

ELECTRICAL SYSTEM

SECTION **EL**

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM				
- NATS)	334			BR
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				RS
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				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, crash zone sensor, 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 unintentional 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 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-34, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"
- GI-24, "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)

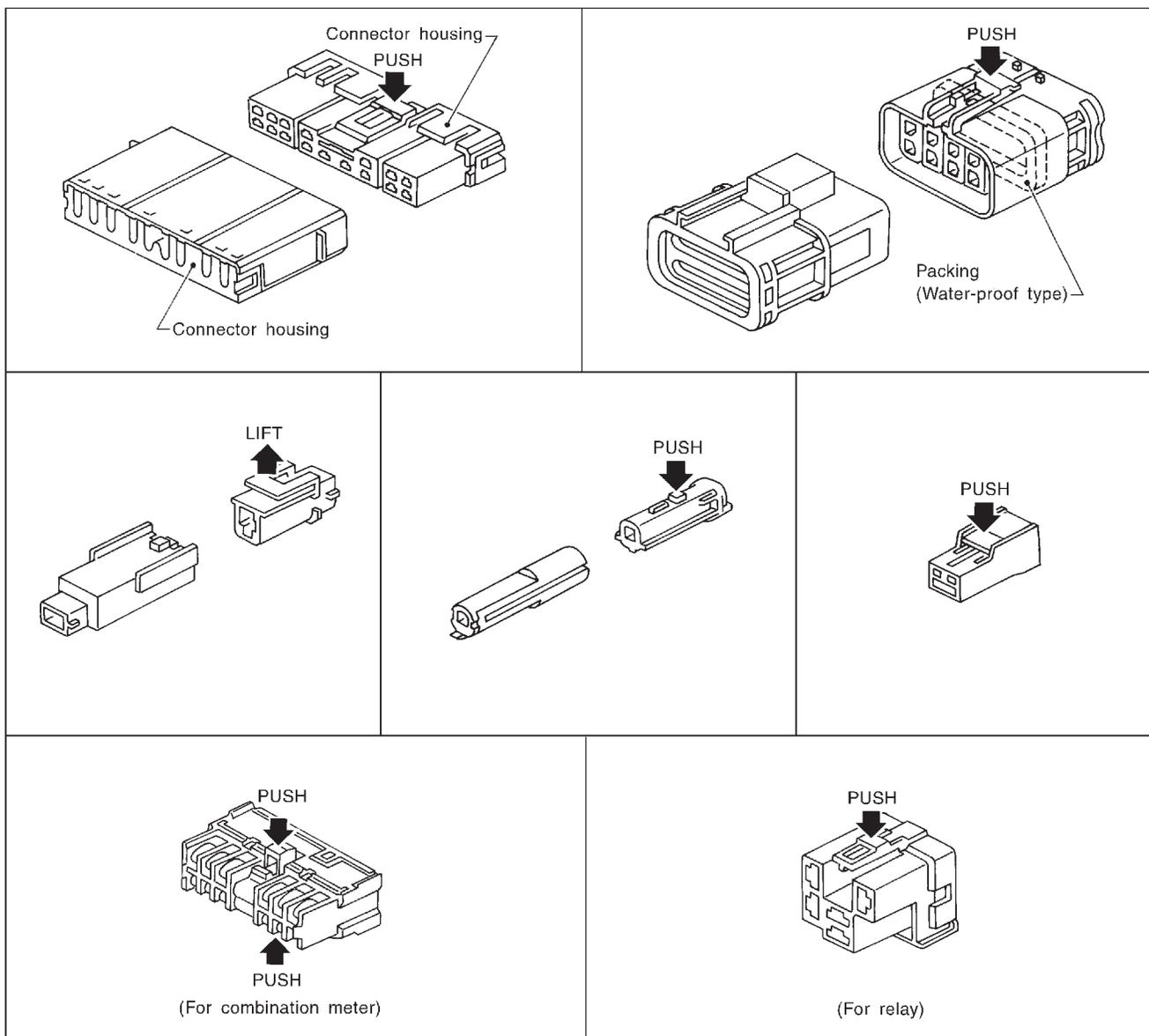
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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
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EL

HARNESS CONNECTOR

Description (Cont'd)

HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

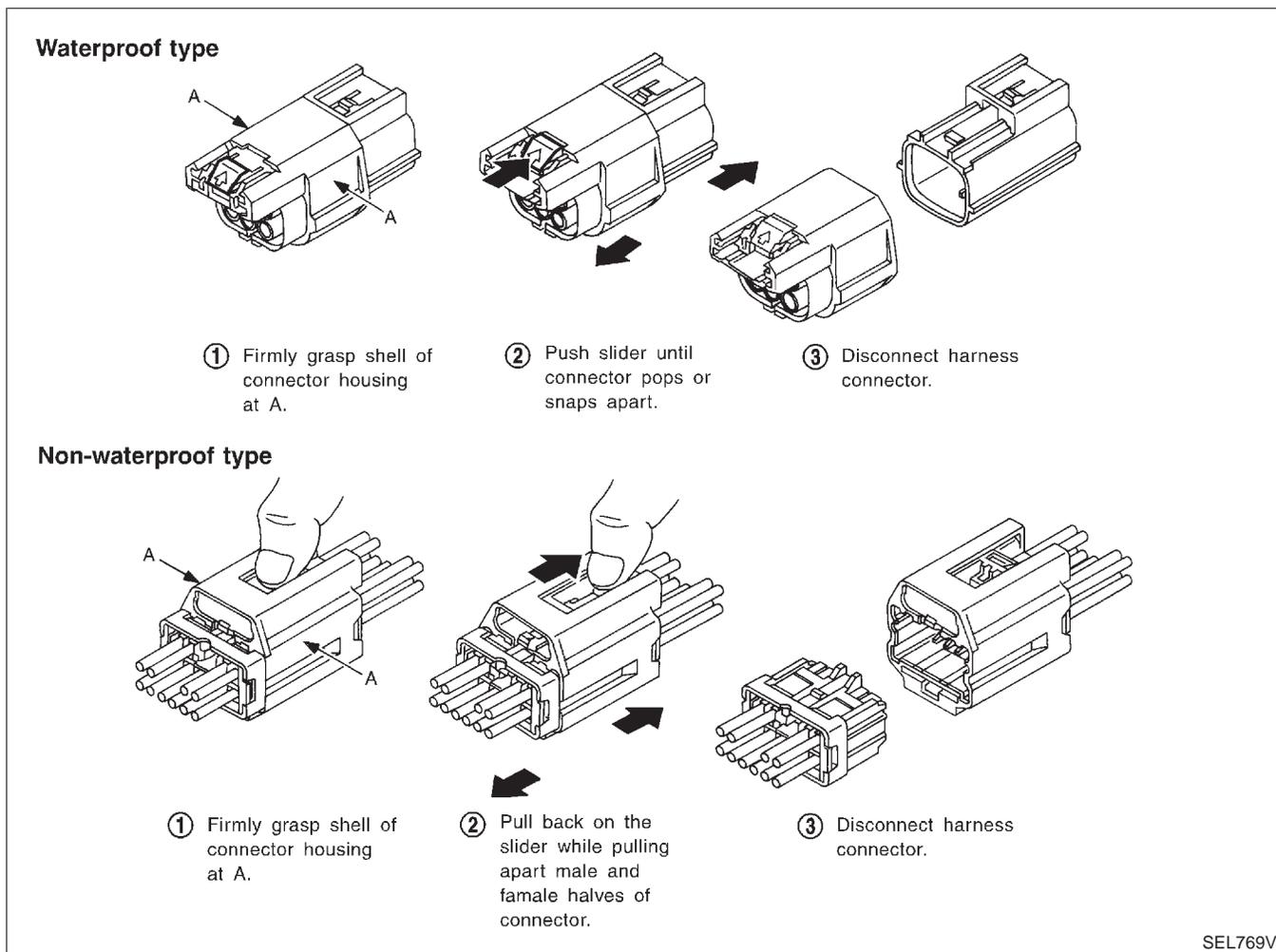
=NFEL0003S02

- 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]



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

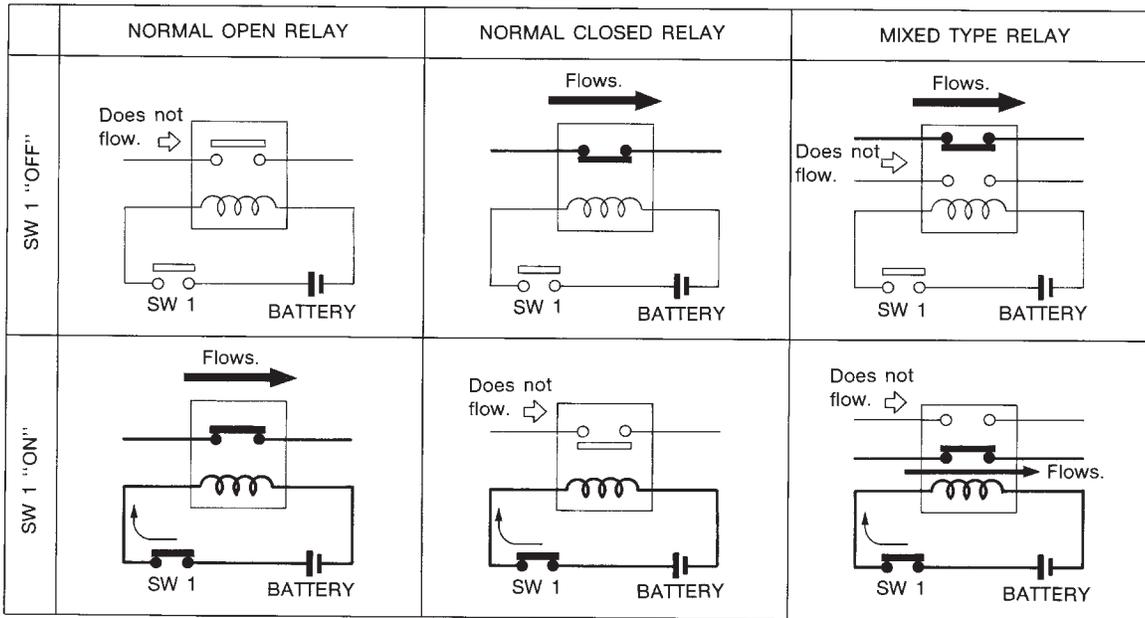
EC

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

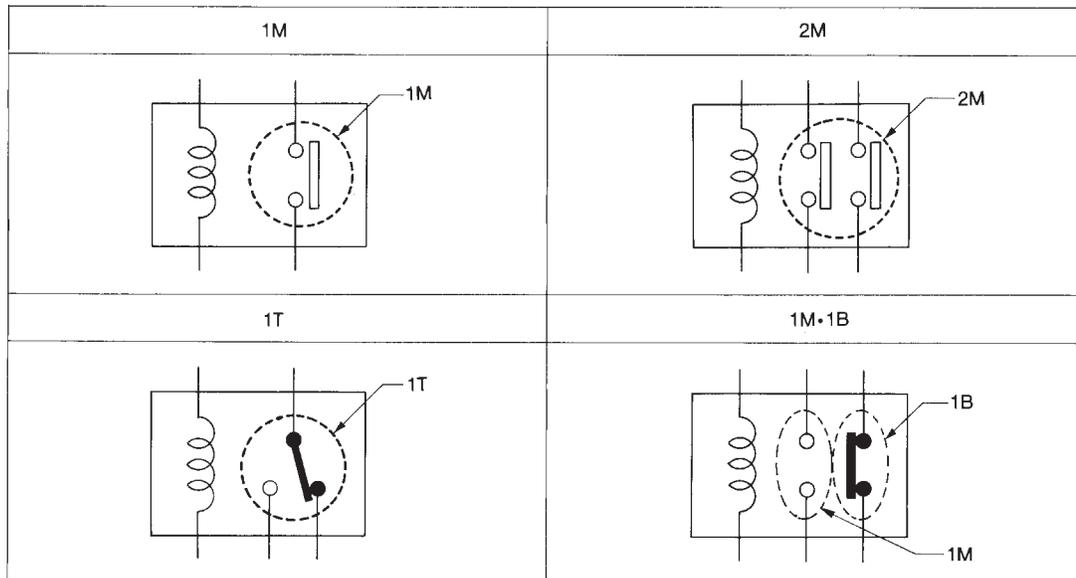
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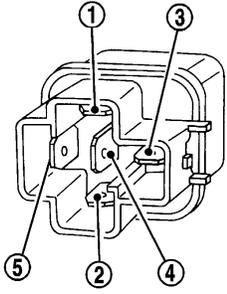
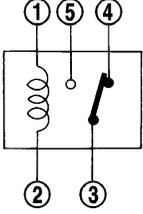
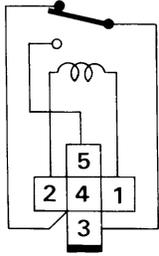
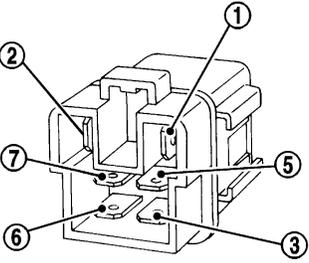
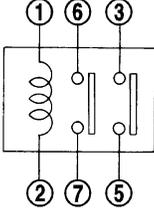
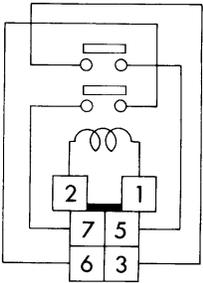
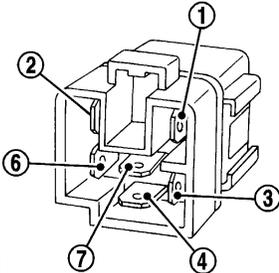
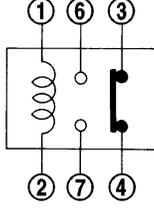
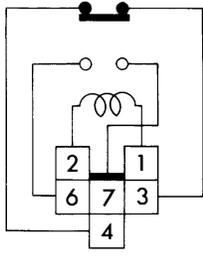
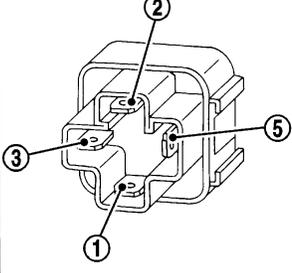
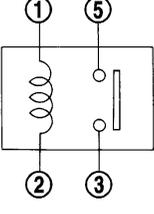
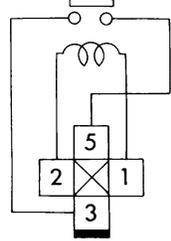
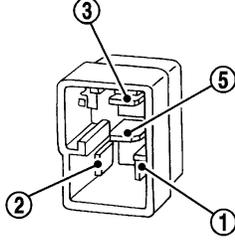
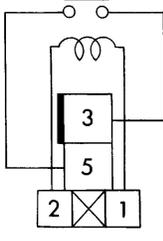
EL

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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 —

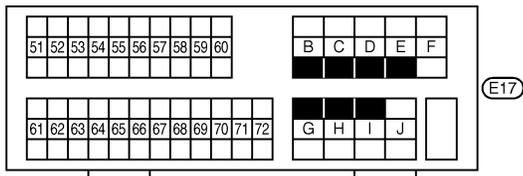
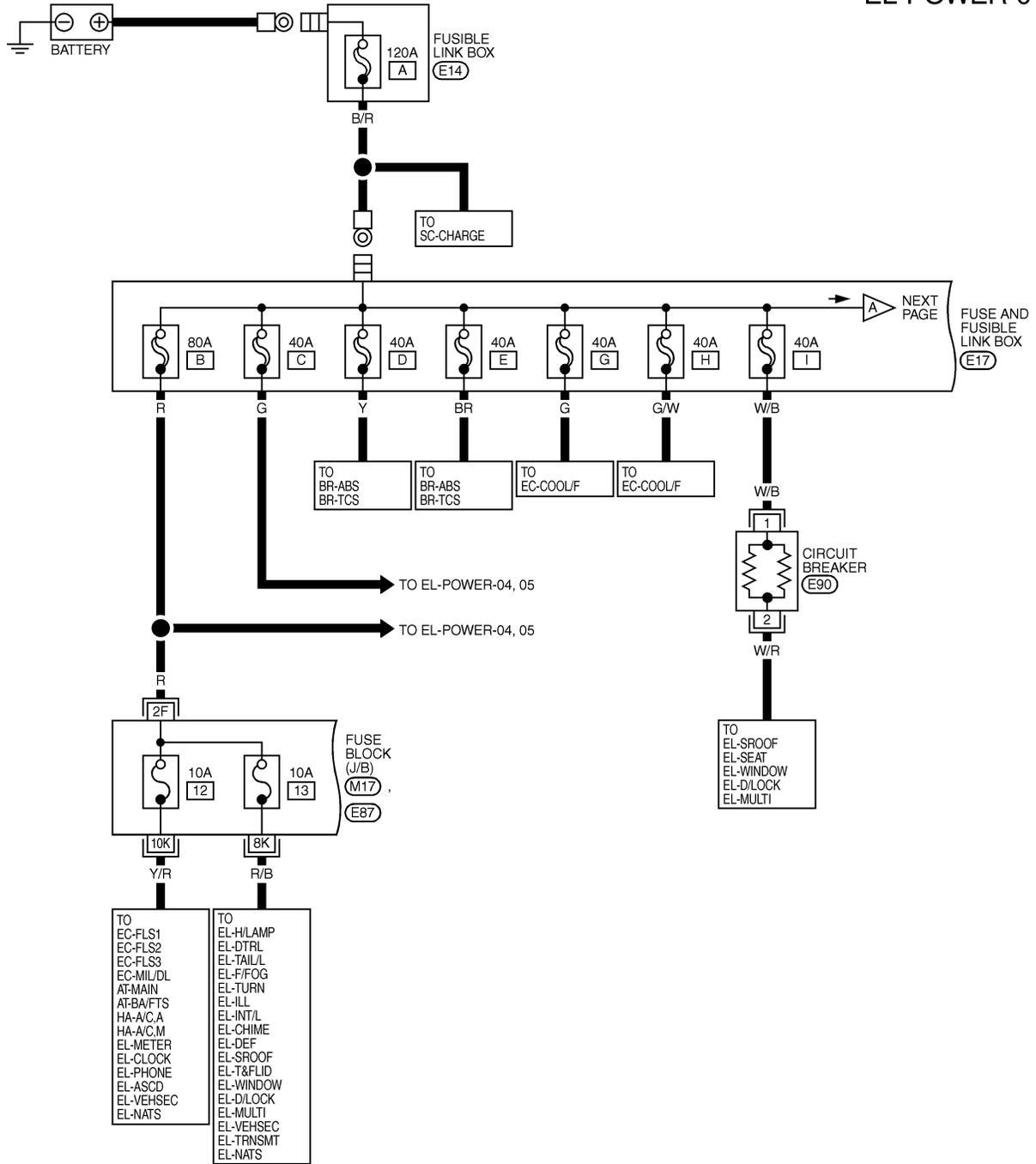
Wiring Diagram — POWER —

BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

NFEL0006

NFEL0006S01

EL-POWER-01



REFER TO THE FOLLOWING.

(M17), (E87) - FUSE BLOCK-JUNCTION BOX (J/B)

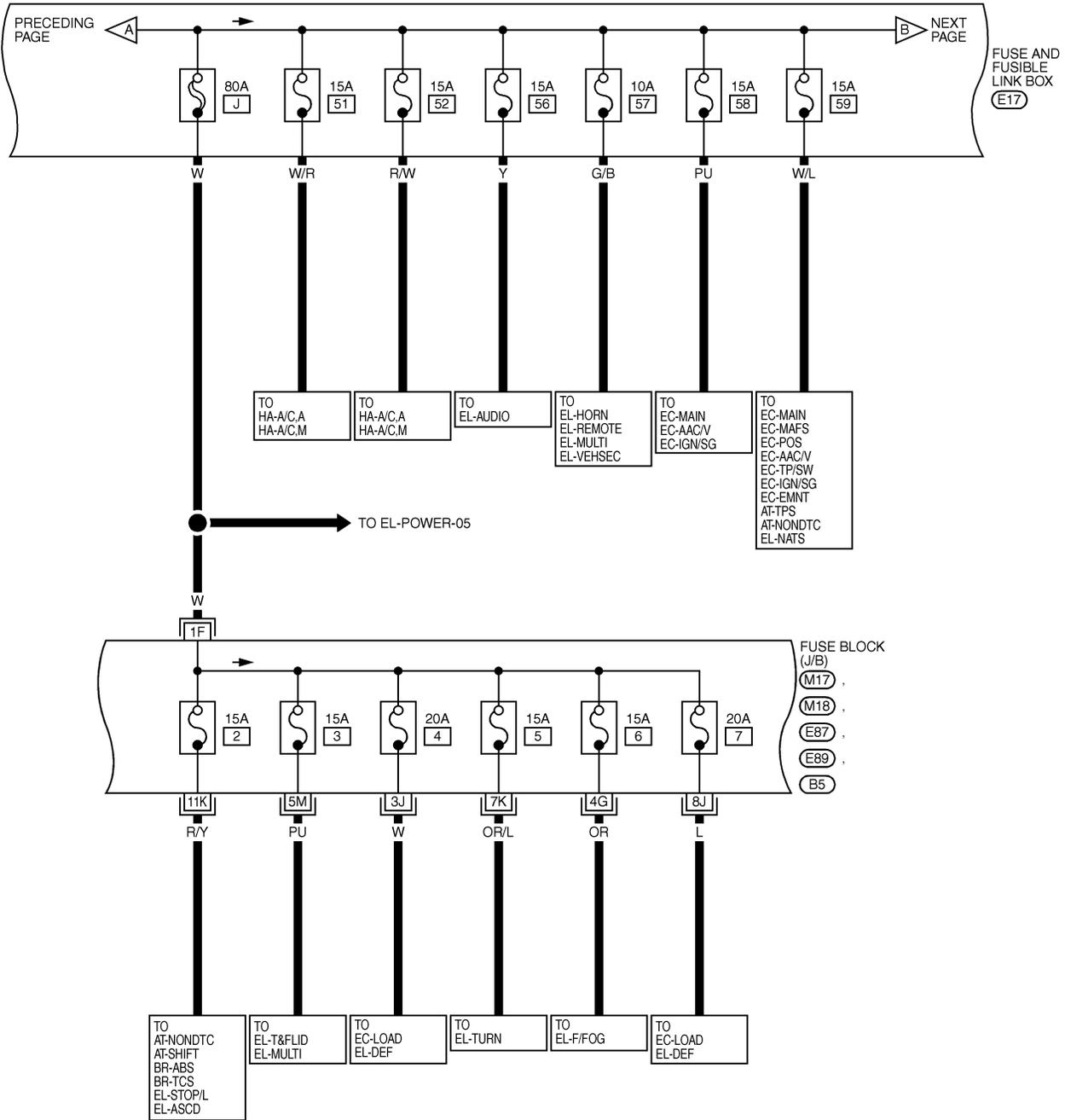


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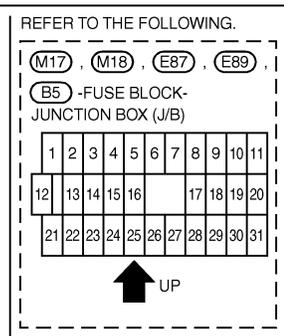
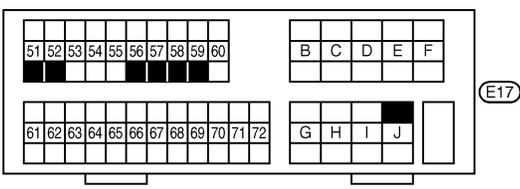
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-02



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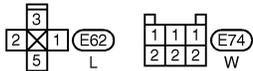
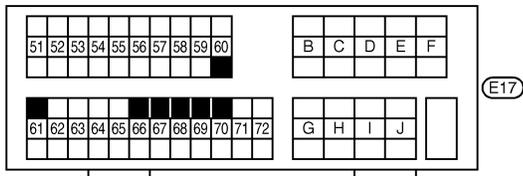
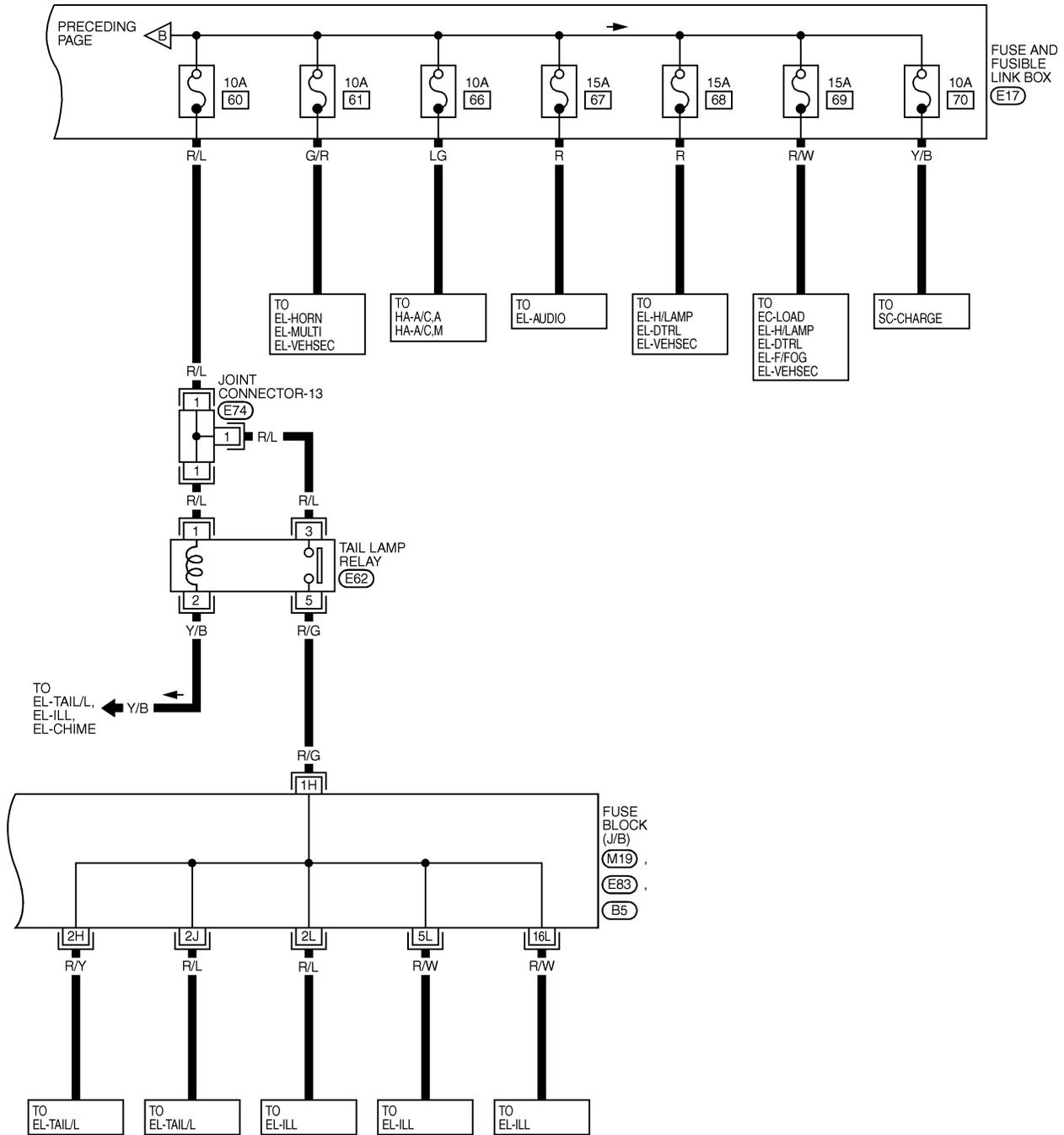


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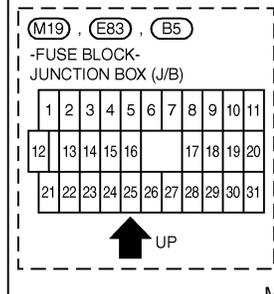
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-03



REFER TO THE FOLLOWING.



MEL007N

POWER SUPPLY ROUTING

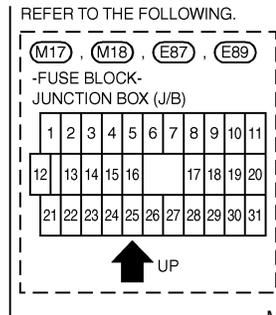
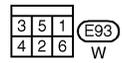
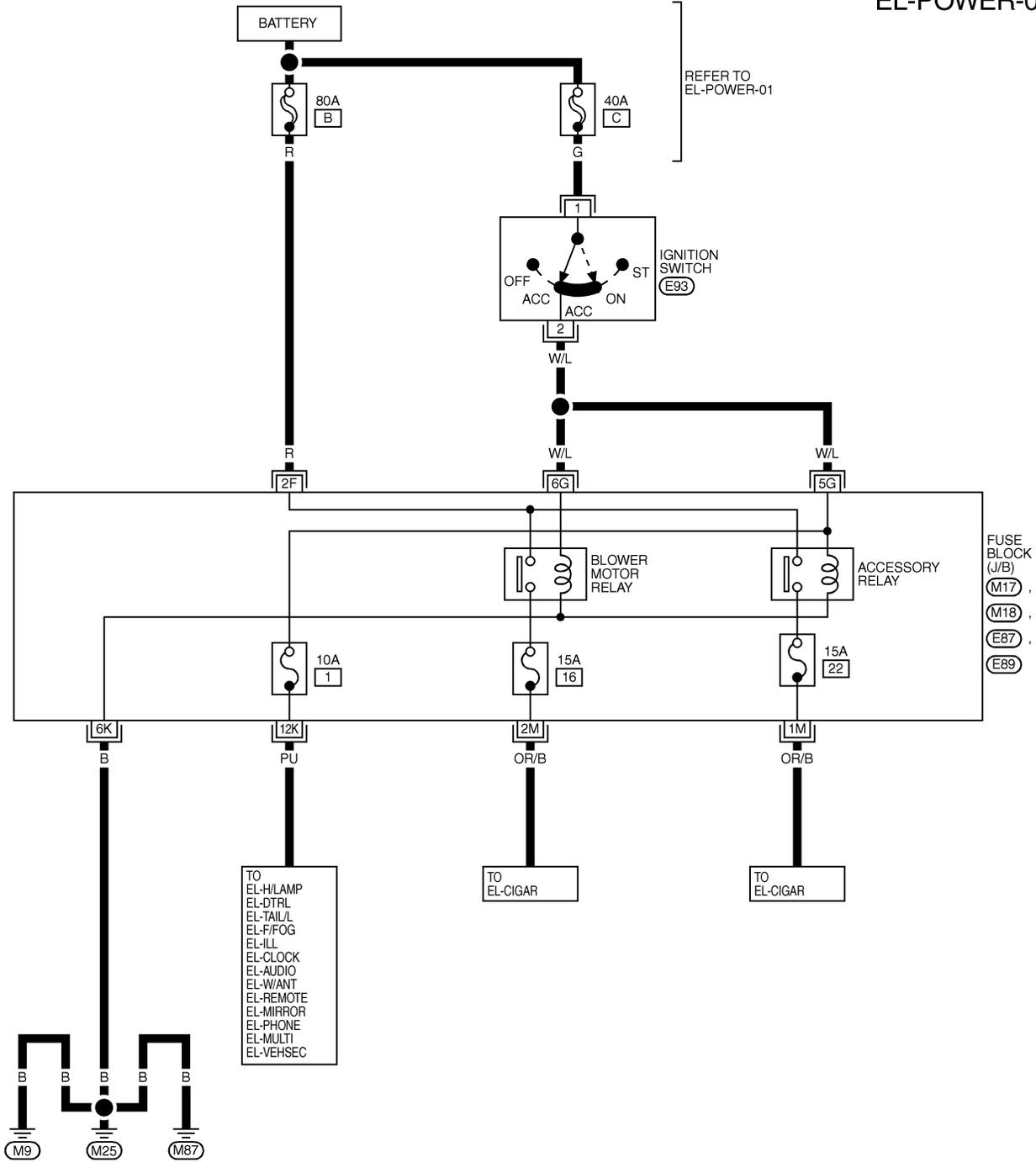
Wiring Diagram — POWER — (Cont'd)

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

NFEL0006S02

EL-POWER-04

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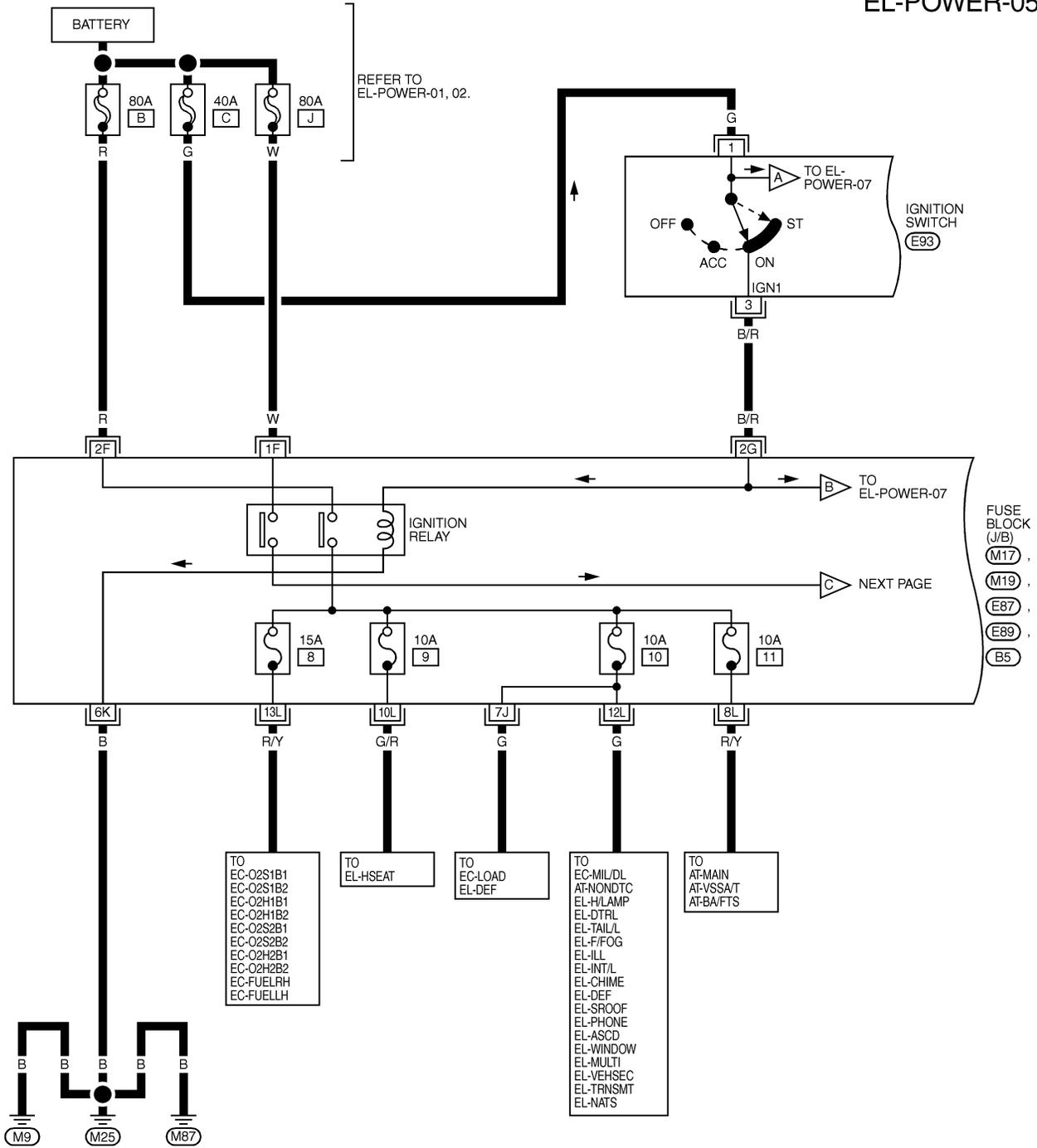
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

IGNITION POWER SUPPLY — IGNITION SW. IN “ON” AND/OR “START”

NFEL0006S03

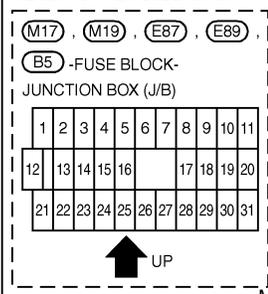
EL-POWER-05



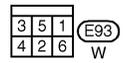
REFER TO EL-POWER-01, 02.

FUSE BLOCK (J/B)
 (M17),
 (M19),
 (E87),
 (E89),
 (B5)

REFER TO THE FOLLOWING.



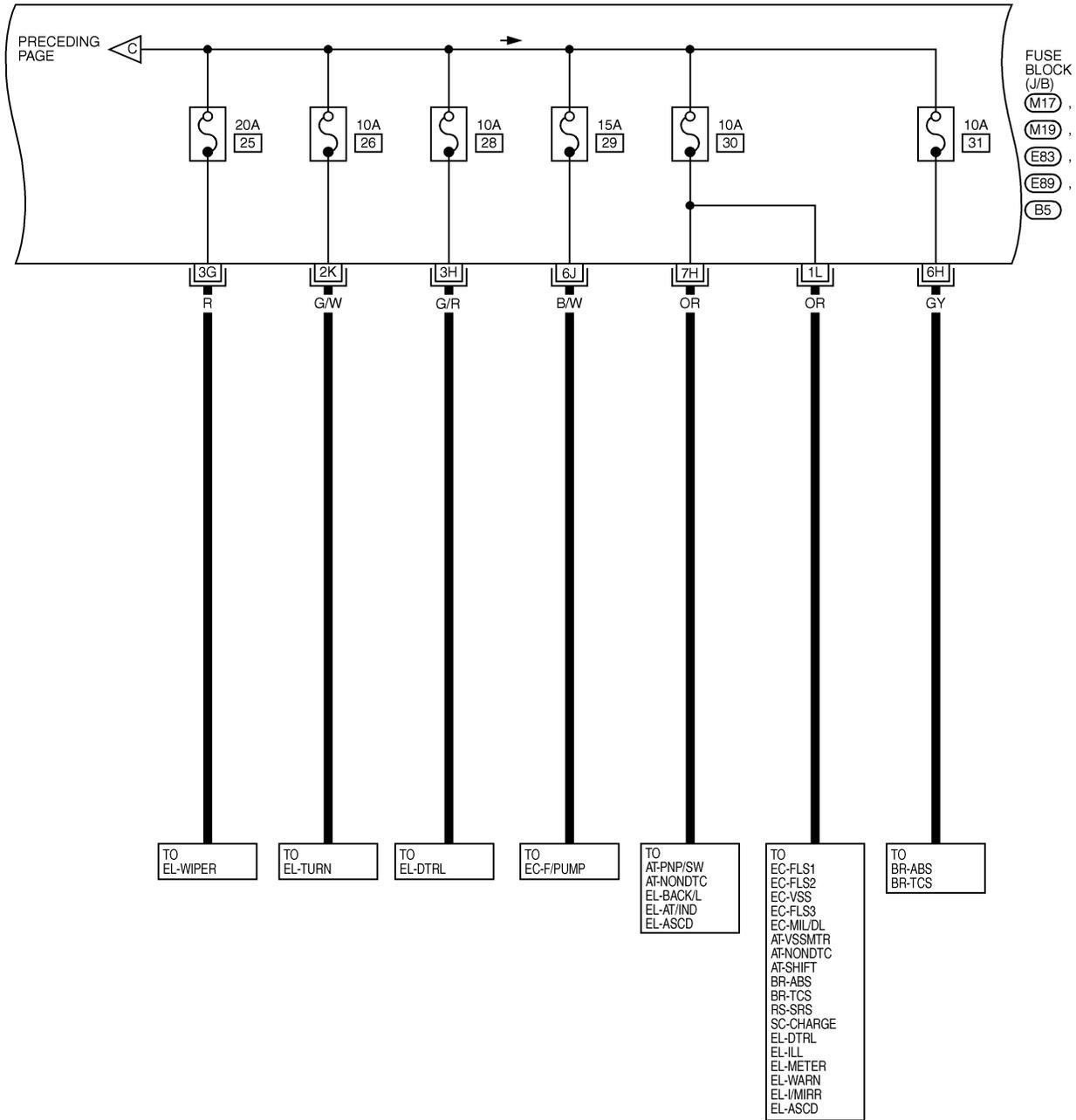
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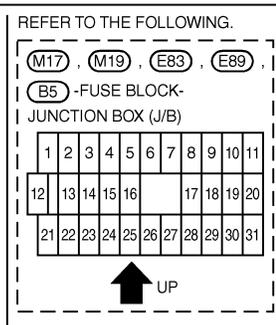
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-06



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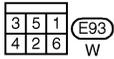
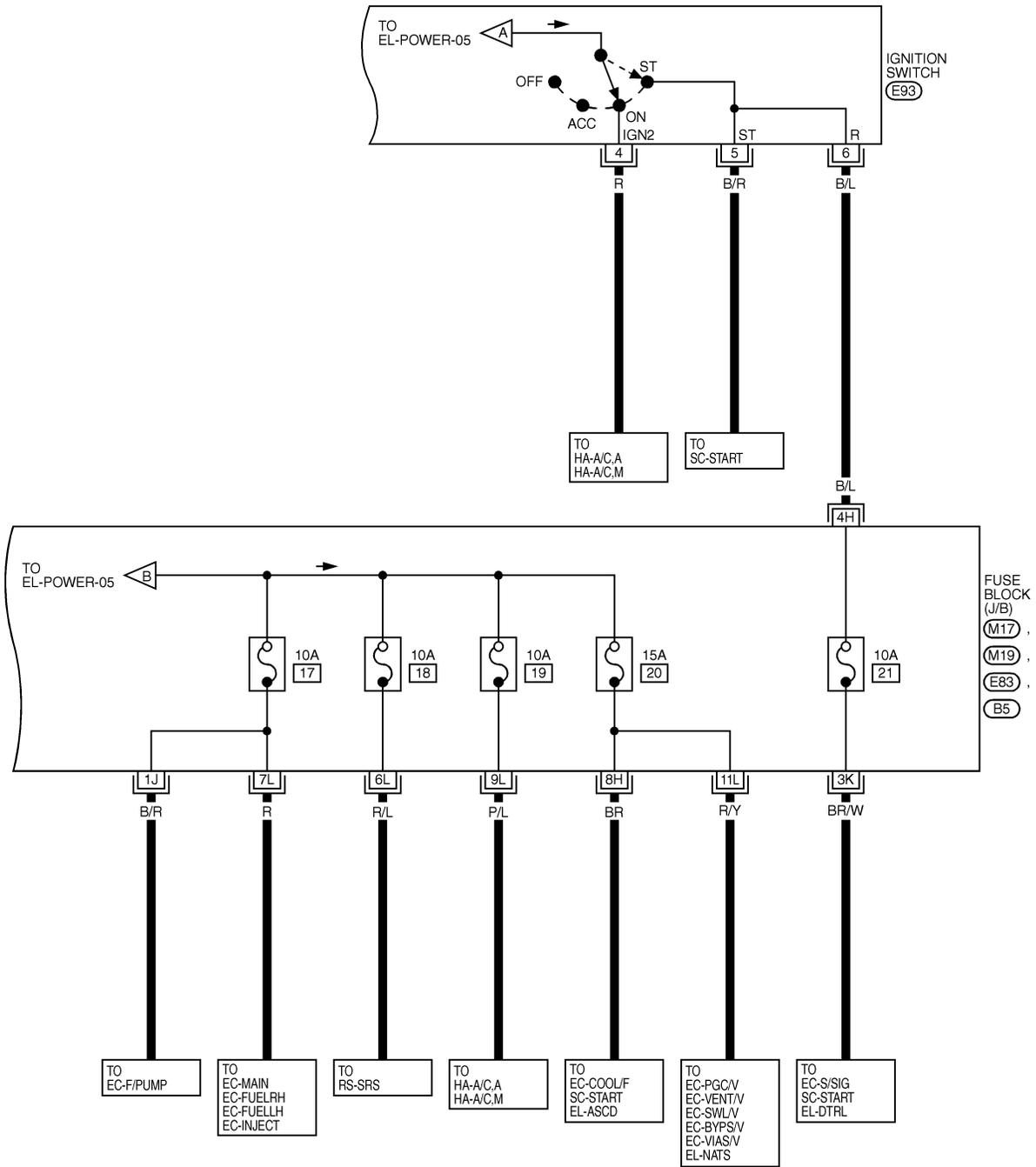


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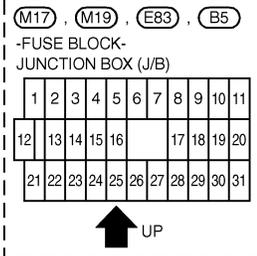
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

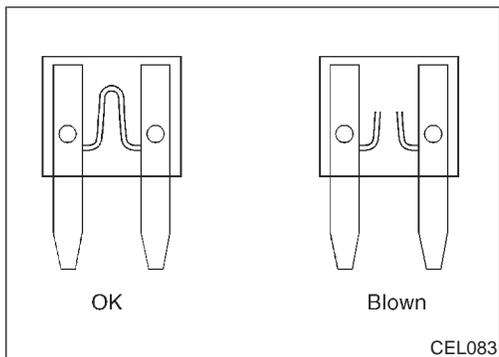
EL-POWER-07



REFER TO THE FOLLOWING.



MEL011N



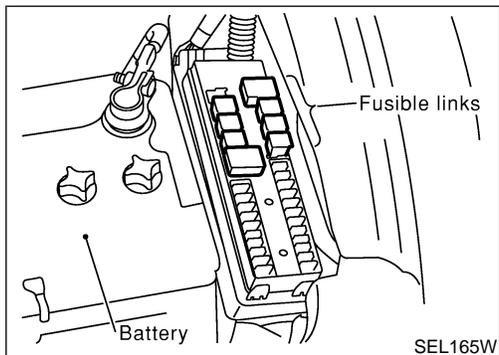
Inspection

FUSE

- 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.

NFEL0007

NFEL0007S01



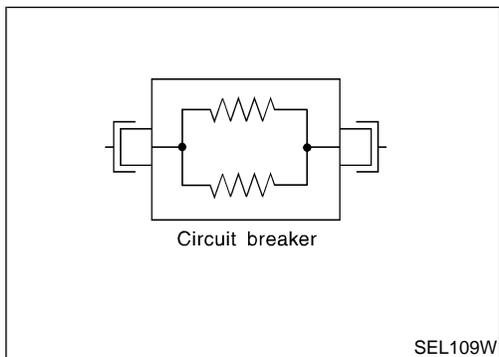
FUSIBLE LINK

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.

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.

NFEL0007S02



CIRCUIT BREAKER (PTC THERMISTOR TYPE)

The PTC thermistor generates heat in response to current flow. The temperature (and resistance) of the thermistor element varies with current flow. Excessive current flow will cause the element's temperature to rise. When the temperature reaches a specified level, the electrical resistance will rise sharply to control the circuit current.

Reduced current flow will cause the element to cool. Resistance falls accordingly and normal circuit current flow is allowed to resume.

NFEL0007S03

GI

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IDX

GROUND

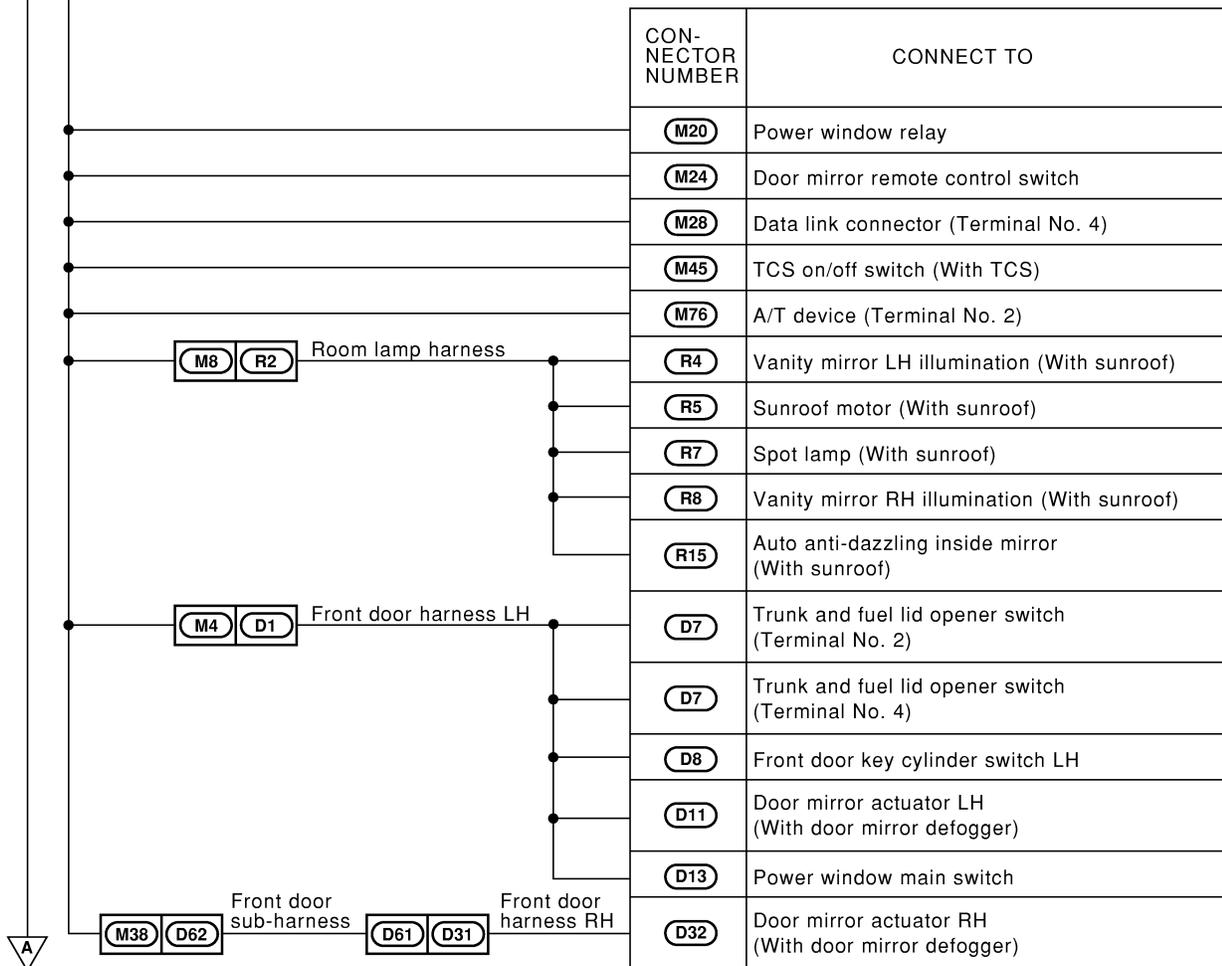
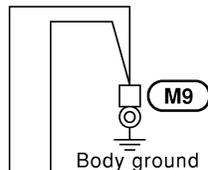
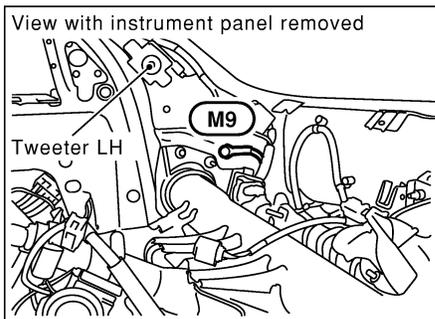
Ground Distribution

Ground Distribution

NFEL0008

NFEL0008S01

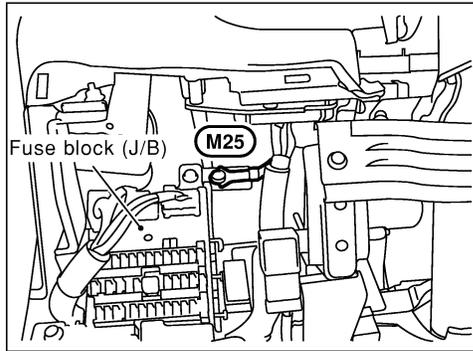
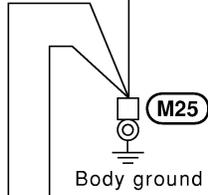
MAIN HARNESS



Next page

MEL091N

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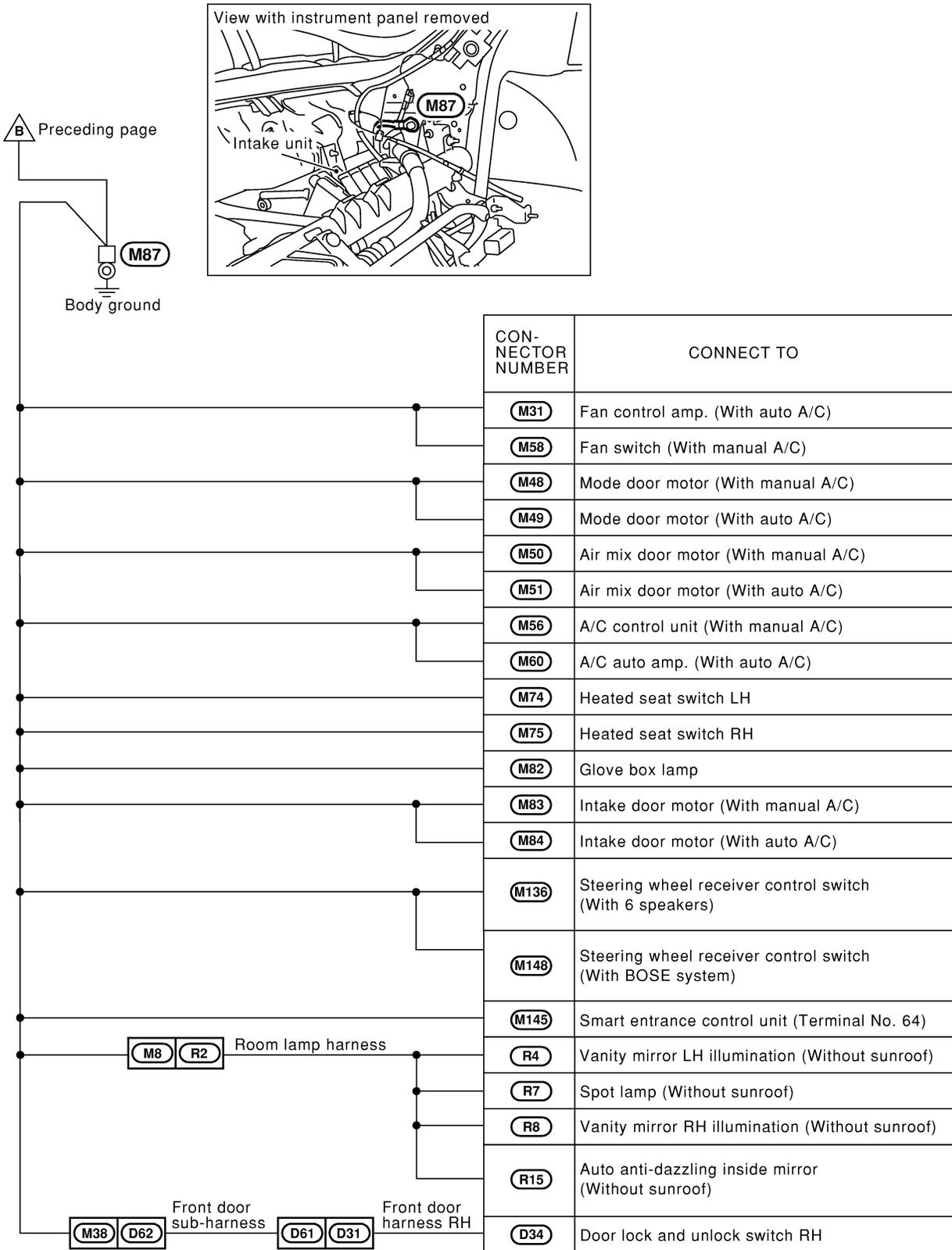
	CON-NECTOR NUMBER	CONNECT TO
●	M16	Telephone
●	M17	Fuse block (J/B) (Terminal No. 6K) • Accessory relay • Blower motor relay • Ignition relay
●	M21	Combination flasher unit
●	M23	Illumination control switch
●	M32	Combination meter (Terminal No. 30) • ABS indicator (Without TCS) • A/T indicator (With A/T) • Turn signal indicator
●	M34	Combination meter (Terminal No. 59) • Air bag warning lamp • Fuel gauge • Odo/trip meter • Speedometer • Tachometer • Water temp. gauge
●	M52	ASCD control unit
●	M53	Cigarette lighter
●	M72	Ashtray illumination
●	M76	A/T device (Terminal No. 6)
●	M78	Power socket
●	M144	Smart entrance control unit (Terminal No. 43)
●	M146	Air bag diagnosis sensor unit
●	M152	Clock
●	M30 M151	Main sub-harness-1

▼ Next page

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GROUND

Ground Distribution (Cont'd)



MEL093N

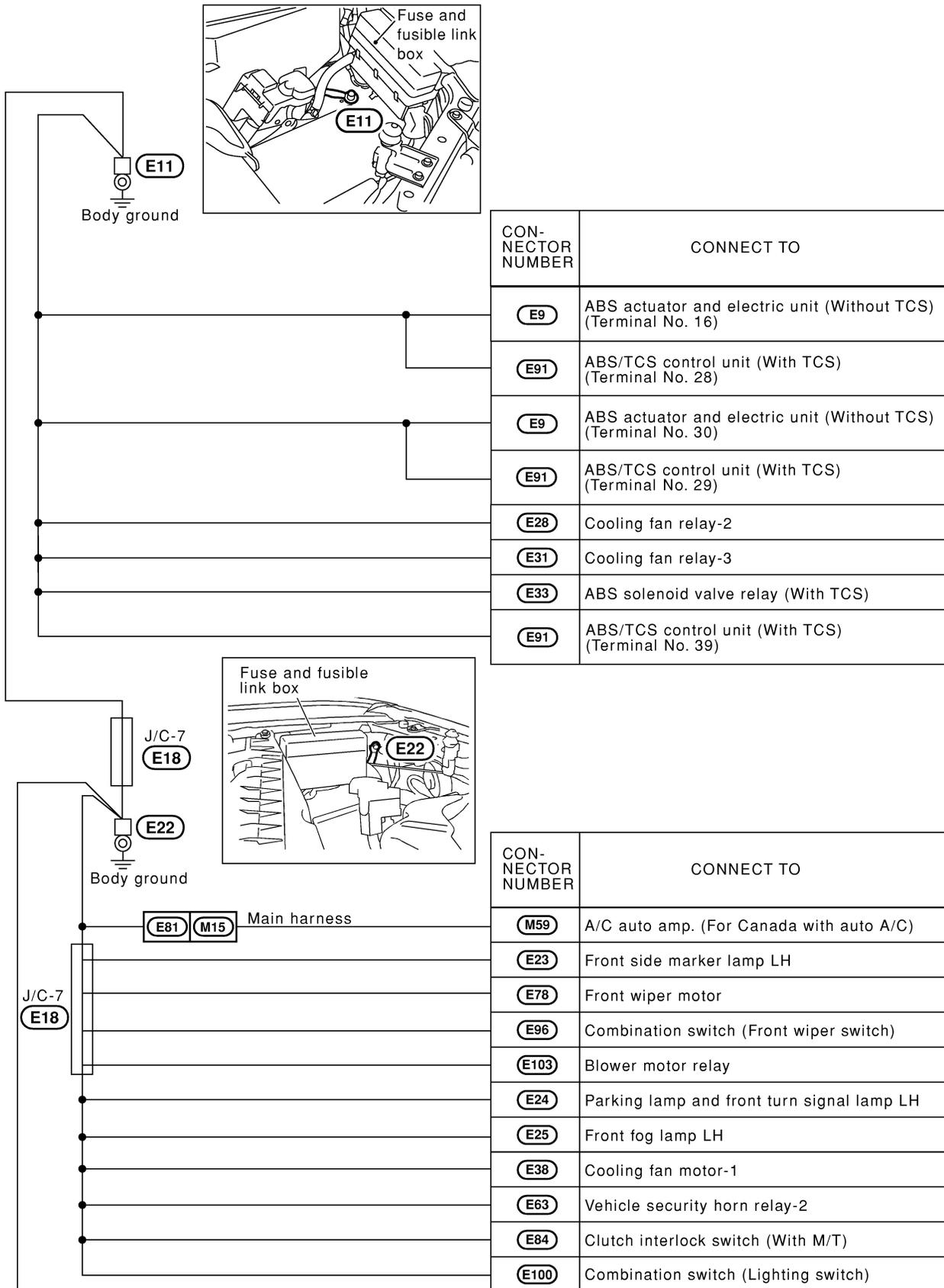
GROUND

Ground Distribution (Cont'd)

ENGINE ROOM HARNESS

NFEL0008S02

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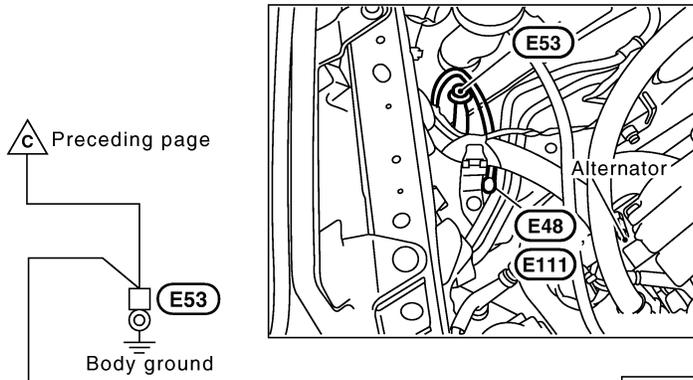


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MEL094N

GROUND

Ground Distribution (Cont'd)

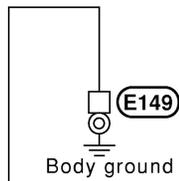
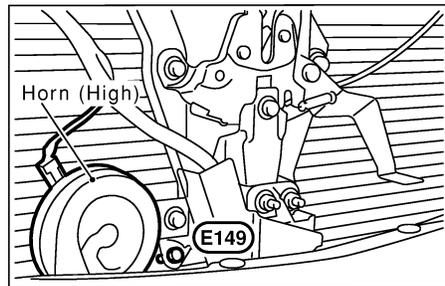
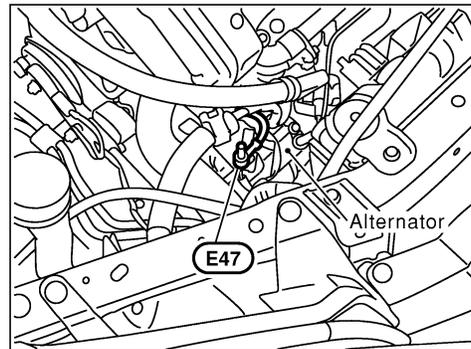
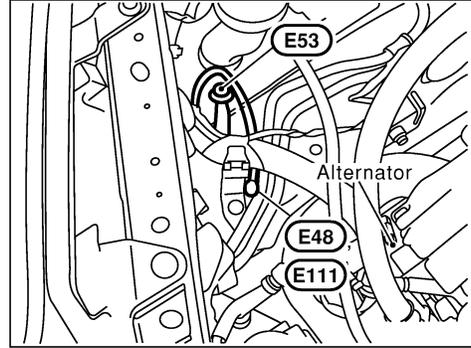
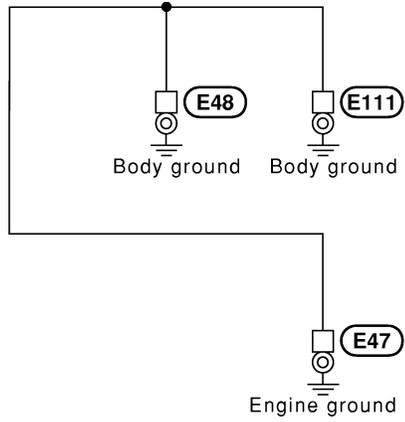


CON-NECTOR NUMBER	CONNECT TO
E1	Brake fluid level switch
E26	Hood switch
E42	Washer level switch
E43	Cooling fan motor-2
E44	Front fog lamp RH
E45	Parking lamp and front turn signal lamp RH
E49	Front side marker lamp RH
E59	Daytime light control unit (For Canada)
E69	Door mirror defogger relay (With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

MEL284L

GROUND

Ground Distribution (Cont'd)



E147 **M150** Main harness

CON-NECTOR NUMBER	CONNECT TO
M146	Shield wire (Air bag diagnosis sensor unit)

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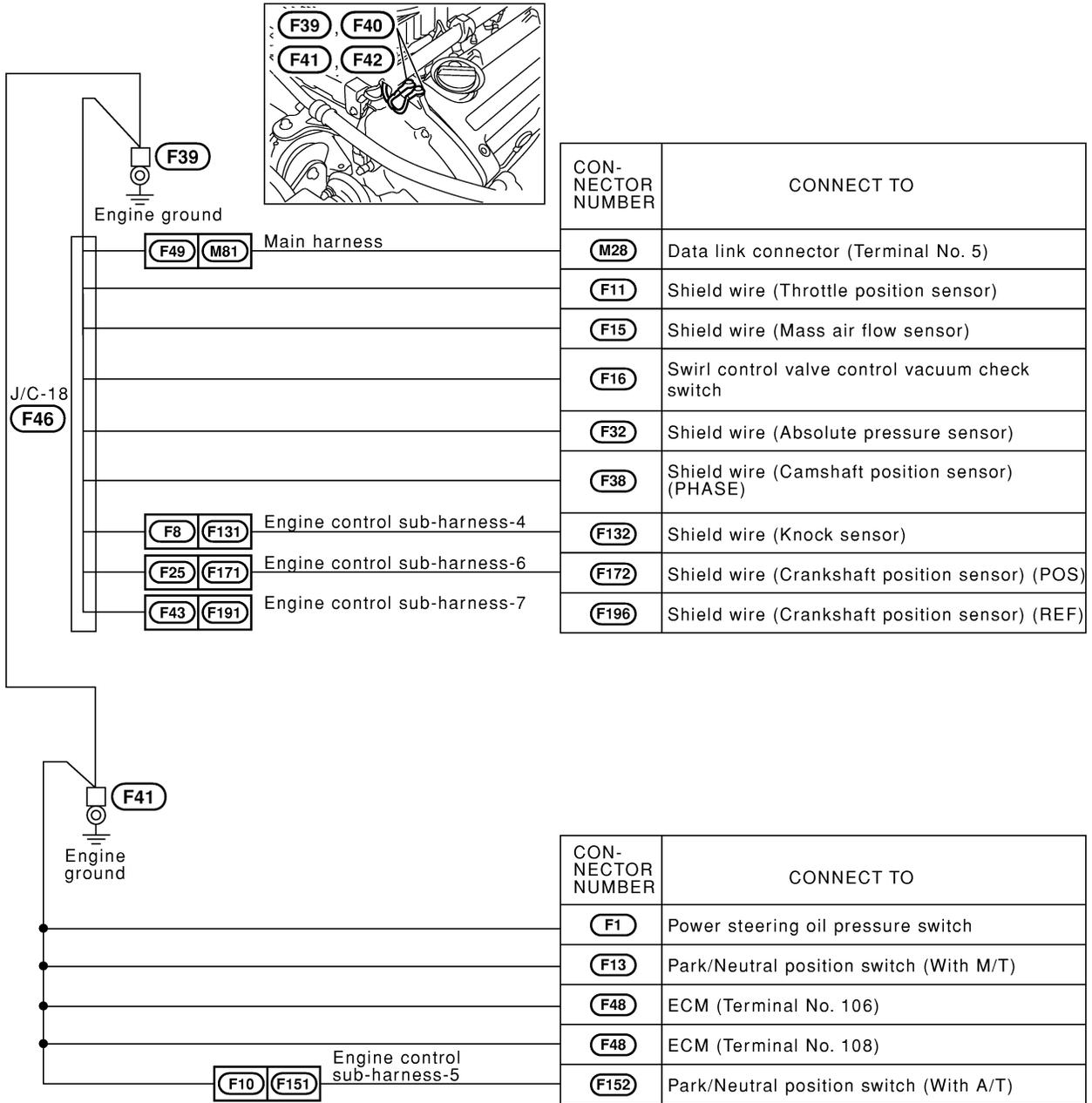
MEL789M

GROUND

Ground Distribution (Cont'd)

ENGINE CONTROL HARNESS

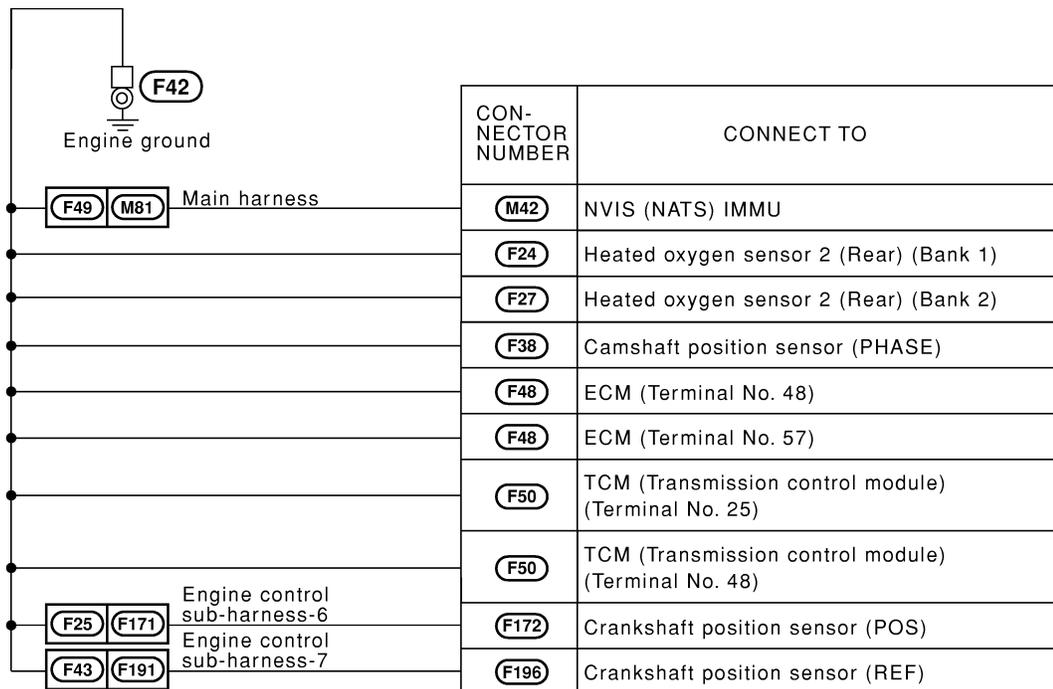
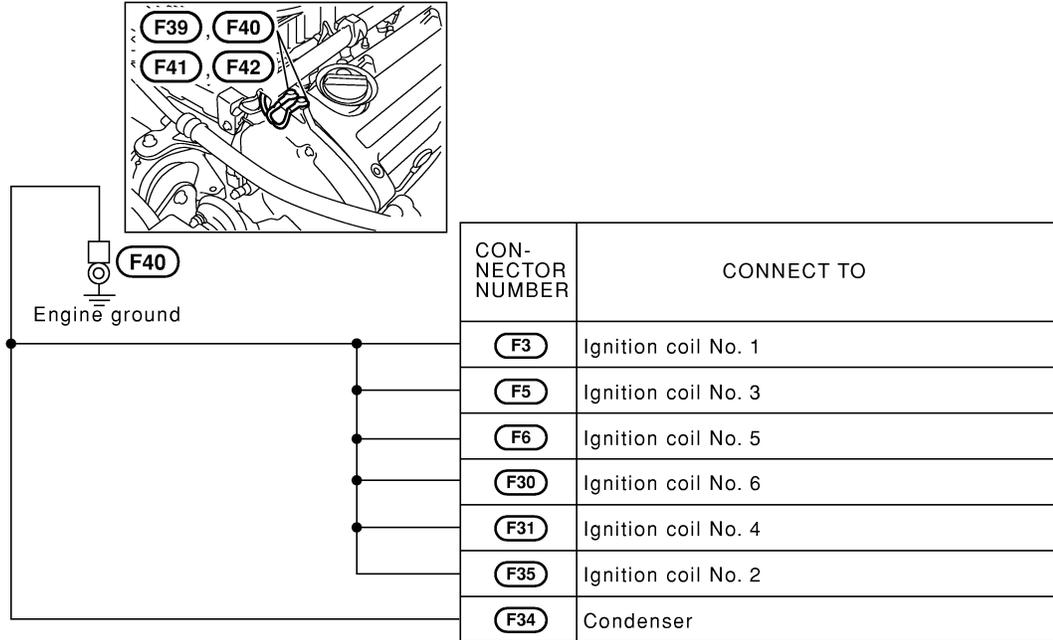
NFEL0008S03



MEL095N

GROUND

Ground Distribution (Cont'd)



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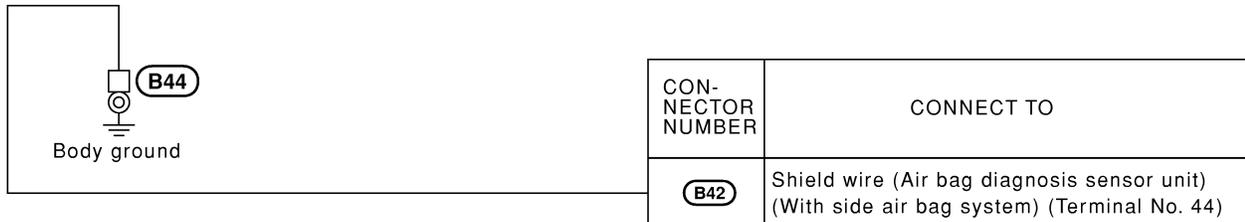
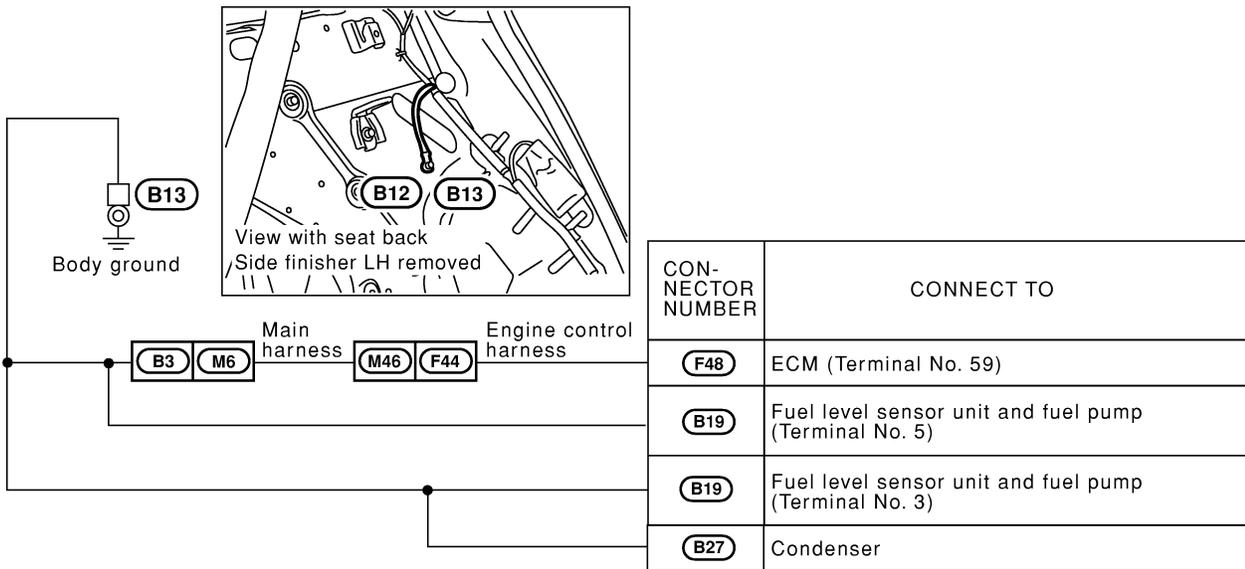
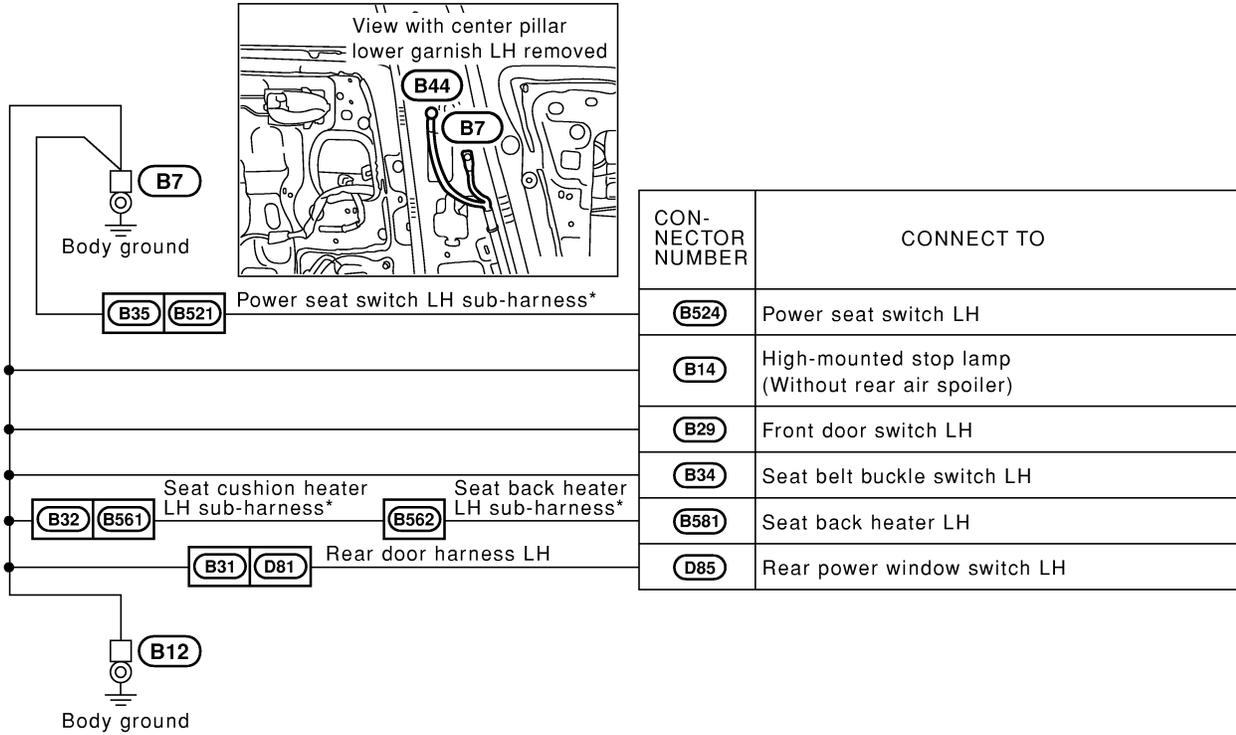
MEL096N

GROUND

Ground Distribution (Cont'd)

NFEL0008S04

BODY HARNESS

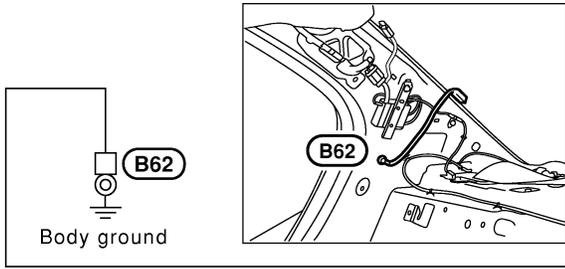


*: This sub-harness is not shown in "Harness layout", EL-section.

MEL097N

GROUND

Ground Distribution (Cont'd)



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

MEL347K

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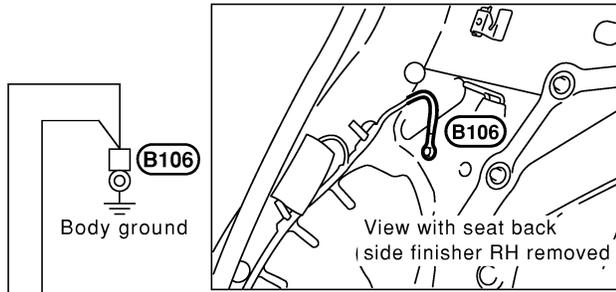
IDX

GROUND

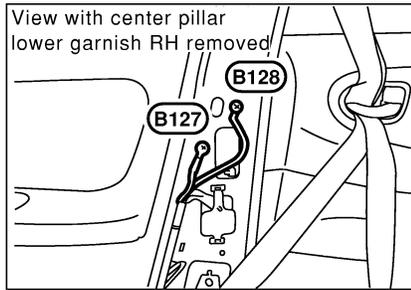
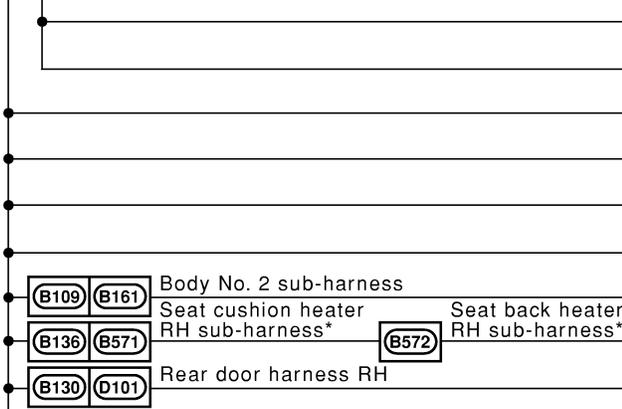
Ground Distribution (Cont'd)

BODY NO. 2 HARNESS

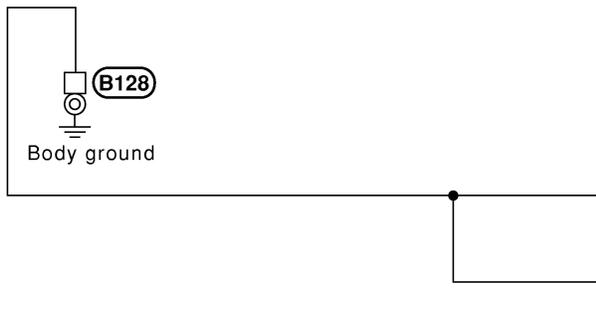
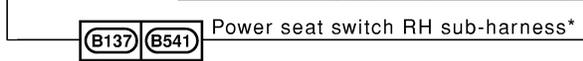
=NFEL0008S05



CON-NECTOR NUMBER	CONNECT TO
B123	Woofer (With BOSE system)
B124	BOSE speaker amp. (With BOSE system)
B108	Trunk lid key cylinder switch
B110	License lamp RH
B111	License lamp LH
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



CON-NECTOR NUMBER	CONNECT TO
B135	Shield wire (Air bag diagnosis sensor unit) (With side air bag system) (Terminal No. 39)
B135	Shield wire (Air bag diagnosis sensor unit) (With side air bag system) (Terminal No. 40)

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

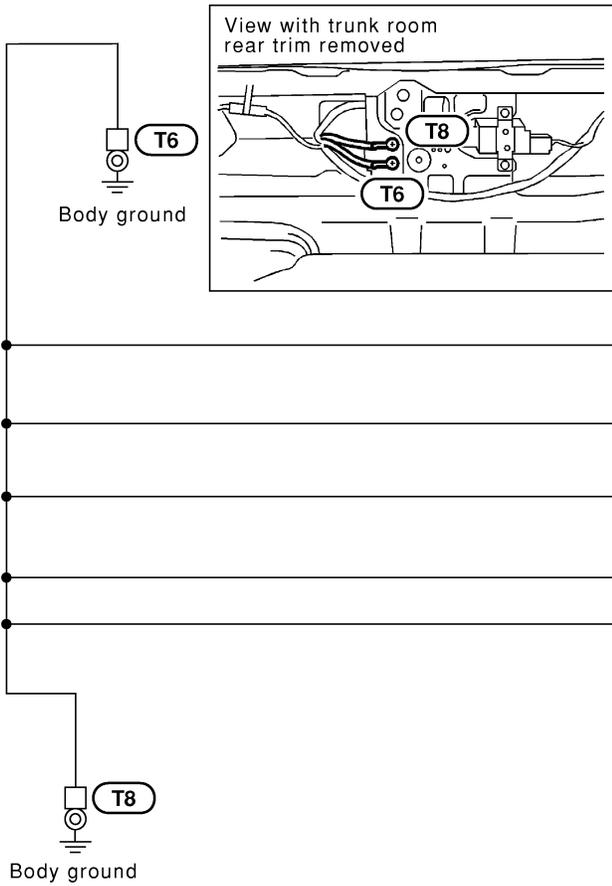
MEL098N

GROUND

Ground Distribution (Cont'd)

TAIL HARNESS

NFEL0008S06



CON-NECTOR NUMBER	CONNECT TO
T1	Rear combination lamp LH • Turn signal lamp • Tail/Stop lamp • Back-up lamp
T2	Rear side marker lamp LH
T5	Rear combination lamp RH • Turn signal lamp • Tail/Stop lamp • Back-up lamp
T7	Rear side marker lamp RH
T9	Trunk room lamp switch

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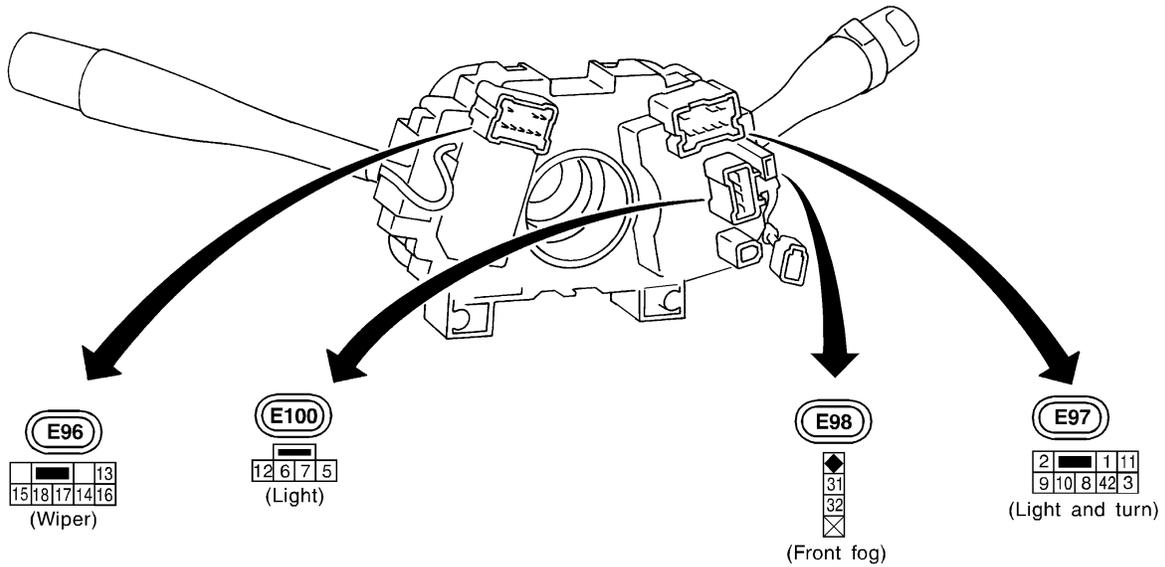
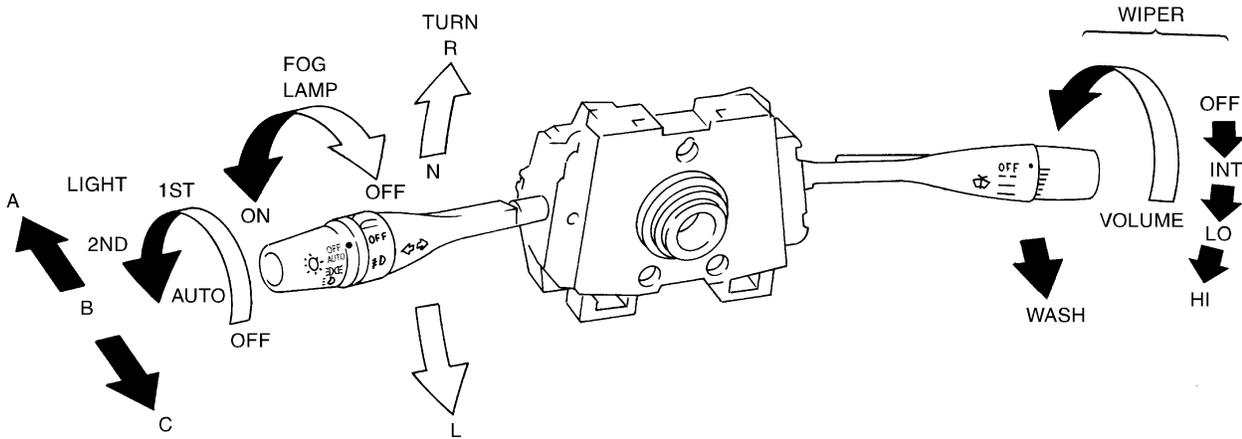
IDX

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"/>

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"/>		<input type="checkbox"/>

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

VARIABLE INTERMITTENT WIPER VOLUME



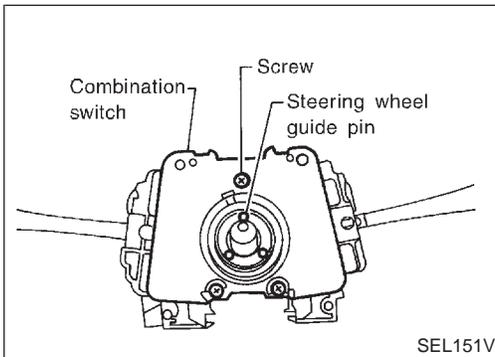
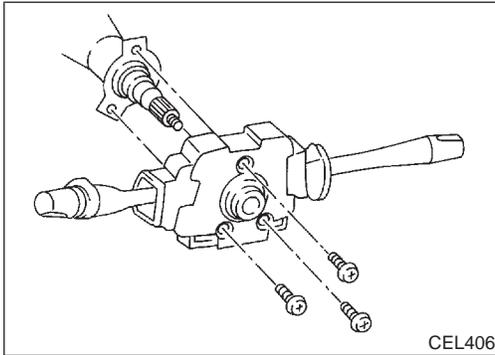
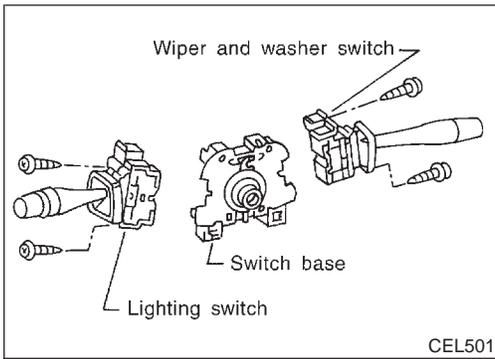
FRONT FOG LAMP SWITCH

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

TURN SIGNAL LAMP SWITCH

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

MEL335K



Replacement

For removal and installation of spiral cable, refer to RS-26, ^{NFEL0010} "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.

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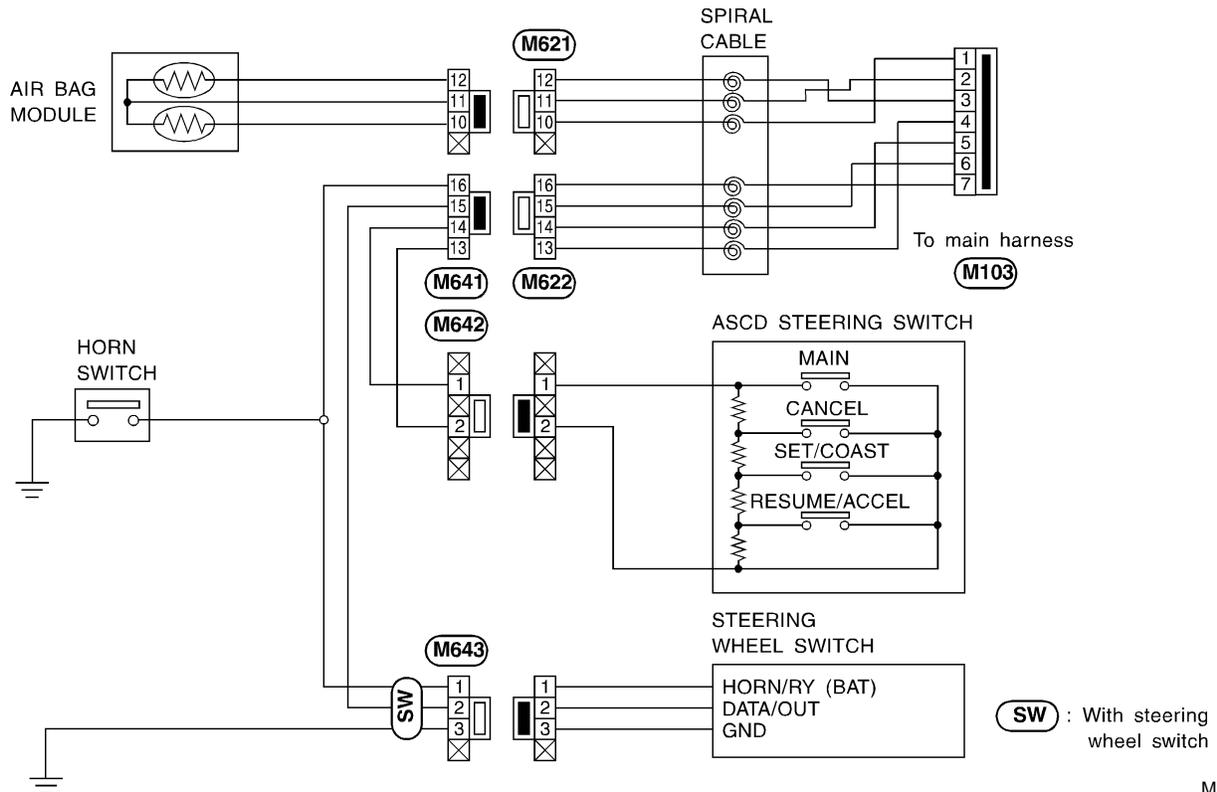
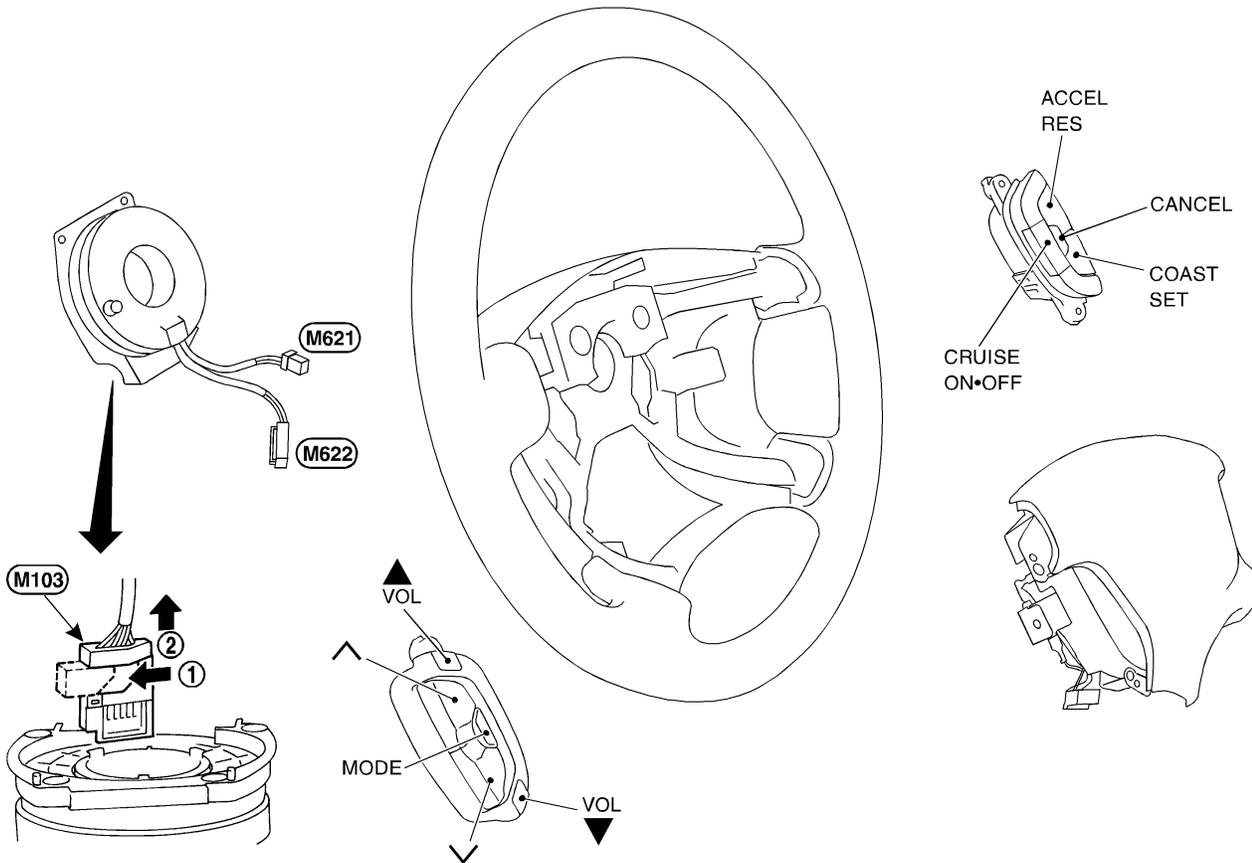
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STEERING SWITCH

Check

NFEL0011

Check



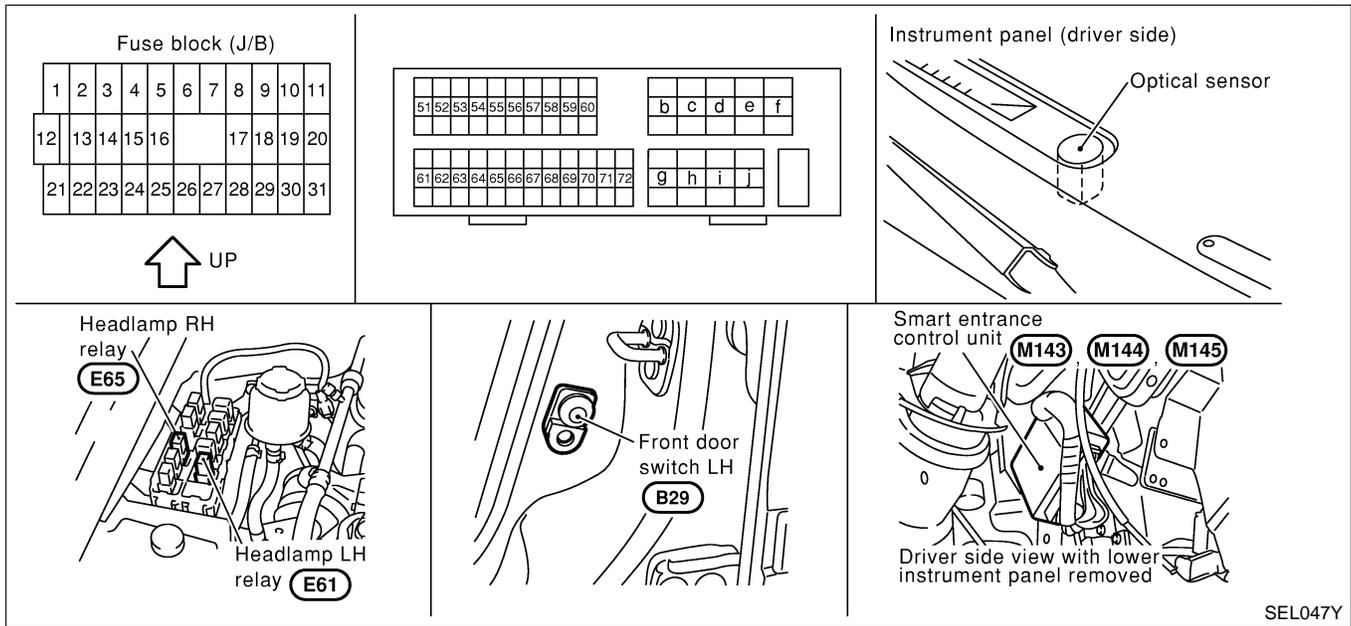
MEL781M

HEADLAMP (FOR USA)

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NFEL0197



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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

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 smart entrance control unit terminal 49
- through 10A fuse [No. 13, located in the fuse block (J/B)].

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

- to smart entrance control unit terminal 27
- through 10A fuse [No. 10, located in the fuse block (J/B)].

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

- to smart entrance control unit terminal 26
- through 10A fuse [No. 1, located in the fuse block (J/B)]

Ground is supplied

- to smart entrance control unit terminals 43 and 64
- through body grounds M9, M25 and M87.

POWER SUPPLY TO LOW BEAM AND HIGH BEAM

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

- to headlamp LH relay terminal 2 from smart entrance control unit terminal 21
- through smart entrance control unit terminal 22,
- from lighting switch terminal 12, and
- to headlamp RH relay terminal 2 from smart entrance control unit terminal 59
- through smart entrance control unit terminal 60,
- from lighting switch terminal 12.

Headlamp relays (LH and RH) are energized and then power is supplied to headlamps (LH and RH).

NFEL0198S01

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NFEL0198S07

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HEADLAMP (FOR USA)

System Description (Cont'd)

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

Headlamps will remain on for a short while after the ignition switch is turned ON (or START) from OFF (or ACC).

Continuity between terminals 21 and 22, and between terminals 59 and 60 of smart entrance control unit will be disturbed after 45 seconds, then the headlamps will be turned off.

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 smart entrance control unit terminals 20 and 58 from lighting switch terminal 11, and then,
- to headlamp LH and RH relays terminal 2 from smart entrance control unit terminals 21 and 59,
- through smart entrance control unit terminals 22 and 60 and
- through lighting switch terminal 12.

Then headlamps illuminate again.

AUTO LIGHT OPERATION

NFEL0198S06

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

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

- to smart entrance control unit terminal 23
- from lighting switch terminal 42.

When ignition switch is turn to "ON" or "START" position and Outside brightness is darker than prescribed level.

Ground is supplied

- to headlamp relay LH and RH terminals 2

- through smart entrance control unit terminal 21, 59 and 43, 64.

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.

NOTE:

The delay time changes (maximum of 20 seconds) as the outside brightness changes.

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

VEHICLE SECURITY SYSTEM

The vehicle security system will flash the high beams if the system is triggered. Refer to "VEHICLE SECURITY (THEFT WARNING) SYSTEM" (EL-291). NFEL0198S05

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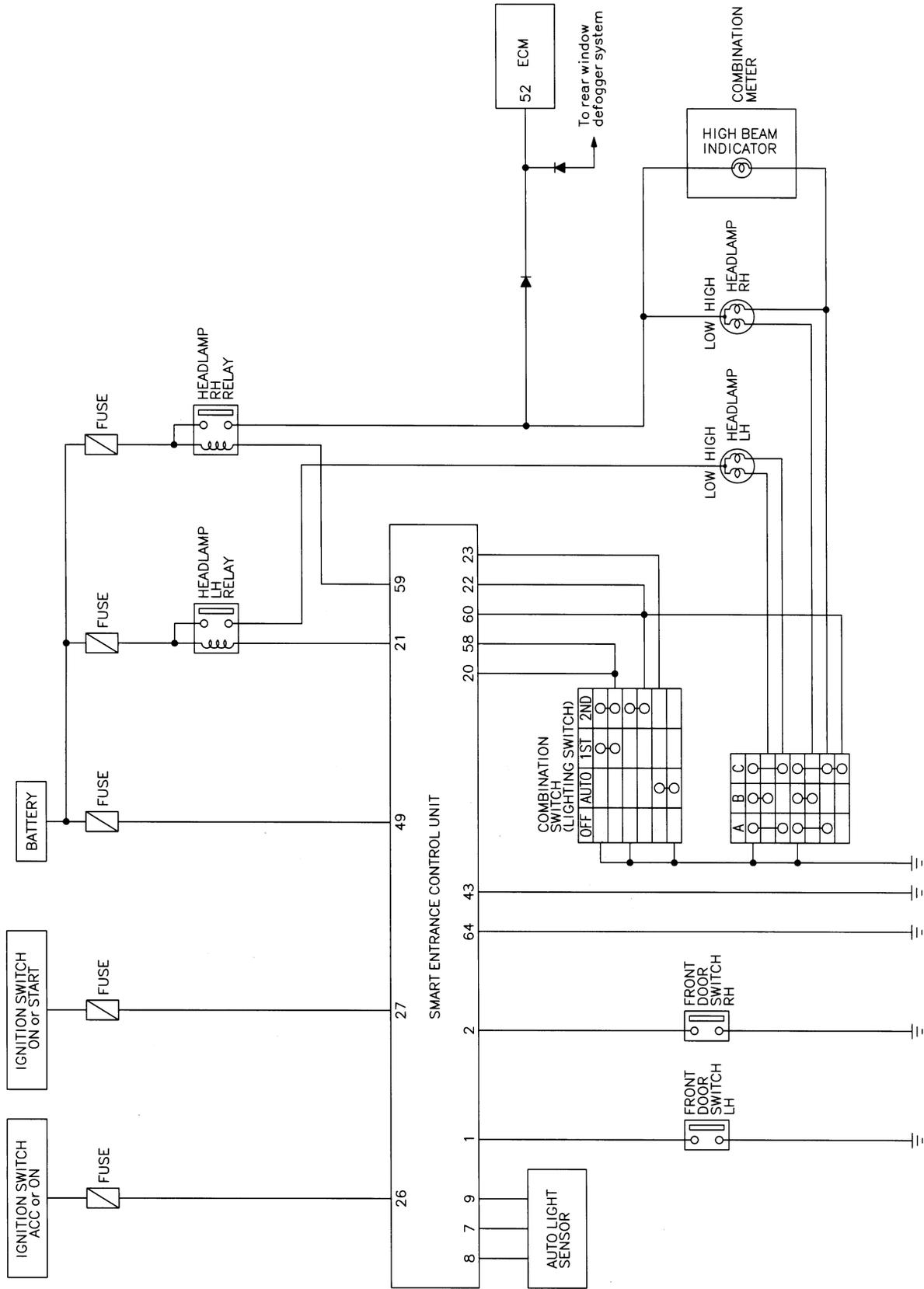
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HEADLAMP (FOR USA)

Schematic

Schematic

NFEL0199



MEL012N

HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP —

Wiring Diagram — H/LAMP —

NFEL0013

EL-H/LAMP-01

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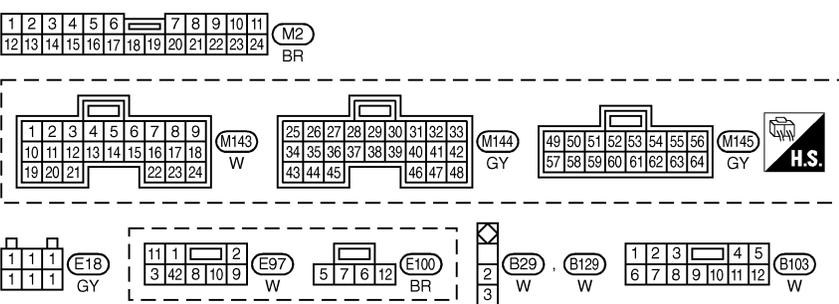
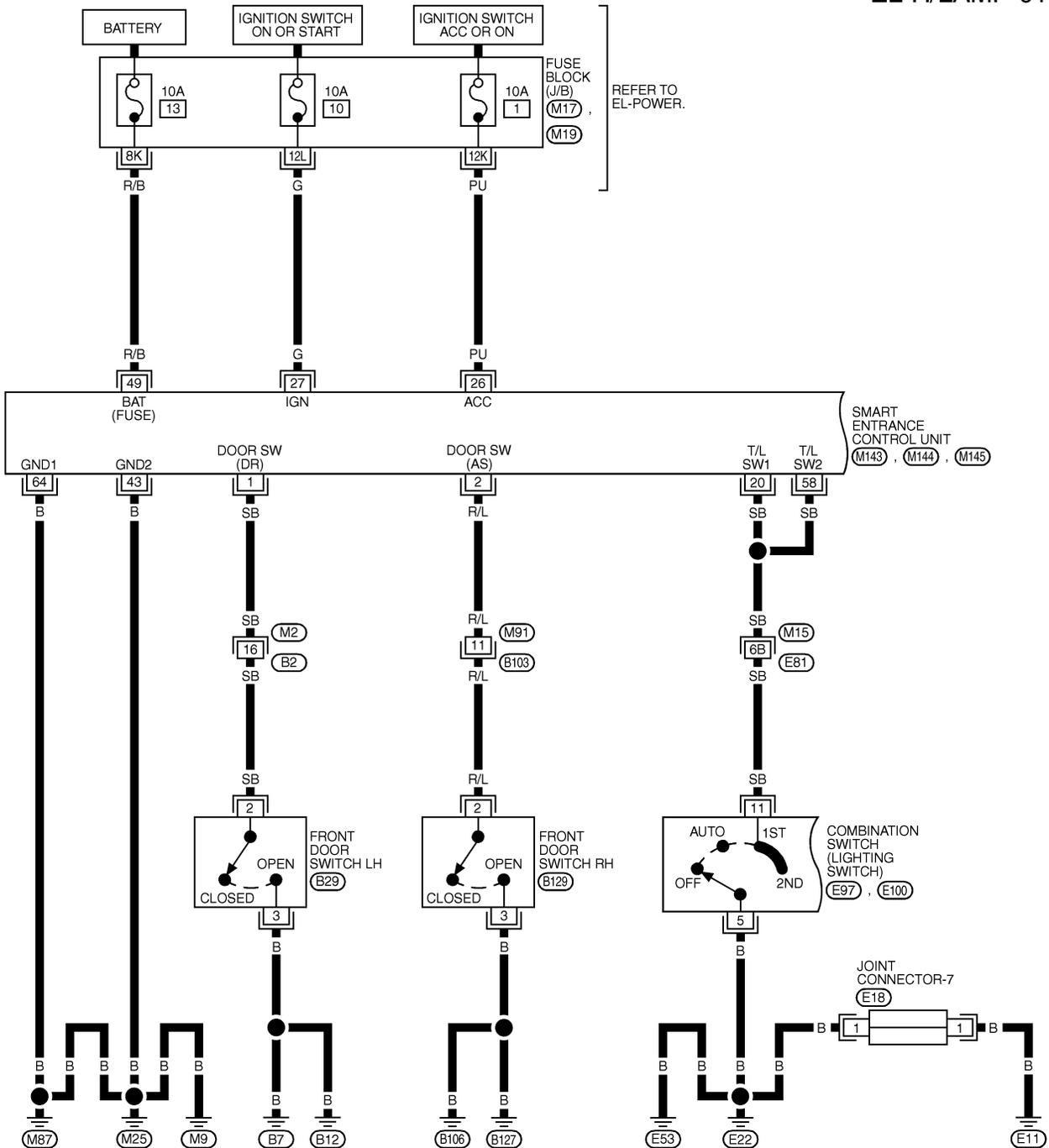
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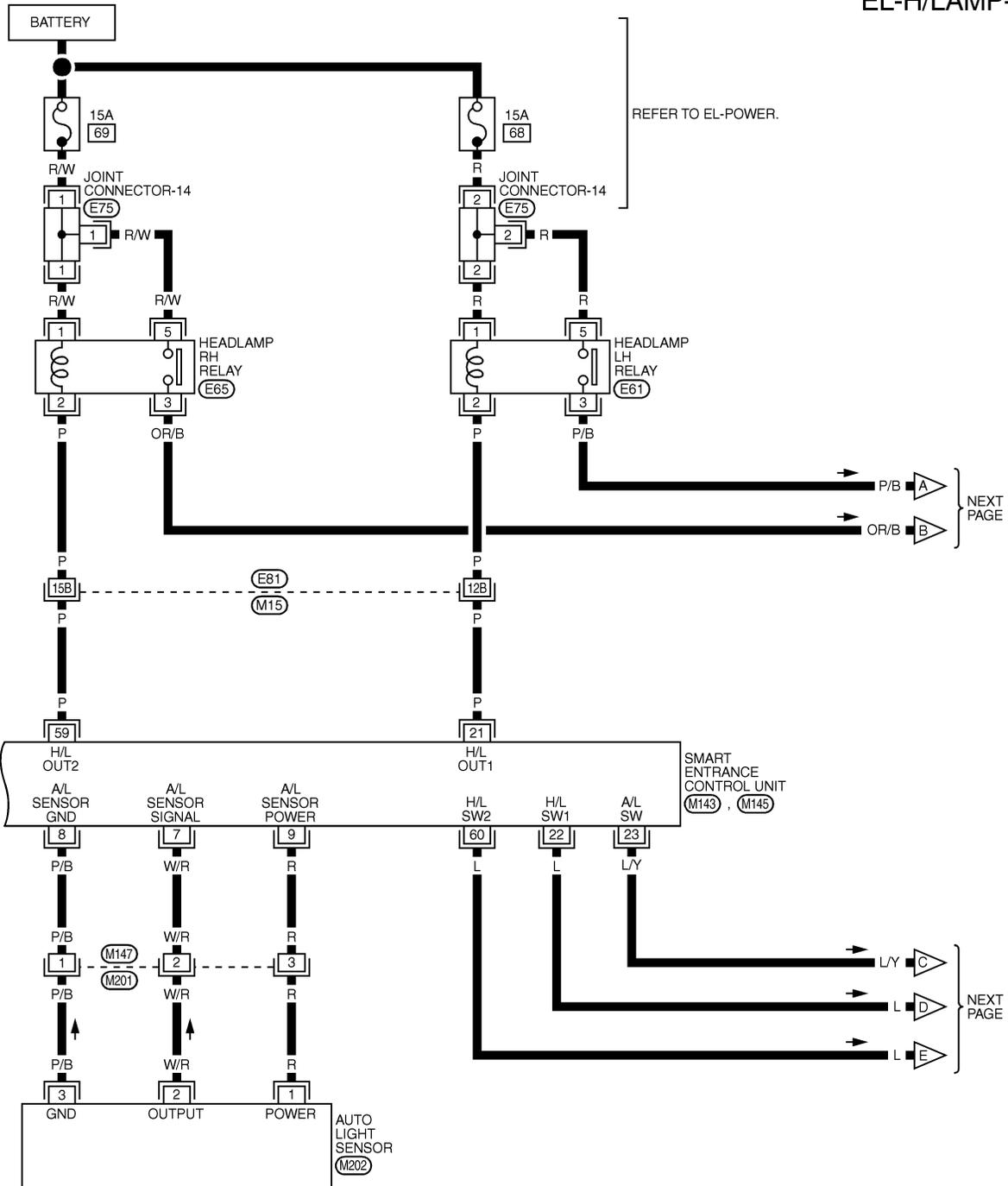


REFER TO THE FOLLOWING.
 (M15) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M17), (M19) -FUSE BLOCK-
 JUNCTION BOX (J/B)

HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP — (Cont'd)

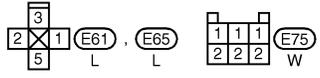
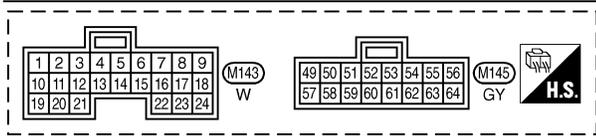
EL-H/LAMP-02



REFER TO EL-POWER.

NEXT PAGE

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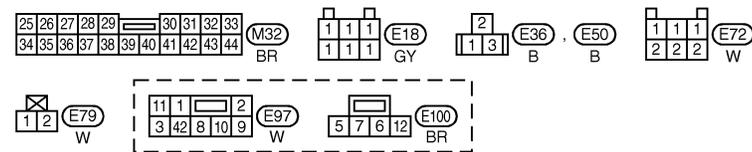
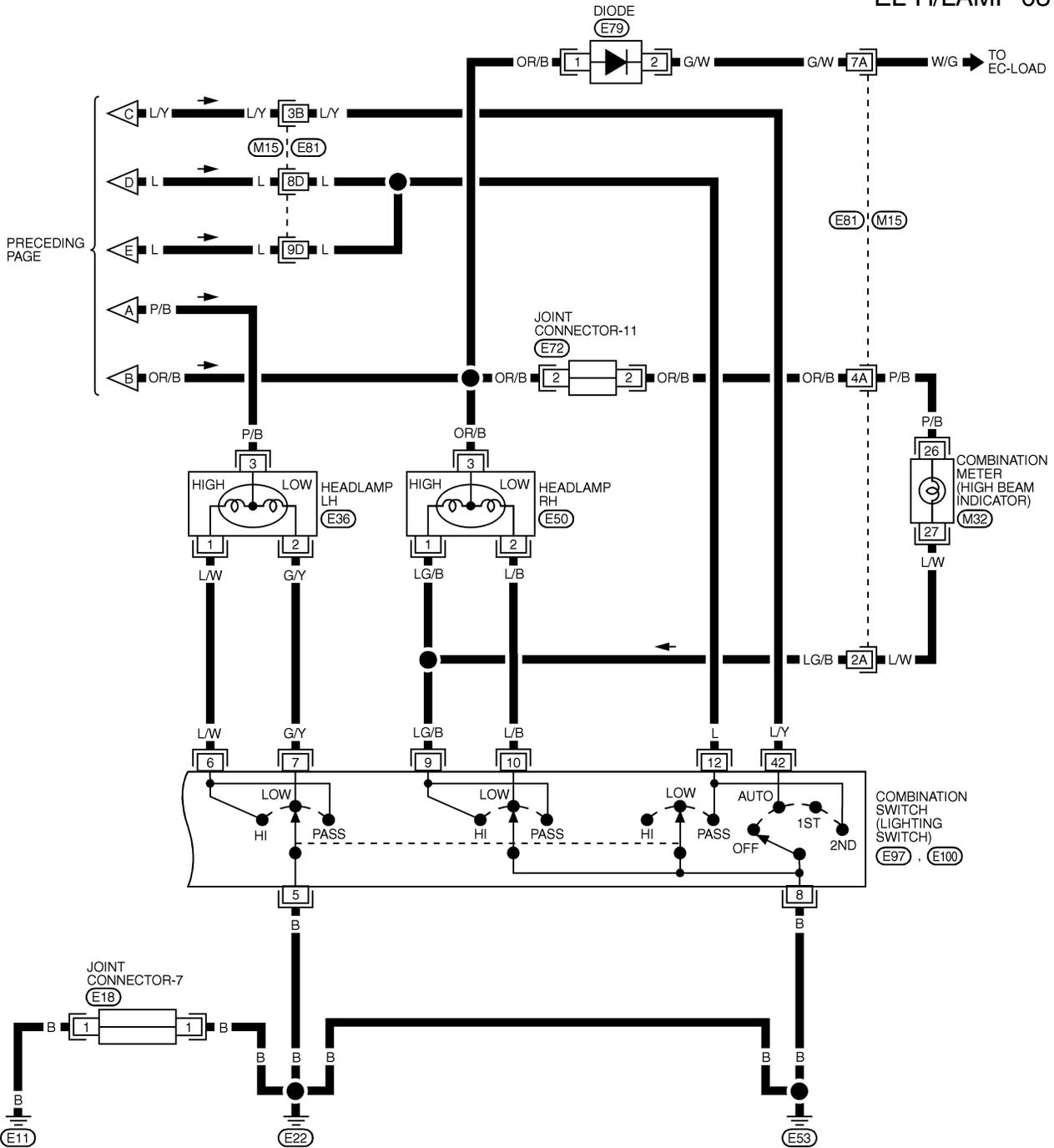
REFER TO THE FOLLOWING.
 (M15) - SUPER
 MULTIPLE JUNCTION (SMJ)

MEL014N

HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP — (Cont'd)

EL-H/LAMP-03



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

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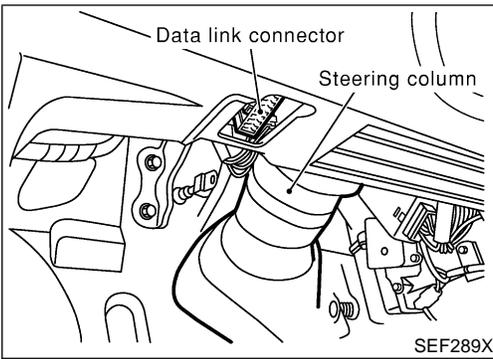
HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP — (Cont'd)

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

TERMINAL	WIRE COLOR	ITEM	CONDITION		DATA (DC)			
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V			
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V			
7	W/R	AUTO LIGHT SENSOR (SIGNAL)	IGNITION SWITCH "ON" POSITION	HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL OPERATE → NOT OPERATE	5V → 1V			
8	P/B	AUTO LIGHT SENSOR (GND)	-		-			
9	R	AUTO LIGHT SENSOR (POWER)	IGNITION SWITCH (OFF → ON)		0V → 5V			
20	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V			
21	P	HEADLAMP LH RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH OFF OR 1ST)	OFF	MORE THAN 45 SECONDS	12V		
				ON OR START	WITHIN 45 SECONDS	0V		
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL					0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL					0V
22	L	HEADLAMP SWITCH	LIGHTING SWITCH	EXCEPT PASS OR 2ND POSITION		12V		
				PASS OR 2ND POSITION		0V		
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL OPERATE → NOT OPERATE					LESS THAN 1.5V → 12V
23	L/Y	HEADLAMP SWITCH	IGNITION SWITCH "ON" POSITION	LIGHTING SWITCH (EXCEPT AUTO → AUTO POSITION)	12V → 0V			
26	PU	IGNITION SWITCH (ACC)	"ACC" POSITION		12V			
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION		12V			
43	B	GROUND	-		-			
49	R/B	POWER SOURCE (FUSE)	-		12V			
58	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V			
59	P	HEADLAMP RH RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH OFF OR 1ST)	OFF	MORE THAN 45 SECONDS	12V		
				ON OR START	WITHIN 45 SECONDS	0V		
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL OPERATE → NOT OPERATE					LESS THAN 1.5V → 12V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL OPERATE → NOT OPERATE					12V
60	L	HEADLAMP SWITCH	LIGHTING SWITCH	EXCEPT PASS OR 2ND POSITION		12V		
				PASS OR 2ND POSITION		0V		
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)					0V → 12V
64	B	GROUND	-		-			

SEL194Y



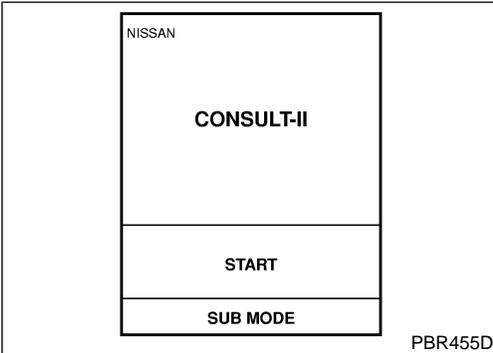
CONSULT-II Inspection Procedure

NFEL0200

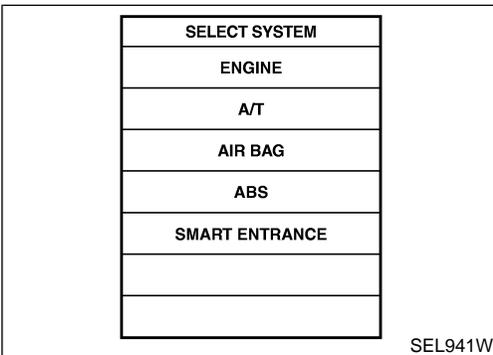
NFEL0200S01

“RETAINED PWR”

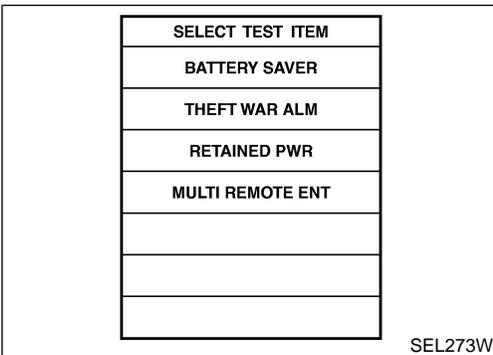
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



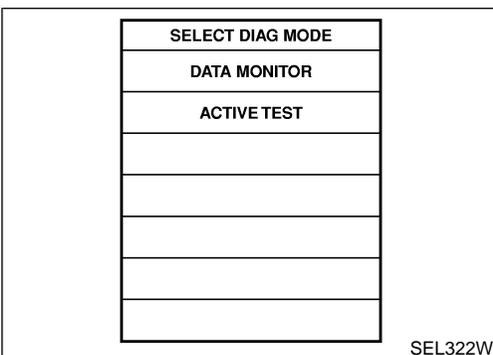
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “RETAINED PWR”.



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

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HEADLAMP (FOR USA)

CONSULT-II Application Items

CONSULT-II Application Items

NFEL0201

NFEL0201S01

NFEL0201S0101

“RETAINED PWR”

Data Monitor

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. Those systems can be operated when turning on “RETAINED PWR” on CONSULT-II screen even if the ignition switch is turned OFF.</p> <p>NOTE: 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

NFEL0255

Symptom	Possible cause	Repair order
Neither headlamp operates.	<ol style="list-style-type: none"> 10A fuse Lighting switch Smart entrance control unit 	<ol style="list-style-type: none"> Check 10A fuse [No. 13, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 49 of smart entrance control unit. Check Lighting switch. Check smart entrance control unit. (EL-328)
LH headlamp (low and high beam) does not operate, but RH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> 15A fuse Headlamp LH relay Headlamp LH relay circuit Lighting switch circuit Smart entrance control unit 	<ol style="list-style-type: none"> 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. Check headlamp LH relay. Check the following. <ol style="list-style-type: none"> Harness between headlamp LH relay and headlamp LH. Harness between headlamp LH relay and smart entrance control unit. Check harness between smart entrance control unit and lighting switch. Check smart entrance control unit. (EL-328)
RH headlamp (low and high beam) does not operate, but LH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> 15A fuse Headlamp RH relay Headlamp RH relay circuit Lighting switch circuit Smart entrance control unit 	<ol style="list-style-type: none"> 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. Check headlamp RH relay. Check the following. <ol style="list-style-type: none"> Harness between headlamp RH relay and headlamp RH. Harness between headlamp RH relay and smart entrance control unit. Check harness between smart entrance control unit and lighting switch. Check smart entrance control unit. (EL-328)
LH high beam does not operate, but LH low beam does operate.	<ol style="list-style-type: none"> Bulb Open in LH high beams circuit Lighting switch 	<ol style="list-style-type: none"> Check bulb. Check the harness between lighting switch and LH headlamp for an open circuit. Check lighting switch.

HEADLAMP (FOR USA)

Trouble Diagnoses (Cont'd)

Symptom	Possible cause	Repair order	
LH low beam does not operate, but LH high beam does operate.	1. Bulb 2. Open in LH low beams circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and LH headlamp for an open circuit. 3. Check lighting switch.	GI MA
RH high beam does not operate, but RH low beam does operate.	1. Bulb 2. Open in RH high beams circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and RH headlamp for an open circuit. 3. Check lighting switch.	EM
RH low beam does not operate, but RH high beam does operate.	1. Bulb 2. Open in RH low beams circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and RH headlamp for an open circuit. 3. Check lighting switch.	LC EC
High beam indicator does not work.	1. Bulb 2. Open in high beam circuit	1. Check bulb in combination meter. 2. Check the following. a. Harness between headlamp RH relay and combination meter for an open circuit b. Harness between combination meter and combination switch for an open circuit	FE CL
Battery saver control does not operate properly.	1. Door switch LH or RH circuit 2. Smart entrance control unit	1. Check the following. a. Harness between smart entrance control unit and LH or RH door switch for open or short circuit b. LH or RH door switch ground circuit c. LH or RH door switch 2. Check smart entrance control unit. (EL-328)	MT AT

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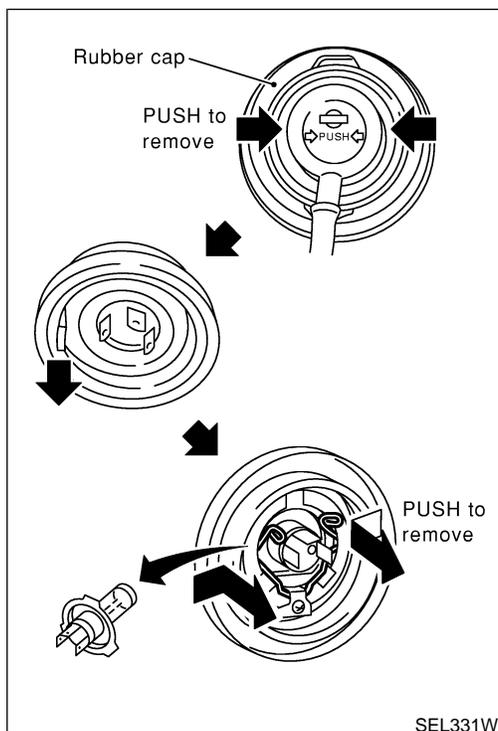
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Bulb Replacement

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.

HEADLAMP (FOR USA)

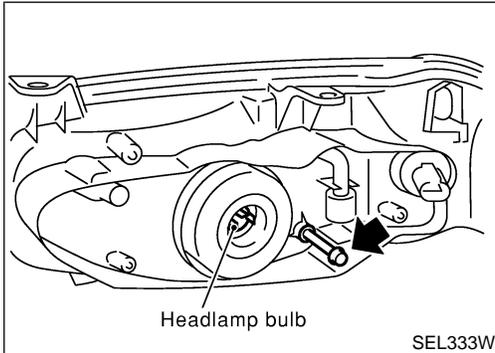
Aiming Adjustment

NFEL0016

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

Before performing aiming adjustment, check the following.

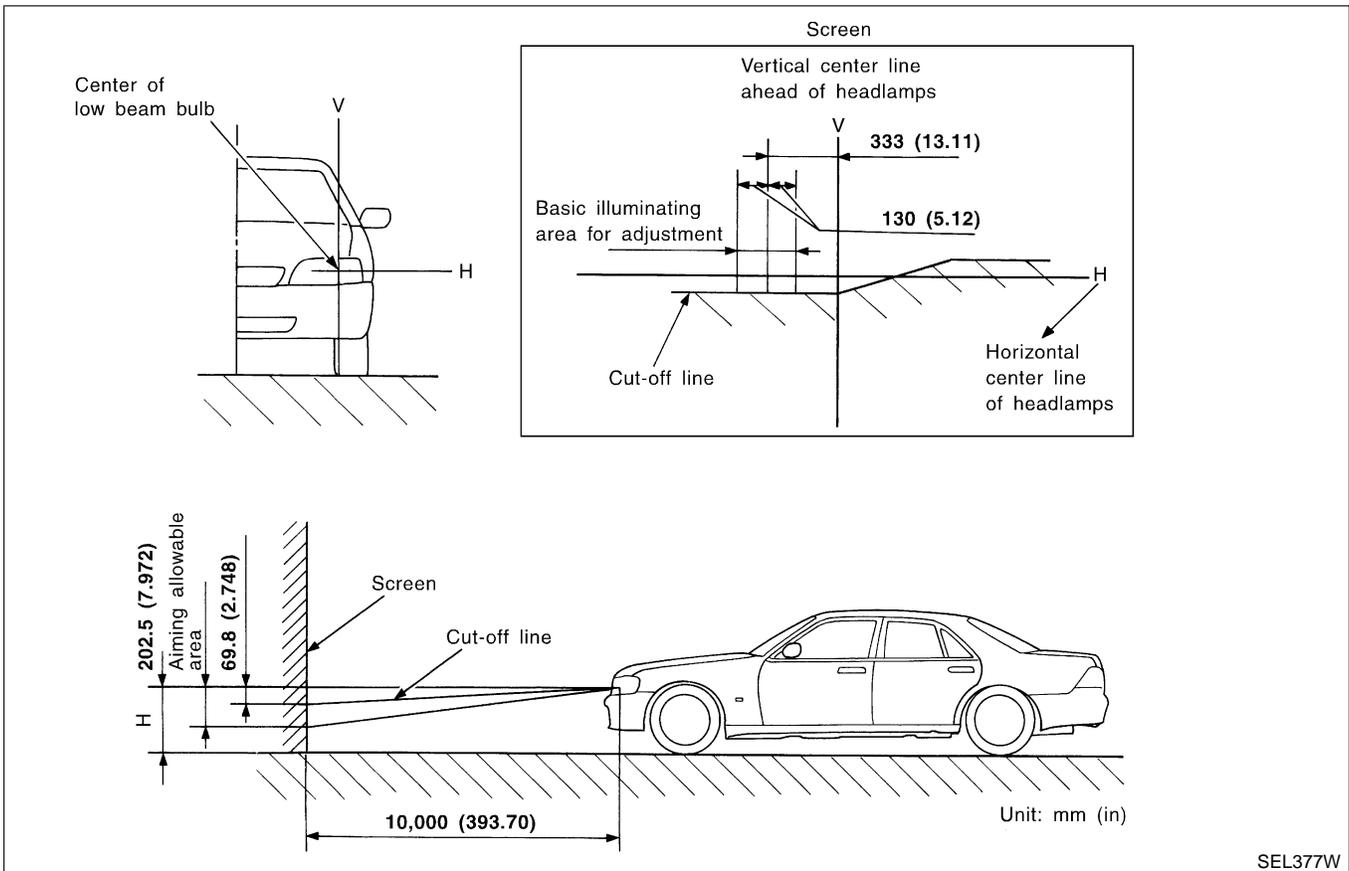
- 1) Keep all tires inflated to correct pressures.
- 2) Place vehicle on flat surface.
- 3) See that there is no-load in vehicle (coolant, engine oil filled up to correct level and full fuel tank) other than the driver (or equivalent weight placed in driver's position).



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.**



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.

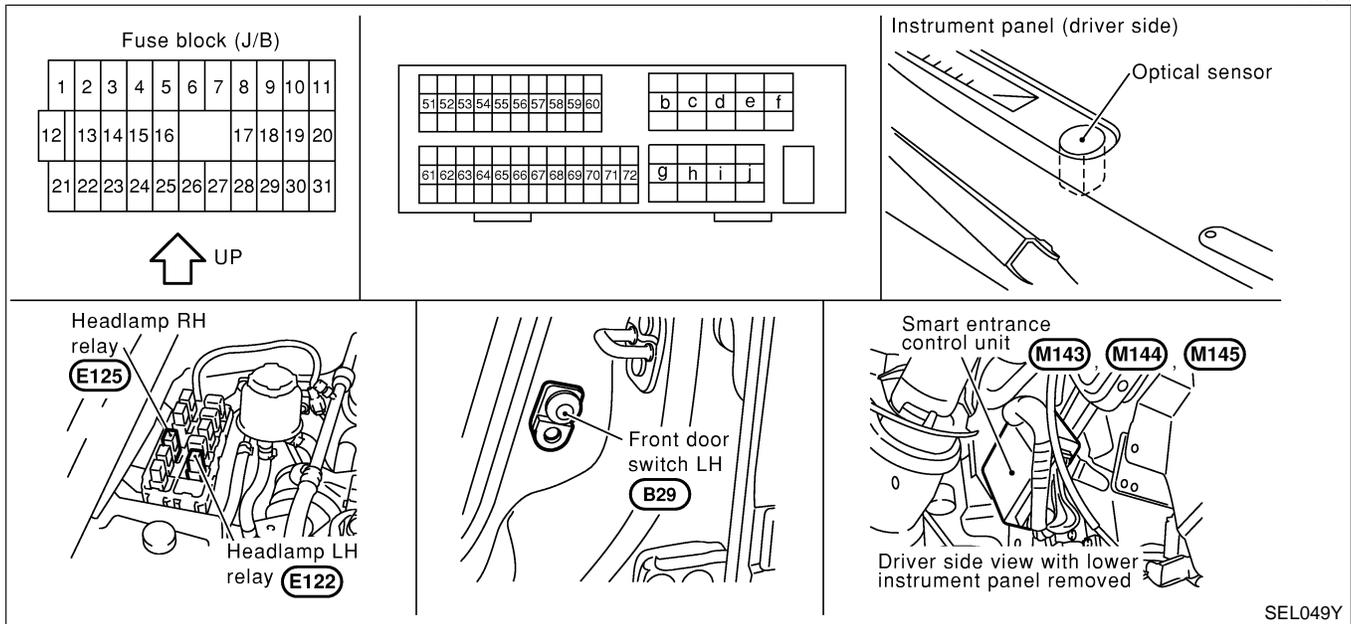
- **Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.**

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NFEL0203



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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 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 smart entrance control unit terminal 49
- through 10A fuse [No. 13, located in the fuse block (J/B)].

Ground is supplied

- to daytime light control unit terminal 16 and
- to smart entrance control unit terminals 43 and 64

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

- to daytime light control unit terminal 3
- through 10A fuse [No. 28, located in the fuse block (J/B)], and
- to smart entrance control unit terminal 27
- through 10A fuse [No. 10, located in the fuse block (J/B)].

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

- to smart entrance control unit terminal 26
- through 10A fuse [No. 1, 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

Power Supply to Low Beam and High Beam

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

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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

System Description (Cont'd)

- to headlamp LH relay terminal 2 from smart entrance control unit terminal 21
- through smart entrance control unit terminal 22
- from lighting switch terminal 12, and
- to headlamp RH relay terminal 2 from smart entrance control unit terminal 59
- through smart entrance control unit terminal 60
- from lighting switch terminal 12.

Headlamp relays (LH and RH) are energized and then power is supplied to headlamps (LH and RH).

Low Beam Operation

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

NFEL0204S0103

- 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.

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.

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

High Beam Operation/Flash-to-pass Operation

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

NFEL0204S0104

- 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.

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.

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

BATTERY SAVER CONTROL

Headlamps will remain on for a short while after the ignition switch is turned ON (or START) from OFF (or ACC).

NFEL0204S02

Continuity between terminals 21 and 22, and between terminals 59 and 60 of smart entrance control unit will be disturbed after 45 seconds, then the headlamps will be turned off.

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.

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

- to smart entrance control unit terminals 20 and 58 from lighting switch terminal 11, and then
- to headlamp LH and RH relays terminal 2 from headlamp battery saver control unit terminals 21 and 59
- through smart entrance control unit terminals 22 and 60, and
- through lighting switch terminal 12.

Then headlamps illuminate again.

AUTO LIGHT OPERATION

For auto light operation, refer to “HEADLAMP” (EL-34).

NFEL0204S05

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								
Lighting switch		OFF			1ST			2ND			OFF			1ST			2ND		
		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.

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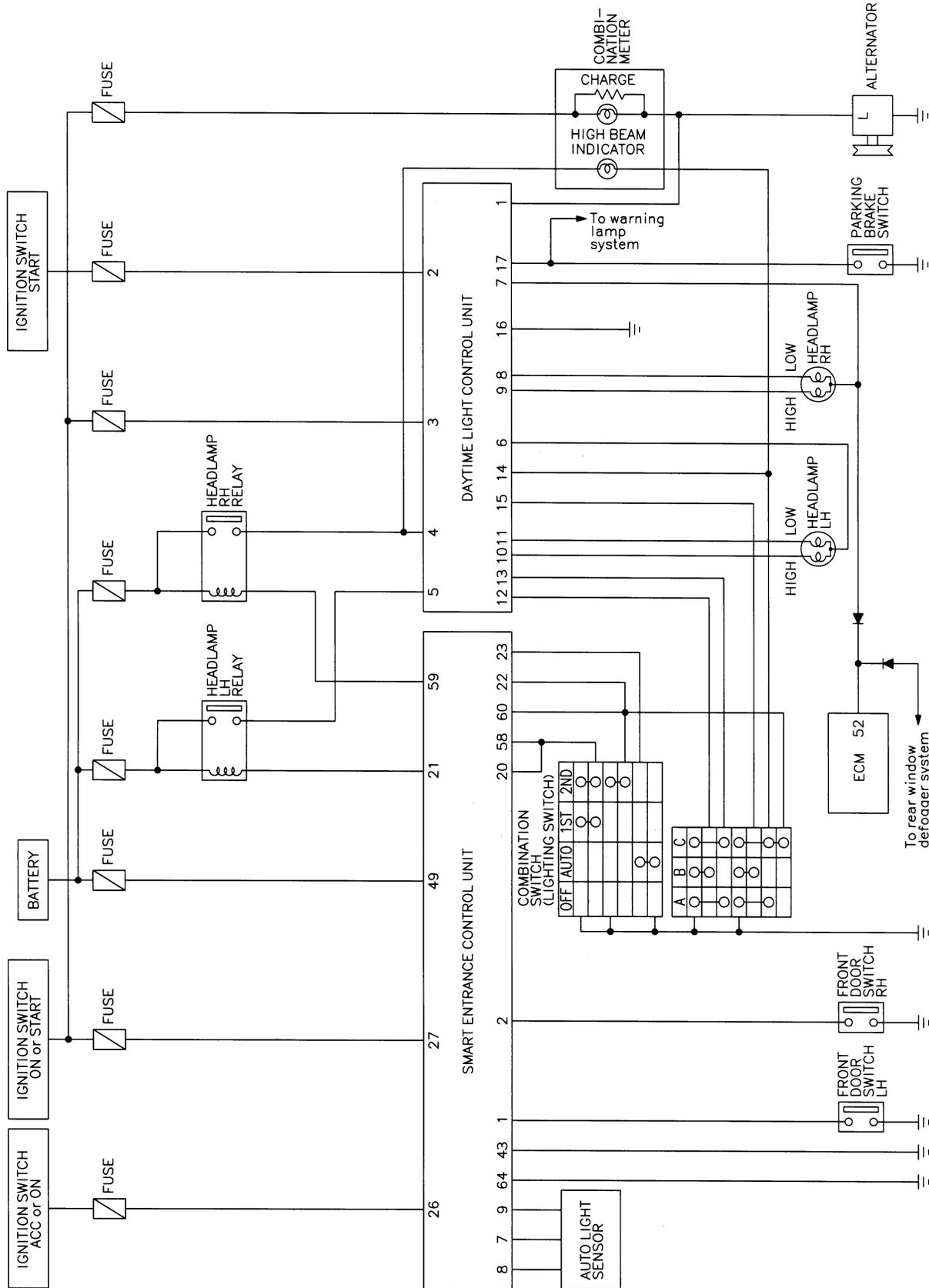
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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

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NFEL0205



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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

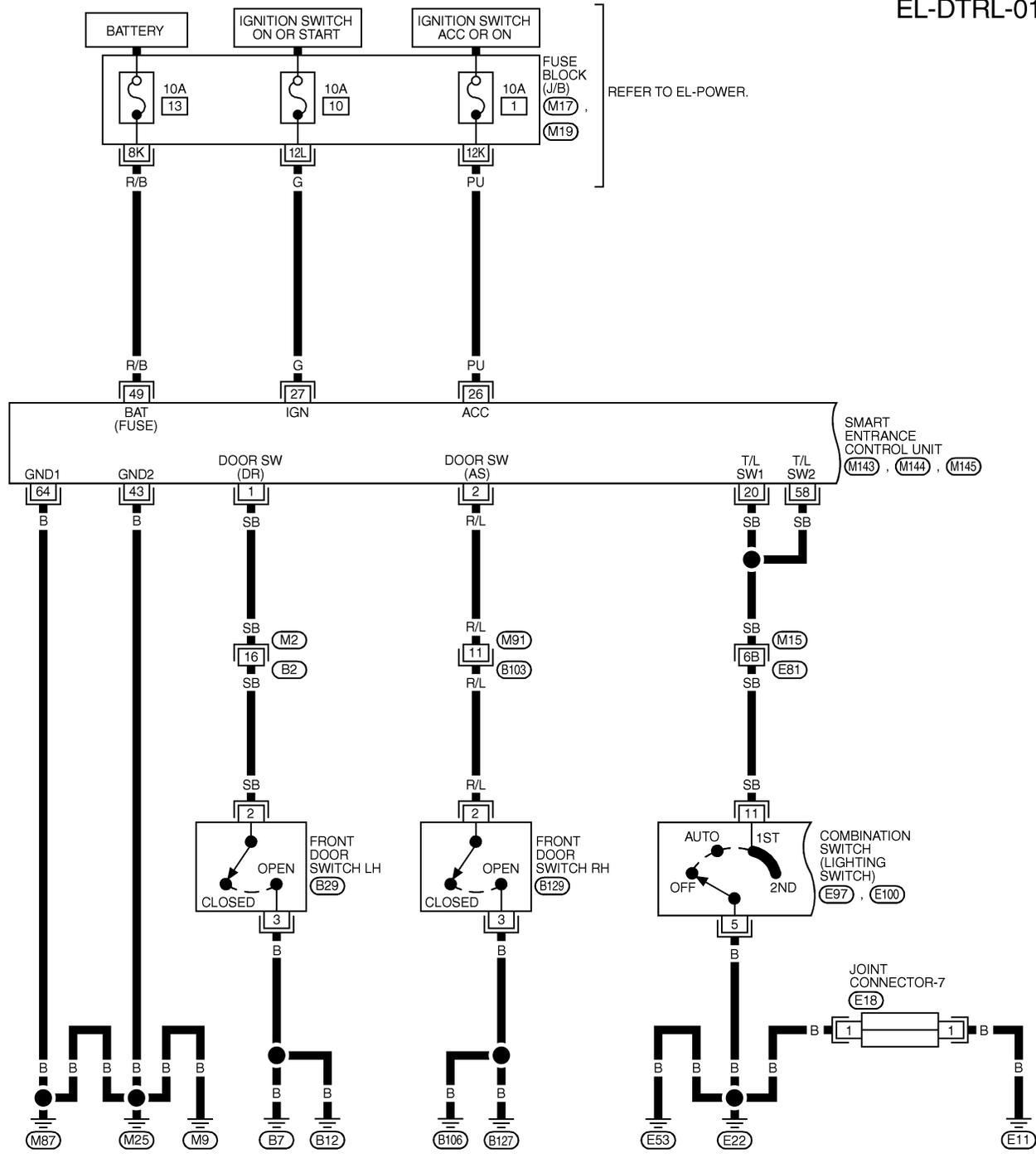
Wiring Diagram — DTRL —

Wiring Diagram — DTRL —

NFEL0020

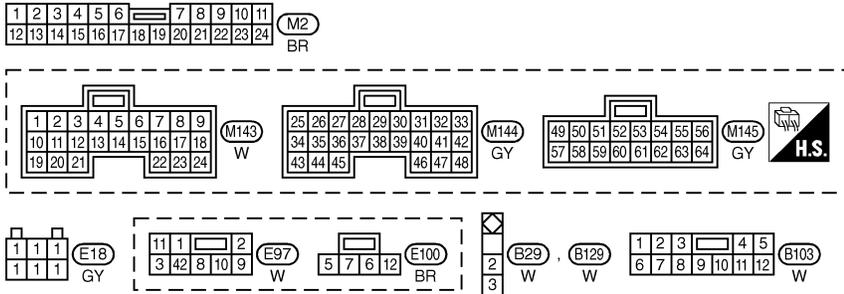
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SMART ENTRANCE CONTROL UNIT (M143, M144, M145)

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



EL

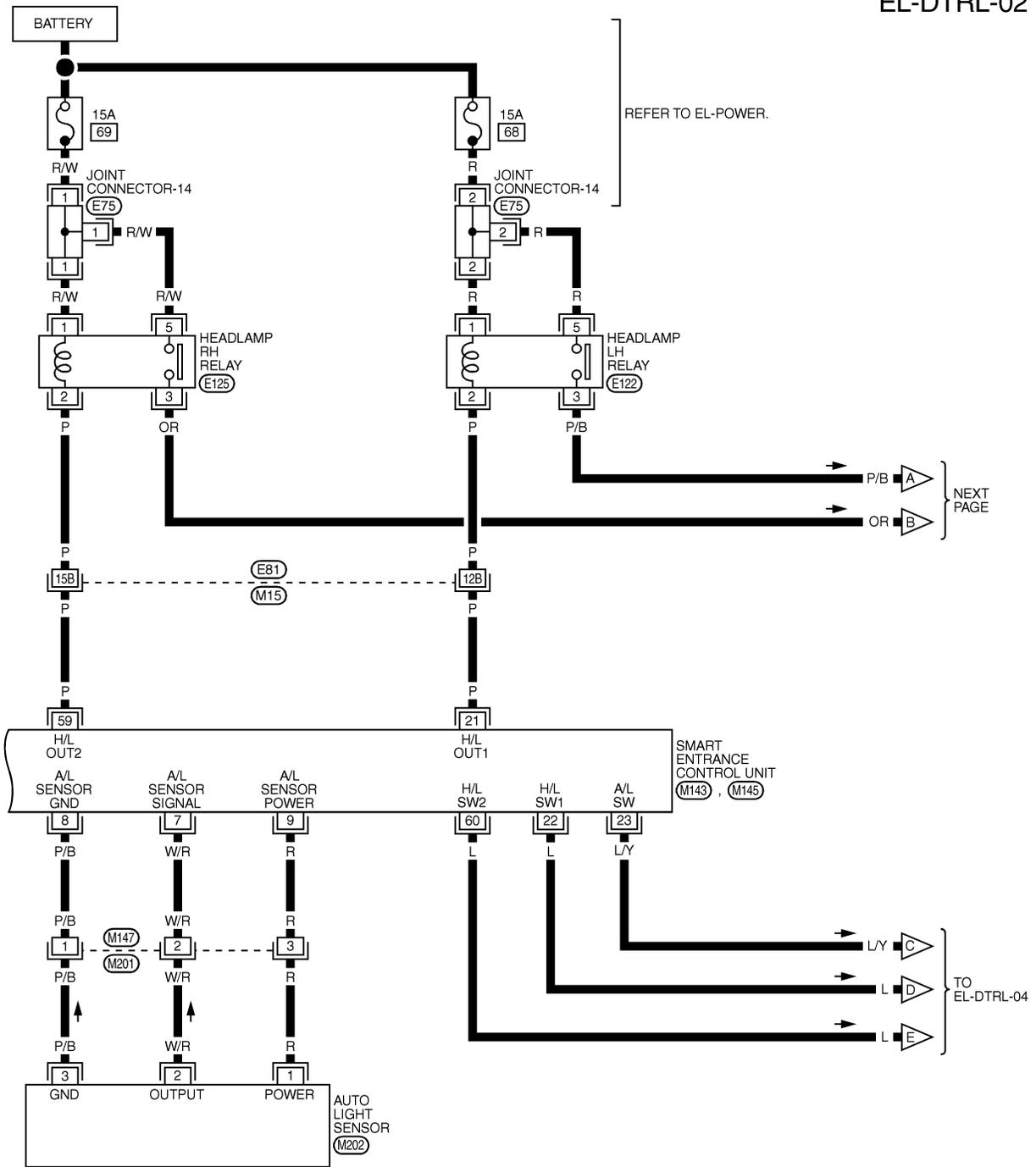
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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

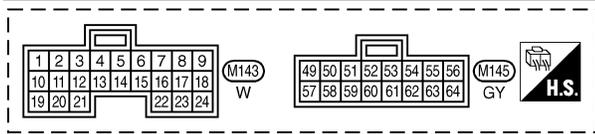
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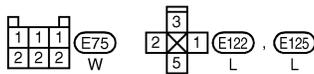
REFER TO EL-POWER.

NEXT PAGE

TO EL-DTRL-04



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

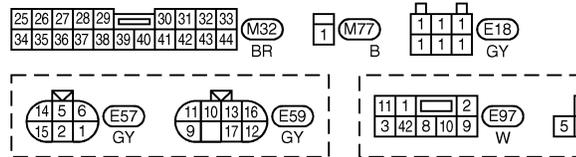
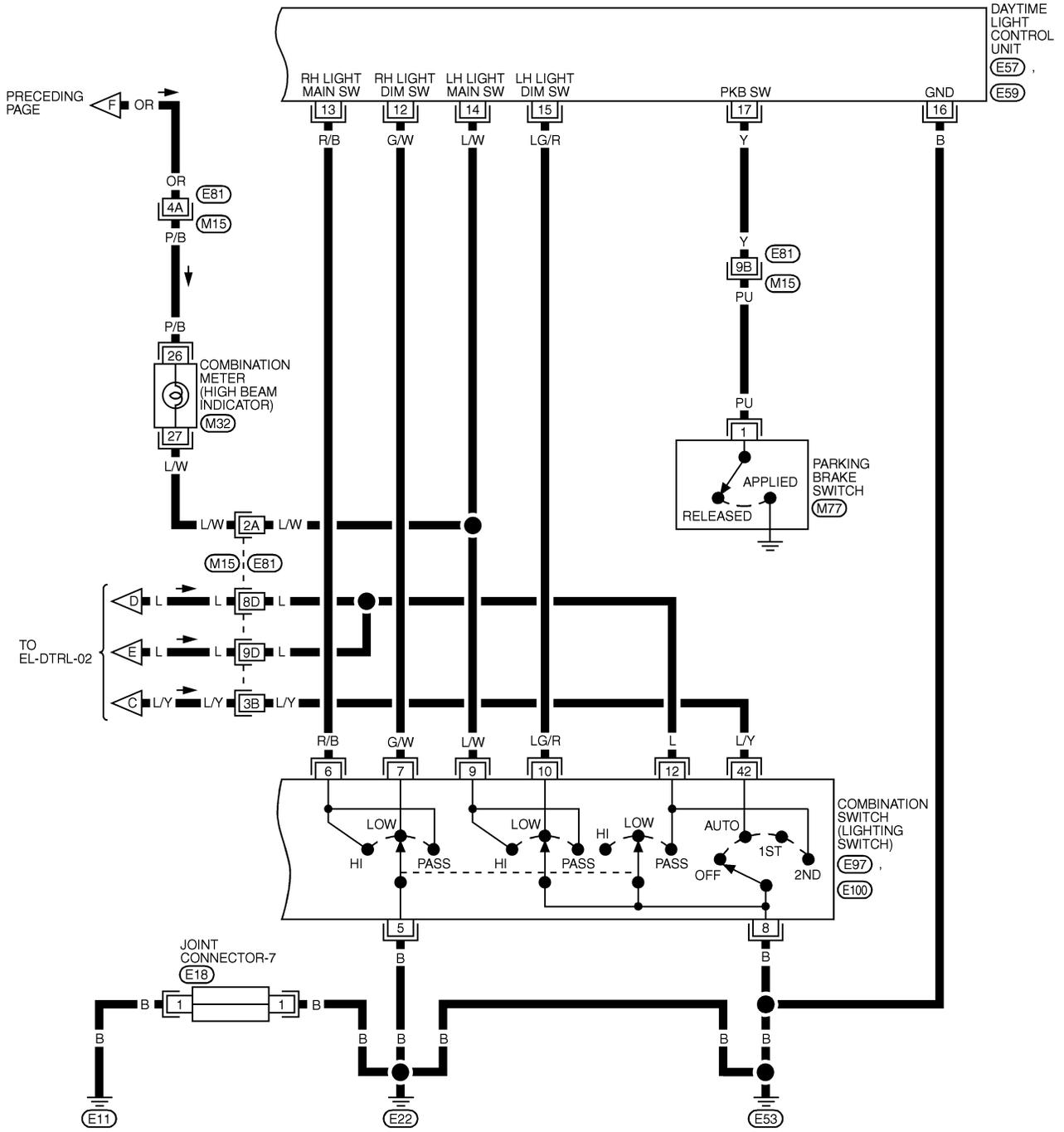


MEL018N

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-04



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

MEL020N

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Trouble Diagnoses

Trouble Diagnoses

NFEL0206

Symptom	Possible cause	Repair order	
Neither headlamp operates.	<ol style="list-style-type: none"> 1. 10A fuse 2. Lighting switch 3. Smart entrance control unit 	<ol style="list-style-type: none"> 1. Check 10A fuse [No. 13, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 49 of smart entrance control unit. 2. Check Lighting switch. 3. Check smart entrance control unit. (EL-328) 	<p>GI</p> <p>MA</p> <p>EM</p>
LH headlamp (low and high beam) does not operate, but RH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> 1. 15A fuse 2. Headlamp LH relay 3. Headlamp LH relay circuit 4. Lighting switch circuit 5. Smart entrance control unit 	<ol style="list-style-type: none"> 1. 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. 2. Check headlamp LH relay. 3. Check the following. <ol style="list-style-type: none"> a. Harness between headlamp LH relay and daytime light control unit b. Harness between headlamp LH and daytime light control unit c. Harness between headlamp LH relay and smart entrance control unit 4. Check harness between smart entrance control unit and lighting switch. 5. Check smart entrance control unit. (EL-328) 	<p>LC</p> <p>EC</p> <p>FE</p> <p>CL</p>
RH headlamp (low and high beam) does not operate, but LH headlamp (low and high beam) does operate.	<ol style="list-style-type: none"> 1. 15A fuse 2. Headlamp RH relay 3. Headlamp RH relay circuit 4. Lighting switch circuit 5. Smart entrance control unit 	<ol style="list-style-type: none"> 1. 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. 2. Check headlamp RH relay. 3. Check the following. <ol style="list-style-type: none"> a. Harness between headlamp RH relay and daytime light control unit b. Harness between headlamp RH and daytime light control unit c. Harness between headlamp RH relay and smart entrance control unit 4. Check harness between smart entrance control unit and lighting switch. 5. Check smart entrance control unit. (EL-328) 	<p>MT</p> <p>AT</p> <p>AX</p> <p>SU</p> <p>BR</p>
LH high beam does not operate, but LH low beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Headlamp LH high beams circuit 3. Lighting switch 4. Lighting switch circuit 5. Daytime control unit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check harness between daytime light control unit and headlamp LH. 3. Check lighting switch. 4. Check harness between daytime light control unit and lighting switch. 5. Check daytime control unit. (EL-54) 	<p>ST</p> <p>RS</p>
LH low beam does not operate, but LH high beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Headlamp LH low beams circuit 3. Lighting switch 4. Lighting switch circuit 5. Daytime control unit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check harness between daytime light control unit and headlamp LH. 3. Check lighting switch. 4. Check harness between daytime light control unit and lighting switch. 5. Check daytime control unit. (EL-54) 	<p>BT</p> <p>HA</p>
RH high beam does not operate, but RH low beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Headlamp RH high beams circuit 3. Lighting switch 4. Lighting switch circuit 5. Daytime control unit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check harness between daytime light control unit and headlamp RH. 3. Check lighting switch. 4. Check harness between daytime light control unit and lighting switch. 5. Check daytime control unit. (EL-54) 	<p>SC</p> <p>EL</p> <p>IDX</p>

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Trouble Diagnoses (Cont'd)

Symptom	Possible cause	Repair order
RH low beam does not operate, but RH high beam does operate.	<ol style="list-style-type: none"> 1. Bulb 2. Headlamp RH low beams circuit 3. Lighting switch 4. Lighting switch circuit 5. Daytime control unit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check harness between daytime light control unit and headlamp RH. 3. Check lighting switch. 4. Check harness between daytime light control unit and lighting switch. 5. Check daytime control unit. (EL-54)
High beam indicator does not work.	<ol style="list-style-type: none"> 1. Bulb 2. Open in high beam circuit 	<ol style="list-style-type: none"> 1. Check bulb in combination meter. 2. Check the following. <ol style="list-style-type: none"> a. Harness between daytime light control unit and combination meter for an open circuit b. Harness between combination meter and combination switch for an open circuit
Battery saver control does not operate properly.	<ol style="list-style-type: none"> 1. Door switch LH or RH circuit 2. Smart entrance control unit 	<ol style="list-style-type: none"> 1. Check the following. <ol style="list-style-type: none"> a. Harness between smart entrance control unit and LH or RH door switch for open or short circuit b. LH or RH door switch ground circuit c. LH or RH door switch 2. Check smart entrance control unit. (EL-328)
Daytime light control does not operate properly.	<ol style="list-style-type: none"> 1. Fuse check 2. Parking brake switch 3. Parking brake switch circuit 4. Alternator circuit 5. Daytime control unit 	<ol style="list-style-type: none"> 1. Check 10A fuse [No. 28, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 3 of daytime light control unit. 2. Check parking brake switch. 3. Check harness between parking brake switch and daytime light control unit. 4. Check harness between alternator and daytime light control unit. 5. Check daytime light control unit. (EL-54)

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
			 When engine is running	Battery voltage
			 When turning ignition switch to "OFF"	Less than 1V
2	BR/W	Start signal	 When turning ignition switch to "ST"	Battery voltage
			 When turning ignition switch to "ON" from "ST"	Less than 1V
			 When turning ignition switch to "OFF"	Less than 1V

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Trouble Diagnoses (Cont'd)

Terminal No.	Wire color	Item	Condition	Voltage (Approximate values)	
3	G/R	Power source	 When turning ignition switch to "ON"	Battery voltage	GI
			 When turning ignition switch to "ST"	Battery voltage	MA
			 When turning ignition switch to "OFF"	Less than 1V	EM
4	OR	Power source	 When turning ignition switch to "ON"	Battery voltage	LC
			 When turning ignition switch to "OFF"	Battery voltage	EC
5	P/B	Power source	 When turning ignition switch to "ON"	Battery voltage	FE
			 When turning ignition switch to "OFF"	Battery voltage	CL
6	P	LH headlamp control (ground)	When lighting switch is turned to the 2ND position with "LOW BEAM" position	Less than 1V	AT
			 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Approx. half battery voltage	AX
9	LG/B	RH hi beam	When lighting switch is turned to the 2ND position with "HI BEAM" position	Battery voltage	SU
			 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Approx. half battery voltage	BR
10	Y	LH hi beam	When turning lighting switch to "HI BEAM"	Battery voltage	ST
			 When releasing parking brake with engine running and turning lighting switch to "OFF" (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Battery voltage	RS
12 15	G/W LG/R	Lighting switch (Lo beam)	When turning lighting switch to "LOW BEAM"	Battery voltage	BT
13 14	R/B L/W	Lighting switch (Hi beam)	When turning lighting switch to "HI BEAM"	Battery voltage	HA
			When turning lighting switch to "FLASH TO PASS"	Battery voltage	SC
16	B	Ground	—	—	
17	Y	Parking brake switch	 When parking brake is released	Battery voltage	
			When parking brake is set	Less than 1.5V	

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Bulb Replacement

Bulb Replacement

Refer to “HEADLAMP (FOR USA)” (EL-43).

NFEL0022

Aiming Adjustment

Refer to “HEADLAMP (FOR USA)” (EL-44).

NFEL0023

System Description

NFEL0256

The parking, license and tail lamp operation is controlled by the lighting switch which is built into the combination switch and smart entrance control unit. The battery saver system is controlled by the 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 smart entrance control unit terminal 49
- through 10A fuse [No. 13, located in the fuse block (J/B)].

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

- to smart entrance control unit terminal 27
- through 10A fuse [No. 10, located in the fuse block (J/B)].

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

- to smart entrance control unit terminal 26
- through 10A fuse [No. 1, located in the fuse block (J/B)].

Ground is supplied to smart entrance control unit terminals 43 and 64.

LIGHTING OPERATION BY LIGHTING SWITCH

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

- to tail lamp relay terminal 2 from smart entrance control unit terminals 19 and 57
- through smart entrance control unit terminals 20 and 58, and
- through lighting switch and body grounds E11, E22 and E53.

Tail lamp relay is then energized and the parking, license, 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 smart entrance control unit terminals 19 and 57
- through smart entrance control unit terminals 43 and 64, and
- to body grounds M9, M25 and M87.

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

BATTERY SAVER CONTROL

Parking, license, side marker and tail lamps will remain on for a short while after the ignition switch is turned ON (or START) from OFF (or ACC).

Continuity between terminals 19 and 20, and between terminals 57 and 58 of smart entrance control unit will be disturbed after 45 seconds, then the headlamps will be turned off.

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 smart entrance control unit terminals 20 and 58 from lighting switch terminal 11, and
- to tail lamp relay terminal 2 from smart entrance control unit terminals 19 and 57.

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

GI

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NFEL0256S01

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NFEL0256S02

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NFEL0256S03

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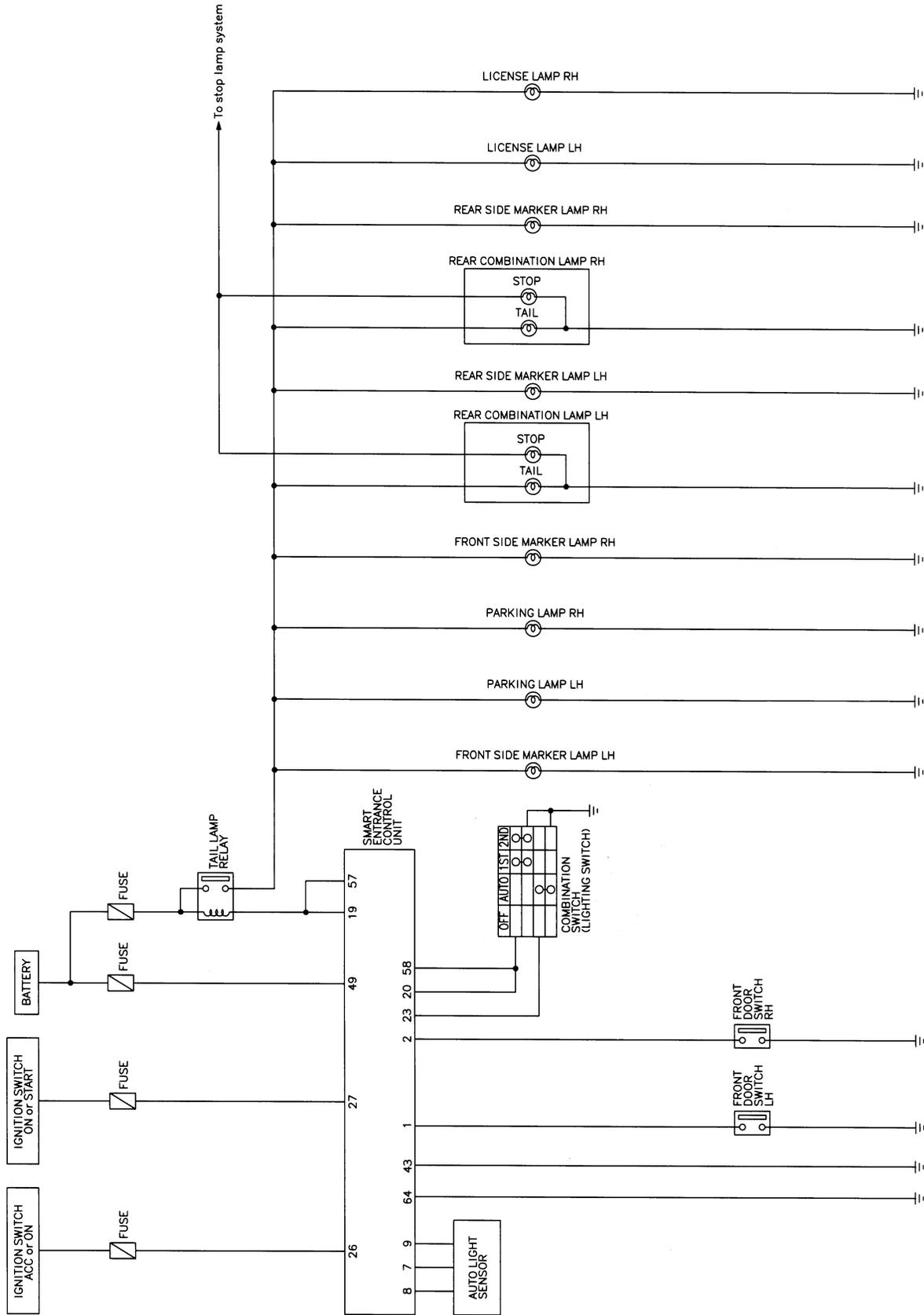
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PARKING, LICENSE AND TAIL LAMPS

Schematic

Schematic

NFEL0208



MEL021N

EL-58

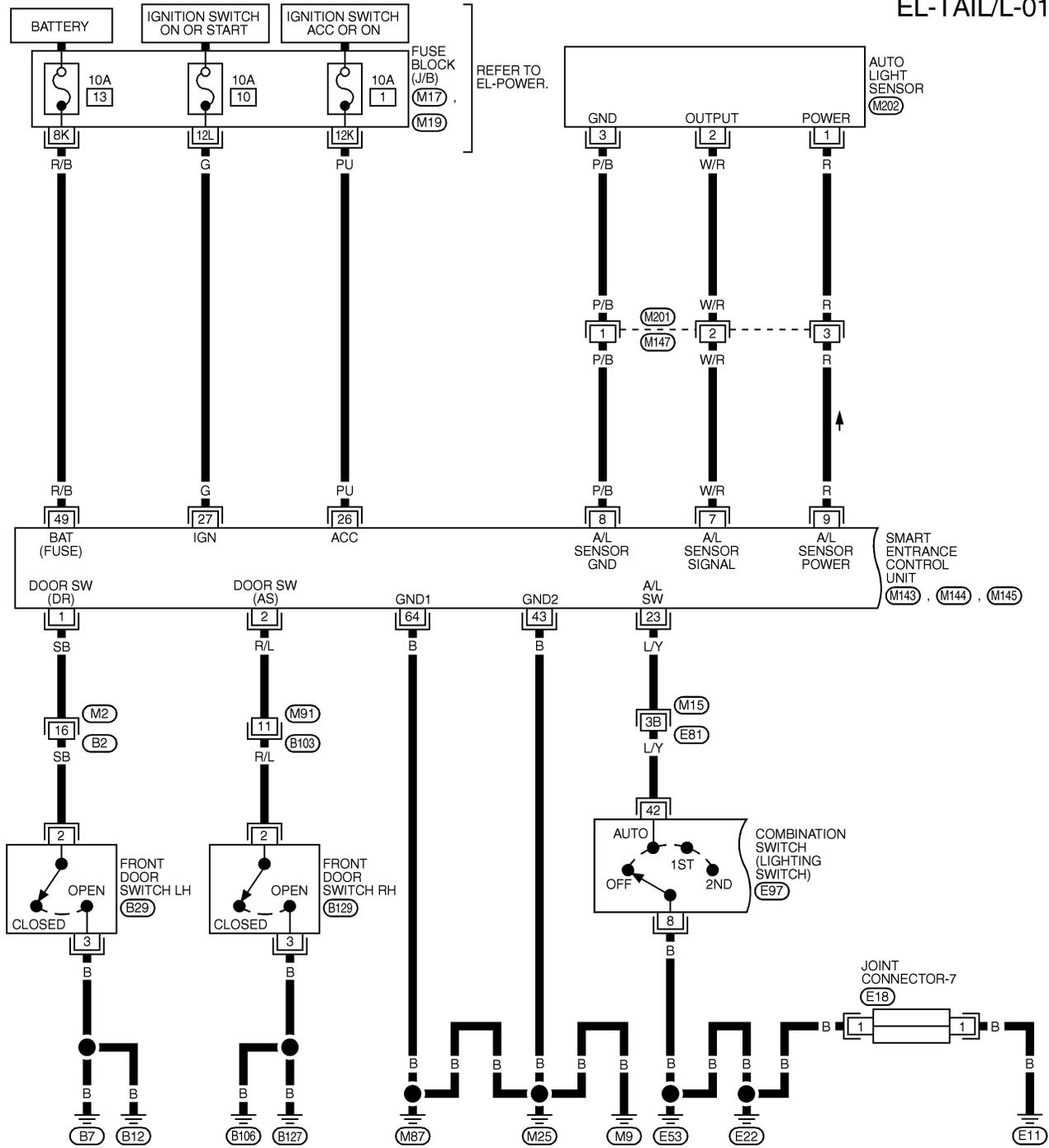
PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L —

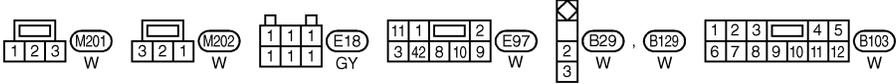
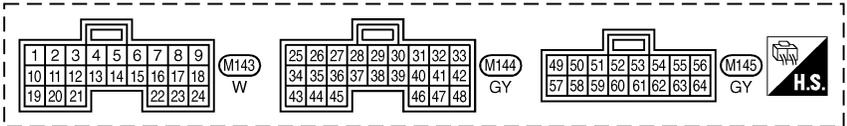
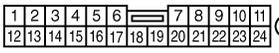
Wiring Diagram — TAIL/L —

NFEL0024

EL-TAIL/L-01



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

EL

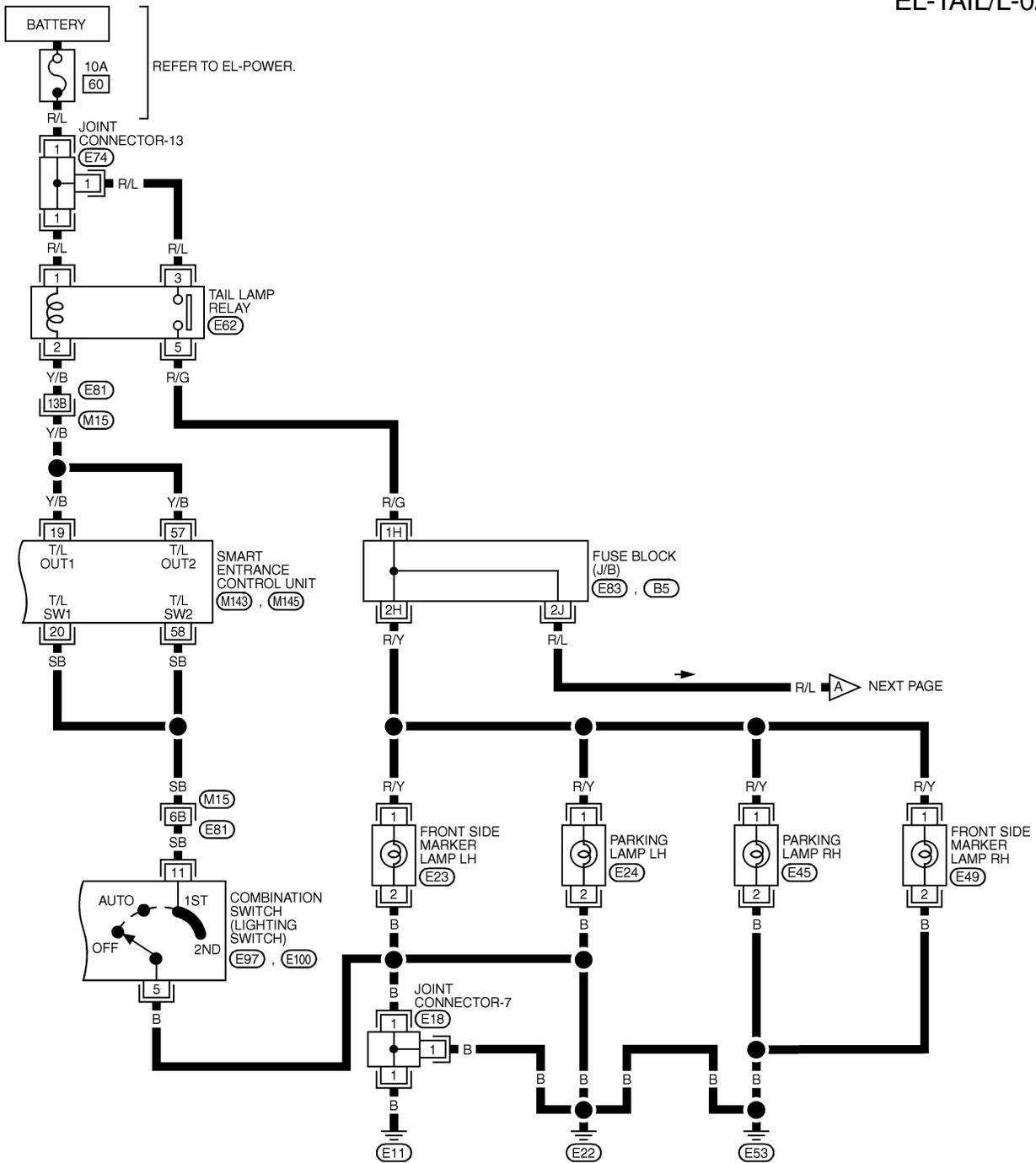
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MEL022N

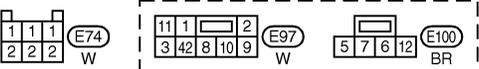
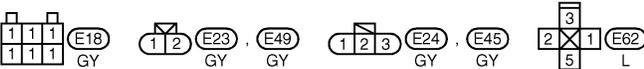
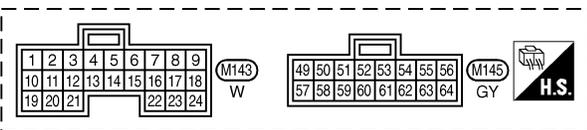
PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

EL-TAIL/L-02



REFER TO THE FOLLOWING.
 (M15) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (E83) , (B5) -FUSE BLOCK-
 JUNCTION BOX (J/B)

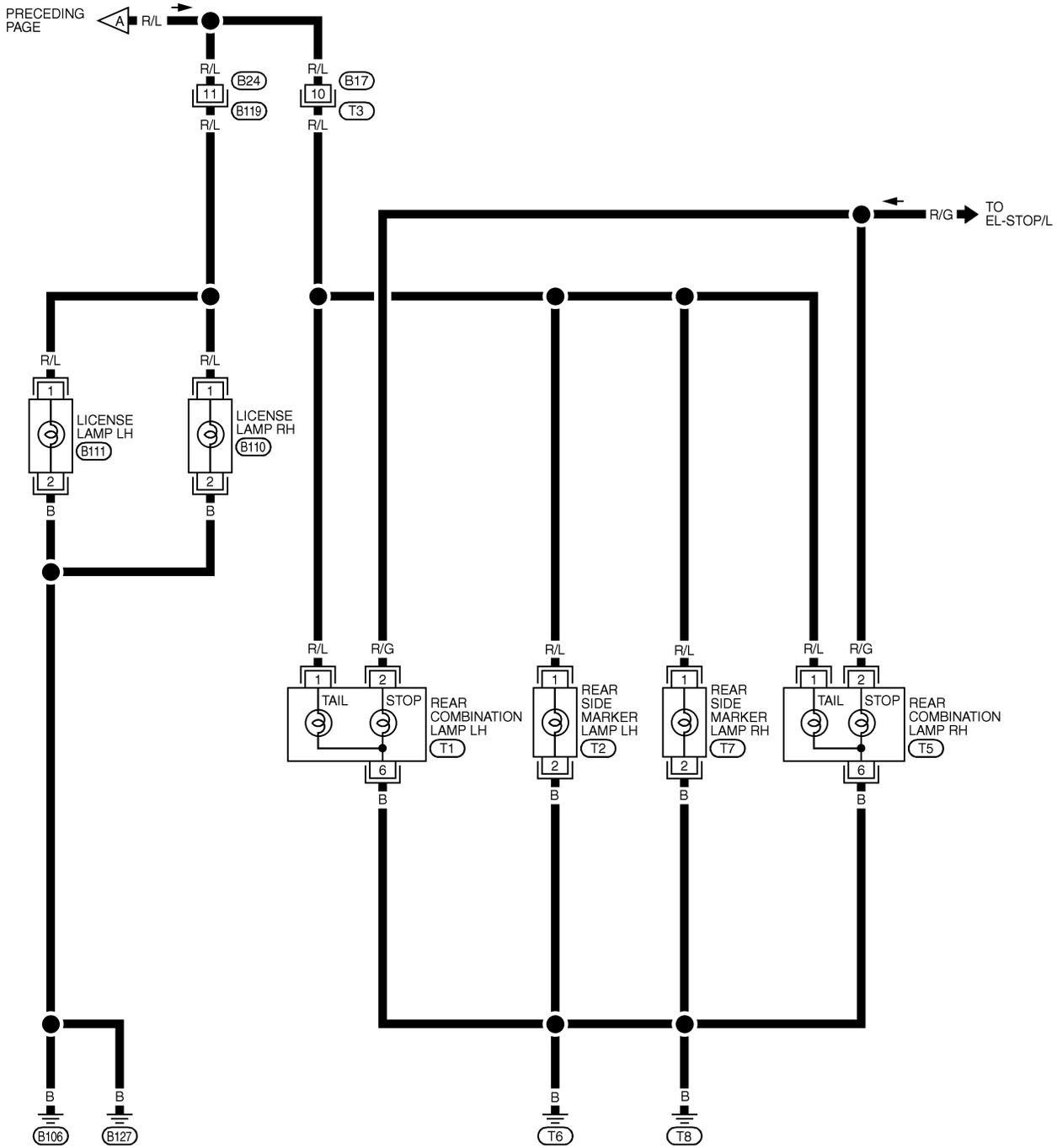


MEL023N

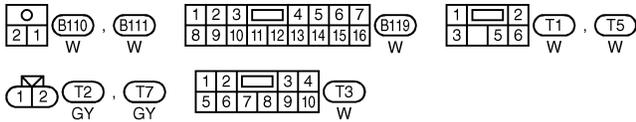
PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

EL-TAIL/L-03



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MEL024N

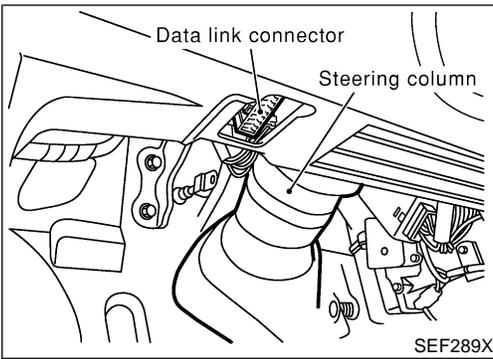
PARKING, LICENSE AND TAIL LAMPS

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)	
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
19	Y/B	TAIL LAMP RELAY (Out put)	IGNITION SWITCH (WITH LIGHTING SWITCH 1ST OR 2ND)	OFF	MORE THAN 45 SECONDS	12V
					WITHIN 45 SECONDS	0V
			ON OR START		0V	
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)		0V → 12V	
20	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V	
23	L/Y	HEADLAMP SWITCH	IGNITION SWITCH "ON" POSITION	LIGHTING SWITCH (EXCEPT AUTO → AUTO POSITION)	12V → 0V	
26	PU	IGNITION SWITCH (ACC)	"ACC" POSITION		12V	
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION		12V	
43	B	GROUND	-		-	
49	R/B	POWER SOURCE (FUSE)	-		12V	
57	Y/B	TAIL LAMP RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH 1ST OR 2ND)	OFF	MORE THAN 45 SECONDS	12V
					WITHIN 45 SECONDS	0V
			ON OR START		0V	
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)		LESS THAN 1.5V → 12V	
58	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V	
64	B	GROUND	-		-	

SEL972XA



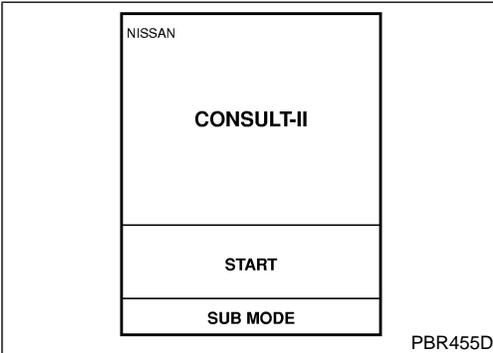
CONSULT-II Inspection Procedure

NFEL0209

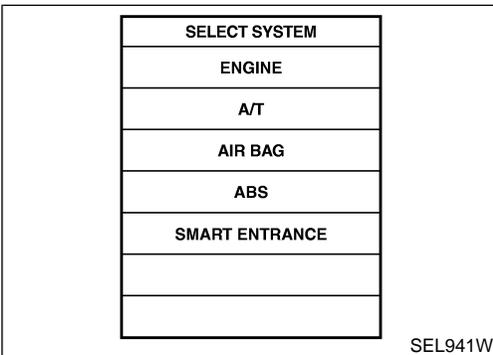
NFEL0209S01

“RETAINED PWR”

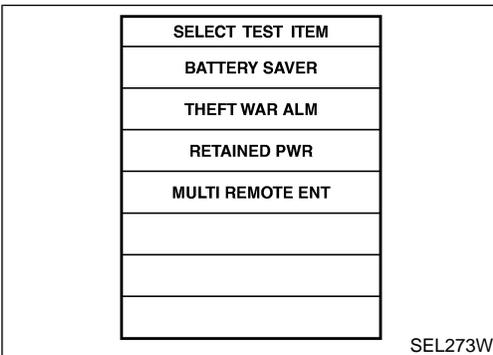
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



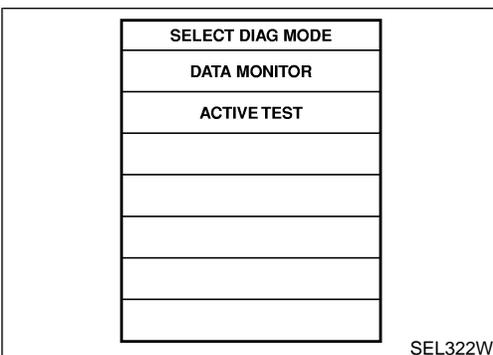
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “RETAINED PWR”.



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

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PARKING, LICENSE AND TAIL LAMPS

CONSULT-II Application Items

CONSULT-II Application Items

NFEL0210

NFEL0210S01

NFEL0210S0101

“RETAINED PWR”

Data Monitor

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. Those systems can be operated when turning on “RETAINED PWR” on CONSULT-II screen even if the ignition switch is tuned OFF.</p> <p>NOTE: 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

NFEL0257

Symptom	Possible cause	Repair order
No lamps operate (including head-lamps).	<ol style="list-style-type: none"> 10A fuse Lighting switch Smart entrance control unit 	<ol style="list-style-type: none"> Check 10A fuse [No. 13, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 49 of smart entrance control unit. Check lighting switch. Check smart entrance control unit. (EL-328)
No parking, side marker, license and tail lamps operate, but head-lamps do operate.	<ol style="list-style-type: none"> 10A fuse Tail lamp relay Tail lamp relay circuit Lighting switch Lighting switch circuit Smart entrance control unit 	<ol style="list-style-type: none"> 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. Check tail lamp relay. Check harness between smart entrance control unit terminals 19 and 57 and tail lamp relay terminal 2. Check harness between tail lamp relay terminal 5 and ground. Check lighting switch. Check harness between lighting switch terminal 11 and smart entrance control unit terminals 20 and 58. Check harness between lighting switch terminal 5 and ground. Check smart entrance control unit. (EL-328)
Battery saver control does not operate properly.	<ol style="list-style-type: none"> Door switch LH or RH circuit Smart entrance control unit 	<ol style="list-style-type: none"> Check the following. <ol style="list-style-type: none"> Harness between smart entrance control unit and LH or RH door switch for open or short circuit LH or RH door switch ground circuit LH or RH door switch Check smart entrance control unit. (EL-328)

STOP LAMP

Wiring Diagram — STOP/L —

Wiring Diagram — STOP/L —

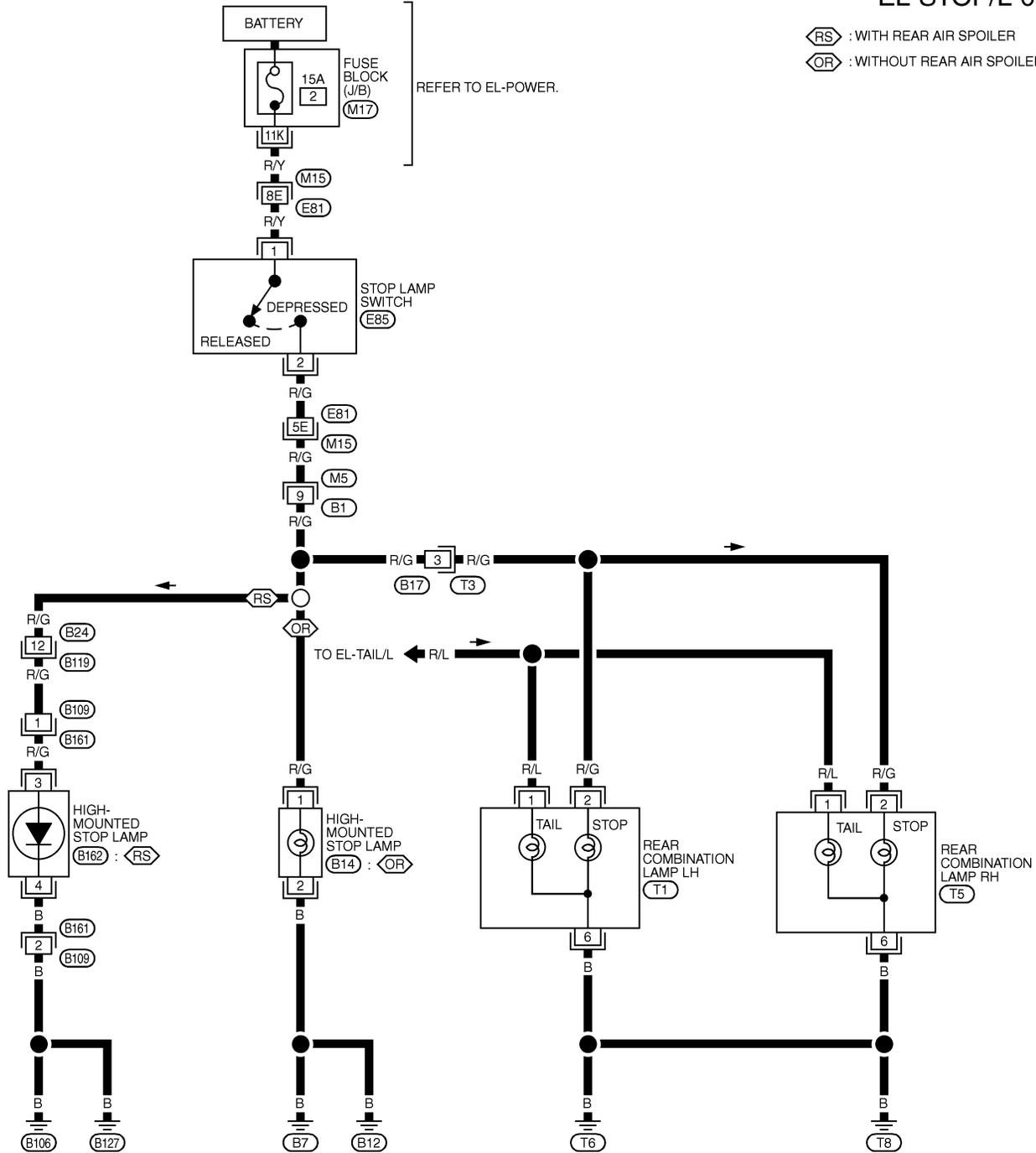
NFEL0025

EL-STOP/L-01

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

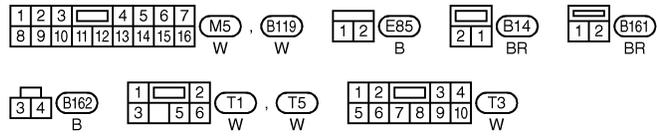
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REFER TO EL-POWER.

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



BACK-UP LAMP

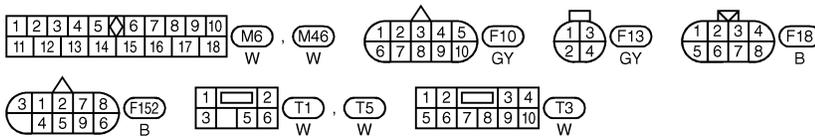
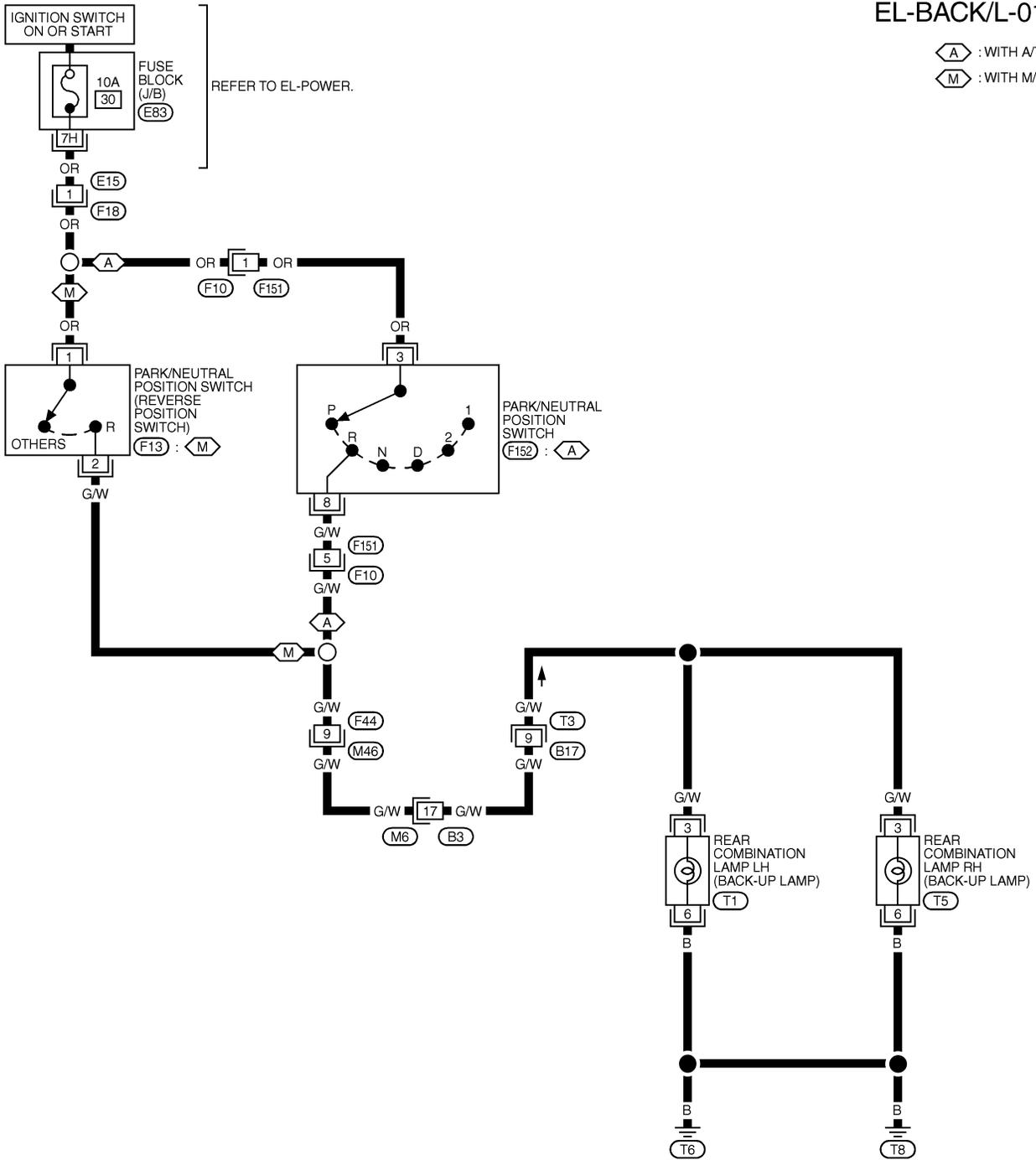
Wiring Diagram — BACK/L —

Wiring Diagram — BACK/L —

NFEL0026

EL-BACK/L-01

(A) : WITH A/T
(M) : WITH M/T



REFER TO THE FOLLOWING.
(E83) - FUSE BLOCK-
JUNCTION BOX (J/B)

MEL026N

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 smart entrance control unit terminal 49
- through 10A fuse [No. 13, 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 smart entrance control unit terminal 27
- through 10A fuse [No. 10, located in the fuse block (J/B)].

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

- to smart entrance control unit terminal 26
- through 10A fuse [No. 1, located in the fuse block (J/B)].

Ground is supplied to smart entrance control unit terminals 43 and 64.

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

- to headlamp LH relay terminal 2 from smart entrance control unit terminal 59.
- through smart entrance control unit terminal 60, and
- through lighting switch, and body grounds E11, E22 and E53.

Headlamp LH 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

Fog lamps will remain on for a short while after the ignition switch is turned ON (or START) from OFF (or ACC). Continuity between terminals 59 and 60 of smart entrance control unit will be disturbed after 45 seconds, then the headlamps will be turned off.

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 2ND after fog lamps are turned off by the battery saver control, ground is supplied

- to smart entrance control unit terminals 20 and 58 from lighting switch terminal 11, and then
- to headlamp RH relay terminal 2 from smart entrance control unit terminal 59
- through smart entrance control unit terminal 60 from lighting switch terminal 12.

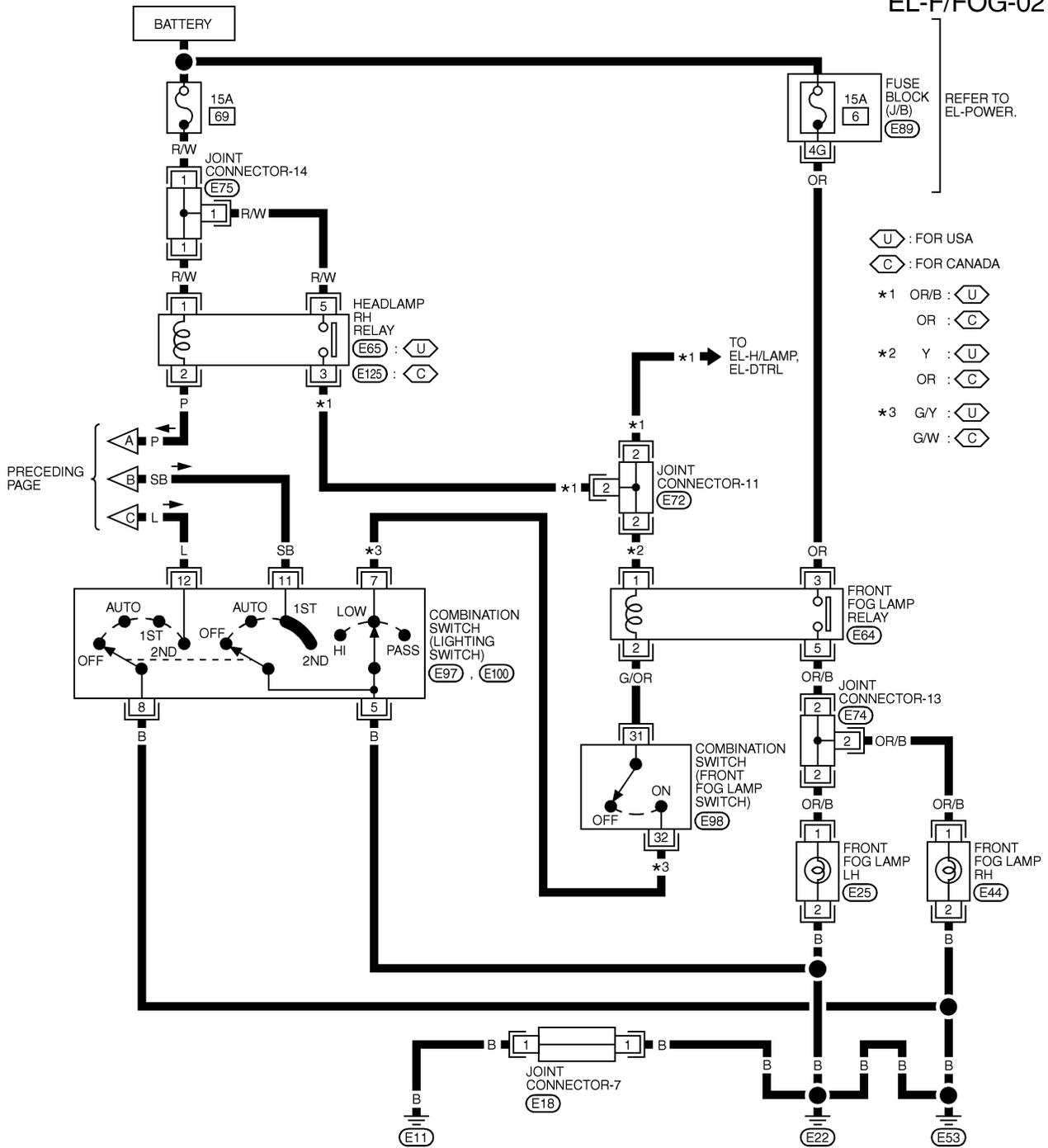
Then the fog lamps illuminate again.

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FRONT FOG LAMP

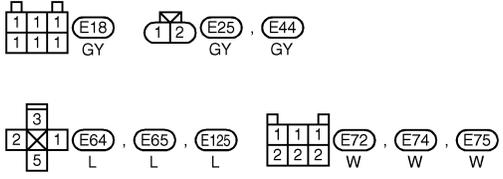
Wiring Diagram — F/FOG — (Cont'd)

EL-F/FOG-02



- U : FOR USA
- C : FOR CANADA
- *1 OR/B : U
OR : C
- *2 Y : U
OR : C
- *3 G/Y : U
G/W : C

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

EL
IDX

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)
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V
20	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V
22	L	HEADLAMP SWITCH	LIGHTING SWITCH	EXCEPT PASS OR 2ND POSITION	12V
				PASS OR 2ND POSITION	0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)		LESS THAN 1.5V → 12V
26	PU	IGNITION SWITCH (ACC)	"ACC" POSITION		12V
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION		12V
43	B	GROUND	-		-
49	R/B	POWER SOURCE (FUSE)	-		12V
58	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V
59	P	HEADLAMP RH RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH OFF OR 1ST)	OFF	MORE THAN 45 SECONDS
				ON OR START	WITHIN 45 SECONDS
					0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL		0V
60	L	HEADLAMP SWITCH	LIGHTING SWITCH	EXCEPT PASS OR 2ND POSITION	12V
				PASS OR 2ND POSITION	0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)		0V → 12V
64	B	GROUND	-		-

SEL184YA

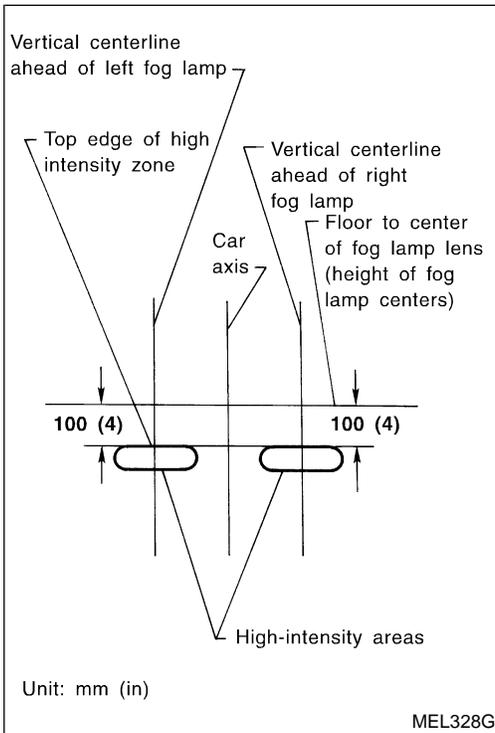
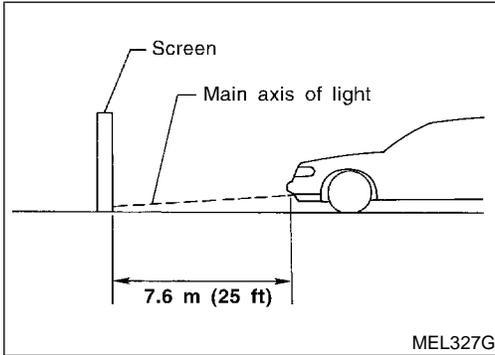
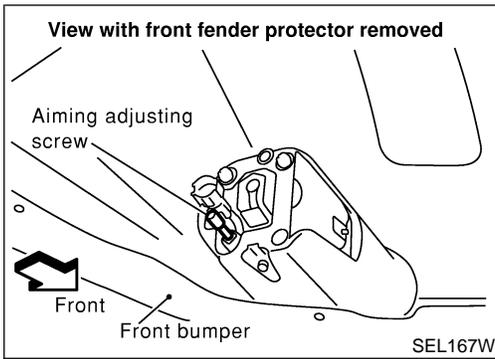
NOTE:

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

For CONSULT-II Application Items, refer to "HEADLAMP (FOR USA)" (EL-42).

Trouble Diagnoses for battery saver control, refer to "HEADLAMP (FOR USA)" (EL-42).

=NFEL0029



Aiming Adjustment

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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TURN SIGNAL AND HAZARD WARNING LAMPS

System Description

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:

- 15A 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

- to smart entrance control unit terminal 49
- through 10A fuse [No. 13, located in the fuse block (J/B)].

EM

Ground is supplied to smart entrance control unit terminal 43 and 64.

Power is supplied to smart entrance control unit terminals 47 and 48, when the multi-remote control system is triggered.

LC

Refer to "MULTI-REMOTE CONTROL SYSTEM", EL-259.

The multi-remote control relay is energized.

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

EC

- 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.

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

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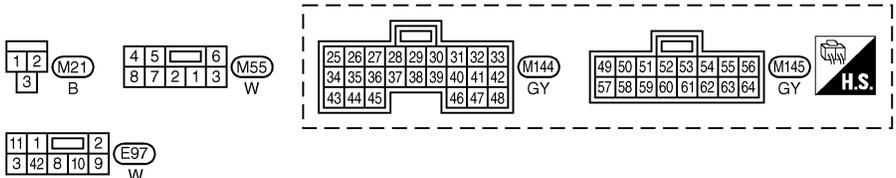
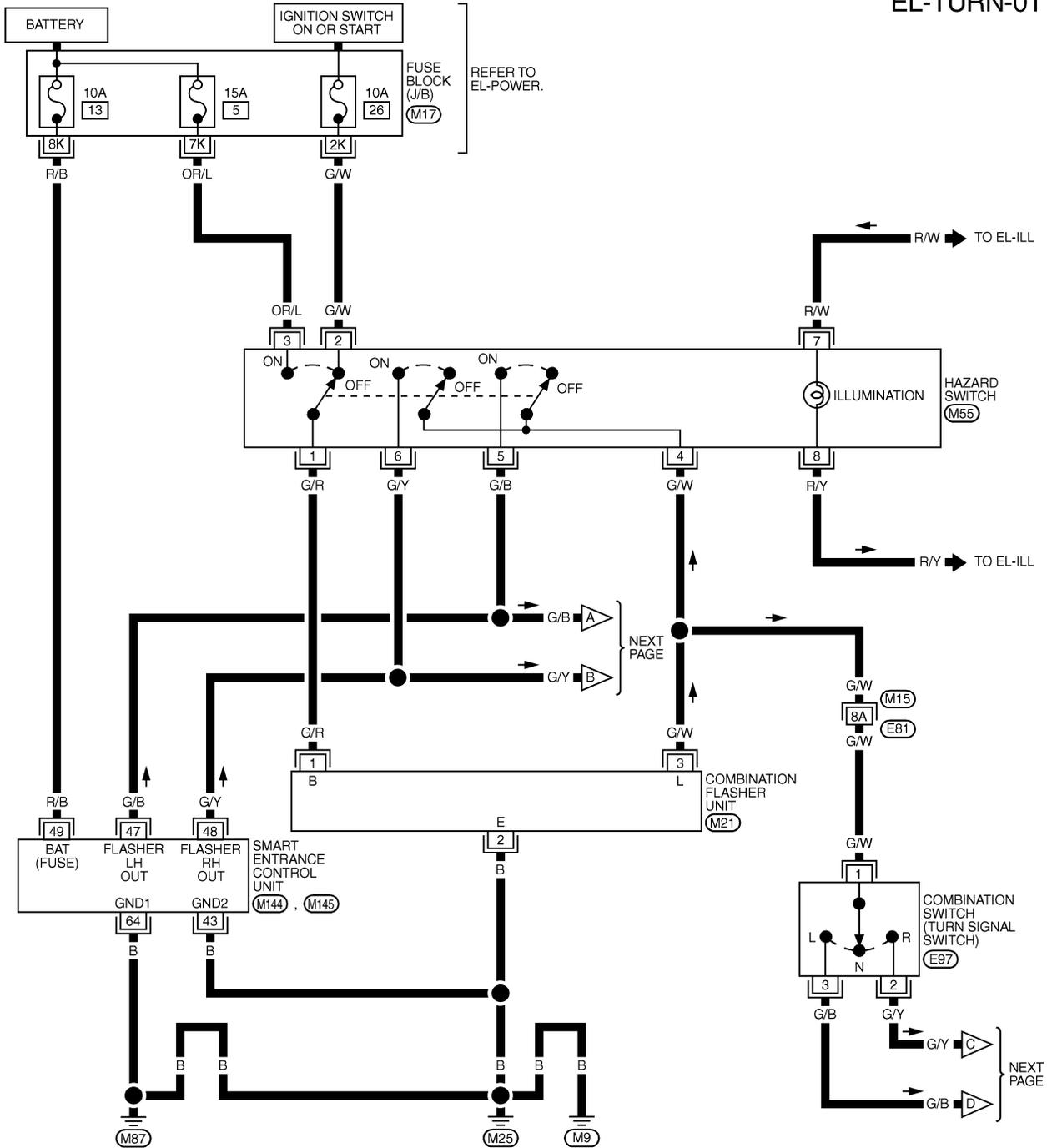
TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —

Wiring Diagram — TURN —

NFEL0032

EL-TURN-01



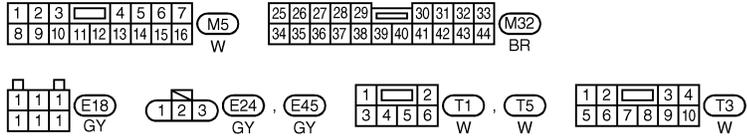
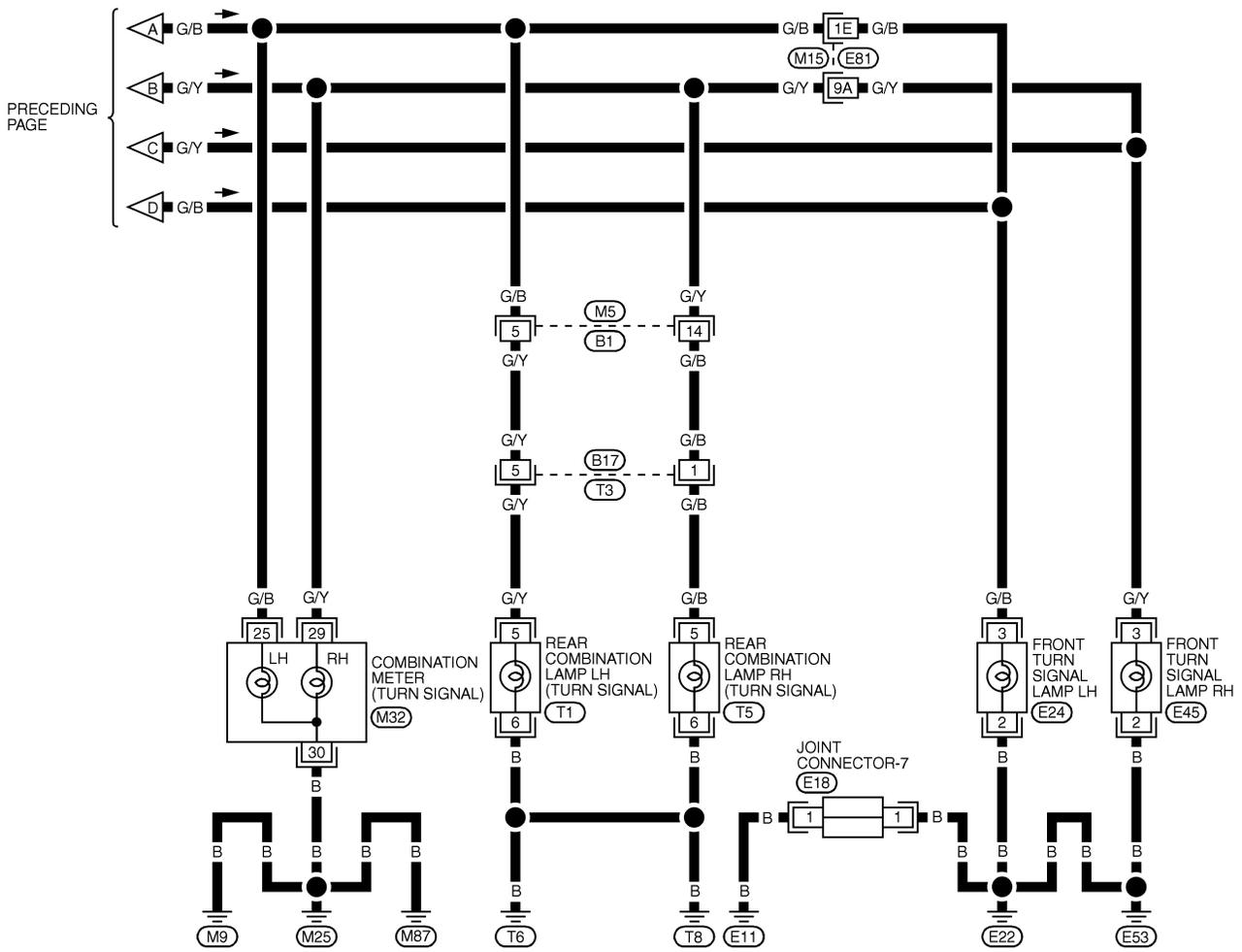
REFER TO THE FOLLOWING.
 (M15) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M17) -FUSE BLOCK-
 JUNCTION BOX (J/B)

MEL029N

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN — (Cont'd)

EL-TURN-02



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

MEL030N

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
47	G/B	LH TURN SIGNAL LAMP	WHEN DOOR LOCK OR UNLOCK IS OPERATED USING REMOTE CONTROLLER (ON → OFF)	12V → 0V
48	G/Y	RH TURN SIGNAL LAMP	WHEN DOOR LOCK OR UNLOCK IS OPERATED USING REMOTE CONTROLLER (ON → OFF)	12V → 0V
49	R/B	POWER SOURCE (FUSE)	-	12V

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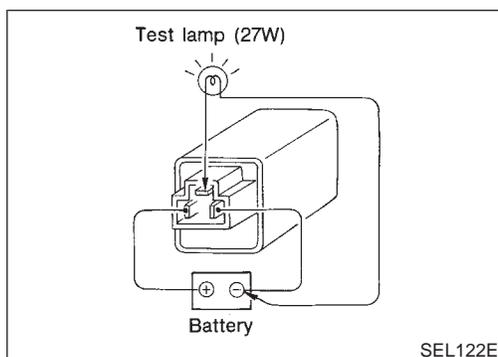
TURN SIGNAL AND HAZARD WARNING LAMPS

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"> 1. Hazard switch 2. Combination flasher unit 3. Open in combination flasher unit circuit 	<ol style="list-style-type: none"> 1. Check hazard switch. 2. Refer to combination flasher unit check. 3. Check wiring to combination flasher unit for open circuit.
Turn signal lamps do not operate but hazard warning lamps operate.	<ol style="list-style-type: none"> 1. 10A fuse 2. Hazard switch 3. Turn signal switch 4. Open in turn signal switch circuit 	<ol style="list-style-type: none"> 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. 2. Check hazard switch. 3. Check turn signal switch. 4. Check the wire between combination flasher unit terminal 3 and turn signal switch terminal 1 for open circuit.
Hazard warning lamps do not operate but turn signal lamps operate.	<ol style="list-style-type: none"> 1. 15A fuse 2. Hazard switch 3. Open in hazard switch circuit 	<ol style="list-style-type: none"> 1. Check 15A fuse [No. 5, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 3 of hazard switch. 2. Check hazard switch. 3. Check the wire between combination flasher unit terminal 3 and hazard switch terminal 4 for open circuit.
Front turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds E11, E22 and E53 3. Front turn signal lamp circuit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds E11, E22 and E53. 3. Check the wire between combination switch and front turn signal lamp.
Rear turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds T6 and T8 3. Rear turn signal lamp circuit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds T6 and T8. 3. Check the wire between combination switch and rear turn signal lamp.
LH and RH turn indicators do not operate.	<ol style="list-style-type: none"> 1. Ground 	<ol style="list-style-type: none"> 1. Check grounds M9, M25 and M87.
LH or RH turn indicator does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Turn indicator circuit 	<ol style="list-style-type: none"> 1. Check bulb in combination meter. 2. Check the wire between hazard switch and combination meter.



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

NFEL0258

The illumination lamp operation is controlled by the lighting switch which is built into the combination switch and smart entrance control unit. The battery saver system is controlled by 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 smart entrance control unit terminal 49
- through 10A fuse [No. 13, located in the fuse block (J/B)].

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

- to smart entrance control unit terminal 27
- through 10A fuse [No. 10, located in the fuse block (J/B)], and

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

- to smart entrance control unit terminal 26
- through 10A fuse [No. 1, located in the fuse block (J/B)].

Ground is supplied to smart entrance control unit terminals 43 and 64.

LIGHTING OPERATION BY LIGHTING SWITCH

NFEL0258S01

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

- to tail lamp relay terminal 2 from smart entrance control unit terminals 19 and 57
- through smart entrance control unit terminals 20 and 58, 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

NFEL0258S02

Illumination lamps will remain on for a short while after the ignition switch is turned ON (or START) from OFF (or ACC).

Continuity between terminals 19 and 20, and between terminals 57 and 58 of smart entrance control unit will be disturbed after 45 seconds, then the headlamps will be turned off.

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 smart entrance control unit terminals 20 and 58 from lighting switch terminal 11, and
- to tail lamp relay terminal 2 from smart entrance control unit terminals 19 and 57.

Then illumination lamps illuminate again.

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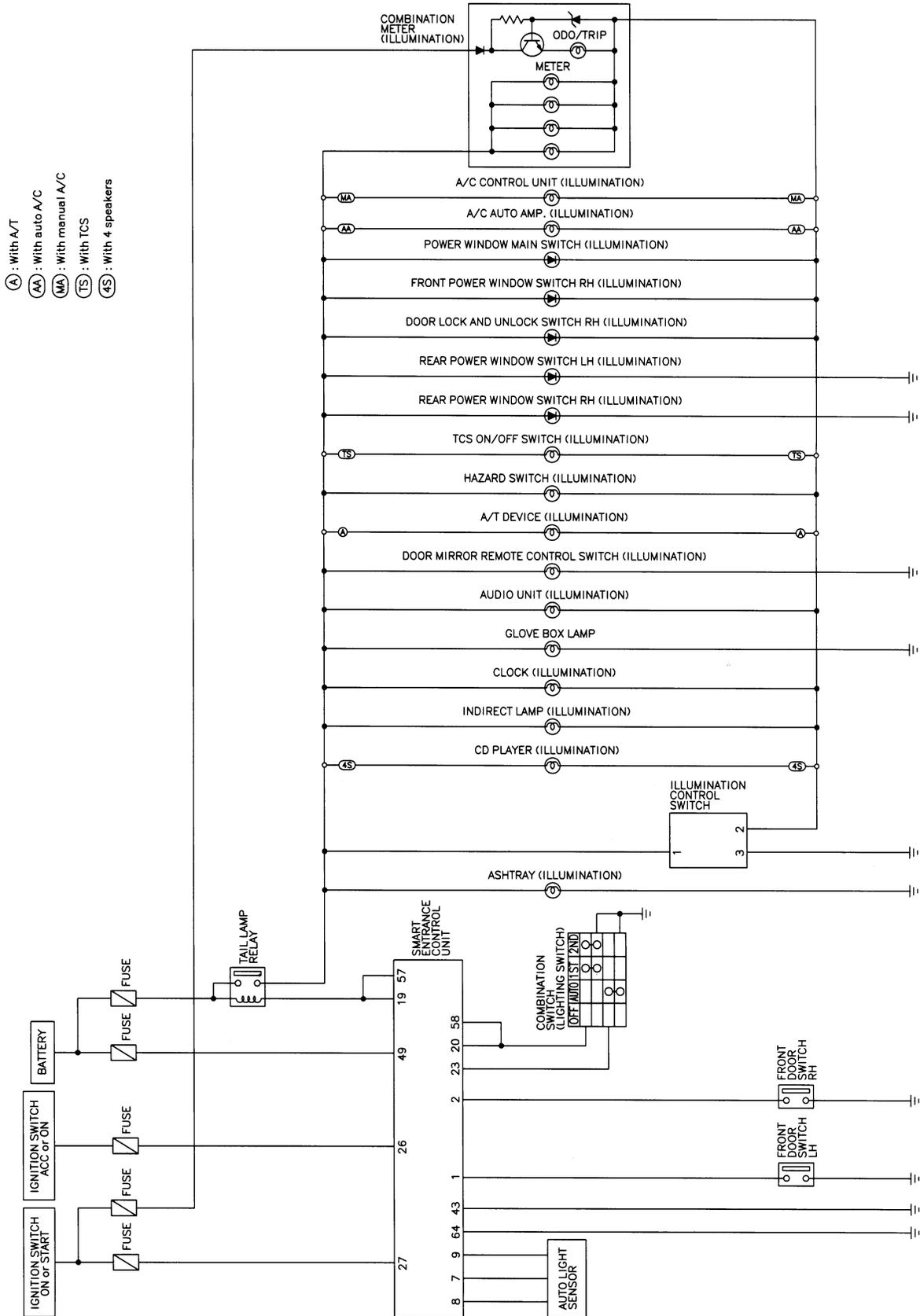
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ILLUMINATION

Schematic

NFEL0036

Schematic



ILLUMINATION

Wiring Diagram — ILL —

Wiring Diagram — ILL —

NFEL0037

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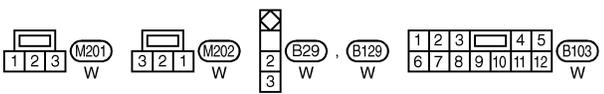
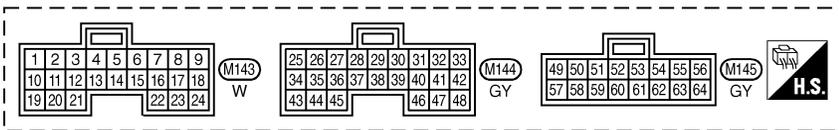
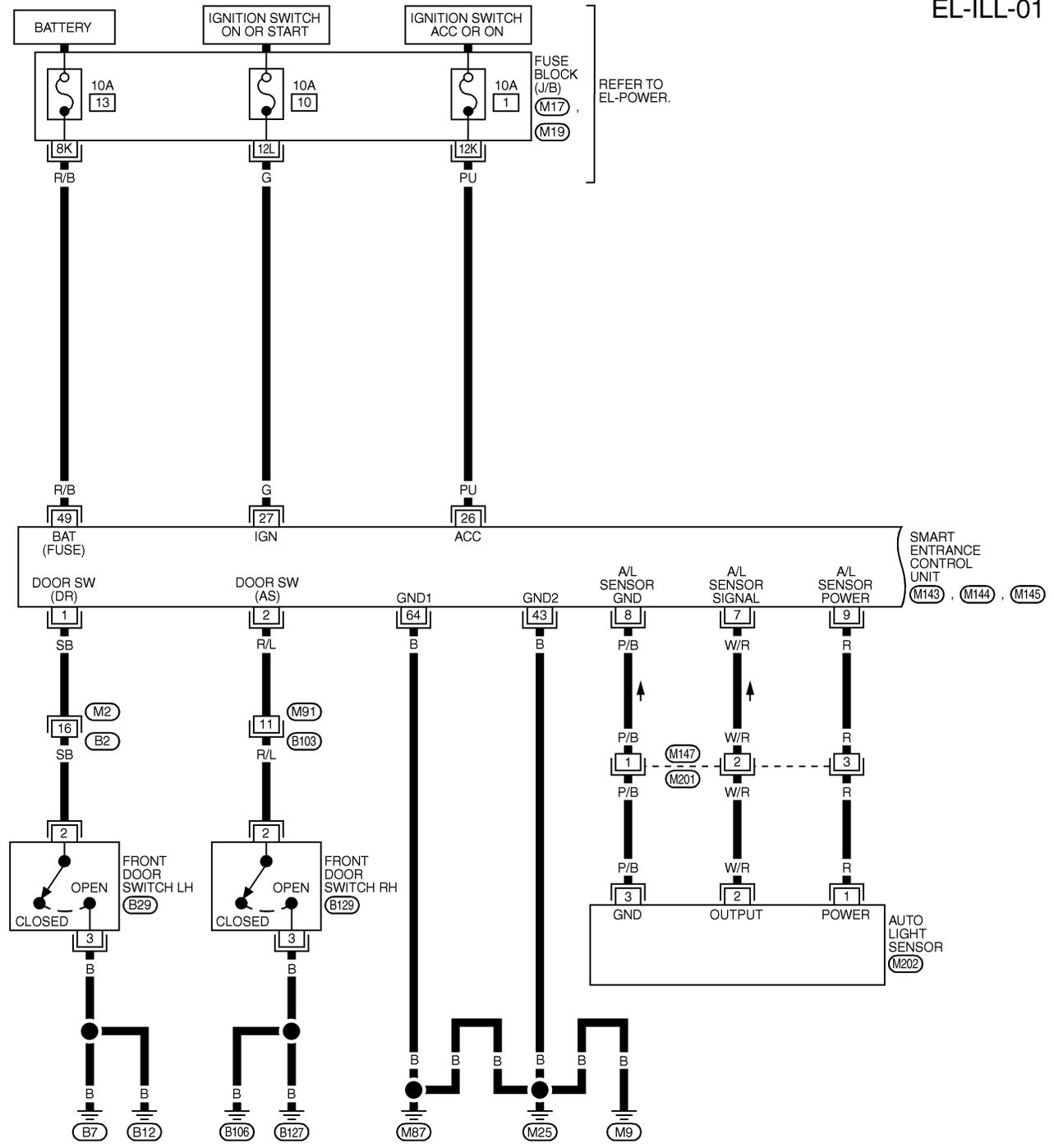
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REFER TO THE FOLLOWING.
 (M17) , (M19) -FUSE BLOCK-
 JUNCTION BOX (J/B)

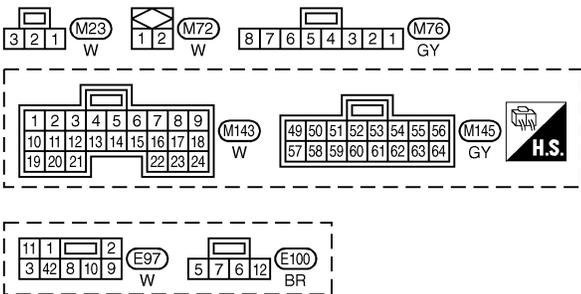
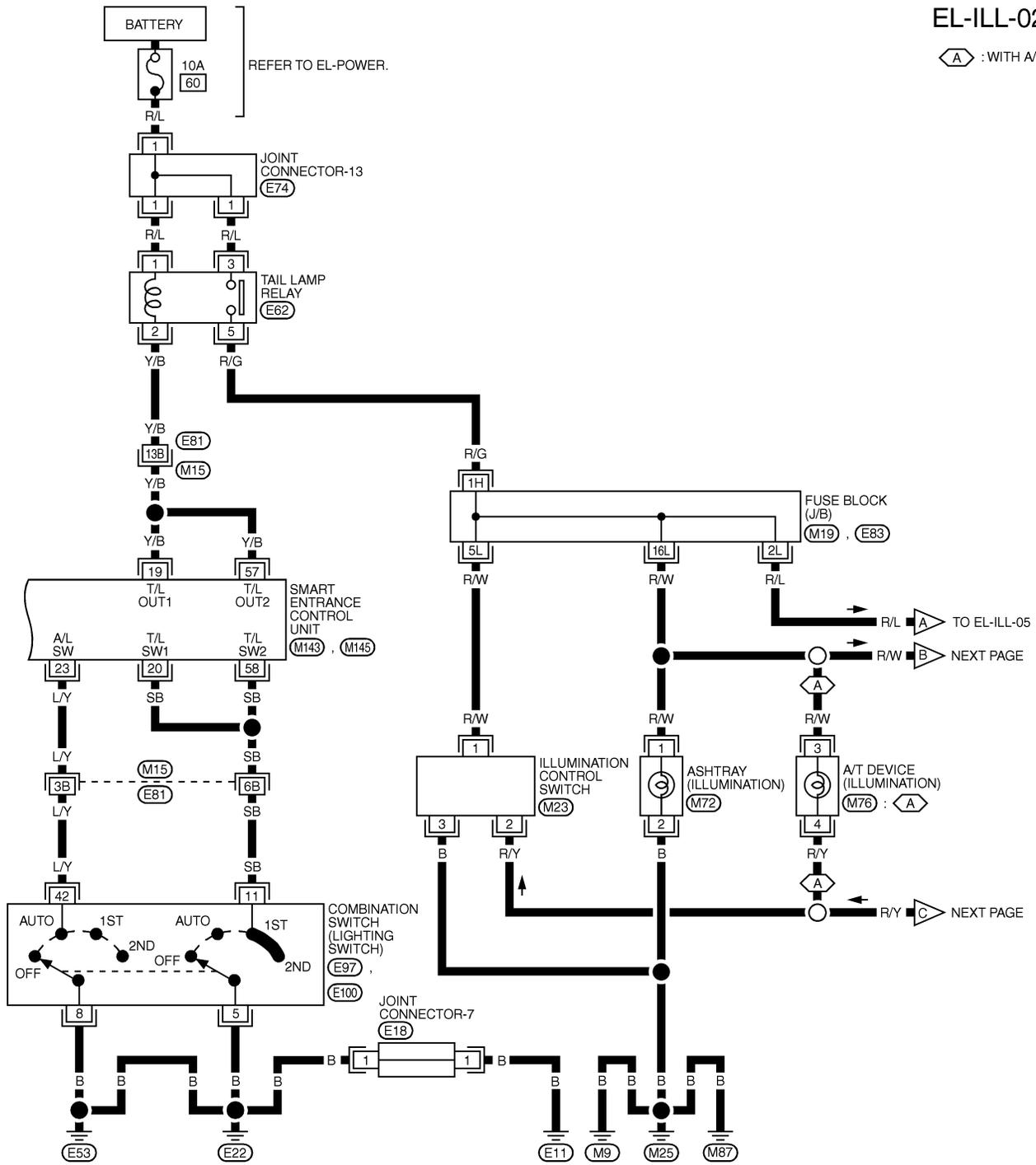
MEL032N

ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-02

(A) : WITH A/T



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

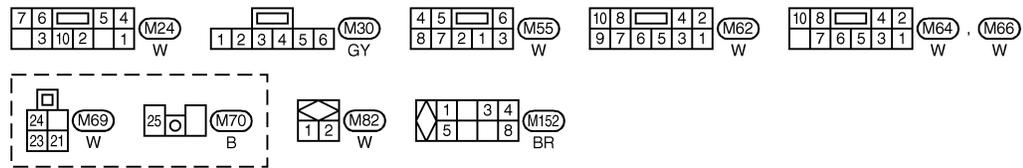
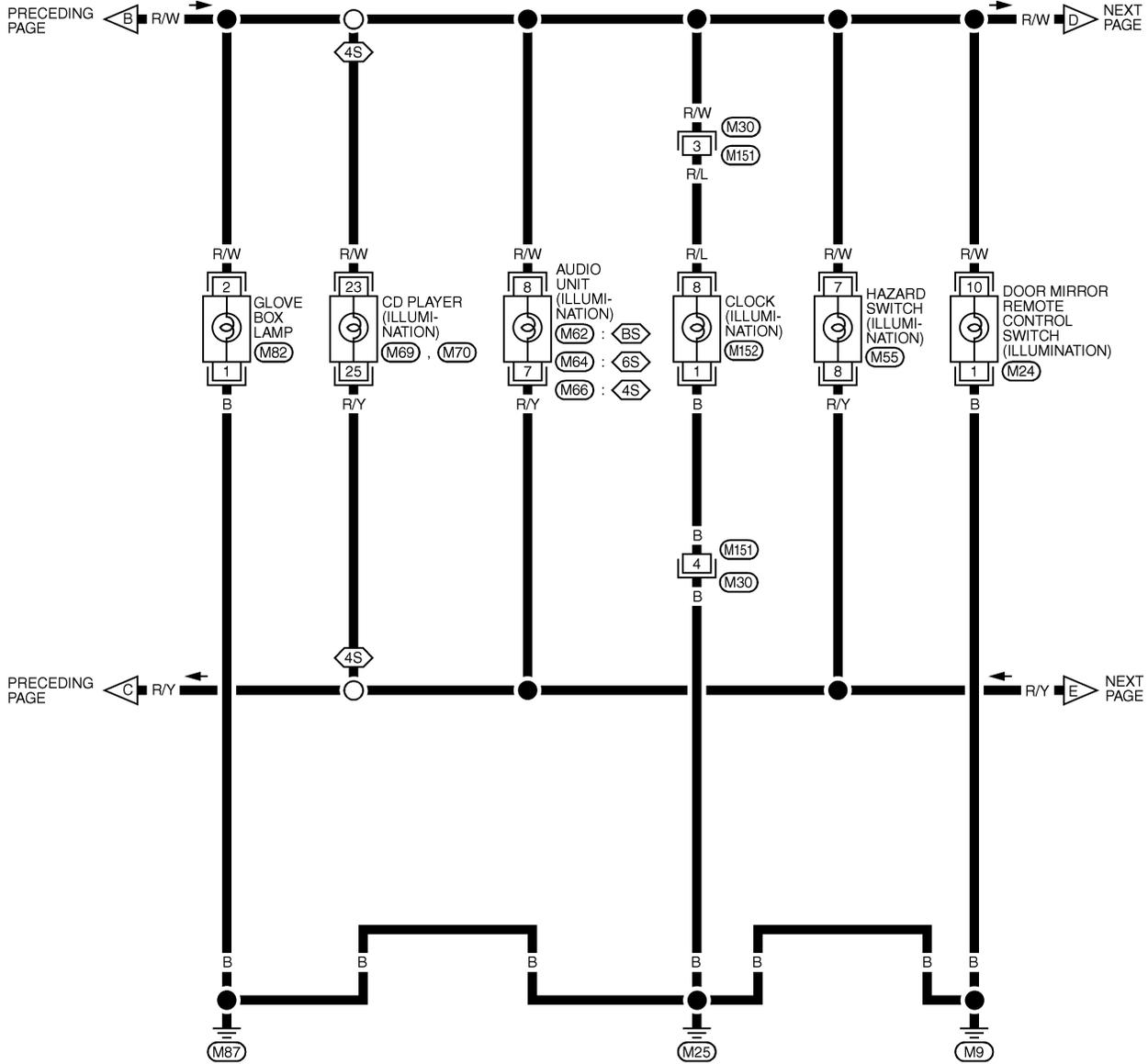
MEL033N

ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-03

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



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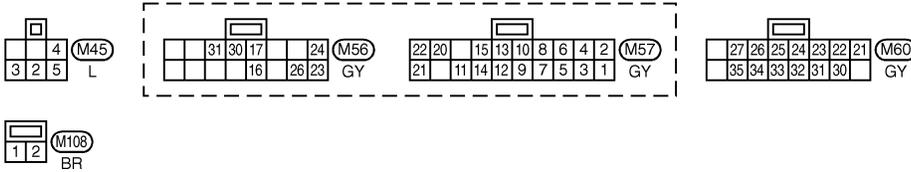
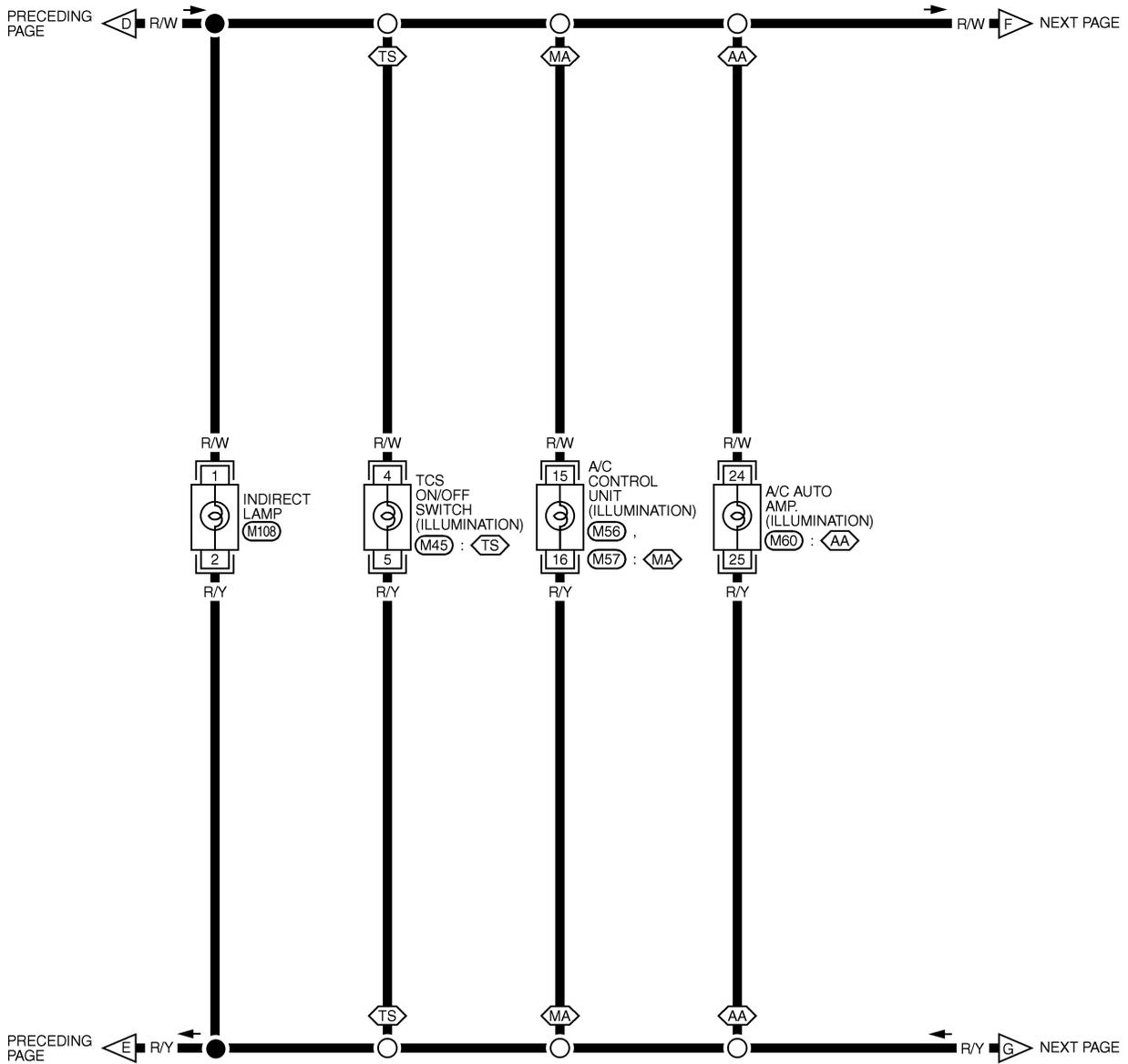
MEL034N

ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-04

- AA : WITH AUTO A/C
- MA : WITH MANUAL A/C
- TS : WITH TCS

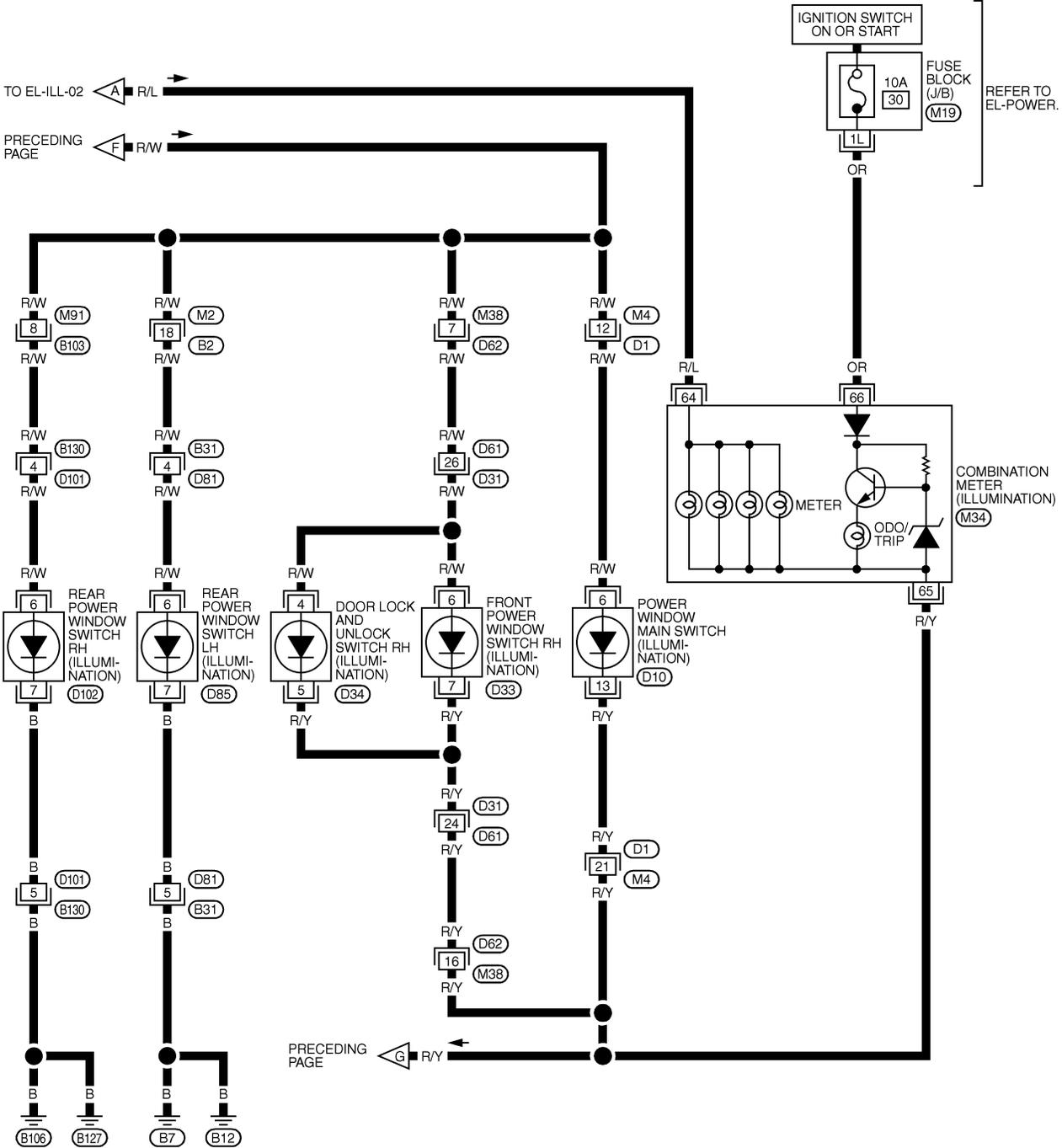


MEL035N

ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-05



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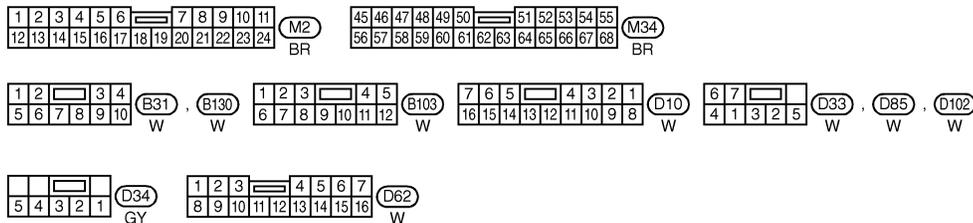
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MEL036N



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)	
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
19	Y/B	TAIL LAMP RELAY (Out put)	IGNITION SWITCH (WITH LIGHTING SWITCH 1ST OR 2ND)	OFF	MORE THAN 45 SECONDS	12V
				ON OR START	WITHIN 45 SECONDS	0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)			0V → 12V
20	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V	
23	L/Y	HEADLAMP SWITCH	IGNITION SWITCH "ON" POSITION	LIGHTING SWITCH (EXCEPT AUTO → AUTO POSITION)	12V → 0V	
26	PU	IGNITION SWITCH (ACC)	"ACC" POSITION		12V	
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION		12V	
43	B	GROUND	-		-	
49	R/B	POWER SOURCE (FUSE)	-		12V	
57	Y/B	TAIL LAMP RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH 1ST OR 2ND)	OFF	MORE THAN 45 SECONDS	12V
				ON OR START	WITHIN 45 SECONDS	0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)			LESS THAN 1.5V → 12V
58	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V	
64	B	GROUND	-		-	

SEL974XA

ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

NOTE:

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

For CONSULT-II Application Items, refer to "PARKING, LICENSE AND TAIL LAMPS" (EL-64).

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

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

System Description

System Description

NFEL0165

NFEL0165S01

POWER SUPPLY AND GROUND

Power is supplied at all times:

- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to key switch terminal 2 and
- to smart entrance control unit terminal 49.

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

- through key switch terminal 1
- to smart entrance control unit terminal 25.

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 27.

Ground is supplied:

- to smart entrance control unit terminal 43 and 64
- through body grounds terminals M9, M25 and M87.

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

- through body grounds B7 and B12
- to front door switch LH terminal 3
- from front door switch LH terminal 2
- to smart entrance control unit terminal 1.

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 2.

When any other door (except front door) is opened, ground is supplied to smart entrance control unit terminal 3 in the same manner as the front door switch.

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

- through body grounds terminals M9, M25 and M87
- to door lock and unlock switch terminal 19 (LH) or 3 (RH)
- from door lock and unlock switch terminal 17 (LH) or 1 (RH)
- to smart entrance control unit terminal 4.

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

- through body grounds terminals M9, M25 and M87
- to front door key cylinder switch LH terminal 2
- from front door key cylinder switch LH terminal 1
- to smart entrance control unit terminal 10.

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

- through smart entrance control unit terminal 31
- to interior lamp terminal 2.

With power and ground supplied, the interior lamp illuminates.

SWITCH OPERATION

When interior lamp switch is ON, ground is supplied:

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

And power is supplied:

- to interior lamp terminal 1
- from smart entrance control unit terminal 50.

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

NFEL0165S02

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

System Description (Cont'd)

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

And power is supplied:

- to spot lamp terminal 1
- from smart entrance control unit terminal 50.

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

- 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 50.

When rear door switch LH and/or RH is ON (door is opened), the smart entrance control unit receives a ground signal:

- through case ground of the rear door switch
- from the rear door switch terminal 1
- to smart entrance control unit terminal 3.
- from smart entrance control unit terminal 32
- to from step lamp LH and RH terminal 1.

And power is supplied:

- to front step lamp LH and RH terminals 2
- from smart entrance control unit terminal 50.

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

- through body grounds B7 and B12, 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 1 and/or 2
- from smart entrance control unit terminal 32
- to front step lamp LH and RH terminals 1.

And power is supplied:

- to front step lamp LH and RH terminals 2
- from smart entrance control unit terminal 50.

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 1

And power is supplied:

- to trunk room lamp terminal 2
- from smart entrance control unit terminal 50.

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 or door key cylinder 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:

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NFEL0165S03

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

System Description (Cont'd)

- 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. NFEL0165S04

When any door is opened, step lamps turn ON.

BATTERY SAVER

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. NFEL0165S05

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

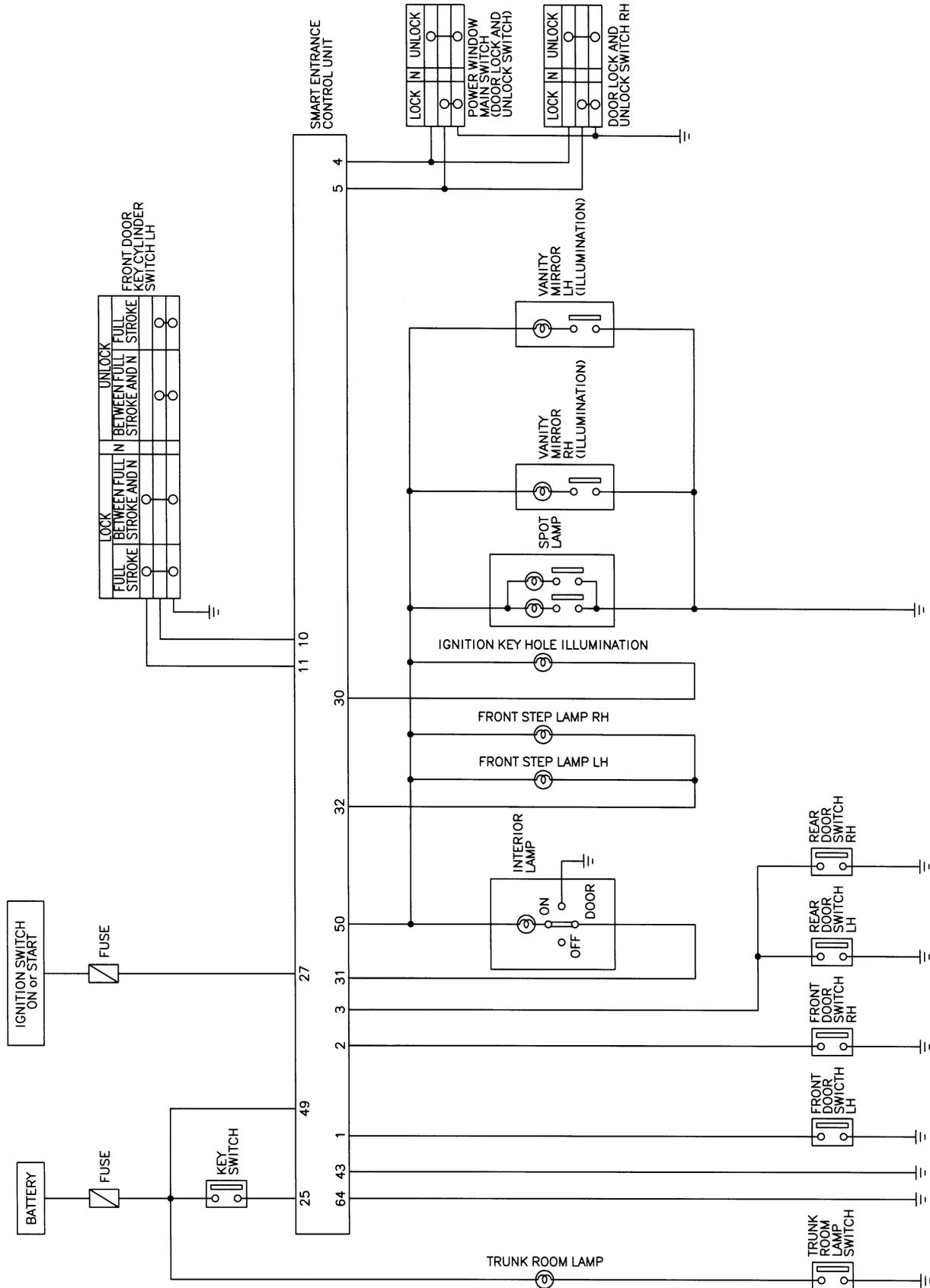
- driver's door is locked or unlocked,
- door is opened or closed,
- key is removed from ignition key cylinder or inserted in ignition key cylinder.

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

Schematic

Schematic

NFEL0212



- GI
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- EL**
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MEL966N

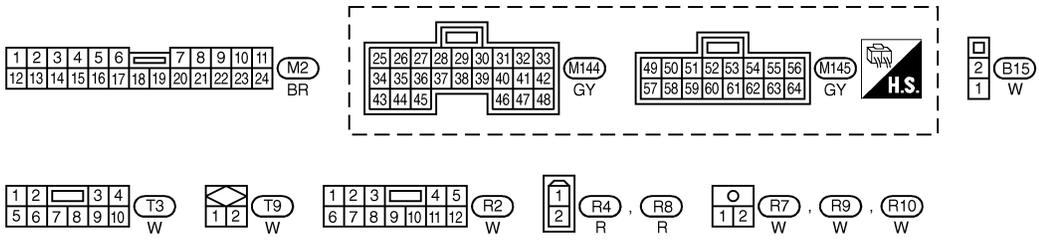
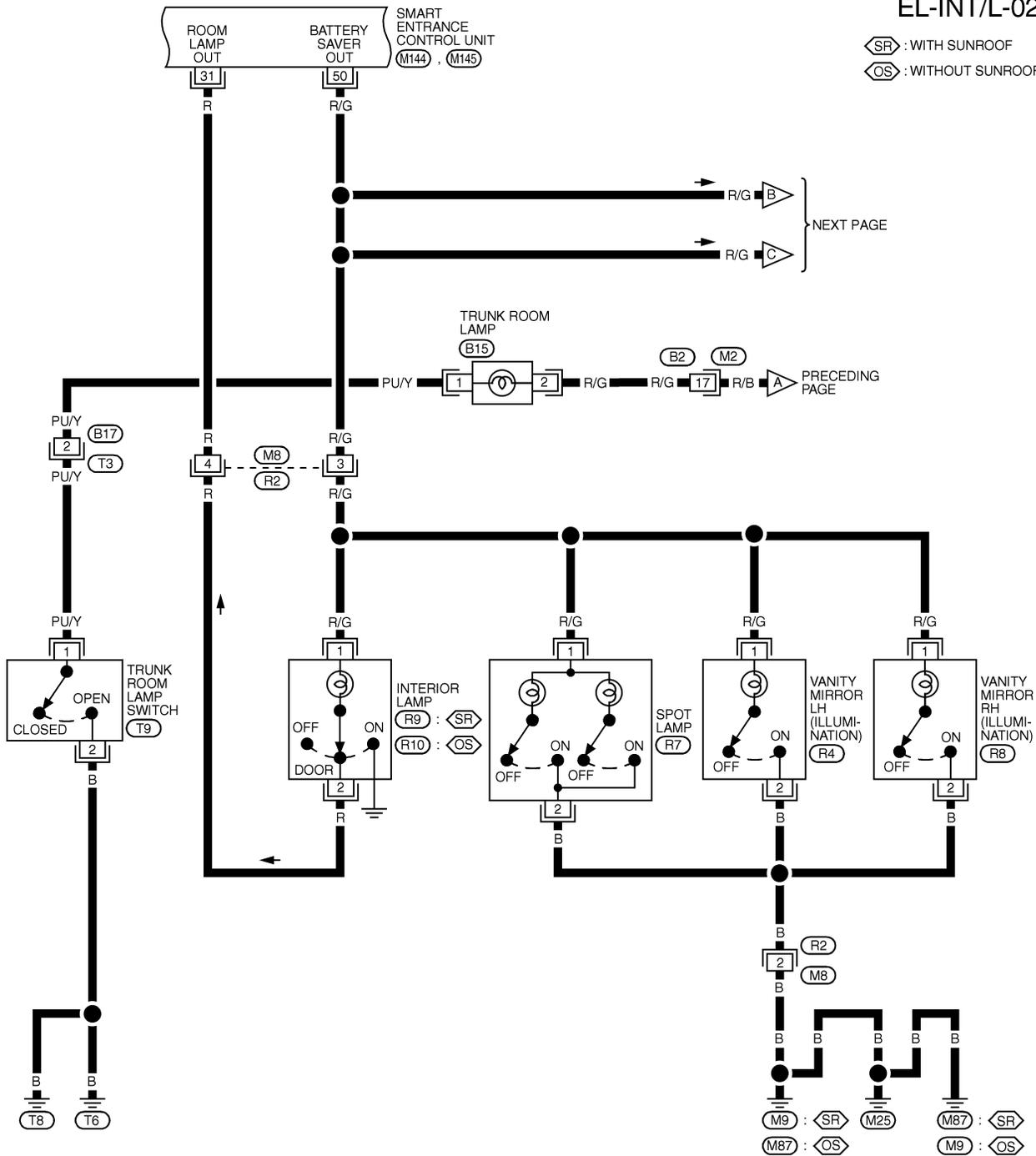
INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-02

SR : WITH SUNROOF
OS : WITHOUT SUNROOF

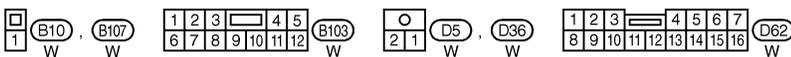
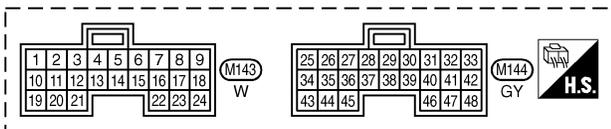
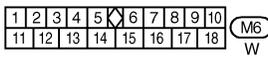
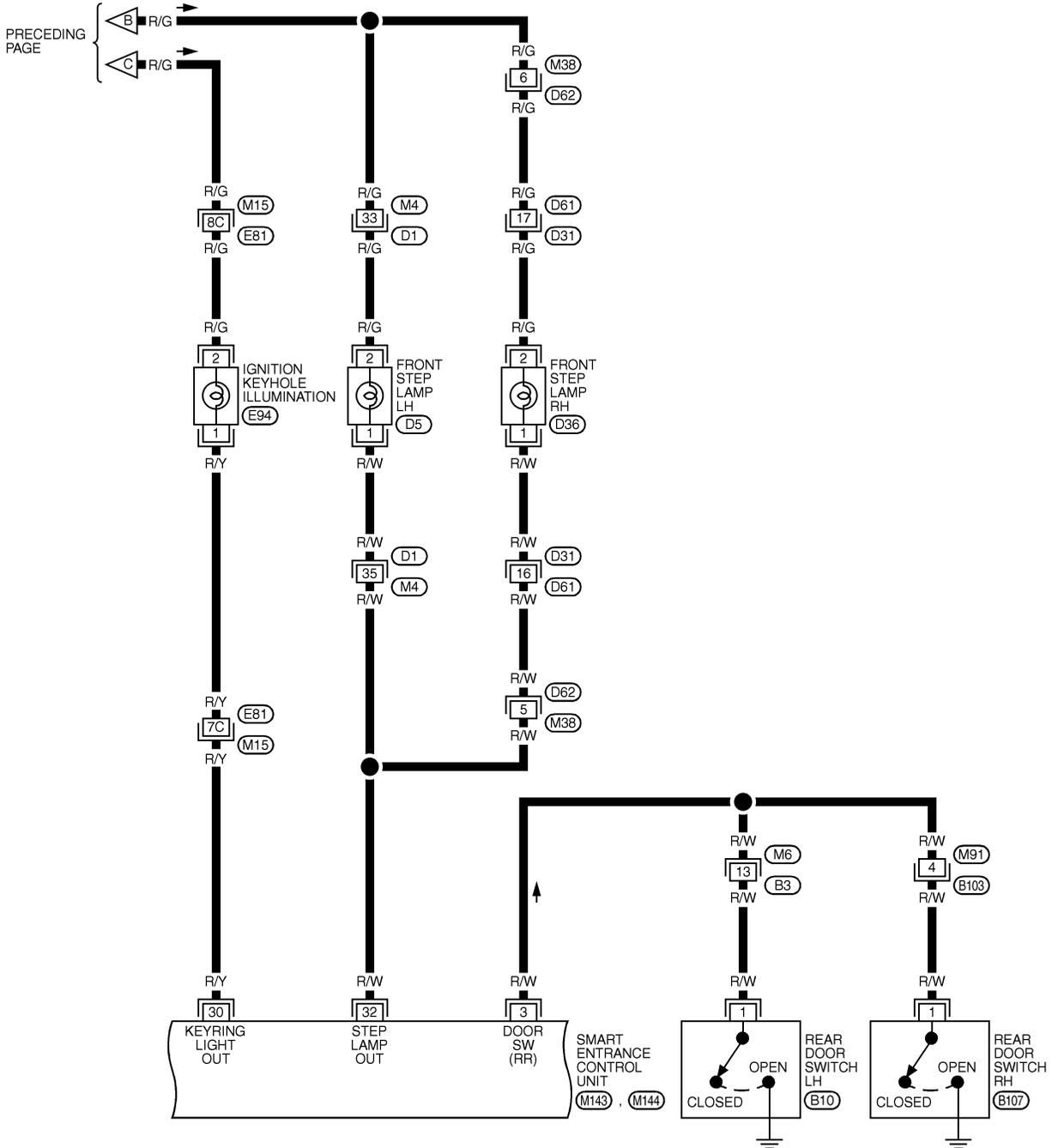
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INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-03



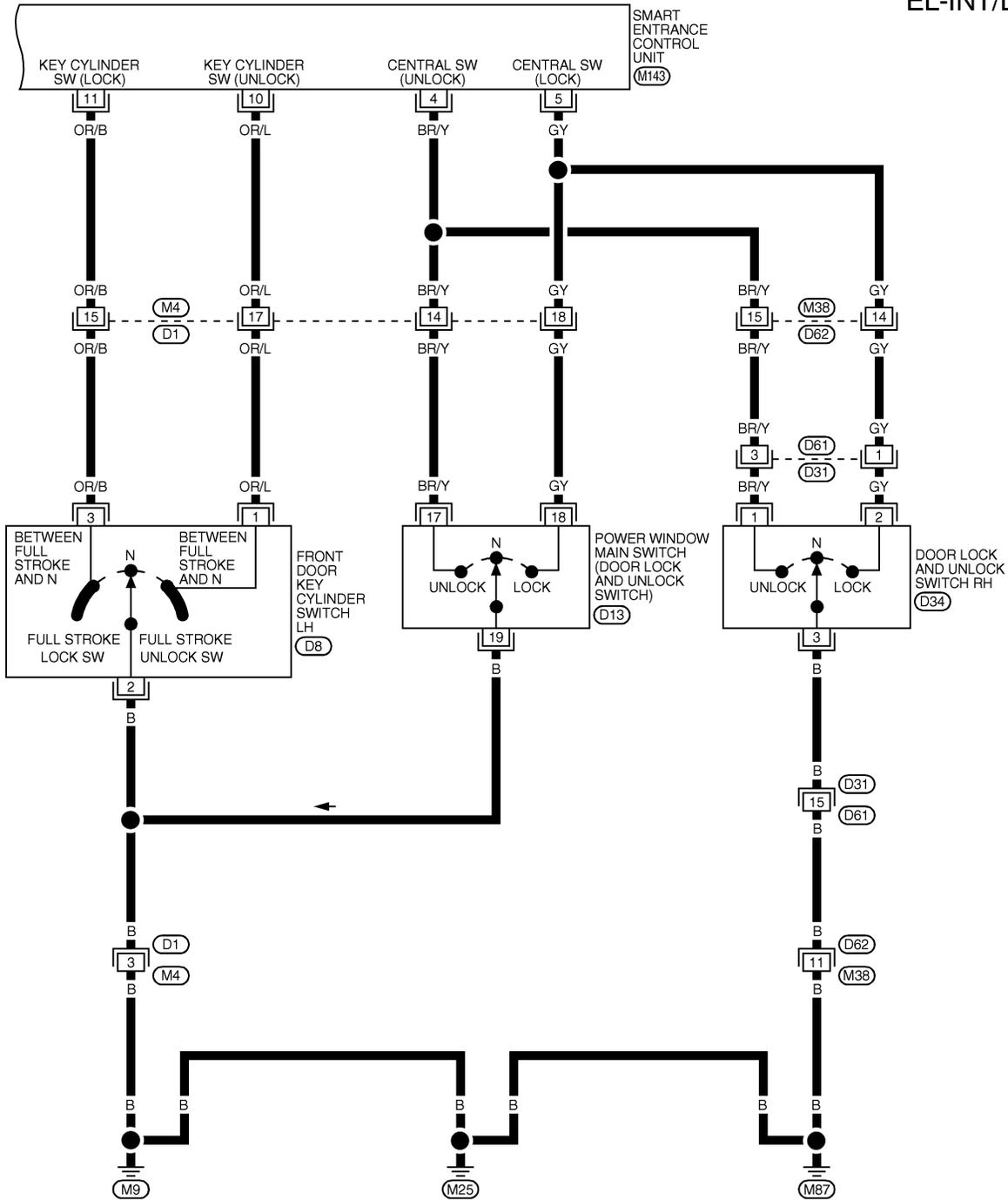
REFER TO THE FOLLOWING.
 (M15) , (D1) , (D31) -SUPER
 MULTIPLE JUNCTION (SMJ)

MEL969N

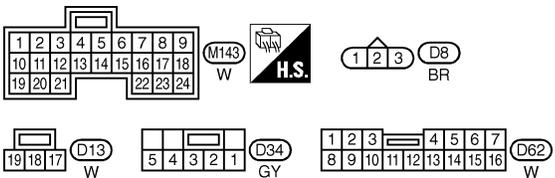
INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-04



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

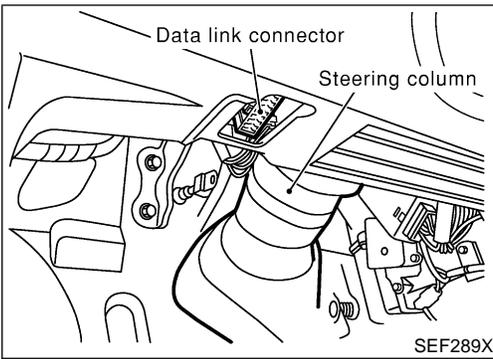
INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

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	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
3	R/W	REAR DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
4	BR/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → UNLOCKS	5V → 0V
5	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → LOCKS	5V → 0V
10	OR/L	DOOR KEY CYLINDER UNLOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)	5V → 0V
11	OR/B	DOOR KEY CYLINDER LOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)	5V → 0V
25	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER	12V → 0V
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION	12V
30	R/Y	IGNITION KEYHOLE ILLUMINATION	WHEN DOORS ARE UNLOCKED USING REMOTE CONTROLLER (OFF → UNLOCK)	12V → 0V
31	R	INTERIOR LAMP	WHEN DOORS ARE LOCKED USING REMOTE CONTROLLER (LAMP SWITCH IN "DOOR" POSITION)	12V
32	R/W	FRONT STEP LAMP	ANY DOOR SWITCH ON (OPEN) → OFF (CLOSED)	0V → 12V
43	B	GROUND	-	-
49	R/B	POWER SOURCE (FUSE)	-	12V
50	R/G	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOSE OPERATE → DOES NOT OPERATE (ON → OFF)	12V → 0V
64	B	GROUND	-	-

SEL975XA



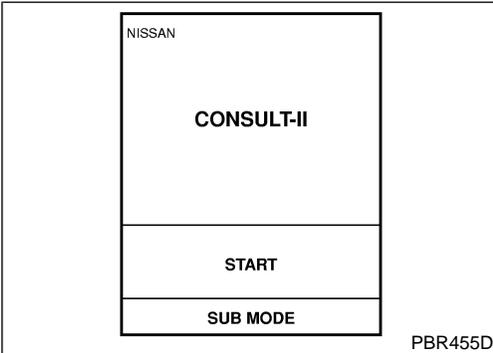
CONSULT-II Inspection Procedure

=NFEL0213

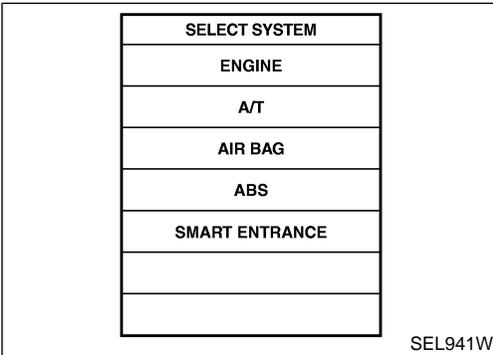
“INT LAMP”/“BATTERY SAVER”

NFEL0213S01

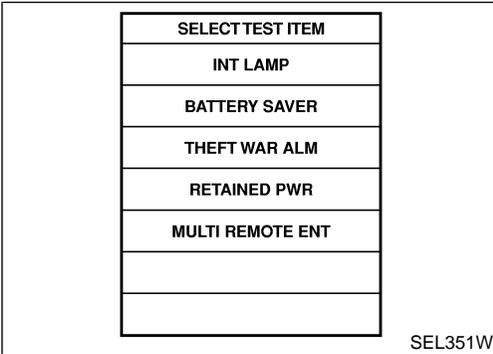
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



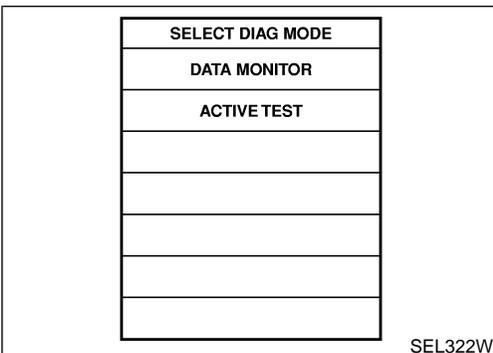
3. Turn ignition switch “ON”.
4. Touch “START”.



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”.

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

CONSULT-II Application Items

CONSULT-II Application Items

NFEL0259

NFEL0259S01

NFEL0259S0101

“INT LAMP” Data Monitor

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-RR	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-AS	Indicates [ON/OFF] condition of front door switch RH.
LOCK SW DR/AS	Indicates [ON/OFF] condition of front door lock switch.
UNLK SW DR/AS	Indicates [ON/OFF] condition of front door lock switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of front door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of front door key cylinder switch.
LK BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.

Active Test

NFEL0259S0102

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

“BATTERY SAVER” Data Monitor

NFEL0259S02

NFEL0259S0201

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
DOOR SW-RR	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-AS	Indicates [ON/OFF] condition of front door switch RH.
LOCK SW DR/AS	Indicates [ON/OFF] condition of front door lock switch.
UNLK SW DR/AS	Indicates [ON/OFF] condition of front door lock switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of front door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of front door key cylinder switch.
LK BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.

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

CONSULT-II Application Items (Cont'd)

Active Test

NFEL0259S0202

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

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

Trouble Diagnoses for Interior Lamp Timer

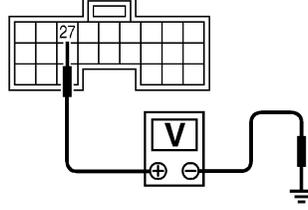
Trouble Diagnoses for Interior Lamp Timer

=NFEL0215

DIAGNOSTIC PROCEDURE 1

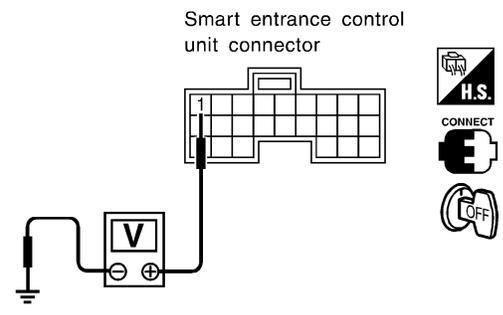
NFEL0215S01

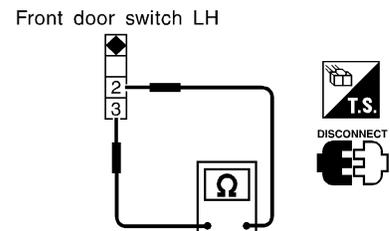
SYMPTOM: Interior lamp timer does not operate.

1	CHECK IGNITION ON SIGNAL																
<p> With CONSULT-II 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: IGN ON SW ON</p> <p>When ignition switch is OFF: IGN ON SW OFF</p>																	
SEL318W																	
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M144 terminal 27 (G) and ground.</p>																	
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">  <p>Smart entrance control unit connector</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>27</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	27	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position															
(+)	(-)	OFF	ACC	ON													
27	Ground	0V	0V	Battery voltage													
SEL003Y																	
OK or NG																	
OK	▶	GO TO 2.															
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 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)

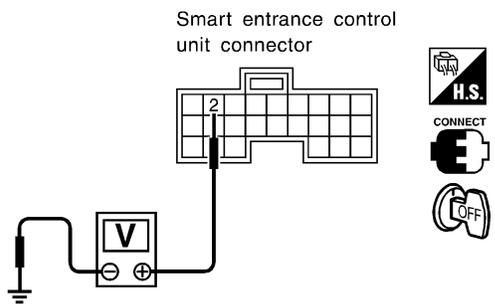
2	CHECK FRONT LH DOOR SWITCH INPUT SIGNAL						
<p> With CONSULT-II Check driver door switch signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.</p>							
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>DOOR SW-DR</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		DOOR SW-DR	OFF
DATA MONITOR							
MONITOR							
DOOR SW-DR	OFF						
<p>When front LH door is open: DOOR SW-DR ON</p> <p>When driver's door is closed: DOOR SW-DR OFF</p>							
SEL319WA							
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 1 (SB) and ground.</p>							
<p>Smart entrance control unit connector</p> 							
<p>Voltage [V]: Condition of driver's door: CLOSED Approx. 5 Condition of driver's door: OPENED 0</p>							
SEL004Y							
OK or NG							
OK	▶ GO TO 4.						
NG	▶ GO TO 3.						

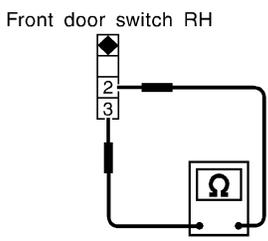
3	CHECK FRONT LH DOOR SWITCH
Check continuity between door switch connector B29 terminals 2 and 3.	
<p>Front door switch LH</p> 	
<p>Continuity: Door switch is pushed. No Door switch is released. Yes</p>	
SEL325WB	
OK or NG	
OK	▶ Check the following. ● Front LH door switch ground circuit and condition ● Harness for open or short between smart entrance control unit and front LH door switch
NG	▶ Replace front LH door switch.

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

Trouble Diagnoses for Interior Lamp Timer (Cont'd)

4	CHECK FRONT RH DOOR SWITCH INPUT SIGNAL						
<p> With CONSULT-II Check driver door switch signal ("DOOR SW-AS") 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>DOOR SW-AS</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		DOOR SW-AS	OFF
DATA MONITOR							
MONITOR							
DOOR SW-AS	OFF						
<p>When front RH door is open: DOOR SW-AS ON</p> <p>When driver's door is closed: DOOR SW-AS OFF</p>							
SEL153Y							
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 2 (R/L) and ground.</p>							
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p style="text-align: center;">Smart entrance control unit connector</p>  </div> <div style="flex: 0.5; text-align: center;">    </div> <div style="flex: 1;"> <p>Voltage [V]: Condition of front RH door: CLOSED Approx. 5 Condition of front RH door: OPENED 0</p> </div> </div>							
SEL152Y							
OK or NG							
OK	▶	GO TO 6.					
NG	▶	GO TO 5.					

5	CHECK FRONT RH DOOR SWITCH	
Check continuity between door switch connector B129 terminals 2 and 3.		
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p style="text-align: center;">Front door switch RH</p>  </div> <div style="flex: 0.5; text-align: center;">   </div> <div style="flex: 1;"> <p>Continuity: Door switch is pushed. No Door switch is released. Yes</p> </div> </div>		
SEL325WC		
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Front RH door switch ground circuit and condition ● Harness for open or short between smart entrance control unit and front RH door switch
NG	▶	Replace front RH door switch.

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

Trouble Diagnoses for Interior Lamp Timer (Cont'd)

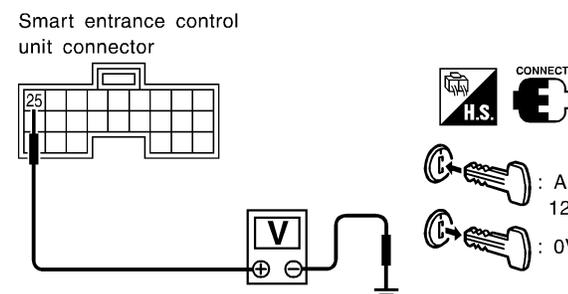
6	CHECK REAR LH AND RH DOOR SWITCHES INPUT SIGNAL							
<p> With CONSULT-II Check door switches ("DOOR SW-RR") in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>DOOR SW-RR</td><td>OFF</td></tr> </table>			DATA MONITOR		MONITOR		DOOR SW-RR	OFF
DATA MONITOR								
MONITOR								
DOOR SW-RR	OFF							
		<p>When rear door LH and/or RH is open: DOOR SW-RR ON</p> <p>When driver's door is closed: DOOR SW-RR OFF</p>						
SEL154Y								
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminals 3 (R/W) and ground.</p>								
<p>Smart entrance control unit connector</p>								
		<p>Voltage [V]: Condition of rear LH and/or RH door: CLOSED Approx. 5 Condition of rear LH and/or RH door: OPENED 0</p>						
SEL155Y								
OK or NG								
OK	▶	GO TO 8.						
NG	▶	GO TO 7.						

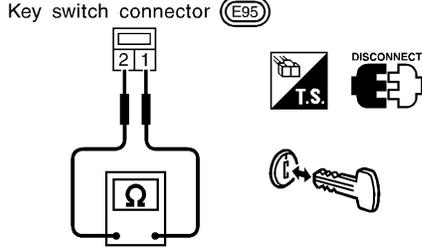
7	CHECK REAR LH AND RH DOOR SWITCHES	
<p>1. Disconnect door switch harness connector. 2. Check continuity between door switch terminal 1 and ground.</p>		
<p>Rear door switch connector</p>		
		<p>Continuity: Door switch is pushed. No Door switch is released. Yes</p>
SEL156Y		
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Rear LH and/or RH door switch ground circuit or door switch ground condition ● Harness for open or short between smart entrance control unit and rear LH and/or RH door switch
NG	▶	Replace rear LH and/or RH door switch.

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

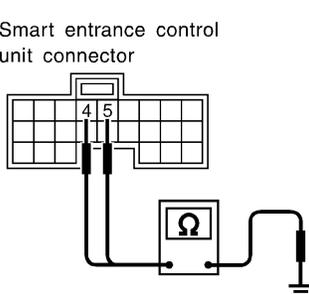
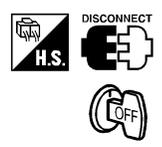
Trouble Diagnoses for Interior Lamp Timer (Cont'd)

8	CHECK KEY SWITCH INPUT SIGNAL								
<p> With CONSULT-II 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	<p>When key is inserted to ignition key cylinder: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p>	
DATA MONITOR									
MONITOR									
KEY ON SW	ON								
SEL315W									
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M144 terminal 25 (B/R) and ground.</p>									
<p>Smart entrance control unit connector</p> 		<p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p>							
SEL011Y									
OK or NG									
OK		▶ GO TO 10.							
NG		▶ GO TO 9.							

9	CHECK KEY SWITCH (INSERT)		
<p>Check continuity between terminals 1 and 2.</p>			
<p>Key switch connector (E95)</p> 		<p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p>	
SEL311W			
OK or NG			
OK		▶ Check the following.	
		<ul style="list-style-type: none"> ● 10A fuse [No. 13, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch 	
NG		▶ Replace key switch.	

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

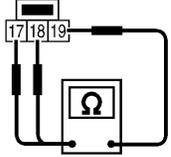
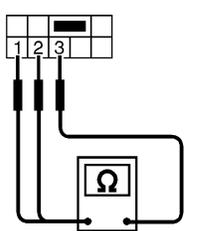
Trouble Diagnoses for Interior Lamp Timer (Cont'd)

10	CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL													
<p>With CONSULT-II Check door lock/unlock switch (“LOCK SW DR/AS”/“UNLK SW DR/AS”) 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>LOCK SW DR/AS</td><td>OFF</td></tr> <tr><td>UNLK SW DR/AS</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		LOCK SW DR/AS	OFF	UNLK SW DR/AS	OFF					
DATA MONITOR														
MONITOR														
LOCK SW DR/AS	OFF													
UNLK SW DR/AS	OFF													
<p>When lock/unlock switch is turned to LOCK: LOCK SW DR/AS ON</p> <p>When lock/unlock switch is turned to UNLOCK: UNLK SW DR/AS ON</p>														
SEL341W														
<p>Without CONSULT-II</p> <ol style="list-style-type: none"> 1. Disconnect smart entrance control unit harness connector . 2. Check continuity between smart entrance control unit harness connector M143 terminal 4 (BR/Y) or 5 (GY) and ground. 														
<div style="display: flex; align-items: center; justify-content: space-around;"> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;"> <p>DISCONNECT</p>  </div> </div>														
<table border="1" style="margin: auto;"> <thead> <tr> <th>Terminals</th> <th>Door lock/unlock switch (LH or RH) condition</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">4 - Ground</td> <td>Lock</td> <td>Yes</td> </tr> <tr> <td>N and Unlock</td> <td>No</td> </tr> <tr> <td rowspan="2">5 - Ground</td> <td>Unlock</td> <td>Yes</td> </tr> <tr> <td>N and Lock</td> <td>No</td> </tr> </tbody> </table>		Terminals	Door lock/unlock switch (LH or RH) condition	Continuity	4 - Ground	Lock	Yes	N and Unlock	No	5 - Ground	Unlock	Yes	N and Lock	No
Terminals	Door lock/unlock switch (LH or RH) condition	Continuity												
4 - Ground	Lock	Yes												
	N and Unlock	No												
5 - Ground	Unlock	Yes												
	N and Lock	No												
SEL157Y														
OK or NG														
OK	▶ GO TO 12.													
NG	▶ GO TO 11.													

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Trouble Diagnoses for Interior Lamp Timer (Cont'd)

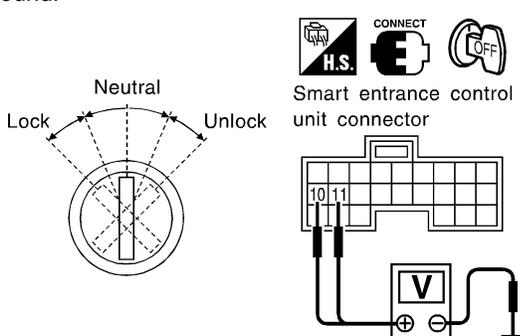
11	CHECK DOOR LOCK/UNLOCK SWITCH																			
<p>1. Disconnect door lock/unlock switch harness connector. 2. Check continuity between each door lock/unlock switch terminals.</p> <ul style="list-style-type: none"> ● Power window main switch (Door lock/unlock switch connector D13) 																				
	<p>Power window main switch</p> 																			
<table border="1"> <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>○</td> <td>○</td> </tr> <tr> <td>N</td> <td colspan="3">No continuity</td> </tr> <tr> <td>Unlock</td> <td>○</td> <td></td> <td>○</td> </tr> </tbody> </table>		Condition	Terminals			17	18	19	Lock		○	○	N	No continuity			Unlock	○		○
Condition	Terminals																			
	17	18	19																	
Lock		○	○																	
N	No continuity																			
Unlock	○		○																	
<ul style="list-style-type: none"> ● Door lock/unlock switch RH connector D34 																				
	<p>Door lock and unlock switch RH</p> 																			
<table border="1"> <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>○</td> <td>○</td> </tr> <tr> <td>N</td> <td colspan="3">No continuity</td> </tr> <tr> <td>Unlock</td> <td>○</td> <td></td> <td>○</td> </tr> </tbody> </table>		Condition	Terminals			1	2	3	Lock		○	○	N	No continuity			Unlock	○		○
Condition	Terminals																			
	1	2	3																	
Lock		○	○																	
N	No continuity																			
Unlock	○		○																	
<p>OK or NG</p>																				
<p>OK</p>	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● Ground circuit for door lock/unlock switch ● Harness for open or short between door lock/unlock switch and smart entrance control unit connector 																			
<p>NG</p>	<p>▶ Replace door lock/unlock switch.</p>																			

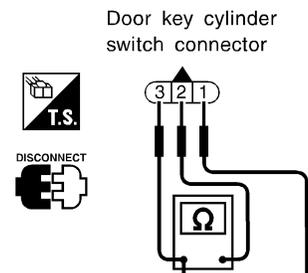
SEL185Y

SEL186Y

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

Trouble Diagnoses for Interior Lamp Timer (Cont'd)

12	CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)																		
<p> With CONSULT-II Check front door key cylinder switch (“KEY CYL LK-SW”/“KEY CYL UN-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 CYL LK-SW</td><td>OFF</td></tr> <tr><td>KEY CYL UN-SW</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		KEY CYL LK-SW	OFF	KEY CYL UN-SW	OFF										
DATA MONITOR																			
MONITOR																			
KEY CYL LK-SW	OFF																		
KEY CYL UN-SW	OFF																		
<p>When key inserted in front key cylinder is turned to LOCK: KEY CYL LK-SW ON</p> <p>When key inserted in front key cylinder is turned to UNLOCK: KEY CYL UN-SW ON</p>																			
SEL342W																			
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminals 10 (OR/L) or 11 (OR/B) and ground.</p>																			
																			
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">Terminals</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" style="text-align: center;">11</td> <td rowspan="2" style="text-align: center;">Ground</td> <td>Neutral/Unlock</td> <td>Approx. 5</td> </tr> <tr> <td>Lock</td> <td>0</td> </tr> <tr> <td rowspan="2" style="text-align: center;">10</td> <td rowspan="2" style="text-align: center;">Ground</td> <td>Neutral/Lock</td> <td>Approx. 5</td> </tr> <tr> <td>Unlock</td> <td>0</td> </tr> </tbody> </table>		Terminals		Key position	Voltage V	(+)	(-)	11	Ground	Neutral/Unlock	Approx. 5	Lock	0	10	Ground	Neutral/Lock	Approx. 5	Unlock	0
Terminals		Key position	Voltage V																
(+)	(-)																		
11	Ground	Neutral/Unlock	Approx. 5																
		Lock	0																
10	Ground	Neutral/Lock	Approx. 5																
		Unlock	0																
SEL158Y																			
OK or NG																			
OK	▶ Replace smart entrance control unit.																		
NG	▶ GO TO 13.																		

13	CHECK DOOR KEY CYLINDER SWITCH													
<p>1. Disconnect door key cylinder switch harness connector D8. 2. Check continuity between door key cylinder switch terminals.</p>														
														
<p>① : Door unlock switch terminal ② : Ground terminal ③ : Door lock switch terminal</p>														
<table border="1" style="margin: auto;"> <thead> <tr> <th>Terminals</th> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">③ - ②</td> <td>Neutral/Unlock</td> <td>No</td> </tr> <tr> <td>Lock</td> <td>Yes</td> </tr> <tr> <td rowspan="2" style="text-align: center;">① - ②</td> <td>Neutral/Lock</td> <td>No</td> </tr> <tr> <td>Unlock</td> <td>Yes</td> </tr> </tbody> </table>		Terminals	Key position	Continuity	③ - ②	Neutral/Unlock	No	Lock	Yes	① - ②	Neutral/Lock	No	Unlock	Yes
Terminals	Key position	Continuity												
③ - ②	Neutral/Unlock	No												
	Lock	Yes												
① - ②	Neutral/Lock	No												
	Unlock	Yes												
SEL187Y														
OK or NG														
OK	▶ Check the following.													
<ul style="list-style-type: none"> ● 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.													

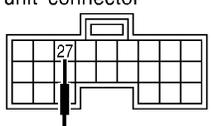
INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (Cont'd)

DIAGNOSTIC PROCEDURE 2

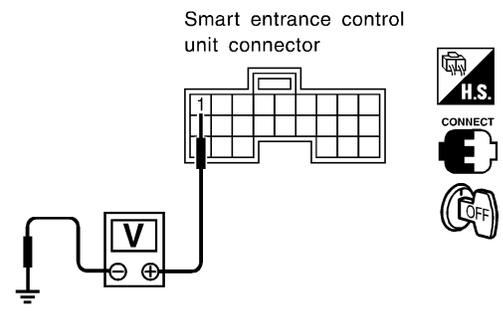
NFEL0215S02

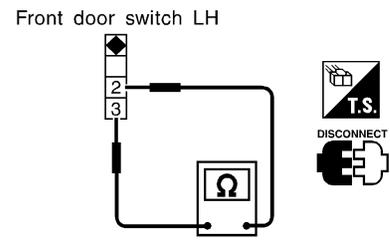
SYMPTOM: Interior lamp timer does not cancel properly.

1	CHECK IGNITION ON SIGNAL																
<p> With CONSULT-II 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: IGN ON SW ON</p> <p>When ignition switch is OFF: IGN ON SW OFF</p>																	
SEL318W																	
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M144 terminal 27 (G) and ground.</p>																	
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">  </div> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector</p>  </div> <div> <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>27</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div> </div>			Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	27	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position															
(+)	(-)	OFF	ACC	ON													
27	Ground	0V	0V	Battery voltage													
SEL995X																	
OK or NG																	
OK	▶	GO TO 2.															
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 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)

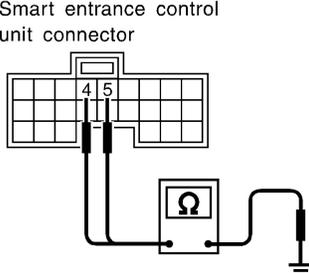
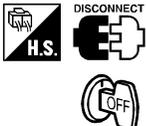
2	CHECK FRONT LH DOOR SWITCH INPUT SIGNAL						
<p> With CONSULT-II Check driver door switch signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.</p>							
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>DOOR SW-DR</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		DOOR SW-DR	OFF
DATA MONITOR							
MONITOR							
DOOR SW-DR	OFF						
<p>When front LH door is open: DOOR SW-DR ON</p> <p>When driver's door is closed: DOOR SW-DR OFF</p>							
SEL319WA							
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 1 (SB) and ground.</p>							
<p>Smart entrance control unit connector</p> 							
<p>Voltage [V]: Condition of driver's door: CLOSED Approx. 5 Condition of driver's door: OPENED 0</p>							
SEL004Y							
OK or NG							
OK	▶ GO TO 4.						
NG	▶ GO TO 3.						

3	CHECK FRONT LH DOOR SWITCH
Check continuity between door switch connector B29 terminals 2 and 3.	
<p>Front door switch LH</p> 	
<p>Continuity: Door switch is pushed. No Door switch is released. Yes</p>	
SEL325WB	
OK or NG	
OK	▶ Check the following. <ul style="list-style-type: none"> ● Front LH door switch ground circuit and condition ● Harness for open or short between smart entrance control unit and front LH door switch
NG	▶ Replace front LH door switch.

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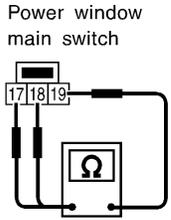
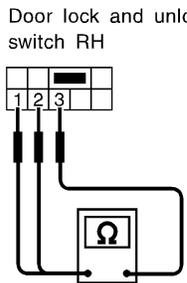
INTERIOR, STEP, SPOT, VANITY MIRROR AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (Cont'd)

4	CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL													
<p> With CONSULT-II Check door lock/unlock switch (“LOCK SW DR/AS”/“UNLK SW DR/AS”) 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>LOCK SW DR/AS</td><td>OFF</td></tr> <tr><td>UNLK SW DR/AS</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		LOCK SW DR/AS	OFF	UNLK SW DR/AS	OFF					
DATA MONITOR														
MONITOR														
LOCK SW DR/AS	OFF													
UNLK SW DR/AS	OFF													
<p>When lock/unlock switch is turned to LOCK: LOCK SW DR/AS ON</p> <p>When lock/unlock switch is turned to UNLOCK: UNLK SW DR/AS ON</p>														
SEL341W														
<p> Without CONSULT-II</p> <ol style="list-style-type: none"> 1. Disconnect smart entrance control unit harness connector . 2. Check continuity between smart entrance control unit harness connector M143 terminal 4 (BR/Y) or 5 (GY) and ground. 														
<div style="display: flex; align-items: center; justify-content: space-around;"> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;">  </div> </div>														
<table border="1" style="margin: auto;"> <thead> <tr> <th>Terminals</th> <th>Door lock/unlock switch (LH or RH) condition</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">4 - Ground</td> <td>Lock</td> <td>Yes</td> </tr> <tr> <td>N and Unlock</td> <td>No</td> </tr> <tr> <td rowspan="2">5 - Ground</td> <td>Unlock</td> <td>Yes</td> </tr> <tr> <td>N and Lock</td> <td>No</td> </tr> </tbody> </table>		Terminals	Door lock/unlock switch (LH or RH) condition	Continuity	4 - Ground	Lock	Yes	N and Unlock	No	5 - Ground	Unlock	Yes	N and Lock	No
Terminals	Door lock/unlock switch (LH or RH) condition	Continuity												
4 - Ground	Lock	Yes												
	N and Unlock	No												
5 - Ground	Unlock	Yes												
	N and Lock	No												
SEL157Y														
OK or NG														
OK	▶ GO TO 6.													
NG	▶ GO TO 5.													

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

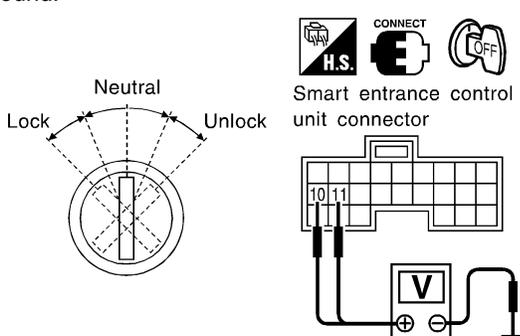
Trouble Diagnoses for Interior Lamp Timer (Cont'd)

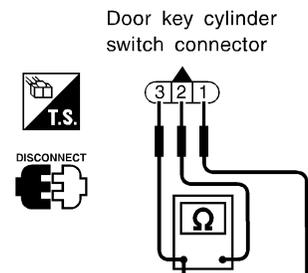
5	CHECK DOOR LOCK/UNLOCK SWITCH																																							
	<p>1. Disconnect door lock/unlock switch harness connector.</p> <p>2. Check continuity between each door lock/unlock switch terminals.</p> <ul style="list-style-type: none"> ● Power window main switch (Door lock/unlock switch connector D13) 	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>Power window main switch</p>  </div> <div style="width: 65%;"> <table border="1"> <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>○</td> <td>○</td> </tr> <tr> <td>N</td> <td colspan="3">No continuity</td> </tr> <tr> <td>Unlock</td> <td>○</td> <td></td> <td>○</td> </tr> </tbody> </table> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <ul style="list-style-type: none"> ● Door lock/unlock switch RH connector D34 </div> <div style="width: 65%;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">  <p>Door lock and unlock switch RH</p>  </div> <div style="width: 65%;"> <table border="1"> <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>○</td> <td>○</td> </tr> <tr> <td>N</td> <td colspan="3">No continuity</td> </tr> <tr> <td>Unlock</td> <td>○</td> <td></td> <td>○</td> </tr> </tbody> </table> </div> </div> </div> </div>	Condition	Terminals			17	18	19	Lock		○	○	N	No continuity			Unlock	○		○	Condition	Terminals			1	2	3	Lock		○	○	N	No continuity			Unlock	○		○
Condition	Terminals																																							
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Lock		○	○																																					
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Unlock	○		○																																					
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N	No continuity																																							
Unlock	○		○																																					
OK	▶	<p style="text-align: center;">OK or NG</p> <p>Check the following.</p> <ul style="list-style-type: none"> ● Ground circuit for door lock/unlock switch ● Harness for open or short between door lock/unlock switch and smart entrance control unit connector 																																						
NG	▶	Replace door lock/unlock switch.																																						

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

Trouble Diagnoses for Interior Lamp Timer (Cont'd)

6	CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)																		
<p> With CONSULT-II Check front door key cylinder switch (“KEY CYL LK-SW”/“KEY CYL UN-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 CYL LK-SW</td><td>OFF</td></tr> <tr><td>KEY CYL UN-SW</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		KEY CYL LK-SW	OFF	KEY CYL UN-SW	OFF										
DATA MONITOR																			
MONITOR																			
KEY CYL LK-SW	OFF																		
KEY CYL UN-SW	OFF																		
<p>When key inserted in front key cylinder is turned to LOCK: KEY CYL LK-SW ON</p> <p>When key inserted in front key cylinder is turned to UNLOCK: KEY CYL UN-SW ON</p>																			
SEL342W																			
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminals 10 (OR/L) or 11 (OR/B) and ground.</p>																			
																			
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">Terminals</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" style="text-align: center;">11</td> <td rowspan="2" style="text-align: center;">Ground</td> <td>Neutral/Unlock</td> <td style="text-align: center;">Approx. 5</td> </tr> <tr> <td>Lock</td> <td style="text-align: center;">0</td> </tr> <tr> <td rowspan="2" style="text-align: center;">10</td> <td rowspan="2" style="text-align: center;">Ground</td> <td>Neutral/Lock</td> <td style="text-align: center;">Approx. 5</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>		Terminals		Key position	Voltage V	(+)	(-)	11	Ground	Neutral/Unlock	Approx. 5	Lock	0	10	Ground	Neutral/Lock	Approx. 5	Unlock	0
Terminals		Key position	Voltage V																
(+)	(-)																		
11	Ground	Neutral/Unlock	Approx. 5																
		Lock	0																
10	Ground	Neutral/Lock	Approx. 5																
		Unlock	0																
SEL158Y																			
OK or NG																			
OK	▶ Replace smart entrance control unit.																		
NG	▶ GO TO 7.																		

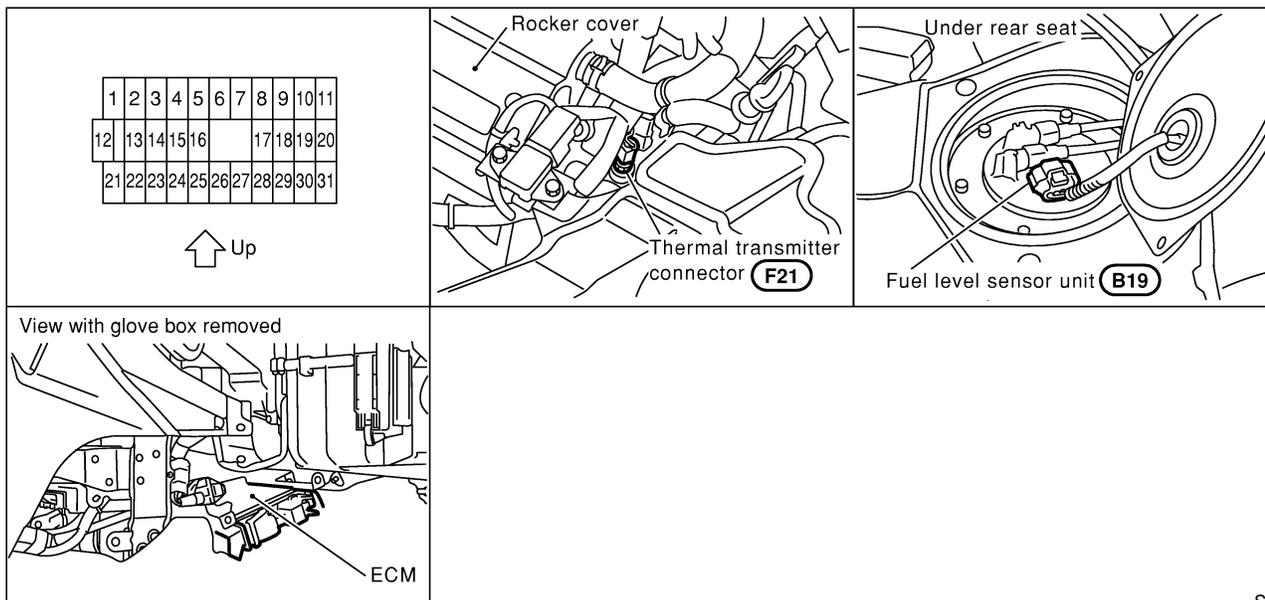
7	CHECK DOOR KEY CYLINDER SWITCH													
<p>1. Disconnect door key cylinder switch harness connector D8. 2. Check continuity between door key cylinder switch terminals.</p>														
														
<table border="1" style="margin: auto;"> <thead> <tr> <th>Terminals</th> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">③ - ②</td> <td>Neutral/Unlock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>Lock</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td rowspan="2" style="text-align: center;">① - ②</td> <td>Neutral/Lock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table>		Terminals	Key position	Continuity	③ - ②	Neutral/Unlock	No	Lock	Yes	① - ②	Neutral/Lock	No	Unlock	Yes
Terminals	Key position	Continuity												
③ - ②	Neutral/Unlock	No												
	Lock	Yes												
① - ②	Neutral/Lock	No												
	Unlock	Yes												
SEL187Y														
OK or NG														
OK	▶ Check the following. <ul style="list-style-type: none"> ● 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.													

METERS AND GAUGES

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NFEL0041



SEL168W

System Description

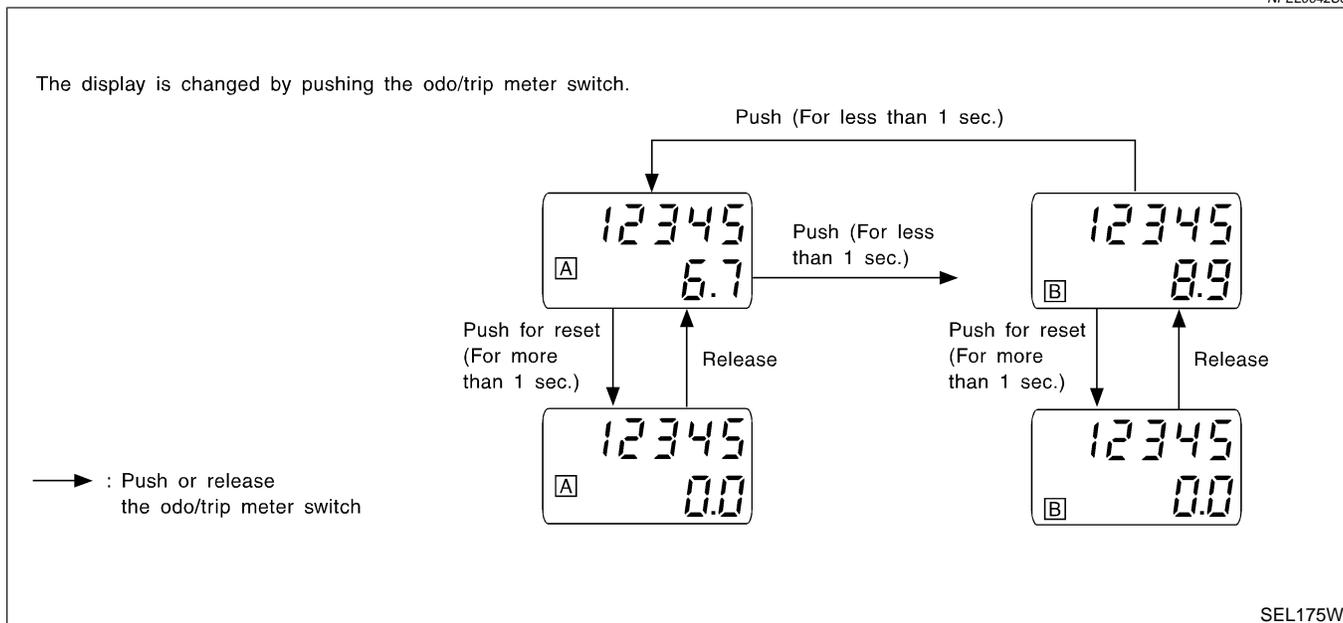
NFEL0042

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.

HOW TO CHANGE THE DISPLAY FOR ODO/TRIP METER

NFEL0042S07



SEL175W

NOTE:

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

METERS AND GAUGES

System Description (Cont'd)

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 (with TCS).
- to terminal 19 of ABS actuator and electric unit (without TCS).

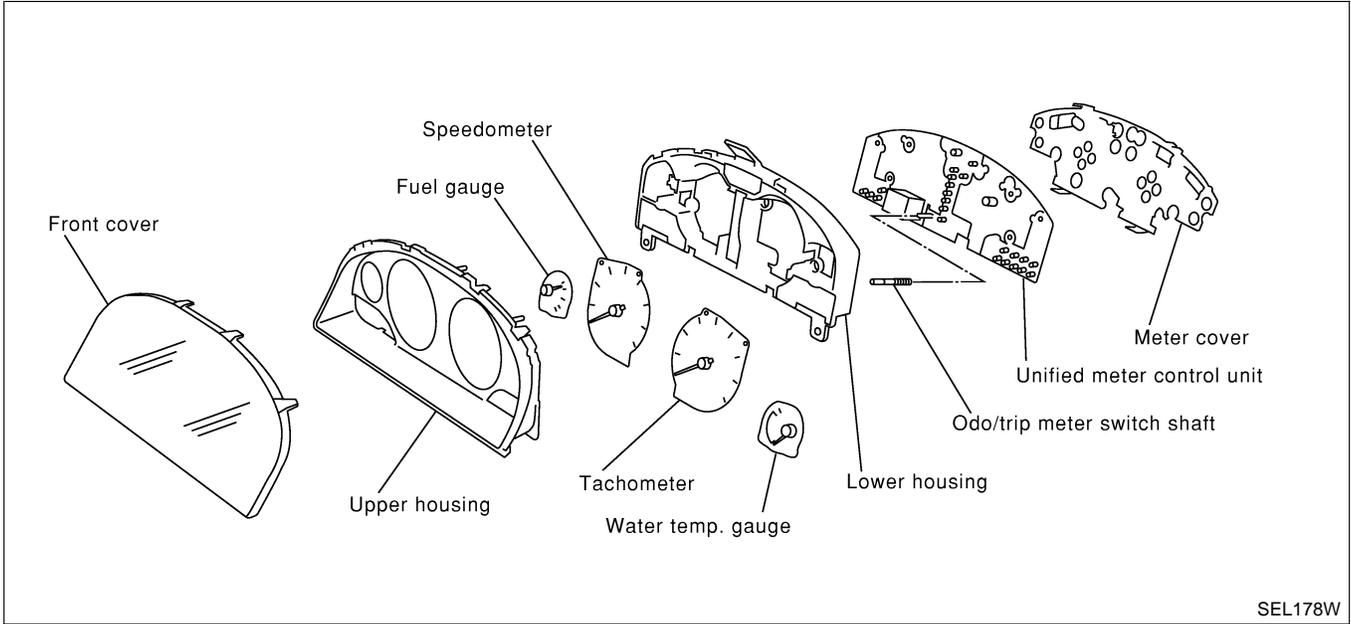
The speedometer converts the voltage into the vehicle speed displayed.

METERS AND GAUGES

Combination Meter (Cont'd)

CONSTRUCTION

NFEL0043S04



SEL178W

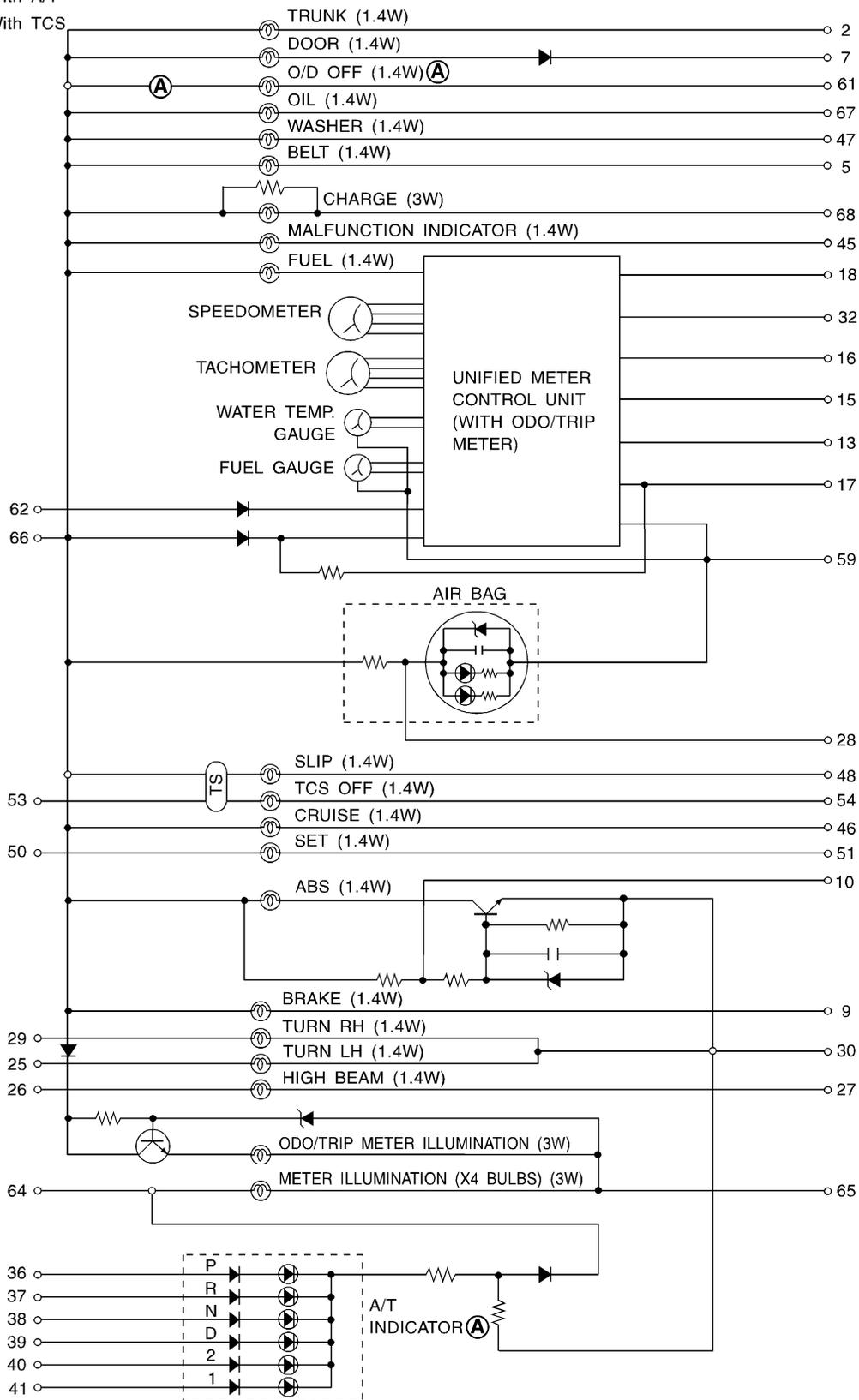
METERS AND GAUGES

Schematic

Schematic

NFEL0254

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



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METERS AND GAUGES

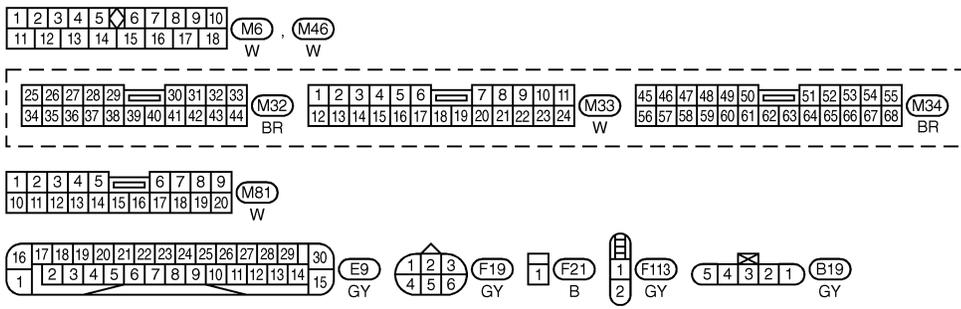
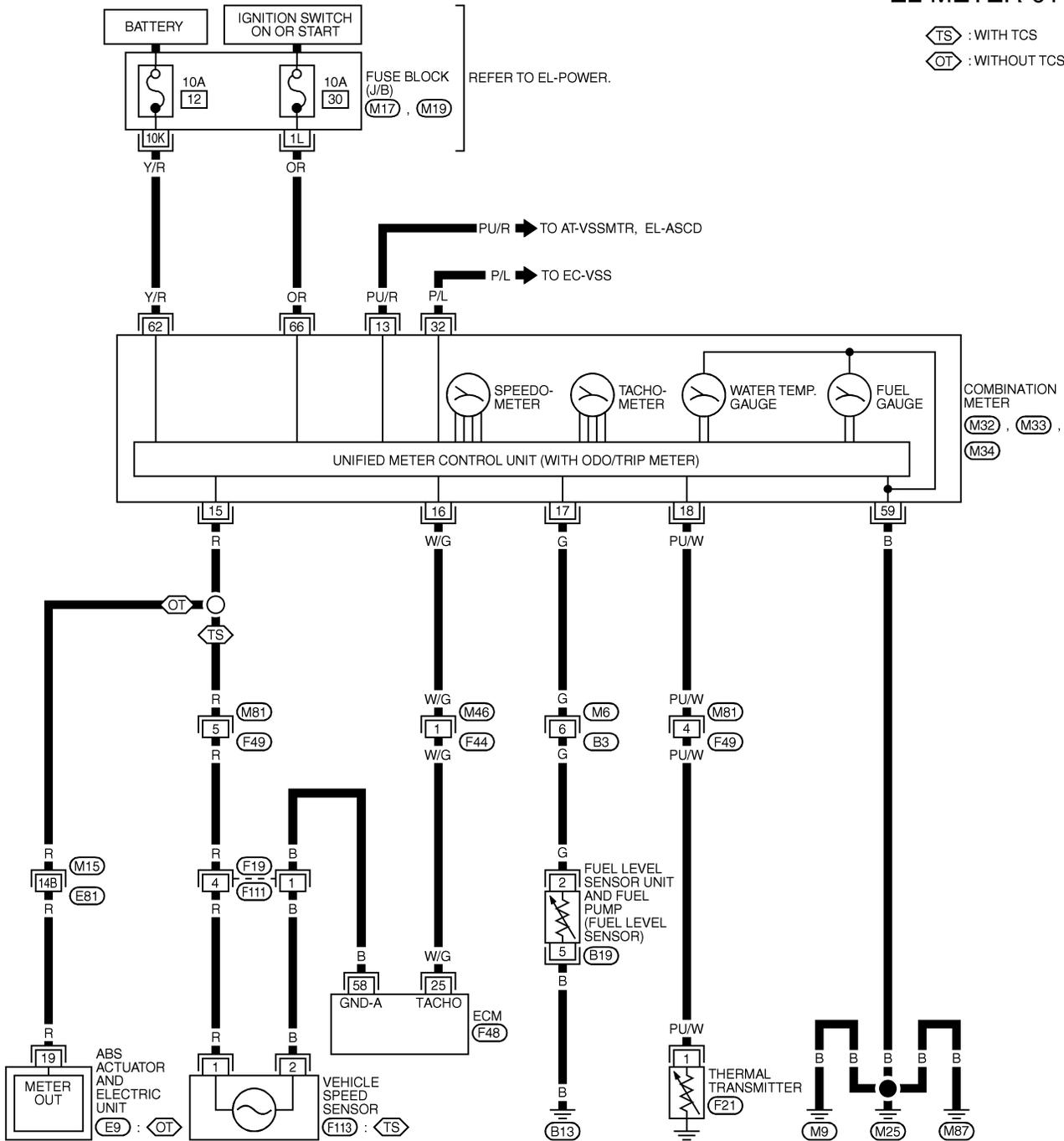
Wiring Diagram — METER —

Wiring Diagram — METER —

NFEL0045

EL-METER-01

⬡(TS) : WITH TCS
 ⬡(OT) : WITHOUT TCS



REFER TO THE FOLLOWING.
 (M15) -SUPER MULTIPLE JUNCTION (SMJ).
 (M17) , (M19) -FUSE BLOCK-JUNCTION BOX (J/B).
 (F48) -ELECTRICAL UNITS

MEL042N

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

NFEL0151

GI

DIAGNOSIS FUNCTION

NFEL0151S01

MA

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

HOW TO ALTERNATE DIAGNOSIS MODE

NFEL0151S02

EM

1. Turn ignition switch to ON and change odo/trip meter to "TRIP A".
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.

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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.

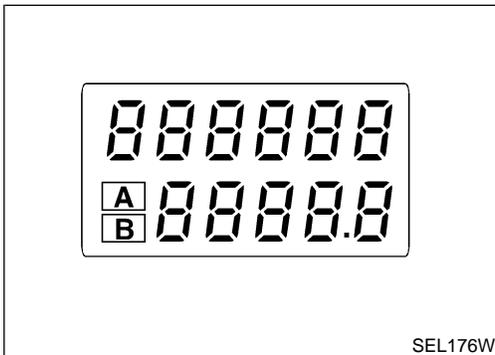
At this point, the unified control meter is turned to diagnosis mode.

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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.

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NOTE:

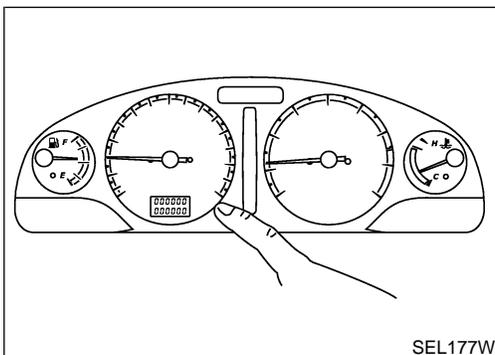
It takes about a few seconds for indication of fuel gauge and water temperature gauge to become stable.

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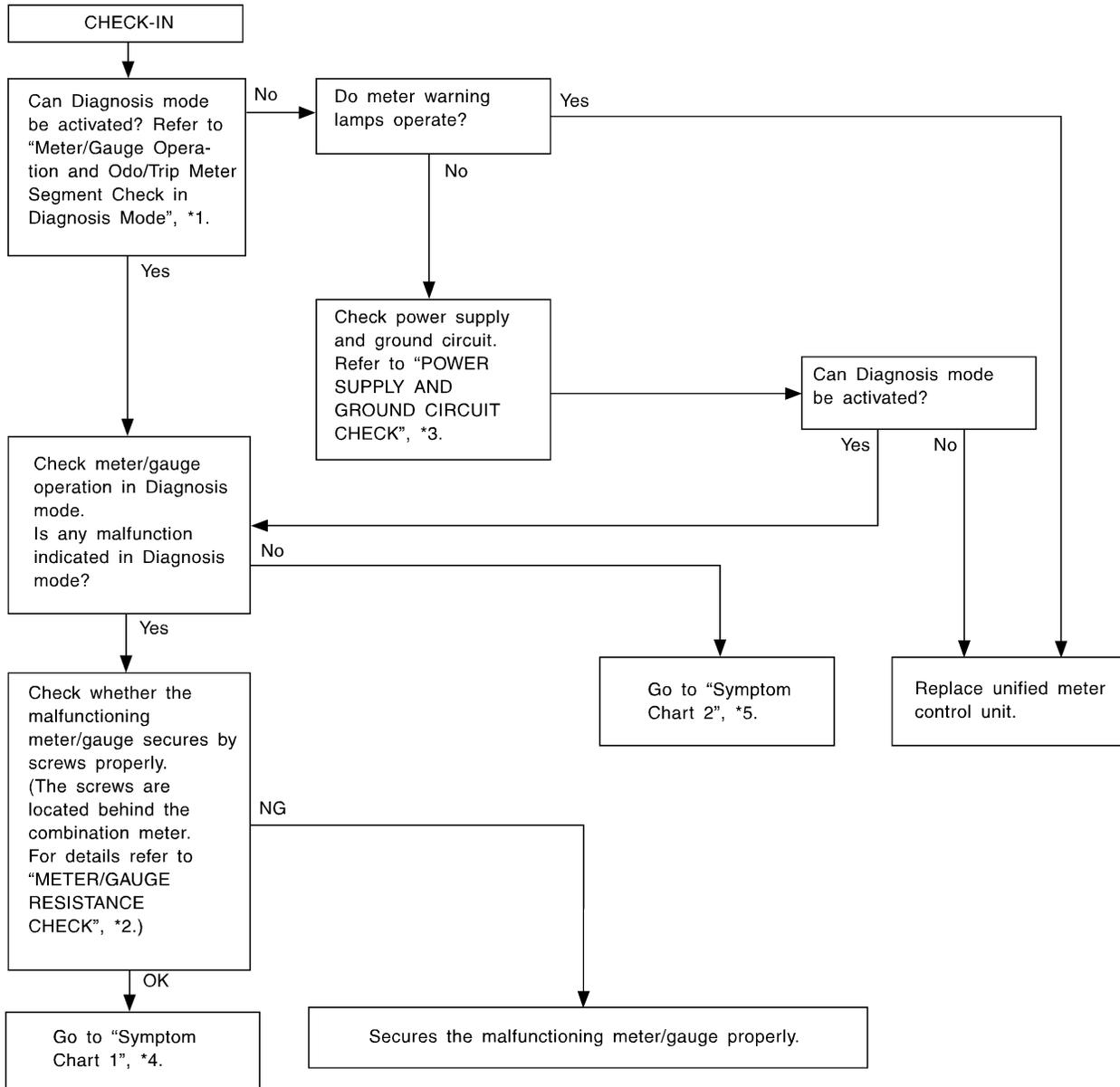


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METERS AND GAUGES

Trouble Diagnoses PRELIMINARY CHECK



SEL361W

*1: Meter/Gauge Operation and Odo/ Trip Meter Segment Check in Diagnosis Mode (EL-117)
*2: METER/GAUGE RESISTANCE CHECK (EL-126)

*3: POWER SUPPLY AND GROUND CIRCUIT CHECK (EL-120)
*4: Symptom Chart 1 (EL-119)

*5: Symptom Chart 2 (EL-119)

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

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"> Meter/Gauge Unified meter control unit 	<ol style="list-style-type: none"> Check resistance of meter/gauge indicating malfunction. If the resistance is NG, replace the meter/gauge. Refer to "METER/GAUGE RESISTANCE CHECK", EL-126. If the resistance of meter/gauge is OK, replace unified meter control unit.

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

NFEL0046S1002

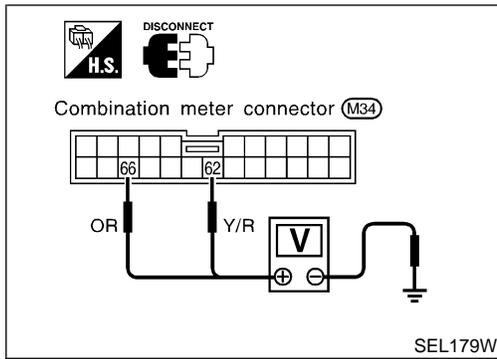
Symptom	Possible causes	Repair order
One of speedometer/tachometer/fuel gauge/water temp. gauge is malfunctioning.	<ol style="list-style-type: none"> Sensor signal <ul style="list-style-type: none"> Vehicle speed signal Engine revolution signal Fuel gauge Water temp. gauge Unified meter control unit 	<ol style="list-style-type: none"> Check the sensor for malfunctioning meter/gauge. INSPECTION/VEHICLE SPEED SENSOR (Refer to EL-121.) INSPECTION/ENGINE REVOLUTION SIGNAL (Refer to EL-123.) INSPECTION/FUEL LEVEL SENSOR UNIT (Refer to EL-124.) INSPECTION/THERMAL TRANSMITTER (Refer to EL-125.) Replace unified meter control unit.
Multiple meter/gauge are malfunctioning. (except odo/trip meter)		

Before starting trouble diagnoses below, perform PRELIMINARY CHECK, EL-118.

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METERS AND GAUGES

Trouble Diagnoses (Cont'd)



POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0046S07

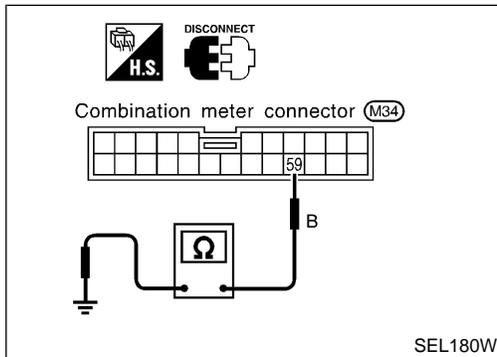
Power Supply Circuit Check

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

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

INSPECTION/VEHICLE SPEED SENSOR With TCS

=NFEL0046S03

NFEL0046S0301

1	CHECK VEHICLE SPEED SENSOR OUTPUT	<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> <p style="text-align: right;">SEL181W</p>	
		OK or NG	
OK	▶	Vehicle speed sensor is OK.	
NG	▶	GO TO 2.	

2	CHECK VEHICLE SPEED SENSOR	<p>Check resistance between vehicle speed sensor terminals 1 and 2.</p> <p style="text-align: right;">SEL645W</p>	
		OK or NG	
OK	▶	Check harness or connector between speedometer, vehicle speed sensor and ECM.	
NG	▶	Replace vehicle speed sensor.	

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METERS AND GAUGES

Trouble Diagnoses (Cont'd)

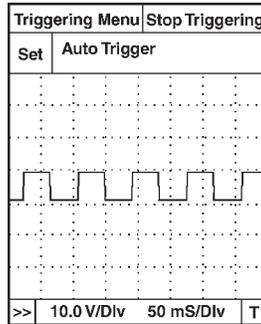
Without TCS

NFEL0046S0302

1 CHECK ABS CONTROL UNIT OUTPUT SIGNAL

With CONSULT-II

- Lift up drive wheels.
- Start engine.
- Check signal between combination meter terminal 15 and ground when rotating wheels with engine at idle. (Use "SIMPLE OSCILLOSCOPE" in "SUB MODE" with CONSULT-II.)



SEL938W

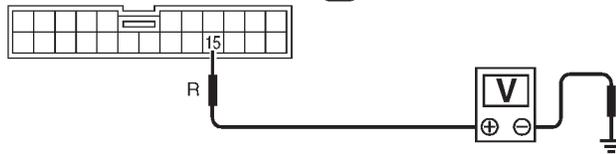
Without CONSULT-II

- Lift up drive wheels.
- Start engine.
- Check voltage between combination meter terminal 15 and ground when rotating wheels with engine at idle.



combination meter harness connector (M33)

Voltage: Approx. 0 - 5V



SEL939W

OK or NG

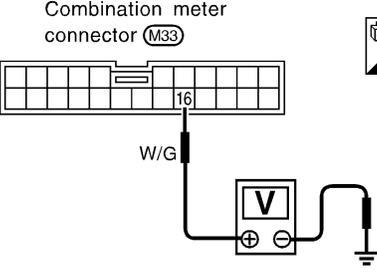
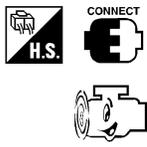
OK ► ABS control unit is OK.

NG ► **Check the following.**

- Harness for open or short between ABS actuator and electric unit and combination meter.
- ABS actuator and electric unit. Refer to BR-62, "Wheel Sensor or Rotor".

INSPECTION/ENGINE REVOLUTION SIGNAL

NFEL0046S02

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

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METERS AND GAUGES

Trouble Diagnoses (Cont'd)

INSPECTION/FUEL LEVEL SENSOR UNIT

=NFEL0046S08

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

2	CHECK FUEL LEVEL SENSOR UNIT	
Refer to "FUEL LEVEL SENSOR UNIT CHECK" (EL-126).		
OK or NG		
OK	▶	GO TO 3.
NG	▶	Replace fuel level sensor unit.

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

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

INSPECTION/THERMAL TRANSMITTER

=NFEL0046S09

1	CHECK THERMAL TRANSMITTER	
Refer to "THERMAL TRANSMITTER CHECK" (EL-126).		
OK or NG		
OK	▶	GO TO 2.
NG	▶	Replace.

GI
MA
EM

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

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METERS AND GAUGES

Electrical Components Inspection

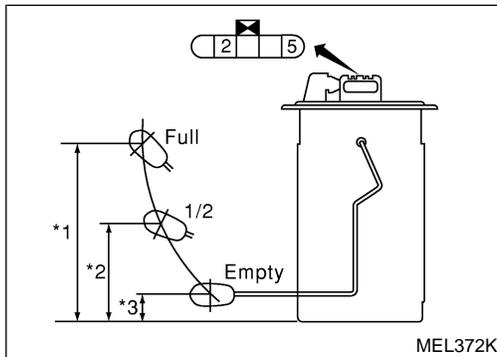
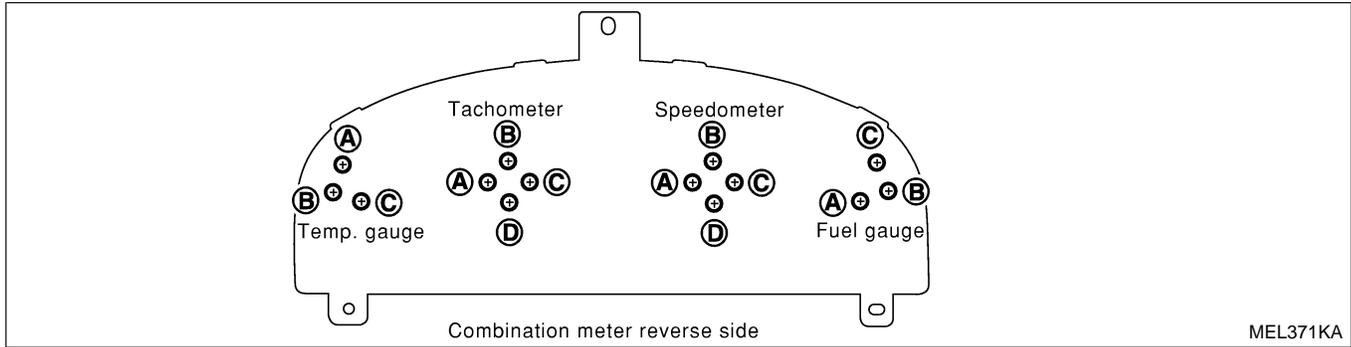
=NFEL0047

METER/GAUGE RESISTANCE CHECK

NFEL0047S04

Check resistance between installation screws of meter/gauge.

Screws		Resistance Ω
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

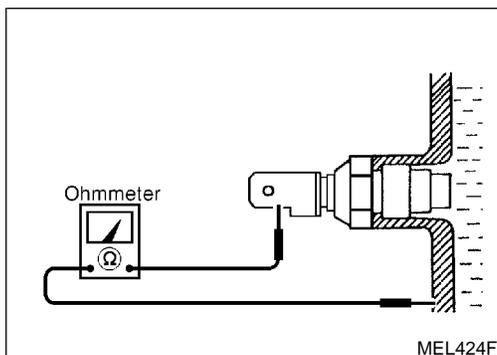
NFEL0047S01

- For removal, refer to FE-6.

Check the resistance between terminals 2 and 5.

Ohmmeter		Float position		mm (in)	Resistance value Ω
(+)	(-)				
2	5	*1	Full	152 (5.98)	Approx. 4 - 6
		*2	1/2	87 (3.43)	27 - 35
		*3	Empty	22 (0.87)	78 - 85

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

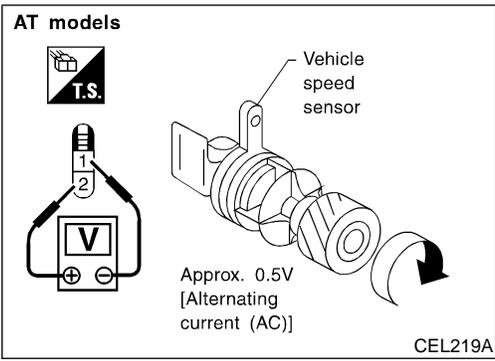


THERMAL TRANSMITTER CHECK

NFEL0047S02

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

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



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.

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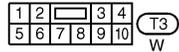
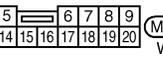
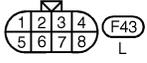
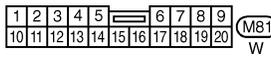
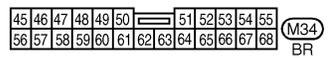
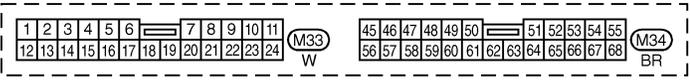
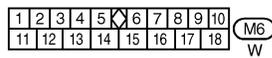
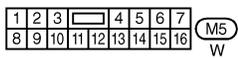
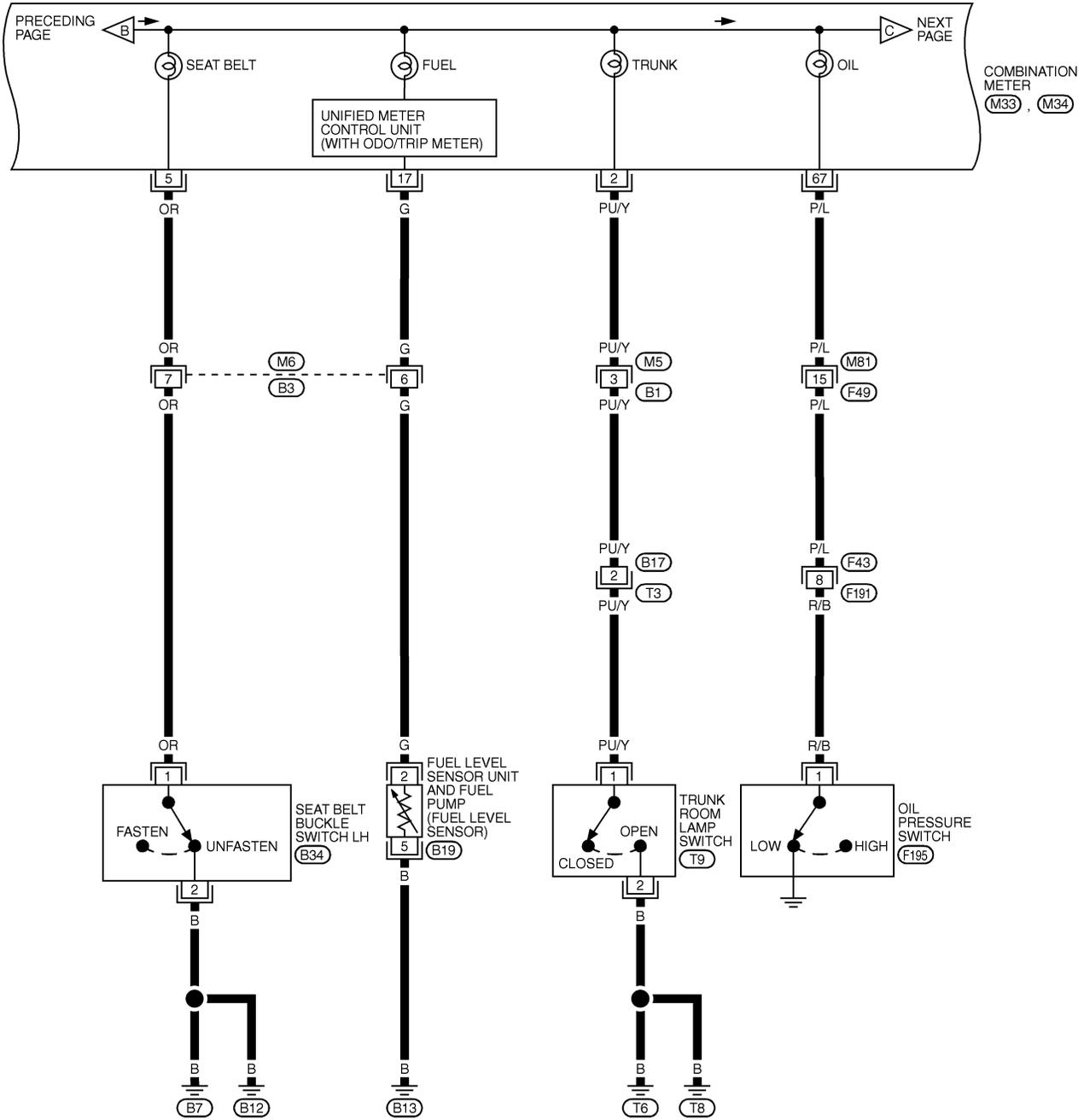
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WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-02

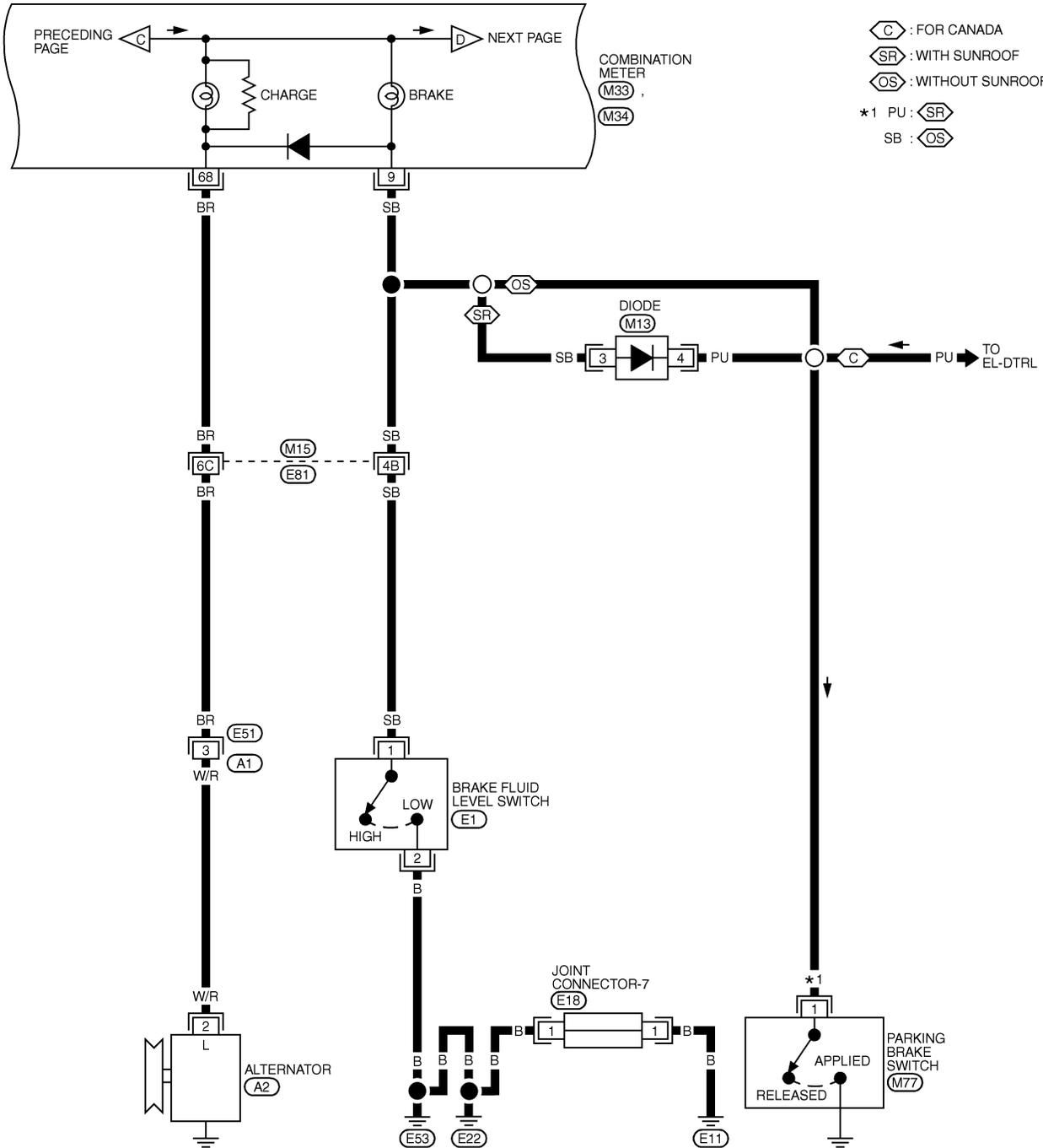


MEL044N

WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-03



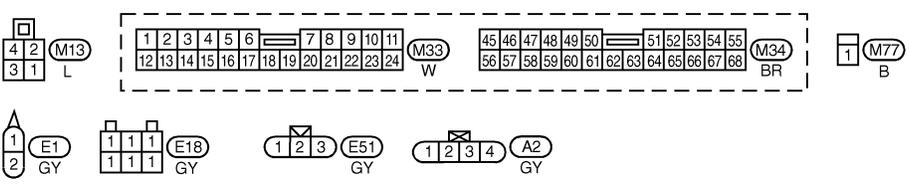
- ⬡ C : FOR CANADA
- ⬡ SR : WITH SUNROOF
- ⬡ OS : WITHOUT SUNROOF
- *1 PU : ⬡ SR
- SB : ⬡ OS

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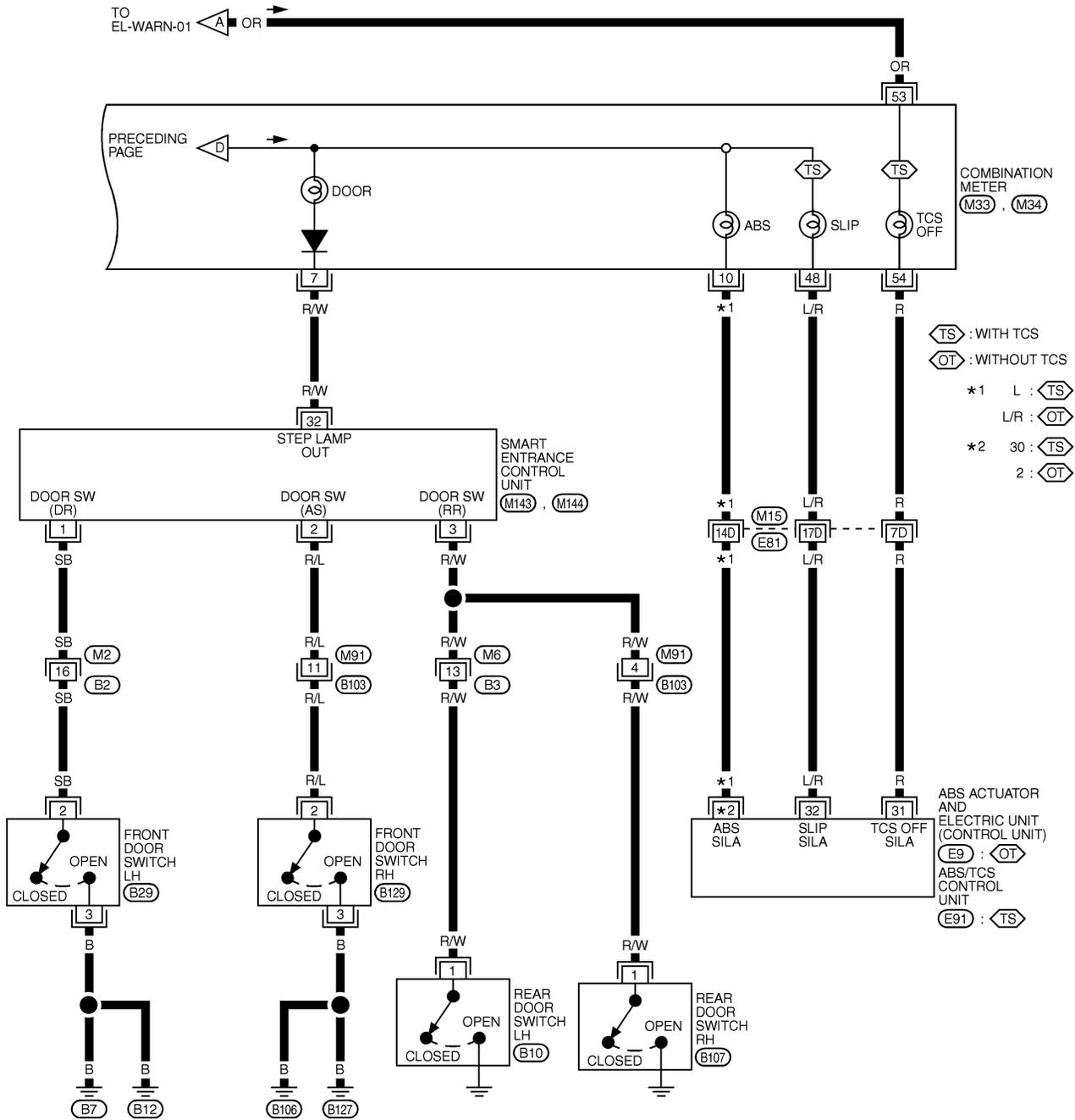


REFER TO THE FOLLOWING.
 (M15) - SUPER
 MULTIPLE JUNCTION (SMJ)

WARNING LAMPS

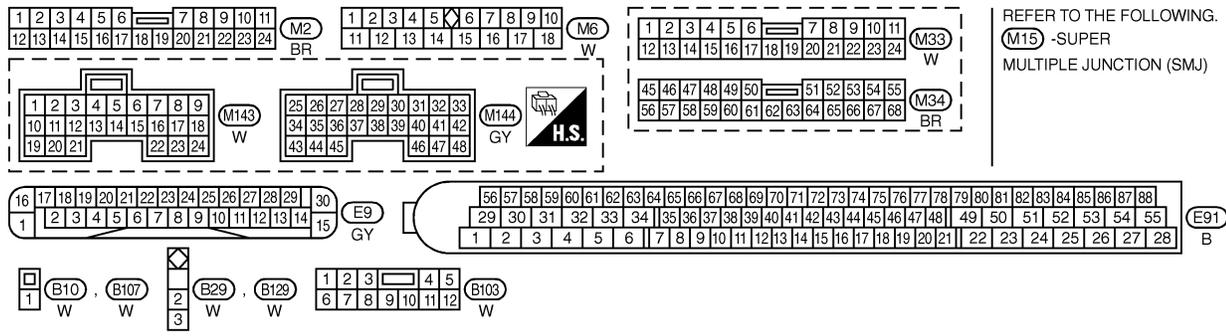
Wiring Diagram — WARN — (Cont'd)

EL-WARN-04

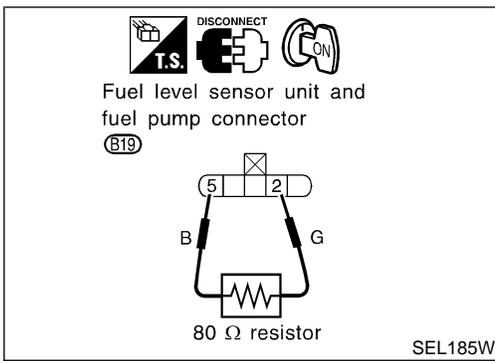


(TS) : WITH TCS
 (OT) : WITHOUT TCS
 *1 L : (TS)
 L/R : (OT)
 *2 30 : (TS)
 2 : (OT)

ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)
 (E9) : (OT)
 ABS/TCS CONTROL UNIT
 (E91) : (TS)



MEL046N



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-82, "HOW TO ERASE EMISSION-RELATED DIAGNOSTIC INFORMATION".

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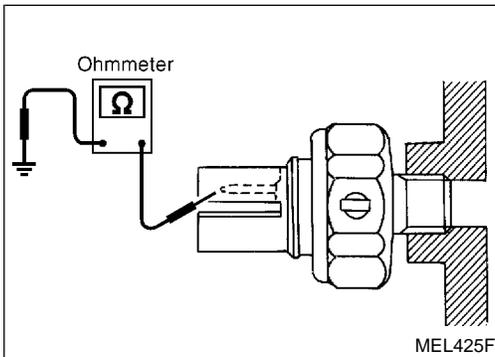
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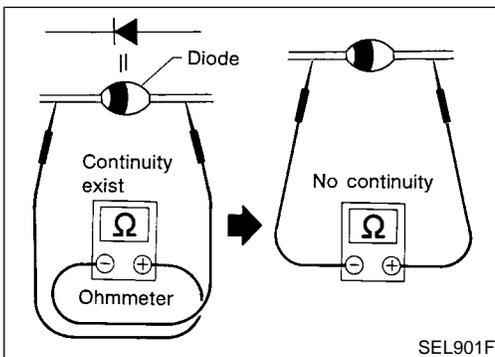


OIL PRESSURE SWITCH CHECK

NFEL0051S02

	Oil pressure kPa (kg/cm ² , 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-129, "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.

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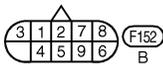
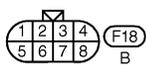
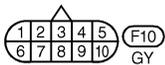
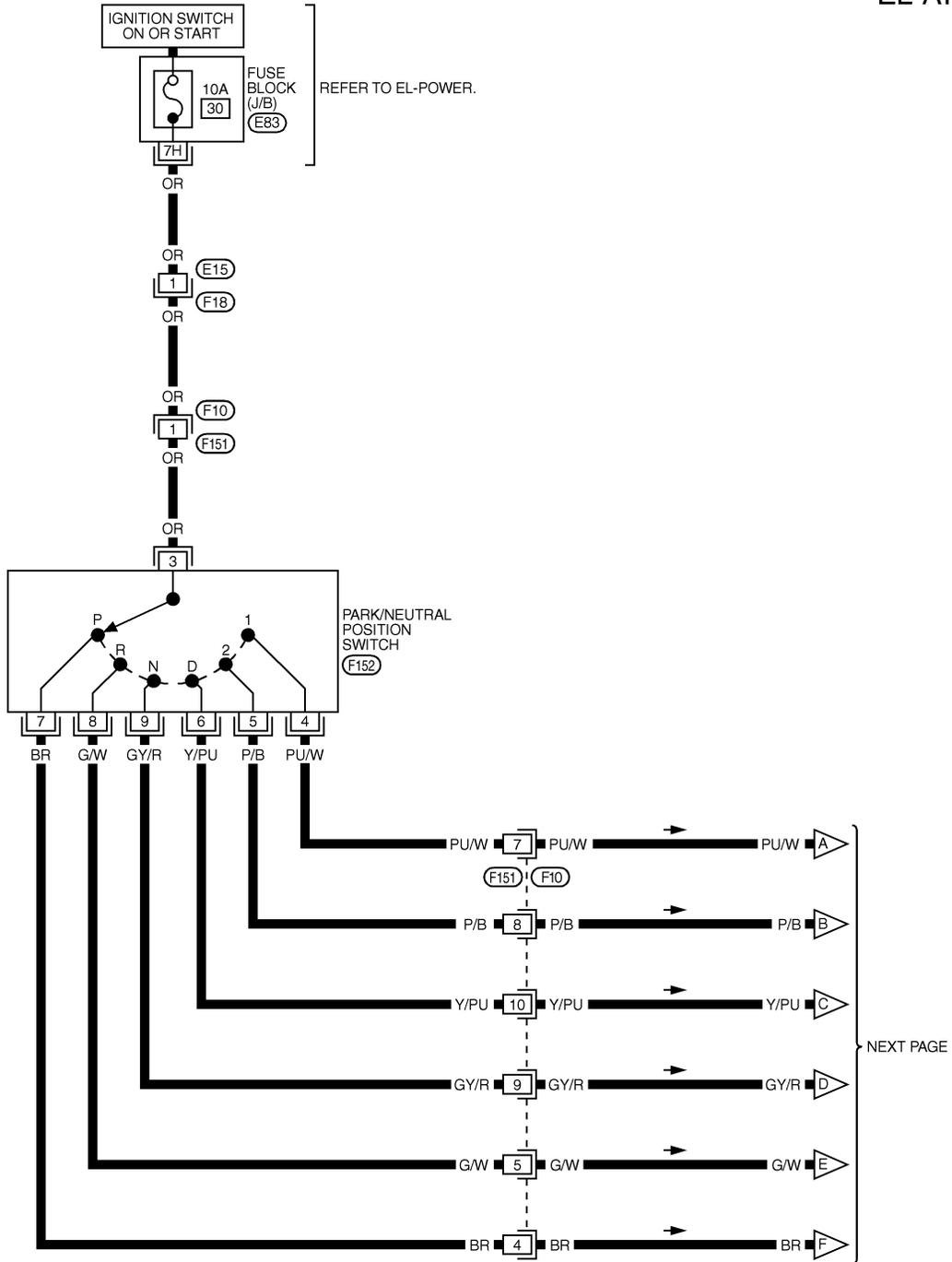
A/T INDICATOR

Wiring Diagram — AT/IND —

Wiring Diagram — AT/IND —

NFEL0159

EL-AT/IND-01

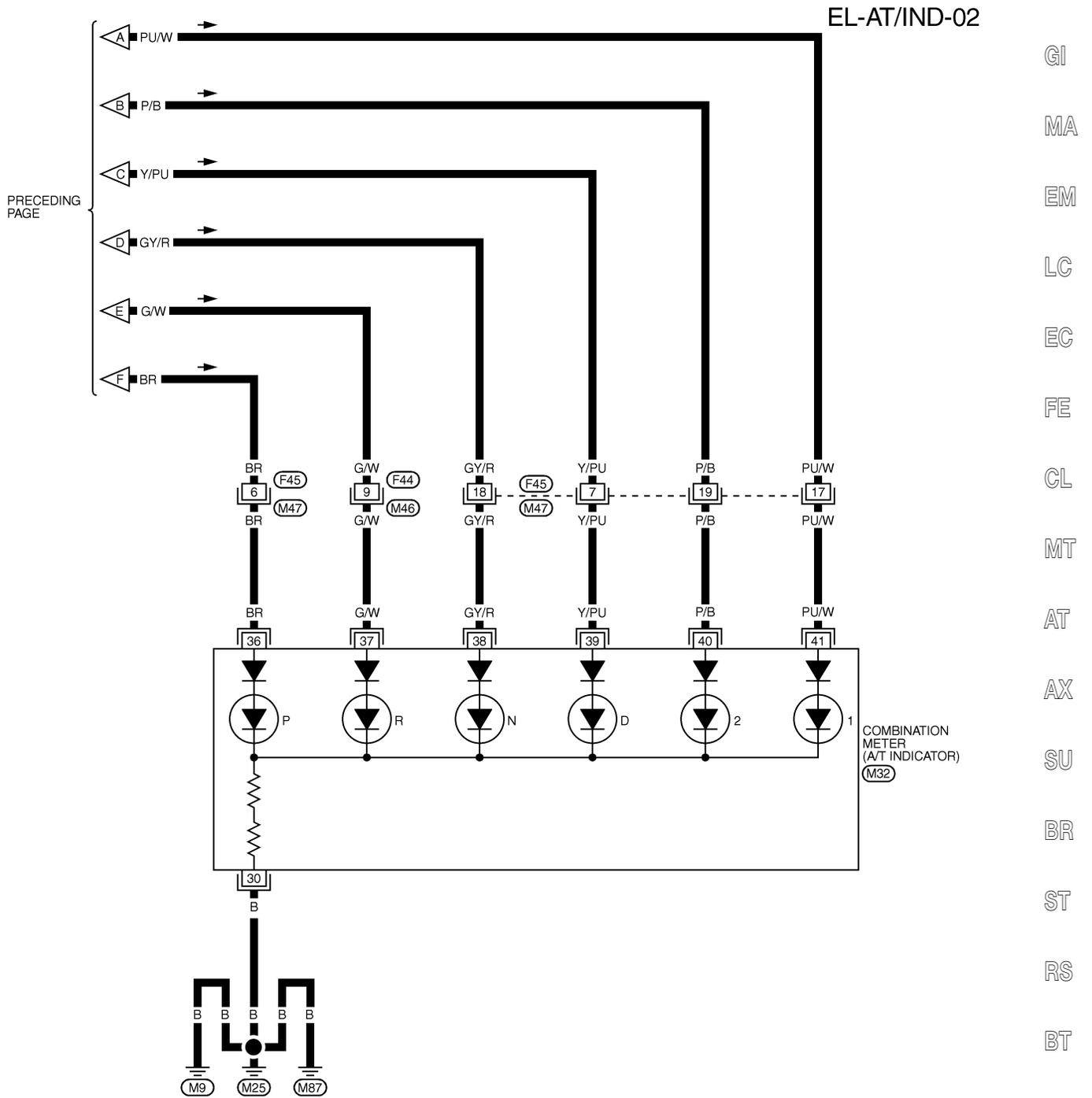


REFER TO THE FOLLOWING.
(E83) - FUSE BLOCK-
JUNCTION BOX (J/B)

MEL270K

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		

(M46)
W

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

(M47)
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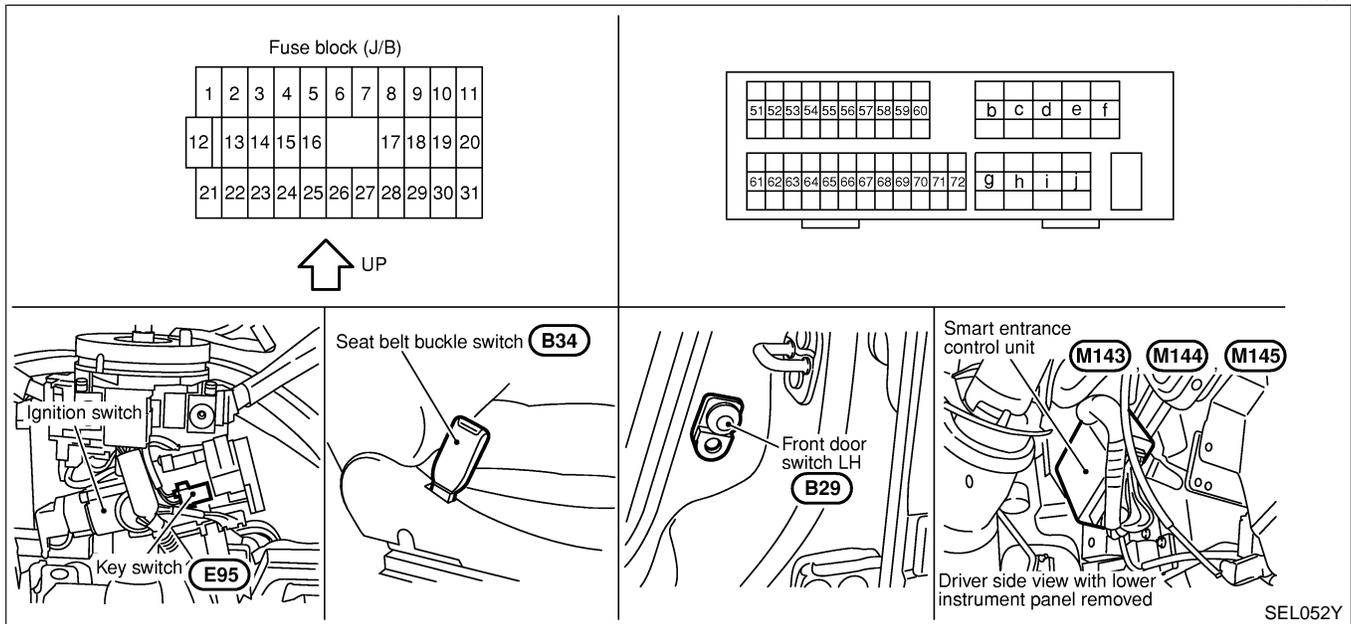
MEL271K

WARNING CHIME

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NFEL0052



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 49 and
- 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 27.

Ground is supplied to smart entrance control unit terminals 43 and 64 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 25.

Ground is supplied

- from front door switch (driver side) terminal 2
- to smart entrance control unit terminal 1.

Front door switch (driver side) terminal 3 is grounded through body grounds B7 and B12.

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 2
- to smart entrance control unit terminals 19 and 57.

Ground is supplied

WARNING CHIME

System Description (Cont'd)

- from front door switch (driver side) terminal 2
- to smart entrance control unit terminal 1.

Front door switch (driver side) terminal 3 is grounded through body grounds B7 and B12.

GI

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

MA

Ground is supplied

- from seat belt switch terminal 1
- to smart entrance control unit terminal 28.

EM

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

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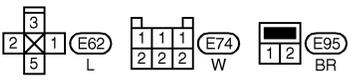
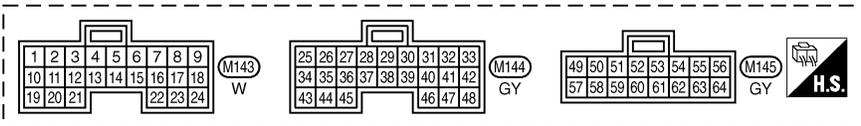
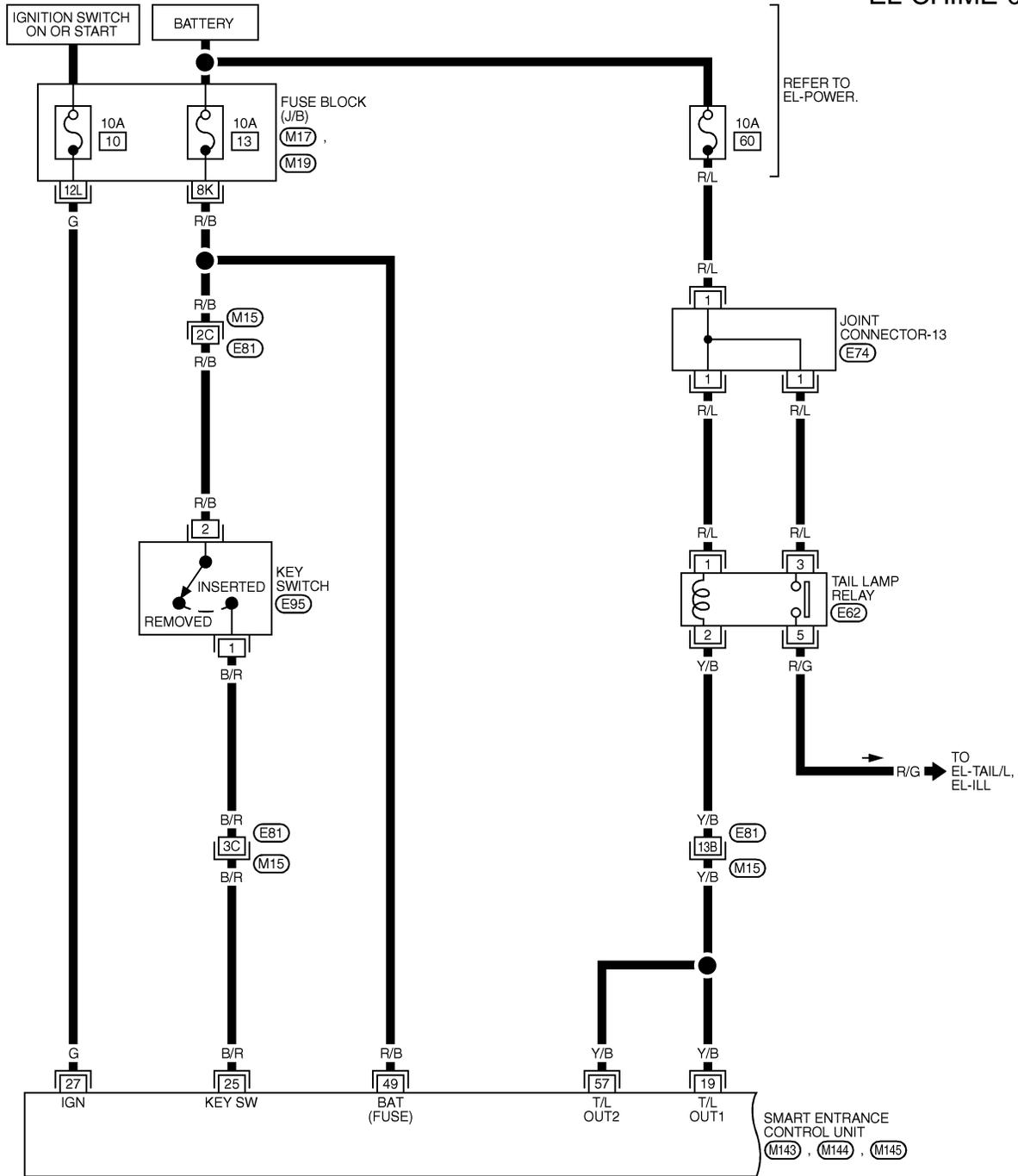
WARNING CHIME

Wiring Diagram — CHIME —

Wiring Diagram — CHIME —

NFEL0054

EL-CHIME-01



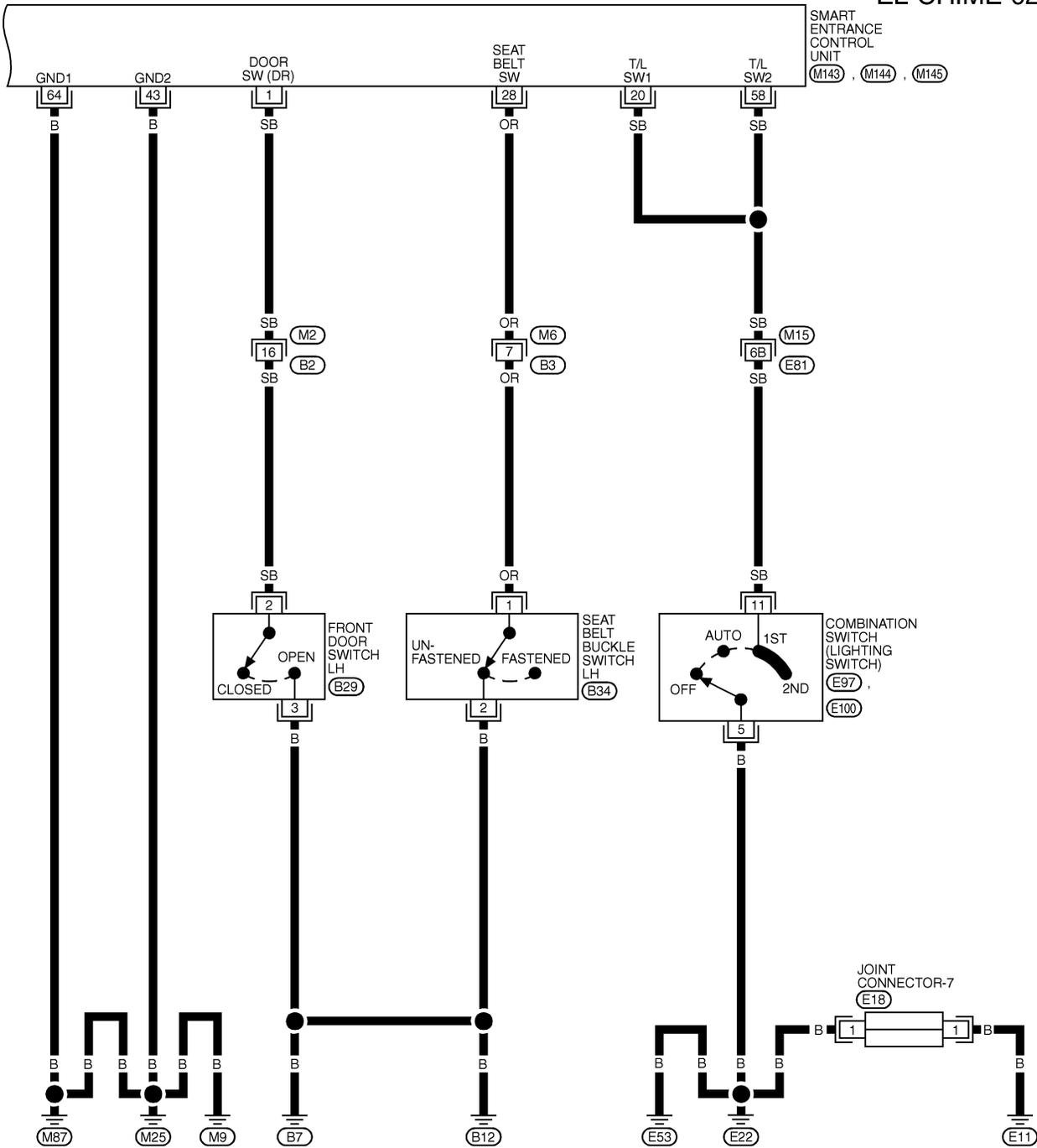
REFER TO THE FOLLOWING.
 (M15) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M17) , (M19) -FUSE BLOCK-
 JUNCTION BOX (J/B)

MEL047N

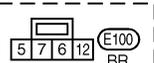
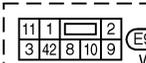
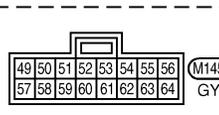
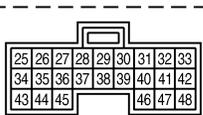
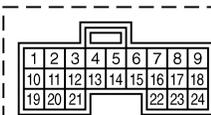
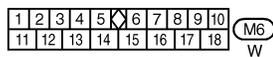
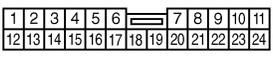
WARNING CHIME

Wiring Diagram — CHIME — (Cont'd)

EL-CHIME-02



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

MEL048N

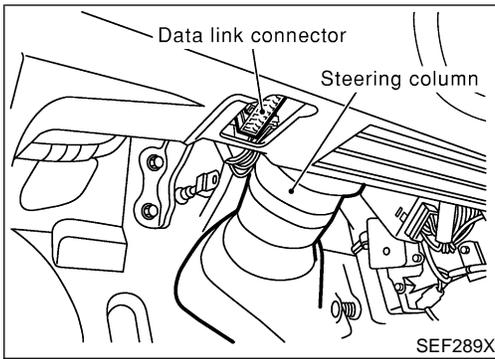
WARNING CHIME

Wiring Diagram — CHIME — (Cont'd)

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

TERMINAL	WIRE COLOR	ITEM	CONDITION		DATA (DC)	
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
19	Y/B	TAIL LAMP RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH 1ST OR 2ND)	OFF	MORE THAN 45 SECONDS	12V
					WITHIN 45 SECONDS	0V
				ON OR START		0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)			
20	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V	
25	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER		12V → 0V	
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION		12V	
28	OR	SEAT BELT BUCKLE SWITCH	UNFASTENED → FASTENED (IGNITION SWITCH IS IN "ON" POSITION)		0V → 12V	
43	B	GROUND	-		-	
49	R/B	POWER SOURCE (FUSE)	-		12V	
57	Y/B	TAIL LAMP RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH 1ST OR 2ND)	OFF	MORE THAN 45 SECONDS	12V
					WITHIN 45 SECONDS	0V
				ON OR START		0V
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)			
58	SB	TAIL LAMP SWITCH	LIGHTING SWITCH (OFF OR AUTO → 1ST OR 2ND POSITION)		12V → 0V	
64	B	GROUND	-		-	

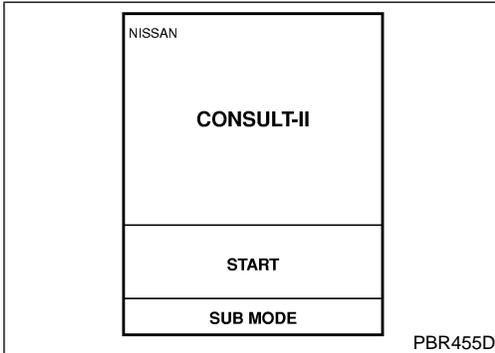
SEL195Y



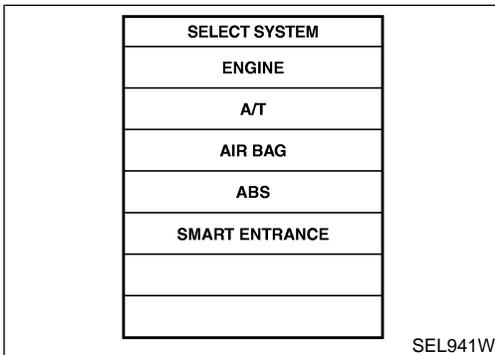
CONSULT-II Inspection Procedure “KEY WARN ALM”/“LIGHT WARN ALM”/“SEAT BELT ALM”

=NFEL0216
NFEL0216S01

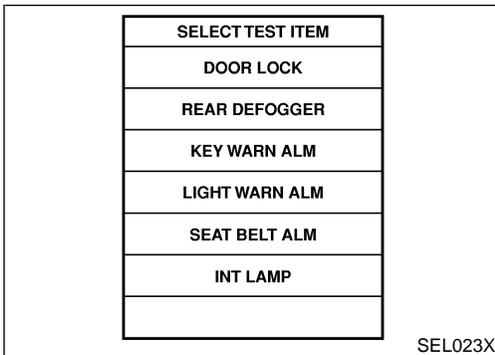
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



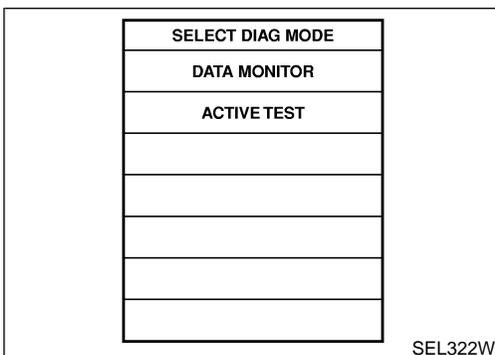
3. Turn ignition switch “ON”.
4. Touch “START”.



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.

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WARNING CHIME

CONSULT-II Application Items

CONSULT-II Application Items

NFEL0217

“KEY WARNING ALARM”

NFEL0217S01

Data Monitor

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.

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.

“LIGHT WARN ALM”

NFEL0217S02

Data Monitor

NFEL0217S0201

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

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.

“SEAT BELT WARM ALM”

NFEL0217S03

Data Monitor

NFEL0217S0301

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

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.

WARNING CHIME

Trouble Diagnoses

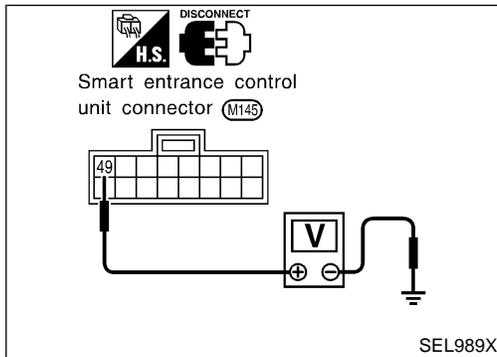
Trouble Diagnoses SYMPTOM CHART

NFEL0055

NFEL0055S01

REFERENCE PAGE (EL-)	143	145	146	147	148
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

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POWER SUPPLY AND GROUND CIRCUIT CHECK Power Supply Circuit Check

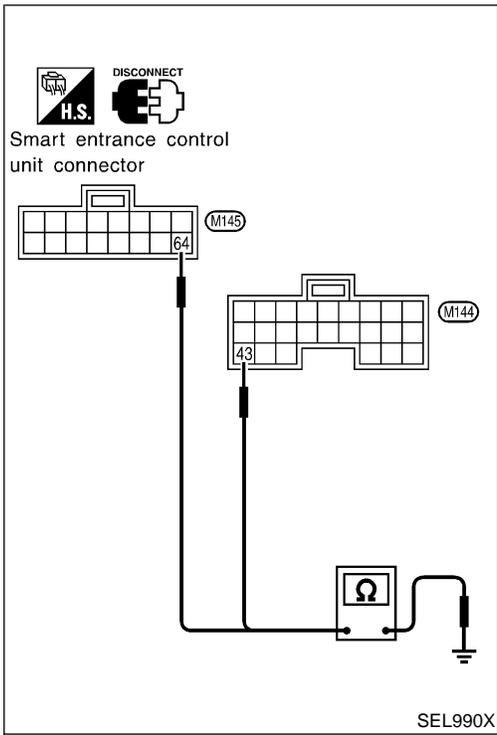
NFEL0055S02

NFEL0055S0201

Terminals	Voltage
46 - Ground	Battery voltage

WARNING CHIME

Trouble Diagnoses (Cont'd)



Ground Circuit Check

NFEL0055S0202

Terminals	Continuity
43 - Ground	Yes
64 - Ground	Yes

WARNING CHIME

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)

-NFEL0055S03

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1 CHECK LIGHTING SWITCH INPUT SIGNAL

With CONSULT-II

Check lighting switch ("LIGHT SW 1ST") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
LIGHT SW 1ST	OFF

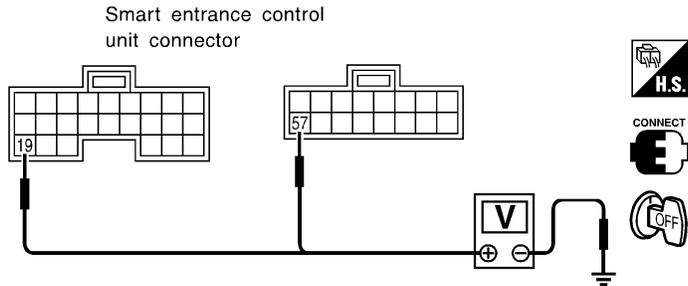
When lighting switch is in 1st or 2nd position:
LIGHT SW 1ST ON

When lighting switch is in OFF position:
LIGHT SW 1ST OFF

SEL991X

Without CONSULT-II

Check voltage between smart entrance control unit harness connector M43 terminal 19 (Y/B), connector M145 terminal 57 (GY) and ground.



Voltage [V]:
Condition of lighting switch: 1ST or 2ND
0
Condition of lighting switch: OFF
Approx. 12

SEL992XA

OK or NG

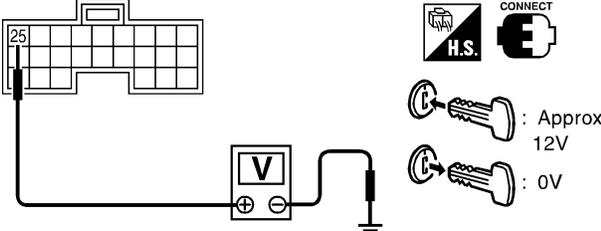
OK	▶	Lighting switch is OK.
NG	▶	Check the following. <ul style="list-style-type: none"> • 10A fuse (No. 60, located in the fuse and fusible link box) • Harness for open or short between smart entrance control unit and tail lamp relay

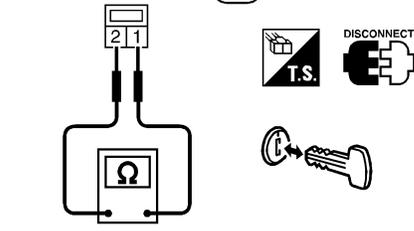
WARNING CHIME

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)

-NFEL0055S04

1	CHECK KEY SWITCH INPUT SIGNAL							
<p> With CONSULT-II 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: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p>						
SEL315W								
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 25 (B/R) and ground.</p>								
<p>Smart entrance control unit connector</p> 								
		<p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p>						
SEL011Y								
OK or NG								
OK	▶	Key switch is OK.						
NG	▶	GO TO 2.						

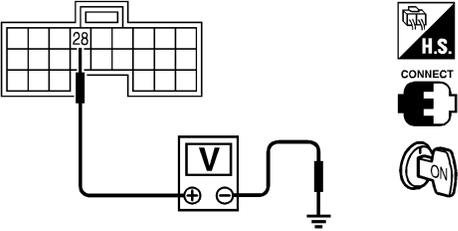
2	CHECK KEY SWITCH (INSERT)	
Check continuity between terminals 1 and 2.		
<p>Key switch connector </p> 		
		<p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p>
SEL311W		
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 13, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch
NG	▶	Replace key switch.

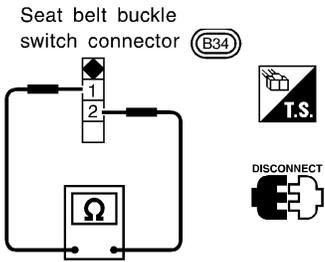
WARNING CHIME

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 3 (SEAT BELT BUCKLE SWITCH CHECK)

-NFEL0055S05

1	CHECK SEAT BELT BUCKLE SWITCH INPUT SIGNAL						
<p> With CONSULT-II 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: SEAT BELT SW ON</p> <p>When seat belt is released: SEAT BELT SW OFF</p>							
SEL317W							
<p> Without CONSULT-II</p> <p>1. Turn ignition switch "ON". 2. Check voltage between smart entrance control unit harness connector M144 terminal 28 (OR) and ground.</p>							
<p>Smart entrance control unit connector</p> 							
<p>Voltage [V]: Condition of seat belt buckle switch: Fastened Approx. 5 Condition of seat belt buckle switch: Unfastened 0</p>							
SEL994X							
OK or NG							
OK	▶ Seat belt buckle switch is OK.						
NG	▶ GO TO 2.						

2	CHECK SEAT BELT BUCKLE SWITCH
Check continuity between terminals 1 and 2 when seat belt is fastened and unfastened.	
<p>Seat belt buckle switch connector (B34)</p> 	
<p>Continuity: Seat belt is fastened. No Seat belt is unfastened. Yes</p>	
SEL313W	
OK or NG	
OK	▶ Check the following. ● Seat belt buckle switch ground circuit ● Harness for open or short between smart entrance control unit and seat belt buckle switch
NG	▶ Replace seat belt buckle switch.

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WARNING CHIME

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 4

NFEL0055S06

1 CHECK IGNITION ON SIGNAL

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

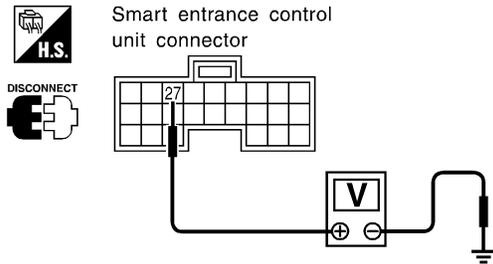
When ignition switch is ON:
IGN ON SW ON

When ignition switch is OFF:
IGN ON SW OFF

SEL318W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector M144 terminal 27 (G) and ground.



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

SEL995X

OK or NG

OK



GO TO 2.

NG

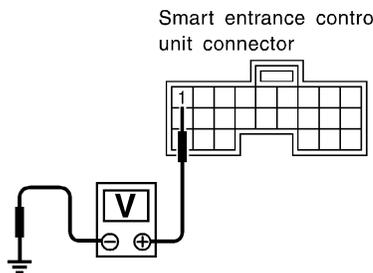


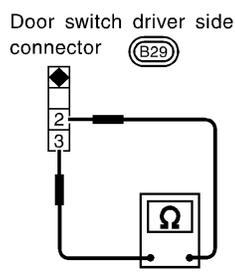
Check the following.

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

WARNING CHIME

Trouble Diagnoses (Cont'd)

2	CHECK DOOR SWITCH INPUT SIGNAL								
<p> With CONSULT-II 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: DOOR SW-DR ON</p> <p>When driver's door is closed: DOOR SW-DR OFF</p>	
DATA MONITOR									
MONITOR									
DOOR SW-DR	OFF								
		SEL319W							
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 1 (SB) and ground.</p>									
									
		<p>Voltage [V]: Condition of driver's door: CLOSED Approx. 5 Condition of driver's door: OPENED 0</p>							
		SEL996X							
OK or NG									
OK	▶	GO TO 4.							
NG	▶	GO TO 3.							

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

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WARNING CHIME

Trouble Diagnoses (Cont'd)

4	CHECK WARNING CHIME						
<p>With CONSULT-II</p> <p>Perform "CHIME" in "ACTIVE TEST" mode with CONSULT-II.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"><table border="1" style="width: 100%; text-align: center;"><thead><tr><th colspan="2">ACTIVE TEST</th></tr></thead><tbody><tr><td>CHIME</td><td>OFF</td></tr><tr><td>ON</td><td></td></tr></tbody></table></div> <p style="text-align: center;">Warning chime should operate.</p> <p style="text-align: right;">SEL320W</p> <p style="text-align: center;">OK or NG</p>		ACTIVE TEST		CHIME	OFF	ON	
ACTIVE TEST							
CHIME	OFF						
ON							
OK	▶ System is OK.						
NG	▶ Replace smart entrance control unit.						

System Description

NFEL0057

WIPER OPERATION

NFEL0057S01

GI

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)

MA

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.

EM

LC

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.

EC

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.

FE

CL

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

MT

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.

AT

AX

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.

SU

BR

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.

ST

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).

RS

BT

HA

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

SC

WASHER OPERATION

NFEL0057S02

EL

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

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.

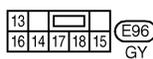
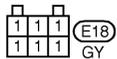
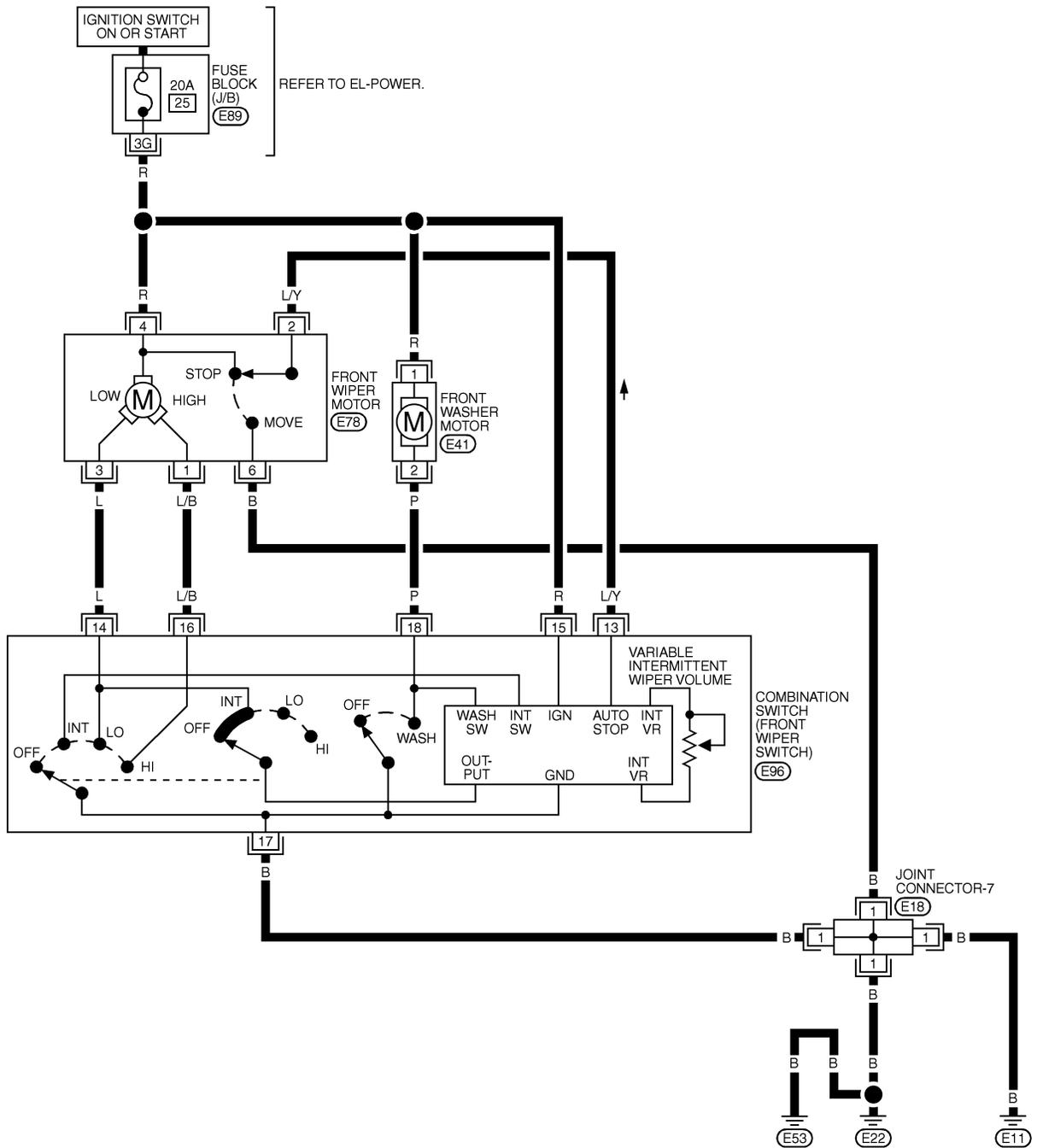
FRONT WIPER AND WASHER

Wiring Diagram — WIPER —

Wiring Diagram — WIPER —

NFEL0058

EL-WIPER-01



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

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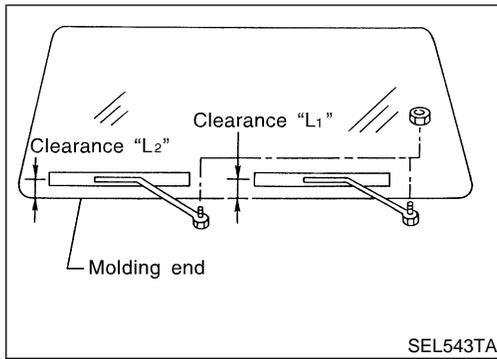
EL

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MEL274K

FRONT WIPER AND WASHER

Removal and Installation



Removal and Installation

NFEL0060

WIPER ARMS

NFEL0060S01

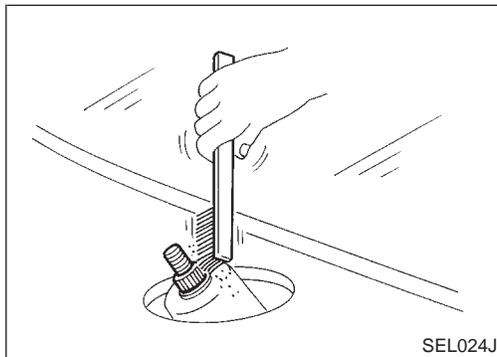
1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up and then set it down onto glass surface to set the blade center to clearance "L₁" & "L₂" immediately before tightening nut.
3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
4. Ensure that wiper blades stop within clearance "L₁" & "L₂".

Clearance "L₁": 48 - 64 mm (1.89 - 2.52 in)

Clearance "L₂": 40 - 56 mm (1.57 - 2.20 in)

- Tighten wiper arm nuts to specified torque.

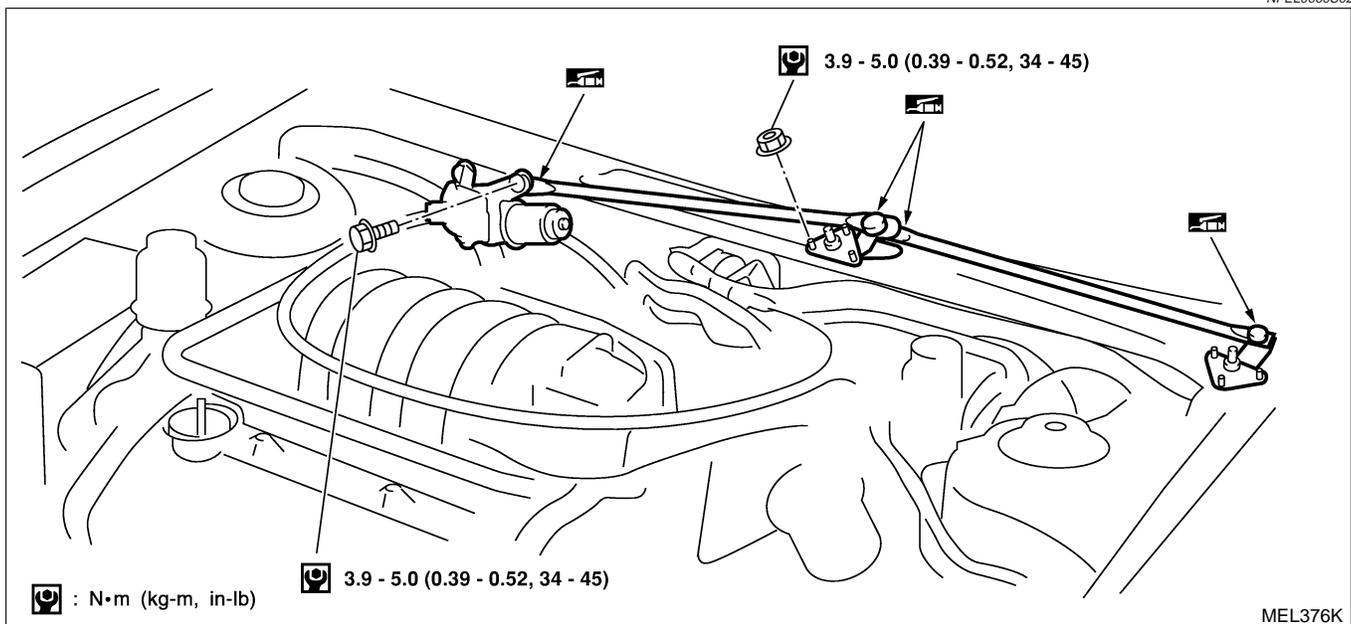
Front wiper: 21 - 26 N·m (2.1 - 2.7 kg·m, 16 - 19 ft·lb)



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

WIPER LINKAGE

NFEL0060S02



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.

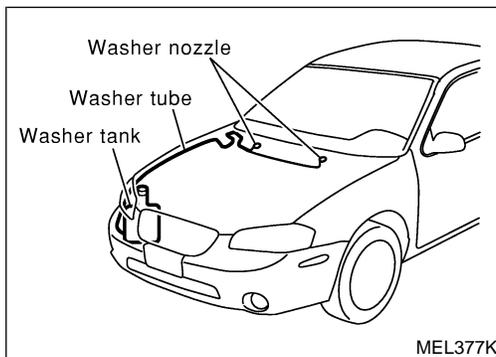
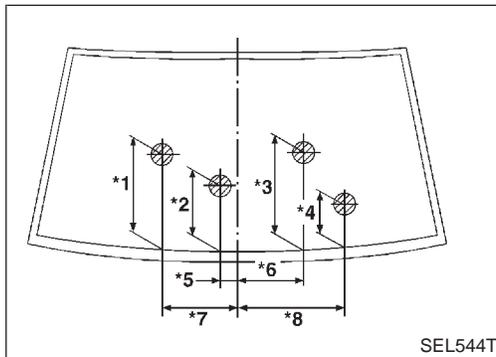
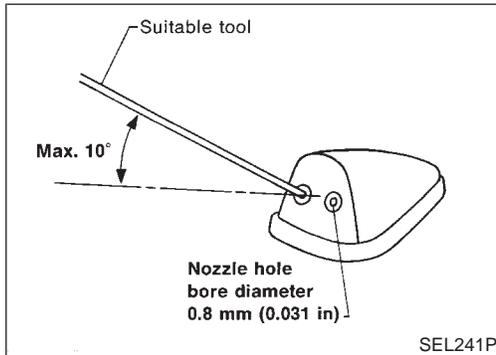
Adjustable range: $\pm 10^\circ$

EC

FE

CL

MT



Washer Tube Layout

NFEL0062

ST

RS

BT

HA

SC

EL

IDX

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)

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

AT

AX

SU

BR

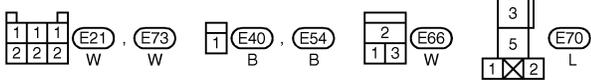
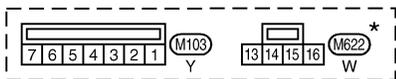
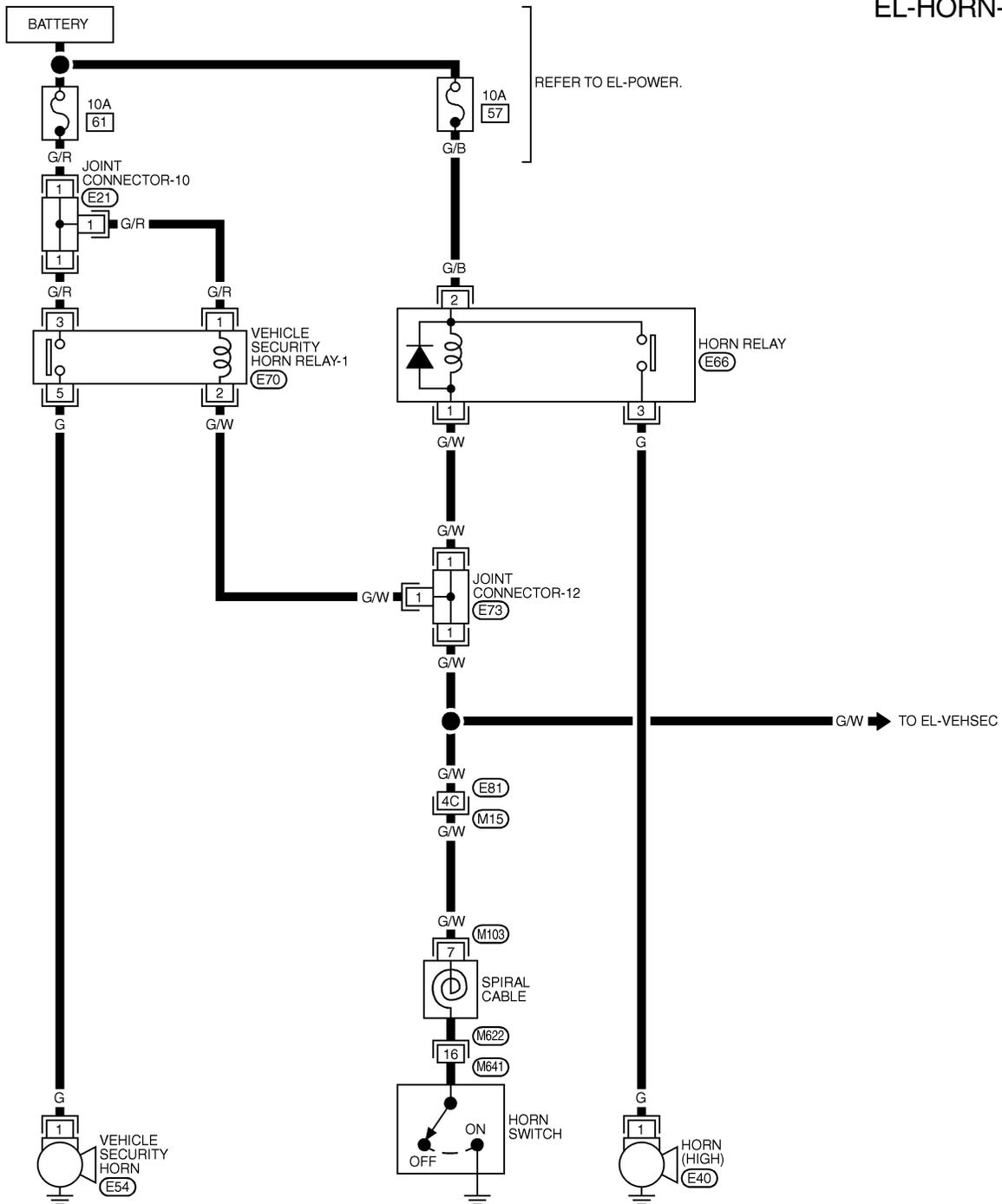
HORN

Wiring Diagram — HORN —

Wiring Diagram — HORN —

NFEL0071

EL-HORN-01



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

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

MEL049N

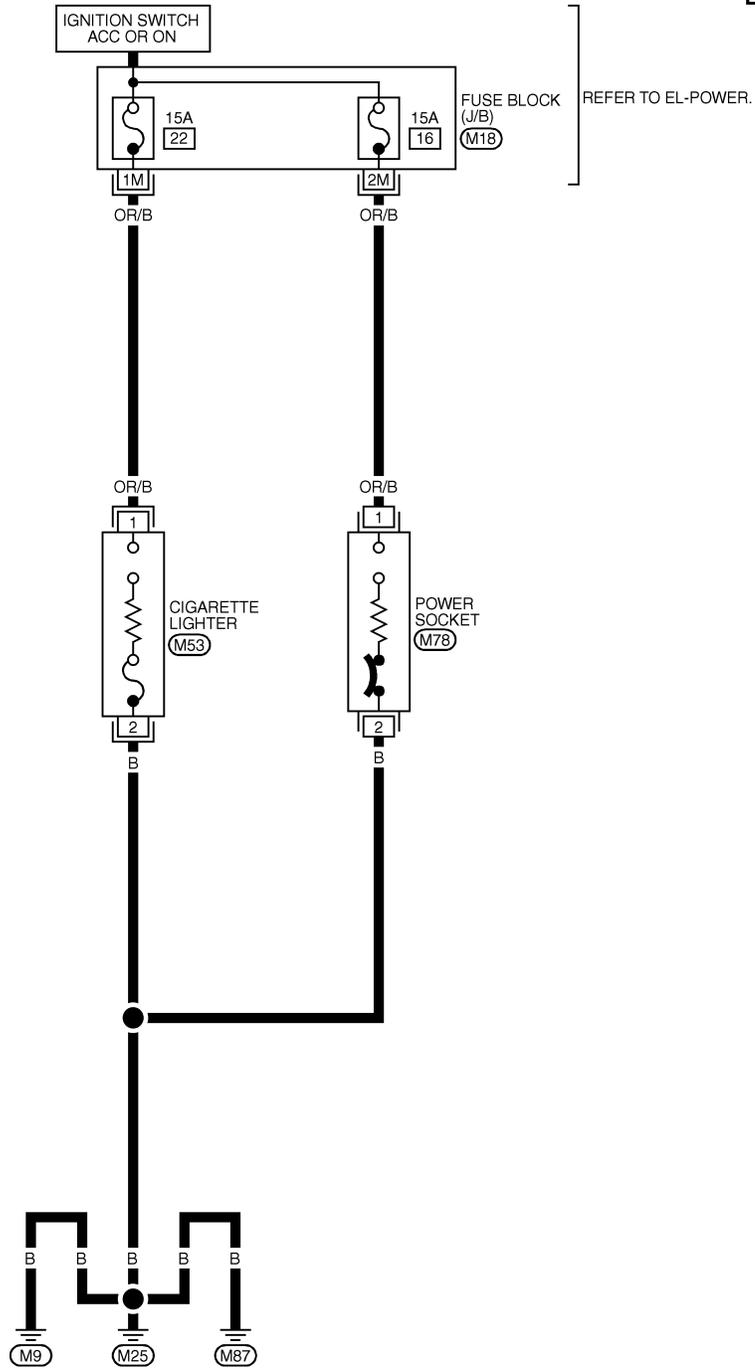
CIGARETTE LIGHTER

Wiring Diagram — CIGAR —

Wiring Diagram — CIGAR —

NFEL0156

EL-CIGAR-01



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

GI

MA

EM

LC

EC

FE

CL

MT

AT

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MEL276K

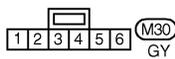
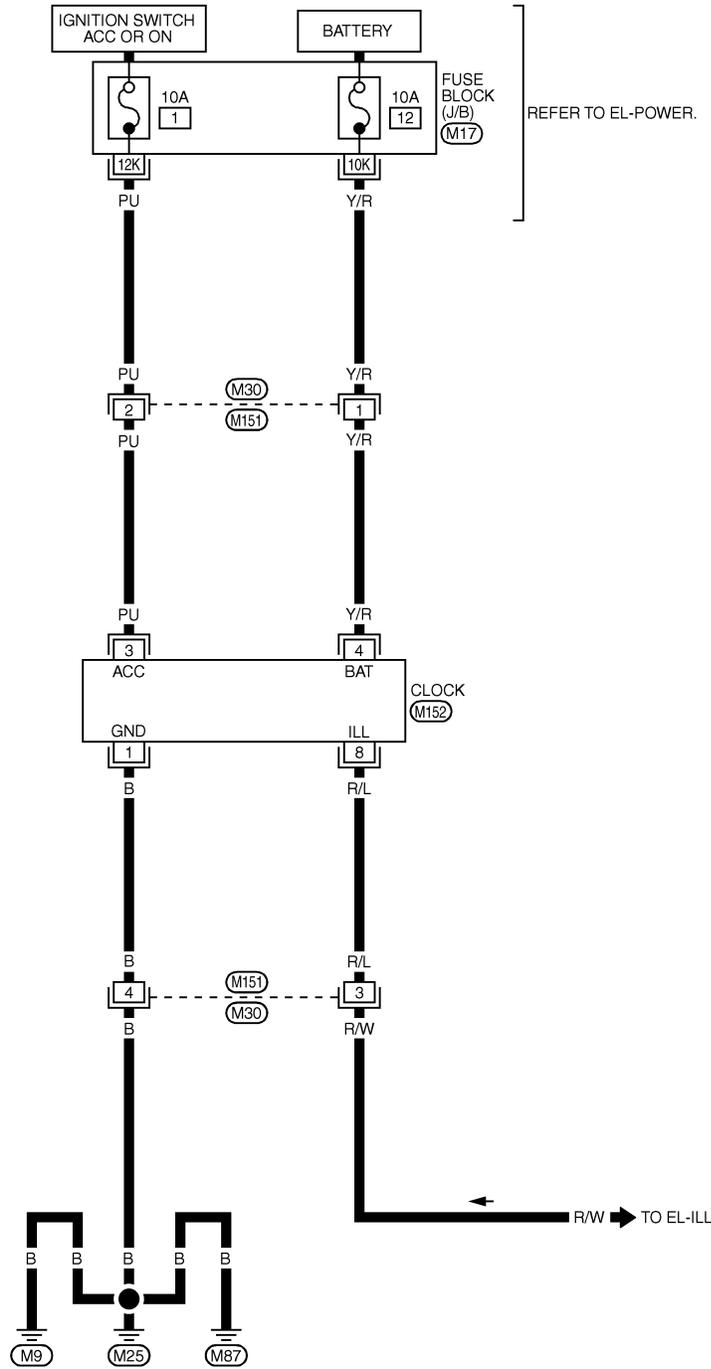
CLOCK

Wiring Diagram — CLOCK —

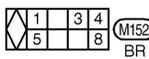
Wiring Diagram — CLOCK —

NFEL0166

EL-CLOCK-01



M30
GY



M152
BR

REFER TO THE FOLLOWING.

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

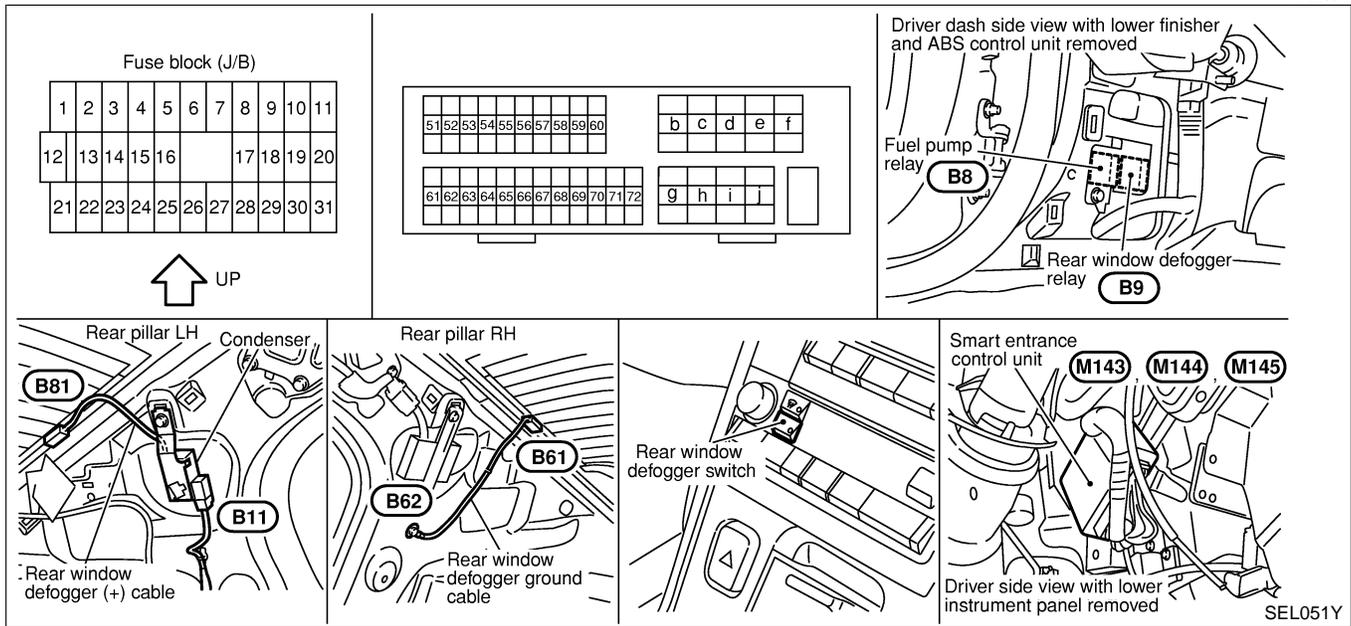
MEL277K

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 49
- 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 27.

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 14.

Terminal 37 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.

When the system is activated, the rear window defogger indicator illuminates in the rear window defogger switch.

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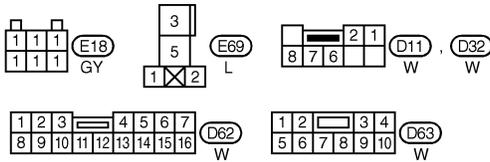
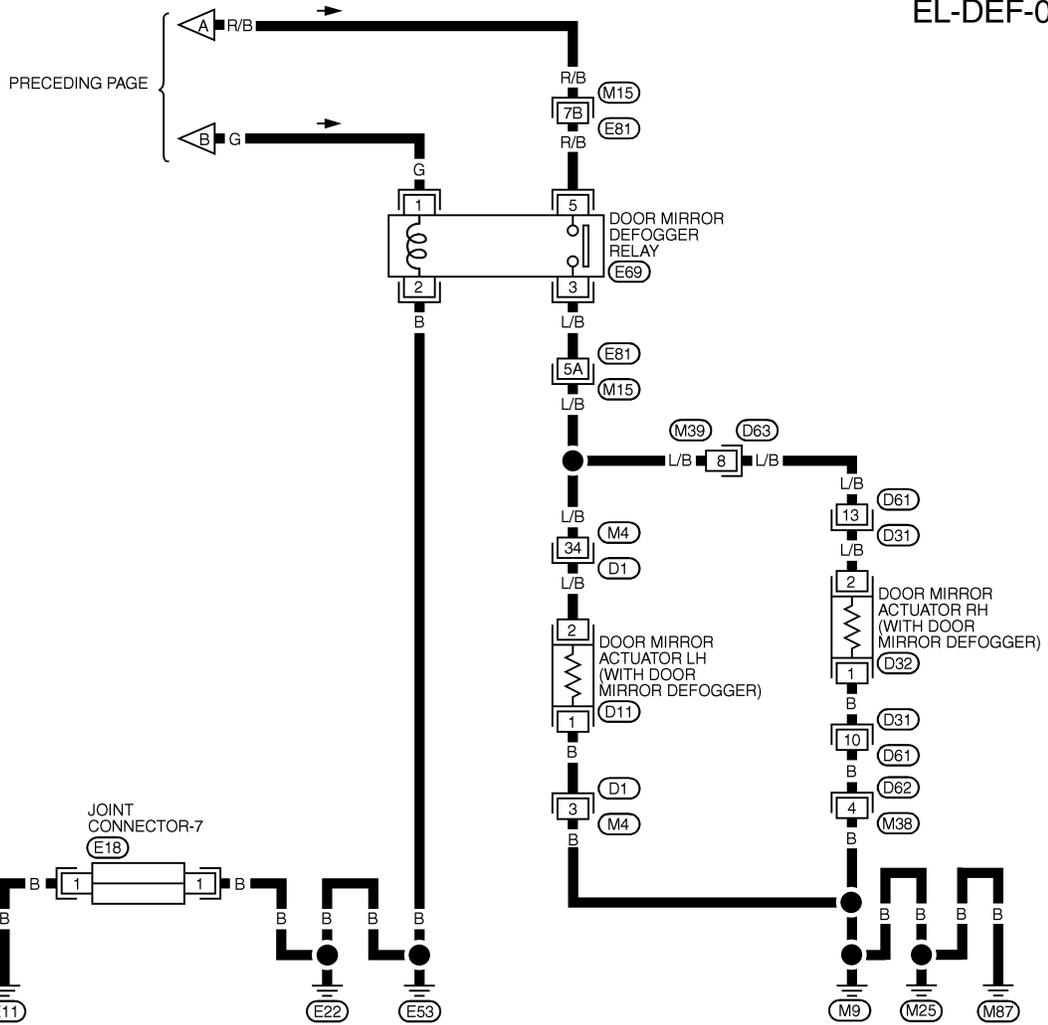
EL

IDX

REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

EL-DEF-02



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

MEL304N

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

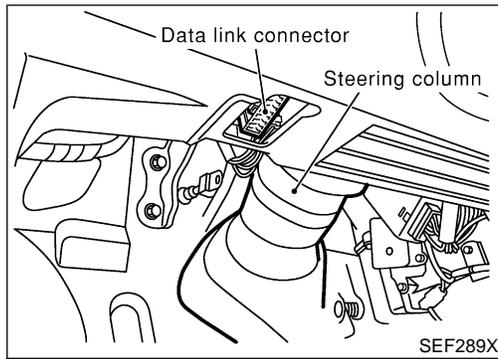
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
14	G/R: (DM) G/W: (OD)	REAR WINDOW DEFOGGER SWITCH	OFF → ON (WHEN ONLY PUSHED)	5V → 0V
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION	12V
37	G/R	REAR WINDOW DEFOGGER RELAY	OFF → ON (IGNITION SWITCH IS IN "ON" POSITION)	12V → 0V
43	B	GROUND	-	-
49	R/B	POWER SOURCE (FUSE)	-	12V
64	B	GROUND	-	-

SEL199Y

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REAR WINDOW DEFOGGER

CONSULT-II Inspection Procedure

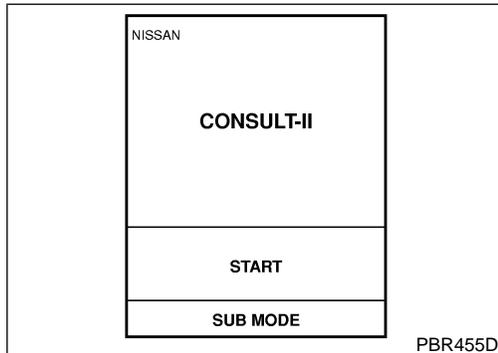


CONSULT-II Inspection Procedure "REAR DEFOGGER"

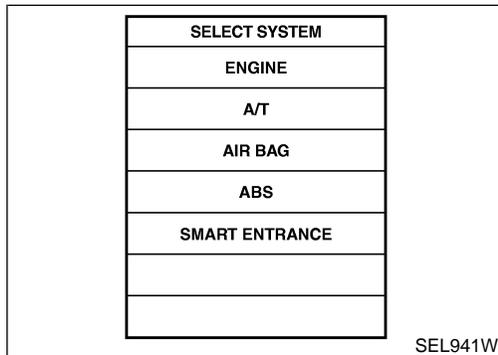
NFEL0218

NFEL0218S01

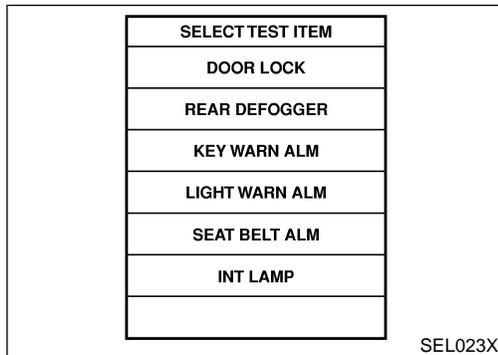
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



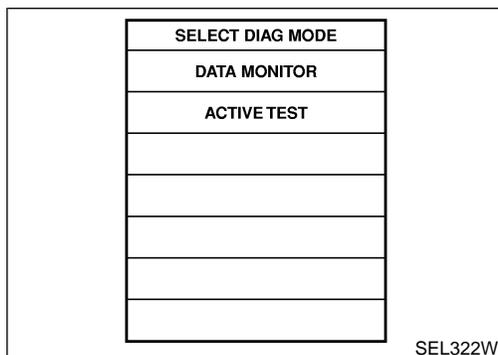
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Touch "REAR DEFOGGER".



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

REAR WINDOW DEFOGGER

CONSULT-II Application Items

CONSULT-II Application Items

“REAR DEFOGGER”

NFEL0219

Data Monitor

NFEL0219S01

GI

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.

MA

EM

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.

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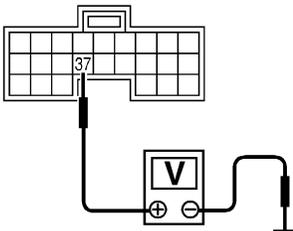
REAR WINDOW DEFOGGER

Trouble Diagnoses

Trouble Diagnoses DIAGNOSTIC PROCEDURE SYMPTOM: Rear window defogger does not activate, or does not go off after activating.

NFEL0075

NFEL0075S01

1	CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL	
<p> With CONSULT-II Select "ACTIVE TEST" in "REAR DEFOGGER" with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 5px; width: 150px;"> <p style="text-align: center; margin: 0;">ACTIVE TEST</p> <p style="margin: 0;">REAR DEFOGGER OFF</p> <p style="text-align: center; background-color: black; color: white; margin-top: 10px;">ON</p> </div> <div style="text-align: center; padding: 10px;"> <p>Rear window defogger and rear window defogger switch indicator should operate when the "ON" button on the CONSULT-II screen is touched.</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL353W</p>		
<p> Without CONSULT-II</p> <ol style="list-style-type: none"> 1. Turn ignition switch to ON position. 2. Check voltage between smart entrance control unit harness connector M144 terminal 37 (G/R) and ground. <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>Voltage [V]:</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; margin-top: 10px;">SEL997X</p>		
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Rear window defogger relay (Refer to EL-168.) ● Rear window defogger circuit ● Rear window defogger filament (Refer to EL-169.)
NG	▶	GO TO 2.

REAR WINDOW DEFOGGER

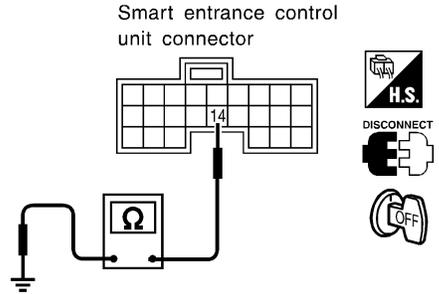
Trouble Diagnoses (Cont'd)

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 harness connector M144 terminal 37 (G/R) and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div> </div> <div> </div> <div> <p>Battery voltage should exist.</p> </div> </div> <p style="text-align: right;">SEL998X</p> <p style="text-align: center;">OK or NG</p>	
OK	▶	GO TO 3.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in the fuse block (J/B)] ● Rear window defogger relay ● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay ● Harness for open or short between rear window defogger relay and smart entrance control unit

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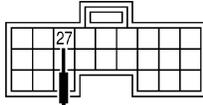
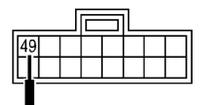
REAR WINDOW DEFOGGER

Trouble Diagnoses (Cont'd)

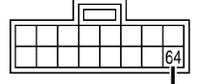
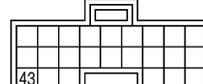
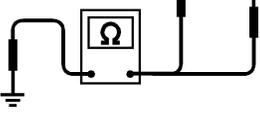
3	CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL							
<p> With CONSULT-II Select "REAR DEF SW" in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>REAR DEF SW</td><td>ON</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: REAR DEF SW should be ON.</p>								
SEL352W								
<p> Without CONSULT-II Check continuity between smart entrance control unit harness connector M143 terminal 14 (G/R for with door mirror defogger or G/W for without door mirror defogger) and ground.</p>								
<p>Smart entrance control unit connector</p> 								
<p>Continuity: Rear window defogger switch is pushed. Continuity should exist. Rear window defogger switch is released. Continuity should not exist.</p>								
SEL999X								
OK or NG								
OK	▶	GO TO 4.						
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Rear window defogger switch (Refer to EL-168.) ● Harness for open or short between smart entrance control unit and rear window defogger switch ● Rear window defogger switch ground circuit 						

REAR WINDOW DEFOGGER

Trouble Diagnoses (Cont'd)

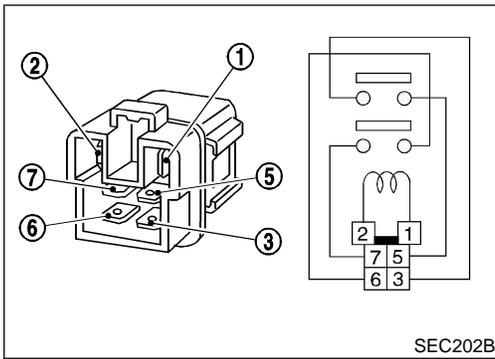
4	CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL																					
<p>Check voltage between smart entrance control unit harness connector M144 terminal 27 (G), M145 terminal 49 (R/B) and ground.</p>																						
<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;">  </div> </div> <div style="text-align: center; margin-top: 10px;">  </div> <table border="1" style="margin-left: auto; margin-right: auto; 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>49</td> <td>Ground</td> <td>Battery voltage</td> <td>Battery voltage</td> <td>Battery voltage</td> </tr> <tr> <td>27</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 10px;">SEL001Y</p>			Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	49	Ground	Battery voltage	Battery voltage	Battery voltage	27	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position																				
(+)	(-)	OFF	ACC	ON																		
49	Ground	Battery voltage	Battery voltage	Battery voltage																		
27	Ground	0V	0V	Battery voltage																		
OK or NG																						
OK	▶	GO TO 5.																				
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10 or No. 13, located in the fuse block (J/B)] ● Harness for open or short between smart entrance control unit and fuse 																				

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5	CHECK CONTROL UNIT GROUND CIRCUIT	
<p>Check continuity between smart entrance control unit harness connector M144 terminal 43 (B), M145 terminal 64 (B) and ground.</p>		
<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;">  </div> </div> <div style="text-align: center; margin-top: 10px;">  </div> <p style="text-align: center; margin-top: 10px;">Continuity should exist.</p> <p style="text-align: right; margin-top: 10px;">SEL002Y</p>		
Yes	▶	Replace smart entrance control unit.
No	▶	Repair harness or connectors.

REAR WINDOW DEFOGGER

Electrical Components Inspection



Electrical Components Inspection

=NFEL0076

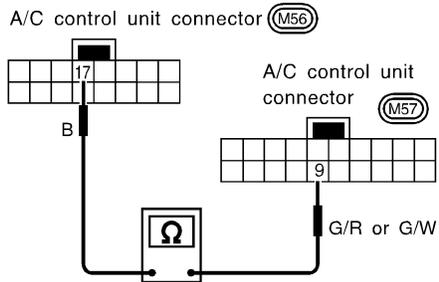
REAR WINDOW DEFOGGER RELAY

NFEL0076S01

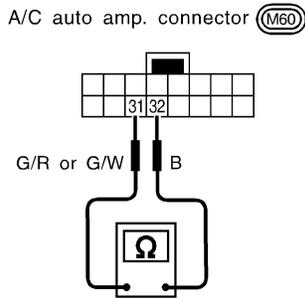
Check continuity between terminals 3 and 5, 6 and 7.

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

With manual A/C



With auto A/C

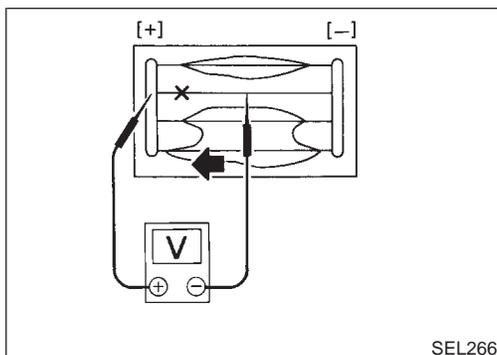
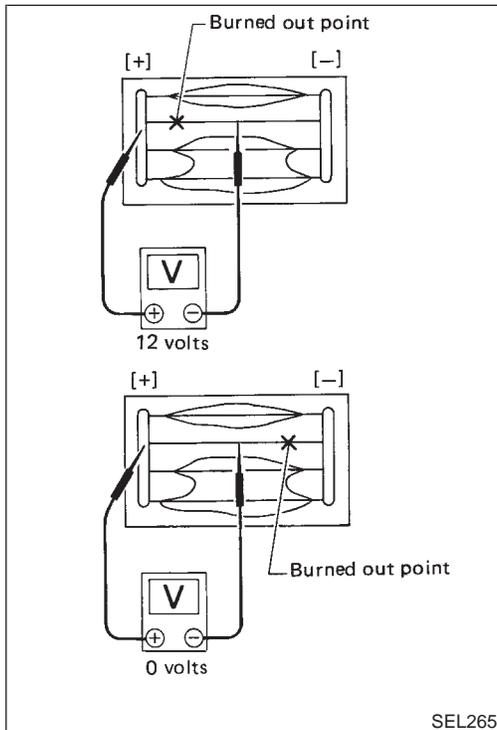
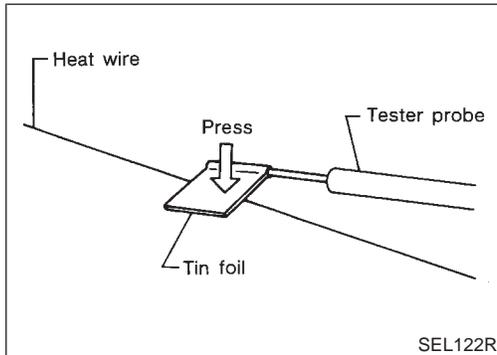
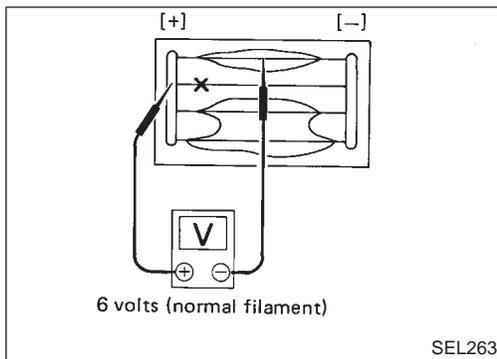


REAR WINDOW DEFOGGER SWITCH

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



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.

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REAR WINDOW DEFOGGER

Filament Repair

NFEL0078

REPAIR EQUIPMENT

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

REPAIRING PROCEDURE

NFEL0078S02

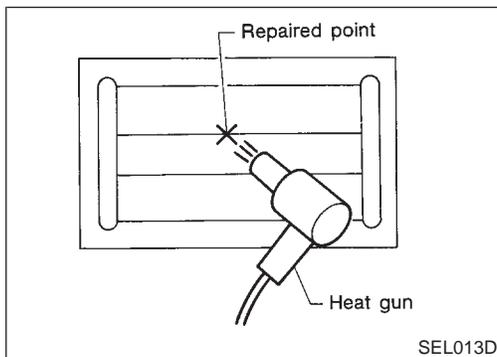
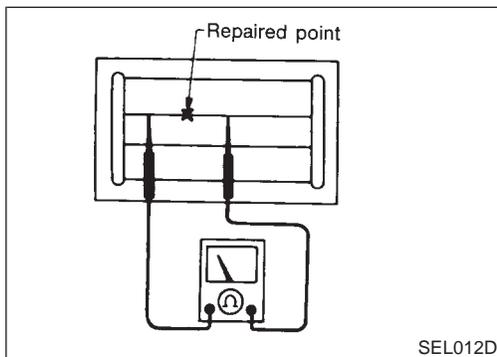
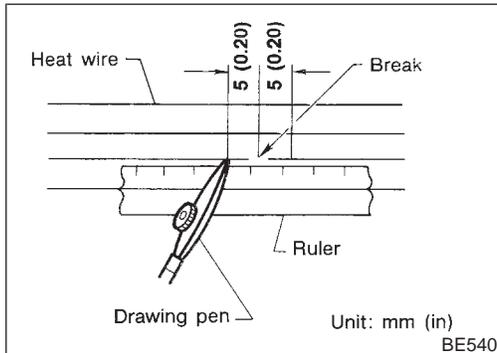
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened in alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.

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

Do not touch repaired area while test is being conducted.

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.



System Description

BASE SYSTEM

NFEL0079

NFEL0079S01

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

NFEL0079S02

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.

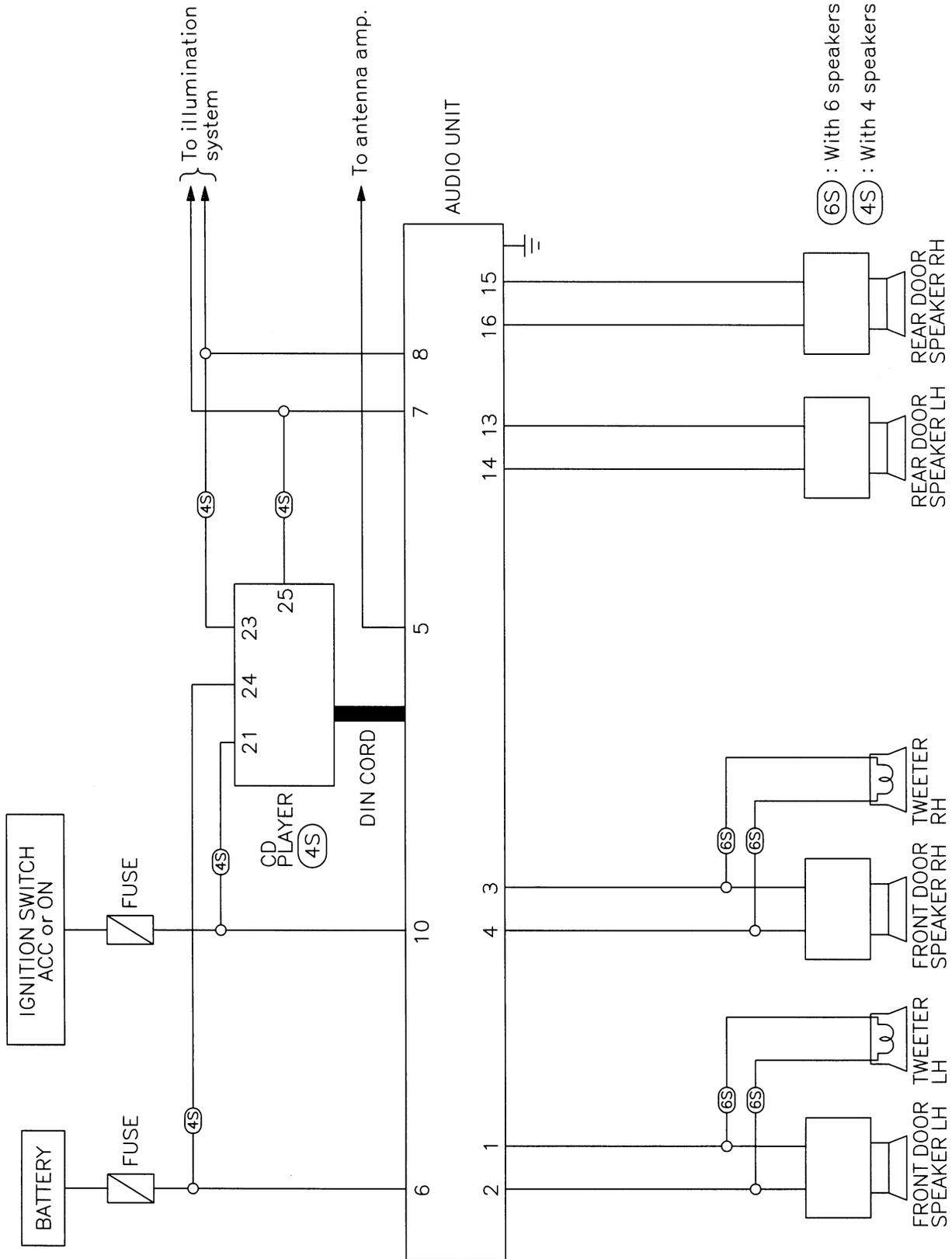
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Schematic

BASE SYSTEM

NFEL0167

NFEL0167S01

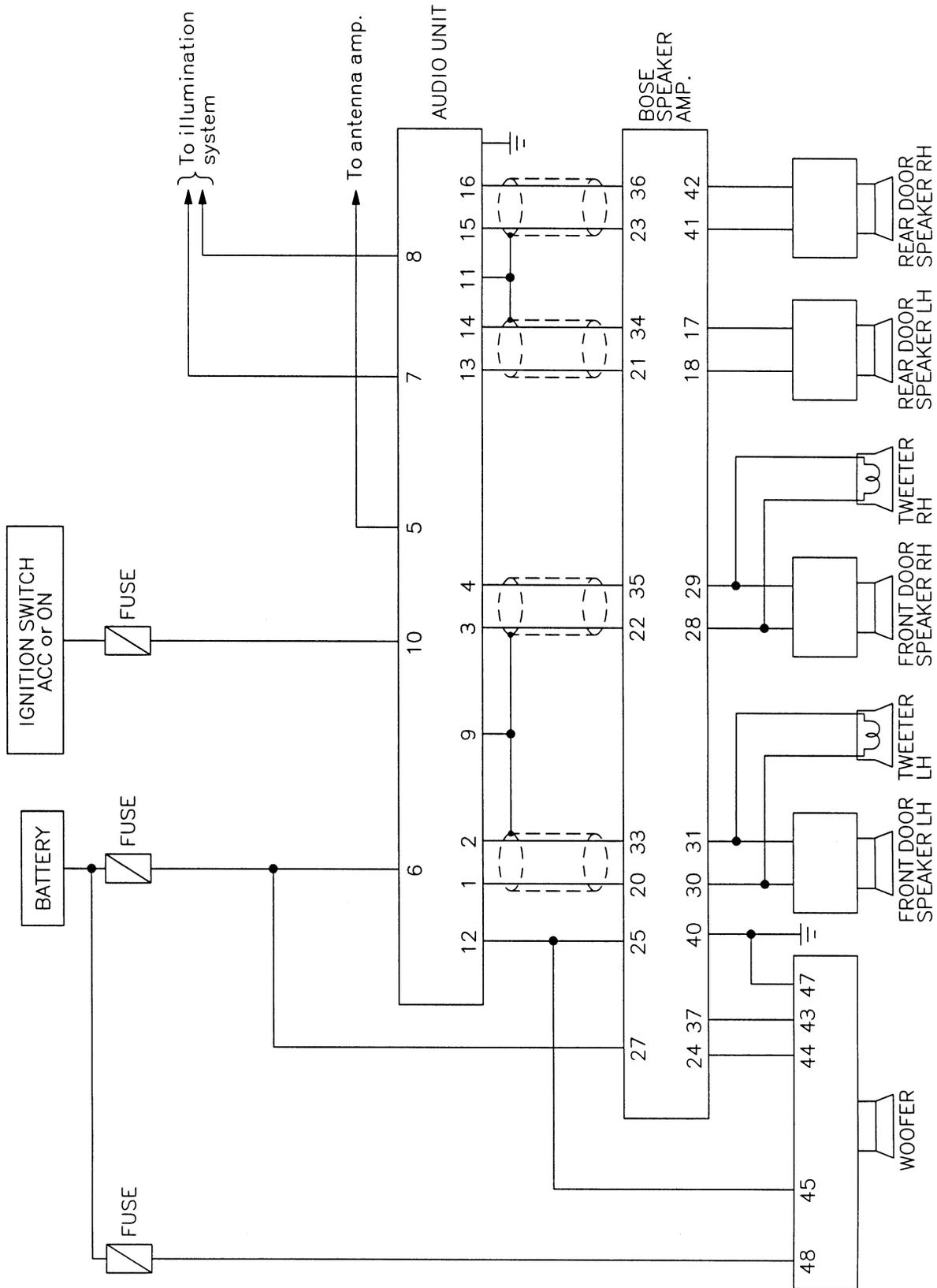


AUDIO

Schematic (Cont'd)

BOSE SYSTEM

NFEL0167S02



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MEL442N

AUDIO

Wiring Diagram — AUDIO —

Wiring Diagram — AUDIO —

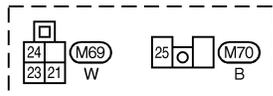
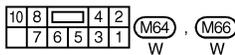
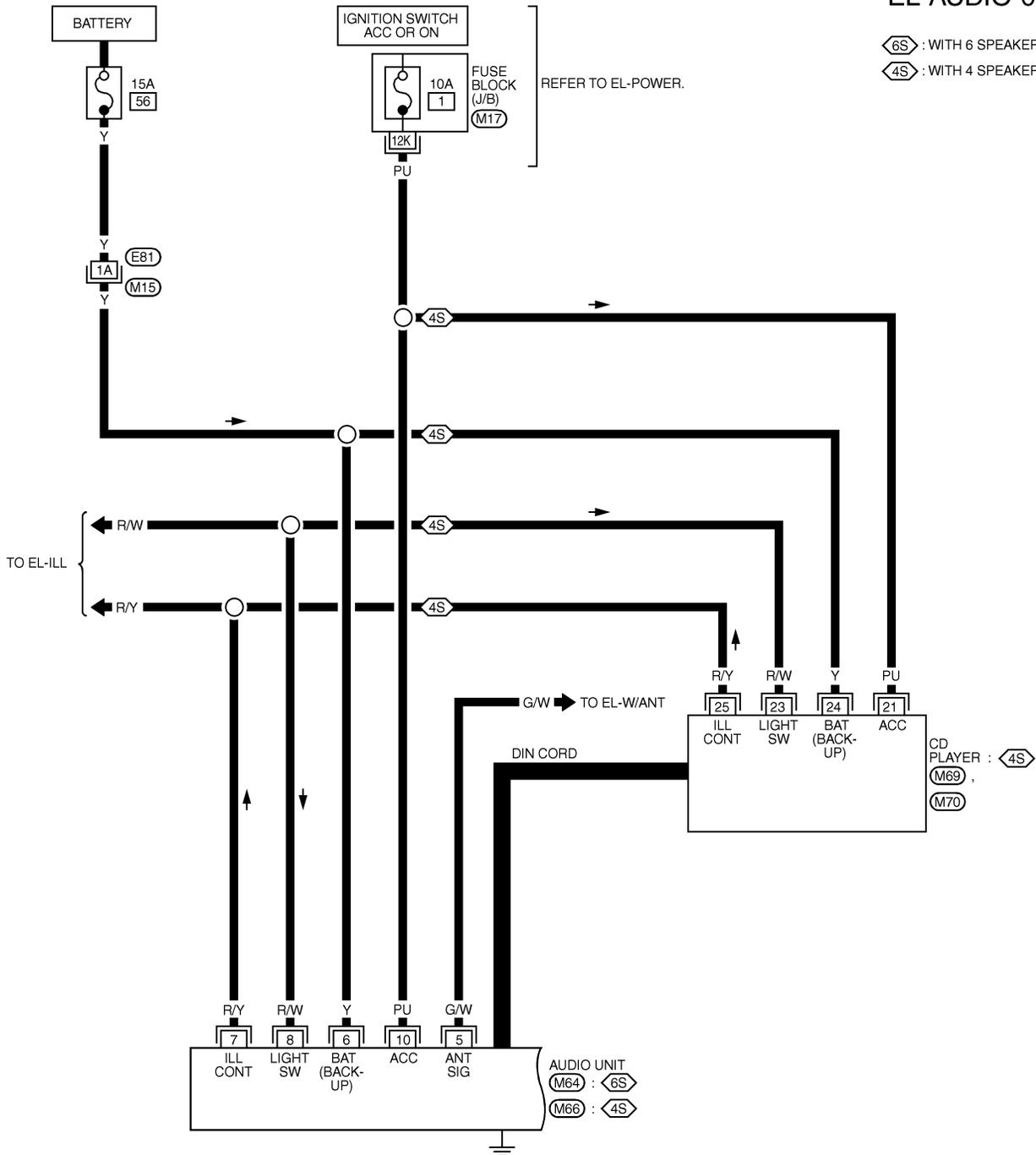
NFEL0081

NFEL0081S01

BASE SYSTEM

EL-AUDIO-01

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



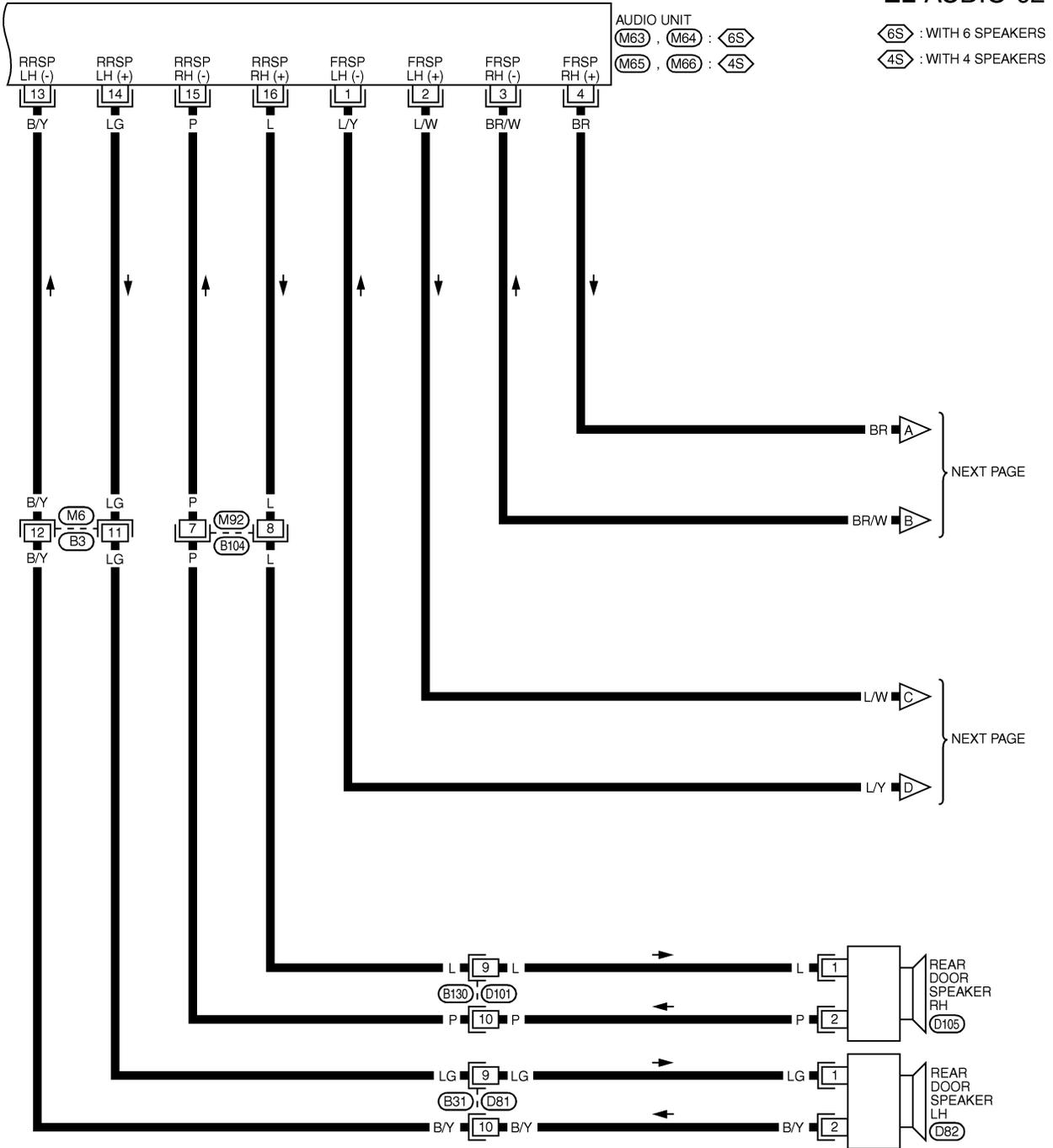
REFER TO THE FOLLOWING.
 (M15) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M17) -FUSE BLOCK-
 JUNCTION BOX (J/B)

MEL317L

AUDIO

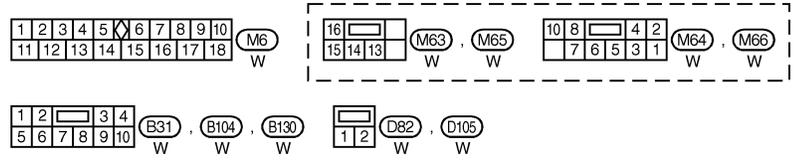
Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-02



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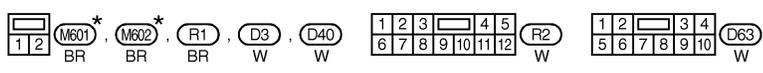
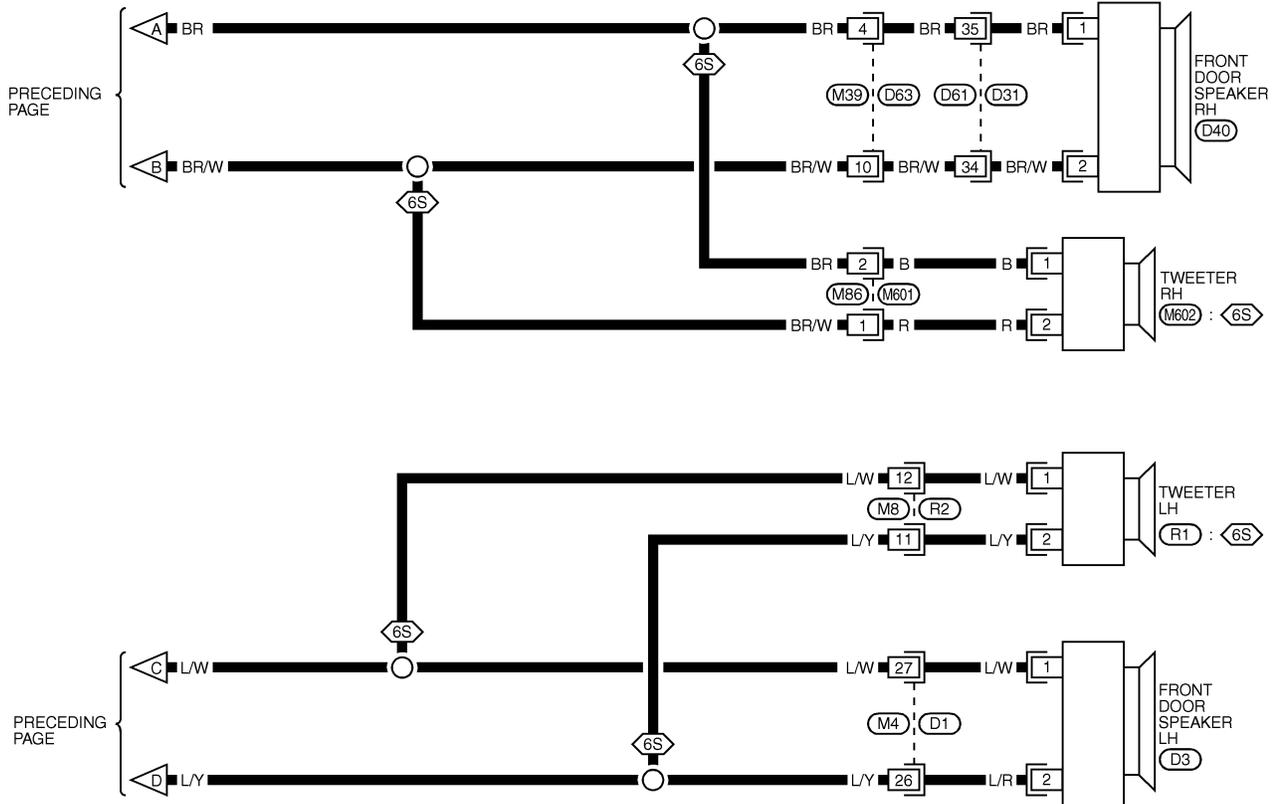


AUDIO

Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-03

⬡6S⬡ : WITH 6 SPEAKERS



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

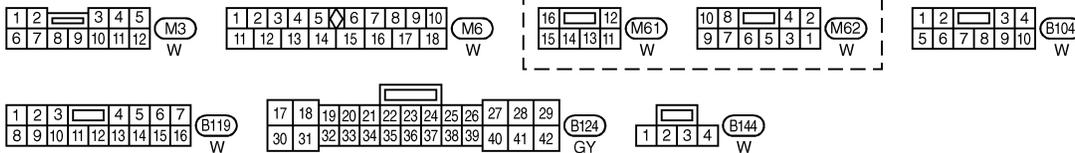
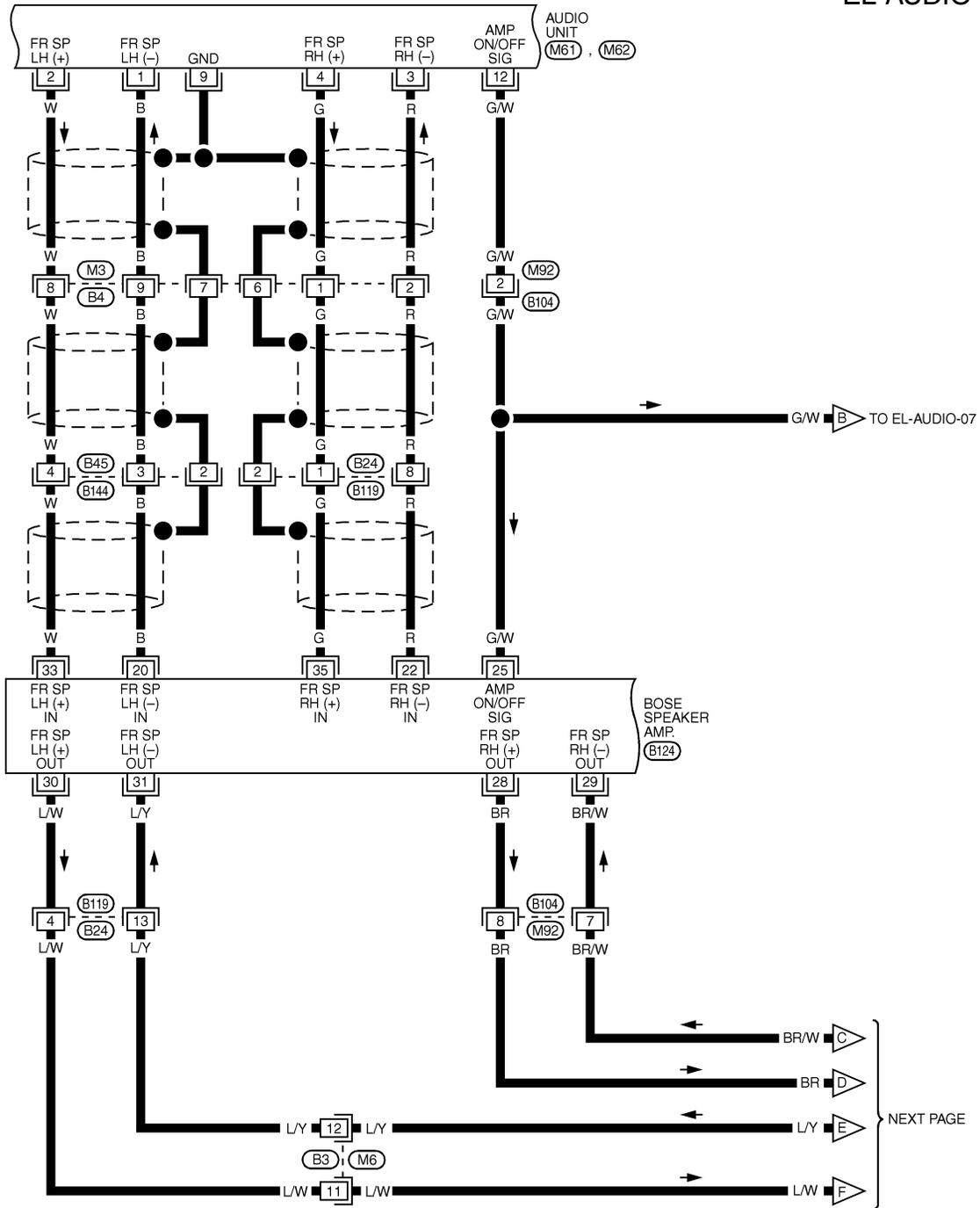
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

MEL051N

AUDIO

Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-05



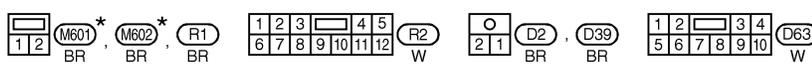
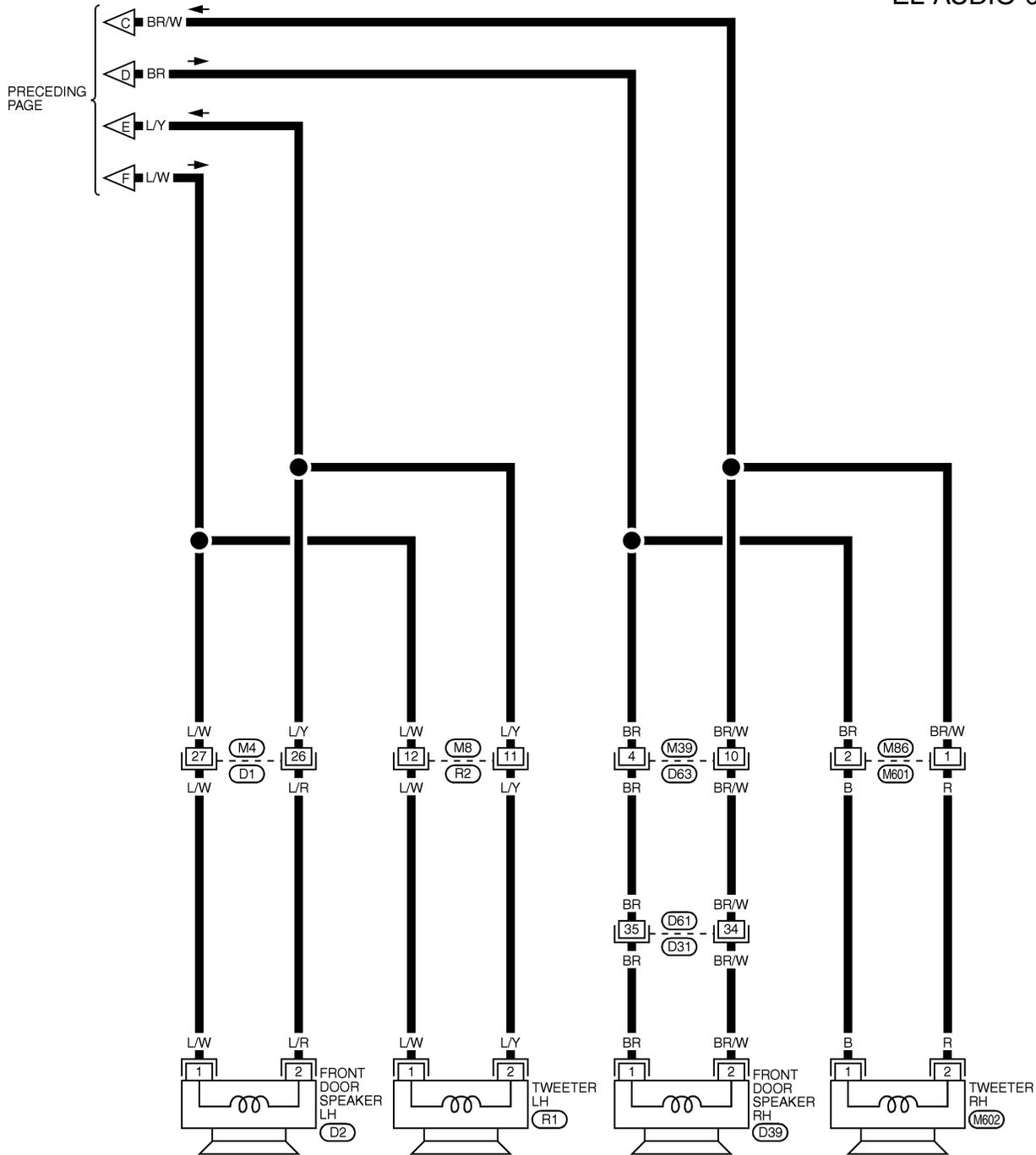
MEL052N

AUDIO

Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-06

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

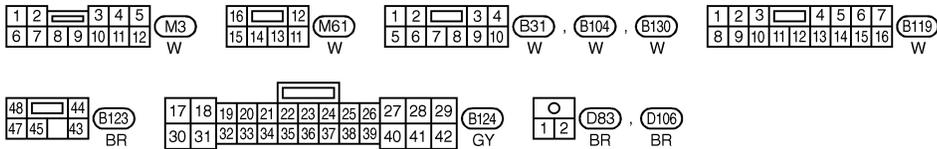
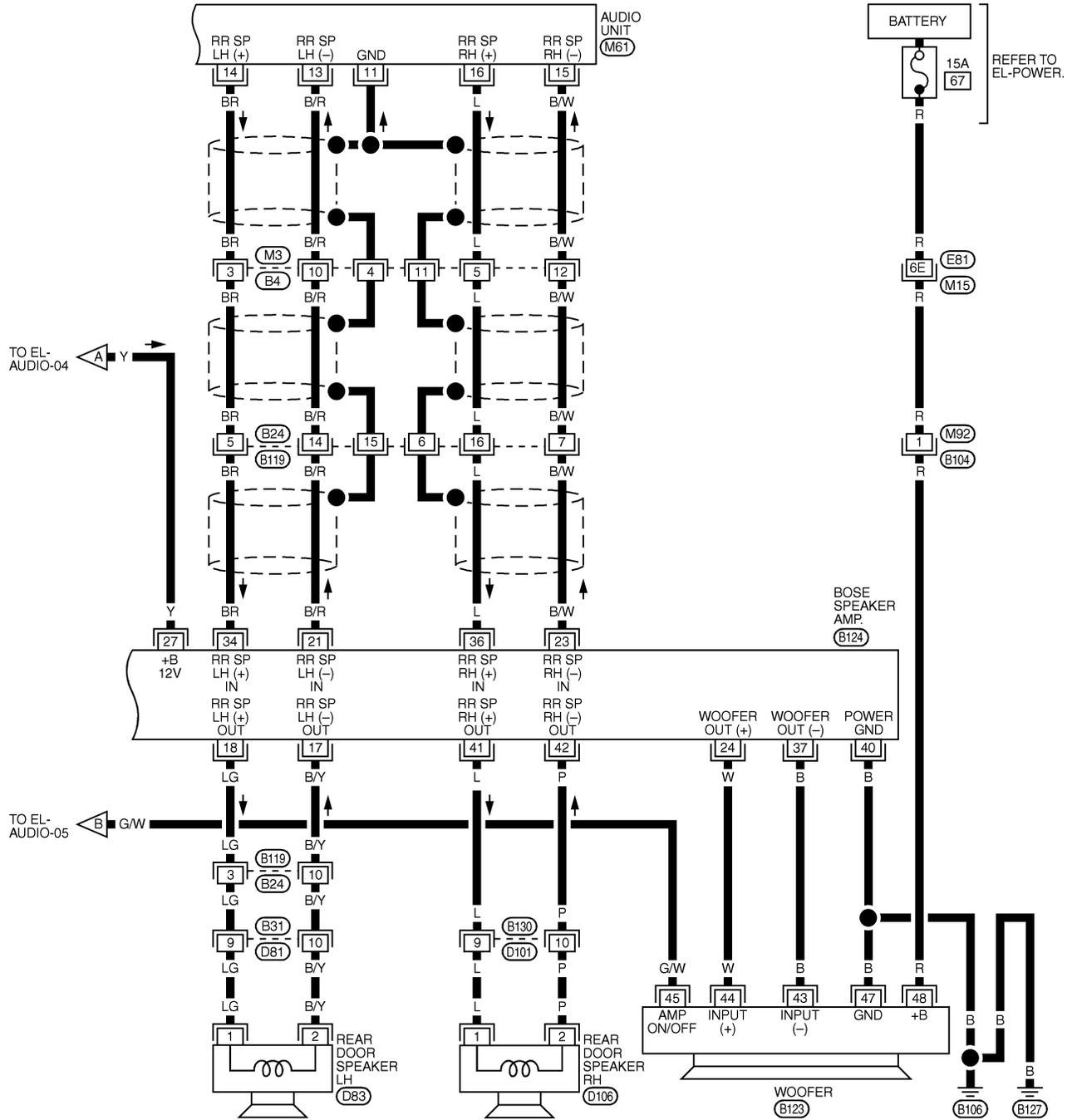
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

MEL053N

AUDIO

Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-07



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

MEL054N

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"> 10A fuse Poor audio unit case ground Audio unit 	<ol style="list-style-type: none"> 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. Check audio unit case ground. Remove audio unit for repair.
Audio unit presets are lost when ignition switch is turned OFF.	<ol style="list-style-type: none"> 15A fuse Audio unit 	<ol style="list-style-type: none"> 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. Remove audio unit for repair.
AM/FM stations are weak or noisy.	<ol style="list-style-type: none"> Window antenna Audio unit ground Audio unit 	<ol style="list-style-type: none"> Check window antenna. Check audio unit ground condition. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with engine running.	<ol style="list-style-type: none"> Poor audio unit ground Loose or missing ground bonding straps Ignition condenser or rear window defogger noise suppressor condenser Ignition coil or secondary wiring Audio unit 	<ol style="list-style-type: none"> Check audio unit ground. Check ground bonding straps. Replace ignition condenser or rear window defogger noise suppressor condenser. Check ignition coil and secondary wiring. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with accessories on (switch pops and motor noise).	<ol style="list-style-type: none"> Poor audio unit ground Antenna Accessory ground Faulty accessory 	<ol style="list-style-type: none"> Check audio unit ground. Check antenna. Check accessory ground. Replace accessory.

BASE SYSTEM

NFEL0220S02

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

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

AUDIO

Inspection

Inspection

NFEL0221

AUDIO UNIT AND AMP.

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.)

ANTENNA

NFEL0221S02

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

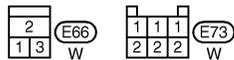
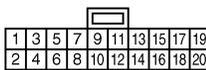
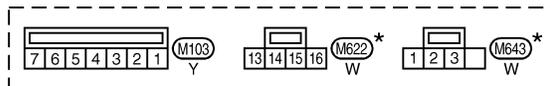
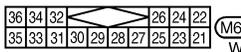
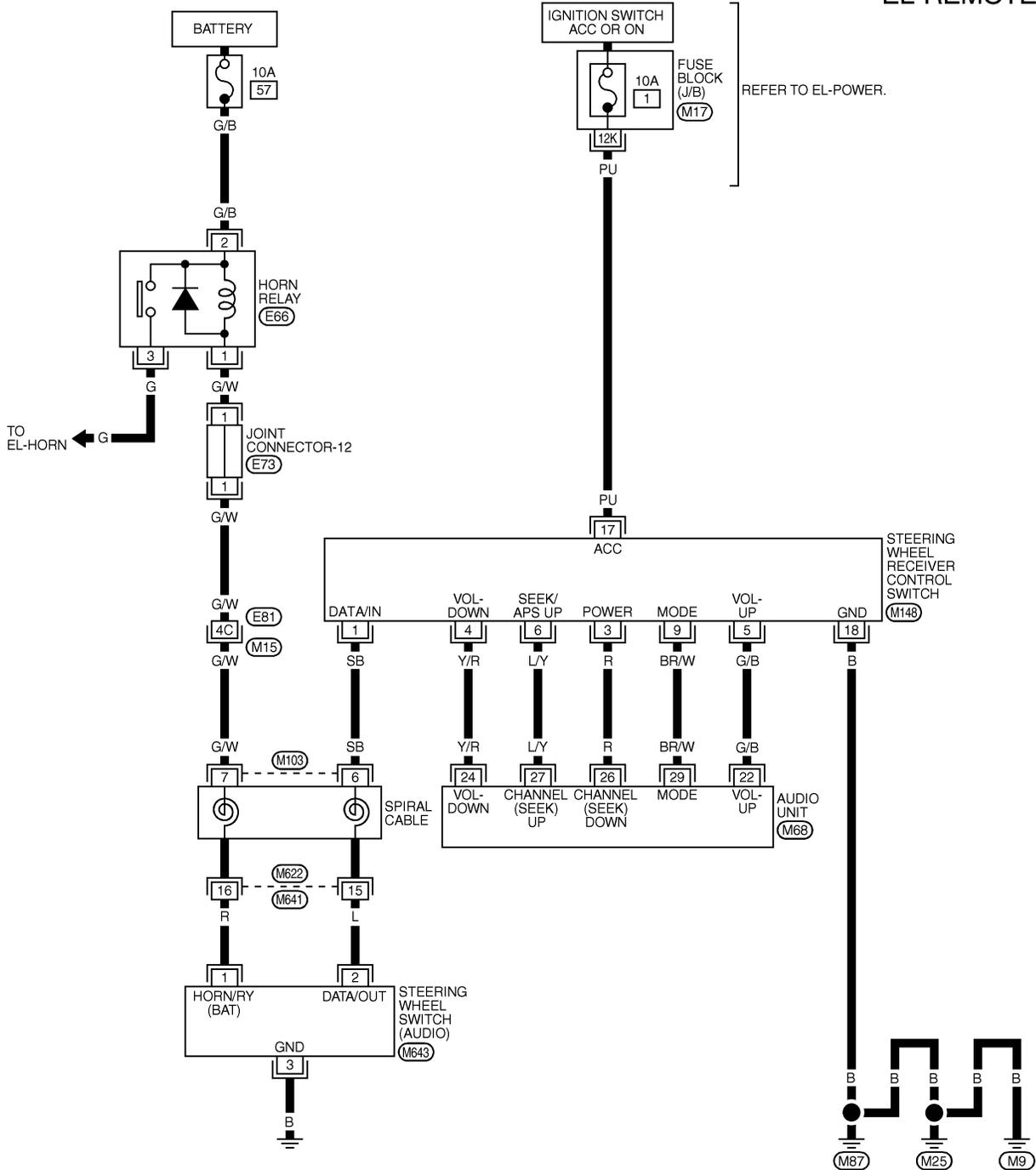
- If reception improves, check antenna ground (at body surface).
- If reception does not improve, check main feeder cable for short circuit or open circuit.

Wiring Diagram — REMOTE — WITH BOSE SYSTEM

NFEL0260

NFEL0260S01

EL-REMOTE-01



REFER TO THE FOLLOWING.

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

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

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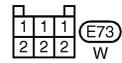
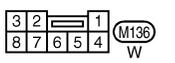
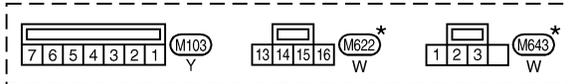
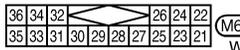
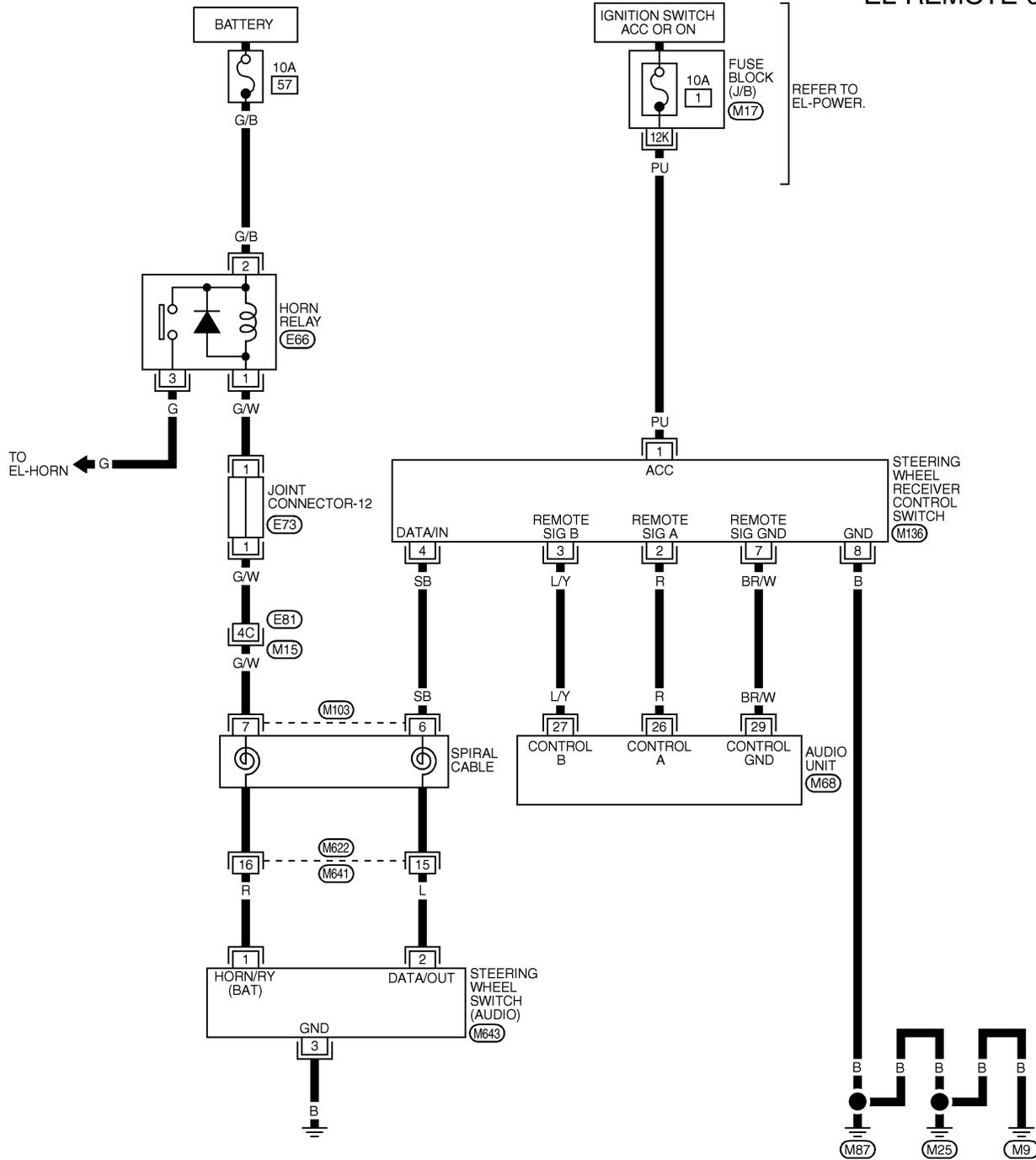
AUDIO

Wiring Diagram — REMOTE — (Cont'd)

WITH 6 SPEAKERS

NFEL0260S02

EL-REMOTE-02



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

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

MEL428N

AUDIO ANTENNA

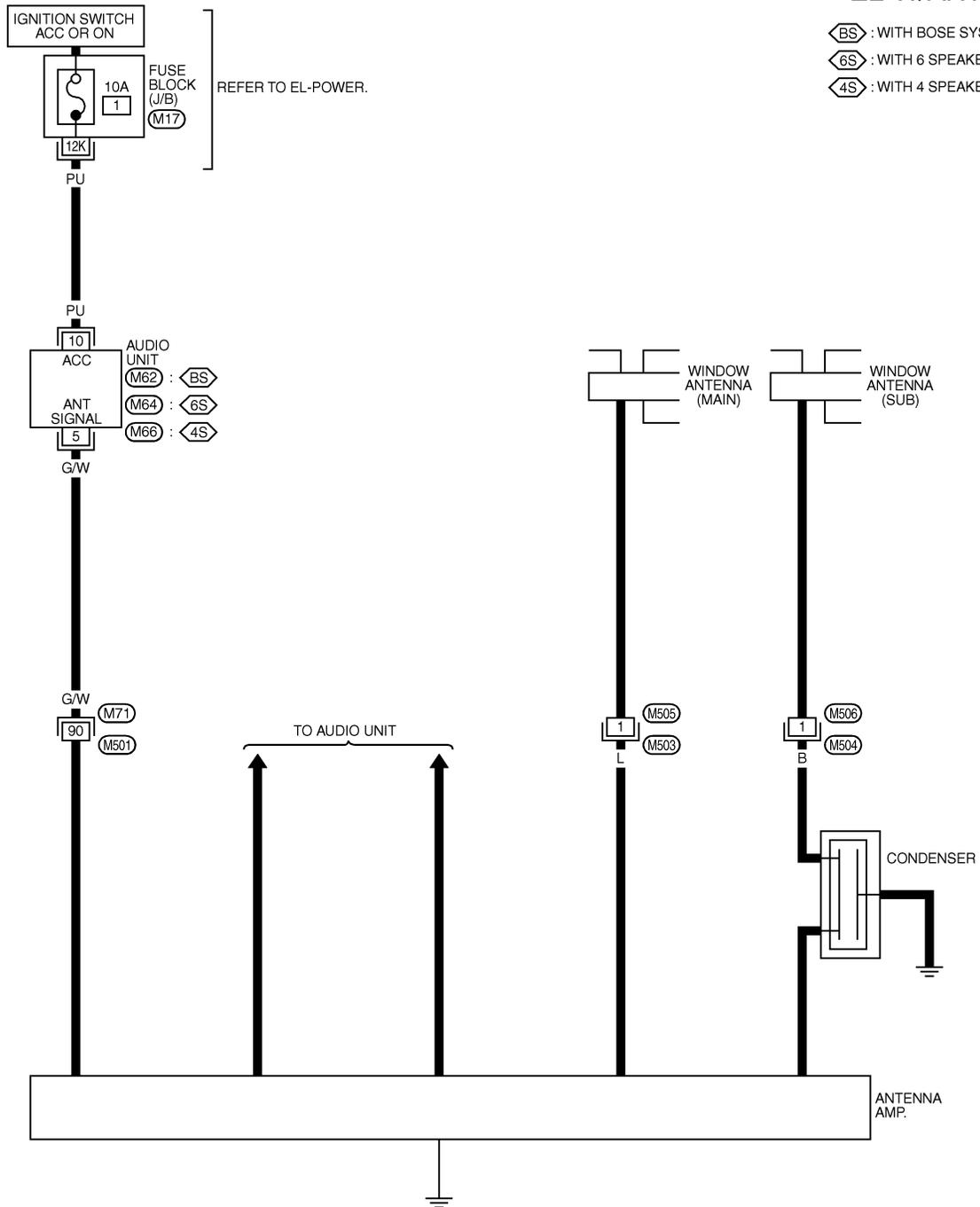
Wiring Diagram — W/ANT —

Wiring Diagram — W/ANT —

NFEL0085

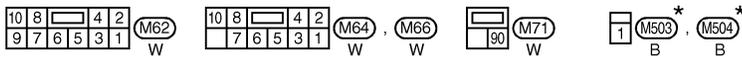
EL-W/ANT-01

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



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

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

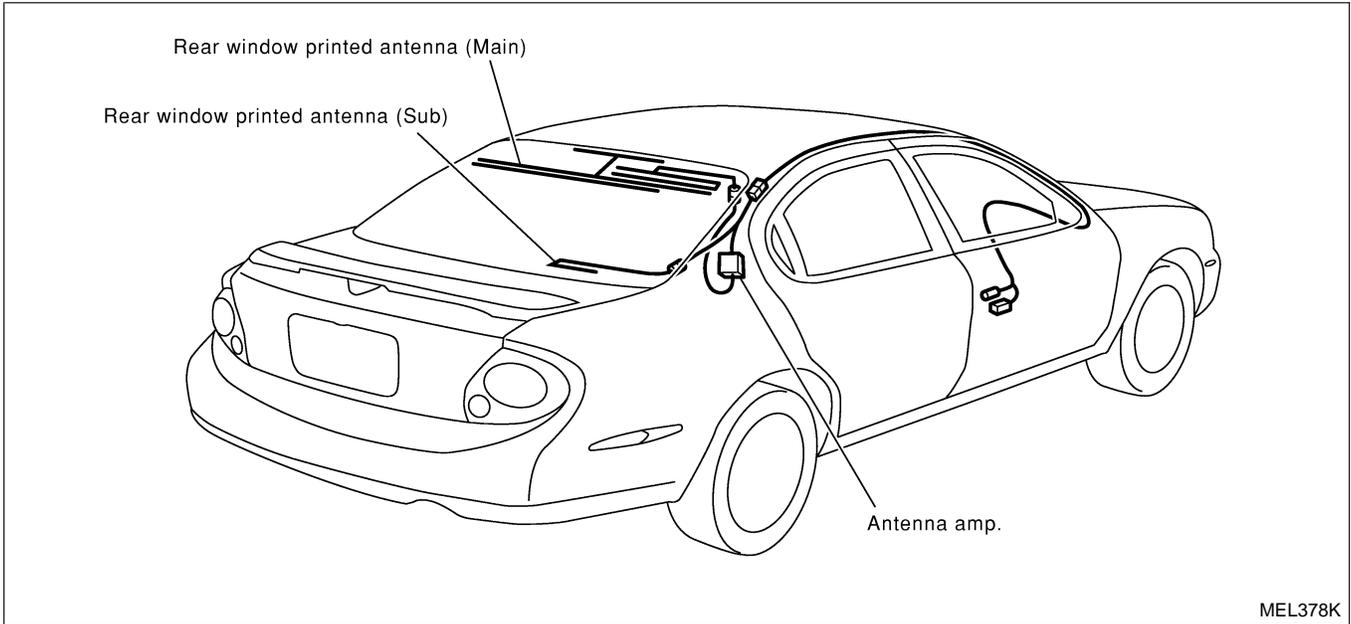
MEL642L

AUDIO ANTENNA

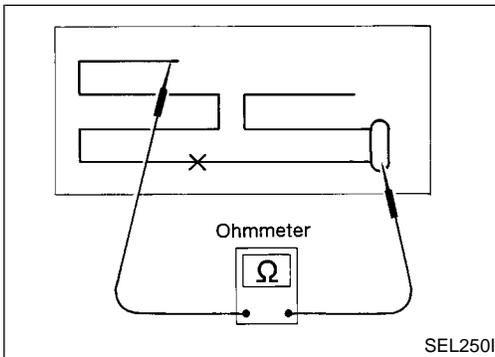
Location of Antenna

Location of Antenna

NFEL0087



MEL378K



SEL250I

Window Antenna Repair

NFEL0250

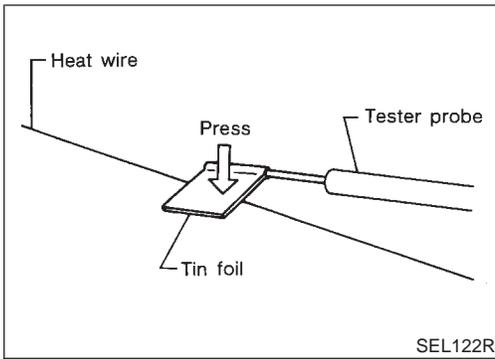
ELEMENT CHECK

NFEL0250S01

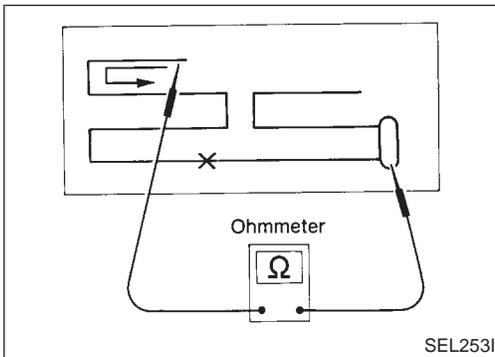
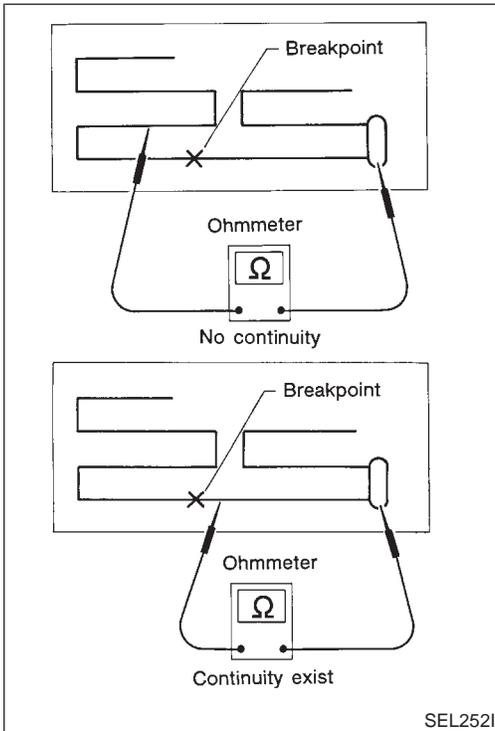
1. Attach probe circuit tester (in ohm range) to antenna terminal on each side.
If an element is OK, continuity should exist.
If an element is broken, no continuity should exist. Go to step 2.

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-169).

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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 46.

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).

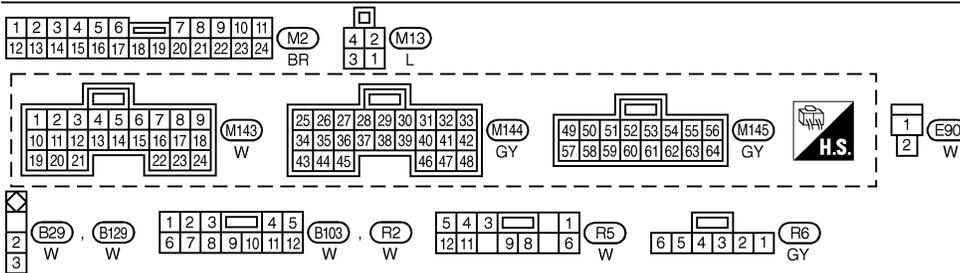
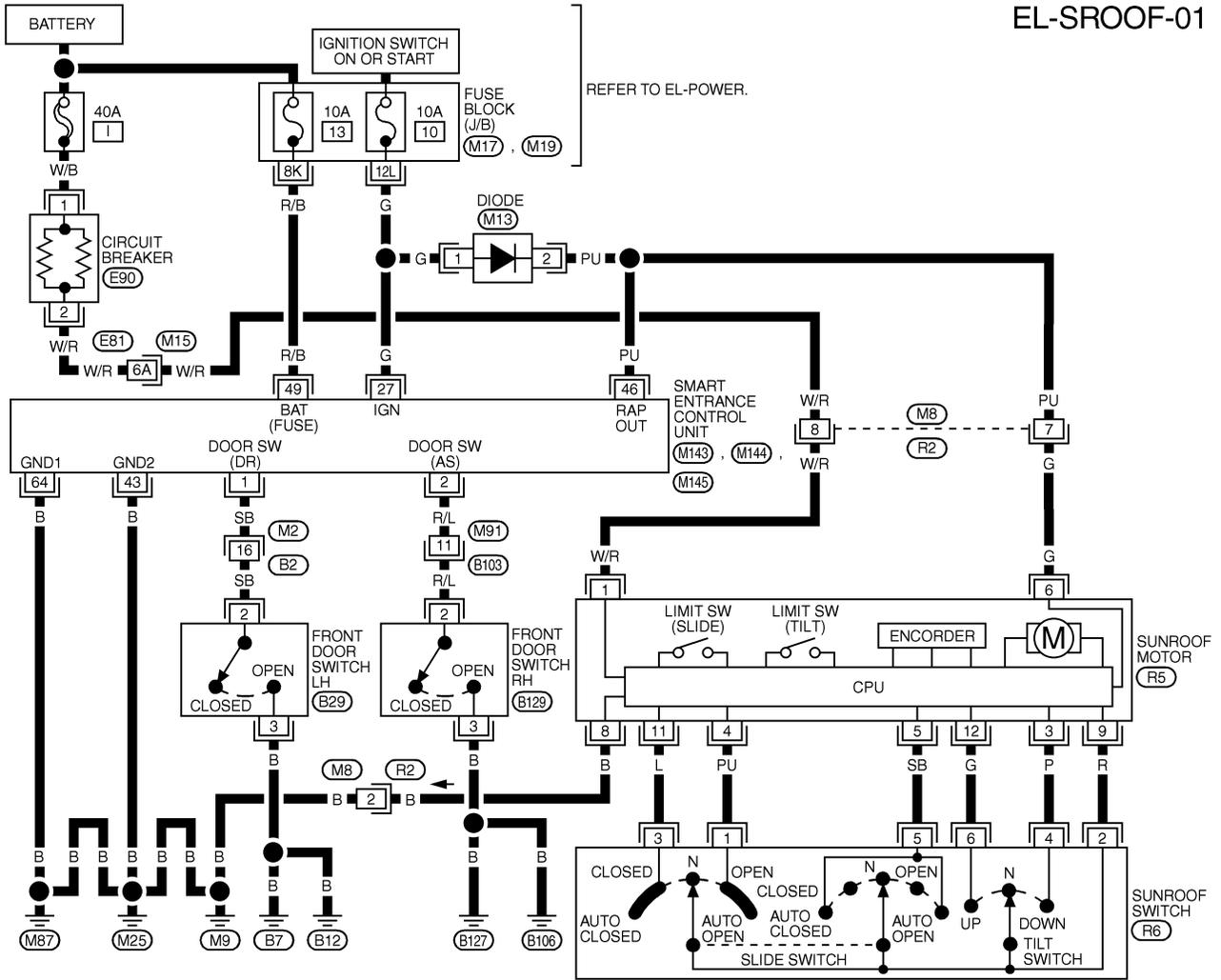
POWER SUNROOF

Wiring Diagram — SROOF —

Wiring Diagram — SROOF —

NFEL0089

EL-SROOF-01



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

MEL056N

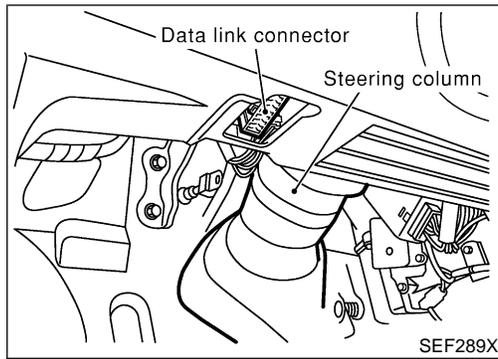
SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
27	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN "ON" POSITION	12V
43	B	GROUND	-	-
46	PU	SUNROOF MOTOR	RETAINED POWER OPERATION IS OPERATED (ON → OFF)	12V → 0V
49	R/B	POWER SOURCE (FUSE)	-	12V
64	B	GROUND	-	-

SEL986XA

POWER SUNROOF

CONSULT-II Inspection Procedure

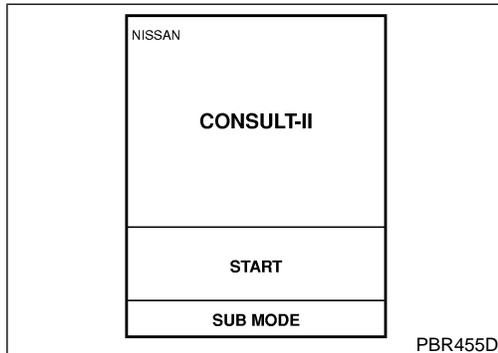


CONSULT-II Inspection Procedure “RETAINED PWR”

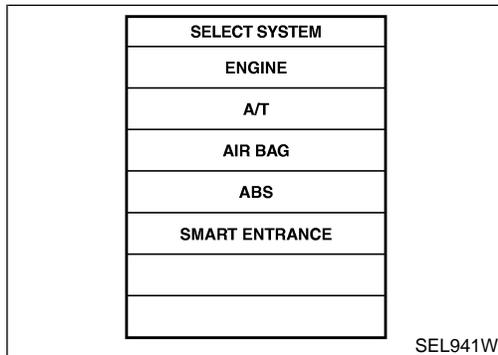
=NFEL0223

NFEL0223S01

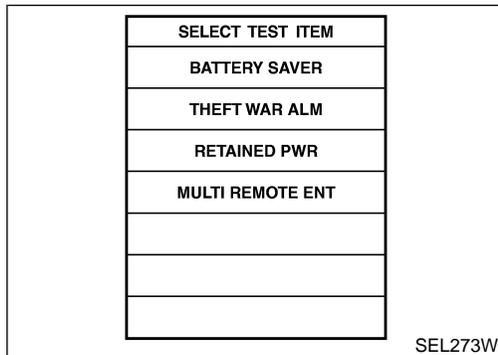
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



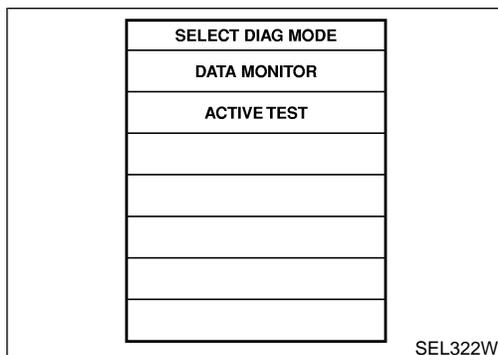
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “RETAINED PWR”.



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

CONSULT-II Application Items

NFEL0224

“RETAINED PWR”

Data Monitor

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. Those systems can be operated when turning on “RETAINED PWR” on CONSULT-II screen even if the ignition switch is tuned OFF.</p> <p>NOTE: 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"> 10A fuse, 40A fusible link and E90 circuit breaker Grounds M9, M25 and M87 Sunroof switch Sunroof switch circuit Sunroof motor 	<ol style="list-style-type: none"> 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. Check grounds M9, M25, M87. Check sunroof switch. Check harness between sunroof switch and sunroof motor. Replace sunroof motor.
Power sunroof cannot be operated using one of the sunroof switches.	<ol style="list-style-type: none"> Sunroof switch Sunroof switch circuit 	<ol style="list-style-type: none"> Check sunroof switch. Check the harness between sunroof motor and sunroof switch.
Power sunroof auto function cannot be operated properly.	<ol style="list-style-type: none"> Sunroof slide mechanism Sunroof switch Sunroof switch circuit Sunroof motor 	<ol style="list-style-type: none"> Check the following. <ol style="list-style-type: none"> Check obstacles in sunroof, etc. Check worn or deformed sunroof. Check sunroof sash tilted too far inward or outward. Check sunroof switch. Check harness between sunroof motor and sunroof switch. Replace sunroof motor.

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POWER SUNROOF

Trouble Diagnoses (Cont'd)

Symptom	Possible cause	Repair order
Retained power operation does not operate properly.	<ol style="list-style-type: none"> 1. RAP signal circuit 2. Driver or passenger side door switch circuit 3. Smart entrance control unit 	<ol style="list-style-type: none"> 1. Check RAP signal. <ol style="list-style-type: none"> a. (With CONSULT-II) Check RAP signal with CONSULT-II. Use "ACTIVE TEST" mode, "RETAINED PWR" in "SMART ENTRANCE". (Refer to EL-190.) If NG, go to the step b. below. b. Verify 12 positive voltage from smart entrance control unit is present at terminal 6 of sunroof motor: <ul style="list-style-type: none"> ● Within 45 seconds after ignition switch turns off. ● When front door LH and RH is closed. 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. 3. Check smart entrance control unit. (EL-328)

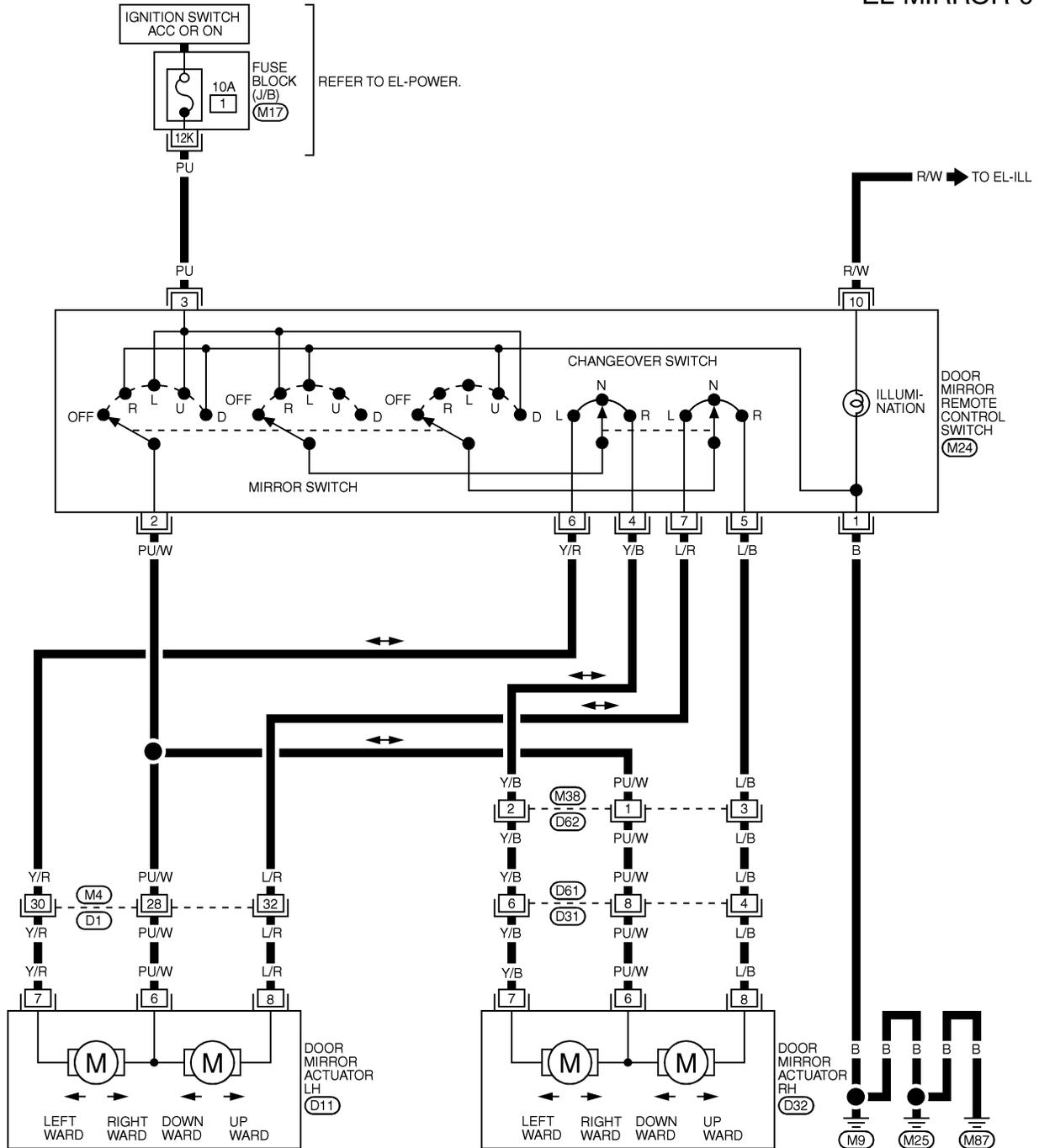
DOOR MIRROR

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

EM

LC

EC

FE

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MEL291K

AUTO ANTI-DAZZLING INSIDE MIRROR

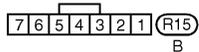
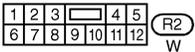
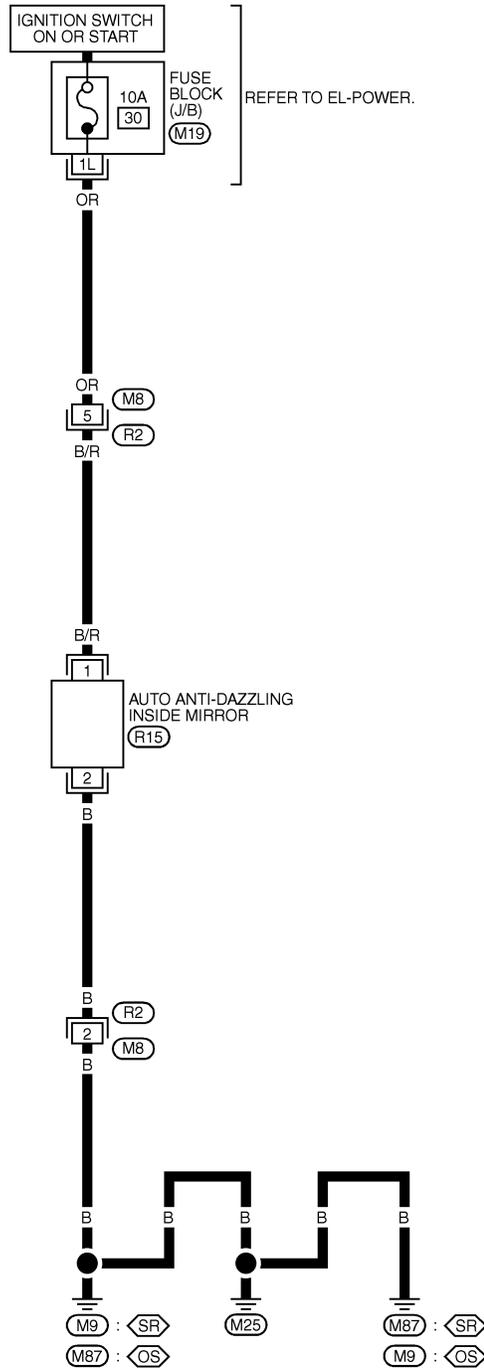
Wiring Diagram — I/MIRR —

Wiring Diagram — I/MIRR —

NFEL0264

EL-I/MIRR-01

SR : WITH SUNROOF
OS : WITHOUT SUNROOF



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

MEL427N

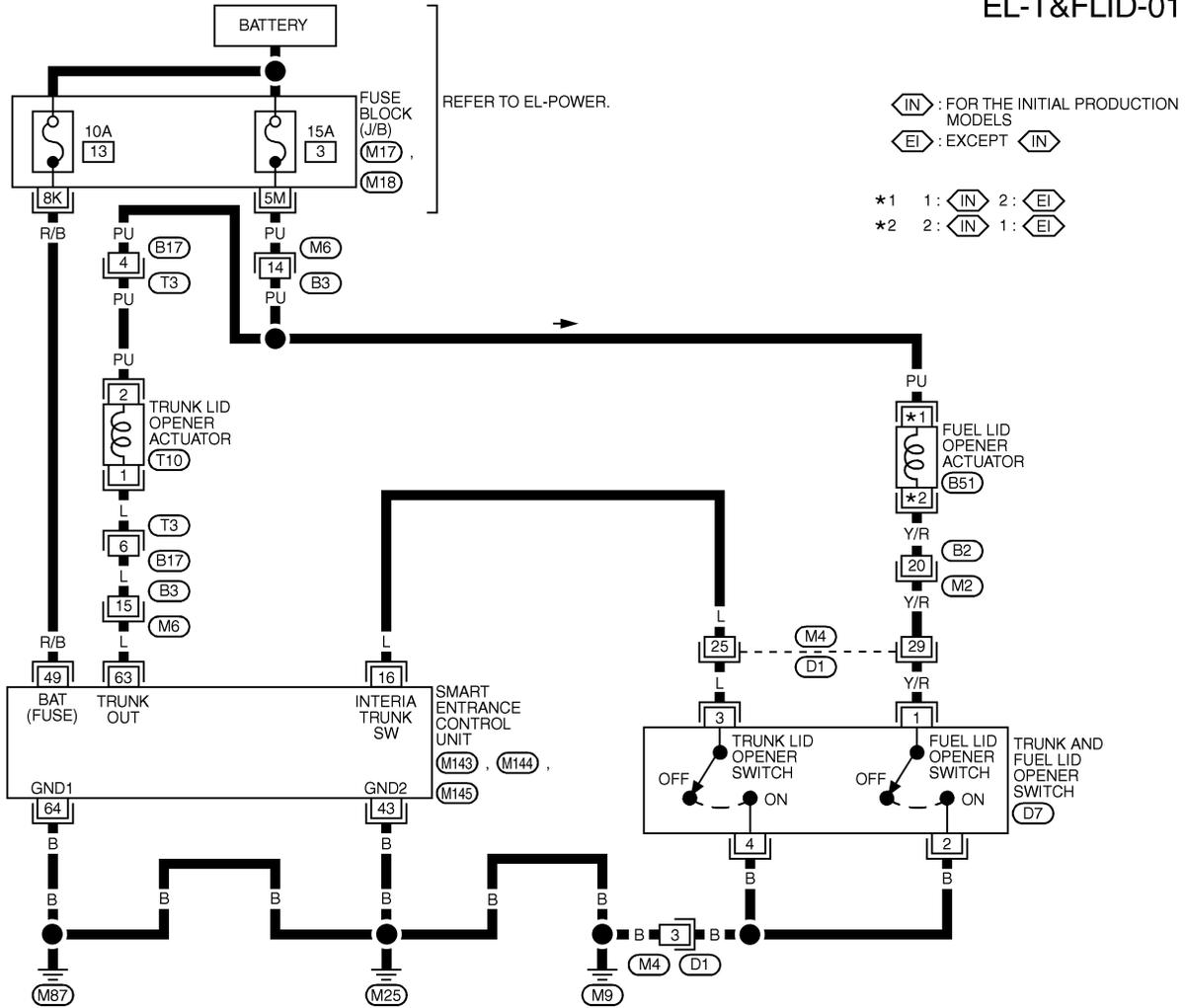
TRUNK LID AND FUEL FILLER LID OPENER

Wiring Diagram — T&FLID —

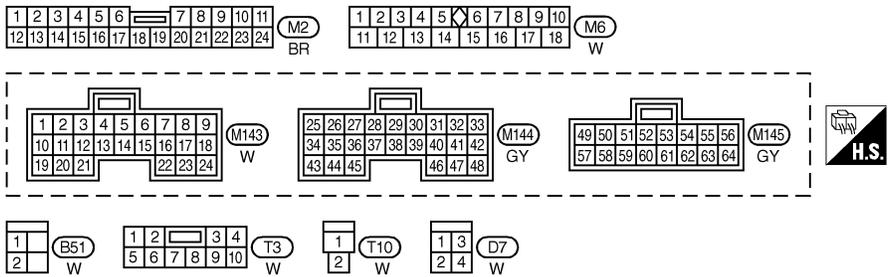
Wiring Diagram — T&FLID —

NFEL0168

EL-T&FLID-01



GI
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IDX



REFER TO THE FOLLOWING.
D1 -SUPER
 MULTIPLE JUNCTION (SMJ)
M17 , M18 -FUSE BLOCK-
 JUNCTION BOX (J/B)

MEL970N

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
16	L	TRUNK AND FUEL LID OPENER SWITCH	OFF → ON (when only pulled)	12V → 0V
43	B	GROUND	-	-
49	R/B	POWER SOURCE (FUSE)	-	12V
63	L	TRUNK LID OPENER ACTUATOR	WHEN TRUNK LID OPENER ACTUATOR IS OPERATED USING REMOTE CONTROLLER (ON → OFF)	0V → 12V
64	B	GROUND	-	-

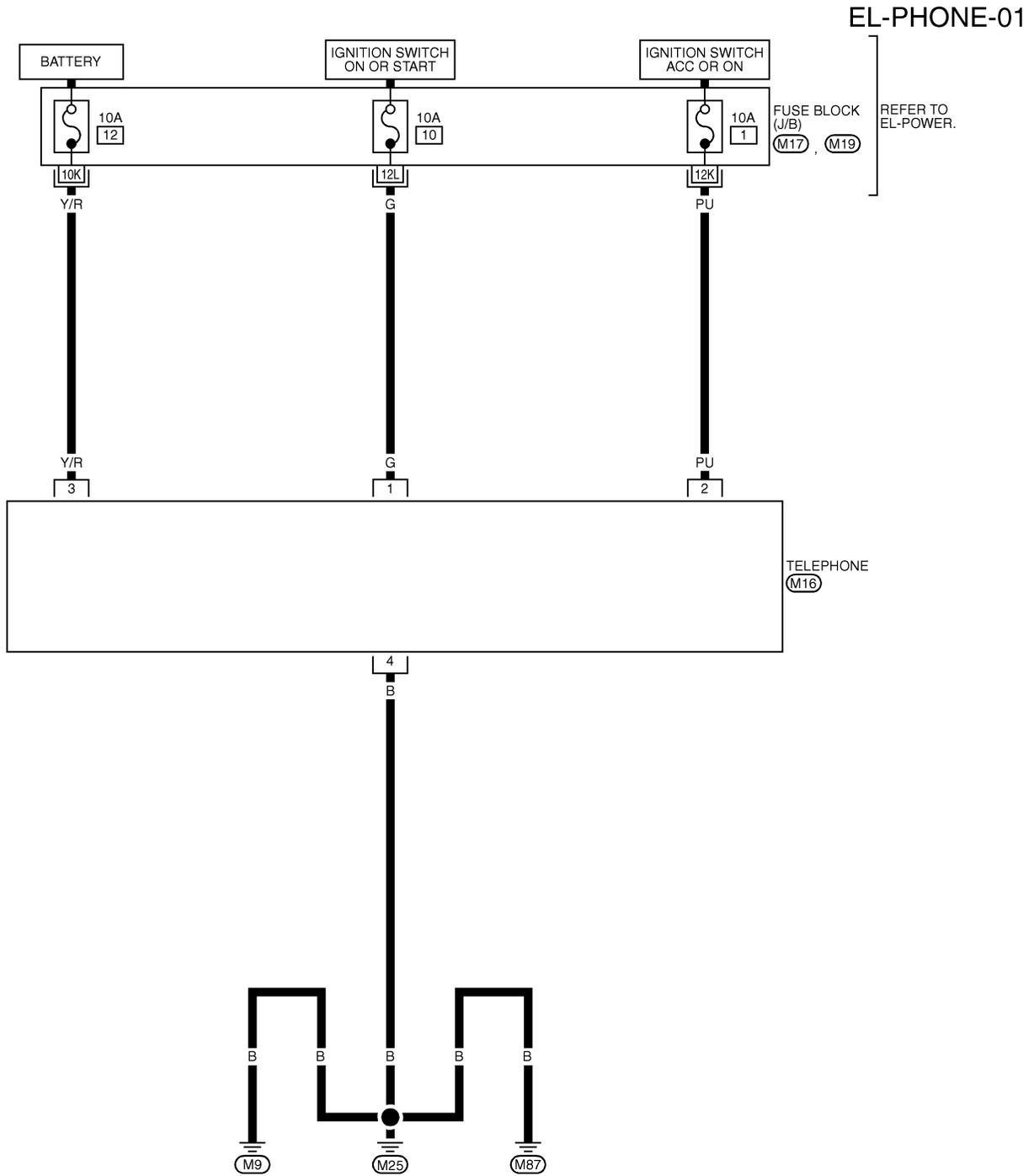
SEL987X

TELEPHONE (PRE WIRE)

Wiring Diagram — PHONE —

Wiring Diagram — PHONE —

NFEL0170



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

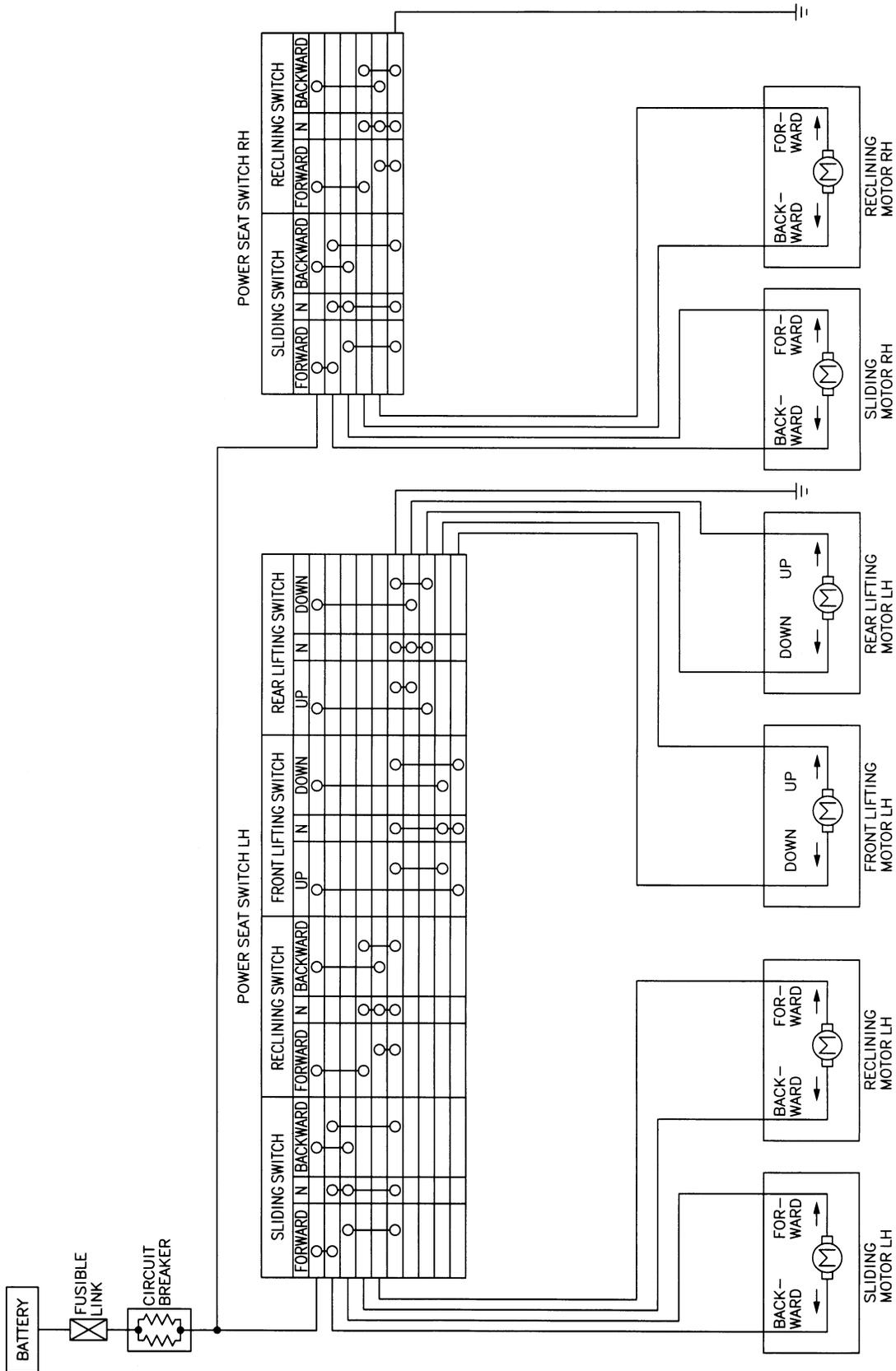
MEL295K

POWER SEAT

Schematic

Schematic

NFEL0251



GI

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IDX

MEL324L

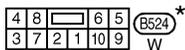
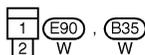
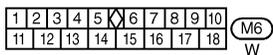
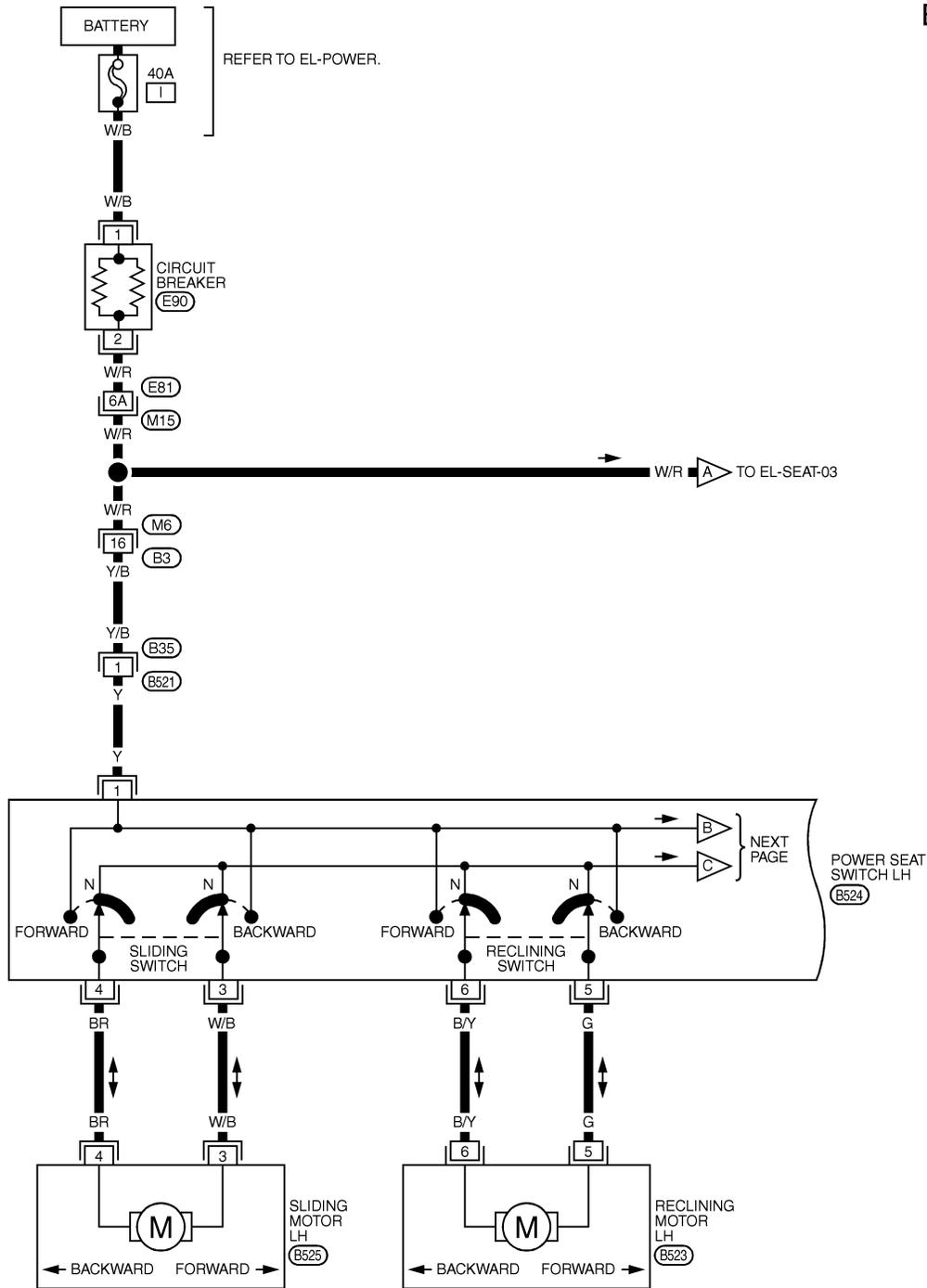
POWER SEAT

Wiring Diagram — SEAT —

Wiring Diagram — SEAT —

NFEL0092

EL-SEAT-01



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

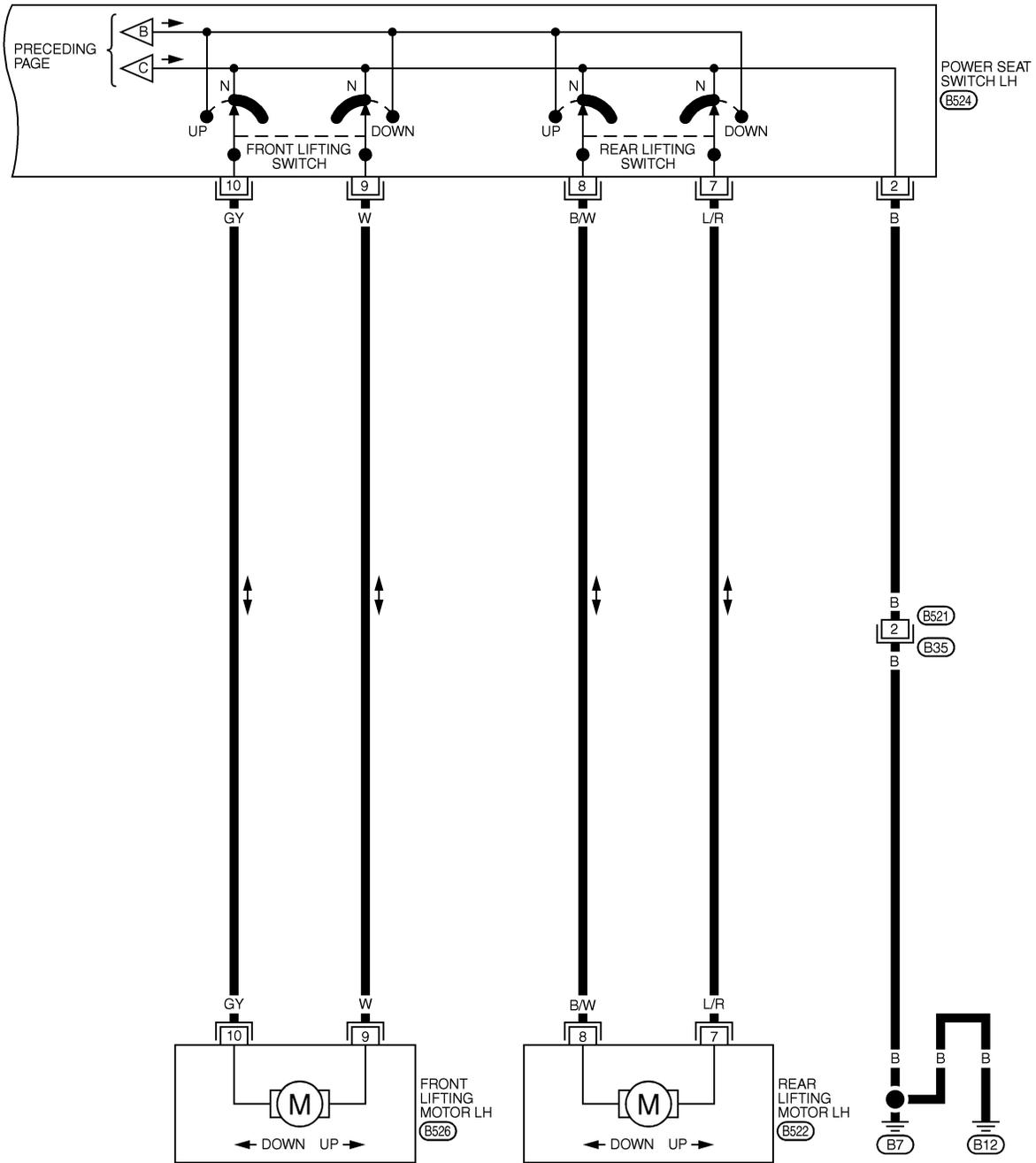
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL-SECTION.

MEL325L

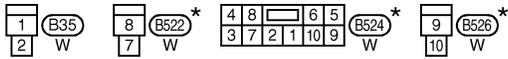
POWER SEAT

Wiring Diagram — SEAT — (Cont'd)

EL-SEAT-02



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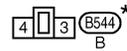
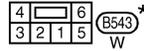
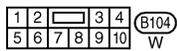
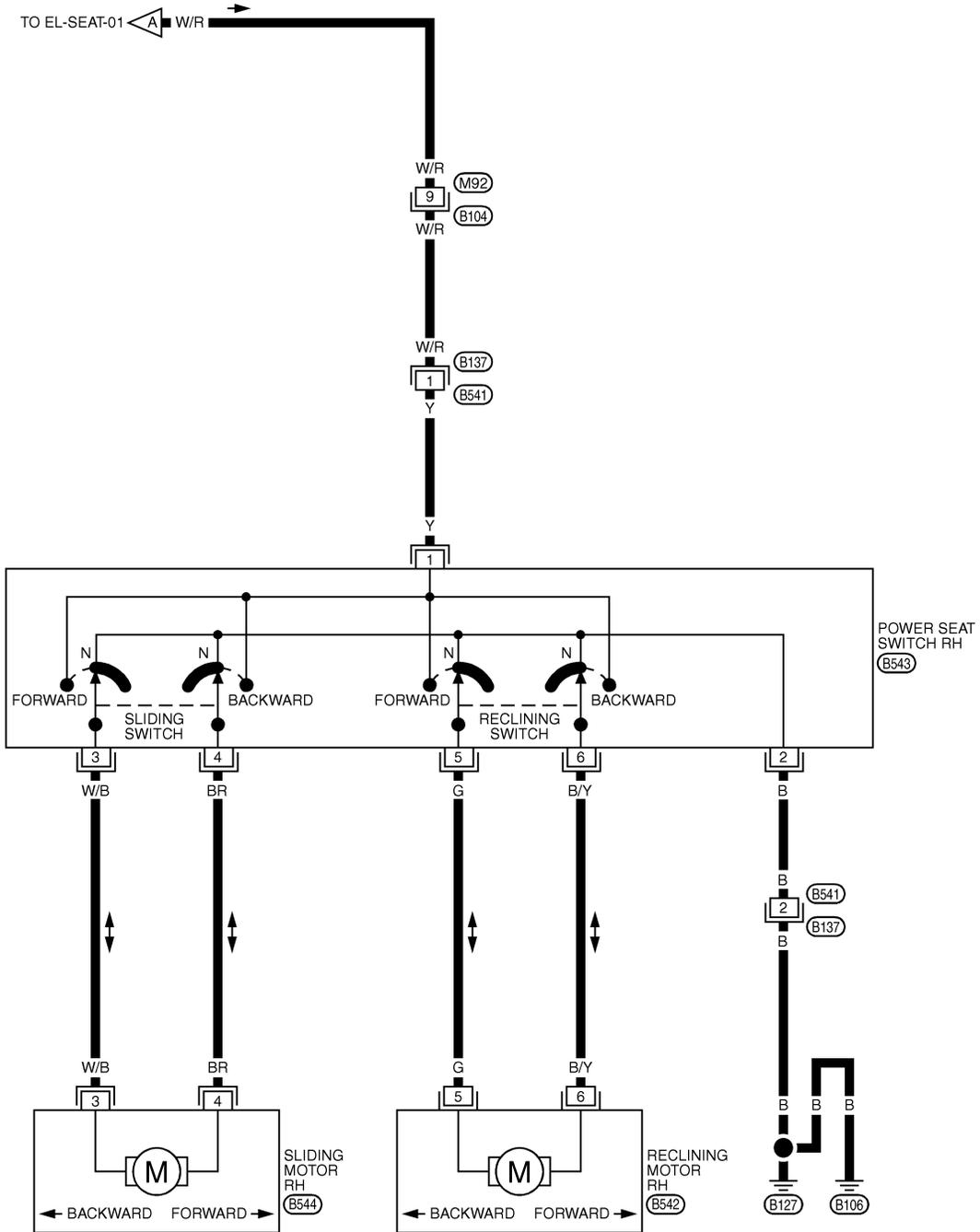
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

MEL057N

POWER SEAT

Wiring Diagram — SEAT — (Cont'd)

EL-SEAT-03



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

MEL648K

HEATED SEAT

Wiring Diagram — HSEAT —

Wiring Diagram — HSEAT —

NFEL0093

EL-HSEAT-01

GI

MA

EM

LC

EC

FE

CL

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AT

AX

SU

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ST

RS

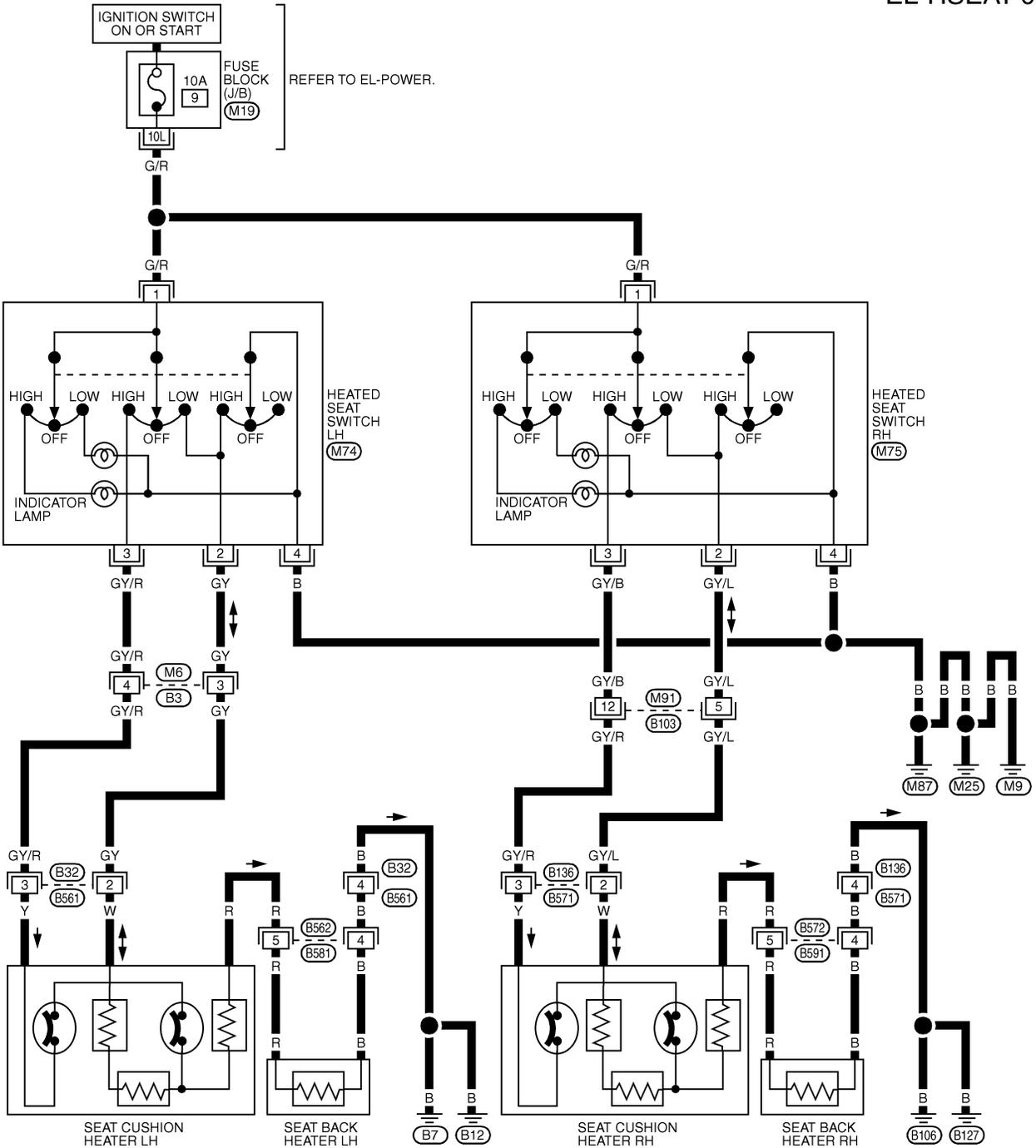
BT

HA

SC

EL

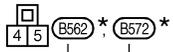
IDX



REFER TO EL-POWER.

REFER TO THE FOLLOWING.

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



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

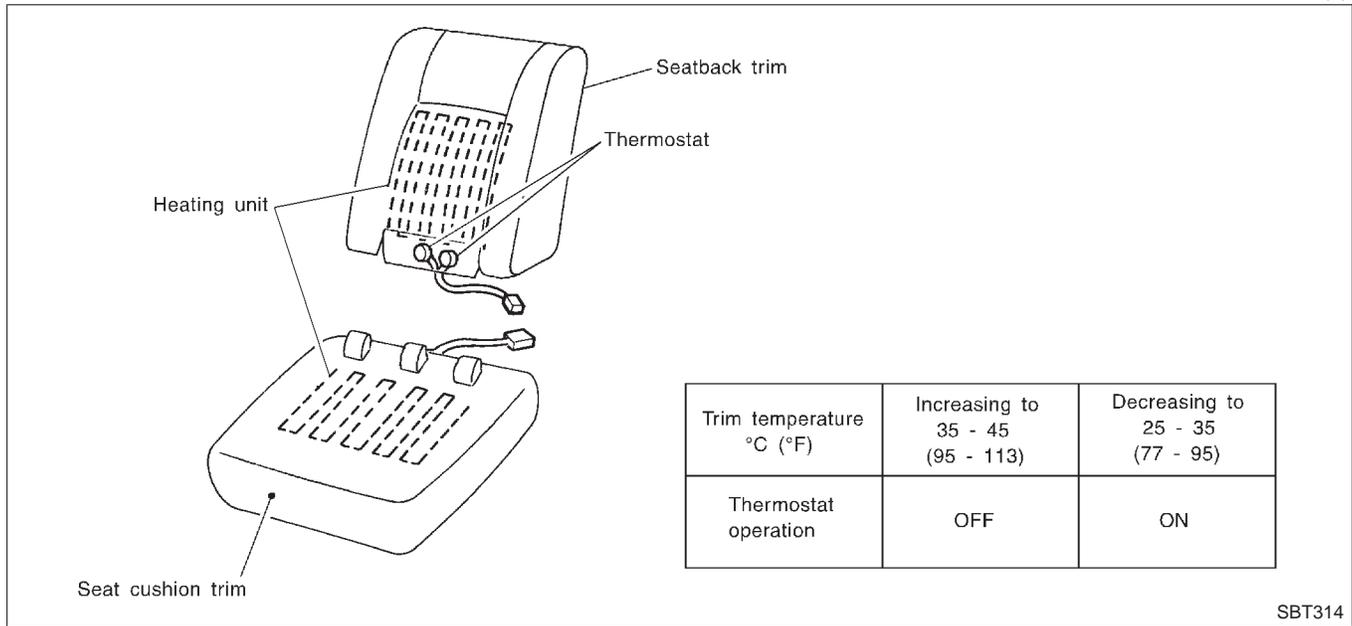
MEL298K

HEATED SEAT

Seatback Heating Unit

Seatback Heating Unit

NFEL0261



SBT314

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

System Description

System Description

NFEL0190

Refer to Owner's Manual for ASCD operating instructions.

POWER SUPPLY AND GROUND

NFEL0190S01

- 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 (A/T models),
- 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

When park/neutral position is in the P or N position, ground is supplied (A/T models):

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

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

- to ASCD control unit terminal 11
- from ASCD steering switch terminal 1
- to ASCD steering switch terminal 2
- from ASCD control unit terminal 24.

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

Ground is supplied:

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

OPERATION

NFEL0190S02

Set Operation

NFEL0190S0201

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

- Ground supply to ASCD control unit terminal 11
- 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 24.

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

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

System Description (Cont'd)

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.

GI

Accel Operation

NFEL0190S0204

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

- from ASCD steering switch terminal 2
- to ASCD control unit terminal 24.

MA

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.

EM

LC

Cancel Operation

NFEL0190S0205

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

- CANCEL switch is depressed. (Power supply to ASCD control unit terminal 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.)

EC

FE

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.

CL

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).

MT

AT

AX

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.

SU

BR

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.

ST

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.

RS

		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

BT

HA

SC

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

*2: Set position held.

EL

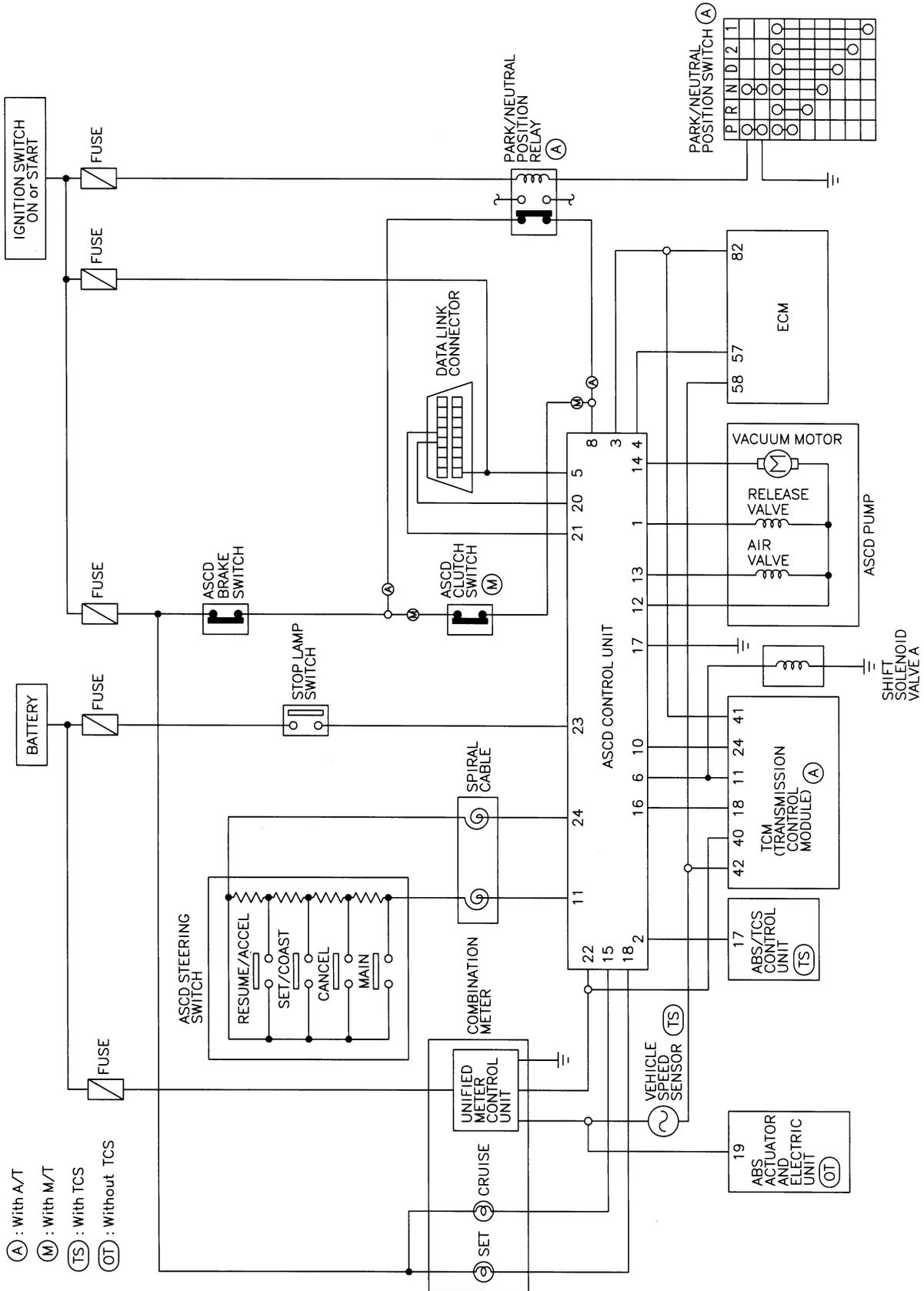
IDX

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Schematic

NFEL0096

Schematic



MEL058N

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

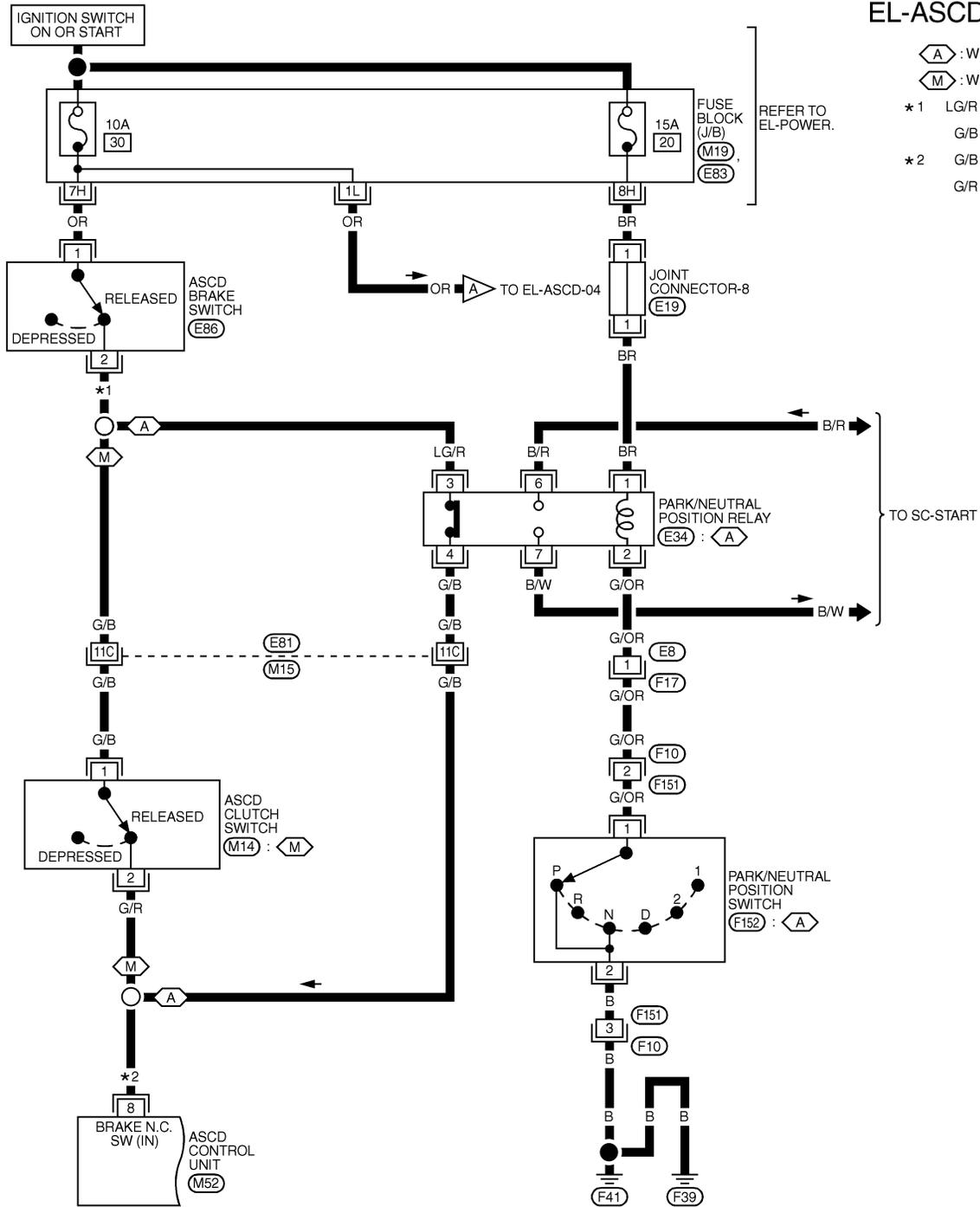
Wiring Diagram — ASCD —

Wiring Diagram — ASCD —

FIG. 1

NFEL0097

NFEL0097S01



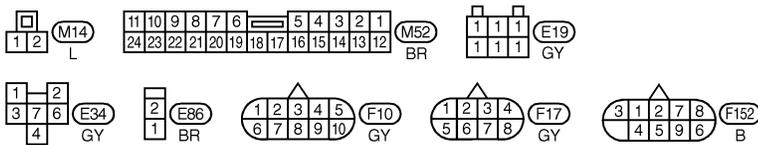
EL-ASCD-01

- ⬡ : WITH A/T
- ⬢ : WITH M/T
- * 1 LG/R : ⬡
- G/B : ⬢
- * 2 G/B : ⬡
- G/R : ⬢

GI
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EL

IDX



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

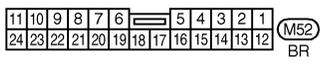
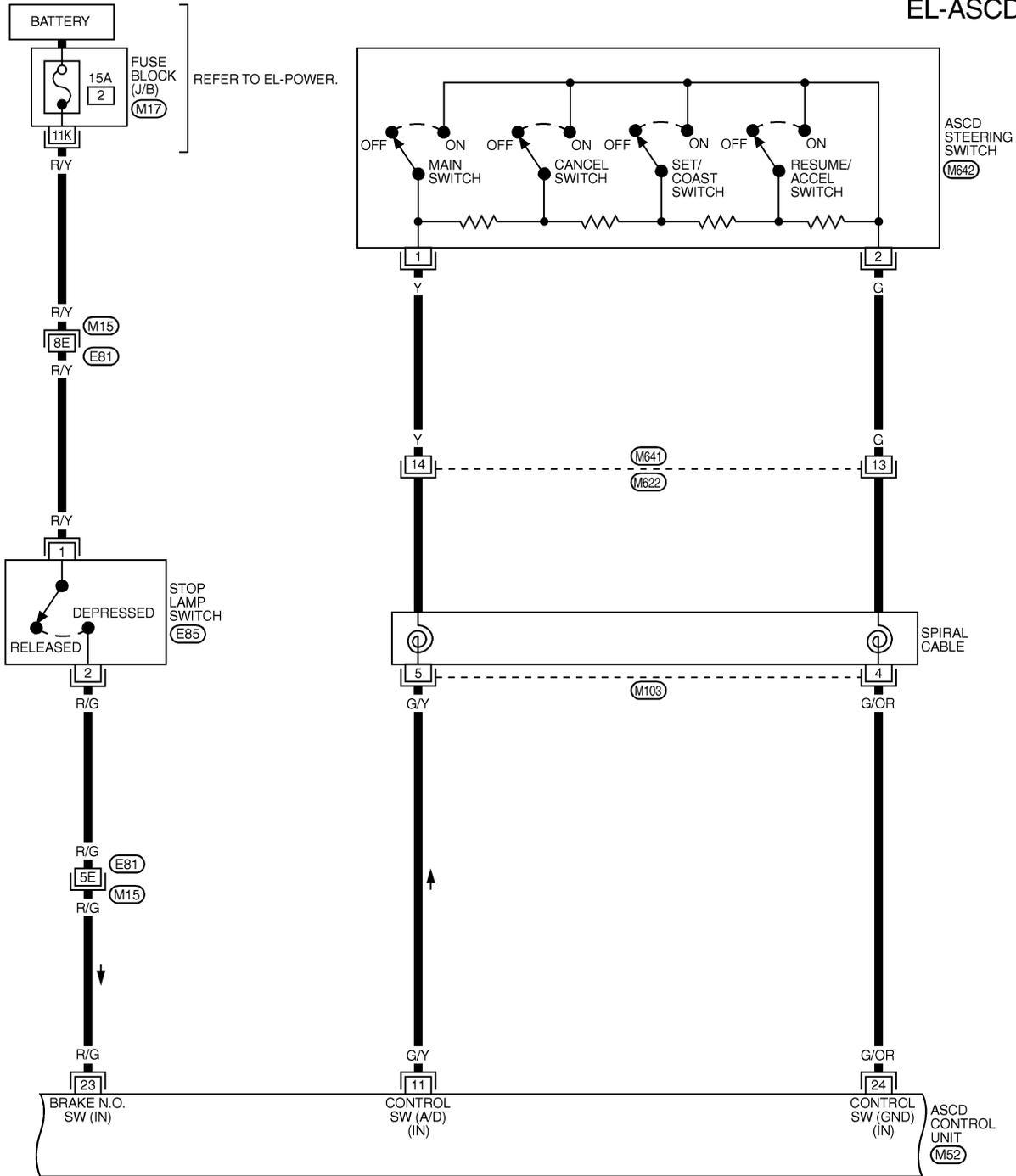
AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD — (Cont'd)

NFEL0097S02

FIG. 2

EL-ASCD-02



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

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

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

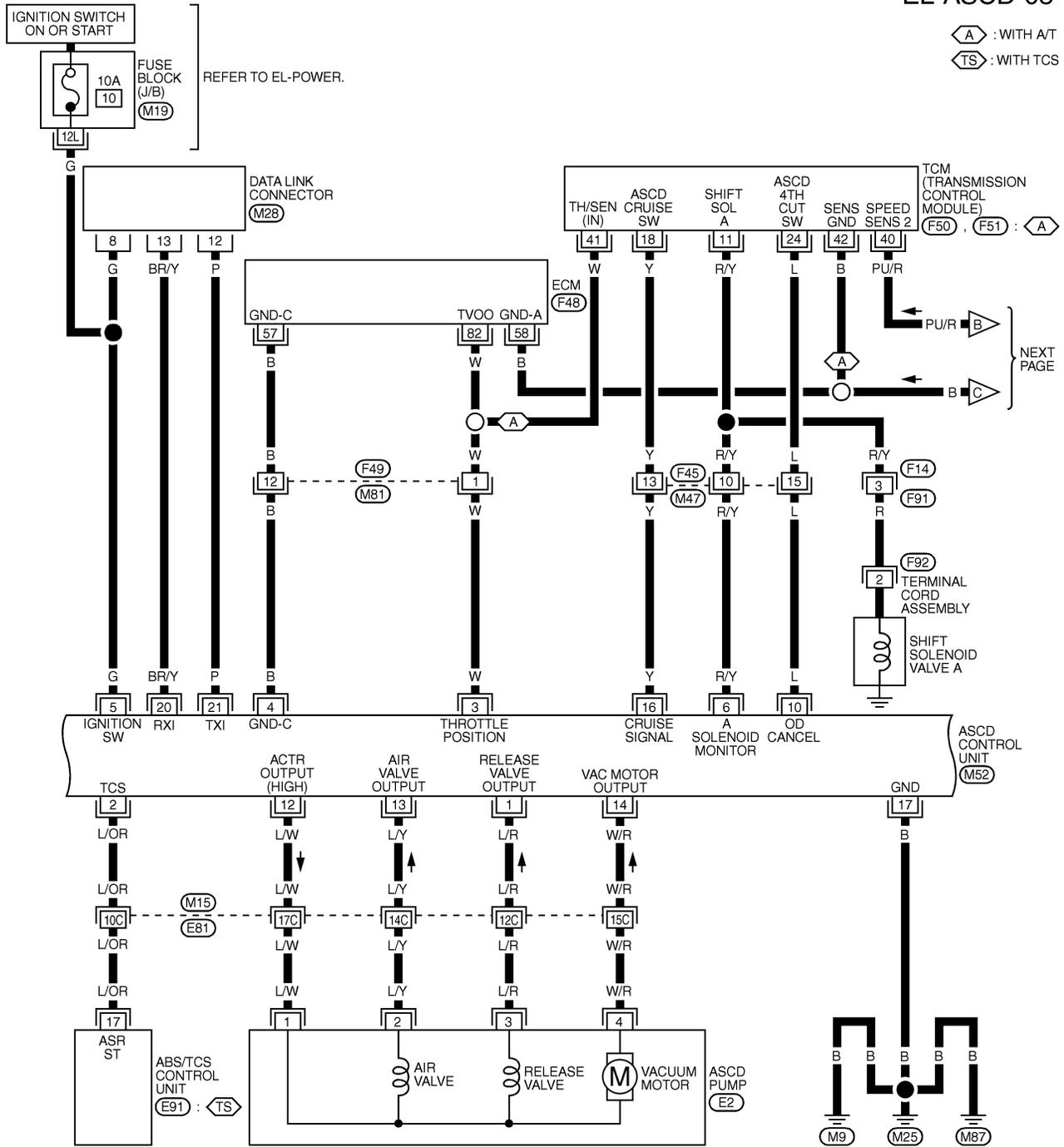
Wiring Diagram — ASCD — (Cont'd)

FIG. 3

NFEL0097S03

EL-ASCD-03

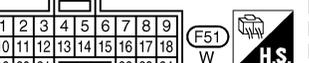
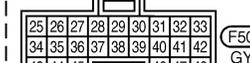
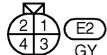
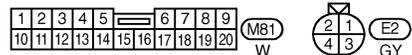
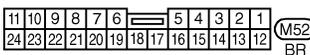
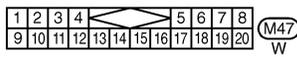
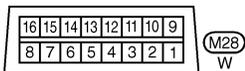
(A) : WITH AT
(TS) : WITH TCS



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

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

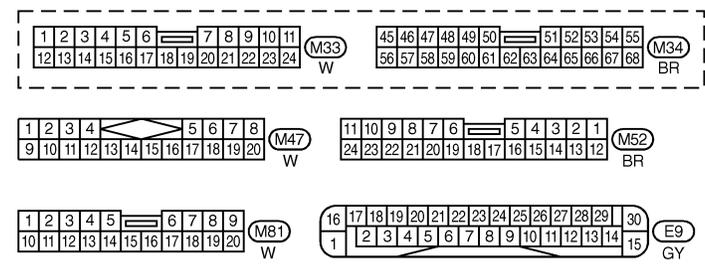
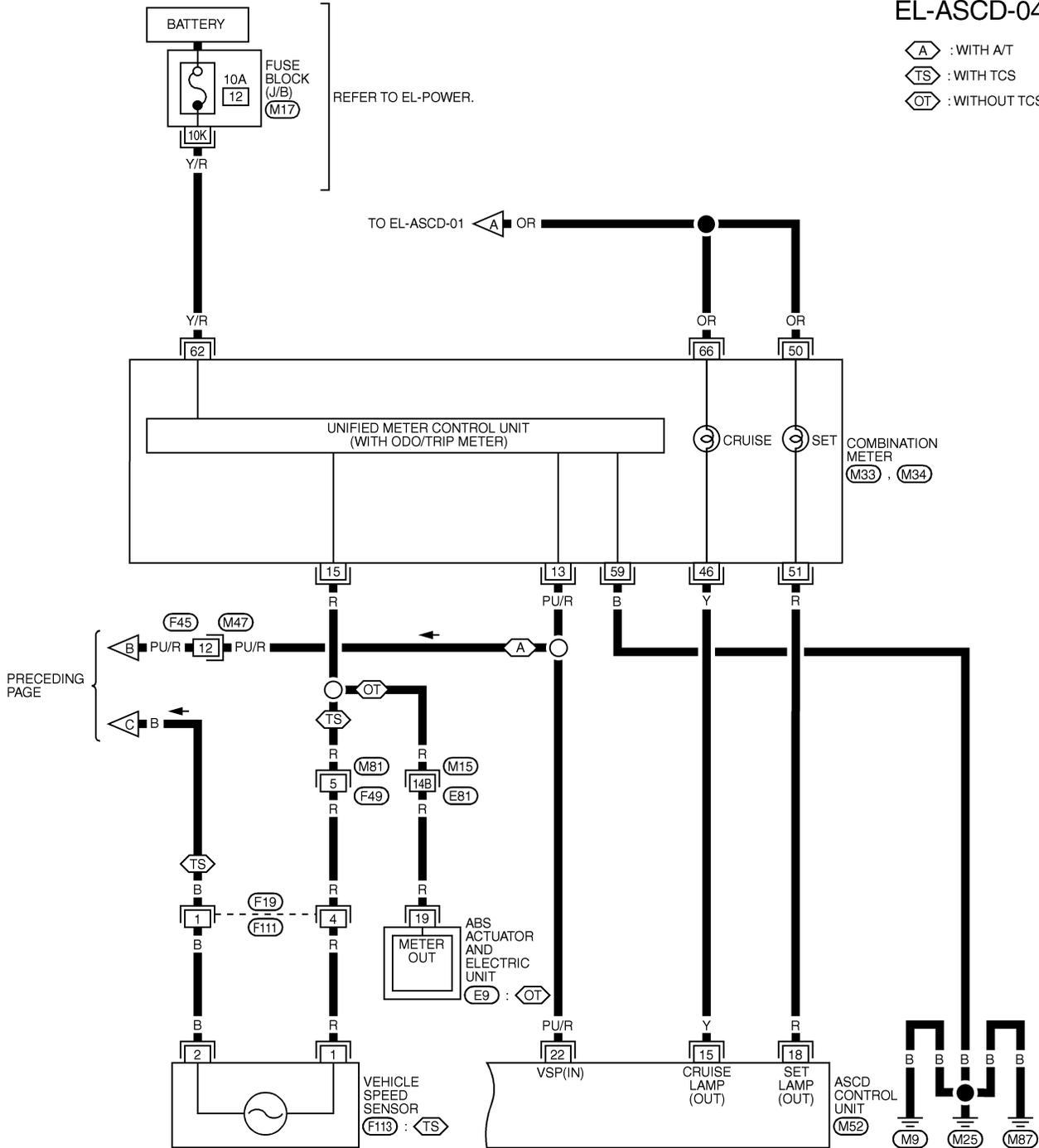
Wiring Diagram — ASCD — (Cont'd)

FIG. 4

NFEL0097S04

EL-ASCD-04

- : WITH A/T
- : WITH TCS
- : WITHOUT TCS

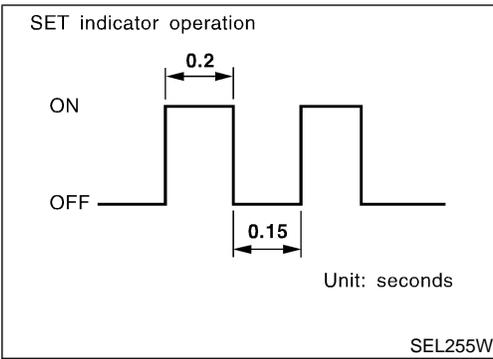


REFER TO THE FOLLOWING.
 -SUPER-MULTIPLE JUNCTION (SMJ)
 -FUSE BLOCK-JUNCTION BOX (J/B)

MEL062N

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Fail-safe System



Fail-safe System

NFEL0228

DESCRIPTION

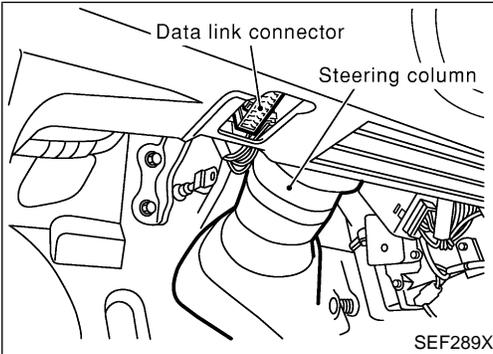
NFEL0228S01

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

MALFUNCTION DETECTION CONDITIONS

NFEL0228S02

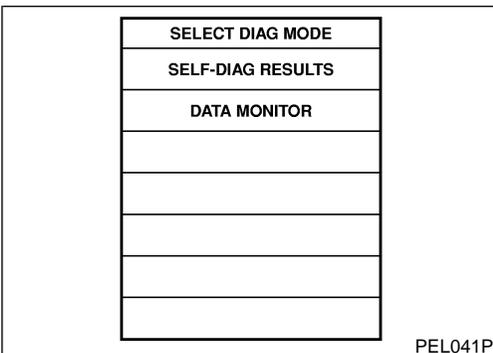
Detection conditions	ASCD operation during malfunction detection
<ul style="list-style-type: none"> ASCD steering (RESUME/ACCEL, CANCEL, SET/COAST) switch is stuck. Vacuum motor ground circuit or power circuit is open or shorted. Air valve ground circuit or power circuit is open or shorted. Release valve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



CONSULT-II Inspection Procedure

NFEL0229

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



- Turn ignition switch ON.
- Turn ASCD main switch ON.
- Touch START (on CONSULT-II display).
- Touch ASCD.
- Touch SELF-DIAG RESULTS.

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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-212).

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-213).

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"> Even if no malfunction is indicated, further testing may be required as far as the customer complains. 	—
POWER SUPPLY-VALVE	<ul style="list-style-type: none"> The power supply circuit for the ASCD pump is open. (An abnormally high voltage is entered.) 	ASCD PUMP CIRCUIT CHECK (EL-222)
VACUUM PUMP	<ul style="list-style-type: none"> The vacuum motor circuit is open or shorted. (An abnormally high or low voltage is entered.) 	ASCD PUMP CIRCUIT CHECK (EL-222)
AIR VALVE	<ul style="list-style-type: none"> The air valve circuit is open or shorted. (An abnormally high or low voltage is entered.) 	ASCD PUMP CIRCUIT CHECK (EL-222)
RELEASE VALVE	<ul style="list-style-type: none"> The release valve circuit is open or shorted. (An abnormally high or low voltage is entered.) 	ASCD PUMP CIRCUIT CHECK (EL-222)
VHCL SP-S/FAILSAFE	<ul style="list-style-type: none"> The vehicle speed sensor is malfunctioning. 	VEHICLE SPEED SENSOR CHECK (EL-221)
CONTROL UNIT	<ul style="list-style-type: none"> The ASCD control unit is malfunctioning. 	Replace ASCD control unit.
BRAKE SW/STOP/L SW	<ul style="list-style-type: none"> The brake switch or stop lamp switch circuit is malfunctioning. 	ASCD BRAKE/STOP LAMP SWITCH CHECK (EL-217)

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"> The steering switch (set/coast switch, resume/accel switch or cancel switch) is malfunctioning. 	ASCD STEERING SWITCH CHECK (EL-219)

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CONSULT-II Data Monitor

NFEL0231

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

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses

Trouble Diagnoses SYMPTOM CHART

NFEL0232

NFEL0232S01

PROCEDURE	Diagnostic procedure						
REFERENCE PAGE (EL-)	215	216	217	219	221	222	224
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-215) to verify repairs.

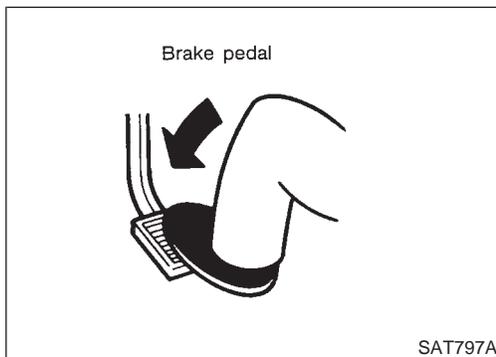
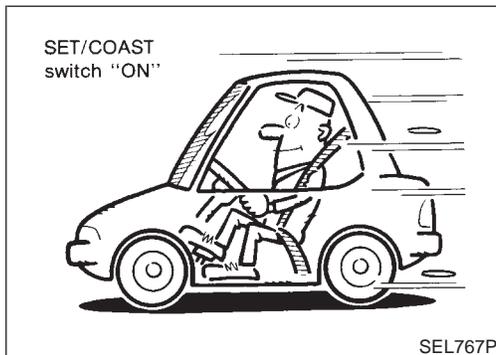
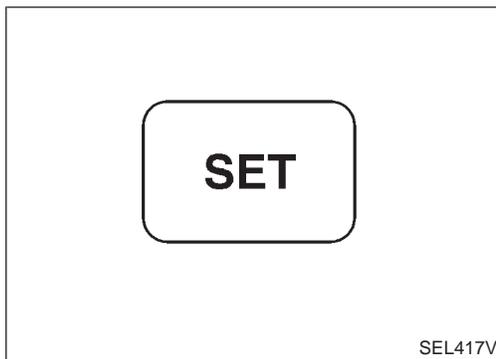
★2: If vehicle speed is greater than 40 km/h (25 MPH) after system has been released, pressing RESUME/ACCEL switch returns vehicle speed to the set speed previously achieved. However, doing so when the ASCD main switch is turned to "OFF", vehicle speed will not return to the set speed since the memory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

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

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

=NFEL0232S02



FAIL-SAFE SYSTEM CHECK

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

If the indicator lamp blinks, check the following.

- ASCD steering switch. Refer to EL-219.

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

If the indicator lamp blinks, check the following.

- Vehicle speed sensor. Refer to EL-221.
- ASCD pump circuit. Refer to EL-222.
- Replace control unit.

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

If the indicator lamp blinks, check the following.

- ASCD brake/stop lamp switch. Refer to EL-217.

5. END. (System is OK.)

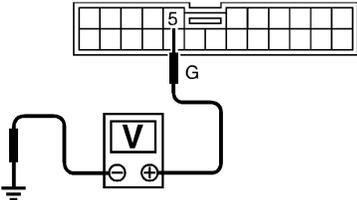
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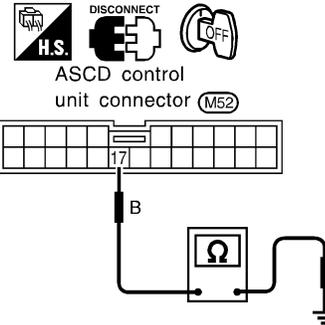
AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0232S03

1	CHECK POWER SUPPLY CIRCUIT FOR ASCD CONTROL UNIT	
<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> 		
		
Does battery voltage exist?		
SEL256W		
Yes or No		
Yes	▶	GO TO 2.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse (No. 10 located in the fuse block) ● Harness for open or short

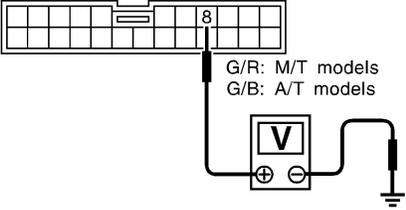
2	CHECK GROUND CIRCUIT FOR ASCD CONTROL UNIT	
Check continuity between ASCD control unit harness connector terminal 17 and body ground.		
<p>ASCD control unit connector (M52)</p> 		
Does continuity exist?		
SEL257W		
Yes or No		
Yes	▶	Power supply and ground circuit is OK.
No	▶	Repair harness.

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

ASCD BRAKE/STOP LAMP SWITCH CHECK

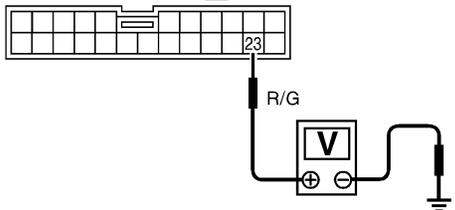
=NFEL0232S06

1	CHECK ASCD BRAKE SWITCH CIRCUIT							
<p> With CONSULT-II See "BRAKE SW" in "DATA MONITOR" mode.</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>BRAKE SW</td> <td>OFF</td> </tr> </tbody> </table> <p>A/T models When brake pedal is depressed or A/T selector lever is in "N" or "P" range: BRAKE SW OFF When brake pedal is released and A/T selector lever is not in "N" or "P" range: BRAKE SW ON</p> <p>M/T models When clutch pedal or brake pedal is depressed: BRAKE SW OFF When clutch pedal and brake pedal are released: BRAKE SW ON</p> <p style="text-align: right;">SEL286W</p>	DATA MONITOR		MONITOR		BRAKE SW	OFF
DATA MONITOR								
MONITOR								
BRAKE SW	OFF							
<p> Without CONSULT-II</p> <ol style="list-style-type: none"> Disconnect ASCD control unit harness connector. Turn ignition switch ON. Check voltage between ASCD control unit harness connector terminal 8 and ground. 		<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;">  <p>DISCONNECT H.S.</p> </div> <div style="margin-right: 20px;">  <p>ON</p> </div> </div> <p>ASCSD control unit connector (M52)</p>  <p>G/R: M/T models G/B: A/T models</p> <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): Apporox. 0V 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): Battery voltage should exist.</p> <p style="text-align: right;">SEL258W</p>						
OK or NG								
OK	▶	GO TO 2.						
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ASCSD brake switch Refer to "Electrical Component Inspection" (EL-226). Park/neutral position switch (A/T models) Refer to "Electrical Component Inspection" (EL-226). Park/neutral position relay (A/T models) ASCSD clutch switch (M/T models) Refer to "Electrical Component Inspection" (EL-226). Harness for open or short 						

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

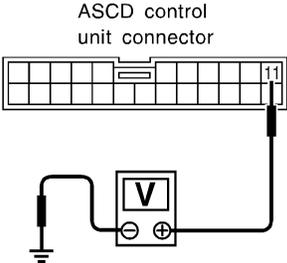
2	CHECK STOP LAMP SWITCH CIRCUIT						
<p> With CONSULT-II See "STOP LAMP" in "DATA MONITOR" mode.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table style="width: 100%; border-collapse: 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: STOP LAMP SW OFF</p> <p>When brake pedal is depressed: STOP LAMP SW ON</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> Without CONSULT-II</p> <ol style="list-style-type: none"> 1. Disconnect ASCD control unit harness connector. 2. Check voltage between ASCD control unit harness connector terminal 23 and ground. <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="margin-bottom: 10px;">  <p style="font-size: x-small;">ASCDC control unit connector (M52)</p> </div> <div style="margin-left: 20px;"> <p>Voltage [V]:</p> <p>Stop lamp switch: Depressed Approx. 12</p> <p>Stop lamp switch: Released 0</p> </div> </div> <div style="text-align: center; margin-top: 10px;">  </div> <p style="font-size: x-small;">Refer to wiring diagram in EL-208.</p> <p style="text-align: center; font-weight: bold; margin-top: 10px;">OK or NG</p> <p style="text-align: right; font-size: small;">SEL259W</p>							
OK	▶ ASCD brake/stop lamp switch is OK.						
NG	▶ Check the following. <ul style="list-style-type: none"> ● 15A fuse [No. 2, located in the fuse block (J/B)] ● Harness for open or short between ASCD control unit and stop lamp switch ● Harness for open or short between fuse and stop lamp switch ● Stop lamp switch <p style="font-size: x-small;">Refer to "Electrical Component Inspection" (EL-226).</p>						

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

ASCD STEERING SWITCH CHECK

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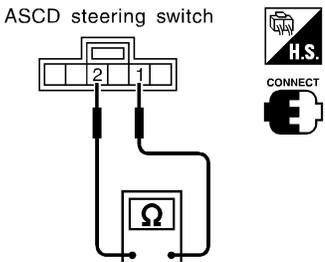
1	CHECK ASCD STEERING SWITCH CIRCUIT FOR ASCD CONTROL UNIT																								
<p> With CONSULT-II See "MAIN SW", "RESUME/ACC SW", "SET SW" and "CANCEL SW" in "DATA MONITOR" mode.</p>																									
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>MAIN SW</td> <td>OFF</td> </tr> <tr> <td>SET SW</td> <td>OFF</td> </tr> <tr> <td>RESUME/ACC SW</td> <td>OFF</td> </tr> <tr> <td>CANCEL SW</td> <td>OFF</td> </tr> </tbody> </table>			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>MAIN SW, RESUME/ACC SW, SET SW and CANCEL SW When switch is pressed: ON When switch is released: OFF</p>																									
SEL288W																									
<p> Without CONSULT-II Check voltage between ASCD control unit harness connector M52 terminal 11 (G/Y) and ground.</p>																									
<div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center;"> <p>ASCD control unit connector</p>  </div> <div style="margin-left: 20px;">  </div> </div>																									
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th>Switch</th> <th>Condition</th> <th>Voltage [V]</th> </tr> </thead> <tbody> <tr> <td rowspan="2">MAIN SW</td> <td>Pressed</td> <td>0</td> </tr> <tr> <td>Released</td> <td>Approx. 4.0</td> </tr> <tr> <td rowspan="2">SET SW</td> <td>Pressed</td> <td>Approx. 2.0</td> </tr> <tr> <td>Released</td> <td>Approx. 4.0</td> </tr> <tr> <td rowspan="2">RESUME/ACC SW</td> <td>Pressed</td> <td>Approx. 3.0</td> </tr> <tr> <td>Released</td> <td>Approx. 4.0</td> </tr> <tr> <td rowspan="2">CANCEL SW</td> <td>Pressed</td> <td>Approx. 1.0</td> </tr> <tr> <td>Released</td> <td>Approx. 4.0</td> </tr> </tbody> </table>			Switch	Condition	Voltage [V]	MAIN SW	Pressed	0	Released	Approx. 4.0	SET SW	Pressed	Approx. 2.0	Released	Approx. 4.0	RESUME/ACC SW	Pressed	Approx. 3.0	Released	Approx. 4.0	CANCEL SW	Pressed	Approx. 1.0	Released	Approx. 4.0
Switch	Condition	Voltage [V]																							
MAIN SW	Pressed	0																							
	Released	Approx. 4.0																							
SET SW	Pressed	Approx. 2.0																							
	Released	Approx. 4.0																							
RESUME/ACC SW	Pressed	Approx. 3.0																							
	Released	Approx. 4.0																							
CANCEL SW	Pressed	Approx. 1.0																							
	Released	Approx. 4.0																							
SEL005Y																									
Refer to wiring diagram in EL-208.																									
OK or NG																									
OK	▶	ASCD steering switch is OK.																							
NG	▶	GO TO 2.																							

2	CHECK POWER SUPPLY FOR ASCD STEERING SWITCH	
Does horn work?		
Yes	▶	GO TO 3.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse (No. 10, located in the relay box) ● Harness for open or short

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

3	CHECK ASCD STEERING SWITCH																								
<p>1. Disconnect ASCD steering switch. 2. Check continuity between M642 terminals 1 and 2 by pushing each switch.</p>																									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Switch</th> <th style="width: 30%;">Condition</th> <th style="width: 40%;">Resistance [Ω]</th> </tr> </thead> <tbody> <tr> <td rowspan="2">MAIN SW</td> <td>Pressed</td> <td>Approx. 0.3</td> </tr> <tr> <td>Released</td> <td>Approx. 4,000</td> </tr> <tr> <td rowspan="2">SET SW</td> <td>Pressed</td> <td>Approx. 661</td> </tr> <tr> <td>Released</td> <td>Approx. 4,000</td> </tr> <tr> <td rowspan="2">RESUME/ ACC SW</td> <td>Pressed</td> <td>Approx. 1,486</td> </tr> <tr> <td>Released</td> <td>Approx. 4,000</td> </tr> <tr> <td rowspan="2">CANCEL SW</td> <td>Pressed</td> <td>Approx. 249</td> </tr> <tr> <td>Released</td> <td>Approx. 4,000</td> </tr> </tbody> </table>	Switch	Condition	Resistance [Ω]	MAIN SW	Pressed	Approx. 0.3	Released	Approx. 4,000	SET SW	Pressed	Approx. 661	Released	Approx. 4,000	RESUME/ ACC SW	Pressed	Approx. 1,486	Released	Approx. 4,000	CANCEL SW	Pressed	Approx. 249	Released	Approx. 4,000	SEL196Y
Switch	Condition	Resistance [Ω]																							
MAIN SW	Pressed	Approx. 0.3																							
	Released	Approx. 4,000																							
SET SW	Pressed	Approx. 661																							
	Released	Approx. 4,000																							
RESUME/ ACC SW	Pressed	Approx. 1,486																							
	Released	Approx. 4,000																							
CANCEL SW	Pressed	Approx. 249																							
	Released	Approx. 4,000																							
OK or NG																									
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

1	CHECK SPEEDOMETER OPERATION	
Does speedometer operate normally?		
Yes	▶	GO TO 2.
No	▶	Check speedometer and vehicle speed sensor circuit. Refer to EL-121.

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2 CHECK VEHICLE SPEED INPUT

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With CONSULT-II

See "VHCL SPEED SE" in "DATA MONITOR" mode while driving.

NOTE:

- 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.
- Always drive vehicle in safe speed and manner according to traffic conditions and obey all traffic laws.



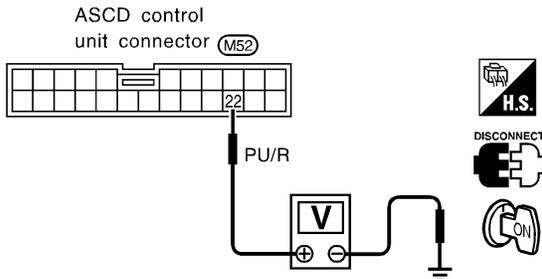
DATA MONITOR	
MONITOR	
VHCL SPEED SE	0 km/h

Is actual vehicle speed indicated?

SEL289W

Without CONSULT-II

1. Apply wheel chocks and jack up drive wheel.
2. Disconnect ASCD control unit harness connector.
3. Check voltage between control unit terminal 22 and ground with turning drive wheel slowly by hand.



Does voltage pointer deflect?

SEL263W

Refer to wiring diagram in EL-210.

Yes or No

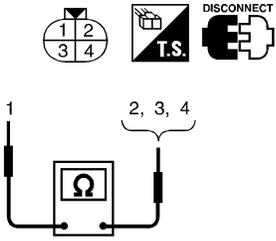
Yes	▶	Vehicle speed sensor is OK.
No	▶	Check harness for open or short between ASCD control unit terminal 22 and combination meter terminal 13.

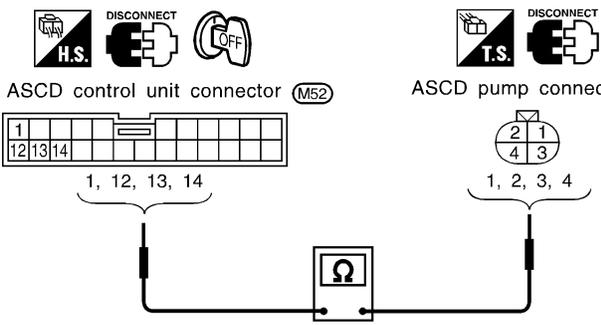
AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

ASCD PUMP CIRCUIT CHECK

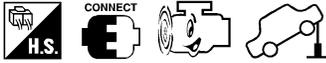
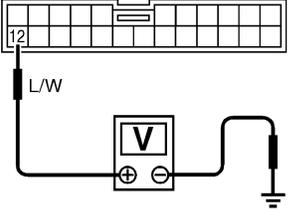
NFEL0232S09

1	CHECK ASCD PUMP												
<p>1. Disconnect ASCD pump connector.</p> <p>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;">  <table border="1" style="border-collapse: collapse;"> <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="text-align: center; vertical-align: middle;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">Approx. 65</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">Approx. 65</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Approx. 3</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL262W</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											
Refer to wiring diagram in EL-209.													
OK or NG													
OK	▶	GO TO 2.											
NG	▶	Replace ASCD pump.											

2	CHECK ASCD PUMP CIRCUIT																			
<p>1. Disconnect ASCD control unit harness connector.</p> <p>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;">  <table border="1" style="border-collapse: collapse;"> <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 style="text-align: center;">12</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Air valve</td> <td style="text-align: center;">13</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Release valve</td> <td style="text-align: center;">1</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Vacuum motor</td> <td style="text-align: center;">14</td> <td style="text-align: center;">4</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL269W</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																		
Continuity should exist.																				
OK or NG																				
OK	▶	GO TO 3.																		
NG	▶	Repair harness.																		

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

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

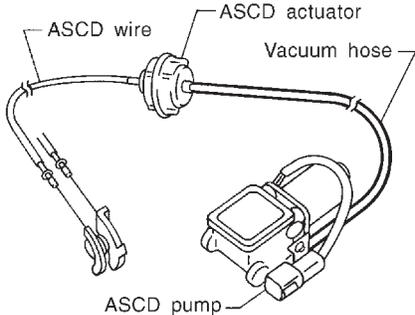
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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

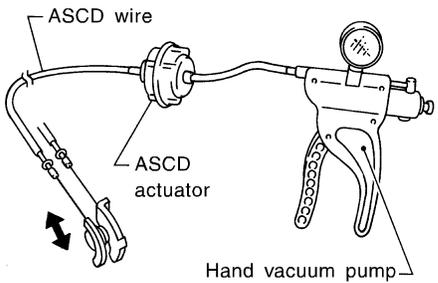
Trouble Diagnoses (Cont'd)

ASCD ACTUATOR/PUMP CHECK

=NFEL0232S10

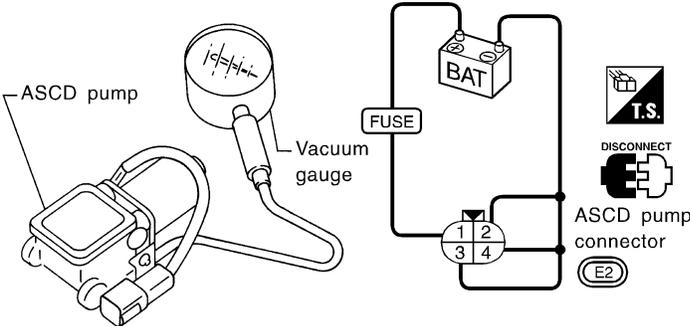
1	CHECK VACUUM HOSE	
<p>Check vacuum hose (between ASCD actuator and ASCD pump) for breakage, cracks or fracture.</p> <div style="text-align: center;">  <p>Labels in diagram: ASCD wire, ASCD actuator, Vacuum hose, ASCD pump.</p> </div> <p style="text-align: right;">MEL402G</p>		
OK or NG		
OK	▶	GO TO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

2	CHECK ASCD WIRE	
<p>Check wire for improper installation, rust formation or breaks.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 3.
NG	▶	Repair or replace wire. Refer to "ASCD Wire Adjustment" (EL-227).

3	CHECK ASCD ACTUATOR	
<p>1. Disconnect vacuum hose from ASCD actuator. 2. Connect the hose of hand vacuum pump to ASCD actuator.</p> <div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p>Labels in diagram: ASCD wire, ASCD actuator, Hand vacuum pump.</p> </div> <div style="flex: 2; padding-left: 20px;"> <p>Apply -40 kPa (-0.41 kg/cm², -5.8 psi) vacuum to ASCD actuator with hand vacuum pump. ASCD wire should move to pull throttle drum. Wait 10 seconds and check for decrease in vacuum pressure.</p> <p>Vacuum pressure decrease: Less than 2.7 kPa (0.028 kg/cm², 0.39 psi)</p> </div> </div> <p style="text-align: right;">SEL264W</p>		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Replace ASCD actuator.

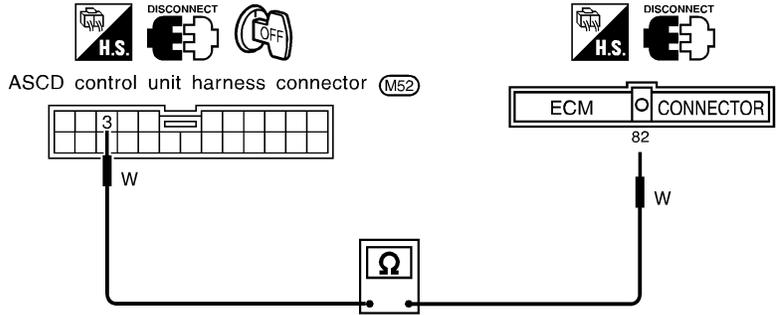
AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

4	CHECK ASCD PUMP	<ol style="list-style-type: none"> 1. Disconnect vacuum hose from ASCD pump and ASCD pump connector. 2. If necessary remove ASCD pump. 3. Connect vacuum gauge to ASCD pump. 4. Apply 12V direct current to ASCD pump and check operation. 																
		<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <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" style="text-align: center; vertical-align: middle;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">Close</td> </tr> <tr> <td>Release valve</td> <td style="text-align: center;">3</td> <td style="text-align: center;">Close</td> </tr> <tr> <td>Vacuum motor</td> <td style="text-align: center;">4</td> <td style="text-align: center;">Operate</td> </tr> </tbody> </table> <p>A vacuum pressure of at least -40 kPa (-0.41 kg/cm², -5.8 psi) should be generated.</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															
SEL265W																		
OK or NG																		
OK	▶	INSPECTION END																
NG	▶	Replace ASCD pump.																

THROTTLE POSITION SENSOR SIGNAL CHECK

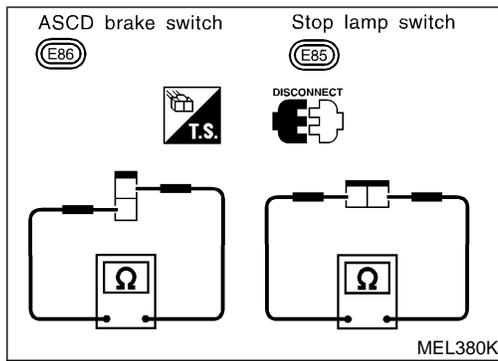
NFEL0232S11

1	CHECK THROTTLE POSITION SENSOR SIGNAL CIRCUIT	<ol style="list-style-type: none"> 1. Disconnect ECM harness connector and ASCD control unit harness connector. 2. Check continuity between ECM terminal 82 and ASCD control unit terminal 3.
		<p>Continuity should exist.</p>
SEL268W		
OK or NG		
OK	▶	Refer to "TROUBLE DIAGNOSIS FOR INTERMITTENT INCIDENT" in EC section. (EC-147)
NG	▶	Repair harness.

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Electrical Component Inspection



Electrical Component Inspection

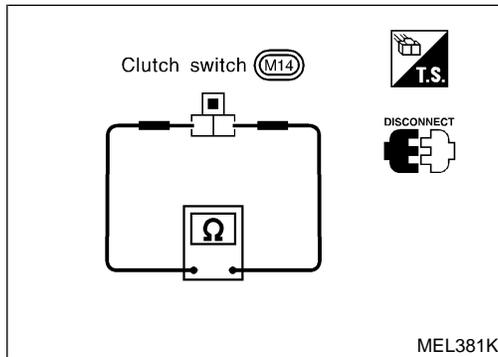
ASCD BRAKE SWITCH AND STOP LAMP SWITCH

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NFEL0100S02

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

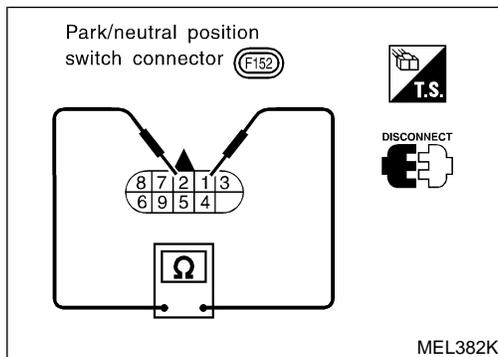
Check each switch after adjusting brake pedal — refer to BR section.



ASCD CLUTCH SWITCH (FOR M/T MODELS)

NFEL0100S04

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



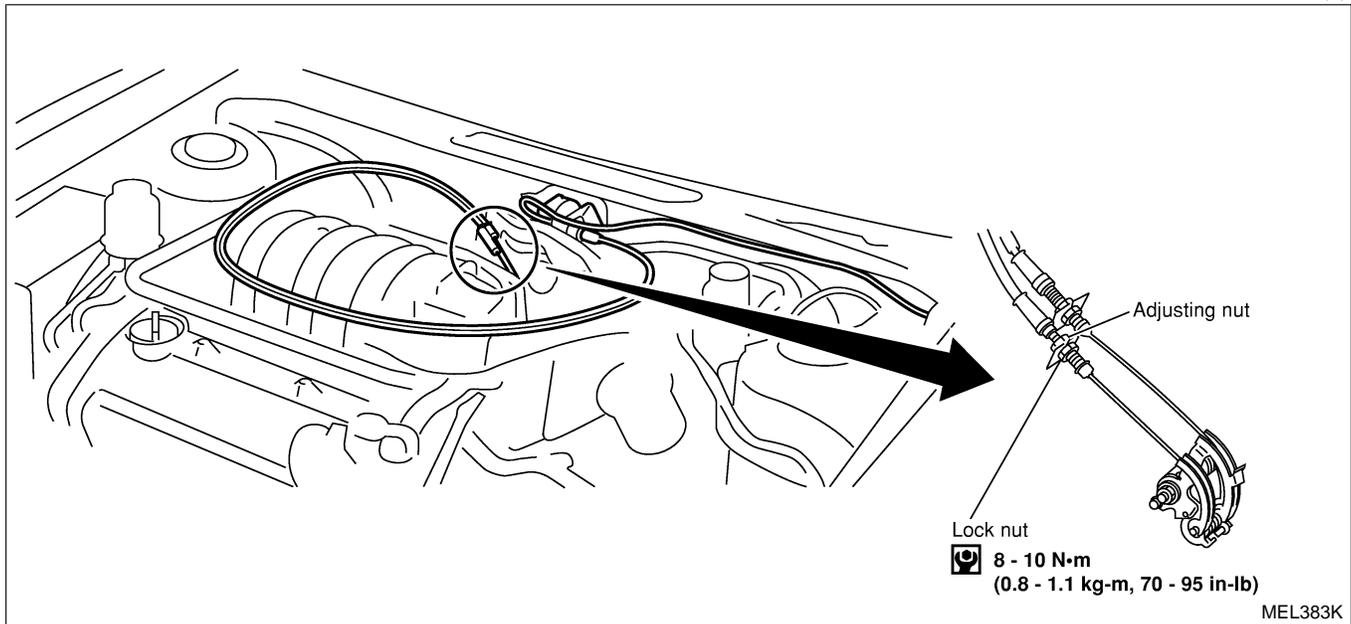
PARK/NEUTRAL POSITION SWITCH (FOR A/T MODELS)

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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POWER WINDOW

System Description

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 and
- to front power window main switch terminal 5.

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
- to smart entrance control unit terminal 27.

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

Front Door LH

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

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).

NFEL0191S01

NFEL0191S0101

NFEL0191S0102

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.

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.

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.

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 46.

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.

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).

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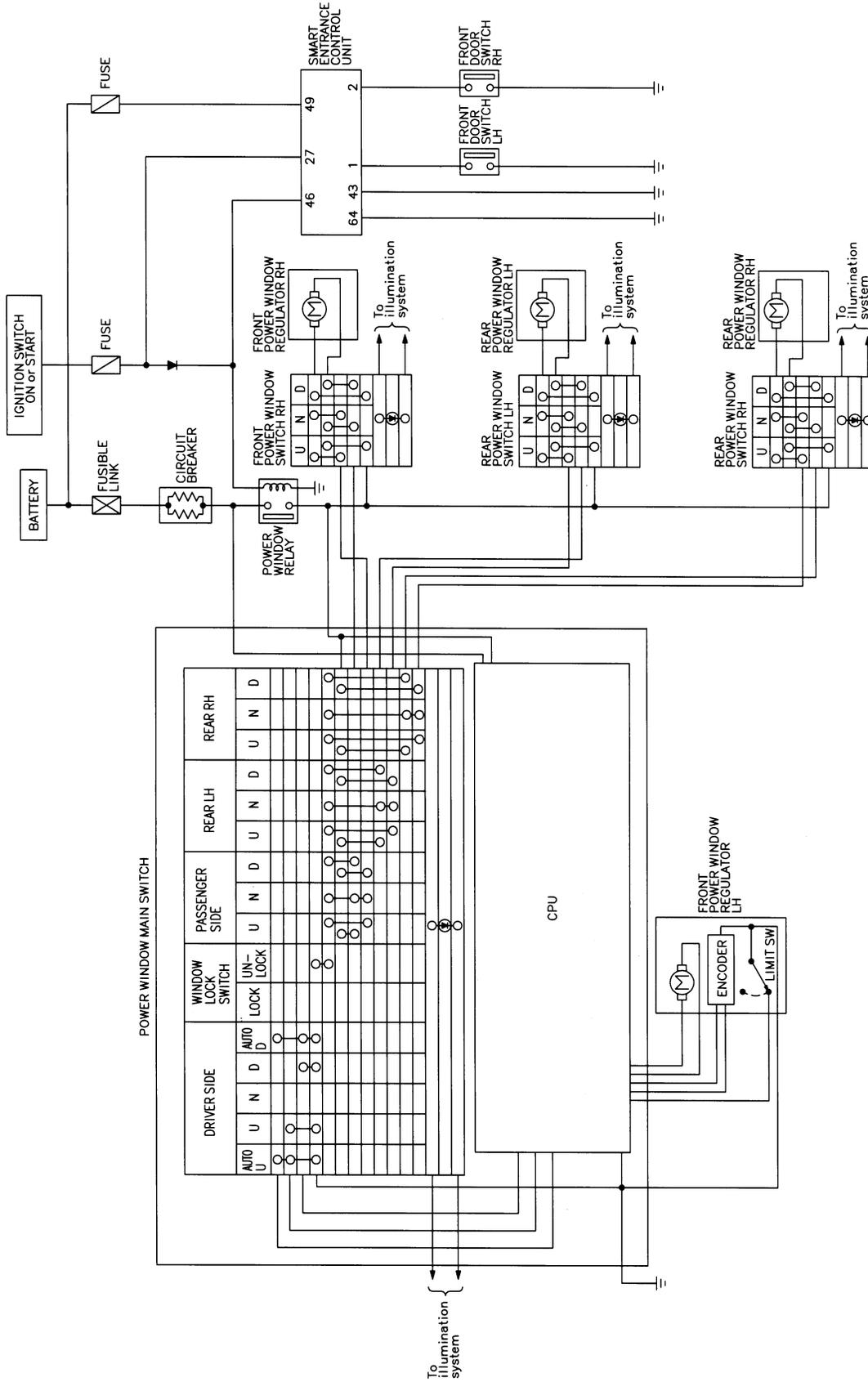
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POWER WINDOW

Schematic

NFEL0103

Schematic

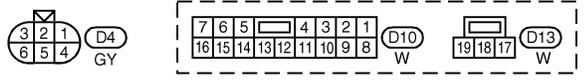
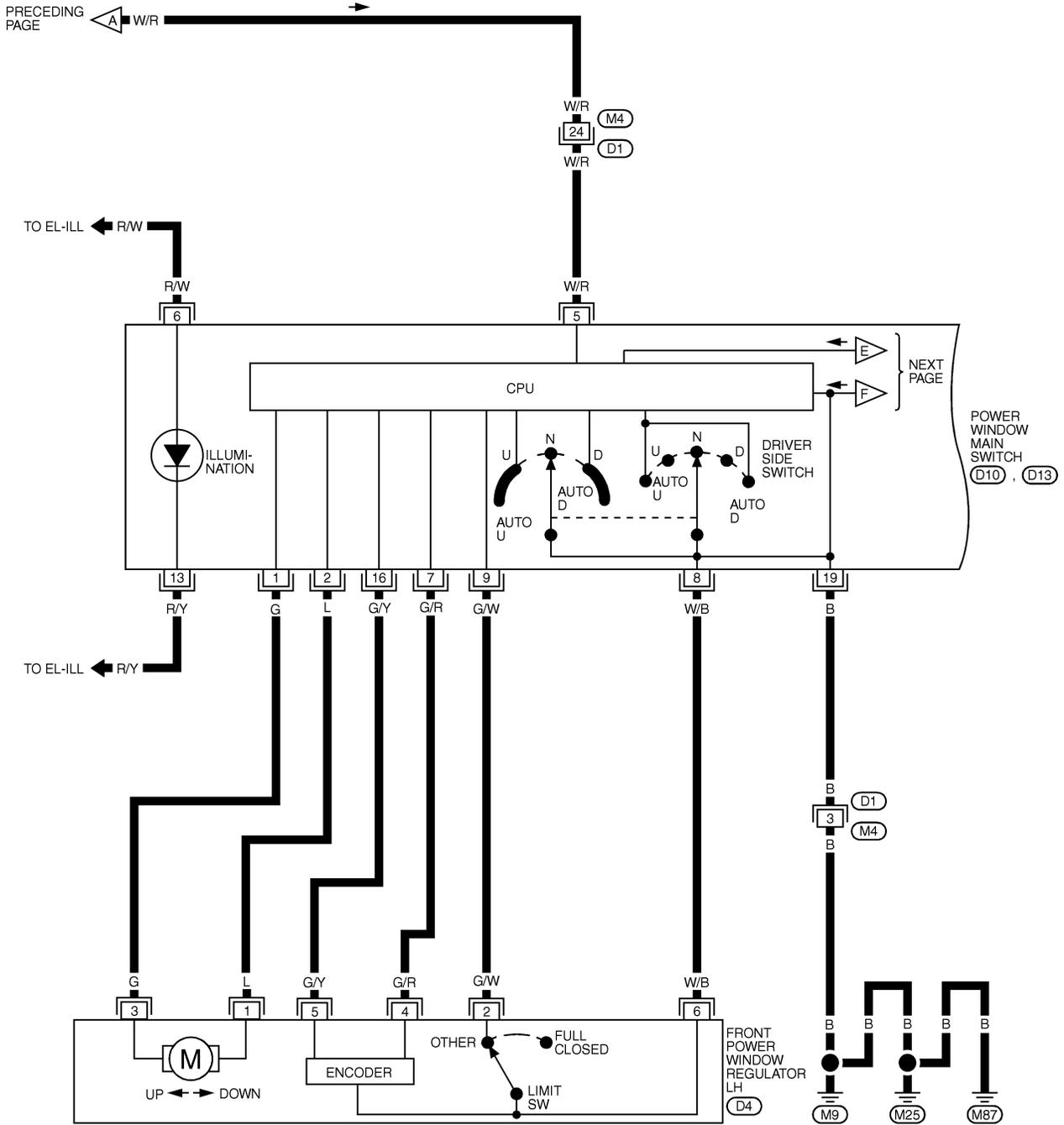


MEL063N

POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-02



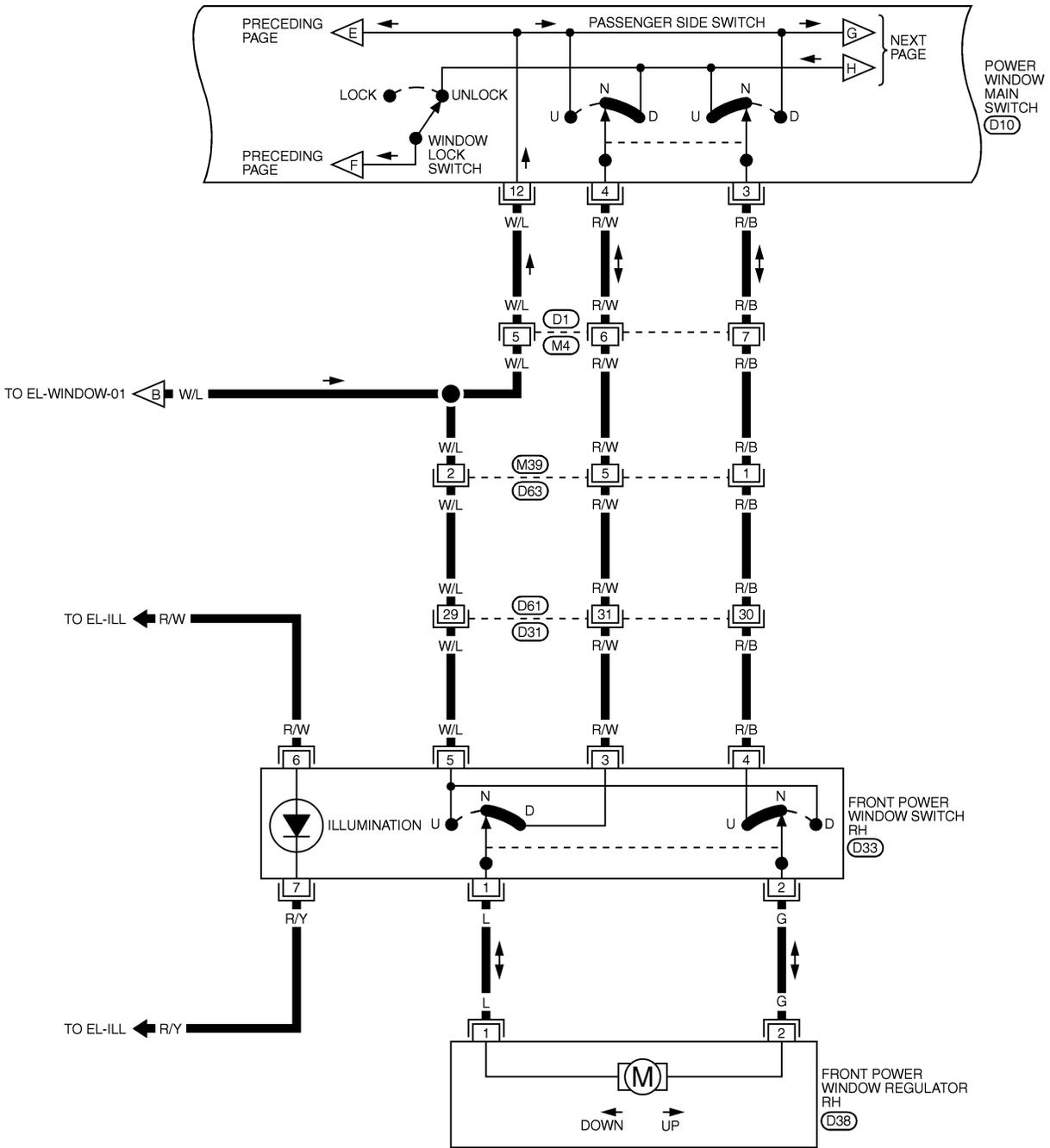
REFER TO THE FOLLOWING.
 (D1) -SUPER
 MULTIPLE JUNCTION (SMJ)

MEL065N

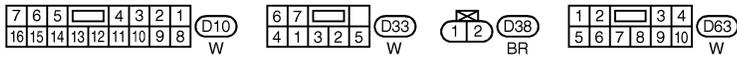
POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-03



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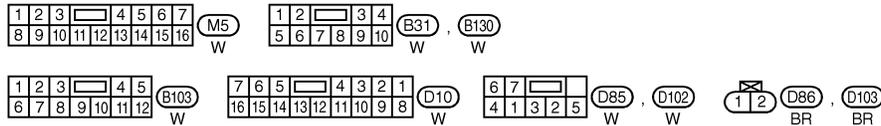
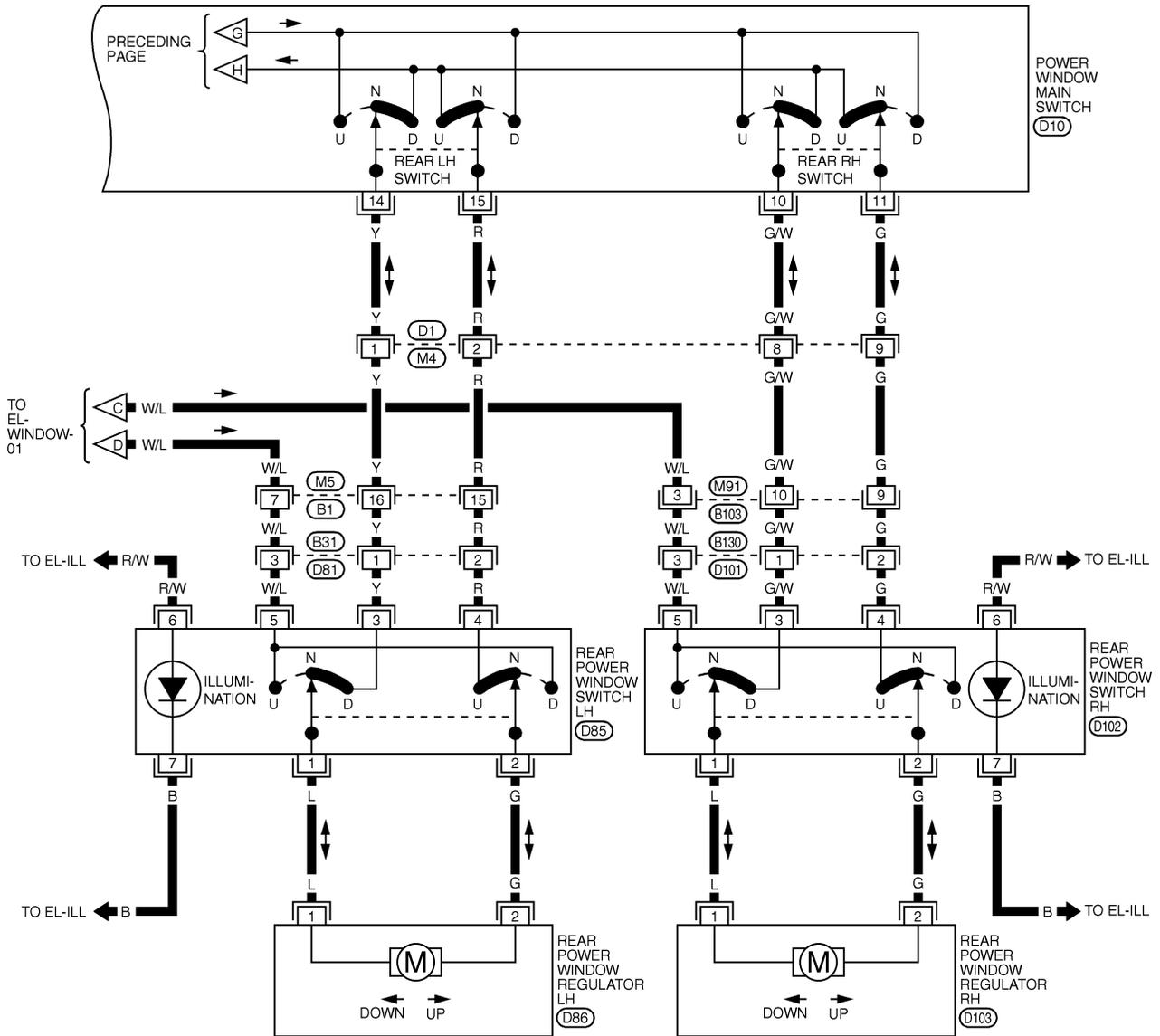
REFER TO THE FOLLOWING.
 (M4), (D1) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (D31), (D61) -SUPER
 MULTIPLE JUNCTION (SMJ)

MEL307K

POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-04



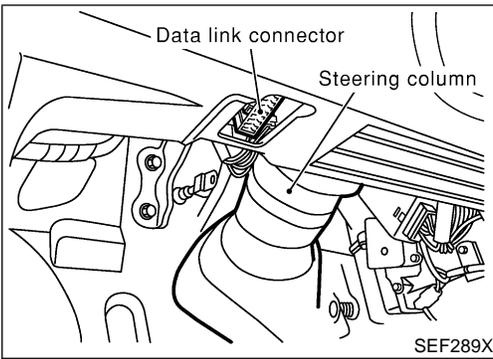
REFER TO THE FOLLOWING.
 (D1) - SUPER
 MULTIPLE JUNCTION (SMJ)

MEL305N

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
27	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN "ON" POSITION	12V
46	PU	POWER WINDOW RELAY	RETAINED POWER OPERATION IS OPERATED (ON → OFF)	12V → 0V
49	R/B	POWER SOURCE (FUSE)	-	12V
64	B	GROUND	-	-

SEL979X



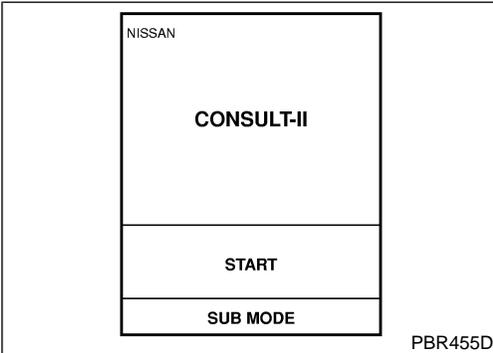
CONSULT-II Inspection Procedure

NFEL0235

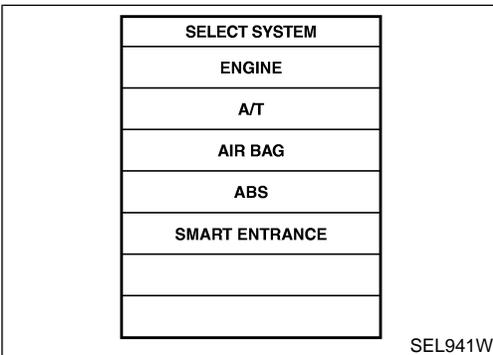
NFEL0235S01

“RETAINED PWR”

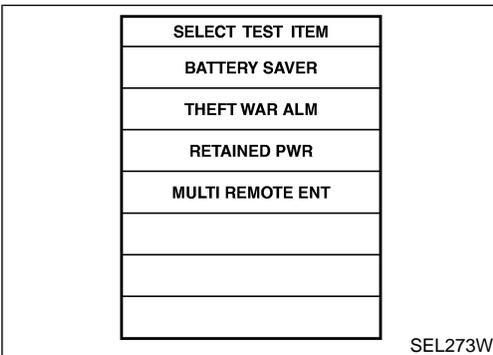
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



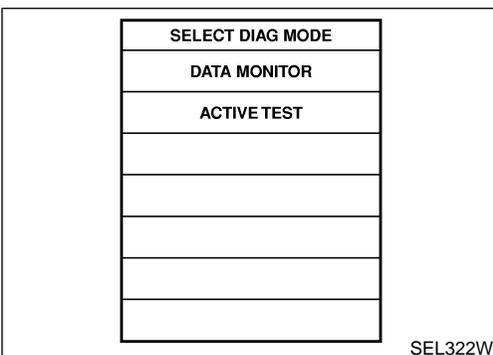
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “RETAINED PWR”.



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

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POWER WINDOW

CONSULT-II Application Items

CONSULT-II Application Items

NFEL0236

NFEL0236S01

NFEL0236S0101

“RETAINED PWR”

Data Monitor

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>NOTE: 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.</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"> 10A fuse, 40A fusible link E90 circuit breaker Power window relay E90 circuit breaker circuit Power window relay circuit Ground circuit Power window main switch 	<ol style="list-style-type: none"> Check 10A fuse [No. 10, located in fuse block (J/B)], 40A fusible link (letter I, located in fuse and fusible link box). Check E90 circuit breaker. Check power window relay. Check the following. <ol style="list-style-type: none"> Check harness between E90 circuit breaker and 40A fusible link (letter I, located in fuse and fusible link box). Check harness between E90 circuit breaker and power window main switch. Check the following. <ol style="list-style-type: none"> Check harness between E90 circuit breaker and power window relay. Check harness between fuse and power window relay. Check the following. <ol style="list-style-type: none"> Check ground circuit of power window main switch terminal 19. Check power window relay ground circuit. Check power window main switch.
Driver side power window cannot be operated but other windows can be operated.	<ol style="list-style-type: none"> Driver side power window regulator circuit Driver side power window regulator Power window main switch 	<ol style="list-style-type: none"> Check harness between power window main switch and driver side power window regulator for open or short circuit. Check driver side power window regulator. Check power window main switch.

POWER WINDOW

Trouble Diagnoses (Cont'd)

Symptom	Possible cause	Repair order	
One or more power windows except driver's side window cannot be operated.	<ol style="list-style-type: none"> 1. Power window switches 2. Power window regulators 3. Power window main switch 4. Power window circuit 	<ol style="list-style-type: none"> 1. Check power window switch. 2. Check power window regulator. 3. Check power window main switch. 4. Check the following. <ol style="list-style-type: none"> a. Check harness between the power window switch terminal 5 and power window relay. b. Check harnesses between power window main switch and power window switch for open/short circuit. c. Check harnesses between power window switch and power window regulator for open/short circuit. 	GI MA EM LC
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"> 1. Power window main switch 	<ol style="list-style-type: none"> 1. Check power window main switch. 	EC FE
Driver side power window automatic operation does not function properly.	<ol style="list-style-type: none"> 1. Power window main switch 2. Encoder and limit switch 	<ol style="list-style-type: none"> 1. Check power window main switch. 2. Check encoder and limit switch. (EL-238) 	CL
Retained power operation does not operate properly.	<ol style="list-style-type: none"> 1. RAP signal circuit 2. Driver or passenger side door switch circuit 3. Smart entrance control unit 	<ol style="list-style-type: none"> 1. Check RAP signal. <ol style="list-style-type: none"> a. (With CONSULT-II) Check RAP signal with CONSULT-II. Use "ACTIVE TEST" mode, "RETAINED PWR" in "SMART ENTRANCE". (Refer to EL-235.) If NG, go to the step b. below. 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"> ● Within 45 seconds after ignition switch turns off. ● When front door LH and RH is closed. 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. 3. Check smart entrance control unit. (EL-328) 	MT AT AX SU BR ST

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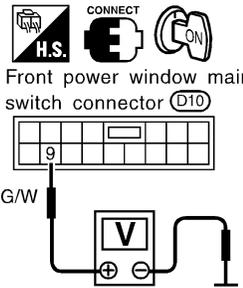
POWER WINDOW

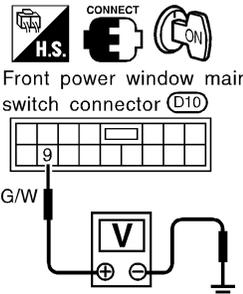
Trouble Diagnoses (Cont'd)

ENCODER AND LIMIT SWITCH CHECK

=NFEL0105S01

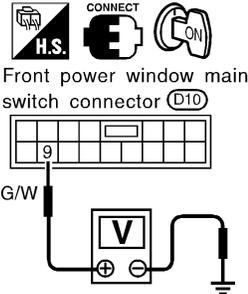
1	CHECK DOOR WINDOW SLIDE MECHANISM	
<p>Check the following.</p> <ul style="list-style-type: none"> ● Obstacles in window, glass molding, etc. ● Worn or deformed glass molding ● Door sash tilted too far inward or outward ● Door window regulator <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO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

2	CHECK POWER SUPPLY TO LIMIT SWITCH	
<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>Voltage: 5V</p> </div> </div> <p>NOTE: Check voltage when front power window regulator LH harness connector is disconnected.</p> <p style="text-align: right;">SEL378WA</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 3.
NG	▶	Replace power window main switch.

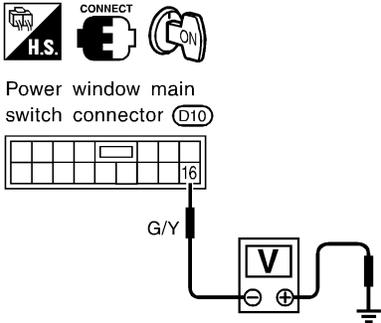
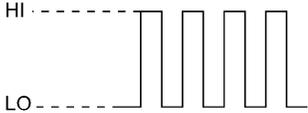
3	CHECK LIMIT SWITCH OPERATION										
<p>Check voltage between power window main switch terminal 9 and ground during power window closing operation.</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Terminal No.</th> <th style="text-align: center;">Condition</th> <th style="text-align: center;">Voltage (DCV)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">9</td> <td style="text-align: center;">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></td> <td style="text-align: center;">Other positions</td> <td style="text-align: center;">Approx. 0</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL379WA</p> <p style="text-align: center;">OK or NG</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.									

POWER WINDOW

Trouble Diagnoses (Cont'd)

4	RESET LIMIT SWITCH	<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> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Front power window main switch connector (D10)</p> </div> <div style="width: 45%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Terminal No.</th> <th style="width: 45%;">Condition</th> <th style="width: 40%;">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> </div> </div> <div style="text-align: right; margin-top: 10px;">SEL379WA</div>	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 or NG										
OK	▶	GO TO 5.								
NG	▶	Replace power window regulator motor (front driver side).								

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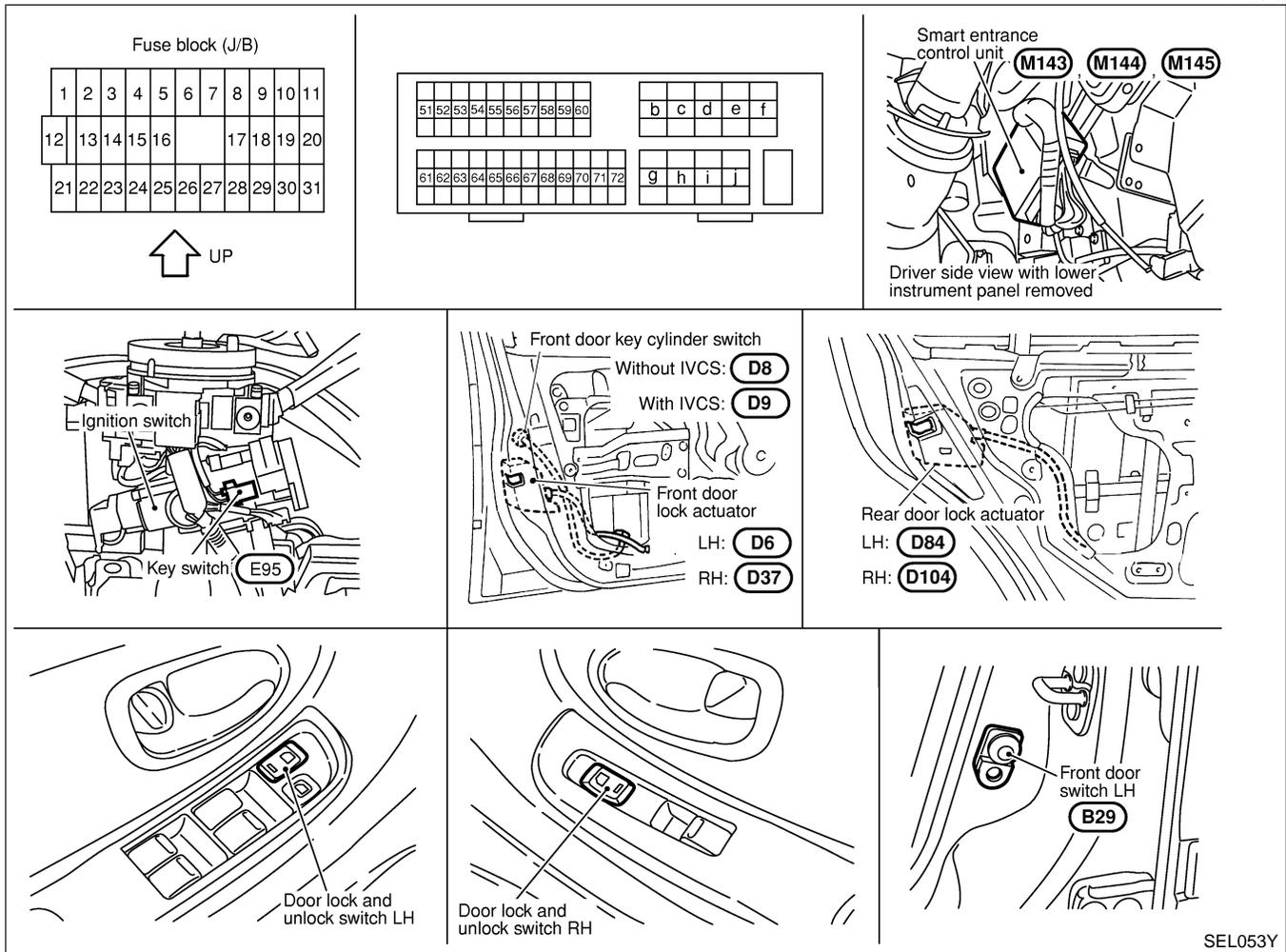
5	CHECK ENCODER	<p>Measure voltage between power window main switch terminal 16 and ground with oscilloscope when power window is in automatic closing operation.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Power window main switch connector (D10)</p> </div> <div style="width: 45%;">  <p>HI: Approx. 5V LO: Approx. 0V</p> </div> </div> <div style="text-align: right; margin-top: 10px;">SEL252W</div>
OK or NG		
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



System Description

NFEL0107

OPERATION

NFEL0107S04

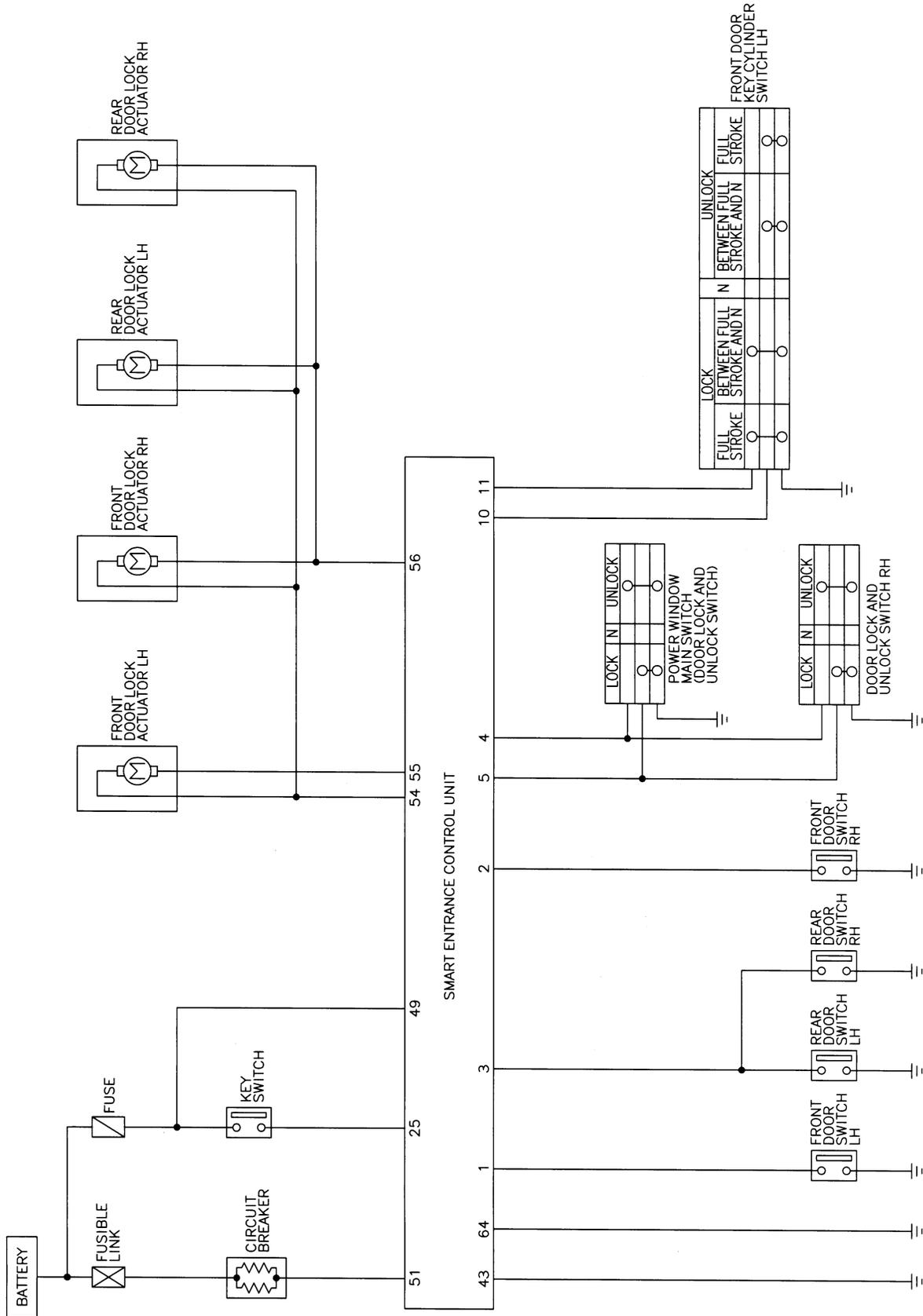
- The lock/unlock switches (LH and RH) on door trim can lock and unlock all doors.
- With the door key inserted in the key cylinder on front LH, turning it to "LOCK", will lock all doors; turning it to "UNLOCK" once unlocks the corresponding door; turning it to "UNLOCK" again within 5 seconds after the 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)

POWER DOOR LOCK

Schematic

Schematic

NFEL0108



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MEL066N

POWER DOOR LOCK

Wiring Diagram — D/LOCK —

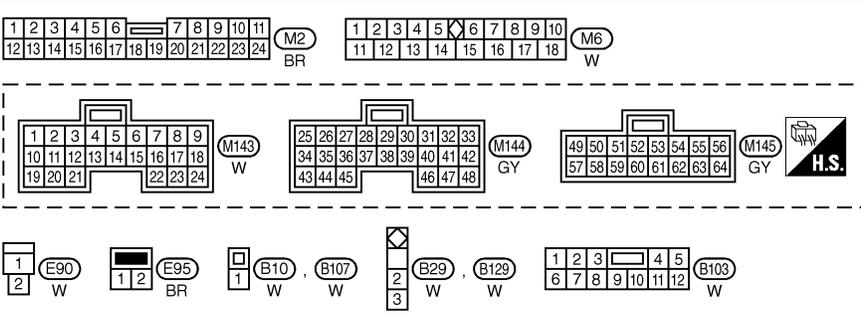
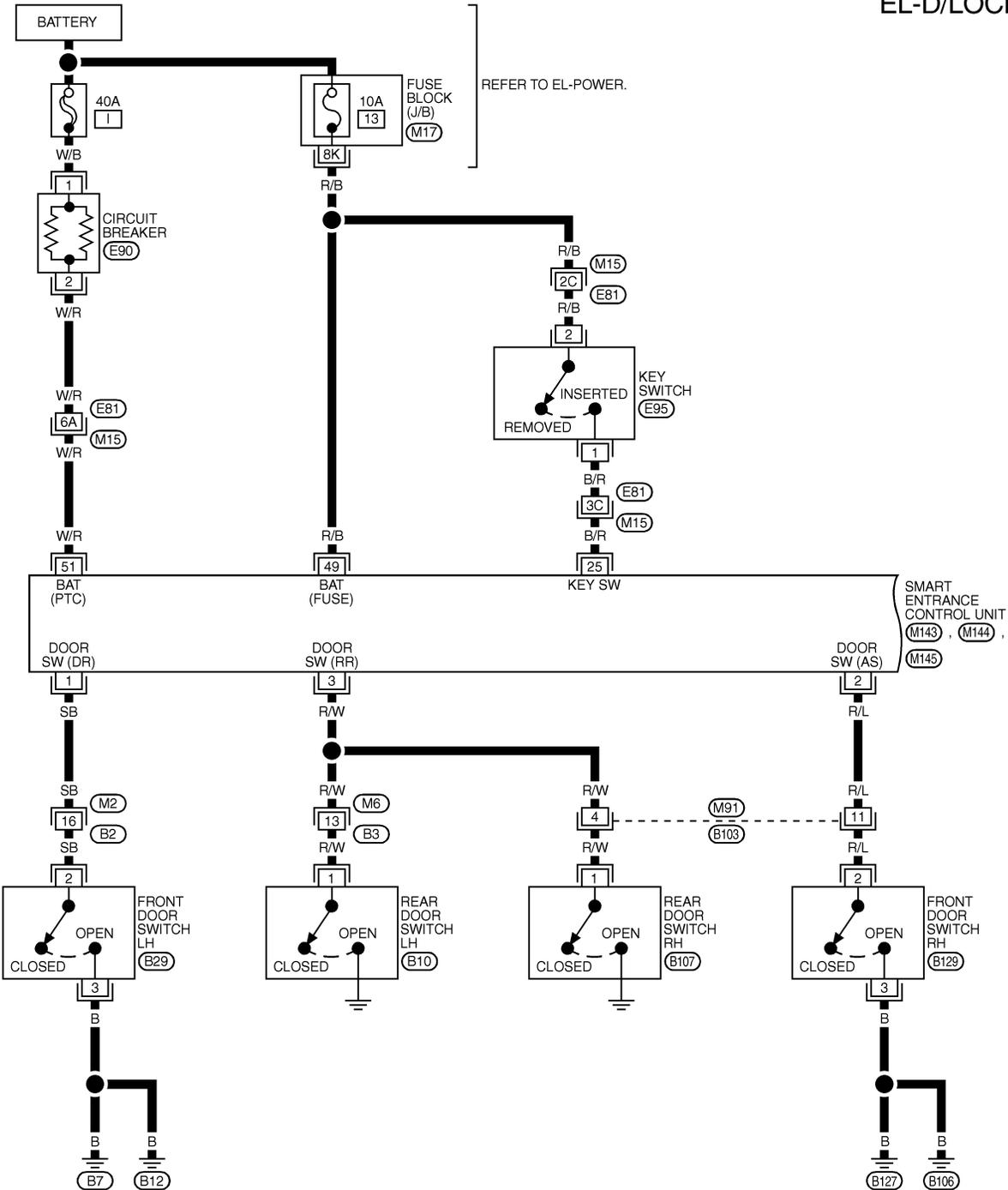
Wiring Diagram — D/LOCK —

NFEL0109

NFEL0109S01

FIG. 1

EL-D/LOCK-01



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

MEL067N

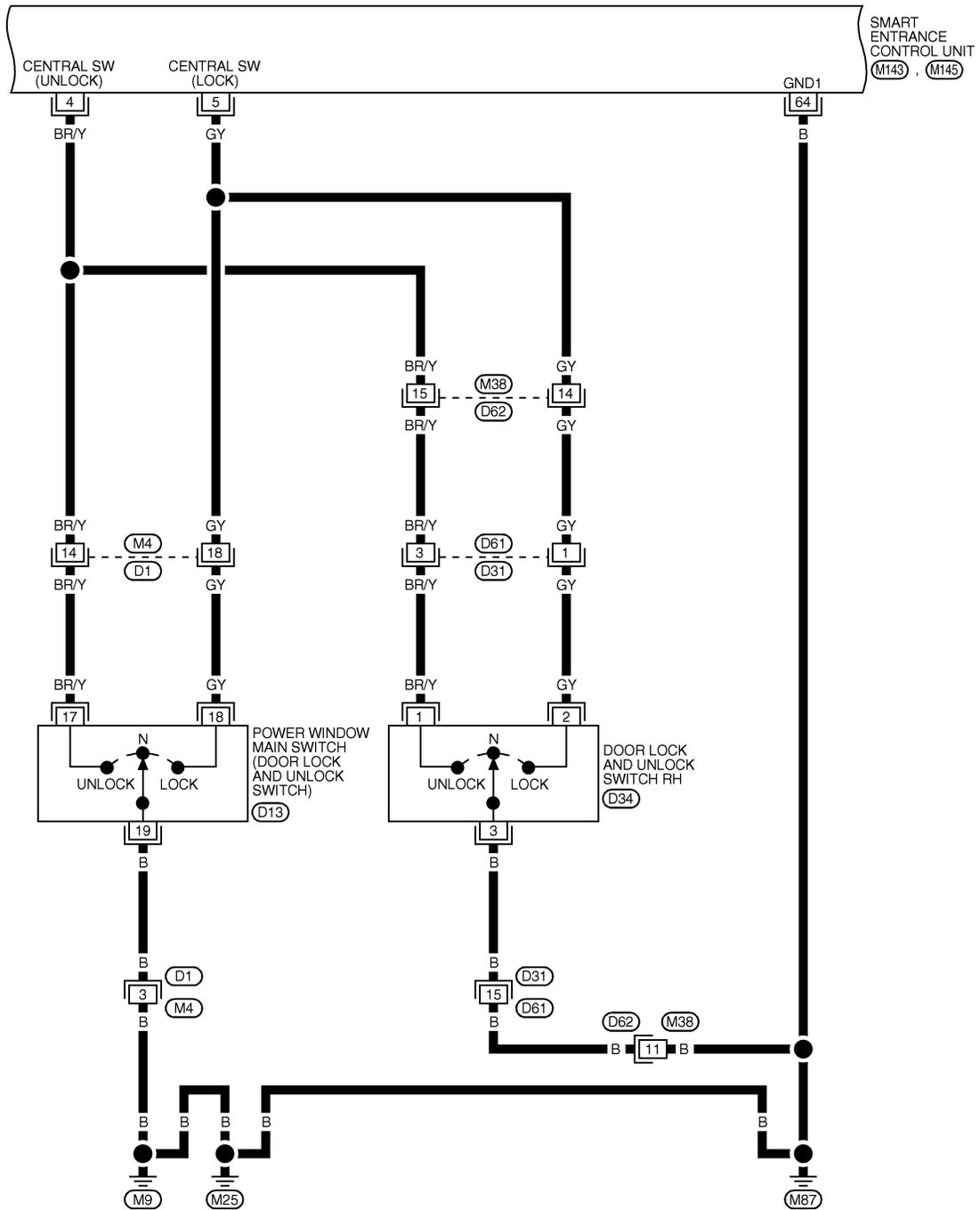
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 2

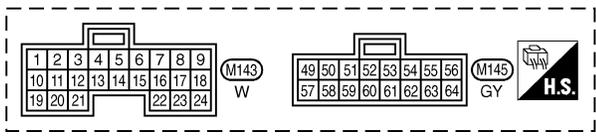
NFEL0109S02

EL-D/LOCK-02



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REFER TO THE FOLLOWING.

(D1), (D31) -SUPER
MULTIPLE JUNCTION (SMJ)

MEL068N

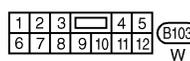
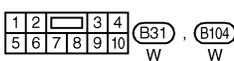
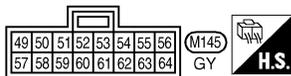
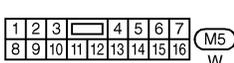
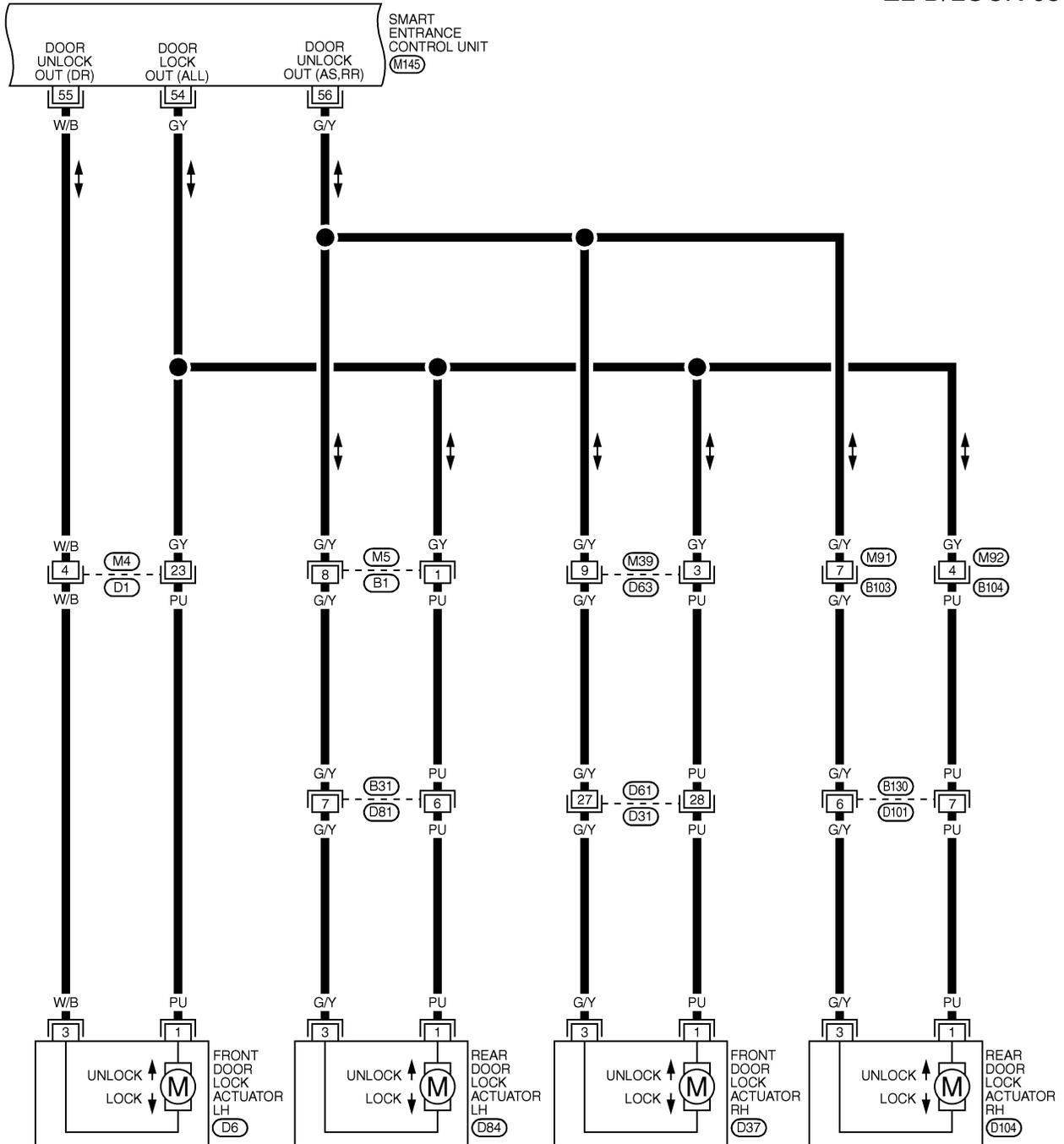
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 3

NFEL0109S03

EL-D/LOCK-03



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

MEL069N

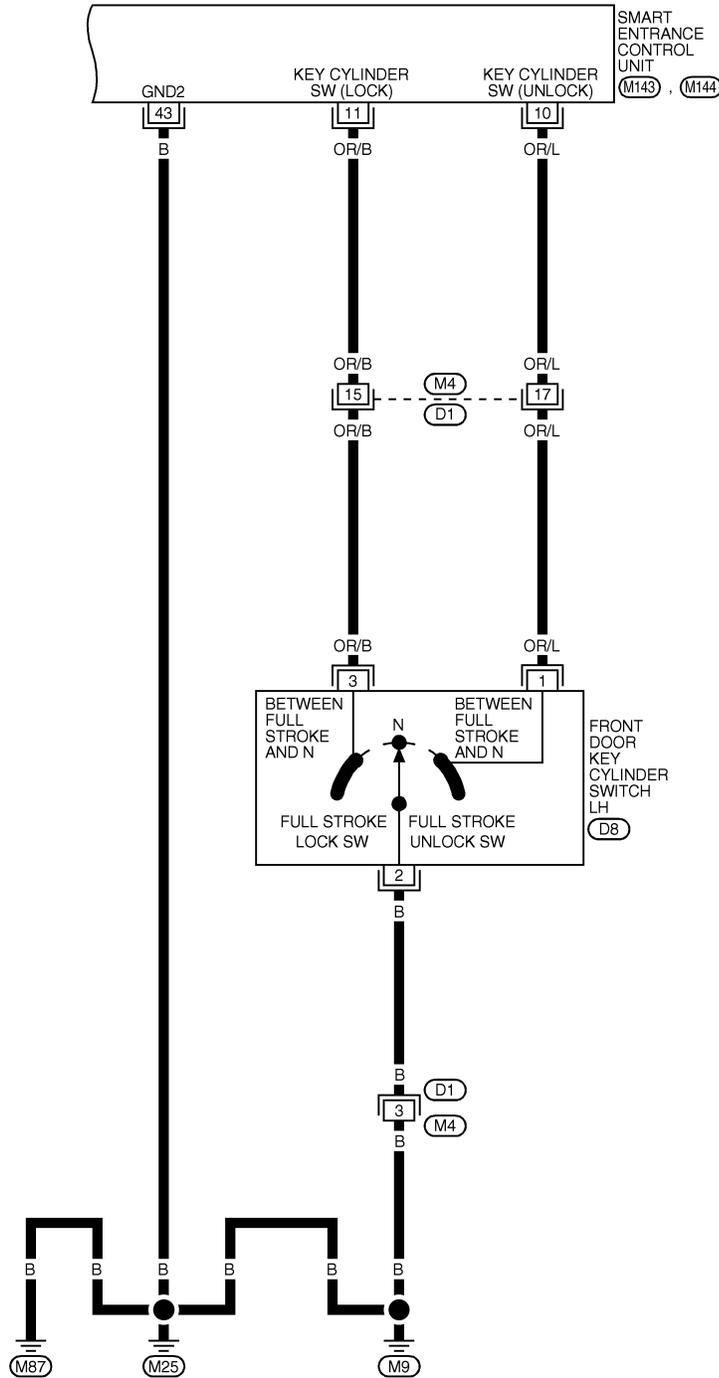
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

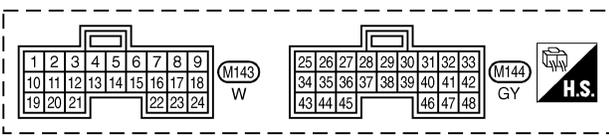
FIG. 4

NFEL0109S05

EL-D/LOCK-04



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

MEL070N

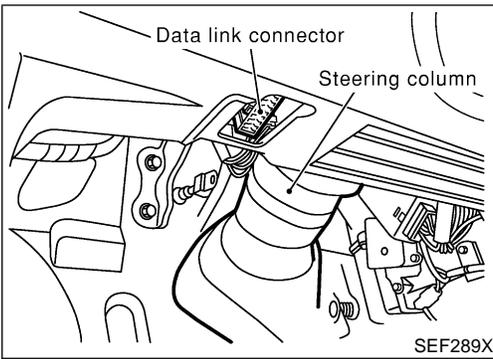
POWER DOOR LOCK

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)
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
3	R/W	REAR DOOR SWITCH	OFF (CLOSED) → ON (OPEN)	5V → 0V
4	BR/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → UNLOCKS	5V → 0V
5	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → LOCKS	5V → 0V
10	OR/L	DOOR KEY CYLINDER UNLOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)	5V → 0V
11	OR/B	DOOR KEY CYLINDER LOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)	5V → 0V
25	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER	12V → 0V
43	B	GROUND	-	-
49	R/B	POWER SOURCE (FUSE)	-	12V
51	W/R	POWER SOURCE (PTC)	-	12V
54	GY	DOOR LOCK ACTUATORS	DOOR LOCK & UNLOCK SWITCH (FREE → LOCK)	0V → 12V
55	W/B	DRIVER DOOR LOCK ACTUATOR	DOOR LOCK & UNLOCK SWITCH (FREE → UNLOCK)	0V → 12V
56	GY	PASSENGER AND REAR DOORS LOCK ACTUATOR	DOOR LOCK & UNLOCK SWITCH (FREE → UNLOCK)	0V → 12V
64	B	GROUND	-	-

SEL980X



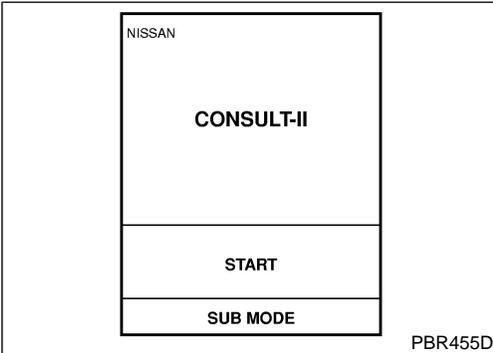
CONSULT-II Inspection Procedure

=NFEL0238

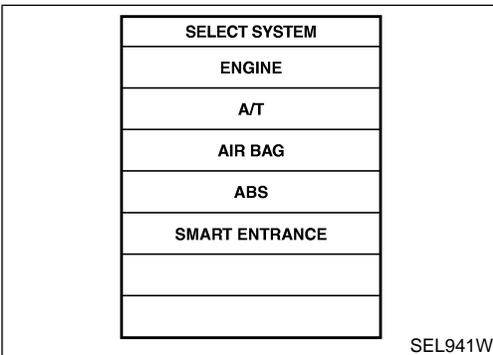
NFEL0238S01

“DOOR LOCK”

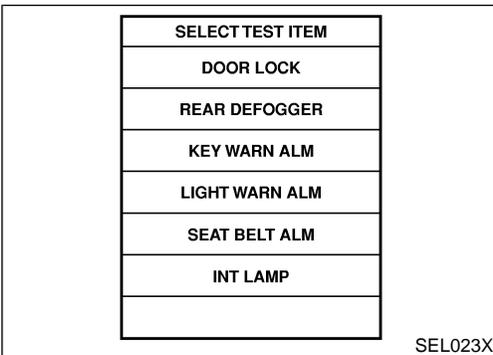
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



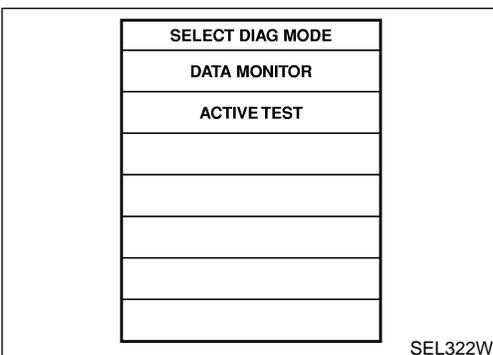
3. Turn ignition switch “ON”.
4. Turn “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “DOOR LOCK”.



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

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POWER DOOR LOCK

CONSULT-II Application Items

CONSULT-II Application Items “DOOR LOCK” Data Monitor

NFEL0239

NFEL0239S01

NFEL0239S0101

Monitored Item	Description
KEY ON SW	Indicates [ON/OFF] condition of key switch.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch LH and RH.
DOOR SW-RR	Indicates [ON/OFF] condition of door switch (Rear).
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.
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.
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.
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

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.
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.
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.

POWER DOOR LOCK

Trouble Diagnoses

Trouble Diagnoses SYMPTOM CHART

=NFEL0193

NFEL0193S01

REFERENCE PAGE (EL-)	250	251	252	253	255	257
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	

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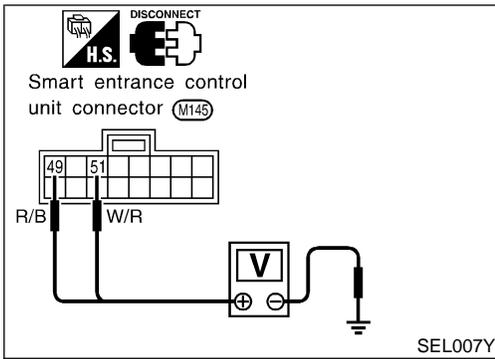
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POWER DOOR LOCK

Trouble Diagnoses (Cont'd)



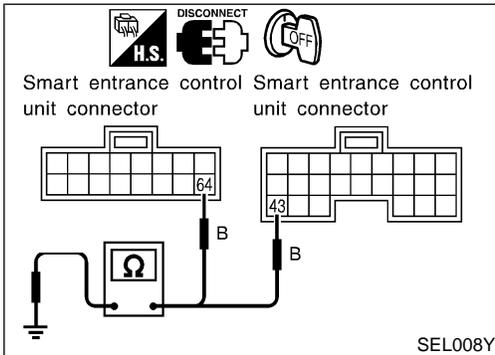
MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0193S02

Main Power Supply Circuit Check

NFEL0193S0201

Terminals		Ignition switch		
(+)	(-)	OFF	ACC	ON
49	Ground	Battery volt- age	Battery volt- age	Battery volt- age
51				



Ground Circuit Check

NFEL0193S0202

Terminals	Continuity
43 - Ground	Yes
64 - Ground	Yes

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-DR", "DOOR SW-AS", "DOOR SW-RR") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
DOOR SW-RR	OFF
DOOR SW-DR	OFF
DOOR SW-AS	OFF

When any doors are open:

DOOR SW-DR ON
DOOR SW-AS ON
DOOR SW-RR ON

When any doors are closed:

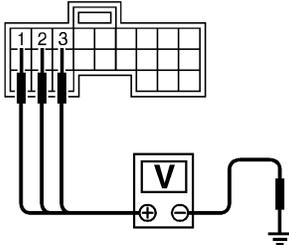
DOOR SW-DR OFF
DOOR SW-AS OFF
DOOR SW-RR OFF

SEL009Y

Without CONSULT-II

Check voltage between smart entrance control unit harness connector M143 terminals 1 (SB), 2 (R/L) or 3 (R/W) and ground.

Smart entrance control unit connector



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door switch	1	Ground	Open	0
			Closed	Approx. 5
Front RH door switch	2	Ground	Open	0
			Closed	Approx. 5
Rear door switches	3	Ground	Open	0
			Closed	Approx. 5

SEL010Y

Refer to wiring diagram in EL-242.

OK or NG

OK ► Door switch is OK.

NG ► GO TO 2.

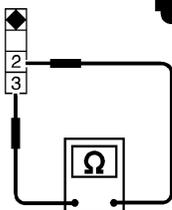
2 CHECK DOOR SWITCHES

1. Disconnect door switch harness connector.
2. Check continuity between door switch connector terminals.

Door switch connector

Front LH : (B29)

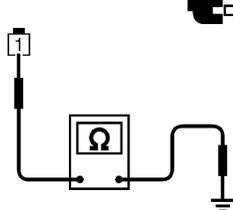
Front RH : (B129)



Door switch connector

Rear LH : (B10)

Rear RH : (B107)



	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.

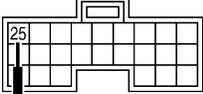
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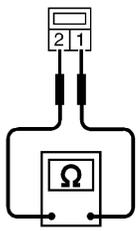
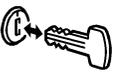
POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

KEY SWITCH (INSERT) CHECK

=NFEL0193S04

1	CHECK KEY SWITCH INPUT SIGNAL						
<p> With CONSULT-II Check key switch ("KEY ON SW") 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; text-align: center;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>KEY ON SW</td> <td>ON</td> </tr> </tbody> </table> </div> <div style="margin-left: 20px;"> <p>When key is inserted to ignition key cylinder: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL315W</p>		DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR							
MONITOR							
KEY ON SW	ON						
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M144 terminal 25 (B/R) and ground.</p> <p>Smart entrance control unit connector</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p> CONNECT</p> <p> : Approx. 12V</p> <p> : 0V</p> </div> <div style="margin-left: 20px;"> <p>Voltage [V]:</p> <p>Condition of key switch: Key is inserted. Approx. 12</p> <p>Condition of key switch: Key is removed. 0</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL011Y</p> <p>Refer to wiring diagram in EL-242.</p> <p style="text-align: center; margin-top: 10px;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 25%;">OK</td> <td style="width: 5%; 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.					

2	CHECK KEY SWITCH (INSERT)						
<p>Check continuity between key switch connector terminals 1 and 2.</p> <p>Key switch connector </p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p> DISCONNECT</p> <p></p> </div> <div style="margin-left: 20px;"> <p>Continuity:</p> <p>Condition of key switch: Key is inserted. Yes</p> <p>Condition of key switch: Key is removed. No</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL194W</p> <p style="text-align: center; margin-top: 10px;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 25%;">OK</td> <td style="width: 5%; text-align: center;">▶</td> <td> <p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 13, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch </td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>Replace key switch.</td> </tr> </table>		OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 13, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch 	NG	▶	Replace key switch.
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 13, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch 					
NG	▶	Replace key switch.					

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:

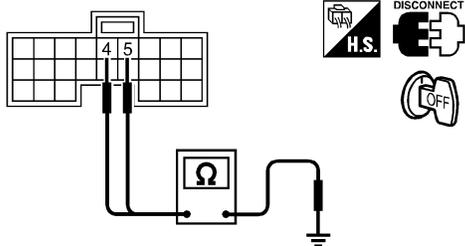
UNLK SW DR/AS ON

SEL341W

Without CONSULT-II

1. Disconnect smart entrance control unit harness connector .
2. Check continuity between smart entrance control unit harness connector M143 terminal 4 (BR/Y) or 5 (GY) and ground.

Smart entrance control unit connector



Terminals	Door lock/unlock switch (LH or RH) condition	Continuity
4 - Ground	Lock	Yes
	N and Unlock	No
5 - Ground	Unlock	Yes
	N and Lock	No

Refer to wiring diagram in EL-243.

SEL012Y

OK or NG

OK	▶	Door lock/unlock switch is OK.
NG	▶	GO TO 2.

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

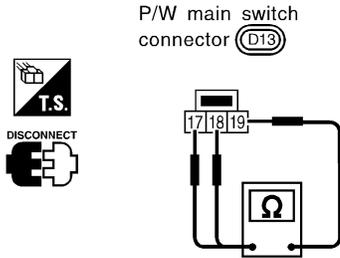
IDX

POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2 CHECK DOOR LOCK/UNLOCK SWITCH

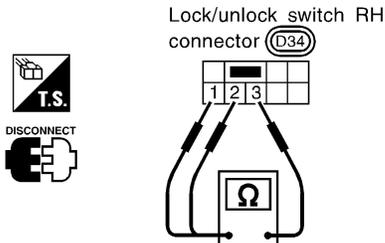
1. Disconnect door lock/unlock switch harness connector.
 2. Check continuity between each door lock/unlock switch terminals.
- Power window main switch (Door lock/unlock switch LH)



Condition	Terminals		
	17	18	19
Lock		○	○
N	No continuity		
Unlock	○		○

SEL196W

- Door lock/unlock switch RH



Condition	Terminals		
	1	2	3
Lock		○	○
N	No continuity		
Unlock	○		○

SEL197W

OK or NG

OK



Check the following.

- Ground circuit for door lock/unlock switch
- Harness for open or short between door lock/unlock switch and smart entrance control unit connector

NG



Replace door lock/unlock switch.

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

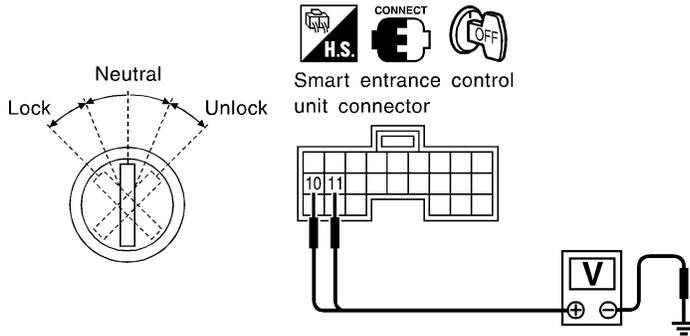
When key inserted in front key cylinder is turned to UNLOCK:

KEY CYL UN-SW ON

SEL342W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector M143 terminals 10 (OR/L) or 11 (OR/B) and ground.



Terminals		Key position	Voltage V
(+)	(-)		
11	Ground	Neutral/Unlock	Approx. 5
		Lock	0
10	Ground	Neutral/Lock	Approx. 5
		Unlock	0

Refer to wiring diagram in EL-245.

SEL013Y

OK or NG

OK ► Door key cylinder switch is OK.

NG ► GO TO 2.

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

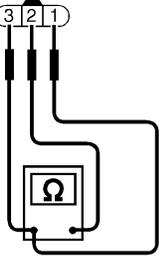
SC

EL

IDX

POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2	CHECK DOOR KEY CYLINDER SWITCH													
<p>1. Disconnect door key cylinder switch harness connector. 2. Check continuity between door key cylinder switch terminals.</p>														
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;">  <p>Door key cylinder switch connector</p> </div> <div style="margin-right: 20px;">  </div> <div style="margin-right: 20px;"> <p>① : Door unlock switch terminal ② : Ground terminal ③ : Door lock switch terminal</p> </div> <div style="flex-grow: 1;">  </div> <div style="margin-top: 20px;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Terminals</th> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">③ - ②</td> <td>Neutral/Unlock</td> <td>No</td> </tr> <tr> <td>Lock</td> <td>Yes</td> </tr> <tr> <td rowspan="2">① - ②</td> <td>Neutral/Lock</td> <td>No</td> </tr> <tr> <td>Unlock</td> <td>Yes</td> </tr> </tbody> </table> </div> </div>		Terminals	Key position	Continuity	③ - ②	Neutral/Unlock	No	Lock	Yes	① - ②	Neutral/Lock	No	Unlock	Yes
Terminals	Key position	Continuity												
③ - ②	Neutral/Unlock	No												
	Lock	Yes												
① - ②	Neutral/Lock	No												
	Unlock	Yes												
SEL034X														
OK or NG														
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● Door key cylinder switch ground circuit ● Harness for open or short between smart entrance control unit and door key cylinder switch 													
NG	<p>▶ Replace door key cylinder switch.</p>													

POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

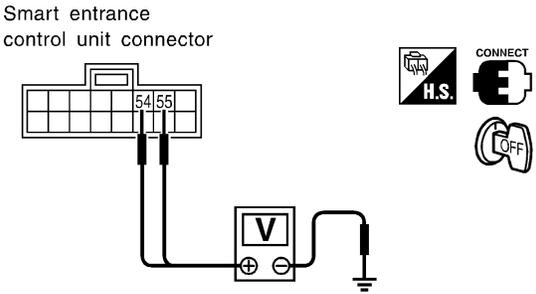
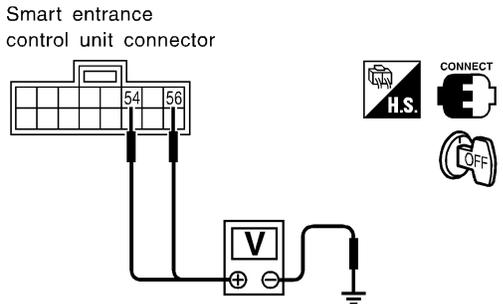
DOOR LOCK ACTUATOR CHECK

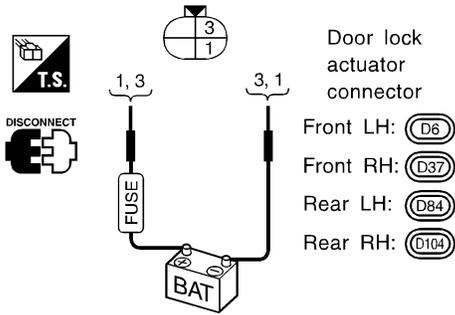
=NFEL0193S08

1	CHECK DOOR LOCK ACTUATOR OPERATION	<p>With CONSULT-II</p> <ol style="list-style-type: none"> 1. Select "ACTIVE TEST" in "DOOR LOCK" with CONSULT-II. 2. Select "ALL D/LK MTR" and touch "ON". 3. Then, select "DR D/UN MTR" and touch "ON". 4. Select "NON DR D/UN" and touch "ON". <div style="text-align: center; margin: 10px 0;"> <table border="1" style="border-collapse: collapse; width: 150px;"> <tr> <th colspan="2" style="text-align: center; padding: 2px;">ACTIVE TEST</th> </tr> <tr> <td style="padding: 2px;">ALL D/LK MTR</td> <td style="padding: 2px; text-align: center;">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; text-align: center;">OFF)</td> </tr> <tr> <td style="padding: 2px;">(NON DR D/UN</td> <td style="padding: 2px; text-align: center;">OFF)</td> </tr> <tr> <td colspan="2" style="padding: 2px;"> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; text-align: center;">ON</td> <td style="width: 50%; border: none;"></td> </tr> </table> </td> </tr> </table> </div> <p style="text-align: center; margin-top: 10px;">Door lock motor should operate.</p> <p style="text-align: right; margin-top: 10px;">SEL343W</p> <p>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</p> <p style="text-align: center; margin-top: 10px;">OK or NG</p>	ACTIVE TEST		ALL D/LK MTR	OFF	or		(DR D/UN MTR	OFF)	(NON DR D/UN	OFF)	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; text-align: center;">ON</td> <td style="width: 50%; border: none;"></td> </tr> </table>		ON		GI MA EM LC EC FE CL MT AT AX SU BR ST RS BT HA SC EL IDX
ACTIVE TEST																	
ALL D/LK MTR	OFF																
or																	
(DR D/UN MTR	OFF)																
(NON DR D/UN	OFF)																
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; text-align: center;">ON</td> <td style="width: 50%; border: none;"></td> </tr> </table>		ON															
ON																	
OK	▶	Door lock actuator is OK.															
NG	▶	GO TO 2.															

POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2	CHECK DOOR LOCK ACTUATOR CIRCUIT	
<ul style="list-style-type: none"> Door lock actuator front LH Check voltage between smart entrance control unit harness connector M145 terminal 54 (GY), 55 (W/B) and ground. 		
<p>Smart entrance control unit connector</p> 		
SEL014Y		
<ul style="list-style-type: none"> Door lock actuator front RH and rear Check voltage between smart entrance control unit harness connector M145 terminal 54 (GY), 56 (G/Y) and ground. 		
<p>Smart entrance control unit connector</p> 		
SEL015Y		
<p>Refer to wiring diagram in EL-244.</p> <p style="text-align: center;">OK or NG</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"> Disconnect door lock actuator harness connector. Apply 12V direct current to door lock actuator and check operation. 		
 <p style="text-align: right;">Door lock actuator connector</p> <p>Front LH: (D6) Front RH: (D37) Rear LH: (D84) Rear RH: (D104)</p>		
SEL222W		
OK or NG		
OK	▶	Check harness for open or short between smart entrance control unit connector and door lock actuator.
NG	▶	Replace door lock actuator.

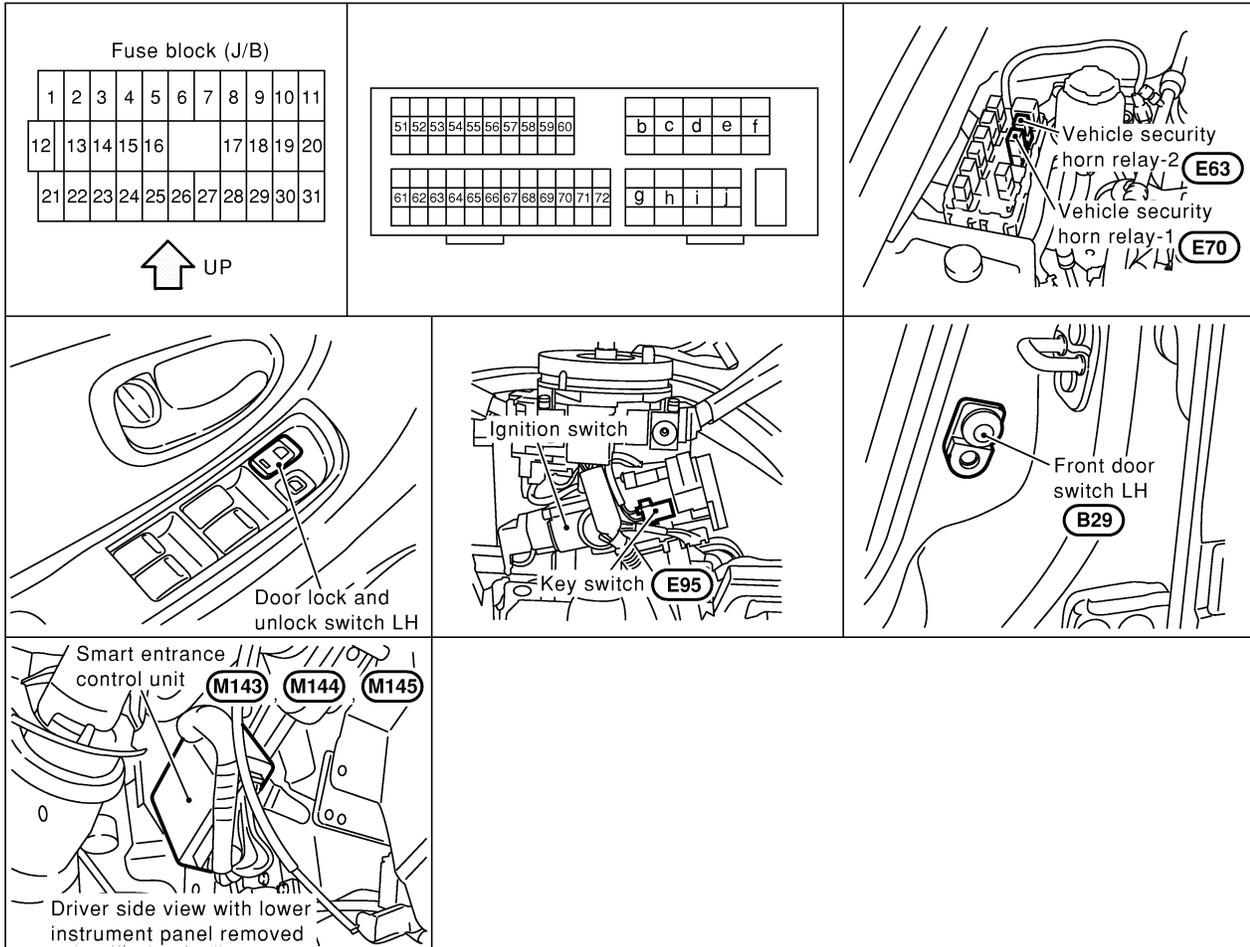
Door lock actuator operation:
Terminals between (+): 1 and (-): 3
Unlocked → Locked
Terminals between (+): 3 and (-): 1
Locked → Unlocked

MULTI-REMOTE CONTROL SYSTEM

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NFEL0111



GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

SEL054Y

BR

System Description

NFEL0194

NFEL0194S01

ST

INPUTS

Power is supplied at all times

- to smart entrance control unit terminal 49 and
- to key switch terminal 2
- through 10A fuse [No. 13, 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 25.

When the front door switch LH is ON (door is OPEN), ground is supplied

- to smart entrance control unit terminal 1
- through front door switch LH terminal 2
- to front door switch LH terminal 3
- through body grounds B7 and B12 (without rear sunshade) or B46 (with rear sunshade).

When the front door switch RH is ON (door is OPEN), ground is supplied

- to smart entrance control unit terminal 2
- 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

RS

BT

HA

SC

EL

IDX

MULTI-REMOTE CONTROL SYSTEM

System Description (Cont'd)

- to smart entrance control unit terminal 3
- 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 5
- 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 4
- through lock/unlock switch LH terminal 17, 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.

NFEL0194S0201

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

NFEL0194S0202

Power is supplied at all times

- to vehicle security horn relay-1 terminals 1 and 3, and
- to vehicle security horn relay-2 terminal 1
- through 10A fuse [No. 61, 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 vehicle security horn relay-2 terminal 2
- through smart entrance control unit terminal 42

Vehicle security horn relay-2 is then energized

- to horn relay terminal 1, and
- to vehicle security horn relay-1 terminal 2
- through vehicle security horn relay-2 terminals 5 and 3, and
- through body ground E11, E22 and E53
- to smart entrance control unit terminals 47 and 48 from hazard warning lamp system.

Vehicle security horn relay-1 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	—

MULTI-REMOTE CONTROL SYSTEM

System Description (Cont'd)

	C mode (Horn chirp mode)		S mode (Non-horn chirp mode)	
	Hazard warning lamp flash	Horn sound	Hazard warning lamp flash	Horn sound
Unlock	Once	—	—	—

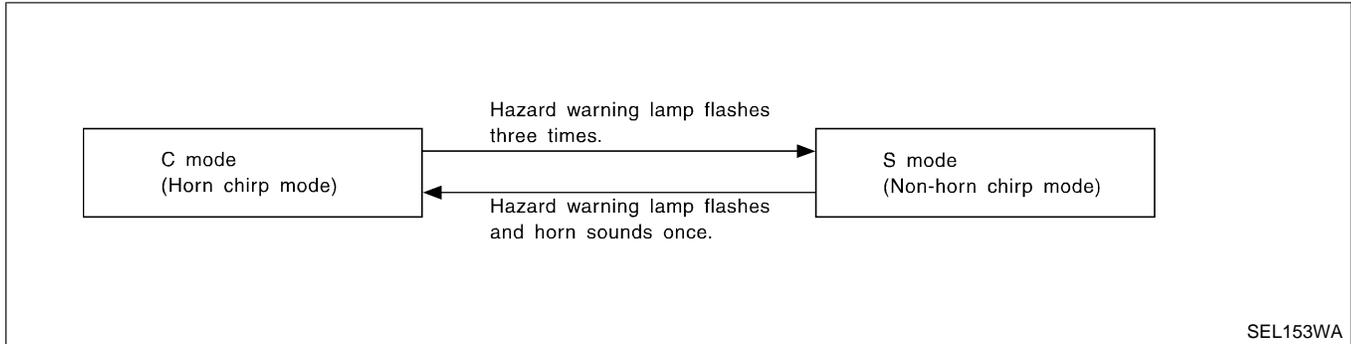
How to change hazard and horn reminder mode

① 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-86).

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 “VEHICLE SECURITY SYSTEM” (EL-289).

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 63.

Then power and ground are supplied, trunk lid opener actuator opens trunk lid.

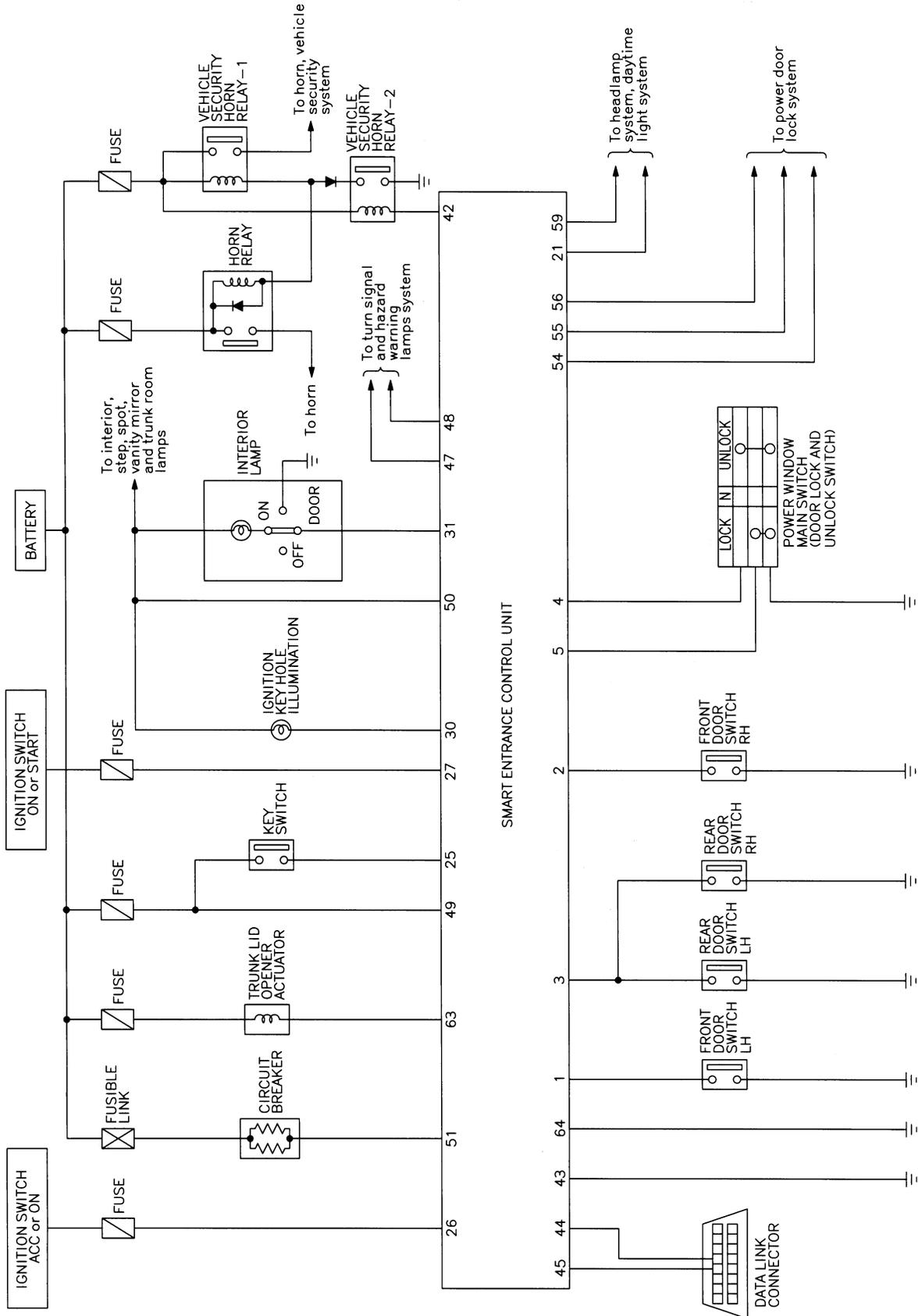
GI
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RS
BT
HA
SC
EL
IDX

MULTI-REMOTE CONTROL SYSTEM

Schematic

Schematic

NFEL0171



MEL071N

MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI —

NFEL0114

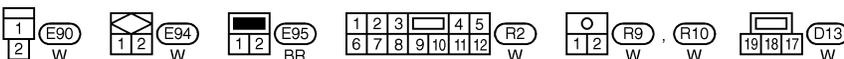
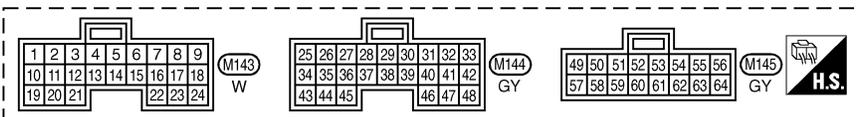
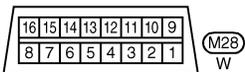
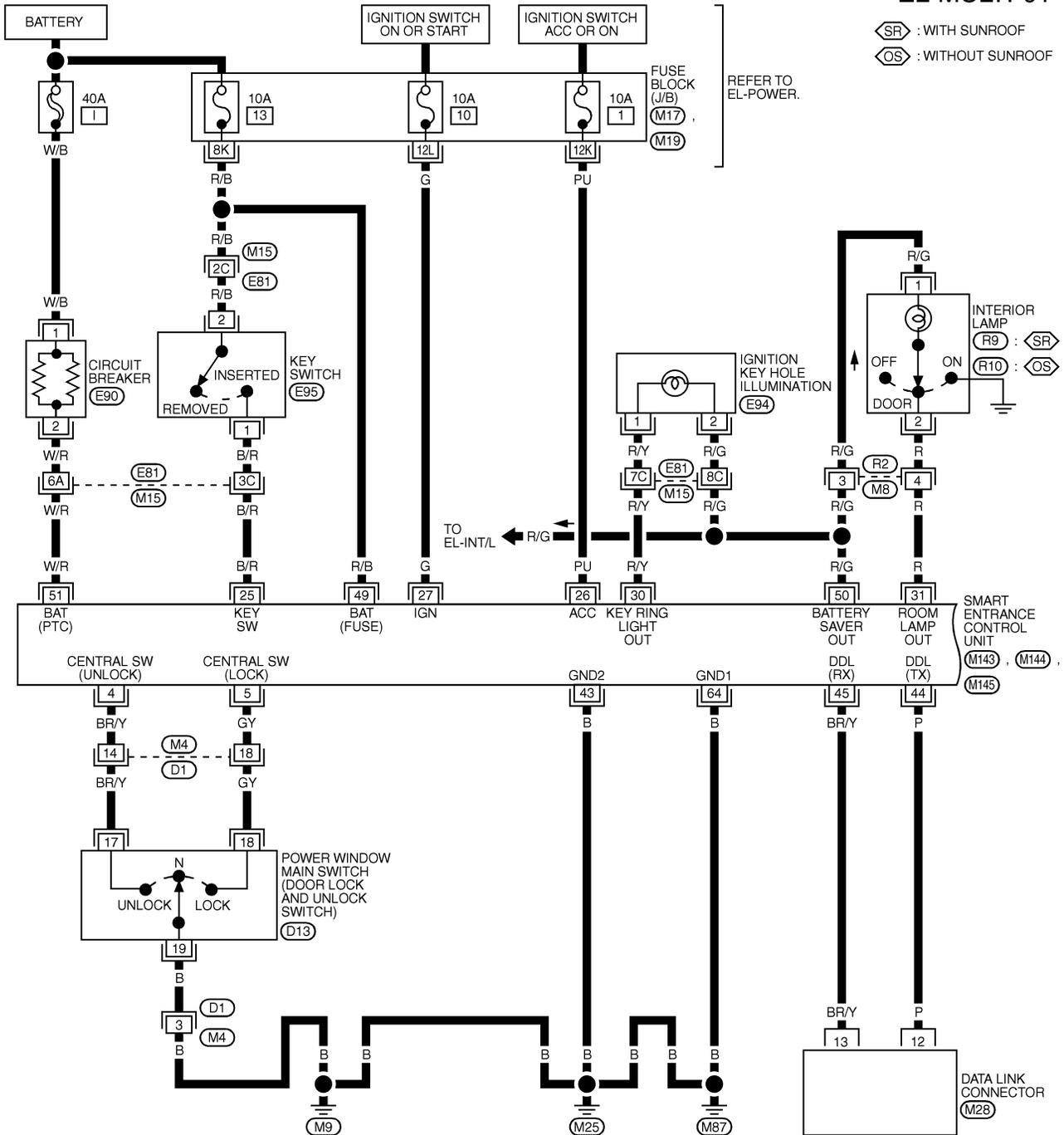
NFEL0114S01

FIG. 1

Wiring Diagram — MULTI —

EL-MULTI-01

⊕SR : WITH SUNROOF
⊖OS : WITHOUT SUNROOF



REFER TO THE FOLLOWING.
 (M15), (D1) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M17), (M19) -FUSE BLOCK-
 JUNCTION BOX (J/B)

GI
MA
EM
LC
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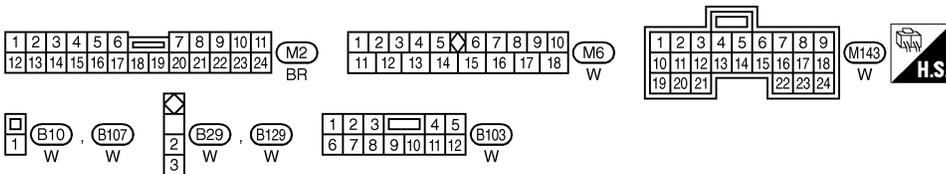
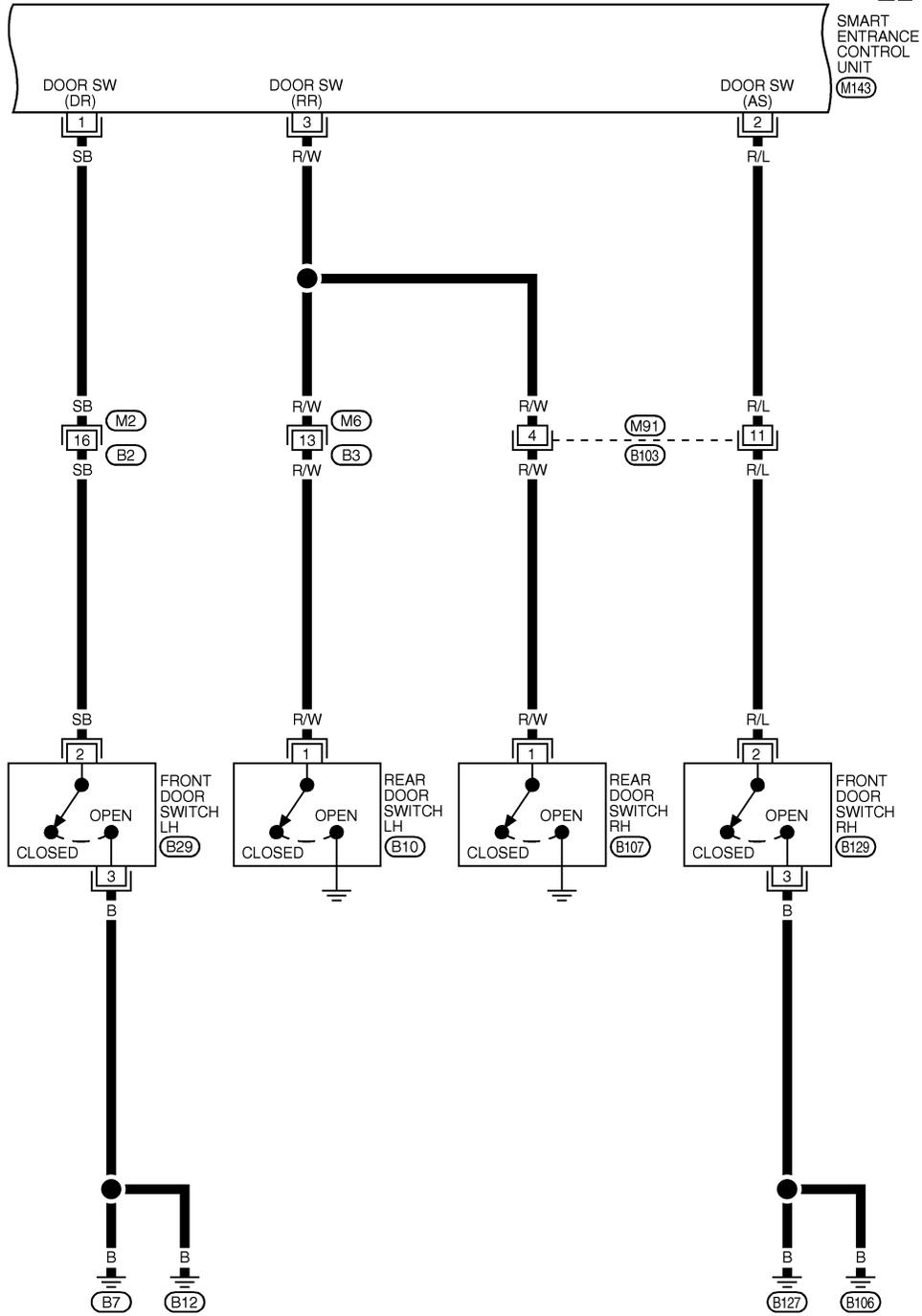
MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 2

NFEL0114S02

EL-MULTI-02



MEL073N

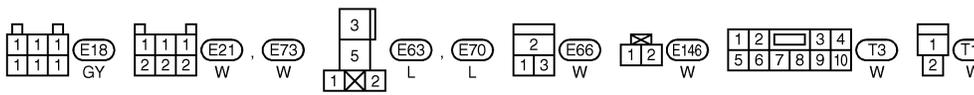
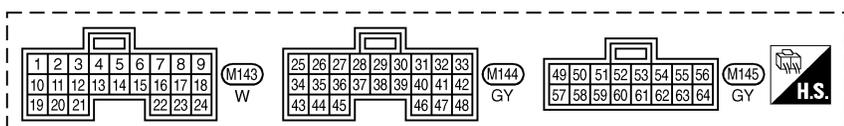
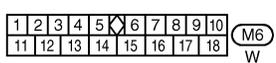
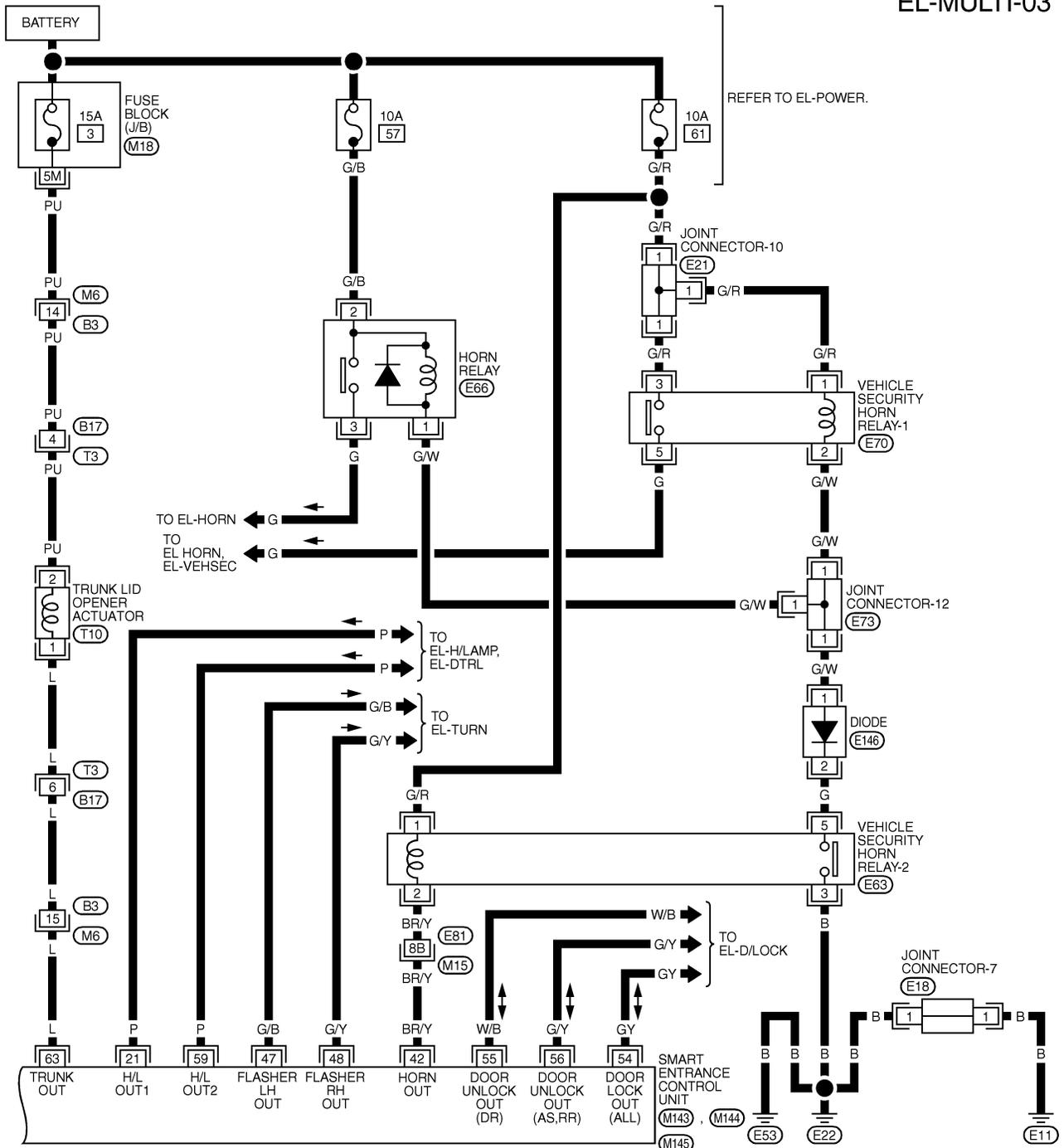
MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 3

NFEL0114S05

EL-MULTI-03



REFER TO THE FOLLOWING.
 (M15) -SUPER
 MULTIPLE JUNCTION (SMJ)
 (M18) -FUSE BLOCK-
 JUNCTION BOX (J/B)

GI
MA
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IDX

MULTI-REMOTE CONTROL SYSTEM

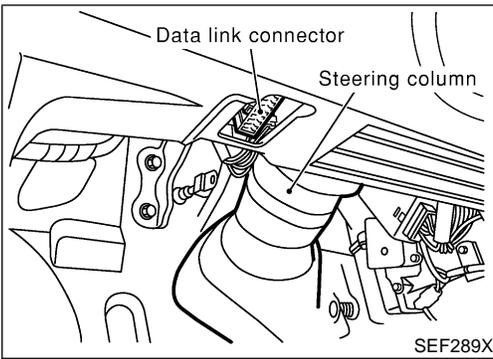
Wiring Diagram — MULTI — (Cont'd)

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

TERMINAL	WIRE COLOR	ITEM	CONDITION		DATA (DC)	
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
3	R/W	REAR DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V	
4	BR/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → UNLOCKS		5V → 0V	
5	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → LOCKS		5V → 0V	
21	P	HEADLAMP LH RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH OFF OR 1ST)	OFF	MORE THAN 45 SECONDS	12V
					WITHIN 45 SECONDS	0V
			ON OR START		0V	
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL		0V	
25	B/R	IGNITION KEY SWITCH (INSERT)	KEY INSERTED → KEY REMOVED FROM IGN KEY CYLINDER		12V → 0V	
26	PU	IGNITION SWITCH (ACC)	"ACC" POSITION		12V	
27	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN "ON" POSITION		12V	
30	R/Y	IGNITION KEYHOLE ILLUMINATION	WHEN DOORS ARE UNLOCKED USING REMOTE CONTROLLER (OFF → UNLOCK)		12V → 0V	
31	R/Y	INTERIOR LAMP	WHEN DOORS ARE LOCKED USING REMOTE CONTROLLER (LAMP SWITCH IN "DOOR" POSITION)		12V	
42	BR/Y	VEHICLE SECURITY HORN RELAY	WHEN PANIC ALARM IS OPERATED USING REMOTE CONTROLLER (ON → OFF)		12V → 0V	
43	B	GROUND	-		-	
47	G/B	LH TURN SIGNAL LAMP	WHEN DOOR LOCK OR UNLOCK IS OPERATED USING REMOTE CONTROLLER (ON → OFF)		12V → 0V	
48	G/Y	RH TURN SIGNAL LAMP	WHEN DOOR LOCK OR UNLOCK IS OPERATED USING REMOTE CONTROLLER (ON → OFF)		12V → 0V	
49	R/B	POWER SOURCE (FUSE)	-		12V	
50	R/G	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOSE OPERATE → DOES NOT OPERATE (ON → OFF)		12V → 0V	
51	W/R	POWER SOURCE (PTC)	-		12V	
54	GY	DOOR LOCK ACTUATORS	DOOR LOCK & UNLOCK SWITCH (FREE → LOCK)		0V → 12V	
55	W/B	DRIVER DOOR LOCK ACTUATORS	DOOR LOCK & UNLOCK SWITCH (FREE → UNLOCK)		0V → 12V	
56	GY	PASSENGER AND REAR DOORS LOCK ACTUATOR	DOOR LOCK & UNLOCK SWITCH (FREE → UNLOCK)		0V → 12V	
59	P	HEADLAMP RH RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH OFF OR 1ST)	OFF	MORE THAN 45 SECONDS	12V
					WITHIN 45 SECONDS	0V
			ON OR START		0V	
			HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)		LESS THAN 1V	
63	L	TRUNK LID OPENER ACTUATOR	WHEN TRUNK LID OPENER ACTUATOR IS OPERATED USING REMOTE CONTROLLER (ON → OFF)		0V → 12V	
64	B	GROUND	-		-	

MULTI-REMOTE CONTROL SYSTEM

CONSULT-II Inspection Procedure



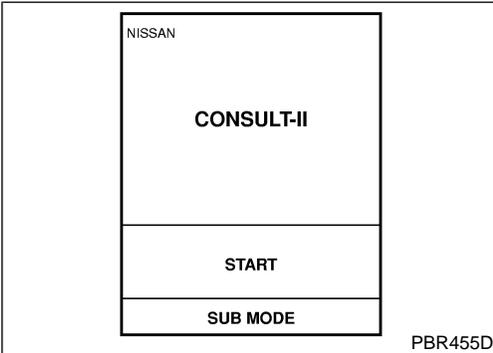
CONSULT-II Inspection Procedure

NFEL0241

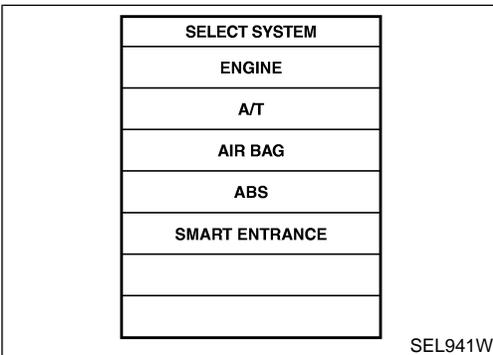
NFEL0241S01

"MULTI REMOTE ENT"

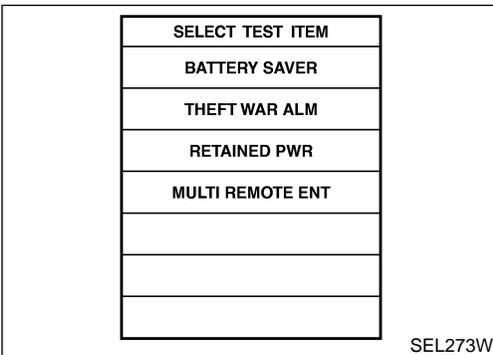
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



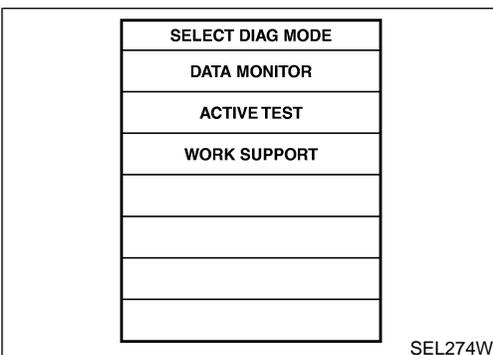
3. Turn ignition switch "ON".
4. Touch "START".



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
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch.
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-AS	Indicates [ON/OFF] condition of door switch RH.
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.
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.
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.
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activate for 0.5 seconds after “ON” on CONSULT-II screen is touched.
HEAD LAMP	This test is able to check headlamps panic alarm operation. The headlamp illuminates for 0.5 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.

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses

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	271
	2. Power supply and ground circuit for smart entrance control unit check	272
	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.	283
The new ID of remote controller cannot be entered.	1. Remote controller battery and function check	271
	2. Key switch (insert) check	275
	3. Door switch check	274
	4. Door lock/unlock switch LH check	276
	5. Power supply and ground circuit for smart entrance control unit check	272
	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.	283
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-249)	1. Remote controller battery and function check	271
	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.	283
Hazard and horn reminder does not activate properly when pressing lock or unlock button of remote controller.	1. Remote controller battery and function check	271
	2. Hazard reminder check	278
	3. Horn reminder check* *: Horn chirp can be activated or deactivated. First check the horn chirp setting. Refer to "System Description", EL-259.	279
	4. Door switch check	274
	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.	283
Interior lamp and key hole illumination operation do not activate properly.	1. Interior lamp operation check	281
	2. Key hole illumination operation check	282
	3. Door switch check	274

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

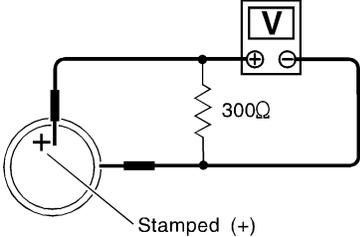
Symptom	Diagnoses/service procedure	Reference page (EL-)
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Remote controller battery and function check	271
	2. Theft warning operation check. Refer to "PRELIMINARY CHECK" in "VEHICLE SECURITY SYSTEM".	304
	3. Key switch (insert) check	275
	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.	283
Trunk lid does not open when trunk opener button is continuously pressed.	1. Remote controller battery and function check	271
	2. Trunk lid opener actuator check	277
	3. Key switch (insert) check	275
	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.	283

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

REMOTE CONTROLLER BATTERY AND FUNCTION CHECK

-NFEL0195S02

1	CHECK REMOTE CONTROLLER BATTERY	<p>Remove battery (refer to EL-287) and measure voltage across battery positive and negative terminals, (+) and (-).</p> <p>Voltage [V]: 2.5 - 3.0</p> <p>NOTE: Remote controller does not function if battery is not set correctly.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">SEL237W</p> <p style="text-align: center;">OK or NG</p>	<p>GI</p> <p>MA</p> <p>EM</p> <p>LC</p> <p>EC</p> <p>FE</p> <p>CL</p>
OK	▶	GO TO 2.	MT
NG	▶	Replace battery.	AT

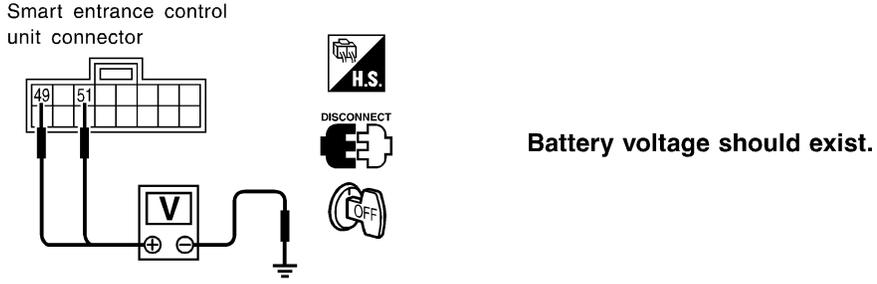
2	CHECK REMOTE CONTROLLER FUNCTION	<p> With CONSULT-II Check remote controller function ("LK BUTTON/SIG", "UN BUTTON/SIG", "TRUNK BTN/SIG", "PANIC BTN", "UN BUTTON ON" and "LK/UN BTN ON") in "DATA MONITOR" mode with CONSULT-II.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <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>LK BUTTON/SIG</td> <td style="text-align: center;">ON</td> </tr> <tr> <td>UN BUTTON/SIG</td> <td style="text-align: center;">ON</td> </tr> <tr> <td>TRUNK BTN/SIG</td> <td style="text-align: center;">ON</td> </tr> <tr> <td>PANIC BTN</td> <td style="text-align: center;">ON</td> </tr> <tr> <td>LK/UN BTN ON</td> <td style="text-align: center;">ON</td> </tr> </tbody> </table> <p>When pushing each button of remote controller, the corresponding monitor item should be turned as follows.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Condition</th> <th style="text-align: center;">Monitor item</th> </tr> </thead> <tbody> <tr> <td>Pushing LOCK</td> <td>LK BUTTON/SIG ON</td> </tr> <tr> <td>Pushing UNLOCK</td> <td>UN BUTTON/SIG ON</td> </tr> <tr> <td>Pushing TRUNK</td> <td>TRUNK BTN/SIG ON</td> </tr> <tr> <td>Pushing PANIC</td> <td>PANIC BTN/SIG ON</td> </tr> <tr> <td>Pushing LOCK and UNLOCK at the same time</td> <td>LK/UN BTN ON ON</td> </tr> </tbody> </table> <p style="text-align: right;">SEL023Y</p> <p style="text-align: center;">OK or NG</p>	DATA MONITOR		MONITOR		LK BUTTON/SIG	ON	UN BUTTON/SIG	ON	TRUNK BTN/SIG	ON	PANIC BTN	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 LOCK and UNLOCK at the same time	LK/UN BTN ON ON	<p>AX</p> <p>SU</p> <p>BR</p> <p>ST</p> <p>RS</p> <p>BT</p> <p>HA</p> <p>SC</p>
DATA MONITOR																													
MONITOR																													
LK BUTTON/SIG	ON																												
UN BUTTON/SIG	ON																												
TRUNK BTN/SIG	ON																												
PANIC BTN	ON																												
LK/UN BTN ON	ON																												
Condition	Monitor item																												
Pushing LOCK	LK BUTTON/SIG ON																												
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Pushing TRUNK	TRUNK BTN/SIG ON																												
Pushing PANIC	PANIC BTN/SIG ON																												
Pushing LOCK and UNLOCK at the same time	LK/UN BTN ON ON																												
OK	▶	Remote controller is OK. Further inspection is necessary. Refer to "SYMPTOM CHART", EL-269.	EL																										
NG	▶	Replace remote controller. Refer to ID Code Entry Procedure.	IDX																										

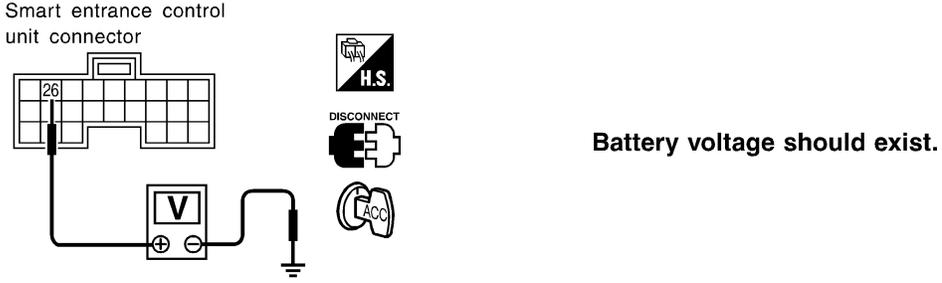
MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

POWER SUPPLY AND GROUND CIRCUIT CHECK

=NFEL0195S03

1	CHECK MAIN POWER SUPPLY CIRCUIT FOR SMART ENTRANCE CONTROL UNIT	
	<p>1. Disconnect smart entrance control unit harness connector. 2. Check voltage between smart entrance control unit harness connector M145 terminal 49 (R/B) or 51 (W/R) and ground.</p>	
		
	<p>Refer to wiring diagram in EL-263.</p> <p style="text-align: right;">SEL018Y</p>	
	OK or NG	
OK	▶	GO TO 2.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 40A fusible link (letter i, located in fuse and fusible link box) ● 10A fuse [No. 13, located in fuse block (J/B)] ● E90 circuit breaker ● Harness for open or short between smart entrance control unit and fuse

2	CHECK IGNITION SWITCH “ACC” CIRCUIT	
	<p>1. Disconnect smart entrance control unit harness connector. 2. Check voltage between smart entrance control unit harness connector M144 terminal 26 (PU) and ground while ignition switch is “ACC”.</p>	
		
	<p>Refer to wiring diagram in EL-263.</p> <p style="text-align: right;">SEL019Y</p>	
	OK or NG	
OK	▶	GO TO 3.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 1, located in fuse block (J/B)] ● Harness for open or short between smart entrance control unit and fuse

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

3	CHECK GROUND CIRCUIT FOR SMART ENTRANCE CONTROL UNIT	
<p>Check continuity between smart entrance control unit harness connector M144 terminal 43 (B) or M145 terminal 64 (B) and ground.</p>		
<p>Refer to wiring diagram in EL-263.</p>		
OK or NG		
OK	▶	Power supply and ground circuits are OK.
NG	▶	Check ground harness.

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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-RR", "DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
DOOR SW-RR	OFF
DOOR SW-DR	OFF
DOOR SW-AS	OFF

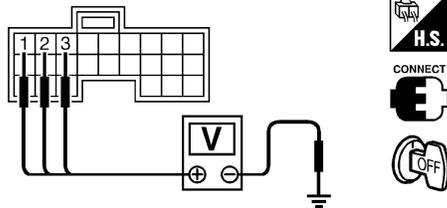
	Monitor item	Condition	Condition
DOOR SW-RR	Rear doors switch	Open	ON
		Closed	OFF
DOOR SW-DR	Door switch LH	Open	ON
		Closed	OFF
DOOR SW-AS	Door switch RH	Open	ON
		Closed	OFF

SEL024Y

Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminals 1 (SB), 2 (R/L) or 3 (R/W) and ground.

Smart entrance control unit connector



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front door switch LH	1	Ground	Open	0
			Closed	Approx. 5
Front door switch RH	2	Ground	Open	0
			Closed	Approx. 5
Rear door switches	3	Ground	Open	0
			Closed	Approx. 5

SEL021Y

Refer to wiring diagram in EL-264.

OK or NG

OK ► Door switch is OK.

NG ► GO TO 2.

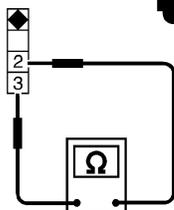
2 CHECK DOOR SWITCH

1. Disconnect door switch harness connector.
2. Check continuity between door switch terminals.

Door switch connector

Front LH : (B29)

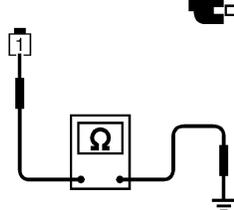
Front RH : (B129)



Door switch connector

Rear LH : (B10)

Rear RH : (B107)



	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

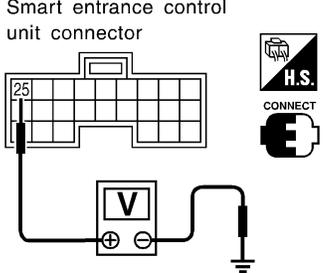
NG ► Replace door switch.

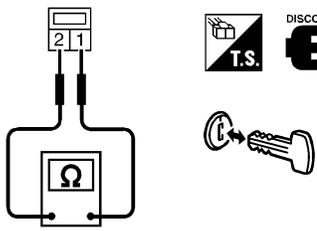
MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

KEY SWITCH (INSERT) CHECK

=NFEL0195S05

1	CHECK KEY SWITCH INPUT SIGNAL	<p> With CONSULT-II 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>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: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p> </div> </div> <p style="text-align: right; margin-top: 20px;">SEL315W</p>	DATA MONITOR		MONITOR		KEY ON SW	ON	GI MA EM LC EC
DATA MONITOR									
MONITOR									
KEY ON SW	ON								
		<p> Without CONSULT-II Check voltage between control unit harness connector M144 terminal 25 (B/R) and ground. Refer to wiring diagram in EL-263.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector</p>  </div> <div style="margin-left: 20px;"> <p>Voltage [V]: Condition of key switch : Key is inserted. Approx. 12 Condition of key switch : Key is removed. 0</p> </div> </div> <p style="text-align: right; margin-top: 20px;">SEL022Y</p>	FE CL MT AT AX SU						
		OK or NG							
OK		▶ Key switch is OK.							
NG		▶ GO TO 2.							

2	CHECK KEY SWITCH (INSERT)	<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 </p>  </div> <div style="margin-left: 20px;"> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> </div> </div> <p style="text-align: right; margin-top: 20px;">SEL194W</p>	ST RS BT HA SC
		OK or NG	
OK		▶ Check the following. <ul style="list-style-type: none"> ● 10A fuse [No. 13, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch 	EL IDX
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:

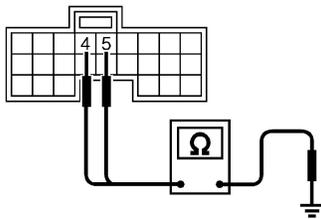
UNLK SW DR/AS ON

SEL341W

Without CONSULT-II

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector M143 terminal 4 (BR/Y) or 5 (GY) and ground.

Smart entrance control unit connector



Terminals	Door lock/unlock switch (LH or RH) condition	Continuity
5 - Ground	Lock	Yes
	N and Unlock	No
4 - Ground	Unlock	Yes
	N and Lock	No

SEL025Y

Refer to wiring diagram in EL-263.

OK or NG

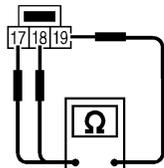
OK ► Door lock/unlock switch is OK.

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.

P/W main switch connector (D13)



Condition	Terminals		
	17	18	19
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

SEL196W

OK or NG

OK ► **Check the following.**

- Ground circuit for door lock/unlock switch
- Harness for open or short between door lock/unlock switch and smart entrance control unit connector

NG ► Replace door lock/unlock switch.

MULTI-REMOTE CONTROL SYSTEM

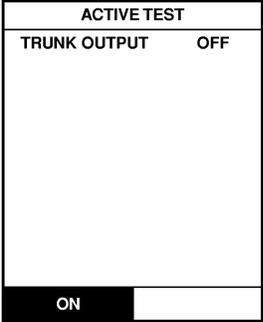
Trouble Diagnoses (Cont'd)

TRUNK LID OPENER ACTUATOR CHECK

=NFEL0195S12

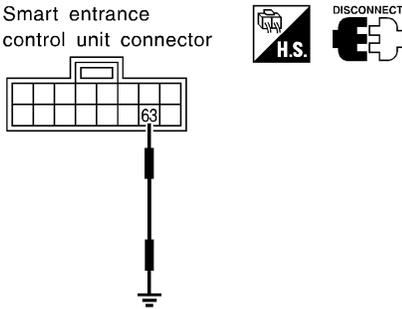
1	CHECK TRUNK LID OPENER	
Check trunk lid opener operation with trunk lid opener switch. NOTE: First check trunk lid opener cancel lever position.		
Does trunk lid open?		
Yes	▶	GO TO 2.
No	▶	Check trunk lid opener actuator and the circuit.

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MA
EM

2	CHECK TRUNK LID OPENER ACTUATOR OPERATION	
With CONSULT-II 1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "TRUNK OUTPUT" and touch "ON".		
		
Trunk lid opener should operate.		
NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.		
OK or NG		
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.

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3	CHECK TRUNK LID OPENER ACTUATOR CIRCUIT	
Without CONSULT-II 1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector M145 terminal 63 (L).		
		
Refer to wiring diagram in EL-265.		
Does trunk lid open?		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between smart entrance control unit and trunk lid opener actuator.

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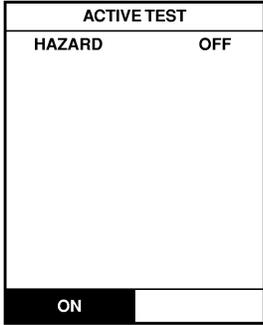
MULTI-REMOTE CONTROL SYSTEM

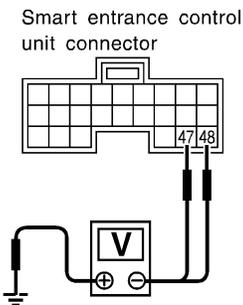
Trouble Diagnoses (Cont'd)

HAZARD REMINDER CHECK

=NFEL0195S08

1	CHECK HAZARD INDICATOR	
Check if hazard indicator flashes with hazard switch.		
Does hazard indicator operate?		
Yes	▶	GO TO 2.
No	▶	Check "hazard indicator" circuit.

2	CHECK HAZARD REMINDER OPERATION WITH CONSULT-II	
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "HAZARD" and touch "ON".</p>		
		
Hazard indicator should illuminate.		
SEL347W		
NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.		
OK or NG		
OK	▶	Hazard reminder operation is OK.
NG	▶	Replace smart entrance control unit.

3	CHECK HAZARD REMINDER OPERATION WITHOUT CONSULT-II							
<p> Without CONSULT-II</p> <p>Apply ground to smart entrance control unit harness connector M144 terminal 47 (G/B) and 48 (G/Y).</p>								
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Smart entrance control unit connector</p>  </div> <div style="flex: 1; margin-left: 20px;">  <p>CONNECT</p>   </div> <div style="flex: 2; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Condition of lock or unlock button</th> <th style="text-align: center;">Voltage (V)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Push.</td> <td style="text-align: center;">Approx. more than 0 - 12</td> </tr> <tr> <td style="text-align: center;">Do not push.</td> <td style="text-align: center;">0</td> </tr> </tbody> </table> </div> </div>			Condition of lock or unlock button	Voltage (V)	Push.	Approx. more than 0 - 12	Do not push.	0
Condition of lock or unlock button	Voltage (V)							
Push.	Approx. more than 0 - 12							
Do not push.	0							
SEL027Y								
Refer to wiring diagram in EL-265.								
OK or NG								
OK	▶	System is OK.						
NG	▶	Replace smart entrance control unit.						

MULTI-REMOTE CONTROL SYSTEM

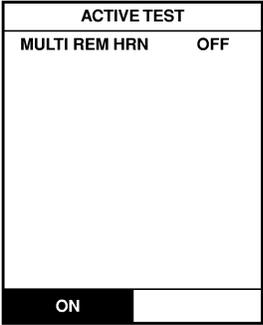
Trouble Diagnoses (Cont'd)

HORN REMINDER CHECK

=NFEL0195S09

1	CHECK HORN	
Check if horn sounds with horn switch.		
Does horn operate?		
Yes	▶	GO TO 2.
No	▶	Check horn circuit.

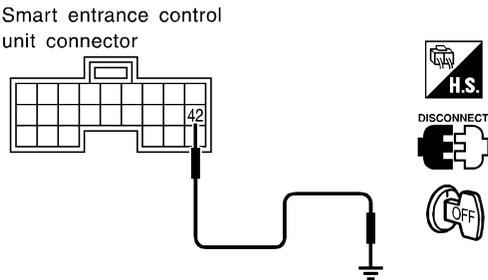
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2	CHECK HORN REMINDER OPERATION WITH CONSULT-II	
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "MULTI REM HRN" and touch "ON".</p>		
		
Horn should sound.		
<p>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Horn reminder operation is OK.
NG	▶	GO TO 4.

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3	CHECK HORN REMINDER OPERATION WITHOUT CONSULT-II	
<p> Without CONSULT-II</p> <p>1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector M144 terminal 42 (BR/Y).</p>		
		
<p>Refer to wiring diagram in EL-265.</p> <p style="text-align: center;">Does horn sound?</p>		
Yes	▶	Replace smart entrance control unit.
No	▶	GO TO 4.

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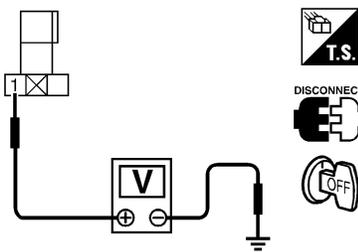
EL

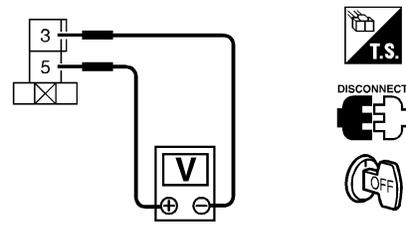
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MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

4	CHECK VEHICLE SECURITY HORN RELAY-2
Check vehicle security horn relay-2.	
OK or NG	
OK	▶ GO TO 5.
NG	▶ Replace vehicle security horn relay-2.

5	CHECK POWER SUPPLY FOR VEHICLE SECURITY HORN RELAY-2
1. Disconnect vehicle security horn relay-2 harness connector. 2. Check voltage between vehicle security horn relay-2 harness connector E63 terminal 1 (G/R) and ground.	
Vehicle security horn relay-2 	
SEL031Y	
Does battery voltage exist?	
Yes	▶ GO TO 6.
No	▶ Check the following. <ul style="list-style-type: none"> ● 10A fuse [No. 61, located in fuse block (J/B)] ● Harness for open or short between vehicle security horn relay-2 and fuse

6	CHECK VEHICLE SECURITY HORN RELAY-2
1. Disconnect vehicle security horn relay-2 harness connector. 2. Check voltage between vehicle security horn relay-2 harness connector E63 terminals 5 (G) and 3 (B).	
Vehicle security horn relay-2 	
SEL032Y	
Battery voltage should exist.	
OK or NG	
OK	▶ Check harness for open or short between smart entrance control unit and vehicle security horn relay-2.
NG	▶ Check the following. <ul style="list-style-type: none"> ● Harness for open or short between vehicle security horn relay-2 and fuse ● Harness for open or short between horn relay and vehicle security horn relay-2 ● Harness for open or short between vehicle security horn relay-2 and body grounds

MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

INTERIOR LAMP OPERATION CHECK

=NFEL0195S10

1	CHECK INTERIOR LAMP	
Check if the interior lamp switch is in the "ON" position and the lamp illuminates.		
Does interior lamp illuminate?		
Yes	▶	GO TO 2.
No	▶	Check the following. <ul style="list-style-type: none"> ● Harness for open or short between smart entrance control unit and interior lamp ● Interior lamp

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2	CHECK INTERIOR LAMP OPERATION									
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "INT/IGN ILLUM" 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;"> <table border="1" style="width: 100%; text-align: center;"> <tr><th colspan="2">ACTIVE TEST</th></tr> <tr><td>INT/IGN ILLUM</td><td>OFF</td></tr> <tr><td colspan="2" style="height: 100px;"> </td></tr> <tr><td colspan="2">ON</td></tr> </table> </div> <div style="text-align: center;"> <p>Interior lamp should illuminate.</p> </div> </div>			ACTIVE TEST		INT/IGN ILLUM	OFF			ON	
ACTIVE TEST										
INT/IGN ILLUM	OFF									
ON										
SEL349W										

EC

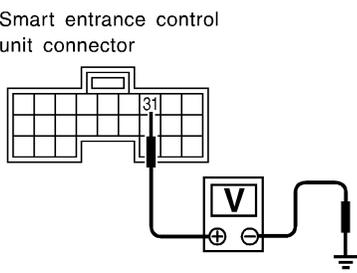
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<p> Without CONSULT-II</p> <p>Push unlock button of remote controller with all doors closed and driver's door locked, and check voltage between smart entrance control unit harness connector M144 terminal 31 (R/Y) and ground.</p>		
<div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector</p>  </div> <div style="margin-right: 20px;">  </div> <div style="text-align: center;"> <p>Voltage [V]:</p> <p>Unlock button is pushed. 0 (For approx. 30 seconds.)</p> <p>Unlock button is not pushed. Battery voltage</p> </div> </div>		
SEL029Y		
<p>Refer to wiring diagram in EL-263.</p> <p>OK or NG</p>		

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OK	▶	System is OK.
NG	▶	Check harness open or short between smart entrance control unit and interior lamp.

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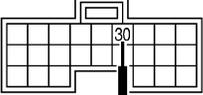
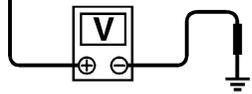
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MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

KEY HOLE ILLUMINATION OPERATION CHECK

NFEL0195S13

1	CHECK KEY HOLE ILLUMINATION OPERATION	
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" IN "MULTI REMOTE ENT" with CONSULT-II. 2. Select "INT/IGN ILLUM" and touch "ON".</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>ACTIVE TEST</p> <p>INT/IGN ILLUM OFF</p> <p>ON</p> </div> <div style="text-align: center;"> <p>Key hole illuminate should illuminate.</p> </div> </div> <p style="text-align: right;">SEL350W</p>		
<p> Without CONSULT-II</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 M144 terminal 30 (R/Y) and ground.</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector</p>  </div> <div style="text-align: center;">    </div> <div style="text-align: center;"> <p>Voltage [V]:</p> <p>Unlock button is pushed. 0 (For approx. 30 seconds)</p> <p>Unlock button is not pushed. Battery voltage</p> </div> </div> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;">  </div> <p style="text-align: right;">SEL030Y</p> <p>Refer to wiring diagram in EL-263.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	System is OK.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Harness for open or short between smart entrance control unit and key hole illumination. ● Key hole illumination

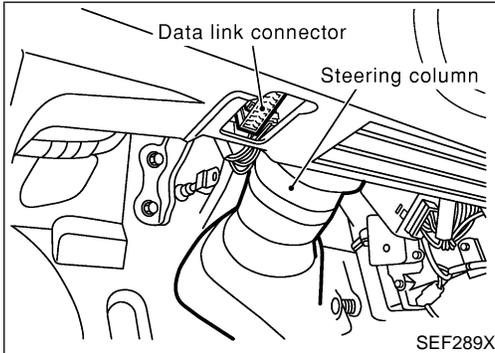
ID Code Entry Procedure

REMOTE CONTROLLER ID SET UP WITH CONSULT-II

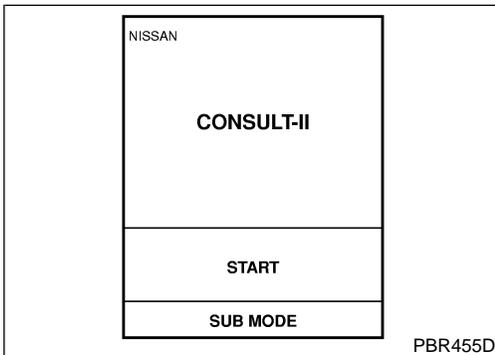
~NFEL0117
NFEL0117S01

NOTE:

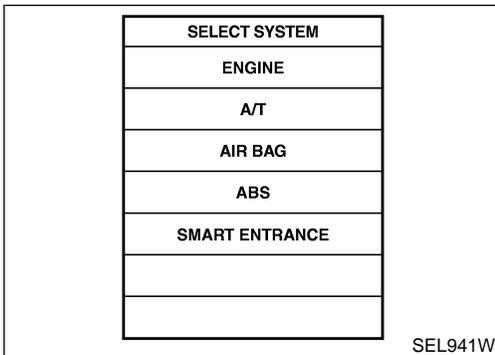
If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. When the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.



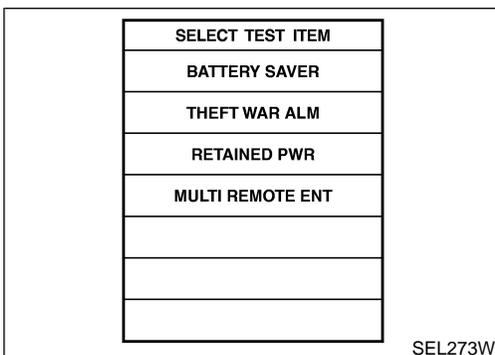
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



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



5. Touch "SMART ENTRANCE".



6. Touch "MULTI REMOTE ENT".

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MULTI-REMOTE CONTROL SYSTEM

ID Code Entry Procedure (Cont'd)

SELECT DIAG MODE
DATA MONITOR
ACTIVE TEST
WORK SUPPORT

SEL274W

SELECT WORK ITEM
REMO CONT ID CONFIR
REMO CONT ID REGIST
REMO CONT ID ERASUR
HZRD REM SET

SEL277W

7. Touch "WORK SUPPORT".

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.

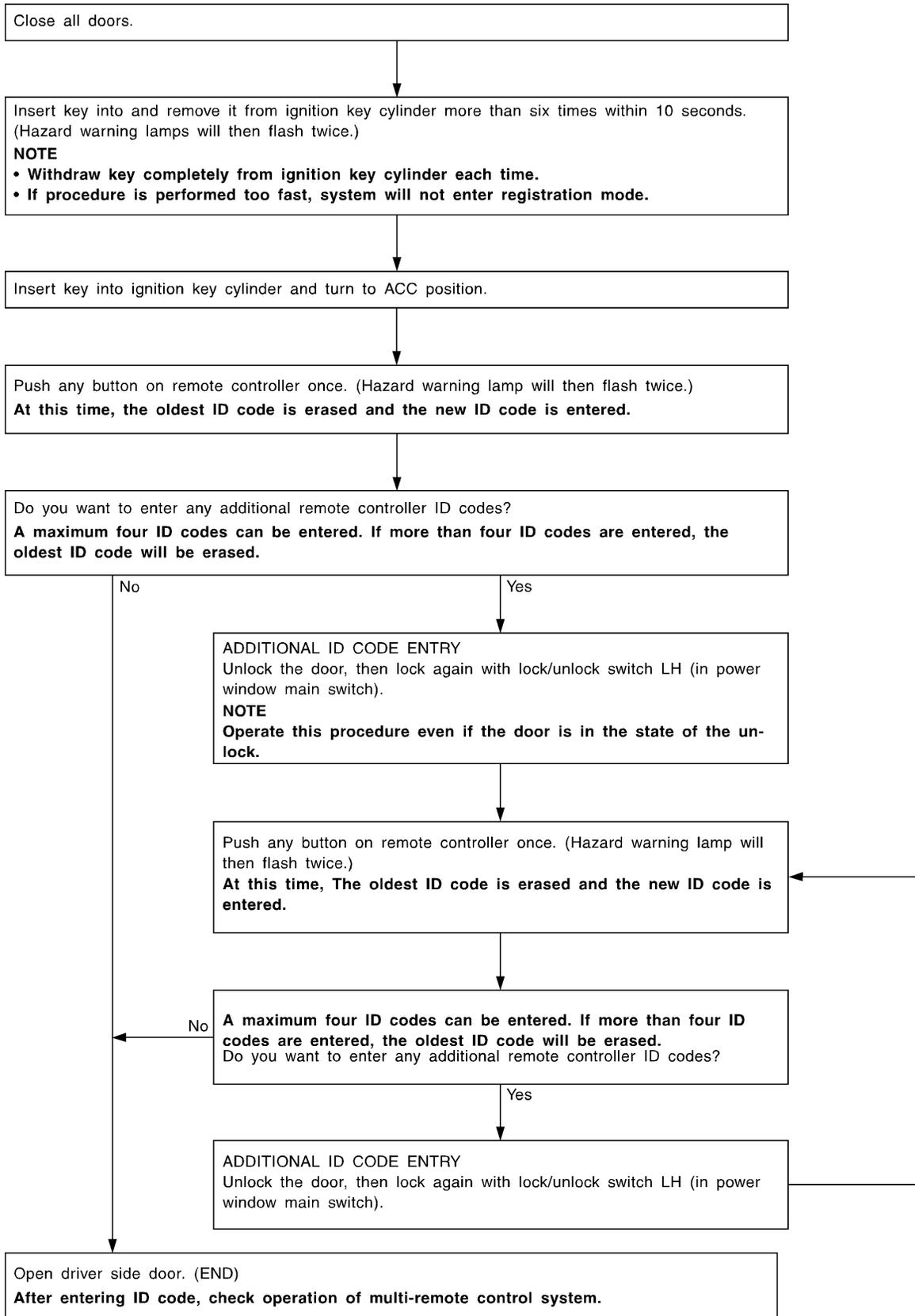
- "REMO CONT ID ERASUR"
Use this mode to erase a remote controller ID code.
- "HZRD REM SET"
Use this mode to activate or deactivate the hazard and horn reminder.

MULTI-REMOTE CONTROL SYSTEM

ID Code Entry Procedure (Cont'd)

REMOTE CONTROLLER ID SET UP WITHOUT CONSULT-II

NFEL0117S02



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MULTI-REMOTE CONTROL SYSTEM

ID Code Entry Procedure (Cont'd)

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-II. 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.

MULTI-REMOTE CONTROL SYSTEM

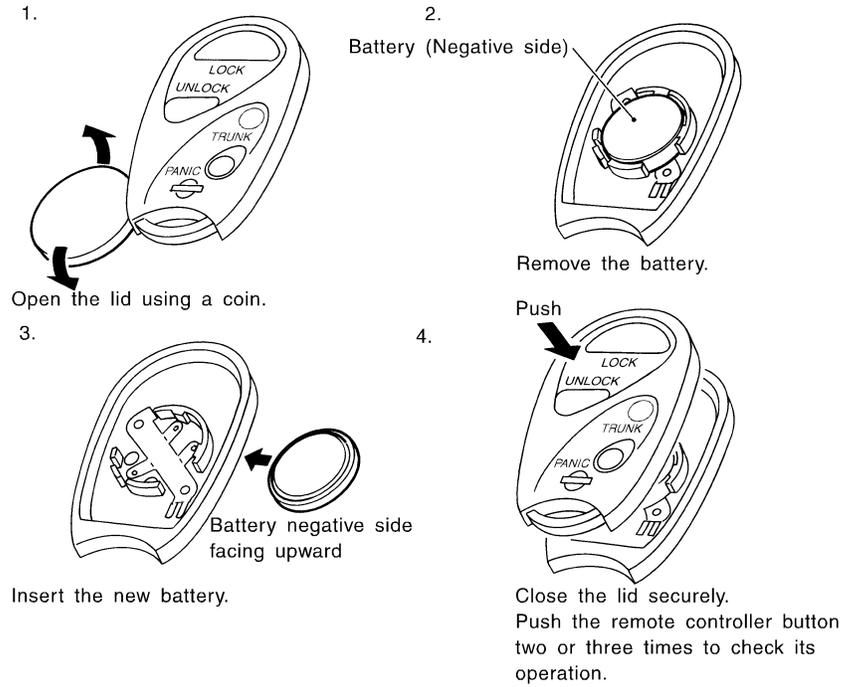
Remote Controller Battery Replacement

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.



SEL366W

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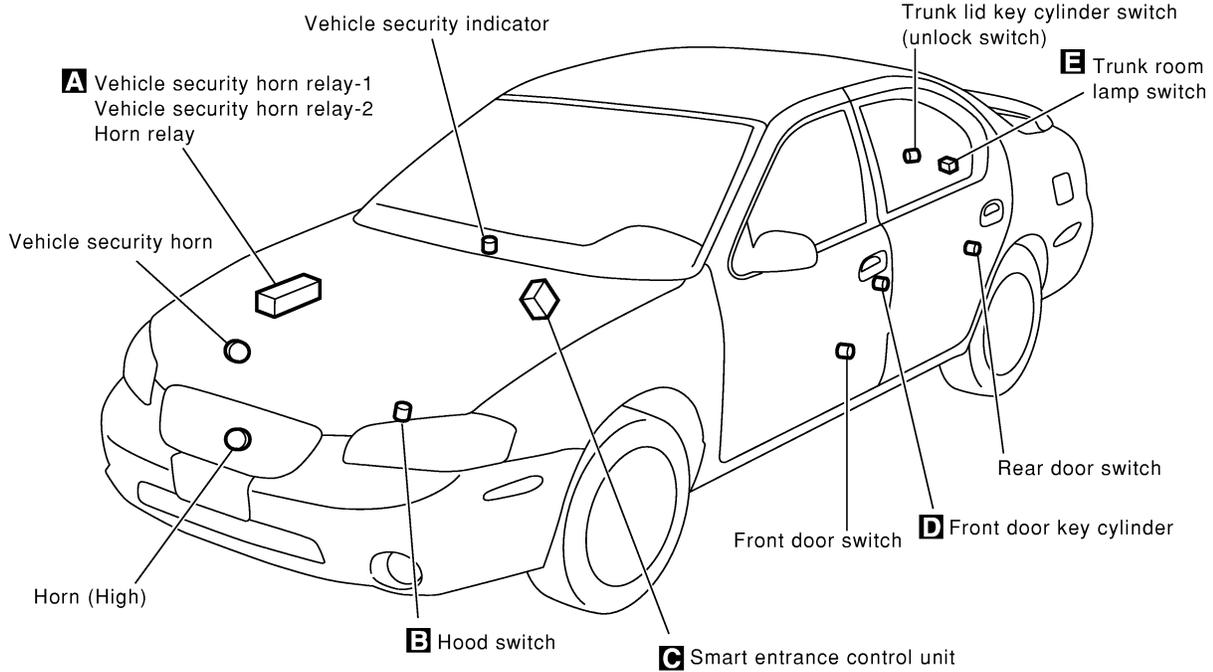
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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NFEL0119



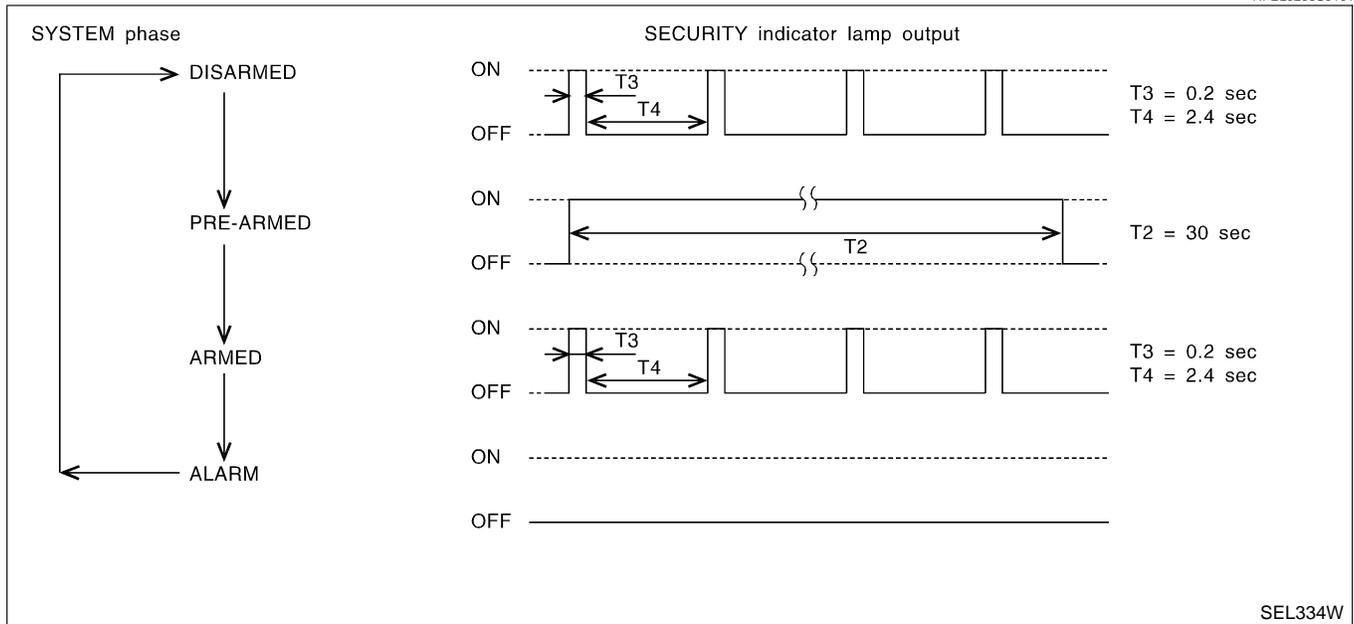
<p>Fuse block (J/B)</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr> <tr><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td></td><td></td><td></td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <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			<p>A Vehicle security horn relay-2 (E63)</p> <p>Horn relay (E66)</p> <p>Vehicle security 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																												
21	22	23	24	25	26	27	28	29	30	31																													
<p>B Hood switch (E26)</p>		<p>C Smart entrance control unit (M143, M144, M145)</p> <p>Driver side view with lower instrument panel removed</p>		<p>D Front door key cylinder switch (D8)</p> <p>Front door lock actuator (unlock sensor)</p> <p>LH: (D6)</p> <p>RH: (D37)</p>																																			
<p>E Trunk room lamp switch (T9)</p>		<p>Security indicator lamp</p> <p>Clock</p>																																					

SEL188Y

System Description

DESCRIPTION

1. Operation Flow



2. Setting The Vehicle Security System

Initial condition

- 1) Ignition switch is in OFF position.

Disarmed phase

When the vehicle security 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 vehicle security 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 Vehicle Security System

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 Vehicle Security System

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

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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

System Description (Cont'd)

- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to smart entrance control unit terminal 49.

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 27.

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 26.

Ground is supplied

- to smart entrance control unit terminals 43 and 64
- through body grounds M9, M25 and M87.

INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the vehicle security system is controlled by the doors, hood and trunk lid.

NFEL0263S03

Pattern A

To activate the vehicle security system, the smart entrance control unit must receive signals indicating the doors, hood and trunk lid are closed.

NFEL0263S0301

When a door is open, smart entrance control unit terminal 1, 2 or 3 receives a ground signal from each door switch.

When the hood is open, smart entrance control unit terminal 6 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 13 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 vehicle security system will automatically shift to armed mode.

Pattern B

To activate the vehicle security system, the smart entrance control unit must receive signal indicating any door (including hood and trunk lid) is opened.

NFEL0263S0302

When the front doors are locked with key, lock/unlock switch or multi-remote controller and then all doors are closed, the vehicle security system will automatically shift to armed mode.

VEHICLE SECURITY SYSTEM ACTIVATION

Pattern A

With all doors (including hood and trunk lid) close if the key is used to lock doors, terminal 11 receives a ground signal

NFEL0263S04

NFEL0263S0401

- 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 vehicle security system will activate automatically.

NOTE:

Vehicle security 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 5 receives a ground signal

NFEL0263S0402

- from terminal 6 of lock/unlock switch LH, or
- from terminal 8 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 11 receives a ground signal

- from terminal 3 of the key cylinder switch LH
- through body grounds M9, M25 and M87.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

System Description (Cont'd)

If these signals and lock signal from remote controller are received by the smart entrance control unit, ground signals of terminals 1, 2 and 3 are interrupted and all doors are closed, the vehicle security system will activate automatically.

NOTE:

Vehicle security system can be set even though the rear door is not locked.

Once the vehicle security system has been activated, smart entrance control unit terminal 38 supplies ground to terminal 2 of the security indicator lamp.

The security lamp will illuminate for approximately 30 seconds and then blinks every 2.6 seconds.

Now the vehicle security system is in armed phase.

VEHICLE SECURITY SYSTEM ALARM OPERATION

The vehicle security system is triggered by

- opening a door
- opening the hood or the trunk lid
- detection of battery disconnect and connect.

Once the vehicle security system is in armed phase, if the smart entrance control unit receives a ground signal at terminal 1, 2, 3 (door switch), 13 (trunk room lamp switch) or 6 (hood switch), the vehicle security system will be triggered. The headlamps flash and the horn sounds intermittently.

Power is supplied at all times

- through 10A fuse (No. 61 located in fuse and fusible link box)
- to vehicle security horn relay-1 terminals 1 and 3, and
- to vehicle security horn relay-2 terminal 1
- through 10A fuse (No. 57, located in fuse and fusible link box)
- to horn relay terminal 2.

Without xenon headlamp

Power is also 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.

With xenon headlamp

Power is also supplied at all times

- through 15A fuse (No. 68, located in fuse and fusible link box)
- to headlamp relay LH terminal 3,
- through 20A fuse (No. 54, located in fuse and fusible link box)
- to headlamp relay LH terminals 1 and 6,
- through 15A fuse (No. 69, located in fuse and fusible link box)
- to headlamp relay RH terminal 3, and
- through 20A fuse (No. 55, located in fuse and fusible link box)
- to headlamp relay RH terminals 1 and 6.

When the vehicle security system is triggered, ground is supplied intermittently

- to headlamp LH relay terminal 2 from smart entrance control unit terminal 21 and
- to headlamp RH relay terminal 2 from smart entrance control unit terminal 59
- through smart entrance control unit terminals 43 and 64.

When headlamp relays (LH and RH) are energized and then power is supplied to headlamps (LH and RH). The headlamps flash intermittently.

When the vehicle security system is triggered, ground is supplied intermittently

- from smart entrance control unit terminal 42
- to vehicle security horn relay-2 terminal 2.

When vehicle security horn relay-2 is energized, ground is supplied intermittently

- to vehicle security horn relay-1 terminal 2, and
- to horn relay terminal 1.

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VEHICLE SECURITY (THEFT WARNING) SYSTEM

System Description (Cont'd)

When vehicle security horn relay-1 and horn relay are energized, then power is supplied to vehicle security horn and horn.

The horn sounds intermittently.

The alarm automatically turns off after 50 seconds but will reactivate if the vehicle is tampered with again.

VEHICLE SECURITY SYSTEM DEACTIVATION

NFEL0263S06

To deactivate the vehicle security 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 10 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 12 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 vehicle security system is deactivated. (Disarmed phase)

PANIC ALARM OPERATION

NFEL0263S07

Multi-remote control system may or may not operate vehicle security 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 42
- to vehicle security horn relay-2 terminal 2,
- from smart entrance control unit terminal 21
- to headlamp LH relay terminal 2 and
- from smart entrance control unit terminal 59
- to headlamp RH relay terminal 2

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.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

System Description (Cont'd)

NOTE:

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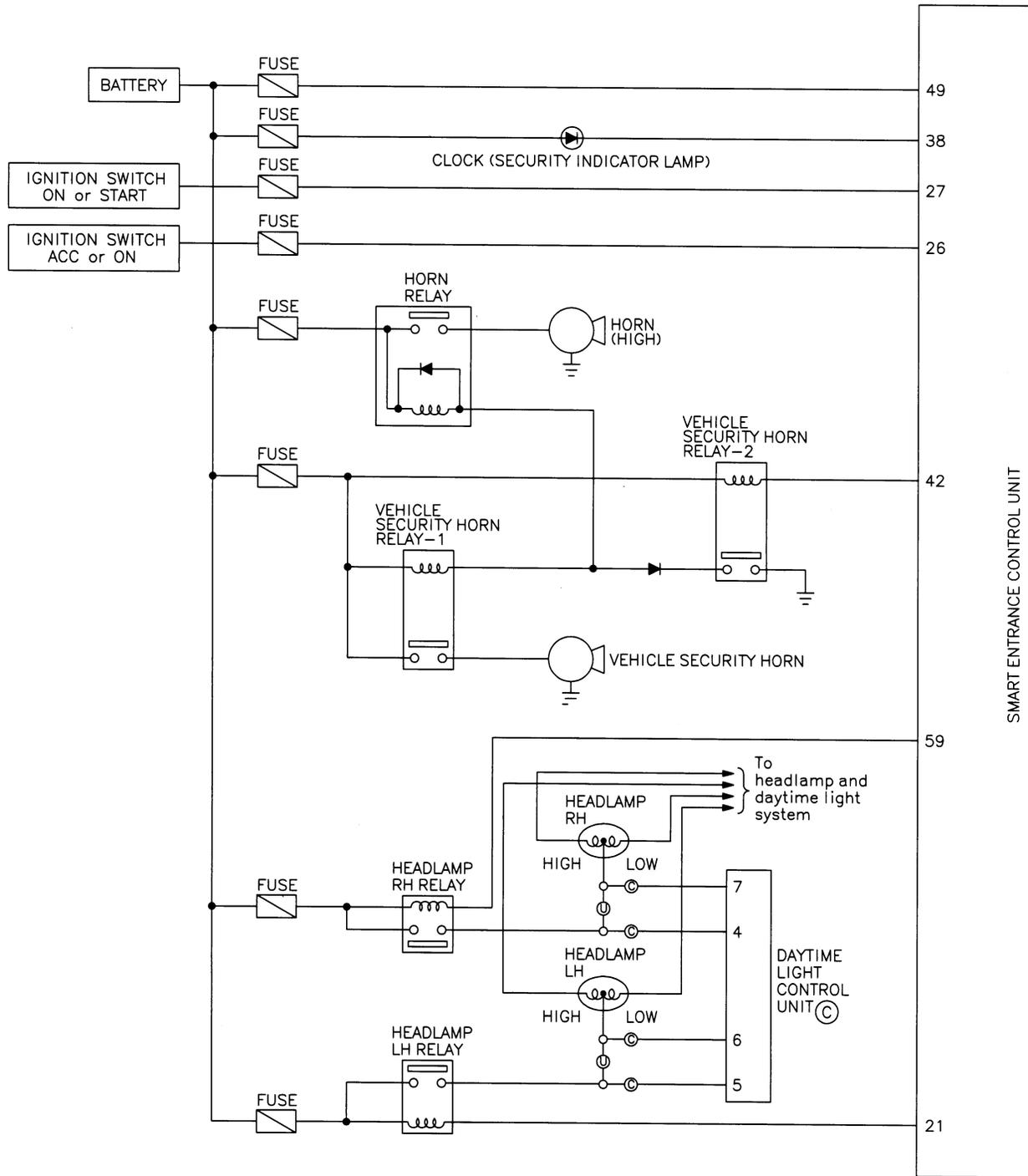
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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Schematic

Schematic

NFEL0121

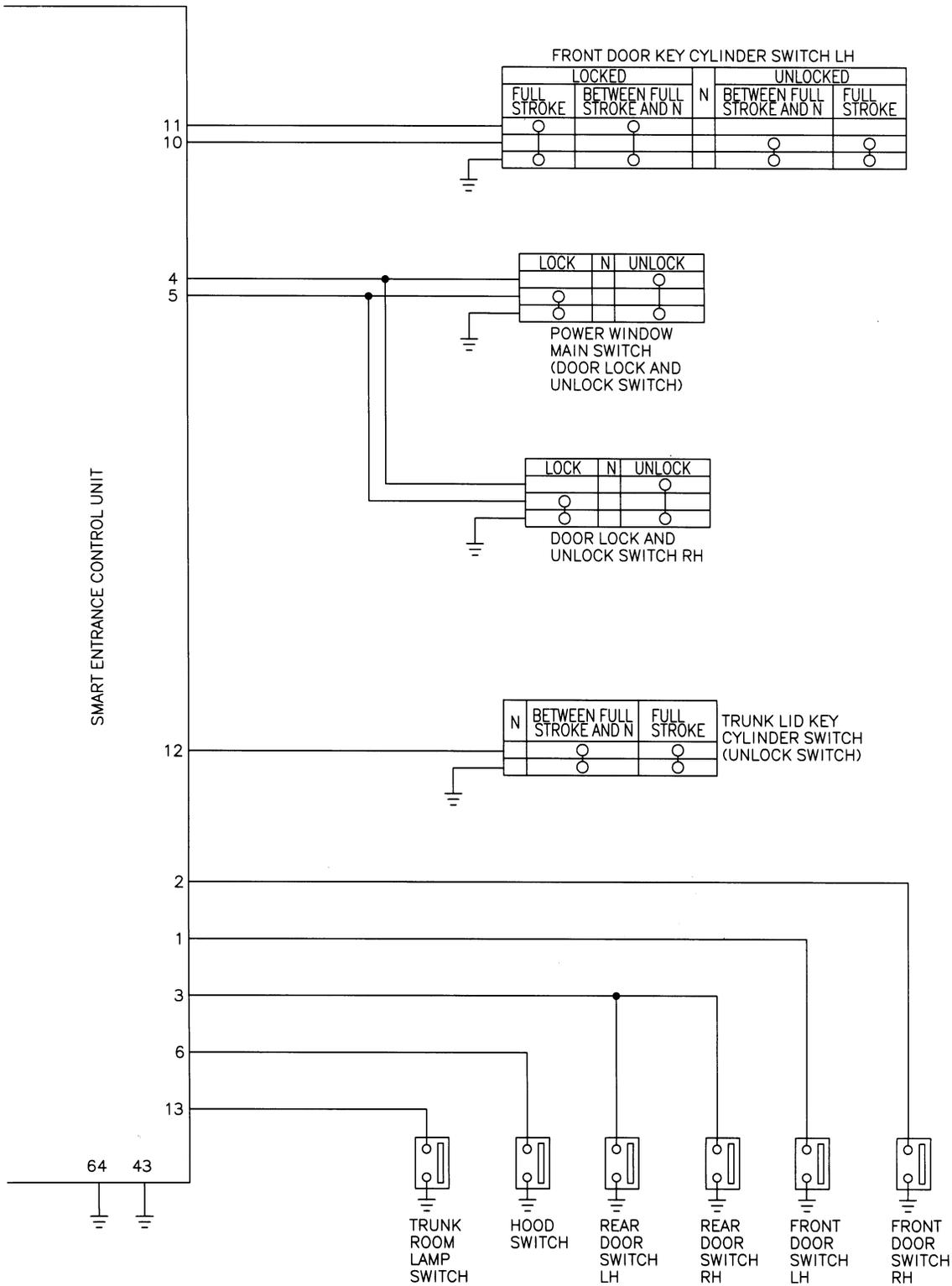


Ⓢ : For USA
 Ⓢ : For Canada

MEL075N

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Schematic (Cont'd)



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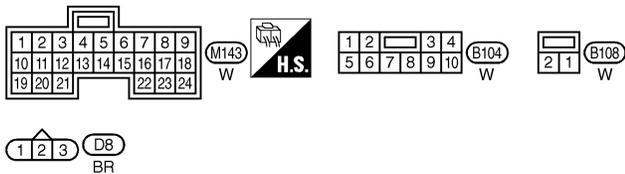
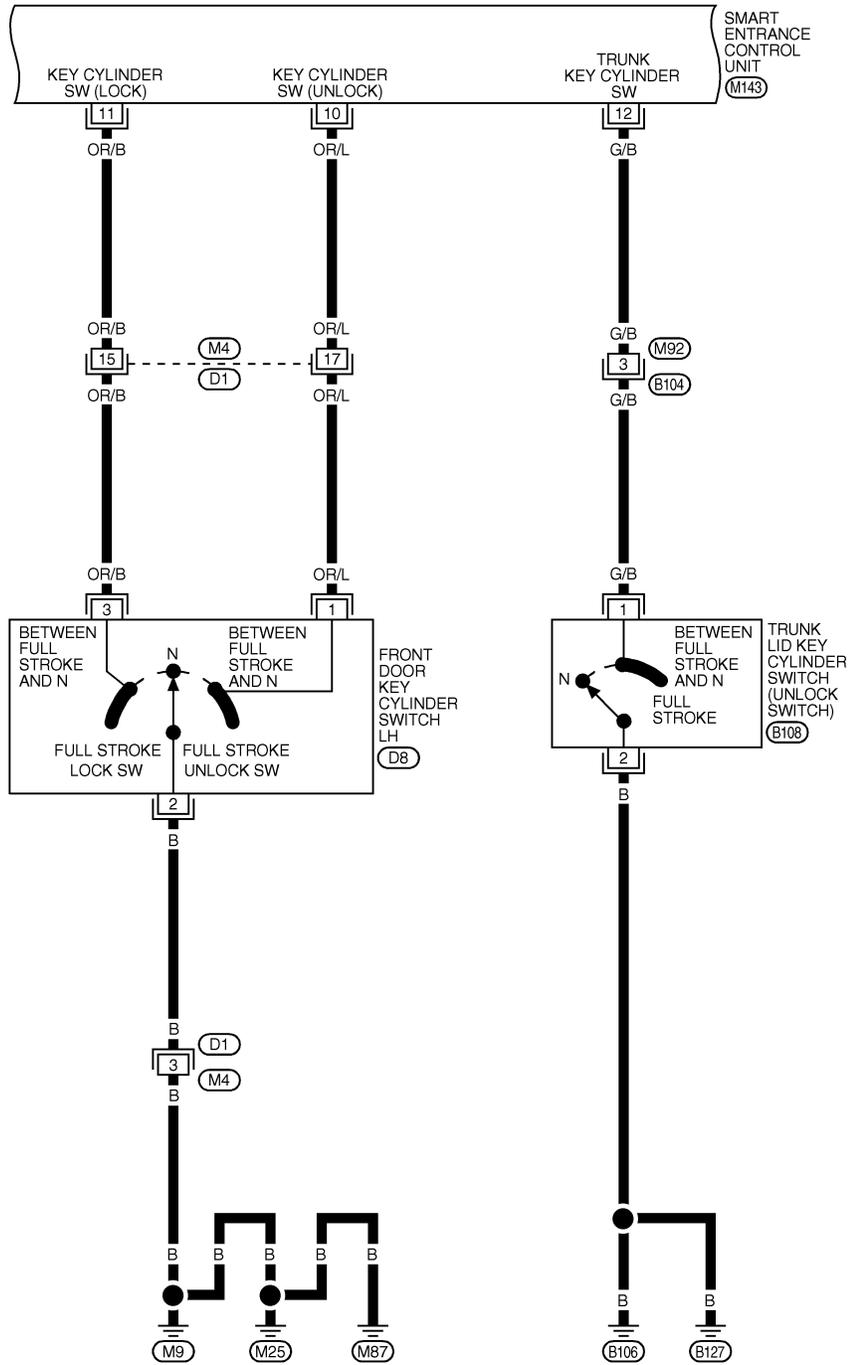
VEHICLE SECURITY (THEFT WARNING) SYSTEM

Wiring Diagram — VEHSEC — (Cont'd)

FIG. 3

NFEL0122S03

EL-VEHSEC-03



REFER TO THE FOLLOWING.

(D1) -SUPER
MULTIPLE JUNCTION (SMJ)

MEL079N

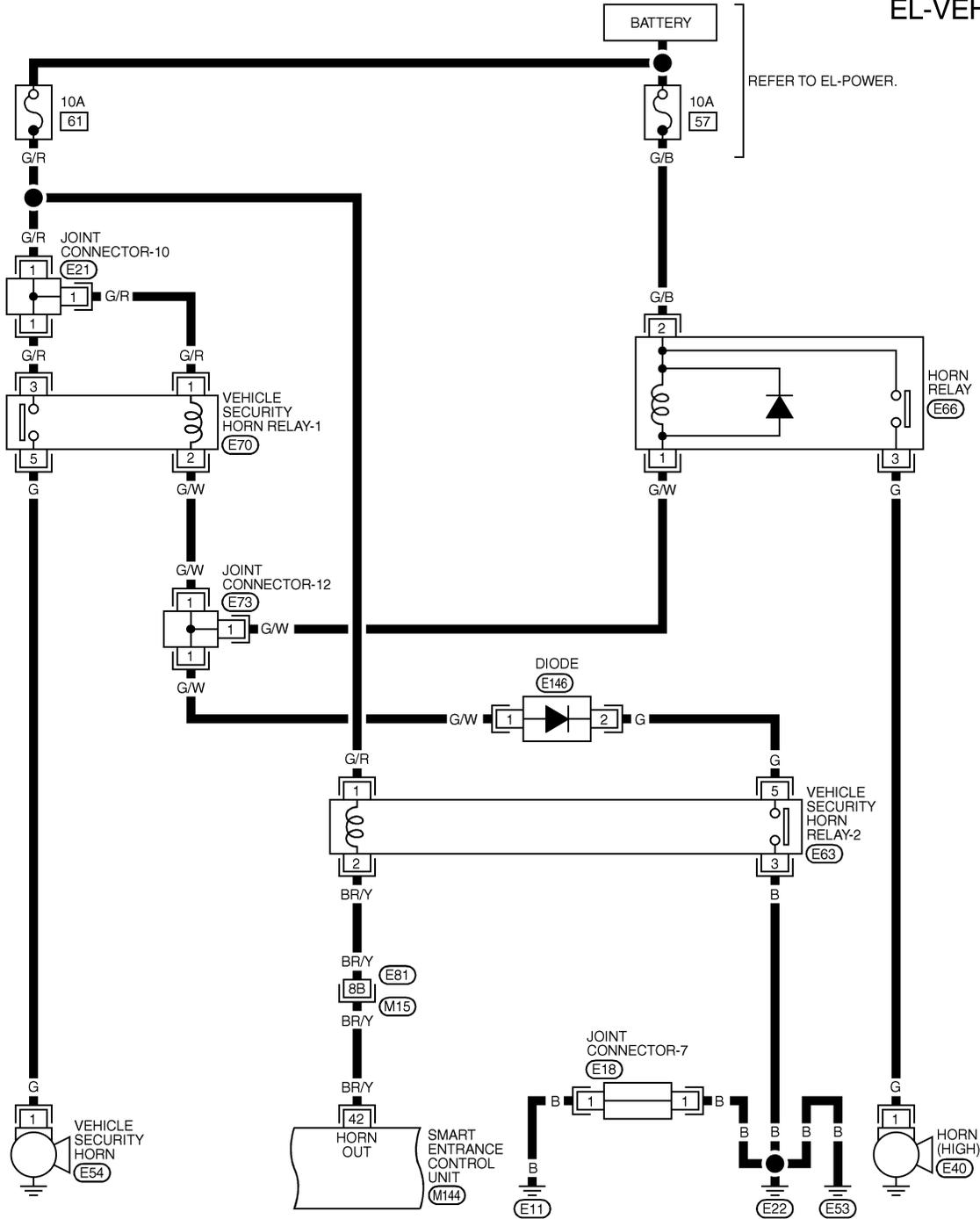
VEHICLE SECURITY (THEFT WARNING) SYSTEM

Wiring Diagram — VEHSEC — (Cont'd)

FIG. 4

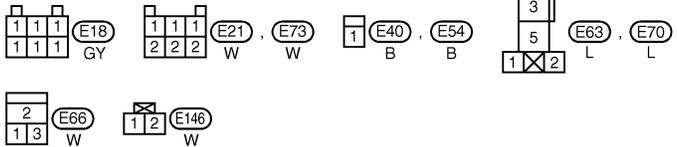
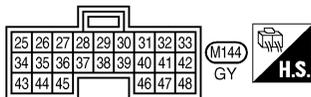
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EL-VEHSEC-04



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REFER TO THE FOLLOWING.

(M15) -SUPER
MULTIPLE JUNCTION (SMJ)

MEL080N

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Wiring Diagram — VEHSEC — (Cont'd)

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

TERMINAL	WIRE COLOR	ITEM	CONDITION		DATA (DC)
1	SB	DRIVER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V
2	R/L	PASSENGER DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V
3	R/W	REAR DOOR SWITCH	OFF (CLOSED) → ON (OPEN)		5V → 0V
4	BR/Y	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → UNLOCKS		5V → 0V
5	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL → LOCKS		5V → 0V
6	Y/B	HOOD SWITCH	ON (OPEN) → OFF (CLOSED)		0V → 12V
10	OR/L	DOOR KEY CYLINDER UNLOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)		5V → 0V
11	OR/B	DOOR KEY CYLINDER LOCK SWITCH	OFF (NEUTRAL) → ON (LOCKED)		5V → 0V
12	G/B	TRUNK LID KEY CYLINDER SWITCH	OFF (NEUTRAL) → ON (UNLOCK)		5V → 0V
13	PU/Y	TRUNK ROOM LAMP SWITCH	ON (OPEN) → OFF (CLOSED)		0V → 12V
21	P	HEADLAMP LH RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH OFF OR 1ST) ON OR START HEADLAMPS ILLUMINATE BY AUTO LIGHT CONTROL	OFF MORE THAN 45 SECONDS	12V
				WITHIN 45 SECONDS	0V
					0V
					0V
26	PU	IGNITION SWITCH (ACC)	"ACC" POSITION		12V
27	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN "ON" POSITION		12V
38	G/OR	SECURITY INDICATOR	GOES OFF → ILLUMINATES		12V → 0V
42	BR/Y	VEHICLE SECURITY HORN RELAY	WHEN PANIC ALARM IS OPERATED USING REMOTE CONTROLLER (ON → OFF)		12V → 0V
43	B	GROUND	-		-
49	R/B	POWER SOURCE (FUSE)	-		12V
59	P	HEADLAMP RH RELAY	IGNITION SWITCH (WITH LIGHTING SWITCH OFF OR 1ST) ON OR START HEAD LAMP ILLUMINATE BY AUTO LIGHT CONTROL (OPERATE → NOT OPERATE)	OFF OR ACC MORE THAN 45 SECONDS	12V
				WITHIN 45 SECONDS	0V
					0V
					LESS THAN 1.5V → 12V
64	B	GROUND	-		-

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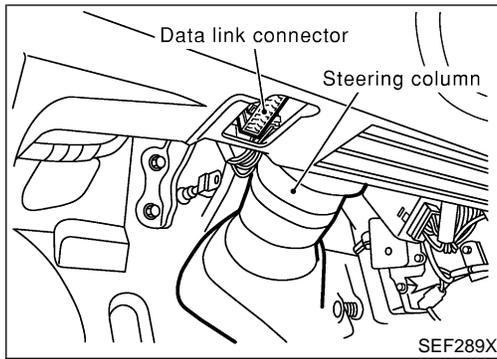
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VEHICLE SECURITY (THEFT WARNING) SYSTEM

CONSULT-II Inspection Procedure



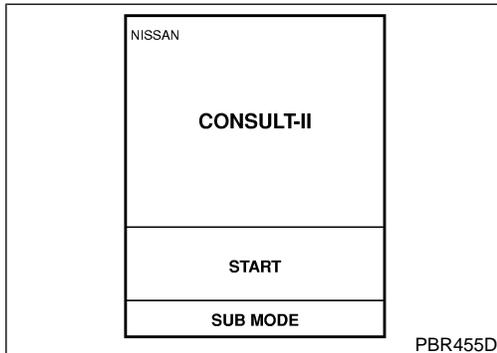
CONSULT-II Inspection Procedure

=NFEL0244

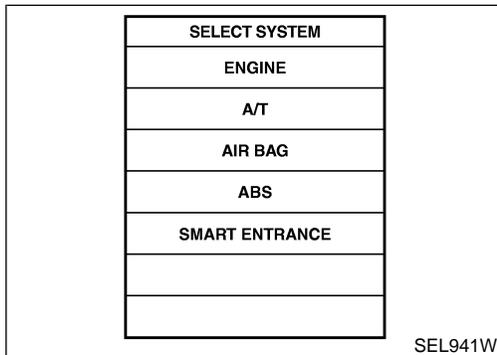
NFEL0244S01

"THEFT WAR ALM"

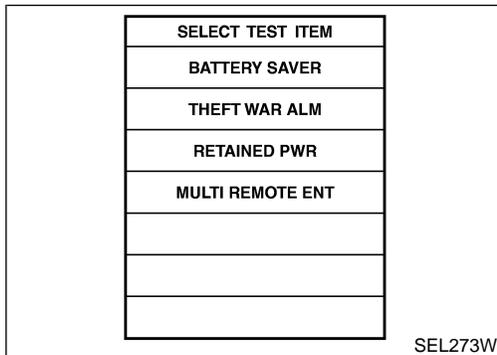
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



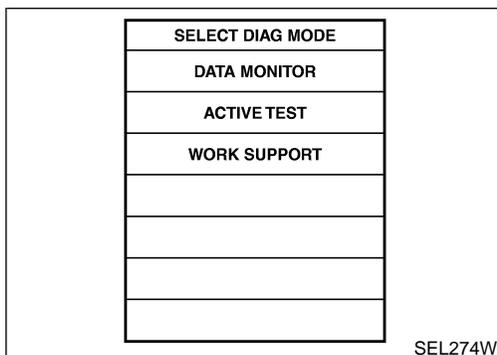
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Touch "THEFT WAR ALM".



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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

CONSULT-II Application Item

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.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
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.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door 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.
TRUNK SW	Indicates [ON/OFF] condition of trunk switch.
TRUNK KEY SW	Indicates [ON/OFF] condition of trunk key cylinder switch.
HOOD SWITCH	Indicates [ON/OFF] condition of hood switch.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from door lock/unlock LH and RH.
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.

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.
HORN	This test is able to check vehicle security alarm operation. The alarm will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.
HEADLAMP	This test is able to check vehicle security alarm headlamp operation. The headlamp illuminates for 0.5 seconds after “ON” on CONSULT-II screen is touched.

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.

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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses

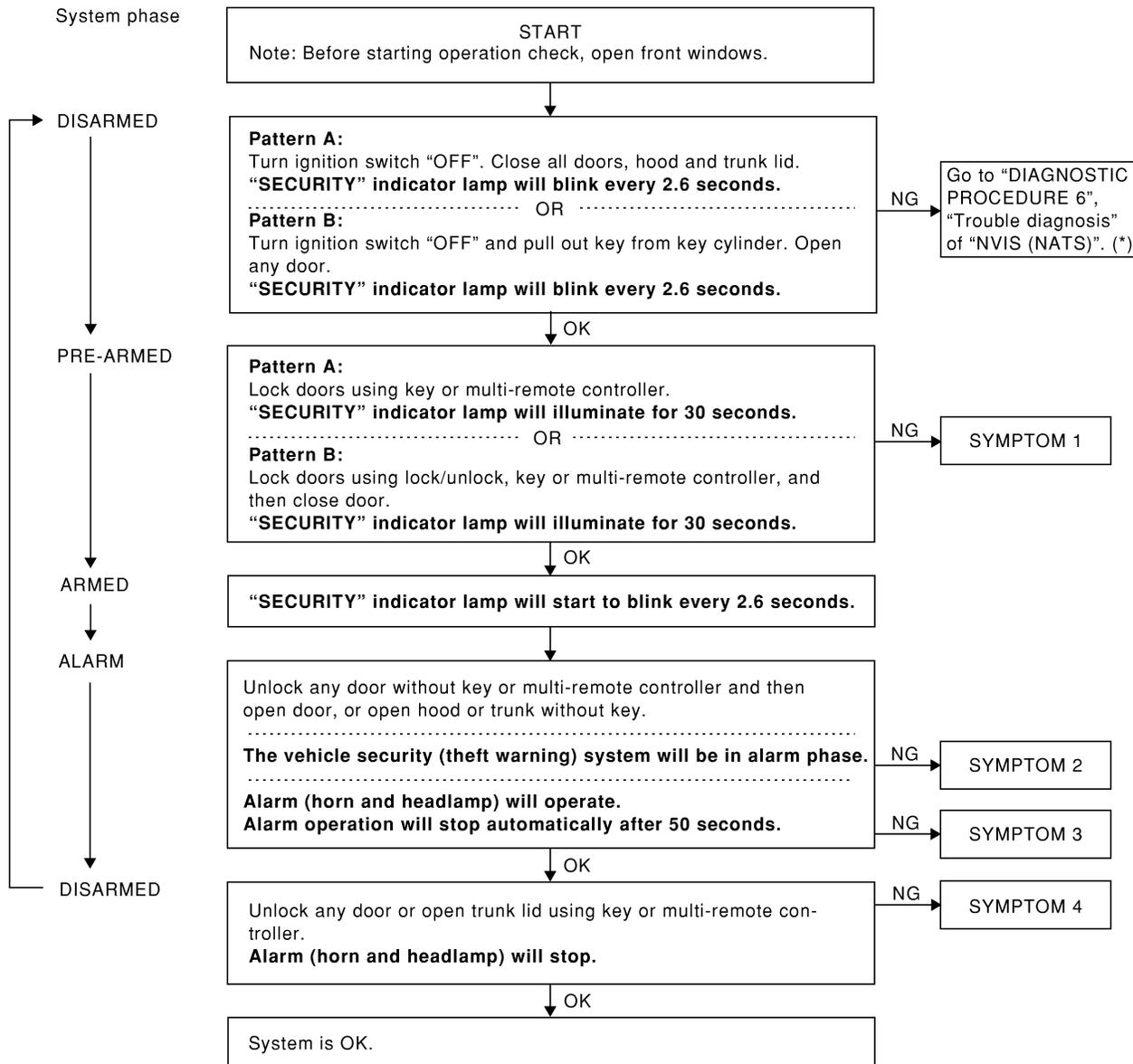
Trouble Diagnoses

=NFEL0123

PRELIMINARY CHECK

NFEL0123S01

The system operation is canceled by turning ignition switch to "ACC" at any step between START and ARMED in the following flow chart.



SEL254WA

For details of "Pattern A" and "Pattern B" about vehicle security (theft warning) system setting, refer to EL-289.

*: Refer to EL-349.

After performing preliminary check, go to symptom chart on next page.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

SYMPTOM CHART

NFEL0123S02

REFERENCE PAGE (EL-)	304	306	307	313	315	316	317	319	269	
SYMPTOM	PRELIMINARY CHECK	POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR, HOOD AND TRUNK ROOM LAMP SWITCH CHECK	SECURITY INDICATOR LAMP CHECK	DOOR KEY CYLINDER SWITCH CHECK	TRUNK LID KEY CYLINDER SWITCH CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	VEHICLE SECURITY HORN AND HEADLAMP ALARM CHECK	Check "MULTI-REMOTE CONTROL" system.	GI MA EM LC EC FE CL MT
1	Vehicle security indicator does not illuminate for 30 seconds.	X	X		X					AT
	Vehicle security system cannot be set by ...									AX
	All items	X	X	X						SU
	Door outside key	X				X				BR
Lock/unlock switch	X						X		ST	
Multi-remote control	X								X	RS
2	*1 Vehicle security system does not alarm when ...									BT
	One of the door is opened	X		X						HA
3	Vehicle security alarm does not activate.									SC
	Horn or headlamp alarm	X		X				X		EL
4	Vehicle security system cannot be canceled by ...									IDX
	Door outside key	X				X				
	Trunk lid key	X					X			
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-304.

Symptom numbers in the symptom chart correspond with those of preliminary check.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

POWER SUPPLY AND GROUND CIRCUIT CHECK

NFEL0123S03

Power Supply Circuit Check

NFEL0123S0301

1. Disconnect smart entrance control unit harness connector.
2. Check voltage between smart entrance control unit harness connector M144 terminals 26 (PU), 27 (G), M145 terminal 49 (R/B) and ground.

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

SEL033Y

Ground Circuit Check

NFEL0123S0302

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector M144 terminal 43 (B), M145 terminal 64 (B) and ground.

Terminals	Continuity
43 - Ground	Yes
64 - Ground	Yes

SEL034Y

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

DOOR, HOOD AND TRUNK ROOM LAMP SWITCH CHECK

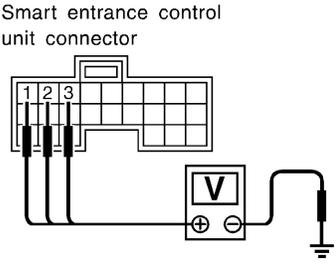
Door Switch Check

=NFEL0123S04

NFEL0123S0401

1	PRELIMINARY CHECK	
<p>1. Turn ignition switch OFF and remove key from ignition key cylinder. “SECURITY” indicator lamp should blink every 2.6 seconds.</p> <p>2. Close all doors, hood and trunk lid.</p> <p>3. Lock doors with multi-remote controller from inside the vehicle. “SECURITY” indicator lamp should turn on for 30 seconds.</p> <p>4. Unlock any door with the door lock knob and open the door within 30 seconds after door is locked. “SECURITY” indicator lamp should turn off.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Door switch is OK, and go to hood switch check.
NG	▶	GO TO 2.

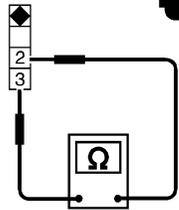
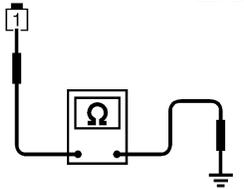
2	CHECK DOOR SWITCH INPUT SIGNAL																																	
<p> With CONSULT-II Check door switches (“DOOR SW-RR”, “DOOR SW-DR” and “DOOR SW-AS”) in “DATA MONITOR” mode with CONSULT-II.</p>																																		
<table border="1" style="margin-bottom: 20px;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>DOOR SW-RR</td> <td>OFF</td> </tr> <tr> <td>DOOR SW-DR</td> <td>OFF</td> </tr> <tr> <td>DOOR SW-AS</td> <td>OFF</td> </tr> </tbody> </table> <table border="1" style="margin-bottom: 20px;"> <thead> <tr> <th></th> <th>Monitor item</th> <th>Condition</th> <th>Condition</th> </tr> </thead> <tbody> <tr> <td rowspan="2">DOOR SW-RR</td> <td rowspan="2">Rear doors switch</td> <td>Open</td> <td>ON</td> </tr> <tr> <td>Closed</td> <td>OFF</td> </tr> <tr> <td rowspan="2">DOOR SW-DR</td> <td rowspan="2">Door switch LH</td> <td>Open</td> <td>ON</td> </tr> <tr> <td>Closed</td> <td>OFF</td> </tr> <tr> <td rowspan="2">DOOR SW-AS</td> <td rowspan="2">Door switch RH</td> <td>Open</td> <td>ON</td> </tr> <tr> <td>Closed</td> <td>OFF</td> </tr> </tbody> </table>			DATA MONITOR		MONITOR		DOOR SW-RR	OFF	DOOR SW-DR	OFF	DOOR SW-AS	OFF		Monitor item	Condition	Condition	DOOR SW-RR	Rear doors switch	Open	ON	Closed	OFF	DOOR SW-DR	Door switch LH	Open	ON	Closed	OFF	DOOR SW-AS	Door switch RH	Open	ON	Closed	OFF
DATA MONITOR																																		
MONITOR																																		
DOOR SW-RR	OFF																																	
DOOR SW-DR	OFF																																	
DOOR SW-AS	OFF																																	
	Monitor item	Condition	Condition																															
DOOR SW-RR	Rear doors switch	Open	ON																															
		Closed	OFF																															
DOOR SW-DR	Door switch LH	Open	ON																															
		Closed	OFF																															
DOOR SW-AS	Door switch RH	Open	ON																															
		Closed	OFF																															
SEL024Y																																		

<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminals 1 (SB), 2 (R/L) or 3 (R/W) and ground.</p>																														
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Smart entrance control unit connector</p>  </div> <div style="flex: 1; text-align: center;">    </div> <div style="flex: 2;"> <table border="1" style="margin-left: auto; margin-right: 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 door switch LH</td> <td rowspan="2">1</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 door switch RH</td> <td rowspan="2">2</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">3</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> </tbody> </table> </div> </div>				Terminals		Condition	Voltage [V]	(+)	(-)	Front door switch LH	1	Ground	Open	0	Closed	Approx. 5	Front door switch RH	2	Ground	Open	0	Closed	Approx. 5	Rear door switches	3	Ground	Open	0	Closed	Approx. 5
	Terminals			Condition	Voltage [V]																									
	(+)	(-)																												
Front door switch LH	1	Ground	Open	0																										
			Closed	Approx. 5																										
Front door switch RH	2	Ground	Open	0																										
			Closed	Approx. 5																										
Rear door switches	3	Ground	Open	0																										
			Closed	Approx. 5																										
SEL021Y																														
Refer to wiring diagram in EL-297.																														
OK or NG																														
OK	▶	Door switch is OK, and go to hood switch check.																												
NG	▶	GO TO 3.																												

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VEHICLE SECURITY (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				
OK or NG				
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 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.		

	Terminals	Condition	Continuity
Front door switches	2 - 3	Closed	No
		Open	Yes
Rear door switches	1 - Ground	Closed	No
		Open	Yes

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

Hood Switch Check

=NFEL0123S0402

1	PRELIMINARY CHECK	
<p>1. Turn ignition switch OFF and remove key from ignition key cylinder. "SECURITY" indicator lamp should blink every 2.6 seconds.</p> <p>2. Close all doors, hood and trunk lid.</p> <p>3. Lock doors with multi-remote controller from inside the vehicle. "SECURITY" indicator lamp should turn on for 30 seconds.</p> <p>4. Unlock hood with hood opener within 30 seconds after door is locked. "SECURITY" indicator lamp should turn off.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Hood switch is OK, and go to trunk room lamp switch check.
NG	▶	GO TO 2.

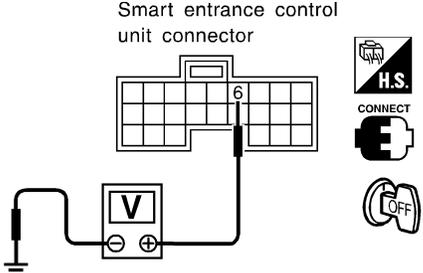
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2	CHECK HOOD SWITCH FITTING CONDITION	
OK or NG		
OK	▶	GO TO 3.
NG	▶	Adjust installation of hood switch or hood.

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3	CHECK HOOD SWITCH INPUT SIGNAL							
<p> With CONSULT-II 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
DATA MONITOR								
MONITOR								
HOOD SWITCH	OFF							
<p>When hood is open: HOOD SWITCH ON</p> <p>When hood is closed: HOOD SWITCH OFF</p>								
SEL354W								

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<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 6 (Y/B) and ground.</p>		
<p>Smart entrance control unit connector</p> 		
<p>Voltage [V]: Engine hood is open. 0 Engine hood is closed. Approx. 5</p>		
SEL035Y		
OK or NG		
OK	▶	Hood switch is OK, and go to trunk room lamp switch check.
NG	▶	GO TO 4.

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VEHICLE SECURITY (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> <p>Hood switch connector (E28)</p> </div> <div> <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>Check the following.</p> <ul style="list-style-type: none"> ● Hood switch ground circuit ● Harness for open or short between smart entrance control unit and hood switch
NG	▶	<p>Replace hood switch.</p>

VEHICLE SECURITY (THEFT WARNING) SYSTEM

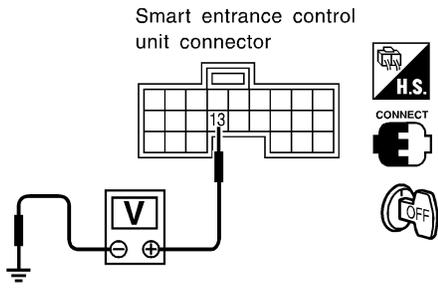
Trouble Diagnoses (Cont'd)

Trunk Room Lamp Switch Check

=NFEL0123S0403

1	PRELIMINARY CHECK	
<p>1. Turn ignition switch OFF and remove key from ignition key cylinder. "SECURITY" indicator lamp should blink every 2.6 seconds.</p> <p>2. Close all doors, hood and trunk lid.</p> <p>3. Lock doors with multi-remote controller from inside the vehicle. "SECURITY" indicator lamp should turn on for 30 seconds.</p> <p>4. Open trunk lid with trunk lid opener switch (on driver side door trim) within 30 seconds after door is locked. "SECURITY" indicator lamp should turn off.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Trunk room lamp switch is OK.
NG	▶	GO TO 2.

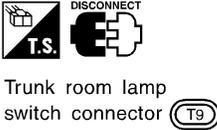
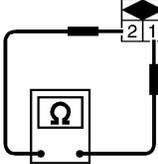
2	CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL							
<p> With CONSULT-II Check trunk room lamp switch ("TRUNK SW"), in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>TRUNK SW</td><td>OFF</td></tr> </table>			DATA MONITOR		MONITOR		TRUNK SW	OFF
DATA MONITOR								
MONITOR								
TRUNK SW	OFF							
<p>When trunk lid is open: TRUNK SW ON</p> <p>When trunk lid is closed: TRUNK SW OFF</p>								
SEL355W								

<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 13 (PU/Y) and ground.</p>		
		
<p>Voltage [V]: Trunk lid is open. Approx. 0 Trunk lid is closed. Approx. 12</p>		
SEL036Y		
OK or NG		
OK	▶	Trunk room lamp switch is OK.
NG	▶	GO TO 3.

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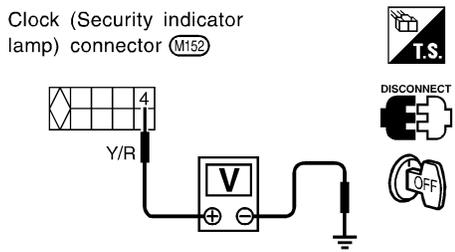
VEHICLE SECURITY (THEFT WARNING) SYSTEM

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>Continuity: Condition: Closed No Condition: Open Yes</p> </div> </div> <div style="text-align: center; margin-top: 20px;">  </div> <div style="text-align: right; margin-top: 20px;">SEL242W</div>		
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Trunk room lamp switch ground circuit ● Harness for open or short between smart entrance control unit and trunk room lamp switch
NG	▶	Replace trunk room lamp switch.

VEHICLE SECURITY (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;">  <p>Clock (Security indicator lamp) connector (M152)</p> <p>Y/R</p> <p>DISCONNECT</p> <p>OFF</p> <p>T.S.</p> </div> <p style="text-align: right;">SEL244W</p> <p style="text-align: center;">Does battery voltage exist?</p>		
Yes	▶	Check harness for open or short between security indicator lamp and smart entrance control unit.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between security indicator lamp and fuse

VEHICLE SECURITY (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

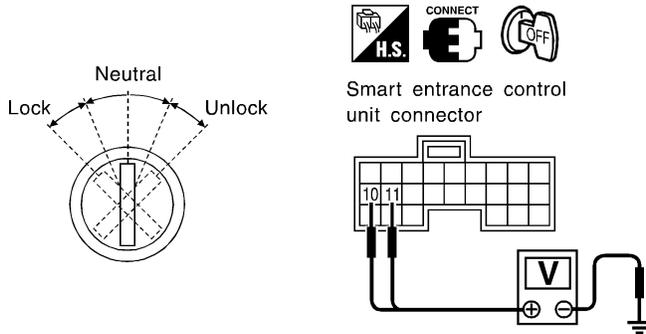
When key inserted in front key cylinder is turned to UNLOCK:

KEY CYL UN-SW ON

SEL342W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector M143 terminal 10 (OR/L) or 11 (OR/B) and ground.



Terminals		Key position	Voltage V
(+)	(-)		
11	Ground	Neutral/Unlock	Approx. 5
		Lock	0
10	Ground	Neutral/Lock	Approx. 5
		Unlock	0

SEL038Y

Refer to wiring diagram in EL-298.

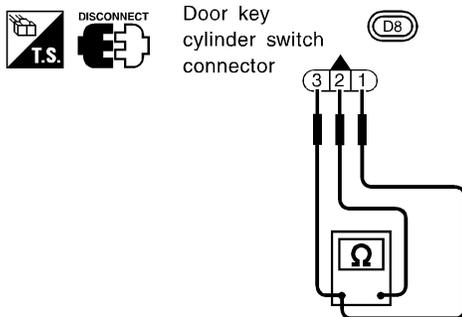
OK or NG

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.

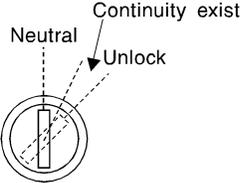
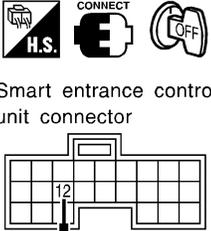
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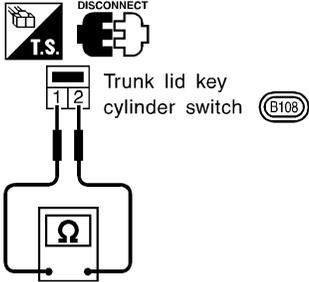
VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

TRUNK LID KEY CYLINDER SWITCH CHECK

=NFEL0123S08

1	CHECK TRUNK LID KEY CYLINDER SWITCH INPUT SIGNAL (UNLOCK SIGNAL)																		
<p> With CONSULT-II 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;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>TRUNK KEY SW</td><td>OFF</td></tr> </table> </div> <div style="margin-left: 20px;"> <p>When key in key cylinder is at Neutral position: TRUNK KEY SW OFF</p> <p>When key in key cylinder is at Unlock position: TRUNK KEY SW ON</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL358W</p>		DATA MONITOR		MONITOR		TRUNK KEY SW	OFF												
DATA MONITOR																			
MONITOR																			
TRUNK KEY SW	OFF																		
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector M143 terminal 12 (G/B) and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">  <p>Continuity exist</p> </div> <div style="text-align: center;">  <p>Smart entrance control unit connector</p> </div> <div style="margin-left: 20px;"> <table border="1" style="width: 100%; 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">12</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> </div> <p style="text-align: right; margin-top: 10px;">SEL039Y</p> <p>Refer to wiring diagram in EL-298.</p> <p style="text-align: center; margin-top: 10px;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 10%; text-align: center;">▶</td> <td>Trunk lid key cylinder switch is OK.</td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>GO TO 2.</td> </tr> </table>		Terminal		Key position	Voltage [V]	(+)	(-)	12	Ground	Neutral	Approx. 5	Unlock	0	OK	▶	Trunk lid key cylinder switch is OK.	NG	▶	GO TO 2.
Terminal		Key position	Voltage [V]																
(+)	(-)																		
12	Ground	Neutral	Approx. 5																
		Unlock	0																
OK	▶	Trunk lid key cylinder switch is OK.																	
NG	▶	GO TO 2.																	

2	CHECK TRUNK LID KEY CYLINDER SWITCH												
<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="text-align: center;">  <p>Trunk lid key cylinder switch (B108)</p> </div> <div style="margin-left: 20px;"> <table border="1" style="width: 100%; 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> </div> <p style="text-align: right; margin-top: 10px;">SEL248W</p> <p style="text-align: center; margin-top: 10px;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">OK</td> <td style="width: 10%; text-align: center;">▶</td> <td> <p>Check the following.</p> <ul style="list-style-type: none"> Trunk lid key cylinder switch ground circuit Harness for open or short between smart entrance control unit and trunk lid key cylinder switch </td> </tr> <tr> <td>NG</td> <td style="text-align: center;">▶</td> <td>Replace trunk lid key cylinder switch.</td> </tr> </table>		Key position	Continuity	Neutral	No	Unlock	Yes	OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> Trunk lid key cylinder switch ground circuit Harness for open or short between smart entrance control unit and trunk lid key cylinder switch 	NG	▶	Replace trunk lid key cylinder switch.
Key position	Continuity												
Neutral	No												
Unlock	Yes												
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> Trunk lid key cylinder switch ground circuit Harness for open or short between smart entrance control unit and trunk lid key cylinder switch 											
NG	▶	Replace trunk lid key cylinder switch.											

VEHICLE SECURITY (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:

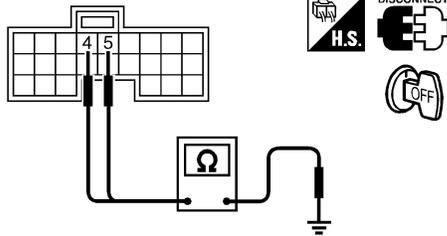
UNLK SW DR/AS ON

SEL341W

Without CONSULT-II

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector M143 terminal 4 (BR/Y) or 5 (GY) and ground.

Smart entrance control unit connector



Terminals	Door lock/unlock switch (LH or RH) condition	Continuity
5 - Ground	Lock	Yes
	N and Unlock	No
4 - Ground	Unlock	Yes
	N and Lock	No

Refer to wiring diagram in EL-296.

SEL040Y

OK or NG

OK ► Door lock/unlock switch is OK.

NG ► GO TO 2.

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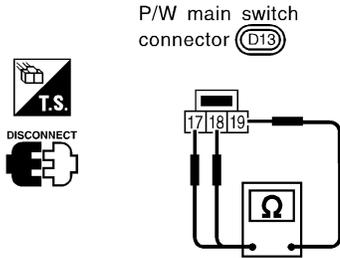
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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

2 CHECK DOOR LOCK/UNLOCK SWITCH

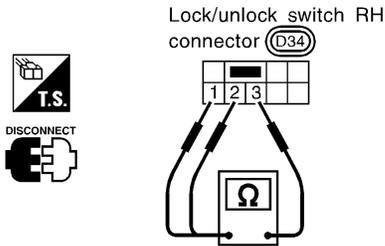
1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between each door lock/unlock switch terminals.
 - Power window main switch (Door lock/unlock switch LH)



Condition	Terminals		
	17	18	19
Lock		○	○
N	No continuity		
Unlock	○		○

SEL196W

- Door lock/unlock switch RH



Condition	Terminals		
	1	2	3
Lock		○	○
N	No continuity		
Unlock	○		○

SEL197W

OK or NG

OK



Check the following.

- Ground circuit for door lock/unlock switch
- Harness for open or short between door lock/unlock switch and smart entrance control unit

NG



Replace door lock/unlock switch.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

VEHICLE SECURITY HORN AND HEADLAMP ALARM CHECK

-NFEL0123S09

1	CHECK VEHICLE SECURITY HORN AND HEADLAMP ALARM OPERATION WITH CONSULT-II	GI												
	<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "THEFT WAR ALM" with CONSULT-II.</p> <p>2. Select "HORN" and touch "ON".</p> <div style="display: flex; align-items: center; margin: 10px 0;"> <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%; padding: 2px;">HORN</td> <td style="width: 50%; padding: 2px;">OFF</td> </tr> <tr> <td colspan="2" style="height: 100px;"></td> </tr> <tr> <td style="background-color: black; color: white; text-align: center; padding: 2px;">ON</td> <td style="padding: 2px;"></td> </tr> </table> </div> <div style="text-align: center;"> <p>Vehicle security horn alarm should operate.</p> </div> </div> <p style="text-align: right; margin-right: 20px;">SEL041Y</p> <p>3. Select "HEADLAMP" and touch "ON".</p> <div style="display: flex; align-items: center; margin: 10px 0;"> <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%; padding: 2px;">HEAD LAMP</td> <td style="width: 50%; padding: 2px;">OFF</td> </tr> <tr> <td colspan="2" style="height: 100px;"></td> </tr> <tr> <td style="background-color: black; color: white; text-align: center; padding: 2px;">ON</td> <td style="padding: 2px;"></td> </tr> </table> </div> <div style="text-align: center;"> <p>Vehicle security headlamp alarm should operate.</p> </div> </div> <p style="text-align: right; margin-right: 20px;">SEL042Y</p> <p>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</p> <p style="text-align: center;">OK or NG</p>	HORN	OFF			ON		HEAD LAMP	OFF			ON		<p>MA</p> <p>EM</p> <p>LC</p> <p>EC</p> <p>FE</p> <p>CL</p> <p>MT</p> <p>AT</p> <p>AX</p> <p>SU</p> <p>BR</p>
HORN	OFF													
ON														
HEAD LAMP	OFF													
ON														
OK	▶	Vehicle security horn and headlamp alarm operation are OK.												
NG	▶	GO TO 3.												

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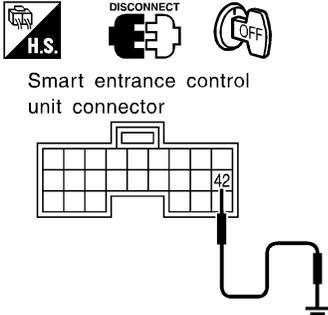
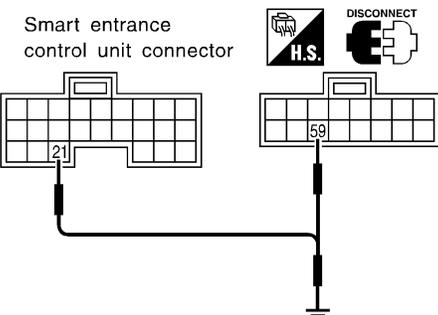
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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

2	CHECK VEHICLE SECURITY HORN AND HEADLAMP ALARM OPERATION WITHOUT CONSULT-II	
<p>⊗ Without CONSULT-II</p> <p>1. Disconnect smart entrance control unit harness connector.</p> <p>2. Apply ground to smart entrance control unit harness connector M144 terminal 42 (BR/Y).</p>		
		
		Vehicle security horn should operate.
SEL043YA		
<p>Refer to wiring diagram in EL-299.</p> <p>3. Apply ground to smart entrance control unit harness connector M143 and M145 terminal 21 (P) and 59 (P).</p>		
		
		Vehicle security headlamp alarm should operate.
SEL198Y		
<p>Refer to wiring diagram in EL-300.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Horn and headlamp alarm is OK.
NG	▶	GO TO 3.

3	CHECK VEHICLE SECURITY HORN RELAYS	
<p>Check vehicle security horn relay-1 and relay-2.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 4.
NG	▶	Replace.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

4	CHECK POWER SUPPLY FOR VEHICLE SECURITY HORN RELAYS	
<p>1. Disconnect vehicle security horn relay-1 and relay-2 connectors. 2. Check voltage between terminal 1 and ground.</p>		
<p>Vehicle security horn relay connectors</p>		
SEL044Y		
Does battery voltage exist?		
Yes	▶	GO TO 5.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse (No. 57 located in the fuse and fusible link box) ● Harness for open or short between vehicle security horn relays and fuse

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5	CHECK VEHICLE SECURITY HORN RELAYS CIRCUIT	
<p>1. Disconnect vehicle security horn relay-1 and relay-2 connectors. 2. Check voltage between terminals of each relay. Battery voltage should exist.</p>		
SEL045Y		
OK or NG		
OK	▶	Check harness for open or short between vehicle security horn relay-2 and headlamp relays.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Harness for open or short between vehicle security horn relay-1 and fuse ● Harness for open or short between vehicle security horn relay-1 and relay-2 ● Harness for open or short between vehicle security horn relay-1 and vehicle security horn

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SMART ENTRANCE CONTROL UNIT

Description

Description

NFEL0124

NFEL0124S01

OUTLINE

The smart entrance control unit totally controls the following body electrical system operations.

- Headlamp auto light control system
- Warning chime
- Rear defogger and door mirror defogger
- Power door lock
- Multi-remote control system
- Vehicle security 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 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 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 with remote controller, door lock/unlock switch or door key cylinder.
- Ignition switch is turned to ON.
- 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 (or ACC) 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 46.

- 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 Remote controller signal Door lock/unlock switch LH	Horn relay Vehicle security horn relay-1 Vehicle security horn relay-2 Hazard warning lamp 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
Vehicle security	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)	Vehicle security horn relay-2 Headlamp relay Security indicator	CL
			MT
Interior lamp	Door switches Remote controller signal (lock/unlock) Door lock/unlock switches (lock/unlock) Door key cylinder switch (lock/unlock) Ignition switch (ON) Key switch (Insert)	Interior lamp Key hole illumination Step lamp Door indicator	AT
			AX
Battery saver control for headlamps/parking lamps/licence lamps/tail lamps/fog lamps/illumination lamps	Ignition switch (ON) Front door switches Lighting switches	Headlamps Parking lamps Licence lamps Tail lamps Fog lamps Illumination lamps	SU
			BR
Battery saver control for interior lamp/trunk room lamp/spot lamp/vanity mirror illumination	Ignition switch (ON) Front door switches Lamp switches	Interior lamp Step lamp Spot lamp Vanity mirror illumination	ST
			RS
Battery saver control for rear window defogger and door mirror defogger	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay	BT
			BT
Retained power control for electric sunroof	Ignition switch (ON) Front door switches	Power window relay	HA
			HA
Retained power control for power window	Ignition switch (ON) Front door switches	Power window relay	SC
			SC

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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	Vehicle security system	X	X	X
RETAINED PWR	Retained power control	X	X	
MULTI REMOTE ENT	Multi-remote control system	X	X	X
HEAD LAMP	Headlamp	X	X	

X: Applicable

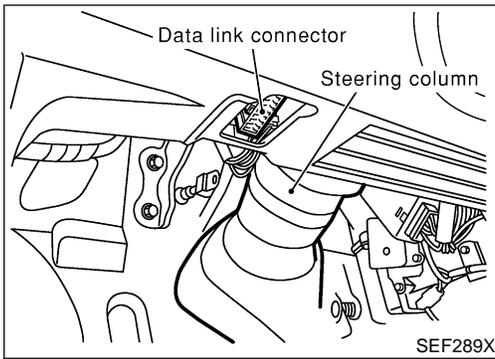
For diagnostic item in each control system, refer to the relevant pages for each system.

DIAGNOSTIC ITEM DESCRIPTION

NFEL0247S02

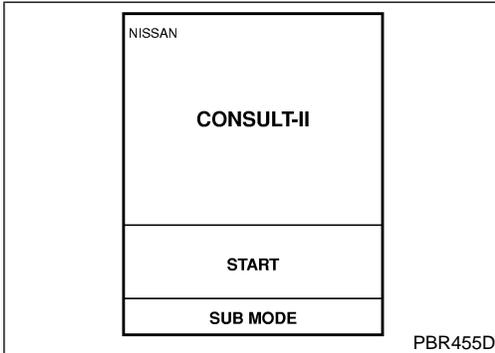
MODE	Description
DATA MONITOR	Input/output data in the smart entrance control unit can be read.
ACTIVE TEST	Diagnostic Test Mode in which CONSULT-II drives some systems apart from the smart entrance control unit.
WORK SUPPORT for THEFT WAR ALM	The recorded trigger signal when vehicle security system was activated can be checked.
WORK SUPPORT for MULTI REMOTE ENT	ID code of multi-remote controller can be registered and erased.

=NFEL0247S03

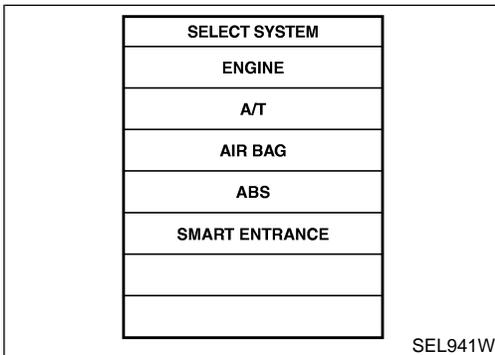


CONSULT-II INSPECTION PROCEDURE

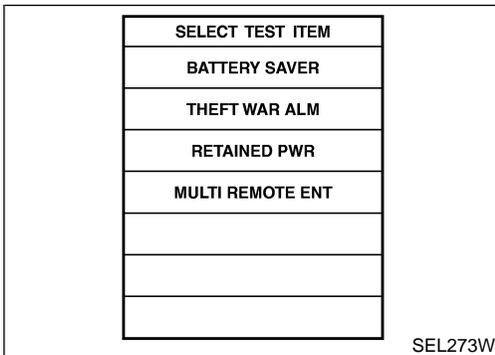
1. Turn the ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



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-324.

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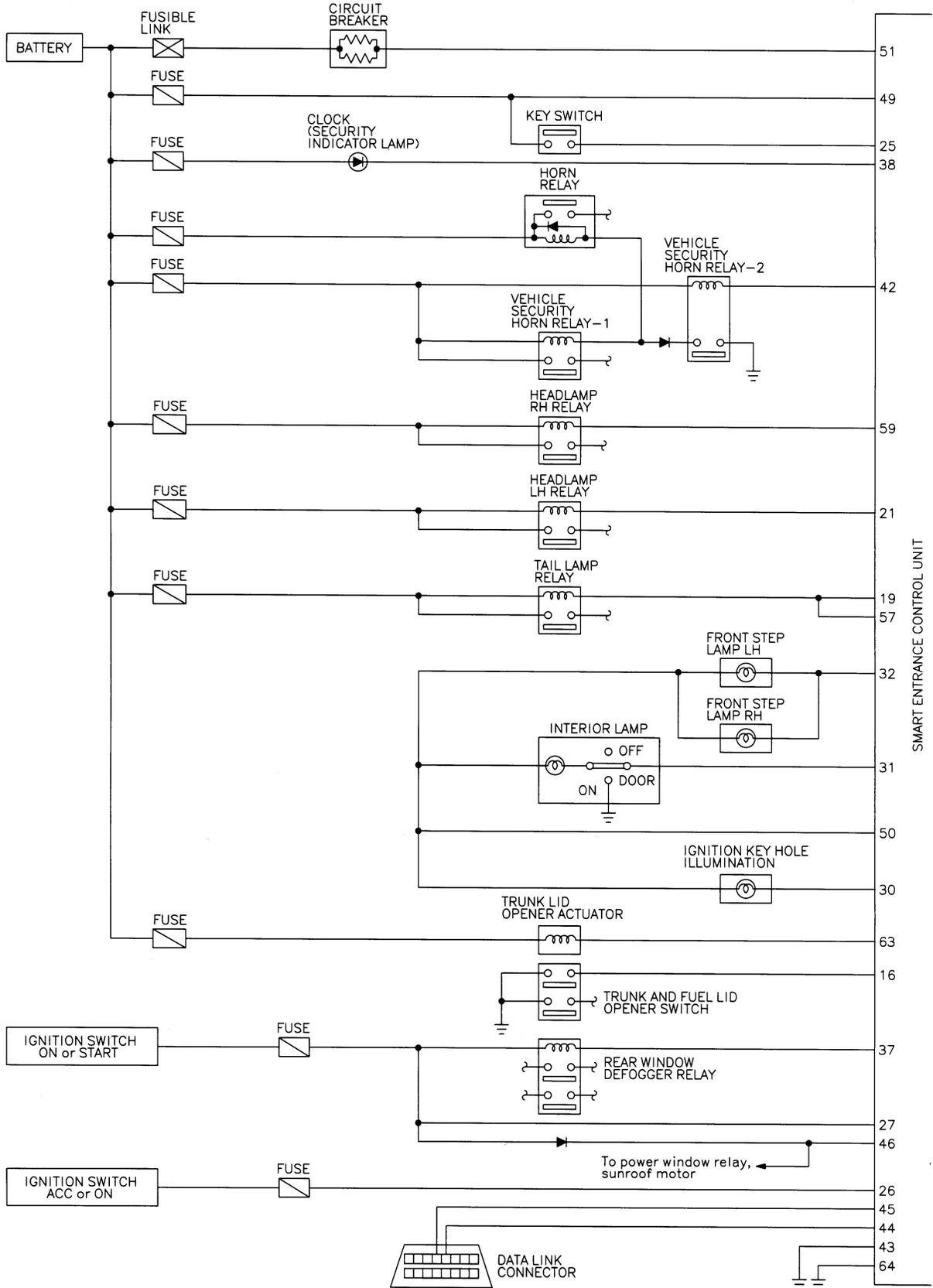
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SMART ENTRANCE CONTROL UNIT

Schematic

Schematic

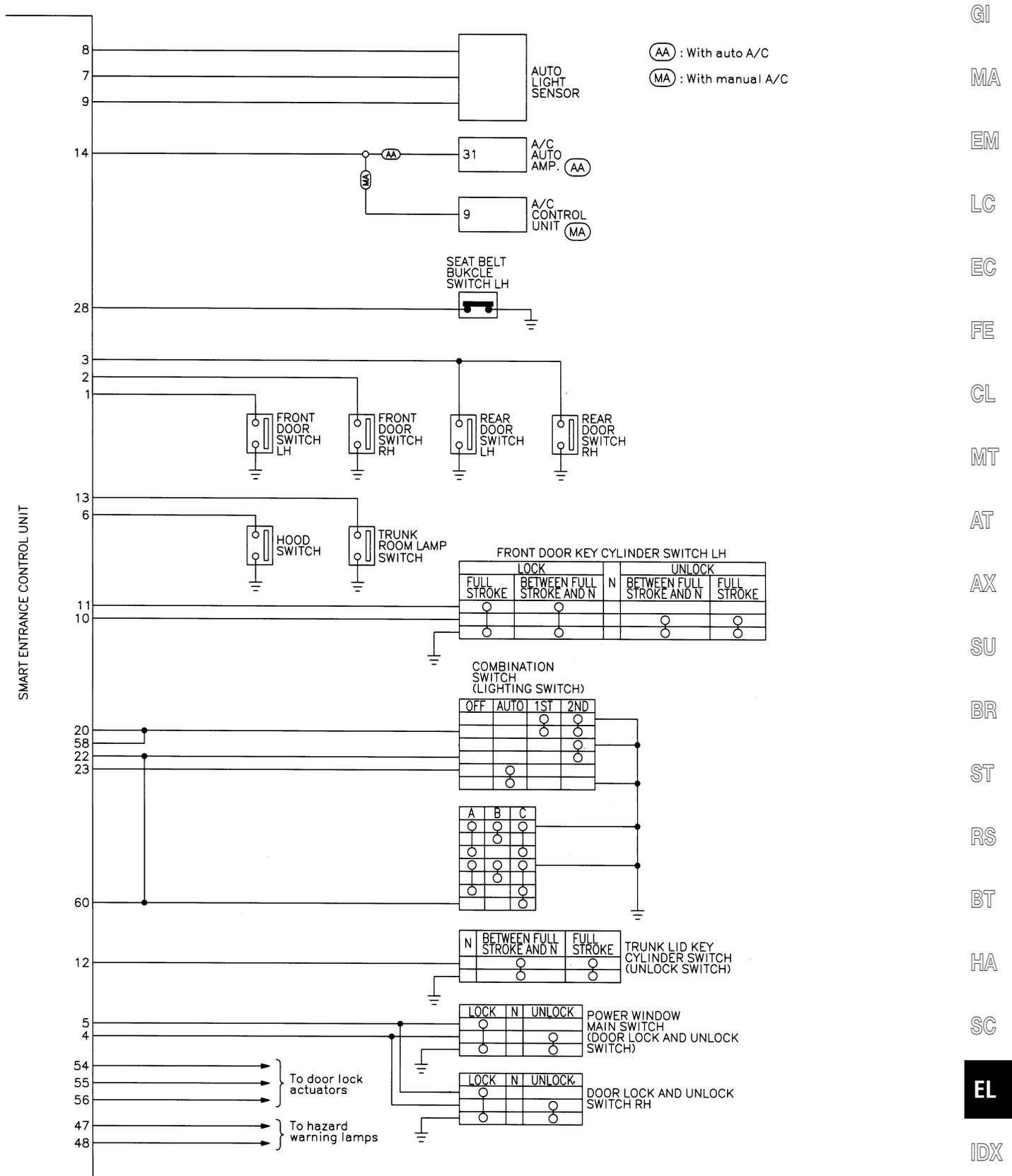
NFEL0125



MEL082N

SMART ENTRANCE CONTROL UNIT

Schematic (Cont'd)



MEL083N

SMART ENTRANCE CONTROL UNIT

Smart Entrance Control Unit Inspection Table

Smart Entrance Control Unit Inspection Table

NFEL0262

Terminal No.	Wire color	Connections	Operated condition		Voltage (Approximate values)	
1	SB	Driver door switch	OFF (Closed) → ON (Open)		5V → 0V	
2	R/L	Passenger door switch	OFF (Closed) → ON (Open)		5V → 0V	
3	R/W	Rear door switch	OFF (Closed) → ON (Open)		5V → 0V	
4	BR/Y	Door lock & unlock switches	Neutral → Unlocks		5V → 0V	
5	GY	Door lock & unlock switches	Neutral → Locks		5V → 0V	
6	Y/B	Hood switch	ON (Open) → OFF (Closed)		0V → 12V	
7	R	Auto light sensor (Signal)	Ignition switch ON position	Headlamps illuminate by auto light control. (Operate → Not operate)	5V → 1V	
8	W/G	Auto light sensor (GND)	—		—	
9	BR/W	Auto light sensor (Power)	Ignition switch (OFF → ON)		0V → 5V	
10	OR/L	Door key cylinder unlock switch	OFF (Neutral) → ON (Locked)		5V → 0V	
11	OR/B	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)		5V → 0V	
12	G/B	Trunk lid key cylinder switch	OFF (Neutral) → ON (Unlock)		5V → 0V	
13	PU/Y	Trunk room lamp switch	ON (Open) → OFF (Closed)		0V → 12V	
14	G/W	Rear window defogger switch	OFF → ON (Only when pushed)		5V → 0V	
16	L	Trunk and fuel lid opener switch	OFF → ON (Only when pulled)		12V → 0V	
19	Y/B	Tail lamp relay (Output)	Ignition switch (with lighting switch 1ST or 2ND)	OFF position	More than 45 seconds after ignition switch is turned to OFF position	12V
					Within 45 seconds after ignition switch is turned to OFF position	0V
				ON or START position		0V
			Headlamps illuminate by auto light control. (Operate → Not operate)			
20	SB	Tail lamp switch	Light switch (OFF → 1ST or 2ND position)		12V → 0V	

SMART ENTRANCE CONTROL UNIT

Smart Entrance Control Unit Inspection Table (Cont'd)

Terminal No.	Wire color	Connections	Operated condition		Voltage (Approximate values)		
21	P	Headlamp LH relay	Ignition switch (with lighting switch OFF or 1ST)	OFF position	More than 45 seconds after ignition switch is turned to OFF position	12V	GI
					Within 45 seconds after ignition switch is turned to OFF position	0V	MA
			ON or START position		0V	EM	
			Headlamps illuminate by auto light control.		0V	LC	
22	L	Headlamp switch	Lighting switch	Except PASS or 2ND position	12V	EC	
				PASS or 2ND position	0V	FE	
			Headlamps illuminate by auto light control. (Operate → Not operate)		Less than 1.5V → 12V	CL	
23	L/Y	Headlamp switch	Ignition switch "ON" position	Lighting switch (Except AUTO → AUTO position)	12V → 0V	MT	
25	B/R	Ignition key switch (Insert)	Key inserted → Key removed from IGN key cylinder		12V → 0V	AT	
26	PU	Ignition switch (ACC)	"ACC" position		12V		
27	G	Ignition switch (ON)	Ignition key is in "ON" position		12V	AX	
28	OR	Seat belt buckle switch	Unfastened → Fastened (Ignition key is in "ON" position)		0V → 12V	SU	
30	R/Y	Ignition keyhole illumination	When doors are unlocked using remote controller (OFF → Unlock)		12V → 0V		
31	R/Y	Interior lamp	When doors are locked using remote controller (Lamp switch in "DOOR" position)		12V	BR	
32	R/W	Front step lamp	Any door switch	ON (Open) → OFF (Closed)	0V → 12V	ST	
37	G/R	Rear window defogger relay	OFF → ON (Ignition key is in "ON" position)		12V → 0V		
38	G/OR	Security indicator	Goes off → Illuminates		12V → 0V	RS	
42	BR/Y	Vehicle Security horn relay	When panic alarm is operated using remote controller (ON → OFF)		12V → 0V	BT	
43	B	Ground	—		—		
46	PU	Power window relay	Retained power operation is operated (ON → OFF)		12V → 0V	HA	
47	G/B	LH turn signal lamp	When door lock or unlock is operated using remote controller (ON → OFF)		12V → 0V		
48	G/Y	RH turn signal lamp	When door lock or unlock is operated using remote controller (ON → OFF)		12V → 0V	SC	
49	R/B	Power source (Fuse)	—		12V	EL	
50	R/G	Battery saver (Interior lamp)	Battery saver operates → Does not operate (ON → OFF)		12V → 0V	IDX	
51	W/R	Power source (PTC)	—		12V		
54	GY	Door lock actuators	Door lock & unlock switch (Free → Lock)		0V → 12V		
55	W/B	Driver door lock actuator	Door lock & unlock switch (Free → Unlock)		0V → 12V		

SMART ENTRANCE CONTROL UNIT

Smart Entrance Control Unit Inspection Table (Cont'd)

Terminal No.	Wire color	Connections	Operated condition		Voltage (Approximate values)	
56	GY	Passenger and rear doors lock actuator	Door lock & unlock switch (Free → Unlock)		0V → 12V	
57	Y/B	Tail lamp relay	Ignition switch (with lighting switch 1ST or 2ND)	OFF position	More than 45 seconds after ignition switch is turned to OFF position	12V
					Within 45 seconds after ignition switch is turned to OFF position	0V
				ON or START position	0V	
			Headlamps illuminate by auto light control. (Operate → Not operate)		Less than 1.5V → 12V	
58	SB	Tail lamp switch	Lighting switch OFF or AUTO → 1ST or 2ND		12V → 0V	
59	P	Headlamp RH relay	Ignition switch (with lighting switch OFF or 1ST)	OFF	More than 45 seconds after ignition switch is turned to OFF position	12V
					Within 45 seconds after ignition switch is turned to OFF position	0V
				ON or START position	0V	
			Headlamps illuminate by auto light control. (Operate → Not operate)		Less than 1.5V → 12V	
60	L	Headlamp switch	Lighting switch	Except PASS or 2ND position	12V	
				PASS or 2ND position	0V	
			Headlamps illuminate by auto light control. (Operate → Not operate)		0V → 12V	
63	L	Trunk lid opener actuator	When trunk lid opener actuator is operated using remote controller. (ON → OFF)		0V → 12V	
64	B	Ground	—		—	

INTEGRATED HOMELINK TRANSMITTER

Wiring Diagram — TRNSMT —

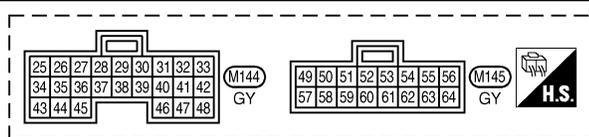
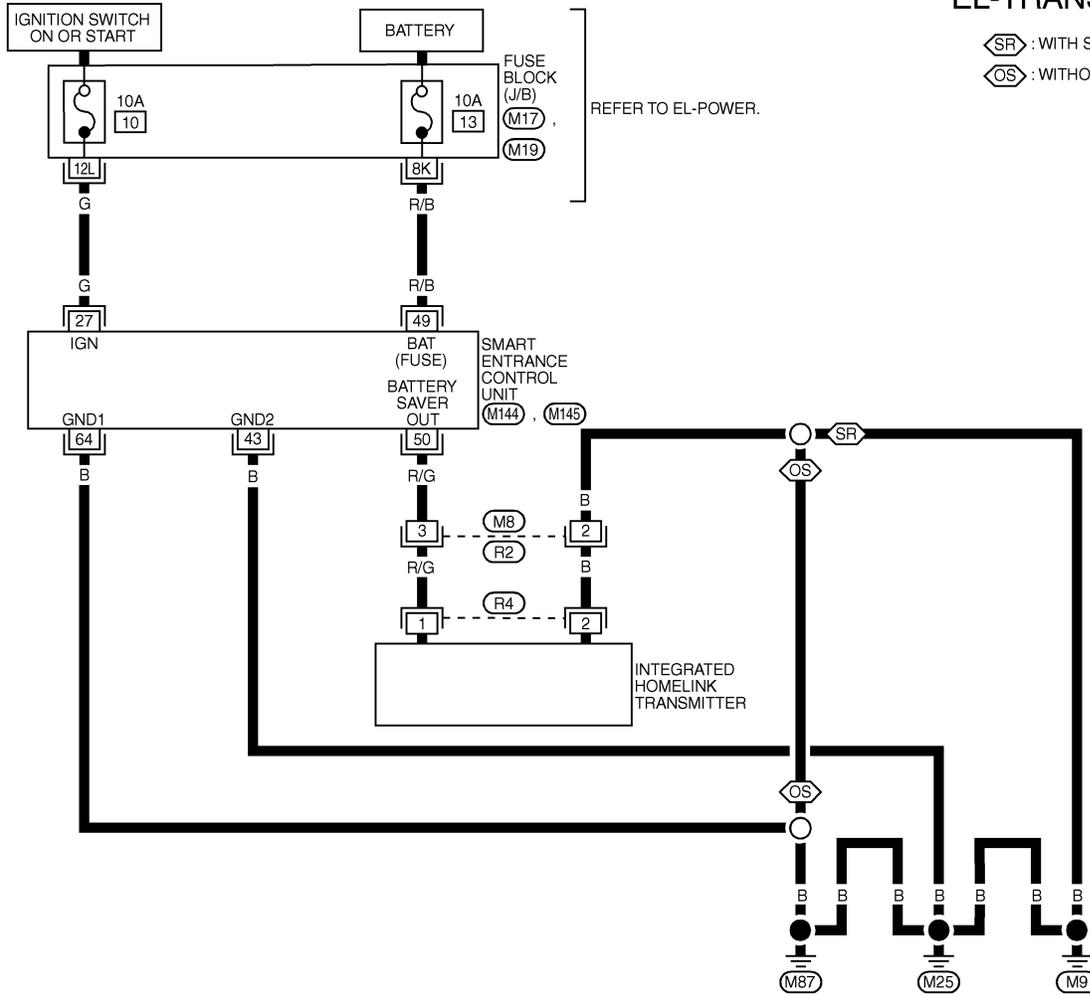
Wiring Diagram — TRNSMT —

NFEL0127

EL-TRANSMT-01

⊖SR : WITH SUNROOF

⊖OS : WITHOUT SUNROOF



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

MEL084N

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
27	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN "ON" POSITION	12V
43	B	GROUND	-	-
49	R/B	POWER SOURCE (FUSE)	-	12V
50	R/G	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOSE OPERATE → DOES NOT OPERATE (ON → OFF)	12V → 0V
64	B	GROUND	-	-

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INTEGRATED HOMELINK TRANSMITTER

Trouble Diagnoses

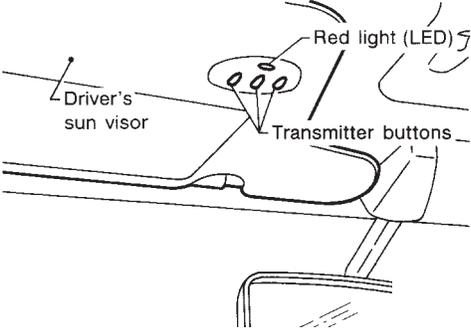
Trouble Diagnoses DIAGNOSTIC PROCEDURE

NFEL0128

NFEL0128S01

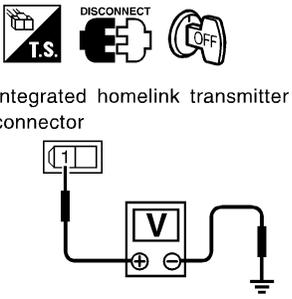
SYMPTOM: Transmitter does not activate receiver.

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.

1	PRELIMINARY CHECK
<p>1. Turn ignition switch "OFF". 2. Does red light (LED) of transmitter illuminate when any button is pressed?</p>	
 <p>The diagram shows a side view of a car's interior sun visor. A hand is shown pressing one of the buttons on the visor. A red light (LED) is located above the buttons. Labels include 'Driver's sun visor', 'Transmitter buttons', and 'Red light (LED)'.</p>	
Yes or No	
Yes	▶ GO TO 2.
No	▶ GO TO 3.

SEL442U

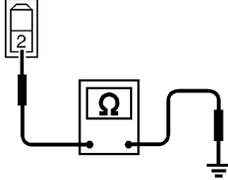
2	CHECK TRANSMITTER FUNCTION
<p>Check transmitter with Tool. For details, refer to Technical Service Bulletin.</p>	
OK or NG	
OK	▶ Receiver or handheld transmitter fault, not vehicle related.
NG	▶ Replace transmitter with sun visor assembly.

3	CHECK POWER SUPPLY
<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>The diagram shows an 'Integrated homelink transmitter connector' with terminal 1. A voltage meter (V) is connected between terminal 1 and a ground symbol. Above the connector are icons for 'T.S.' (Technical Service Bulletin), 'DISCONNECT' (a plug with a lightning bolt), and 'OFF' (a switch in the off position).</p>	
Battery voltage should exist.	
OK or NG	
OK	▶ GO TO 4.
NG	▶ Check fuse (10A) and repair harness.

SEL367W

INTEGRATED HOMELINK TRANSMITTER

Trouble Diagnoses (Cont'd)

4	CHECK GROUND CIRCUIT	
<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;">  <p>T.S.</p> </div> <div style="text-align: center;">  <p>DISCONNECT</p> </div> <div style="text-align: center;">  <p>OFF</p> </div> </div> <p>Integrated homelink transmitter connector</p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;"> <p>Continuity should exist.</p> </div> </div> <p style="text-align: right;">SEL368W</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Replace transmitter with sun visor assembly.
NG	▶	Repair harness.

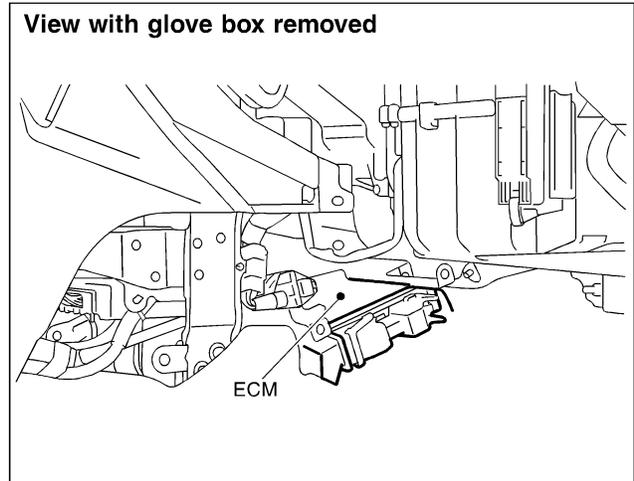
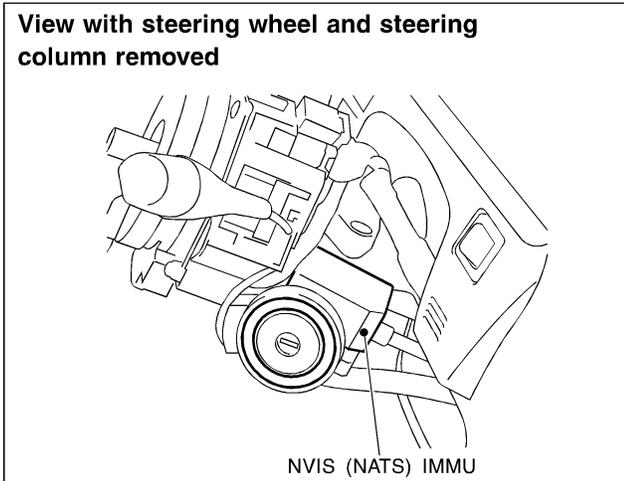
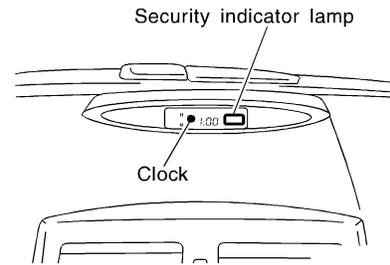
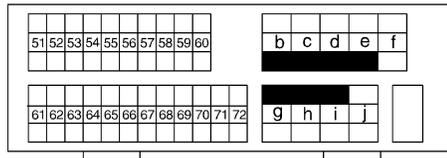
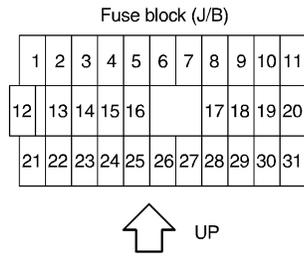
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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NFEL0172



SEL301W

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:

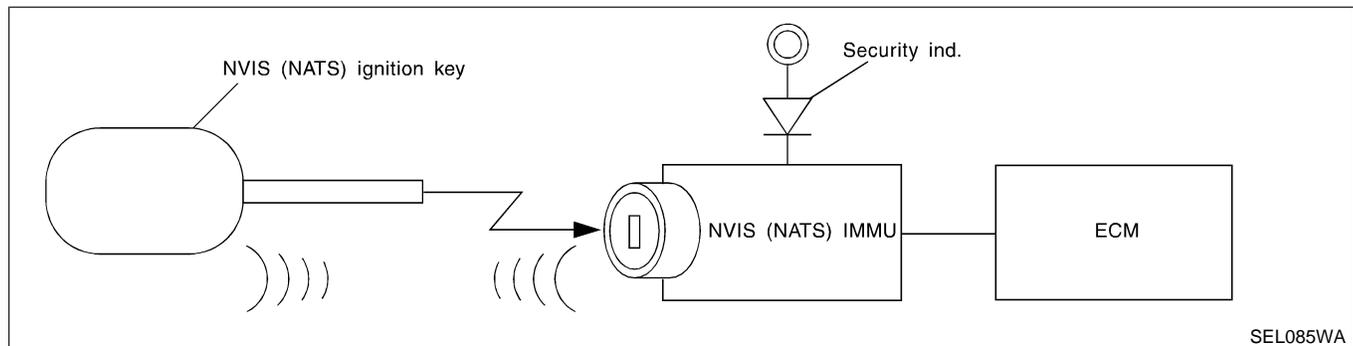
- Since only NVIS (NATS) ignition keys, whose ID nos. have been registered into the ECM and IMMU of NVIS (NATS), allow the engine to run, operation of a stolen vehicle without an NVIS (NATS) registered key is prevented by NVIS (NATS).
That is to say, NVIS (NATS) will immobilize the engine if someone 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



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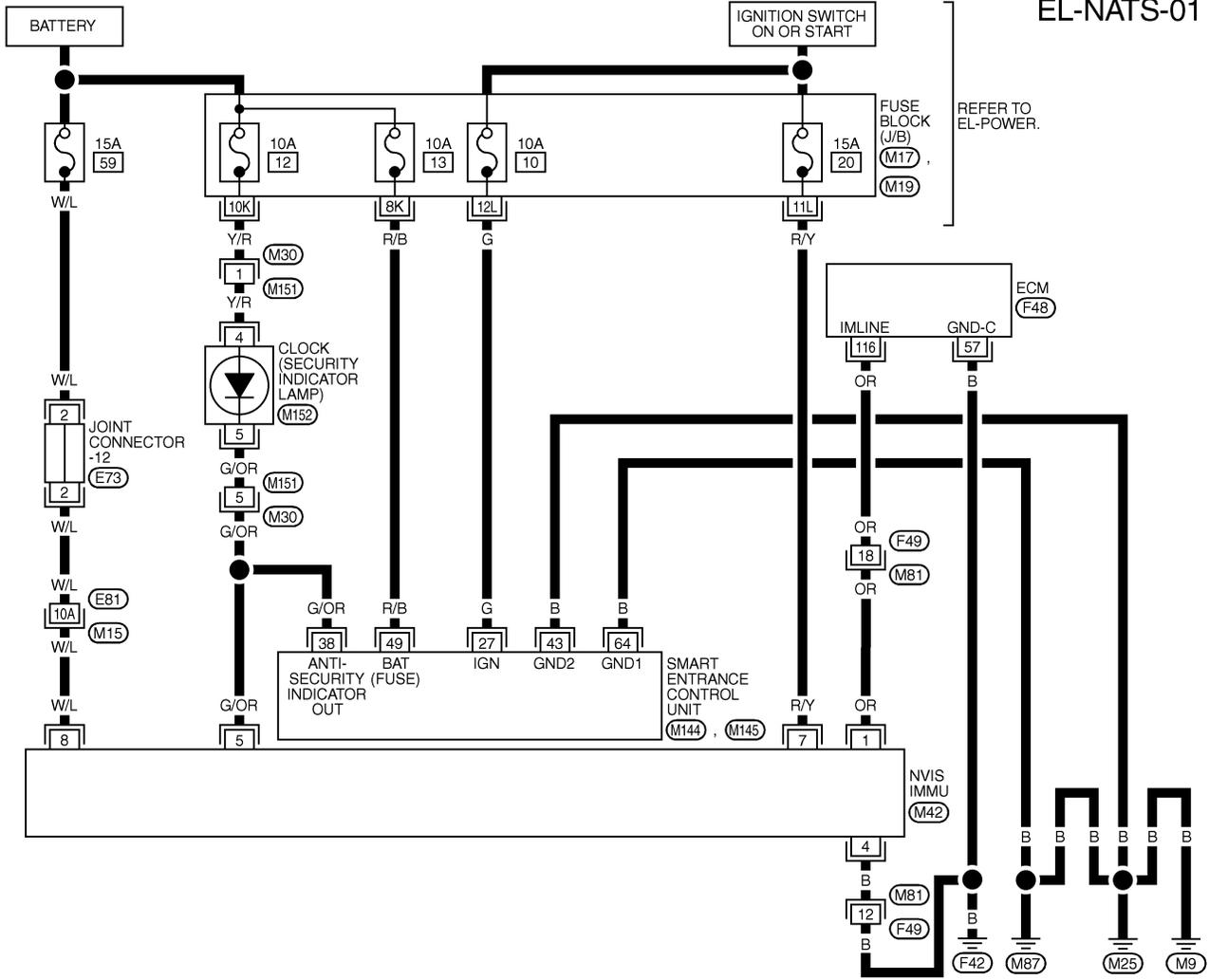
NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Wiring Diagram — NATS —

Wiring Diagram — NATS —

NFEL0175

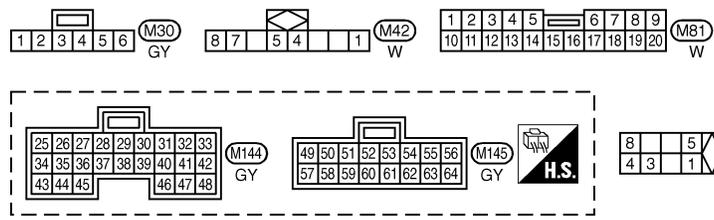
EL-NATS-01



REFER TO EL-POWER.

REFER TO THE FOLLOWING.

- (M15) -SUPER MULTIPLE JUNCTION (SMJ)
- (M17) , (M19) -FUSE BLOCK-JUNCTION BOX (J/B)
- (F48) -ELECTRICAL UNITS-

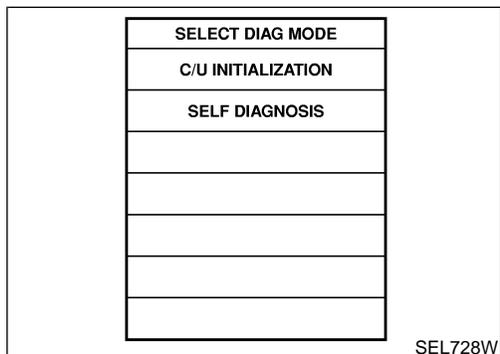
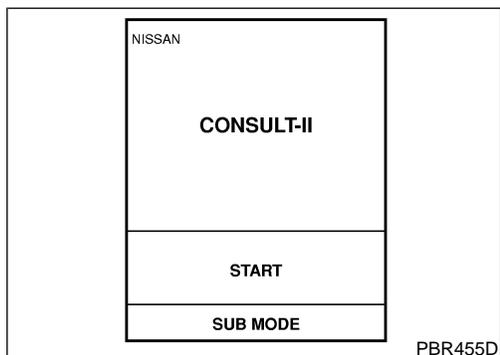
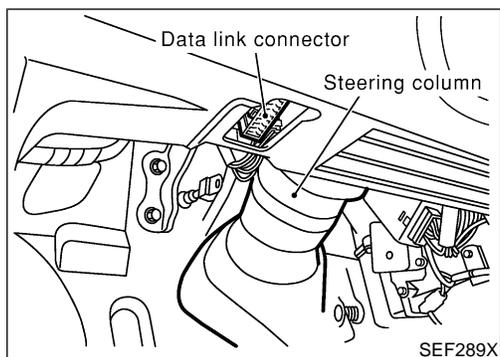


MEL085N

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
27	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN "ON" POSITION	12V
38	G/OR	SECURITY INDICATOR	GOES OFF → ILLUMINATES	12V → 0V
43	B	GROUND	-	-
49	R/B	POWER SOURCE (FUSE)	-	12V
64	B	GROUND	-	-

SEL984X



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 (AEN00A)

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, IVIS/NVIS.

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 EL-338.

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.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

CONSULT-II (Cont'd)

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
ERASE	PRINT

Detected items → CHAIN OF ECM-IMMU
 Time data ← 0
 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".
 If "Scroll Down" is indicated, there are four or more malfunctions.
 When touched, the results stored in the engine control module (ECM) are erased.
 When touched, the results are printed out.

SEL308W

NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART

NFEL0176S04

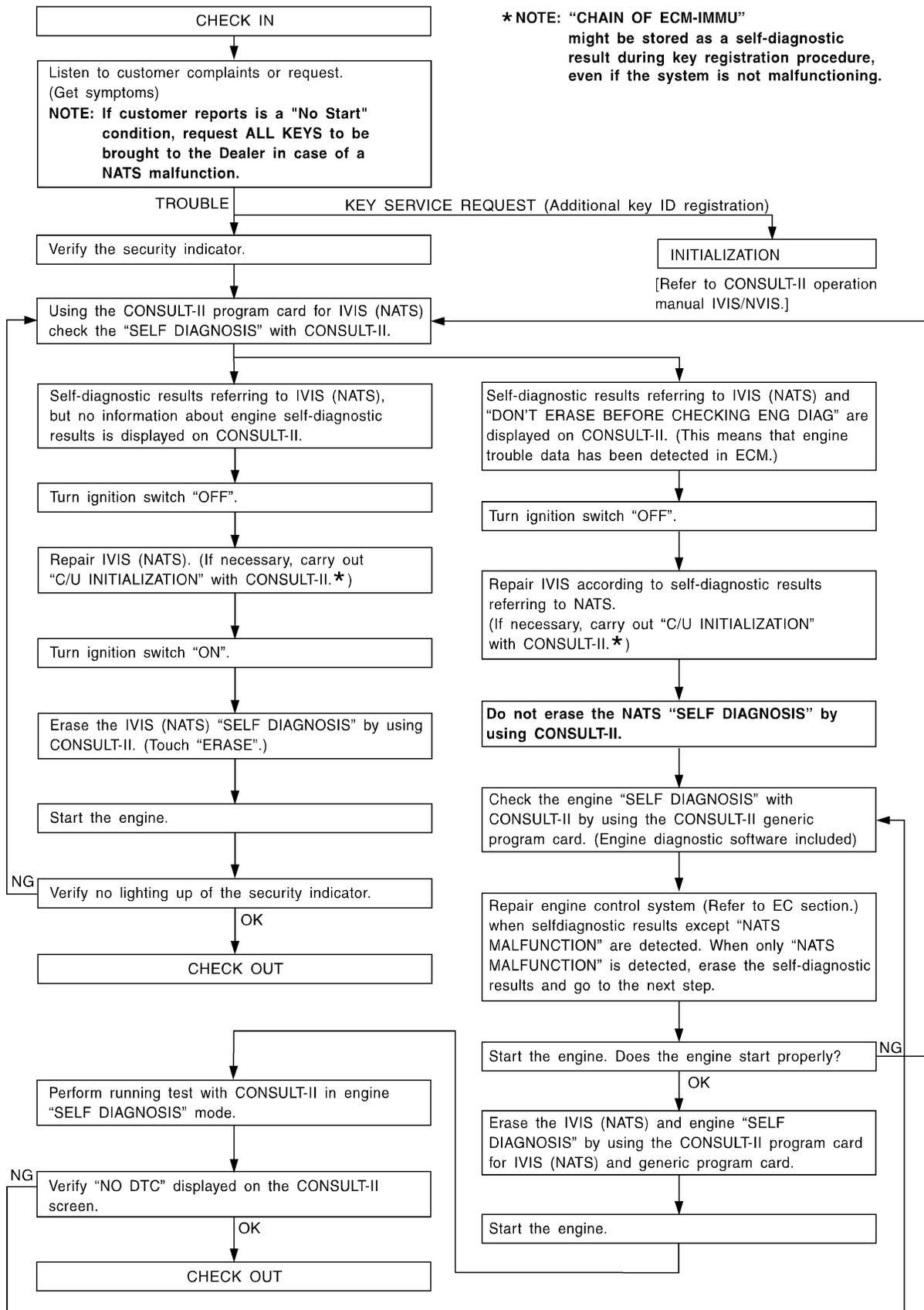
Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of "ENGINE")	Malfunction is detected when	Reference page
ECM INT CIRC-IMMU	NATS MAL-FUNCTION P1613	The malfunction of ECM internal circuit of IMMU communication line is detected.	EL-341
CHAIN OF ECM-IMMU	NATS MAL-FUNCTION P1612	Communication impossible between ECM and IMMU	EL-342
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-346
CHAIN OF IMMU-KEY	NATS MAL-FUNCTION P1614	IMMU cannot receive the key ID signal.	EL-347
ID DISCORD, IMM-ECM	NATS MAL-FUNCTION P1611	The result of ID verification between IMMU and ECM is NG. System initialization is required.	EL-348
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"> ● Unregistered ignition key is used. ● IMMU or ECM's malfunctioning. 	EL-351
DON'T ERASE BEFORE CHECKING ENG DIAG	—	All engine trouble codes except NVIS (NATS) trouble code has been detected in ECM.	EL-339

Trouble Diagnoses WORK FLOW

NFEL0177

NFEL0177S01

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

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"> Security indicator lighting up* Engine hard to start 	ECM INT CIRC-IMMU	PROCEDURE 1 (EL-341)	ECM	B
	CHAIN OF ECM-IMMU	PROCEDURE 2 (EL-342)	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-346)	Unregistered key	D
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 4 (EL-347)	Malfunction of key ID chip	E
			IMMU	A
	ID DISCORD, IMM-ECM	PROCEDURE 5 (EL-348)	System initialisation has not yet been completed.	F
ECM			F	
LOCK MODE	PROCEDURE 7 (EL-351)	LOCK MODE	D	
<ul style="list-style-type: none"> MIL staying ON Security indicator lighting up* 	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (EL-339)	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.

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

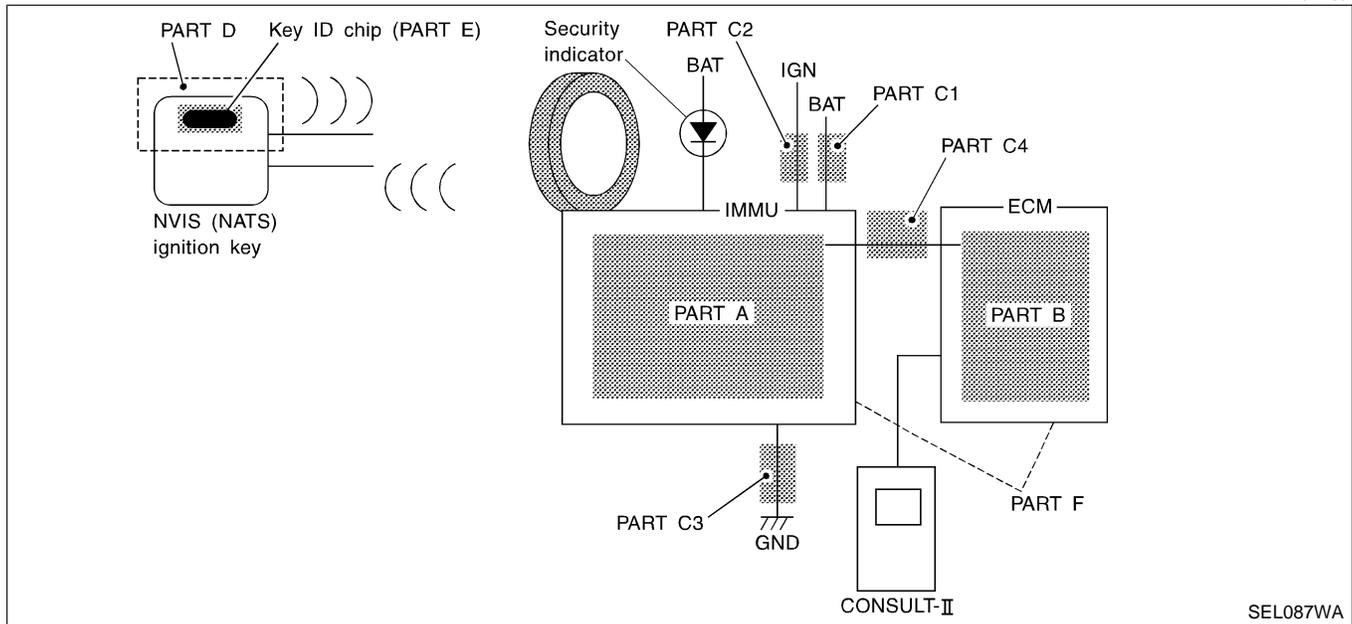
SYMPTOM MATRIX CHART 2 (Non self-diagnosis related item)

NFEL0177S03

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)
Security ind. does not light up.	PROCEDURE 6 (EL-349)	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”.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

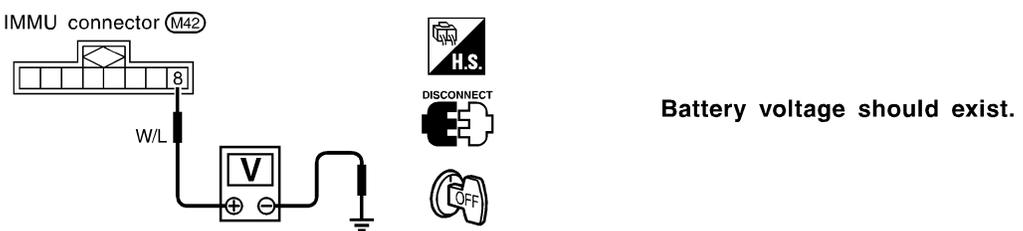
DIAGNOSTIC PROCEDURE 2

=NFEL0177S07

Self-diagnostic results:

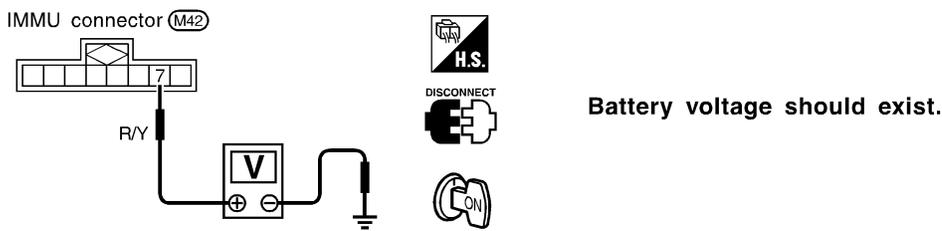
“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
<p>Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF ECM-IMMU” displayed on CONSULT-II screen.</p> <p>NOTE: In rare cases “CHAIN OF ECM-IMMU” might be stored during the key registration procedure, even if the system is not malfunctioning.</p>												
<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>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												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

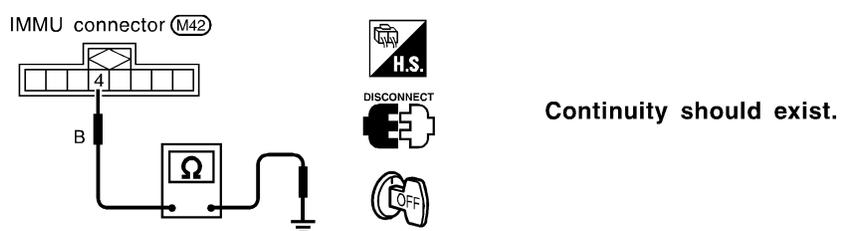
2	CHECK POWER SUPPLY CIRCUIT FOR IMMU	
<p>1. Disconnect IMMU connector.</p> <p>2. Check voltage between terminal 8 of IMMU and ground with CONSULT-II or tester.</p>		
		
SEL302W		
OK or NG		
OK	▶	GO TO 3.
NG	▶	<p>Check the following</p> <ul style="list-style-type: none"> ● 15A fuse (No. 59, located in the fuse and fusible link box) ● Harness for open or short between fuse and IMMU connector <p>Ref. Part No. C1</p>

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

3	CHECK IGN SW. ON SIGNAL	
<p>1. Turn ignition switch ON. 2. Check voltage between terminal 7 of IMMU and ground with CONSULT-II or tester.</p>		
		
SEL303W		
OK or NG		
OK	▶	GO TO 4.
NG	▶	<p>Check the following</p> <ul style="list-style-type: none"> ● 15A fuse [No. 20, located in the fuse block (J/B)] ● Harness for open or short between fuse and IMMU connector <p>Ref. part No. C2</p>

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4	CHECK GROUND CIRCUIT FOR IMMU	
<p>1. Turn ignition OFF. 2. Check harness continuity between IMMU terminal 4 and ground.</p>		
		
SEL304W		
OK or NG		
OK	▶	GO TO 5.
NG	▶	Repair harness. Ref. part No. C3

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

5	CHECK COMMUNICATION LINE OPEN CIRCUIT	
<p>1. Disconnect ECM connector. 2. Check harness continuity between ECM terminal 116 and IMMU terminal 1.</p>		
SEL305W		
OK or NG		
OK	▶	GO TO 6.
NG	▶	Repair harness or connector. Ref. part No. C4

6	CHECK COMMUNICATION LINE BATTERY SHORT CIRCUIT	
<p>1. Turn ignition ON. 2. Check voltage between ECM terminal 116 or IMMU terminal 1 and ground.</p>		
SEL306W		
OK or NG		
OK	▶	GO TO 7.
NG	▶	Communication line is short-circuited with battery voltage line or ignition switch ON line. Repair harness or connectors. Ref. part No. C4

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

7	CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT	
<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. Ref. part No. C4

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8	SIGNAL FROM ECM TO IMMU CHECK	
<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. Ref. part No. A Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual IVIS/NVIS".
NG	▶	ECM is malfunctioning. Replace ECM. Ref. part No. B Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual IVIS/NVIS".

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 3

=NFEL0177S08

Self-diagnostic results:

“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.												
<table border="1"> <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												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

2	PERFORM INITIALIZATION WITH CONSULT-II				
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"> <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					
NOTE: If the initialization is not completed or fails, CONSULT-II shows above message on the screen.					
Can the system be initialized?					
Yes	▶	Start engine. (END) (Ignition key ID was unregistered. Ref. part No. D)			
No	▶	IMMU is malfunctioning. Replace IMMU. Ref. part No. A Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.			

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 4

=NFEL0177S09

Self-diagnostic results:
"CHAIN OF IMMU-KEY" displayed on CONSULT-II screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS "CHAIN OF IMMU-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>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												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

2	CHECK NVIS (NATS) IGNITION KEY ID CHIP	
Start engine with another registered NVIS (NATS) ignition key.		
Does the engine start?		
Yes	▶	Ignition key ID chip is malfunctioning. Replace the ignition key. Ref. part No. E Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual IVIS/NVIS".
No	▶	GO TO 3.

3	CHECK IMMU INSTALLATION	
Check IMMU installation. Refer to "How to Replace IMMU" in EL-352.		
OK or NG		
OK	▶	IMMU is malfunctioning. Replace IMMU. Ref. part No. A Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual IVIS/NVIS".
NG	▶	Reinstall IMMU correctly.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 5

=NFEL0177S10

Self-diagnostic results:

“ID DISCORD, IMM-ECM” displayed on CONSULT-II screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS “ID DISCORD, IMM-ECM” displayed on CONSULT-II screen.												
<table border="1"> <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>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>NOTE: “ID DISCORD IMM-ECM”: Registered ID of IMM-ECM is in discord with that of ECM.</p>												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

2	PERFORM INITIALIZATION WITH CONSULT-II				
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"> <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					
<p>NOTE: If the initialization is not completed or fails, CONSULT-II shows above message on the screen.</p>					
Can the system be initialized?					
Yes	▶	Start engine. (END) (System initialization had not been completed. Ref. part No. F)			
No	▶	ECM is malfunctioning. Replace ECM. Ref. part No. F Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”.			

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 6

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

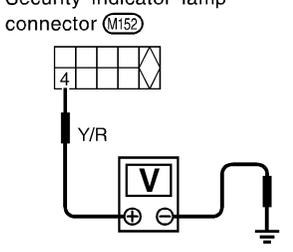
=NFEL0177S12

1	CHECK FUSE	
Check 10A fuse [No. 12, located in the fuse block (J/B)].		
Is 10A fuse OK?		
Yes	▶	GO TO 2.
No	▶	Replace fuse.

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2	CHECK SECURITY INDICATOR LAMP	
<ol style="list-style-type: none"> 1. Install 10A fuse. 2. Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II operation manual IVIS/NVIS”. 3. Turn ignition switch OFF. 4. Start engine and turn ignition switch OFF. 5. Check the security indicator lamp lighting. <p>Security indicator lamp should be blinking.</p>		
OK or NG		
OK	▶	INSPECTION END
NG	▶	GO TO 3.

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3	CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT	
<ol style="list-style-type: none"> 1. Disconnect security indicator lamp connector. 2. Check voltage between security indicator lamp connector terminal 4 and ground. 		
<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>Battery voltage should exist.</p> </div> <div style="text-align: right;"> <p>SEL299W</p> </div> </div>		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Check harness for open or short between fuse and security indicator lamp.

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4	CHECK SECURITY INDICATOR LAMP	
Check security Indicator Lamp.		
Is security indicator lamp OK?		
Yes	▶	GO TO 5.
No	▶	Replace security indicator lamp.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

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> <p>IMMU connector (M42)</p> <p>G/OR</p> </div> <div> </div> <div> <p>Continuity should exist intermittently.</p> </div> </div> <p style="text-align: right;">SEL300W</p> <p style="text-align: center;">OK or NG</p>	
OK	▶	Check harness for open or short between security indicator lamp and IMMU.
NG	▶	<p>IMMU is malfunctioning.</p> <p>Replace IMMU.</p> <p>Perform initialization with CONSULT-II.</p> <p>For initialization, refer to "CONSULT-II operation manual IVIS/NVIS".</p>

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 7

=NFEL0177S13

Self-diagnostic results:
"LOCK MODE" displayed on CONSULT-II screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS "LOCK MODE" is 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 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												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

2	ESCAPE FROM LOCK MODE	
<ol style="list-style-type: none"> 1. Turn ignition switch OFF. 2. Turn ignition switch ON with registered key. (Do not start engine.) Wait 5 seconds. 3. Return the key to OFF position. 4. Repeat steps 2 and 3 twice (total of three cycles). 5. Start the engine. 		
Does engine start?		
Yes	▶	System is OK. (Now system is escaped from "LOCK MODE".)
No	▶	GO TO 3.

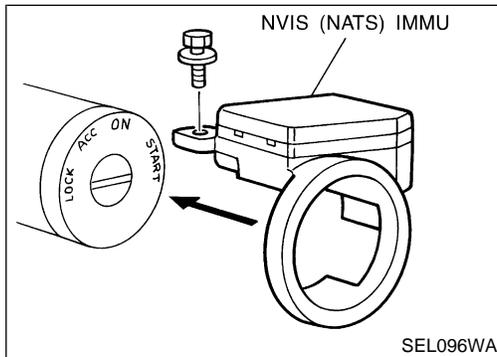
3	CHECK IMMU ILLUSTRATION	
Check IMMU installation. Refer to "How to Replace IMMU" in EL-352.		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Reinstall IMMU correctly.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

4	PERFORM INITIALIZATION WITH CONSULT-II	
<p>Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual IVIS/NVIS".</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p style="text-align: center; margin: 0;">IMMU INITIALIZATION</p> <hr/> <p style="text-align: center; margin: 0;">INITIALIZATION FAIL</p> <hr/> <p style="text-align: center; margin: 0; font-size: small;">THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</p> </div> <p style="text-align: right; margin-top: 20px;">SEL297W</p>		
<p>NOTE: If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.</p> <p style="text-align: center;">Can the system be initialized?</p>		
Yes	▶	System is OK.
No	▶	GO TO DIAGNOSTIC PROCEDURE 5 to check "CHAIN OF IMMU-KEY", refer to EL-347.



How to Replace NVIS (NATS) IMMU

NFEL0178

NOTE:

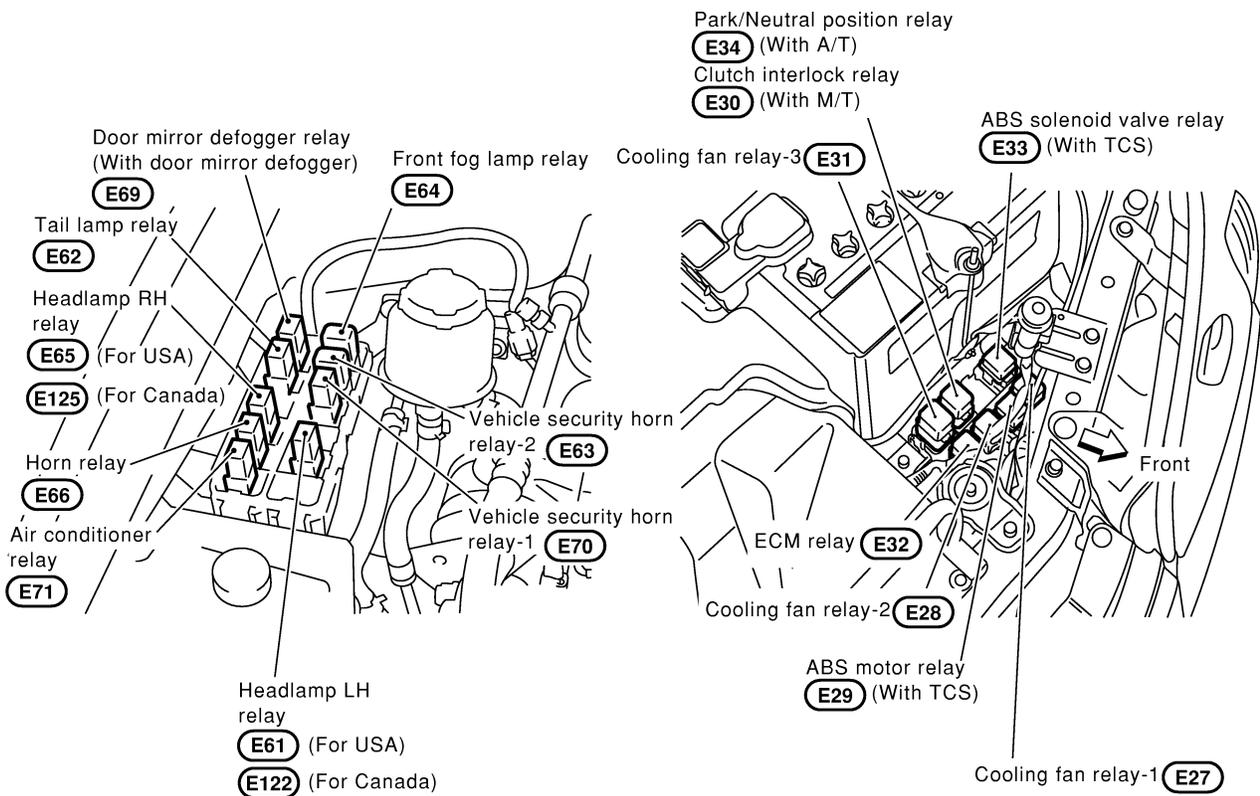
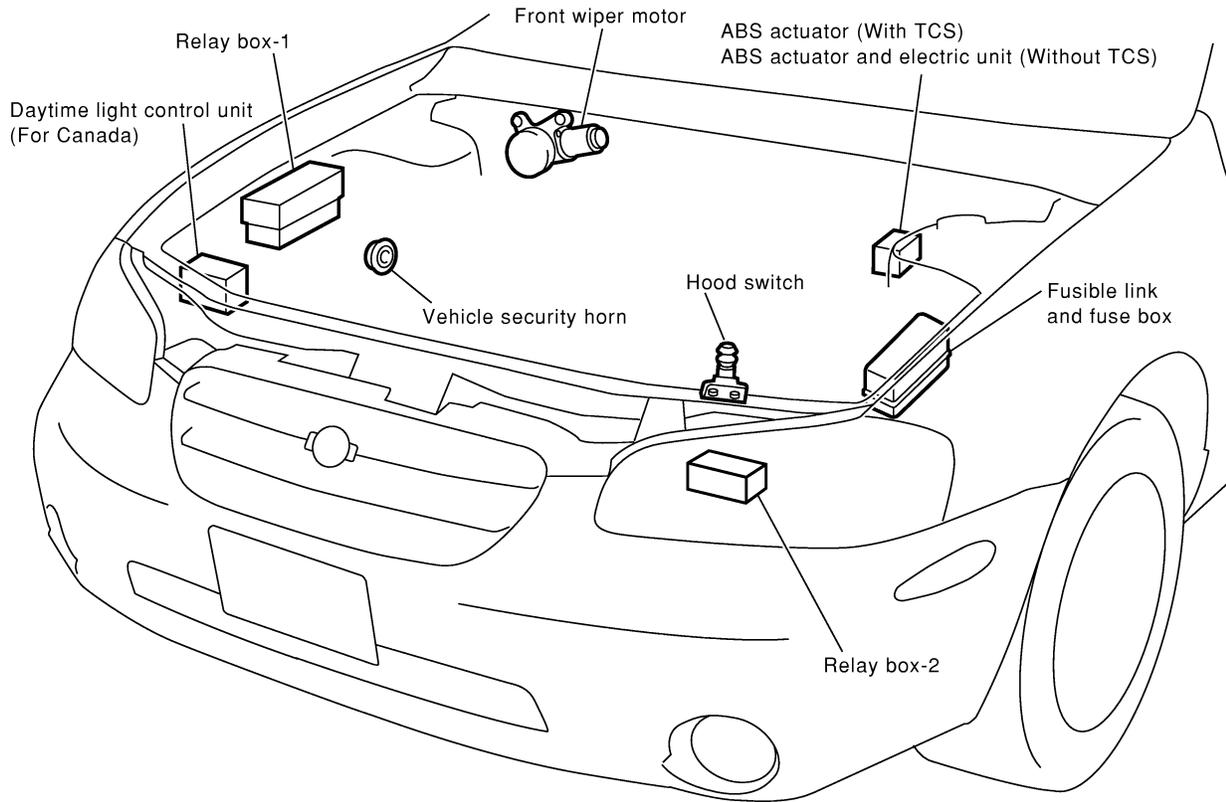
- If NVIS (NATS) IMMU is not installed correctly, NVIS (NATS) system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show "LOCK MODE" or "CHAIN OF IMMU-KEY".

ELECTRICAL UNITS LOCATION

Engine Compartment

Engine Compartment

NFEL0129



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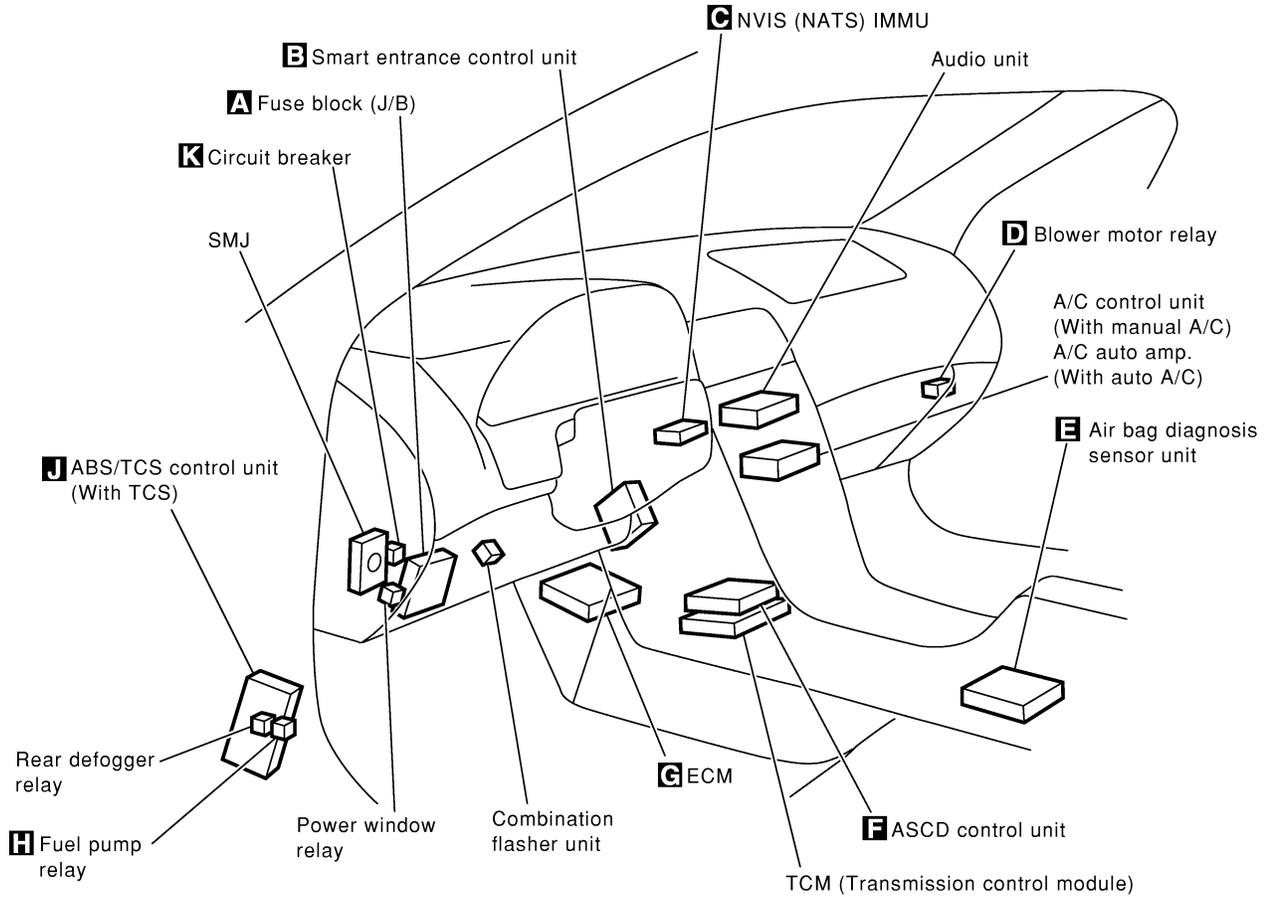
MEL099N

ELECTRICAL UNITS LOCATION

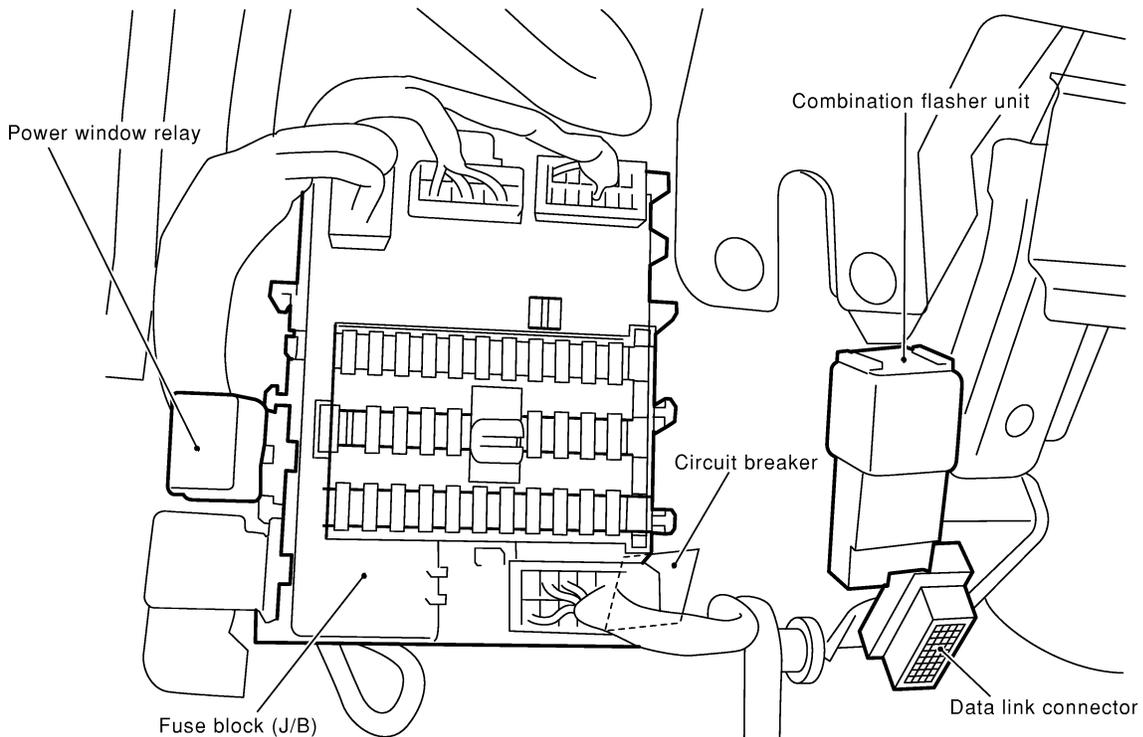
Passenger Compartment

Passenger Compartment

NFEL0130



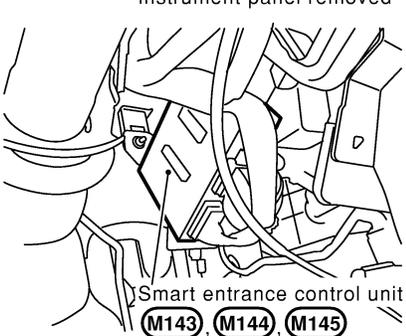
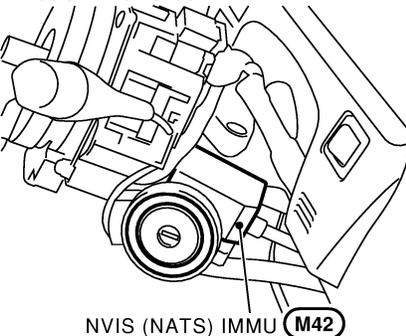
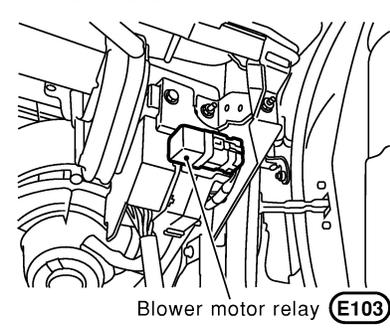
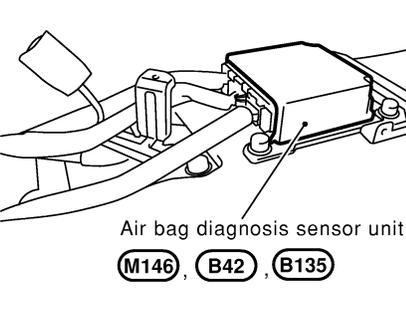
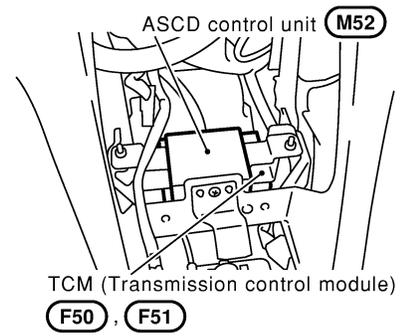
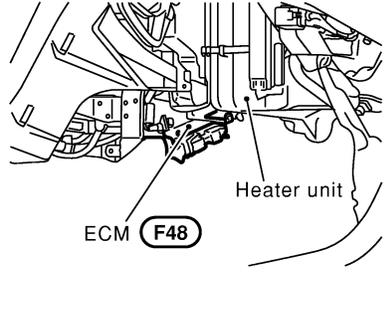
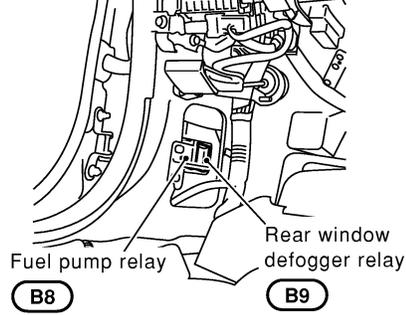
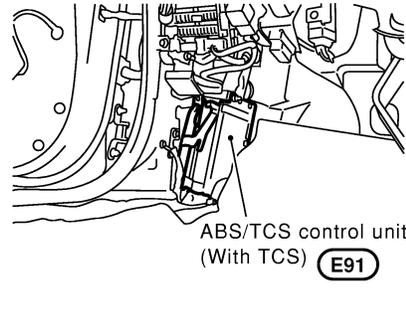
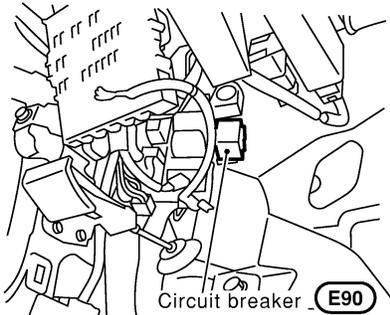
A Instrument panel LH side



MEL100N

ELECTRICAL UNITS LOCATION

Passenger Compartment (Cont'd)

<p>B Driver side view with lower instrument panel removed</p>  <p>Smart entrance control unit M143, M144, M145</p>	<p>C View with steering wheel and steering column removed</p>  <p>NVIS (NATS) IMMU M42</p>	<p>D Passenger side view with dash side lower finisher removed</p>  <p>Blower motor relay E103</p>
<p>E Rear of parking brake</p>  <p>Air bag diagnosis sensor unit M146, B42, B135</p>	<p>F View with lower instrument center panel removed</p>  <p>ASCD control unit M52 TCM (Transmission control module) F50, F51</p>	<p>G Passenger side view with lower instrument panel removed</p>  <p>Heater unit ECM F48</p>
<p>H Driver side view with dash side lower finisher removed</p>  <p>Fuel pump relay B8 Rear window defogger relay B9</p>	<p>J Driver side view with dash side lower finisher removed</p>  <p>ABS/TCS control unit (With TCS) E91</p>	<p>K Driver side view with lower instrument panel removed</p>  <p>Circuit breaker E90</p>

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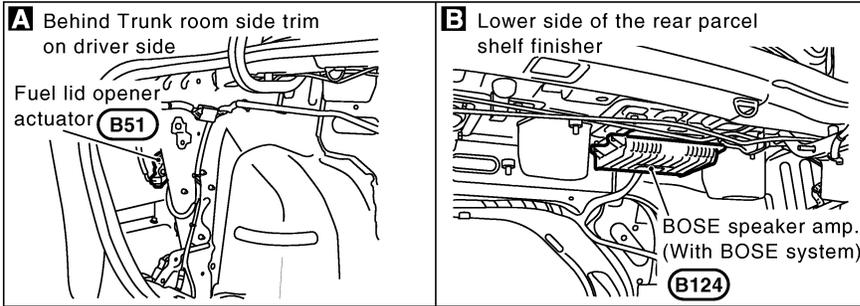
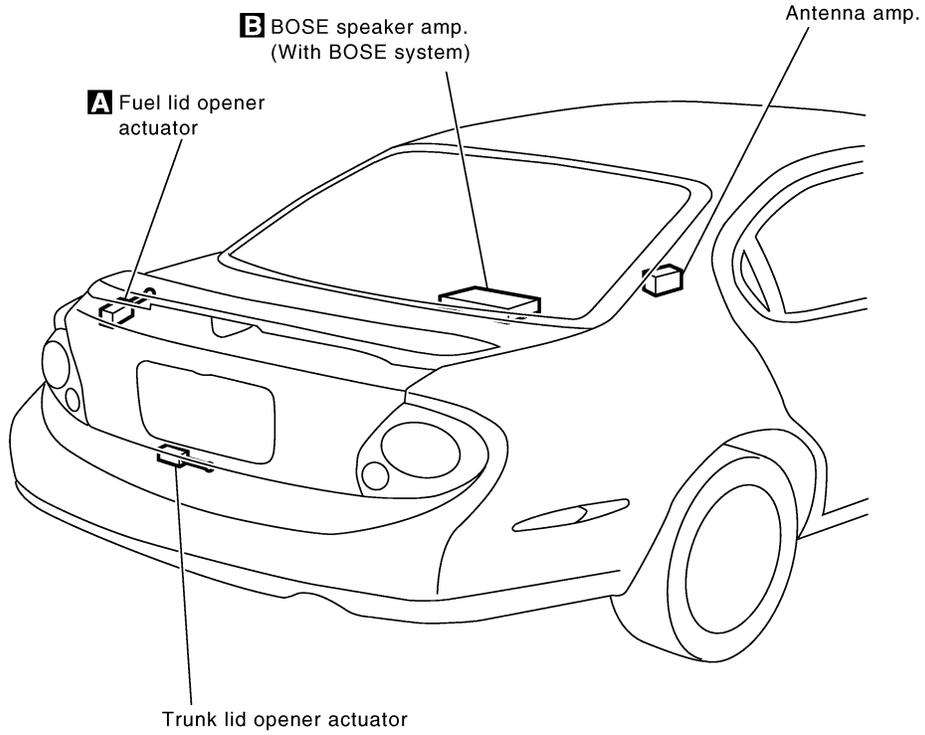
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MEL101N

ELECTRICAL UNITS LOCATION

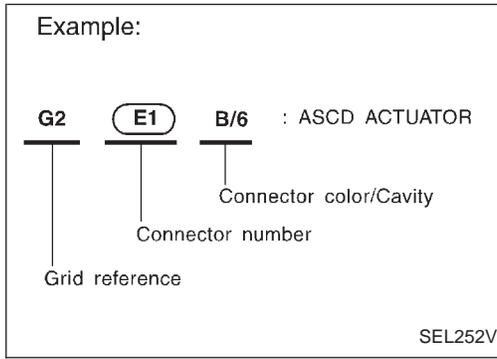
Passenger Compartment (Cont'd)



MEL343L

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.

CONNECTOR SYMBOL

Main symbols of connector (in Harness Layout) are indicated in the below.

Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
<ul style="list-style-type: none"> ● Cavity: Less than 4 ● Relay connector 				
<ul style="list-style-type: none"> ● Cavity: From 5 to 8 				
<ul style="list-style-type: none"> ● Cavity: More than 9 	—	—		
<ul style="list-style-type: none"> ● Ground terminal etc. 	—			

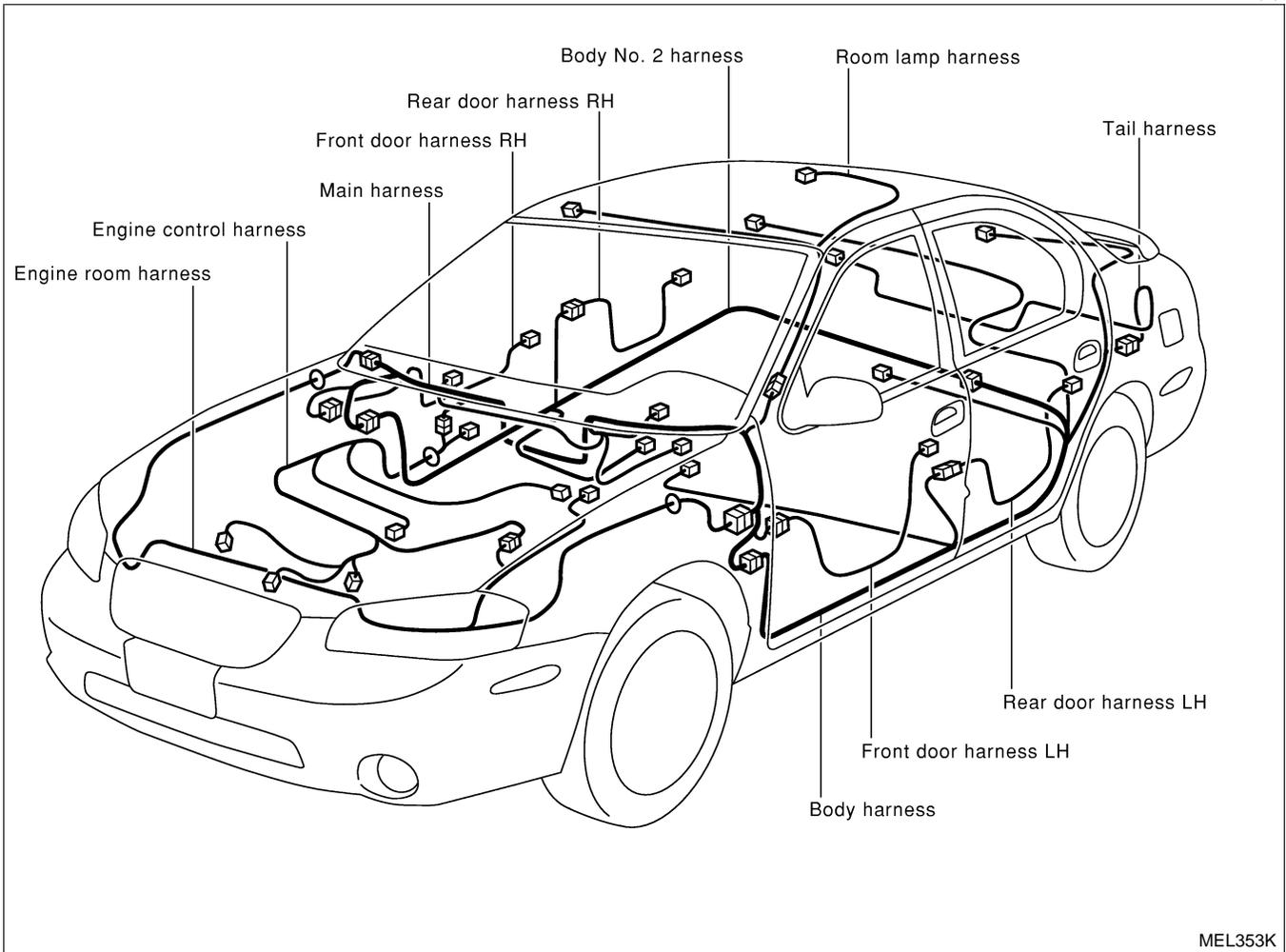
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HARNESS LAYOUT

Outline

Outline

NFEL0132



NOTE:

For detailed ground distribution information, refer to "Ground Distribution", "GROUND" EL-18.

HARNESS LAYOUT

Outline (Cont'd)

NOTE:

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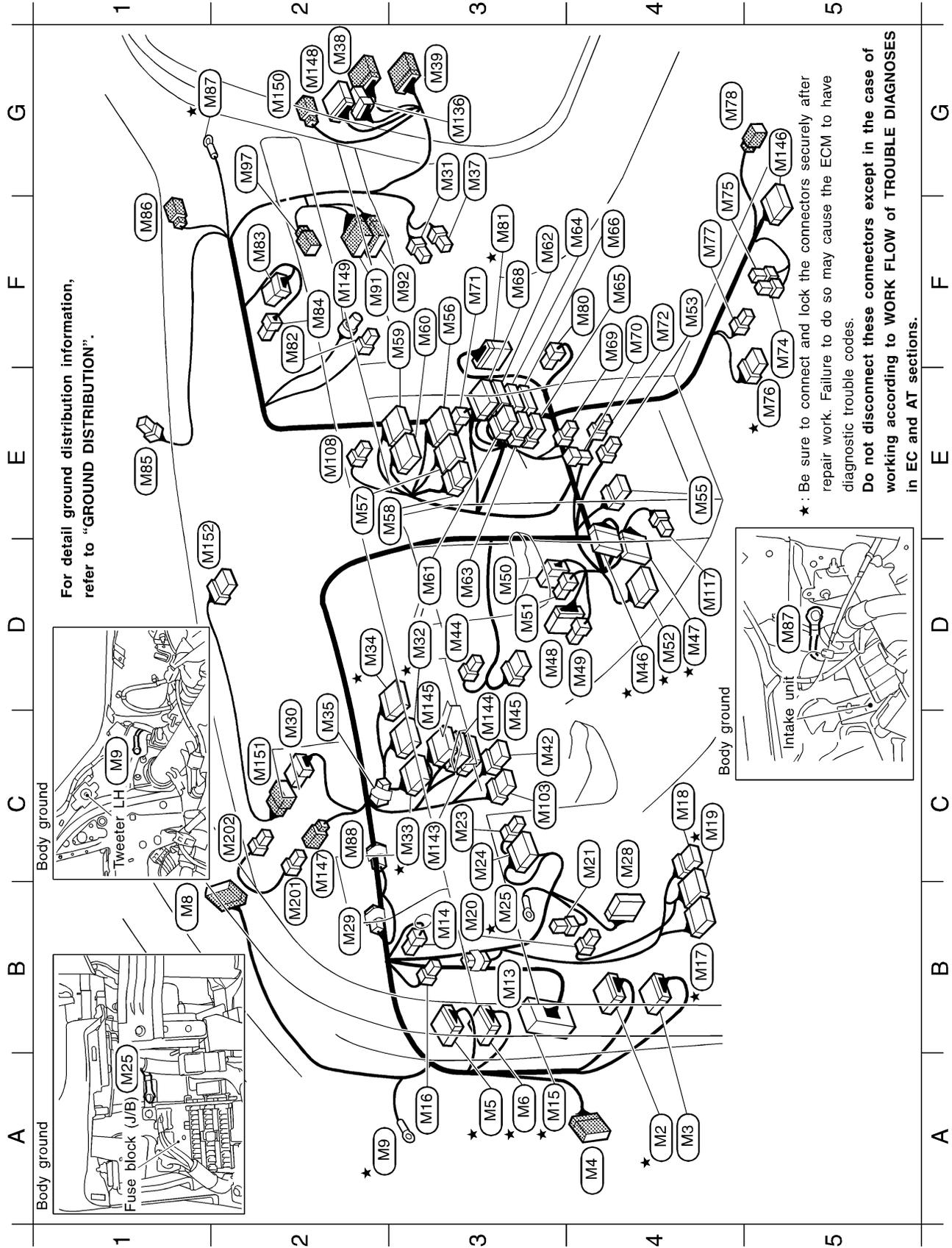
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HARNESS LAYOUT

Main Harness

NFEL0133

Main Harness



★: 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.

MEL971N

HARNES LAYOUT

Main Harness (Cont'd)

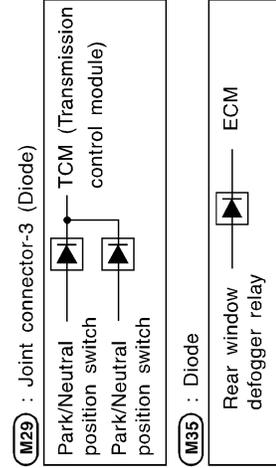
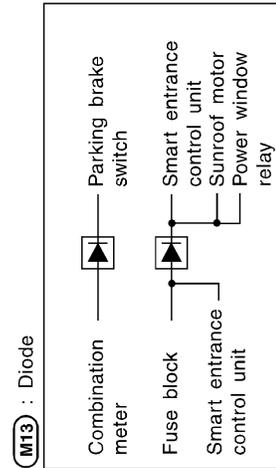
Main harness

A4★	M2	BR/24	: To	B2	
A4	M3	W/12	: To	B4	(With BOSE system)
A4	M4	SMJ	: To	D1	
A3★	M5	W/16	: To	B1	
A3★	M6	W/18	: To	B3	
B1	M8	W/12	: To	R2	
A2★	M9	-	: Body ground		
B3	M13	L/4	: Diode		
B3	M14	L/2	: ASCD clutch switch (With M/T)		
A3★	M15	SMJ	: To	E81	
A3	M16	W/4	: Telephone		
B4★	M17	W/12	: Fuse block (J/B)		
C4	M18	W/6	: Fuse block (J/B)		
C4★	M19	W/16	: Fuse block (J/B)		
B3	M20	L/4	: Power window relay		
C4	M21	B/3	: Combination flasher unit		
C3	M23	W/3	: Illumination control switch		
C3	M24	W/10	: Door mirror remote control switch		
B3★	M25	-	: Body ground		
C4	M28	W/16	: Data link connector		
B2	M29	★ 2	: Joint connector-3 (Diode) (With A/T)		
C2	M30	GY/6	: To	M15	
G3	M31	W/4	: Fan control amp. (With auto A/C)		
D3★	M32	BR/20	: Combination meter		
C3★	M33	W/24	: Combination meter		
D2★	M34	BR/24	: Combination meter		
C2	M35	★ 1	: Diode		
G3	M37	BR/4	: Fan resistor (With manual A/C)		
G2	M38	W/16	: To	D62	
G3	M39	W/10	: To	D63	
C3	M42	W/8	: NVIS (NATS) IMMU		
D3	M44	W/2	: In-vehicle sensor (With auto A/C)		
C3	M45	L/6	: TCS on/off switch (With TCS)		
D4★	M46	W/18	: To	F44	
D4★	M47	W/20	: To	F45	(With A/T)
D3	M48	BR/10	: Mode door motor (With manual A/C)		
D4	M49	W/3	: Mode door motor (With auto A/C)		
D3	M50	B/6	: Air mix door motor (With manual A/C)		
D3	M51	W/3	: Air mix door motor (With auto A/C)		
D4★	M52	BR/24	: ASCD control unit		
F4	M53	B/2	: Cigarette lighter		
E4	M55	W/8	: Hazard switch		
F3	M56	GY/16	: A/C control unit (With manual A/C)		
E2	M57	GY/20	: A/C control unit (With manual A/C)		
E3	M58	W/6	: Fan switch (With manual A/C)		
F3	M59	GY/20	: A/C auto amp. (With auto A/C)		
F3	M60	GY/16	: A/C auto amp. (With auto A/C)		

★ 1 : W/2 or B/2

★ 2 : SB/6 or GY/3

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HARNESS LAYOUT

Main Harness (Cont'd)

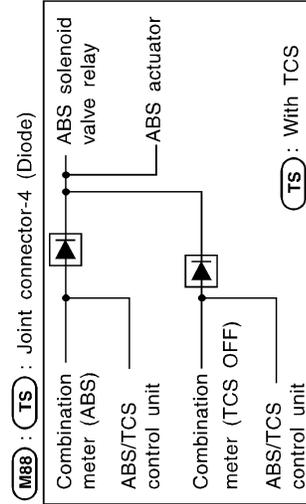
Main harness

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)
F3	(M68)	W/16	: Audio unit
F4	(M69)	W/4	: CD player (With 4 speakers)
F4	(M70)	B/2	: CD player (With 4 speakers)
F3	(M71)	W/2	: Antenna amp. (Via sub-harness)
F4	(M72)	W/2	: Ashtray illumination
F5	(M74)	L/4	: Heated seat switch LH
F4	(M75)	W/4	: Heated seat switch RH
E5★	(M76)	GY/8	: A/T device (With A/T)
F4	(M77)	B/1	: Parking brake switch
G4	(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 (Via sub-harness)
G1★	(M87)	-	: Body ground
C2	(M88)	★ 1	: Joint connector-4 (Diode) (With TCS)
F2	(M91)	W/12	: To (B103)
F2	(M92)	W/10	: To (B104)
G2	(M97)	G/2	: To (E105)
C3	(M103)	Y/7	: Spiral cable (Via sub-harness)
E2	(M108)	BR/2	: Indirect lamp
D4	(M117)	BR/2	: To (F53) (With M/T)
G3	(M139)	W/8	: Steering wheel receiver control switch (With 6 speakers)

C3	(M143)	W/24	: Smart entrance control unit
C3	(M144)	GY/24	: Smart entrance control unit
D3	(M145)	GY/16	: Smart entrance control unit
G5	(M146)	Y/28	: Air bag diagnosis sensor unit
C2	(M147)	W/3	: To (M201)
G2	(M149)	GY/20	: Steering wheel receiver control switch (With BOSE system)
F2	(M149)	Y/4	: Front passenger air bag module
G2	(M150)	Y/4	: To (E147)
Main sub-harness-1			
C2	(M151)	GY/6	: To (M30)
D2	(M152)	BR/8	: Clock
Main sub-harness-3			
C2	(M201)	W/3	: To (M147)
B2	(M202)	W/3	: Auto light sensor

★ : Be sure to connect and lock the connectors securely after repair work.
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Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

★1 : SB/6 or GY/3



HARNESS LAYOUT

Main Harness (Cont'd)

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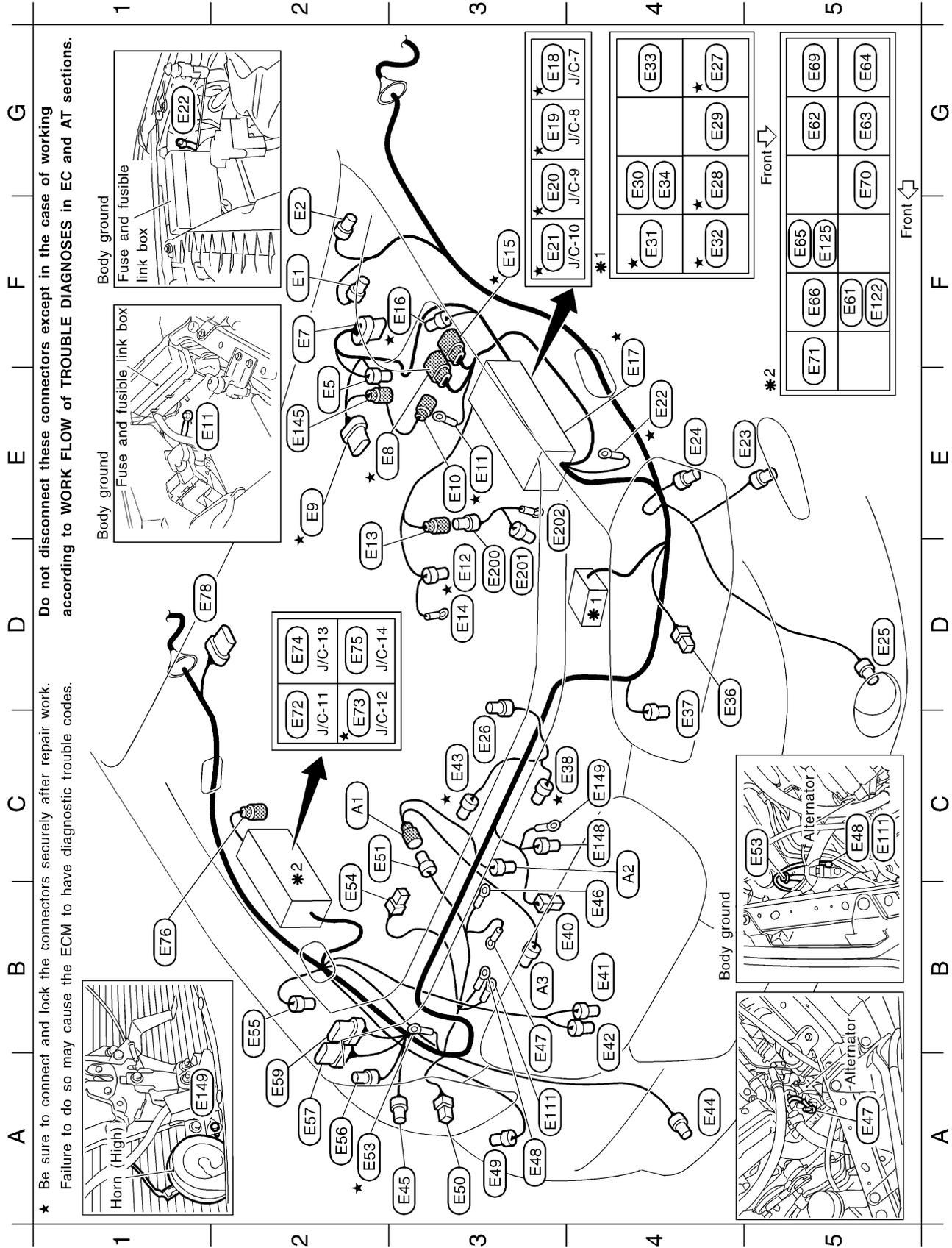
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HARNESS LAYOUT

Engine Room Harness

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.

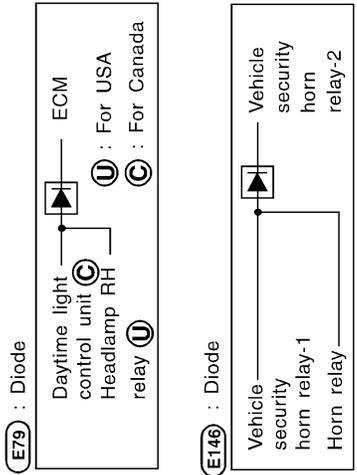
Do not disconnect these connectors except in the case of working according to **WORK FLOW of TROUBLE DIAGNOSES** in EC and AT sections.

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 moter-2
F2	(E2) GY/4 : ASCD pump	A4	(E44) GY/2 : Front fog lamp RH
E2	(E5) W/2 : ABS actuator (With TCS)	A3	(E45) GY/3 : Parking lamp and front turn signal lamp RH
F2	(E7) GY/8 : ABS actuator (With TCS)	B4	(E46) - : Alternator
E3★	(E8) GY/8 : To (F17)	B3	(E47) - : Alternator
E2★	(E9) SMJ : ABS actuator and electric unit (Without TCS)	A3	(E48) - : Body ground
E3	(E10) BR/2 : Front wheel sensor LH (With TCS)	A3	(E49) GY/2 : Front side marker lamp RH
E3★	(E11) - : Body ground	A3	(E50) B/3 : Headlamp RH
D3★	(E12) GY/2 : Intake air temperature sensor	C3	(E51) GY/3 : To (A1)
D2	(E13) GY/1 : To (E200)	A2★	(E53) - : Body ground
D3	(E14) - : Battery (Fusible link 120A)	B2	(E54) B/1 : Vehicle security horn
F3★	(E15) B/8 : To (F18)	B2	(E55) B/2 : Ambient sensor (With auto A/C)
F3★	(E16) GY/2 : Dropping resistor (With A/T)	A2	(E56) GY/4 : Daytime light control unit (For Canada)
F4★	(E17) - : Fuse and fusible link box	A2	(E57) GY/6 : Daytime light control unit (For Canada)
G3★	(E18) GY/6 : Joint connector-7	A2	(E59) GY/8 : Daytime light control unit (For Canada)
G3★	(E19) GY/6 : Joint connector-8	F5	(E61) L/4 : Headlamp LH relay (For USA)
G3★	(E20) W/6 : Joint connector-9	G5	(E62) L/4 : Tail lamp relay
F3★	(E21) W/6 : Joint connector-10	G5	(E63) L/4 : Vehicle security horn relay-2
E4★	(E22) - : Body ground	G5	(E64) L/4 : Front fog lamp relay
E5	(E23) GY/2 : Front side marker lamp LH	F5	(E65) L/4 : Headlamp RH relay (For USA)
E4	(E24) GY/3 : Parking lamp and front turn signal lamp LH	F5	(E66) W/3 : Horn relay
D5	(E25) GY/2 : Front fog lamp LH	G5	(E69) L/4 : Door mirror defogger relay
C3	(E26) W/2 : Hood switch	G5	(E70) L/4 : Vehicle security horn relay-1
G4★	(E27) BR/6 : Cooling fan relay-1	F5	(E71) L/4 : Air conditioner relay
G4★	(E28) BR/6 : Cooling fan relay-2	A1	(E72) W/6 : Joint connector-11
G4	(E29) B/5 : ABS motor relay (With TCS)	A2★	(E73) W/6 : Joint connector-12
G4	(E30) L/4 : Clutch interlock relay (With M/T)	A1	(E74) W/6 : Joint connector-13
F4★	(E31) BR/6 : Cooling fan relay-3	A2	(E75) W/6 : Joint connector-14
F4★	(E32) BR/6 : ECM relay	B1	(E76) GY/2 : Front wheel sensor RH
G4	(E33) B/5 : ABS solenoid valve relay (With TCS)	D2	(E78) GY/6 : Front wiper moter
G4	(E34) GY/6 : Park/Neutral position relay (With A/T)	A3	(E111) - : Body ground
D4	(E36) B/3 : Headlamp LH	F5	(E122) L/4 : Headlamp LH relay (For Canada)
C4	(E37) B/3 : Refrigerant pressure sensor	F5	(E125) L/4 : Headlamp RH relay (For Canada)
C4★	(E38) GY/4 : Cooling fan moter-1	E2	(E145) BR/2 : Front wheel sensor LH (Without TCS)
B4	(E40) B/1 : Horn (High)	C4	(E146) Y/2 : Crash zone sensor
B4	(E41) GY/2 : Front washer motor	C3	(E149) - : Body ground
B4	(E42) BR/2 : Washer level switch		

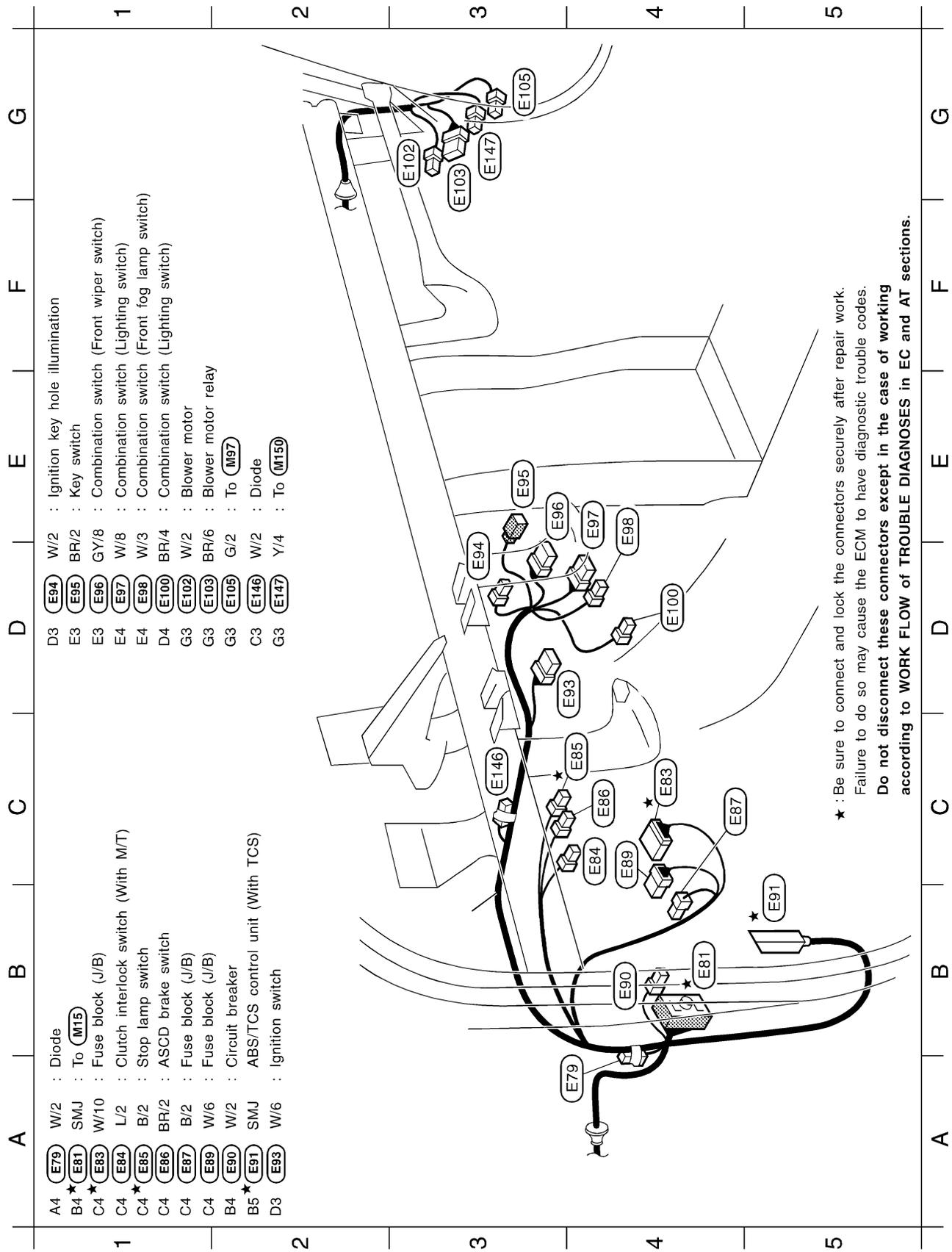
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HARNESS LAYOUT

Engine Room Harness (Cont'd)



★ : Be sure to connect and lock the connectors securely after repair work.
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 according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

HARNESS LAYOUT

Engine Room Harness (Cont'd)

NOTE:

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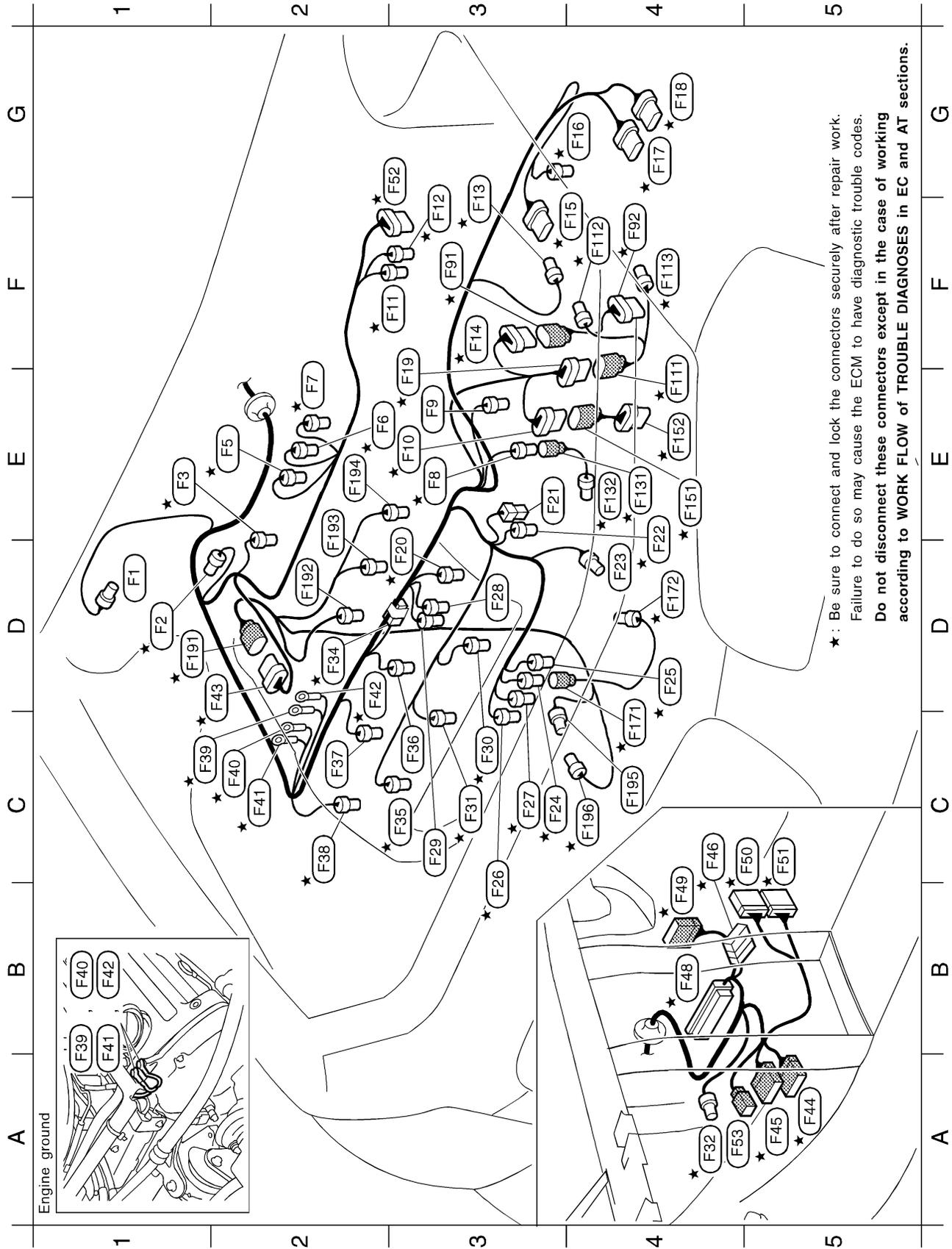
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HARNESS LAYOUT

Engine Control Harness

Engine Control Harness

NFEL0135



MEL108N

Engine control harness

D1	(F1)	B/2	: Power steering oil pressure switch
D1	(F2)	GY/3	: Heated oxygen sensor 1 (Front) (Bank 1)
E1	(F3)	GY/3	: Ignition coil No. 1
E2	(F5)	GY/3	: Ignition coil No. 3
E2	(F6)	GY/3	: Ignition coil No. 5
E2	(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 (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 (F111) (With A/T)
D3	(F20)	BR/2	: Swirl control valve control solenoid valve
E8	(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	: Heated oxygen sensor 2 (Rear) (Bank 1)
D4	(F25)	G/4	: To (F171)
C3	(F26)	GY/3	: Heated oxygen sensor 1 (Front) (Bank 2)
C3	(F27)	GY/4	: Heated oxygen sensor 2 (Rear) (Bank 2)
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
A4	(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)
C1	(F39)	-	: Engine ground
C2	(F40)	-	: Engine ground
C2	(F41)	-	: Engine ground
D2	(F42)	-	: Engine ground

D2	(F43)	L/8	: To (F191)
A5	(F44)	W/18	: To (M46)
A5	(F45)	W/20	: To (M47) (With A/T)
C4	(F46)	L/12	: Joint connector-18
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
A4	(F53)	BR/2	: To (M117) (With M/T)
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			
E4	(F111)	GY/6	: To (F19) (With A/T)
F4	(F112)	B/3	: Revolution sensor (With A/T)
F4	(F113)	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			
D1	(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)

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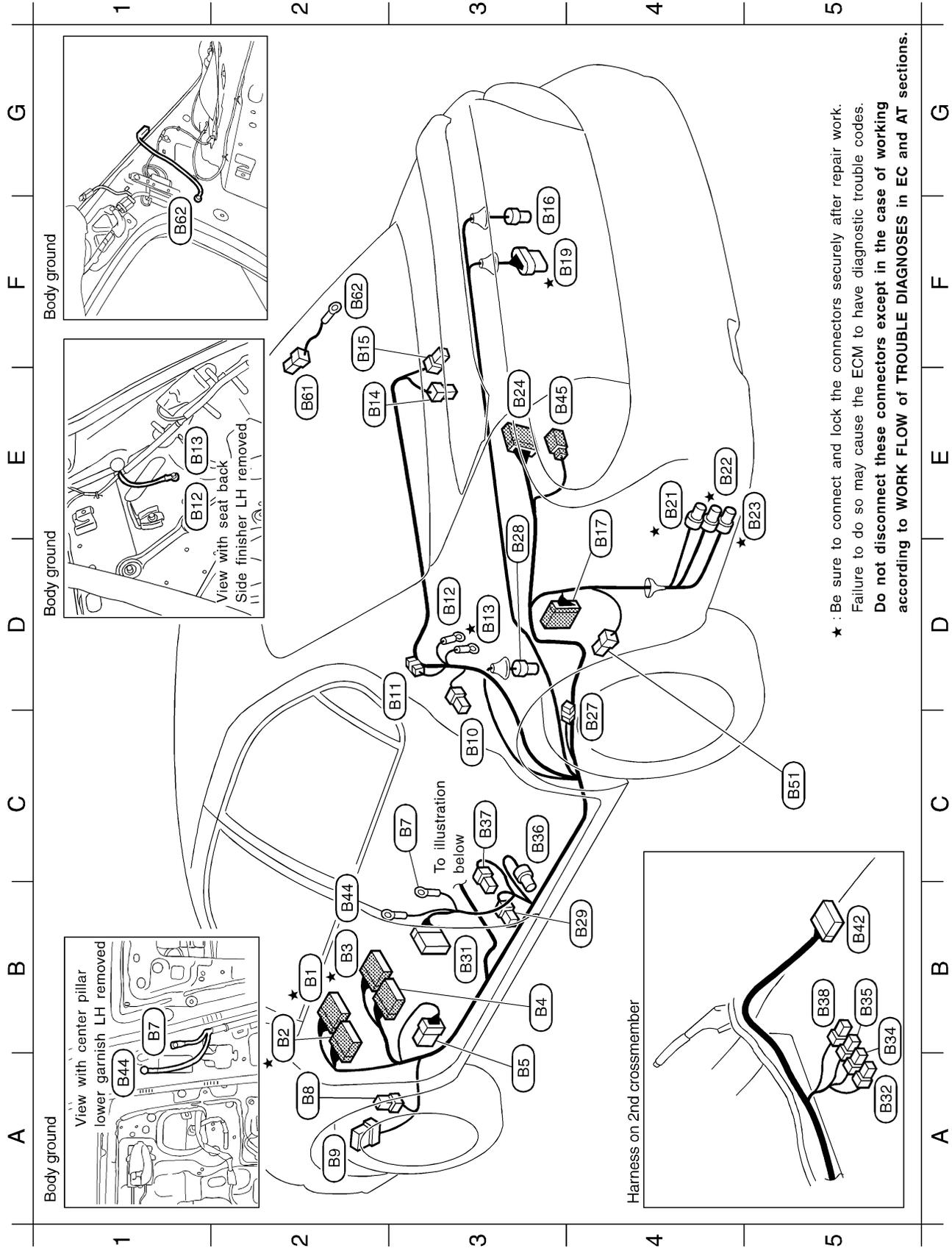
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HARNESS LAYOUT

Body Harness

NFEL0136

Body Harness



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MEL110N

HARNES LAYOUT

Body Harness (Cont'd)

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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)
A3	(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	
F3	(B16)	GY/2	:	Rear wheel sensor RH	
E4	(B17)	W/10	:	To	(T3)
F3★	(B19)	GY/5	:	Fuel level sensor unit and fuel pump	
E4★	(B21)	G/2	:	Vacuum cut valve bypass valve	
E4★	(B22)	B/2	:	EVAP canister vent control valve	
E5★	(B23)	GY/3	:	EVAP control system pressure sensor	
E3	(B24)	W/16	:	To	(B119)
C4	(B27)	W/2	:	Condenser	
E3	(B28)	BR/2	:	Rear wheel sensor LH	
B4	(B29)	W/3	:	Front door switch LH	
B3	(B31)	W/10	:	To	(D81)
A5	(B32)	W/3	:	Heated seat LH (Via sub-harness)	
B5	(B34)	W/3	:	Seat belt buckle switch LH	
B5	(B35)	W/2	:	Power seat LH (Via sub-harness)	
C3	(B36)	OR/2	:	Satellite sensor LH (With side air bag system)	
C3	(B37)	★ 1	:	Seat belt pre-tensioner LH	
B5	(B38)	Y/2	:	Side air bag module LH (With side air bag system) (Via sub-harness)	
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	

Defogger harness

E2	(B61)	B/1	:	Rear window defogger
F2	(B62)	-	:	Body ground

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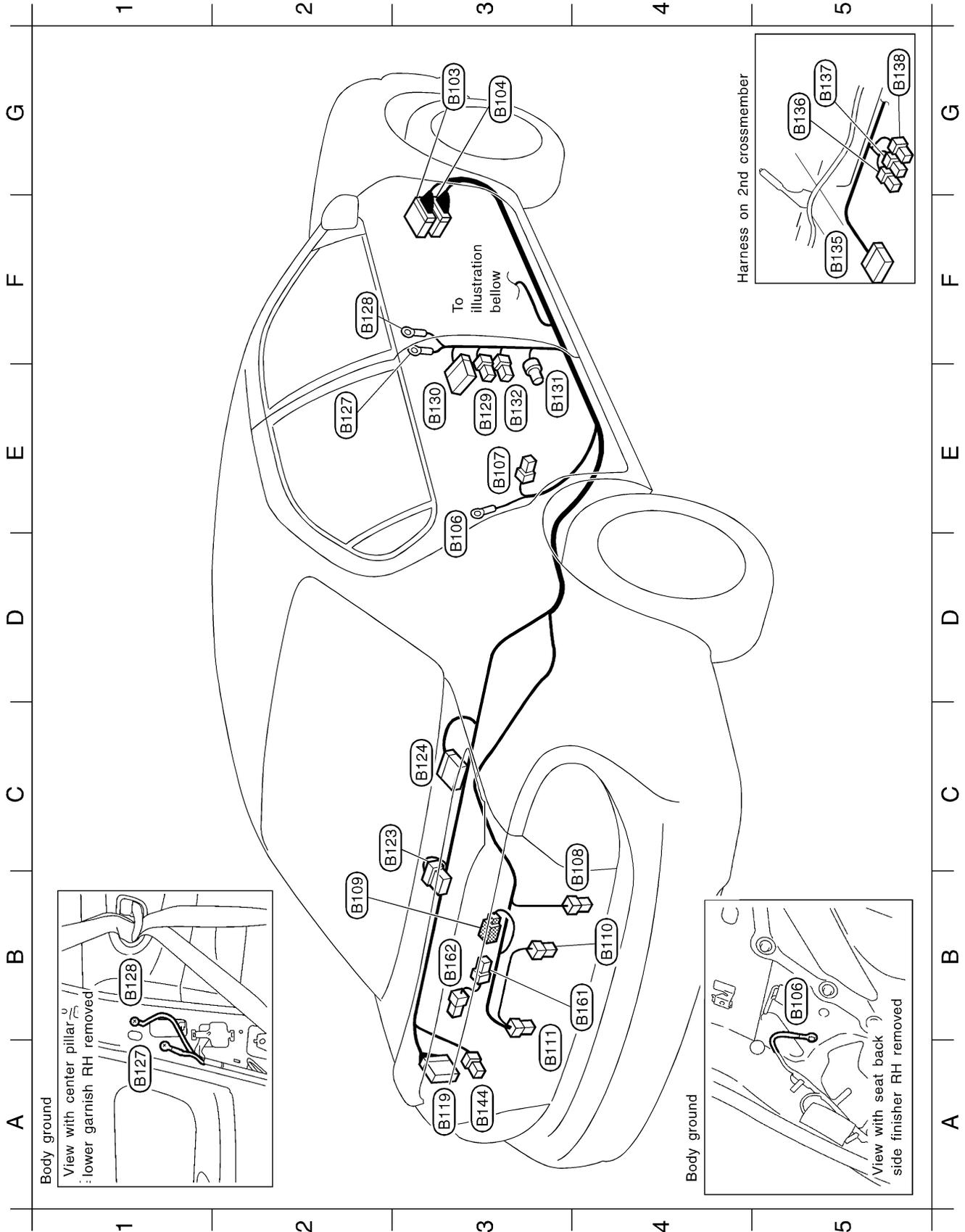
★ 1 : W/4 or Y/2

HARNESS LAYOUT

Body No. 2 Harness

Body No. 2 Harness

NFEL0137



MEL363K

HARNESS LAYOUT

Body No. 2 Harness (Cont'd)

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		
A3	(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	:	Heated seat RH (Via sub-harness)		
G5	(B137)	W/2	:	Power seat RH (Via sub-harness)		
G5	(B138)	Y/2	:	Side air bag module RH (With side air bag system) (Via sub-harness)		
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)		

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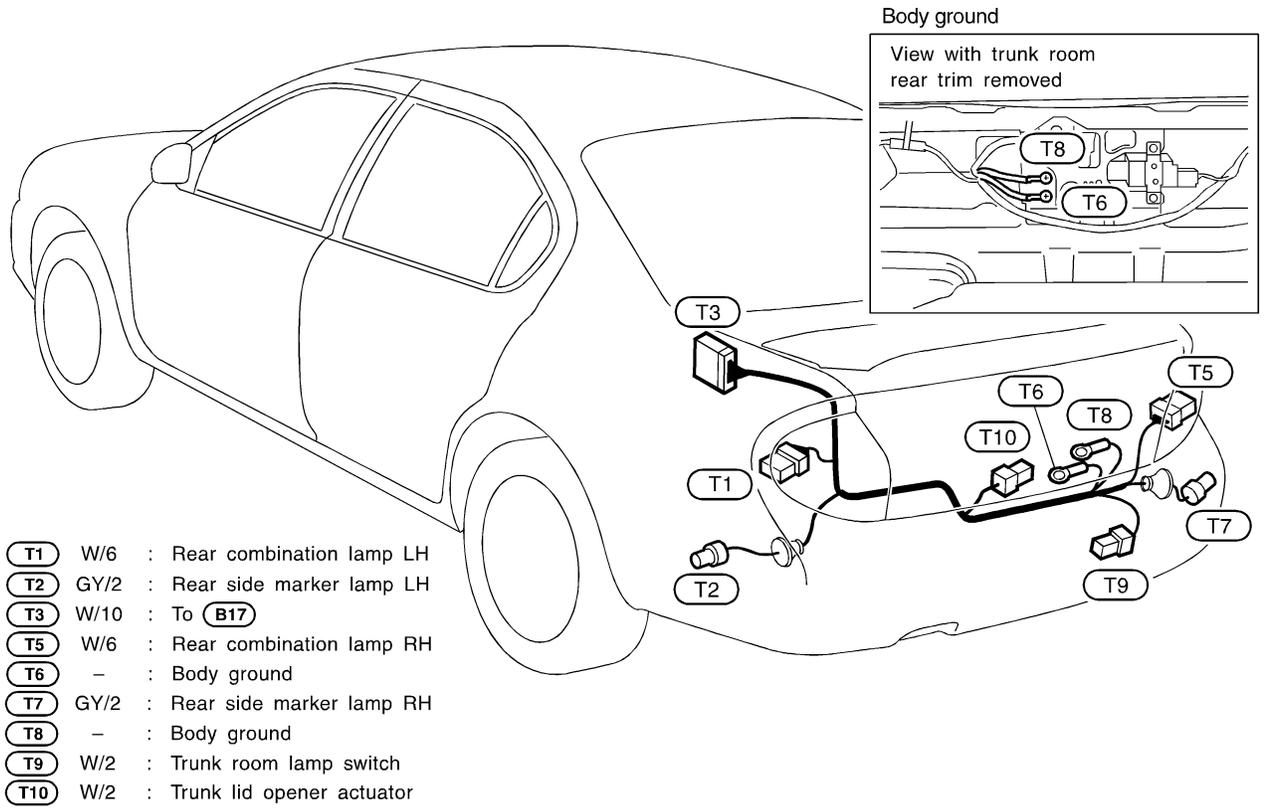
MEL112N

HARNESS LAYOUT

Tail Harness

Tail Harness

NFEL0138



MEL113N

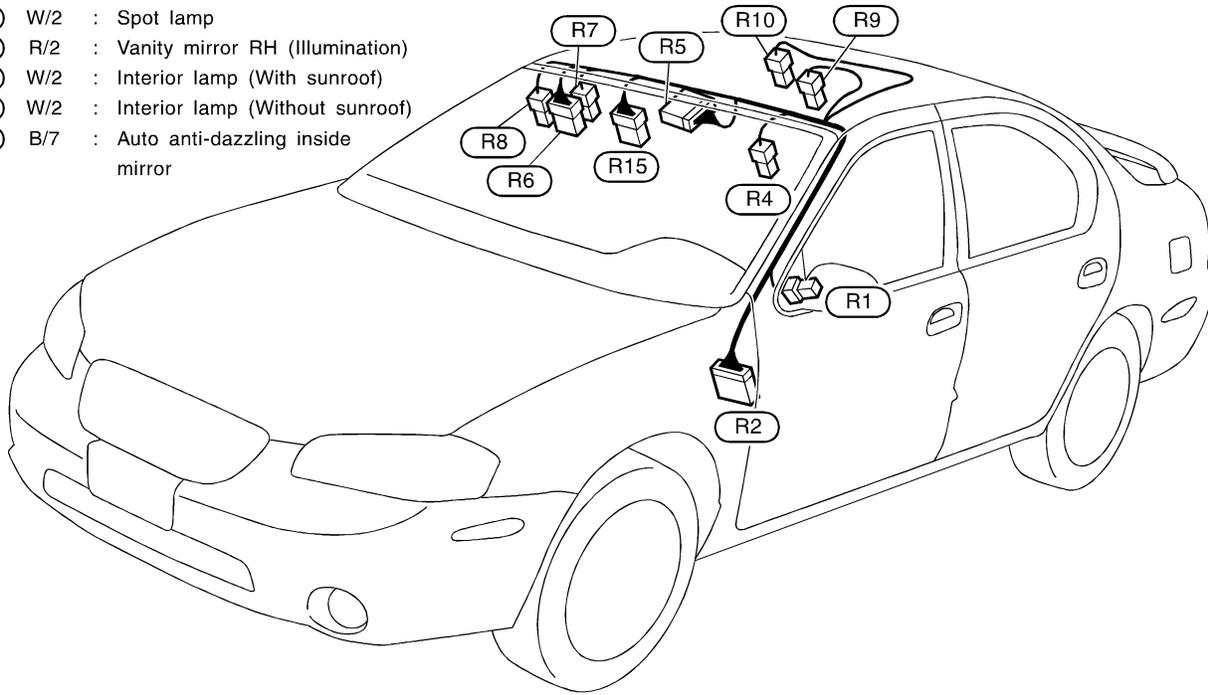
HARNESS LAYOUT

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)
- R15** B/7 : Auto anti-dazzling inside mirror



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HARNESS LAYOUT

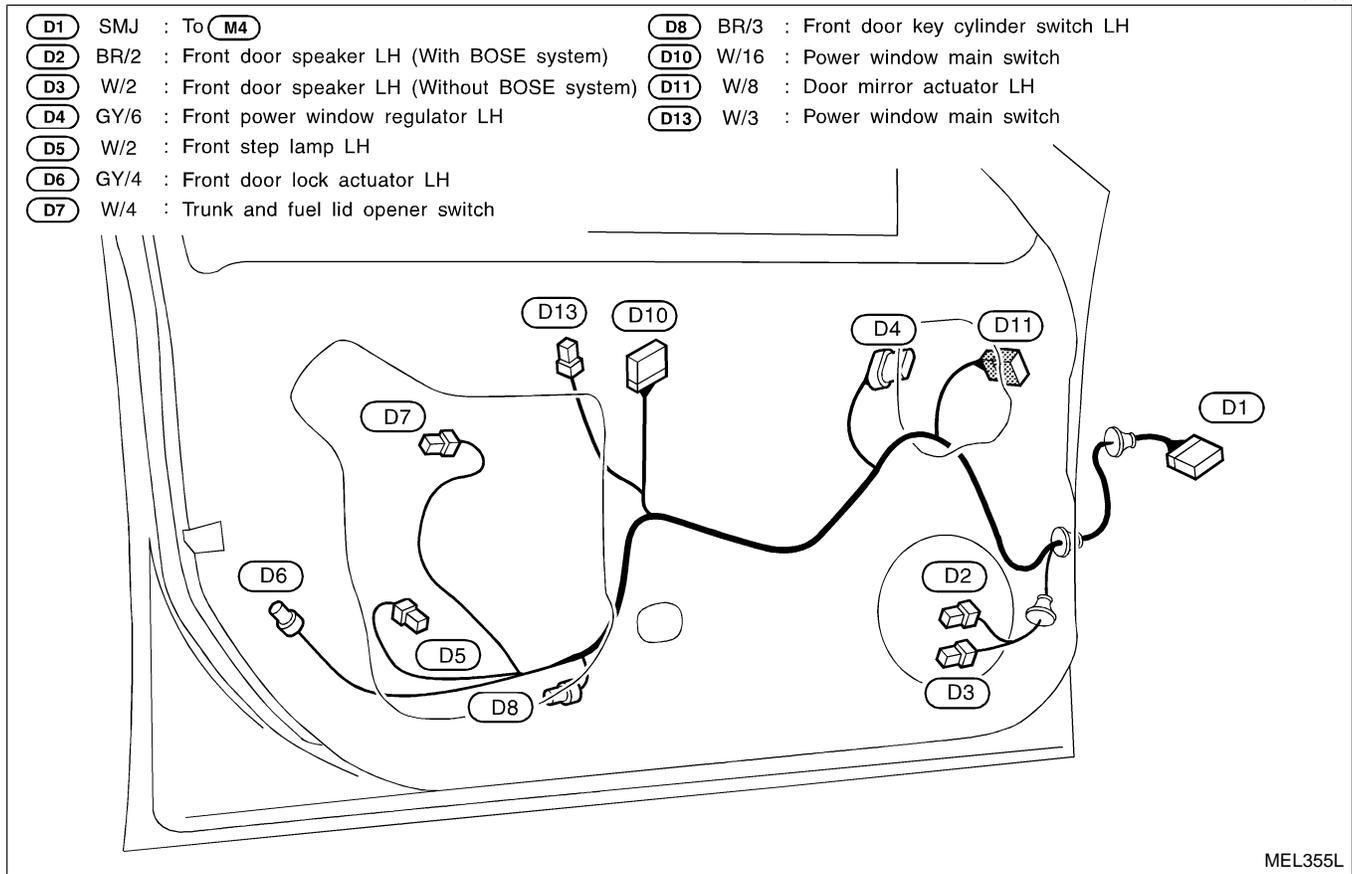
Front Door Harness

Front Door Harness

NFEL0142

LH SIDE

NFEL0142S03

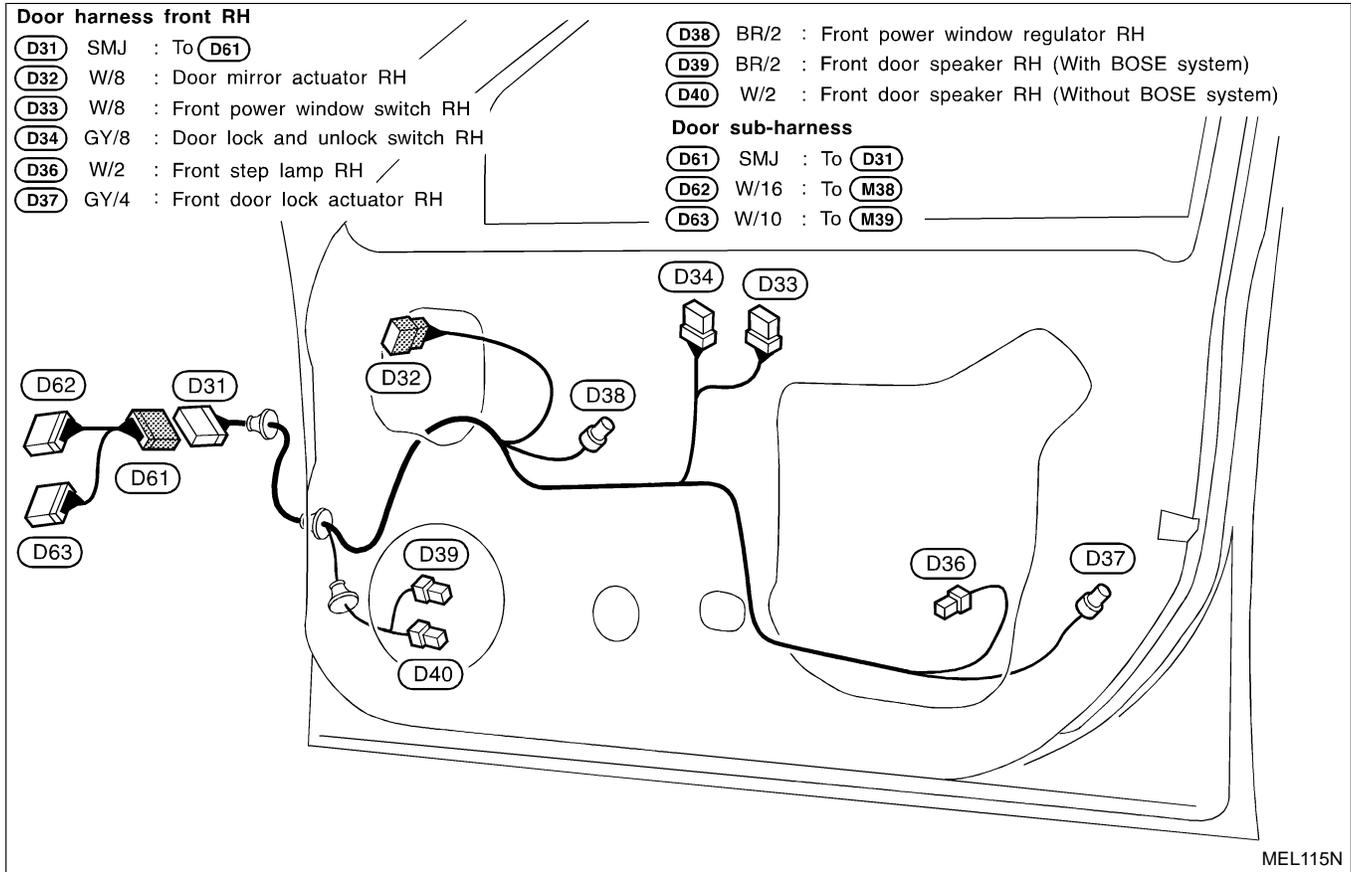


HARNESS LAYOUT

Front Door Harness (Cont'd)

RH SIDE

NFEL0142S04



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HARNESS LAYOUT

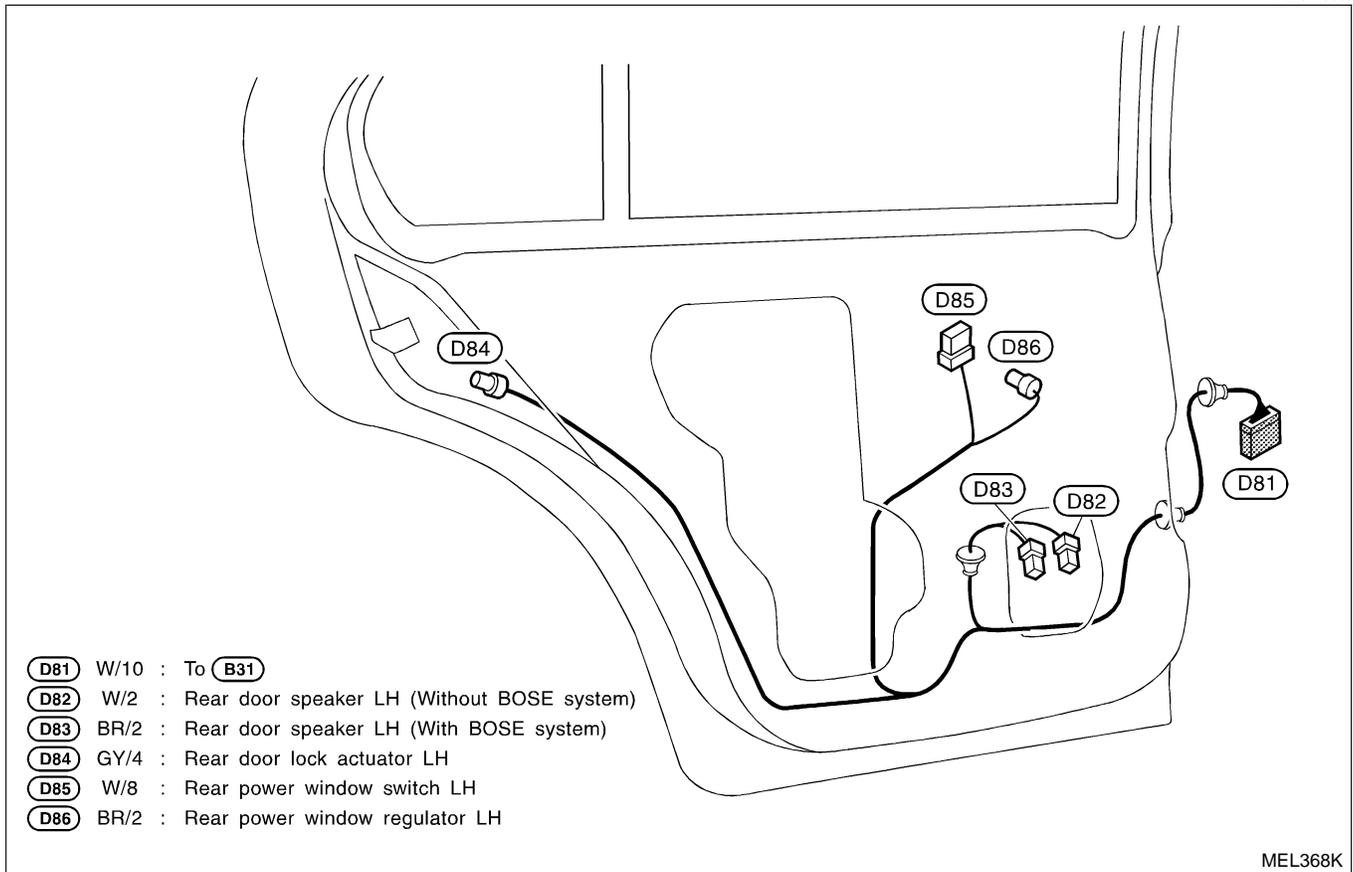
Rear Door Harness

Rear Door Harness

NFEL0143

LH SIDE

NFEL0143S03



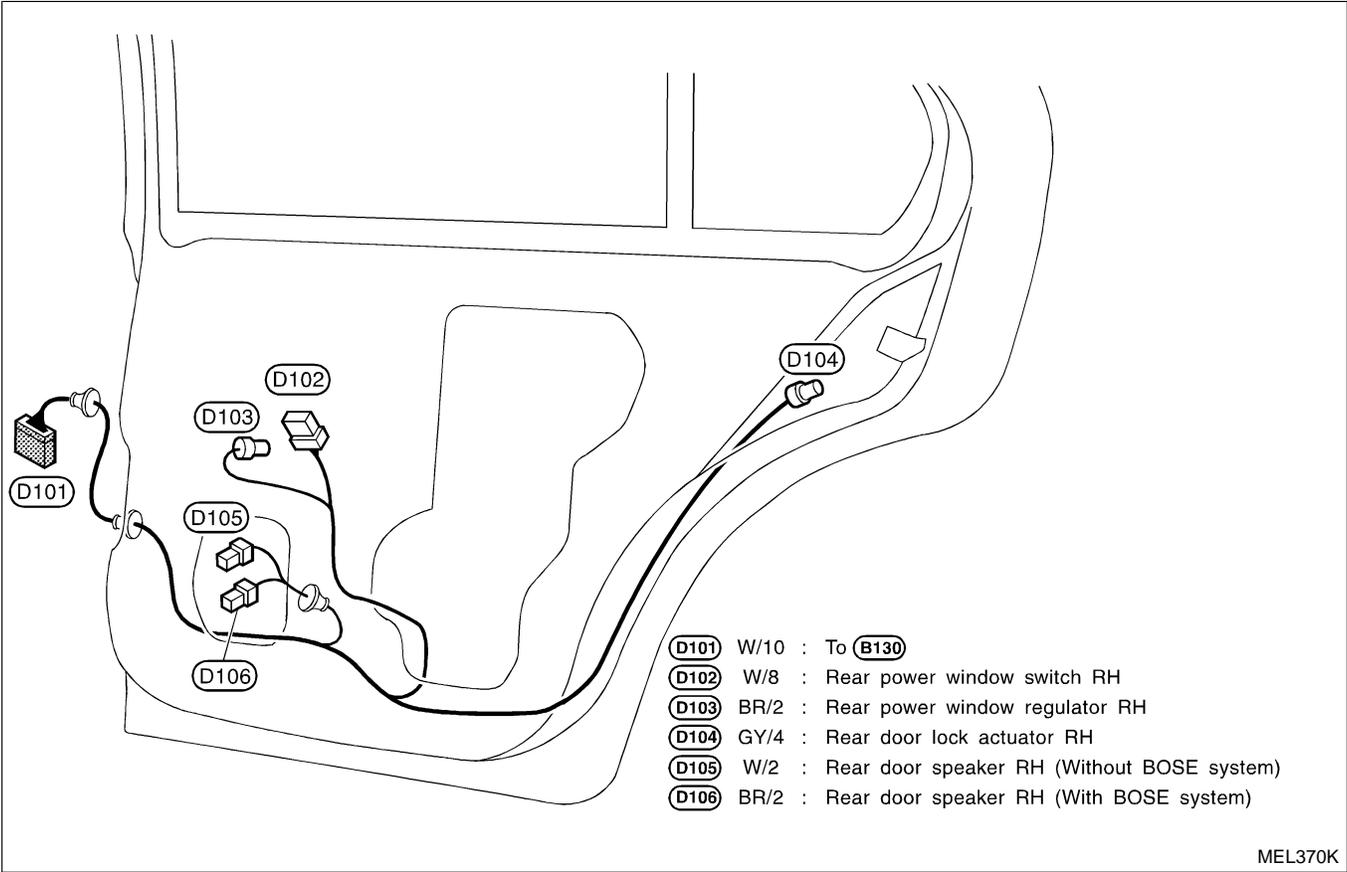
MEL368K

HARNESS LAYOUT

Rear Door Harness (Cont'd)

RH SIDE

NFEL0143S04



GI

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MT

AT

AX

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BR

ST

RS

BT

HA

SC

EL

IDX

BULB SPECIFICATIONS*Headlamp***Headlamp**

NFEL0144S03

Item	Wattage (W)
High/Low	60/55 (HB2)

Exterior Lamp

NFEL0144S01

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	

Interior Lamp

NFEL0144S02

Item	Wattage (W)	
Interior room lamp	8	
Map lamp	With sunroof	5
	Without sunroof	8
Vanity mirror lamp	8	
Trunk room lamp	3.4	

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
ABS	BR	Anti-lock Brake System
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
EMNT	EC	Electronic Controlled Engine Mount
ENGSS	AT	Engine Speed Signal
F/FOG	EL	Front Fog Lamp
FLS1	EC	Fuel Level Sensor
FLS2	EC	Fuel Level Sensor

Code	Section	Wiring Diagram Name	
FLS3	EC	Fuel Level Sensor	GI
F/PUMP	EC	Fuel Pump Control	
FTS	AT	A/T Fluid Temperature Sensor	MA
FTTS	EC	Fuel Tank Temperature Sensor	
FUELLH	EC	Fuel Injection System Function (Bank 2)	EM
FUELRH	EC	Fuel Injection System Function (Bank 1)	LC
H/LAMP	EL	Headlamp	EC
HORN	EL	Horn	
HSEAT	EL	Heated Seat	FE
I/MIRR	EL	Inside Mirror (Auto Anti-dazzling Mirror)	CL
IATS	EC	Intake Air Temperature Sensor	MT
IGN/SG	EC	Ignition Signal	AT
ILL	EL	Illumination	
INJECT	EC	Injector	AX
INT/L	EL	Interior, Step, Spot, Vanity Mirror and Trunk Room Lamps	SU
KS	EC	Knock Sensor	BR
LAN	AT	A/T Communication Line	ST
LOAD	EC	Electrical Load Signal	RS
LPSV	AT	Line Pressure Solenoid Valve	BT
MAFS	EC	Mass Air Flow Sensor	HA
MAIN	AT	Main Power Supply and Ground Circuit	SC
MAIN	EC	Main Power Supply and Ground Circuit	EL
METER	EL	Speedometer, Tachometer, Temp., Oil, and Fuel Gauges	BT
MIL/DL	EC	MIL & Data Link Connectors	HA
MIRROR	EL	Power Door Mirror	
MULTI	EL	Multi-remote Control System	
NATS	EL	NVIS (Nissan Vehicle Immobilizer System — NATS)	SC
NONDTC	AT	Non-detectable Items	
O2H1B1	EC	Heated Oxygen Sensor 1 Heater (Front) (Bank 1)	EL
O2H1B2	EC	Heated Oxygen Sensor 1 Heater (Front) (Bank 2)	IDX
O2H2B1	EC	Heated Oxygen Sensor 2 Heater (Rear) (Bank 1)	

WIRING DIAGRAM CODES (CELL CODES)

Code	Section	Wiring Diagram Name
O2H2B2	EC	Heated Oxygen Sensor 2 Heater (Rear) (Bank 2)
O2S1B1	EC	Heated Oxygen Sensor 1 (Front) (Bank 1)
O2S1B2	EC	Heated Oxygen Sensor 1 (Front) (Bank 2)
O2S2B1	EC	Heated Oxygen Sensor 2 (Rear) (Bank 1)
O2S2B2	EC	Heated Oxygen Sensor 2 (Rear) (Bank 2)
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 (CMPS) (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)
REMOTE	EL	Audio (Remote Control Switch)
RP/SEN	EC	Refrigerant Pressure Sensor
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
TAIL/L	EL	Parking, License and Tail Lamps

Code	Section	Wiring Diagram Name
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
T&FLID	EL	Trunk Lid and Fuel Filler Lid Opener
TPS	AT	Throttle Position Sensor
TPS	EC	Throttle Position Sensor
TP/SW	EC	Closed Throttle Position Switch
TRNSMT	EL	Integrated Homelink Transmitter
TURN	EL	Turn Signal and Hazard Warning Lamps
VEHSEC	EL	Vehicle Security (Theft Warning) System
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