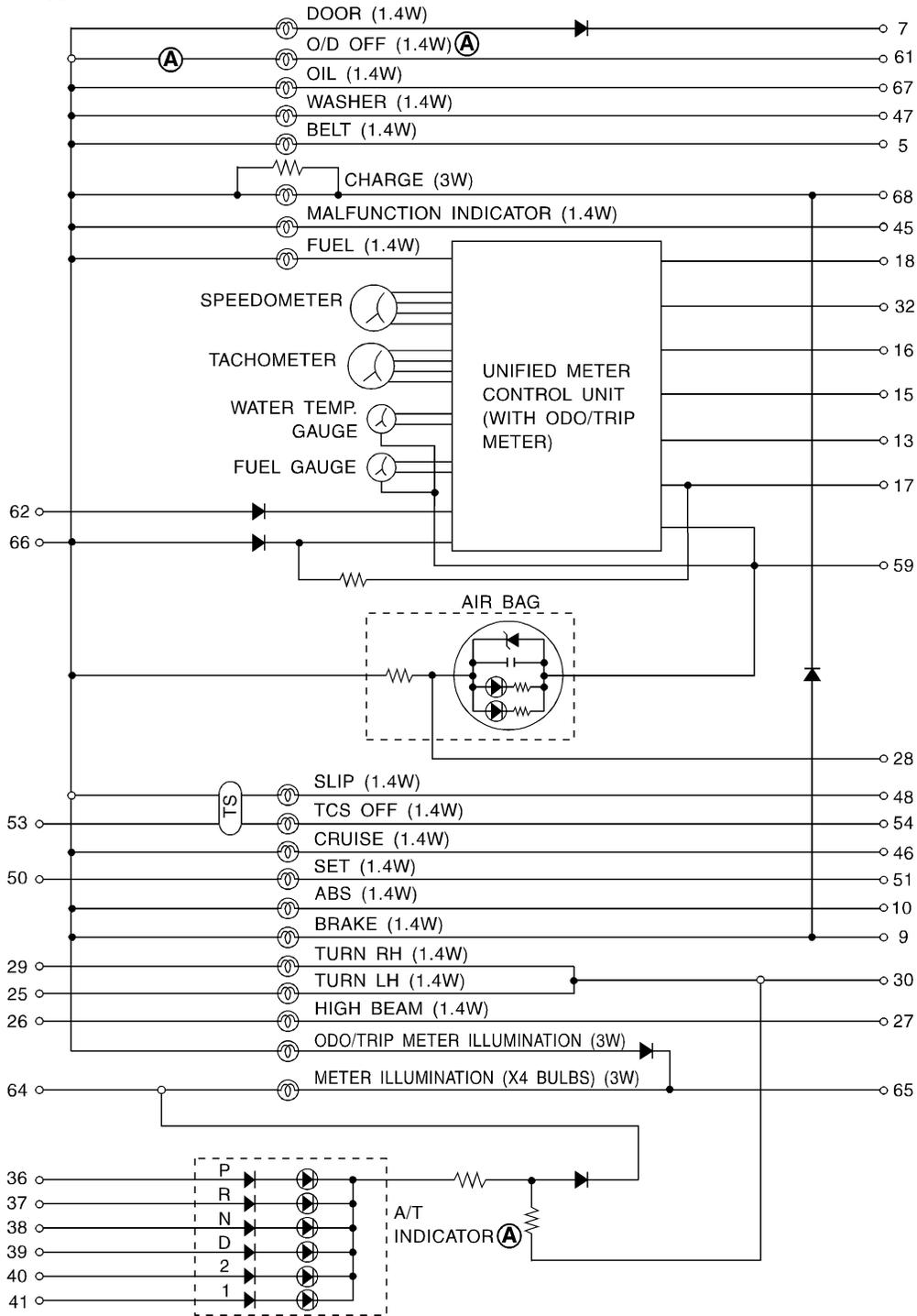


SEL178W

## Schematic

NFEL0254

- (A) : With A/T
- (TS) : With TCS



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SC

**EL**

IDX



# METERS AND GAUGES

Meter/Gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode

## Meter/Gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode

### DIAGNOSIS FUNCTION

- Odo/trip meter segment can be checked in diagnosis mode. NFEL0151
- Meters/gauges can be checked in diagnosis mode. NFEL0151S01

### HOW TO ALTERNATE DIAGNOSIS MODE

1. Turn ignition switch to ON and change odo/trip meter to "TRIP A". NFEL0151S02
2. Turn ignition switch to OFF.
3. Turn ignition switch to ON when pushing odo/trip meter switch.
4. Release odo/trip meter switch 1 second after ignition switch is turned ON.
5. Push odo/trip meter switch more than three times within 5 seconds.

6. All odo/trip meter segments should be turned on.

**NOTE:**

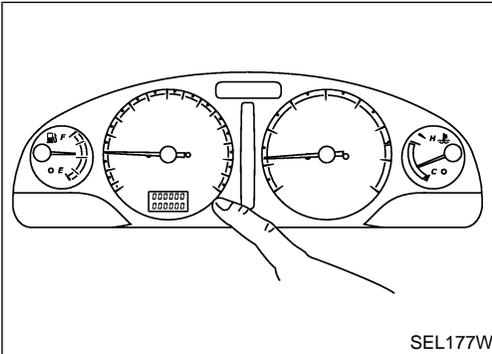
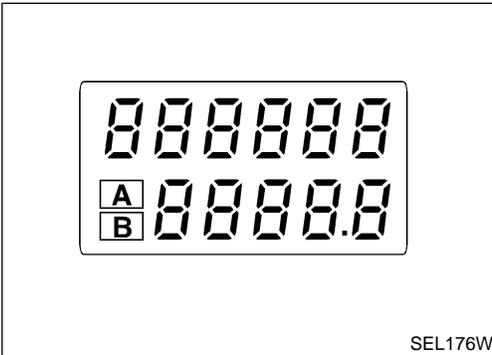
If some segments are not turned on, unified meter control unit with odo/trip meter should be replaced.

At this point, the unified control meter is turned to diagnosis mode.

7. Push odo/trip meter switch. Indication of each meter/gauge should be as shown left during pushing odo/trip meter switch if it is no malfunctioning.

**NOTE:**

It takes about a few seconds for indication of fuel gauge and water temperature gauge to become stable.



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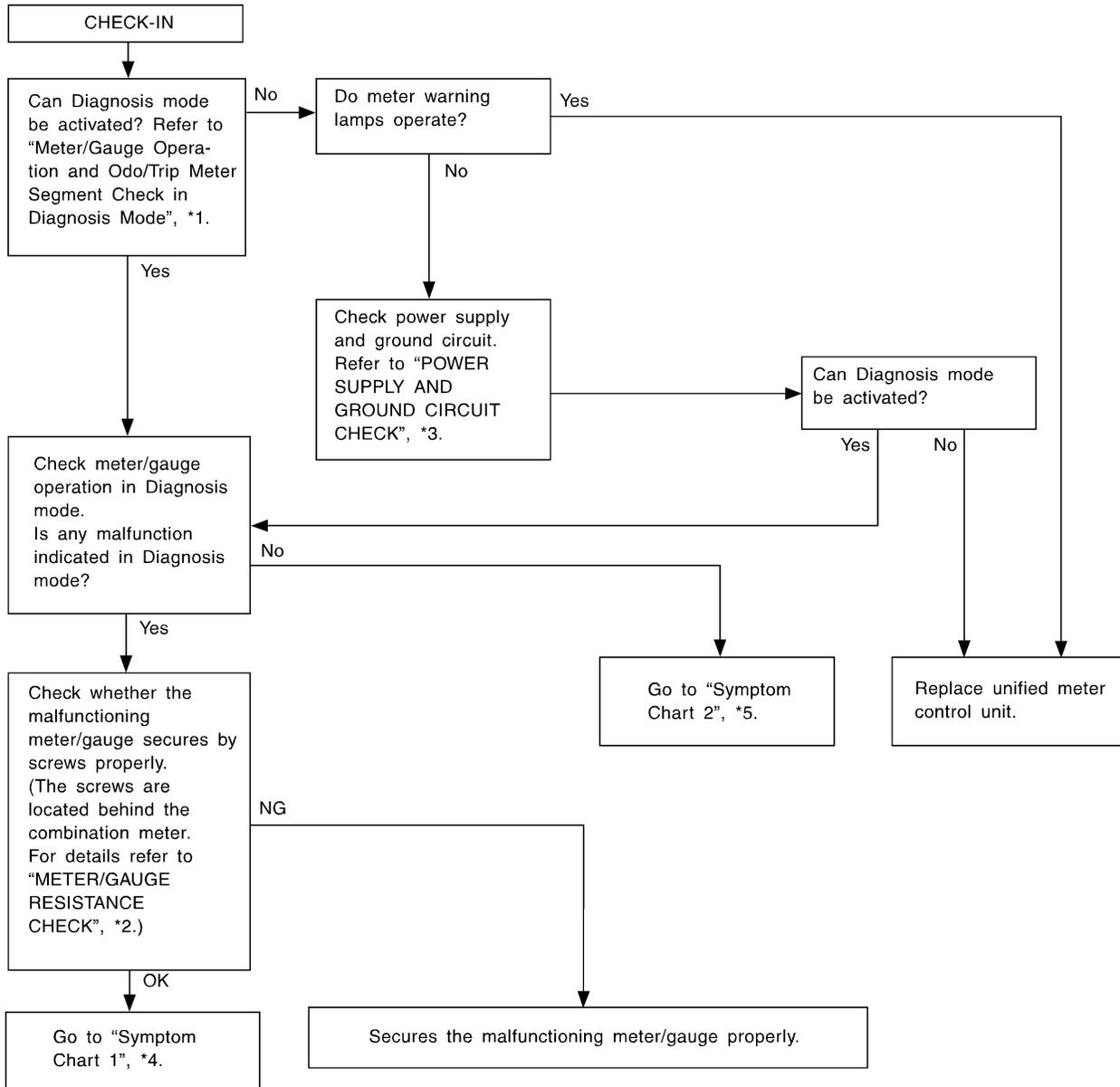
# METERS AND GAUGES

Trouble Diagnoses

## Trouble Diagnoses PRELIMINARY CHECK

NFEL0046

NFEL0046S04



SEL361W

- \*1: Meter/Gauge Operation and Odo/ Trip Meter Segment Check in Diagnosis Mode (EL-111)
- \*2: METER/GAUGE RESISTANCE CHECK (EL-119)

- \*3: POWER SUPPLY AND GROUND CIRCUIT CHECK (EL-114)
- \*4: Symptom Chart 1 (EL-113)

- \*5: Symptom Chart 2 (EL-113)

## SYMPTOM CHART

### Symptom Chart 1 (Malfunction is Indicated in Diagnosis Mode)

NFEL0046S10

NFEL0046S1001

Symptom	Possible causes	Repair order
Odo/trip meter indicate(s) malfunction in Diagnosis mode.	Unified meter control unit	Replace unified meter control unit.
Multiple meter/gauge indicate malfunction in Diagnosis mode.		
One of speedometer/tachometer/fuel gauge/water temp. gauge indicates malfunction in Diagnosis mode.	<ol style="list-style-type: none"> <li>Meter/Gauge</li> <li>Unified meter control unit</li> </ol>	<ol style="list-style-type: none"> <li>Check resistance of meter/gauge indicating malfunction. If the resistance is NG, replace the meter/gauge. Refer to "METER/GAUGE RESISTANCE CHECK", EL-119.</li> <li>If the resistance of meter/gauge is OK, replace unified meter control unit.</li> </ol>

GI

MA

EM

LC

EC

FE

### Symptom Chart 2 (No Malfunction is Indicated in Diagnosis Mode)

NFEL0046S1002

Symptom	Possible causes	Repair order
One of speedometer/tachometer/fuel gauge/water temp. gauge is malfunctioning.	<ol style="list-style-type: none"> <li>Sensor signal                             <ul style="list-style-type: none"> <li>Vehicle speed signal</li> <li>Engine revolution signal</li> <li>Fuel gauge</li> <li>Water temp. gauge</li> </ul> </li> <li>Unified meter control unit</li> </ol>	<ol style="list-style-type: none"> <li>Check the sensor for malfunctioning meter/gauge. INSPECTION/VEHICLE SPEED SENSOR (Refer to EL-115.) INSPECTION/ENGINE REVOLUTION SIGNAL (Refer to EL-116.) INSPECTION/FUEL LEVEL SENSOR UNIT (Refer to EL-117.) INSPECTION/THERMAL TRANSMITTER (Refer to EL-118.)</li> <li>Replace unified meter control unit.</li> </ol>
Multiple meter/gauge are malfunctioning. (except odo/trip meter)		

CL

MT

AT

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SU

Before starting trouble diagnoses below, perform PRELIMINARY CHECK, EL-112.

BR

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RS

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HA

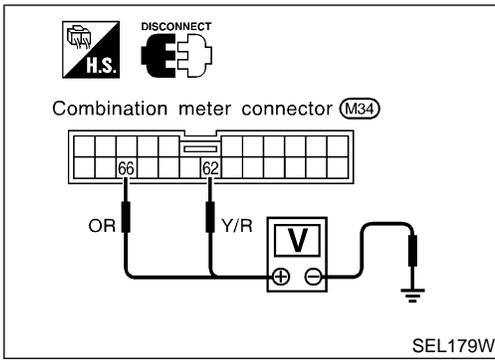
SC

**EL**

IDX

# METERS AND GAUGES

Trouble Diagnoses (Cont'd)



## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0046S07

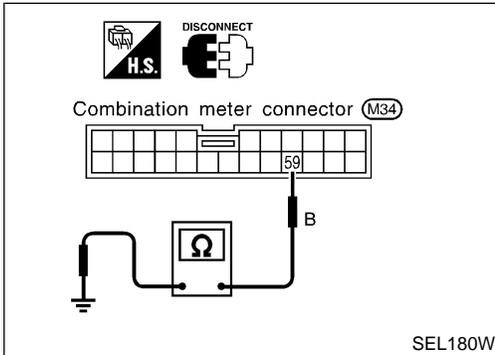
### Power Supply Circuit Check

NFEL0046S0701

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
62	Ground	Battery voltage	Battery voltage	Battery voltage
66	Ground	0V	0V	Battery voltage

If NG, check the following.

- 10A fuse [No. 12, located in fuse block (J/B)]
- 10A fuse [No. 30, located in fuse block (J/B)]
- Harness for open or short between fuse and combination meter



### Ground Circuit Check

NFEL0046S0702

Terminals	Continuity
59 - Ground	Yes

## INSPECTION/VEHICLE SPEED SENSOR

=NFEL0046S03

<b>1</b>	<b>CHECK VEHICLE SPEED SENSOR OUTPUT</b>	<p>1. Remove vehicle speed sensor from transmission. 2. Check voltage between combination meter terminal 15 and ECM terminal 58 while quickly turning speed sensor pinion.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> <p><b>Voltage: Approx. 0.5V</b></p> </div> <div style="margin-right: 20px;"> <p><b>NOTE:</b> Vehicle speed sensor connector should remain connected.</p> </div> <div style="margin-right: 20px;"> <p><b>SEL181W</b></p> </div> </div> <p style="text-align: center;"><b>OK or NG</b></p>	<p>GI</p> <p>MA</p> <p>EM</p> <p>LC</p> <p>EC</p> <p>FE</p> <p>CL</p>
OK	▶	Vehicle speed sensor is OK.	
NG	▶	GO TO 2.	

<b>2</b>	<b>CHECK VEHICLE SPEED SENSOR</b>	<p>Check resistance between vehicle speed sensor terminals 1 and 2.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> <p><b>Resistance: Approx. 250 Ω</b></p> </div> <div style="margin-right: 20px;"> <p><b>SEL406W</b></p> </div> </div> <p style="text-align: center;"><b>OK or NG</b></p>	<p>MT</p> <p>AT</p> <p>AX</p> <p>SU</p> <p>BR</p> <p>ST</p> <p>RS</p> <p>BT</p> <p>HA</p> <p>SC</p>
OK	▶	Check harness or connector between speedometer, vehicle speed sensor and ECM.	
NG	▶	Replace vehicle speed sensor.	

# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/ENGINE REVOLUTION SIGNAL

NFEL0046S02

<b>1</b>	<b>CHECK ECM OUTPUT</b>		
<p>1. Start engine. 2. Check voltage between combination meter terminals 16 and ground at idle and 2,000 rpm.</p>			
<p><b>Higher rpm = Higher voltage</b> <b>Lower rpm = Lower voltage</b> <b>Voltage should change with rpm.</b></p>			
SEL364W			
<b>OK or NG</b>			
OK	▶	Engine revolution signal is OK.	
NG	▶	Harness for open or short between ECM and combination meter	

# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/FUEL LEVEL SENSOR UNIT

=NFEL0046S08

<b>1</b>	<b>CHECK GROUND CIRCUIT FOR FUEL LEVEL SENSOR UNIT</b>	
<p>Check harness continuity between fuel level sensor unit and fuel pump connector terminal 5 and ground.</p> <div style="text-align: center;"> <p>Fuel level sensor unit and fuel pump connector (B19)</p> <p><b>Continuity should exist.</b></p> <p>SEL182W</p> <p><b>OK or NG</b></p> </div>		
OK	▶	GO TO 2.
NG	▶	Repair harness or connector.

<b>2</b>	<b>CHECK FUEL LEVEL SENSOR UNIT</b>	
<p>Refer to "FUEL LEVEL SENSOR UNIT CHECK" (EL-119).</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 3.
NG	▶	Replace fuel level sensor unit.

<b>3</b>	<b>CHECK HARNESS FOR OPEN OR SHORT</b>	
<ol style="list-style-type: none"> <li>1. Disconnect combination meter connector and fuel level sensor unit and fuel pump connector.</li> <li>2. Check continuity between combination meter terminal 17 and fuel level sensor unit and fuel pump connector terminal 2. <b>Continuity should exist.</b></li> <li>3. Check continuity between combination meter terminal 17 and ground. <b>Continuity should not exist.</b></li> </ol>		
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Combination meter connector (M33)</p> </div> <div style="text-align: center;"> <p>Fuel level sensor unit and fuel pump connector (B19)</p> </div> </div> <p>SEL183W</p> <p><b>OK or NG</b></p>		
OK	▶	Fuel level sensor unit is OK.
NG	▶	Repair harness or connector.

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# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/THERMAL TRANSMITTER

=NFEL0046S09

<b>1</b>	<b>CHECK THERMAL TRANSMITTER</b>	
Refer to "THERMAL TRANSMITTER CHECK" (EL-119).		
<b>OK or NG</b>		
OK	▶	GO TO 2.
NG	▶	Replace.

<b>2</b>	<b>CHECK HARNESS FOR OPEN OR SHORT</b>	
<ol style="list-style-type: none"> <li>1. Disconnect combination meter connector and thermal transmitter connector.</li> <li>2. Check continuity between combination meter terminal 18 and thermal transmitter terminal 1. <b>Continuity should exist.</b></li> <li>3. Check continuity between combination meter terminal 18 and ground. <b>Continuity should not exist.</b></li> </ol>		
SEL184W		
<b>OK or NG</b>		
OK	▶	Thermal transmitter is OK.
NG	▶	Repair harness or connector.

## Electrical Components Inspection

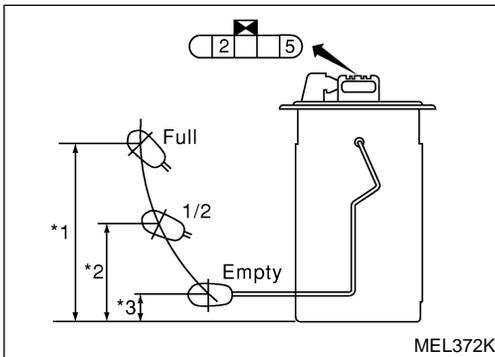
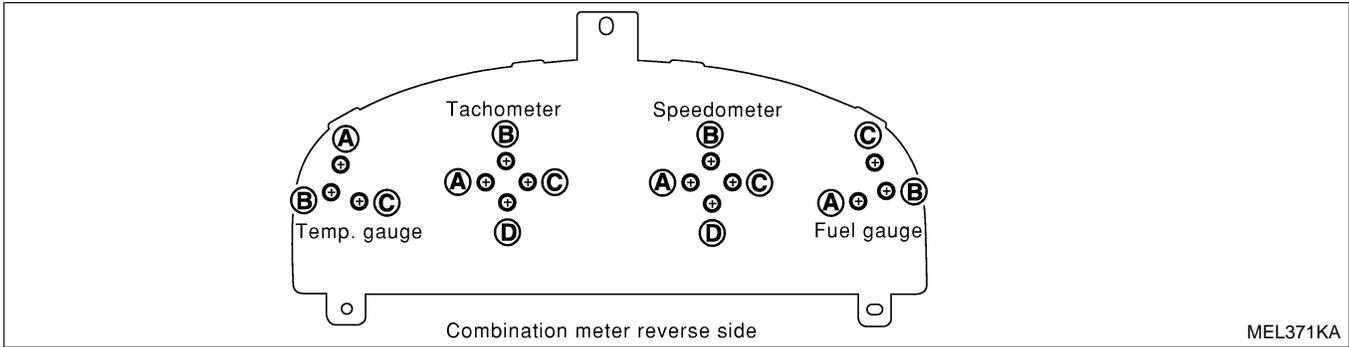
=NFEL0047

### METER/GAUGE RESISTANCE CHECK

NFEL0047S04

Check resistance between installation screws of meter/gauge.

Screws		Resistance $\Omega$
Tacho/Speedometer	Fuel/Temp. gauge	
A - C	A - C	Approx. 190 - Approx. 260
B - D	B - C	Approx. 230 - Approx. 310



### FUEL LEVEL SENSOR UNIT CHECK

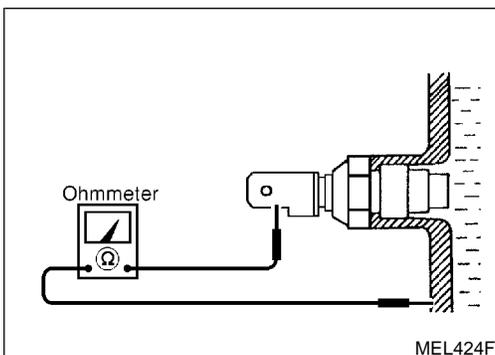
NFEL0047S01

- For removal, refer to FE-7.

Check the resistance between terminals 2 and 5.

Ohmmeter		Float position		mm (in)	Resistance value $\Omega$
(+)	(-)				
2	5	*1	Full	152 (5.98)	Approx. 4 - 6
		*2	1/2	87 (3.43)	
		*3	Empty	22 (0.87)	

\*1 and \*3: When float rod is in contact with stopper.



### THERMAL TRANSMITTER CHECK

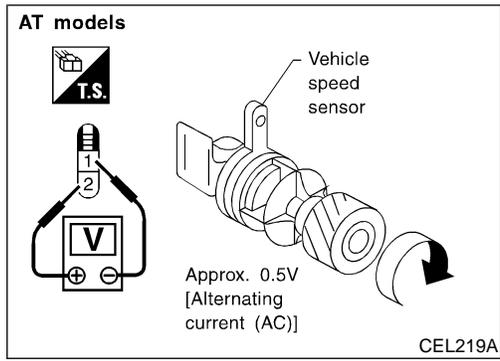
NFEL0047S02

Check the resistance between the terminals of thermal transmitter and body ground.

Water temperature	Resistance
60°C (140°F)	Approx. 170 - 210 $\Omega$
100°C (212°F)	Approx. 47 - 53 $\Omega$

# METERS AND GAUGES

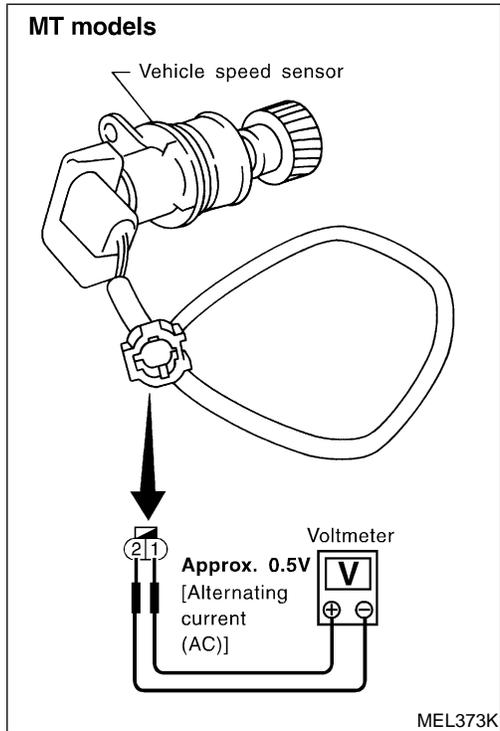
Electrical Components Inspection (Cont'd)



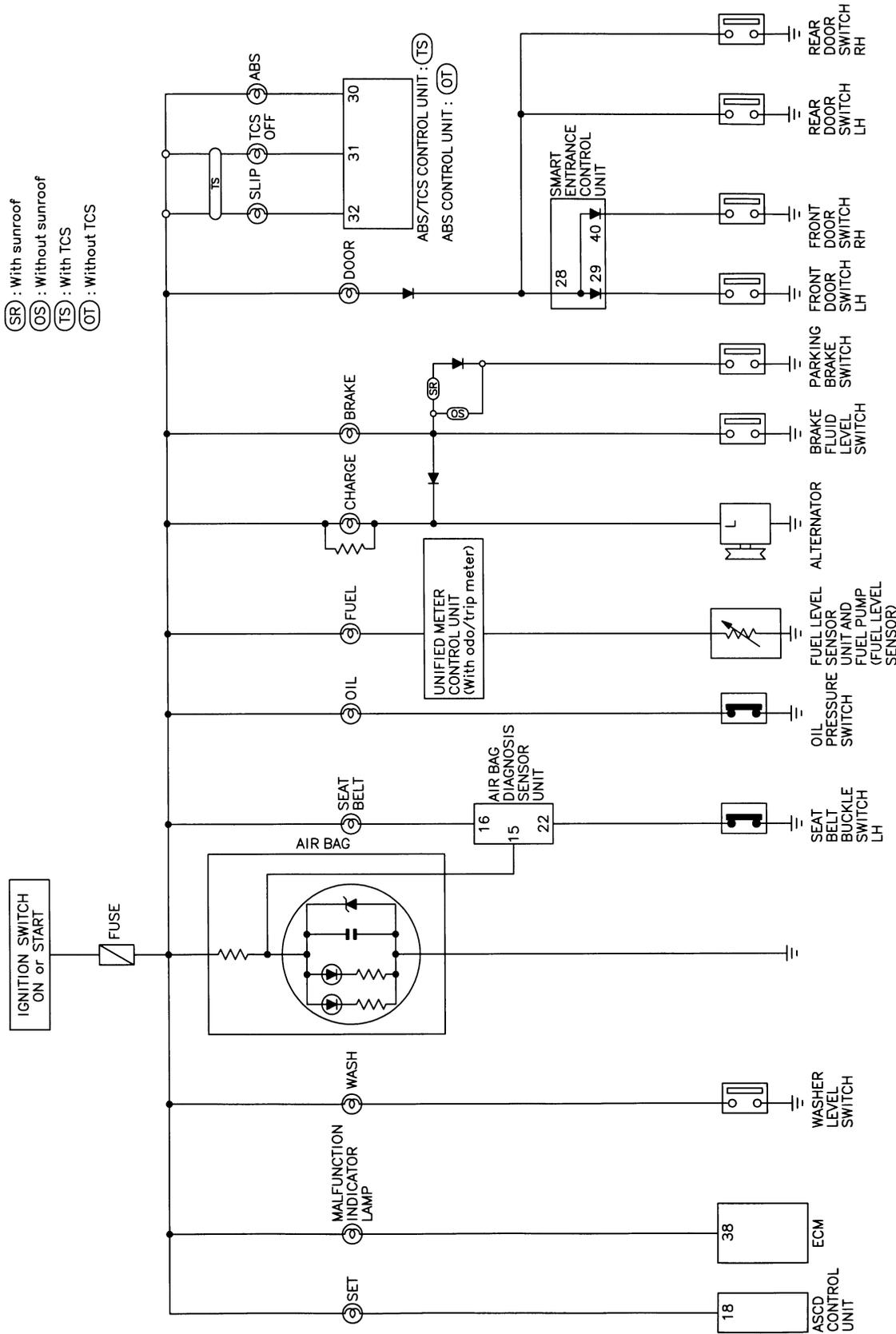
## VEHICLE SPEED SENSOR SIGNAL CHECK

NFEL0047S03

1. Remove vehicle speed sensor from transmission.
2. Turn vehicle speed sensor pinion quickly and measure voltage across 1 and 2.



## Schematic



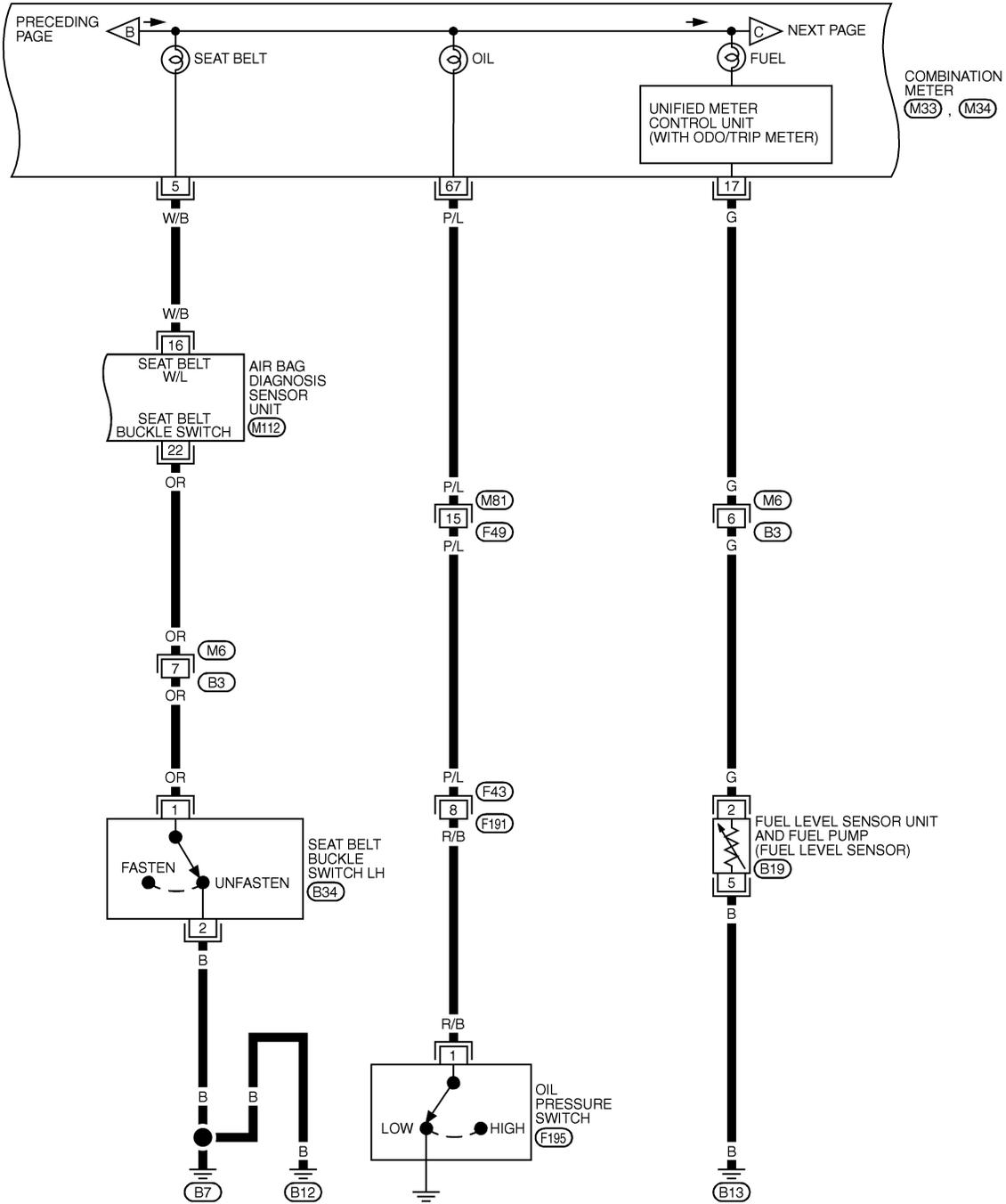
- GI
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- EL**
- IDX



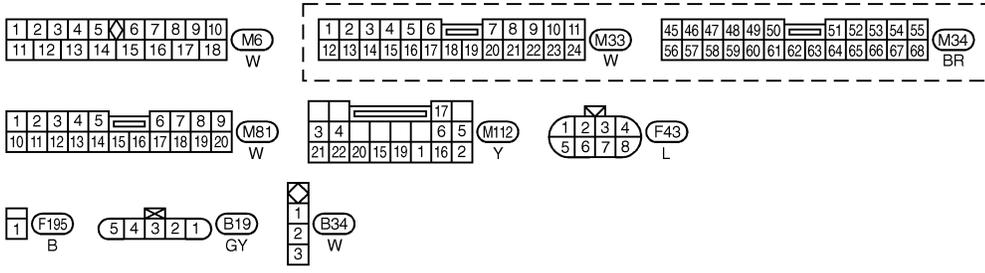
# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-02



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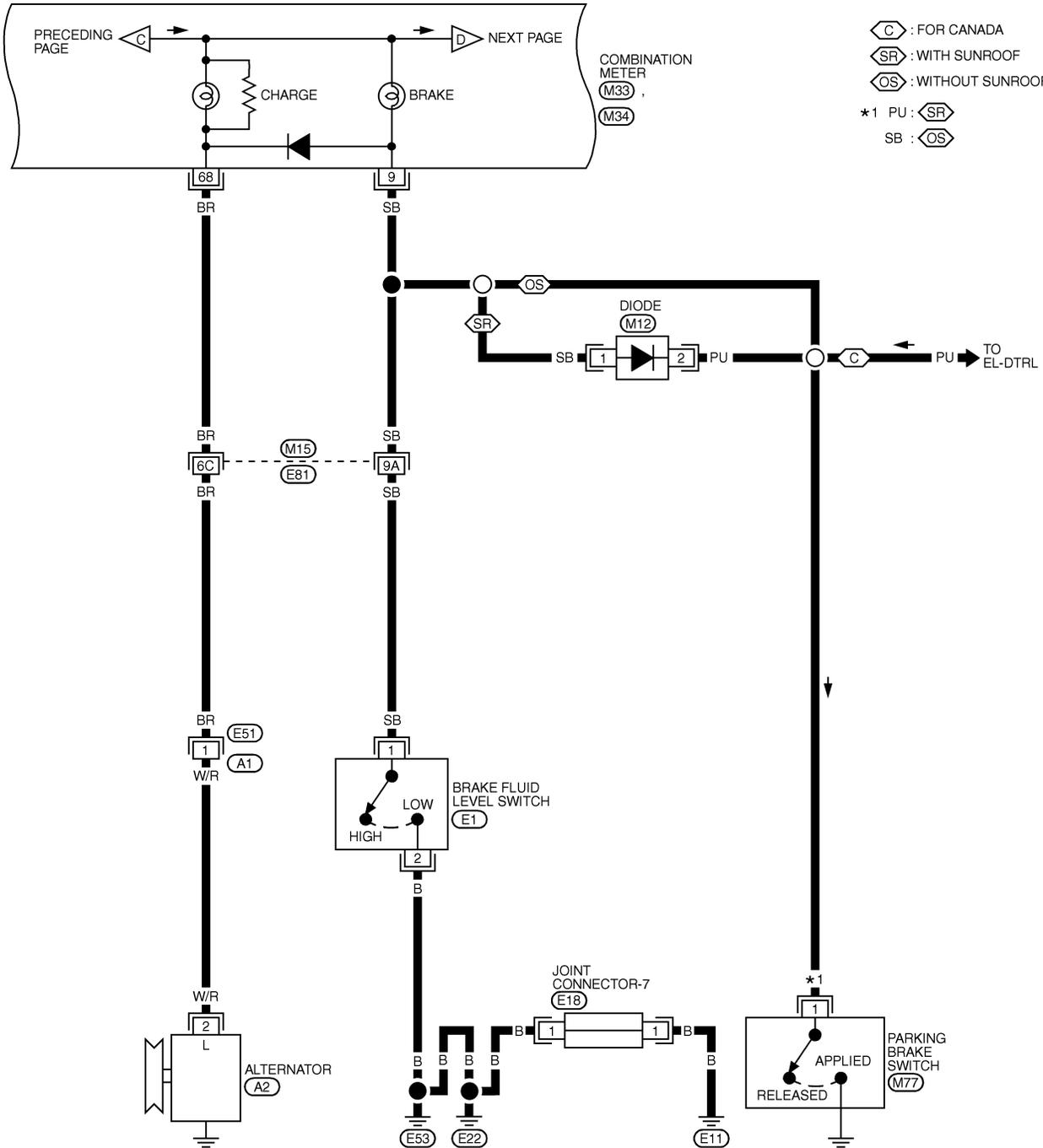


MEL267K

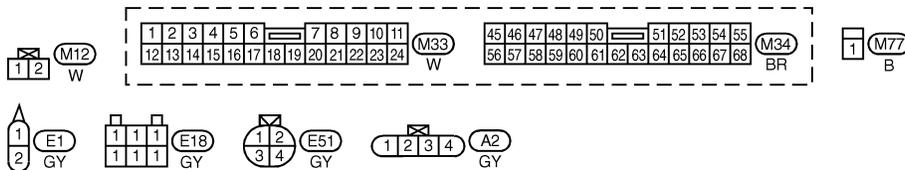
# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

## EL-WARN-03



- Ⓢ : FOR CANADA
- ⓈⓇ : WITH SUNROOF
- ⓈⓄ : WITHOUT SUNROOF
- \*1 PU : ⓈⓇ
- SB : ⓈⓄ



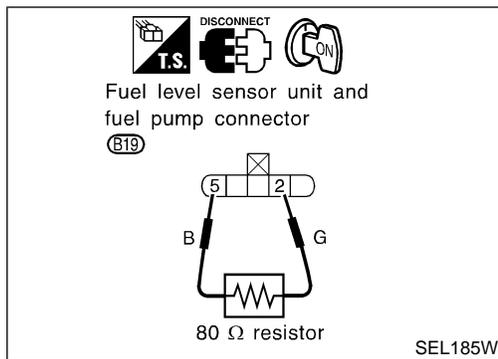
REFER TO THE FOLLOWING.  
 (M15) -SUPER  
 MULTIPLE JUNCTION (SMJ)

MEL721L



# WARNING LAMPS

## Electrical Components Inspection



## Electrical Components Inspection

### FUEL WARNING LAMP OPERATION CHECK

NFEL0051

NFEL0051S01

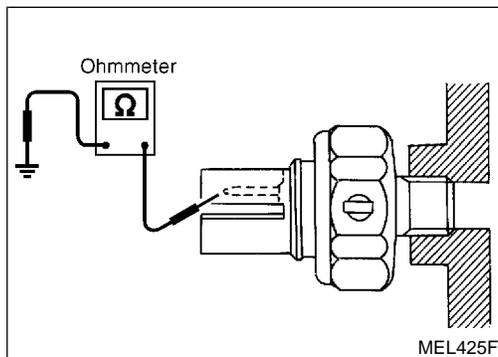
1. Turn ignition switch "OFF".
2. Disconnect fuel level sensor unit and fuel pump harness connector B19.
3. Connect a resistor (80Ω) between fuel level sensor unit and fuel pump harness connector terminals 2 and 5.
4. Turn ignition switch "ON".

**The fuel warning lamp should come on.**

#### NOTE:

ECM might store the 1st trip DTC P0180 and the 1st trip DTC P0464 during this inspection.

If the DTC is stored in ECM memory, erase the DTC after reconnecting fuel level sensor unit and fuel pump harness connector. Refer to EC-85, "HOW TO ERASE EMISSION-RELATED DIAGNOSTIC INFORMATION" "Emission-related Diagnostic Information" "ON BOARD DIAGNOSTIC SYSTEM DESCRIPTION".

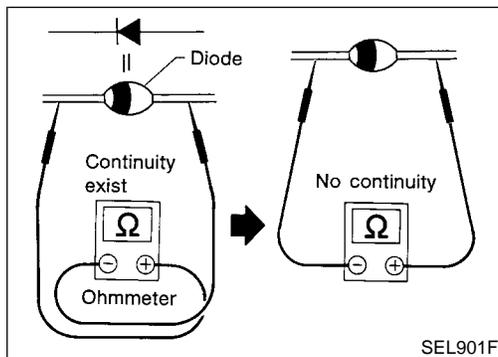


### OIL PRESSURE SWITCH CHECK

NFEL0051S02

	Oil pressure kPa (kg/cm <sup>2</sup> , psi)	Continuity
Engine running	More than 10 - 20 (0.1 - 0.2, 1 - 3)	No
Engine not running	Less than 10 - 20 (0.1 - 0.2, 1 - 3)	Yes

Check the continuity between the terminals of oil pressure switch and body ground.



### DIODE CHECK

NFEL0051S03

- Check continuity using an ohmmeter.
- Diode is functioning properly if test results are as shown in the figure at left.
- Check diodes at the combination meter harness connector instead of on the combination meter assembly. Refer to EL-122, "WARNING LAMP" wiring diagrams.

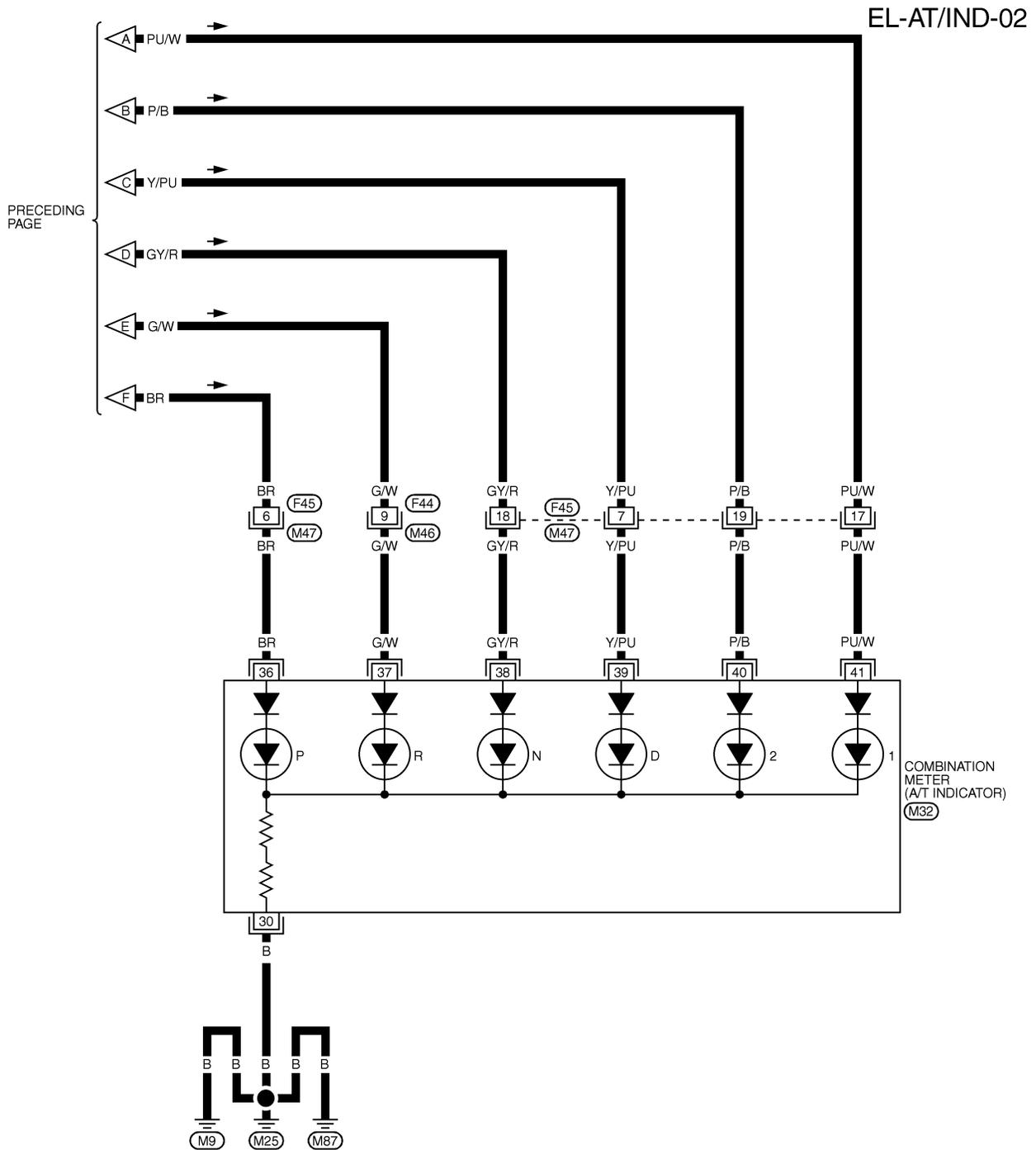
#### NOTE:

Specification may vary depending on the type of tester. Before performing this inspection, be sure to refer to the instruction manual for the tester to be used.



# A/T INDICATOR

Wiring Diagram — AT/IND — (Cont'd)



25	26	27	28	29	30	31	32	33		
34	35	36	37	38	39	40	41	42	43	44

(M32)  
BR

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

(M46)  
W

1	2	3	4	5	6	7	8				
9	10	11	12	13	14	15	16	17	18	19	20

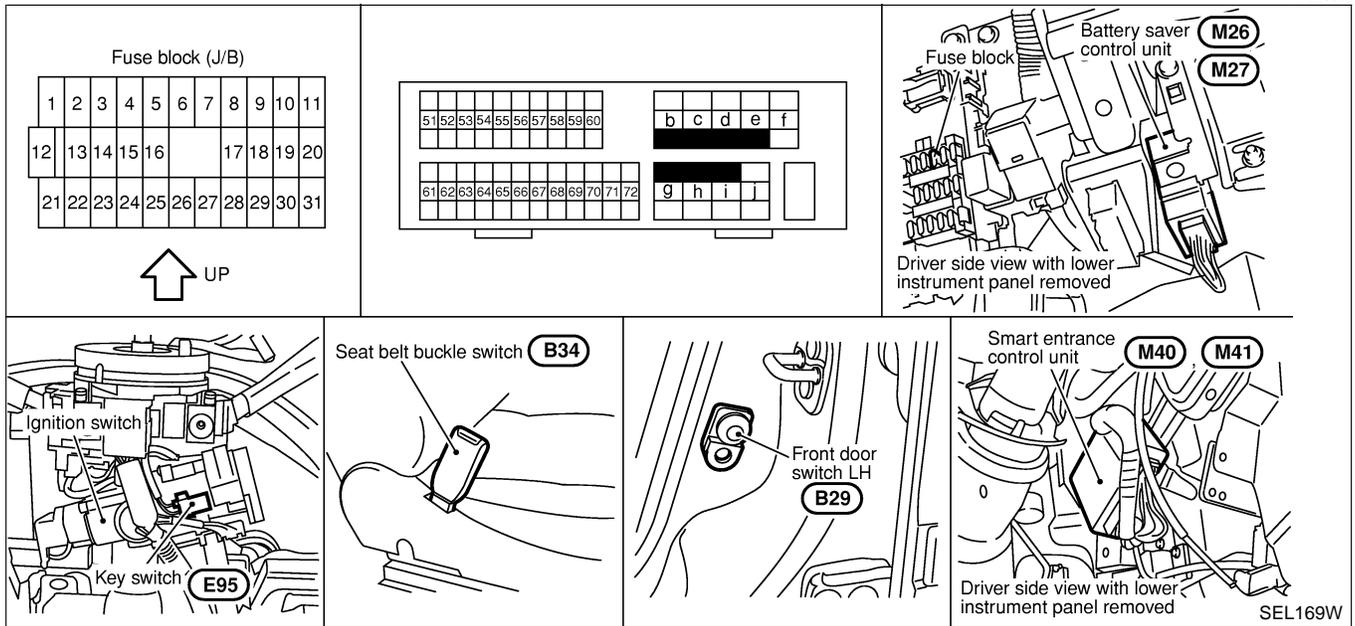
(M47)  
W

# WARNING CHIME

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NFEL0052



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT

### System Description

NFEL0053

The warning chime is controlled by the smart entrance control unit. The warning chime is located in the smart entrance control unit. Power is supplied at all times

- through 10A fuse [No. 13, located in fuse block (J/B)]
- to smart entrance control unit terminal 10,
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 2,
- through 10A fuse (No. 60, located in the fuse and fusible link box)
- to tail lamp relay terminals 1 and 3.

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to smart entrance control unit terminal 33.

Ground is supplied to smart entrance control unit terminal 16 through body grounds M9, M25 and M87.

When a signal, or combination of signals, is received by the smart entrance control unit, the warning chime will sound.

### IGNITION KEY WARNING CHIME

NFEL0053S01

With the key in the ignition switch in the OFF position, and the driver's door open, the warning chime will sound. Power is supplied

- from key switch terminal 1
- to smart entrance control unit terminal 32.

Ground is supplied

- from front door switch (driver side) terminal 2
- to smart entrance control unit terminal 29.

Front door switch (driver side) terminal 3 is grounded through body ground B30.

### LIGHT WARNING CHIME

NFEL0053S02

With ignition switch OFF, driver's door open, and lighting switch in 1ST or 2ND position, warning chime will sound. Power is supplied.

- from tail lamp relay terminal 5
- to smart entrance control unit terminal 34.

Ground is supplied

AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

## WARNING CHIME

*System Description (Cont'd)*

---

- from front door switch (driver side) terminal 2
- to smart entrance control unit terminal 29.

Front door switch (driver side) terminal 3 is grounded through body ground B30.

### **SEAT BELT WARNING CHIME**

With ignition switch turned ON and seat belt unfastened (seat belt switch ON), warning chime will sound for approximately 6 seconds.

NFEL0053S03

Ground is supplied

- from seat belt switch terminal 1
- to smart entrance control unit terminal 22.

Seat belt switch terminal 2 is grounded through body grounds B7 and B12.

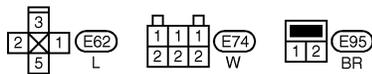
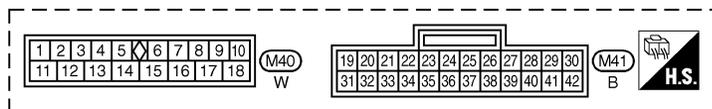
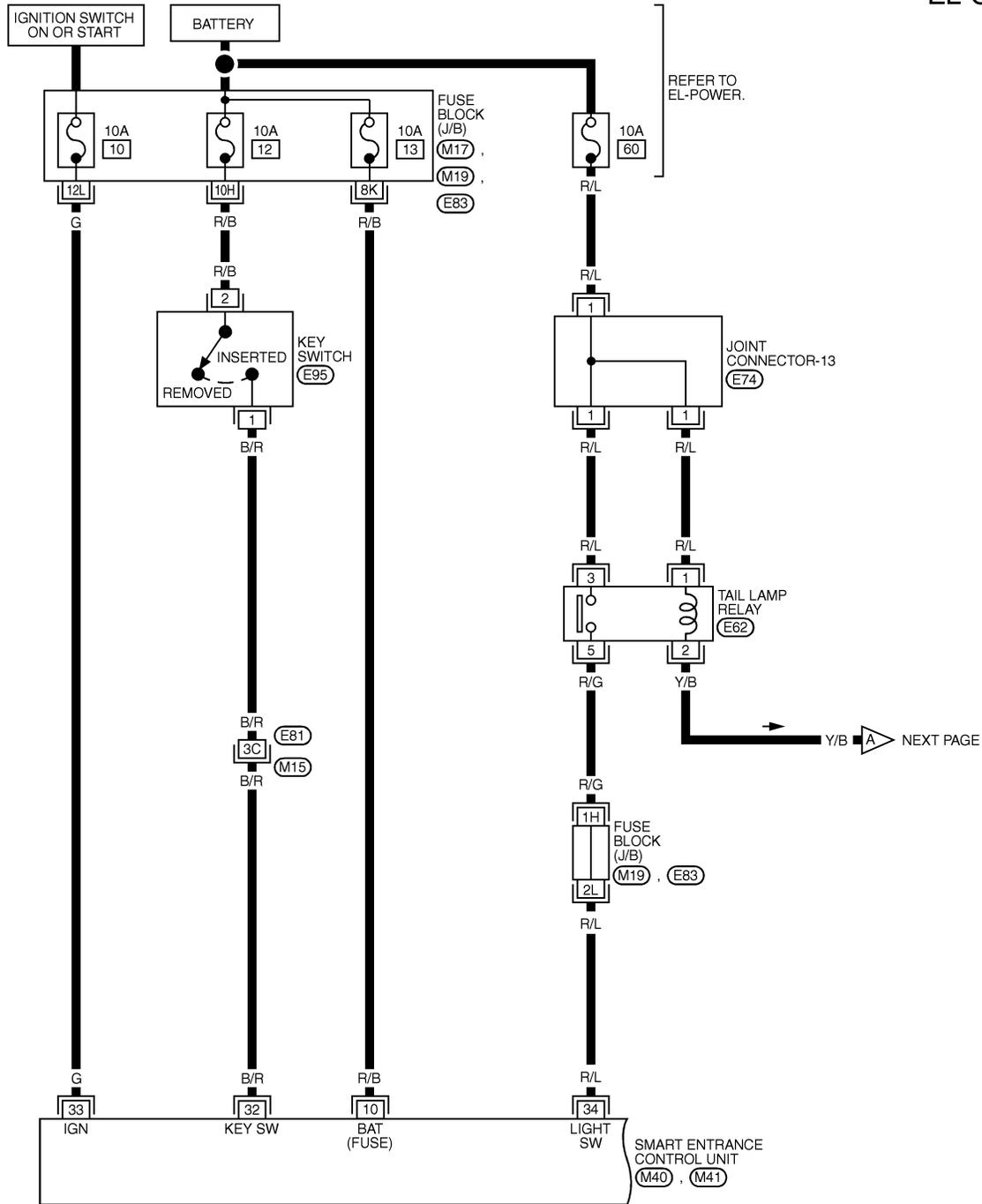
# WARNING CHIME

Wiring Diagram — CHIME —

## Wiring Diagram — CHIME —

NFEL0054

EL-CHIME-01



REFER TO THE FOLLOWING.  
 (M15) . (E81) -SUPER MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-JUNCTION BOX (J/B)  
 (M19) -FUSE BLOCK-JUNCTION BOX (J/B)  
 (E83) -FUSE BLOCK-JUNCTION BOX (J/B)

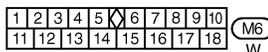
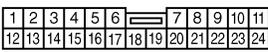
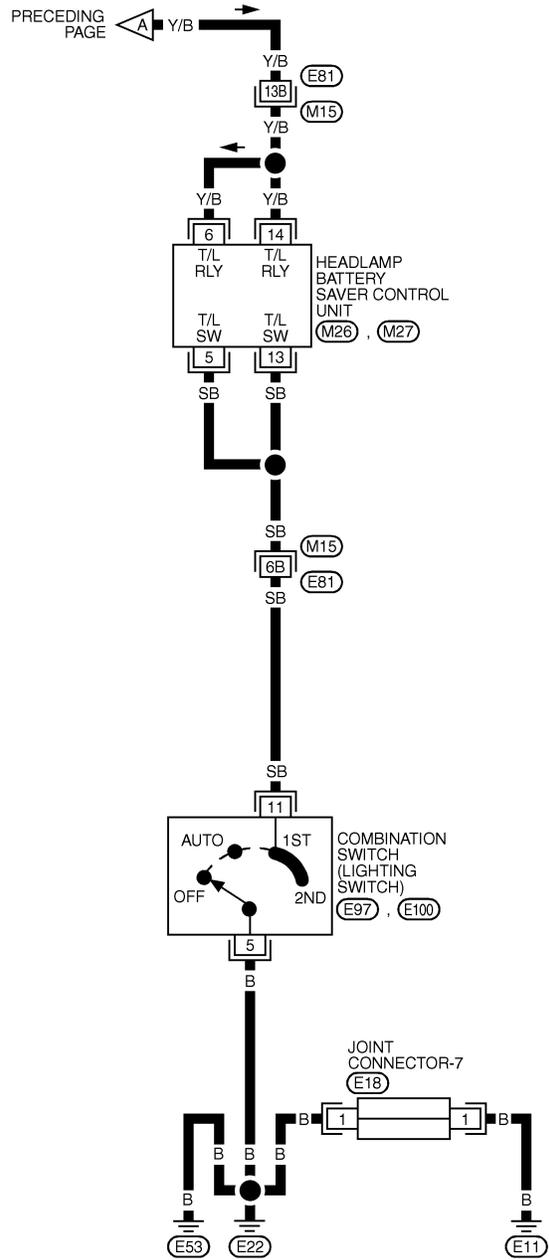
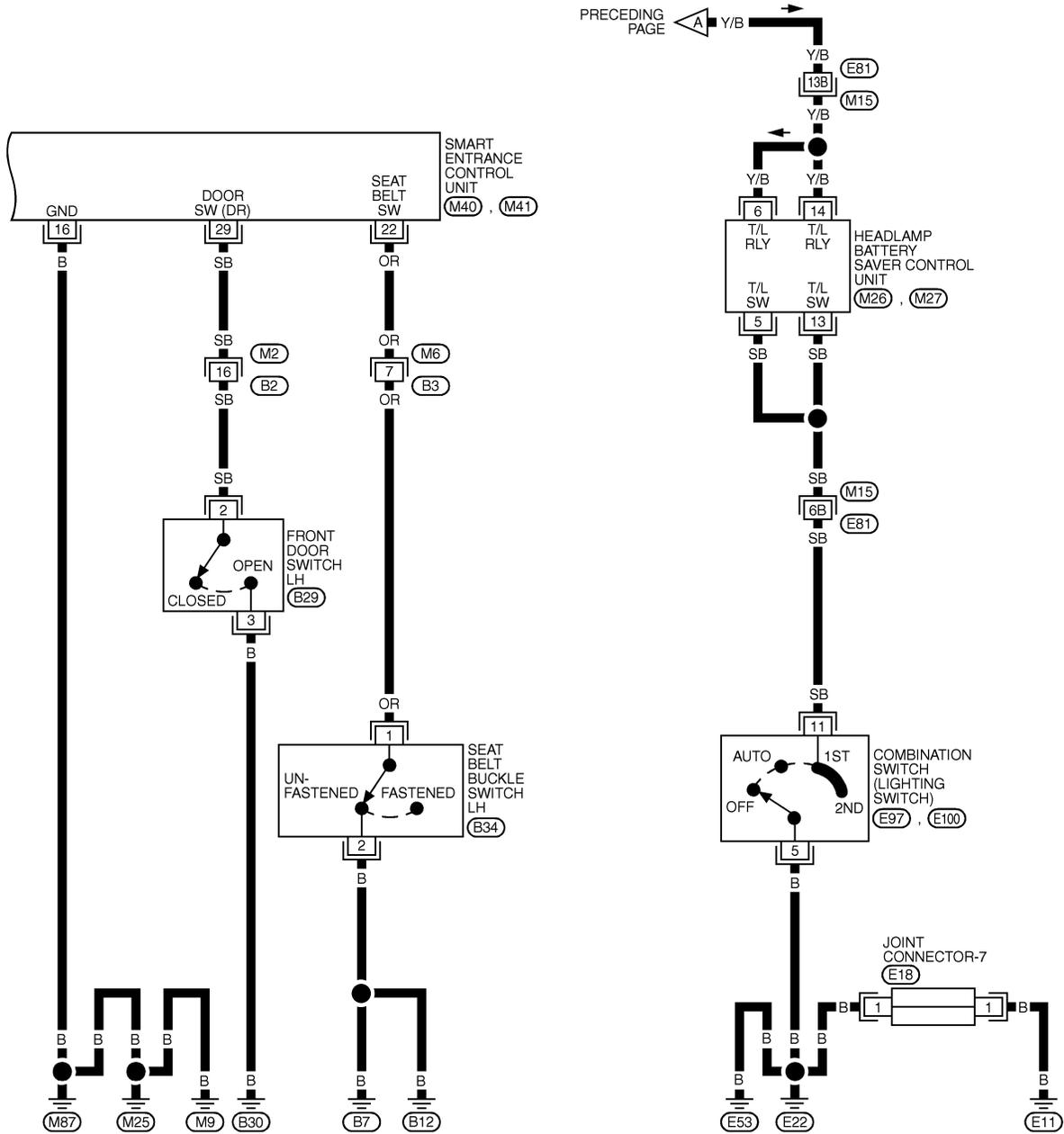
GI  
MA  
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SC  
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IDX

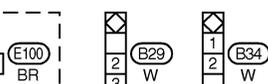
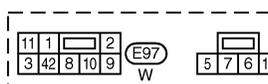
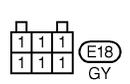
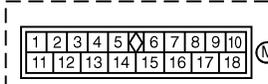
# WARNING CHIME

Wiring Diagram — CHIME — (Cont'd)

EL-CHIME-02

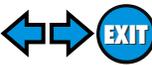


REFER TO THE FOLLOWING.  
(M15), (E81) - SUPER  
MULTIPLE JUNCTION (SMJ)



MEL273K

# WARNING CHIME



Wiring Diagram — CHIME — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
22	OR	SEAT BELT BUCKLE SWITCH	UNFASTEN → FASTEN (IGNITION KEY IS IN "ON" POSITION)	0V → 5V
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
32	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER	12V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
34	R/L	TAIL LAMP RELAY	1ST, 2ND POSITIONS: ON → OFF	12V → 0V

GI

MA

EM

LC

EC

SEL037X FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

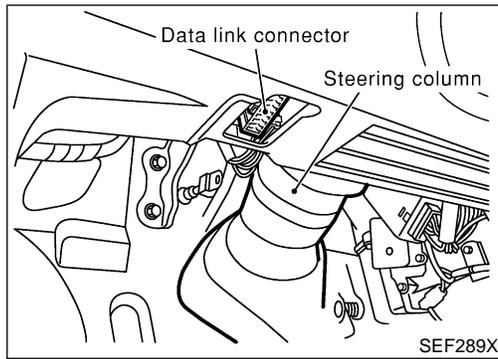
SC

**EL**

IDX

# WARNING CHIME

CONSULT-II Inspection Procedure

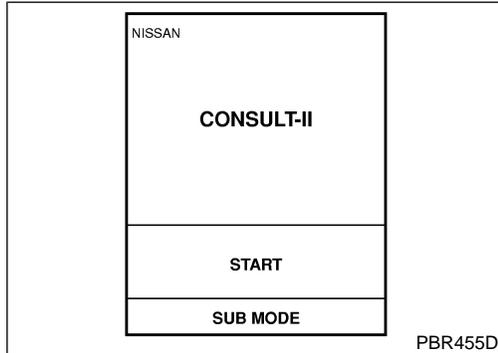


## CONSULT-II Inspection Procedure “KEY WARN ALM”/“LIGHT WARN ALM”/“SEAT BELT ALM”

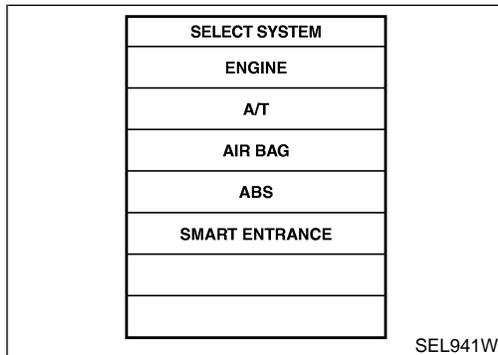
=NFEL0216

NFEL0216S01

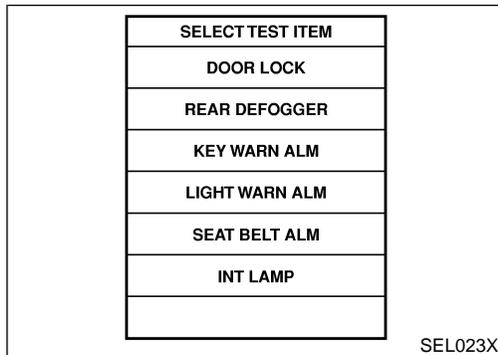
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



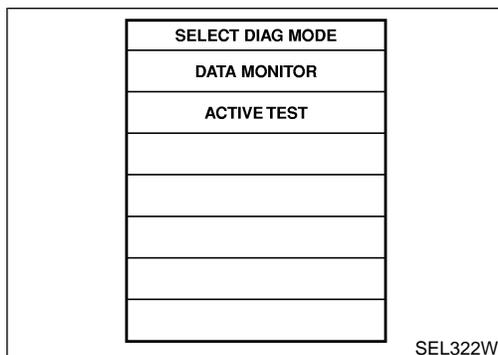
3. Turn ignition switch “ON”.
4. Touch “START”.



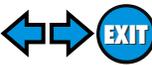
5. Touch “SMART ENTRANCE”.



6. Touch “KEY WARN ALM”, “LIGHT WARN ALM” or “SEAT BELT ALM”.



- DATA MONITOR and ACTIVE TEST are available for the warning chime.



# WARNING CHIME

CONSULT-II Application Items

## CONSULT-II Application Items

### “KEY WARNING ALARM”

NFEL0217

#### Data Monitor

NFEL0217S01

GI

NFEL0217S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
DOOR SW DR	Indicates [ON/OFF] condition of front door switch LH.

MA

EM

#### Active Test

NFEL0217S0102

Test Item	Description
CHIME	This test is able to check key warning chime operation. Key warning chime sounds for 2 seconds after touching “ON” on CONSULT-II screen.

LC

EC

### “LIGHT WARN ALM”

NFEL0217S02

#### Data Monitor

NFEL0217S0201

FE

CL

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
HD/LMP 1ST SW	Indicates [ON/OFF] condition of lighting switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.

MT

AT

#### Active Test

NFEL0217S0202

Test Item	Description
CHIME	This test is able to check light warning chime operation. Light warning chime sounds for 2 seconds after touching “ON” on CONSULT-II screen.

AX

SU

### “SEAT BELT WARM ALM”

NFEL0217S03

#### Data Monitor

NFEL0217S0301

BR

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
SEAT BELT SW	Indicates [ON/OFF] condition of seat belt switch.

ST

RS

#### Active Test

NFEL0217S0302

Test Item	Description
CHIME	This test is able to check seat belt warning chime operation. Seat belt warning chime sounds for 2 seconds after touching “ON” on CONSULT-II screen.

BT

HA

SC

EL

IDX

# WARNING CHIME

Trouble Diagnoses

## Trouble Diagnoses SYMPTOM CHART

NFEL0055

NFEL0055S01

REFERENCE PAGE (EL- )	136	137	138	139	140
SYMPTOM	POWER SUPPLY AND GROUND CIRCUIT CHECK	DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 3 (SEAT BELT BUCKLE SWITCH CHECK)	DIAGNOSTIC PROCEDURE 4
Light warning chime does not activate.	X	X			X
Ignition key warning chime does not activate.	X		X		X
Seat belt warning chime does not activate.	X			X	X
All warning chimes do not activate.	X				X

### POWER SUPPLY AND GROUND CIRCUIT CHECK

NFEL0055S02

#### Power Supply Circuit Check

NFEL0055S0201

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
10	Ground	Battery voltage	Battery voltage	Battery voltage

Smart entrance control unit connector (M40)

SEL326WA

Smart entrance control unit connector (M40)

SEL781VB

### Ground Circuit Check

NFEL0055S0202

Terminals	Continuity
16 - Ground	Yes

## DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)

-NFEL0055S03

<b>1</b>	<b>CHECK LIGHTING SWITCH INPUT SIGNAL</b>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>With CONSULT-II</b> Check lighting switch ("HD/LMP 1ST SW") in "DATA MONITOR" mode with CONSULT-II.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">DATA MONITOR</th> </tr> <tr> <th style="text-align: center;">MONITOR</th> <th style="text-align: center;"> </th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">HD/LMP 1ST SW</td> <td style="text-align: center;">OFF</td> </tr> </tbody> </table> <p>When lighting switch is in 1st or 2nd position: <b>HD/LMP 1ST SW ON</b></p> <p>When lighting switch is in OFF position: <b>HD/LMP 1ST SW OFF</b></p> </div> <div style="width: 50%; vertical-align: top;"> <p style="text-align: right;">SEL316W</p> </div> </div>	DATA MONITOR		MONITOR		HD/LMP 1ST SW	OFF
DATA MONITOR								
MONITOR								
HD/LMP 1ST SW	OFF							
		<p><b>Without CONSULT-II</b> Check voltage between smart entrance control unit terminal 34 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>Smart entrance control unit connector (M41)</p> </div> <div style="width: 50%; vertical-align: top;"> <p style="text-align: right;">SEL309W</p> </div> </div> <p style="text-align: center; margin-top: 20px;"><b>OK or NG</b></p>						
OK	▶	Lighting switch is OK.						
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 60, located in the fuse and fusible link box)</li> <li>● Harness for open or short between smart entrance control unit and tail lamp relay</li> </ul>						

GI  
 MA  
 EM  
 LC  
 EC  
 FE  
 CL  
 MT  
 AT  
 AX  
 SU  
 BR  
 ST  
 RS  
 BT  
 HA  
 SC  
 EL  
 IDX

# WARNING CHIME

Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)

-NFEL0055S04

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>							
<p> <b>With CONSULT-II</b> Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>KEY ON SW</td><td>ON</td></tr> </table>			DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR								
MONITOR								
KEY ON SW	ON							
		<p>When key is inserted to ignition key cylinder: <b>KEY ON SW ON</b></p> <p>When key is removed from ignition key cylinder: <b>KEY ON SW OFF</b></p>						
SEL315W								
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit terminal 32 and ground.</p>								
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Smart entrance control unit connector (M4)</p> </div> <div style="width: 45%;"> <p> <b>CONNECT</b></p> <p> : Approx. 12V</p> <p> : 0V</p> </div> </div>								
		<p><b>Voltage [V]:</b></p> <p>Condition of key switch: Key is inserted. <b>Approx. 12</b></p> <p>Condition of key switch: Key is withdrawn. <b>0</b></p>						
SEL310W								
<b>OK or NG</b>								
OK	▶	Key switch is OK.						
NG	▶	GO TO 2.						

<b>2</b>	<b>CHECK KEY SWITCH (INSERT)</b>	
Check continuity between terminals 1 and 2.		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Key switch connector (E95)</p> </div> <div style="width: 45%;"> <p> <b>DISCONNECT</b></p> <p> : Yes</p> <p> : No</p> </div> </div>		
		<p><b>Continuity:</b></p> <p>Condition of key switch: Key is inserted. <b>Yes</b></p> <p>Condition of key switch: Key is removed. <b>No</b></p>
SEL311W		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between smart entrance control unit and key switch</li> </ul>
NG	▶	Replace key switch.

## DIAGNOSTIC PROCEDURE 3 (SEAT BELT BUCKLE SWITCH CHECK)

-NFEL0055S05

<b>1</b>	<b>CHECK SEAT BELT BUCKLE SWITCH INPUT SIGNAL</b>	GI						
<p> <b>With CONSULT-II</b> Check seat belt buckle switch ("SEAT BELT SW") in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>SEAT BELT SW</td><td>ON</td></tr> </table>			DATA MONITOR		MONITOR		SEAT BELT SW	ON
DATA MONITOR								
MONITOR								
SEAT BELT SW	ON							
<p>When seat belt is fastened: <b>SEAT BELT SW ON</b></p> <p>When seat belt is released: <b>SEAT BELT SW OFF</b></p>								
SEL317W								
<p> <b>Without CONSULT-II</b></p> <p>1. Turn ignition switch "ON". 2. Check voltage between smart entrance control unit terminal 22 and ground.</p>								
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Smart entrance control unit connector (M41)</p> <p>OR</p> </div> <div style="flex: 1; text-align: center;"> <p><b>Voltage [V]:</b></p> <p>Condition of seat belt buckle switch: Fastened <b>Approx. 5</b></p> <p>Condition of seat belt buckle switch: Unfastened <b>0</b></p> </div> </div>								
SEL312W								
<b>OK or NG</b>								
OK	▶	Seat belt buckle switch is OK.						
NG	▶	GO TO 2.						

<b>2</b>	<b>CHECK SEAT BELT BUCKLE SWITCH</b>	ST
<p>Check continuity between terminals 1 and 2 when seat belt is fastened and unfastened.</p>		
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Seat belt buckle switch connector (B34)</p> </div> <div style="flex: 1; text-align: center;"> <p><b>Continuity:</b></p> <p>Seat belt is fastened. <b>No</b></p> <p>Seat belt is unfastened. <b>Yes</b></p> </div> </div>		
SEL313W		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Seat belt buckle switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and seat belt buckle switch</li> </ul>
NG	▶	Replace seat belt buckle switch.

GI  
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BT  
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SC  
EL  
IDX

# WARNING CHIME

Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 4

NFEL0055S06

<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>															
<p> <b>With CONSULT-II</b> Check ignition switch ON signal ("IGN ON SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>IGN ON SW</td> <td>ON</td> </tr> </tbody> </table> <div style="margin-left: 20px;"> <p>When ignition switch is ON: <b>IGN ON SW ON</b></p> <p>When ignition switch is OFF: <b>IGN ON SW OFF</b></p> </div> </div> <p style="text-align: right;">SEL318W</p>		DATA MONITOR		MONITOR		IGN ON SW	ON									
DATA MONITOR																
MONITOR																
IGN ON SW	ON															
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit terminal 33 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M4)</p> </div> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">Terminals</th> <th colspan="3">Ignition switch position</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>OFF</th> <th>ACC</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>33</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL380W</p> <p style="text-align: center;"><b>OK or NG</b></p>		Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	33	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position														
(+)	(-)	OFF	ACC	ON												
33	Ground	0V	0V	Battery voltage												
OK	▶	GO TO 2.														
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>														

# WARNING CHIME

Trouble Diagnoses (Cont'd)

<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>								
<p> <b>With CONSULT-II</b> Check driver door switch signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.</p>									
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th colspan="2">MONITOR</th> </tr> </thead> <tbody> <tr> <td>DOOR SW-DR</td> <td>OFF</td> </tr> </tbody> </table>		DATA MONITOR		MONITOR		DOOR SW-DR	OFF	<p>When driver's door is open: <b>DOOR SW-DR ON</b></p> <p>When driver's door is closed: <b>DOOR SW-DR OFF</b></p>	
DATA MONITOR									
MONITOR									
DOOR SW-DR	OFF								
		SEL319W							
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit terminal 29 and ground.</p>									
		<p><b>Voltage [V]:</b> Condition of driver's door: <b>CLOSED</b> Approx. 5 Condition of driver's door: <b>OPENED</b> 0</p>							
		SEL324W							
<b>OK or NG</b>									
OK	▶	GO TO 4.							
NG	▶	GO TO 3.							

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

<b>3</b>	<b>CHECK DRIVER SIDE DOOR SWITCH</b>		
<p>Check continuity between terminals 2 and 3.</p>			
		<p><b>Continuity:</b> Door switch is pushed. No Door switch is released. Yes</p>	
		SEL325W	
<b>OK or NG</b>			
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Driver side door switch ground circuit and condition</li> <li>● Harness for open or short between smart entrance control unit and driver side door switch</li> </ul>	
NG	▶	Replace driver side door switch.	

# WARNING CHIME

Trouble Diagnoses (Cont'd)

<b>4</b>	<b>CHECK WARNING CHIME</b>							
<p> <b>With CONSULT-II</b> Perform "CHIME" in "ACTIVE TEST" mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <table border="1"> <thead> <tr> <th colspan="2">ACTIVE TEST</th> </tr> <tr> <th>CHIME</th> <th>OFF</th> </tr> </thead> <tbody> <tr> <td style="background-color: black; color: white;">ON</td> <td></td> </tr> </tbody> </table> </div> <div style="text-align: center; padding: 20px;"> <p><b>Warning chime should operate.</b></p> </div> <div style="text-align: right; padding-right: 20px;"> <p>SEL320W</p> </div> </div> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>			ACTIVE TEST		CHIME	OFF	ON	
ACTIVE TEST								
CHIME	OFF							
ON								
OK	▶	System is OK.						
NG	▶	Replace smart entrance control unit.						

## System Description

### WIPER OPERATION

NFEL0057

NFEL0057S01

The wiper switch is controlled by a lever built into the combination switch. There are three wiper switch positions:

- LO speed
- HI speed
- INT (Intermittent)

With the ignition switch in the ON or START position, power is supplied

- through 20A fuse [No. 25, located in the fuse block (J/B)]
- to wiper motor terminal 4.

#### Low and High Speed Wiper Operation

NFEL0057S0101

Ground is supplied to wiper switch terminal 17 through body grounds E11, E22 and E53.

When the wiper switch is placed in the LO position, ground is supplied

- through terminal 14 of the wiper switch
- to wiper motor terminal 3.

With power and ground supplied, the wiper motor operates at low speed.

When the wiper switch is placed in the HI position, ground is supplied

- through terminal 16 of the wiper switch
- to wiper motor terminal 1.

With power and ground supplied, the wiper motor operates at high speed.

#### Auto Stop Operation

NFEL0057S0102

With wiper switch turned OFF, wiper motor will continue to operate until wiper arms reach windshield base.

When wiper arms are not located at base of windshield with wiper switch OFF, ground is provided

- from terminal 14 of the wiper switch
- to wiper motor terminal 3, in order to continue wiper motor operation at low speed.

Ground is also supplied

- through terminal 13 of the wiper switch
- to wiper motor terminal 2
- through terminal 6 of the wiper motor, and
- through body grounds E11, E22 and E53.

When wiper arms reach base of windshield, wiper motor terminals 2 and 4 are connected instead of terminals 2 and 6. Wiper motor will then stop wiper arms at the STOP position.

#### Intermittent Operation

NFEL0057S0103

The wiper motor operates the wiper arms one time at low speed at a set interval of approximately 3 to 13 seconds. This feature is controlled by the wiper amplifier (INT SW) combined with wiper switch.

When the wiper switch is placed in the INT position, ground is supplied to wiper amplifier.

The desired interval time is input to wiper amplifier (INT VR) from wiper volume switch combined with wiper switch.

Then intermittent ground is supplied

- to wiper motor terminal 3
- from terminal 14 of wiper switch
- through wiper amplifier (OUTPUT).

The wiper motor operates at low speed at the desired interval.

### WASHER OPERATION

NFEL0057S02

With the ignition switch in the ON or START position, power is supplied

- through 20A fuse [No. 25, located in the fuse block (J/B)]
- to washer motor terminal 1.

When the lever is pulled to the WASH position, ground is supplied

- to washer motor terminal 2, and
- from terminal 18 of the wiper switch
- through terminal 17 of the wiper switch, and

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

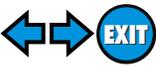
BT

HA

SC

EL

IDX



## FRONT WIPER AND WASHER

*System Description (Cont'd)*

---

- through body grounds E11, E22 and E53.

With power and ground supplied, the washer motor operates.

When the lever is pulled to the WASH position for one second or more, the wiper motor operates at low speed for approximately 3 seconds to clean windshield. This feature is controlled by the wiper amplifier in the same manner as the intermittent operation.

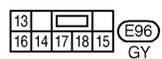
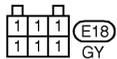
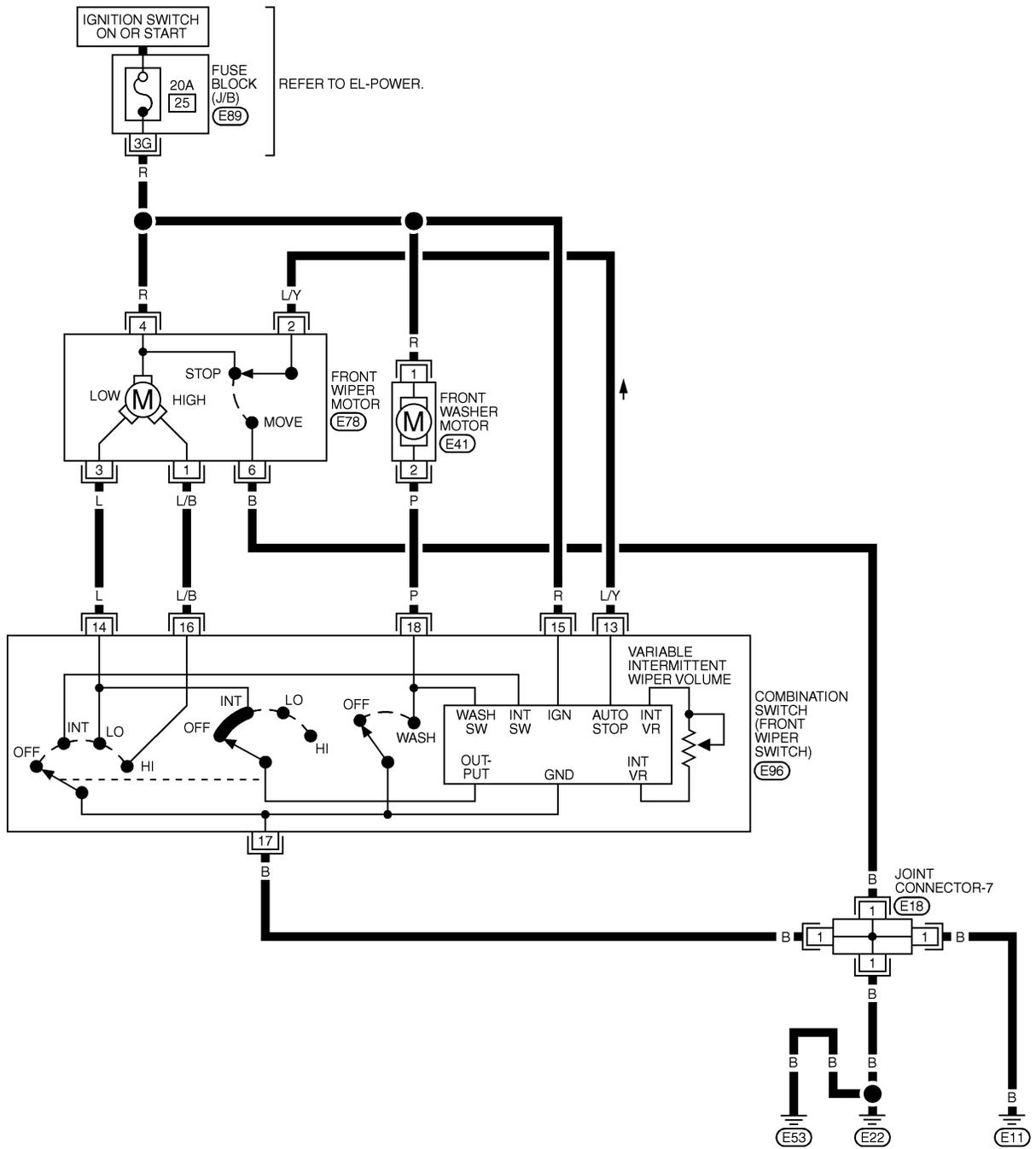
# FRONT WIPER AND WASHER

Wiring Diagram — WIPER —

## Wiring Diagram — WIPER —

NFEL0058

EL-WIPER-01



REFER TO THE FOLLOWING.  
 (E89) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

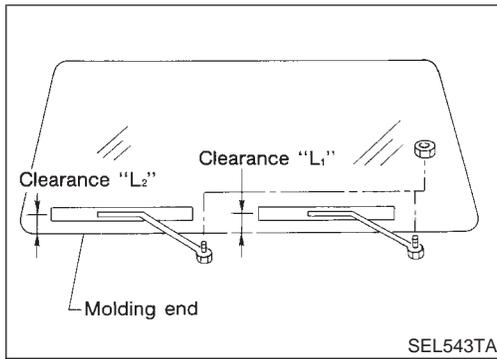
SC

EL

IDX

# FRONT WIPER AND WASHER

## Removal and Installation



## Removal and Installation

NFEL0060

### WIPER ARMS

NFEL0060S01

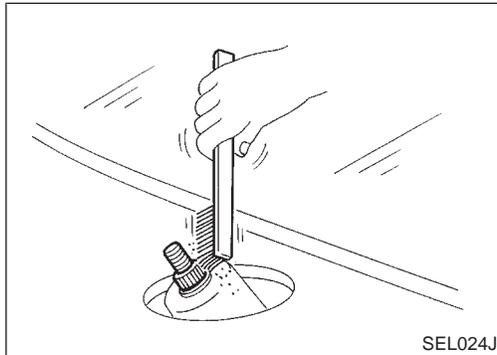
1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up and then set it down onto glass surface to set the blade center to clearance "L<sub>1</sub>" & "L<sub>2</sub>" immediately before tightening nut.
3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
4. Ensure that wiper blades stop within clearance "L<sub>1</sub>" & "L<sub>2</sub>".

**Clearance "L<sub>1</sub>": 48 - 64 mm (1.89 - 2.52 in)**

**Clearance "L<sub>2</sub>": 40 - 56 mm (1.57 - 2.20 in)**

- Tighten wiper arm nuts to specified torque.

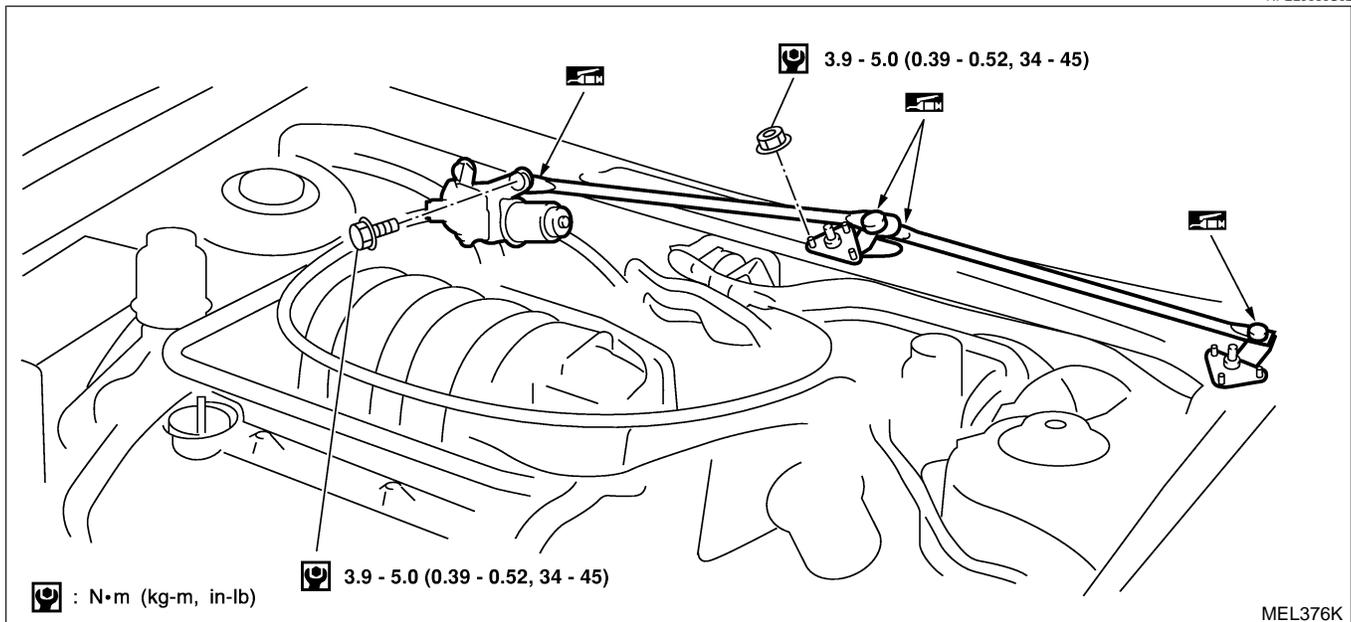
**Front wiper: 21 - 26 N·m (2.1 - 2.7 kg·m, 16 - 19 ft·lb)**



- Before reinstalling wiper arm, clean up the pivot area as illustrated. This will reduce possibility of wiper arm looseness.

### WIPER LINKAGE

NFEL0060S02



# FRONT WIPER AND WASHER

Removal and Installation (Cont'd)

## Removal

NFEL0060S0201

1. Remove 4 bolts that secure wiper motor.
2. Detach wiper motor from wiper linkage at ball joint.
3. Remove wiper linkage.

GI

**Be careful not to break ball joint rubber boot.**

MA

## Installation

NFEL0060S0202

- Grease ball joint portion before installation.
1. Installation is the reverse order of removal.

EM

LC

## Washer Nozzle Adjustment

NFEL0061

- Adjust washer nozzle with suitable tool as shown in the figure at left.

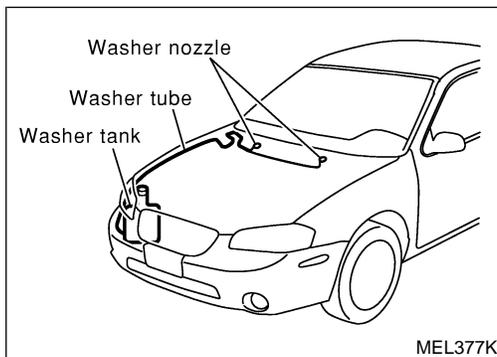
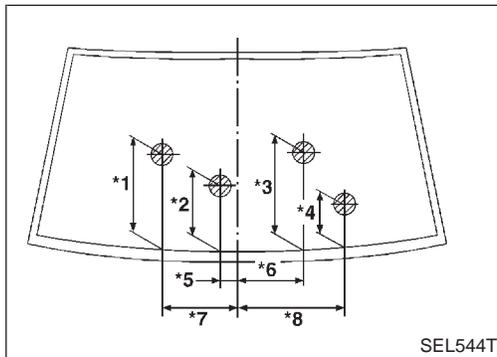
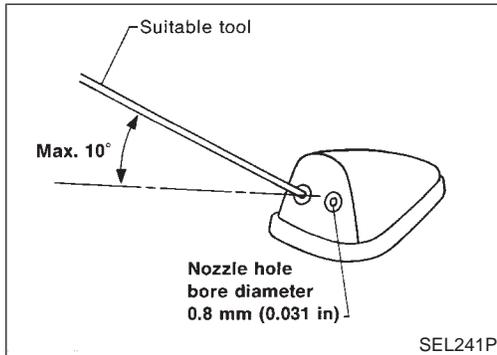
EC

**Adjustable range:  $\pm 10^\circ$**

FE

CL

MT



Unit: mm (in)

*1	341 (13.43)	*5	154 (6.06)
*2	286 (11.26)	*6	203 (7.99)
*3	285 (11.22)	*7	382 (15.04)
*4	152 (5.98)	*8	385 (15.16)

AT

AX

SU

\*: The diameters of these circles are less than 80 mm (3.15 in).

BR

## Washer Tube Layout

NFEL0062

ST

RS

BT

HA

SC

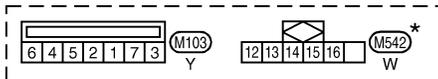
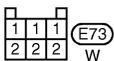
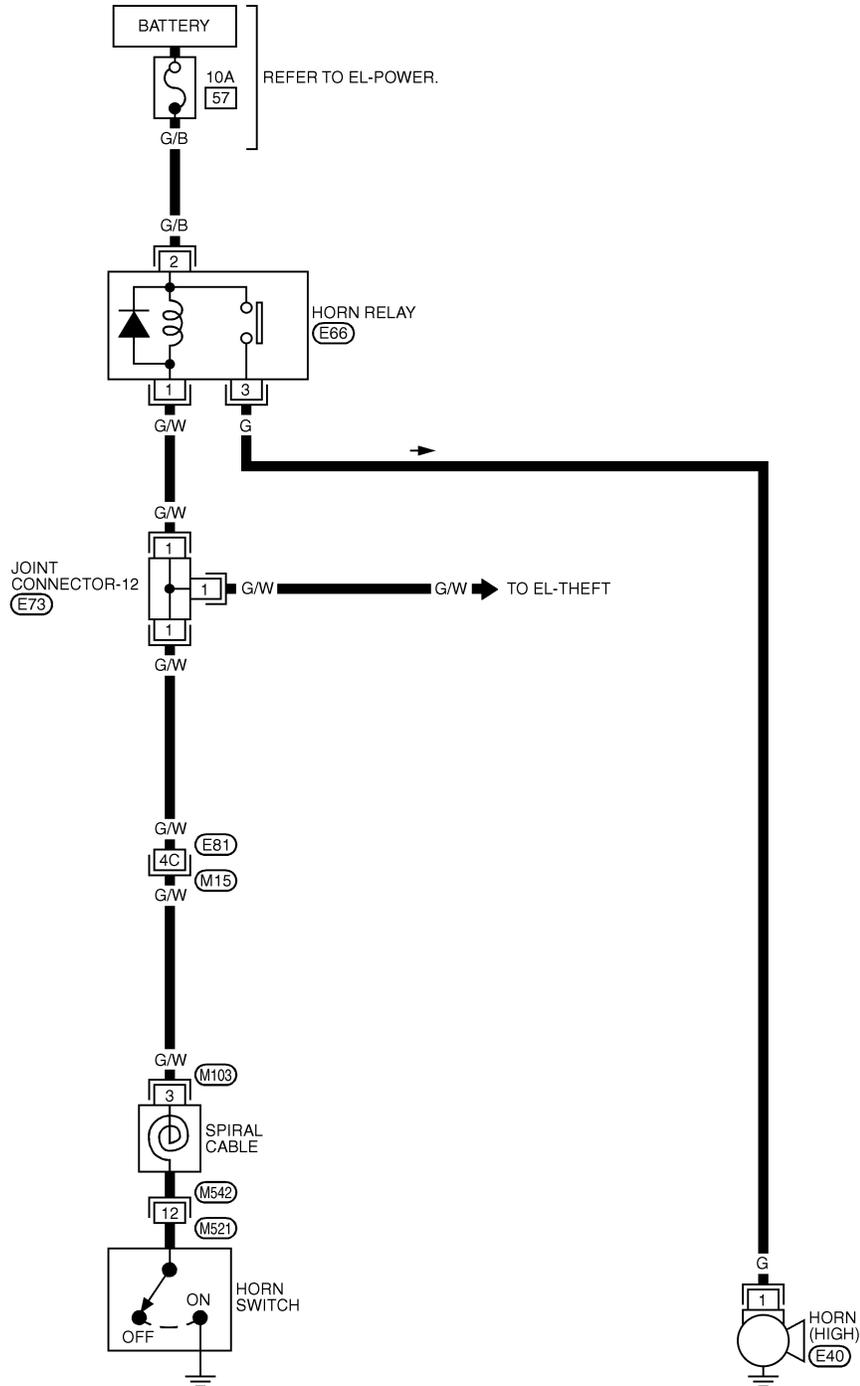
EL

IDX

## Wiring Diagram — HORN —

NFEL0071

EL-HORN-01



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL-SECTION.

REFER TO THE FOLLOWING.  
 (M15) . (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)

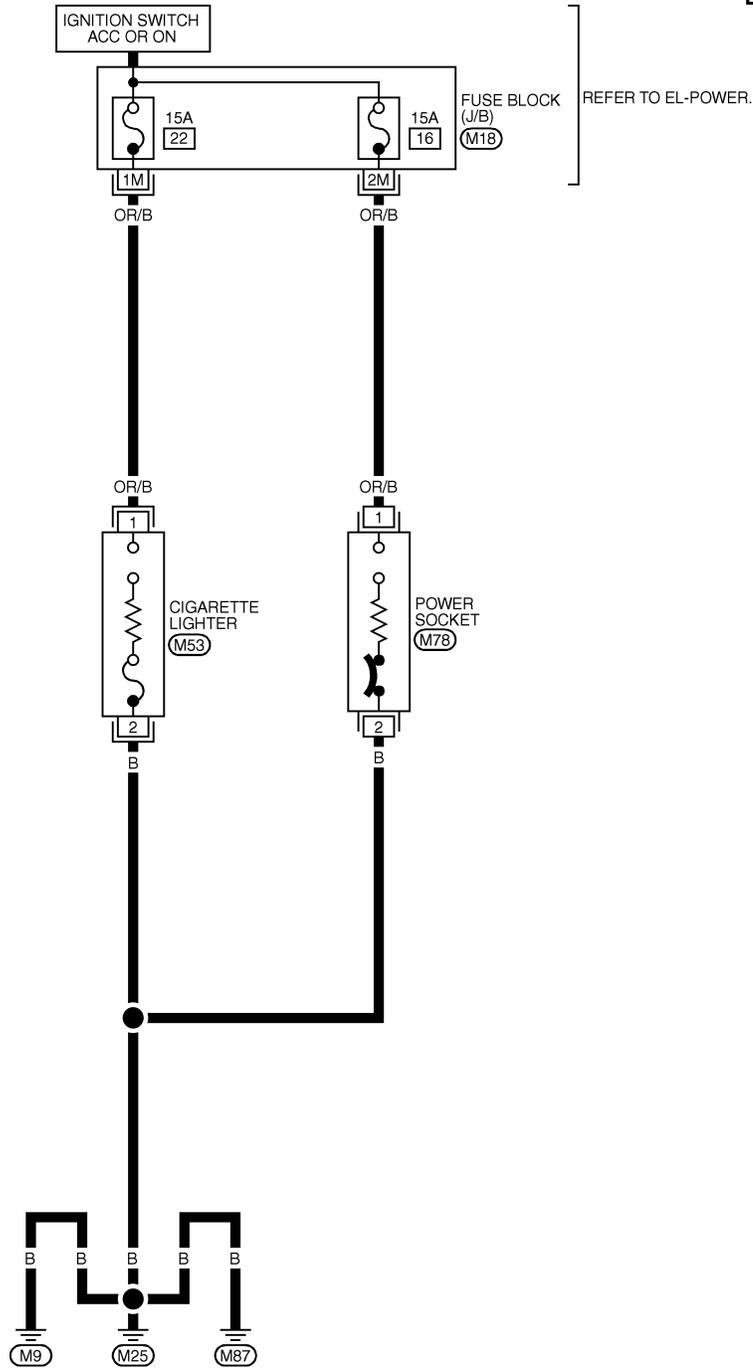
# CIGARETTE LIGHTER

Wiring Diagram — CIGAR —

## Wiring Diagram — CIGAR —

NFEL0156

EL-CIGAR-01



REFER TO EL-POWER.



REFER TO THE FOLLOWING.  
 (M18) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

**EL**

HA

IDX

MEL276K

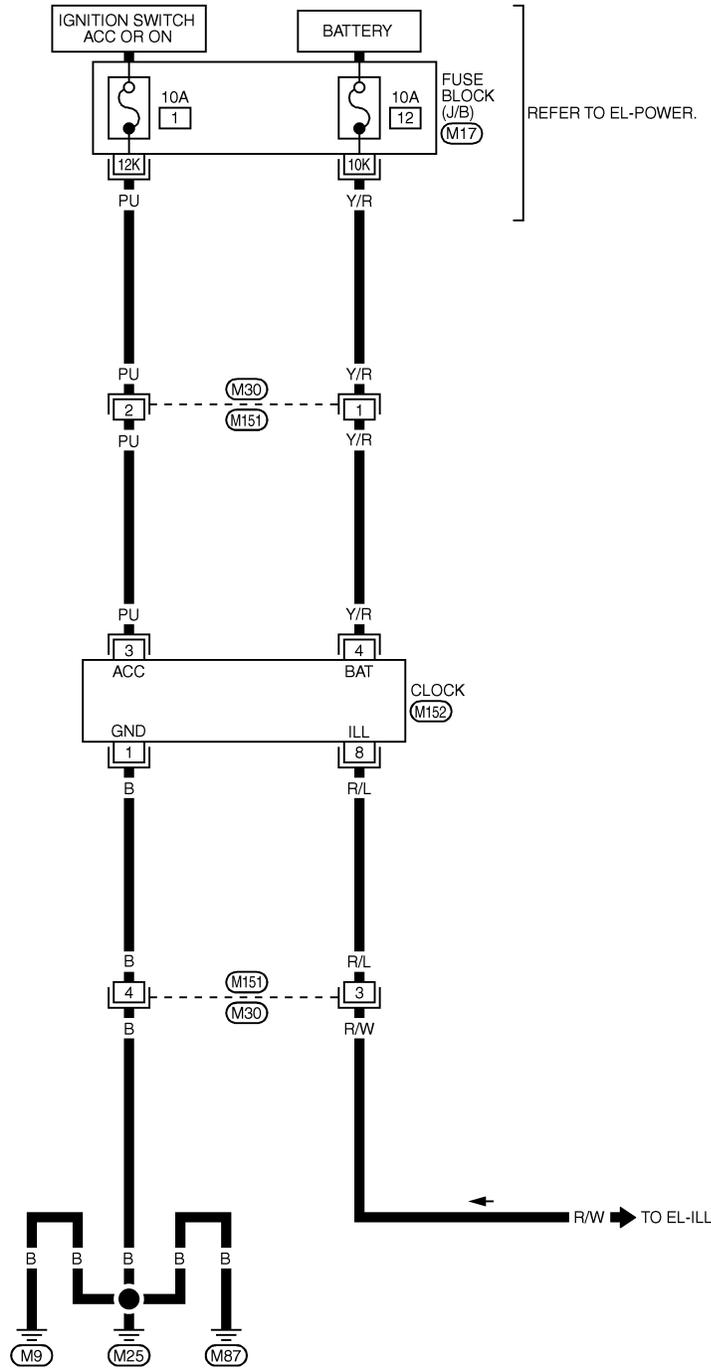
# CLOCK

Wiring Diagram — CLOCK —

## Wiring Diagram — CLOCK —

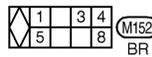
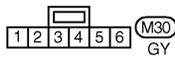
NFEL0166

EL-CLOCK-01



REFER TO EL-POWER.

R/W TO EL-ILL



REFER TO THE FOLLOWING.  
 (M17) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

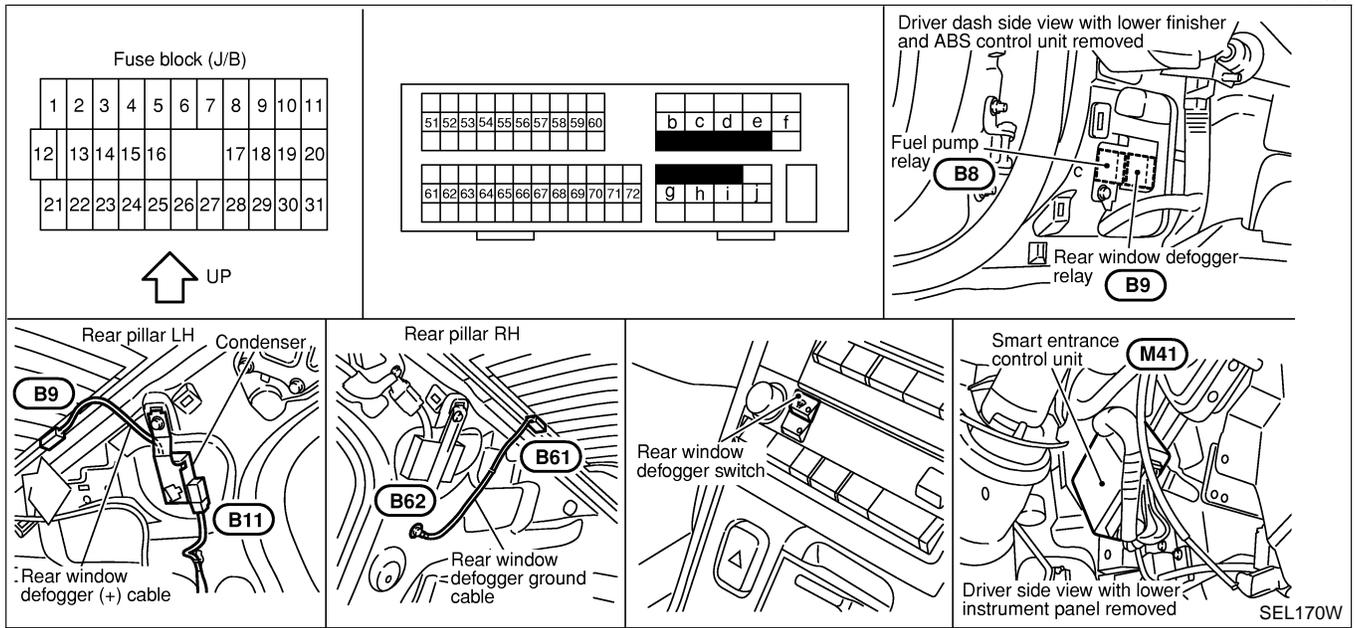
MEL277K

# REAR WINDOW DEFOGGER

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NFEL0072



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT

## System Description

NFEL0073

The rear window defogger system is controlled by the smart entrance control unit. The rear window defogger operates only for approximately 15 minutes. Power is supplied at all times

- to rear window defogger relay terminal 3
- through 20A fuse (No. 7, located in the fuse and fusible link box) and
- to rear window defogger relay terminal 6
- through 20A fuse (No. 4, located in the fuse and fusible link box).
- to smart entrance control unit terminal 10
- through 10A fuse (No. 13, located in the fuse and fusible link box).

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to the rear window defogger relay terminal 1 and
- to smart entrance control unit terminal 33.

Ground is supplied to terminal 32 (with auto A/C) or 17 (with manual A/C) of the rear defogger switch (built-in A/C control unit or A/C auto amp.) through body grounds M9, M25 and M87.

When the rear defogger switch is turned ON, ground is supplied

- through terminal 31 (with auto A/C) or 9 (with manual A/C) of the rear defogger switch
- to smart entrance control unit terminal 39.

Terminal 2 of the smart entrance control unit then supplies ground to the rear window defogger relay terminal 2.

With power and ground supplied, the rear window defogger relay is energized.

Power is supplied

- through terminals 5 and 7 of the rear window defogger relay
- to the rear window defogger.

The rear window defogger has an independent ground.

With power and ground supplied, the rear window defogger filaments heat and defog the rear window.

AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

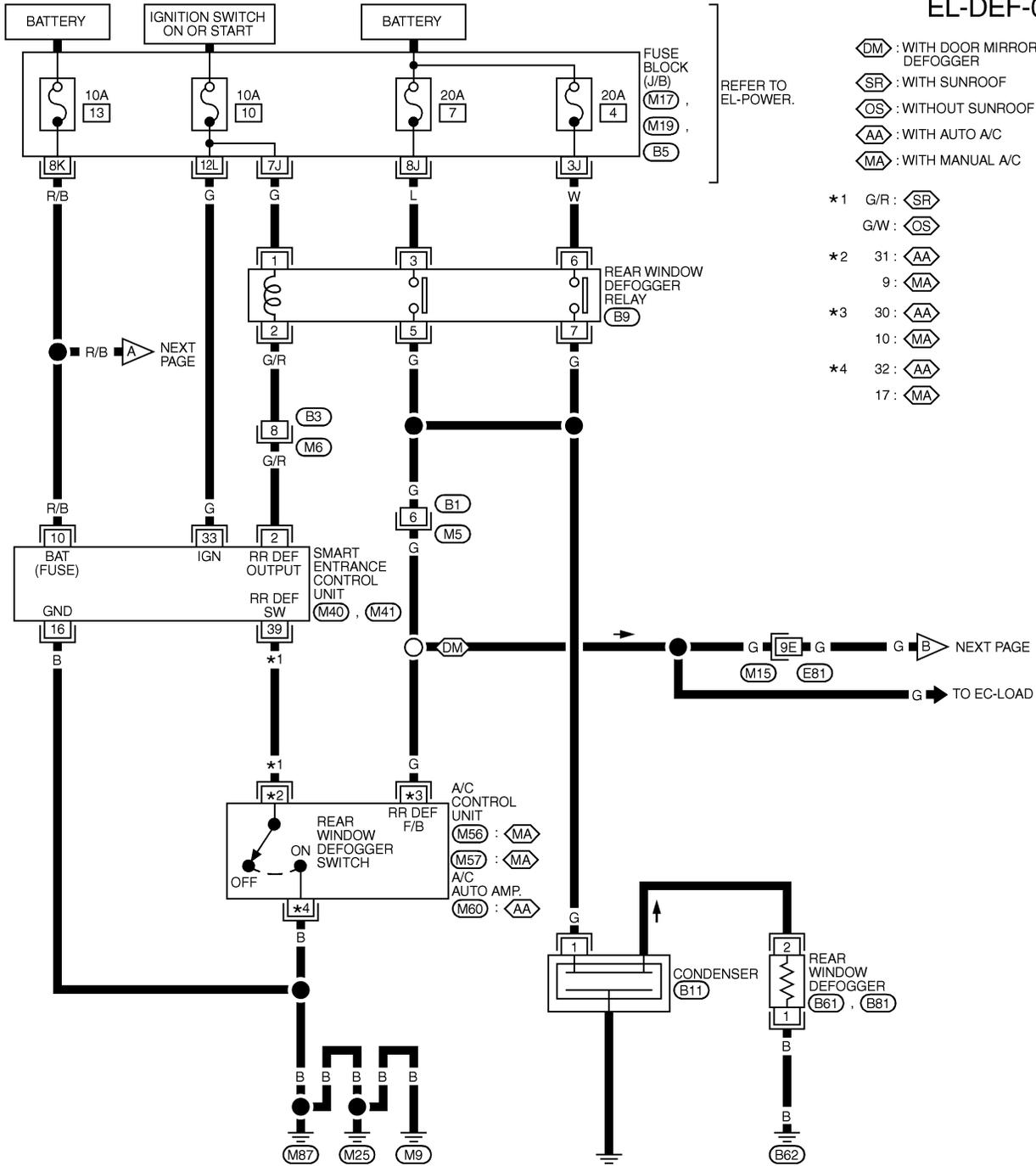
# REAR WINDOW DEFOGGER

Wiring Diagram — DEF —

## Wiring Diagram — DEF —

=NFEL0074

### EL-DEF-01



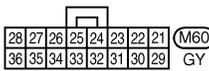
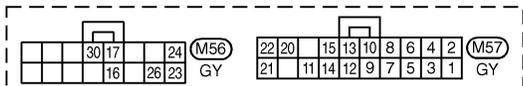
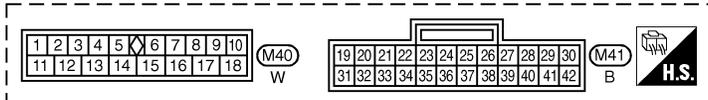
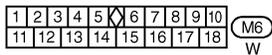
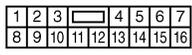
- ◊DM : WITH DOOR MIRROR DEFOGGER
- ◊SR : WITH SUNROOF
- ◊OS : WITHOUT SUNROOF
- ◊AA : WITH AUTO A/C
- ◊MA : WITH MANUAL A/C

- \*1 G/R : ◊SR
- G/W : ◊OS
- \*2 31 : ◊AA
- 9 : ◊MA
- \*3 30 : ◊AA
- 10 : ◊MA
- \*4 32 : ◊AA
- 17 : ◊MA

REFER TO EL-POWER.

NEXT PAGE

TO EC-LOAD



REFER TO THE FOLLOWING.

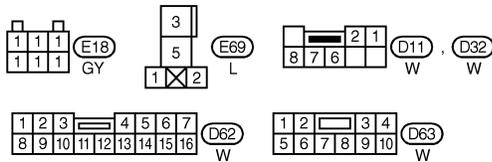
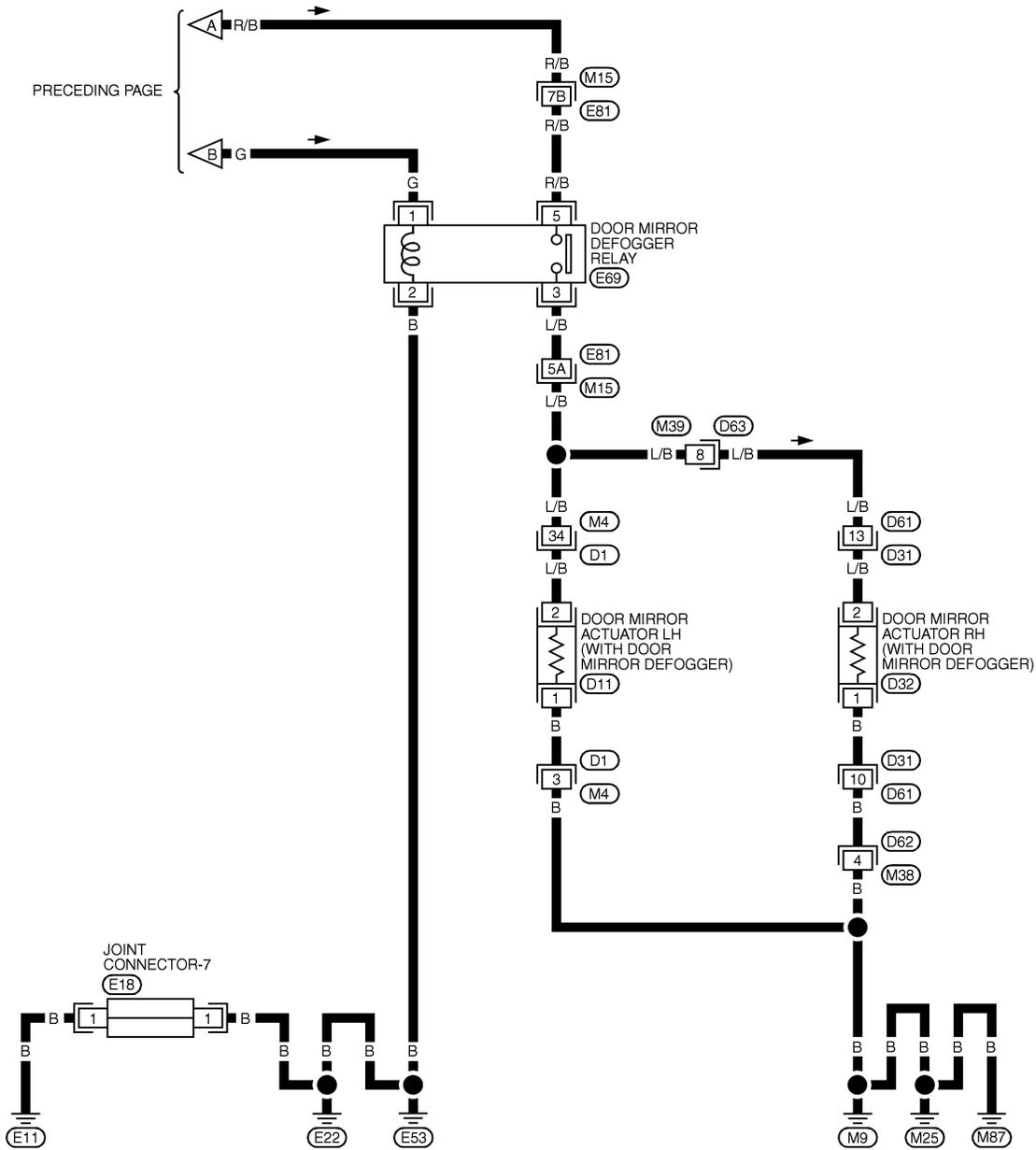
- ◊M15 -SUPER MULTIPLE JUNCTION (SMJ)
- ◊M17 , ◊M19 , ◊B5 -FUSE BLOCK-JUNCTION BOX (J/B)

\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL-SECTION.

# REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

EL-DEF-02



REFER TO THE FOLLOWING.  
 (M4) , (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M15) , (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (D31) , (D61) -SUPER  
 MULTIPLE JUNCTION (SMJ)

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

MEL279K

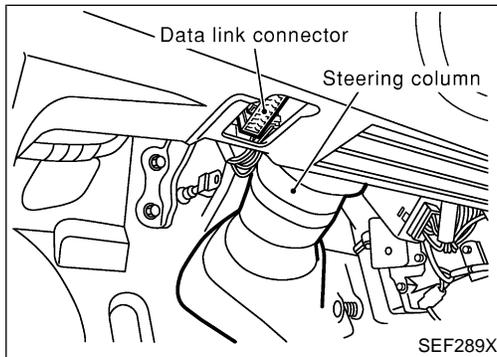
# REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

**SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND**

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
2	G/R	REAR WINDOW DEFOGGER RELAY	OFF → ON (IGNITION KEY IS IN "ON" POSITION)	0V → 12V
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
39	With sunroof: G/R Without sunroof: G/W	REAR WINDOW DEFOGGER SWITCH	OFF → ON	5V → 0V

SEL003X

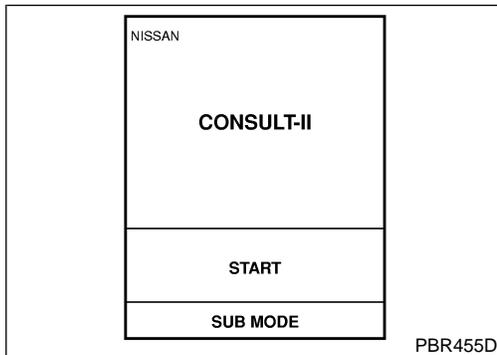


## CONSULT-II Inspection Procedure "REAR DEFOGGER"

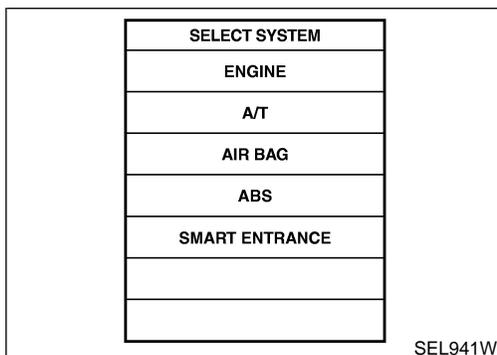
NFEL0218

NFEL0218S01

1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".

# REAR WINDOW DEFOGGER

CONSULT-II Inspection Procedure (Cont'd)

SELECT TEST ITEM
DOOR LOCK
REAR DEFOGGER
KEY WARN ALM
LIGHT WARN ALM
SEAT BELT ALM
INT LAMP

SEL023X

6. Touch "REAR DEFOGGER".

SELECT DIAG MODE
DATA MONITOR
ACTIVE TEST

SEL322W

7. Select diagnosis mode.  
"DATA MONITOR" and "ACTIVE TEST" are available.

## CONSULT-II Application Items

### "REAR DEFOGGER" Data Monitor

NFEL0219  
NFEL0219S01  
NFEL0219S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
REAR DEF SW	Indicates [ON/OFF] condition of rear window defogger switch.

### Active Test

NFEL0219S0102

Test Item	Description
REAR DEFOGGER	This test is able to check rear window defogger operation. Rear window defogger activates when "ON" on CONSULT-II screen is touched.

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

# REAR WINDOW DEFOGGER

Trouble Diagnoses

## Trouble Diagnoses DIAGNOSTIC PROCEDURE

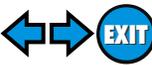
**SYMPTOM:** Rear window defogger does not activate, or does not go off after activating.

NFEL0075

NFEL0075S01

<b>1</b>	<b>CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL</b>
<p> <b>With CONSULT-II</b> Select "ACTIVE TEST" in "REAR DEFOGGER" with CONSULT-II.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p><b>ACTIVE TEST</b></p> <p>REAR DEFOGGER    OFF</p> <p style="background-color: black; color: white; padding: 2px;">ON</p> </div> <div style="text-align: center;"> <p><b>Rear window defogger and rear window defogger switch indicator should operate when the "ON" button on the CONSULT-II screen is touched.</b></p> </div> </div> <p style="text-align: right;">SEL335W</p>	
<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Turn ignition switch to ON position.</li> <li>2. Check voltage between smart entrance control unit harness terminal 2 and ground.</li> </ol> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M40)</p> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p><b>Voltage [V]:</b></p> <p>Rear window defogger switch is "OFF". Approx. 12</p> <p>Rear window defogger switch is "ON". 0</p> </div> </div> <p style="text-align: right;">SEL335W</p>	
<b>OK or NG</b>	
OK	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Rear window defogger relay (Refer to EL-159.)</li> <li>● Rear window defogger circuit</li> <li>● Rear window defogger filament (Refer to EL-160.)</li> </ul>
NG	GO TO 2.

# REAR WINDOW DEFOGGER



Trouble Diagnoses (Cont'd)

2	CHECK DEFOGGER RELAY COIL SIDE CIRCUIT	
	<p>1. Disconnect control unit connector.                      2. Turn ignition switch to ON position.                      3. Check voltage between smart entrance control unit terminal 2 and ground.</p> <div style="display: flex; align-items: center; justify-content: space-around;"> <div data-bbox="272 325 527 577"> <p>Smart entrance control unit connector (M40)</p> </div> <div data-bbox="597 336 673 535"> <p>H.S. DISCONNECT</p> </div> <div data-bbox="889 441 1242 472"> <p><b>Battery voltage should exist.</b></p> </div> </div> <p style="text-align: right;">SEL336W</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶	GO TO 3.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in the fuse block (J/B)]</li> <li>● Rear window defogger relay</li> <li>● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay</li> <li>● Harness for open or short between rear window defogger relay and smart entrance control unit</li> </ul>

GI  
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EL  
IDX

# REAR WINDOW DEFOGGER

Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL</b>						
<p> <b>With CONSULT-II</b> Select "REAR DEF SW" in "DATA MONITOR" mode with CONSULT-II.</p>							
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>REAR DEF SW</td><td>ON</td></tr> </table>		DATA MONITOR		MONITOR		REAR DEF SW	ON
DATA MONITOR							
MONITOR							
REAR DEF SW	ON						
<p>When rear window defogger switch is pushed: <b>REAR DEF SW should be ON.</b></p>							
SEL352W							
<p> <b>Without CONSULT-II</b> Check continuity between smart entrance control unit terminal 39 and ground.</p>							
<p><b>Continuity:</b> Rear window defogger switch is pushed. Continuity should exist. Rear window defogger switch is released. Continuity should not exist.</p>							
SEL002X							
<b>OK or NG</b>							
OK	▶ GO TO 4.						
NG	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Rear window defogger switch (Refer to EL-159.)</li> <li>● Harness for open or short between smart entrance control unit and rear window defogger switch</li> <li>● Rear window defogger switch ground circuit</li> </ul>						

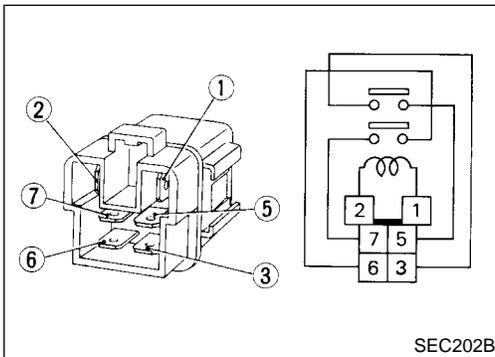
<b>4</b>	<b>CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL</b>																				
Check voltage between smart entrance control unit terminals 10, 33 and ground.																					
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">Terminals</th> <th colspan="3">Ignition switch position</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>OFF</th> <th>ACC</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>Ground</td> <td>Battery voltage</td> <td>Battery voltage</td> <td>Battery voltage</td> </tr> <tr> <td>33</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table>		Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	10	Ground	Battery voltage	Battery voltage	Battery voltage	33	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position																			
(+)	(-)	OFF	ACC	ON																	
10	Ground	Battery voltage	Battery voltage	Battery voltage																	
33	Ground	0V	0V	Battery voltage																	
SEL338W																					
<b>OK or NG</b>																					
OK	▶ GO TO 5.																				
NG	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10 or No. 13, located in the fuse block (J/B)]</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>																				

# REAR WINDOW DEFOGGER

Trouble Diagnoses (Cont'd)

<b>5</b>	<b>CHECK CONTROL UNIT GROUND CIRCUIT</b>	
<p>Check continuity between smart entrance control unit terminal 16 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M40)</p> </div> <div style="text-align: center;"> <p>H.S. DISCONNECT</p> </div> <div style="text-align: center;"> <p><b>Continuity should exist.</b></p> </div> </div>		
SEL339W		
Yes	▶	Replace smart entrance control unit.
No	▶	Repair harness or connectors.

GI  
MA  
EM  
LC  
EC  
FE



## Electrical Components Inspection REAR WINDOW DEFOGGER RELAY

NFEL0076

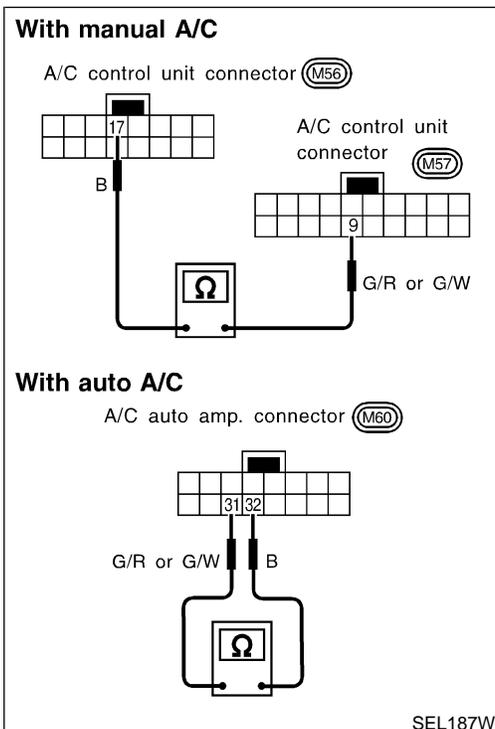
NFEL0076S01

Check continuity between terminals 3 and 5, 6 and 7.

Condition	Continuity
12V direct current supply between terminals 1 and 2	Yes
No current supply	No

CL  
MT

AT  
AX  
SU  
BR



## REAR WINDOW DEFOGGER SWITCH

NFEL0076S02

Check continuity between terminals when rear window defogger switch is pushed and released.

Terminals	Condition	Continuity
9 - 17 (with manual A/C) 31 - 32 (with auto A/C)	Rear window defogger switch is pushed.	Yes
	Rear window defogger switch is released.	No

ST  
RS  
BT  
HA

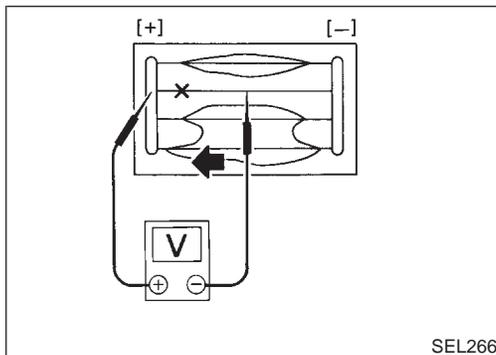
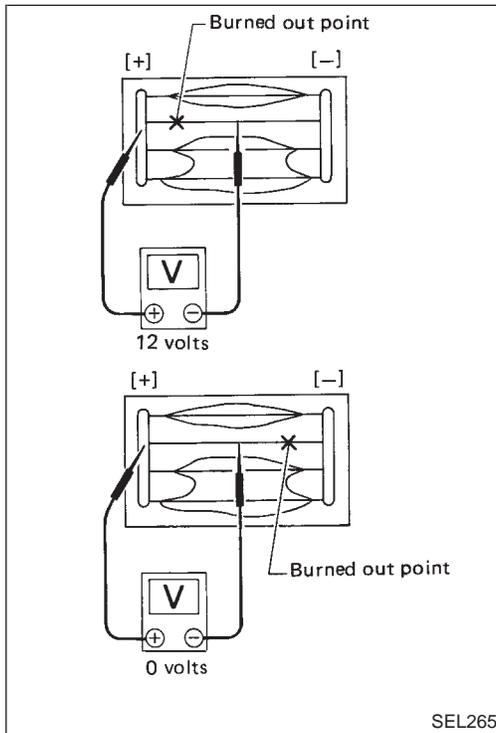
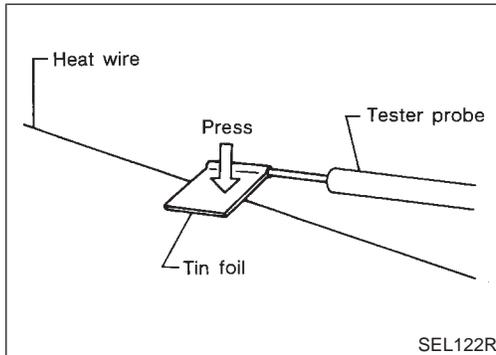
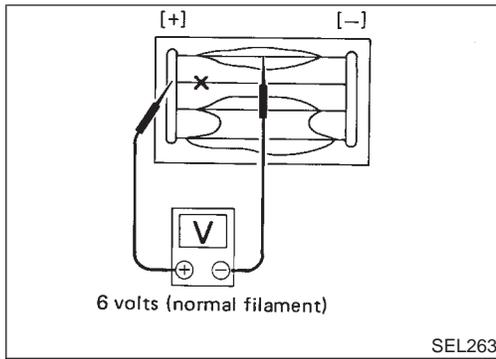
SC

EL

IDX

# REAR WINDOW DEFOGGER

## Filament Check



## Filament Check

NFEL0077

1. Attach probe circuit tester (in volt range) to middle portion of each filament.

- When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finger.

2. If a filament is burned out, circuit tester registers 0 or 12 volts.

3. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.

## Filament Repair

### REPAIR EQUIPMENT

NFEL0078

NFEL0078S01

- 1) Conductive silver composition (Dupont No. 4817 or equivalent)
- 2) Ruler 30 cm (11.8 in) long
- 3) Drawing pen
- 4) Heat gun
- 5) Alcohol
- 6) Cloth

GI

MA

EM

LC

### REPAIRING PROCEDURE

NFEL0078S02

1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.

EC

FE

#### Shake silver composition container before use.

3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.

CL

MT

4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.

AT

#### Do not touch repaired area while test is being conducted.

AX

SU

BR

5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet. If a heat gun is not available, let the repaired area dry for 24 hours.

ST

RS

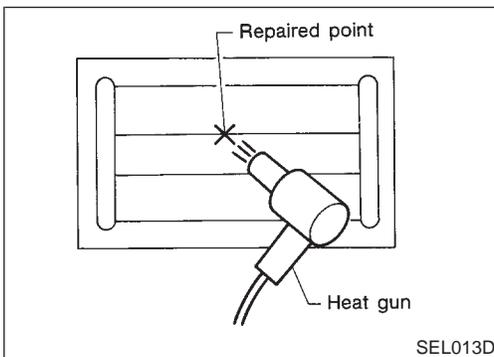
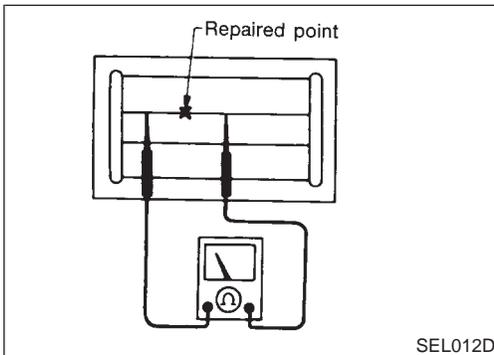
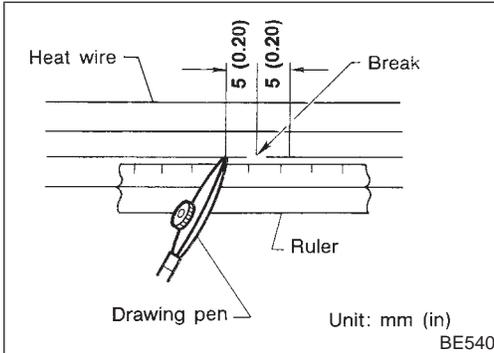
BT

HA

SC

EL

IDX



## System Description

NFEL0079

NFEL0079S01

### BASE SYSTEM

Refer to Owner's Manual for audio system operating instructions.

Power is supplied at all times

- through 15A fuse [No. 56, located in the fuse block (J/B)]
- to audio unit terminal 6, and
- to CD player terminal 24 (with 4 speakers).

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to audio unit terminal 10, and
- CD player terminal 21 (with 4 speakers).

Ground is supplied through the case of the audio unit.

Audio signals are supplied

- through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16
- to terminals 1 and 2 of front door speaker LH and RH
- to terminals 1 and 2 of rear door speaker LH and RH
- to terminals 1 and 2 of tweeter LH and RH (with 6 speakers).

### BOSE SYSTEM

Refer to Owner's Manual for audio system operating instructions.

Power is supplied at all times

- through 15A fuse [No. 56, located in the fuse block (J/B)]
- to speaker amp. terminal 27, and
- to audio unit terminal 6.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to audio unit terminal 10.

Ground is supplied through the case of the audio unit.

Ground is supplied

- to speaker amp. terminal 40, and
- to woofer terminal 47
- through body grounds B106 and B127.

Audio signals are supplied

- through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16
- to speaker amp. terminals 20, 21, 22, 23, 25, 33, 34, 35 and 36.

Audio signals are amplified by the speaker amp.

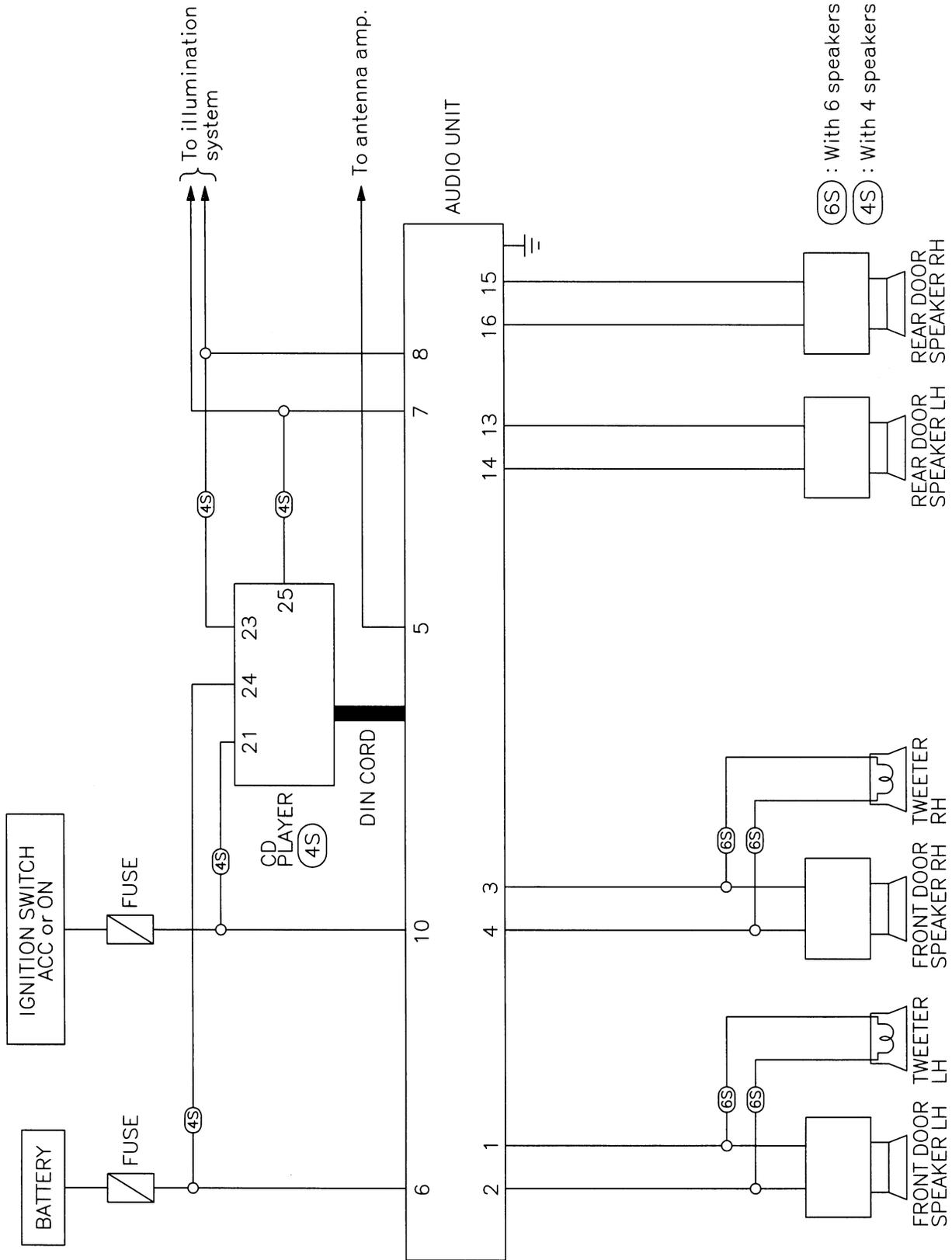
The amplified audio signals are supplied

- through speaker amp. terminals 17, 18, 24, 28, 29, 30, 31, 37, 41 and 42
- to terminals 1 and 2 of the front door speaker LH and RH
- to terminals 1 and 2 of the tweeter LH and RH
- to terminals 1 and 2 of the rear speaker LH and RH
- to terminals 43 and 44 of the woofer.

NFEL0079S02

Schematic

BASE SYSTEM



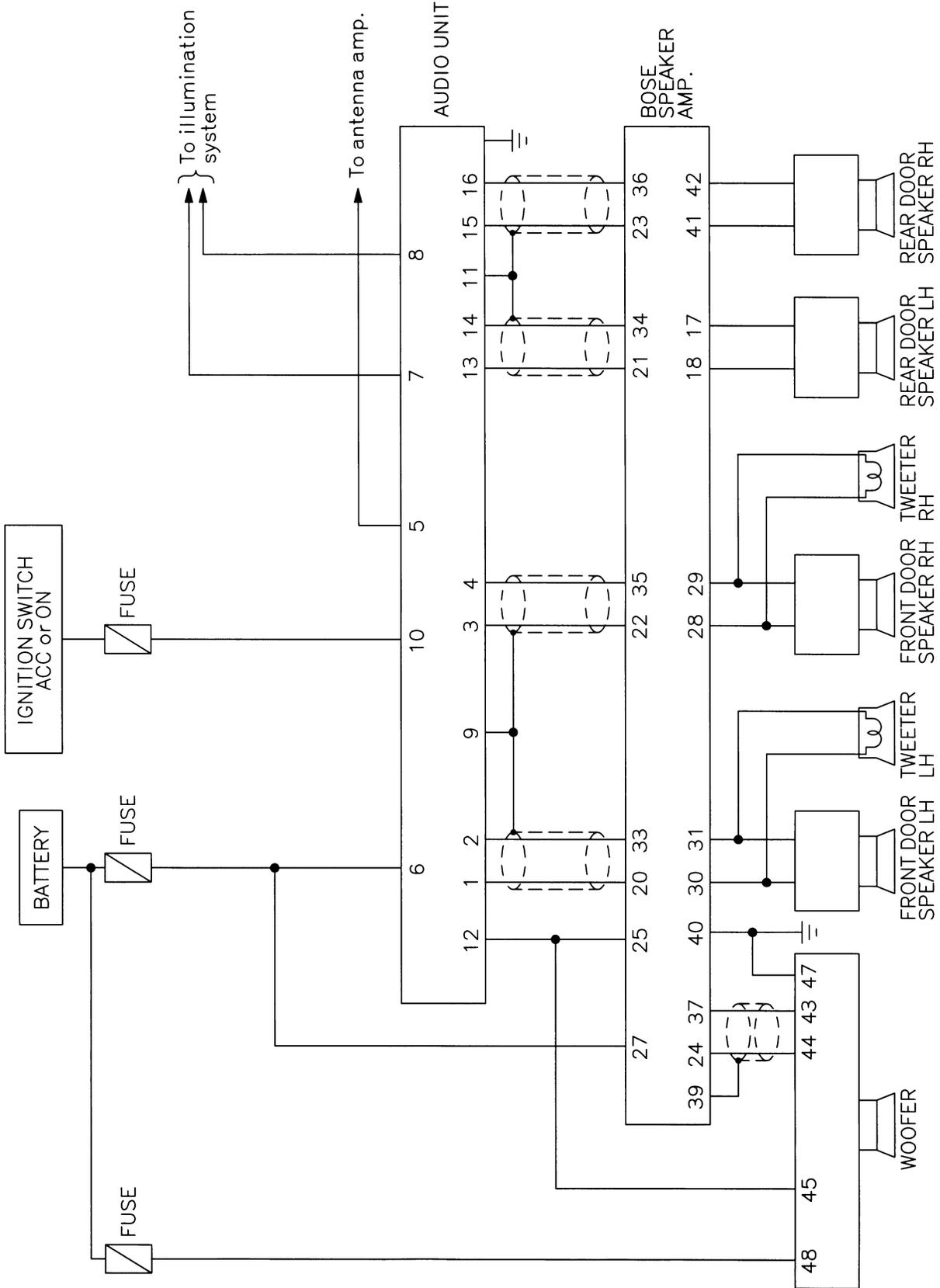
- GI
- MA
- EM
- LC
- EC
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- MT
- AT
- AX
- SU
- BR
- ST
- RS
- BT
- HA
- SC
- EL**
- IDX

# AUDIO

Schematic (Cont'd)

## BOSE SYSTEM

NFEL0167S02



MEL284K

## Wiring Diagram — AUDIO —

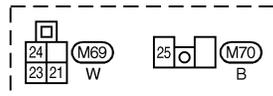
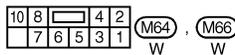
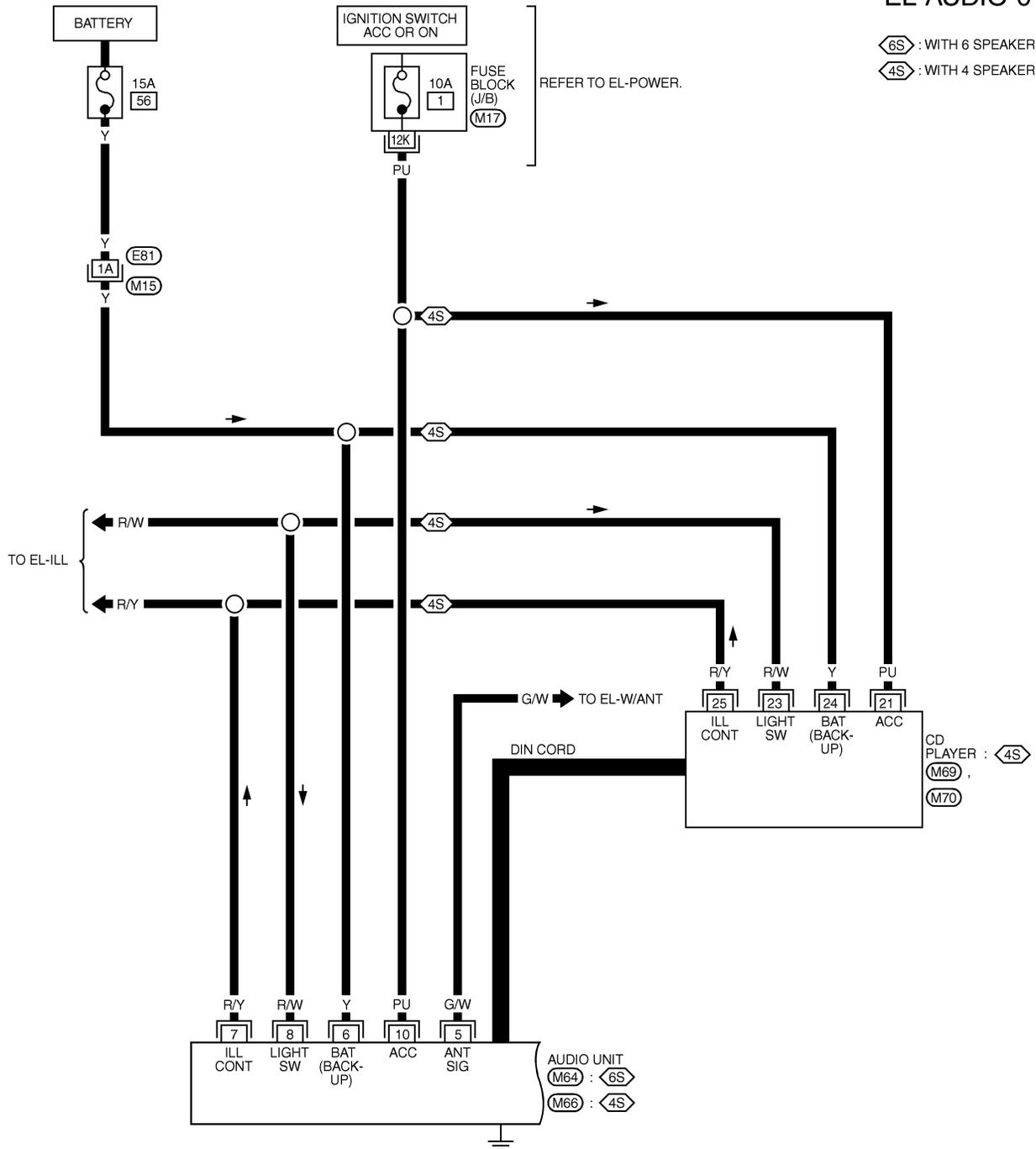
NFEL0081

NFEL0081S01

### BASE SYSTEM

### EL-AUDIO-01

⬡6S : WITH 6 SPEAKERS  
⬡4S : WITH 4 SPEAKERS



REFER TO THE FOLLOWING.  
 (M15) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

GI  
MA  
EM  
LC  
EC  
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BR  
ST  
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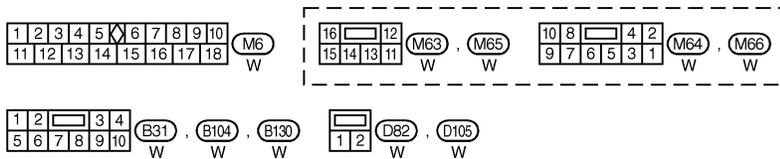
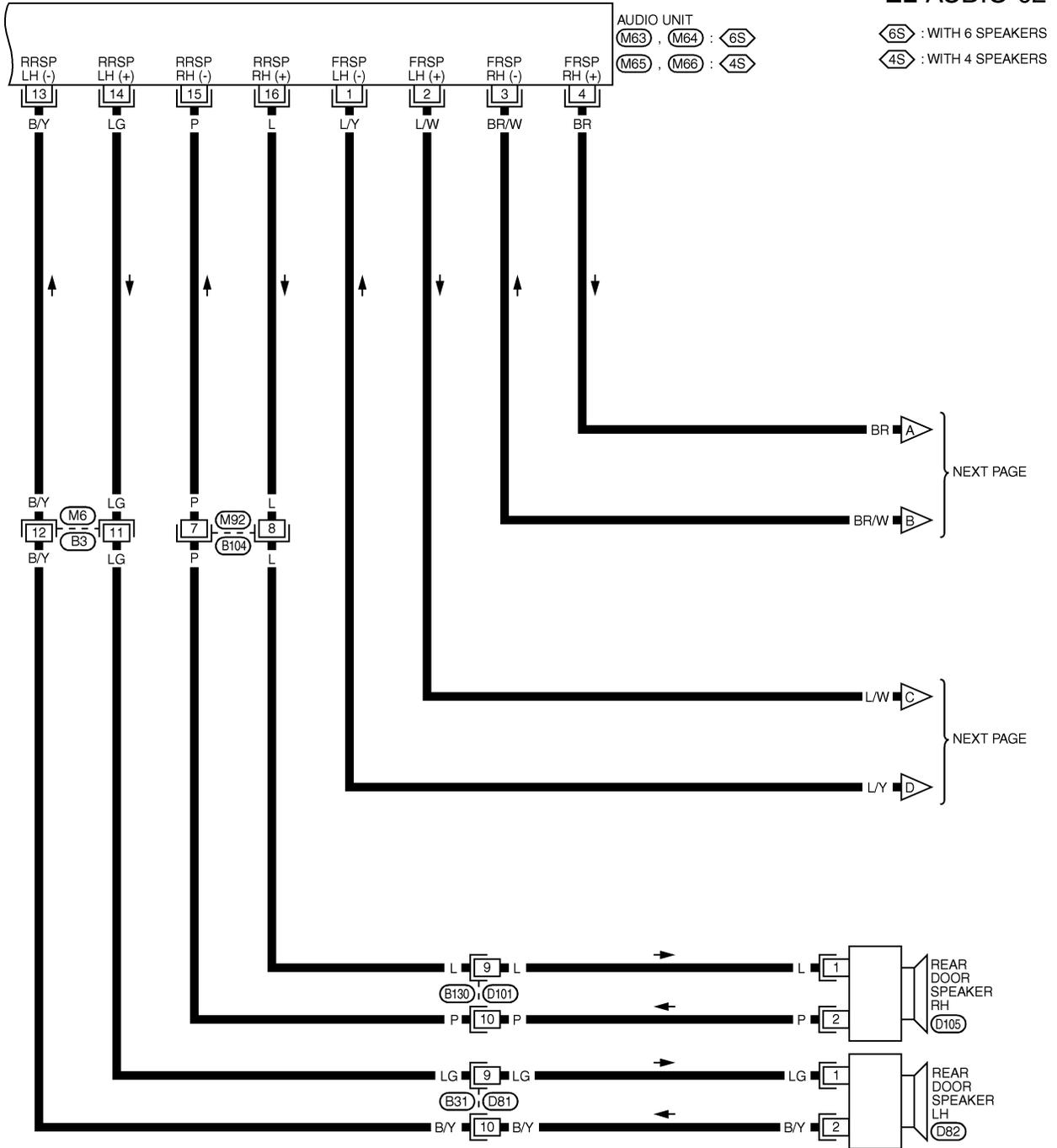
EL

IDX

# AUDIO

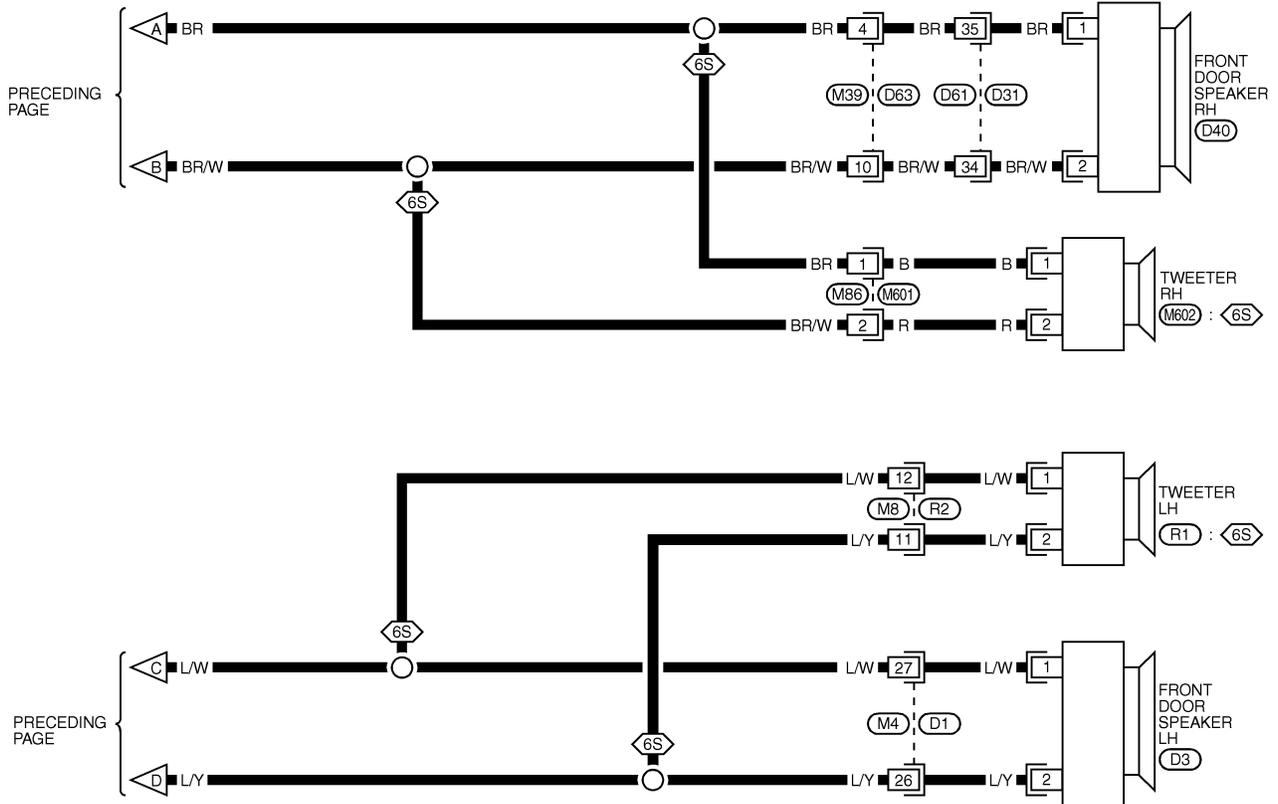
Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-02

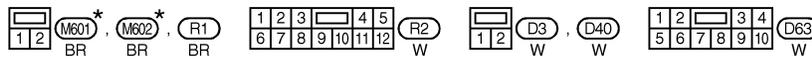


## EL-AUDIO-03

⬡6S⬢ : WITH 6 SPEAKERS



PRECEDING PAGE



REFER TO THE FOLLOWING.  
 (D1), (D31) -SUPER  
 MULTIPLE JUNCTION (SMJ)

\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

MEL724L

GI  
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 EM  
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**EL**  
 IDX

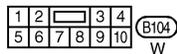
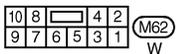
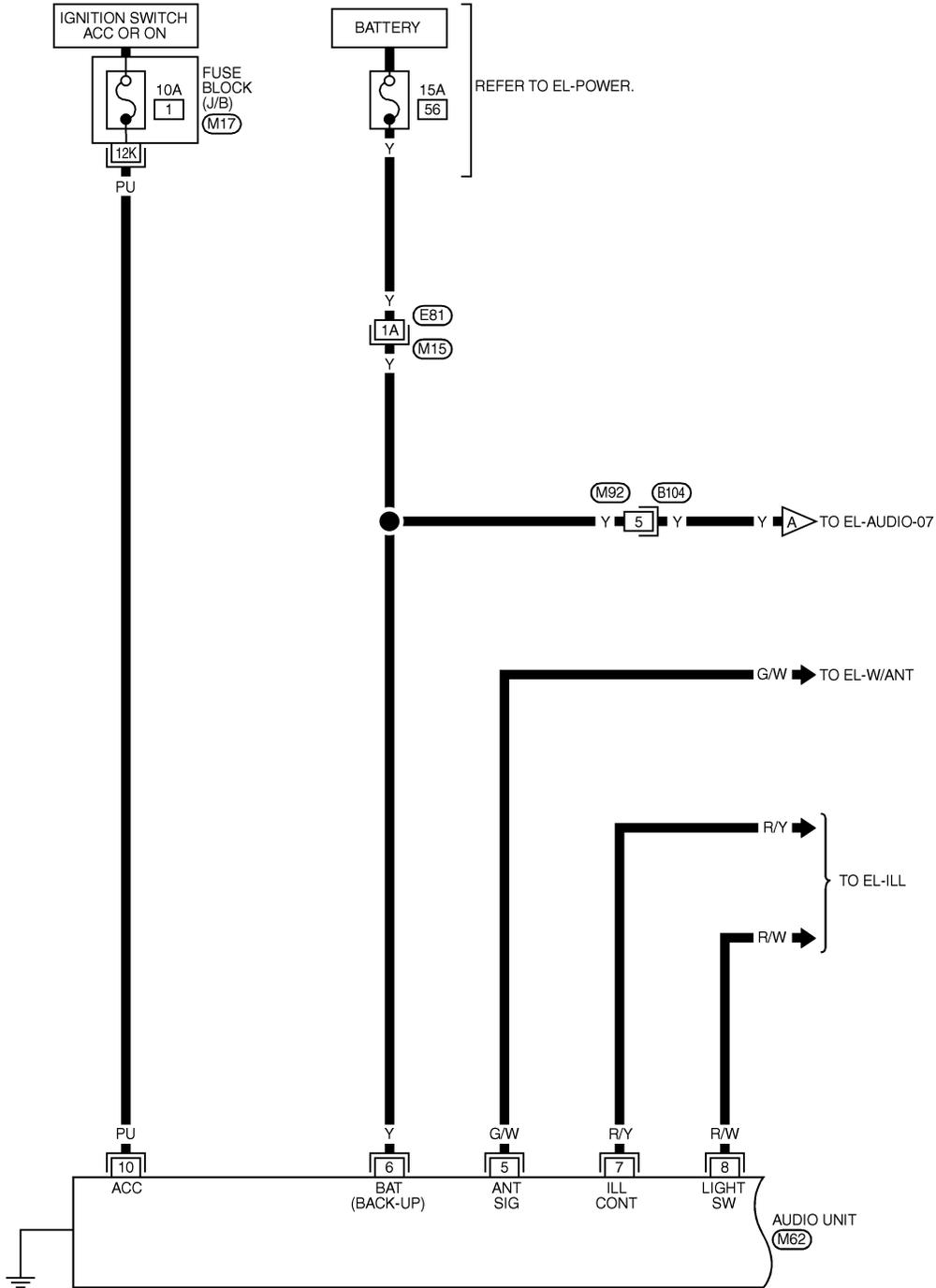
# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## BOSE SYSTEM

NFEL0081S02

### EL-AUDIO-04



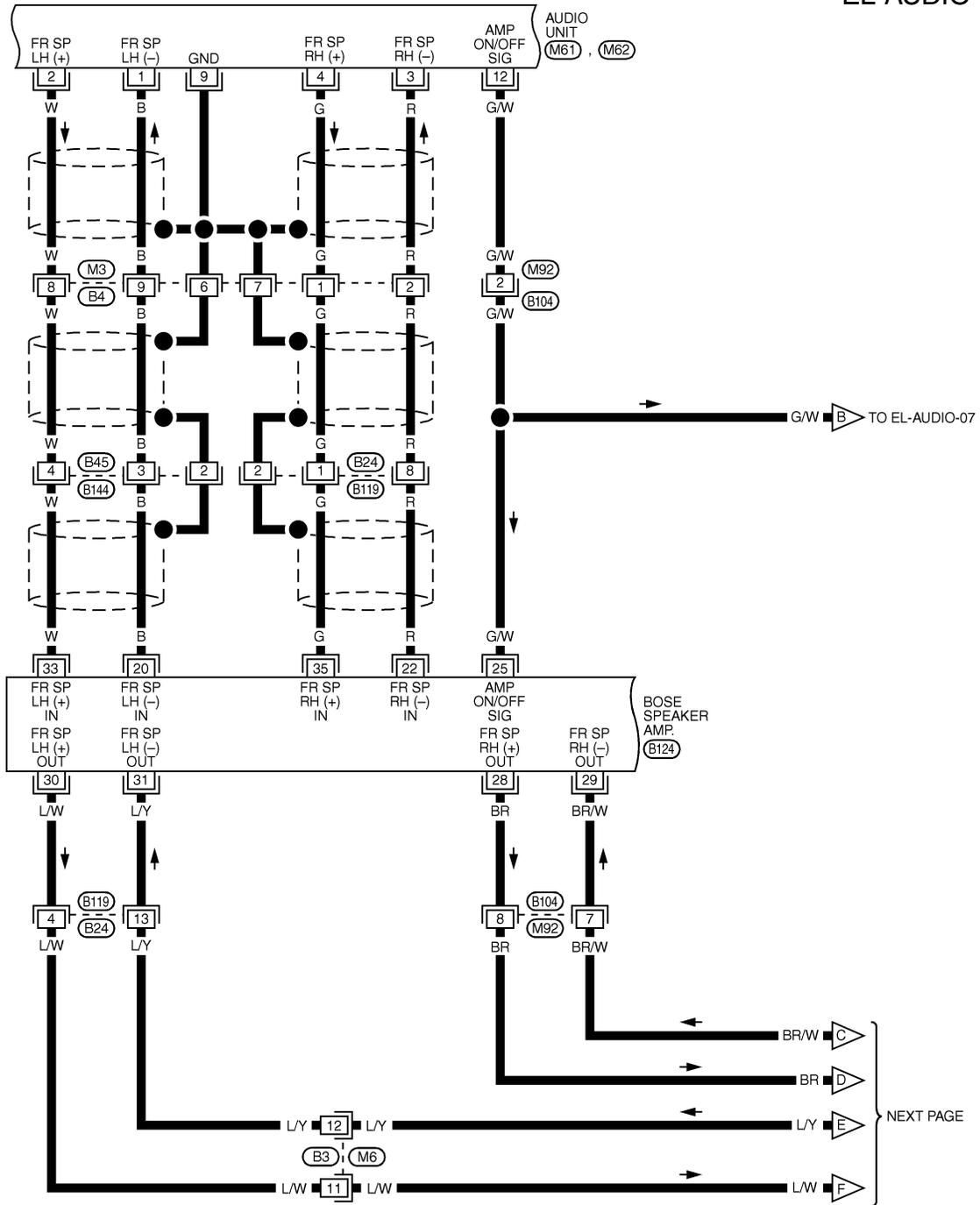
REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

MEL285K

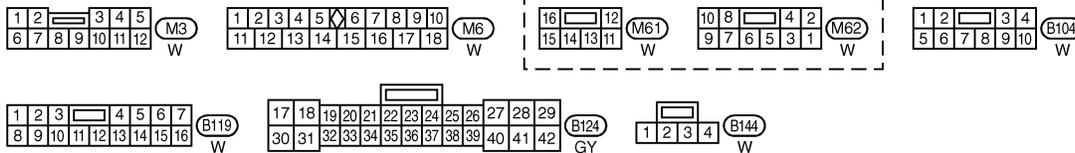
# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-05



GI  
MA  
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SC



NEXT PAGE

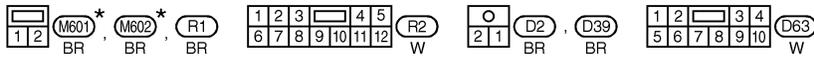
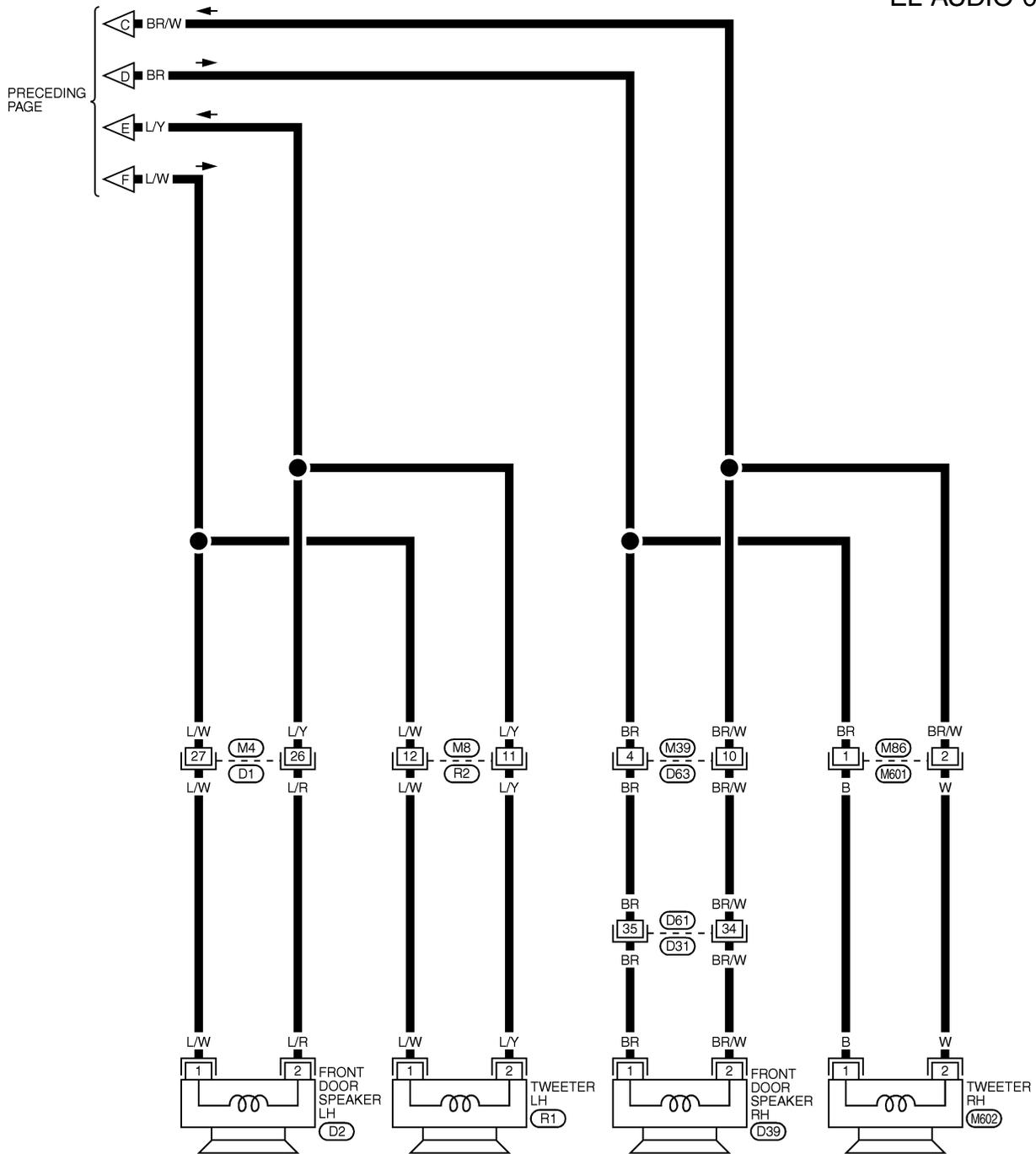
EL  
IDX

MEL286K

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-06



REFER TO THE FOLLOWING.  
 (D1), (D31) -SUPER  
 MULTIPLE JUNCTION (SMJ)

\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

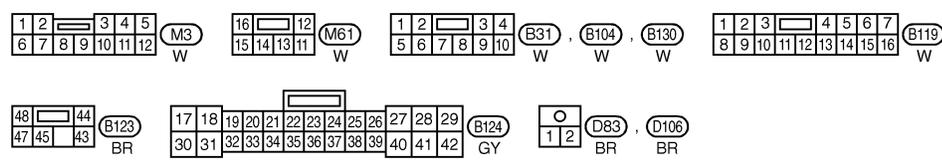
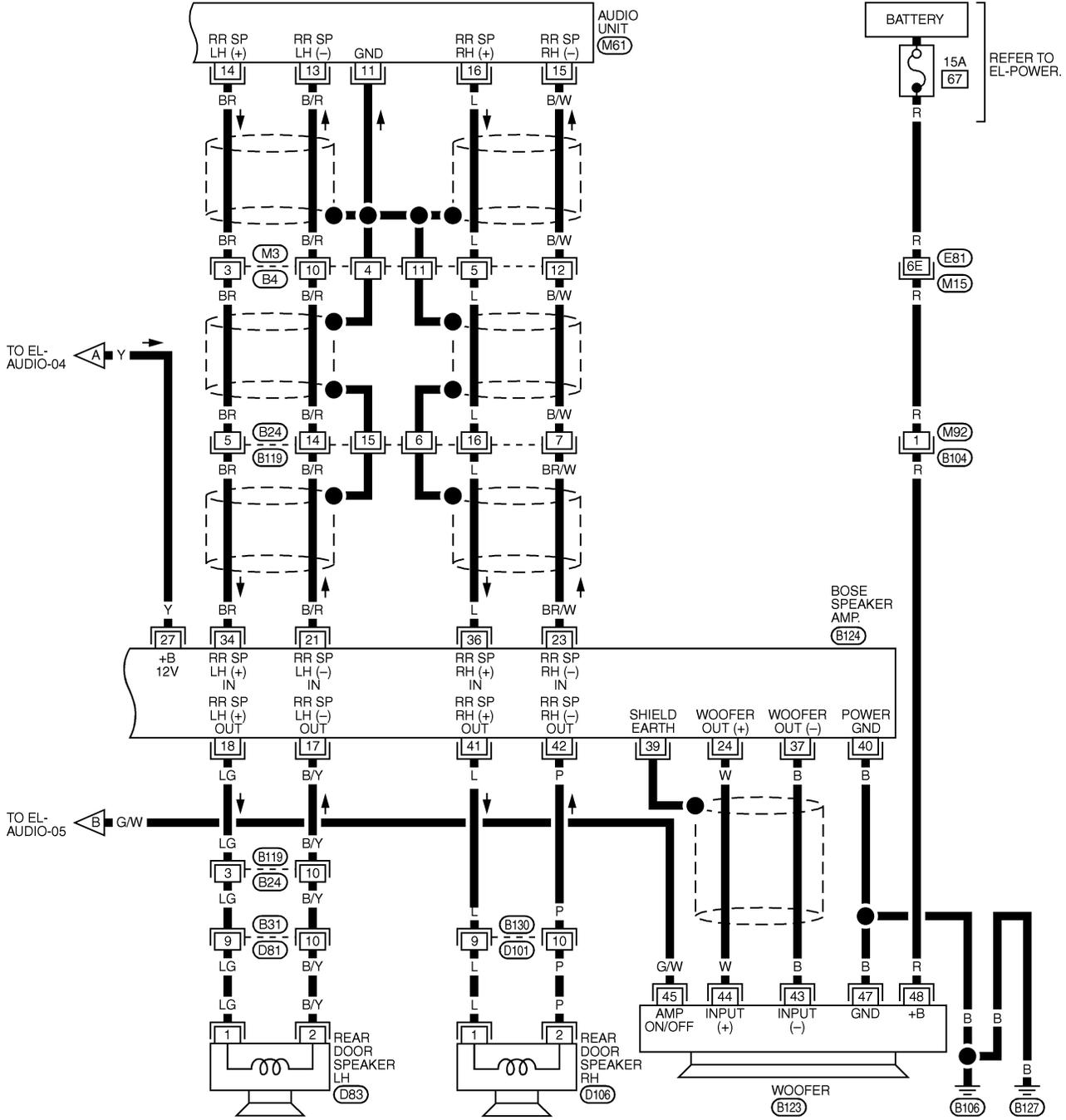
MEL725L

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-07

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX



REFER TO THE FOLLOWING.  
(M15), (E81) -SUPER  
MULTIPLE JUNCTION (SMJ)

# AUDIO

Trouble Diagnoses

## Trouble Diagnoses

NFEL0220

NFEL0220S01

### AUDIO UNIT

Symptom	Possible causes	Repair order
Audio unit inoperative (no digital display and no sound from speakers).	<ol style="list-style-type: none"> <li>10A fuse</li> <li>Poor audio unit case ground</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check 10A fuse [No. 1, located in fuse block (J/B)]. Turn ignition switch ON and verify that battery positive voltage is present at terminal 10 of audio unit.</li> <li>Check audio unit case ground.</li> <li>Remove audio unit for repair.</li> </ol>
Audio unit presets are lost when ignition switch is turned OFF.	<ol style="list-style-type: none"> <li>15A fuse</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check 15A fuse [No. 56, located in fuse block (J/B)] and verify that battery positive voltage is present at terminal 6 of audio unit.</li> <li>Remove audio unit for repair.</li> </ol>
AM/FM stations are weak or noisy.	<ol style="list-style-type: none"> <li>Window antenna</li> <li>Audio unit ground</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check window antenna.</li> <li>Check audio unit ground condition.</li> <li>Remove audio unit for repair.</li> </ol>
Audio unit generates noise in AM and FM modes with engine running.	<ol style="list-style-type: none"> <li>Poor audio unit ground</li> <li>Loose or missing ground bonding straps</li> <li>Ignition condenser or rear window defogger noise suppressor condenser</li> <li>Ignition coil or secondary wiring</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check audio unit ground.</li> <li>Check ground bonding straps.</li> <li>Replace ignition condenser or rear window defogger noise suppressor condenser.</li> <li>Check ignition coil and secondary wiring.</li> <li>Remove audio unit for repair.</li> </ol>
Audio unit generates noise in AM and FM modes with accessories on (switch pops and motor noise).	<ol style="list-style-type: none"> <li>Poor audio unit ground</li> <li>Antenna</li> <li>Accessory ground</li> <li>Faulty accessory</li> </ol>	<ol style="list-style-type: none"> <li>Check audio unit ground.</li> <li>Check antenna.</li> <li>Check accessory ground.</li> <li>Replace accessory.</li> </ol>

### BASE SYSTEM

NFEL0220S02

Symptom	Possible causes	Repair order
Individual speaker is noisy or inoperative.	<ol style="list-style-type: none"> <li>Speaker</li> <li>Audio unit output</li> <li>Speaker circuit</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check speaker.</li> <li>Check audio unit output voltages.</li> <li>Check wires for open or short between audio unit and speaker.</li> <li>Remove audio unit for repair.</li> </ol>

### BOSE SYSTEM

NFEL0220S03

Symptom	Possible causes	Repair order
Audio unit controls are operational, but no sound is heard from any speaker.	<ol style="list-style-type: none"> <li>15A fuse</li> <li>Amp. ON/OFF signal circuit</li> <li>Speaker amp. ground</li> </ol>	<ol style="list-style-type: none"> <li>Check 15A fuse [No. 56, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 27 of speaker amp.</li> <li>Check harness continuity between audio unit terminal 12 and speaker amp. terminal 25.</li> <li>Check harness continuity between speaker amp. terminal 40 and ground.</li> </ol>
Individual rear speaker is noisy or inoperative.	<ol style="list-style-type: none"> <li>Each speaker</li> <li>Output circuit to each speaker</li> </ol>	<ol style="list-style-type: none"> <li>Check speaker.</li> <li>Check the output circuits to each speaker <ul style="list-style-type: none"> <li>between audio unit and speaker amp.</li> <li>between speaker amp. and each speaker.</li> </ul> </li> </ol>
Woofer does not operate.	<ol style="list-style-type: none"> <li>Power supply to woofer</li> <li>Amp. ON/OFF signal circuit</li> <li>Speaker amp. ground</li> <li>Output circuit to woofer</li> </ol>	<ol style="list-style-type: none"> <li>Check 15A fuse [No. 67, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 48 of woofer.</li> <li>Check harness continuity between audio unit terminal 12 and woofer terminal 45.</li> <li>Check harness continuity between woofer terminal 47 and ground.</li> <li>Check the output circuits to woofer from speaker amp.</li> </ol>

## Inspection

### AUDIO UNIT AND AMP.

NFEL0221

NFEL0221S01

All voltage inspections are made with:

- Ignition switch ON or ACC
- Audio unit ON
- Audio unit and amps. connected (If audio unit or amp. is removed for inspection, supply a ground to the case using a jumper wire.)

GI

MA

EM

### ANTENNA

NFEL0221S02

Using a jumper wire, clip an auxiliary ground between antenna and body.

- If reception improves, check antenna ground (at body surface).
- If reception does not improve, check main feeder cable for short circuit or open circuit.

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

# AUDIO ANTENNA

*System Description*

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## System Description

NFEL0084

With the ignition switch is turned to ACC or ON, power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to audio unit terminal 10.

Ground is supplied through the case of antenna amp.

When the radio switch is turned ON, antenna signal is supplied

- through audio unit terminal 5
- to the antenna terminal 1.

Then the antenna amp. is activated.

The amplified radio signals are supplied to the audio unit, through antenna amp. terminals 2 and 3.

# AUDIO ANTENNA

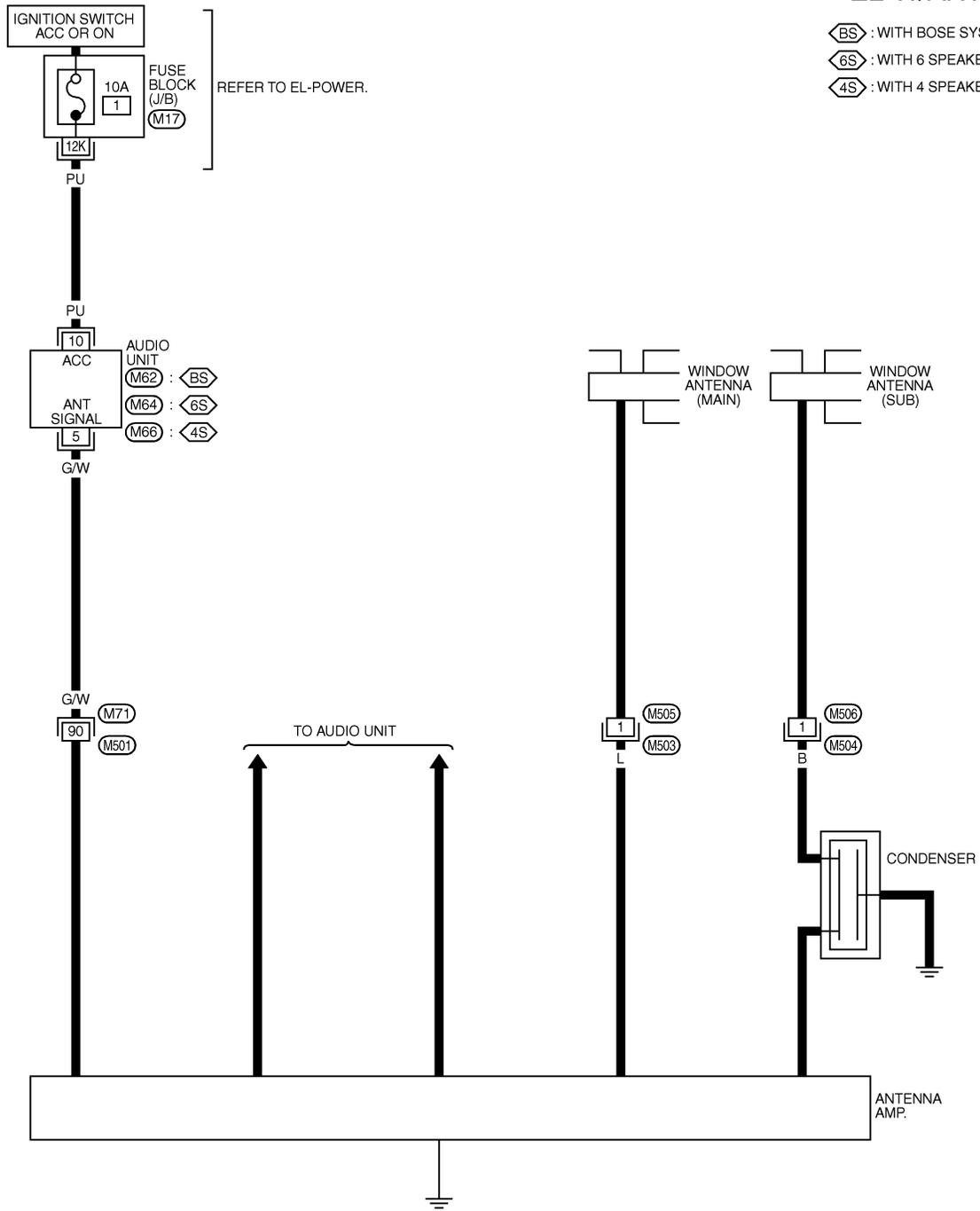
Wiring Diagram — W/ANT —

## Wiring Diagram — W/ANT —

NFEL0085

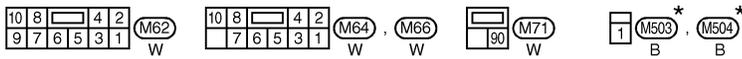
### EL-W/ANT-01

- ◁BS▷ : WITH BOSE SYSTEM
- ◁6S▷ : WITH 6 SPEAKERS
- ◁4S▷ : WITH 4 SPEAKERS



GI  
MA  
EM  
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IDX



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL-SECTION.

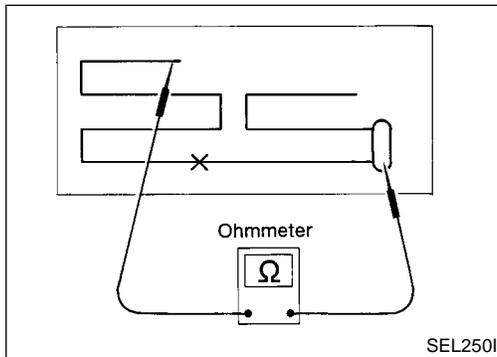
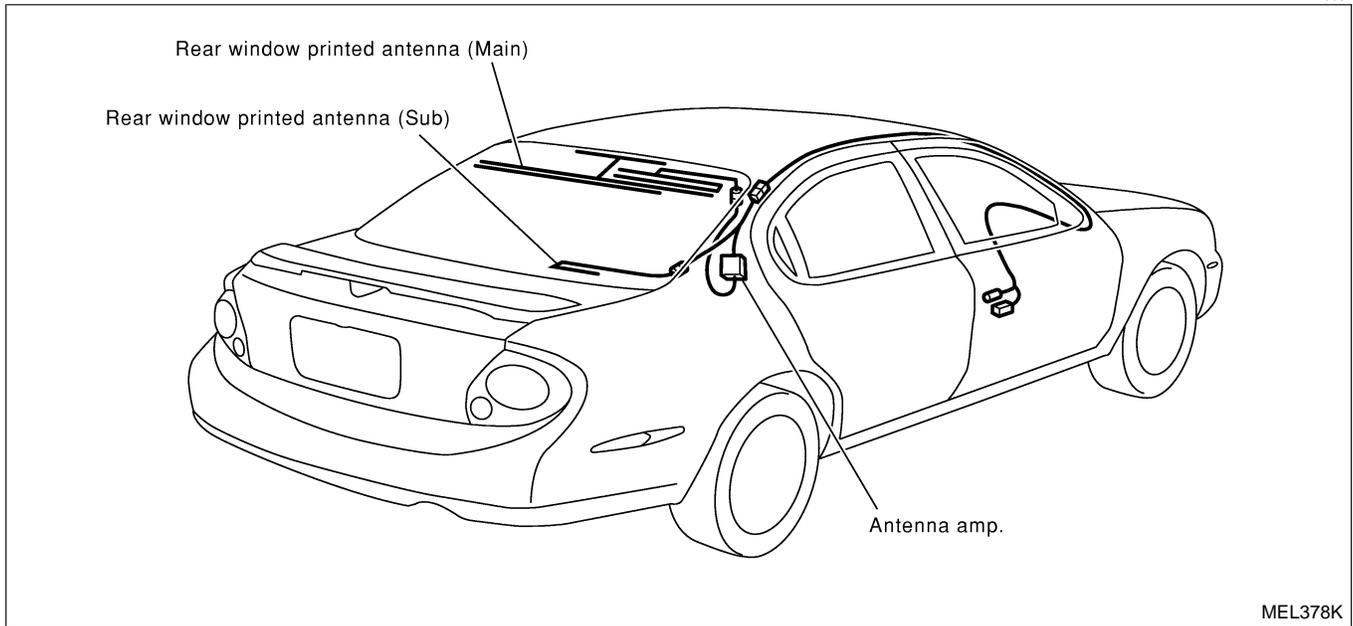
REFER TO THE FOLLOWING.  
 (M17) - FUSE BLOCK-JUNCTION BOX (J/B)

# AUDIO ANTENNA

Location of Antenna

## Location of Antenna

NFEL0087



## Window Antenna Repair

NFEL0250

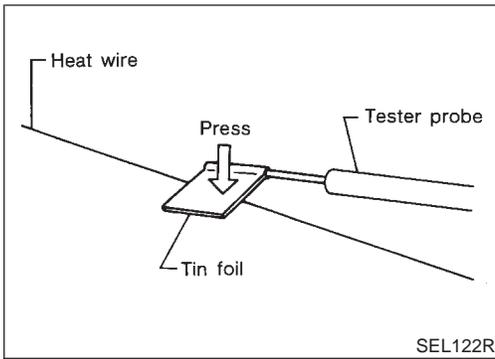
### ELEMENT CHECK

NFEL0250S01

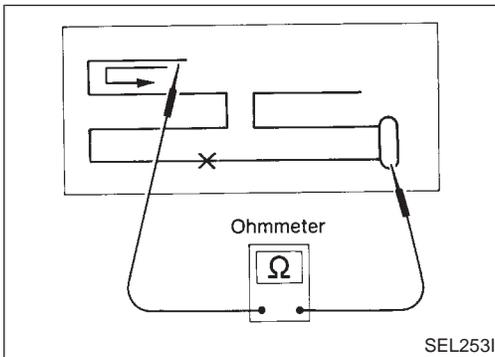
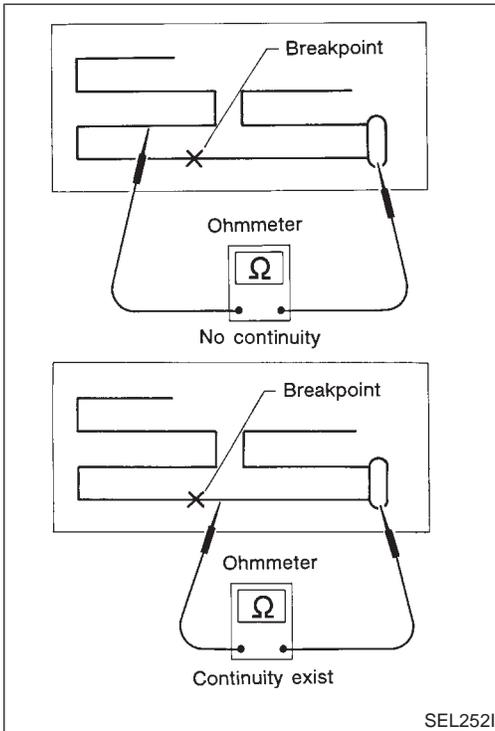
1. Attach probe circuit tester (in ohm range) to antenna terminal on each side.  
If an element is OK, continuity should exist.  
If an element is broken, no continuity should exist. Go to step 2.

# AUDIO ANTENNA

Window Antenna Repair (Cont'd)



- When measuring continuity, wrap tin foil around the top of probe. Then press the foil against the wire with your finger.



2. To locate broken point, move probe along element. Tester needle will swing abruptly when probe passes the point.

## ELEMENT REPAIR

Refer to "Filament Repair", "REAR WINDOW DEFOGGER" (EL-160).  
NFEL0250S02

GI

MA

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## System Description

NFEL0222

### OUTLINE

NFEL0222S01

Electric sunroof system consists of

- Sunroof switch
- Sunroof motor
- Smart entrance control unit

Smart entrance control unit controls retained power operation.

### OPERATION

NFEL0222S03

The sunroof can be opened or closed and tilted up or down with the sunroof switch.

### AUTO OPERATION

NFEL0222S05

The power sunroof AUTO feature makes it possible to open and close the sunroof without holding the sunroof switch in the down or up position.

### RETAINED POWER OPERATION

NFEL0222S02

When the ignition switch is turned to OFF position from ON or START position, power is supplied for 45 seconds

- to sunroof motor terminal 6
- from smart entrance control unit terminal 5.

When power is supplied, the electrical sunroof can be operated.

The retained power operation is canceled when the driver or passenger side door is opened.

### INTERRUPTION DETECTION FUNCTION

NFEL0222S04

The CPU of sunroof motor monitors the sunroof motor operation and the sunroof position (full closed or other) for sunroof by the signals from encoder and limit switch in sunroof motor.

When sunroof motor detects interruption during the following close operation,

- automatic close operation when ignition switch is in the "ON" position
- automatic close operation during retained power operation

sunroof switch controls the motor for open and the sunroof will operate about 150 mm (5.91 in).

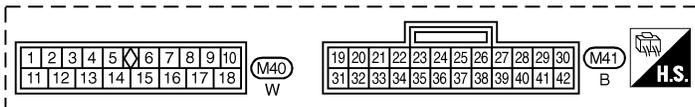
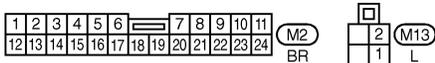
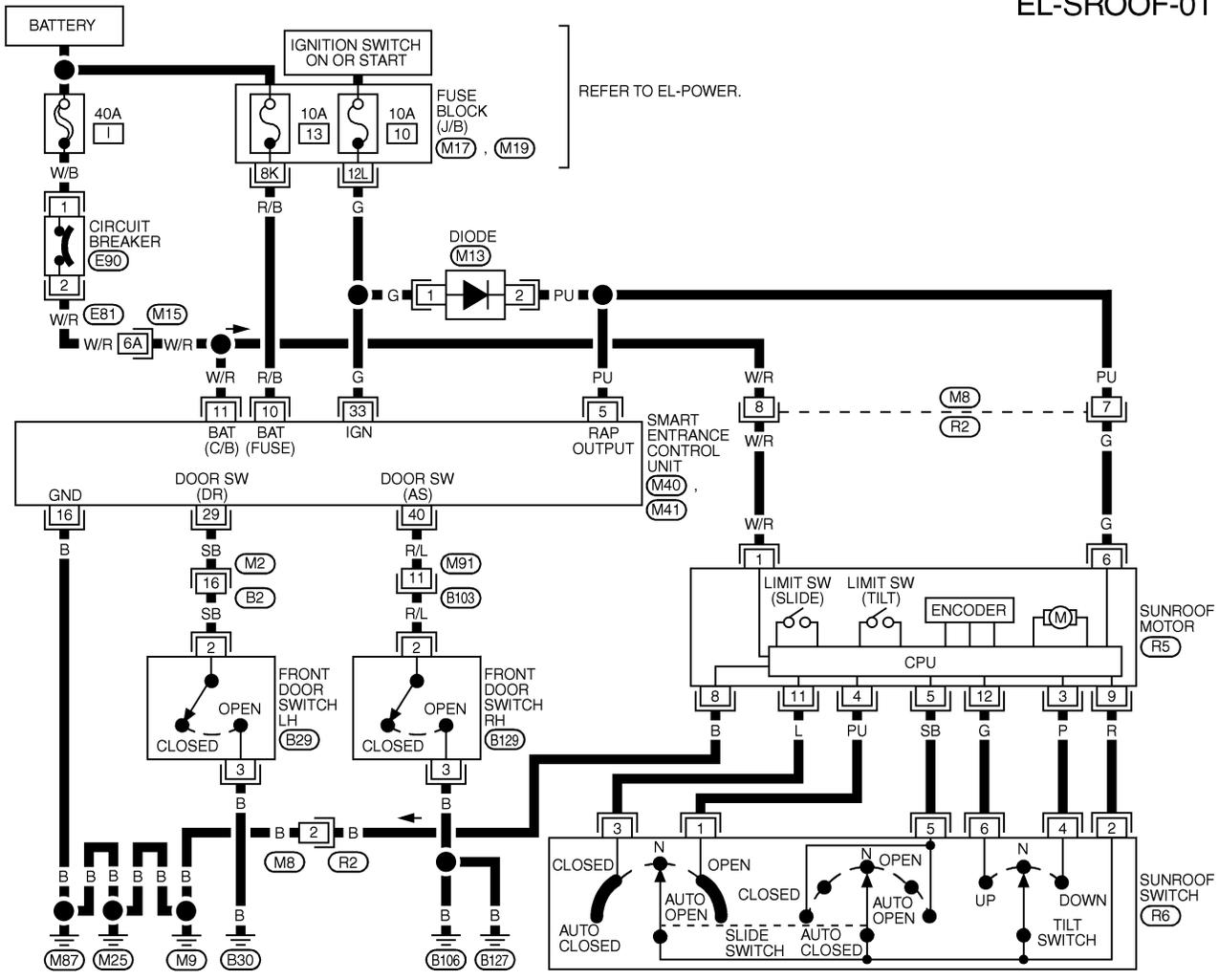
# POWER SUNROOF

Wiring Diagram — SROOF —

## Wiring Diagram — SROOF —

NFEL0089

EL-SROOF-01



REFER TO THE FOLLOWING.

- (M15), (E81) -SUPER MULTIPLE JUNCTION (SMJ)
- (M17) -FUSE BLOCK-JUNCTION BOX (J/B)
- (M19) -FUSE BLOCK-JUNCTION BOX (J/B)

MEL290K

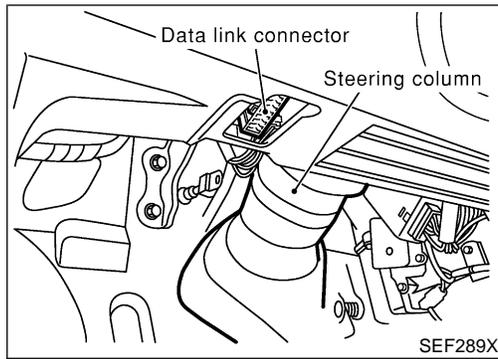
### SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
5	PU	HEADLAMP BATTERY SAVER CONTROL UNIT	WHEN HEADLAMP BATTERY SAVER TIMER IS OPERATED	12V
10	R/B	POWER SOURCE (FUSE)	-	12V
11	W/R	POWER SOURCE (C/B)	-	12V
16	B	GROUND	-	-
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
33	G	IGNITION ON	IGNITION KEY IS IN "ON" POSITION	12V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V

SEL369WA

# POWER SUNROOF

CONSULT-II Inspection Procedure

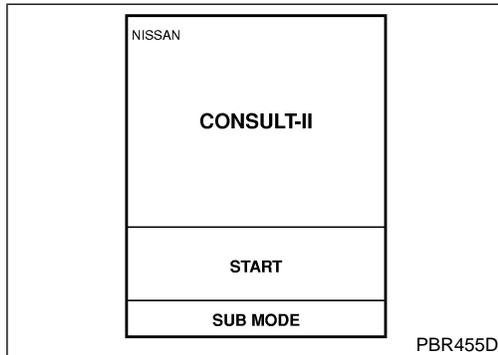


## CONSULT-II Inspection Procedure “RETAINED PWR”

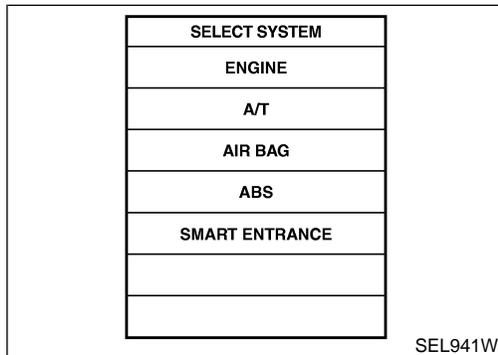
=NFEL0223

NFEL0223S01

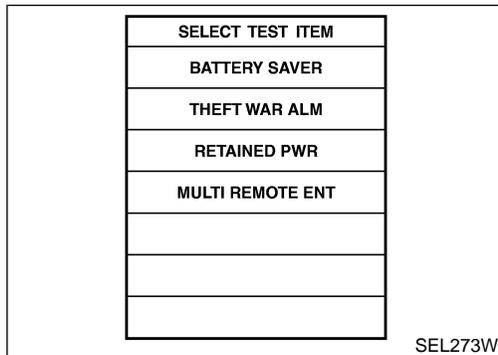
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



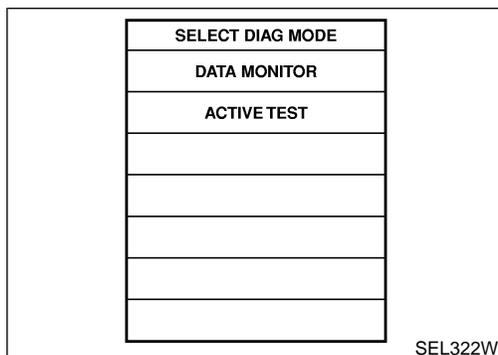
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “RETAINED PWR”.



7. Select diagnosis mode.  
“DATA MONITOR” and “ACTIVE TEST” are available.

CONSULT-II Application Items

“RETAINED PWR”  
Data Monitor

NFEL0224

NFEL0224S01

NFEL0224S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.

Active Test

NFEL0224S0102

Test Item	Description
RETAINED PWR	<p>This test is able to supply RAP signal (power) from smart entrance control unit to power window system, power sunroof system and headlamp battery saver control unit. Those systems can be operated when turning on “RETAINED PWR” on CONSULT-II screen even if the ignition switch is tuned OFF.</p> <p><b>NOTE:</b> During this test, CONSULT-II can be operated with ignition switch “OFF” position. “RETAINED PWR” should be turned “ON” or “OFF” on CONSULT-II screen when ignition switch is ON. Then turn ignition switch OFF for checking retained power operation. CONSULT-II might be stuck if “RETAINED PWR” is turned “ON” or “OFF” on CONSULT-II screen when ignition switch is OFF.</p>

Trouble Diagnoses

NFEL0225

Symptom	Possible cause	Repair order
Power sunroof cannot be operated using any switch.	<ol style="list-style-type: none"> <li>10A fuse, 40A fusible link and E90 circuit breaker</li> <li>Grounds M9, M25 and M87</li> <li>Sunroof switch</li> <li>Sunroof switch circuit</li> <li>Sunroof motor</li> </ol>	<ol style="list-style-type: none"> <li>Check 10A fuse [No. 10, located in fuse block (J/B)], 40A fusible link (letter i, located in fuse and fusible link box) and E90 circuit breaker. Turn ignition switch “ON” and verify battery positive voltage is present at terminals 1 and 6 of sunroof motor.</li> <li>Check grounds M9, M25, M87.</li> <li>Check sunroof switch.</li> <li>Check harness between sunroof switch and sunroof motor.</li> <li>Replace sunroof motor.</li> </ol>
Power sunroof cannot be operated using one of the sunroof switches.	<ol style="list-style-type: none"> <li>Sunroof switch</li> <li>Sunroof switch circuit</li> </ol>	<ol style="list-style-type: none"> <li>Check sunroof switch.</li> <li>Check the harness between sunroof motor and sunroof switch.</li> </ol>
Power sunroof auto function cannot be operated properly.	<ol style="list-style-type: none"> <li>Sunroof slide mechanism</li> <li>Sunroof switch</li> <li>Sunroof switch circuit</li> <li>Sunroof motor</li> </ol>	<ol style="list-style-type: none"> <li>Check the following.                             <ol style="list-style-type: none"> <li>Check obstacles in sunroof, etc.</li> <li>Check worn or deformed sunroof.</li> <li>Check sunroof sash tilted too far inward or outward.</li> </ol> </li> <li>Check sunroof switch.</li> <li>Check harness between sunroof motor and sunroof switch.</li> <li>Replace sunroof motor.</li> </ol>

GI

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EM

LC

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AX

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BR

ST

RS

BT

HA

SC

EL

IDX

# POWER SUNROOF

## Trouble Diagnoses (Cont'd)

Symptom	Possible cause	Repair order
Retained power operation does not operate properly.	<ol style="list-style-type: none"> <li>1. RAP signal circuit</li> <li>2. Driver or passenger side door switch circuit</li> <li>3. Smart entrance control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check RAP signal.               <ol style="list-style-type: none"> <li>a. (With CONSULT-II) Check RAP signal with CONSULT-II. Use "ACTIVE TEST" mode, "RETAINED PWR" in "SMART ENTRANCE". (Refer to EL-180.) If NG, go to the step b. below.</li> <li>b. Verify 12 positive voltage from smart entrance control unit is present at terminal 6 of sunroof motor:                   <ul style="list-style-type: none"> <li>● Within 45 seconds after ignition switch turns off.</li> <li>● When front door LH and RH is closed.</li> </ul> </li> </ol> </li> <li>2. Check harness between smart entrance control unit and driver or passenger side door switch. Check driver or passenger side door switch. Check driver or passenger side door switch.</li> <li>3. Check smart entrance control unit. (EL-316)</li> </ol>

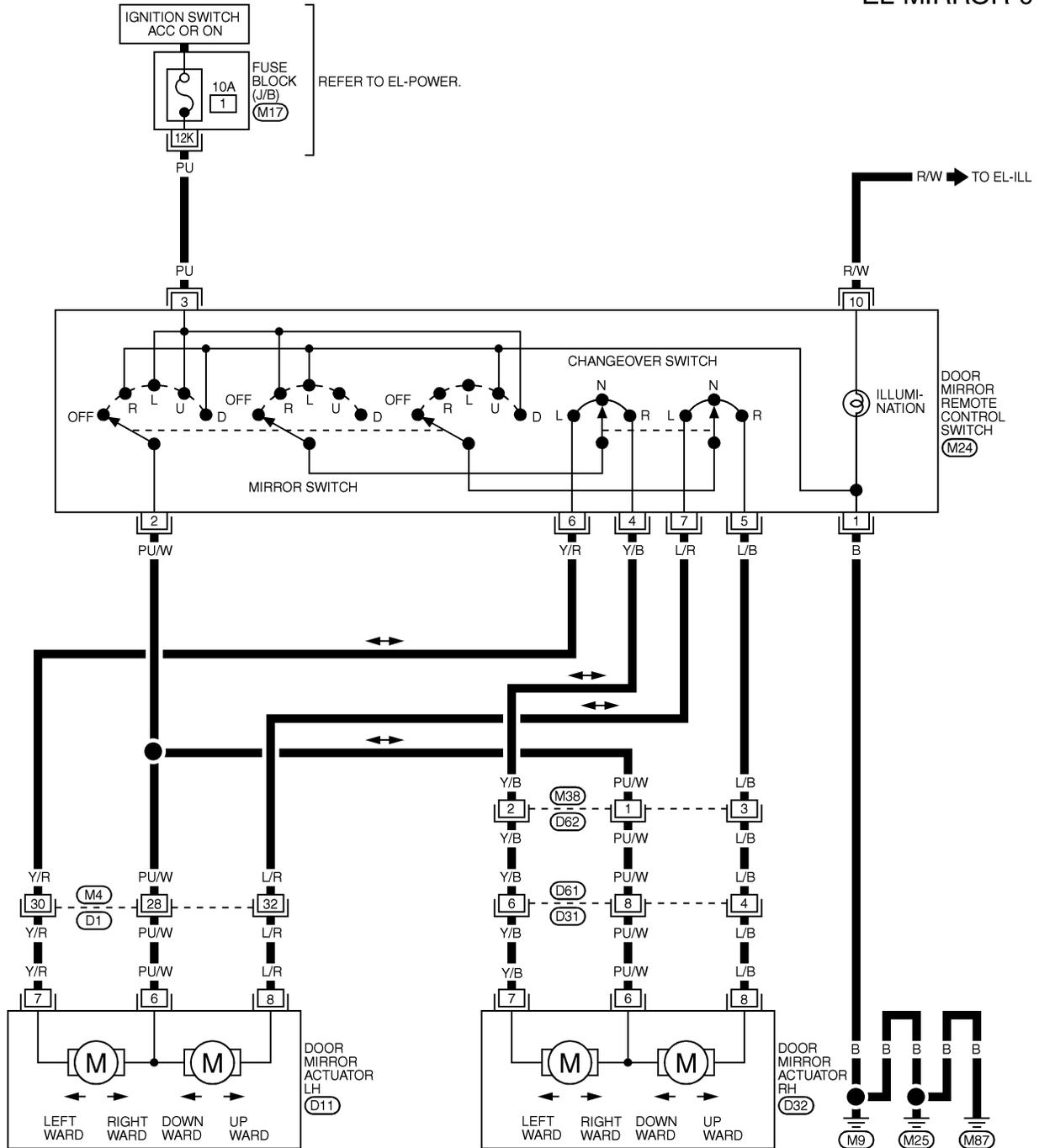
# DOOR MIRROR

Wiring Diagram — MIRROR —

## Wiring Diagram — MIRROR —

NFEL0090

EL-MIRROR-01



REFER TO THE FOLLOWING.  
 (M4) , (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (D31) , (D61) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

GI

MA

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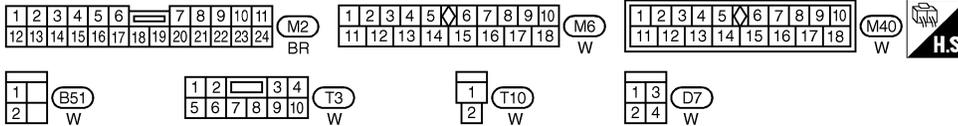
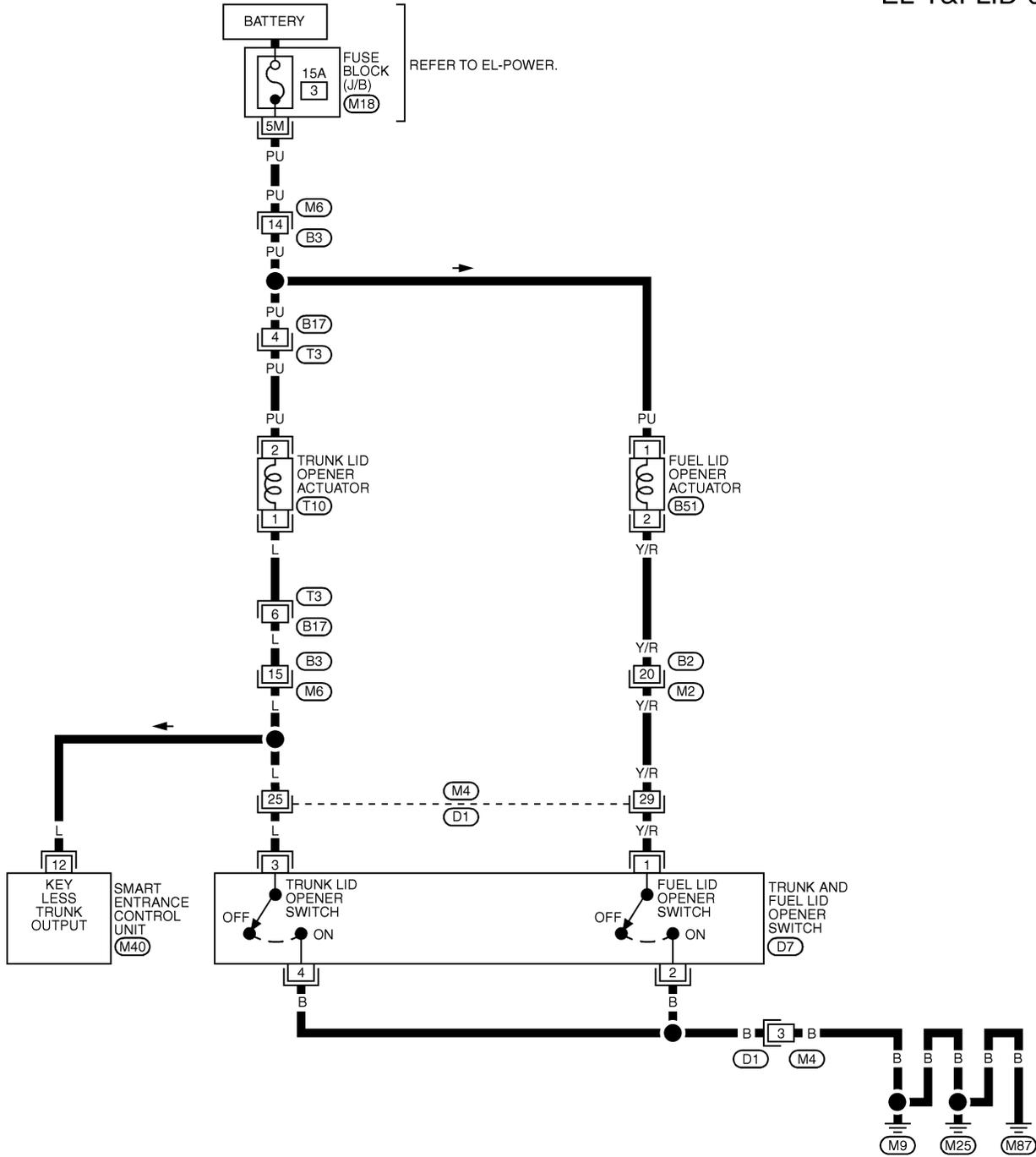
# TRUNK LID AND FUEL FILLER LID OPENER

Wiring Diagram — T&FLID —

## Wiring Diagram — T&FLID —

NFEL0168

EL-T&FLID-01



REFER TO THE FOLLOWING.  
 (M4) , (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M18) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

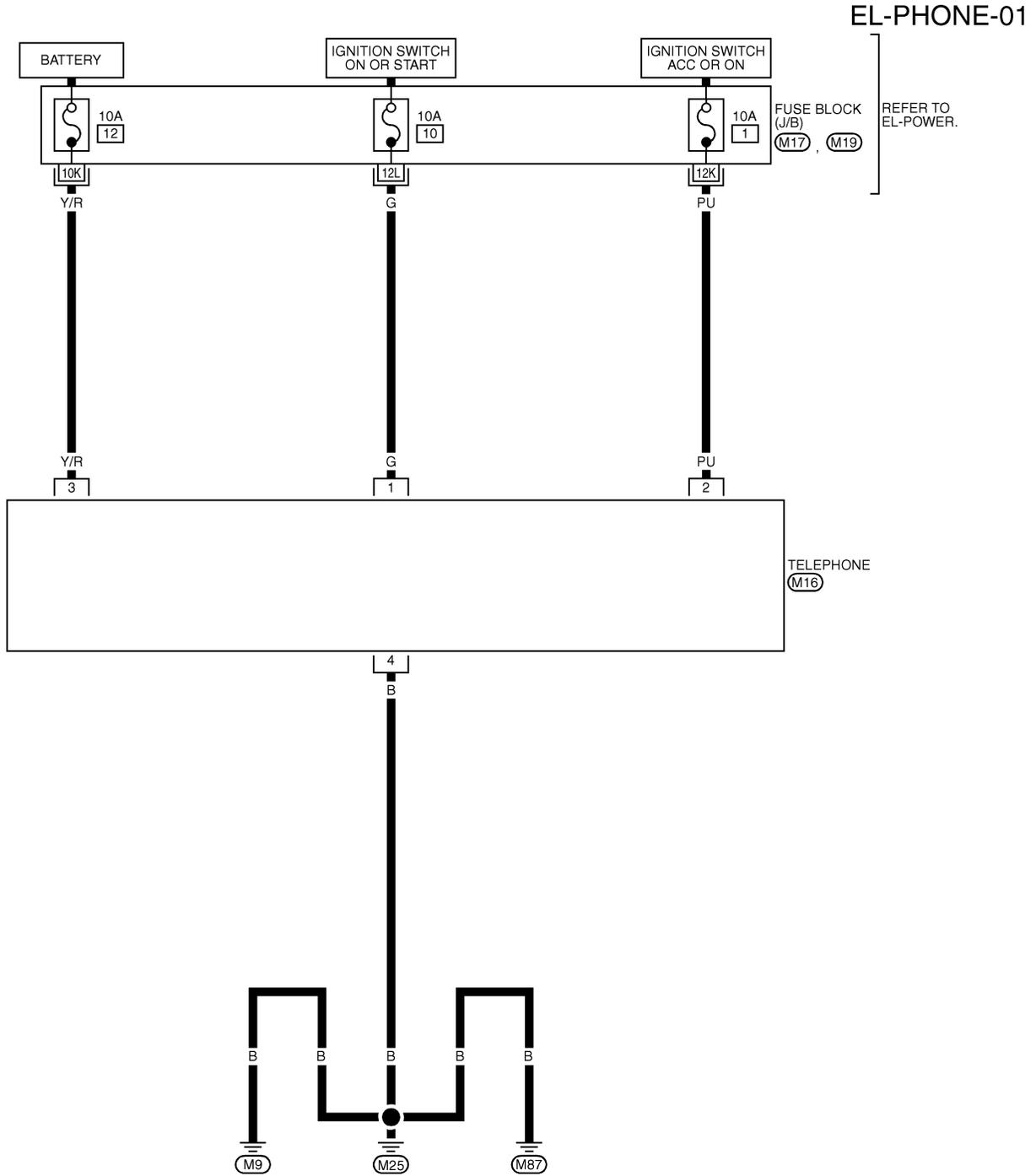
MEL292K

# TELEPHONE (PRE WIRE)

Wiring Diagram — PHONE —

## Wiring Diagram — PHONE —

NFEL0170



- GI
- MA
- EM
- LC
- EC
- FE
- CL
- MT
- AT
- AX
- SU
- BR
- ST
- RS
- BT
- HA
- SC

**EL**

IDX



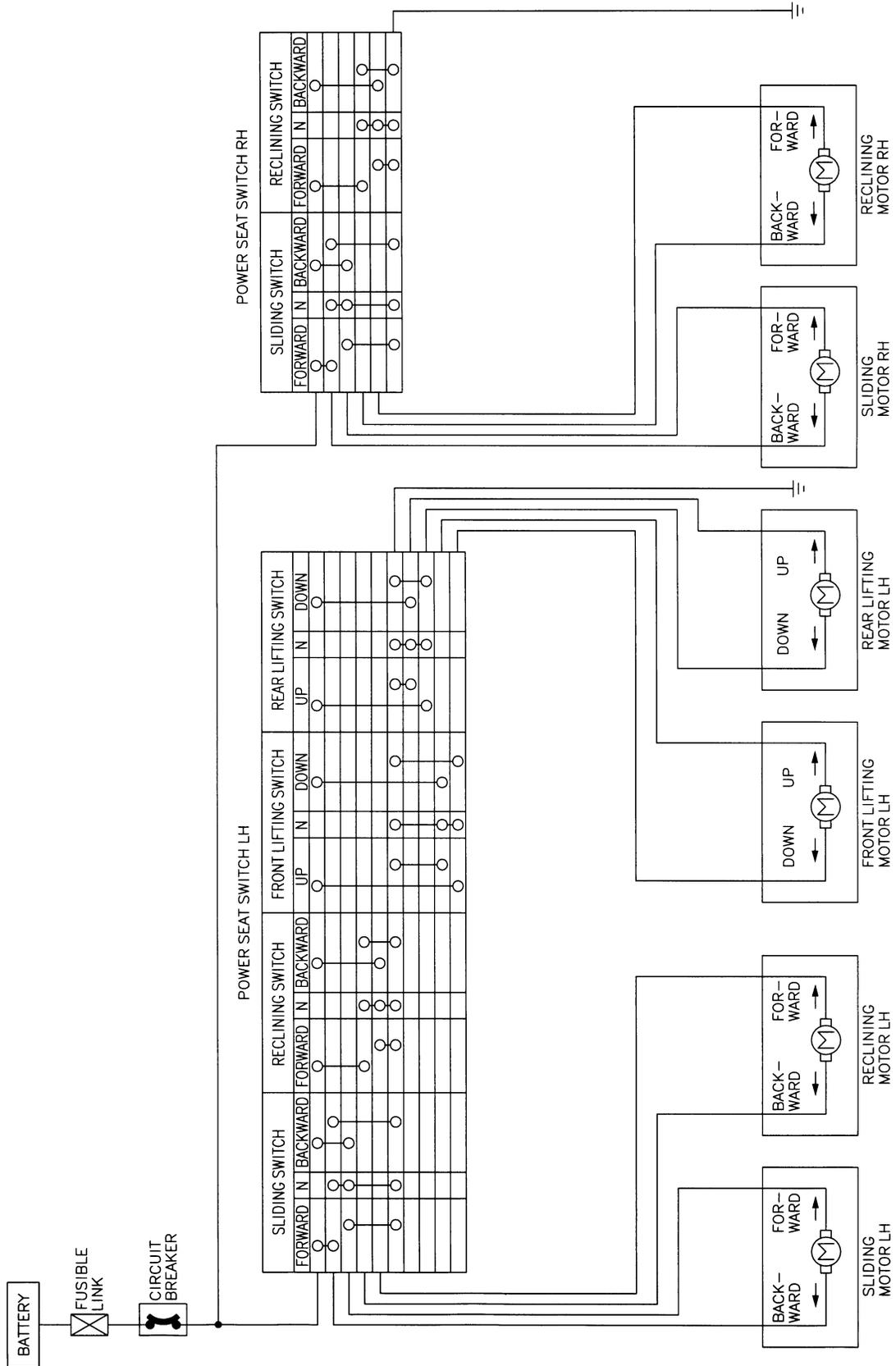
REFER TO THE FOLLOWING.  
 (M17) - FUSE BLOCK-JUNCTION BOX (J/B)  
 (M19) - FUSE BLOCK-JUNCTION BOX (J/B)

# POWER SEAT

Schematic

## Schematic

NFEL0251



MEL647K

# POWER SEAT

Wiring Diagram — SEAT —

## Wiring Diagram — SEAT —

NFEL0092

EL-SEAT-01

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

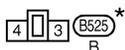
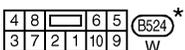
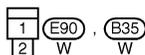
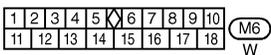
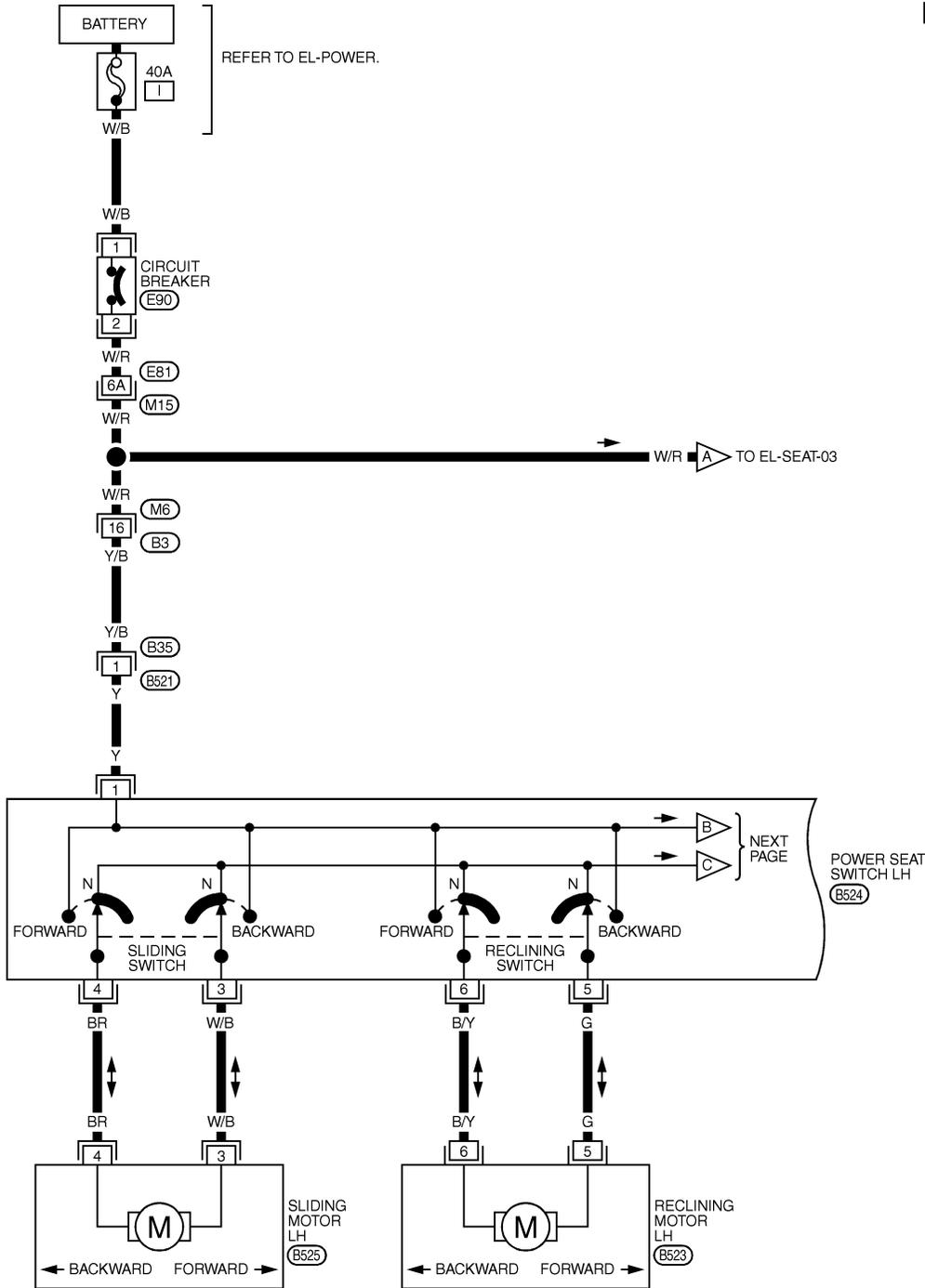
BT

HA

SC

EL

IDX



REFER TO THE FOLLOWING.  
 (M15) , (E81) - SUPER  
 MULTIPLE JUNCTION (SMJ)

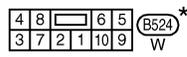
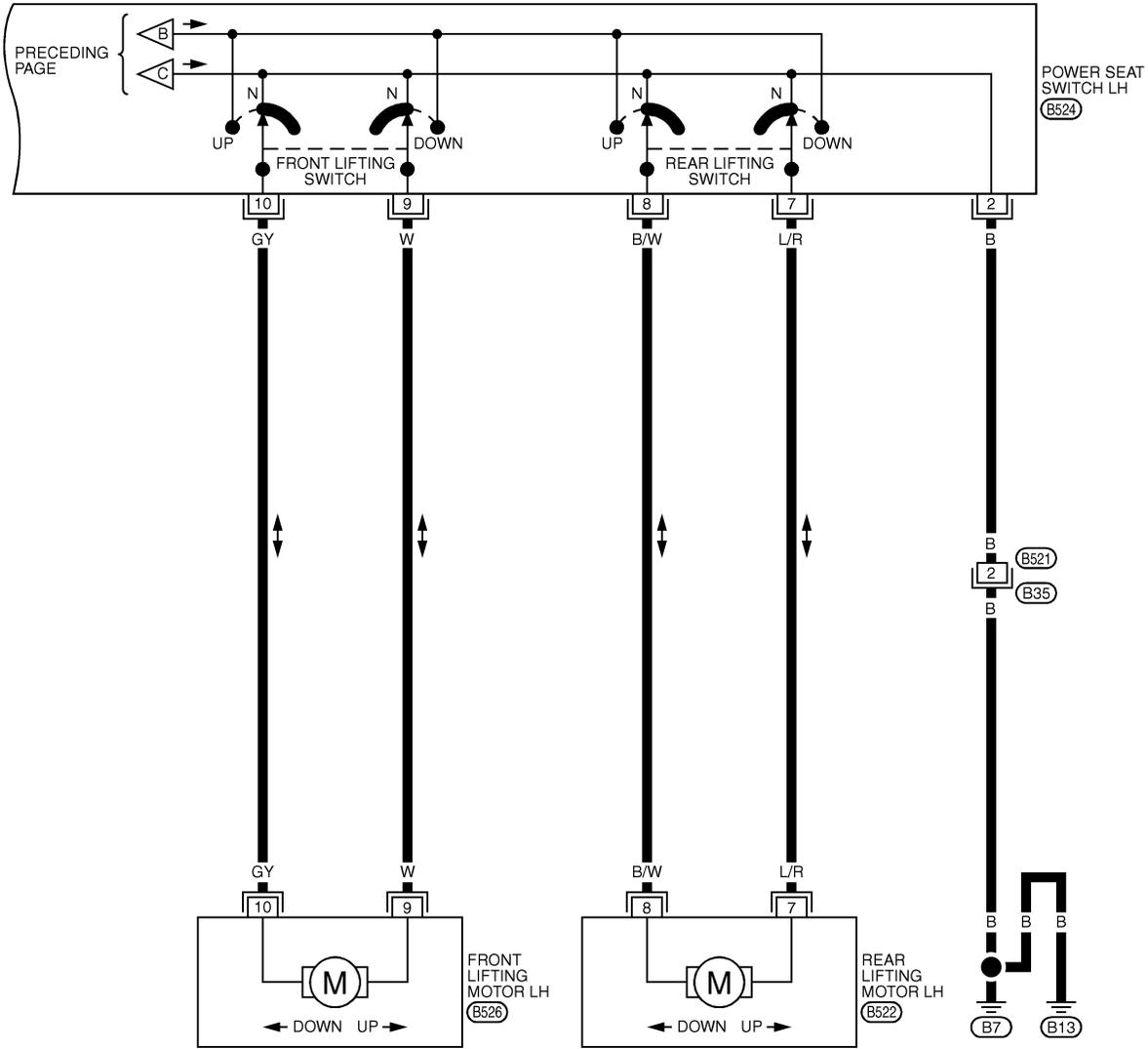
\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL-SECTION.

MEL296K

# POWER SEAT

Wiring Diagram — SEAT — (Cont'd)

EL-SEAT-02

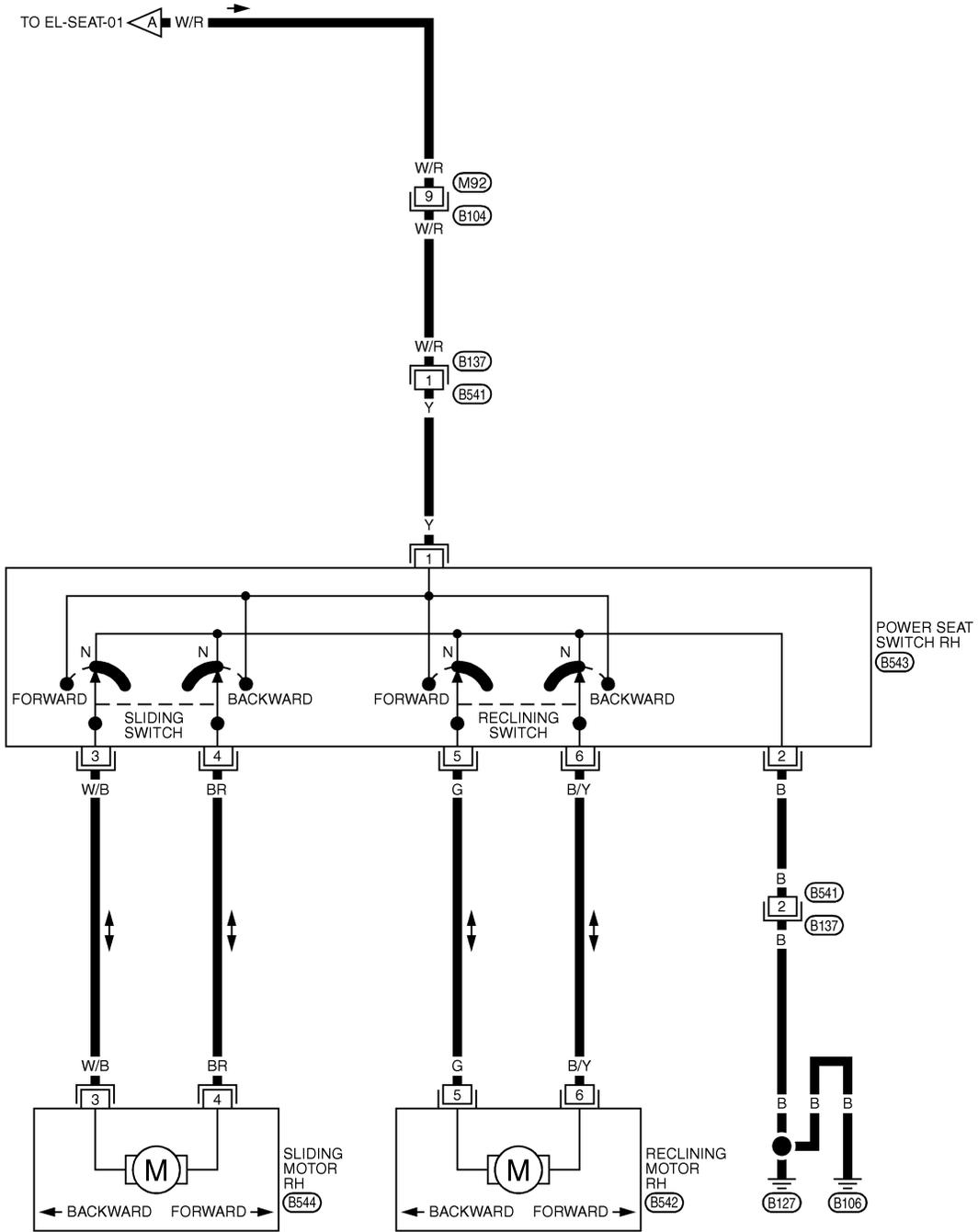


\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

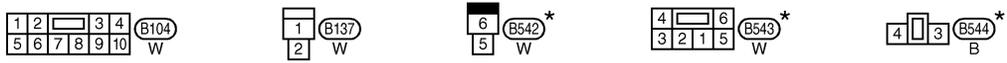
# POWER SEAT

Wiring Diagram — SEAT — (Cont'd)

EL-SEAT-03



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC



\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

MEL648K

EL  
IDX

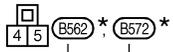
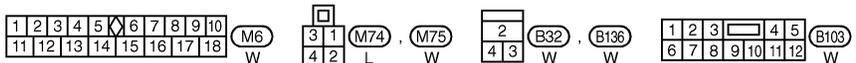
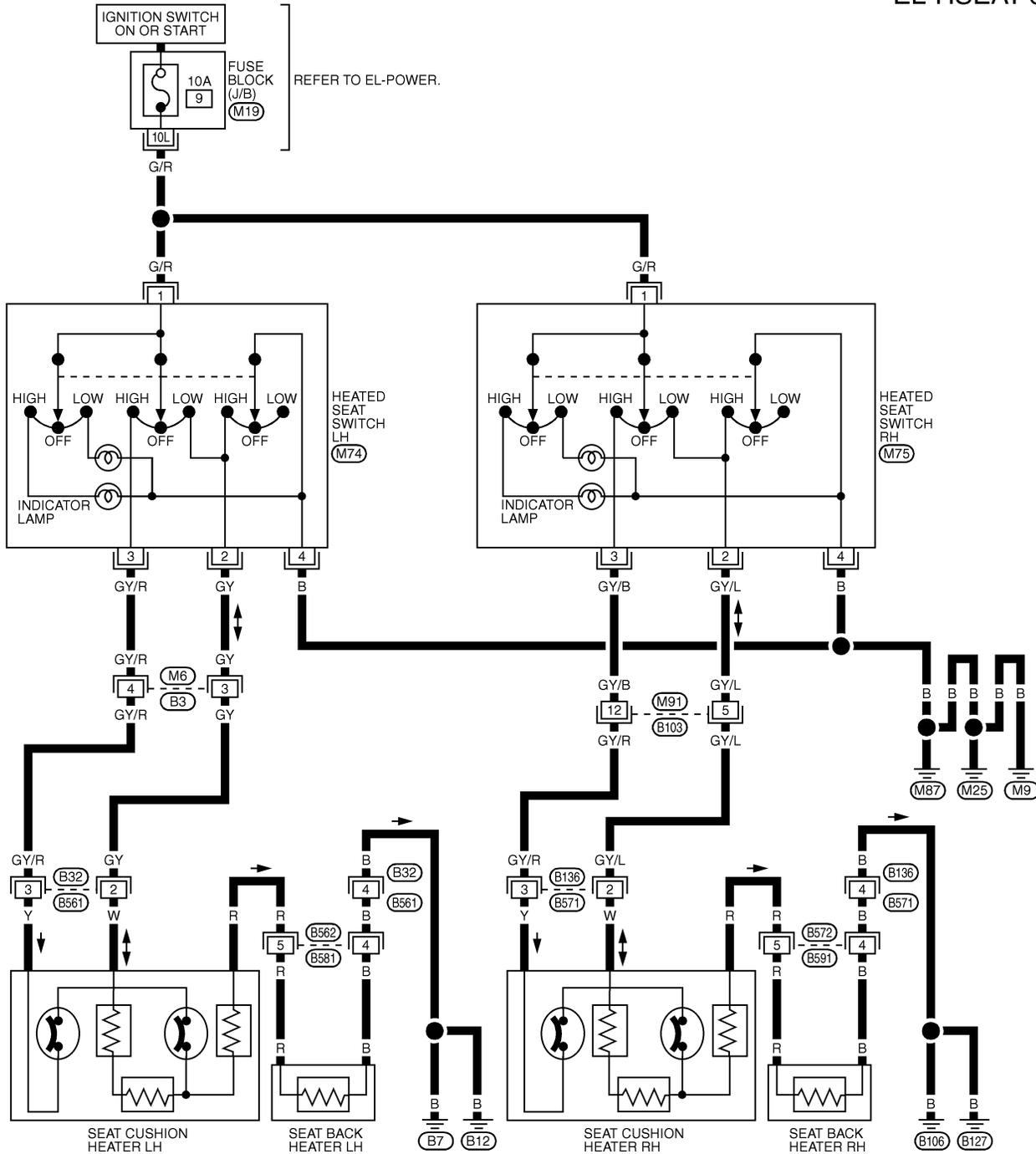
# HEATED SEAT

Wiring Diagram — HSEAT —

## Wiring Diagram — HSEAT —

NFEL0093

EL-HSEAT-01



\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL-SECTION.

REFER TO THE FOLLOWING.  
 (M19) - FUSE BLOCK-JUNCTION BOX (J/B)



## System Description

NFEL0190

Refer to Owner's Manual for ASCD operating instructions.

### POWER SUPPLY AND GROUND

NFEL0190S01

When ignition switch is in the ON or START position, power is supplied:

- through 10A fuse [No. 30, located in the fuse block (J/B)]
- to ASCD brake switch terminal 1 and
- to combination meter terminals 50 and 66,
- through 15A fuse [No. 20, located in the fuse block (J/B)]
- to park/neutral position relay terminal 1,
- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to ASCD control unit terminal 5, and

Power is supplied at all times:

- through 15A fuse [No. 2, located in the fuse block (J/B)]
- to the stop lamp switch terminal 1, and
- through 10A fuse [No. 57, located in the fuse block (J/B)]
- to the horn relay terminal 2.
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to combination meter terminal 62.

When park/neutral position is in the P or N position, ground is supplied:

- to park/neutral position switch terminal 2
- through body grounds F41 and F39.

When ASCD main switch is depressed (ON), ground is supplied:

- to ASCD control unit terminal 9
- from ASCD steering switch terminal 4
- to ASCD steering switch terminal 5
- through body grounds M9, M25 and M87

then ASCD control unit holds CRUISE condition and illuminates CRUISE indicator.

Ground is supplied:

- from ASCD control unit terminal 15, and
- to combination meter terminal 46.

### OPERATION

NFEL0190S02

#### Set Operation

NFEL0190S0201

To activate the ASCD, all of following conditions must exist.

- Ground supply to ASCD control unit terminal 9
- Power supply to ASCD control unit terminal 8 [Brake and clutch pedal is released (M/T models), and brake pedal is released and A/T selector lever is in other than P and N position. (A/T models)]
- Vehicle speed is between 40 km/h (25 MPH) and 144 km/h (89 MPH). (Signal from combination meter)

When the SET/COAST switch is depressed, power is supplied:

- from ASCD steering switch terminal 2
- to ASCD control unit terminal 11.

And then ASCD pump is activated to control throttle wire and ASCD control unit supply ground

- to combination meter terminals 51 to illuminate SET indicator.

#### A/T Overdrive Control during Cruise Control Driving (A/T models)

NFEL0190S0202

When the vehicle speed is approximately 8 km/h (5 MPH) below set speed, a signal is sent

- from ASCD control unit terminal 10
- to TCM (transmission control module) terminal 24.

When this occurs, the TCM (transmission control module) cancels overdrive.

After vehicle speed is approximately 3 km/h (2 MPH) above set speed, overdrive is reactivated.

## ASCD Shifting Control

NFEL0190S0207

During ASCD cruise, ASCD control unit controls A/T shifting to avoid uncomfortable shifting. This is used to control the signals below.

- Throttle position sensor from ECM
- A/T shift solenoid valve A

GI

MA

## Coast Operation

NFEL0190S0203

When the SET/COAST switch is depressed during cruise control driving, ASCD actuator returns the throttle cable to decrease vehicle set speed until the switch is released. And then ASCD will keep the new set speed.

EM

## Accel Operation

NFEL0190S0204

When the RESUME/ACCEL switch is depressed, power is supplied

- from ASCD steering switch terminal 3
- to ASCD control unit terminal 24.

LC

EC

If the RESUME/ACCEL switch is depressed during cruise control driving, ASCD actuator pulls the throttle cable to increase the vehicle speed until the switch is released or vehicle speed is reached to maximum controlled speed by the system. And then ASCD will keep the new set speed.

FE

## Cancel Operation

NFEL0190S0205

When any of following condition exists, cruise operation will be canceled.

- CANCEL switch is depressed. (Power supply to ASCD control unit terminals 11 and 24)
- Brake pedal is depressed. (Power supply to ASCD control unit terminal 23 from stop lamp switch)
- Brake or clutch pedal is depressed (M/T models), brake pedal is depressed or A/T selector lever is shifted to P or N position (A/T models). (Power supply to ASCD control unit terminal 8 is interrupted.)

CL

MT

If MAIN switch is turned to OFF during ASCD is activated, all of ASCD operation will be canceled and vehicle speed memory will be erased.

AT

## Resume Operation

NFEL0190S0206

When the RESUME/ACCEL switch is depressed after cancel operation other than depressing MAIN switch is performed, vehicle speed will return to last set speed. To resume vehicle set speed, vehicle condition must meet following conditions.

- Brake pedal is released.
- Clutch pedal is released (M/T models).
- A/T selector lever is in other than P and N position (A/T models).
- Vehicle speed is greater than 40 km/h (25 MPH) and 144 km/h (89 MPH).

AX

SU

BR

## ASCD PUMP OPERATION

NFEL0190S03

The ASCD pump consists of a vacuum motor, an air valve and a release valve. When the ASCD activates, power is supplied

- from terminal 12 of ASCD control unit
- to ASCD pump terminal 1.

ST

RS

Ground is supplied to vacuum motor, air valve and release valve from ASCD control unit depending on the operated condition as shown in the below table.

BT

The pump is connected to ASCD actuator by vacuum hose. When the ASCD pump is activated, the ASCD pump vacuum the diaphragm of ASCD actuator to control throttle cable.

HA

		Air valve (*1)	Release valve (*1)	Vacuum motor	Actuator inner pressure
ASCD not operating		Open	Open	Stopped	Atmosphere
ASCD operating	Releasing throttle cable	Open	Closed	Stopped	Vacuum
	Holding throttle position	Closed	Closed	Stopped	Vacuum (*2)
	Pulling throttle cable	Closed	Closed	Operated	Vacuum

SC

EL

IDX

\*1: When power and ground is supplied, valve is closed.

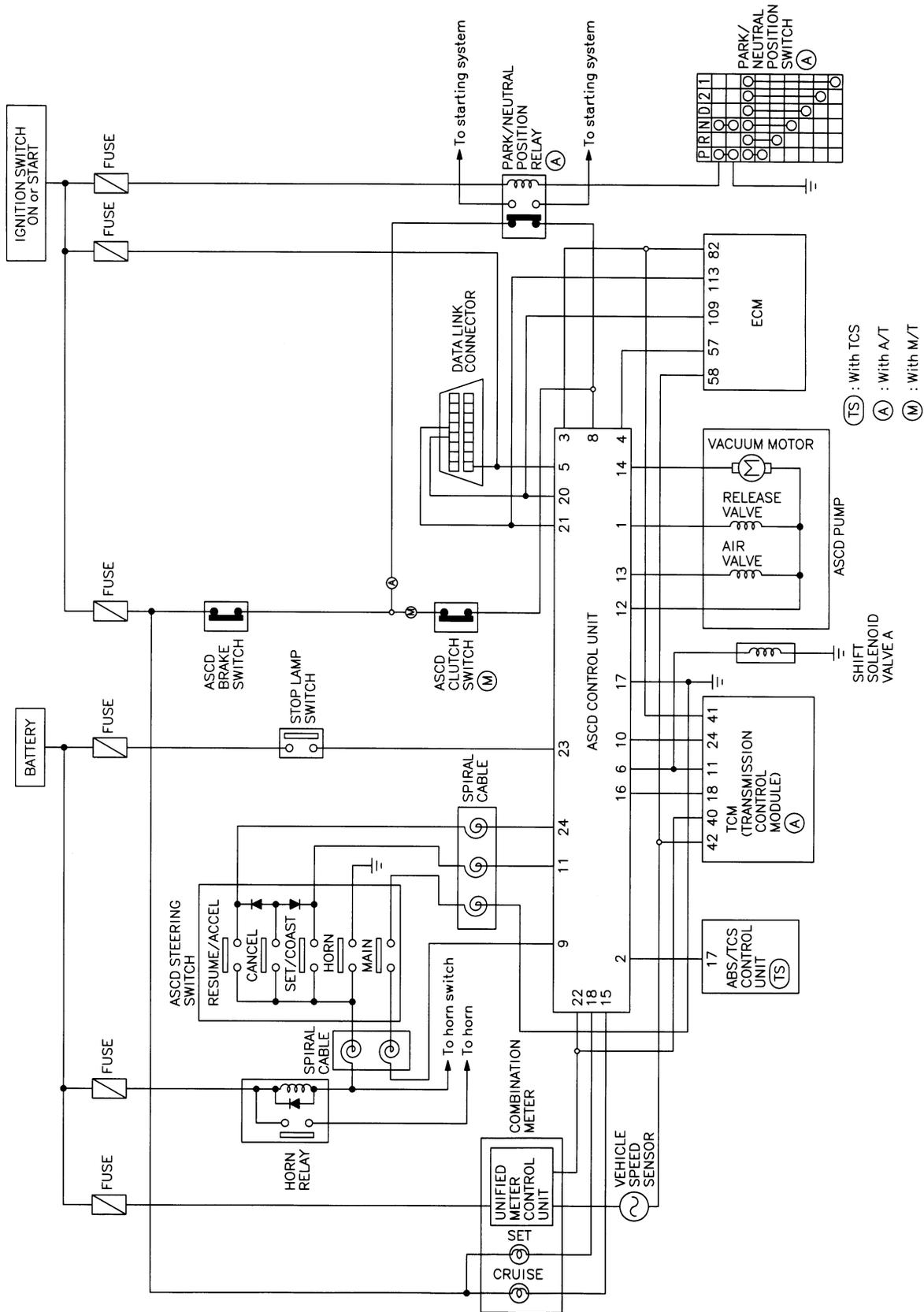
\*2: Set position held.

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Schematic

## Schematic

NFEL0096



MEL643L



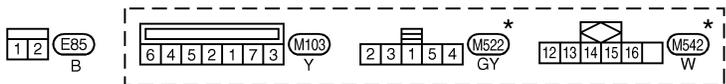
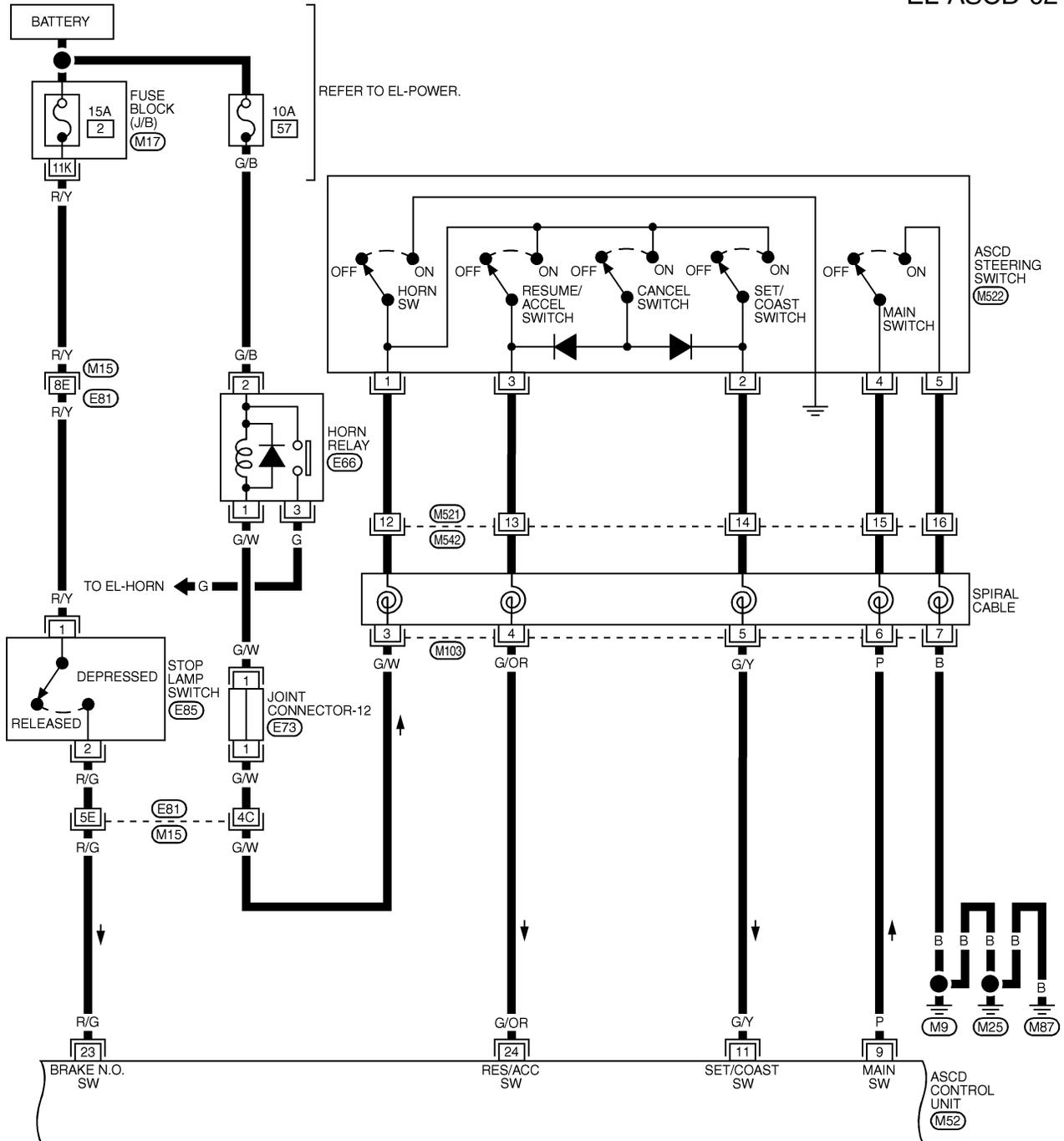
# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD — (Cont'd)

**FIG. 2**

NFEL0097S02

**EL-ASCD-02**



\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF EL SECTION.

REFER TO THE FOLLOWING.

- (M15) -SUPER
- MULTIPLE JUNCTION (SMJ)
- (M17) -FUSE BLOCK-
- JUNCTION BOX (J/B)

MEL726L

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

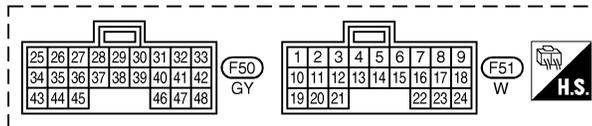
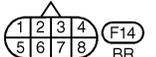
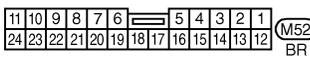
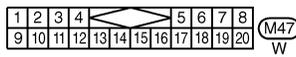
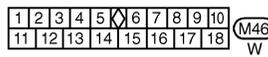
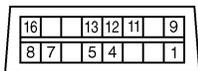
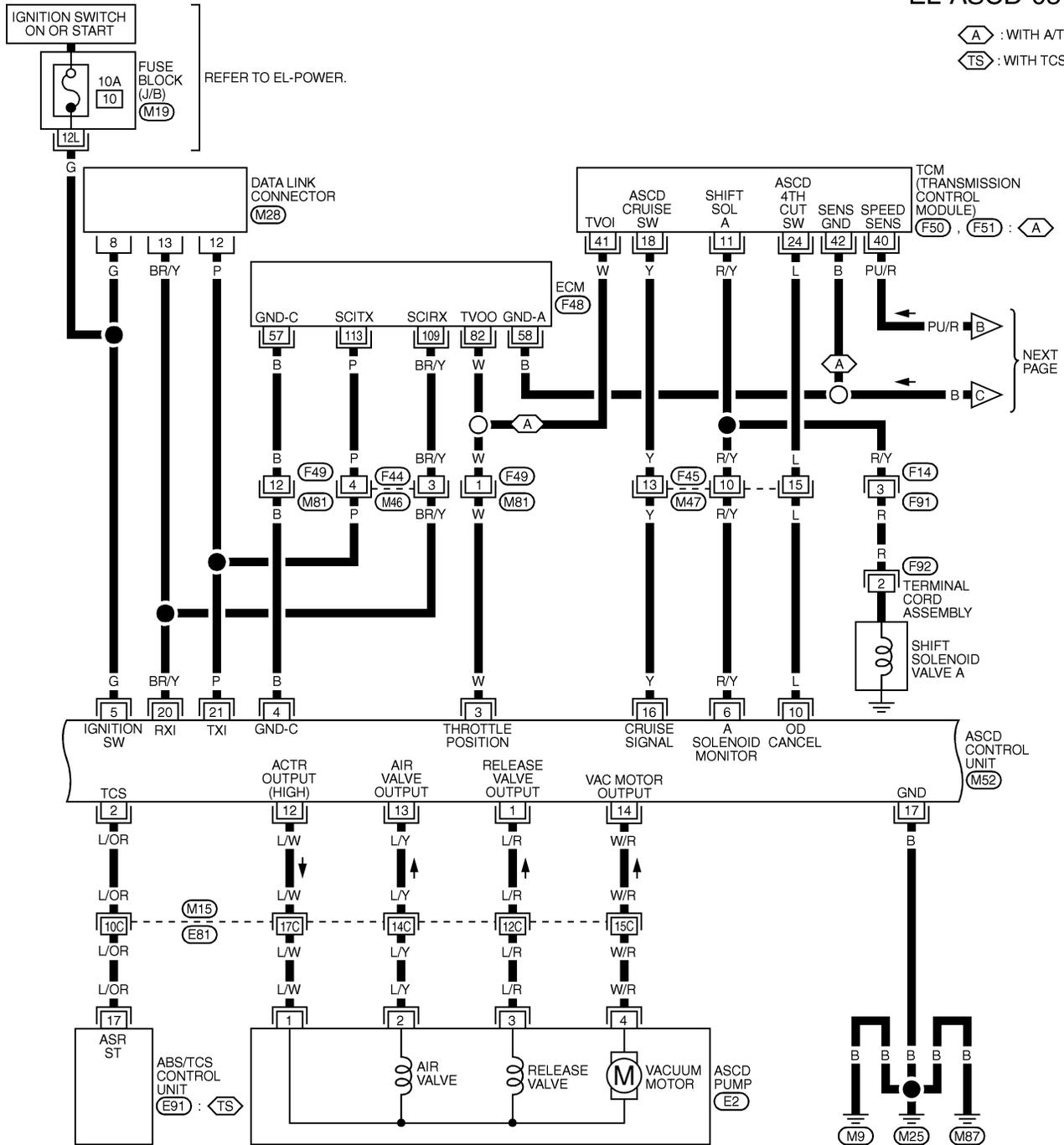
Wiring Diagram — ASCD — (Cont'd)

FIG. 3

NFEL0097S03

## EL-ASCD-03

(A) : WITH AT  
(TS) : WITH TCS



REFER TO THE FOLLOWING.  
(M15) -SUPER  
MULTIPLE JUNCTION (SMJ)  
(M19) -FUSE BLOCK-  
JUNCTION BOX (J/B)  
(E91) , (F48)  
-ELECTRICAL UNITS

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA

SC  
EL  
IDX

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

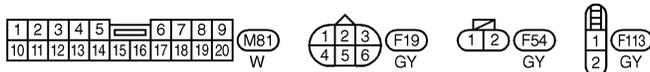
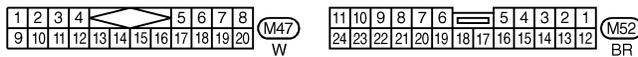
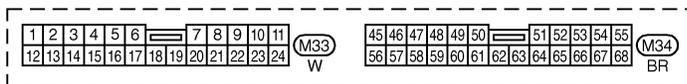
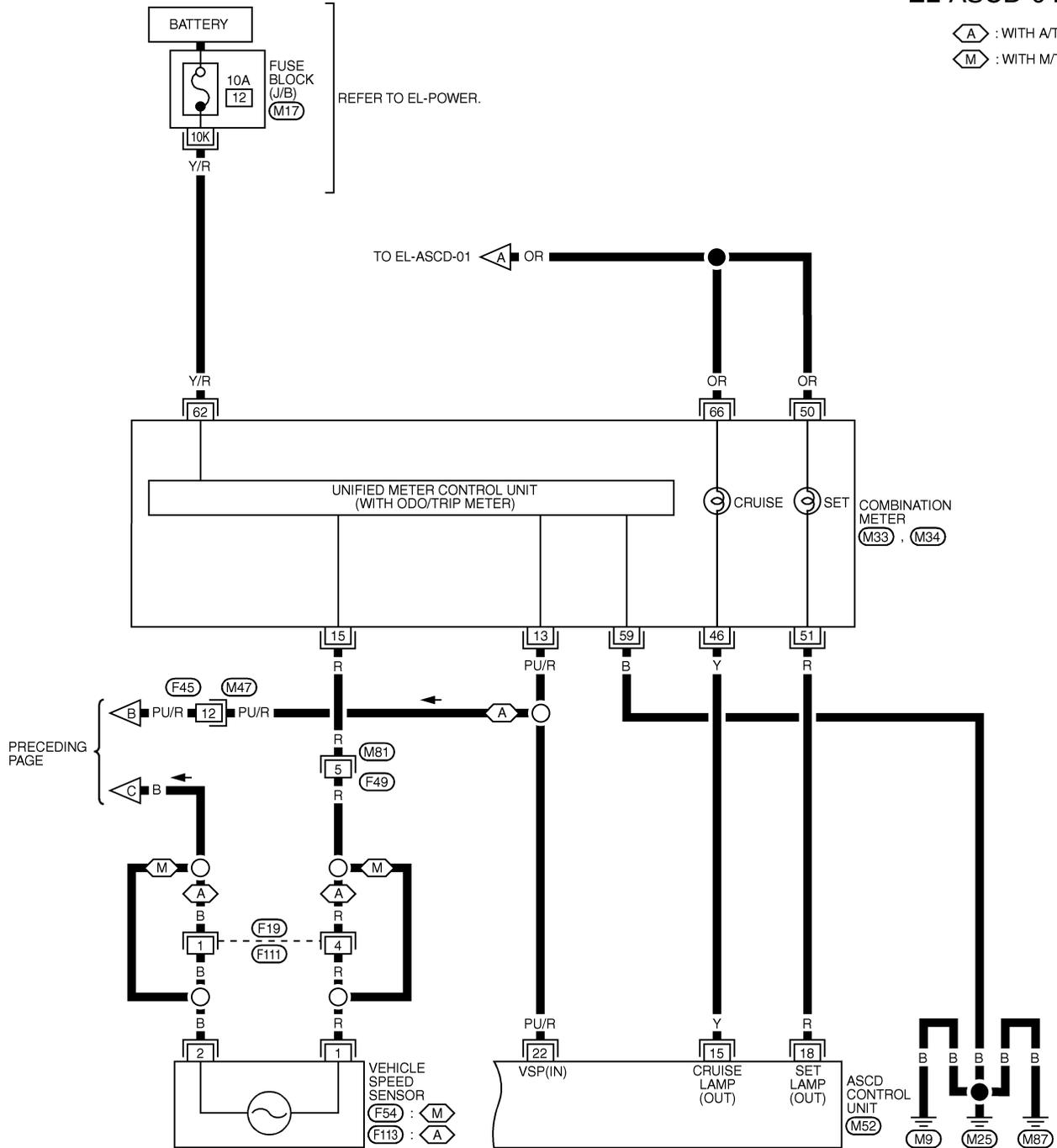
Wiring Diagram — ASCD — (Cont'd)

**FIG. 4**

NFEL0097S04

## EL-ASCD-04

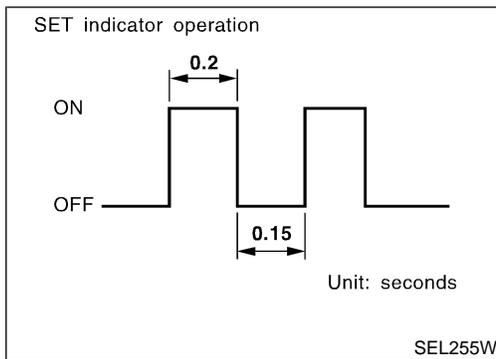
A : WITH A/T  
M : WITH M/T



REFER TO THE FOLLOWING.

(M17) - FUSE BLOCK-  
JUNCTION BOX (J/B)

MEL303K



## Fail-safe System

NFEL0228

### DESCRIPTION

NFEL0228S01

When the fail-safe system senses a malfunction, it deactivates ASCD operation. The SET indicator in the combination meter will then flash.

GI

MA

EM

LC

### MALFUNCTION DETECTION CONDITIONS

NFEL0228S02

Detection conditions	ASCD operation during malfunction detection
<ul style="list-style-type: none"> <li>● ASCD steering (RESUME/ACCEL, CANCEL, SET/COAST) switch is stuck.</li> <li>● Vacuum motor ground circuit or power circuit is open or shorted.</li> <li>● Air valve ground circuit or power circuit is open or shorted.</li> <li>● Release valve ground circuit or power circuit is open or shorted.</li> <li>● Vehicle speed sensor is faulty.</li> <li>● ASCD control unit internal circuit is malfunctioning.</li> </ul>	<ul style="list-style-type: none"> <li>● ASCD is deactivated.</li> <li>● Vehicle speed memory is canceled.</li> </ul>
<ul style="list-style-type: none"> <li>● ASCD brake switch or stop lamp switch is faulty.</li> </ul>	<ul style="list-style-type: none"> <li>● ASCD is deactivated.</li> <li>● Vehicle speed memory is not canceled.</li> </ul>

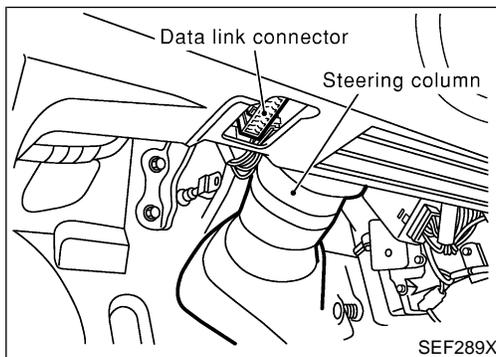
EC

FE

CL

MT

AT



## CONSULT-II Inspection Procedure

NFEL0229

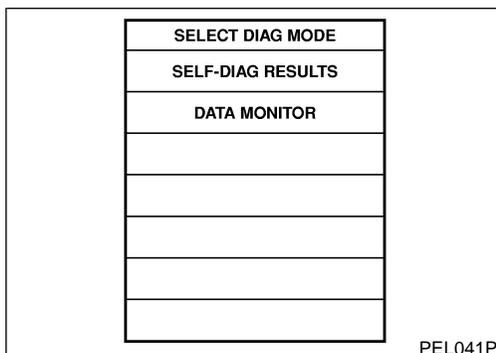
1. Turn ignition switch OFF.
2. Connect "CONSULT-II" to data link connector.

ST

RS

BT

HA



3. Turn ignition switch ON.
4. Turn ASCD main switch ON.
5. Touch START (on CONSULT-II display).
6. Touch ASCD.
7. Touch SELF-DIAG RESULTS.

SC

EL

IDX

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

CONSULT-II Inspection Procedure (Cont'd)

SELF-DIAG RESULTS	
DTC RESULTS	TIME
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	

PFA021B

- Self-diagnostic results are shown on display. Refer to "CONSULT-II self-diagnostic Results" table (EL-200).

SELECT MONITOR ITEM
ALL SIGNALS
SELECTION FROM MENU

PEL043P

8. Touch DATA MONITOR.

DATA MONITOR	
MONITOR	
BRAKE SW	OFF
STOP LAMP SW	ON
SET SW	ON
RESUME/ACC SW	OFF
CANCEL SW	OFF
VHCL SPEED SE	XXX mph
SET VHCL SPD	XXX mph
VACUUM PUMP	XXX msec
AIR VALVE	XXX msec

PEL811S

- Touch START.
- Data monitor results are shown on display. Refer to "CONSULT-II Data Monitor" table (EL-201).

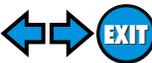
**For further information, read the CONSULT-II Operation Manual.**

## CONSULT-II Self-diagnostic Results

NFEL0230

Diagnostic item	Description	Repair/Check order
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	<ul style="list-style-type: none"> <li>Even if no malfunction is indicated, further testing may be required as far as the customer complains.</li> </ul>	—
POWER SUPPLY-VALVE	<ul style="list-style-type: none"> <li>The power supply circuit for the ASCD pump is open. (An abnormally high voltage is entered.)</li> </ul>	ASCD PUMP CIRCUIT CHECK (EL-210)
VACUUM PUMP	<ul style="list-style-type: none"> <li>The vacuum motor circuit is open or shorted. (An abnormally high or low voltage is entered.)</li> </ul>	ASCD PUMP CIRCUIT CHECK (EL-210)
AIR VALVE	<ul style="list-style-type: none"> <li>The air valve circuit is open or shorted. (An abnormally high or low voltage is entered.)</li> </ul>	ASCD PUMP CIRCUIT CHECK (EL-210)
RELEASE VALVE	<ul style="list-style-type: none"> <li>The release valve circuit is open or shorted. (An abnormally high or low voltage is entered.)</li> </ul>	ASCD PUMP CIRCUIT CHECK (EL-210)
VHCL SP-S/FAILSAFE	<ul style="list-style-type: none"> <li>The vehicle speed sensor is malfunctioning.</li> </ul>	VEHICLE SPEED SENSOR CHECK (EL-209)
CONTROL UNIT	<ul style="list-style-type: none"> <li>The ASCD control unit is malfunctioning.</li> </ul>	Replace ASCD control unit.
BRAKE SW/STOP/L SW	<ul style="list-style-type: none"> <li>The brake switch or stop lamp switch circuit is malfunctioning.</li> </ul>	ASCD BRAKE/STOP LAMP SWITCH CHECK (EL-205)

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)



CONSULT-II Self-diagnostic Results (Cont'd)

Diagnostic item	Description	Repair/Check order	
COMMAND SW	<ul style="list-style-type: none"> <li>The steering switch (set/coast switch, resume/accel switch or cancel switch) is malfunctioning.</li> </ul>	ASCD STEERING SWITCH CHECK (EL-207)	GI
ECM	<ul style="list-style-type: none"> <li>ECM is malfunctioning.</li> </ul>	THROTTLE POSITION SENSOR SIGNAL CHECK (EL-213)	MA

GI

MA

EM

LC

## CONSULT-II Data Monitor

NFEL0231

Monitored item	Description	
BRAKE SW	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the brake switch, and ASCD clutch switch (M/T models) or park/neutral position relay (A/T models).</li> </ul>	EC
AT OD MONITOR	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of A/T O/D (shift solenoid valve A).</li> </ul>	FE
STOP LAMP SW	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the stop lamp switch.</li> </ul>	CL
MAIN SW	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of main switch.</li> </ul>	MT
SET SW	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the set switch.</li> </ul>	AT
RESUME/ACC SW	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the resume/accelerate switch.</li> </ul>	AT
CANCEL SW	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the cancel.</li> </ul>	AT
VHCL SPEED SE	<ul style="list-style-type: none"> <li>The present vehicle speed computed from the vehicle speed sensor signal is displayed.</li> </ul>	AX
SET VHCL SPD	<ul style="list-style-type: none"> <li>The preset vehicle speed is displayed.</li> </ul>	AX
VACUUM PUMP	<ul style="list-style-type: none"> <li>The operation time of the vacuum pump is displayed.</li> </ul>	SU
AIR VALVE	<ul style="list-style-type: none"> <li>The operation time of the air valve is displayed.</li> </ul>	SU
PW SUP-VALVE	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the circuit for the air valve and the release valve.</li> </ul>	BR
CRUISE LAMP	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the set lamp.</li> </ul>	BR
MAIN LAMP	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of cruise lamp.</li> </ul>	ST
A/T-OD CANCEL	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of the OD cancel.</li> </ul>	ST
FAIL SAFE-LOW	<ul style="list-style-type: none"> <li>The fail-safe (LOW) circuit function is displayed.</li> </ul>	RS
FAIL SAFE-SPD	<ul style="list-style-type: none"> <li>The fail-safe (SPEED) circuit function is displayed.</li> </ul>	RS
TCS MONITOR	<ul style="list-style-type: none"> <li>Indicates [ON/OFF] condition of TCS.</li> </ul>	BT
THRTL POS SEN	<ul style="list-style-type: none"> <li>The voltage of throttle position sensor is displayed.</li> </ul>	BT
R/LORD ESTMT	<ul style="list-style-type: none"> <li>The present road/load computed by ASCD control unit is displayed.</li> </ul>	HA

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

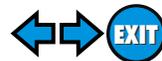
HA

SC

EL

IDX

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)



Trouble Diagnoses

## Trouble Diagnoses SYMPTOM CHART

NFEL0232

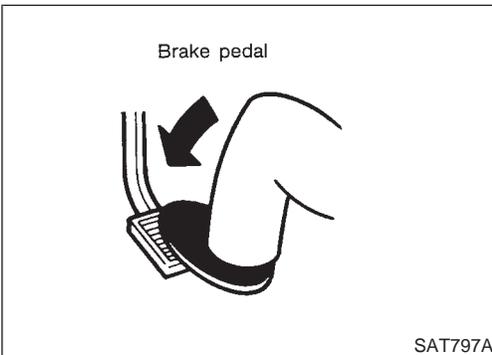
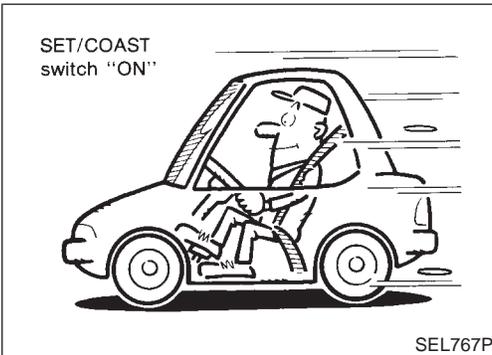
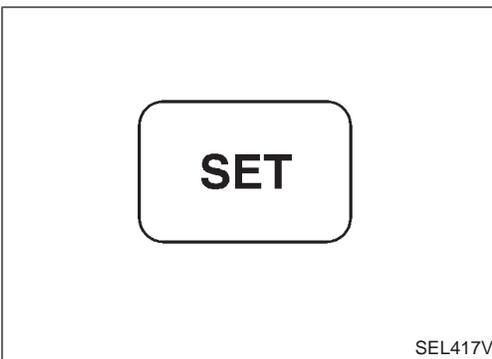
NFEL0232S01

PROCEDURE	Diagnostic procedure						
REFERENCE PAGE (EL- )	203	204	205	207	209	210	212
SYMPTOM	FAIL-SAFE SYSTEM CHECK	POWER SUPPLY AND GROUND CIRCUIT CHECK	ASCD BRAKE/STOP LAMP SWITCH CHECK	ASCD STEERING SWITCH CHECK	VEHICLE SPEED SENSOR CHECK	ASCD PUMP CIRCUIT CHECK	ASCD ACTUATOR/PUMP CHECK
ASCD cannot be set. ("CRUISE" indicator lamp does not ON.)		X		X★3			
ASCD cannot be set. ("SET" indicator lamp does not blink.)			X	X	X		
ASCD cannot be set. ("SET" indicator lamp blinks.★1)	X		X	X	X	X	
Vehicle speed does not decrease after SET/COAST switch has been pressed.				X			X
Vehicle speed does not return to the set speed after RESUME/ACCEL switch has been pressed.★2				X			X
Vehicle speed does not increase after RESUME/ACCEL switch has been pressed.				X			X
System is not released after CANCEL switch (steering) has been pressed.				X			X
Large difference between set speed and actual vehicle speed.					X	X	X
Deceleration is greatest immediately after ASCD has been set.					X	X	X

★1: It indicates that system is in fail-safe. After completing diagnostic procedures, perform "FAIL-SAFE SYSTEM CHECK" (EL-203) to verify repairs.

★2: If vehicle speed is greater than 40 km/h (25 MPH) after system has been released, pressing RESUME/ACCEL switch returns vehicle speed to the set speed previously achieved. However, doing so when the ASCD main switch is turned to "OFF", vehicle speed will not return to the set speed since the memory is canceled.

★3: Check only main switch built-in steering switch.



## FAIL-SAFE SYSTEM CHECK

=NFEL0232S02

1. Turn ignition switch to ON position.
2. Turn ASCD main switch to ON and check if the "set indicator" blinks.

GI

**If the indicator lamp blinks, check the following.**

MA

- ASCD steering switch. Refer to EL-207.

EM

LC

3. Drive the vehicle at more than 40 km/h (25 MPH) and push SET/COAST switch.

EC

**If the indicator lamp blinks, check the following.**

- Vehicle speed sensor. Refer to EL-209.
- ASCD pump circuit. Refer to EL-210.
- Replace control unit.

FE

CL

MT

4. Depress brake pedal slowly (brake pedal should be depressed more than 5 seconds).

AT

**If the indicator lamp blinks, check the following.**

- ASCD brake/stop lamp switch. Refer to EL-205.

AX

SU

BR

5. END. (System is OK.)

ST

RS

BT

HA

SC

EL

IDX

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0232S03

<b>1</b>	<b>CHECK POWER SUPPLY CIRCUIT FOR ASCD CONTROL UNIT</b>	
<p>1. Disconnect ASCD control unit harness connector.</p> <p>2. Turn ignition switch ON.</p> <p>3. Check voltage between ASCD control unit harness connector terminal 5 and ground.</p>		
<p>ASCD control unit connector (M52)</p>		
<b>Does battery voltage exist?</b>		
SEL256W		
<b>Yes or No</b>		
Yes	▶	GO TO 2.
No	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 10 located in the fuse block)</li> <li>● Harness for open or short</li> </ul>

<b>2</b>	<b>CHECK GROUND CIRCUIT FOR ASCD CONTROL UNIT</b>	
<p>Check continuity between ASCD control unit harness connector terminal 17 and body ground.</p>		
<p>ASCD control unit connector (M52)</p>		
<b>Does continuity exist?</b>		
SEL257W		
<b>Yes or No</b>		
Yes	▶	Power supply and ground circuit is OK.
No	▶	Repair harness.

## ASCD BRAKE/STOP LAMP SWITCH CHECK

=NFEL0232S06

<b>1</b>	<b>CHECK ASCD BRAKE SWITCH CIRCUIT</b>							
<p> <b>With CONSULT-II</b> See "BRAKE SW" in "DATA MONITOR" mode.</p>		<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">DATA MONITOR</th> </tr> <tr> <th style="text-align: center;">MONITOR</th> <th style="text-align: center;"> </th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">BRAKE SW</td> <td style="text-align: center;">OFF</td> </tr> </tbody> </table> <p><b>A/T models</b> When brake pedal is depressed or A/T selector lever is in "N" or "P" range: <b>BRAKE SW OFF</b> When brake pedal is released and A/T selector lever is not in "N" or "P" range: <b>BRAKE SW ON</b></p> <p><b>M/T models</b> When clutch pedal or brake pedal is depressed: <b>BRAKE SW OFF</b> When clutch pedal and brake pedal are released: <b>BRAKE SW ON</b></p> <p style="text-align: right;">SEL286W</p>	DATA MONITOR		MONITOR		BRAKE SW	OFF
DATA MONITOR								
MONITOR								
BRAKE SW	OFF							
<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Disconnect ASCD control unit harness connector.</li> <li>2. Turn ignition switch ON.</li> <li>3. Check voltage between ASCD control unit harness connector terminal 8 and ground.</li> </ol>		<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>DISCONNECT H.S.</p> <p>ASCSD control unit connector (M52)</p> <p>G/R: M/T models G/B: A/T models</p> </div> <div> <p>When brake or clutch pedal is depressed (M/T), or when brake pedal is depressed or A/T selector lever is in "N" or "P" range (A/T): <b>Apporox. 0V</b> When brake and clutch pedal are released (M/T), or when both brake pedal is released and A/T selector lever is not in "N" or "P" range (A/T): <b>Battery voltage should exist.</b></p> <p style="text-align: right;">SEL258W</p> </div> </div>						
<b>OK or NG</b>								
OK	▶	GO TO 2.						
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● ASCD brake switch Refer to "Electrical Component Inspection" (EL-214).</li> <li>● Park/neutral position switch (A/T models) Refer to "Electrical Component Inspection" (EL-214).</li> <li>● Park/neutral position relay (A/T models)</li> <li>● ASCD clutch switch (M/T models) Refer to "Electrical Component Inspection" (EL-214).</li> <li>● Harness for open or short</li> </ul>						

GI  
MA  
EM  
LC  
EC  
FE  
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AT  
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BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

<b>2</b>	<b>CHECK STOP LAMP SWITCH CIRCUIT</b>						
<p> <b>With CONSULT-II</b> See "STOP LAMP" in "DATA MONITOR" mode.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr><th colspan="2" style="text-align: center; padding: 2px;">DATA MONITOR</th></tr> <tr><th style="width: 50%; text-align: center; padding: 2px;">MONITOR</th><th style="width: 50%;"></th></tr> <tr><td style="padding: 2px;">STOP LAMP SW</td><td style="text-align: center; padding: 2px;">OFF</td></tr> </table> </div> <div style="margin-left: 20px;"> <p>When brake pedal is released: <b>STOP LAMP SW OFF</b></p> <p>When brake pedal is depressed: <b>STOP LAMP SW ON</b></p> </div> </div> <p style="text-align: right; font-size: small;">SEL287W</p>		DATA MONITOR		MONITOR		STOP LAMP SW	OFF
DATA MONITOR							
MONITOR							
STOP LAMP SW	OFF						
<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Disconnect ASCD control unit harness connector.</li> <li>2. Check voltage between ASCD control unit harness connector terminal 23 and ground.</li> </ol> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="margin-bottom: 10px;"> <p style="font-size: small;">ASCDC control unit connector (M52)</p> </div> <div style="margin-left: 20px;"> <p>Voltage [V]:</p> <p>Stop lamp switch: Depressed <b>Approx. 12</b></p> <p>Stop lamp switch: Released <b>0</b></p> </div> </div> <div style="text-align: center; margin-top: 10px;"> </div> <p style="font-size: small;">Refer to wiring diagram in EL-196.</p> <p style="text-align: right; font-size: small;">SEL259W</p>							
<b>OK or NG</b>							
OK	▶ ASCD brake/stop lamp switch is OK.						
NG	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>● 15A fuse [No. 2, located in the fuse block (J/B)]</li> <li>● Harness for open or short between ASCD control unit and stop lamp switch</li> <li>● Harness for open or short between fuse and stop lamp switch</li> <li>● Stop lamp switch</li> </ul> <p style="font-size: small;">Refer to "Electrical Component Inspection" (EL-214).</p>						

## ASCD STEERING SWITCH CHECK

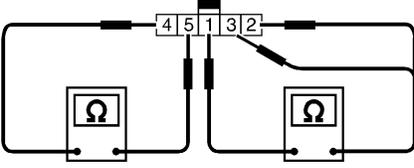
=NFEL0232S07

<b>1</b>	<b>CHECK ASCD STEERING SWITCH CIRCUIT FOR ASCD CONTROL UNIT</b>	GI MA EM LC EC FE CL MT AT AX SU BR																																							
<p><b>With CONSULT-II</b> See "MAIN SW", "RESUME/ACC SW", "SET SW" and "CANCEL SW" in "DATA MONITOR" mode.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">DATA MONITOR</th> </tr> <tr> <th style="text-align: center;">MONITOR</th> <th style="text-align: center;"></th> </tr> </thead> <tbody> <tr> <td>MAIN SW</td> <td style="text-align: center;">OFF</td> </tr> <tr> <td>SET SW</td> <td style="text-align: center;">OFF</td> </tr> <tr> <td>RESUME/ACC SW</td> <td style="text-align: center;">OFF</td> </tr> <tr> <td>CANCEL SW</td> <td style="text-align: center;">OFF</td> </tr> </tbody> </table> <div style="margin-left: 200px; margin-top: 20px;"> <p>MAIN SW, RESUME/ACC SW, SET SW and CANCEL SW When switch is pressed: <b>ON</b> When switch is released: <b>OFF</b></p> </div> <p style="text-align: right;">SEL288W</p>			DATA MONITOR		MONITOR		MAIN SW	OFF	SET SW	OFF	RESUME/ACC SW	OFF	CANCEL SW	OFF																											
DATA MONITOR																																									
MONITOR																																									
MAIN SW	OFF																																								
SET SW	OFF																																								
RESUME/ACC SW	OFF																																								
CANCEL SW	OFF																																								
<p><b>Without CONSULT-II</b> Check voltage between ASCD control unit harness connector terminals and ground.</p> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p style="font-size: small;">DISCONNECT H.S. ASCD control unit connector (M52)</p> </div> <div style="flex: 2; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminal No.</th> <th colspan="2">Switch condition</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>Pressed</th> <th>Released</th> </tr> </thead> <tbody> <tr> <td>MAIN SW</td> <td>9</td> <td>Ground</td> <td>0V</td> <td>Approx. 9V</td> </tr> <tr> <td>SET/COAST SW</td> <td>11</td> <td>Ground</td> <td>12V</td> <td>0V</td> </tr> <tr> <td>RESUME/ACC SW</td> <td>24</td> <td>Ground</td> <td>12V</td> <td>0V</td> </tr> <tr> <td rowspan="2">CANCEL SW</td> <td>11</td> <td>Ground</td> <td>12V</td> <td>0V</td> </tr> <tr> <td>24</td> <td>Ground</td> <td>12V</td> <td>0V</td> </tr> </tbody> </table> <p style="text-align: right;">SEL260W</p> </div> </div> <p style="margin-top: 10px;">Refer to wiring diagram in EL-196.</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">ASCD steering switch is OK.</td> </tr> <tr> <td style="padding: 5px;">NG</td> <td style="text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">GO TO 2.</td> </tr> </table>				Terminal No.		Switch condition		(+)	(-)	Pressed	Released	MAIN SW	9	Ground	0V	Approx. 9V	SET/COAST SW	11	Ground	12V	0V	RESUME/ACC SW	24	Ground	12V	0V	CANCEL SW	11	Ground	12V	0V	24	Ground	12V	0V	OK	▶	ASCD steering switch is OK.	NG	▶	GO TO 2.
	Terminal No.			Switch condition																																					
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	24	Ground	12V	0V																																					
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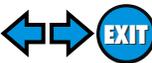
<b>2</b>	<b>CHECK POWER SUPPLY FOR ASCD STEERING SWITCH</b>	ST RS BT HA SC
<b>Does horn work?</b>		
Yes	▶	GO TO 3.
No	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>10A fuse (No. 57, located in the relay box)</li> <li>Horn relay</li> <li>Harness for open or short</li> </ul>

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK ASCD STEERING SWITCH</b>																																						
<p>1. Disconnect ASCD steering switch.                  2. Check continuity between terminals by pushing each switch.</p>																																							
																																							
ASCD steering switch (M522)																																							
		<table border="1" style="border-collapse: collapse; width: 100%;"> <thead> <tr> <th rowspan="2">Switch</th> <th colspan="5">Terminal</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>MAIN</td> <td></td> <td></td> <td></td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>RESUME/ACCEL</td> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">○</td> <td></td> <td></td> </tr> <tr> <td>SET/COAST</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CANCEL</td> <td style="text-align: center;">○</td> <td style="text-align: center;">▶</td> <td style="text-align: center;">○</td> <td></td> <td></td> </tr> </tbody> </table>			Switch	Terminal					1	2	3	4	5	MAIN				○	○	RESUME/ACCEL	○		○			SET/COAST	○	○				CANCEL	○	▶	○		
Switch	Terminal																																						
	1	2	3	4	5																																		
MAIN				○	○																																		
RESUME/ACCEL	○		○																																				
SET/COAST	○	○																																					
CANCEL	○	▶	○																																				
SEL261W																																							
<b>OK or NG</b>																																							
OK	▶	Check harness for open or short between ASCD steering switch and ASCD control unit.																																					
NG	▶	Replace ASCD steering switch.																																					

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)



Trouble Diagnoses (Cont'd)

## VEHICLE SPEED SENSOR CHECK

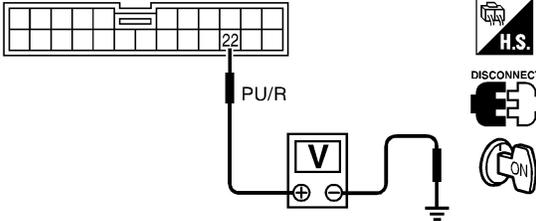
=NFEL0232S08

<b>1</b>	<b>CHECK SPEEDOMETER OPERATION</b>	
Does speedometer operate normally?		
Yes	▶	GO TO 2.
No	▶	Check speedometer and vehicle speed sensor circuit. Refer to EL-115.

GI  
MA  
EM

<b>2</b>	<b>CHECK VEHICLE SPEED INPUT</b>							
<p> <b>With CONSULT-II</b> See "VHCL SPEED SE" in "DATA MONITOR" mode while driving.</p> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>This test may be conducted with the drive wheels lifted in the shop or by driving the vehicle. If a road test is excepted to be easier, it is unnecessary to lift the vehicle.</li> <li>Always drive vehicle in safe speed and manner according to traffic conditions and obey all traffic laws.</li> </ul>								
<div style="display: flex; align-items: center; justify-content: space-around;">  <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>VHCL SPEED SE</td><td>0 km/h</td></tr> </table> <div style="text-align: right;"> <p><b>Is actual vehicle speed indicated?</b></p> </div> </div>			DATA MONITOR		MONITOR		VHCL SPEED SE	0 km/h
DATA MONITOR								
MONITOR								
VHCL SPEED SE	0 km/h							
SEL289W								

LC  
EC  
FE  
CL  
MT  
AT  
AX

<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Apply wheel chocks and jack up drive wheel.</li> <li>Disconnect ASCD control unit harness connector.</li> <li>Check voltage between control unit terminal 22 and ground with turning drive wheel slowly by hand.</li> </ol>		
<div style="display: flex; align-items: center; justify-content: space-around;"> <div style="text-align: center;"> <p>ASCD control unit connector (M52)</p>  </div> <div style="text-align: center;">      </div> <div style="text-align: right;"> <p><b>Does voltage pointer deflect?</b></p> </div> </div>		
SEL263W		
Refer to wiring diagram in EL-195.		
<b>Yes or No</b>		

SU  
BR  
ST  
RS  
BT  
HA

Yes	▶	Vehicle speed sensor is OK.
No	▶	Check harness for open or short between ASCD control unit terminal 22 and combination meter terminal 13.

SC

EL

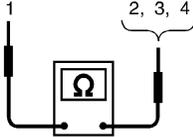
IDX

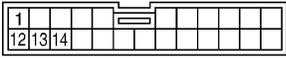
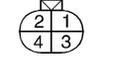
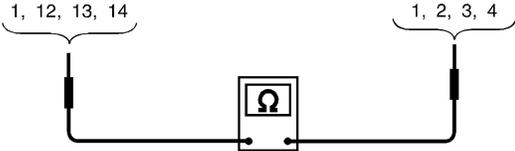
# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

## ASCD PUMP CIRCUIT CHECK

NFEL0232S09

<b>1</b>	<b>CHECK ASCD PUMP</b>												
<p>1. Disconnect ASCD pump connector.                  2. Measure resistance between ASCD pump terminals 1 and 2, 3, 4.</p> <p style="text-align: center;">ASCD pump connector (E2)</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;">  <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%;">Terminals</th> <th style="width: 70%;">Resistance Ω</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="vertical-align: middle;">1</td> <td>2</td> <td>Approx. 65</td> </tr> <tr> <td>3</td> <td>Approx. 65</td> </tr> <tr> <td>4</td> <td>Approx. 3</td> </tr> </tbody> </table> </div> <p style="text-align: right; margin-top: 10px;">SEL262W</p> <p style="text-align: center; margin-top: 10px;">Refer to wiring diagram in EL-197.</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>					Terminals	Resistance Ω	1	2	Approx. 65	3	Approx. 65	4	Approx. 3
	Terminals	Resistance Ω											
1	2	Approx. 65											
	3	Approx. 65											
	4	Approx. 3											
OK		▶	GO TO 2.										
NG		▶	Replace ASCD pump.										

<b>2</b>	<b>CHECK ASCD PUMP CIRCUIT</b>																			
<p>1. Disconnect ASCD control unit harness connector.                  2. Check harness for open or short between ASCD control unit and ASCD pump.</p> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">    </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">   </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <p>ASCD control unit connector (M52)</p> <p>ASCD pump connector (E2)</p> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;">   </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;">  <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2" style="width: 20%;">Circuit</th> <th colspan="2" style="width: 60%;">Terminal</th> </tr> <tr> <th style="width: 20%;">ASCD control unit</th> <th style="width: 20%;">ASCD pump</th> </tr> </thead> <tbody> <tr> <td>ASCD pump power supply</td> <td>12</td> <td>1</td> </tr> <tr> <td>Air valve</td> <td>13</td> <td>2</td> </tr> <tr> <td>Release valve</td> <td>1</td> <td>3</td> </tr> <tr> <td>Vacuum motor</td> <td>14</td> <td>4</td> </tr> </tbody> </table> </div> <p style="text-align: center; margin-top: 10px;"><b>Continuity should exist.</b></p> <p style="text-align: right; margin-top: 10px;">SEL269W</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>				Circuit	Terminal		ASCD control unit	ASCD pump	ASCD pump power supply	12	1	Air valve	13	2	Release valve	1	3	Vacuum motor	14	4
Circuit	Terminal																			
	ASCD control unit	ASCD pump																		
ASCD pump power supply	12	1																		
Air valve	13	2																		
Release valve	1	3																		
Vacuum motor	14	4																		
OK		▶	GO TO 3.																	
NG		▶	Repair harness.																	

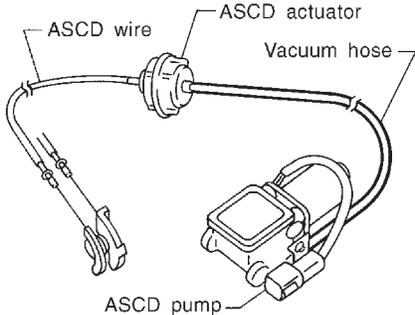
3	CHECK ASCD PUMP POWER SUPPLY								
	<p> <b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Jack up the drive wheels.</li> <li>2. See "PW SUP-VALVE" in "DATA MONITOR" mode.</li> <li>3. Maintain the conditions below.                             <ul style="list-style-type: none"> <li>● Vehicle speed is more than 40 km/h (25 MPH).</li> <li>● Main switch (CRUISE lamp) is ON.</li> <li>● Set/coast switch (SET lamp) is ON.</li> </ul> </li> </ol> <div style="display: flex; align-items: center; justify-content: center; margin: 10px 0;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> </thead> <tbody> <tr> <td style="padding: 2px;">PW SUP-VALVE</td> <td style="padding: 2px;">OFF</td> </tr> </tbody> </table> <div style="margin-left: 20px;"> <p><b>"PW SUP-VALVE" should be ON.</b></p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL290W</p>	DATA MONITOR		MONITOR		PW SUP-VALVE	OFF	GI	MA
DATA MONITOR									
MONITOR									
PW SUP-VALVE	OFF								
	<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Jack-up the drive wheels.</li> <li>2. Maintain the conditions below.                             <ul style="list-style-type: none"> <li>● Vehicle speed is more than 40 km/h (25 MPH).</li> <li>● Main switch (CRUISE lamp) is ON.</li> <li>● Set/coast switch (SET lamp) is ON.</li> </ul> </li> </ol> <p>Check voltage between ASCD control unit harness connector terminal 12 and ground.</p> <div style="display: flex; align-items: center; justify-content: center; margin: 10px 0;"> </div> <p style="text-align: center; margin: 5px 0;">ASCDC control unit connector (M52)</p> <div style="display: flex; align-items: center; justify-content: center; margin: 10px 0;"> <div style="margin-left: 20px;"> <p><b>Battery voltage should exist.</b></p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL381W</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>	MT	AT						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">ASCDC pump power supply is OK.</td> </tr> <tr> <td style="padding: 5px;">NG</td> <td style="text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">Replace ASCDC control unit.</td> </tr> </table>	OK	▶	ASCDC pump power supply is OK.	NG	▶	Replace ASCDC control unit.	AX	SU
OK	▶	ASCDC pump power supply is OK.							
NG	▶	Replace ASCDC control unit.							
		BR	ST						
		RS	BT						
		HA	SC						
		EL	IDX						

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

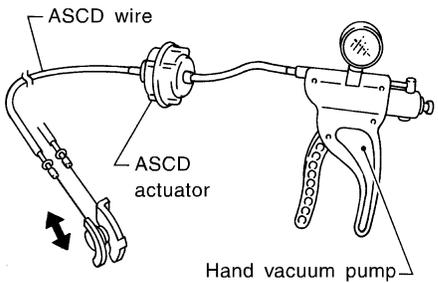
Trouble Diagnoses (Cont'd)

## ASCD ACTUATOR/PUMP CHECK

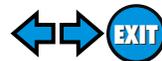
=NFEL0232S10

<b>1</b>	<b>CHECK VACUUM HOSE</b>	
<p>Check vacuum hose (between ASCD actuator and ASCD pump) for breakage, cracks or fracture.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">MEL402G</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 2.
NG	▶	Repair or replace hose.

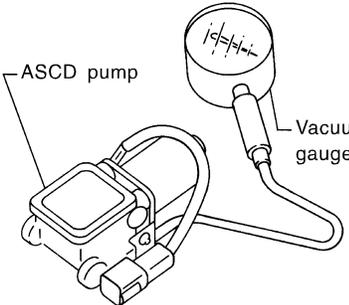
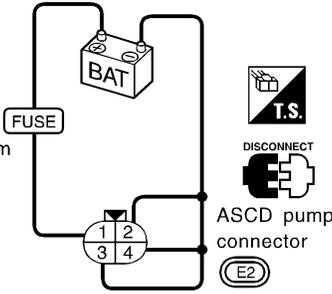
<b>2</b>	<b>CHECK ASCD WIRE</b>	
<p>Check wire for improper installation, rust formation or breaks.</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 3.
NG	▶	Repair or replace wire. Refer to "ASCD Wire Adjustment" (EL-215).

<b>3</b>	<b>CHECK ASCD ACTUATOR</b>	
<p>1. Disconnect vacuum hose from ASCD actuator. 2. Connect the hose of hand vacuum pump to ASCD actuator.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">  </div> <div style="width: 55%;"> <p>Apply -40 kPa (-0.41 kg/cm<sup>2</sup>, -5.8 psi) vacuum to ASCD actuator with hand vacuum pump. <b>ASCD wire should move to pull throttle drum.</b> Wait 10 seconds and check for decrease in vacuum pressure.</p> <p style="text-align: center;"><b>Vacuum pressure decrease:</b> Less than 2.7 kPa (0.028 kg/cm<sup>2</sup>, 0.39 psi)</p> <p style="text-align: right;">SEL264W</p> </div> </div> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 4.
NG	▶	Replace ASCD actuator.

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)



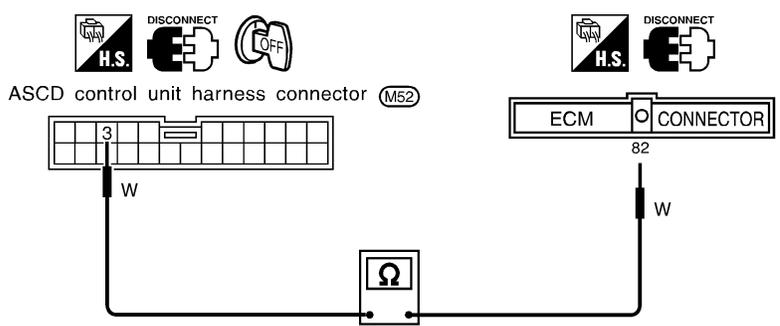
Trouble Diagnoses (Cont'd)

<b>4</b>	<b>CHECK ASCD PUMP</b>	<ol style="list-style-type: none"> <li>1. Disconnect vacuum hose from ASCD pump and ASCD pump connector.</li> <li>2. If necessary remove ASCD pump.</li> <li>3. Connect vacuum gauge to ASCD pump.</li> <li>4. Apply 12V direct current to ASCD pump and check operation.</li> </ol> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 10px;"> <div style="width: 30%;">  <p>ASCD pump</p> <p>Vacuum gauge</p> </div> <div style="width: 30%;">  <p>FUSE</p> <p>BAT</p> <p>T.S.</p> <p>DISCONNECT</p> <p>ASCD pump connector</p> <p>E2</p> </div> <div style="width: 35%;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">12V direct current supply terminals</th> <th rowspan="2">Operation</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td>Air valve</td> <td rowspan="3">1</td> <td>2</td> <td>Close</td> </tr> <tr> <td>Release valve</td> <td>3</td> <td>Close</td> </tr> <tr> <td>Vacuum motor</td> <td>4</td> <td>Operate</td> </tr> </tbody> </table> <p><b>A vacuum pressure of at least -40 kPa (-0.41 kg/cm<sup>2</sup>, -5.8 psi) should be generated.</b></p> <p style="text-align: right;">SEL265W</p> </div> </div> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>		12V direct current supply terminals		Operation	(+)	(-)	Air valve	1	2	Close	Release valve	3	Close	Vacuum motor	4	Operate
	12V direct current supply terminals			Operation														
	(+)	(-)																
Air valve	1	2	Close															
Release valve		3	Close															
Vacuum motor		4	Operate															
OK	▶	INSPECTION END																
NG	▶	Replace ASCD pump.																

GI  
MA  
EM  
LC  
EC  
FE  
CL

## THROTTLE POSITION SENSOR SIGNAL CHECK

NFEL0232S11

<b>1</b>	<b>CHECK THROTTLE POSITION SENSOR SIGNAL CIRCUIT</b>	<ol style="list-style-type: none"> <li>1. Disconnect ECM harness connector and ASCD control unit harness connector.</li> <li>2. Check continuity between ECM terminal 82 and ASCD control unit terminal 3.</li> </ol> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div style="width: 45%;">  <p>ASCD control unit harness connector (M52)</p> <p>ECM CONNECTOR</p> <p>W</p> <p>W</p> <p>Ω</p> </div> <div style="width: 50%; text-align: center;"> <p><b>Continuity should exist.</b></p> <p style="text-align: right;">SEL268W</p> </div> </div> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>
OK	▶	Refer to "TROUBLE DIAGNOSIS FOR INTERMITTENT INCIDENT" in EC section. (EC-156)
NG	▶	Repair harness.

MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT

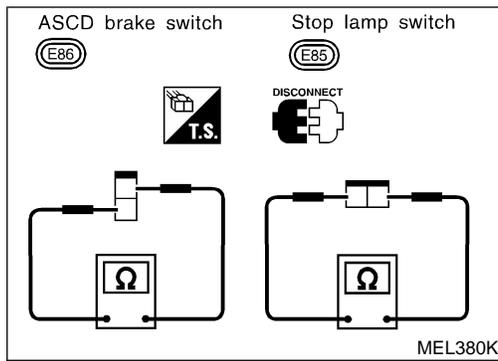
HA  
SC

EL

IDX

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

## Electrical Component Inspection



## Electrical Component Inspection

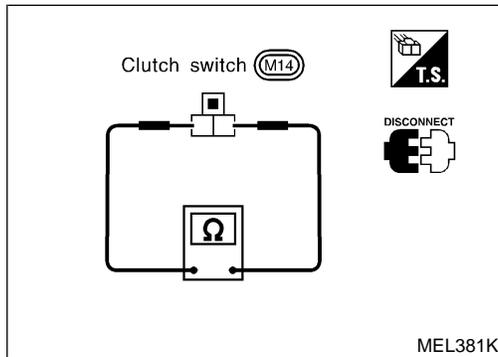
### ASCD BRAKE SWITCH AND STOP LAMP SWITCH

=NFEL0100

NFEL0100S02

Condition	Continuity	
	ASCD brake switch	Stop lamp switch
When brake pedal is depressed	No	Yes
When brake pedal is released	Yes	No

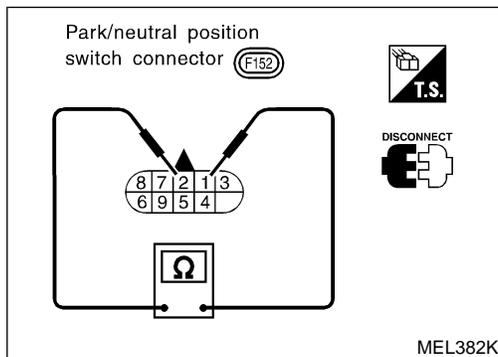
**Check each switch after adjusting brake pedal — refer to BR section.**



### ASCD CLUTCH SWITCH (FOR M/T MODELS)

NFEL0100S04

Condition	Continuity
When clutch pedal is depressed	No
When clutch pedal is released	Yes



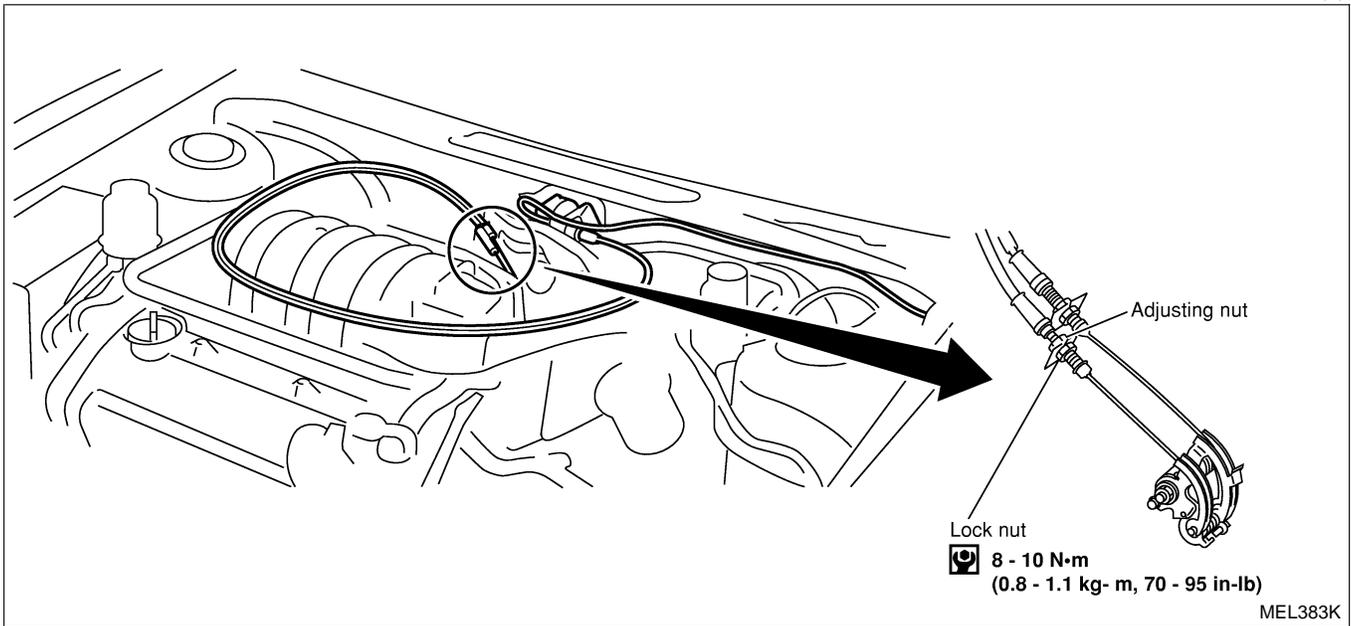
### PARK/NEUTRAL POSITION SWITCH (FOR A/T MODELS)

NFEL0100S03

A/T selector lever position	Continuity
	Between terminals 1 and 2
"P"	Yes
"N"	Yes
Except "P" and "N"	No

## ASCD Wire Adjustment

NFEL0101

**CAUTION:**

- Be careful not to twist ASCD wire when removing it.
  - Do not tense ASCD wire excessively during adjustment.
- Adjust the tension of ASCD wire in the following manner.
1. Loosen lock nut and adjusting nut.
  2. Make sure that accelerator wire is properly adjusted. Refer to FE-3, "ACCELERATOR CONTROL SYSTEM".
  3. Tighten adjusting nut just until throttle drum starts to move.
  4. Loosen adjusting nut again 1/2 to 1 turn.
  5. Tighten lock nut.

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## System Description

NFEL0191

Power is supplied at all times

- from 40A fusible link (letter i, located in the fuse and fusible link box)
- to circuit breaker terminal 1
- through circuit breaker terminal 2
- to power window relay terminal 3.

With ignition switch in ON or START position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to power window relay terminal 2, and

Ground is supplied to power window relay terminal 1

- through body grounds M9, M25 and M87.

The power window relay is energized and power is supplied

- through power window relay terminal 5
- to power window main switch terminal 12,
- to front power window switch terminal 5,
- to rear power window switch LH and RH terminals 5.

### MANUAL OPERATION

NFEL0191S01

#### Front Door LH

NFEL0191S0101

Ground is supplied

- to power window main switch terminal 19
- through body grounds M9, M25 and M87.

#### WINDOW UP

When the front LH switch in the power window main switch is pressed in the up position, power is supplied

- to front power window regulator LH terminal 1
- through power window main switch terminal 2.

Ground is supplied

- to front power window regulator LH terminal 3
- through power window main switch terminal 1.

Then, the motor raises the window until the switch is released.

#### WINDOW DOWN

When the LH switch in the power window main switch is pressed in the down position, power is supplied

- to front power window regulator LH terminal 3
- through power window main switch terminal 1.

Ground is supplied

- to front power window regulator LH terminal 1
- through power window main switch terminal 2.

Then, the motor lowers the window until the switch is released.

#### Front Door RH

NFEL0191S0102

Ground is supplied

- to power window main switch terminal 19
- through body grounds M9, M25 and M87.

#### NOTE:

Numbers in parentheses are terminal numbers, when power window switch is pressed in the UP and DOWN positions respectively.

#### MAIN SWITCH OPERATION

Power is supplied

- through power window main switch (4, 3)
- to front power window switch RH (3, 4).

The subsequent operation is the same as the front power window switch RH operation.

#### FRONT POWER WINDOW SWITCH RH OPERATION

Power is supplied

- through front power window switch RH (1, 2)
- to front power window regulator RH (1, 2).

Ground is supplied

- to front power window regulator RH (2, 1)
- through front power window switch RH (2, 1)
- to front power window switch RH (4, 3)
- through power window main switch (3, 4).

Then, the motor raises or lowers the window until the switch is released.

## Rear Door

Rear door windows will raise and lower in the same manner as front door RH window.

NFEL0191S0103

## AUTO OPERATION

The power window AUTO feature enables the driver to open or close the driver's window without holding the window switch in the down or up position.

The AUTO feature only operates on the driver's window.

NFEL0191S02

## POWER WINDOW LOCK

The power window lock is designed to lock operation of all windows except for driver's door window.

When the lock switch is pressed to lock position, ground of the front and rear power window switches in the power window main switch is disconnected. This prevents the power window motors from operating.

NFEL0191S03

## RETAINED POWER OPERATION

When the ignition switch is turned to OFF position from ON or START position, power is supplied for 45 seconds

- to power window relay terminal 2
- from smart entrance control unit terminal 5.

Ground is always supplied

- to power window relay terminal 1
- through body grounds M9, M25 and M87.

When power and ground are supplied, the power window relay continues to be energized, and the power window can be operated.

The retained power operation is canceled when the driver or passenger side door is opened.

NFEL0191S04

## INTERRUPTION DETECTION FUNCTION

Power window main switch monitors the power window regulator motor operation and the power window position (full closed or other) for driver's power window by the signals from encoder and limit switch in front power window regulator (driver's side).

When power window main switch detects interruption during the following close operation in the driver's side door,

- automatic close operation when ignition switch is in the "ON" position
- automatic close operation during retained power operation
- manual close operation during retained power operation

power window main switch controls driver's power window regulator motor for open and the power window will be lowered about 150 mm (5.91 in).

NFEL0191S05

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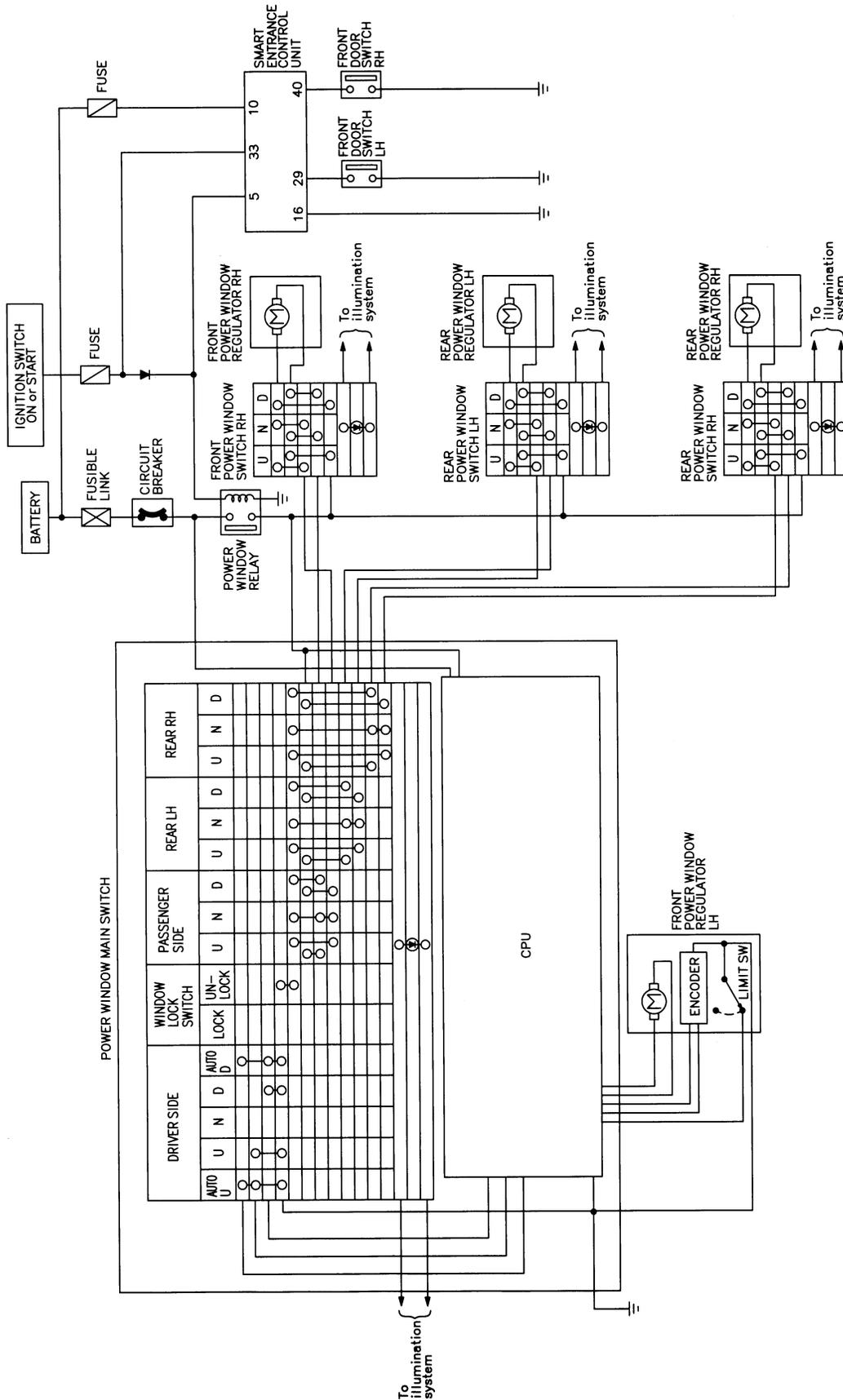
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# POWER WINDOW

Schematic

## Schematic

NFEL0103



MEL304K

# POWER WINDOW

Wiring Diagram — WINDOW —

## Wiring Diagram — WINDOW —

NFEL0104

EL-WINDOW-01

GI

MA

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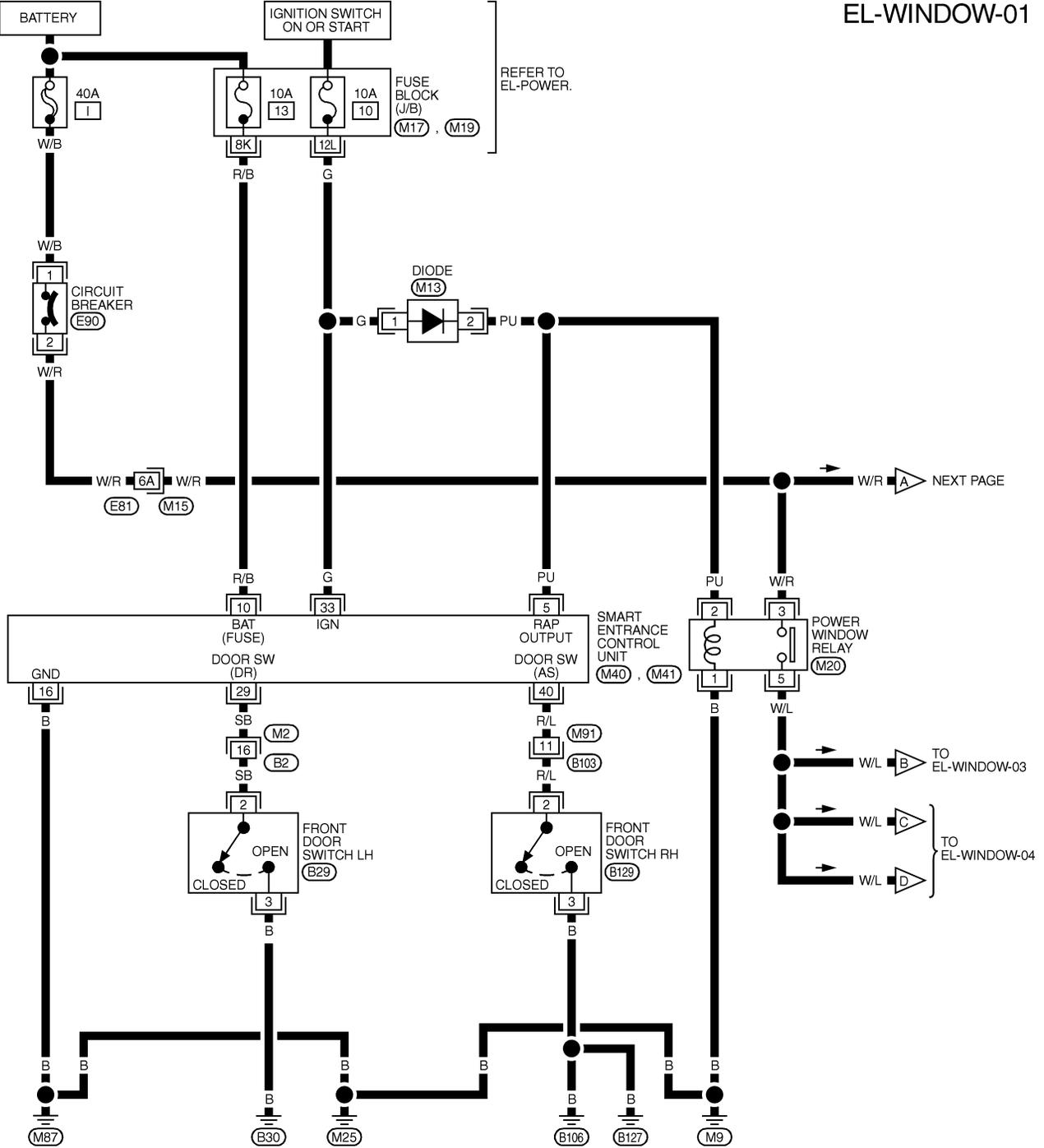
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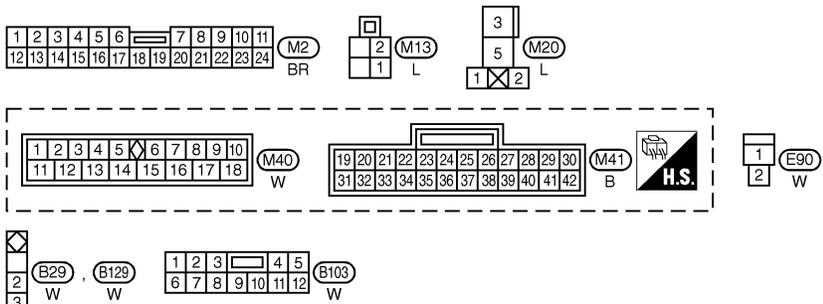
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W/R → A NEXT PAGE

W/L → TO EL-WINDOW-03

W/L → TO EL-WINDOW-04



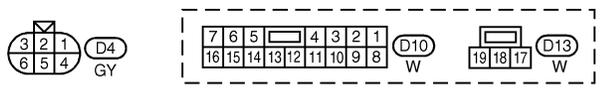
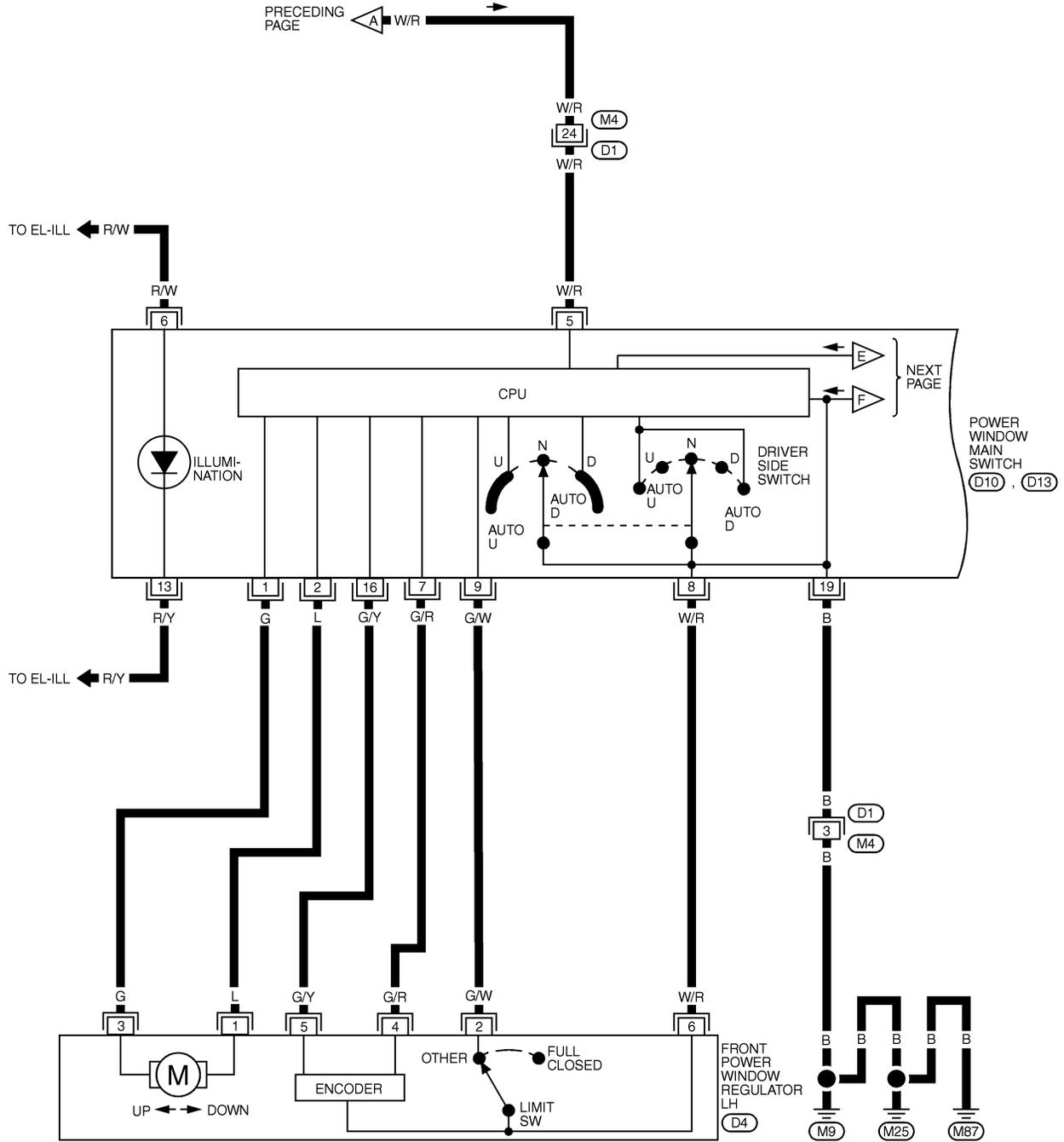
REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)  
 (M19) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

MEL305K

# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-02



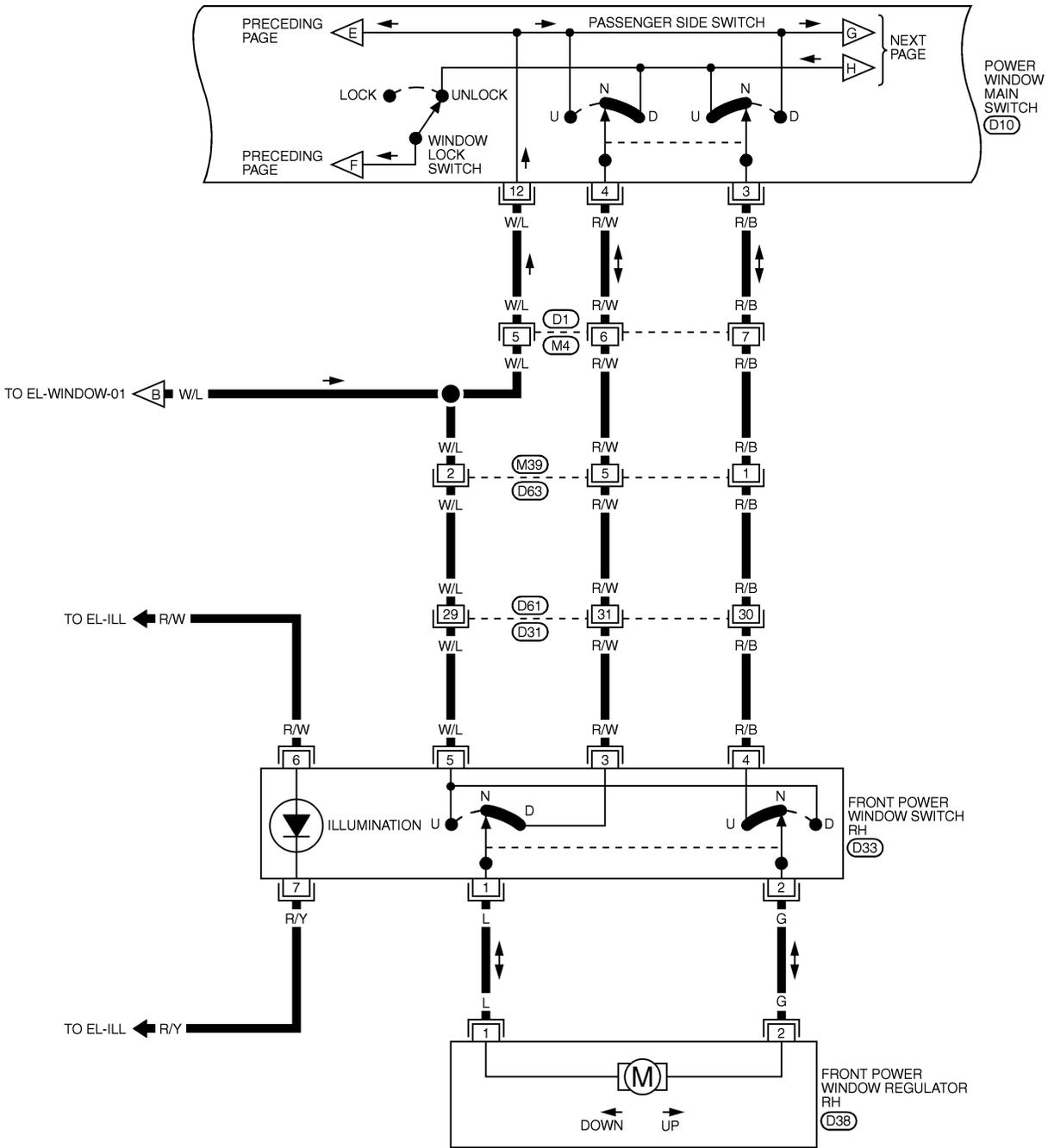
REFER TO THE FOLLOWING.  
 (M4) , (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)

MEL306K

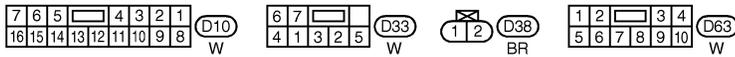
# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

## EL-WINDOW-03



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REFER TO THE FOLLOWING.  
 (M4), (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (D31), (D61) -SUPER  
 MULTIPLE JUNCTION (SMJ)

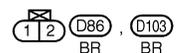
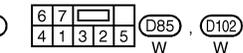
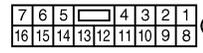
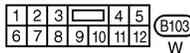
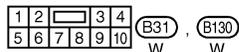
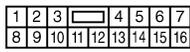
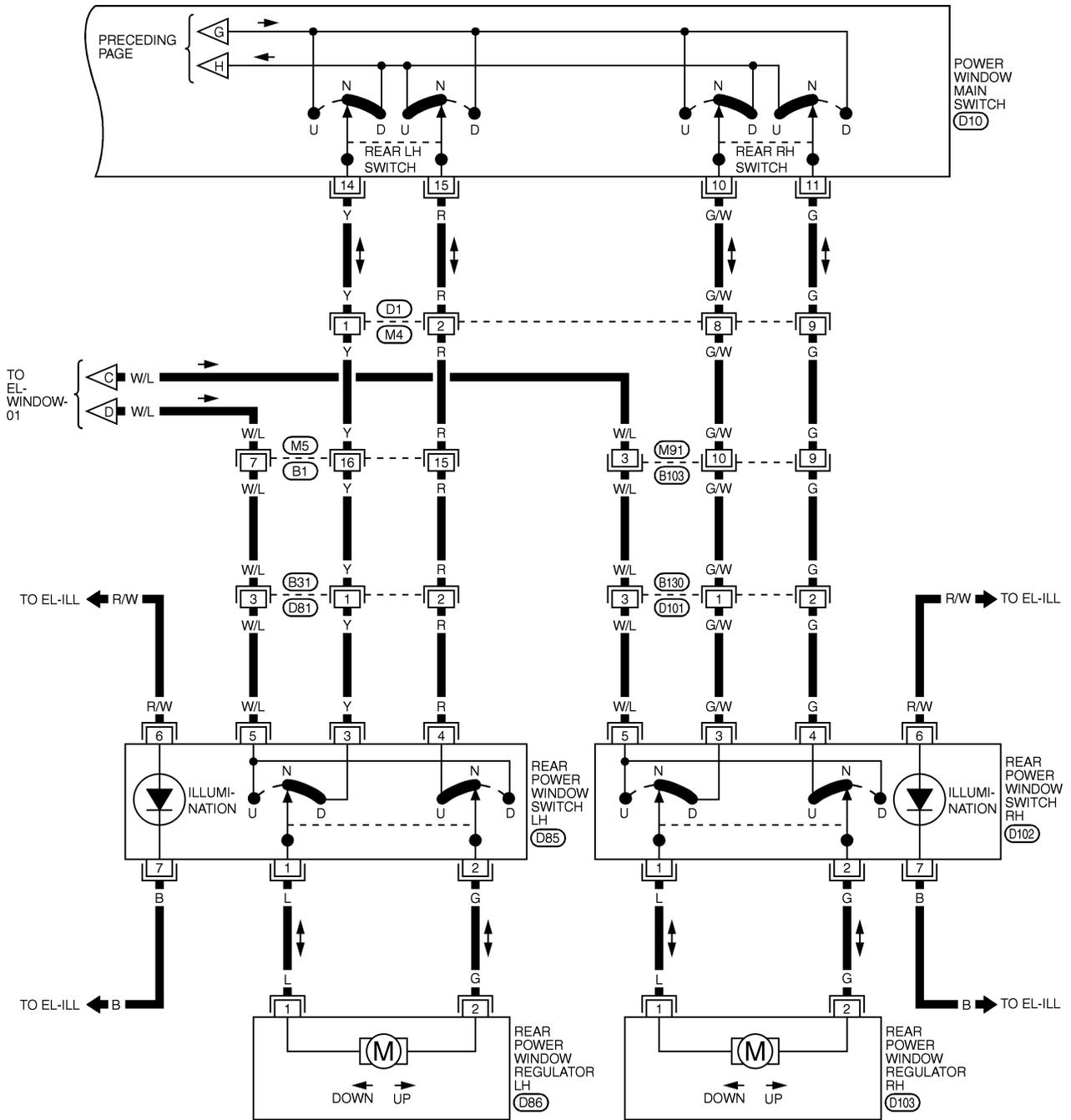
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MEL307K

# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-04



REFER TO THE FOLLOWING.  
 (M4), (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)

# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
5	PU	HEADLAMP BATTERY SAVER CONTROL UNIT	WHEN HEADLAMP BATTERY SAVER TIMER IS OPERATED	12V
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V

GI

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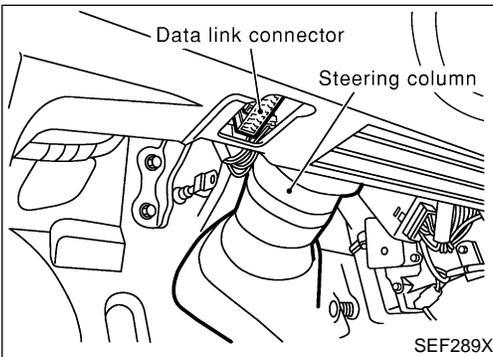
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## CONSULT-II Inspection Procedure "RETAINED PWR"

NFEL0235

NFEL0235S01

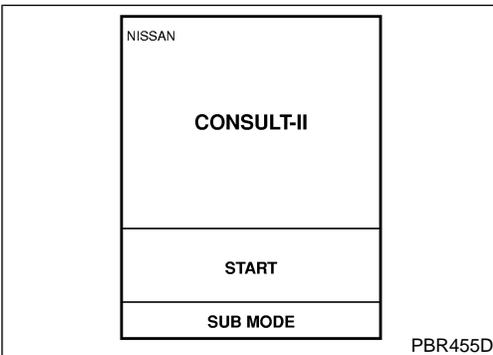
AT

1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.

AX

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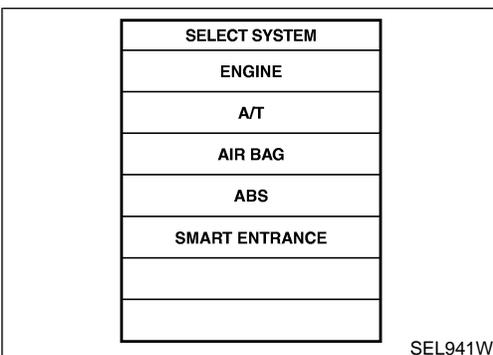
3. Turn ignition switch "ON".
4. Touch "START".

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5. Touch "SMART ENTRANCE".

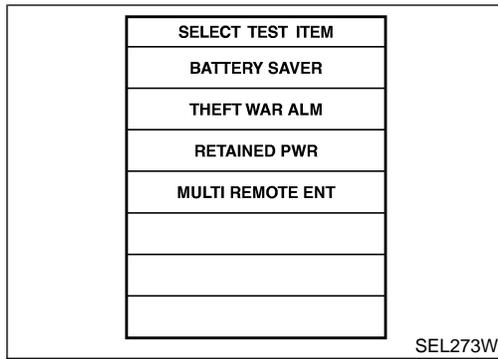
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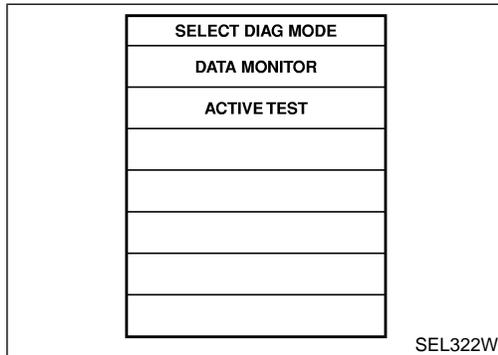
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# POWER WINDOW

CONSULT-II Inspection Procedure (Cont'd)



6. Touch "RETAINED PWR".



7. Select diagnosis mode.  
"DATA MONITOR" and "ACTIVE TEST" are available.

## CONSULT-II Application Items

### "RETAINED PWR"

NFEL0236

#### Data Monitor

NFEL0236S01

NFEL0236S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.

#### Active Test

NFEL0236S0102

Test Item	Description
RETAINED PWR	<p>This test is able to supply RAP signal (power) from smart entrance control unit to power window system, power sunroof system and headlamp battery saver control unit. Those systems can be operated when turning on "RETAINED PWR" on CONSULT-II screen even if the ignition switch is tuned OFF.</p> <p><b>NOTE:</b>  <b>During this test, CONSULT-II can be operated with ignition switch in "OFF" position. "RETAINED PWR" should be turned "ON" or "OFF" on CONSULT-II screen when ignition switch is ON. Then turn ignition switch OFF to check retained power operation. CONSULT-II might be stuck if "RETAINED PWR" is turned "ON" or "OFF" on CONSULT-II screen when ignition switch is OFF.</b></p>

## Trouble Diagnoses

NFEL0105

Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	<ol style="list-style-type: none"> <li>10A fuse, 40A fusible link</li> <li>E90 circuit breaker</li> <li>Power window relay</li> <li>E90 circuit breaker circuit</li> <li>Power window relay circuit</li> <li>Ground circuit</li> <li>Power window main switch</li> </ol>	<ol style="list-style-type: none"> <li>Check 10A fuse [No. 10, located in fuse block (J/B)], 40A fusible link (letter I, located in fuse and fusible link box).</li> <li>Check E90 circuit breaker.</li> <li>Check power window relay.</li> <li>Check the following.                             <ol style="list-style-type: none"> <li>Check harness between E90 circuit breaker and 40A fusible link (letter I, located in fuse and fusible link box).</li> <li>Check harness between E90 circuit breaker and power window main switch.</li> </ol> </li> <li>Check the following.                             <ol style="list-style-type: none"> <li>Check harness between E90 circuit breaker and power window relay.</li> <li>Check harness between fuse and power window relay.</li> </ol> </li> <li>Check the following.                             <ol style="list-style-type: none"> <li>Check ground circuit of power window main switch terminal 19.</li> <li>Check power window relay ground circuit.</li> </ol> </li> <li>Check power window main switch.</li> </ol>
Driver side power window cannot be operated but other windows can be operated.	<ol style="list-style-type: none"> <li>Driver side power window regulator circuit</li> <li>Driver side power window regulator</li> <li>Power window main switch</li> </ol>	<ol style="list-style-type: none"> <li>Check harness between power window main switch and driver side power window regulator for open or short circuit.</li> <li>Check driver side power window regulator.</li> <li>Check power window main switch.</li> </ol>
One or more power windows except driver's side window cannot be operated.	<ol style="list-style-type: none"> <li>Power window switches</li> <li>Power window regulators</li> <li>Power window main switch</li> <li>Power window circuit</li> </ol>	<ol style="list-style-type: none"> <li>Check power window switch.</li> <li>Check power window regulator.</li> <li>Check power window main switch.</li> <li>Check the following.                             <ol style="list-style-type: none"> <li>Check harness between the power window switch terminal 5 and power window relay.</li> <li>Check harnesses between power window main switch and power window switch for open/short circuit.</li> <li>Check harnesses between power window switch and power window regulator for open/short circuit.</li> </ol> </li> </ol>
Power windows except driver's side window cannot be operated using power window main switch but can be operated by power window switch.	<ol style="list-style-type: none"> <li>Power window main switch</li> </ol>	<ol style="list-style-type: none"> <li>Check power window main switch.</li> </ol>
Driver side power window automatic operation does not function properly.	<ol style="list-style-type: none"> <li>Power window main switch</li> <li>Encoder and limit switch</li> </ol>	<ol style="list-style-type: none"> <li>Check power window main switch.</li> <li>Check encoder and limit switch. (EL-227)</li> </ol>

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# POWER WINDOW

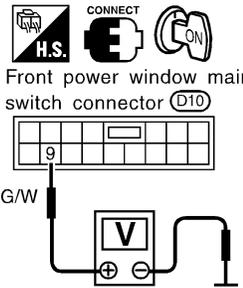
## Trouble Diagnoses (Cont'd)

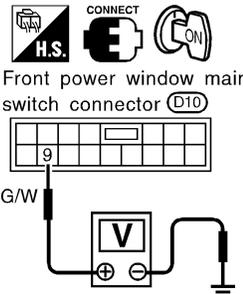
Symptom	Possible cause	Repair order
Retained power operation does not operate properly.	<ol style="list-style-type: none"> <li>1. RAP signal circuit</li> <li>2. Driver or passenger side door switch circuit</li> <li>3. Smart entrance control unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check RAP signal.               <ol style="list-style-type: none"> <li>a. (With CONSULT-II) Check RAP signal with CONSULT-II. Use "ACTIVE TEST" mode, "RETAINED PWR" in "SMART ENTRANCE". (Refer to EL-223.) If NG, go to the step b. below.</li> <li>b. Verify 12 positive voltage from smart entrance control unit is present at terminal 10 of power window relay:                   <ul style="list-style-type: none"> <li>● Within 45 seconds after ignition switch turns off.</li> <li>● When front door LH and RH is closed.</li> </ul> </li> </ol> </li> <li>2. Check harness between smart entrance control unit and driver or passenger side door switch for short circuit. Check driver or passenger side door switch ground circuit. Check driver or passenger side door switch.</li> <li>3. Check smart entrance control unit. (EL-316)</li> </ol>

## ENCODER AND LIMIT SWITCH CHECK

=NFEL0105S01

<b>1</b>	<b>CHECK DOOR WINDOW SLIDE MECHANISM</b>		GI MA EM LC
		<p>Check the following.</p> <ul style="list-style-type: none"> <li>● Obstacles in window, glass molding, etc.</li> <li>● Worn or deformed glass molding</li> <li>● Door sash tilted too far inward or outward</li> <li>● Door window regulator</li> </ul> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶	GO TO 2.	
NG	▶	Remove obstacles or repair door window slide mechanism.	

<b>2</b>	<b>CHECK POWER SUPPLY TO LIMIT SWITCH</b>		EC FE CL MT AT AX SU
		<p>Check voltage between power window main switch terminal 9 and ground.</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p><b>Voltage: 5V</b></p> </div> </div> <p><b>NOTE: Check voltage when front power window regulator LH harness connector is disconnected.</b></p> <p style="text-align: right;">SEL378WA</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶	GO TO 3.	
NG	▶	Replace power window main switch.	

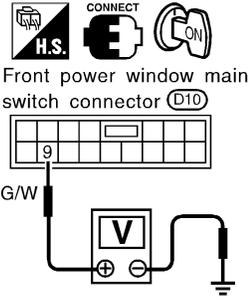
<b>3</b>	<b>CHECK LIMIT SWITCH OPERATION</b>		BR ST RS BT HA SC								
		<p>Check voltage between power window main switch terminal 9 and ground during power window closing operation.</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Terminal No.</th> <th style="padding: 5px;">Condition</th> <th style="padding: 5px;">Voltage (DCV)</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="padding: 5px;">9</td> <td style="padding: 5px;">Approx. 15 mm (0.59 in) below the full closed position to full closed position</td> <td style="padding: 5px;">Approx. 5</td> </tr> <tr> <td style="padding: 5px;">Other positions</td> <td style="padding: 5px;">Approx. 0</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL379WA</p> <p style="text-align: center;"><b>OK or NG</b></p>	Terminal No.	Condition	Voltage (DCV)	9	Approx. 15 mm (0.59 in) below the full closed position to full closed position	Approx. 5	Other positions	Approx. 0	
Terminal No.	Condition	Voltage (DCV)									
9	Approx. 15 mm (0.59 in) below the full closed position to full closed position	Approx. 5									
	Other positions	Approx. 0									
OK	▶	GO TO 5.									
NG	▶	GO TO 4.									

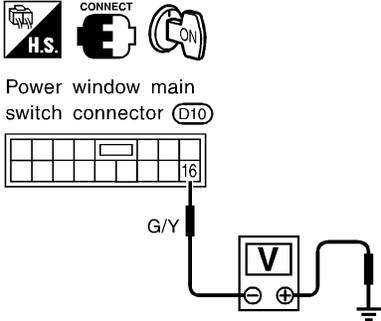
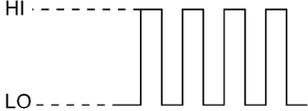
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# POWER WINDOW

## Trouble Diagnoses (Cont'd)

<b>4</b>	<b>RESET LIMIT SWITCH</b>										
<p>Reset limit switch. Refer to BT-21, "Front Door Glass Limit Switch Reset". Then check voltage between power window main switch terminal 9 and ground during power window closing operation at least ten times.</p>											
 <p>Front power window main switch connector (D10)</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Terminal No.</th> <th style="width: 50%;">Condition</th> <th style="width: 30%;">Voltage (DCV)</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">9</td> <td>Approx. 15 mm (0.59 in) below the full closed position to full closed position</td> <td style="text-align: center;">Approx. 5</td> </tr> <tr> <td>Other positions</td> <td style="text-align: center;">Approx. 0</td> </tr> </tbody> </table>	Terminal No.	Condition	Voltage (DCV)	9	Approx. 15 mm (0.59 in) below the full closed position to full closed position	Approx. 5	Other positions	Approx. 0	SEL379WA
Terminal No.	Condition	Voltage (DCV)									
9	Approx. 15 mm (0.59 in) below the full closed position to full closed position	Approx. 5									
	Other positions	Approx. 0									
<b>OK or NG</b>											
OK	▶	GO TO 5.									
NG	▶	Replace power window regulator motor (front driver side).									

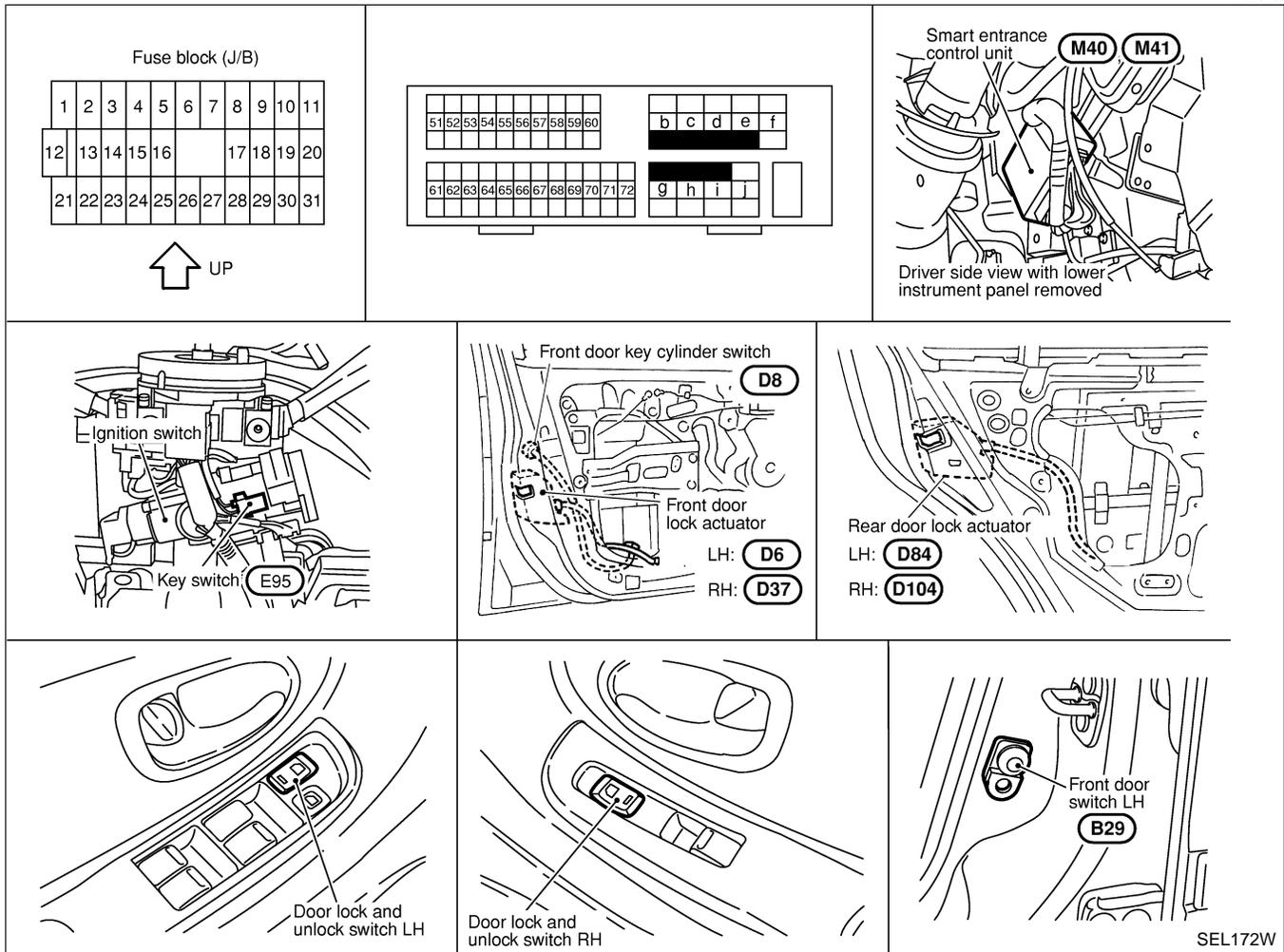
<b>5</b>	<b>CHECK ENCODER</b>		
<p>Measure voltage between power window main switch terminal 16 and ground with oscilloscope when power window is in automatic closing operation.</p>			
 <p>Power window main switch connector (D10)</p>		 <p>HI: Approx. 5V LO: Approx. 0V</p>	SEL252W
<b>OK or NG</b>			
OK	▶	Replace power window main switch.	
NG	▶	Replace power window regulator motor (front driver side).	

# POWER DOOR LOCK

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NFEL0106



GI  
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## System Description

NFEL0107

### OPERATION

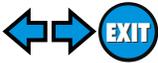
NFEL0107S04

- The lock/unlock switches (LH and RH) on door trim can lock and unlock all doors.
- With the door key inserted in the key cylinder on front LH, turning it to "LOCK", will lock all doors; turning it to "UNLOCK" once unlocks the corresponding door; turning it to "UNLOCK" again within 5 seconds after the first unlock operation unlocks all of the other doors. (Signals from door key cylinder switch)
- If the ignition key is in the ignition key cylinder and one or more of the doors are open, setting the lock/unlock switch to "LOCK" locks the doors once but then immediately unlocks them. (KEY REMINDER DOOR SYSTEM)

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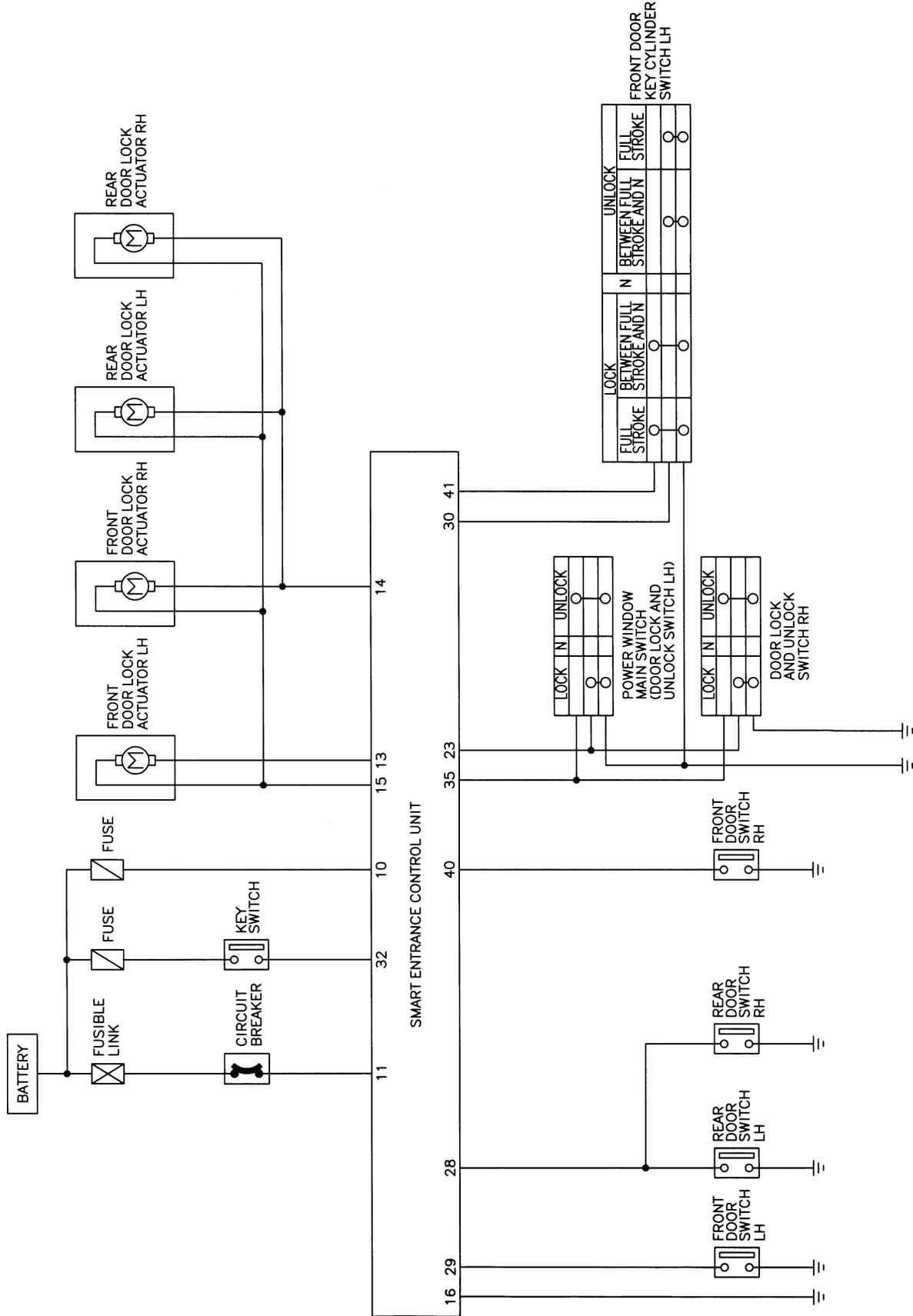


# POWER DOOR LOCK

Schematic

## Schematic

NFEL0108



MEL309K

# POWER DOOR LOCK

Wiring Diagram — D/LOCK —

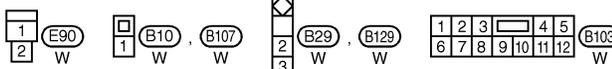
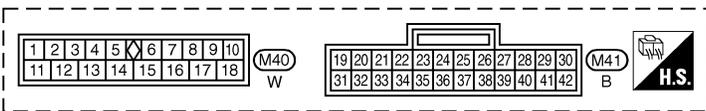
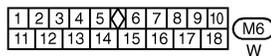
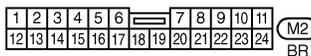
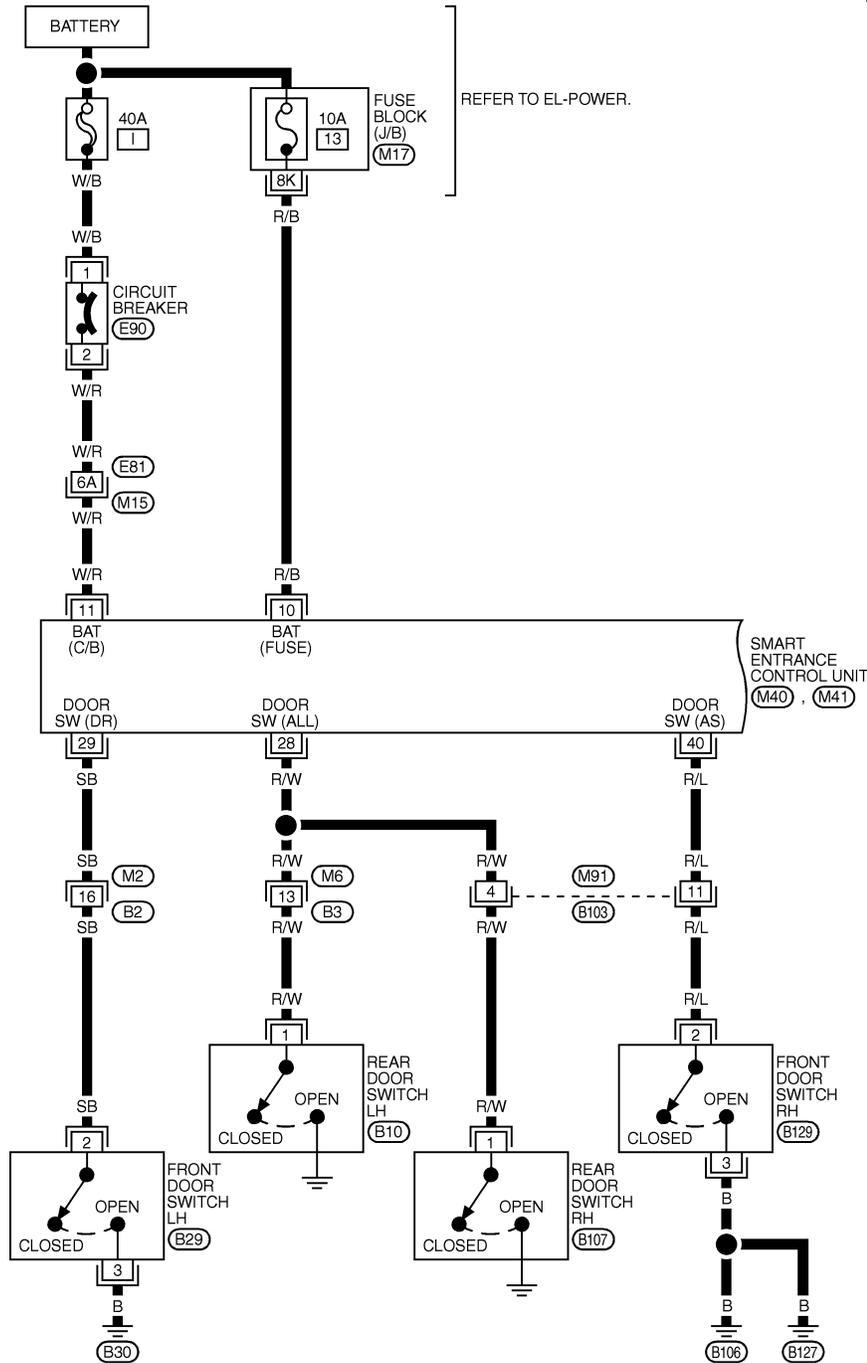
## Wiring Diagram — D/LOCK —

NFEL0109

NFEL0109S01

FIG. 1

EL-D/LOCK-01



REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
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EL

IDX

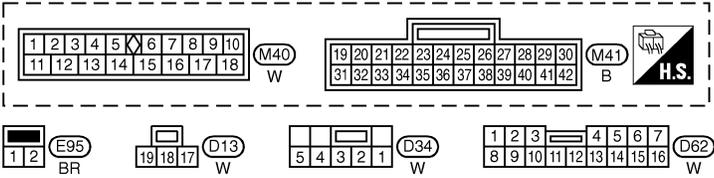
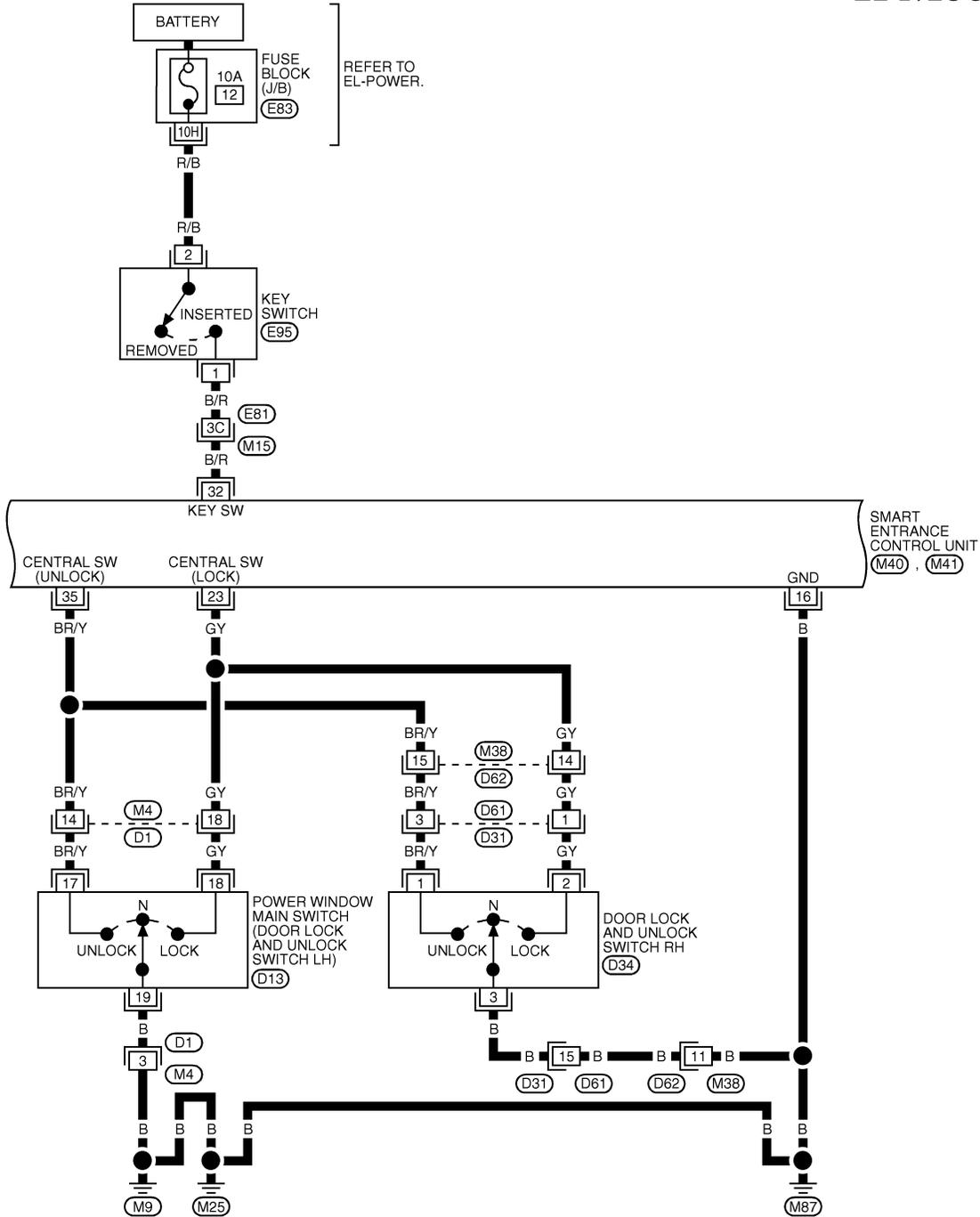
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 2

NFEL0109S02

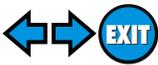
EL-D/LOCK-02



REFER TO THE FOLLOWING.

- (M4) , (D1) -SUPER MULTIPLE JUNCTION (SMJ)
- (M15) , (E81) -SUPER MULTIPLE JUNCTION (SMJ)
- (D31) , (D61) -SUPER MULTIPLE JUNCTION (SMJ)
- (E83) -FUSE BLOCK-JUNCTION BOX (J/B)

MEL311K



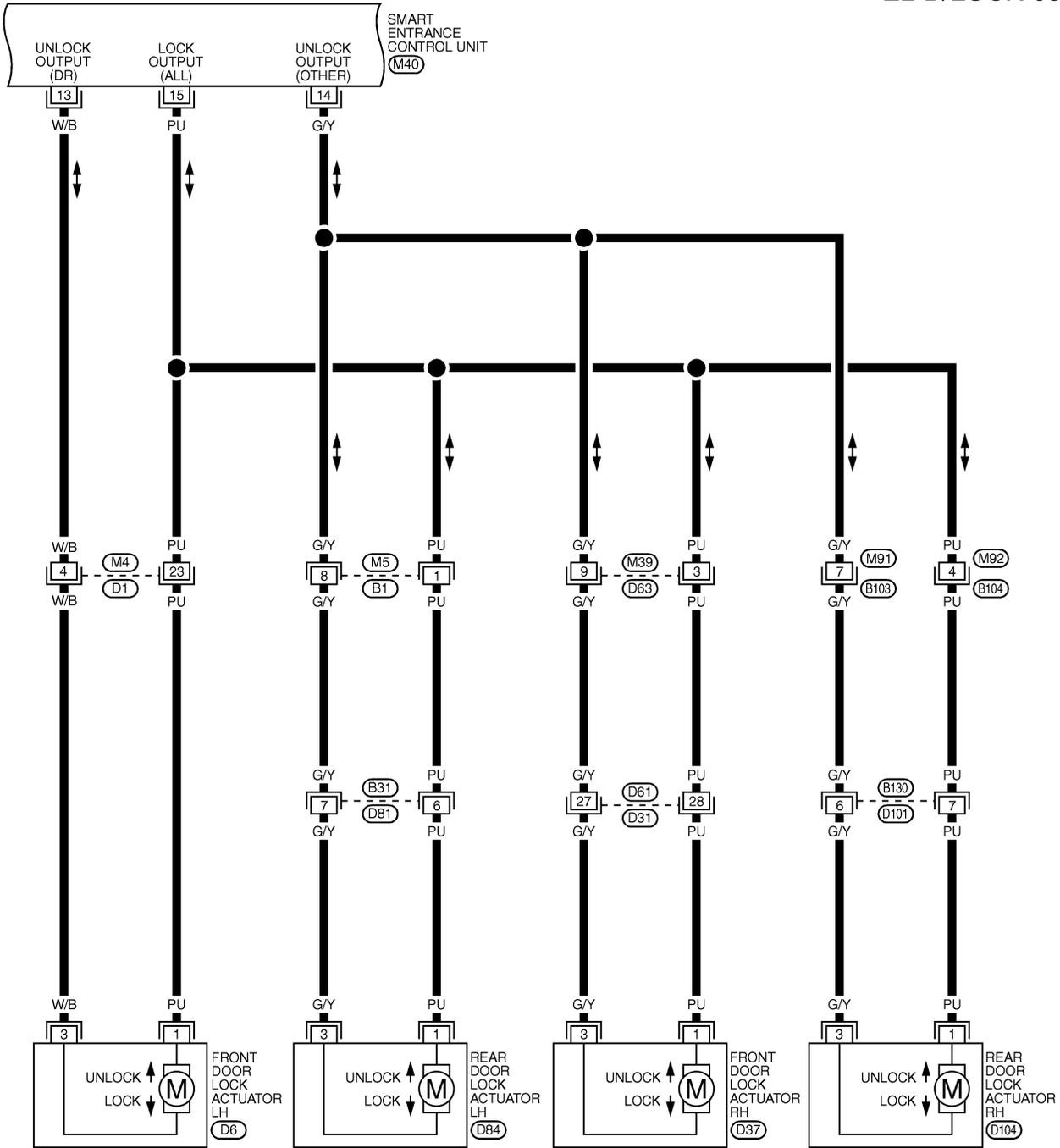
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 3

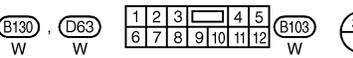
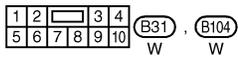
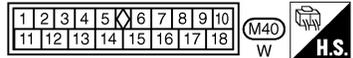
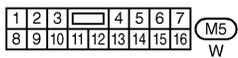
NFEL0109S03

EL-D/LOCK-03



GI  
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LC  
EC  
FE  
CL  
MT  
AT  
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SU  
BR  
ST  
RS  
BT  
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SC  
EL  
IDX



REFER TO THE FOLLOWING.

- (M4) . (D1) -SUPER MULTIPLE JUNCTION (SMJ)
- (D31) . (D61) -SUPER MULTIPLE JUNCTION (SMJ)

MEL312K

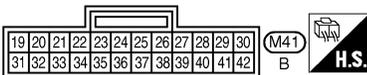
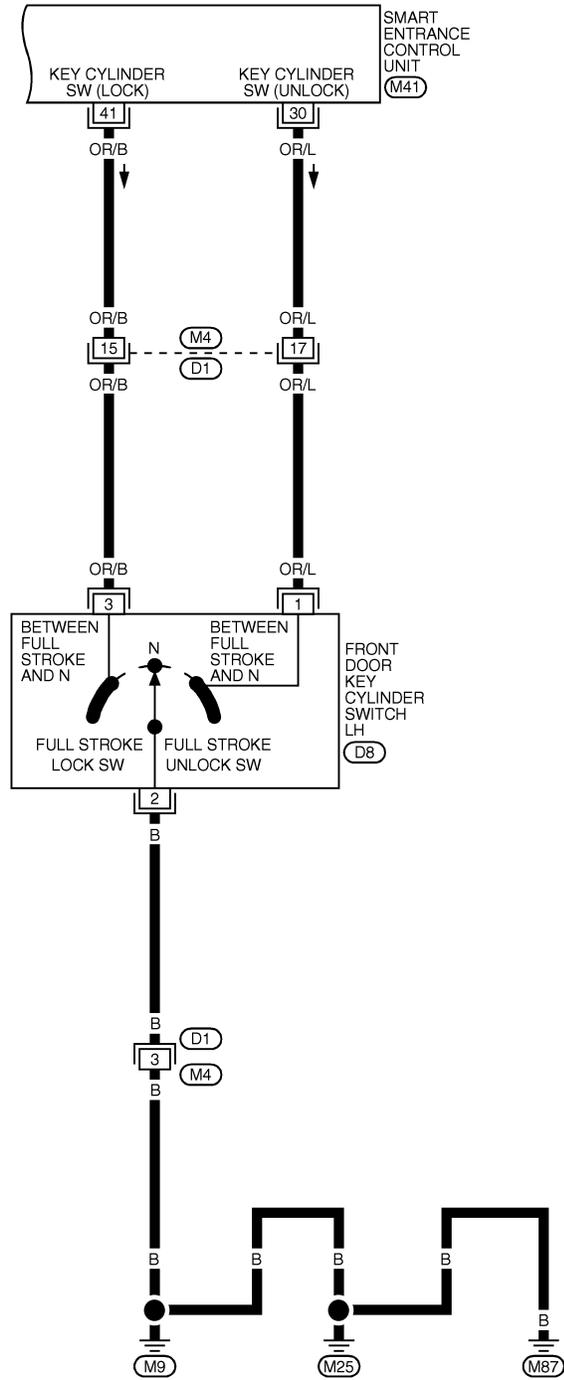
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 4

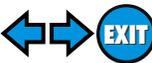
NFEL0109S05

EL-D/LOCK-04



REFER TO THE FOLLOWING.  
 (M4), (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)

# POWER DOOR LOCK



Wiring Diagram — D/LOCK — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

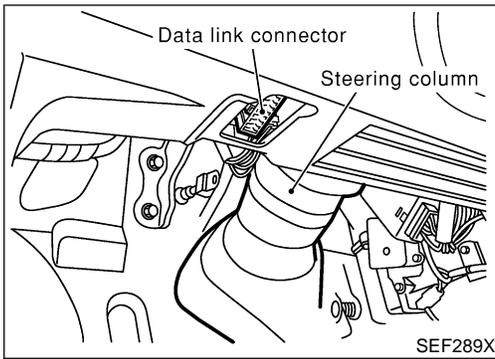
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	R/B	POWER SOURCE (FUSE)	-	12V
11	W/R	POWER SOURCE (C/B)	-	12V
13	W/B	DRIVER DOOR LOCK ACTUATOR	DOOR LOCK & UNLOCK SWITCH	FREE
14	G/Y	PASSENGER AND REAR DOOR LOCK ACTUATOR		UNLOCKED
15	PU	DOOR LOCK ACTUATORS	DOOR LOCK & UNLOCK SWITCH	FREE
16	B	GROUND		LOCKED
23	G/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → LOCKS	5V → 0V
28	R/W	REAR DOOR SWITCHES	OFF (CLOSED) → ON (OPEN)	5V → 0V
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
30	OR/L	DOOR KEY CYLINDER UNLOCK SWITCH	OFF (NEUTRAL) → ON (UNLOCKED)	5V → 0V
32	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER	12V → 0V
35	BR/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → UNLOCKS	5V → 0V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
41	OR/B	DOOR KEY CYLINDER LOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)	5V → 0V

SEL373WB

GI  
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IDX

# POWER DOOR LOCK

CONSULT-II Inspection Procedure

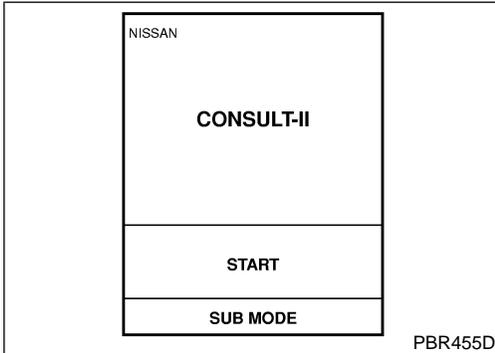


## CONSULT-II Inspection Procedure "DOOR LOCK"

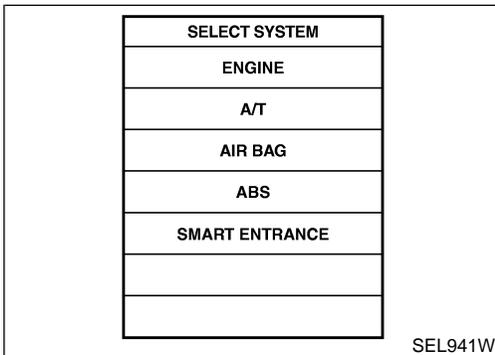
=NFEL0238

NFEL0238S01

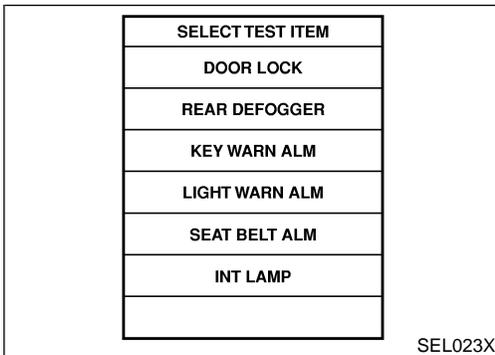
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



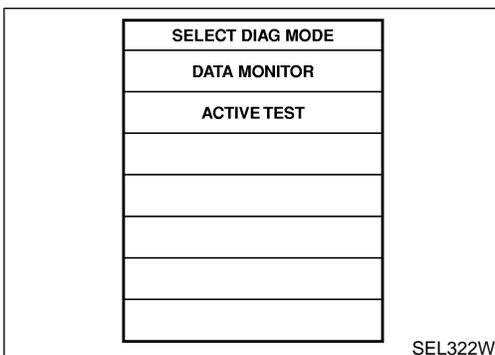
3. Turn ignition switch "ON".
4. Turn "START".



5. Touch "SMART ENTRANCE".



6. Touch "DOOR LOCK".



7. Select diagnosis mode.  
"DATA MONITOR" and "ACTIVE TEST" are available.

## CONSULT-II Application Items

### “DOOR LOCK” Data Monitor

NFEL0239

NFEL0239S01

NFEL0239S0101

Monitored Item	Description	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	GI
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch LH and RH.	MA
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch LH and RH.	EM
KEY CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder.	LC
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.	EC
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (All).	FE
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from remote controller.	CL
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.	
UN BUTTON ON	Indicates [ON/OFF] condition of second unlock signal from remote controller within 5 seconds after first unlock operation.	

### Active Test

NFEL0239S0102

Test Item	Description	
ALL D/LK MTR	This test is able to check all door lock actuators lock operation. These actuators lock when “ON” on CONSULT-II screen is touched.	MT
DR D/UN MTR	This test is able to check front door lock actuator LH unlock operation. The actuator unlocks when “ON” on CONSULT-II screen is touched.	AT
NON DR D/UN	This test is able to check door lock actuators (except front door lock actuator LH) unlock operation. These actuators unlock when “ON” on CONSULT-II screen is touched.	AX

SU

BR

ST

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BT

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SC

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ID

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SC

BT

HA

SC

BT

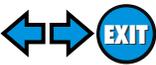
HA

SC

EL

ID

IX



# POWER DOOR LOCK

Trouble Diagnoses

## Trouble Diagnoses

=NFEL0193

NFEL0193S01

### SYMPTOM CHART

REFERENCE PAGE (EL- )	239	240	241	242	244	245
SYMPTOM	MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR SWITCH CHECK	KEY SWITCH (INSERT) CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	FRONT DOOR KEY CYLINDER SWITCH CHECK	DOOR LOCK ACTUATOR CHECK
Key reminder door system does not operate properly.	X	X	X			X
Specific door lock actuator does not operate.	X					X
Power door lock does not operate with door lock and unlock switch (LH and RH) on door trim.	X			X		
Power door lock does not operate with front door key cylinder operation.	X				X	

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0193S02

### Main Power Supply Circuit Check

NFEL0193S0201

Smart entrance control unit connector (M40)

Terminals		Ignition switch		
(+)	(-)	OFF	ACC	ON
10	Ground	Battery voltage	Battery voltage	Battery voltage
11				

SEL190W

GI  
MA  
EM  
LC  
EC

### Ground Circuit Check

NFEL0193S0202

Smart entrance control unit connector (M40)

Terminals	Continuity
16 - Ground	Yes

SEL234W

FE  
CL  
MT  
AT

AX  
SU  
BR  
ST  
RS

**EL**

IDX

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

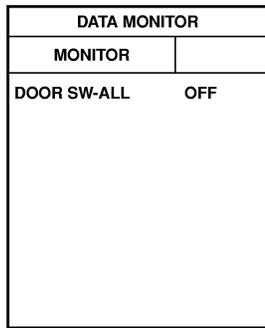
## DOOR SWITCH CHECK

=NFEL0193S03

### 1 CHECK DOOR SWITCHES INPUT SIGNAL

#### With CONSULT-II

Check door switches ("DOOR SW-ALL") in "DATA MONITOR" mode with CONSULT-II.



When any doors are open:

**DOOR SW-ALL ON**

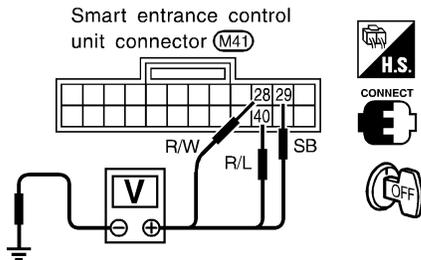
When all doors are closed:

**DOOR SW-ALL OFF**

SEL323W

#### Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminals 28, 29 or 40 and ground.



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door switch	29	Ground	Open	0
			Closed	Approx. 5
Front RH door switch	40	Ground	Open	0
			Closed	Approx. 5
Rear door switches	28	Ground	Open	0
			Closed	Approx. 5

SEL191W

Refer to wiring diagram in EL-231.

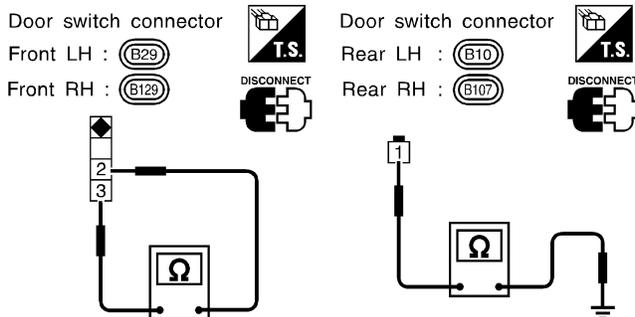
**OK or NG**

OK ► Door switch is OK.

NG ► GO TO 2.

### 2 CHECK DOOR SWITCHES

1. Disconnect door switch harness connector.
2. Check continuity between door switch connector terminals.



	Terminals	Condition	Continuity
Front door switches	2 - 3	Closed	No
		Open	Yes
Rear door switches	1 - Ground	Closed	No
		Open	Yes

SEL192W

**OK or NG**

OK ► **Check the following.**

- Door switch ground circuit or door switch ground condition
- Harness for open or short between smart entrance control unit and door switch

NG ► Replace door switch.

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## KEY SWITCH (INSERT) CHECK

=NFEL0193S04

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>							
<p> <b>With CONSULT-II</b> Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>KEY ON SW</td><td>ON</td></tr> </table>			DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR								
MONITOR								
KEY ON SW	ON							
<p>When key is inserted to ignition key cylinder: <b>KEY ON SW ON</b></p> <p>When key is removed from ignition key cylinder: <b>KEY ON SW OFF</b></p>								
SEL315W								
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 32 and ground.</p>								
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Smart entrance control unit connector (M4)</p> </div> <div style="flex: 1; margin-left: 20px;"> <p> H.S. </p> <p> : Approx. 12V</p> <p> : 0V</p> </div> <div style="flex: 1; margin-left: 20px;"> <p><b>Voltage [V]:</b> Condition of key switch: Key is inserted. <b>Approx. 12</b> Condition of key switch: Key is removed. <b>0</b></p> </div> </div>								
SEL193W								
Refer to wiring diagram in EL-232.								
<b>OK or NG</b>								
OK	▶	Key switch is OK.						
NG	▶	GO TO 2.						

<b>2</b>	<b>CHECK KEY SWITCH (INSERT)</b>	
Check continuity between key switch connector terminals 1 and 2.		
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Key switch connector (E95)</p> </div> <div style="flex: 1; margin-left: 20px;"> <p> T.S. </p> <p></p> </div> <div style="flex: 1; margin-left: 20px;"> <p><b>Continuity:</b> Condition of key switch: Key is inserted. <b>Yes</b> Condition of key switch: Key is removed. <b>No</b></p> </div> </div>		
SEL194W		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between smart entrance control unit and key switch</li> </ul>
NG	▶	Replace key switch.

GI  
MA  
EM  
LC  
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IDX

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## DOOR LOCK/UNLOCK SWITCH CHECK

=NFEL0193S05

### 1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

#### With CONSULT-II

Check door lock/unlock switch ("LOCK SW DR/AS"/"UNLK SW DR/AS") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
LOCK SW DR/AS	OFF
UNLK SW DR/AS	OFF

When lock/unlock switch is turned to LOCK:

**LOCK SW DR/AS ON**

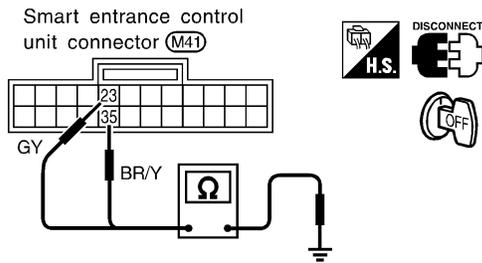
When lock/unlock switch is turned to UNLOCK:

**UNLK SW DR/AS ON**

SEL341W

#### Without CONSULT-II

1. Disconnect smart entrance control unit harness connector .
2. Check continuity between smart entrance control unit harness connector terminal 23 or 35 and ground.



Terminals	Door lock/unlock switch (LH or RH) condition	Continuity
23 - Ground	Lock	Yes
	N and Unlock	No
35 - Ground	Unlock	Yes
	N and Lock	No

Refer to wiring diagram in EL-232.

SEL195W

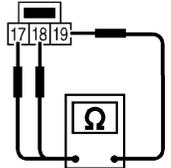
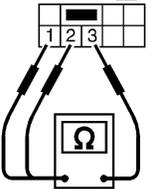
**OK or NG**

OK ► Door lock/unlock switch is OK.

NG ► GO TO 2.

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2	CHECK DOOR LOCK/UNLOCK SWITCH																				
1. Disconnect door lock/unlock switch harness connector. 2. Check continuity between each door lock/unlock switch terminals. <ul style="list-style-type: none"> <li>● Power window main switch (Door lock/unlock switch LH)</li> </ul>	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">  </div> <div style="margin-right: 20px;"> <p>P/W main switch connector (D13)</p>  </div> <div> <table border="1" data-bbox="755 378 1315 535"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>17</th> <th>18</th> <th>19</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td></td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>N</td> <td colspan="3" style="text-align: center;">No continuity</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">○</td> </tr> </tbody> </table> </div> </div>	Condition	Terminals			17	18	19	Lock		○	○	N	No continuity			Unlock	○		○	GI MA EM LC EC SEL196W
Condition	Terminals																				
	17	18	19																		
Lock		○	○																		
N	No continuity																				
Unlock	○		○																		
<ul style="list-style-type: none"> <li>● Door lock/unlock switch RH</li> </ul>	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">  </div> <div style="margin-right: 20px;"> <p>Lock/unlock switch RH connector (D34)</p>  </div> <div> <table border="1" data-bbox="820 745 1380 903"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td></td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>N</td> <td colspan="3" style="text-align: center;">No continuity</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">○</td> </tr> </tbody> </table> </div> </div>	Condition	Terminals			1	2	3	Lock		○	○	N	No continuity			Unlock	○		○	FE CL MT AT SEL197W
Condition	Terminals																				
	1	2	3																		
Lock		○	○																		
N	No continuity																				
Unlock	○		○																		
<b>OK or NG</b>																					
OK		<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Ground circuit for door lock/unlock switch</li> <li>● Harness for open or short between door lock/unlock switch and smart entrance control unit connector</li> </ul>	SU BR																		
NG		Replace door lock/unlock switch.	ST RS BT HA SC																		

EL

IDX

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## FRONT DOOR KEY CYLINDER SWITCH CHECK

=NFEL0193S06

### 1 CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

#### With CONSULT-II

Check front door key cylinder switch ("KEY CYL LK-SW"/"KEY CYL UN-SW") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
KEY CYL LK-SW	OFF
KEY CYL UN-SW	OFF

When key inserted in front key cylinder is turned to LOCK:

**KEY CYL LK-SW ON**

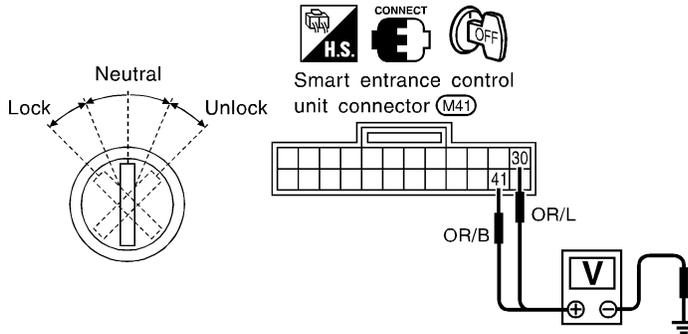
When key inserted in front key cylinder is turned to UNLOCK:

**KEY CYL UN-SW ON**

SEL342W

#### Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminals 30 or 41 and ground.



Terminals		Key position	Voltage V
(+)	(-)		
41	Ground	Neutral/Unlock	Approx. 5
		Lock	0
30	Ground	Neutral/Lock	Approx. 5
		Unlock	0

SEL198W

Refer to wiring diagram in EL-234.

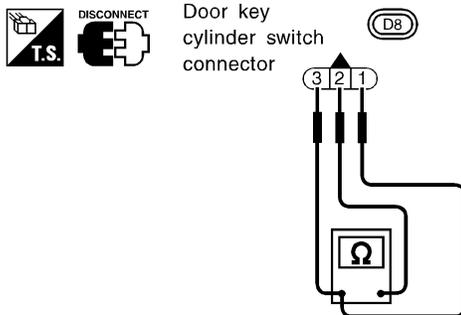
**OK or NG**

OK ► Door key cylinder switch is OK.

NG ► GO TO 2.

### 2 CHECK DOOR KEY CYLINDER SWITCH

1. Disconnect door key cylinder switch harness connector.
2. Check continuity between door key cylinder switch terminals.



- ① : Door unlock switch terminal
- ② : Ground terminal
- ③ : Door lock switch terminal

Terminals	Key position	Continuity
③ - ②	Neutral/Unlock	No
	Lock	Yes
① - ②	Neutral/Lock	No
	Unlock	Yes

SEL034X

**OK or NG**

OK ► **Check the following.**

- Door key cylinder switch ground circuit
- Harness for open or short between smart entrance control unit and door key cylinder switch

NG ► Replace door key cylinder switch.

## DOOR LOCK ACTUATOR CHECK

=NFEL0193S08

<b>1</b>	<b>CHECK DOOR LOCK ACTUATOR OPERATION</b>	<p><b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Select "ACTIVE TEST" in "DOOR LOCK" with CONSULT-II.</li> <li>2. Select "ALL D/LK MTR" and touch "ON".</li> <li>3. Then, select "DR D/UN MTR" and touch "ON".</li> <li>4. Select "NON DR D/UN" and touch "ON".</li> </ol> <div style="text-align: center; margin: 10px 0;"> <table border="1" style="border-collapse: collapse;"> <tr> <th colspan="2">ACTIVE TEST</th> </tr> <tr> <td style="padding: 2px;">ALL D/LK MTR</td> <td style="padding: 2px;">OFF</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 2px;">or</td> </tr> <tr> <td style="padding: 2px;">(DR D/UN MTR</td> <td style="padding: 2px;">OFF)</td> </tr> <tr> <td style="padding: 2px;">(NON DR D/UN</td> <td style="padding: 2px;">OFF)</td> </tr> <tr> <td colspan="2" style="padding: 2px;"><b>ON</b></td> </tr> </table> </div> <p style="text-align: center; font-weight: bold; margin: 10px 0;">Door lock motor should operate.</p> <p style="text-align: right; margin-top: 20px;">SEL343W</p> <p><b>NOTE:</b> If CONSULT-II is not available, skip this procedure and go to the next step.</p> <p style="text-align: center; font-weight: bold;">OK or NG</p>	ACTIVE TEST		ALL D/LK MTR	OFF	or		(DR D/UN MTR	OFF)	(NON DR D/UN	OFF)	<b>ON</b>		GI MA EM LC EC FE CL MT AT AX SU BR ST RS BT HA SC <b>EL</b> IDX
ACTIVE TEST															
ALL D/LK MTR	OFF														
or															
(DR D/UN MTR	OFF)														
(NON DR D/UN	OFF)														
<b>ON</b>															
OK	▶	Door lock actuator is OK.													
NG	▶	GO TO 2.													

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2	CHECK DOOR LOCK ACTUATOR CIRCUIT													
<p>Check voltage for door lock actuator.</p> <ul style="list-style-type: none"> <li>Door lock actuator front LH</li> </ul>														
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> </div> <div style="width: 45%;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Door lock/unlock switch condition</th> <th colspan="2">Terminal No.</th> <th rowspan="2">Voltage V</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td>15</td> <td>Ground</td> <td rowspan="2">Approx. 12</td> </tr> <tr> <td>Unlock</td> <td>13</td> <td>Ground</td> </tr> </tbody> </table> </div> </div>		Door lock/unlock switch condition	Terminal No.		Voltage V	(+)	(-)	Lock	15	Ground	Approx. 12	Unlock	13	Ground
Door lock/unlock switch condition	Terminal No.		Voltage V											
	(+)	(-)												
Lock	15	Ground	Approx. 12											
Unlock	13	Ground												
SEL200W														
<ul style="list-style-type: none"> <li>Door lock actuator front RH and rear</li> </ul>														
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> </div> <div style="width: 45%;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Door lock/unlock switch condition</th> <th colspan="2">Terminal No.</th> <th rowspan="2">Voltage V</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td>15</td> <td>Ground</td> <td rowspan="2">Approx. 12</td> </tr> <tr> <td>Unlock</td> <td>14</td> <td>Ground</td> </tr> </tbody> </table> </div> </div>		Door lock/unlock switch condition	Terminal No.		Voltage V	(+)	(-)	Lock	15	Ground	Approx. 12	Unlock	14	Ground
Door lock/unlock switch condition	Terminal No.		Voltage V											
	(+)	(-)												
Lock	15	Ground	Approx. 12											
Unlock	14	Ground												
SEL221W														
<p>Refer to wiring diagram in EL-233.</p> <p style="text-align: center;"><b>OK or NG</b></p>														
OK	▶ GO TO 3.													
NG	▶ Replace smart entrance control unit. (Before replacing the control unit, perform "DOOR LOCK/UNLOCK SWITCH CHECK".)													

3	CHECK DOOR LOCK ACTUATOR
<ol style="list-style-type: none"> <li>Disconnect door lock actuator harness connector.</li> <li>Apply 12V direct current to door lock actuator and check operation.</li> </ol>	
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> </div> <div style="width: 45%;"> <p>Door lock actuator connector</p> <ul style="list-style-type: none"> <li>Front LH: (D6)</li> <li>Front RH: (D37)</li> <li>Rear LH: (D84)</li> <li>Rear RH: (D104)</li> </ul> </div> </div>	
SEL222W	
<b>OK or NG</b>	
OK	▶ Check harness for open or short between smart entrance control unit connector and door lock actuator.
NG	▶ Replace door lock actuator.

# MULTI-REMOTE CONTROL SYSTEM

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NFEL0111

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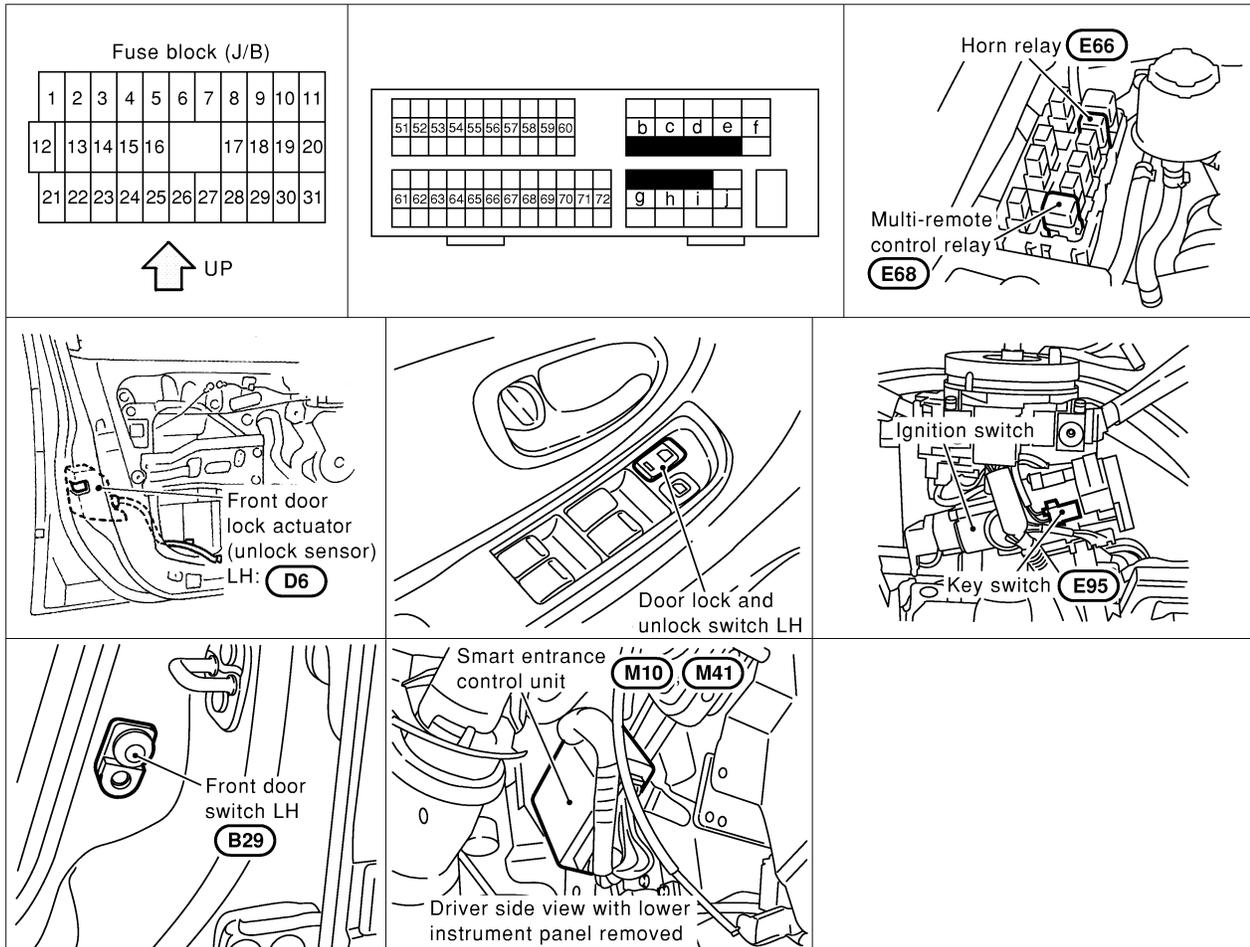
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SEL173W

## System Description

NFEL0194

NFEL0194S01

### INPUTS

Power is supplied at all times

- to key switch terminal 2
- through 10A fuse [No. 12, located in the fuse block (J/B)].

When the key switch is ON (ignition key is inserted in key cylinder), power is supplied

- through key switch terminal 1
- to smart entrance control unit terminal 32.

When the front door switch LH is ON (door is OPEN), ground is supplied

- to smart entrance control unit terminal 29
- through front door switch LH terminal 2
- to front door switch LH terminal 3
- through body grounds B30.

When the front door switch RH is ON (door is OPEN), ground is supplied

- to smart entrance control unit terminal 40
- through front door switch RH terminal 2, and
- to front door switch RH terminal 3
- through body grounds B127 and B106.

When the rear door switches are ON (door is OPEN), ground is supplied

- to smart entrance control unit terminal 28

# MULTI-REMOTE CONTROL SYSTEM

## System Description (Cont'd)

- through rear door switches terminal 1
  - to rear door switches case grounds.
- When lock/unlock switch LH is LOCK, ground is supplied

- to smart entrance control unit terminal 23
- through lock/unlock switch LH terminal 18, and
- through body grounds M9, M25 and M87.

When lock/unlock switch LH is UNLOCK, ground is supplied

- to smart entrance control unit terminal 35
- through lock/unlock switch LH terminal 17, and
- through body grounds M9, M25 and M87.

When front door unlock sensor LH is UNLOCKED, ground is supplied

- to smart entrance control unit terminal 36,
- through front door unlock sensor LH terminal 2, and
- through body grounds M9, M25 and M87.

Remote controller signal is inputted to smart entrance control unit (The antenna of the system is combined with smart entrance control unit).

The multi-remote control system controls operation of the

- power door lock
- trunk lid opener
- interior lamp
- panic alarm
- hazard and horn reminder

## OPERATED PROCEDURE

### Power Door Lock Operation

NFEL0194S02

Smart entrance control unit receives a LOCK signal from remote controller. Smart entrance control unit locks all doors with input of LOCK signal from remote controller.

When an UNLOCK signal is sent from remote controller once, driver's door will be unlocked.

Then, if an UNLOCK signal is sent from remote controller again within 5 seconds, all other door will be unlocked.

### Hazard and Horn Reminder

NFEL0194S0201

Power is supplied at all times

NFEL0194S0202

- to multi-remote control relay terminals 1, 3 and 6
- through 10A fuse [No. 5, located in the fuse block (J/B)], and
- to horn relay terminal 2
- through 10A fuse (No. 57, located in the fusible link and fuse box)

When smart entrance control unit receives LOCK or UNLOCK signal from remote controller with all doors closed, ground is supplied

- to multi-remote control relay terminal 2
- through smart entrance control unit terminal 7, and
- to horn relay terminal 1
- through smart entrance control unit terminal 19

Multi-remote control relay and horn relay are now energized, and hazard warning lamp flashes and horn sounds as a reminder.

The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

### Operating function of hazard and horn reminder

	C mode (Horn chirp mode)		S mode (Non-horn chirp mode)	
	Hazard warning lamp flash	Horn sound	Hazard warning lamp flash	Horn sound
Lock	Twice	Once	Twice	—
Unlock	Once	—	—	—

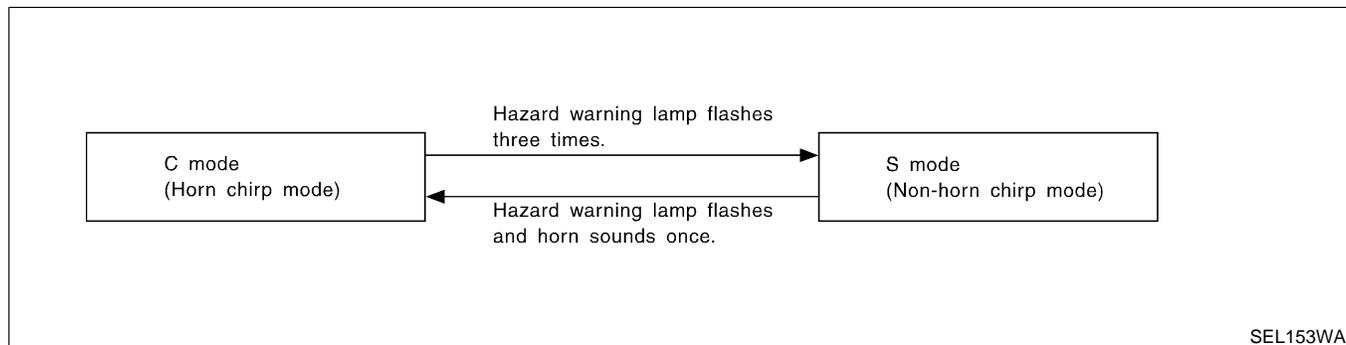
## How to change hazard and horn reminder mode

Ⓟ With CONSULT-II

Hazard and horn reminder can be changed using "WORK SUPPORT" mode in "MULTI REMOTE ENT".

ⓧ Without CONSULT-II

When LOCK and UNLOCK signals are sent from the remote controller for more than 2 seconds at the same time, the hazard and horn reminder mode is changed and hazard warning lamp flashes and horn sounds as follows:



## Interior Lamp Operation

When the following input signals are both supplied:

- door switch CLOSED (when all the doors are closed);
- driver's door LOCKED;

multi-remote control system turns on interior lamp and key hole illumination (for 30 seconds) with input of UNLOCK signal from remote controller.

For detailed description, refer to "INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS" (EL-87).

## Panic Alarm Operation

When key switch is OFF (when ignition key is not inserted in key cylinder), multi-remote control system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from remote controller.

The alarm automatically turns off after 25 seconds or when smart entrance control unit receives any signal from multi-remote controller.

For detailed description, refer to "THEFT WARNING SYSTEM" (EL-280).

## Trunk Lid Opener Operation

Power is supplied at all times

- through 15A fuse [No. 3, located in the fuse block (J/B)]
- to trunk lid opener actuator terminal 2.

When a TRUNK OPEN signal is sent with key OFF (ignition key removed from key cylinder) from remote controller, ground is supplied

- to trunk lid opener actuator terminal 1
- through smart entrance control unit terminal 12.

Then power and ground are supplied, trunk lid opener actuator opens trunk lid.

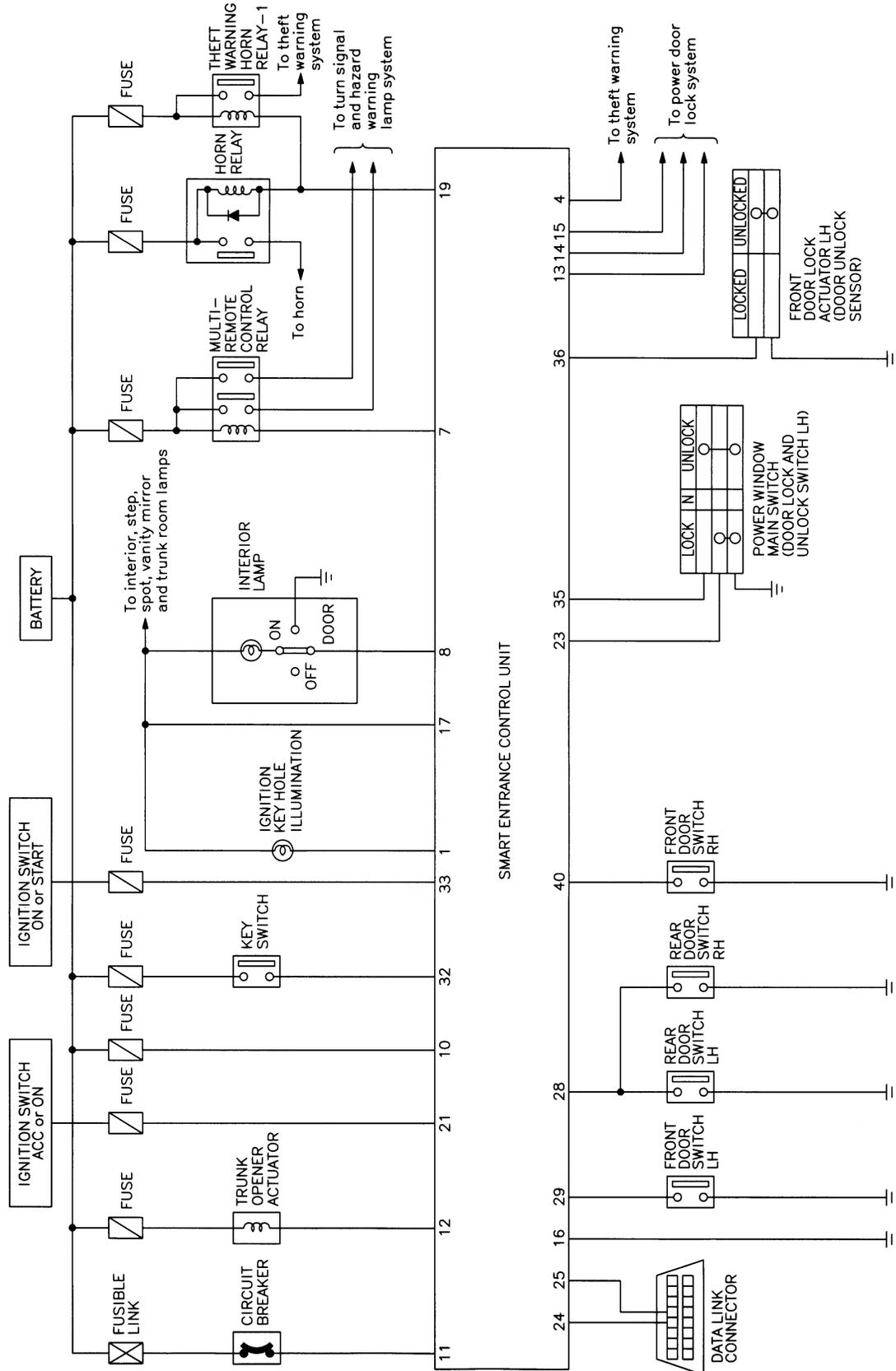
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# MULTI-REMOTE CONTROL SYSTEM

Schematic

## Schematic

NFEL0171



MEL644L

# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI —

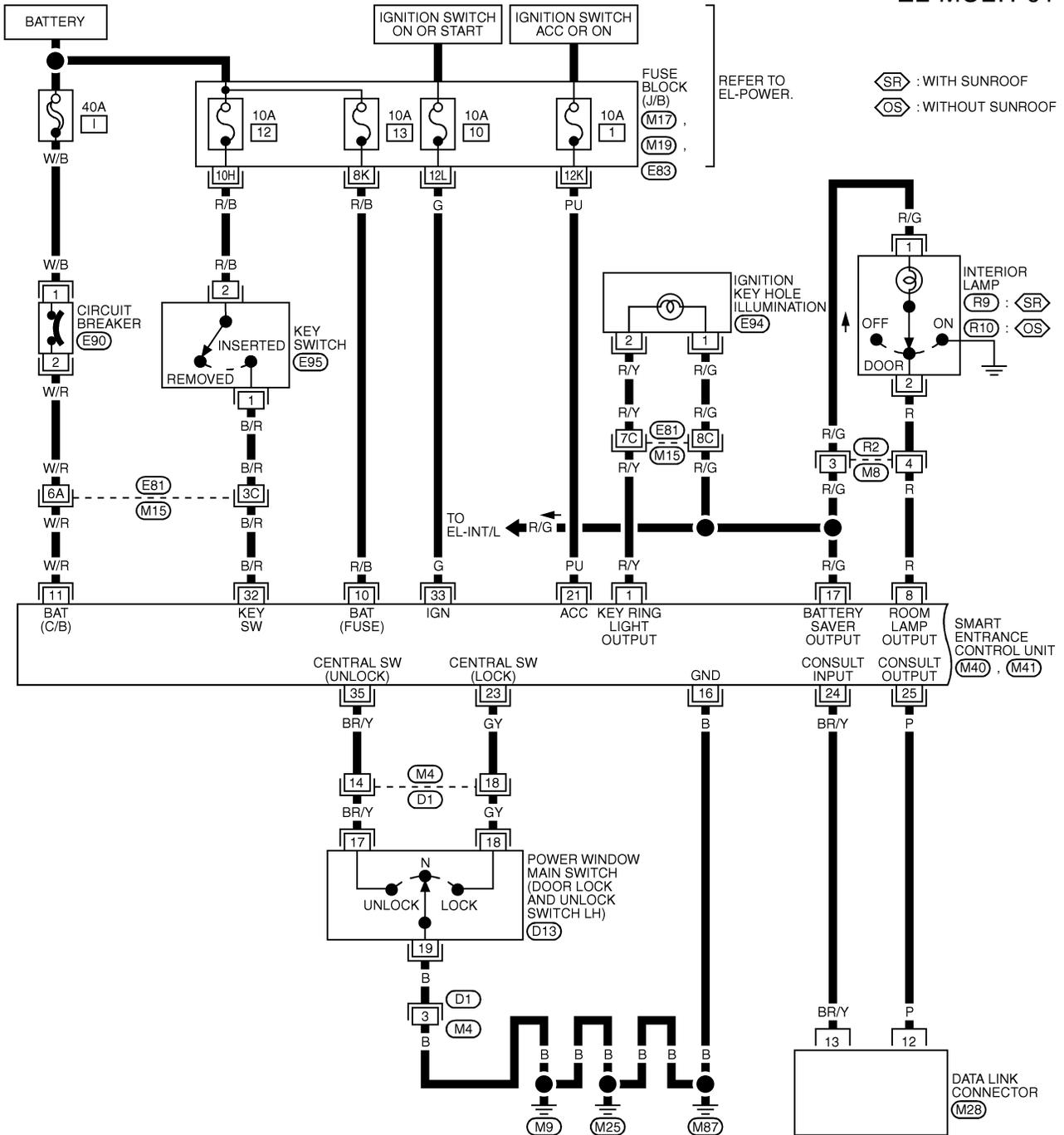
## Wiring Diagram — MULTI —

NFEL0114

NFEL0114S01

FIG. 1

EL-MULTI-01

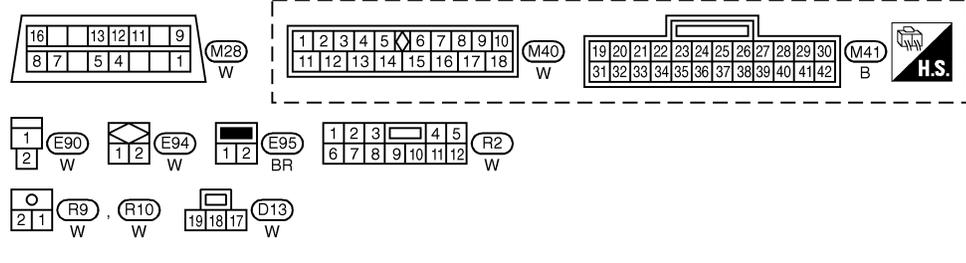


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MEL315K



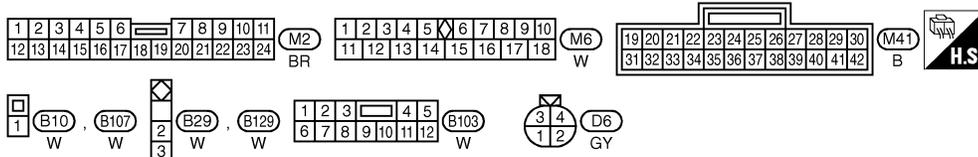
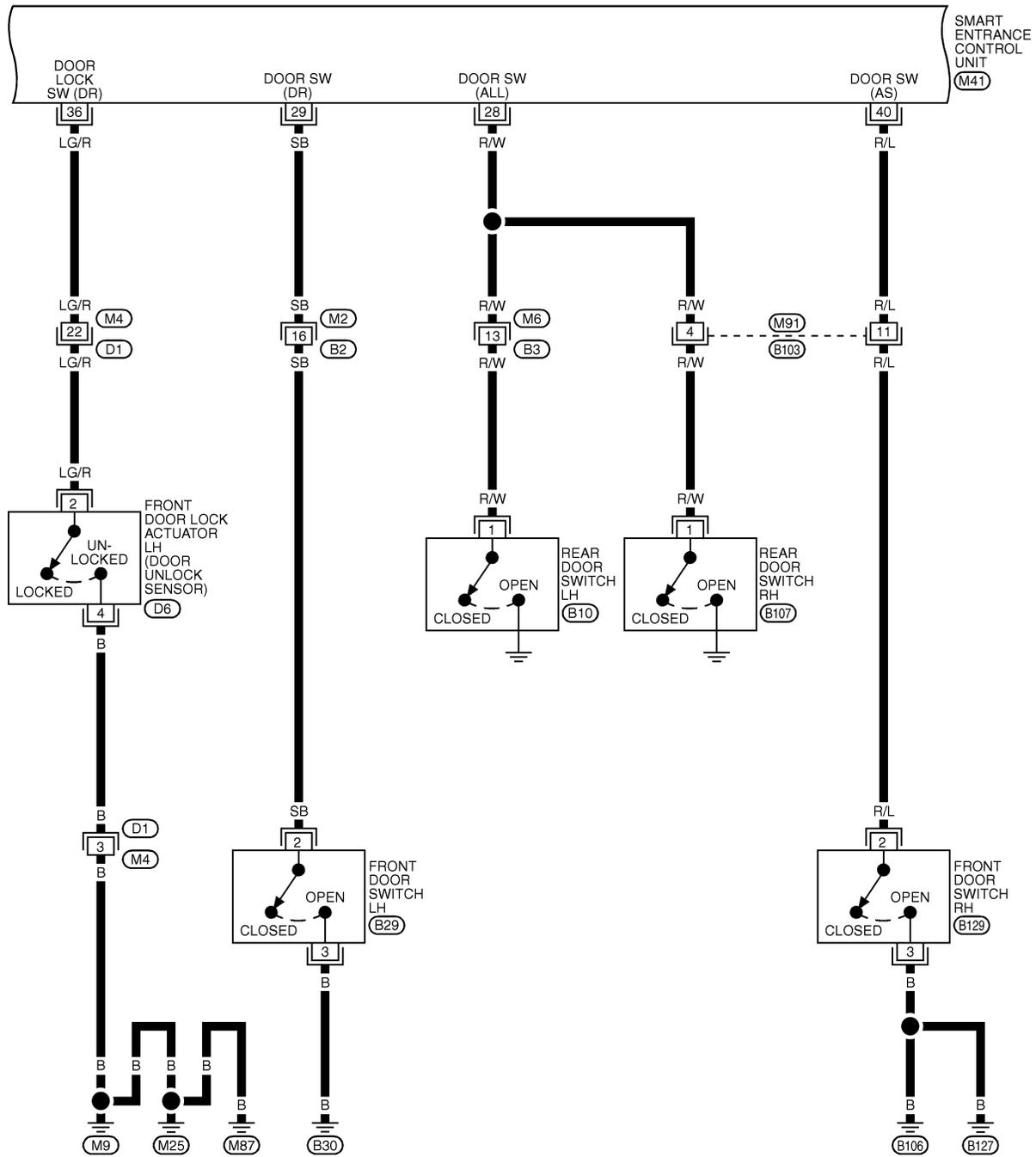
# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 2

NFEL0114S02

EL-MULTI-02



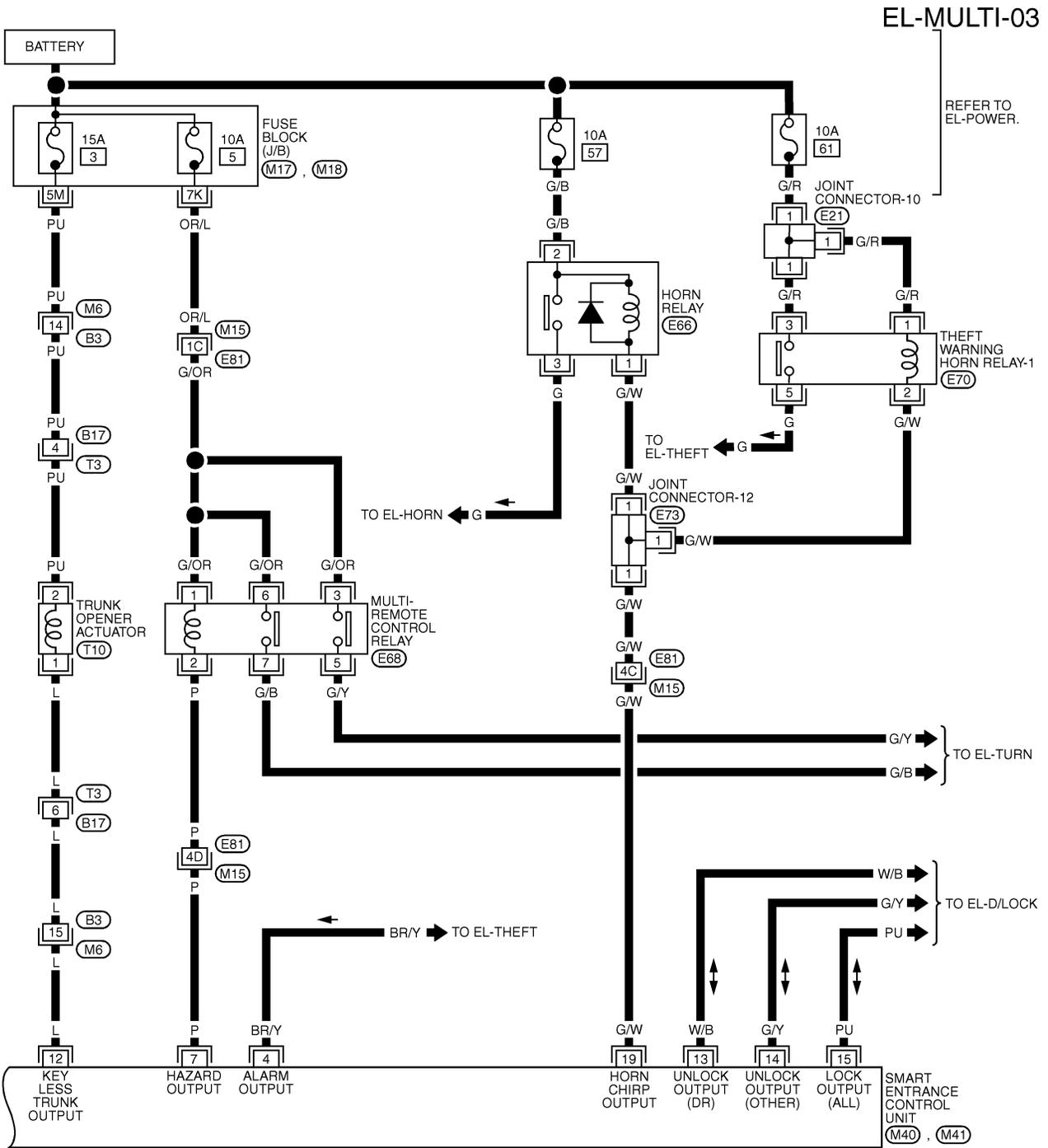
REFER TO THE FOLLOWING.  
 (M4), (D1) -SUPER  
 MULTIPLE JUNCTION (SMJ)

# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 3

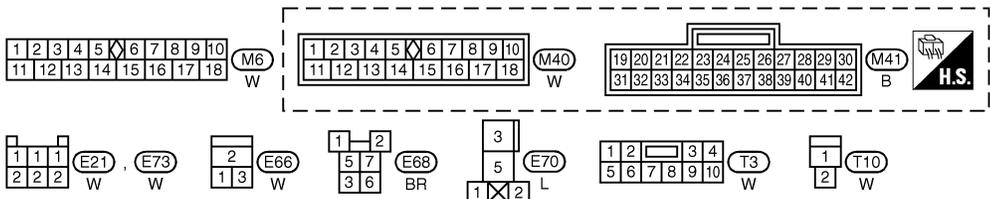
NFEL0114S05



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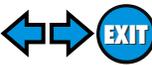
EL

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REFER TO THE FOLLOWING.  
 (M15), (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) -FUSE BLOCK-  
 JUNCTION BOX (J/B)  
 (M18) -FUSE BLOCK-  
 JUNCTION BOX (J/B)

MEL645L



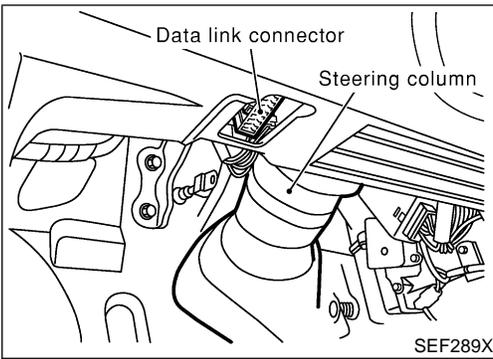
# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)	
1	R/Y	IGNITION KEY HOLE ILLUMINATION	FOR 30 SECONDS AFTER DRIVER DOOR IS LOCKED	0V	
			30 SECONDS PASSED AFTER DRIVER DOOR IS LOCKED	12V	
4	BR/Y	THEFT WARNING HORN/LAMP RELAY	WHEN PANIC ALARM IS OPERATED USING REMOTE CONTROLLER	12V → 0V	
7	P	MULTI-REMOTE CONTROL RELAY	WHEN DOORS ARE LOCKED USING REMOTE CONTROLLER	12V → 0V	
8	R	INTERIOR LAMP	WHEN INTERIOR LAMP IS OPERATED USING REMOTE CONTROLLER (LAMP SWITCH IN "DOOR" POSITION)	0V → 12V	
10	R/B	POWER SOURCE (FUSE)	-	12V	
11	W/R	POWER SOURCE (C/B)	-	12V	
12	L	TRUNK LID OPENER SWITCH	ON (OPEN) → OFF (CLOSED)	0V → 12V	
13	W/B	DRIVER DOOR LOCK ACTUATOR	DOOR LOCK & UNLOCK SWITCH	FREE	0V
14	G/Y	PASSENGER AND REAR DOOR LOCK ACTUATOR		UNLOCKED	12V
15	PU	DOOR LOCK ACTUATORS	DOOR LOCK & UNLOCK SWITCH	FREE	0V
				LOCKED	12V
16	B	GROUND	-	-	
17	R/G	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOES NOT OPERATE → OPERATE	12V → 0V	
19	G/W	HORN RELAY	WHEN DOORS ARE LOCKED USING REMOTE CONTROLLER WITH HORN CHIRP MODE	12V → 0V	
21	PU	IGNITION SWITCH (ACC)	"ACC" POSITION	12V	
23	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → LOCKS	5V → 0V	
28	R/W	REAR DOOR SWITCHES	OFF (CLOSED) → ON (OPEN)	5V → 0V	
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V	
32	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER	12V → 0V	
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V	
35	BR/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → UNLOCKS	5V → 0V	
36	LG/R	DOOR LOCK SWITCH	DRIVER DOOR: LOCKED → UNLOCKED	5V → 0V	
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V	

SEL001XA



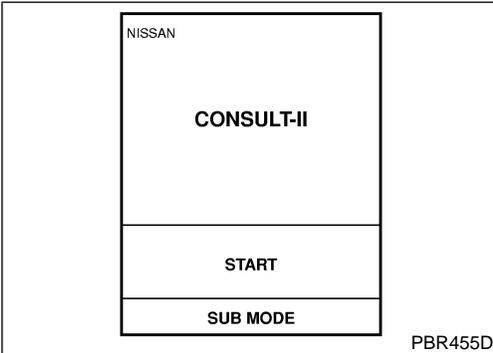
## CONSULT-II Inspection Procedure

NFEL0241

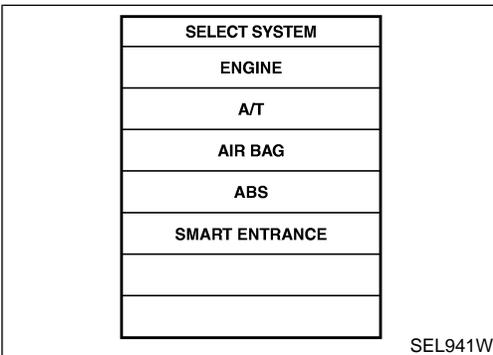
NFEL0241S01

### "MULTI REMOTE ENT"

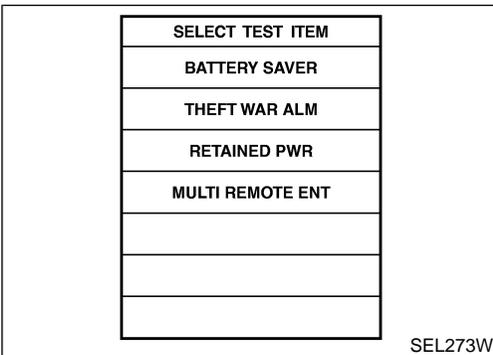
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



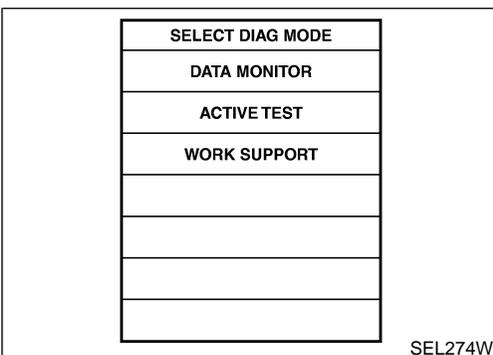
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Touch "MULTI REMOTE ENT".



7. Select diagnosis mode. "DATA MONITOR", "ACTIVE TEST" and "WORK SUPPORT" are available.

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# MULTI-REMOTE CONTROL SYSTEM

CONSULT-II Application Items

## CONSULT-II Application Items

NFEL0242

NFEL0242S01

NFEL0242S0101

### “MULTI REMOTE ENT”

#### Data Monitor

Monitored Item	Description
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (All).
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch LH and RH.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch LH and RH.
KEY CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder switch.
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder switch.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from remote controller.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.
TRUNK BTN/SIG	Indicates [ON/OFF] condition of trunk open signal from remote controller.
PANIC BTN	Indicates [ON/OFF] condition of panic signal from remote controller.
UN BUTTON ON	Indicates [ON/OFF] condition of second unlock signal from remote controller within 5 seconds after first unlock operation.
LK/UN BTN ON	Indicates [ON/OFF] condition of lock/unlock signal at the same time from remote controller.

#### Active Test

NFEL0242S0102

Test Item	Description
INT/IGN ILLUM	This test is able to check interior lamp and ignition key hole illumination operation. The interior lamp and ignition key hole illumination are turned on when “ON” on CONSULT-II screen is touched.
HAZARD	This test is able to check hazard reminder operation. The hazard lamp turns on when “ON” on CONSULT-II screen is touched.
ALARM	This test is able to check panic alarm operation. The alarm activate for 0.5 seconds after “ON” on CONSULT-II screen is touched.
MULTI REM HRN	This test is able to check horn reminder operation. The horn sounds for 0.02 seconds after “ON” on CONSULT-II screen is touched.
TRUNK OUTPUT	This test is able to check trunk lid opener actuator operation. The trunk is unlocked when “ON” on CONSULT-II screen is touched.

#### Work Support

NFEL0242S0103

Test Item	Description
REMO CONT ID CONFIR	It can be checked whether remote controller ID code is registered or not in this mode.
REMO CONT ID REGIST	Remote controller ID code can be registered.
REMO CONT ID ERASUE	Remote controller ID code can be erased.
HZRD REM SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when “MODE SET” on CONSULT-II screen is touched.

## Trouble Diagnoses

### SYMPTOM CHART

NFEL0195

NFEL0195S01

#### NOTE:

- Always check remote controller battery before replacing remote controller.
- The panic alarm operation and trunk lid opener operation of multi-remote control system do not activate with the ignition key inserted in the ignition key cylinder.

Symptom	Diagnoses/service procedure	Reference page (EL- )
All function of multi-remote control system do not operate.	1. Remote controller battery and function check	259
	2. Power supply and ground circuit for smart entrance control unit check	260
	3. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	272
The new ID of remote controller cannot be entered.	1. Remote controller battery and function check	259
	2. Key switch (insert) check	263
	3. Door switch check	262
	4. Door lock/unlock switch LH check	264
	5. Power supply and ground circuit for smart entrance control unit check	260
	6. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	272
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system. Refer to EL-238)	1. Remote controller battery and function check	259
	2. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	272
Hazard and horn reminder does not activate properly when pressing lock or unlock button of remote controller.	1. Remote controller battery and function check	259
	2. Hazard reminder check	267
	3. Horn reminder check* *: Horn chirp can be activated or deactivated. First check the horn chirp setting. Refer to "System Description", EL-247.	269
	4. Door switch check	262
	5. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	272
Interior lamp and key hole illumination operation do not activate properly.	1. Interior lamp operation check	270
	2. Key hole illumination operation check	271
	3. Door switch check	262
	4. Front LH door unlock sensor check	265

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# MULTI-REMOTE CONTROL SYSTEM

## Trouble Diagnoses (Cont'd)

Symptom	Diagnoses/service procedure	Reference page (EL- )
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Remote controller battery and function check	259
	2. Theft warning operation check. Refer to "PRELIMINARY CHECK" in "THEFT WARNING SYSTEM".	292
	3. Key switch (insert) check	263
	4. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	272
Trunk lid does not open when trunk opener button is continuously pressed.	1. Remote controller battery and function check	259
	2. Trunk lid opener actuator check	266
	3. Key switch (insert) check	263
	4. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	272

## REMOTE CONTROLLER BATTERY AND FUNCTION CHECK

-NFEL0195S02

<b>1</b>	<b>CHECK REMOTE CONTROLLER BATTERY</b>		GI
		Remove battery (refer to EL-276) and measure voltage across battery positive and negative terminals, (+) and (-). <b>Voltage [V]:</b> <b>2.5 - 3.0</b>	MA
		<b>NOTE:</b> Remote controller does not function if battery is not set correctly.	EM
			LC
		SEL237W	EC
		<b>OK or NG</b>	FE
OK	▶	GO TO 2.	CL
NG	▶	Replace battery.	MT

<b>2</b>	<b>CHECK REMOTE CONTROLLER FUNCTION</b>		AT																																					
		<b>With CONSULT-II</b> Check remote controller function ("LK BUTTON/SIG", "UN BUTTON/SIG", "TRUNK BTN/SIG", "PANIC BTN", "UN BUTTON ON" and "LK/UN BTN ON") in "DATA MONITOR" mode with CONSULT-II.	AX																																					
		<b>When pushing each button of remote controller, the corresponding monitor item should be turned as follows.</b>	SU																																					
		<table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>LK BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>UN BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>TRUNK BTN/SIG</td> <td>ON</td> </tr> <tr> <td>PANIC BTN</td> <td>ON</td> </tr> <tr> <td>UN BUTTON ON</td> <td>ON</td> </tr> <tr> <td>LK/UN BTN ON</td> <td>ON</td> </tr> </tbody> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Condition</th> <th colspan="2">Monitor item</th> </tr> </thead> <tbody> <tr> <td>Pushing LOCK</td> <td>LK BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing UNLOCK</td> <td>UN BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing TRUNK</td> <td>TRUNK BTN/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing PANIC</td> <td>PANIC BTN/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing UNLOCK within 5 seconds after first pushing UNLOCK</td> <td>UN BUTTON ON</td> <td>ON</td> </tr> <tr> <td>Pushing LOCK and UNLOCK at the same time</td> <td>LK/UN BTN ON</td> <td>ON</td> </tr> </tbody> </table>	DATA MONITOR		MONITOR		LK BUTTON/SIG	ON	UN BUTTON/SIG	ON	TRUNK BTN/SIG	ON	PANIC BTN	ON	UN BUTTON ON	ON	LK/UN BTN ON	ON	Condition	Monitor item		Pushing LOCK	LK BUTTON/SIG	ON	Pushing UNLOCK	UN BUTTON/SIG	ON	Pushing TRUNK	TRUNK BTN/SIG	ON	Pushing PANIC	PANIC BTN/SIG	ON	Pushing UNLOCK within 5 seconds after first pushing UNLOCK	UN BUTTON ON	ON	Pushing LOCK and UNLOCK at the same time	LK/UN BTN ON	ON	BR
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Pushing LOCK and UNLOCK at the same time	LK/UN BTN ON	ON																																						
		SEL346W	ST																																					
		<b>OK or NG</b>	RS																																					
OK	▶	Remote controller is OK. Further inspection is necessary. Refer to "SYMPTOM CHART", EL-257.	BT																																					
NG	▶	Replace remote controller. Refer to ID Code Entry Procedure.	HA																																					

EL

IDX

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

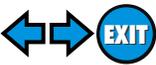
## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0195S03

<b>1</b>	<b>CHECK MAIN POWER SUPPLY CIRCUIT FOR SMART ENTRANCE CONTROL UNIT</b>
<p>1. Disconnect smart entrance control unit harness connector.                  2. Check voltage between smart entrance control unit harness connector terminal 10 or 11 and ground.</p>	
SEL226W	
Refer to wiring diagram in EL-251.	
<b>OK or NG</b>	
OK	▶ GO TO 2.
NG	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 40A fusible link (letter i, located in fuse and fusible link box)</li> <li>● 10A fuse [No. 13, located in fuse block (J/B)]</li> <li>● E90 circuit breaker</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>

<b>2</b>	<b>CHECK IGNITION SWITCH “ACC” CIRCUIT</b>
<p>1. Disconnect smart entrance control unit harness connector.                  2. Check voltage between smart entrance control unit harness connector terminal 21 and ground while ignition switch is “ACC”.</p>	
SEL227W	
Refer to wiring diagram in EL-251.	
<b>OK or NG</b>	
OK	▶ GO TO 3.
NG	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 1, located in fuse block (J/B)]</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>

# MULTI-REMOTE CONTROL SYSTEM



Trouble Diagnoses (Cont'd)

3	<b>CHECK GROUND CIRCUIT FOR SMART ENTRANCE CONTROL UNIT</b>
<p>Check continuity between smart entrance control unit harness connector terminal 16 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="381 273 657 546"> <p>Smart entrance control unit connector (M40)</p> </div> <div data-bbox="698 294 787 504"> </div> <div data-bbox="933 378 1242 430"> <p><b>Continuity should exist.</b></p> </div> </div> <p>Refer to wiring diagram in EL-251.</p> <p style="text-align: right;">SEL228W</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶ Power supply and ground circuits are OK.
NG	▶ Check ground harness.

- GI
- MA
- EM
- LC
- EC
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- CL
- MT
- AT
- AX
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- BR
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- RS
- BT
- HA
- SC
- EL**
- IDX

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

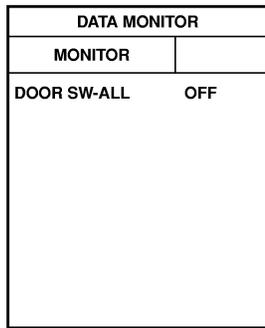
## DOOR SWITCH CHECK

=NFEL0195S04

### 1 CHECK DOOR SWITCH INPUT SIGNAL

#### With CONSULT-II

Check door switches ("DOOR SW-ALL") in "DATA MONITOR" mode with CONSULT-II.



When any doors are open:

**DOOR SW-ALL ON**

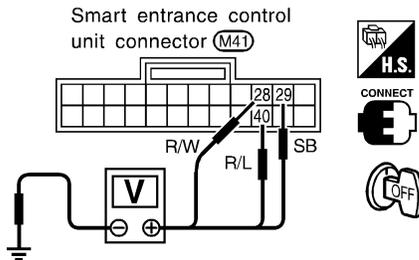
When all doors are closed:

**DOOR SW-ALL OFF**

SEL323W

#### Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminals 28, 29 or 40 and ground.



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door switch	29	Ground	Open	0
			Closed	Approx. 5
Front RH door switch	40	Ground	Open	0
			Closed	Approx. 5
Rear door switches	28	Ground	Open	0
			Closed	Approx. 5

SEL191W

Refer to wiring diagram in EL-252.

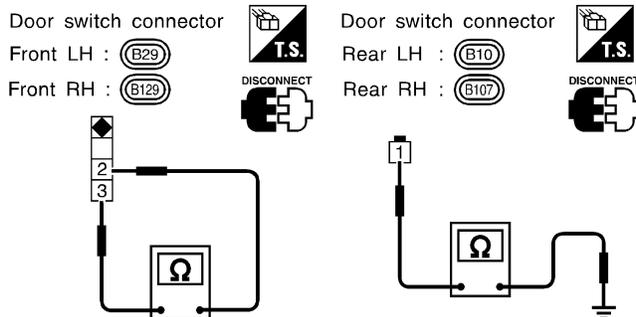
**OK or NG**

OK ► Door switch is OK.

NG ► GO TO 2.

### 2 CHECK DOOR SWITCH

1. Disconnect door switch harness connector.
2. Check continuity between door switch terminals.



	Terminals	Condition	Continuity
Front door switches	2 - 3	Closed	No
		Open	Yes
Rear door switches	1 - Ground	Closed	No
		Open	Yes

SEL192W

**OK or NG**

OK ► **Check the following.**

- Door switch ground circuit or door switch ground condition
- Harness for open or short between smart entrance control unit and door switch

NG ► Replace door switch.

## KEY SWITCH (INSERT) CHECK

=NFEL0195S05

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	<p> <b>With CONSULT-II</b> Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">DATA MONITOR</th> </tr> <tr> <th style="width: 50%;">MONITOR</th> <th style="width: 50%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">KEY ON SW</td> <td style="text-align: center;">ON</td> </tr> </tbody> </table> </div> <div style="margin-left: 20px;"> <p>When key is inserted to ignition key cylinder: <b>KEY ON SW ON</b></p> <p>When key is removed from ignition key cylinder: <b>KEY ON SW OFF</b></p> </div> </div> <p style="text-align: right; margin-top: 20px;">SEL315W</p>	DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR								
MONITOR								
KEY ON SW	ON							
		<p> <b>Without CONSULT-II</b> Check voltage between control unit terminal 32 and ground.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M4)</p> </div> <div style="margin-right: 20px;"> <p> <b>CONNECT</b></p> <p>: Approx. 12V : 0V</p> </div> <div style="margin-left: 20px;"> <p><b>Voltage [V]:</b> Condition of key switch: Key is inserted. <b>Approx. 12</b> Condition of key switch: Key is removed. <b>0</b></p> </div> </div> <p style="text-align: right; margin-top: 20px;">SEL193W</p> <p>Refer to wiring diagram in EL-251.</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 10%; text-align: center;">▶</td> <td>Key switch is OK.</td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>GO TO 2.</td> </tr> </table>	OK	▶	Key switch is OK.	NG	▶	GO TO 2.
OK	▶	Key switch is OK.						
NG	▶	GO TO 2.						

GI  
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IDX

<b>2</b>	<b>CHECK KEY SWITCH (INSERT)</b>	<p>Check continuity between key switch terminals 1 and 2.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Key switch connector (E95)</p> </div> <div style="margin-right: 20px;"> <p> <b>DISCONNECT</b></p> </div> <div style="margin-left: 20px;"> <p><b>Continuity:</b> Condition of key switch: Key is inserted. <b>Yes</b> Condition of key switch: Key is removed. <b>No</b></p> </div> </div> <p style="text-align: right; margin-top: 20px;">SEL194W</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 10%; text-align: center;">▶</td> <td> <p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between smart entrance control unit and key switch</li> </ul> </td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>Replace key switch.</td> </tr> </table>	OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between smart entrance control unit and key switch</li> </ul>	NG	▶	Replace key switch.
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between smart entrance control unit and key switch</li> </ul>						
NG	▶	Replace key switch.						

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## DOOR LOCK/UNLOCK SWITCH LH CHECK

=NFEL0195S06

### 1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

**With CONSULT-II**

Check door lock/unlock switch ("LOCK SW DR/AS"/"UNLK SW DR/AS") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
LOCK SW DR/AS	OFF
UNLK SW DR/AS	OFF

When lock/unlock switch is turned to LOCK:

**LOCK SW DR/AS ON**

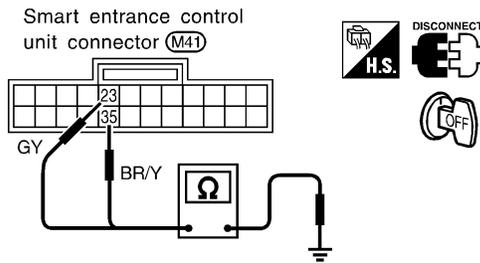
When lock/unlock switch is turned to UNLOCK:

**UNLK SW DR/AS ON**

SEL341W

**Without CONSULT-II**

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector terminal 23 or 35 and ground.



Terminals	Door lock/unlock switch (LH or RH) condition	Continuity
23 - Ground	Lock	Yes
	N and Unlock	No
35 - Ground	Unlock	Yes
	N and Lock	No

SEL195W

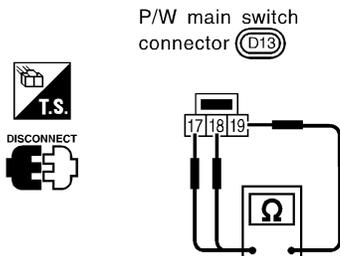
Refer to wiring diagram in EL-251.

**OK or NG**

OK	▶	Door lock/unlock switch is OK.
NG	▶	GO TO 2.

### 2 CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between door lock/unlock switch LH terminals.



Condition	Terminals		
	17	18	19
Lock		○	○
N	No continuity		
Unlock	○		○

SEL196W

**OK or NG**

OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Ground circuit for door lock/unlock switch</li> <li>● Harness for open or short between door lock/unlock switch and smart entrance control unit connector</li> </ul>
NG	▶	Replace door lock/unlock switch.

## FRONT LH DOOR UNLOCK SENSOR CHECK

=NFEL0195S07

### 1 CHECK FRONT LH DOOR UNLOCK SENSOR INPUT SIGNAL

**With CONSULT-II**

1. Select "DATA MONITOR" mode in "INT LAMP" with CONSULT-II.
2. Check front LH door unlock sensor ("LOCK SIG DR") in "DATA MONITOR" mode.

DATA MONITOR	
MONITOR	
LOCK SIG DR	OFF

When front LH door is locked:

**LOCK SIG DR OFF**

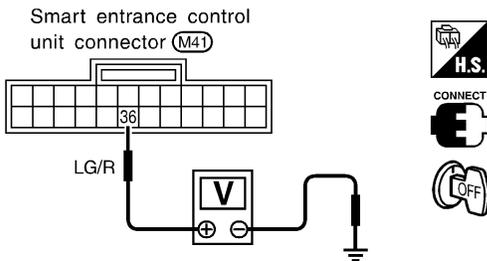
When front LH door is unlocked:

**LOCK SIG DR ON**

SEL344W

**Without CONSULT-II**

Check voltage between smart entrance control unit harness connector terminal 36 and ground.



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door	36	Ground	Locked	Approx. 5
			Unlocked	0

SEL223W

Refer to wiring diagram in EL-252.

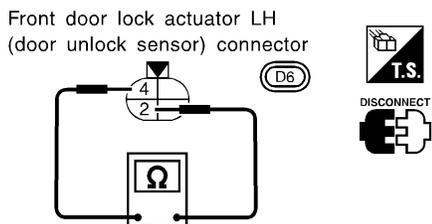
**OK or NG**

OK ► Door unlock sensor is OK.

NG ► GO TO 2.

### 2 CHECK FRONT LH DOOR UNLOCK SENSOR

1. Disconnect front LH door unlock sensor harness connector.
2. Check continuity between door unlock sensor terminals.



**Continuity:**  
 Condition: Locked  
 No  
 Condition: Unlocked  
 Yes

SEL224W

**OK or NG**

OK ► **Check the following.**

- Door unlock sensor ground circuit
- Harness for open or short between smart entrance control unit and door unlock sensor

NG ► Replace door unlock sensor.

GI  
MA  
EM  
LC  
EC  
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CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

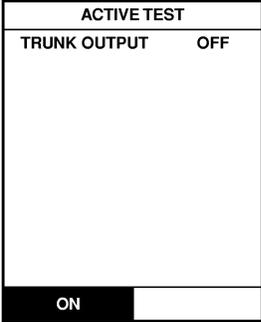
# MULTI-REMOTE CONTROL SYSTEM

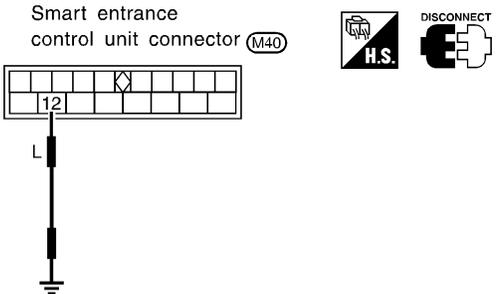
Trouble Diagnoses (Cont'd)

## TRUNK LID OPENER ACTUATOR CHECK

=NFEL0195S12

<b>1</b>	<b>CHECK TRUNK LID OPENER</b>	
Check trunk lid opener operation with trunk lid opener switch. NOTE: First check trunk lid opener cancel lever position.		
<b>Does trunk lid open?</b>		
Yes	▶	GO TO 2.
No	▶	Check trunk lid opener actuator and the circuit.

<b>2</b>	<b>CHECK TRUNK LID OPENER ACTUATOR OPERATION</b>	
With CONSULT-II 1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "TRUNK OUTPUT" and touch "ON".		
		
<b>Trunk lid opener should operate.</b>		
SEL345W		
<b>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</b>		
<b>OK or NG</b>		
OK	▶	Trunk lid opener actuator circuit is OK.
NG	▶	Check harness for open or short between smart entrance control unit and trunk lid opener actuator.

<b>3</b>	<b>CHECK TRUNK LID OPENER ACTUATOR CIRCUIT</b>	
Without CONSULT-II 1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 12.		
		
SEL232W		
Refer to wiring diagram in EL-253.		
<b>Does trunk lid open?</b>		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between smart entrance control unit and trunk lid opener actuator.

## HAZARD REMINDER CHECK

=NFEL0195S08

<b>1</b>	<b>CHECK HAZARD INDICATOR</b>	
Check if hazard indicator flashes with hazard switch.		
<b>Does hazard indicator operate?</b>		
Yes	▶	GO TO 2.
No	▶	Check "hazard indicator" circuit.

GI  
MA  
EM

<b>2</b>	<b>CHECK HAZARD REMINDER OPERATION WITH CONSULT-II</b>					
<p> <b>With CONSULT-II</b></p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "HAZARD" and touch "ON".</p>						
<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <p style="text-align: center; margin: 0;">ACTIVE TEST</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; border-bottom: 1px solid black;">HAZARD</td> <td style="width: 50%; text-align: center; border-bottom: 1px solid black;">OFF</td> </tr> <tr> <td style="border-bottom: 1px solid black;">ON</td> <td style="border-bottom: 1px solid black;"></td> </tr> </table> </div> <div style="text-align: center;"> <p><b>Hazard indicator should illuminate.</b></p> </div> </div>			HAZARD	OFF	ON	
HAZARD	OFF					
ON						
SEL347W						
<b>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</b>						
<b>OK or NG</b>						
OK	▶	Hazard reminder operation is OK.				
NG	▶	GO TO 4.				

LC  
EC  
FE  
CL  
MT  
AT  
AX

<b>3</b>	<b>CHECK HAZARD REMINDER OPERATION WITHOUT CONSULT-II</b>	
<p> <b>Without CONSULT-II</b></p> <p>1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 7.</p>		
<div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M40)</p> </div> <div style="margin-right: 20px;"> <p>DISCONNECT</p> </div> <div style="text-align: center;"> <p><b>Hazard indicator should illuminate.</b></p> </div> </div>		
SEL225W		
Refer to wiring diagram in EL-253.		
<b>OK or NG</b>		
OK	▶	Replace smart entrance control unit.
NG	▶	GO TO 4.

BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

<b>4</b>	<b>CHECK MULTI-REMOTE CONTROL RELAY</b>	
Check multi-remote control relay.		
OK or NG		
OK	▶	GO TO 5.
NG	▶	Replace multi-remote control relay.

<b>5</b>	<b>CHECK POWER SUPPLY FOR MULTI-REMOTE CONTROL RELAY</b>	
<ol style="list-style-type: none"> <li>1. Disconnect multi-remote control relay harness connector.</li> <li>2. Check voltage between terminal 1 and ground.</li> </ol>		
SEL235W		
<b>Does battery voltage exist?</b>		
Yes	▶	GO TO 6.
No	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● 10A fuse [No. 5, located in fuse block (J/B)]</li> <li>● Harness for open or short between multi-remote control relay and fuse</li> </ul>

<b>6</b>	<b>CHECK MULTI-REMOTE CONTROL RELAY CIRCUIT</b>	
<ol style="list-style-type: none"> <li>1. Disconnect multi-remote control relay harness connector.</li> <li>2. Check voltage between terminals 3 and 5.</li> <li>3. Check voltage between terminals 6 and 7.</li> </ol>		
SEL236W		
<b>Battery voltage should exist.</b>		
<b>OK or NG</b>		
OK	▶	Check harness for open or short between smart entrance control unit and multi-remote control relay.
NG	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Harness for open or short between multi-remote control relay and fuse</li> <li>● Harness for open or short between multi-remote control relay and turn signal lamps</li> </ul>

## HORN REMINDER CHECK

=NFEL0195S09

<b>1</b>	<b>CHECK HORN</b>	
Check if horn sounds with horn switch.		
<b>Does horn operate?</b>		
Yes	▶	GO TO 2.
No	▶	Check horn circuit.

GI  
MA  
EM

<b>2</b>	<b>CHECK HORN REMINDER OPERATION WITH CONSULT-II</b>	
<p> <b>With CONSULT-II</b></p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "MULTI REM HRN" and touch "ON".</p>		
<b>Horn should sound.</b>		
<p><b>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</b></p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	Horn reminder operation is OK.
NG	▶	Check harness for open or short between smart entrance control unit and horn relay.

LC  
EC  
FE  
CL  
MT  
AT

<b>3</b>	<b>CHECK HORN REMINDER OPERATION WITHOUT CONSULT-II</b>	
<p> <b>Without CONSULT-II</b></p> <p>1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 19.</p>		
<p>Refer to wiring diagram in EL-253.</p> <p style="text-align: center;"><b>Does horn sound?</b></p>		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between smart entrance control unit and horn relay.

BR  
ST  
RS  
BT  
HA  
SC

EL  
IDX

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## INTERIOR LAMP OPERATION CHECK

=NFEL0195S10

<b>1</b>	<b>CHECK INTERIOR LAMP</b>	
Check if the interior lamp switch is in the "ON" position and the lamp illuminates.		
<b>Does interior lamp illuminate?</b>		
Yes	▶	GO TO 2.
No	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Harness for open or short between smart entrance control unit and interior lamp</li> <li>● Interior lamp</li> </ul>

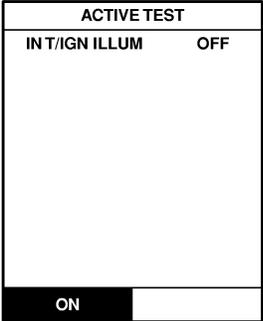
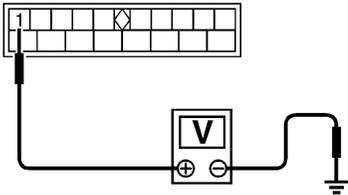
<b>2</b>	<b>CHECK INTERIOR LAMP OPERATION</b>	
<p> <b>With CONSULT-II</b></p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "INT/IGN ILLUM" and touch "ON".</p>		
<p><b>Interior lamp should illuminate.</b></p>		
SEL349W		

<p> <b>Without CONSULT-II</b></p> <p>Push unlock button of remote controller with all doors closed, and check voltage between smart entrance control unit harness connector terminal 8 and ground.</p>		
<p><b>Voltage [V]:</b>  <b>Unlock button is pushed.</b>  0 (For approx. 30 seconds.)  <b>Unlock button is not pushed.</b>  Battery voltage</p>		
SEL231W		
<p>Refer to wiring diagram in EL-251.</p> <p><b>OK or NG</b></p>		

OK	▶	System is OK.
NG	▶	Check harness open or short between smart entrance control unit and interior lamp.

## KEY HOLE ILLUMINATION OPERATION CHECK

NFEL0195S13

<b>1</b>	<b>CHECK KEY HOLE ILLUMINATION OPERATION</b>	<p><b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Select "ACTIVE TEST" IN "MULTI REMOTE ENT" with CONSULT-II.</li> <li>Select "INT/IGN ILLUM" and touch "ON".</li> </ol> <div style="text-align: center; margin: 20px 0;">  </div> <p style="text-align: center; margin: 20px 0;"><b>Key hole illuminate should illuminate.</b></p> <p style="text-align: right; margin: 0 20px;">SEL350W</p>	GI MA EM LC EC FE
<p><b>Without CONSULT-II</b></p> <p>Push unlock button of remote controller with all doors closed and driver's door locked, and check voltage between smart entrance control unit harness connector terminal 1 and ground.</p> <div style="display: flex; align-items: center; margin: 20px 0;"> <div style="flex: 1;"> <p>Smart entrance control unit connector (M40)</p>  </div> <div style="flex: 1; text-align: center;">  </div> <div style="flex: 2;"> <p><b>Voltage [V]:</b></p> <p><b>Unlock button is pushed.</b> 0 (For approx. 30 seconds)</p> <p><b>Unlock button is not pushed.</b> Battery voltage</p> </div> </div> <p style="margin: 20px 0;">Refer to wiring diagram in EL-251.</p> <p style="text-align: right; margin: 0 20px;">SEL330W</p>		CL MT AT AX SU BR	
<b>OK or NG</b>			
OK	▶	System is OK.	
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Harness for open or short between smart entrance control unit and key hole illumination.</li> <li>● Key hole illumination</li> </ul>	ST RS BT HA SC

**EL**

IDX

# MULTI-REMOTE CONTROL SYSTEM

## ID Code Entry Procedure

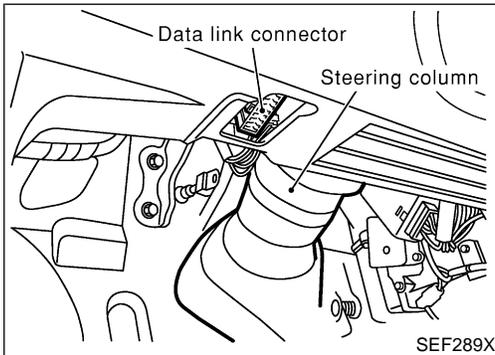
### REMOTE CONTROLLER ID SET UP WITH CONSULT-II

~NFEL0117  
NFEL0117S01

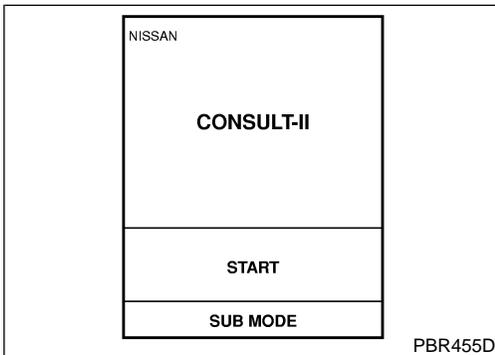
**NOTE:**

If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. When the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.

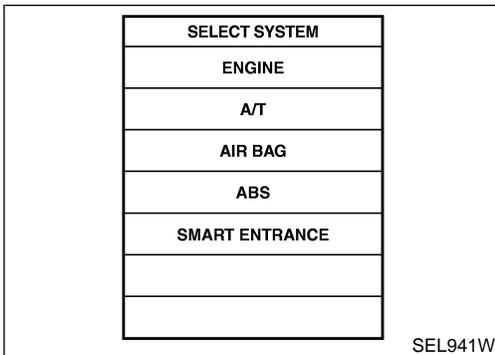
1. Turn ignition switch "OFF".
2. Connect "CONSULT" to the data link connector.



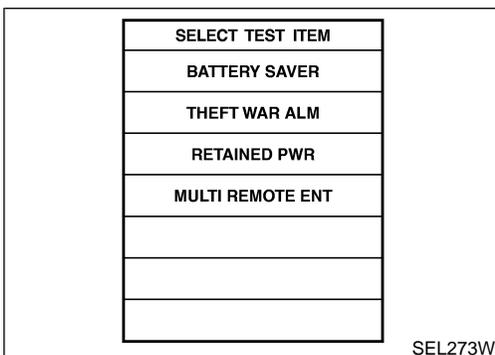
3. Turn ignition switch "ON".
4. Touch "START".



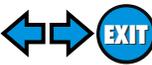
5. Touch "SMART ENTRANCE".



6. Touch "MULTI REMOTE ENT".



# MULTI-REMOTE CONTROL SYSTEM



ID Code Entry Procedure (Cont'd)

SELECT DIAG MODE
DATA MONITOR
ACTIVE TEST
WORK SUPPORT

SEL274W

7. Touch "WORK SUPPORT".

SELECT WORK ITEM
REMO CONT ID CONFIR
REMO CONT ID REGIST
REMO CONT ID ERASUR
HZRD REM SET

SEL277W

8. The items are shown on the figure at left can be set up.

- "REMO CONT ID CONFIR"  
Use this mode to confirm if a remote controller ID code is registered or not.
- "REMO CONT ID REGIST"  
Use this mode to register a remote controller ID code.

**NOTE:**

**Register the ID code when remote controller or smart entrance control unit is replaced, or when additional remote controller is required.**

- "REMO CONT ID ERASUR"  
Use this mode to erase a remote controller ID code.
- "HZRD REM SET"  
Use this mode to activate or deactivate the hazard and horn reminder.

GI

MA

EM

LC

EC

FE

CL

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AT

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BR

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BT

HA

SC

EL

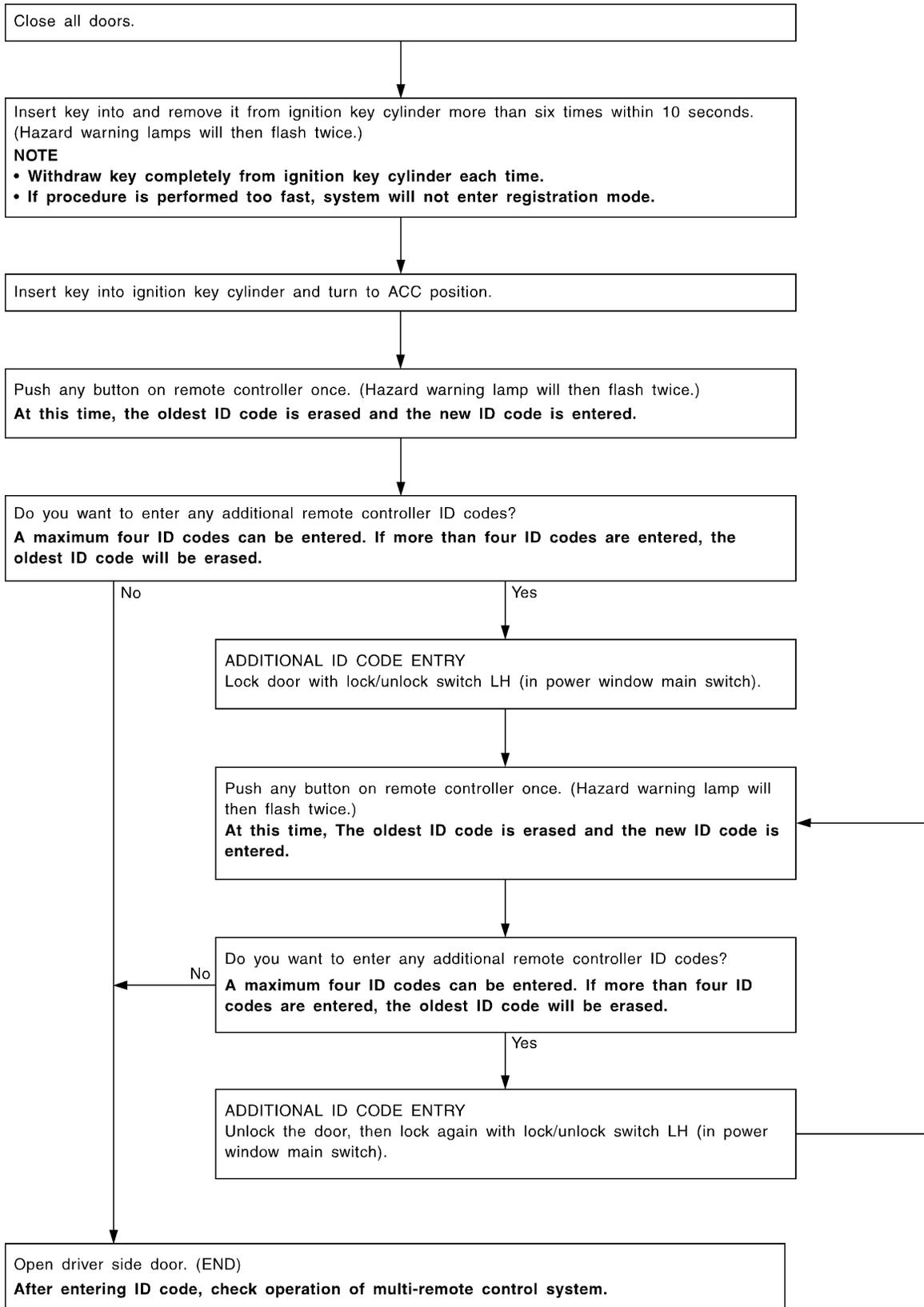
IDX

# MULTI-REMOTE CONTROL SYSTEM

ID Code Entry Procedure (Cont'd)

## REMOTE CONTROLLER ID SET UP WITHOUT CONSULT-II

NFEL0117S02



SEL332WD

**NOTE:**

- If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT. However, when the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.  
To erase all ID codes in memory, register one ID code (remote controller) four times. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.
- When registering an additional remote controller, the existing ID codes in memory may or may not be erased. If four ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than four ID codes are stored in memory, when an additional ID code is registered, the new ID code is added and no ID codes are erased.
- If you need to activate more than two additional new remote controllers, repeat the procedure "Additional ID code entry" for each new remote controller.
- Entry of maximum four ID codes is allowed. When more than four ID codes are entered, the oldest ID code will be erased.
- Even if same ID code that is already in the memory is input, the same ID code can be entered. The code is counted as an additional code.

GI

MA

EM

LC

EC

FE

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AX

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BT

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SC

**EL**

IDX

# MULTI-REMOTE CONTROL SYSTEM

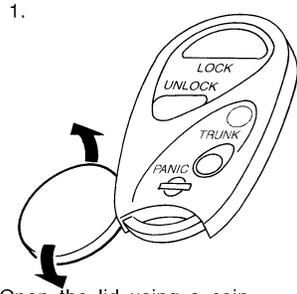
## Remote Controller Battery Replacement

### Remote Controller Battery Replacement

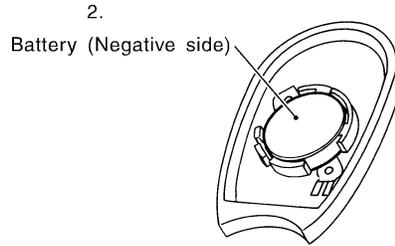
NFEL0118

**NOTE:**

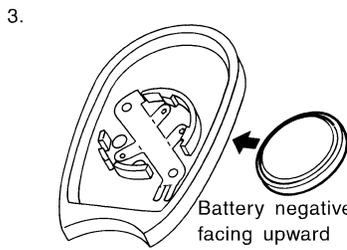
- Be careful not to touch the circuit board or battery terminal.
- The remote controller is water-resistant. However, if it does get wet, immediately wipe it dry.



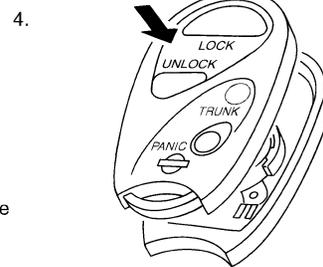
Open the lid using a coin.



Remove the battery.



Insert the new battery.



Close the lid securely.  
Push the remote controller button two or three times to check its operation.

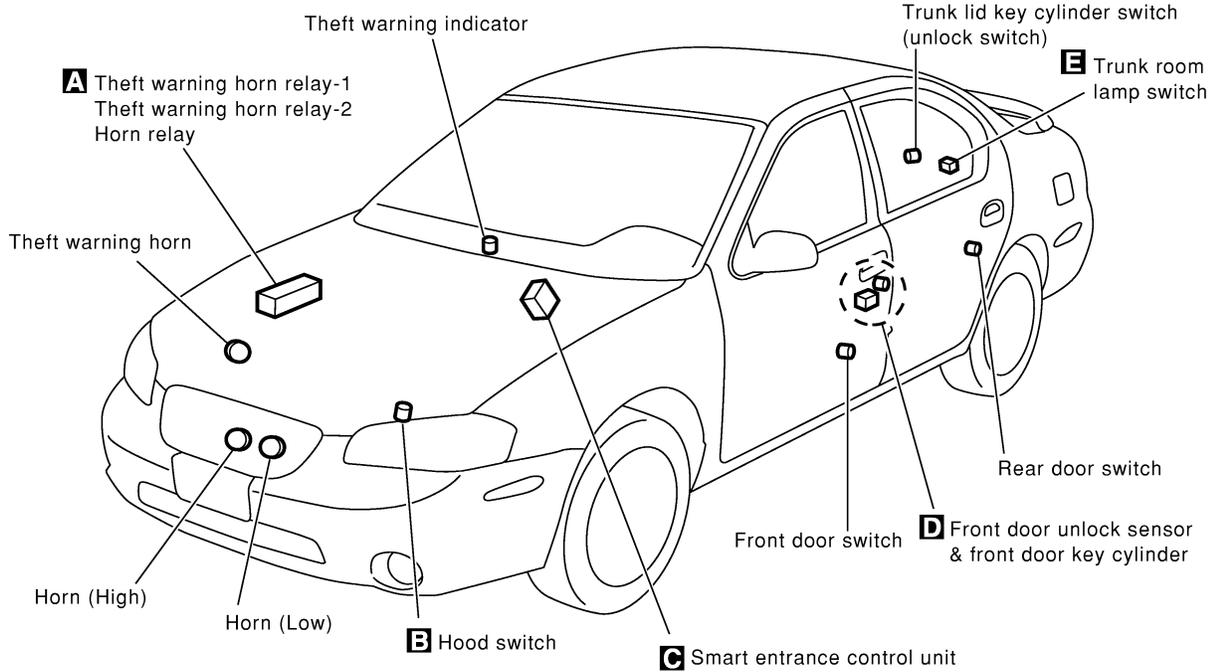
SEL366W

# THEFT WARNING SYSTEM

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NFEL0119



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
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SC  
EL  
IDX

<p>Fuse block (J/B)</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr> <tr><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td></td><td></td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td></tr> </table> <p>↑ UP</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	<table border="1"> <tr><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>61</td><td>62</td><td>63</td><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td><td>71</td><td>72</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table> <table border="1"> <tr><td>b</td><td>c</td><td>d</td><td>e</td><td>f</td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>g</td><td>h</td><td>i</td><td>j</td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td></tr> </table>	51	52	53	54	55	56	57	58	59	60											61	62	63	64	65	66	67	68	69	70	71	72													b	c	d	e	f						g	h	i	j							<p><b>A</b> Theft warning horn relay-2 (E63)</p> <p>Horn relay (E66)</p> <p>Theft warning horn relay-1 (E70)</p>
1	2	3	4	5	6	7	8	9	10	11																																																																																									
12	13	14	15	16			17	18	19	20																																																																																									
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<p><b>B</b> Hood switch (E26)</p>	<p><b>C</b> Smart entrance control unit (M40, M41)</p> <p>Driver side view with lower instrument panel removed</p>	<p><b>D</b> Front door key cylinder switch (D8)</p> <p>Front door lock actuator (unlock sensor)</p> <p>LH: (D6)</p> <p>RH: (D37)</p>																																																																																																	
<p><b>E</b> Trunk room lamp switch (T9)</p>	<p>Security indicator lamp</p> <p>Clock</p>																																																																																																		

# THEFT WARNING SYSTEM

System Description

## System Description

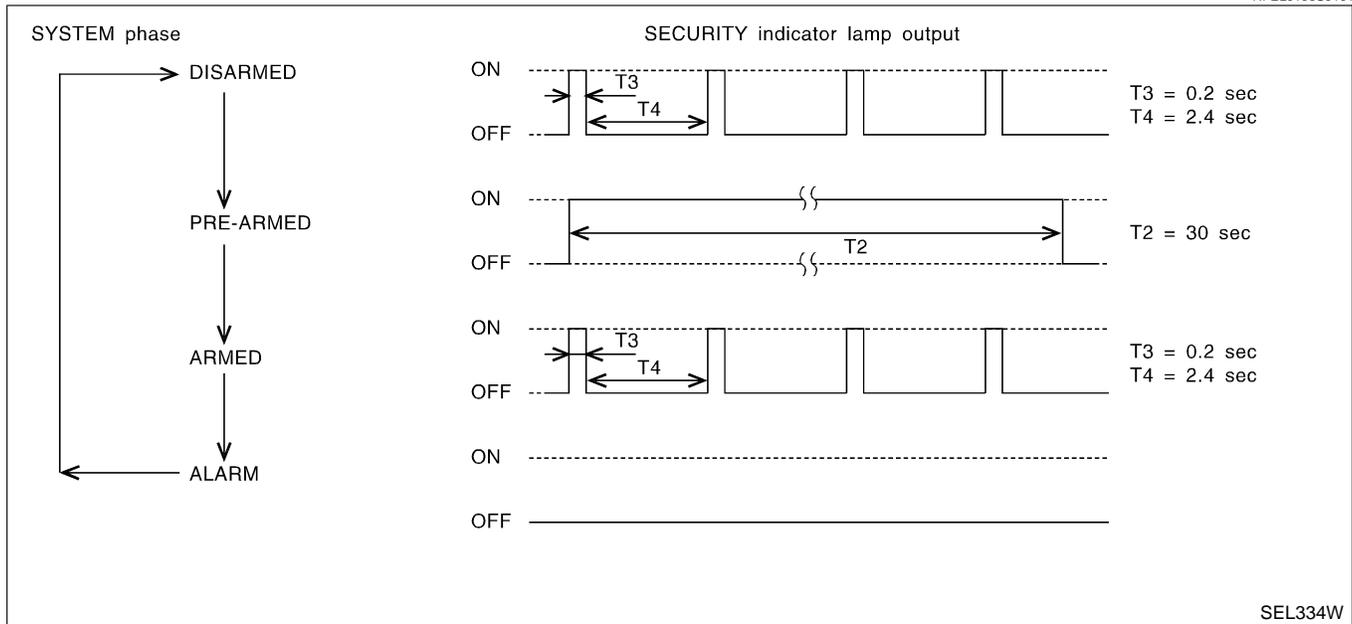
NFEL0196

NFEL0196S01

NFEL0196S0101

### DESCRIPTION

#### 1. Operation Flow



#### 2. Setting The Theft Warning System

NFEL0196S0102

##### Initial condition

- 1) Ignition switch is in OFF position.

##### Disarmed phase

When the theft warning system is in the disarmed phase, the security indicator lamp blinks every 2.6 seconds.

##### Pre-armed phase and armed phase

When the following operation 1) or 2) is performed, the theft warning system turns into the “pre-armed” phase. (The security indicator lamp illuminates.)

- 1) Smart entrance control unit receives LOCK signal from key cylinder switch or multi-remote controller after hood, trunk lid and all doors are closed.
- 2) Hood, trunk lid and all doors are closed after front doors are locked by key, lock/unlock switch or multi-remote controller.

After about 30 seconds, the system automatically shifts into the “armed” phase (the system is set). (The security indicator lamp blinks every 2.6 seconds.)

#### 3. Canceling The Set Theft Warning System

NFEL0196S0103

When the following 1) or 2) operation is performed, the armed phase is canceled.

- 1) Unlock the doors with the key or multi-remote controller.
- 2) Open the trunk lid with the key or multi-remote controller.

#### 4. Activating The Alarm Operation of The Theft Warning System

NFEL0196S0104

Make sure the system is in the armed phase. (The security indicator lamp blinks every 2.6 seconds.)

When the following operation 1) or 2) is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

- 1) Engine hood, trunk lid or any door is opened during armed phase.
- 2) Disconnecting and connecting the battery connector before canceling armed phase.

#### POWER SUPPLY AND GROUND

NFEL0196S02

Power is supplied at all times

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to security indicator lamp terminal 4.

Power is supplied at all times

- through 10A fuse [No. 13, located in the fuse block (J/B)]

- to smart entrance control unit terminal 10.

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to smart entrance control unit terminal 33.

With the ignition switch in the ACC or ON position, power is supplied

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to smart entrance control unit terminal 21.

Ground is supplied

- to smart entrance control unit terminal 16
- through body grounds M9, M25 and M87.

## INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the theft warning system is controlled by the doors, hood and trunk lid.

NFEL0196S03

### Pattern A

To activate the theft warning system, the smart entrance control unit must receive signals indicating the doors, hood and trunk lid are closed.

NFEL0196S0301

When a door is open, smart entrance control unit terminal 28, 29 or 40 receives a ground signal from each door switch.

When the hood is open, smart entrance control unit terminal 27 receives a ground signal

- from terminal 1 of the hood switch
- through body grounds E11, E22 and E53.

When the trunk lid is open, smart entrance control unit terminal 38 receives a ground signal

- from terminal 1 of the trunk room lamp switch
- through body grounds T6 and T8.

When smart entrance control unit receives LOCK signal from key cylinder switch or multi-remote controller and none of the described conditions exist, the theft warning system will automatically shift to armed mode.

### Pattern B

To activate the theft warning system, the smart entrance control unit must receive signal indicating any door (including hood and trunk lid) is opened.

NFEL0196S0302

When the front doors are locked with key, lock/unlock switch or multi-remote controller and then all doors are closed, the theft warning system will automatically shift to armed mode.

## THEFT WARNING SYSTEM ACTIVATION

### Pattern A

With all doors (including hood and trunk lid) close if the key is used to lock doors, terminal 41 receives a ground signal

NFEL0196S04

- from terminal 3 of the key cylinder switch LH
- through body grounds M9, M25 and M87.

If this signal, or lock signal from remote controller is received by the smart entrance control unit, the theft warning system will activate automatically.

### NOTE:

Theft warning system can be set even though all doors are not locked.

### Pattern B

With any door (including hood and trunk lid) open if lock/unlock switch is used to lock doors, terminal 23 receives a ground signal

NFEL0196S0402

- from terminal 18 of lock/unlock switch LH, or
- from terminal 2 of lock/unlock switch RH
- through body grounds M9, M25 and M87, or

With any door (including hood and trunk lid) open if the key is used to lock doors, terminal 41 receives a ground signal

- from terminal 3 of the key cylinder switch LH
- through body grounds M9, M25 and M87.

GI

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# THEFT WARNING SYSTEM

## System Description (Cont'd)

If these signals and lock signal from remote controller are received by the smart entrance control unit and ground signals of terminals 36 and 37 are interrupted and all doors are closed, the theft warning system will activate automatically.

### NOTE:

Theft warning system can be set even though the rear door is not locked.

Once the theft warning system has been activated, smart entrance control unit terminal 31 supplies ground to terminal 5 of the security indicator lamp.

The security lamp will illuminate for approximately 30 seconds and then blinks every 2.6 seconds.

Now the theft warning system is in armed phase.

## THEFT WARNING SYSTEM ALARM OPERATION

NFEL0196S05

The theft warning system is triggered by

- opening a door
- opening the hood or the trunk lid
- detection of battery disconnect and connect.

Once the theft warning system is in armed phase, if the smart entrance control unit receives a ground signal at terminal 28, 29, 40 (door switch), 38 (trunk room lamp switch) or 27 (hood switch), the theft warning system will be triggered. The headlamps flash and the horn sounds intermittently.

Power is supplied at all times

- through 15A fuse (No. 68, located in fuse and fusible link box)
- to headlamp relay LH terminals 1 and 5,
- through 15A fuse (No. 69, located in fuse and fusible link box)
- to headlamp relay RH terminals 1 and 5,
- through 10A fuse (No. 61 located in fuse and fusible link box)
- to theft warning horn relay-1 terminals 1 and 3, and
- to theft warning horn relay-2 terminal 1
- through 10A fuse (No. 57, located in fuse and fusible link box)
- to horn relay terminal 2.

When the theft warning system is triggered, ground is supplied intermittently

- from smart entrance control unit terminal 4
- to theft warning horn relay-2 terminal 2.

When theft warning horn relay-2 is energized, ground is supplied intermittently

- to theft warning horn relay-1 terminal 2,
- to horn relay terminal 1,
- to headlamp relay LH terminal 2 and
- to headlamp relay RH terminal 2.
- through body grounds E11, E22 and E53.

The headlamps flash and the horn sounds intermittently.

The alarm automatically turns off after 50 seconds but will reactivate if the vehicle is tampered with again.

## THEFT WARNING SYSTEM DEACTIVATION

NFEL0196S06

To deactivate the theft warning system, a door or trunk lid must be unlocked with the key or remote controller.

When the key is used to unlock the door, smart entrance control unit terminal 30 receives a ground signal

- from terminal 1 of the LH key cylinder switch.

When the key is used to open the trunk lid, smart entrance control unit terminal 42 receives a ground signal from terminal 1 of the trunk lid key cylinder switch.

When the smart entrance control unit receives either one of these signals or unlock signal from remote controller, the theft warning system is deactivated. (Disarmed phase)

## PANIC ALARM OPERATION

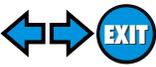
NFEL0196S07

Multi-remote control system may or may not operate theft warning system (horn and headlamps) as required.

When the multi-remote control system (panic alarm) is triggered, ground is supplied intermittently

- from smart entrance control unit terminal 4
- to theft warning horn relay-2 terminal 2.

# THEFT WARNING SYSTEM



*System Description (Cont'd)*

The headlamp flashes and the horn sounds intermittently.  
The alarm automatically turns off after 25 seconds or when smart entrance control unit receives any signal from multi-remote controller.

GI

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**EL**

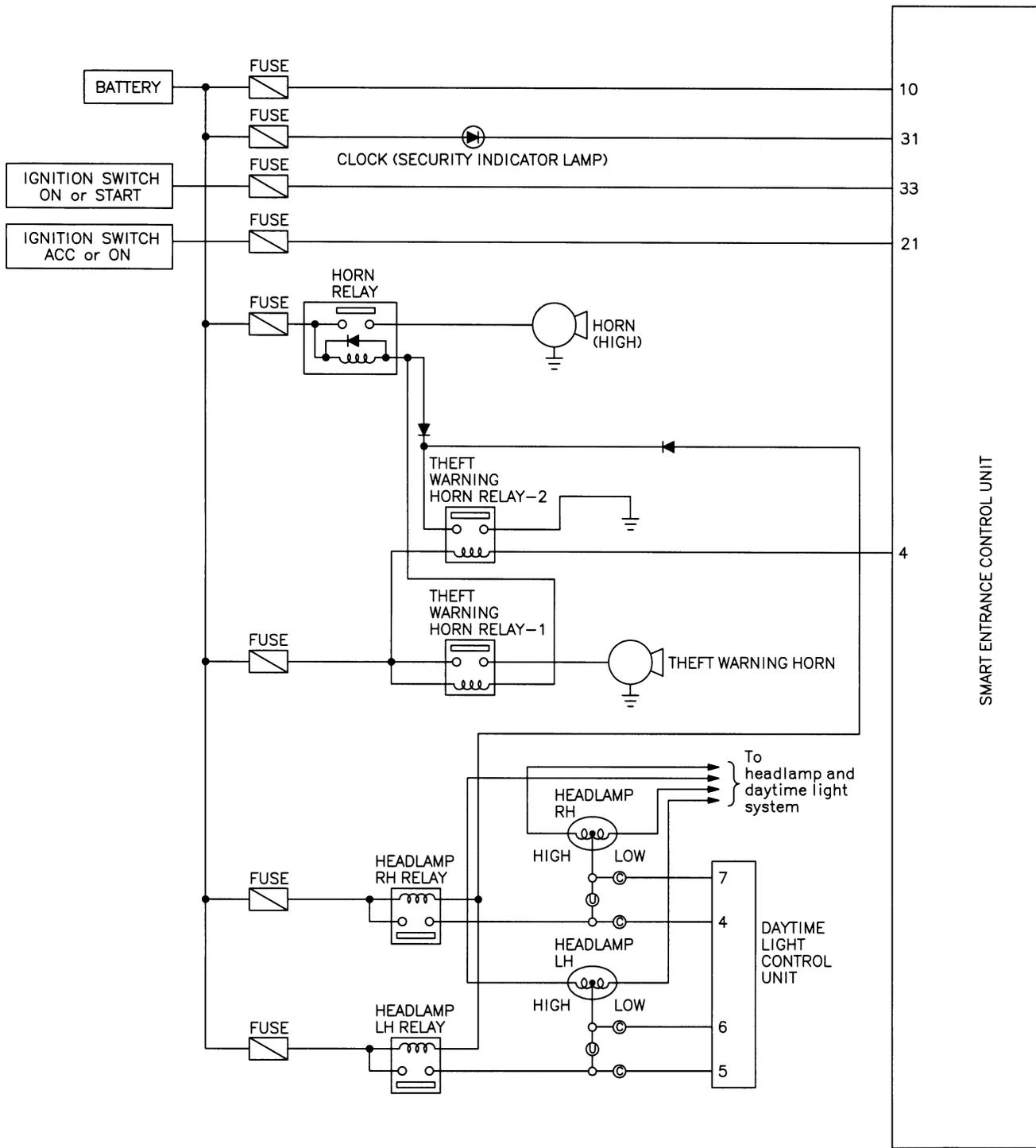
IDX

# THEFT WARNING SYSTEM

Schematic

## Schematic

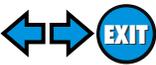
NFEL0121



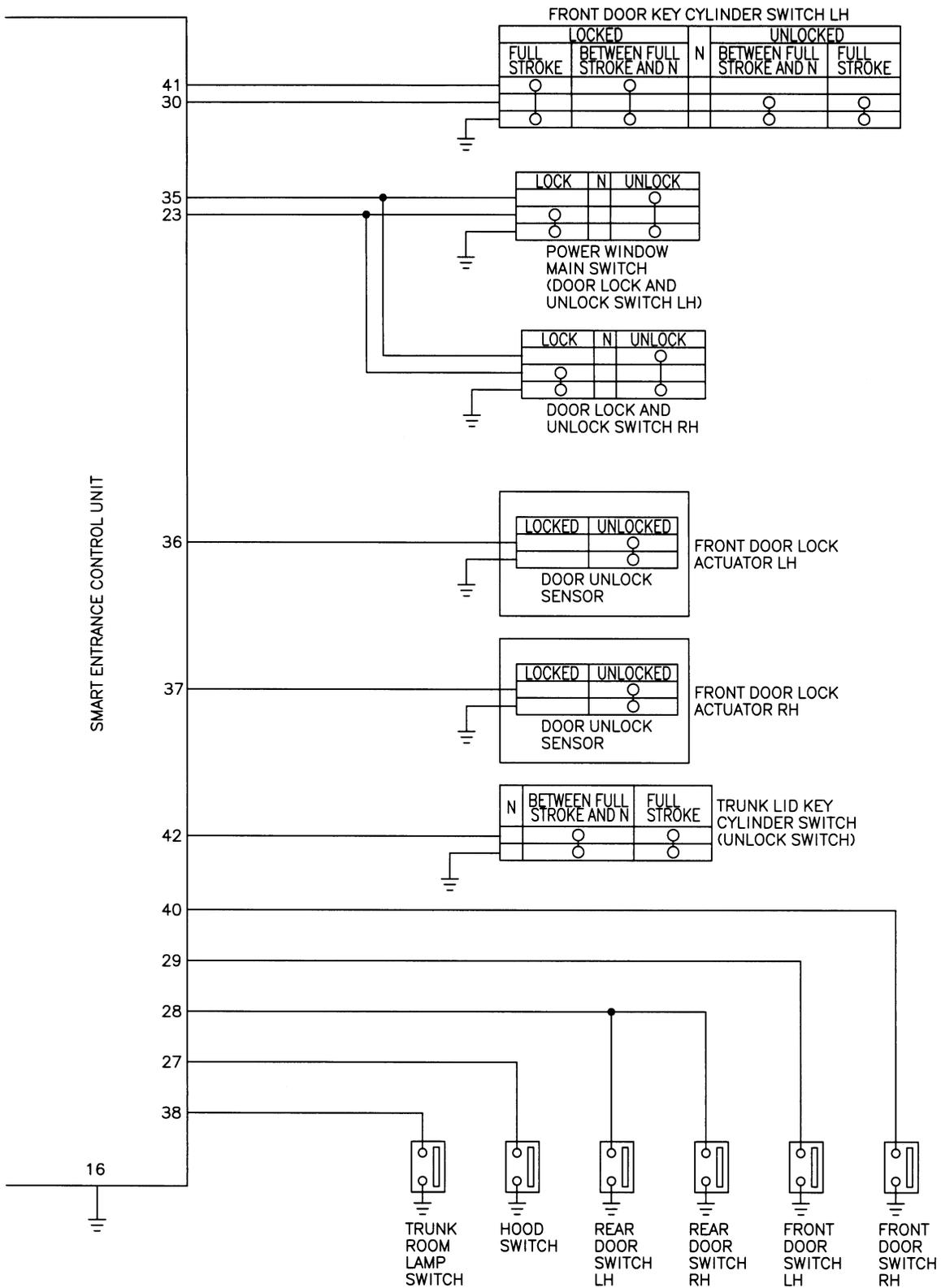
Ⓢ : For USA  
Ⓒ : For Canada

MEL318K

# THEFT WARNING SYSTEM



Schematic (Cont'd)



GI  
MA  
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CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

MEL319K

# THEFT WARNING SYSTEM

Wiring Diagram — THEFT —

## Wiring Diagram — THEFT —

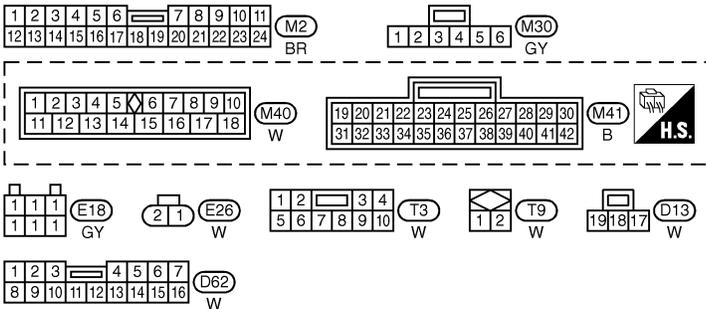
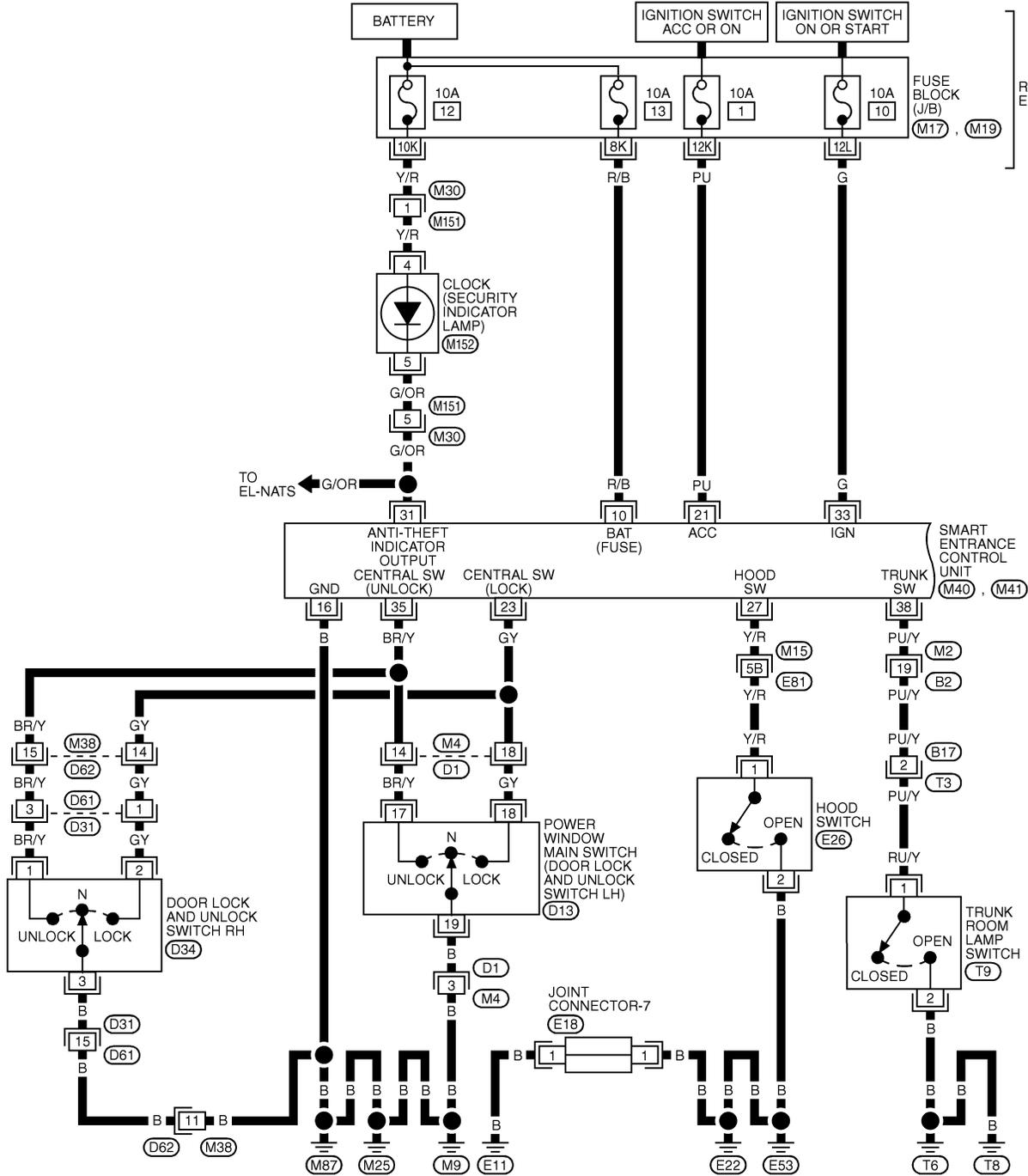
NFEL0122

NFEL0122S01

FIG. 1

EL-THEFT-01

REFER TO EL-POWER.



REFER TO THE FOLLOWING.

- (M4), (D1) - SUPER MULTIPLE JUNCTION (SMJ)
- (M15), (E81) - SUPER MULTIPLE JUNCTION (SMJ)
- (D31), (D61) - SUPER MULTIPLE JUNCTION (SMJ)
- (M17) - FUSE BLOCK-JUNCTION BOX (J/B)
- (M19) - FUSE BLOCK-JUNCTION BOX (J/B)

MEL320K



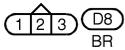
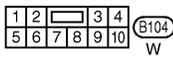
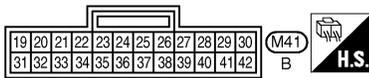
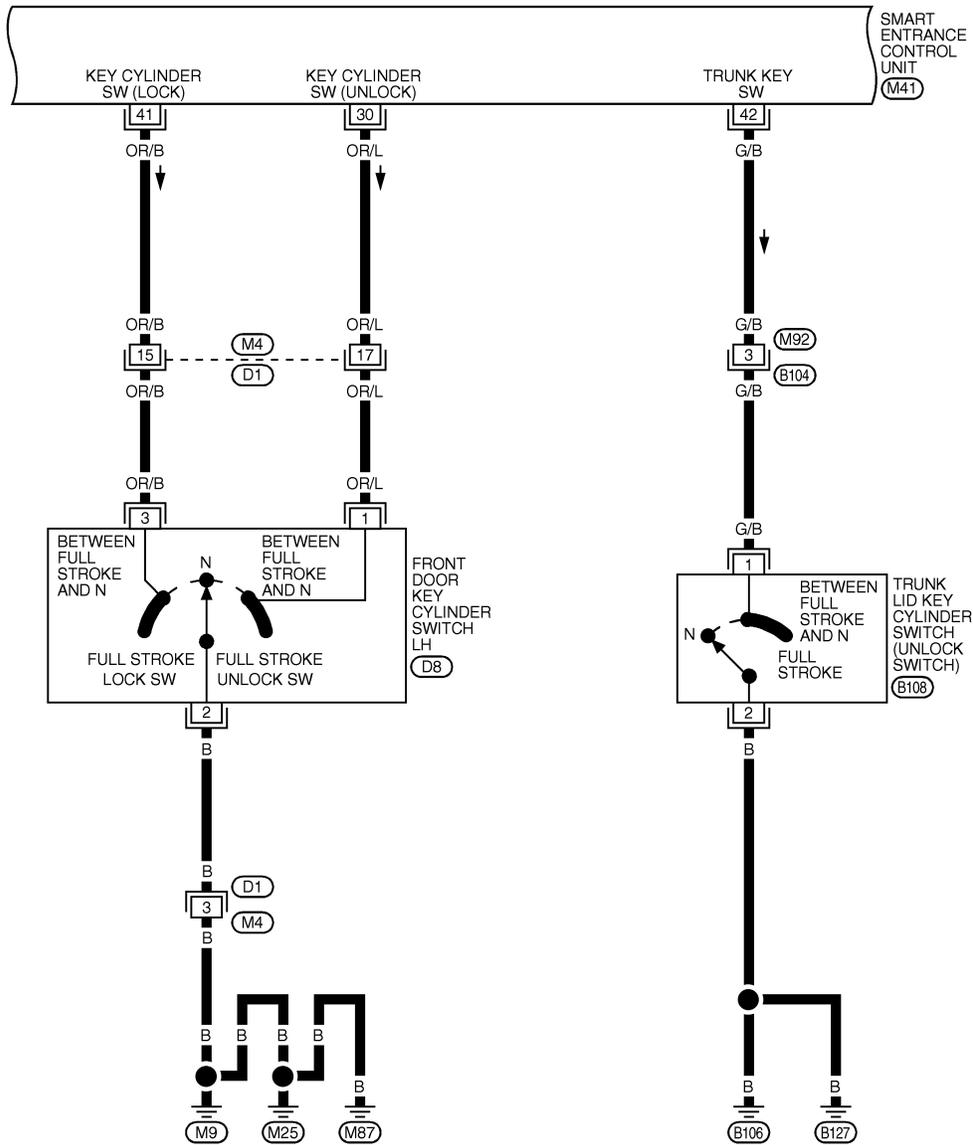
# THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

FIG. 3

NFEL0122S03

EL-THEFT-03



REFER TO THE FOLLOWING.

(M4) . (D1) -SUPER  
MULTIPLE JUNCTION (SMJ)

MEL322K

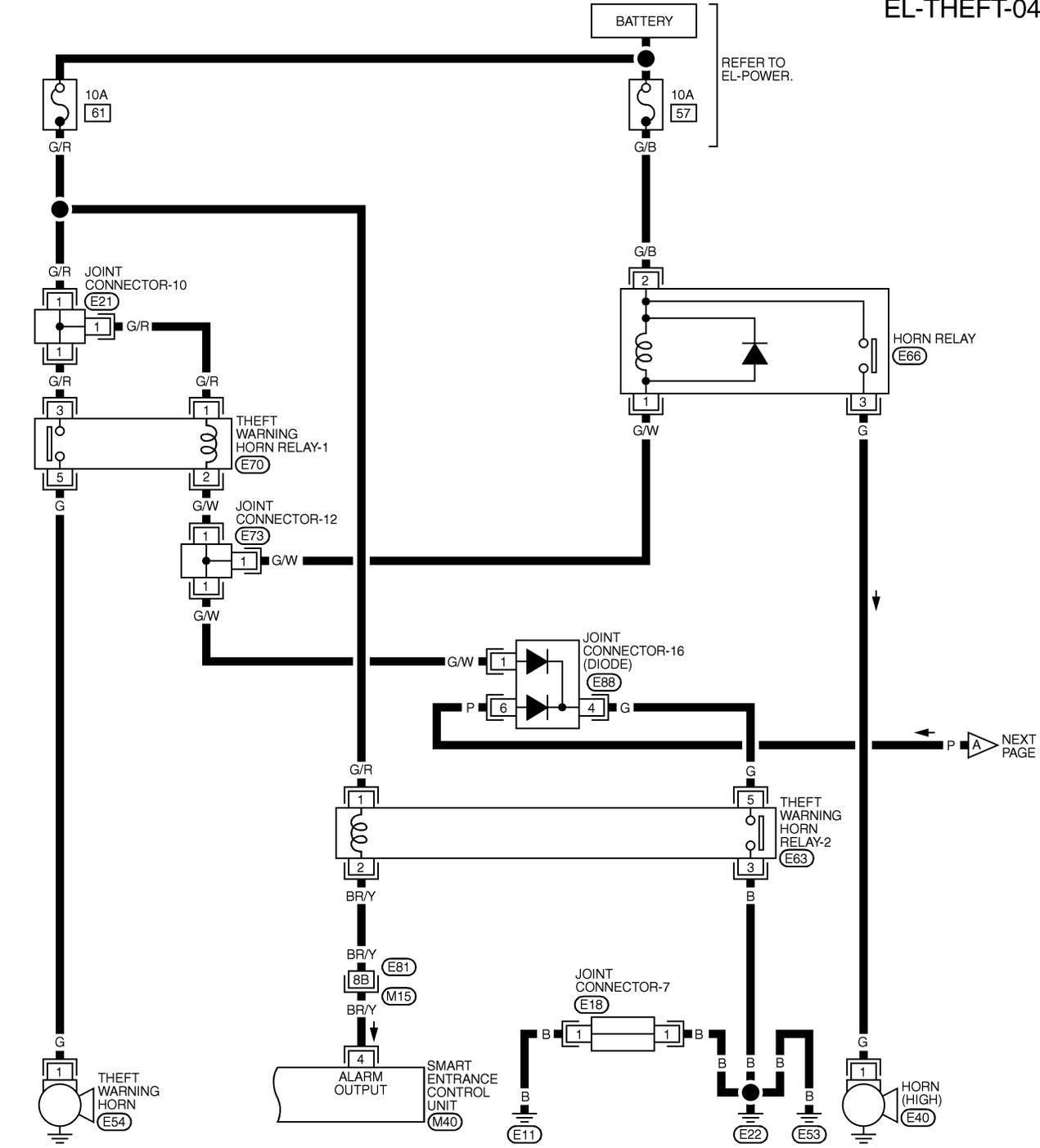
# THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

FIG. 4

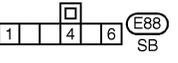
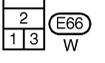
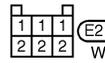
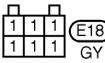
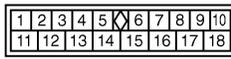
NFEL0122S04

EL-THEFT-04



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▶ NEXT PAGE



REFER TO THE FOLLOWING.  
 (M15) . (E81) -SUPER  
 MULTIPLE JUNCTION (SMJ)

EL

IDX

MEL323K

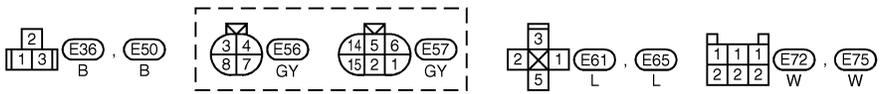
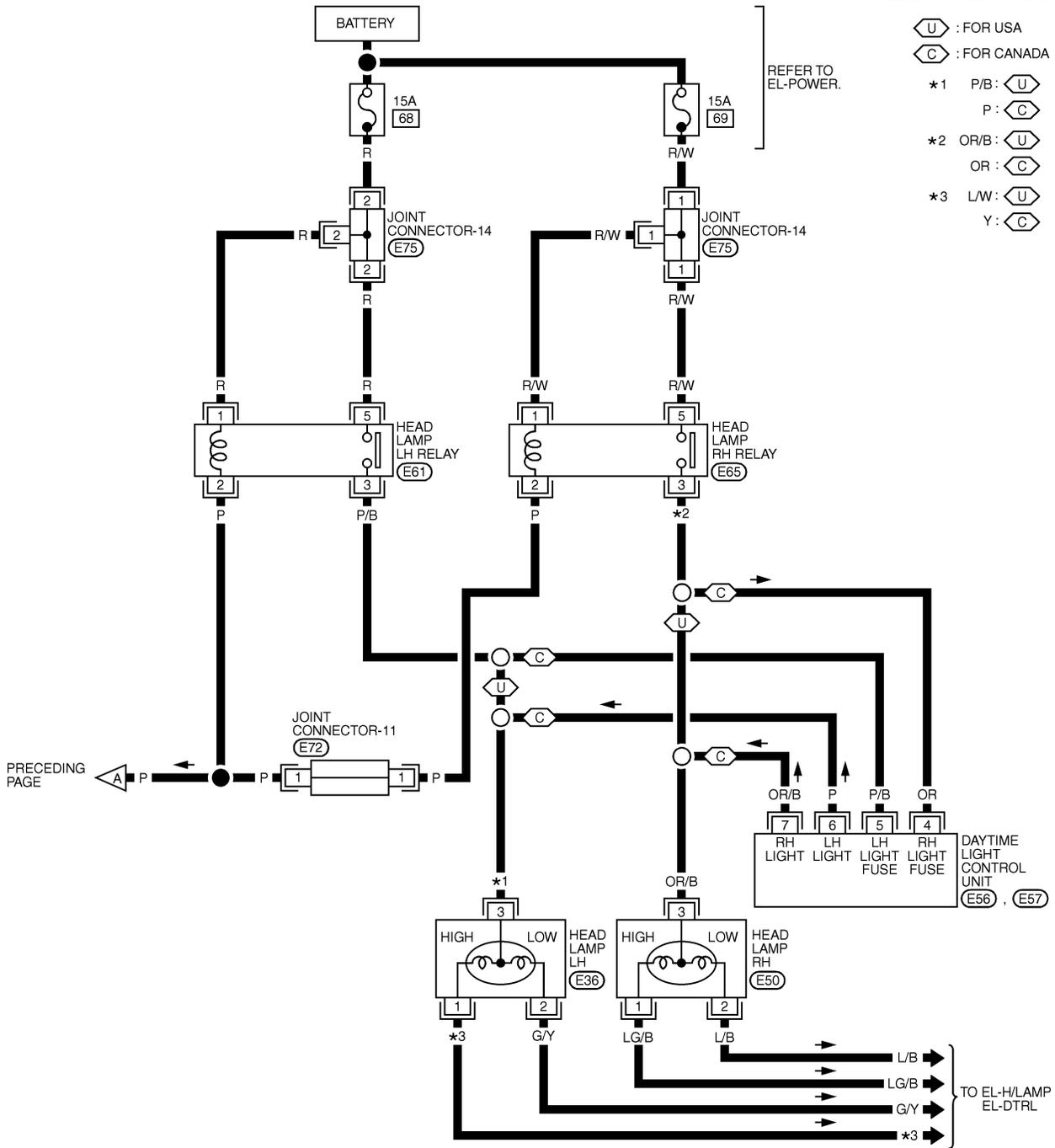
# THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

FIG. 5

NFEL0122S07

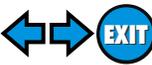
## EL-THEFT-05



REFER TO THE FOLLOWING.

(M15), (E81) -SUPER  
MULTIPLE JUNCTION (SMJ)

# THEFT WARNING SYSTEM



Wiring Diagram — THEFT — (Cont'd)

## SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

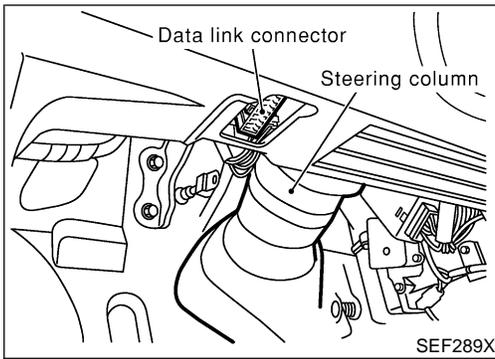
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
4	BR/Y	THEFT WARNING HORN RELAY-2	WHEN PANIC ALARM IS OPERATED USING REMORT CONTROLLER	12V → 0V
10	R/B	POWER SOURCE (FUSE)	-	12V
16	B	GROUND	-	-
21	PU	IGNITION SWITCH (ACC)	"ACC" POSITION	12V
23	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → LOCKS	5V → 0V
27	Y/R	HOOD OPEN SIGNAL	→	0V → 5V
28	R/W	REAR DOOR SWITCHES	OFF (CLOSED) → ON (OPEN)	5V → 0V
29	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
30	OR/L	DOOR KEY CYLINDER UNLOCK SWITCH	OFF (NEUTRAL) → ON (UNLOCKED)	5V → 0V
31	G/OR	THEFT WARNING INDICATOR	GOES OFF → ILLUMINATES	12V → 0V
33	G	IGN ON	IGNITION KEY IS IN "ON" POSITION	12V
35	BR/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → UNLOCKS	5V → 0V
36	LG/R	DRIVER DOOR UNLOCK SENSOR	DRIVER DOOR: LOCKED → UNLOCKED	5V → 0V
37	PU	PASSENGER DOOR UNLOCK SENSOR	PASSENGER DOOR: LOCKED → UNLOCKED	5V → 0V
38	PU/Y	TRUNK ROOM LAMP SWITCH	ON (OPEN) → OFF (CLOSED)	0V → 12V
40	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
41	OR/B	DOOR KEY CYLINDER LOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)	5V → 0V
42	G/B	TRUNK LID KEY CYLINDER SWITCH	OFF (NEUTRAL) → ON (UNLOCK)	5V → 0V

SEL375WD

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IDX

# THEFT WARNING SYSTEM

CONSULT-II Inspection Procedure

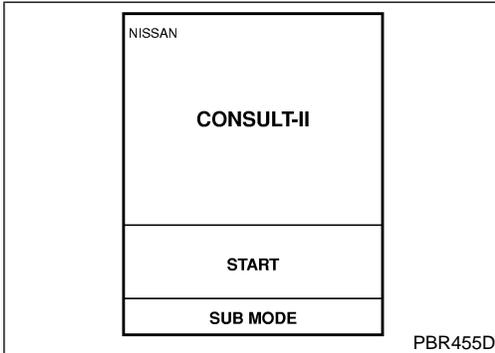


## CONSULT-II Inspection Procedure "THEFT WAR ALM"

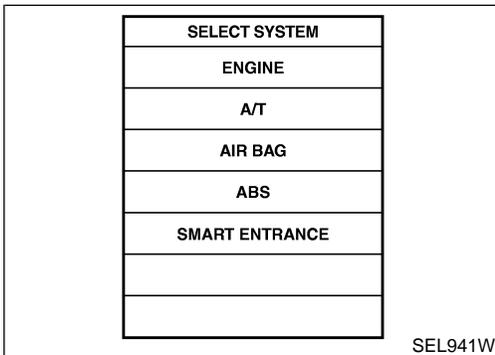
=NFEL0244

NFEL0244S01

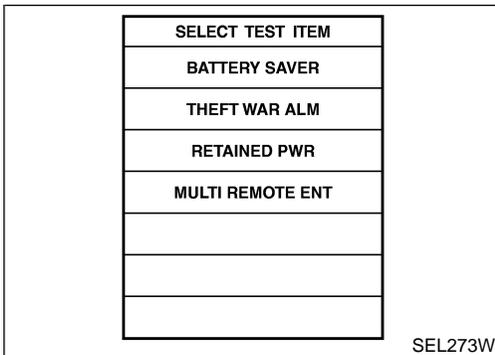
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



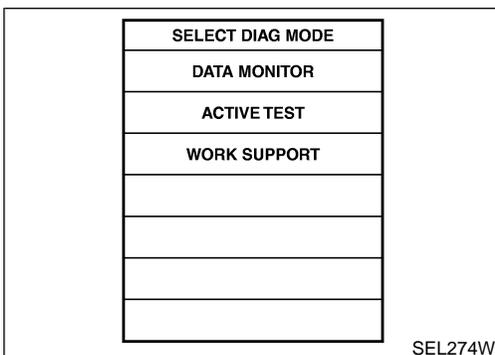
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Touch "THEFT WAR ALM".



7. Select diagnosis mode. "DATA MONITOR", "ACTIVE TEST" and "WORK SUPPORT" are available.

## CONSULT-II Application Item

### “THEFT WAR ALM” Data Monitor

NFEL0245

NFEL0245S01

NFEL0245S0101

Monitored Item	Description	
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.	GI
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.	MA
KEY CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder switch.	EM
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder switch.	LC
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (All).	EC
LOCK SIG DR	Indicates [ON/OFF] condition of front door unlock sensor LH.	FE
LOCK SIG AS	Indicates [ON/OFF] condition of front door unlock sensor RH.	CL
TRUNK SW	Indicates [ON/OFF] condition of trunk switch.	MT
TRUNK KEY SW	Indicates [ON/OFF] condition of trunk key cylinder switch.	AT
HOOD SWITCH	Indicates [ON/OFF] condition of hood switch.	AX
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.	SU
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from door lock/unlock LH and RH.	BR
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from remote controller.	ST
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.	RS
TRUNK BTN/SIG	Indicates [ON/OFF] condition of trunk open signal from remote controller.	BT

### Active Test

NFEL0245S0102

Test Item	Description	
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when “ON” on CONSULT-II screen is touched.	ST
THEFT WAR ALM	This test is able to check theft warning alarm operation. The alarm will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.	HA

### Work Support

NFEL0245S0103

Test Item	Description	
THEFT ALM TRG	The switch which triggered theft warning alarm is recorded. This mode is able to confirm and erase the record of theft warning alarm. The trigger data can be erased by touching “CLEAR” on CONSULT-II screen.	SC

**EL**

IDX

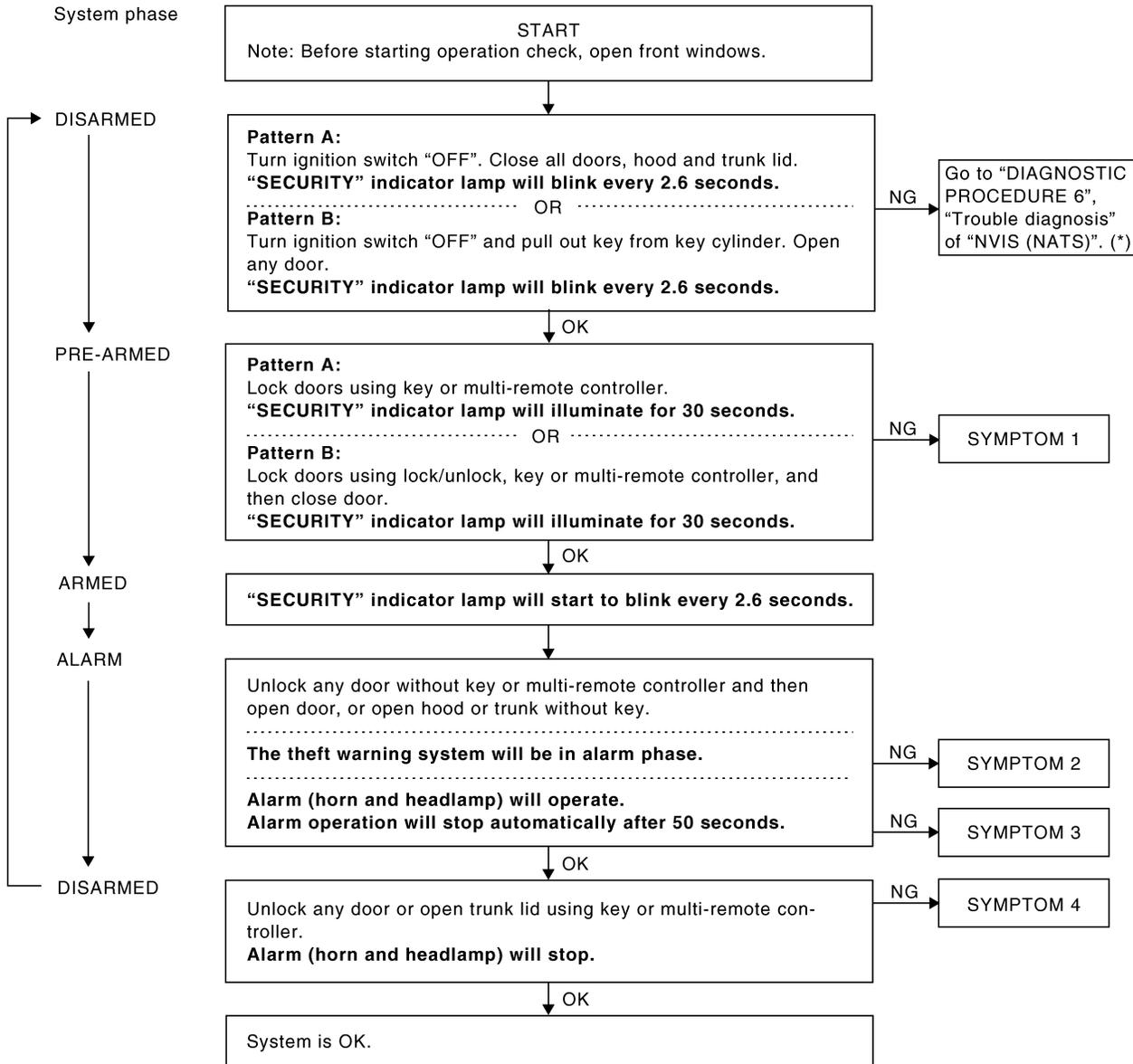
# THEFT WARNING SYSTEM

## Trouble Diagnoses PRELIMINARY CHECK

=NFEL0123

NFEL0123S01

The system operation is canceled by turning ignition switch to "ACC" at any step between START and ARMED in the following flow chart.



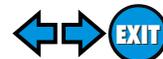
SEL254W

For details of "Pattern A" and "Pattern B" about theft warning system setting, refer to EL-279.

\*: Refer to EL-336.

**After performing preliminary check, go to symptom chart on next page.**

# THEFT WARNING SYSTEM



Trouble Diagnoses (Cont'd)

## SYMPTOM CHART

NFEL0123S02

REFERENCE PAGE (EL- )	292	294	295	301	303	304	305	306	308	257	
	PRELIMINARY CHECK	POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR, HOOD AND TRUNK ROOM LAMP SWITCH CHECK	SECURITY INDICATOR LAMP CHECK	FRONT DOOR UNLOCK SENSOR CHECK	DOOR KEY CYLINDER SWITCH CHECK	TRUNK LID KEY CYLINDER SWITCH CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	THEFT WARNING HORN AND HEADLAMP ALARM CHECK	Check "MULTI-REMOTE CONTROL" system.	GI MA EM LC EC FE CL MT
SYMPTOM											
1	Theft warning indicator does not illuminate for 30 seconds.	X	X		X						AT
	Theft warning system cannot be set by ...	All items	X	X	X		X				AX
		Door outside key	X				X				
		Lock/unlock switch	X						X		
Multi-remote control	X								X	SU	
2	*1 Theft warning system does not alarm when ...	X		X							BR ST
3	Theft warning alarm does not activate.	X		X					X		RS BT
4	Theft warning system cannot be canceled by ...	Door outside key	X				X				HA
		Trunk lid key	X					X			SC
		Multi-remote control	X								X

X : Applicable

\*1: Make sure the system is in the armed phase.

**Before starting trouble diagnoses above, perform preliminary check, EL-292.**

Symptom numbers in the symptom chart correspond with those of preliminary check.

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## POWER SUPPLY AND GROUND CIRCUIT CHECK

NFEL0123S03

### Power Supply Circuit Check

NFEL0123S0301

Smart entrance control unit connector (M40)

Smart entrance control unit connector (M41)

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
10	Ground	Battery voltage	Battery voltage	Battery voltage
33	Ground	0V	0V	Battery voltage
21	Ground	0V	Battery voltage	Battery voltage

SEL238W

### Ground Circuit Check

NFEL0123S0302

Smart entrance control unit connector (M40)

Terminals	Continuity
16 - Ground	Yes

SEL234W

## DOOR, HOOD AND TRUNK ROOM LAMP SWITCH CHECK

### Door Switch Check

=NFEL0123S04

NFEL0123S0401

<b>1</b>	<b>PRELIMINARY CHECK</b>	
<p>1. Turn ignition switch OFF and remove key from ignition key cylinder.  <b>“SECURITY” indicator lamp should blink every 2.6 seconds.</b></p> <p>2. Close all doors, hood and trunk lid.</p> <p>3. Lock doors with multi-remote controller from inside the vehicle.  <b>“SECURITY” indicator lamp should turn on for 30 seconds.</b></p> <p>4. Unlock any door with the door lock knob and open the door within 30 seconds after door is locked.  <b>“SECURITY” indicator lamp should turn off.</b></p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	Door switch is OK, and go to hood switch check.
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>							
<p> <b>With CONSULT-II</b>                  Check door switches (“DOOR SW-ALL”) in “DATA MONITOR” mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><td>MONITOR</td><td></td></tr> <tr><td>DOOR SW-ALL</td><td>OFF</td></tr> </table>			DATA MONITOR		MONITOR		DOOR SW-ALL	OFF
DATA MONITOR								
MONITOR								
DOOR SW-ALL	OFF							
<p>When any doors are open:  <b>DOOR SW-ALL ON</b></p> <p>When all doors are closed:  <b>DOOR SW-ALL OFF</b></p>								
SEL323W								

<p> <b>Without CONSULT-II</b>                  Check voltage between smart entrance control unit harness connector terminals 28, 29 or 40 and ground.</p>																														
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front LH door switch</td> <td rowspan="2">29</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> <tr> <td rowspan="2">Front RH door switch</td> <td rowspan="2">40</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> <tr> <td rowspan="2">Rear door switches</td> <td rowspan="2">28</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> </tbody> </table>		Terminals		Condition	Voltage [V]	(+)	(-)	Front LH door switch	29	Ground	Open	0	Closed	Approx. 5	Front RH door switch	40	Ground	Open	0	Closed	Approx. 5	Rear door switches	28	Ground	Open	0	Closed	Approx. 5
	Terminals			Condition	Voltage [V]																									
	(+)	(-)																												
Front LH door switch	29	Ground	Open	0																										
			Closed	Approx. 5																										
Front RH door switch	40	Ground	Open	0																										
			Closed	Approx. 5																										
Rear door switches	28	Ground	Open	0																										
			Closed	Approx. 5																										
<p>Refer to wiring diagram in EL-285.</p> <p style="text-align: center;"><b>OK or NG</b></p>																														
OK	▶	Door switch is OK, and go to hood switch check.																												
NG	▶	GO TO 3.																												

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# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

3	CHECK DOOR SWITCH			
<p>1. Disconnect door switch connector.                      2. Check continuity between door switch terminals.</p>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Door switch connector</p> <p>Front LH : (B29)</p> <p>Front RH : (B129)</p> </div> <div style="width: 45%;"> <p>Door switch connector</p> <p>Rear LH : (B10)</p> <p>Rear RH : (B107)</p> </div> </div>				
SEL192W				
<b>OK or NG</b>				
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door switch ground circuit or door switch ground condition</li> <li>● Harness for open or short between smart entrance control unit and door switch</li> </ul>		
NG	▶	Replace door switch.		

	Terminals	Condition	Continuity
Front door switches	2 - 3	Closed	No
		Open	Yes
Rear door switches	1 - Ground	Closed	No
		Open	Yes

## Hood Switch Check

=NFEL0123S0402

<b>1</b>	<b>PRELIMINARY CHECK</b>		
<p>1. Turn ignition switch OFF and remove key from ignition key cylinder.  <b>“SECURITY” indicator lamp should blink every 2.6 seconds.</b></p> <p>2. Close all doors, hood and trunk lid.</p> <p>3. Lock doors with multi-remote controller from inside the vehicle.  <b>“SECURITY” indicator lamp should turn on for 30 seconds.</b></p> <p>4. Unlock hood with hood opener within 30 seconds after door is locked.  <b>“SECURITY” indicator lamp should turn off.</b></p> <p style="text-align: center;"><b>OK or NG</b></p>			
OK	▶	Hood switch is OK, and go to trunk room lamp switch check.	
NG	▶	GO TO 2.	

<b>2</b>	<b>CHECK HOOD SWITCH FITTING CONDITION</b>		
<b>OK or NG</b>			
OK	▶	GO TO 3.	
NG	▶	Adjust installation of hood switch or hood.	

<b>3</b>	<b>CHECK HOOD SWITCH INPUT SIGNAL</b>								
<p> <b>With CONSULT-II</b>          Check hood switch (“HOOD SWITCH”) in “DATA MONITOR” mode with CONSULT-II.</p>									
		<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>HOOD SWITCH</td><td>OFF</td></tr> </table>	DATA MONITOR		MONITOR		HOOD SWITCH	OFF	<p>When hood is open:  <b>HOOD SWITCH ON</b></p> <p>When hood is closed:  <b>HOOD SWITCH OFF</b></p>
DATA MONITOR									
MONITOR									
HOOD SWITCH	OFF								
SEL354W									

<p> <b>Without CONSULT-II</b>          Check voltage between smart entrance control unit harness connector terminal 27 and ground.</p>			
		<p>Voltage [V]:          Engine hood is open.  <b>0</b>          Engine hood is closed.  <b>Approx. 5</b></p>	
SEL239W			
<b>OK or NG</b>			
OK	▶	Hood switch is OK, and go to trunk room lamp switch check.	
NG	▶	GO TO 4.	

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

4	CHECK HOOD SWITCH	
	<p>1. Disconnect hood switch connector.</p> <p>2. Check continuity between hood switch terminals 1 and 2.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="386 283 673 541"> <p>Hood switch connector (E28)</p> </div> <div data-bbox="893 357 1153 483"> <p>Continuity:            Condition: Pushed            No            Condition: Released            Yes</p> </div> </div> <p style="text-align: right;">SEL240W</p> <p style="text-align: center;">OK or NG</p>	
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Hood switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and hood switch</li> </ul>
NG	▶	Replace hood switch.

## Trunk Room Lamp Switch Check

=NFEL0123S0403

<b>1</b>	<b>PRELIMINARY CHECK</b>	
<p>1. Turn ignition switch OFF and remove key from ignition key cylinder.  <b>“SECURITY” indicator lamp should blink every 2.6 seconds.</b></p> <p>2. Close all doors, hood and trunk lid.</p> <p>3. Lock doors with multi-remote controller from inside the vehicle.  <b>“SECURITY” indicator lamp should turn on for 30 seconds.</b></p> <p>4. Open trunk lid with trunk lid opener switch (on driver side door trim) within 30 seconds after door is locked.  <b>“SECURITY” indicator lamp should turn off.</b></p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	Trunk room lamp switch is OK.
NG	▶	GO TO 2.

GI  
MA  
EM  
LC  
EC

<b>2</b>	<b>CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL</b>							
<p> <b>With CONSULT-II</b>                  Check trunk room lamp switch (“TRUNK SW”), in “DATA MONITOR” mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>TRUNK SW</td><td>OFF</td></tr> </table>			DATA MONITOR		MONITOR		TRUNK SW	OFF
DATA MONITOR								
MONITOR								
TRUNK SW	OFF							
<p>When trunk lid is open:  <b>TRUNK SW ON</b></p> <p>When trunk lid is closed:  <b>TRUNK SW OFF</b></p>								
SEL355W								

FE  
CL  
MT  
AT  
AX

<p> <b>Without CONSULT-II</b>                  Check voltage between smart entrance control unit harness connector terminal 38 and ground.</p>		
<p><b>Voltage [V]:</b>                  Trunk lid is open.                  Approx. 0                  Trunk lid is closed.                  Approx. 12</p>		
SEL241W		
<b>OK or NG</b>		
OK	▶	Trunk room lamp switch is OK.
NG	▶	GO TO 3.

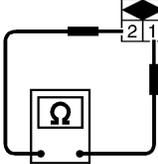
SU  
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RS  
BT  
HA  
SC

**EL**

IDX

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

3	CHECK TRUNK ROOM LAMP SWITCH	
	<p>1. Disconnect trunk room lamp switch connector.                      2. Check continuity between trunk room lamp switch terminals 1 and 2.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Trunk room lamp switch connector (T9)</p>  </div> <div style="text-align: center;"> <p><b>Continuity:</b>                      Condition: Closed                      No                      Condition: Open                      Yes</p> </div> </div> <p style="text-align: right;">SEL242W</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Trunk room lamp switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and trunk room lamp switch</li> </ul>
NG	▶	Replace trunk room lamp switch.

## SECURITY INDICATOR LAMP CHECK

=NFEL0123S05

<b>1</b>	<b>CHECK INDICATOR LAMP OPERATION</b>		GI MA EM LC EC FE						
		<p> <b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Select "ACTIVE TEST" in "THEFT WAR ALM" with CONSULT-II.</li> <li>Select "THEFT IND" and touch "ON".</li> </ol> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <p style="text-align: center; margin: 0;"><b>ACTIVE TEST</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; border-bottom: 1px solid black;">THEFT IND</td> <td style="width: 50%; text-align: center; border-bottom: 1px solid black;">OFF</td> </tr> <tr> <td style="height: 100px;"></td> <td style="height: 100px;"></td> </tr> <tr> <td style="text-align: center; background-color: black; color: white;">ON</td> <td style="text-align: center; background-color: white; color: black;"> </td> </tr> </table> </div> <div style="text-align: center; flex-grow: 1;"> <p><b>Security indicator lamp should illuminate.</b></p> </div> <div style="margin-left: auto; margin-right: 0;">SEL356W</div> </div>	THEFT IND	OFF			ON		CL MT AT AX SU
THEFT IND	OFF								
ON									
		<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Disconnect smart entrance control unit harness connector.</li> <li>Check voltage between smart entrance control unit harness connector terminal 31 and ground.</li> </ol> <div style="display: flex; align-items: center; justify-content: center; margin-top: 20px;"> <div style="text-align: center; margin-right: 20px;"> <p>Smart entrance control unit connector (M4)</p> </div> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> </div> <div style="text-align: center; flex-grow: 1;"> <p><b>Battery voltage should exist.</b></p> </div> <div style="margin-left: 20px;"> </div> </div> <p style="margin-top: 20px;">Refer to wiring diagram in EL-284.</p> <p style="text-align: right; margin-right: 20px;">SEL243W</p>	BR						
		<b>OK or NG</b>	ST						
		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; border-right: 1px solid black; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">Security indicator lamp is OK.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">NG</td> <td style="text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">GO TO 2.</td> </tr> </table>	OK	▶	Security indicator lamp is OK.	NG	▶	GO TO 2.	
OK	▶	Security indicator lamp is OK.							
NG	▶	GO TO 2.							

<b>2</b>	<b>CHECK INDICATOR LAMP</b>								
		<b>OK or NG</b>	RS						
		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; border-right: 1px solid black; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">GO TO 3.</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">NG</td> <td style="text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">Replace indicator lamp.</td> </tr> </table>	OK	▶	GO TO 3.	NG	▶	Replace indicator lamp.	BT HA SC
OK	▶	GO TO 3.							
NG	▶	Replace indicator lamp.							

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

3	CHECK POWER SUPPLY CIRCUIT FOR INDICATOR LAMP	
<p>1. Disconnect security lamp connector.</p> <p>2. Check voltage between indicator lamp terminal 4 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right;">SEL244W</p> <p style="text-align: center;"><b>Does battery voltage exist?</b></p>		
Yes	▶	Check harness for open or short between security indicator lamp and smart entrance control unit.
No	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between security indicator lamp and fuse</li> </ul>

## FRONT DOOR UNLOCK SENSOR CHECK

=NFEL0123S06

<b>1</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL</b>	GI MA EM LC EC FE CL MT AT AX SU BR																											
<p> <b>With CONSULT-II</b> Check front unlock sensor ("LOCK SIG DR", "LOCK SIG AS") in "DATA MONITOR" with CONSULT-II.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>LOCK SIG DR</td> <td>OFF</td> </tr> <tr> <td>LOCK SIG AS</td> <td>OFF</td> </tr> </tbody> </table> <div style="margin-left: 200px;"> <p>When door is locked:  <b>LOCK SIG DR OFF</b>  <b>LOCK SIG AS OFF</b></p> <p>When door is unlocked:  <b>LOCK SIG DR ON</b>  <b>LOCK SIG AS ON</b></p> </div> <p style="text-align: right;">SEL357W</p>			DATA MONITOR		MONITOR		LOCK SIG DR	OFF	LOCK SIG AS	OFF																			
DATA MONITOR																													
MONITOR																													
LOCK SIG DR	OFF																												
LOCK SIG AS	OFF																												
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 36 or 37 and ground.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M41)</p> </div> <div style="margin-right: 20px;"> </div> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front LH door</td> <td rowspan="2">36</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> <tr> <td rowspan="2">Front RH door</td> <td rowspan="2">37</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL245W</p> <p>Refer to wiring diagram in EL-285.</p> <p style="text-align: center;"><b>OK or NG</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">OK</td> <td style="width: 5%; text-align: center;">▶</td> <td style="width: 70%;">Door unlock sensor is OK.</td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>GO TO 2.</td> </tr> </table>				Terminals		Condition	Voltage [V]	(+)	(-)	Front LH door	36	Ground	Locked	Approx. 5	Unlocked	0	Front RH door	37	Ground	Locked	Approx. 5	Unlocked	0	OK	▶	Door unlock sensor is OK.	NG	▶	GO TO 2.
	Terminals			Condition	Voltage [V]																								
	(+)	(-)																											
Front LH door	36	Ground	Locked	Approx. 5																									
			Unlocked	0																									
Front RH door	37	Ground	Locked	Approx. 5																									
			Unlocked	0																									
OK	▶	Door unlock sensor is OK.																											
NG	▶	GO TO 2.																											

<b>2</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR</b>	ST RS BT HA SC EL IDX						
<p>1. Disconnect door lock actuator connector. 2. Check continuity between door lock actuator terminals.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Door lock actuator connectors</p> <p>Front LH : (D6)</p> <p>Front RH : (D37)</p> </div> <div style="margin-right: 20px;"> </div> <div style="margin-right: 20px;"> <p><b>Continuity:</b>  <b>Condition: Locked</b>  <b>No</b>  <b>Condition: Unlocked</b>  <b>Yes</b></p> </div> </div> <p style="text-align: right;">SEL246W</p> <p style="text-align: center;"><b>OK or NG</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">OK</td> <td style="width: 5%; text-align: center;">▶</td> <td style="width: 70%;"> <b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between smart entrance control unit and door unlock sensor</li> </ul> </td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>Replace door unlock sensor.</td> </tr> </table>			OK	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between smart entrance control unit and door unlock sensor</li> </ul>	NG	▶	Replace door unlock sensor.
OK	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between smart entrance control unit and door unlock sensor</li> </ul>						
NG	▶	Replace door unlock sensor.						

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## DOOR KEY CYLINDER SWITCH CHECK

=NFEL0123S07

### 1 CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

#### With CONSULT-II

Check front door key cylinder switch ("KEY CYL LK-SW"/"KEY CYL UN-SW") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
KEY CYL LK-SW	OFF
KEY CYL UN-SW	OFF

When key inserted in front key cylinder is turned to LOCK:

**KEY CYL LK-SW ON**

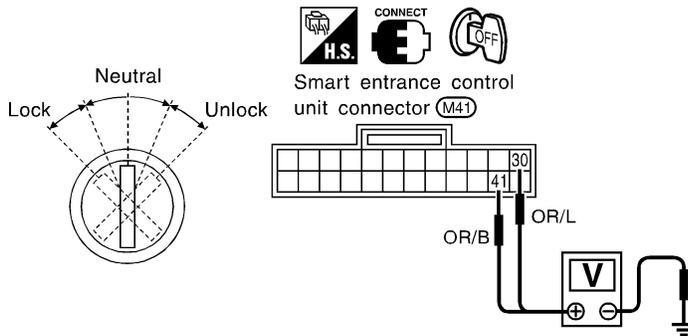
When key inserted in front key cylinder is turned to UNLOCK:

**KEY CYL UN-SW ON**

SEL342W

#### Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminal 30 or 41 and ground.



Terminals		Key position	Voltage V
(+)	(-)		
41	Ground	Neutral/Unlock	Approx. 5
		Lock	0
30	Ground	Neutral/Lock	Approx. 5
		Unlock	0

SEL198W

Refer to wiring diagram in EL-286.

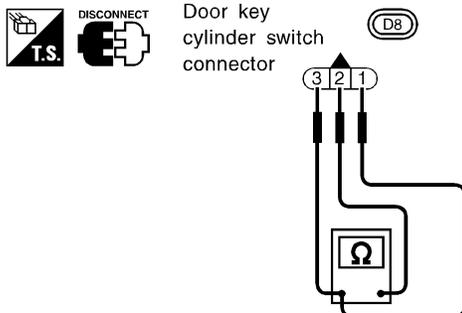
**OK or NG**

OK ► Door key cylinder switch is OK.

NG ► GO TO 2.

### 2 CHECK DOOR KEY CYLINDER SWITCH

1. Disconnect door key cylinder switch connector.
2. Check continuity between door key cylinder switch connector terminals.



- ① : Door unlock switch terminal
- ② : Ground terminal
- ③ : Door lock switch terminal

Terminals	Key position	Continuity
③ - ②	Neutral/Unlock	No
	Lock	Yes
① - ②	Neutral/Lock	No
	Unlock	Yes

SEL034X

**OK or NG**

OK ► **Check the following.**

- Door key cylinder switch ground circuit
- Harness for open or short between smart entrance control unit and door key cylinder switch

NG ► Replace door key cylinder switch.

## TRUNK LID KEY CYLINDER SWITCH CHECK

=NFEL0123S08

<b>1</b>	<b>CHECK TRUNK LID KEY CYLINDER SWITCH INPUT SIGNAL (UNLOCK SIGNAL)</b>	<p><b>With CONSULT-II</b>                  Check trunk lid key cylinder switch ("TRUNK KEY SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>TRUNK KEY SW</td> <td>OFF</td> </tr> </tbody> </table> <div style="margin-left: 20px;"> <p>When key in key cylinder is at Neutral position:  <b>TRUNK KEY SW OFF</b></p> <p>When key in key cylinder is at Unlock position:  <b>TRUNK KEY SW ON</b></p> </div> </div> <p style="text-align: right;">SEL358W</p>	DATA MONITOR		MONITOR		TRUNK KEY SW	OFF	GI MA EM LC EC FE CL MT AT AX SU					
DATA MONITOR														
MONITOR														
TRUNK KEY SW	OFF													
<p><b>Without CONSULT-II</b>                  Check voltage between smart entrance control unit harness connector terminal 42 and ground.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Continuity exist</p> </div> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M41)</p> </div> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">Terminal</th> <th rowspan="2">Key position</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">42</td> <td rowspan="2">Ground</td> <td>Neutral</td> <td>Approx. 5</td> </tr> <tr> <td>Unlock</td> <td>0</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL247W</p>		Terminal		Key position	Voltage [V]	(+)	(-)	42	Ground	Neutral	Approx. 5	Unlock	0	ST RS BT HA SC
Terminal		Key position	Voltage [V]											
(+)	(-)													
42	Ground	Neutral	Approx. 5											
		Unlock	0											
<p>Refer to wiring diagram in EL-286.</p> <p><b>OK or NG</b></p>														
OK	▶	Trunk lid key cylinder switch is OK.												
NG	▶	GO TO 2.												

<b>2</b>	<b>CHECK TRUNK LID KEY CYLINDER SWITCH</b>	<p>1. Disconnect trunk lid key cylinder switch connector.                  2. Check continuity between trunk lid key cylinder switch terminals.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Trunk lid key cylinder switch (B108)</p> </div> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td>Neutral</td> <td>No</td> </tr> <tr> <td>Unlock</td> <td>Yes</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL248W</p>	Key position	Continuity	Neutral	No	Unlock	Yes	EL IDX
Key position	Continuity								
Neutral	No								
Unlock	Yes								
<p><b>OK or NG</b></p>									
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Trunk lid key cylinder switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and trunk lid key cylinder switch</li> </ul>							
NG	▶	Replace trunk lid key cylinder switch.							

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## DOOR LOCK/UNLOCK SWITCH CHECK

NFEL0123S13

### 1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

#### With CONSULT-II

Check door lock/unlock switch ("LOCK SW DR/AS"/"UNLK SW DR/AS") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
LOCK SW DR/AS	OFF
UNLK SW DR/AS	OFF

When lock/unlock switch is turned to LOCK:

**LOCK SW DR/AS ON**

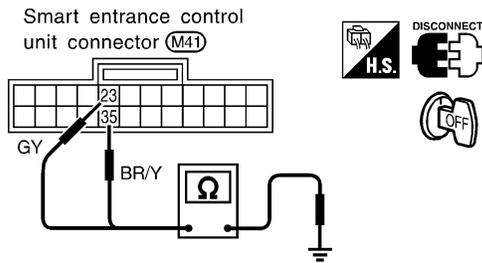
When lock/unlock switch is turned to UNLOCK:

**UNLK SW DR/AS ON**

SEL341W

#### Without CONSULT-II

1. Disconnect smart entrance control unit harness connector .
2. Check continuity between smart entrance control unit harness connector terminal 23 or 35 and ground.



Terminals	Door lock/unlock switch (LH or RH) condition	Continuity
23 - Ground	Lock	Yes
	N and Unlock	No
35 - Ground	Unlock	Yes
	N and Lock	No

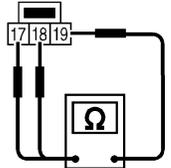
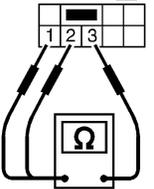
SEL195W

Refer to wiring diagram in EL-284.

**OK or NG**

OK ► Door lock/unlock switch is OK.

NG ► GO TO 2.

2	CHECK DOOR LOCK/UNLOCK SWITCH																																						
	<p>1. Disconnect door lock/unlock switch harness connector.                      2. Check continuity between each door lock/unlock switch terminals.</p> <ul style="list-style-type: none"> <li>● Power window main switch (Door lock/unlock switch LH)</li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>P/W main switch connector (D13)</p>  </div> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>17</th> <th>18</th> <th>19</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td></td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>N</td> <td colspan="3" style="text-align: center;">No continuity</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">○</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL196W</p> <ul style="list-style-type: none"> <li>● Door lock/unlock switch RH</li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Lock/unlock switch RH connector (D34)</p>  </div> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td></td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>N</td> <td colspan="3" style="text-align: center;">No continuity</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">○</td> <td></td> <td style="text-align: center;">○</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL197W</p> <p style="text-align: center;"><b>OK or NG</b></p>	Condition	Terminals			17	18	19	Lock		○	○	N	No continuity			Unlock	○		○	Condition	Terminals			1	2	3	Lock		○	○	N	No continuity			Unlock	○		○
Condition	Terminals																																						
	17	18	19																																				
Lock		○	○																																				
N	No continuity																																						
Unlock	○		○																																				
Condition	Terminals																																						
	1	2	3																																				
Lock		○	○																																				
N	No continuity																																						
Unlock	○		○																																				
OK	<p>▶ <b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Ground circuit for door lock/unlock switch</li> <li>● Harness for open or short between door lock/unlock switch and smart entrance control unit</li> </ul>																																						
NG	<p>▶ Replace door lock/unlock switch.</p>																																						

GI  
 MA  
 EM  
 LC  
 EC  
 FE  
 CL  
 MT  
 AT  
 AX  
 SU  
 BR  
 ST  
 RS  
 BT  
 HA  
 SC  
 EL  
 IDX

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## THEFT WARNING HORN AND HEADLAMP ALARM CHECK

-NFEL0123S09

<b>1</b>	<b>CHECK THEFT WARNING HORN AND HEADLAMP ALARM OPERATION</b>	
<p> <b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Select "ACTIVE TEST" in "THEFT WAR ALM" with CONSULT-II.</li> <li>Select "THEFT WAR ALM" and touch "ON".</li> </ol>		
<p><b>Theft warning horn and headlamp alarm should operate.</b></p>		
SEL359W		
<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Disconnect smart entrance control unit harness connector.</li> <li>Apply ground to smart entrance control unit harness connector terminal 4.</li> </ol>		
<p><b>Theft warning horn and headlamp alarm should operate.</b></p>		
SEL249W		
<p>Refer to wiring diagram in EL-287.</p>		
<b>OK or NG</b>		
OK	▶	Horn and headlamp alarm is OK.
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK THEFT WARNING HORN RELAYS</b>	
<p>Check theft warning horn relay-1 and relay-2.</p>		
<b>OK or NG</b>		
OK	▶	GO TO 3.
NG	▶	Replace.

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK POWER SUPPLY FOR THEFT WARNING HORN RELAYS</b>	
<p>1. Disconnect theft warning horn relay-1 and relay-2 connectors.                  2. Check voltage between terminal 1 and ground.</p>		
<p>Thrift warning horn relay connectors</p>		
SEL362W		
<b>Does battery voltage exist?</b>		
Yes	▶	GO TO 4.
No	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 57 located in the fuse and fusible link box)</li> <li>● Harness for open or short between theft warning horn relays and fuse</li> </ul>

GI  
MA  
EM  
LC  
EC  
FE  
CL

<b>4</b>	<b>CHECK THEFT WARNING HORN RELAYS CIRCUIT</b>	
<p>1. Disconnect theft warning horn relay-1 and relay-2 connectors.                  2. Check voltage between terminals of each relay.  <b>Battery voltage should exist.</b></p>		
SEL363W		
<b>OK or NG</b>		
OK	▶	Check harness for open or short between theft warning horn relay-2 and headlamp relays.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Harness for open or short between theft warning horn relay-1 and fuse</li> <li>● Harness for open or short between theft warning horn relay-1 and relay-2</li> <li>● Harness for open or short between theft warning horn relay-1 and theft warning horn</li> </ul>

MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA

SC

EL

IDX

# SMART ENTRANCE CONTROL UNIT

Description

## Description

NFEL0124

NFEL0124S01

### OUTLINE

The smart entrance control unit totally controls the following body electrical system operations.

- Warning chime
- Rear defogger and door mirror defogger
- Power door lock
- Multi-remote control system
- Theft warning system
- Interior lamp

In addition, the following timer operations are controlled by the smart entrance control unit.

- Battery saver control
- Retained power control

### BATTERY SAVER CONTROL

NFEL0124S02

#### Headlamps/Parking Lamps/License Lamps/Tail Lamps/Fog Lamps/Illumination Lamps

NFEL0124S0201

When the ignition switch is turned OFF (or ACC) from ON (or START) while headlamps illuminate, the headlamps (including parking, license, tail, fog and illumination lamps) are turned off after 45 seconds which are counted by the RAP (Retained Accessory Power) signal from the smart entrance control unit terminal 5 to the headlamp battery saver control unit.

The headlamps (including parking, license, tail, fog and illumination lamps) are turned off when the driver or passenger side door is opened even if 45 seconds have not passed after the ignition switch is turned OFF (or ACC) from ON (or START).

#### Interior Lamp/Trunk Room Lamp/Spot Lamp/Vanity Mirror Illumination

NFEL0124S0202

The lamps turn off automatically when the interior lamp, trunk room lamp, spot lamp or/and vanity mirror illumination are illuminated with the ignition key in the OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in the ON position for more than 10 minutes.

After lamps are turned off by the battery saver system, the lamps illuminate again when:

- Driver's door is locked or unlocked,
- Door is opened or closed,
- Key is inserted into ignition key cylinder.
- Trunk lid is opened

#### Rear Window Defogger/Door Mirror Defogger

NFEL0124S0203

Rear window defogger and door mirror defogger are turned off in approximately 15 minutes after the rear window defogger switch is turned on.

### RETAINED POWER CONTROL

NFEL0124S03

When the ignition switch is turned to OFF position from ON or START position, the following systems can be operated for 45 seconds by the RAP signal from the smart entrance control unit terminal 5.

- Electric sunroof
- Power window

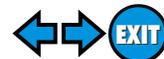
The retained power operation is canceled when the driver or passenger side door is opened.

### INPUT/OUTPUT

NFEL0124S04

System	Input	Output
Power door lock	Door lock and unlock switch LH and RH Key switch (Insert) Door switches Door key cylinder switches	Door lock actuator

# SMART ENTRANCE CONTROL UNIT



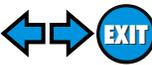
Description (Cont'd)

System	Input	Output	
Multi-remote control	Key switch (Insert) Ignition switch (ACC) Door switches Front door unlock sensor LH Remote controller signal	Horn relay Theft warning horn relay-1 Theft warning horn relay-2 Multi-remote control relay Interior lamp Ignition key hole illumination Door lock actuator Trunk lid opener actuator	GI
			MA
Warning chime	Key switch (Insert) Ignition switch (ON) Lighting switch (1st) Seat belt switch Front door switch LH	Warning chime (located in smart entrance control unit)	EM
			LC
Rear window defogger and door mirror defogger	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay	EC
			FE
Theft warning	Ignition switch (ACC, ON) Door switches Hood switch Trunk room lamp switch Door lock/unlock switches Door key cylinder switches (lock/unlock) Trunk lid key cylinder switch (unlock) Door unlock sensores	Theft warning horn relay-2 Security indicator	CL
			MT
Interior lamp	Door switches Front door unlock sensor LH Ignition switch (ON) Key switch (Insert)	Interior lamp Key hole illumination	AT
			AX
Battery saver control for headlamps/parking lamps/licence lamps/tail lamps/fog lamps/illumination lamps	Ignition switch (ON) Front door switches	Headlamp battery saver control unit	SU
Battery saver control for interior lamp/trunk room lamp/spot lamp/vanity mirror illumination	Ignition switch (ON) Front door switches Lamp switches	Interior lamp Trunk room lamp Spot lamp Vanity mirror illumination	BR
			ST
Battery saver control for rear window defogger and door mirror defogger	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay	RS
Retained power control for electric sunroof	Ignition switch (ON) Front door switches	Sunroof motor	BT
Retained power control for power window	Ignition switch (ON) Front door switches	Power window relay	HA

SC

EL

IDX



# SMART ENTRANCE CONTROL UNIT

CONSULT-II

## CONSULT-II DIAGNOSTIC ITEMS APPLICATION

=NFEL0247

NFEL0247S01

Item (CONSULT-II screen terms)	Diagnosed system	DATA MONITOR	ACTIVE TEST	WORK SUPPORT
DOOR LOCK	Power door lock	X	X	
REAR DEFOGGER	Rear window defogger	X	X	
KEY WARN ALM	Warning chime	X	X	
LIGHT WARN ALM	Warning chime	X	X	
SEAT BELT ALM	Warning chime	X	X	
INT LAMP	Interior lamps	X	X	
BATTERY SAVER	Battery saver control for interior lamp	X	X	
THEFT WAR ALM	Theft warning system	X	X	X
RETAINED PWR	Retained power control	X	X	
MULTI REMOTE ENT	Multi-remote control system	X	X	X

X: Applicable

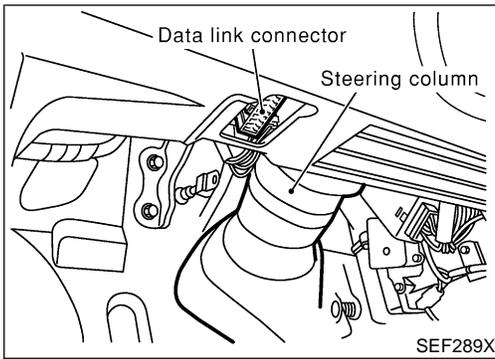
For diagnostic item in each control system, refer to the relevant pages for each system.

## DIAGNOSTIC ITEM DESCRIPTION

NFEL0247S02

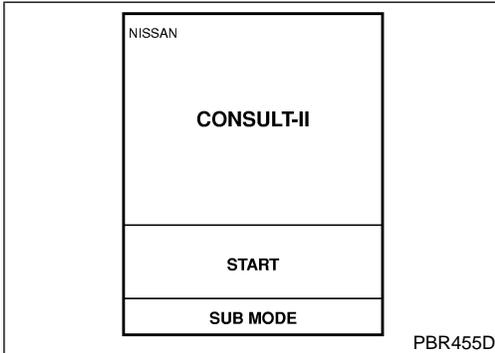
MODE	Description
DATA MONITOR	Input/output data in the smart entrance control unit can be read.
ACTIVE TEST	Diagnostic Test Mode in which CONSULT-II drives some systems apart from the smart entrance control unit.
WORK SUPPORT for THEFT WAR ALM	The recorded trigger signal when theft warning system was activated can be checked.
WORK SUPPORT for MULTI REMOTE ENT	ID code of multi-remote controller can be registered and erased.

=NFEL0247S03

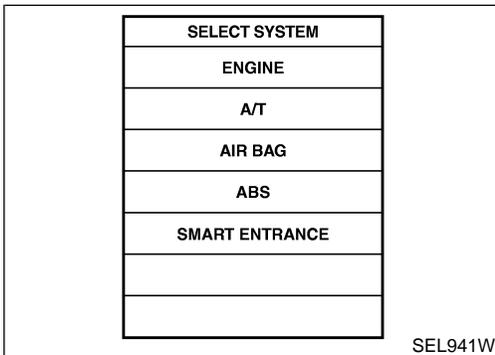


## CONSULT-II INSPECTION PROCEDURE

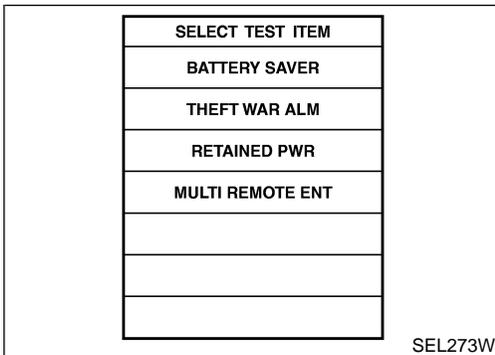
1. Turn the ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Perform each diagnostic item according to "DIAGNOSTIC ITEMS APPLICATION". Refer to EL-312.

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

**EL**

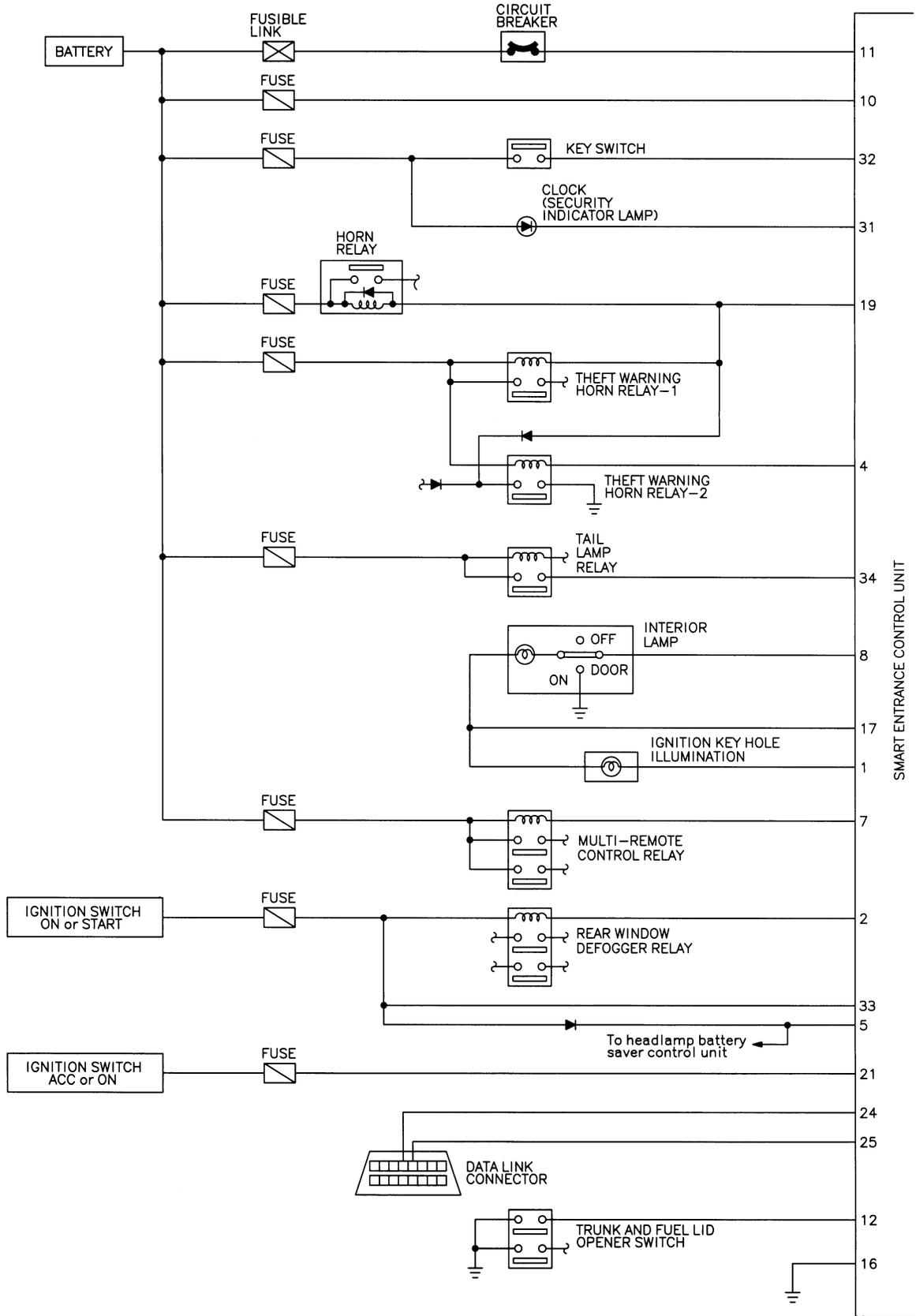
IDX

# SMART ENTRANCE CONTROL UNIT

Schematic

## Schematic

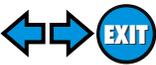
NFEL0125



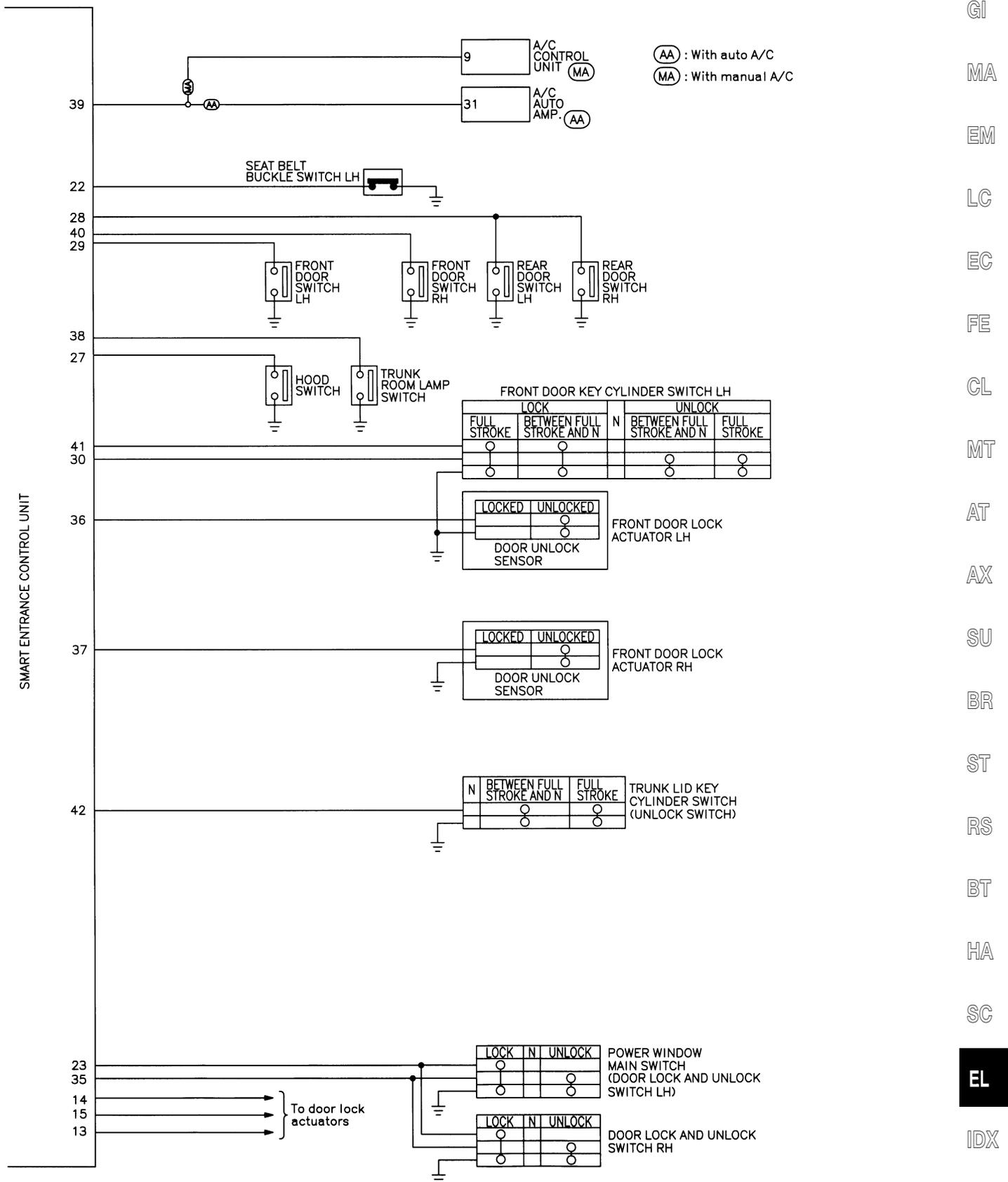
SMART ENTRANCE CONTROL UNIT

MEL326K

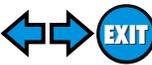
# SMART ENTRANCE CONTROL UNIT



Schematic (Cont'd)



MEL327K



# SMART ENTRANCE CONTROL UNIT

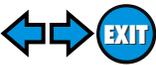
Smart Entrance Control Unit Inspection Table

## Smart Entrance Control Unit Inspection Table

NFEL0126

Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)	
1	R/Y	Ignition key hole illumination	For 30 seconds after driver door is locked	0V	
			30 seconds passed after driver door is locked	12V	
2	G/R	Rear window defogger relay	OFF → ON (Ignition key is in "ON" position)	0V → 12V	
4	BR/Y	Theft warning horn relay-2	When panic alarm is operated using remote controller	12V → 0V	
5	PU	Headlamp battery saver control unit	When headlamp battery saver timer is operated	12V	
7	P	Multi-remote control relay	When doors are locked using remote controller	12V → 0V	
8	R	Interior lamp	When interior lamp is operated using remote controller. (Lamp switch in "DOOR" position)	0V → 12V	
10	R/B	Power source (Fuse)	—	12V	
11	W/R	Power source (C/B)	—	12V	
12	L	Trunk lid opener switch	ON (Open) → OFF (Closed)	0V → 12V	
13	W/B	Driver door lock actuator	Door lock & unlock switch	Free	0V
14	G/Y	Passenger and rear doors lock actuator		Unlocked	12V
15	PU	Door lock actuators	Door lock & unlock switch	Free	0V
				Locked	12V
16	B	Ground	—	—	
17	R/G	Battery saver (Interior lamp)	Battery saver does not operate → Operate	12V → 0V	
19	G/W	Horn relay	When doors are locked using remote controller with horn chirp mode.	12V → 0V	
21	PU	Ignition switch (ACC)	"ACC" position	12V	
22	OR	Seat belt buckle switch	Unfasten → Fasten (Ignition key is in "ON" position)	0V → 5V	
23	GY	Door lock & unlock switches	Neutral → Locks	5V → 0V	
27	Y/R	Hood switch	ON (Open) → OFF (Closed)	0V → 5V	
28	R/W	Rear door switches	OFF (Closed) → ON (Open)	5V → 0V	
29	SB	Driver door switch	OFF (Closed) → ON (Open)	5V → 0V	
30	OR/L	Door key cylinder unlock switch	OFF (Neutral) → ON (Unlocked)	5V → 0V	
31	G/OR	Theft warning indicator	Goes off → Illuminates	12V → 0V	
32	B/R	Ignition key switch (Insert)	key inserted → key removed from IGN key cylinder	12V → 0V	
33	G	Ignition switch (ON)	Ignition key is in "ON" position	12V	
34	R/L	Tail lamp relay	1ST, 2ND positions: ON → OFF	12V → 0V	
35	BR/Y	Door lock & unlock switches	Neutral → Unlocks	5V → 0V	
36	LG/R	Driver door unlock sensor	Driver door: Locked → Unlocked	5V → 0V	
37	PU	Passenger door unlock sensor	Passenger door: Locked → Unlocked	5V → 0V	
38	PU/Y	Trunk room lamp switch	ON (Open) → OFF (Closed)	0V → 12V	
39	G/R	Rear window defogger switch	OFF → ON	5V → 0V	

# SMART ENTRANCE CONTROL UNIT



Smart Entrance Control Unit Inspection Table (Cont'd)

Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)	
40	R/L	Passenger door switch	OFF (Closed) → ON (Open)	5V → 0V	GI
41	OR/B	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)	5V → 0V	MA
42	G/B	Trunk lid key cylinder switch	OFF (Neutral) → ON (Unlock)	5V → 0V	EM
					LC
					EC
					FE
					CL
					MT
					AT
					AX
					SU
					BR
					ST
					RS
					BT
					HA
					SC
					<b>EL</b>
					IDX

# INTEGRATED HOMELINK TRANSMITTER

Wiring Diagram — TRNSMT —

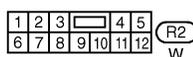
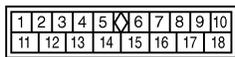
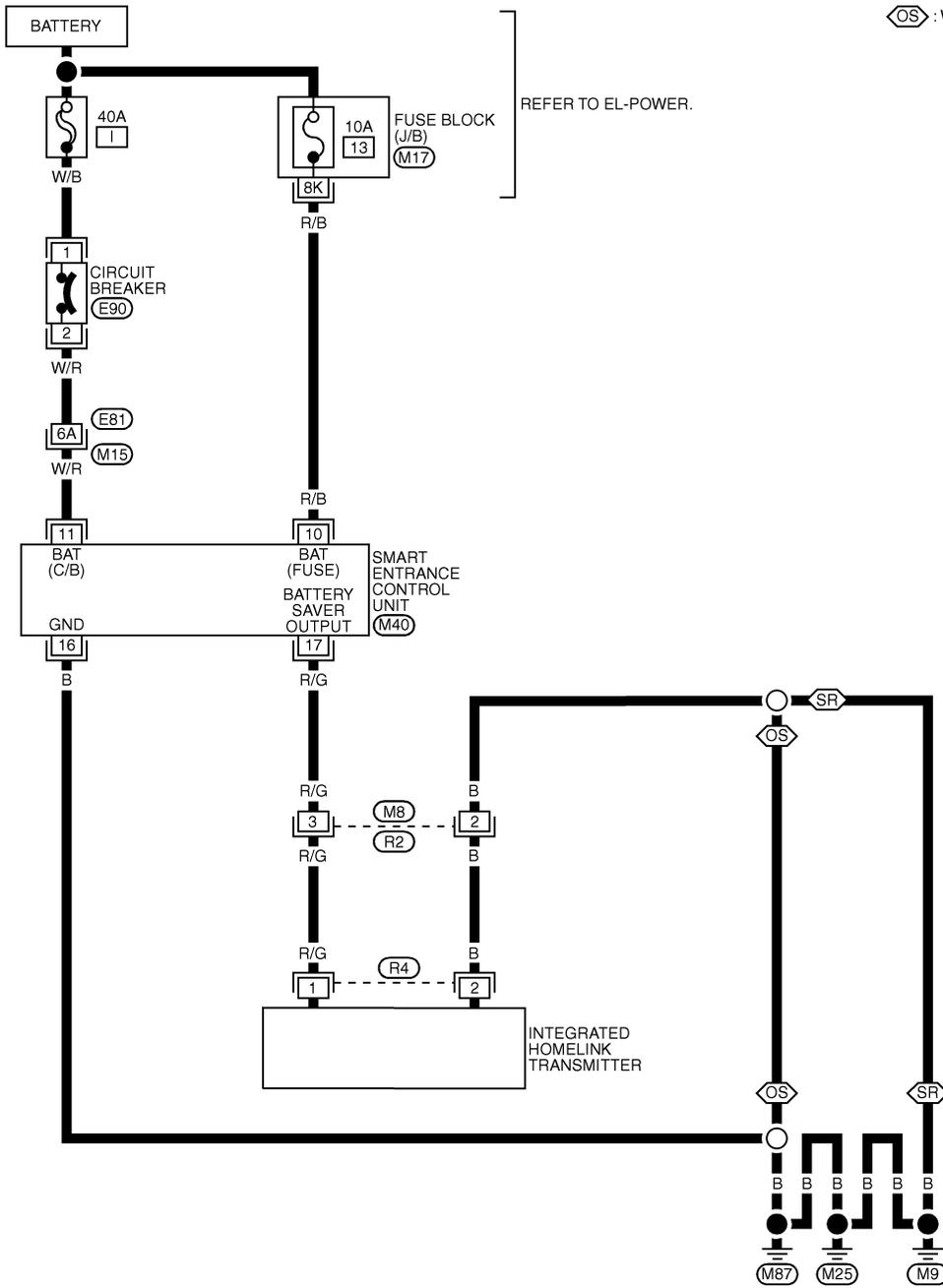
## Wiring Diagram — TRNSMT —

NFEL0127

### EL-TRNSMT-01

◁SR▷ : WITH SUNROOF

◁OS▷ : WITHOUT SUNROOF



REFER TO THE FOLLOWING.  
 (M15) . (E81) - SUPER  
 MULTIPLE JUNCTION (SMJ)  
 (M17) - FUSE BLOCK -  
 JUNCTION BOX (J/B)

MEL544K

## Trouble Diagnoses

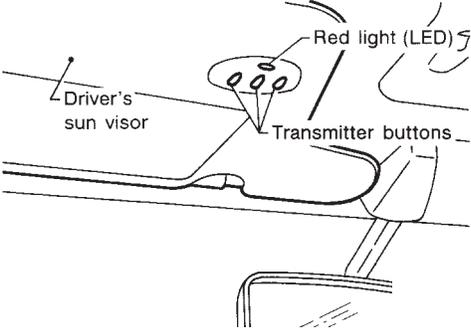
### DIAGNOSTIC PROCEDURE

NFEL0128

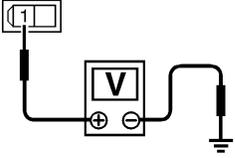
NFEL0128S01

**SYMPTOM: Transmitter does not activate receiver.**

Before conducting the procedure given below, make sure that system receiver (garage door opener, etc.) operates with original, hand-held transmitter. If NG, receiver or hand-held transmitter is at fault, not vehicle related.

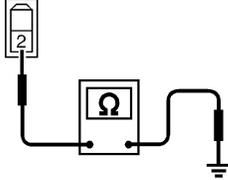
<b>1</b>	<b>PRELIMINARY CHECK</b>		
<p>1. Turn ignition switch "OFF".                  2. Does red light (LED) of transmitter illuminate when any button is pressed?</p>			
			
<b>Yes or No</b>			
Yes	▶	GO TO 2.	
No	▶	GO TO 3.	

<b>2</b>	<b>CHECK TRANSMITTER FUNCTION</b>		
<p>Check transmitter with Tool.                  For details, refer to Technical Service Bulletin.</p>			
<b>OK or NG</b>			
OK	▶	Receiver or handheld transmitter fault, not vehicle related.	
NG	▶	Replace transmitter with sun visor assembly.	

<b>3</b>	<b>CHECK POWER SUPPLY</b>		
<p>1. Disconnect transmitter connector.                  2. Turn ignition switch "OFF".                  3. Check voltage between terminal 1 and body ground. (Within 10 minutes after turn ignition switch "OFF".)</p>			
			
<p>Integrated homelink transmitter connector</p>			
			
<b>Battery voltage should exist.</b>			
<b>OK or NG</b>			
OK	▶	GO TO 4.	
NG	▶	Check fuse (10A) and repair harness.	

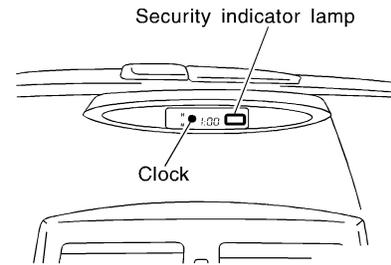
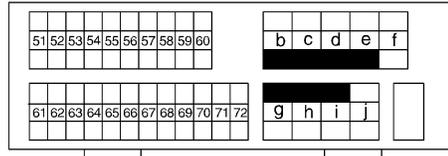
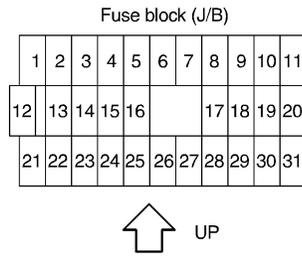
# INTEGRATED HOMELINK TRANSMITTER

Trouble Diagnoses (Cont'd)

<b>4</b>	<b>CHECK GROUND CIRCUIT</b>	
<p>Check continuity between terminal 2 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">   <small>T.S.</small> </div> <div style="text-align: center;">   <small>DISCONNECT</small> </div> <div style="text-align: center;">   <small>OFF</small> </div> </div> <p>Integrated homelink transmitter connector</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p><b>Continuity should exist.</b></p> </div> </div> <div style="text-align: right; margin-top: 20px;">SEL368W</div>		
<b>OK or NG</b>		
OK	▶	Replace transmitter with sun visor assembly.
NG	▶	Repair harness.

## Component Parts and Harness Connector Location

NFEL0172



GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SEL301W

SU

BR

ST

RS

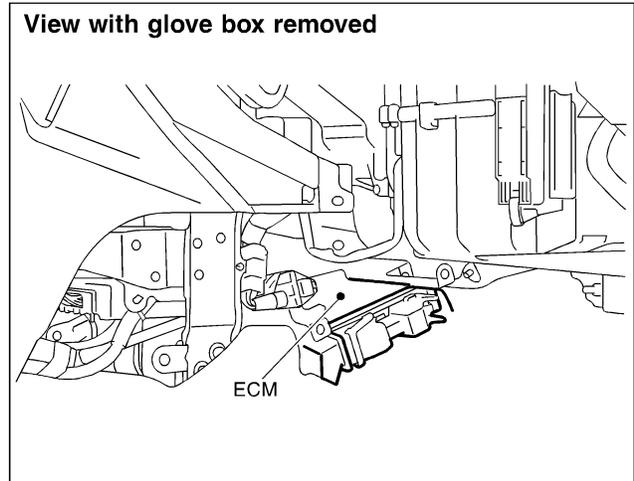
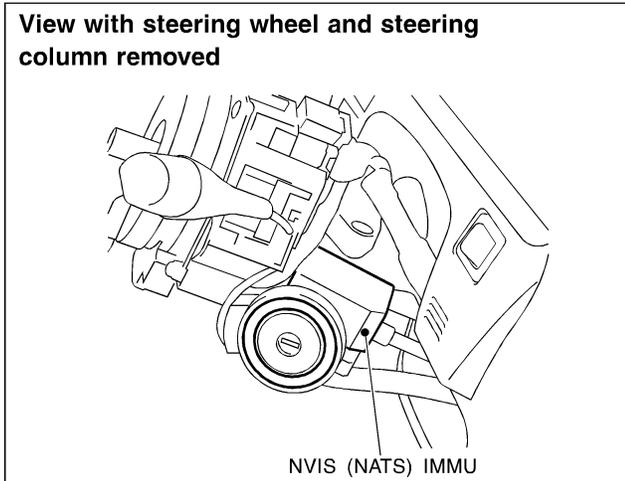
BT

HA

SC

**EL**

IDX



**NOTE:**

If customer reports a “No Start” condition, request ALL KEYS be brought to the Dealer in case of a NATS malfunction.

## System Description

=NFEL0173

NVIS (Nissan Vehicle Immobilizer System-NATS) has the following immobilizer functions:

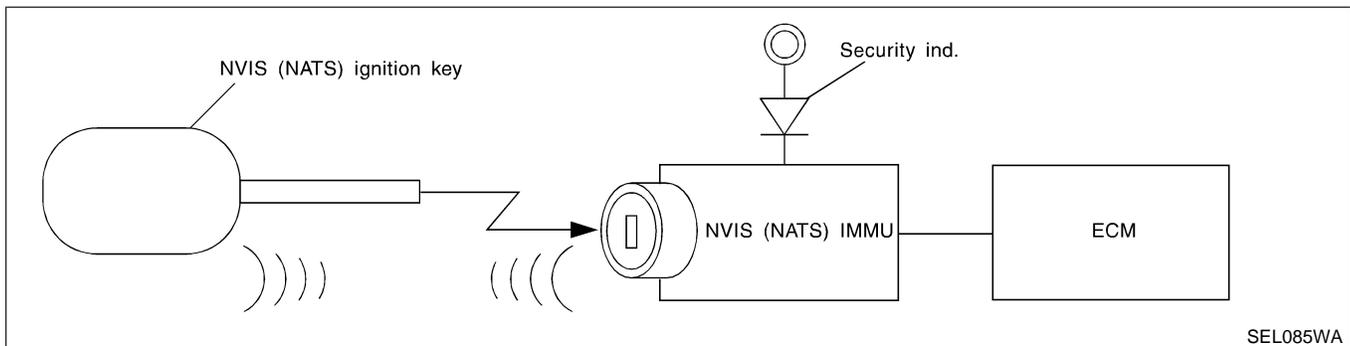
- Since only NVIS (NATS) ignition keys, whose ID nos. have been registered into the ECM and IMMU of NVIS (NATS), allow the engine to run, operation of a stolen vehicle without an NVIS (NATS) registered key is prevented by NVIS (NATS).  
That is to say, NVIS (NATS) will immobilize the engine if someone tries to start it without the registered key of NVIS (NATS).
- All of the originally supplied ignition key IDs have been NVIS (NATS) registered.  
If requested by the vehicle owner, a maximum of five key IDs can be registered into the NVIS (NATS) components.
- The security indicator blinks when the ignition switch is in “OFF” or “ACC” position. Therefore, NVIS (NATS) warns outsiders that the vehicle is equipped with the anti-theft system.
- When NVIS (NATS) detects trouble, the security indicator lamp lights up while ignition key is in the “ON” position.
- NVIS (NATS) trouble diagnoses, system initialization and additional registration of other NVIS (NATS) ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II NVIS (NATS) software. Regarding the procedures of NVIS (NATS) initialization and NVIS (NATS) ignition key ID registration, refer to CONSULT-II operation manual, IVIS/NVIS.
- **When servicing a malfunction of the NVIS (indicated by lighting up of Security Indicator Lamp) or registering another NVIS ignition key ID no., it is necessary to re-register original key identification. Therefore, be sure to receive ALL KEYS from vehicle owner.**

## System Composition

NFEL0174

The immobilizer function of the NVIS (NATS) consists of the following:

- NVIS (NATS) ignition key
- NVIS (NATS) immobilizer control unit (IMMU) located in the ignition key cylinder
- Engine control module (ECM)
- Security indicator

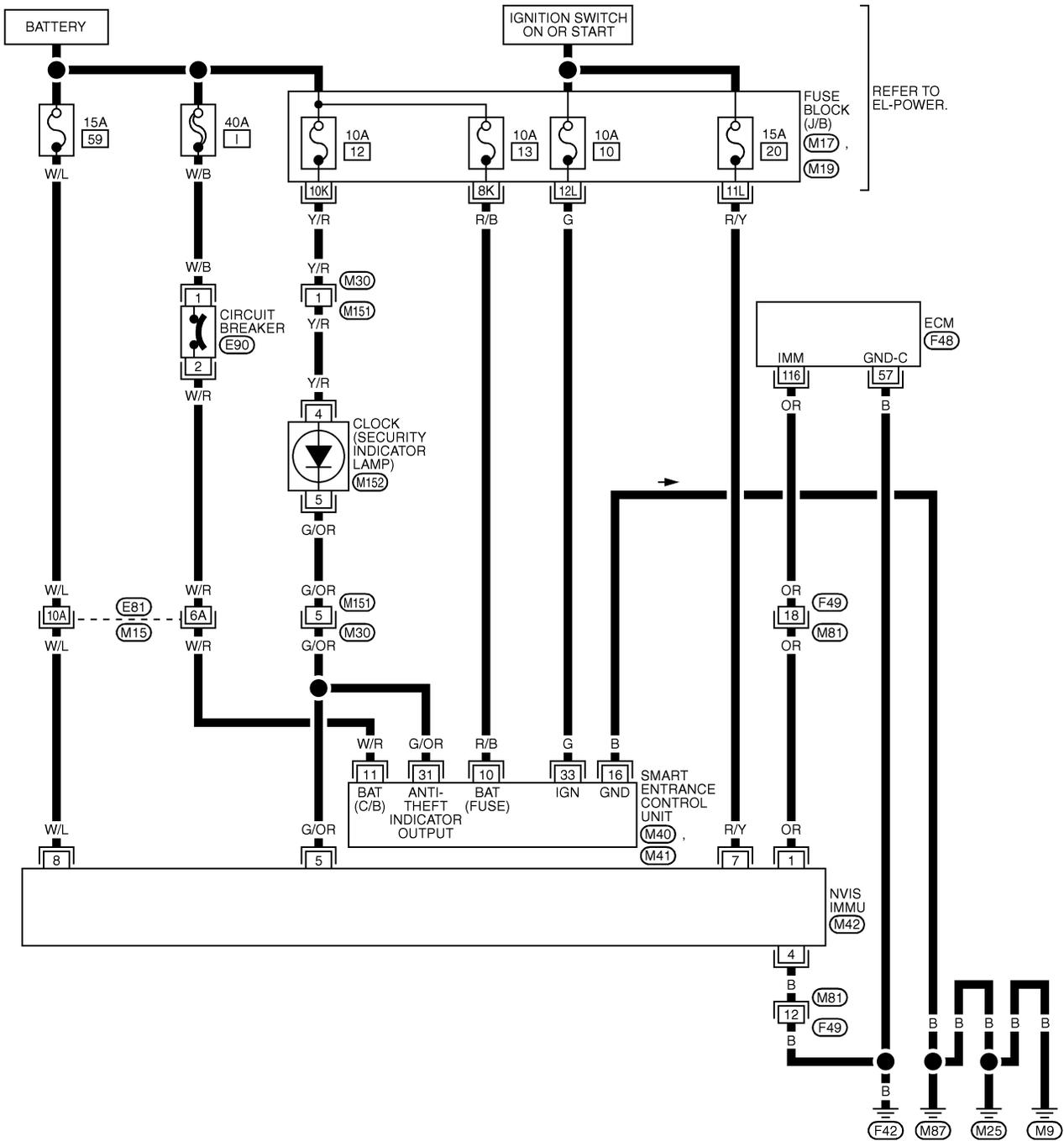


SEL085WA

## Wiring Diagram — NATS —

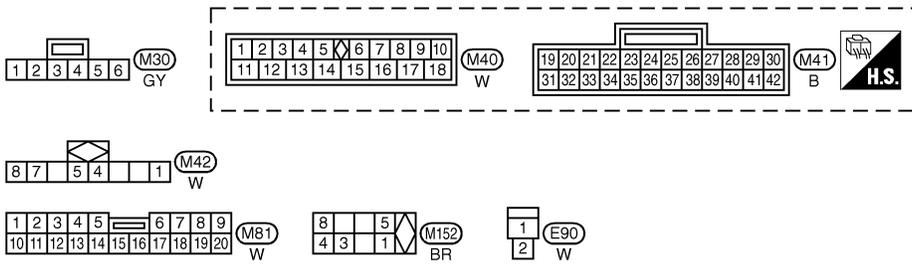
NFEL0175

EL-NATS-01



GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA

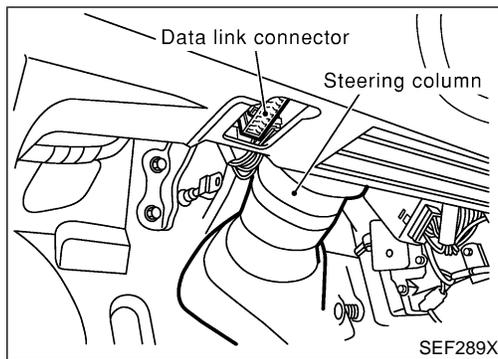
SC  
EL  
IDX



REFER TO THE FOLLOWING.

- (M15) , (E81) -SUPER MULTIPLE JUNCTION (SMJ)
- (M17) -FUSE BLOCK-JUNCTION BOX (J/B)
- (M19) -FUSE BLOCK-JUNCTION BOX (J/B)
- (F48) -ELECTRICAL UNITS

## CONSULT-II



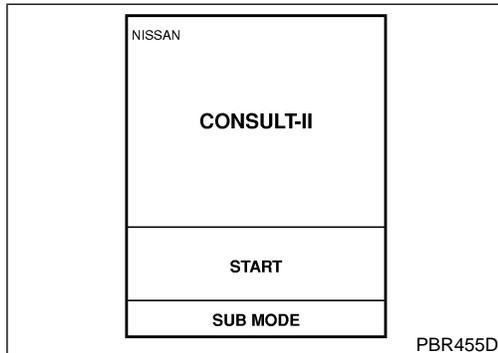
## CONSULT-II

### CONSULT-II INSPECTION PROCEDURE

NFEL0176

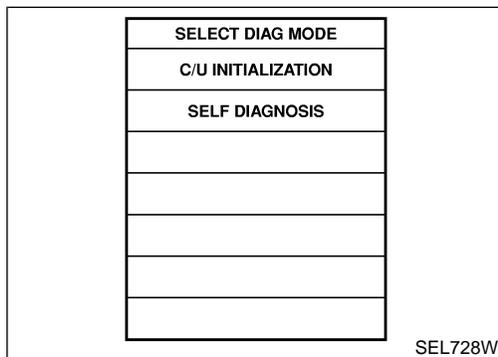
NFEL0176S01

1. Turn ignition switch OFF.
2. Connect "CONSULT-II" to Data link connector.
3. Insert NVIS (NATS) program card into CONSULT-II.
  - ◀ : Program card  
NATS
4. Turn ignition switch ON.
5. Touch "START".



6. Perform each diagnostic test mode according to each service procedure.

For further information, see the CONSULT-II Operation Manual, NVIS (NATS).



### CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

NFEL0176S02

CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following three components, C/U initialization is necessary. [NVIS (NATS) ignition key/IMMU/ECM]
SELF DIAGNOSIS	Detected items (screen terms) are as shown in the chart below.

#### NOTE:

When any initialization is performed, all ID previously registered will be erased and all NVIS (NATS) ignition keys must be registered again.

The engine cannot be started with an unregistered key. In this case, the system will show "DIFFERENCE OF KEY" or "LOCK MODE" as a self-diagnostic result on the CONSULT-II screen.

## HOW TO READ SELF-DIAGNOSTIC RESULTS

NFEL0176S03

**Result display screen (When no malfunction is detected)**

SELF DIAGNOSIS	
DTC RESULTS	TIME
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	
	PRINT

**Result display screen (When malfunction is detected)**

SELF DIAGNOSIS	
DTC RESULTS	TIME
CHAIN OF ECM-IMMU	0
DIFFERENCE OF KEY	1
Scroll down	
ERASE	PRINT

Detected items →

If "Scroll Down" is indicated, there are four or more malfunctions.

When touched, the results stored in the engine control module (ECM) are erased.

Time data ← This indicates how many times the vehicle was driven after the last detection of a malfunction. If the malfunction is detected currently, the time data will be "0".

When touched, the results are printed out.

SEL308W

## NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART

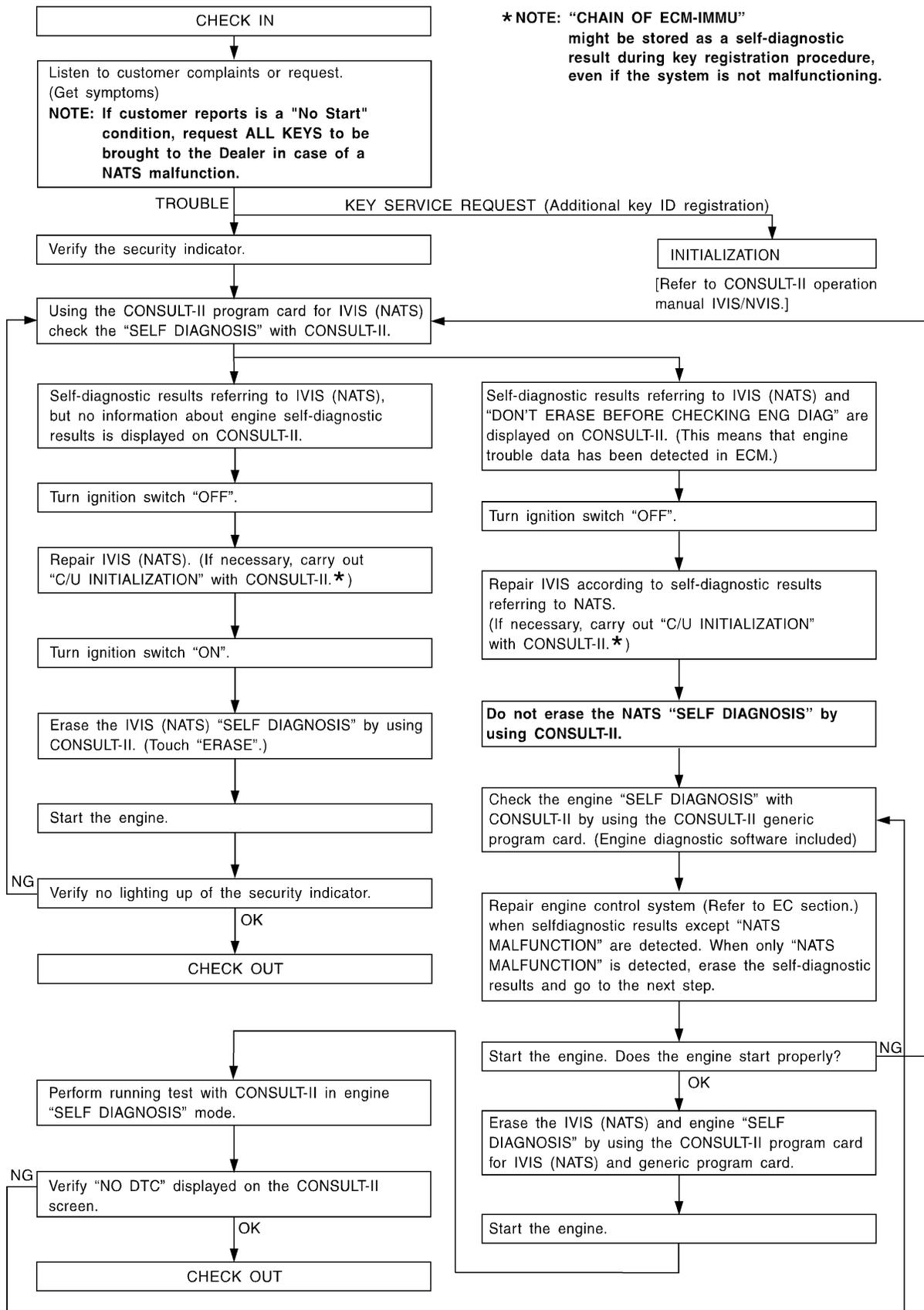
NFEL0176S04

Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of "ENGINE")	Malfunction is detected when .....	Reference page
ECM INT CIRC-IMMU	NATS MAL-FUNCTION P1613	The malfunction of ECM internal circuit of IMMU communication line is detected.	EL-328
CHAIN OF ECM-IMMU	NATS MAL-FUNCTION P1612	Communication impossible between ECM and IMMU	EL-329
DIFFERENCE OF KEY	NATS MAL-FUNCTION P1615	IMMU can receive the key ID signal but the result of ID verification between key ID and IMMU is NG.	EL-333
CHAIN OF IMMU-KEY	NATS MAL-FUNCTION P1614	IMMU cannot receive the key ID signal.	EL-334
ID DISCORD, IMM-ECM	NATS MAL-FUNCTION P1611	The result of ID verification between IMMU and ECM is NG. System initialization is required.	EL-335
LOCK MODE	NATS MAL-FUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NVIS (NATS) will shift the mode to one which prevents the engine from being started. <ul style="list-style-type: none"> <li>● Unregistered ignition key is used.</li> <li>● IMMU or ECM's malfunctioning.</li> </ul>	EL-338
DON'T ERASE BEFORE CHECKING ENG DIAG	—	All engine trouble codes except NVIS (NATS) trouble code has been detected in ECM.	EL-326

## Trouble Diagnoses WORK FLOW

NFEL0177

NFEL0177S01



## SYMPTOM MATRIX CHART 1 (Self-diagnosis related item)

NFEL0177S02

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON NEXT PAGE
<ul style="list-style-type: none"> <li>● Security indicator lighting up*</li> <li>● Engine hard to start</li> </ul>	ECM INT CIRC-IMMU	PROCEDURE 1 (EL-328)	ECM	B
	CHAIN OF ECM-IMMU	PROCEDURE 2 (EL-329)	In rare cases, "CHAIN OF ECM-IMMU" might be stored during the key registration procedure, even if the system is not malfunctioning.	—
			Open circuit in battery voltage line of IMMU circuit	C1
			Open circuit in ignition line of IMMU circuit	C2
			Open circuit in ground line of IMMU circuit	C3
			Open circuit in communication line between IMMU and ECM	C4
			Short circuit between IMMU and ECM communication line and battery voltage line	C4
			Short circuit between IMMU and ECM communication line and ground line	C4
			ECM	B
			IMMU	A
			DIFFERENCE OF KEY	PROCEDURE 3 (EL-333)
	CHAIN OF IMMU-KEY	PROCEDURE 4 (EL-334)	Malfunction of key ID chip	E
			IMMU	A
	ID DISCORD, IMM-ECM	PROCEDURE 5 (EL-335)	System initialisation has not yet been completed.	F
			ECM	F
LOCK MODE	PROCEDURE 7 (EL-338)	LOCK MODE	D	
<ul style="list-style-type: none"> <li>● MIL staying ON</li> <li>● Security indicator lighting up*</li> </ul>	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (EL-326)	Engine trouble data and NVIS (NATS) trouble data have been detected in ECM	—

\*: When NVIS (NATS) detects trouble, the security indicator lights up while ignition key is in the "ON" position.

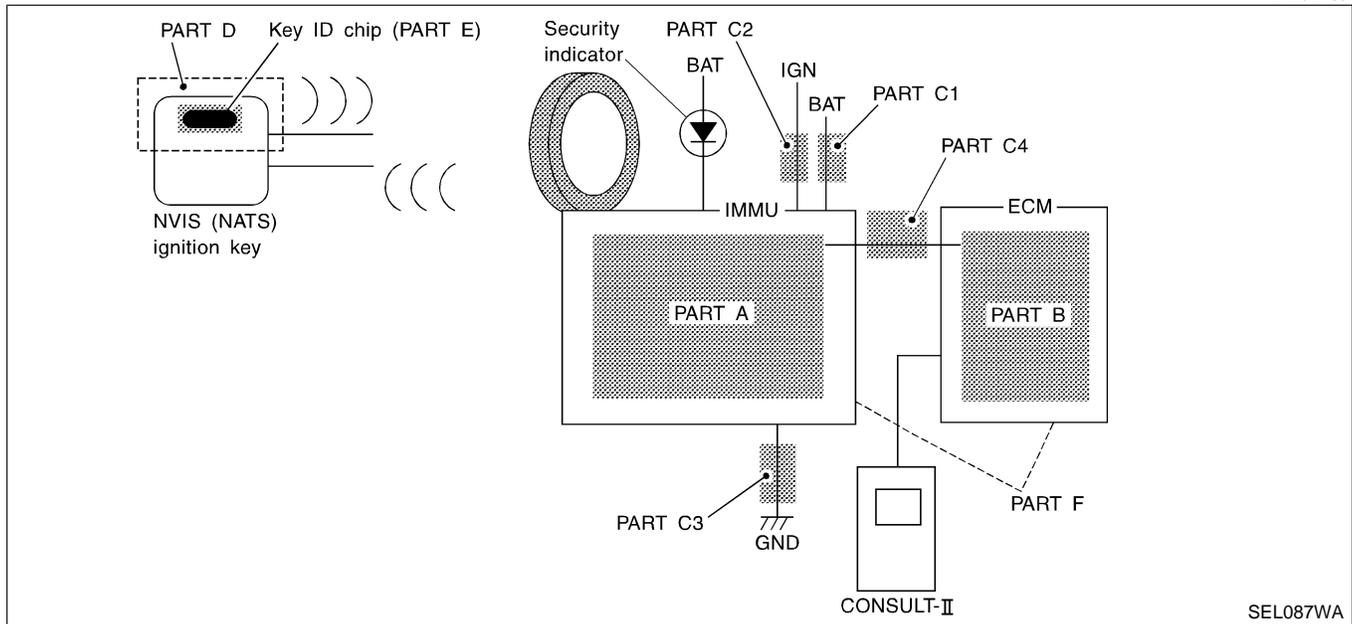
## SYMPTOM MATRIX CHART 2 (Non self-diagnosis related item)

NFEL0177S03

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)
Security ind. does not light up.	PROCEDURE 6 (EL-336)	Security ind.
		Open circuit between Fuse and IMMU
		Continuation of initialization mode
		IMMU

## DIAGNOSTIC SYSTEM DIAGRAM

NFEL0177S04



SEL087WA

SELF DIAGNOSIS	
DTC RESULTS	TIME
ECM INT CIRC-IMMU	0

SEL314W

### DIAGNOSTIC PROCEDURE 1

NFEL0177S06

#### Self-diagnostic results:

**“ECM INT CIRC-IMMU” displayed on CONSULT-II screen**

1. Confirm SELF-DIAGNOSTIC RESULTS “ECM INT CIRC-IMMU” displayed on CONSULT-II screen. Ref. part No. B.
2. Replace ECM.
3. Perform initialization with CONSULT-II.  
For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.

## DIAGNOSTIC PROCEDURE 2

=NFEL0177S07

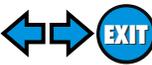
Self-diagnostic results:  
 "CHAIN OF ECM-IMMU" displayed on CONSULT-II screen

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS "CHAIN OF ECM-IMMU" displayed on CONSULT-II screen. <b>NOTE:</b> In rare cases "CHAIN OF ECM-IMMU" might be stored during the key registration procedure, even if the system is not malfunctioning.												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">CHAIN OF ECM-IMMU</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	CHAIN OF ECM-IMMU	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
CHAIN OF ECM-IMMU	0											
SEL292W												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>CHECK POWER SUPPLY CIRCUIT FOR IMMU</b>	
1. Disconnect IMMU connector. 2. Check voltage between terminal 8 of IMMU and ground with CONSULT-II or tester.		
<b>Battery voltage should exist.</b>		
SEL302W		
<b>OK or NG</b>		
OK	▶	GO TO 3.
NG	▶	<b>Check the following</b> <ul style="list-style-type: none"> <li>● 15A fuse (No. 59, located in the fuse and fusible link box)</li> <li>● Harness for open or short between fuse and IMMU connector</li> </ul> <b>Ref. Part No. C1</b>

GI  
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 AT  
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 BT  
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 SC  
 EL  
 IDX

# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)



Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK IGN SW. ON SIGNAL</b>		
<p>1. Turn ignition switch ON. 2. Check voltage between terminal 7 of IMMU and ground with CONSULT-II or tester.</p>			
SEL303W			
<b>OK or NG</b>			
OK	▶	GO TO 4.	
NG	▶	<p><b>Check the following</b></p> <ul style="list-style-type: none"> <li>● 15A fuse [No. 20, located in the fuse block (J/B)]</li> <li>● Harness for open or short between fuse and IMMU connector</li> </ul> <p><b>Ref. part No. C2</b></p>	

<b>4</b>	<b>CHECK GROUND CIRCUIT FOR IMMU</b>		
<p>1. Turn ignition OFF. 2. Check harness continuity between IMMU terminal 4 and ground.</p>			
SEL304W			
<b>OK or NG</b>			
OK	▶	GO TO 5.	
NG	▶	Repair harness. <b>Ref. part No. C3</b>	

5	CHECK COMMUNICATION LINE OPEN CIRCUIT	
	<p>1. Disconnect ECM connector.</p> <p>2. Check harness continuity between ECM terminal 116 and IMMU terminal 1.</p> <div style="text-align: center;"> </div> <p style="text-align: right; margin-right: 50px;"><b>Continuity should exist.</b></p> <p style="text-align: right;">SEL305W</p> <p style="text-align: center;"><b>OK or NG</b></p>	<p>GI</p> <p>MA</p> <p>EM</p> <p>LC</p> <p>EC</p>
OK	▶	GO TO 6.
NG	▶	Repair harness or connector. <b>Ref. part No. C4</b>

GI

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6	CHECK COMMUNICATION LINE BATTERY SHORT CIRCUIT	
	<p>1. Turn ignition ON.</p> <p>2. Check voltage between ECM terminal 116 or IMMU terminal 1 and ground.</p> <div style="text-align: center;"> </div> <p style="text-align: right; margin-right: 50px;"><b>Voltage: 0V</b></p> <p style="text-align: right;">SEL306W</p> <p style="text-align: center;"><b>OK or NG</b></p>	<p>MT</p> <p>AT</p> <p>AX</p> <p>SU</p> <p>BR</p>
OK	▶	GO TO 7.
NG	▶	Communication line is short-circuited with battery voltage line or ignition switch ON line. Repair harness or connectors. <b>Ref. part No. C4</b>

MT

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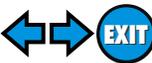
HA

SC

EL

IDX

# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)



Trouble Diagnoses (Cont'd)

<b>7</b>	<b>CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT</b>	
<p>1. Turn ignition switch OFF. 2. Check continuity between ECM terminal 116 or IMMU terminal 1 and ground.</p>		
OK or NG		
OK	▶	GO TO 8.
NG	▶	Communication line is short-circuited with ground line. Repair harness or connectors. <b>Ref. part No. C4</b>

SEL307W

<b>8</b>	<b>SIGNAL FROM ECM TO IMMU CHECK</b>	
<p>1. Check the signal between ECM terminal 116 and ground with CONSULT-II or oscilloscope when ignition switch is turned "ON". 2. Make sure signals which are shown in the figure below can be detected during 750 msec. just after ignition switch is turned "ON".</p>		
OK or NG		
OK	▶	IMMU is malfunctioning. Replace IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual IVIS/NVIS".
NG	▶	ECM is malfunctioning. Replace ECM. <b>Ref. part No. B</b> Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual IVIS/NVIS".

SEL730W

## DIAGNOSTIC PROCEDURE 3

=NFEL0177S08

Self-diagnostic results:  
 “DIFFERENCE OF KEY” displayed on CONSULT-II screen

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>DIFFERENCE OF KEY</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	DIFFERENCE OF KEY	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
DIFFERENCE OF KEY	0											
SEL293W												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

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EL  
IDX

<b>2</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>				
Perform initialization with CONSULT-II. Re-register all NVIS (NATS) ignition key IDs. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.					
<table border="1" style="margin: auto;"> <thead> <tr> <th>IMMU INITIALIZATION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td>THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </tbody> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
<b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows above message on the screen.					
<b>Can the system be initialized?</b>					
Yes	▶	Start engine. (END) (Ignition key ID was unregistered. <b>Ref. part No. D</b> )			
No	▶	IMMU is malfunctioning. Replace IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.			

## DIAGNOSTIC PROCEDURE 4

=NFEL0177S09

**Self-diagnostic results:  
“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen**

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.												
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">CHAIN OF IMMU-KEY</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	CHAIN OF IMMU-KEY	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
CHAIN OF IMMU-KEY	0											
SEL294W												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>CHECK NVIS (NATS) IGNITION KEY ID CHIP</b>	
Start engine with another registered NVIS (NATS) ignition key.		
<b>Does the engine start?</b>		
Yes	▶	Ignition key ID chip is malfunctioning. Replace the ignition key. <b>Ref. part No. E</b> Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.
No	▶	GO TO 3.

<b>3</b>	<b>CHECK IMMU INSTALLATION</b>	
Check IMMU installation. Refer to “How to Replace IMMU” in EL-339.		
<b>OK or NG</b>		
OK	▶	IMMU is malfunctioning. Replace IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.
NG	▶	Reinstall IMMU correctly.

## DIAGNOSTIC PROCEDURE 5

=NFEL0177S10

**Self-diagnostic results:  
“ID DISCORD, IMM-ECM” displayed on CONSULT-II screen**

GI

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS “ID DISCORD, IMM-ECM” displayed on CONSULT-II screen.												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>ID DISCORD, IMM-ECM</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	ID DISCORD, IMM-ECM	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
ID DISCORD, IMM-ECM	0											
SEL298W												
<p><b>NOTE:</b> “ID DISCORD IMM-ECM”: Registered ID of IMM-ECM is in discord with that of ECM.</p>												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

MA

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<b>2</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>				
Perform initialization with CONSULT-II. Re-register all NVIS (NATS) ignition key IDs. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.					
<table border="1" style="margin: auto;"> <thead> <tr> <th>IMMU INITIALIZATION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td style="text-align: center;">THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </tbody> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
<p><b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows above message on the screen.</p>					
<b>Can the system be initialized?</b>					
Yes	▶	Start engine. (END) (System initialization had not been completed. <b>Ref. part No. F</b> )			
No	▶	ECM is malfunctioning. Replace ECM. <b>Ref. part No. F</b> Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.			

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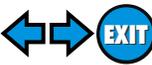
HA

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# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)



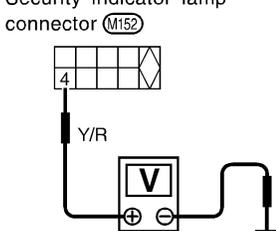
Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 6 “SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

=NFEL0177S12

<b>1</b>	<b>CHECK FUSE</b>	
Check 10A fuse [No. 12, located in the fuse block (J/B)].		
<b>Is 10A fuse OK?</b>		
Yes	▶	GO TO 2.
No	▶	Replace fuse.

<b>2</b>	<b>CHECK SECURITY INDICATOR LAMP</b>	
<ol style="list-style-type: none"> <li>1. Install 10A fuse.</li> <li>2. Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.</li> <li>3. Turn ignition switch OFF.</li> <li>4. Start engine and turn ignition switch OFF.</li> <li>5. Check the security indicator lamp lighting.</li> </ol> <p><b>Security indicator lamp should be blinking.</b></p>		
<b>OK or NG</b>		
OK	▶	INSPECTION END
NG	▶	GO TO 3.

<b>3</b>	<b>CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT</b>	
<ol style="list-style-type: none"> <li>1. Disconnect security indicator lamp connector.</li> <li>2. Check voltage between security indicator lamp connector terminal 4 and ground.</li> </ol>		
<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;"> <p>Security indicator lamp connector (M152)</p>  </div> <div style="text-align: center;">  <p><b>DISCONNECT</b></p> </div> <div style="text-align: center;"> <p><b>Battery voltage should exist.</b></p> </div> </div>		
SEL299W		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	Check harness for open or short between fuse and security indicator lamp.

<b>4</b>	<b>CHECK SECURITY INDICATOR LAMP</b>	
Check security Indicator Lamp.		
<b>Is security indicator lamp OK?</b>		
Yes	▶	GO TO 5.
No	▶	Replace security indicator lamp.

5	CHECK IMMU FUNCTION	
	<p>1. Connect IMMU connector.</p> <p>2. Disconnect security indicator lamp connector.</p> <p>3. Check continuity between IMMU terminal 5 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="289 321 609 567"> <p>IMMU connector (M42)</p> <p>G/OR</p> </div> <div data-bbox="690 331 755 546"> </div> <div data-bbox="873 415 1328 447"> <p><b>Continuity should exist intermittently.</b></p> </div> </div> <p style="text-align: right;">SEL300W</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶	Check harness for open or short between security indicator lamp and IMMU.
NG	▶	IMMU is malfunctioning. Replace IMMU. Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual IVIS/NVIS".

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## DIAGNOSTIC PROCEDURE 7

=NFEL0177S13

**Self-diagnostic results:  
“LOCK MODE” displayed on CONSULT-II screen**

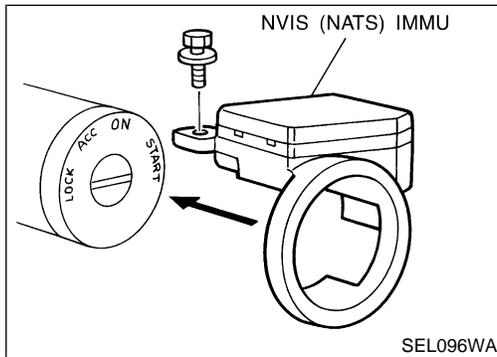
<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS “LOCK MODE” is displayed on CONSULT-II screen.												
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">LOCK MODE</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	LOCK MODE	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
LOCK MODE	0											
SEL295W												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>ESCAPE FROM LOCK MODE</b>	
<ol style="list-style-type: none"> <li>1. Turn ignition switch OFF.</li> <li>2. Turn ignition switch ON with registered key. (Do not start engine.) Wait 5 seconds.</li> <li>3. Return the key to OFF position.</li> <li>4. Repeat steps 2 and 3 twice (total of three cycles).</li> <li>5. Start the engine.</li> </ol>		
<b>Does engine start?</b>		
Yes	▶	System is OK. (Now system is escaped from “LOCK MODE”.)
No	▶	GO TO 3.

<b>3</b>	<b>CHECK IMMU ILLUSTRATION</b>	
Check IMMU installation. Refer to “How to Replace IMMU” in EL-339.		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	Reinstall IMMU correctly.

<b>4</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>				
Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual IVIS/NVIS".					
<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;"><b>IMMU INITIALIZATION</b></td> </tr> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td style="text-align: center;">                     THEN IGN KEY SW 'OFF' AND                      'ON', AFTER CONFIRMING                      SELF-DIAG AND PASSWORD,                      PERFORM C/U INITIALIZATION                      AGAIN.                 </td> </tr> </table>			<b>IMMU INITIALIZATION</b>	INITIALIZATION FAIL	THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
<b>IMMU INITIALIZATION</b>					
INITIALIZATION FAIL					
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
<p><b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.</p> <p style="text-align: right;">SEL297W</p>					
<b>Can the system be initialized?</b>					
Yes	▶	System is OK.			
No	▶	GO TO DIAGNOSTIC PROCEDURE 5 to check "CHAIN OF IMMU-KEY", refer to EL-334.			

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## How to Replace NVIS (NATS) IMMU

NFEL0178

**NOTE:**

- If NVIS (NATS) IMMU is not installed correctly, NVIS (NATS) system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show "LOCK MODE" or "CHAIN OF IMMU-KEY".

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**EL**

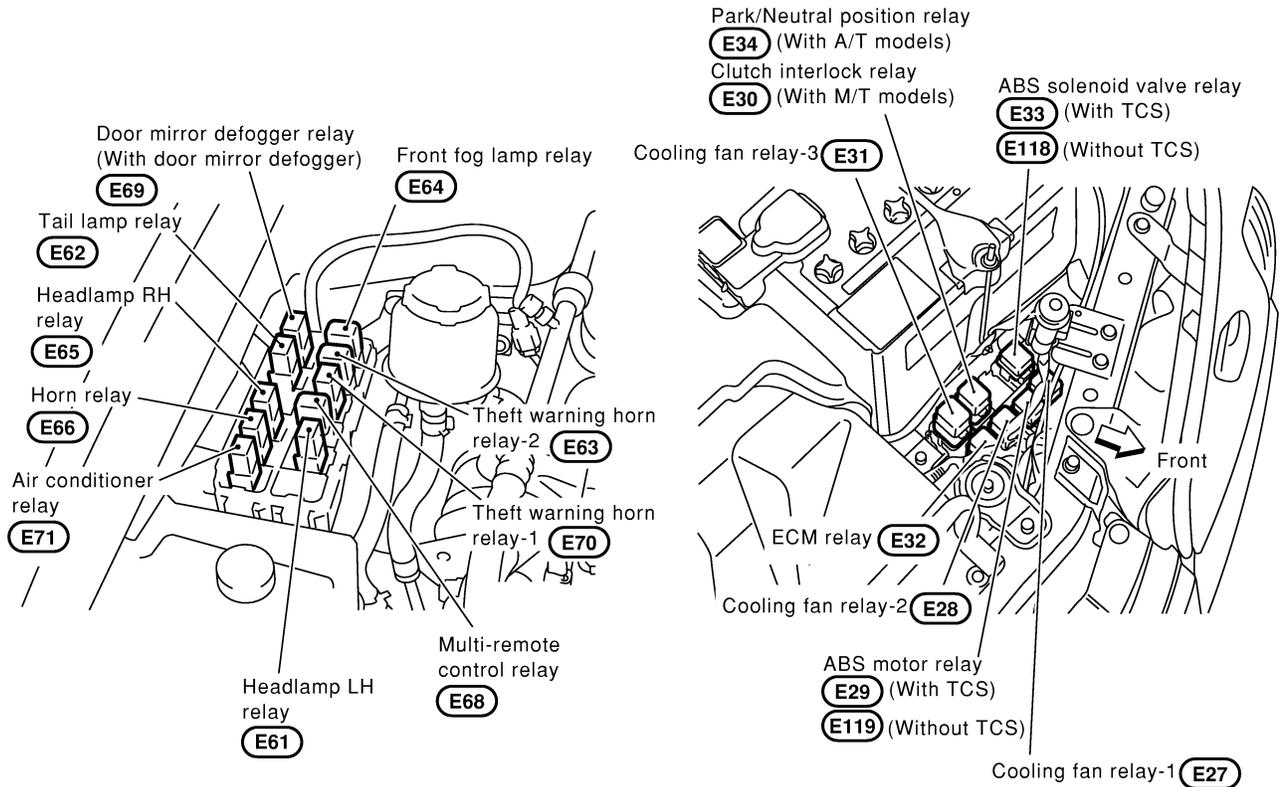
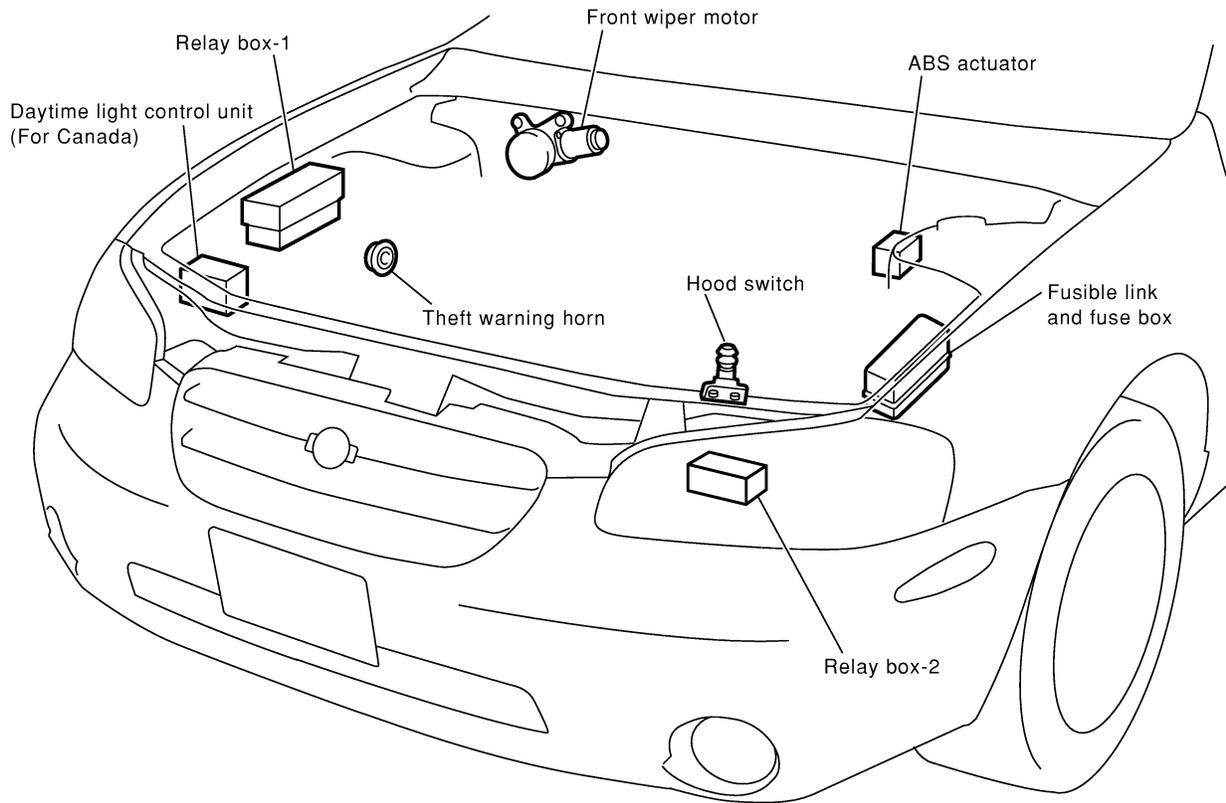
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# ELECTRICAL UNITS LOCATION

Engine Compartment

## Engine Compartment

NFEL0129



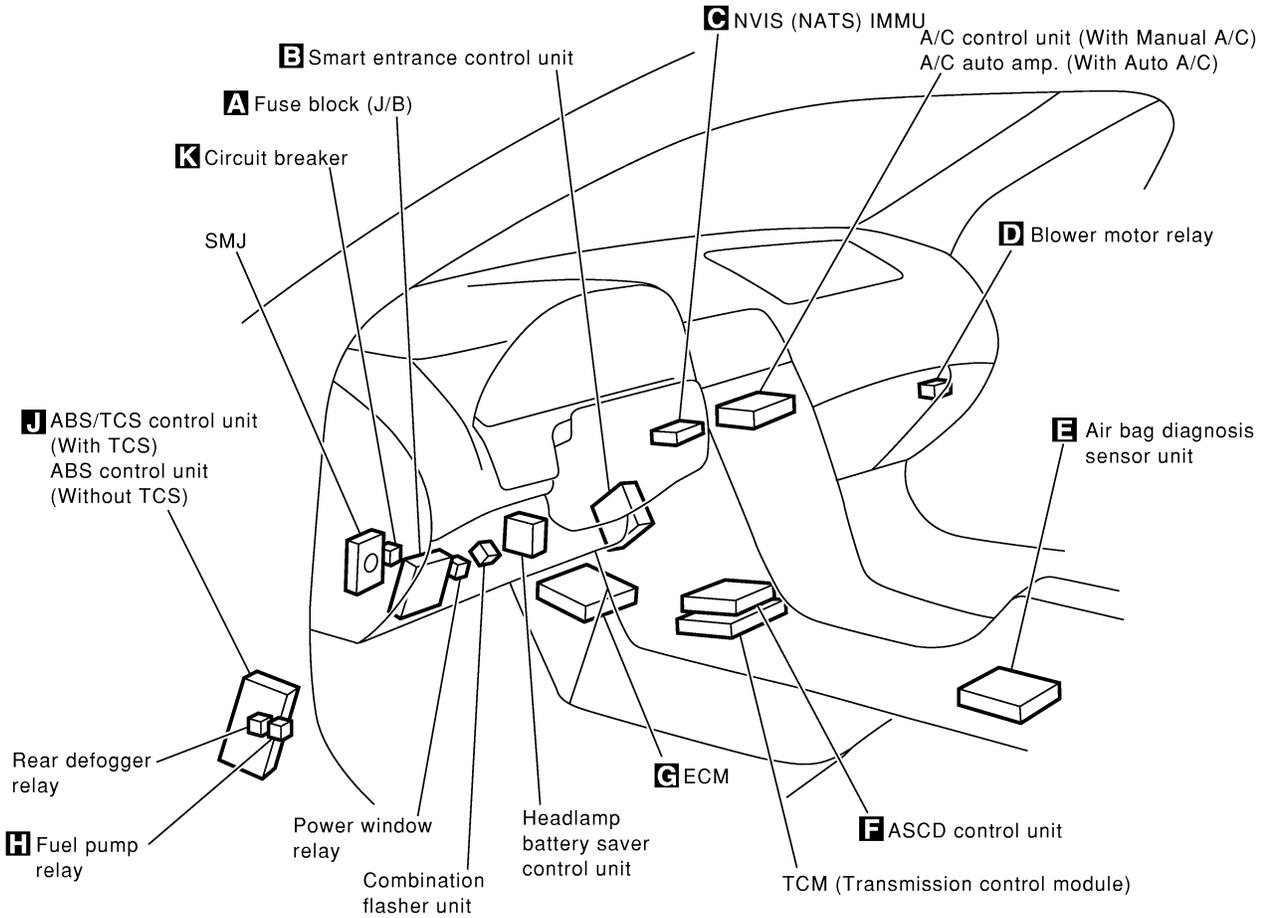
MEL349K

# ELECTRICAL UNITS LOCATION

Passenger Compartment

## Passenger Compartment

NFEL0130



GI

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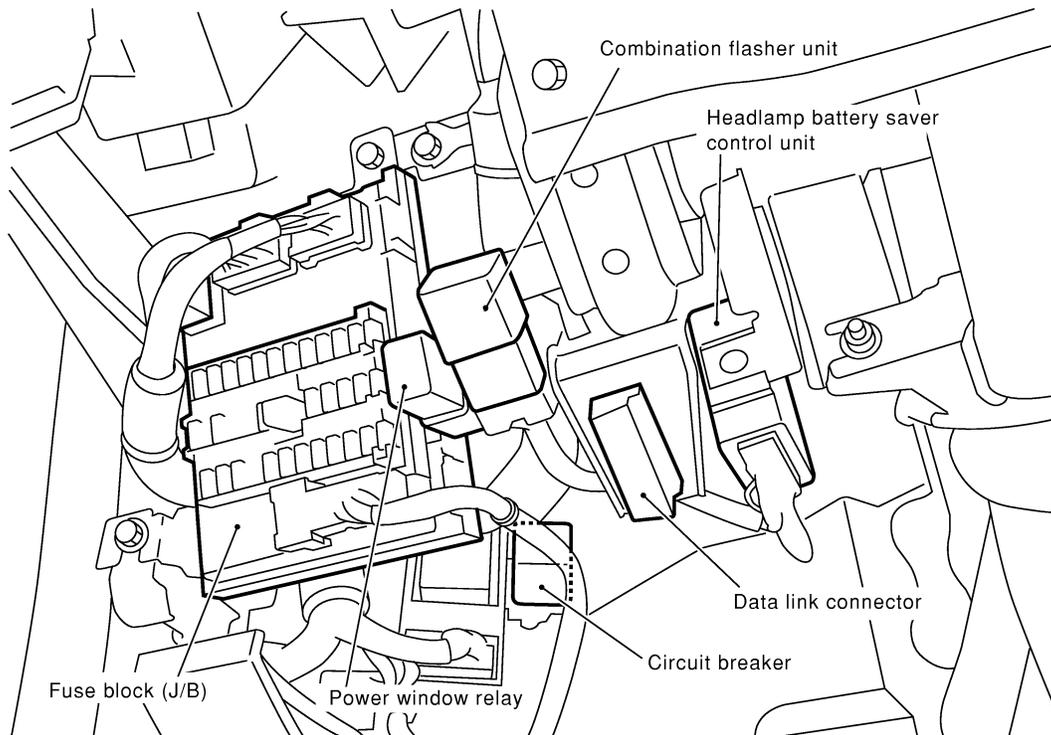
MT

AT

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### A Instrument panel LH side



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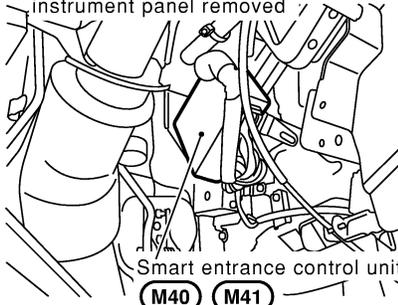
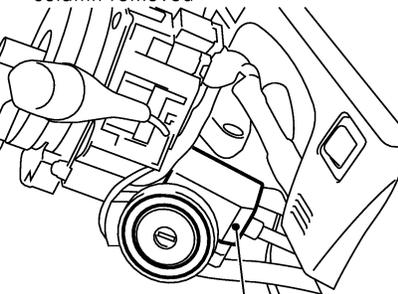
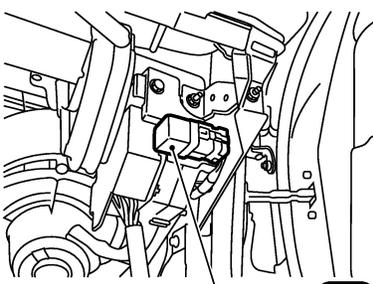
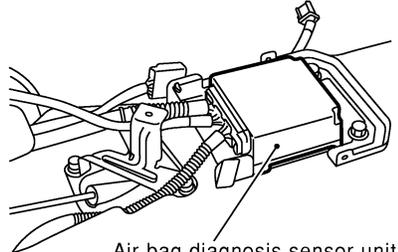
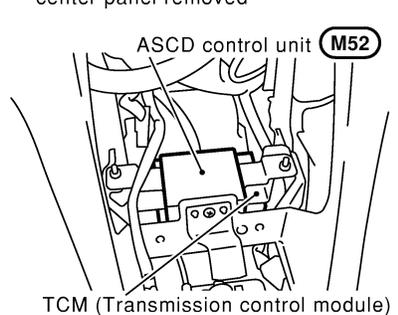
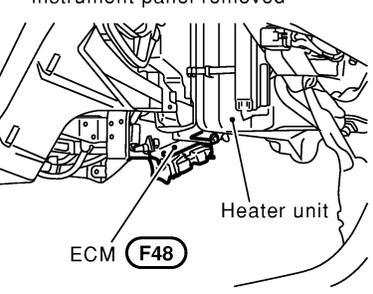
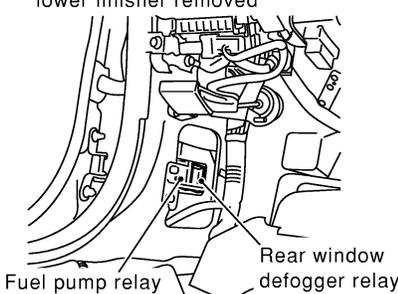
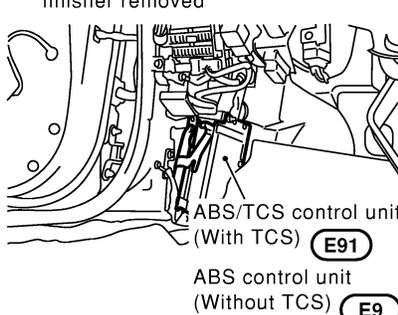
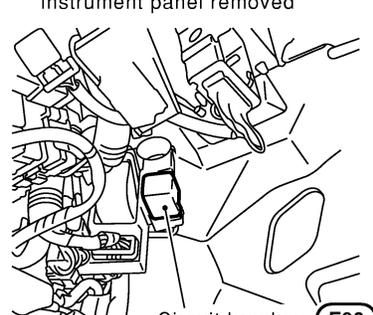
**EL**

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MEL350K

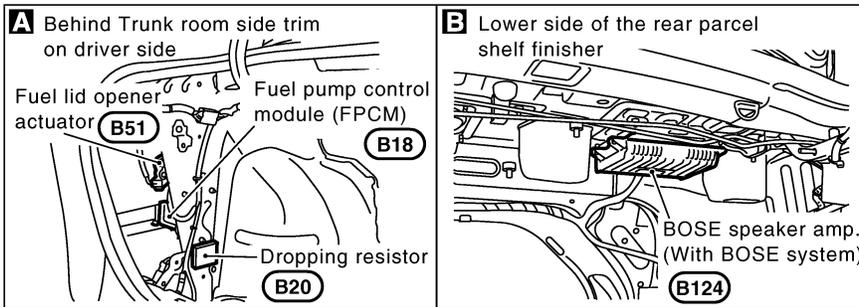
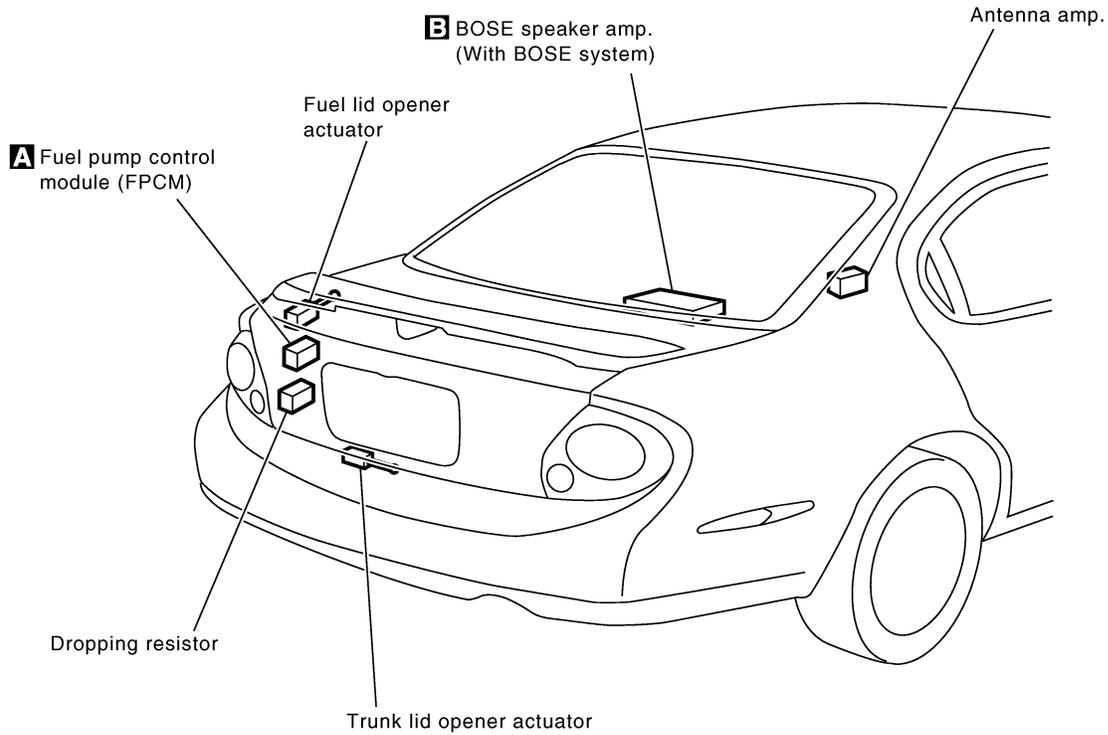
# ELECTRICAL UNITS LOCATION

Passenger Compartment (Cont'd)

<p><b>B</b> Driver side view with lower instrument panel removed</p>  <p>Smart entrance control unit  <b>M40</b> <b>M41</b></p>	<p><b>C</b> View with steering wheel and steering column removed</p>  <p>NVIS (NATS) IMMU <b>M42</b></p>	<p><b>D</b> Passenger side view with dash side lower finisher removed</p>  <p>Blower motor relay <b>E103</b></p>
<p><b>E</b> Rear of parking brake</p>  <p>Air bag diagnosis sensor unit  <b>M112</b> <b>B42</b> <b>B135</b></p>	<p><b>F</b> View with lower instrument center panel removed</p>  <p>ASCD control unit <b>M52</b>          TCM (Transmission control module)  <b>F50</b> <b>F51</b></p>	<p><b>G</b> Passenger side view with lower instrument panel removed</p>  <p>Heater unit          ECM <b>F48</b></p>
<p><b>H</b> Driver side view with dash side lower finisher removed</p>  <p>Fuel pump relay <b>B8</b>          Rear window defogger relay <b>B9</b></p>	<p><b>J</b> Driver side view with dash side lower finisher removed</p>  <p>ABS/TCS control unit (With TCS) <b>E91</b>          ABS control unit (Without TCS) <b>E9</b></p>	<p><b>K</b> Driver side view with lower instrument panel removed</p>  <p>Circuit breaker <b>E90</b></p>

# ELECTRICAL UNITS LOCATION

Passenger Compartment (Cont'd)



GI

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EM

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EC

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AT

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BR

ST

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**EL**

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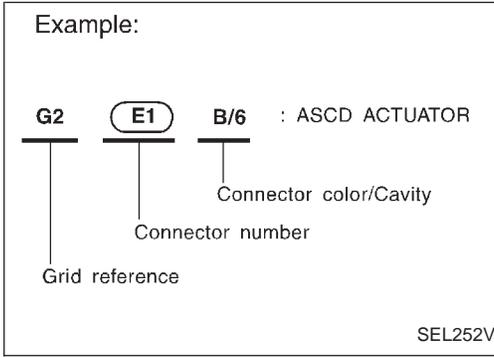
MEL647L

# HARNESS LAYOUT

How to Read Harness Layout

## How to Read Harness Layout

NFEL0131



The following Harness Layouts use a map style grid to help locate connectors on the drawings:

- Main Harness
- Engine Room Harness (Engine Compartment)

### TO USE THE GRID REFERENCE

1. Find the desired connector number on the connector list.
2. Find the grid reference.
3. On the drawing, find the crossing of the grid reference letter column and number row.
4. Find the connector number in the crossing zone.
5. Follow the line (if used) to the connector.

NFEL0131S01

### CONNECTOR SYMBOL

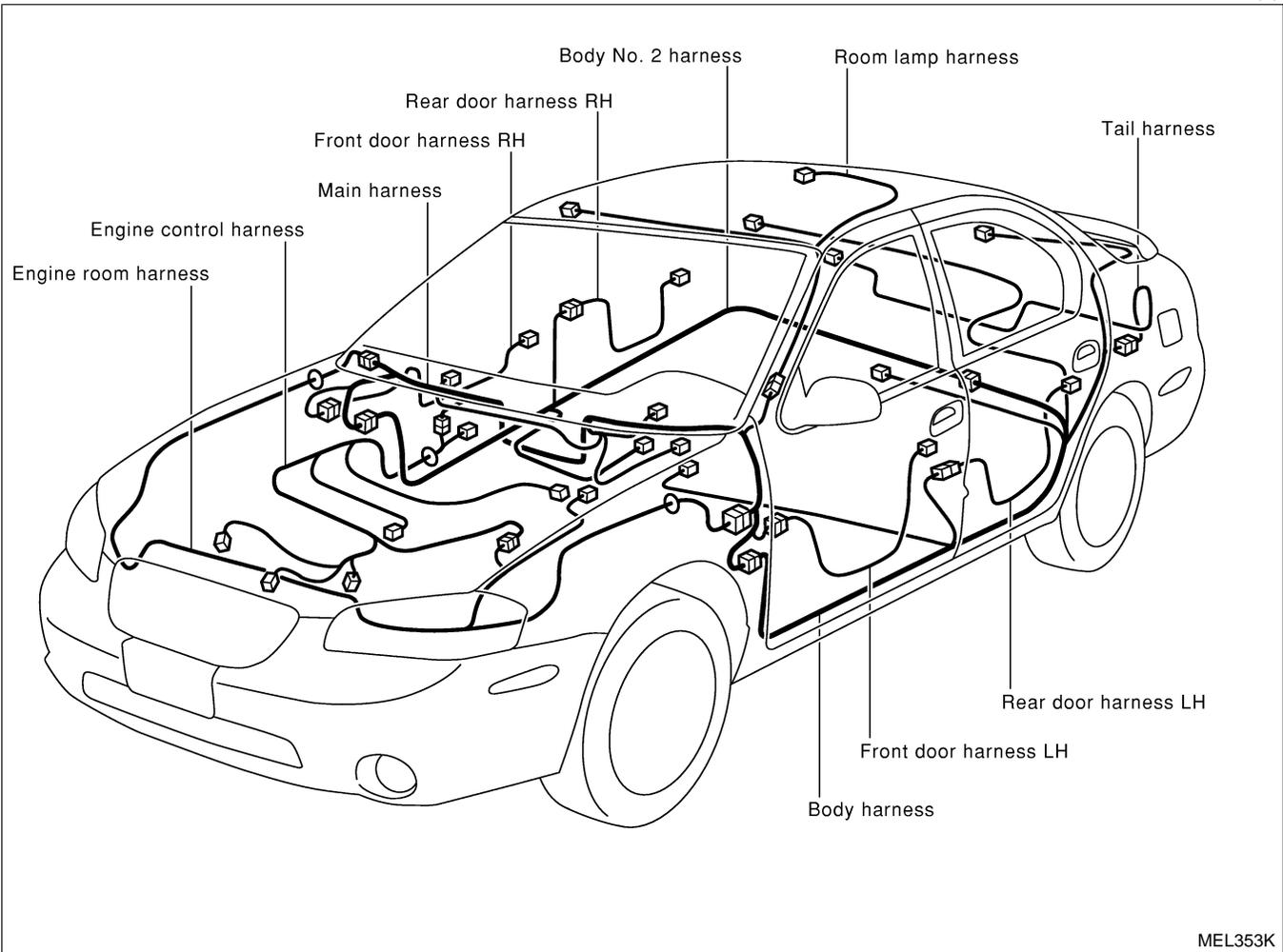
Main symbols of connector (in Harness Layout) are indicated in the below.

NFEL0131S02

Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
<ul style="list-style-type: none"> <li>● Cavity: Less than 4</li> <li>● Relay connector</li> </ul>				
<ul style="list-style-type: none"> <li>● Cavity: From 5 to 8</li> </ul>				
<ul style="list-style-type: none"> <li>● Cavity: More than 9</li> </ul>	—	—		
<ul style="list-style-type: none"> <li>● Ground terminal etc.</li> </ul>	—			

## Outline

NFEL0132



MEL353K

**NOTE:**

For detailed ground distribution information, refer to "Ground Distribution", "GROUND" EL-18.

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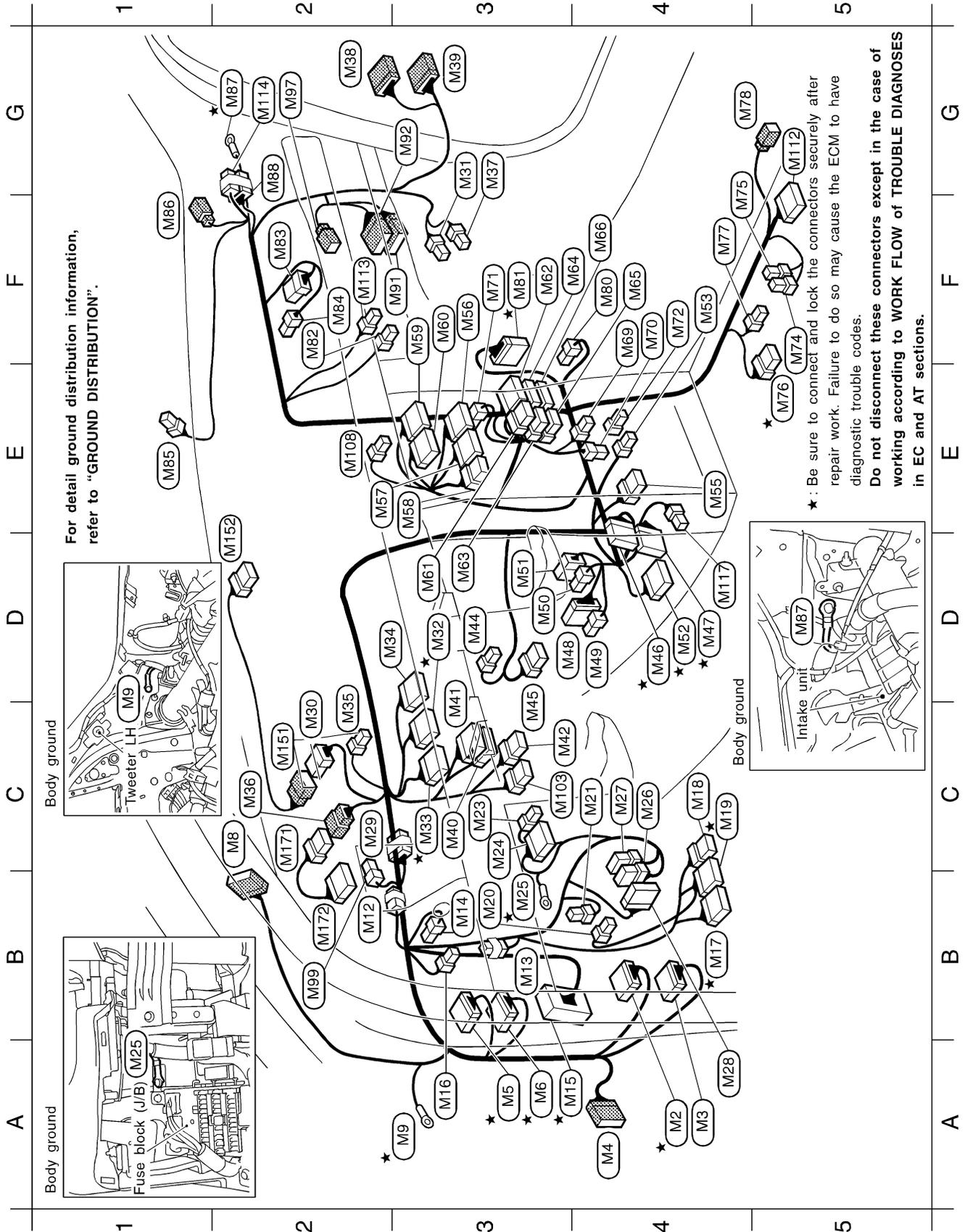
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# HARNESS LAYOUT

Main Harness

## Main Harness

NFEL0133



For detail ground distribution information, refer to "GROUND DISTRIBUTION".

\* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes.  
 Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

MEL648L



# HARNES LAYOUT

Main Harness (Cont'd)

## Main harness

D3	(M61)	W/6	: Audio unit (With BOSE system)
F3	(M62)	W/10	: Audio unit (With BOSE system)
D3	(M63)	W/6	: Audio unit (With 6 speakers)
F4	(M64)	W/10	: Audio unit (With 6 speakers)
F4	(M65)	W/6	: Audio unit (With 4 speakers)
F4	(M66)	W/10	: Audio unit (With 4 speakers)
F4	(M69)	W/4	: CD player (With 4 speakers)
F4	(M70)	B/2	: CD player (With 4 speakers)
F3	(M71)	W/2	: To (M501)
F4	(M72)	W/2	: Ashtray illumination
F5	(M74)	L/4	: Heated seat switch LH
G5	(M75)	W/4	: Heated seat switch RH
E5★	(M76)	GY/8	: A/T device (With A/T)
F4	(M77)	B/1	: Parking brake switch
G5	(M78)	B/2	: Power socket
F4	(M80)	W/3	: Intake sensor (With auto A/C)
F3★	(M81)	W/20	: To (F49)
F2	(M82)	W/2	: Glove box lamp
F2	(M83)	W/8	: Intake door motor (With manual A/C)
F2	(M84)	W/3	: Intake door motor (With auto A/C)
E1	(M85)	B/2	: Sunload sensor (With auto A/C)
F1	(M86)	BR/2	: Tweeter RH
G1★	(M87)	-	: Body ground
G2	(M88)	SB/6	: Joint connector-4 (Diode) (With TCS)

F3	(M91)	W/12	: To (B103)
G3	(M92)	W/10	: To (B104)
G2	(M97)	G/2	: To (E105)
B2	(M99)	W/2	: Diode
C3	(M103)	Y/7	: Spiral cable (Via sub-harness)
E2	(M108)	W/3	: Indirect lamp
G5	(M112)	Y/20	: Air bag diagnosis sensor unit
F2	(M113)	Y/2	: Passenger air bag module
G2	(M114)	W/2	: Diode (Without TCS)
D4	(M117)	BR/2	: To (F53)

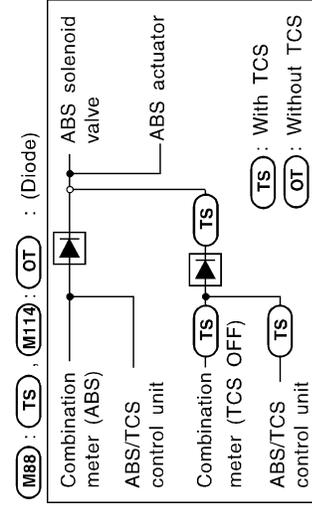
## Main sub-harness-1

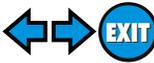
C2	(M151)	GY/6	: To (M30)
D2	(M152)	BR/8	: Clock

## Main sub-harness-2

C2	(M171)	W/6	: To (M36)
B2	(M172)	GY/10	: Auto light control unit

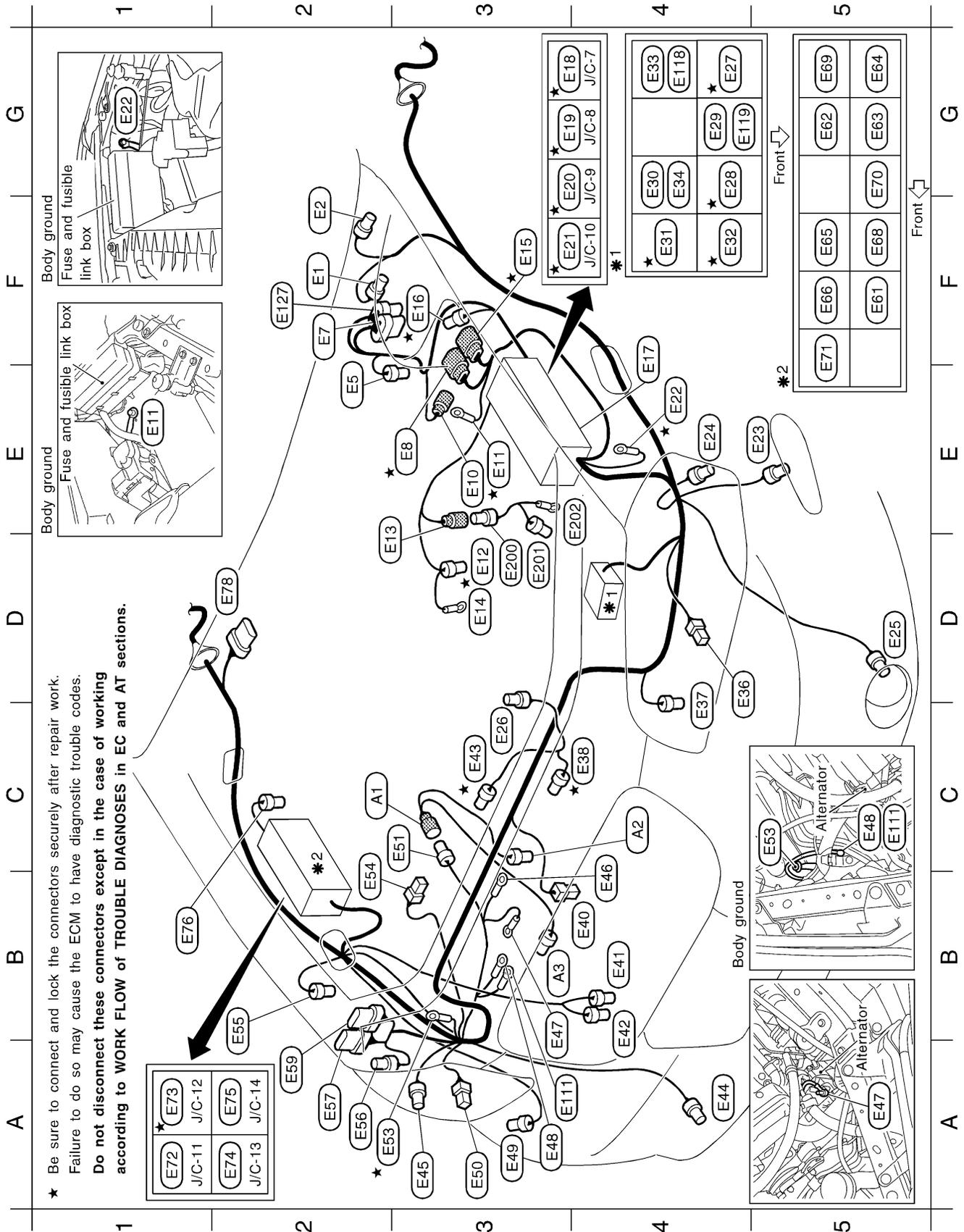
★ : Be sure to connect and lock the connectors securely after repair work.  
 Failure to do so may cause the ECM to have diagnostic trouble codes.  
**Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**





## Engine Room Harness

NFEL0134



★ Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

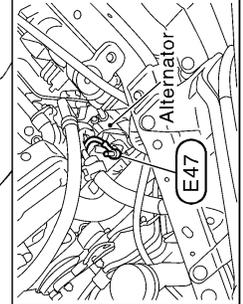
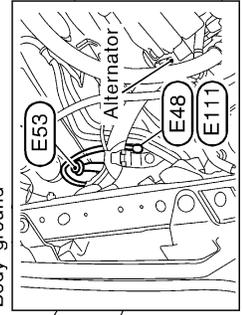
★ E72	E73
J/C-11	J/C-12
E74	E75
J/C-13	J/C-14

\*1

★ E21	E18
J/C-10	J/C-7
★ E20	E19
J/C-9	J/C-8
★ E31	E27
★ E30	E28
E34	E119
★ E32	E29
★ E33	E27
E118	E27

\*2

E71	E66	E65	E62	E69
E61	E68	E70	E63	E64



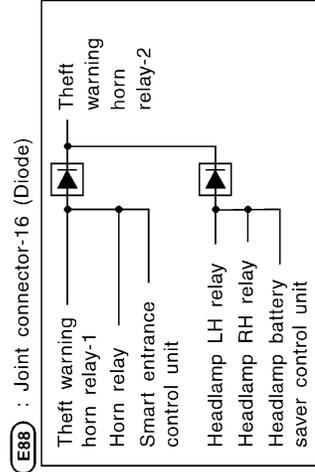
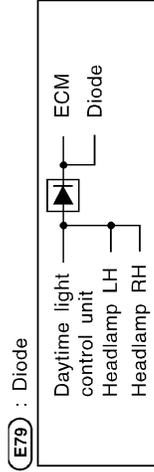
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# HARNESS LAYOUT

Engine Room Harness (Cont'd)

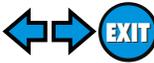
Engine room harness		Engine room sub-harness	
F2	(E1) GY/2 : Brake fluid level switch	C3★	(E43) GY/4 : Cooling fan motor-2
F2	(E2) GY/4 : ASCD pump	A4	(E44) GY/2 : Front fog lamp RH
E2	(E5) W/2 : ABS actuator	A3	(E45) GY/3 : Parking lamp and front turn signal lamp RH
F2	(E7) GY/8 : ABS actuator (With TCS)	C4	(E46) - : Alternator
E3★	(E8) GY/8 : To (F17)	B3	(E47) - : Alternator
E3	(E10) BR/2 : Front wheel sensor LH	A3	(E48) - : Body ground
E3★	(E11) - : Body ground	A3	(E49) GY/2 : Front side marker lamp RH
D3★	(E12) GY/2 : Intake air temperature sensor	A3	(E50) B/3 : Headlamp RH
D3	(E13) GY/1 : To (E200)	C3	(E51) GY/4 : To (A1)
D3	(E14) - : Battery (Fusible link 120A)	A2★	(E53) - : Body ground
F3★	(E15) B/8 : To (F18)	B2	(E54) B/1 : Theft warning horn
F3★	(E16) GY/2 : Dropping resistor (With A/T)	B2	(E55) B/2 : Ambient sensor (With auto A/C)
F4	(E17) - : Fuse and fusible link box	A2	(E56) GY/4 : Daytime light control unit (For Canada)
G4★	(E18) GY/6 : Joint connector-7	A2	(E57) GY/6 : Daytime light control unit (For Canada)
G4★	(E19) GY/6 : Joint connector-8	A2	(E59) GY/8 : Daytime light control unit (For Canada)
G4★	(E20) W/6 : Joint connector-9	F5	(E61) L/4 : Headlamp LH relay
F4★	(E21) W/6 : Joint connector-10	G5	(E62) L/4 : Tail lamp relay
E4★	(E22) - : Body ground	G5	(E63) L/4 : Theft warning horn relay-2
E5	(E23) GY/2 : Front side marker lamp LH	G5	(E64) L/4 : Front fog lamp relay
E4	(E24) GY/3 : Parking lamp and front turn signal lamp LH	F5	(E65) L/4 : Headlamp RH relay
D5	(E25) GY/2 : Front fog lamp LH	F5	(E66) W/3 : Horn relay
C3	(E26) W/2 : Hood switch	F5	(E68) BR/6 : Multi-remote control relay
G4★	(E27) BR/6 : Cooling fan relay-1	G5	(E69) L/4 : Door mirror defogger relay
G4★	(E28) BR/6 : Cooling fan relay-2	G5	(E70) L/4 : Theft warning horn relay-1
G4	(E29) B/5 : ABS motor relay (With TCS)	F5	(E71) L/4 : Air conditioner relay
G4	(E30) L/4 : Clutch interlock relay (With M/T)	A1	(E72) W/6 : Joint connector-11
F4★	(E31) BR/6 : Cooling fan relay-3	A1★	(E73) W/6 : Joint connector-12
F4★	(E32) BR/6 : ECM relay	A2	(E74) W/6 : Joint connector-13
G4	(E33) B/5 : ABS solenoid valve relay (With TCS)	A2	(E75) W/6 : Joint connector-14
G4	(E34) GY/6 : Park/Neutral position relay (With A/T)	B1	(E76) GY/2 : Front wheel sensor RH
D4	(E36) B/3 : Headlamp LH	D2	(E78) GY/6 : Front wiper motor
C4	(E37) B/3 : Refrigerant pressure sensor	A3	(E111) - : Body ground
C4★	(E38) GY/4 : Cooling fan motor-1	G4	(E119) B/5 : ABS solenoid valve relay (Without TCS)
B4	(E40) B/1 : Horn (High)	G4	(E119) B/5 : ABS motor relay (Without TCS)
B4	(E41) GY/2 : Front washer motor	F2	(E127) GY/8 : ABS actuator (Without TCS)
B4	(E42) BR/2 : Washer level switch		

**Alternator harness**  
 C2 (A1) GY/4 : To (E51)  
 C4 (A2) GY/4 : Alternator  
 B3 (A3) B/1 : Compressor

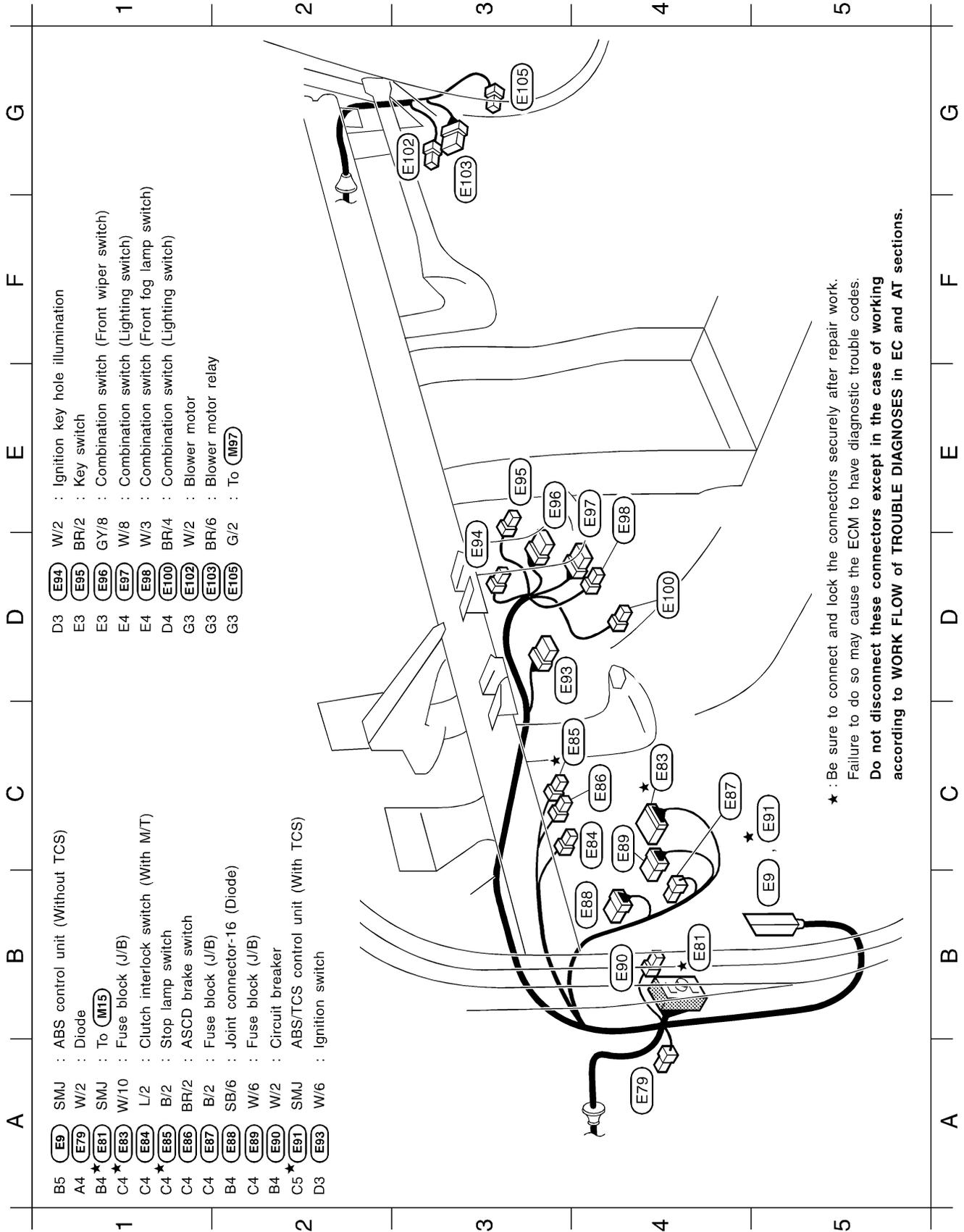


★ : Be sure to connect and lock the connectors securely after repair work.  
 Failure to do so may cause the ECM to have diagnostic trouble codes.  
**Do not disconnect these connectors except in the case of working**  
**according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT**  
**sections.**

# HARNESS LAYOUT



Engine Room Harness (Cont'd)



- |    |     |      |                                      |
|----|-----|------|--------------------------------------|
| B5 | E9  | SMJ  | : ABS control unit (Without TCS)     |
| A4 | E79 | W/2  | : Diode                              |
| B4 | E81 | SMJ  | : To <b>(MT15)</b>                   |
| C4 | E83 | W/10 | : Fuse block (J/B)                   |
| C4 | E84 | L/2  | : Clutch interlock switch (With M/T) |
| C4 | E85 | B/2  | : Stop lamp switch                   |
| C4 | E86 | BR/2 | : ASCD brake switch                  |
| C4 | E87 | B/2  | : Fuse block (J/B)                   |
| B4 | E88 | SB/6 | : Joint connector-16 (Diode)         |
| C4 | E89 | W/6  | : Fuse block (J/B)                   |
| B4 | E90 | W/2  | : Circuit breaker                    |
| C5 | E91 | SMJ  | : ABS/TCS control unit (With TCS)    |
| D3 | E93 | W/6  | : Ignition switch                    |

- |    |      |      |  |
|----|------|------|--|
| D3 | E94  | W/2  | : Ignition key hole illumination             |
| E3 | E95  | BR/2 | : Key switch                                 |
| E3 | E96  | GY/8 | : Combination switch (Front wiper switch)    |
| E4 | E97  | W/8  | : Combination switch (Lighting switch)       |
| E4 | E98  | W/3  | : Combination switch (Front fog lamp switch) |
| D4 | E100 | BR/4 | : Combination switch (Lighting switch)       |
| G3 | E102 | W/2  | : Blower motor                               |
| G3 | E103 | BR/6 | : Blower motor relay                         |
| G3 | E105 | G/2  | : To <b>(M97)</b>                            |

\* : Be sure to connect and lock the connectors securely after repair work.  
 Failure to do so may cause the ECM to have diagnostic trouble codes.  
**Do not disconnect these connectors except in the case of working**  
 according to **WORK FLOW of TROUBLE DIAGNOSES** in EC and AT sections.

MEL358K

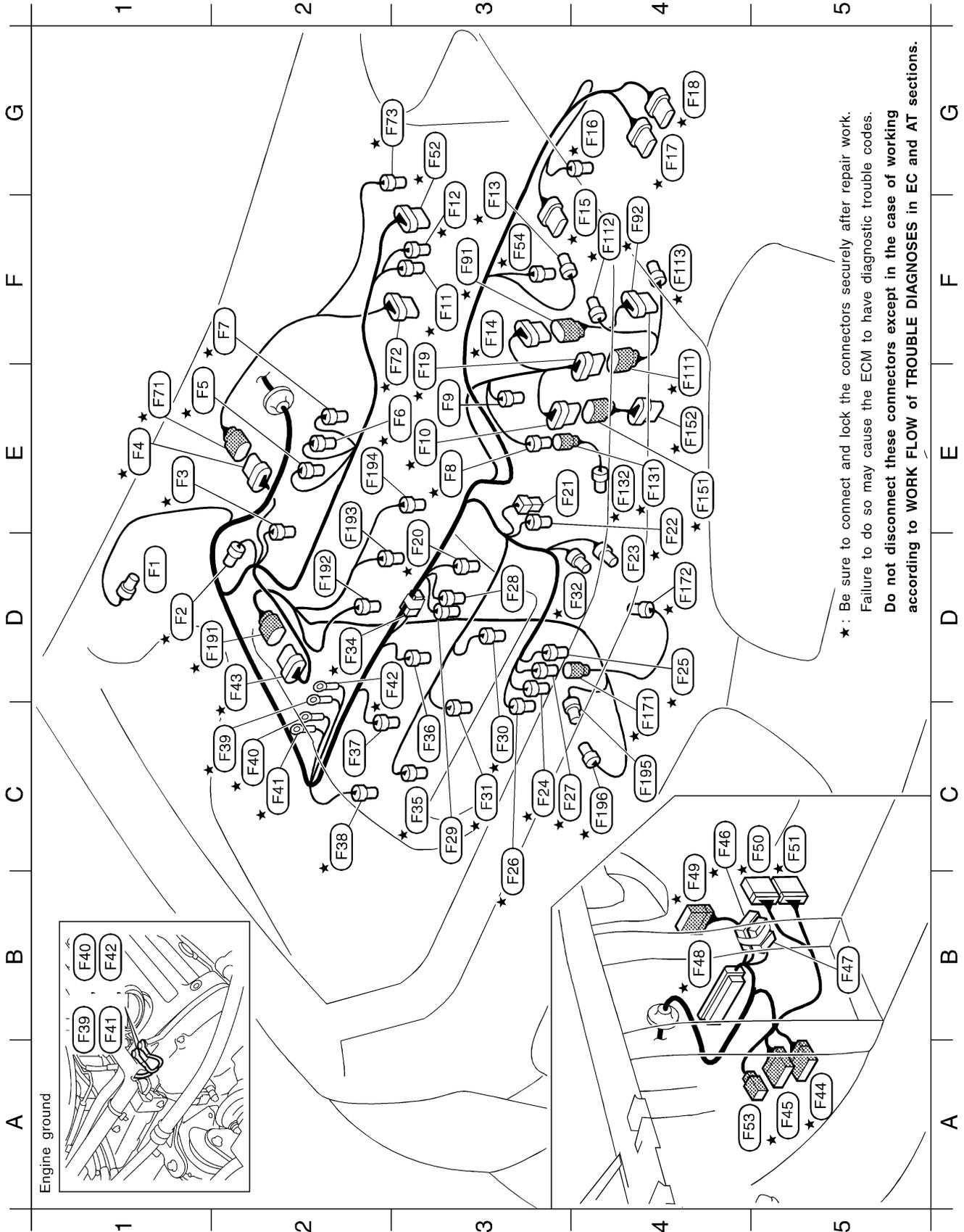
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# HARNESS LAYOUT

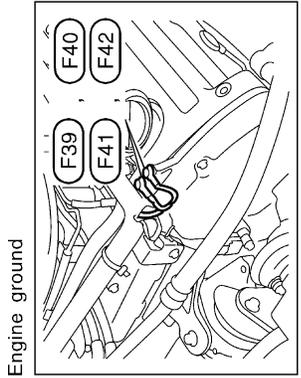
Engine Control Harness

## Engine Control Harness

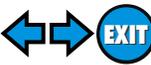
NFEL0135



★ : Be sure to connect and lock the connectors securely after repair work.  
 Failure to do so may cause the ECM to have diagnostic trouble codes.  
 Do not disconnect these connectors except in the case of working  
 according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.



MEL359K



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## Engine control harness

D1	(F1)	B/2	: Power steering oil pressure switch
D1	(F2)	GY/3	: Front heated oxygen sensor RH
E1	(F3)	GY/3	: Ignition coil No. 1
E1	(F4)	GY/8	: To (F71)
E1	(F5)	GY/3	: Ignition coil No. 3
E3	(F6)	GY/3	: Ignition coil No. 5
F2	(F7)	L/2	: EVAP canister purge volume control solenoid valve
E3	(F8)	B/2	: To (F131)
E3	(F9)	BR/3	: Rear electronic controlled engine mount (With A/T)
E3	(F10)	GY/10	: To (F151) (With A/T)
F3	(F11)	BR/3	: Throttle position sensor
F3	(F12)	GY/3	: Throttle position switch
G3	(F13)	W/4	: Park/Neutral position switch (Reverse position switch) (With M/T)
F3	(F14)	BR/8	: To (F91) (With A/T)
F4	(F15)	GY/5	: Mass air flow sensor
G4	(F16)	SB/2	: Swirl control valve control vacuum check switch
G4	(F17)	GY/8	: To (E8)
G4	(F18)	B/8	: To (E15)
F3	(F19)	GY/6	: To (F11) (With A/T)
D3	(F20)	BR/2	: Swirl control valve control solenoid valve
E3	(F21)	B/1	: Thermal transmitter
E4	(F22)	GY/2	: Engine coolant temperature sensor
D4	(F23)	BR/3	: Front electronic controlled engine mount (With A/T)
C3	(F24)	B/4	: Rear heated oxygen sensor RH (For California)
D4	(F25)	G/4	: To (F171)
C3	(F26)	GY/3	: Front heated oxygen sensor LH
C3	(F27)	GY/4	: Rear heated oxygen sensor LH (For California)
D3	(F28)	GY/2	: Injector No. 6
C3	(F29)	B/2	: VIAS control solenoid valve
C3	(F30)	GY/3	: Ignition coil No. 6
C3	(F31)	GY/3	: Ignition coil No. 4
D3	(F32)	GY/3	: Absolute pressure sensor
D2	(F34)	W/2	: Condenser
C3	(F35)	GY/3	: Ignition coil No. 2
C3	(F36)	GY/2	: Injector No. 4
C2	(F37)	GY/2	: Injector No. 2
C2	(F38)	GY/2	: Camshaft position sensor (PHASE)
C2	(F39)	-	: Engine ground
C2	(F40)	-	: Engine ground
C2	(F41)	-	: Engine ground
D3	(F42)	-	: Engine ground
D2	(F43)	L/8	: To (F191)
A5	(F44)	W/18	: To (M46)

A5	(F45)	W/20	: To (M47)
C4	(F46)	L/12	: Joint connector-18
B5	(F47)	GY/6	: Joint connector-17
B4	(F48)	SMJ	: ECM
B4	(F49)	W/20	: To (M81)
C5	(F50)	GY/24	: TCM (Transmission control module)
C5	(F51)	W/24	: TCM (Transmission control module)
G3	(F52)	GY/6	: IACV-AAC valve
A5	(F53)	BR/2	: To (M117)
F3	(F54)	GY/2	: Vehicle speed sensor (With M/T)

**Engine control sub-harness-1**

E1	(F71)	G/8	: To (F4)
F3	(F72)	GY/6	: EGR volume control valve
G3	(F73)	SB/2	: EGR temperature sensor

**Engine control sub-harness-2**

F3	(F91)	BR/8	: To (F14) (With A/T)
F4	(F92)	B/8	: Terminal cord assembly (With A/T)

**Engine control sub-harness-3**

F4	(F11)	GY/6	: To (F19) (With A/T)
F4	(F12)	B/3	: Revolution sensor (With A/T)
F4	(F13)	GY/2	: Vehicle speed sensor (With A/T)

**Engine control sub-harness-4**

E4	(F131)	B/2	: To (F8)
E4	(F132)	GY/2	: Knock sensor

**Engine control sub-harness-5**

E4	(F151)	GY/10	: To (F10) (With A/T)
E4	(F152)	B/10	: Park/Neutral position switch (With A/T)

**Engine control sub-harness-6**

C4	(F171)	G/4	: To (F25)
D4	(F172)	GY/3	: Crankshaft position sensor (POS)

**Engine control sub-harness-7**

D2	(F191)	L/8	: To (F43)
D2	(F192)	GY/2	: Injector No. 1
E2	(F193)	GY/2	: Injector No. 3
E2	(F194)	GY/2	: Injector No. 5
C4	(F195)	B/1	: Oil pressure switch
C4	(F196)	GY/2	: Crankshaft position sensor (REF)

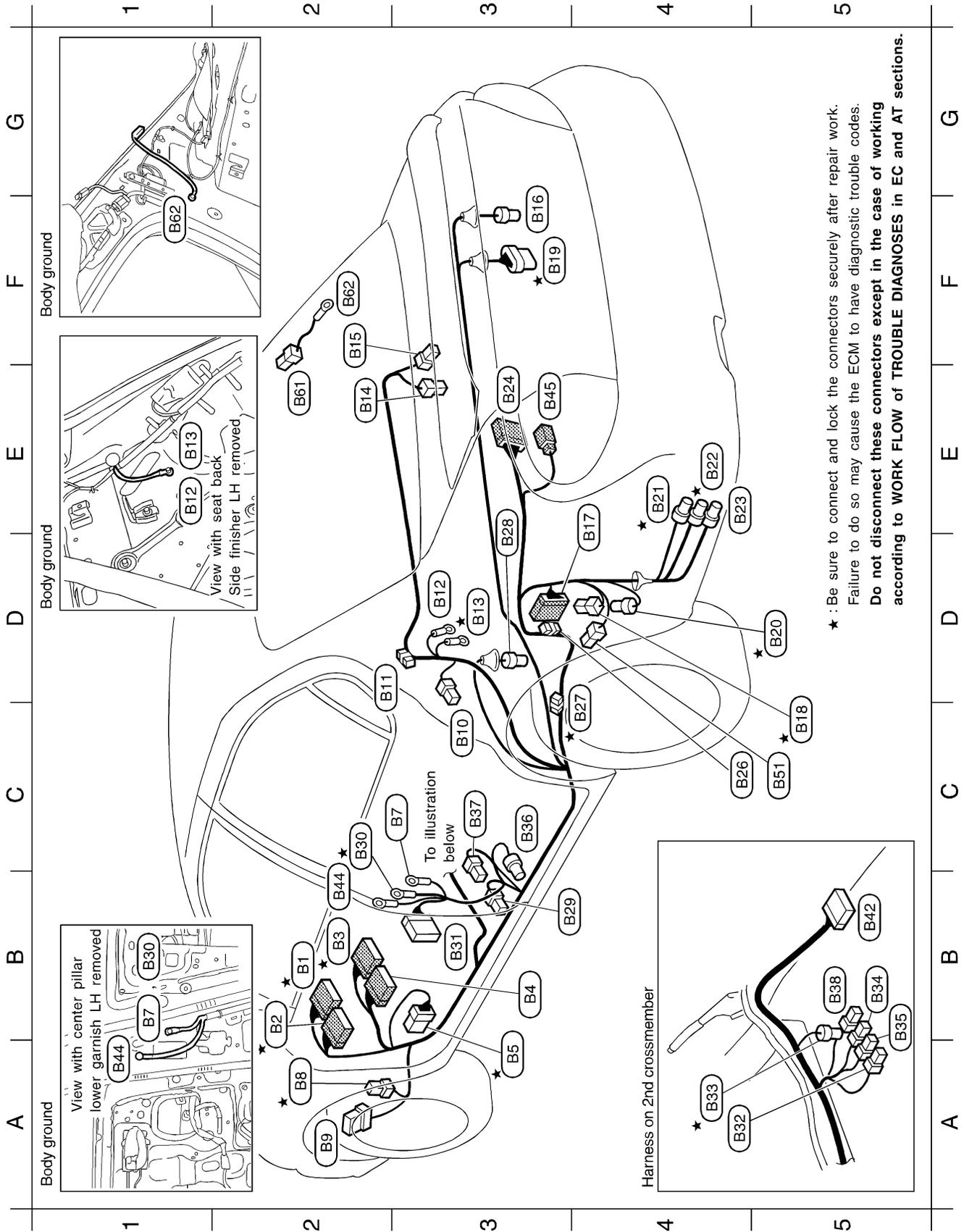
★ : Be sure to connect and lock the connectors securely after repair work.  
Failure to do so may cause the ECM to have diagnostic trouble codes.  
**Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

# HARNESS LAYOUT

Body Harness

## Body Harness

NFEL0136



★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

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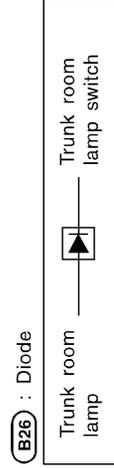
**Defogger harness**

E2 (B61) B/1 : Rear window defogger  
F2 (B62) - : Body ground

**Body harness**

B2★ (B1) W/16 : To (M5)  
B2★ (B2) BR/24 : To (M2)  
B2★ (B3) W/18 : To (M6)  
B3 (B4) W/12 : To (M3) (With BOSE system)  
B3★ (B5) W/8 : Fuse block (J/B)  
C3 (B7) - : Body ground  
A2★ (B8) L/4 : Fuel pump relay  
A2 (B9) BR/6 : Rear window defogger relay  
C3 (B10) W/1 : Rear door switch LH  
D3 (B11) W/1 : Condenser (Rear window defogger)  
D3 (B12) - : Body ground  
D3★ (B13) - : Body ground  
E2 (B14) BR/2 : High-mounted stop lamp (Without rear air spoiler)  
F2 (B15) W/2 : Trunk room lamp  
G3 (B16) GY/2 : Rear wheel sensor RH  
E4 (B17) W/10 : To (T3)  
C5★ (B18) W/4 : Fuel pump control module (FPCM)  
F3★ (B19) GY/5 : Fuel level sensor unit and fuel pump  
D5★ (B20) W/2 : Dropping resistor  
E4★ (B21) G/2 : Vacuum cut valve bypass valve  
E4★ (B22) B/2 : EVAP canister vent control valve  
E4 (B23) GY/3 : EVAP control system pressure sensor  
E3 (B24) W/16 : To (B119)  
C4 (B26) W/2 : Diode  
C4★ (B27) W/2 : Condenser  
E3 (B28) BR/2 : Rear wheel sensor LH  
B4 (B29) W/3 : Front door switch LH  
C2★ (B30) - : Body ground  
B3 (B31) W/10 : To (D81)  
A4 (B32) W/3 : To (B561)  
A4★ (B33) G/4 : Rear heated oxygen sensor (Except for California)  
B5 (B34) W/3 : Seat belt buckle switch LH  
B5 (B35) W/2 : To (B521)  
C3 (B36) OR/2 : Satellite sensor LH (With side air bag system)  
C3 (B37) W/4 : Seat belt pre-tensioner LH  
B5 (B38) Y/2 : Side air bag module LH (With side air bag system)  
B5 (B42) Y/12 : Side air bag diagnosis sensor unit LH (With side air bag system)  
B2 (B44) - : Body ground (With side air bag system)  
E3 (B45) W/4 : To (B144)  
C5 (B51) W/4 : Fuel lid opener actuator

★ : Be sure to connect and lock the connectors securely after repair work.  
Failure to do so may cause the ECM to have diagnostic trouble codes.  
**Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**



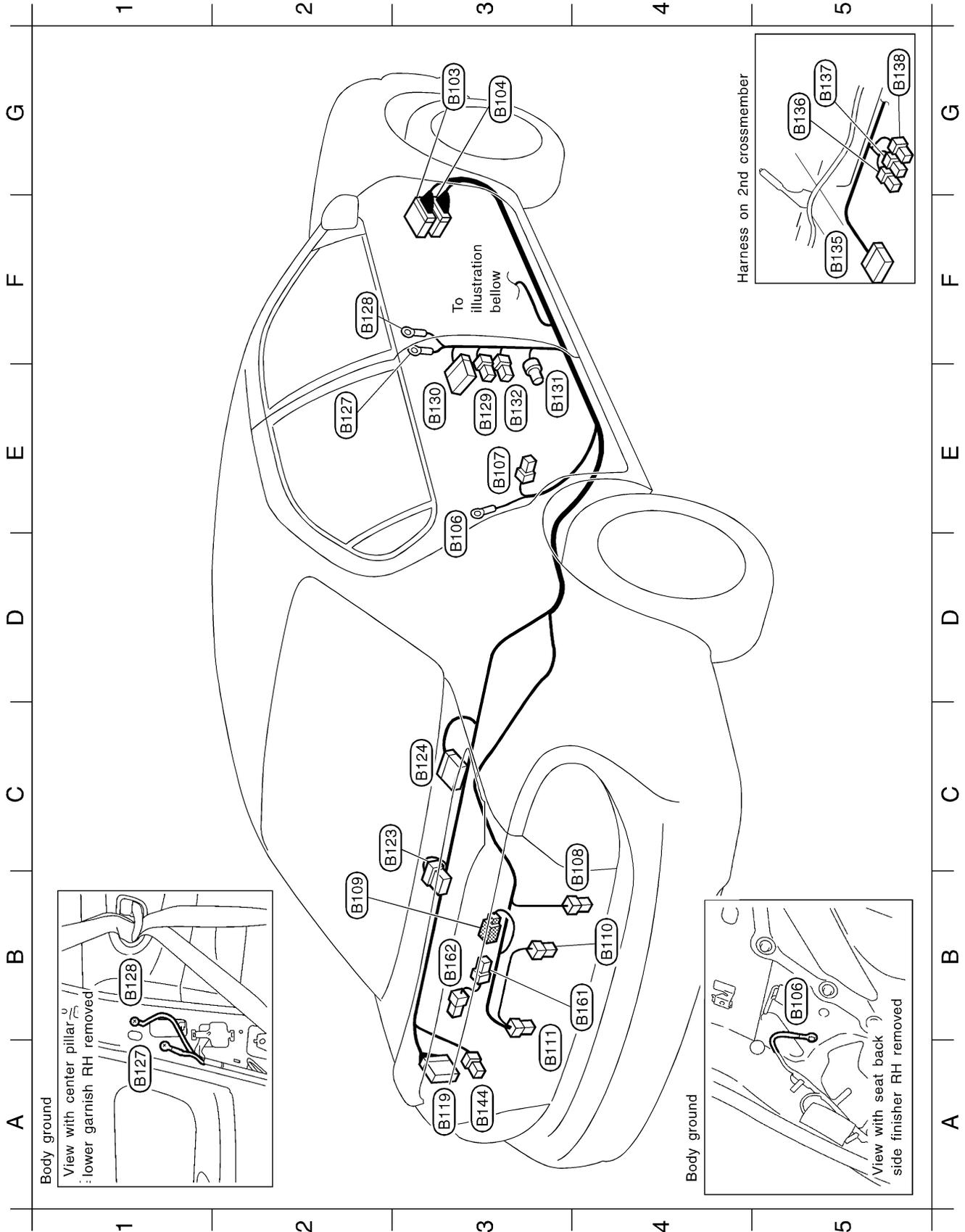
(B26) : Diode

# HARNESS LAYOUT

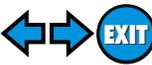
Body No. 2 Harness

## Body No. 2 Harness

NFEL0137



MEL363K



Body No. 2 harness	
G3	(B103) W/12 : To (M91)
G3	(B104) W/10 : To (M92)
E3	(B106) - : Body ground
E3	(B107) W/1 : Rear door switch RH
C4	(B108) W/2 : Trunk lid key cylinder switch
B2	(B109) BR/2 : To (B161)
B4	(B110) W/2 : License lamp RH
B3	(B111) W/2 : License lamp LH
A3	(B119) W/16 : To (B24)
C2	(B123) BR/6 : Woofer (With BOSE system)
C3	(B124) GY/26 : BOSE speaker amp. (With BOSE system)
E2	(B127) - : Body ground
F2	(B128) - : Body ground (With side air bag system)
E3	(B129) W/3 : Front door switch RH
E3	(B130) W/10 : To (D101)
E3	(B131) Y/2 : Satellite sensor RH (With side air bag system)
E3	(B132) W/4 : Seat belt pre-tensioner RH
F5	(B135) Y/12 : Side air bag diagnosis sensor unit RH (With side air bag system)
G5	(B136) W/3 : To (B571)
G5	(B137) W/2 : To (B541)
G5	(B138) Y/2 : Side air bag module RH (With side air bag system)
A3	(B144) W/4 : To (B45)
Body No. 2 sub-harness	
B4	(B161) BR/2 : To (B109)
B3	(B162) B/2 : High-mounted stop lamp (With rear air spoiler)

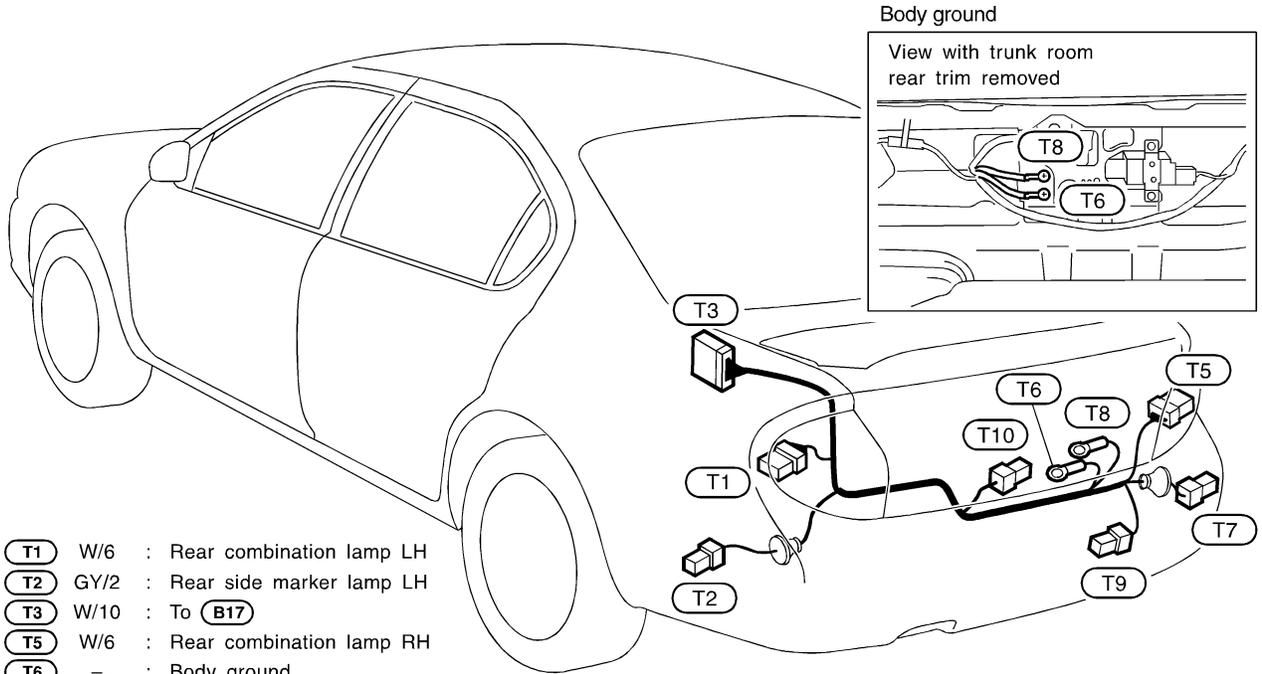
GI  
MA  
EM  
LC  
EC  
FE  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

# HARNESS LAYOUT

Tail Harness

## Tail Harness

NFEL0138



- T1** W/6 : Rear combination lamp LH
- T2** GY/2 : Rear side marker lamp LH
- T3** W/10 : To **B17**
- T5** W/6 : Rear combination lamp RH
- T6** - : Body ground
- T7** GY/2 : Rear side marker lamp RH
- T8** - : Body ground
- T9** W/2 : Trunk room lamp switch
- T10** W/2 : Trunk lid opener actuator

MEL365K

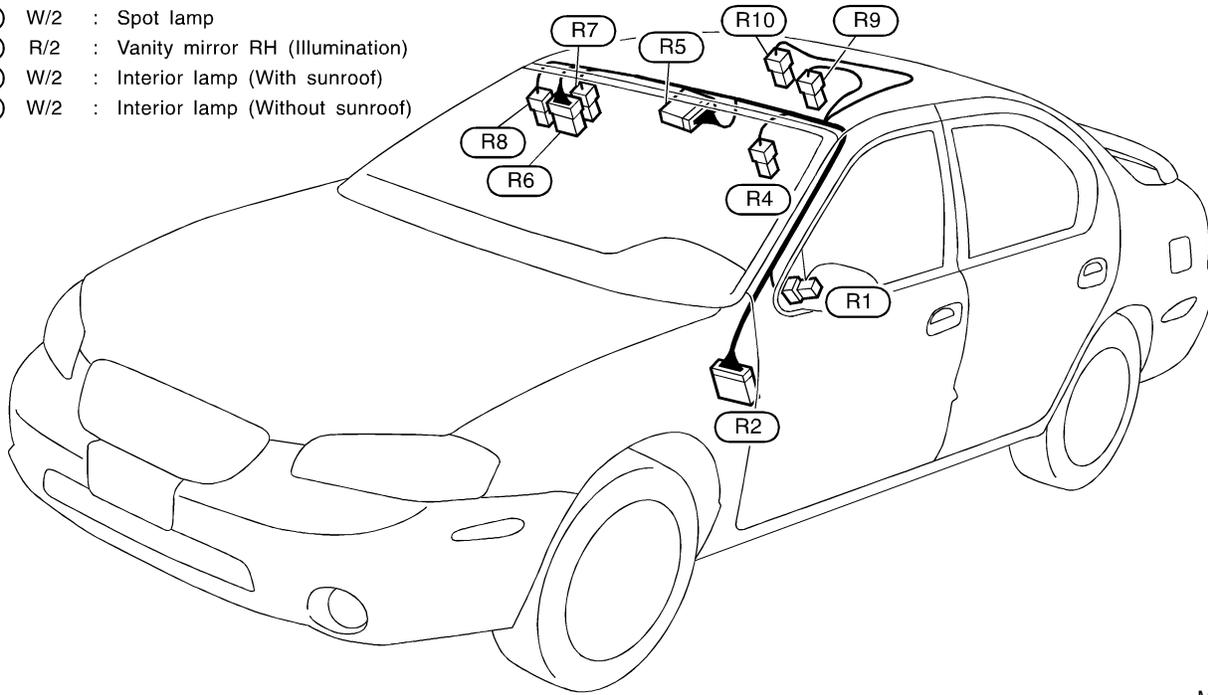
# HARNESS LAYOUT

Room Lamp Harness

## Room Lamp Harness

NFEL0140

- R1** BR/2 : Tweeter LH
- R2** W/12 : To **M8**
- R4** R/2 : Vanity mirror LH (Illumination)
- R5** W/12 : Sunroof motor (With sunroof)
- R6** GY/6 : Sunroof switch (With sunroof)
- R7** W/2 : Spot lamp
- R8** R/2 : Vanity mirror RH (Illumination)
- R9** W/2 : Interior lamp (With sunroof)
- R10** W/2 : Interior lamp (Without sunroof)



MEL366K

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

**EL**

IDX

# HARNESS LAYOUT

Front Door Harness

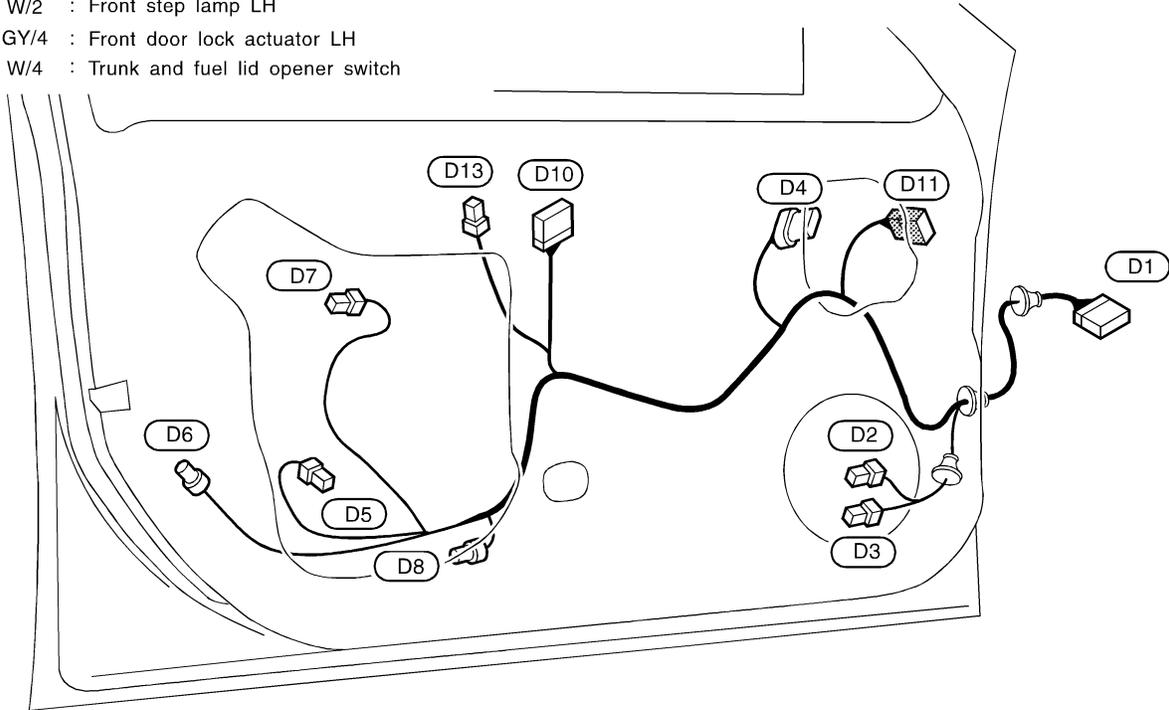
## Front Door Harness

NFEL0142

### LH SIDE

NFEL0142S03

- |  |   |
|--|---|
| (D1) SMJ : To (M4)                                     | (D8) BR/3 : Front door key cylinder switch LH |
| (D2) BR/2 : Front door speaker LH (With BOSE system)   | (D10) W/16 : Power window main switch         |
| (D3) W/2 : Front door speaker LH (Without BOSE system) | (D11) W/8 : Door mirror actuator LH           |
| (D4) GY/6 : Front power window regulator LH            | (D13) W/3 : Power window main switch          |
| (D5) W/2 : Front step lamp LH                          |   |
| (D6) GY/4 : Front door lock actuator LH                |   |
| (D7) W/4 : Trunk and fuel lid opener switch            |   |



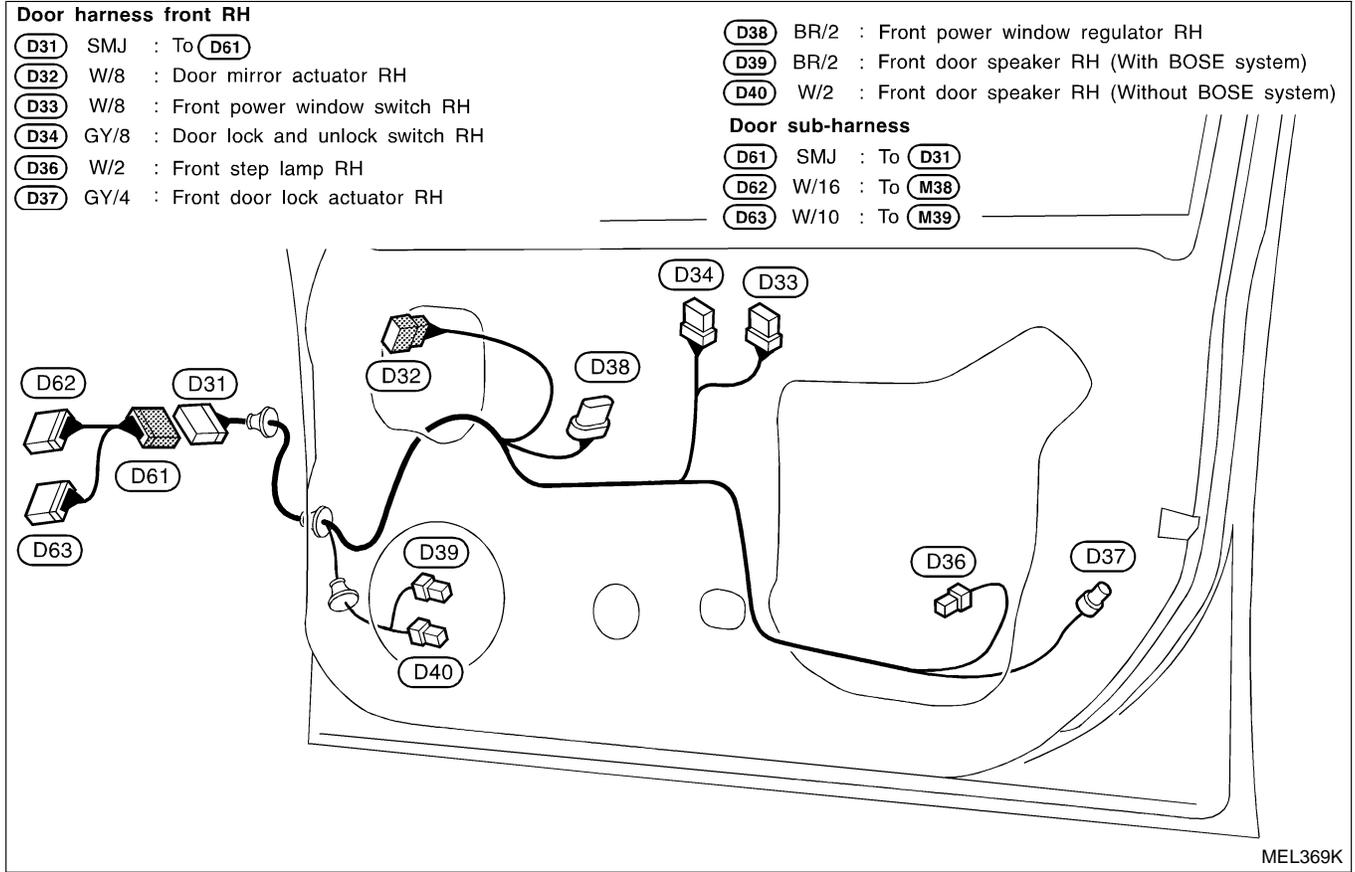
MEL649L

# HARNESS LAYOUT

Front Door Harness (Cont'd)

## RH SIDE

NFEL0142S04



GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

**EL**

IDX

# HARNESS LAYOUT

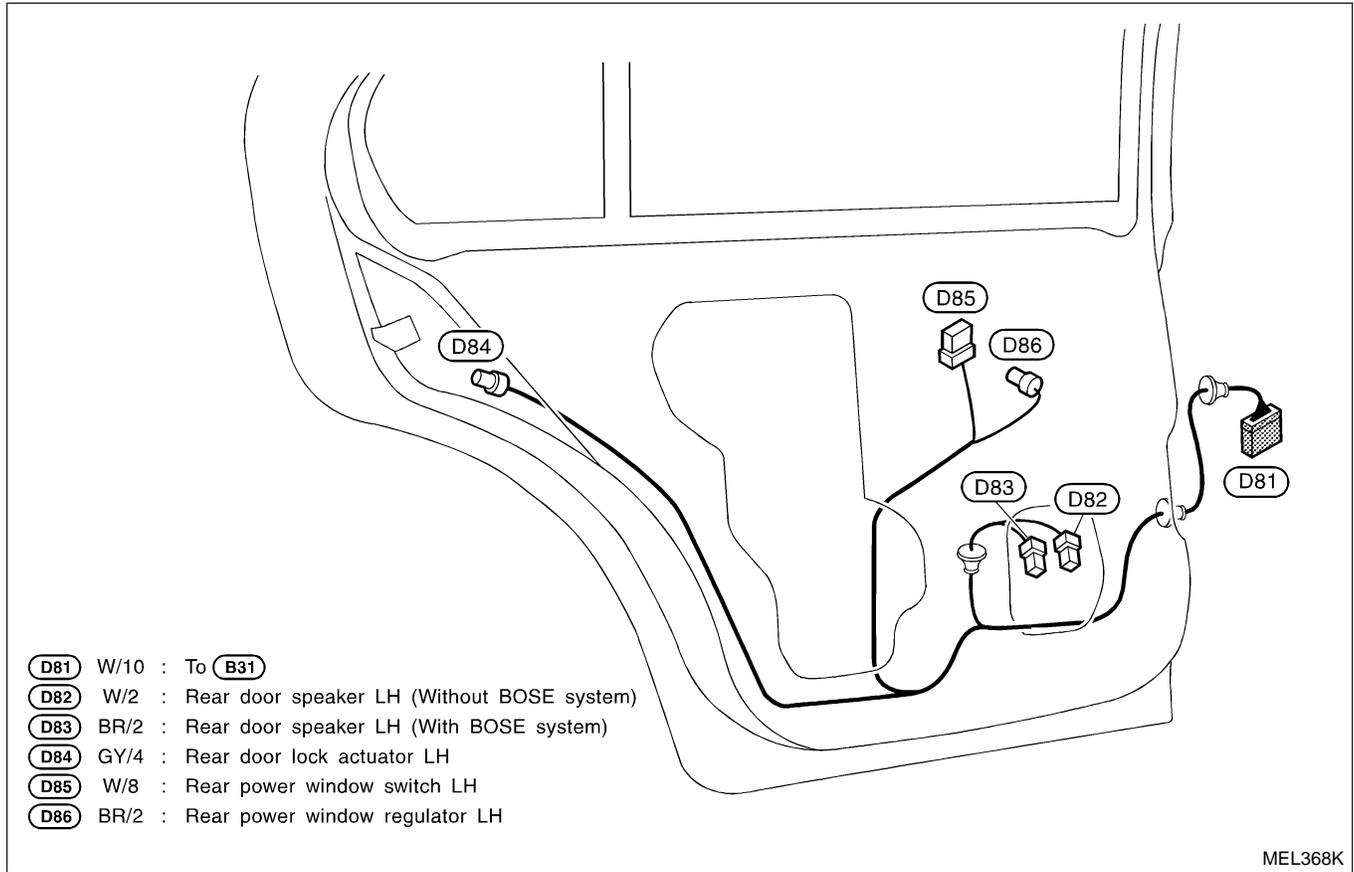
Rear Door Harness

## Rear Door Harness

NFEL0143

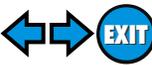
LH SIDE

NFEL0143S03



MEL368K

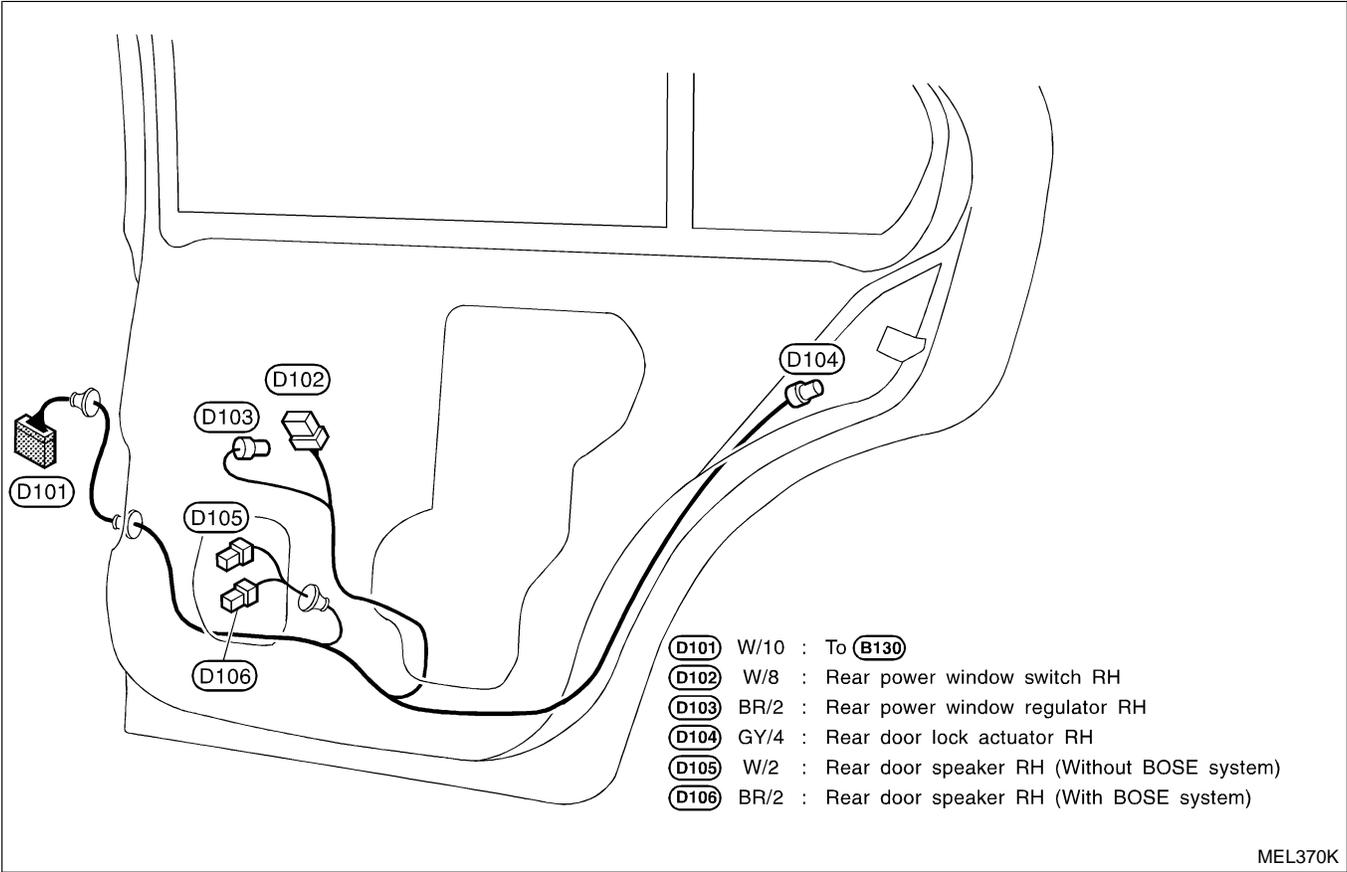
# HARNESS LAYOUT



Rear Door Harness (Cont'd)

RH SIDE

NFEL0143S04



- D101** W/10 : To **B130**
- D102** W/8 : Rear power window switch RH
- D103** BR/2 : Rear power window regulator RH
- D104** GY/4 : Rear door lock actuator RH
- D105** W/2 : Rear door speaker RH (Without BOSE system)
- D106** BR/2 : Rear door speaker RH (With BOSE system)

MEL370K

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

**EL**

IDX

# BULB SPECIFICATIONS

## Headlamp

<b>Headlamp</b>	
Item	Wattage (W)
High/Low	60/55 (HB2)

NFEL0144S03

## Exterior Lamp

<b>Exterior Lamp</b>		
Item	Wattage (W)	
Front fog lamp	35 (H3)	
Front turn signal lamp	21	
Side turn signal lamp	5	
Parking lamp	5	
Front side marker lamp	3.8	
Rear combination lamp	Turn signal	21
	Stop/Tail	21/5
	Back-up	13
Rear side marker lamp	3.8	
License lamp	5	
High-mounted stop lamp (without rear spoiler)	21	

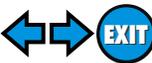
NFEL0144S01

## Interior Lamp

<b>Interior Lamp</b>		
Item	Wattage (W)	
Interior room lamp	8	
Map lamp	With sunroof	5
	Without sunroof	8
Vanity mirror lamp	8	
Trunk room lamp	3.4	

NFEL0144S02

# WIRING DIAGRAM CODES (CELL CODES)



Use the chart below to find out what each wiring diagram code stands for.

Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
1STSIG	AT	A/T 1ST Signal
2NDSIG	AT	A/T 2ND Signal
3RDSIG	AT	A/T 3RD Signal
4THSIG	AT	A/T 4TH Signal
AAC/V	EC	IACV-AAC Valve
A/C, A	HA	Auto Air Conditioner
A/C, M	HA	Manual Air Conditioner
AP/SEN	EC	Absolute Pressure Sensor
ASCD	EL	Automatic Speed Control Device (ASCD)
AT/C	EC	A/T Communication Line
ATDIAG	EC	A/T Diagnosis Communication Line
AT/IND	EL	A/T Indicator Lamp
AUDIO	EL	Audio
BACK/L	EL	Back-up Lamp
BA/FTS	AT	A/T Fluid Temperature Sensor and TCM Power Supply
BYPS/V	EC	Vacuum Cut Valve Bypass Valve
CHARGE	SC	Charging System
CHIME	EL	Warning Chime
CIGAR	EL	Cigarette Lighter
CLOCK	EL	Clock
COOL/F	EC	Cooling Fan Control
DEF	EL	Rear Window Defogger
D/LOCK	EL	Power Door Lock
DTRL	EL	Headlamp - With Daytime Light System
ECTS	EC	Engine Coolant Temperature Sensor
EGRCI	EC	EGR Function
EGVC/V	EC	EGR Volume Control Valve
EGR/TS	EC	EGR Temperature Sensor
EMNT	EC	Engine Mount
ENGSS	AT	Engine Speed Signal
F/FOG	EL	Front Fog Lamp
FLS1	EC	Fuel Gauge

Code	Section	Wiring Diagram Name	
FLS2	EC	Fuel Gauge	GI
FLS3	EC	Fuel Gauge	
FO2H-L	EC	Front Heated Oxygen Sensor Heater (Left Bank)	MA
FO2H-R	EC	Front Heated Oxygen Sensor Heater (Right Bank)	EM
FPCM	EC	Fuel Pump Control	LC
F/PUMP	EC	Fuel Pump Control	
FRO2LH	EC	Front Heated Oxygen Sensor (Front HO2S) (Left Bank)	EC
FRO2RH	EC	Front Heated Oxygen Sensor (Front HO2S) (Right Bank)	FE
FTS	AT	A/T Fluid Temperature Sensor	
FUELLH	EC	Fuel Injection System Function (Left Bank)	CL
FUELRH	EC	Fuel Injection System Function (Right Bank)	MT
H/LAMP	EL	Headlamp	AT
HORN	EL	Horn	
HSEAT	EL	Heated Seat	AX
IATS	EC	Intake Air Temperature Sensor	
IGN/SG	EC	Ignition Signal	SU
ILL	EL	Illumination	
INJECT	EC	Injector	BR
INT/L	EL	Interior, Step, Spot, Vanity Mirror and Trunk Room Lamps	ST
KS	EC	Knock Sensor	
LAN	AT	A/T Communication Line	RS
LOAD	EC	Electrical Load Signal	
LPSV	AT	Line Pressure Solenoid Valve	BT
MAFS	EC	Mass Air Flow Sensor	
MAIN	AT	Main Power Supply and Ground Circuit	HA
MAIN	EC	Main Power Supply and Ground Circuit	SC
METER	EL	Speedometer, Tachometer, Temp., Oil, and Fuel Gauges	EL
MIL/DL	EC	MIL & Data Link Connector	
MIRROR	EL	Power Door Mirror	IDX
MULTI	EL	Multi-remote Control System	
NATS	EL	NVIS (Nissan Vehicle Immobilizer System — NATS)	

# WIRING DIAGRAM CODES (CELL CODES)



Code	Section	Wiring Diagram Name
NONDTC	AT	Non-detectable Items
OVRCSV	AT	Overrun Clutch Solenoid Valve
PHONE	EL	Telephone (Pre-wire)
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHASE	EC	Camshaft Position Sensor (PHASE)
PNP/SW	AT	Park/Neutral Position Switch
PNP/SW	EC	Park/Neutral Position Switch
POS	EC	Crankshaft Position Sensor (CKPS) (POS)
POWER	EL	Power Supply Routing
PRE/SE	EC	EVAP Control System Pressure Sensor
PST/SW	EC	Power Steering Oil Pressure Switch
REF	EC	Crankshaft Position Sensor (CKPS) (REF)
RO2H-L	EC	Rear Heated Oxygen Sensor Heater (Left Bank)
RO2H-R	EC	Rear Heated Oxygen Sensor Heater (Right Bank)
RP/SEN	EC	Refrigerant Pressure Sensor
RRO2	EC	Rear Heated Oxygen Sensor (Rear HO2S)
RRO2LH	EC	Rear Heated Oxygen Sensor (Rear HO2S) (Left Bank)
RRO2RH	EC	Rear heated Oxygen Sensor (Rear HO2S) (Right Bank)
RRO2/H	EC	Rear Heated Oxygen Sensor Heater
SEAT	EL	Power Seat
SHIFT	AT	A/T Shift Lock System
SROOF	EL	Sunroof
SRS	RS	Supplemental Restraint System
S/SIG	EC	Start Signal
SSV/A	AT	Shift Solenoid Valve A
SSV/B	AT	Shift Solenoid Valve B
START	SC	Starting System
STOP/L	EL	Stop Lamp
S/VCSW	EC	Swirl Control Valve Control Vacuum Check Switch
SWL/V	EC	Swirl Control Valve Control Solenoid Valve

Code	Section	Wiring Diagram Name
TAIL/L	EL	Parking, License and Tail Lamps
TCCSIG	AT	A/T TCC Signal (Lock Up)
TCS	EC	ABS/TCS Communication Line
TCS	BR	Traction Control System
TCV	AT	Torque Converter Clutch Solenoid Valve
TFTS	EC	Tank Fuel Temperature Sensor
T&FLID	EL	Trunk Lid and Fuel Filler Lid Opener
THEFT	EL	Theft Warning System
TPS	AT	Throttle Position Sensor
TPS	EC	Throttle Position Sensor
TP/SW	EC	Closed Throttle Position Switch
TRNSMT	EL	Integrated HOMELINK (TM) Transmitter
TURN	EL	Turn Signal and Hazard Warning Lamps
VENT/V	EC	EVAP Canister Vent Control Valve
VIAS/V	EC	Variable Induction Air Control System
VSS	EC	Vehicle Speed Sensor
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)
VSSMTR	AT	Vehicle Speed Sensor MTR
W/ANT	EL	Audio Antenna
WARN	EL	Warning Lamps
WINDOW	EL	Power Window
WIPER	EL	Front Wiper and Washer