

# ELECTRICAL SYSTEM

## SECTION **EL**

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## PRECAUTIONS

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

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

NJEL0001

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 N16 is as follows (The composition varies according to the destination and 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), front seat belt pre-tensioners, a diagnosis sensor unit, warning lamp, wiring harness and spiral cable.
- For a side collision  
The Supplemental Restraint System consists of front side air bag module (located in the outer side of front seat), side air bag (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. SRS wiring harnesses can be identified by yellow harness connector.**

### Wiring Diagrams and Trouble Diagnosis

NJEL0002

When you read wiring diagrams, refer to the following:

- Refer to GI-12, "HOW TO READ WIRING DIAGRAMS"
- Refer to EL-10, "POWER SUPPLY ROUTING" for power distribution circuit

When you perform trouble diagnosis, refer to the following:

- Refer to GI-32, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"
- Refer to GI-21, "HOW TO PERFORM EFFICIENT DIAGNOSIS FOR AN ELECTRICAL INCIDENT"

Check for any Service bulletins before servicing the vehicle.



# HARNESS CONNECTOR

Description

## Description

NJEL0003

NJEL0003S01

### HARNESS CONNECTOR (TAB-LOCKING TYPE)

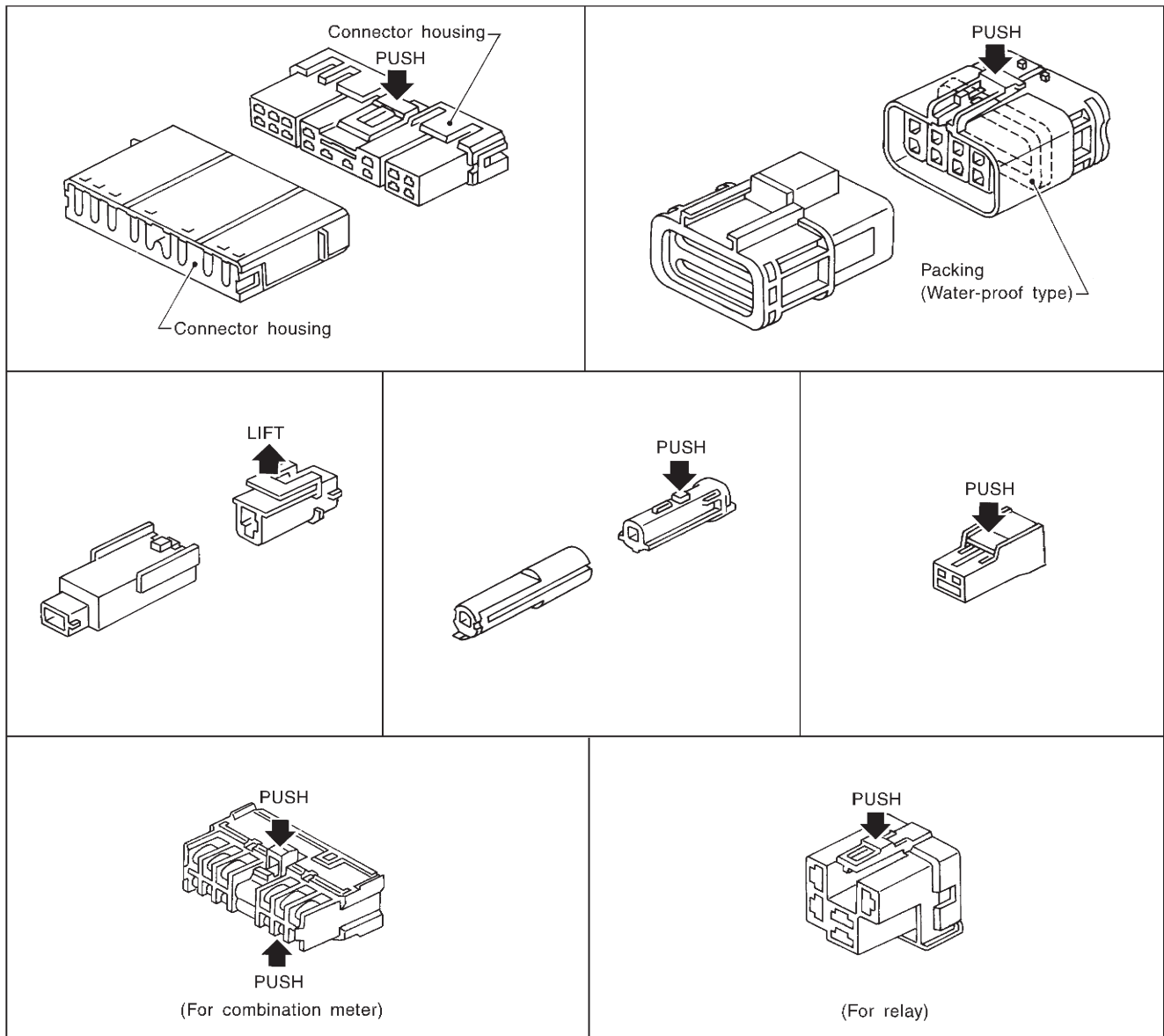
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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]



SEL769DA

# HARNESS CONNECTOR

Description (Cont'd)

## HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

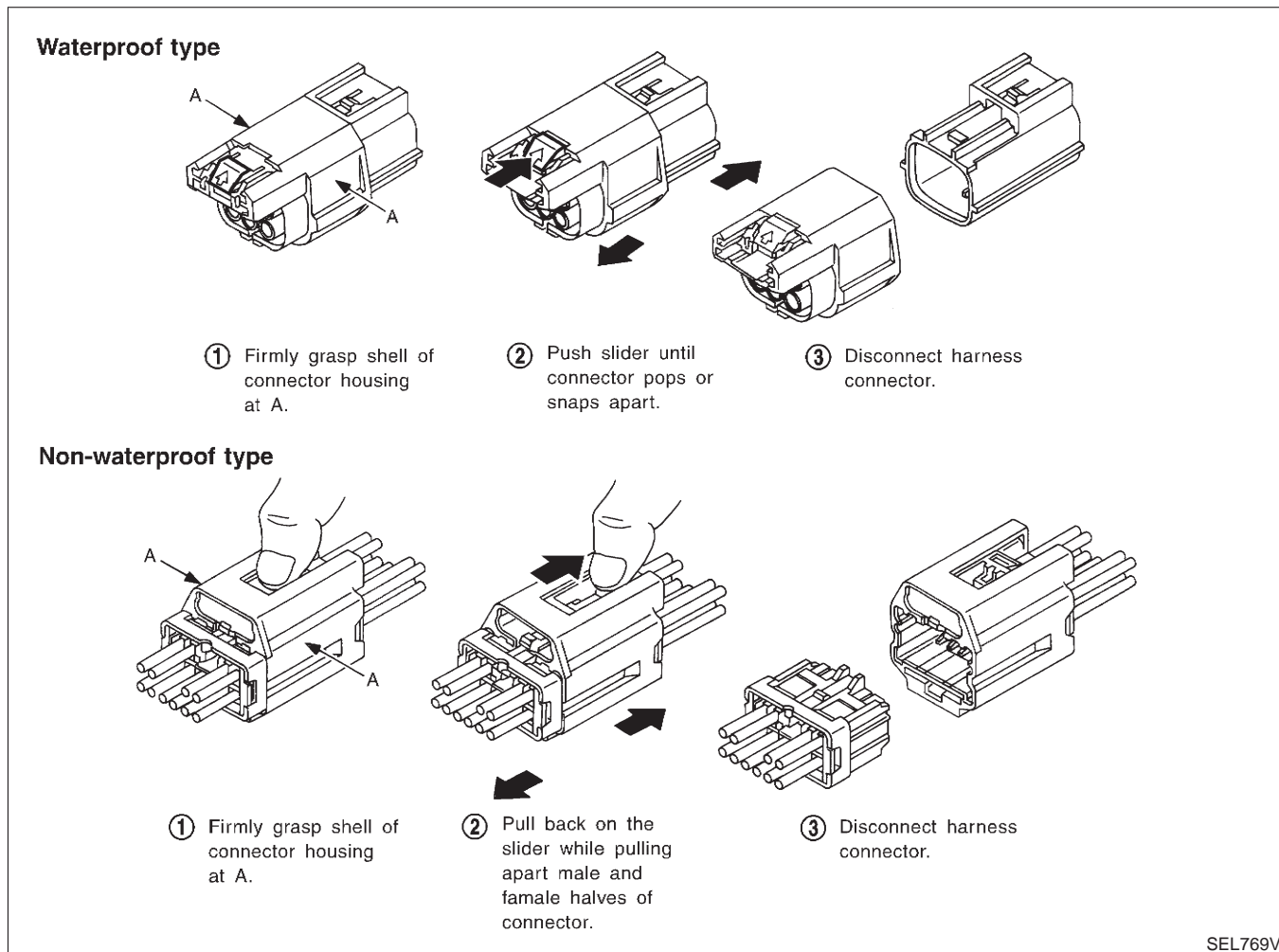
=NJEL0003S02

- 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

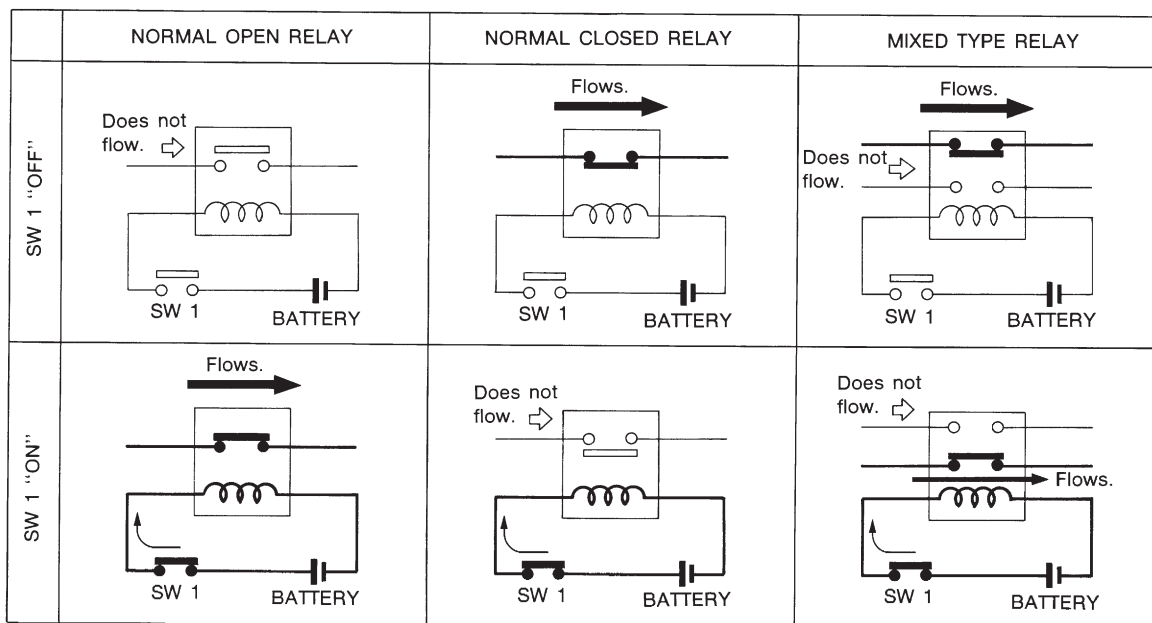
## Description

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

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

NJEL0004

NJEL0004S01

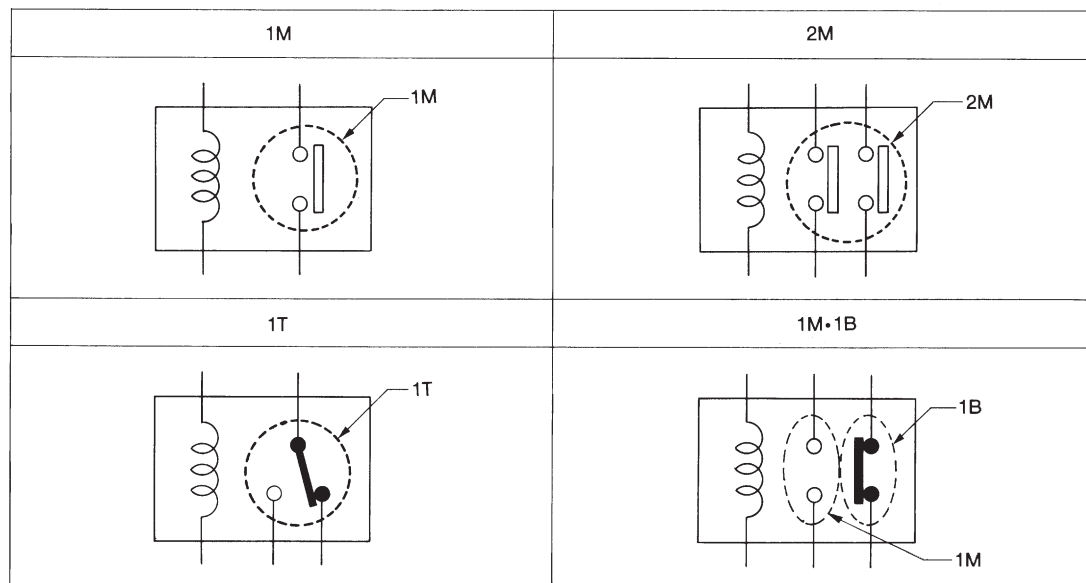


SEL881H

### TYPE OF STANDARDIZED RELAYS

NJEL0004S02

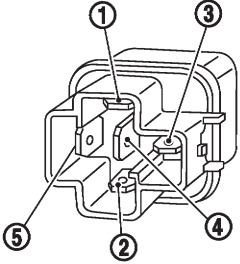
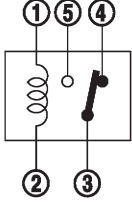
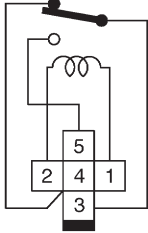
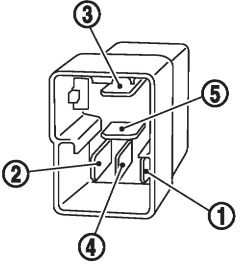
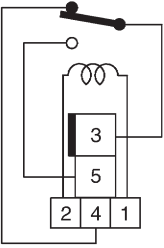
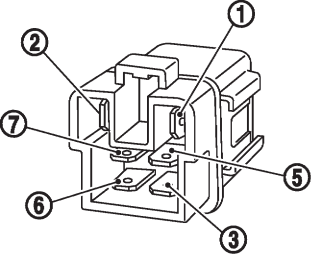
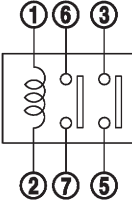
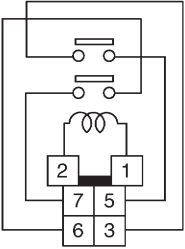
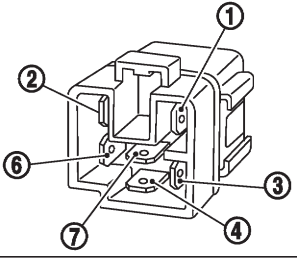
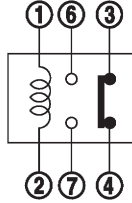
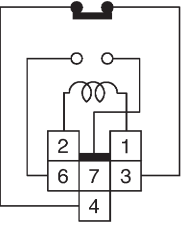
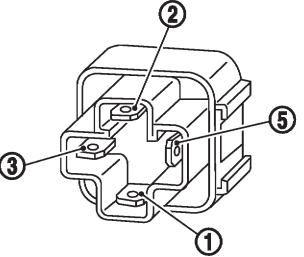
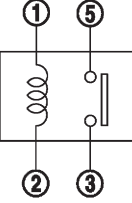
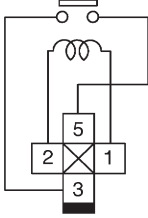
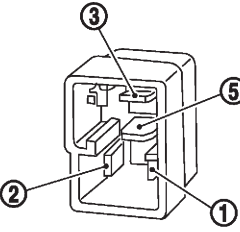
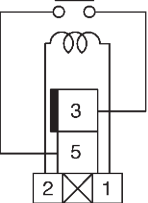
1M	1 Make	2M	2 Make
1T	1 Transfer	1M-1B	1 Make 1 Break



SEL882H

# STANDARDIZED RELAY

Description (Cont'd)

Type	Outer view	Circuit	Connector symbol and connector	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.

GEL264

## POWER SUPPLY ROUTING

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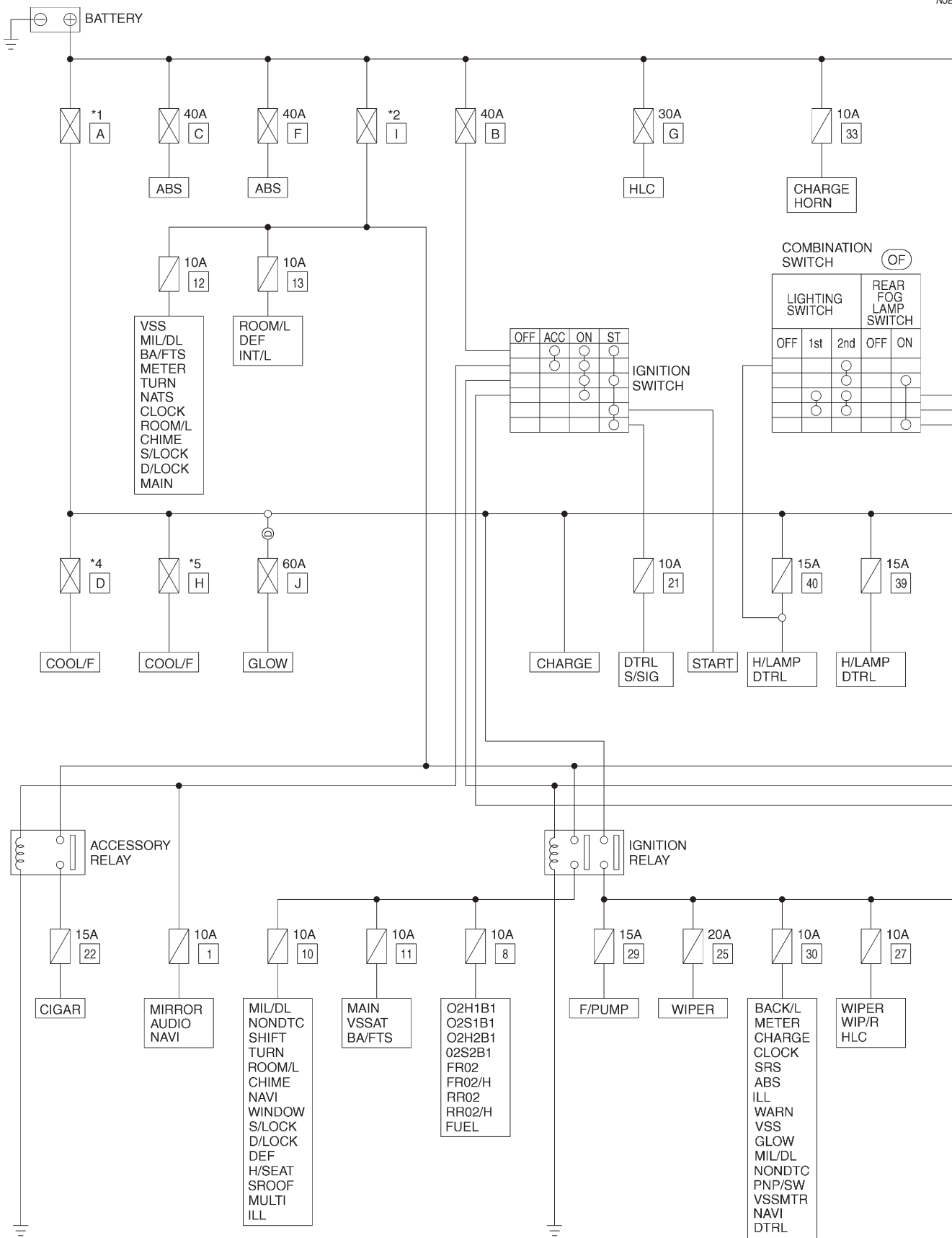
NOTE:

# POWER SUPPLY ROUTING

Schematic

NJEL0418

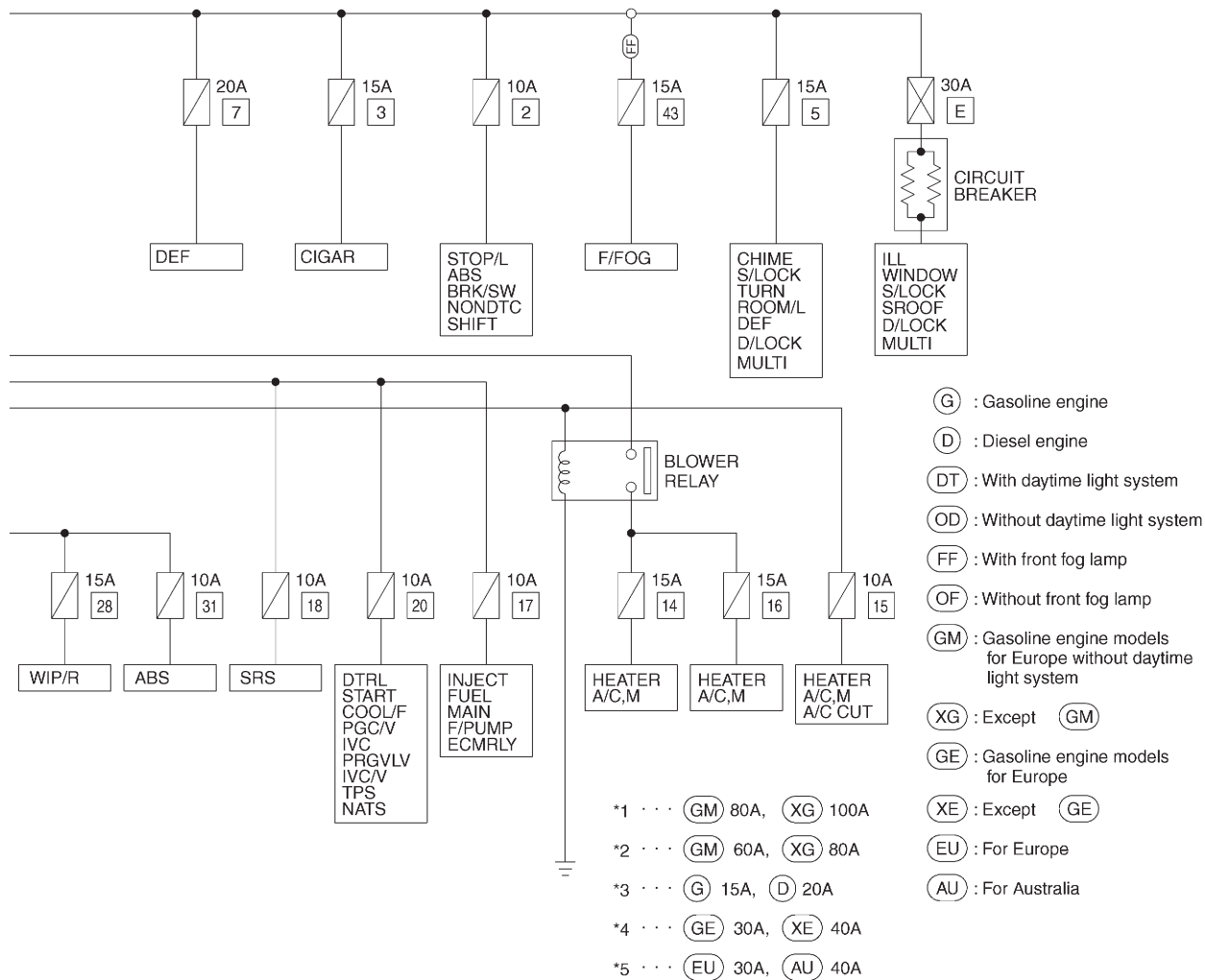
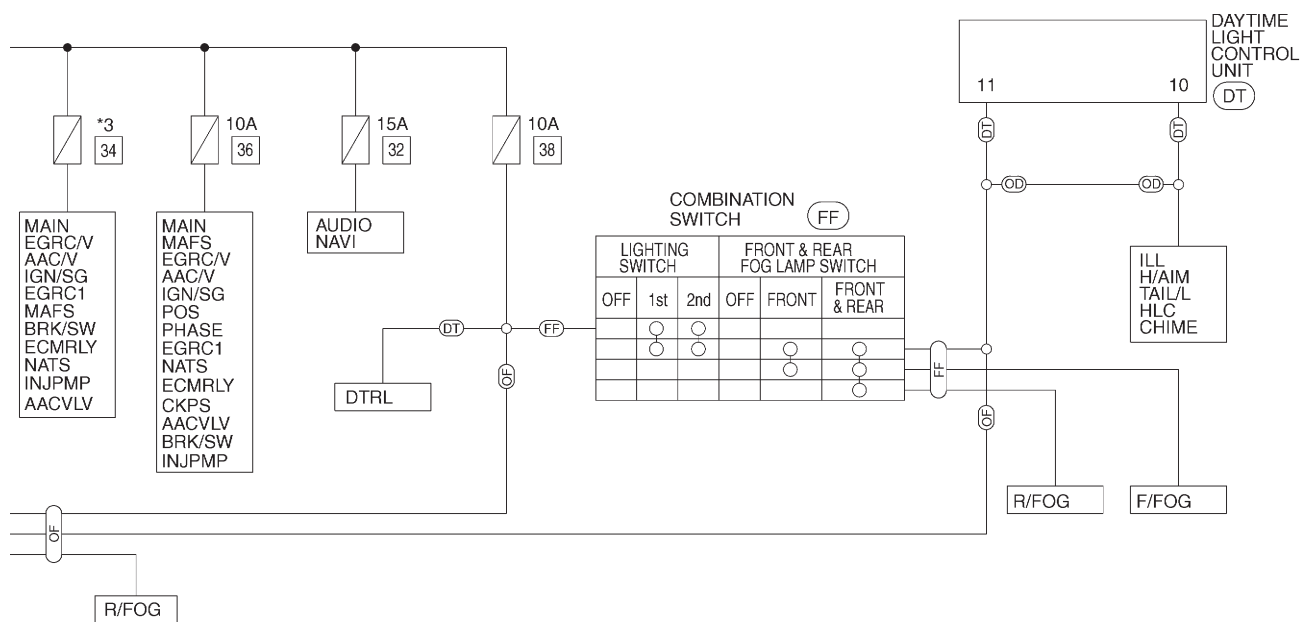
## Schematic



YEL590C

# POWER SUPPLY ROUTING

Schematic (Cont'd)



YEL591C

# POWER SUPPLY ROUTING

Wiring Diagram — POWER —

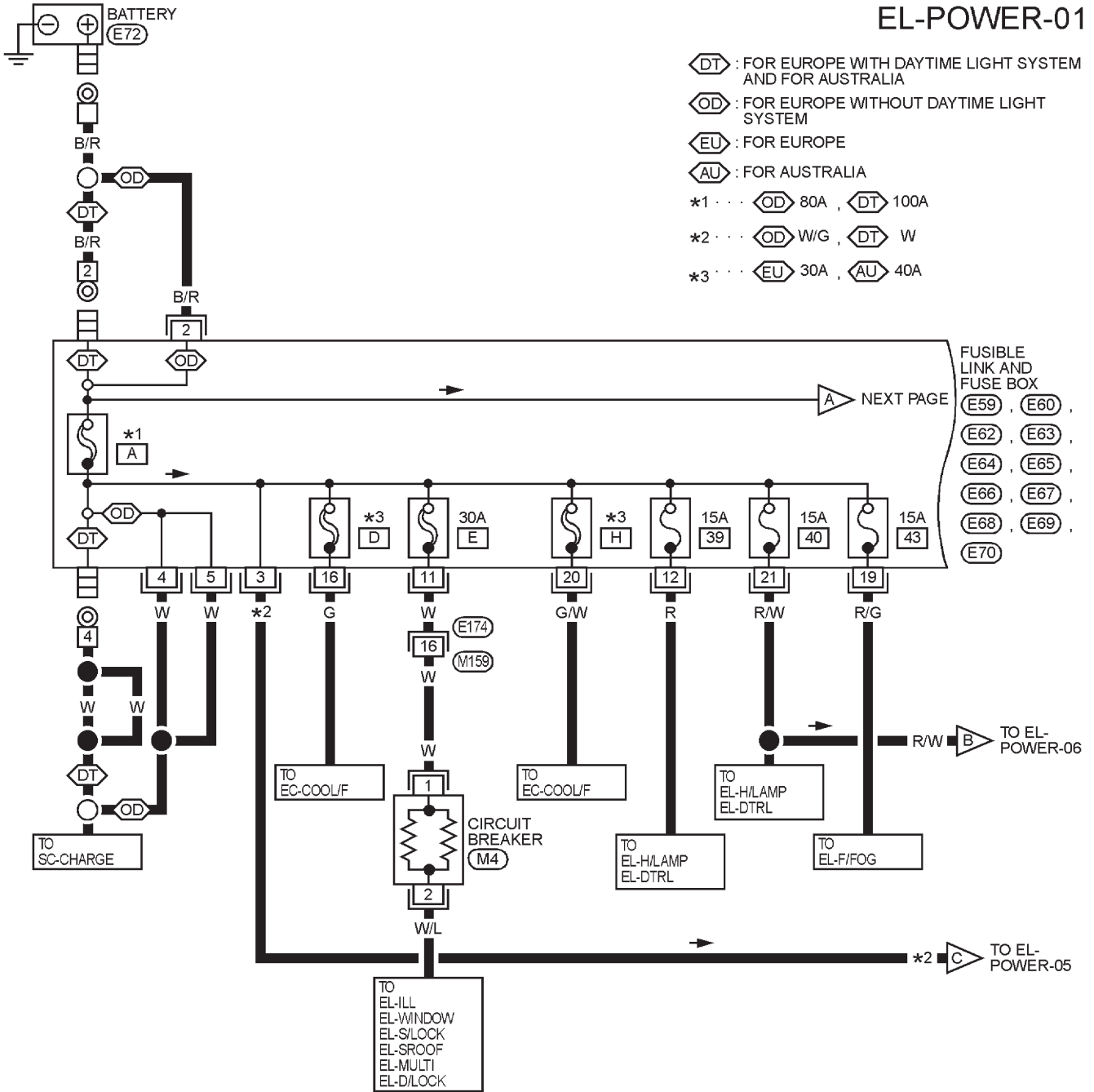
## Wiring Diagram — POWER —

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

NJEL0419

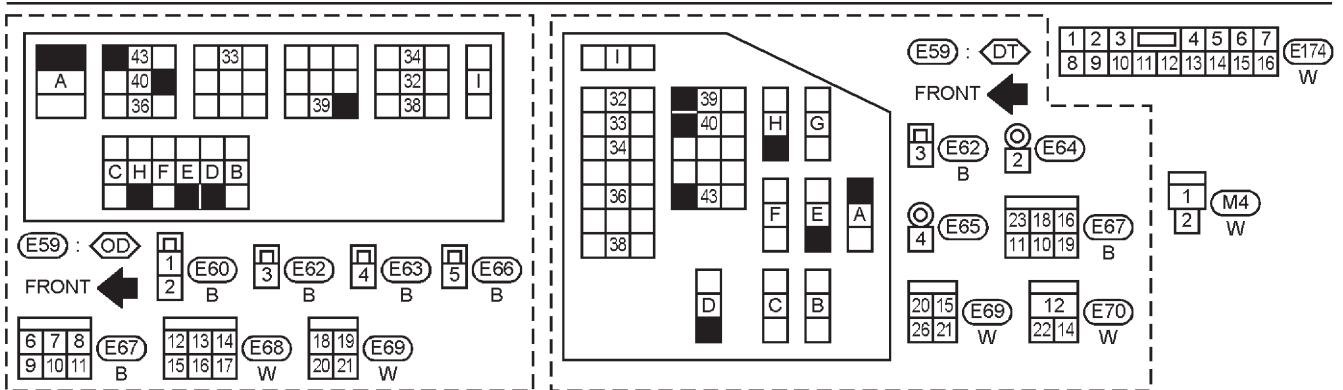
NJEL0419S01

### EL-POWER-01



- ⬡ DT : FOR EUROPE WITH DAYTIME LIGHT SYSTEM AND FOR AUSTRALIA
- ⬡ OD : FOR EUROPE WITHOUT DAYTIME LIGHT SYSTEM
- ⬡ EU : FOR EUROPE
- ⬡ AU : FOR AUSTRALIA
- \*1 . . . ⬡ OD 80A , ⬡ DT 100A
- \*2 . . . ⬡ OD W/G , ⬡ DT W
- \*3 . . . ⬡ EU 30A , ⬡ AU 40A

- FUSIBLE LINK AND FUSE BOX
- ⬡ E59 , ⬡ E60 ,
  - ⬡ E62 , ⬡ E63 ,
  - ⬡ E64 , ⬡ E65 ,
  - ⬡ E66 , ⬡ E67 ,
  - ⬡ E68 , ⬡ E69 ,
  - ⬡ E70



YEL592C



# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

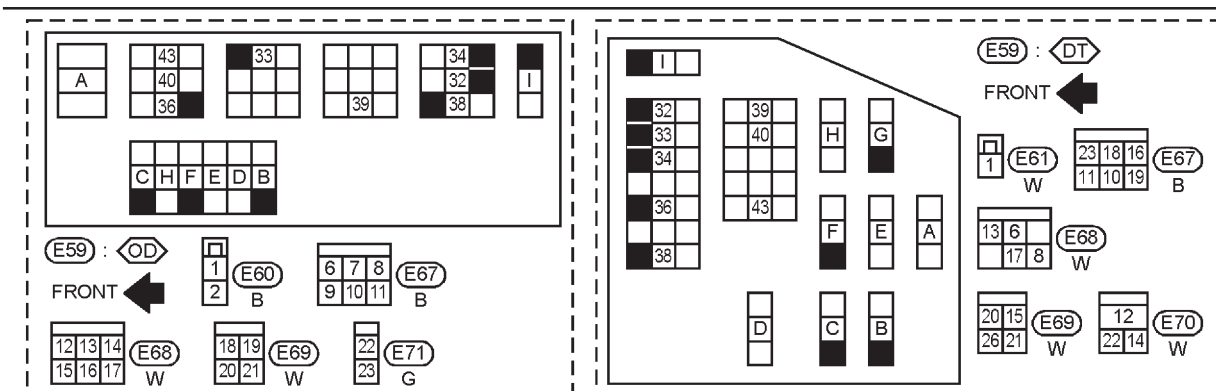
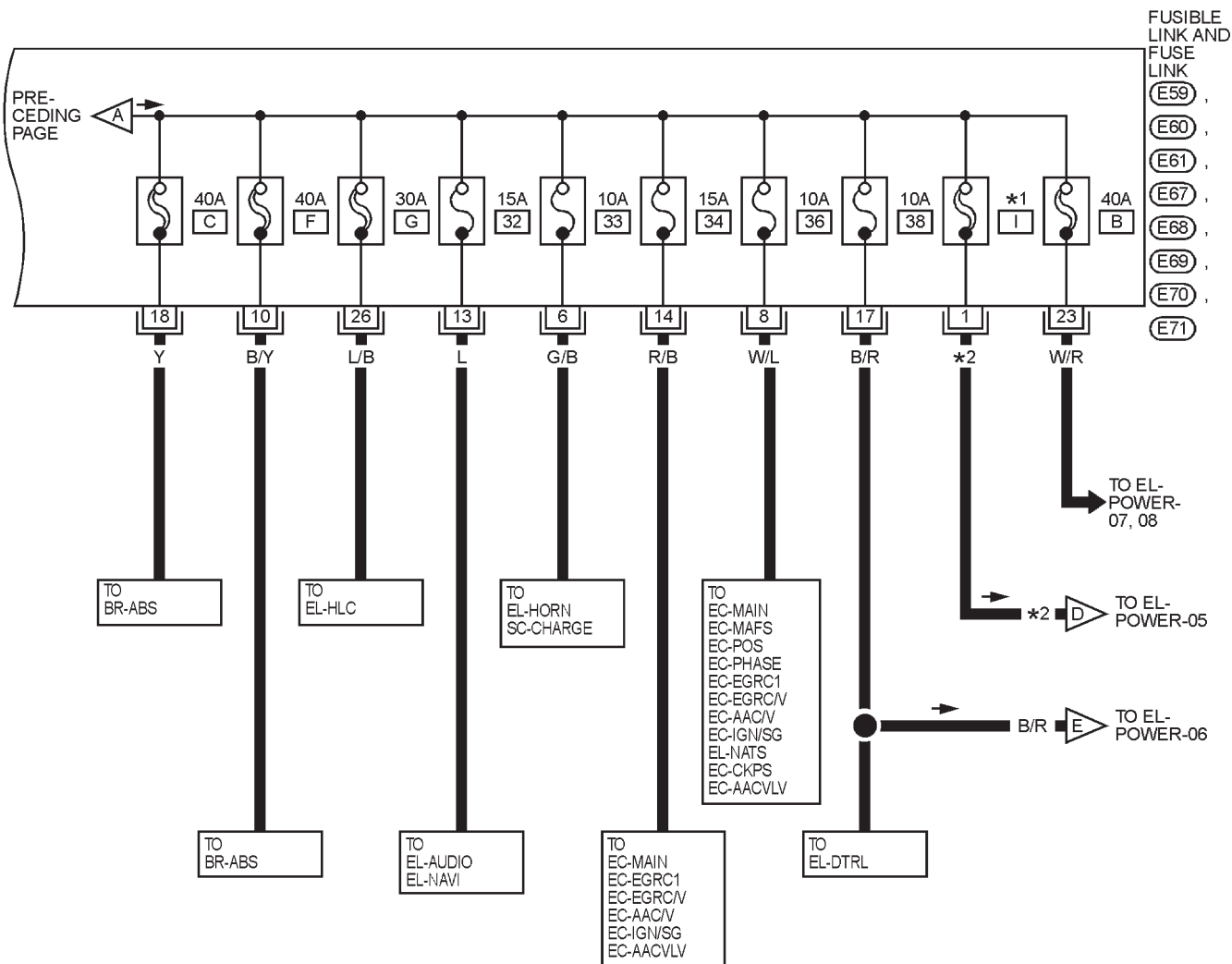
## EL-POWER-02

⬡DT⬡ : FOR EUROPE WITH DAYTIME LIGHT SYSTEM AND FOR AUSTRALIA

⬡OD⬡ : FOR EUROPE WITHOUT DAYTIME LIGHT SYSTEM

\*1 ... ⬡OD⬡ 60A , ⬡DT⬡ 80A

\*2 ... ⬡OD⬡ R/G , ⬡DT⬡ R

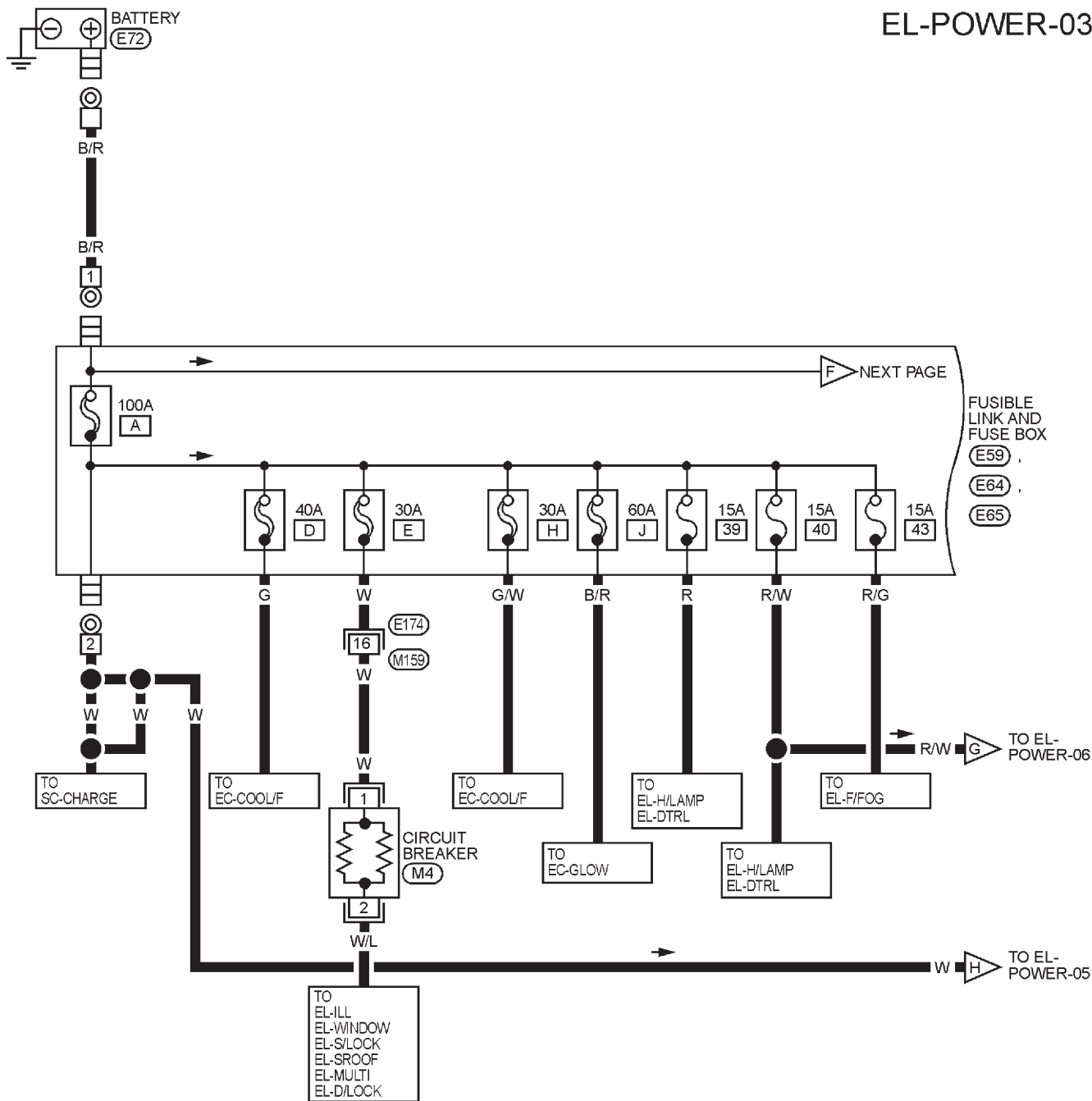


YEL593C

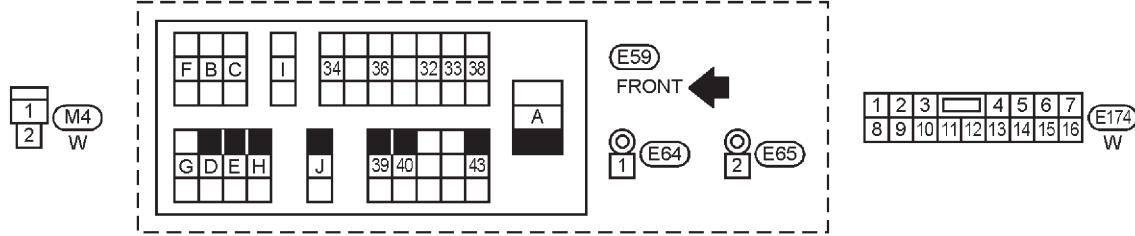
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-03



FUSIBLE LINK AND FUSE BOX  
 (E59)  
 (E64)  
 (E65)

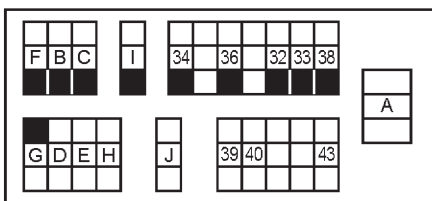
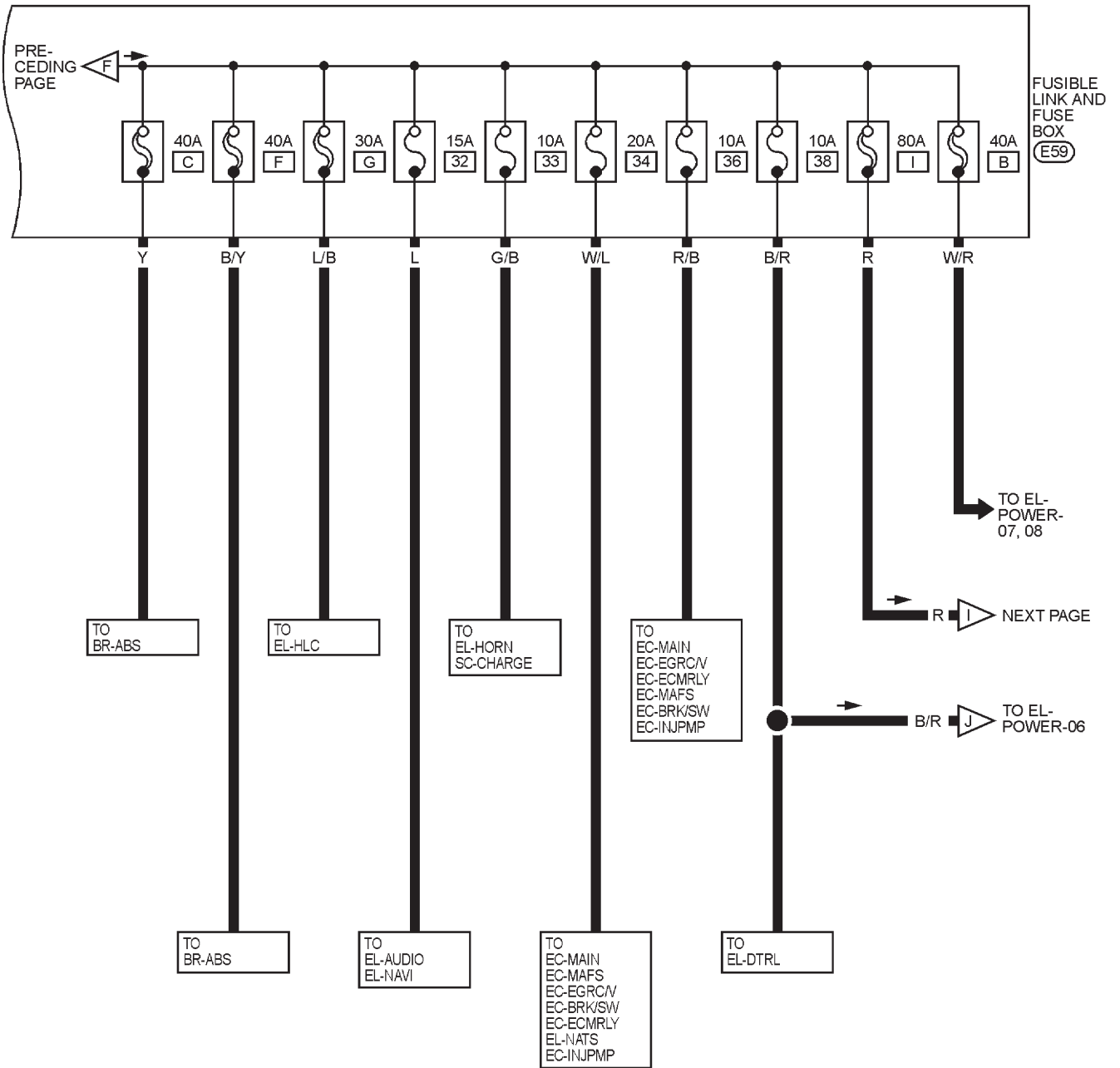


YEL594C

# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

## EL-POWER-04

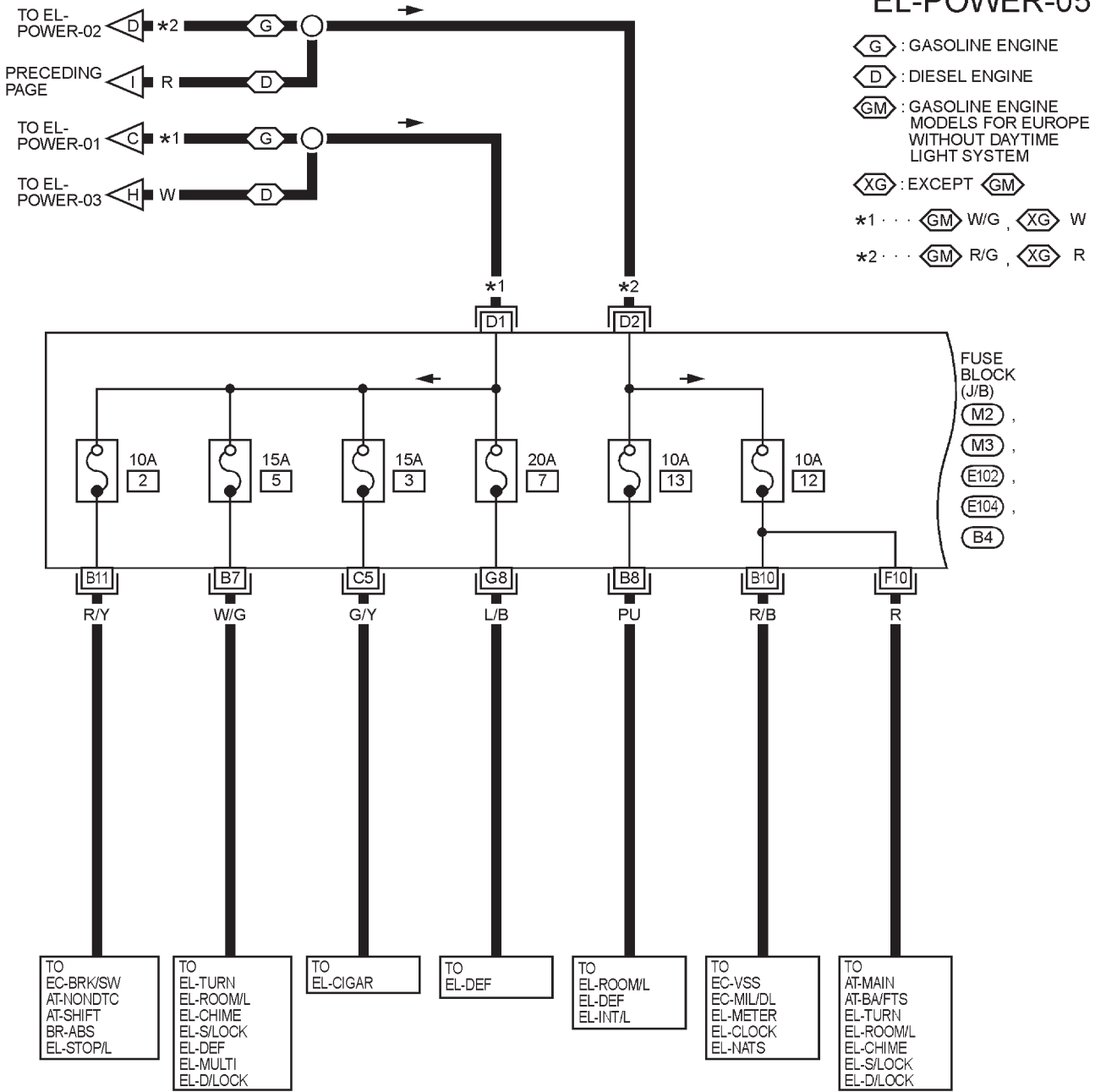


(E59)  
FRONT ←

YEL595C

# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)



REFER TO THE FOLLOWING.

M2 , M3 , E102 , E104 ,  
B4

-FUSE BLOCK-  
JUNCTION BOX (J/B)

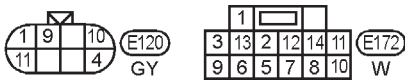
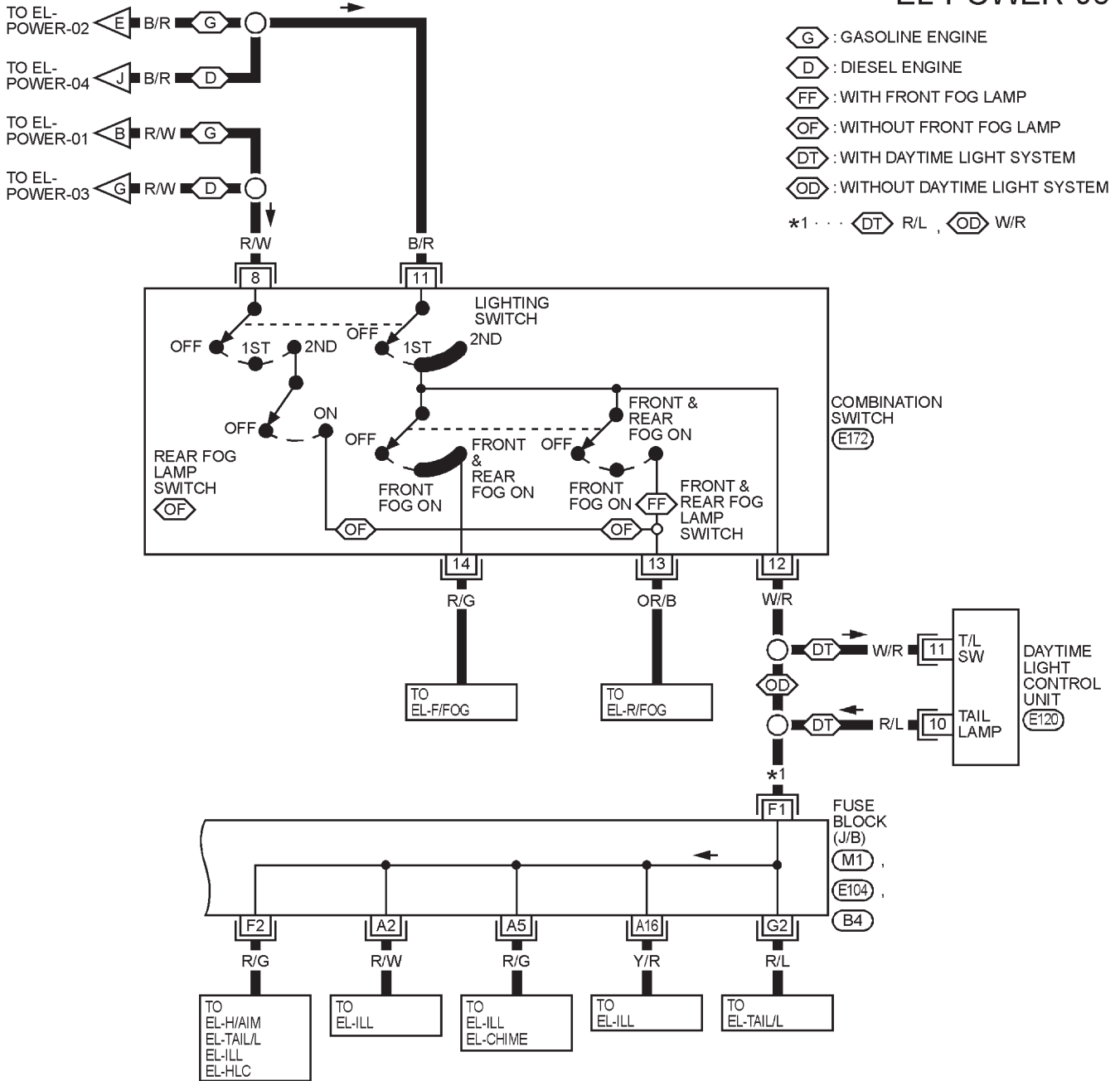
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16			17	18	19	20
21	22	23	24	25	26	27	28	29	30	31

YEL596C

# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

## EL-POWER-06



REFER TO THE FOLLOWING.

(M1), (E104), (B4)

-FUSE BLOCK-  
JUNCTION BOX (J/B)

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

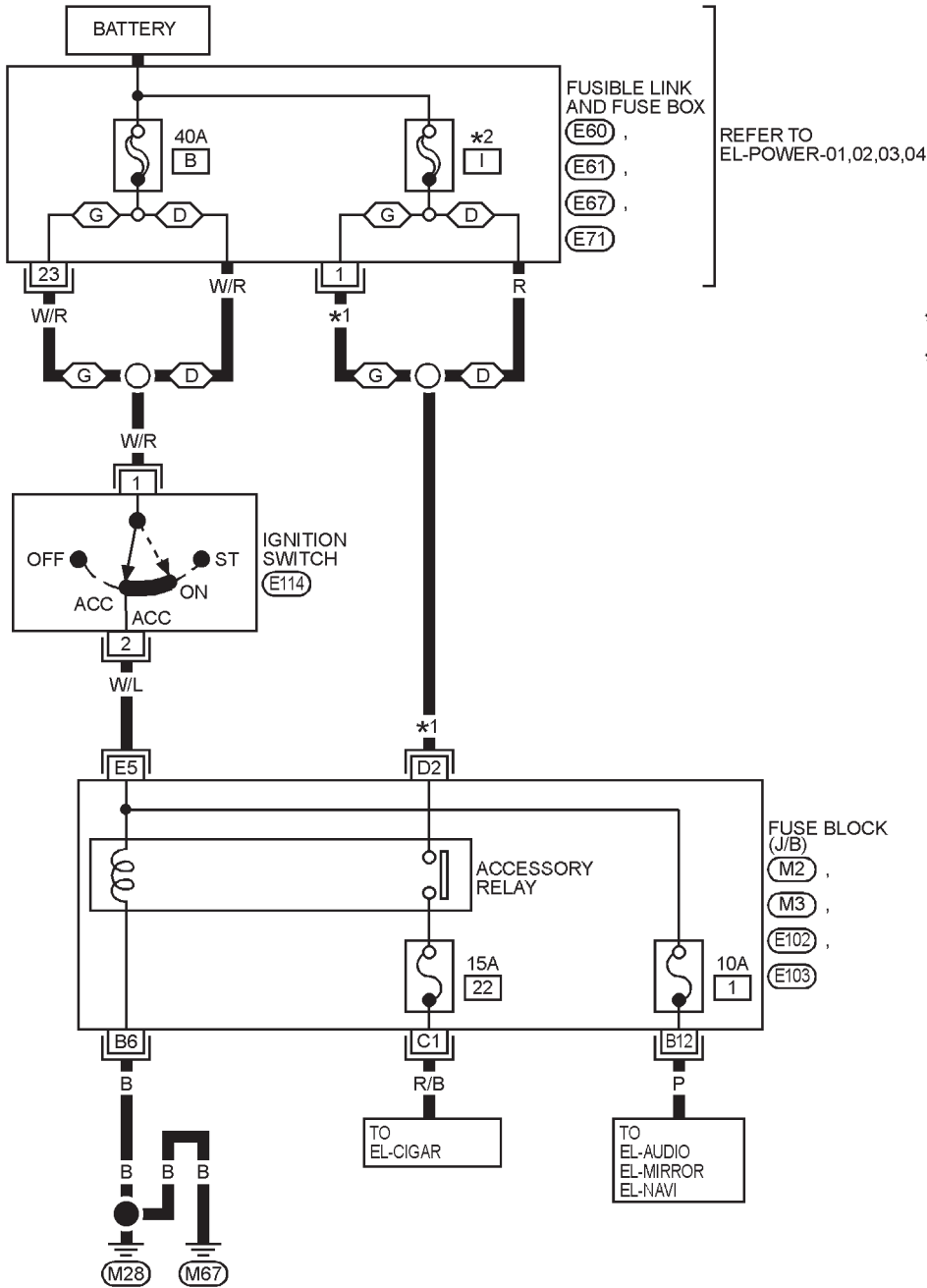
YEL597C

# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

## ACCESSORY POWER SUPPLY — IGNITION SWITCH IN “ACC” OR “ON”

NJEL0419S04



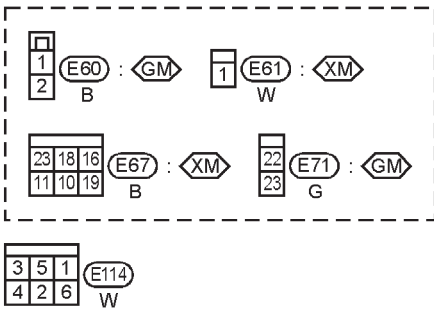
### EL-POWER-07

- G : GASOLINE ENGINE
- D : DIESEL ENGINE
- GM : GASOLINE ENGINE MODELS FOR EUROPE WITHOUT DAYTIME LIGHT SYSTEM
- XM : GASOLINE ENGINE MODELS EXCEPT GM

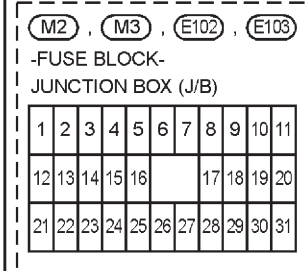
- \*1 . . . GM R/G , XM R , D R
- \*2 . . . GM 80A , XM 80A , D 80A

REFER TO EL-POWER-01,02,03,04

FUSE BLOCK (J/B)  
M2 ,  
M3 ,  
E102 ,  
E103



REFER TO THE FOLLOWING.



YEL598C

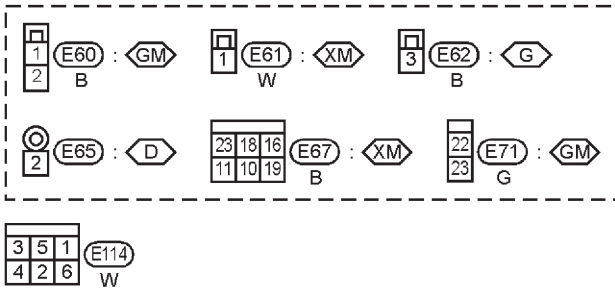
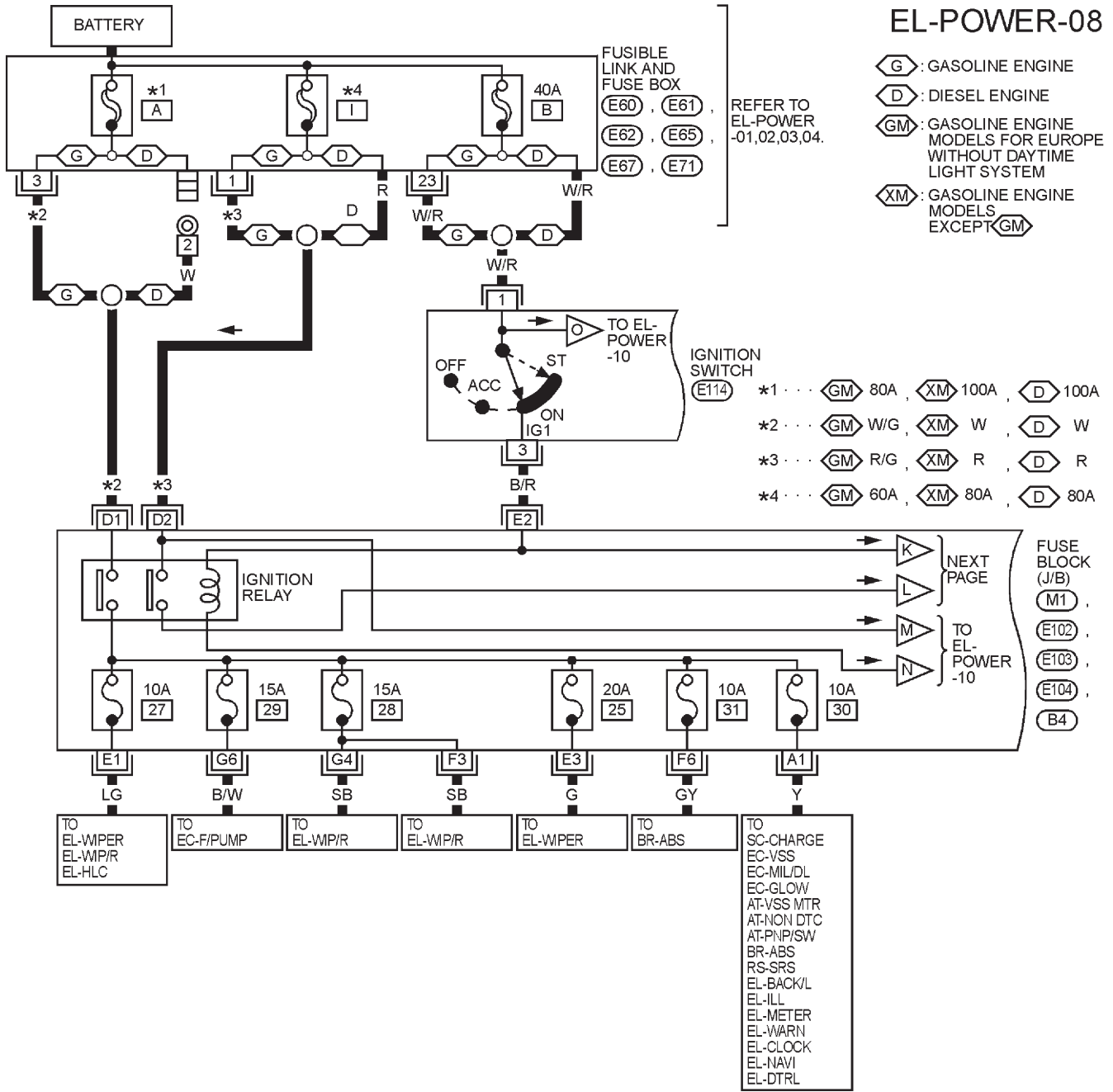
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

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

NJEL0419S05

### EL-POWER-08



REFER TO THE FOLLOWING.

(M1), (E102), (E103),

(E104), (B4)

- FUSE BLOCK -  
 JUNCTION BOX (J/B)

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

YEL599C

# POWER SUPPLY ROUTING

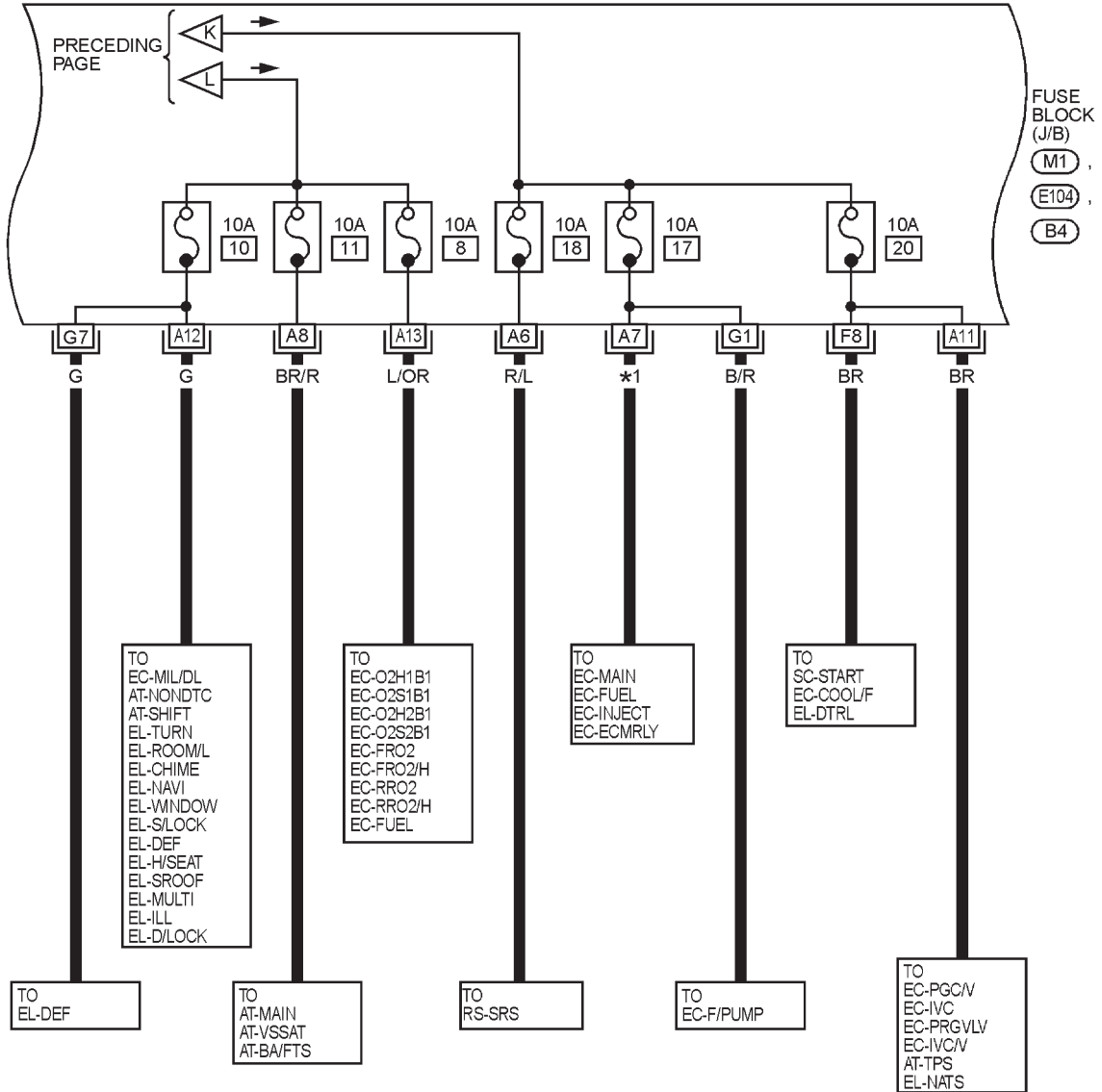
Wiring Diagram — POWER — (Cont'd)

## EL-POWER-09

(G) : GASOLINE ENGINE

(D) : DIESEL ENGINE

\*1 . . . (G) B/R , (D) W/R



REFER TO THE FOLLOWING.

(M1) , (E104) , (B4) -FUSE

BLOCK-  
JUNCTION BOX (J/B)

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

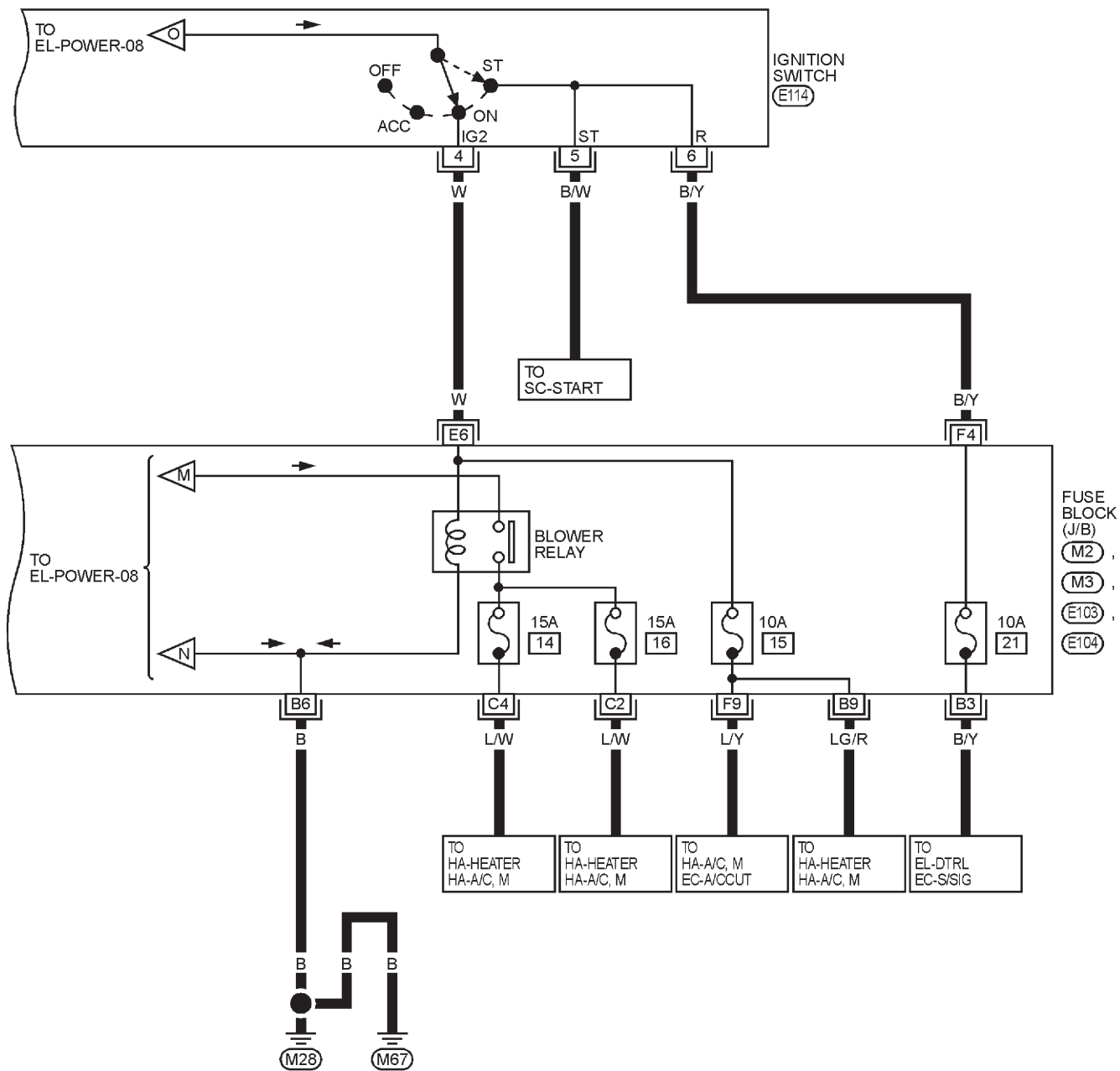
YEL600C



# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

## EL-POWER-10



3	5	1	E114 W
4	2	6	

REFER TO THE FOLLOWING.

(M2), (M3), (E103), (E104)

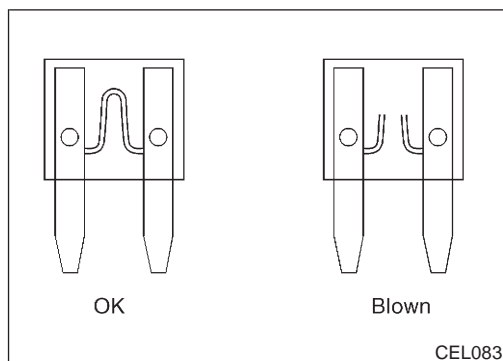
-FUSE BLOCK-  
JUNCTION BOX (J/B)

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

YEL601C

## POWER SUPPLY ROUTING

Inspection



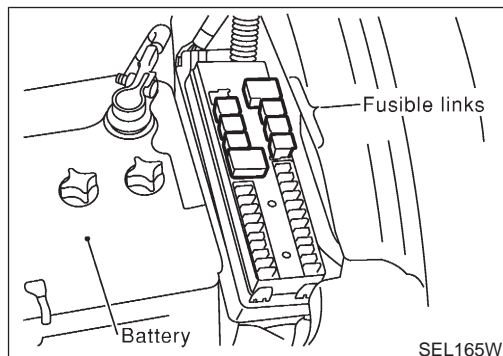
### Inspection

NJEL0007

#### FUSE

NJEL0007S01

- 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.



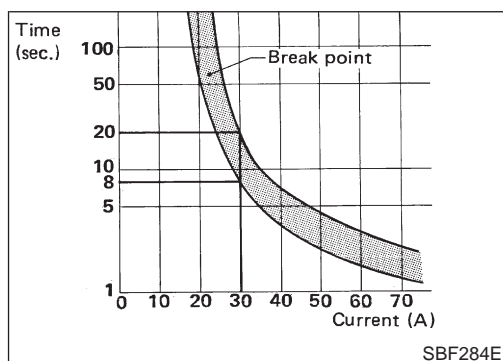
#### FUSIBLE LINK

NJEL0007S02

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:

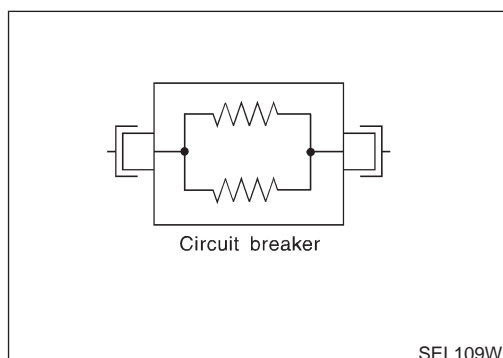
- If fusible link should melt, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such a case, carefully check and eliminate cause of problem.
- Never wrap outside of fusible link with vinyl tape. Important: Never let fusible link touch any other wiring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



#### CIRCUIT BREAKER

NJEL0007S03

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



#### CIRCUIT BREAKER (PTC THERMISTOR TYPE)

NJEL0007S04

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.

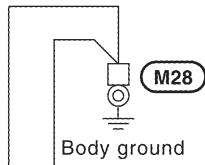
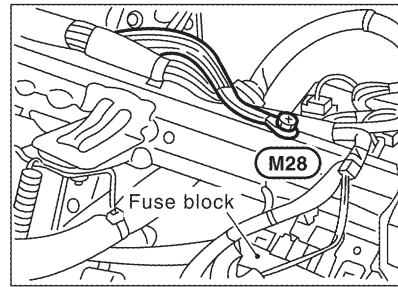
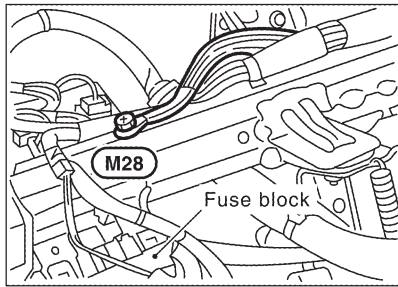
# GROUND

## Ground Distribution

### MAIN HARNESS

NJEL0008

NJEL0008S01

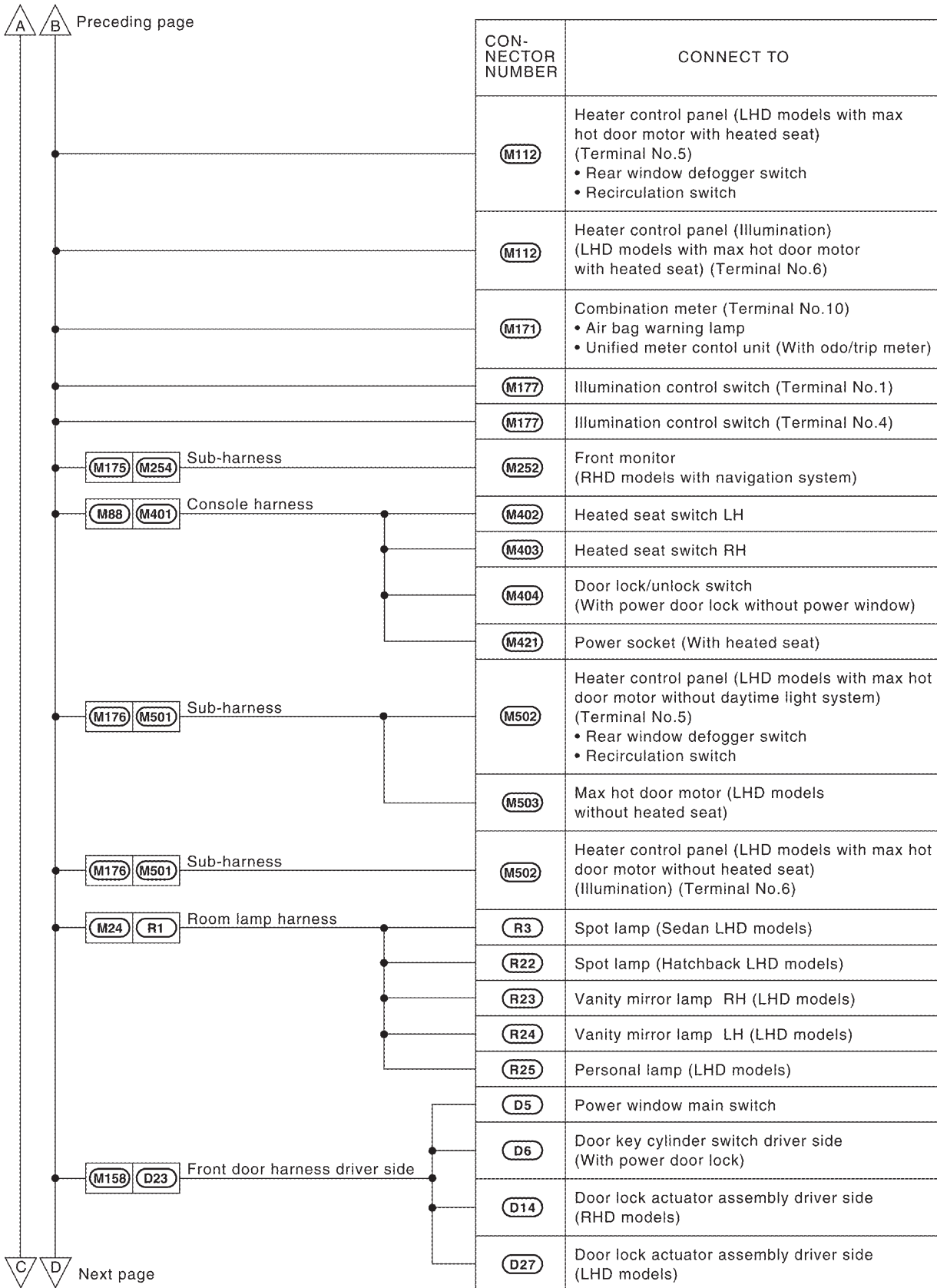


CON- NECTOR NUMBER	CONNECT TO
M2	Fuse block (J/B) • Accessory relay • Ignition relay • Blower relay
M7	Power window relay
M15	Door mirror remote control switch
M29	Data link connector (Terminal No.4)
M46	Heater control panel (Fan switch)
M48	Cigarette lighter socket
M87	Heater control panel (Without max hot door motor) (Terminal No.5) • Rear window defogger switch • Recirculation switch
M87	Heater control panel (illumination) (Without max hot door motor) (Terminal No.6)

A B Next page

# GROUND

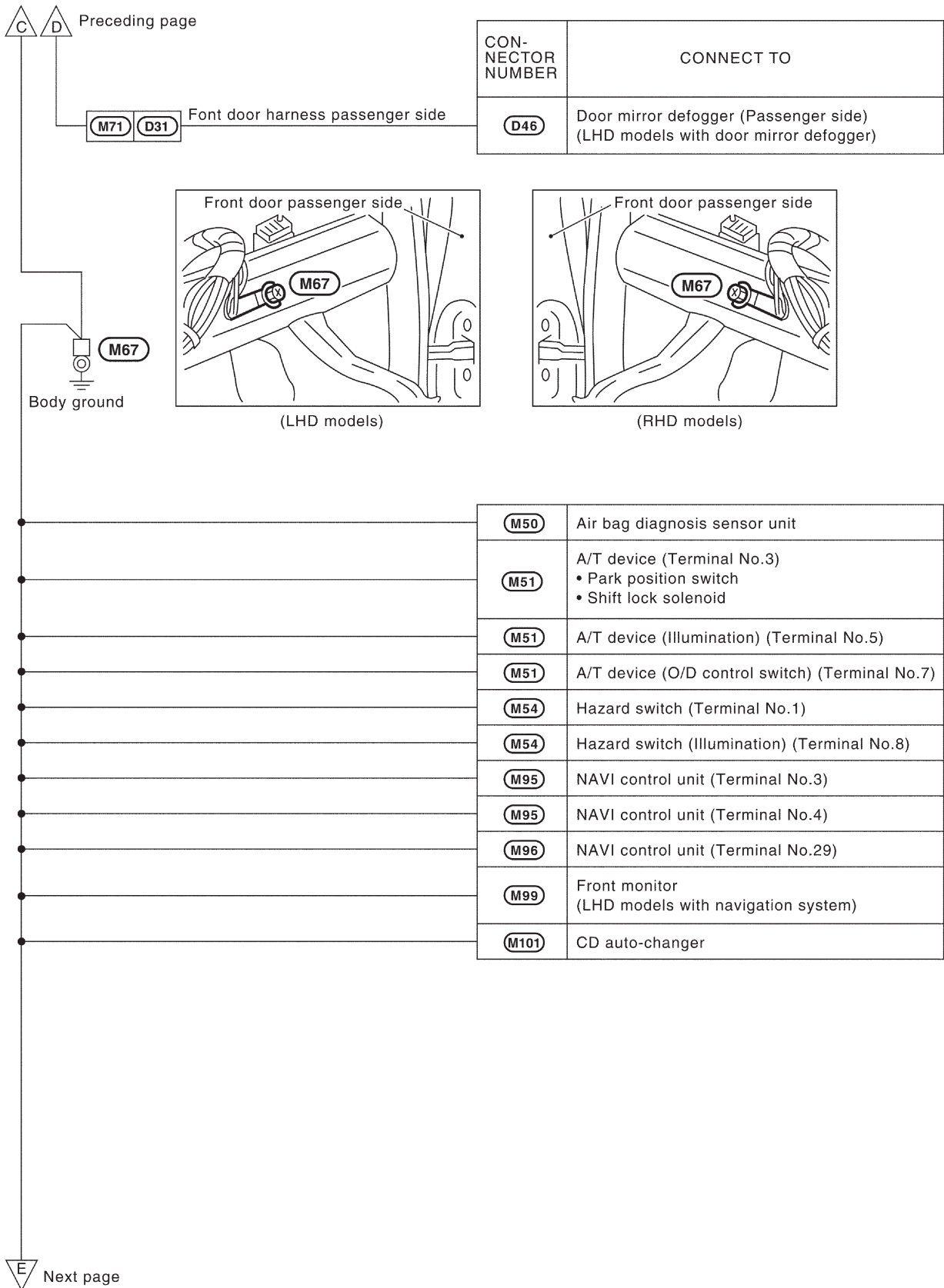
Ground Distribution (Cont'd)



YEL603C

# GROUND

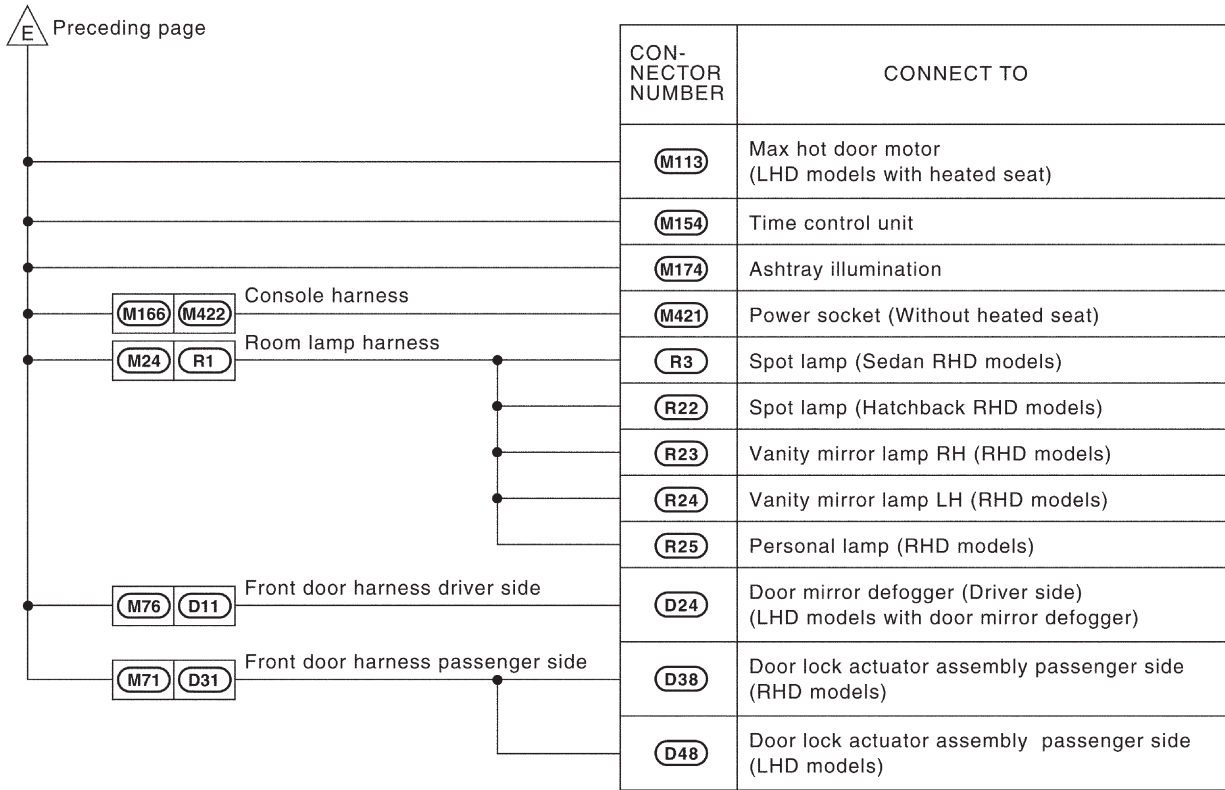
Ground Distribution (Cont'd)



YEL604C

# GROUND

Ground Distribution (Cont'd)



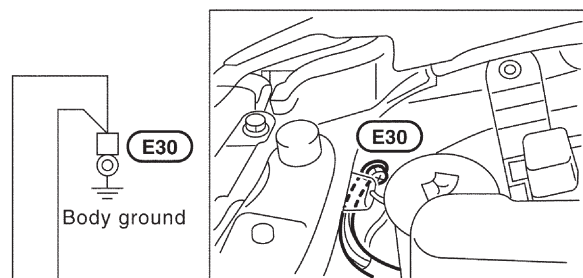
YEL605C

# GROUND

Ground Distribution (Cont'd)

## ENGINE ROOM HARNESS

NJEL0008S02



CON-NECTOR NUMBER	CONNECT TO
(E45)	Headlamp LH
(E49)	Front fog lamp LH
(E185)	Cooling fan relay-2 (Diesel engine)
(E187)	Cooling fan relay-4 (Diesel engine)
(E197)	Combination meter (RHD models) (Terminal No.25) <ul style="list-style-type: none"> <li>• ABS warning lamp</li> <li>• High beam indicator</li> <li>• Front fog indicator lamp</li> <li>• Rear fog indicator lamp</li> <li>• Turn signal and hazard warning lamp</li> <li>• Meter illumination (For Europe)</li> </ul>

(E12)	Headlamp washer timer
(E14)	Headlamp relay RH
(E16)	Headlamp relay LH
(E32)	Front turn signal lamp RH
(E33)	Headlamp aiming motor RH
(E35)	Parking lamp RH
(E47)	Parking lamp LH
(E48)	Headlamp aiming motor LH
(E54)	Front turn signal lamp LH
(E78)	Brake fluid level switch (Without ABS)
(E120)	Daytime light control unit
(E172)	Combination switch (Hatchback) (Terminal No.1) <ul style="list-style-type: none"> <li>• Turn signal switch</li> </ul>
(E178)	Cooling fan motor-1 (Gasoline engine)
(E179)	Cooling fan motor-2 (Gasoline engine)
(E188)	Brake fluid level switch (With ABS)
(E189)	Combination switch (Terminal No.4) <ul style="list-style-type: none"> <li>• Rear wiper switch</li> </ul>
(E189)	Combination switch (Terminal No.17) <ul style="list-style-type: none"> <li>• Front wiper switch</li> </ul>
(E191)	Front wiper motor

**F** Next page

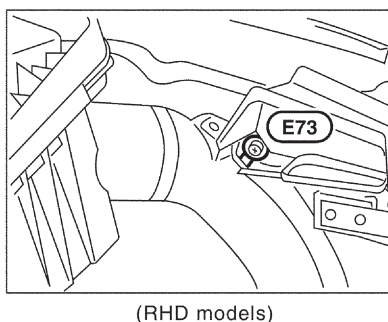
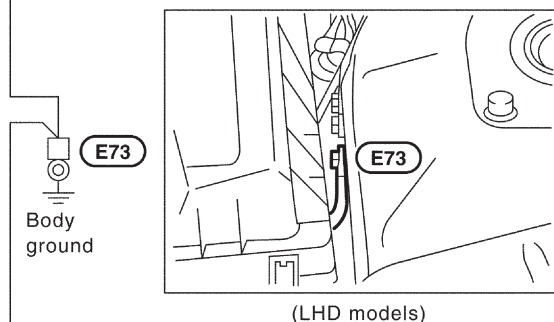
YEL606C

# GROUND

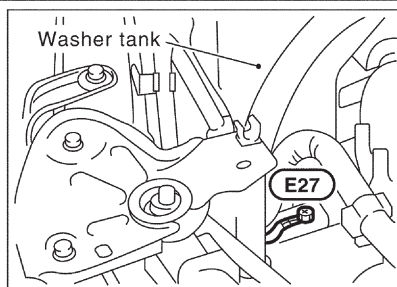
Ground Distribution (Cont'd)

F Preceding page

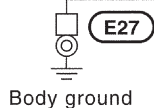
CON-NECTOR NUMBER	CONNECT TO
E193	Rear wiper relay (Hatchback)
E194	Front wiper relay
E201	Headlamp aiming switch
E205	Front fog lamp relay
E206	Side turn signal lamp RH
E207	Side turn signal lamp LH



E37	Headlamp RH
E38	Front fog lamp RH
E179	Cooling fan motor-2 (Diesel engine)
E182	Cooling fan motor-1 (For Australia)
E183	Cooling fan motor-2 (For Australia)
E196	Fuel filter switch (Diesel engine)
E197	Combination meter (LHD models) (Terminal No.25) • ABS warning lamp • High beam indicator • Front fog indicator lamp • Rear fog indicator lamp • Turn signal and hazard warning lamp • Meter illumination
E202	Headlamp washer switch (Terminal No.3)
E202	Headlamp washer switch (Illumination) (Terminal No.5)



CON-NECTOR NUMBER	CONNECT TO
E23	Alternator (E)

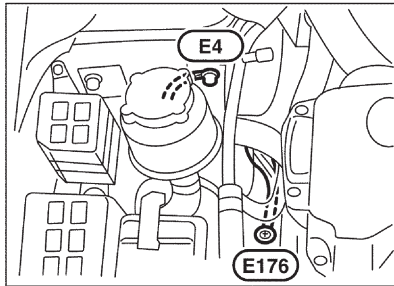


YEL607C

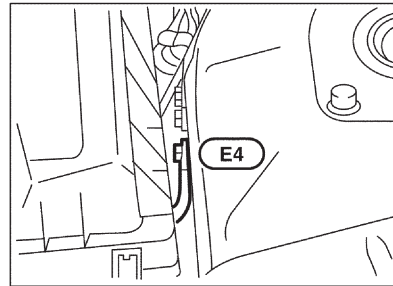


# GROUND

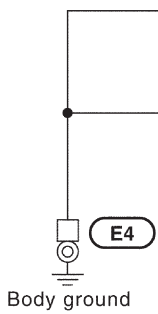
Ground Distribution (Cont'd)



(LHD models)

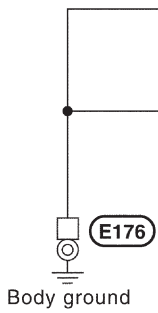


(RHD models)



Body ground

CON-NECTOR NUMBER	CONNECT TO
E1	ABS actuator and electric unit (Actuator) (Except LHD models with gasoline engine) (Terminal No.16)
E1	ABS actuator and electric unit (Control unit) (Except LHD models with gasoline engine) (Terminal No.19)



Body ground

CON-NECTOR NUMBER	CONNECT TO
E1	ABS actuator and electric unit (Actuator) (LHD models with gasoline engine) (Terminal No.16)
E1	ABS actuator and electric unit (Control unit) (LHD models with gasoline engine) (Terminal No.19)

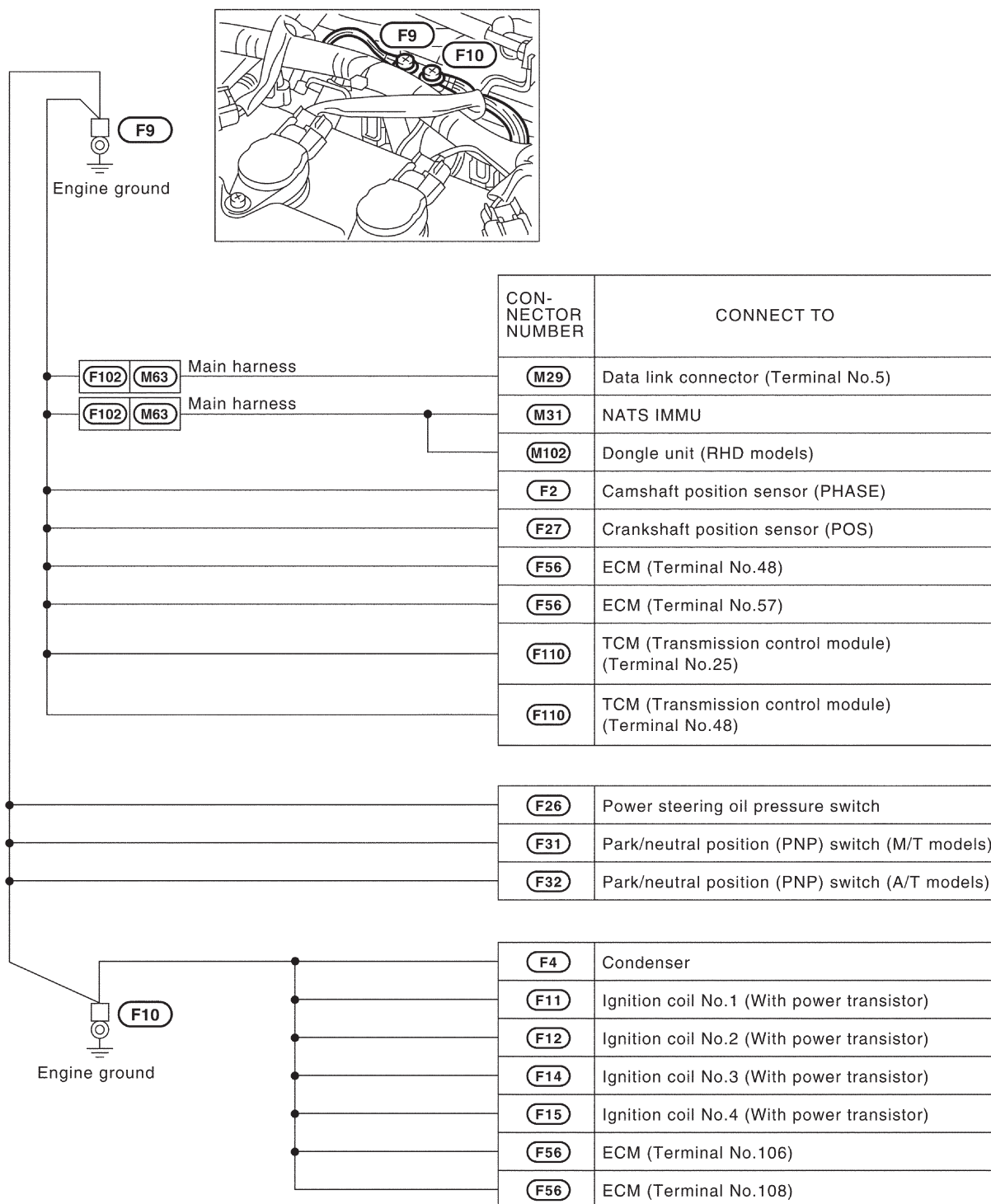
YEL608C

# GROUND

Ground Distribution (Cont'd)

## ENGINE CONTROL HARNESS/QG ENGINE MODELS

NJEL0008S03



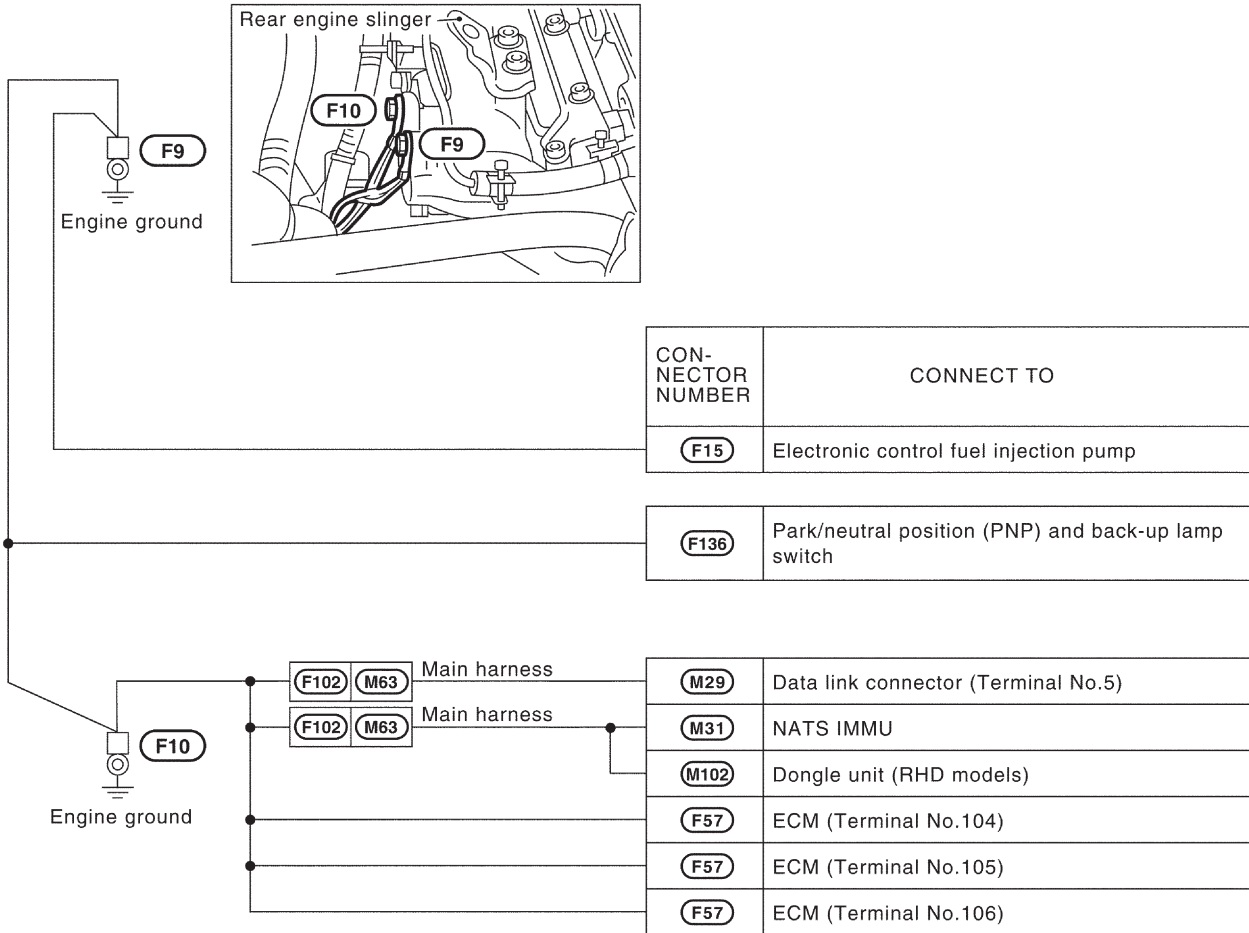
YEL609C

# GROUND

Ground Distribution (Cont'd)

## ENGINE CONTROL HARNESS/YD ENGINE MODELS

NJEL0008S09



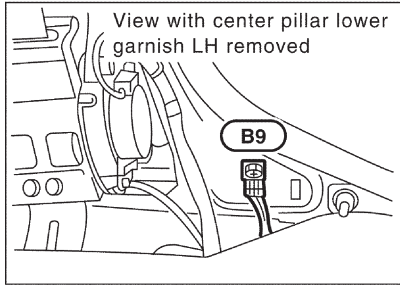
YEL610C

# GROUND

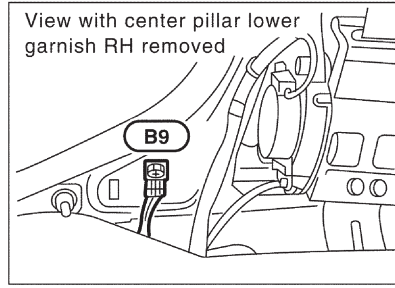
Ground Distribution (Cont'd)

## BODY HARNESS/SEDAN

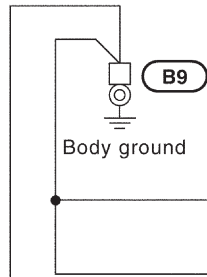
NJEL0008S04



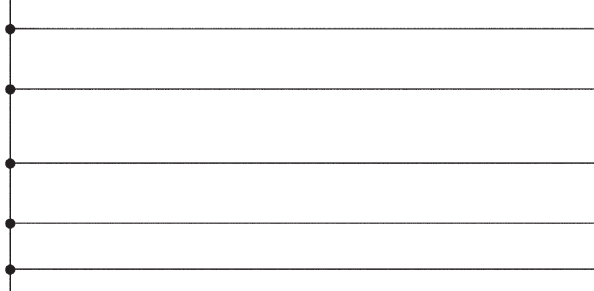
(LHD models)



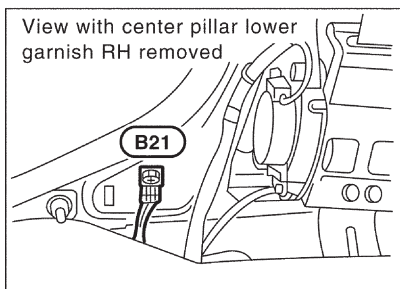
(RHD models)



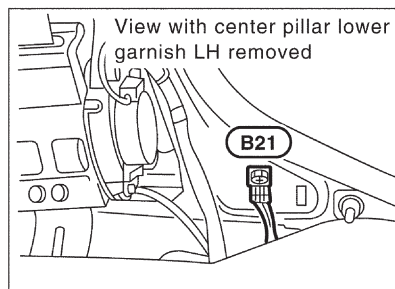
CON-NECTOR NUMBER	CONNECT TO
B11	Shield wire [LH side air bag (satellite) sensor] (LHD models)
B22	Shield wire [RH side air bag (satellite) sensor] (RHD models)



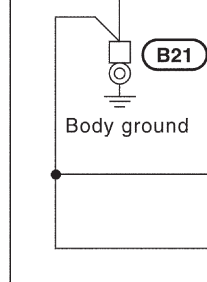
B8	Door switch driver side
B29	Fuel level sensor unit and fuel pump (Fuel pump) (QG engine) (Terminal No.3)
B32	High-mounted stop lamp (On the rear parcel shelf)
B41	Front seat LH (With heated seat)
B42	Front seat RH (With heated seat)



(LHD models)



(RHD models)



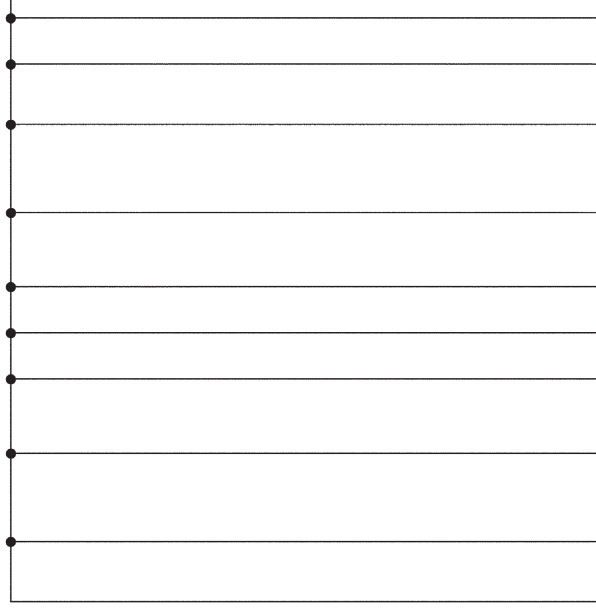
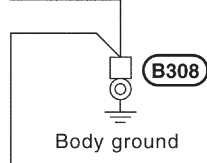
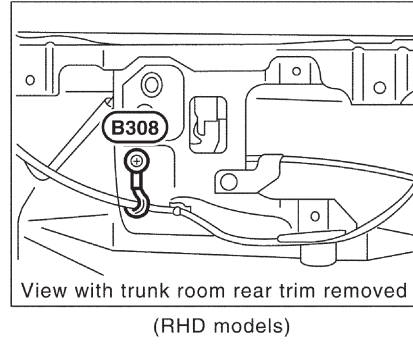
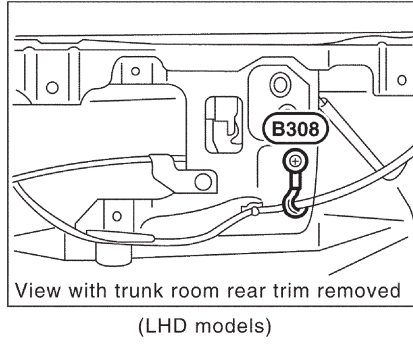
B11	Shield wire [LH side air bag (satellite) sensor] (RHD models)
B22	Shield wire [RH side air bag (satellite) sensor] (LHD models)

Next page

YEL611C

# GROUND

G Preceding page



CON- NECTOR NUMBER	CONNECT TO
B301	High-mounted stop lamp (In the rear spoiler)
B302	Rear combination lamp LH (Outer) (Turn signal)
B303	Rear combination lamp LH (Outer) (Tail and stop)
B304	Rear combination lamp LH (Inner) • Back-up (RHD models) • Rear fog (LHD models)
B307	License plate lamp LH
B309	Trunk room lamp switch
B310	License plate lamp RH
B311	Rear combination lamp RH (Inner) • Back-up (LHD models) • Rear fog (RHD models)
B312	Rear combination lamp RH (Outer) (Tail and stop)
B313	Rear combination lamp RH (Outer) (Turn signal)

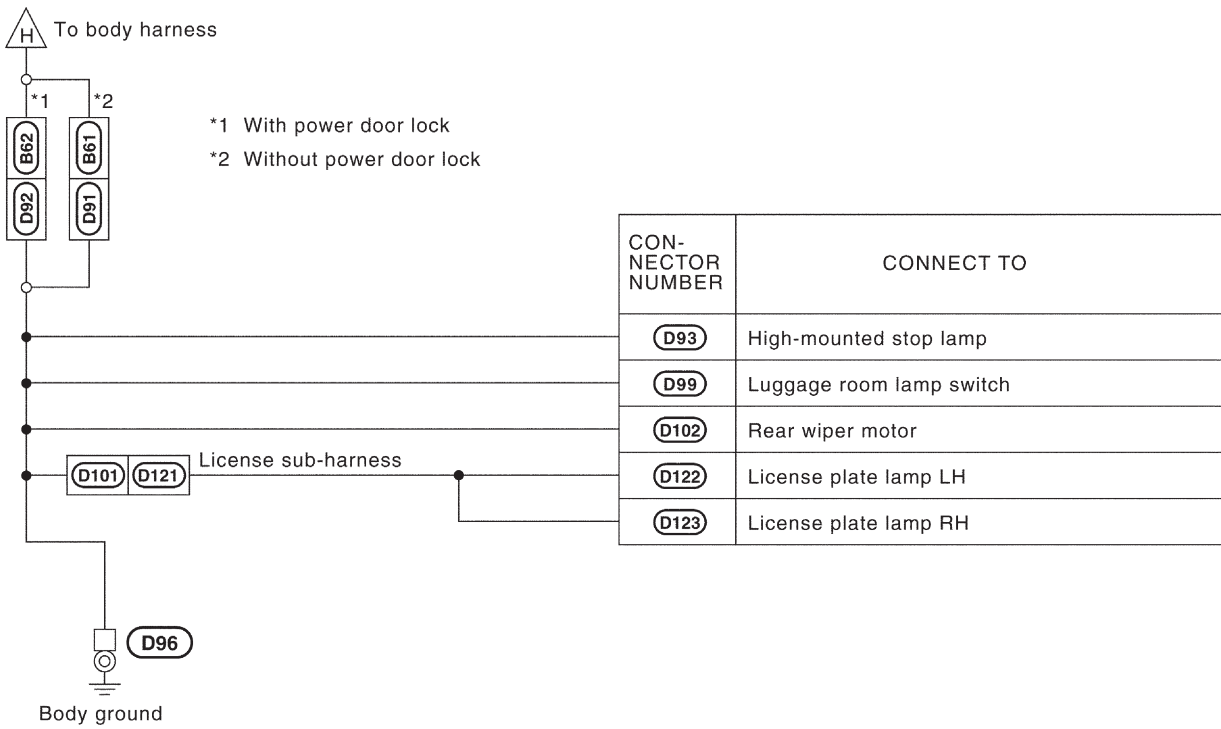


# GROUND

Ground Distribution (Cont'd)

## BACK DOOR HARNESS

NJEL0008S11



YEL614C

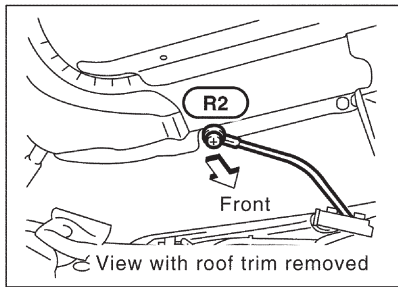
# GROUND

Ground Distribution (Cont'd)

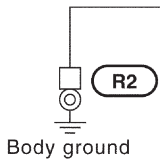
## ROOM LAMP AND REAR WINDOW DEFOGGER HARNESS

NJEL0008S08

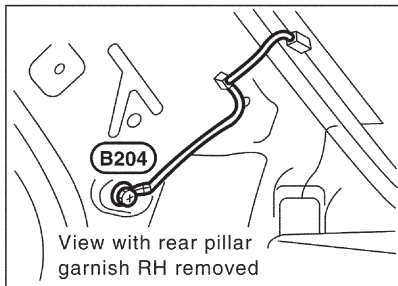
### ROOM LAMP HARNESS



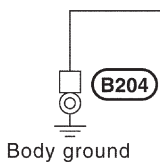
CON-NECTOR NUMBER	CONNECT TO
R5	Sunroof moter assembly



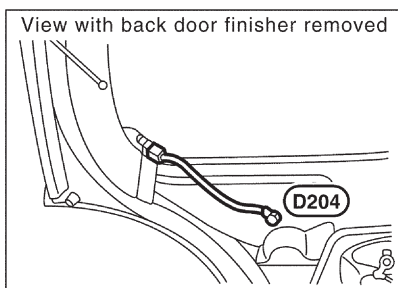
### REAR WINDOW DEFOGGER HARNESS (SEDAN)



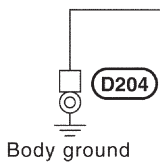
CON-NECTOR NUMBER	CONNECT TO
B203	Rear window defogger (-)



### REAR WINDOW DEFOGGER HARNESS (HATCHBACK)



CON-NECTOR NUMBER	CONNECT TO
D203	Rear window defogger (-)



YEL615C

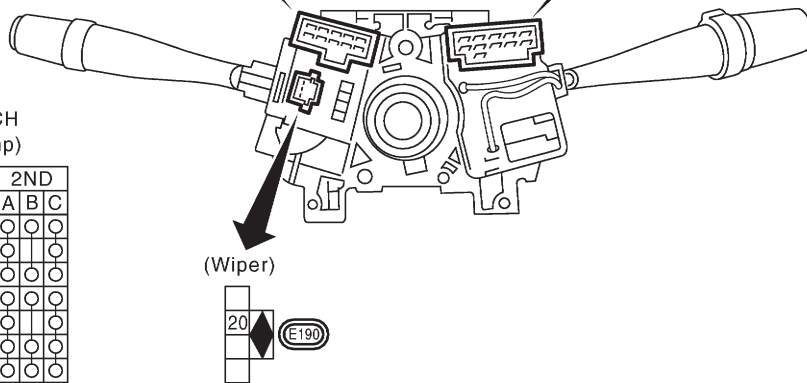
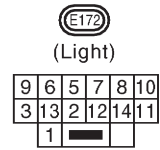
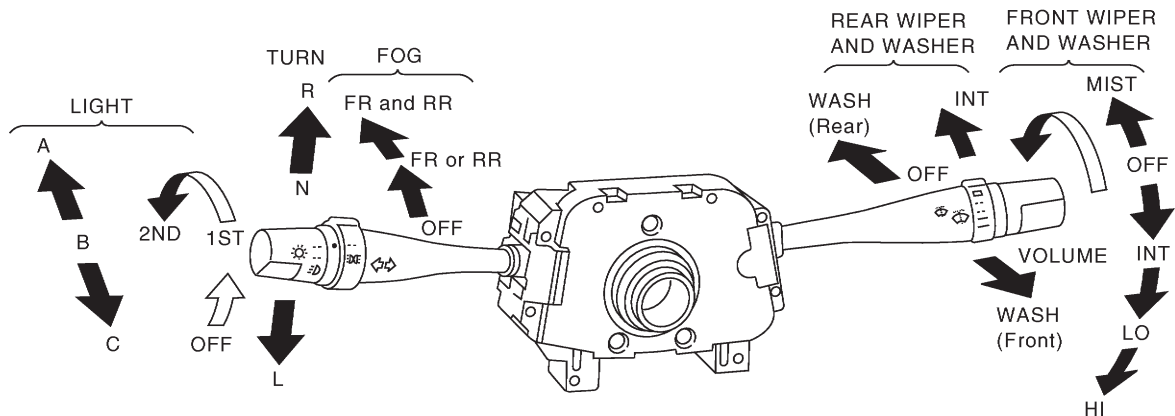


# COMBINATION SWITCH

Check

## Check

NJEL0423



LIGHTING SWITCH  
(With rear fog lamp)

	OFF			1ST			2ND		
	A	B	C	A	B	C	A	B	C
5									
6									
7									
8									
9									
10									
11									
12									

FOG LAMP SWITCH

	OFF	REAR
13		

LIGHTING SWITCH  
(With front and rear fog lamp)

	OFF			1ST			2ND		
	A	B	C	A	B	C	A	B	C
5									
6									
7									
8									
9									
10									
11									
12									

FOG LAMP SWITCH

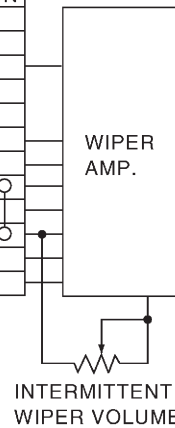
	OFF	FR	FR AND RR
14			
13			

TURN  
SIGNAL  
SWITCH

	L	N	R
1			
2			
3			

WIPER AND WASHER SWITCH

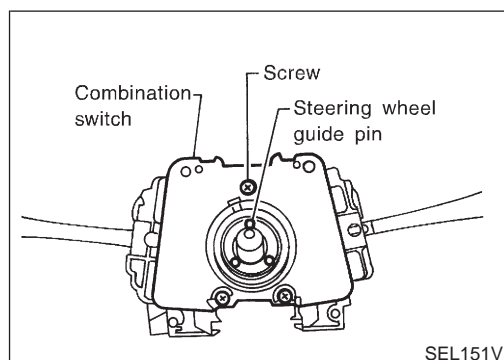
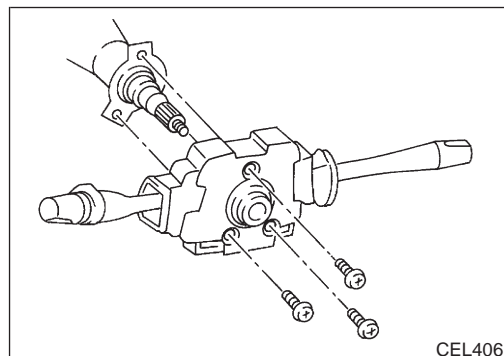
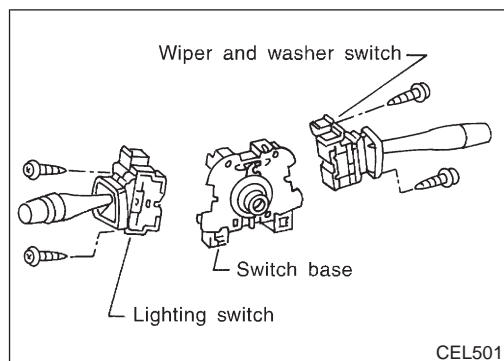
	FRONT					WASH			REAR		
	MIST	OFF	INT	LO	HI	FR/WASH	OFF	RR/WASH	OFF	INT	ON
13											
14											
16											
17											
18											
2											
3											
4											
5											
20											



MEL933L

## COMBINATION SWITCH

### Replacement



### Replacement

For removal and installation of spiral cable, refer to RS-29, <sup>NJEL0010</sup> "Installation — Air Bag Module and Spiral Cable".

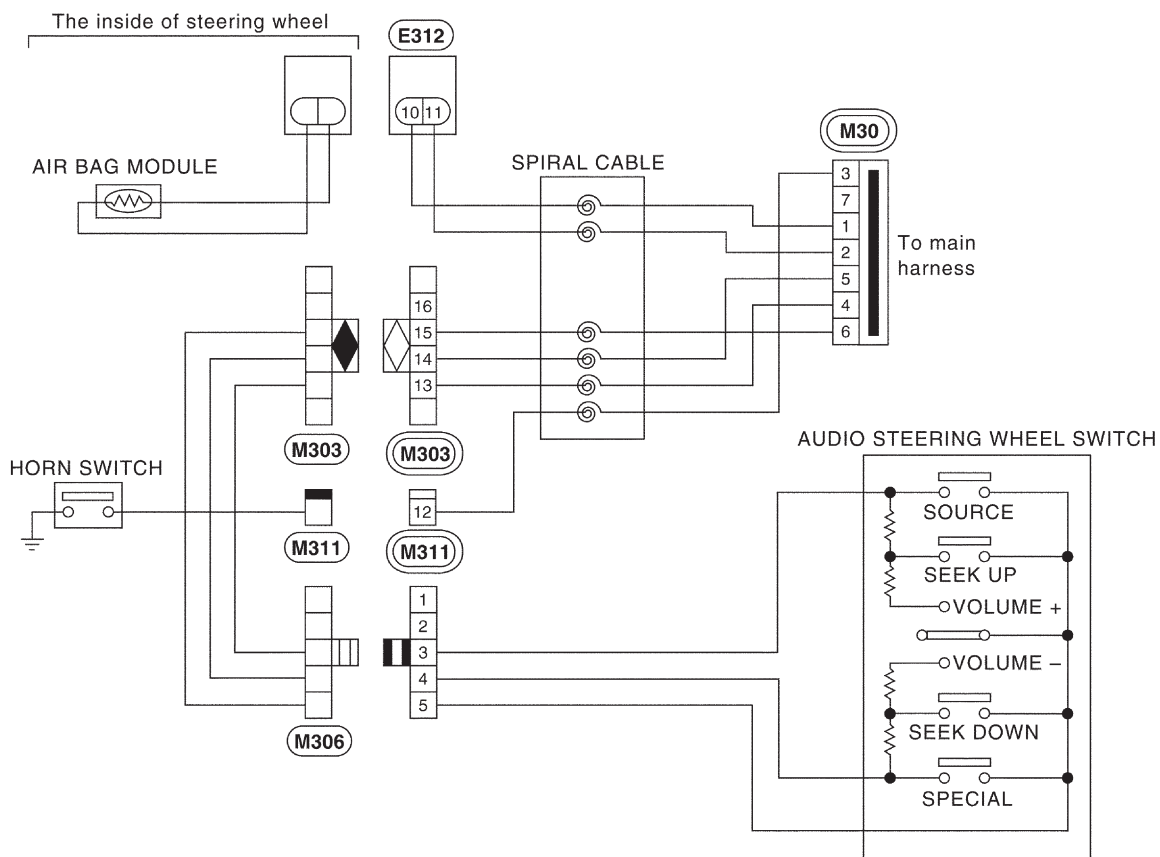
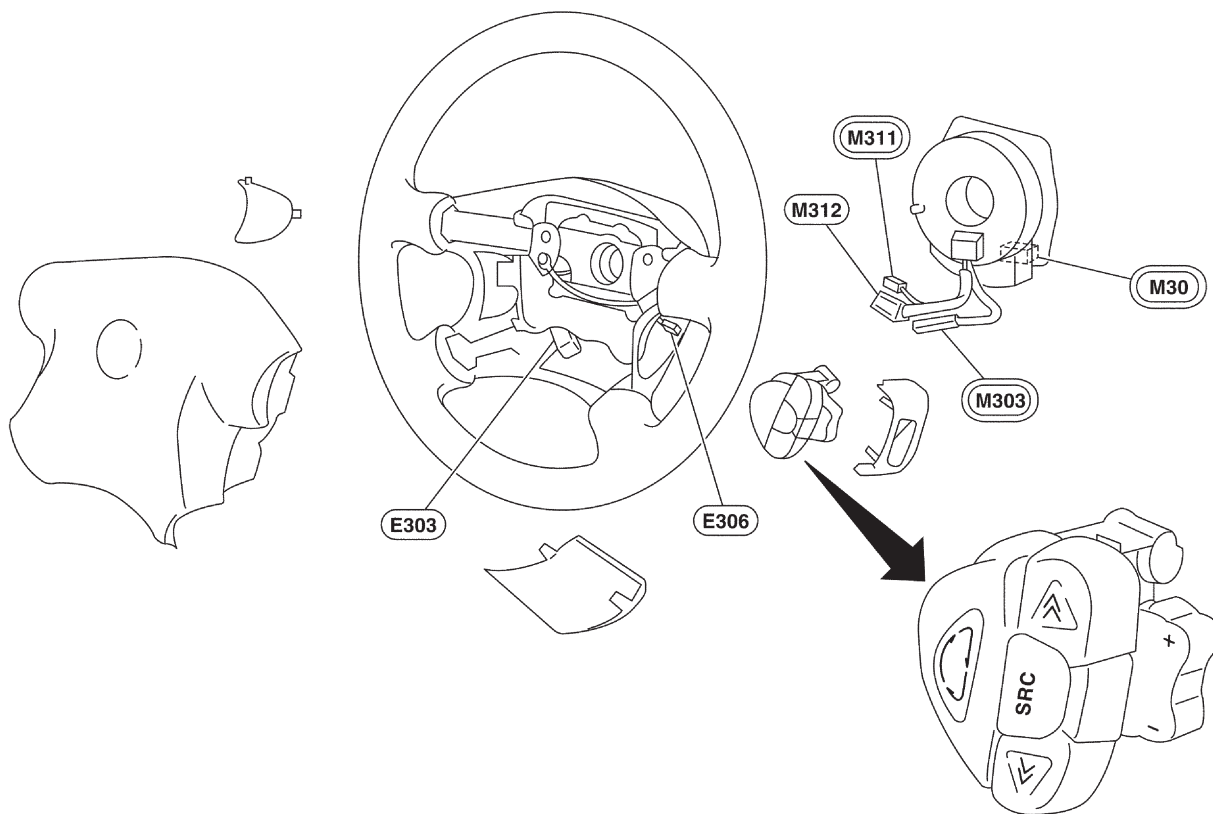
- Each switch can be replaced without removing combination switch base.
- To remove combination switch base, remove base attaching screw.
- Before installing the steering wheel, align the steering wheel guide pins with the screws which secure the combination switch as shown in the left figure.

# STEERING SWITCH

Check

## Check

NJEL0350



YEL617C

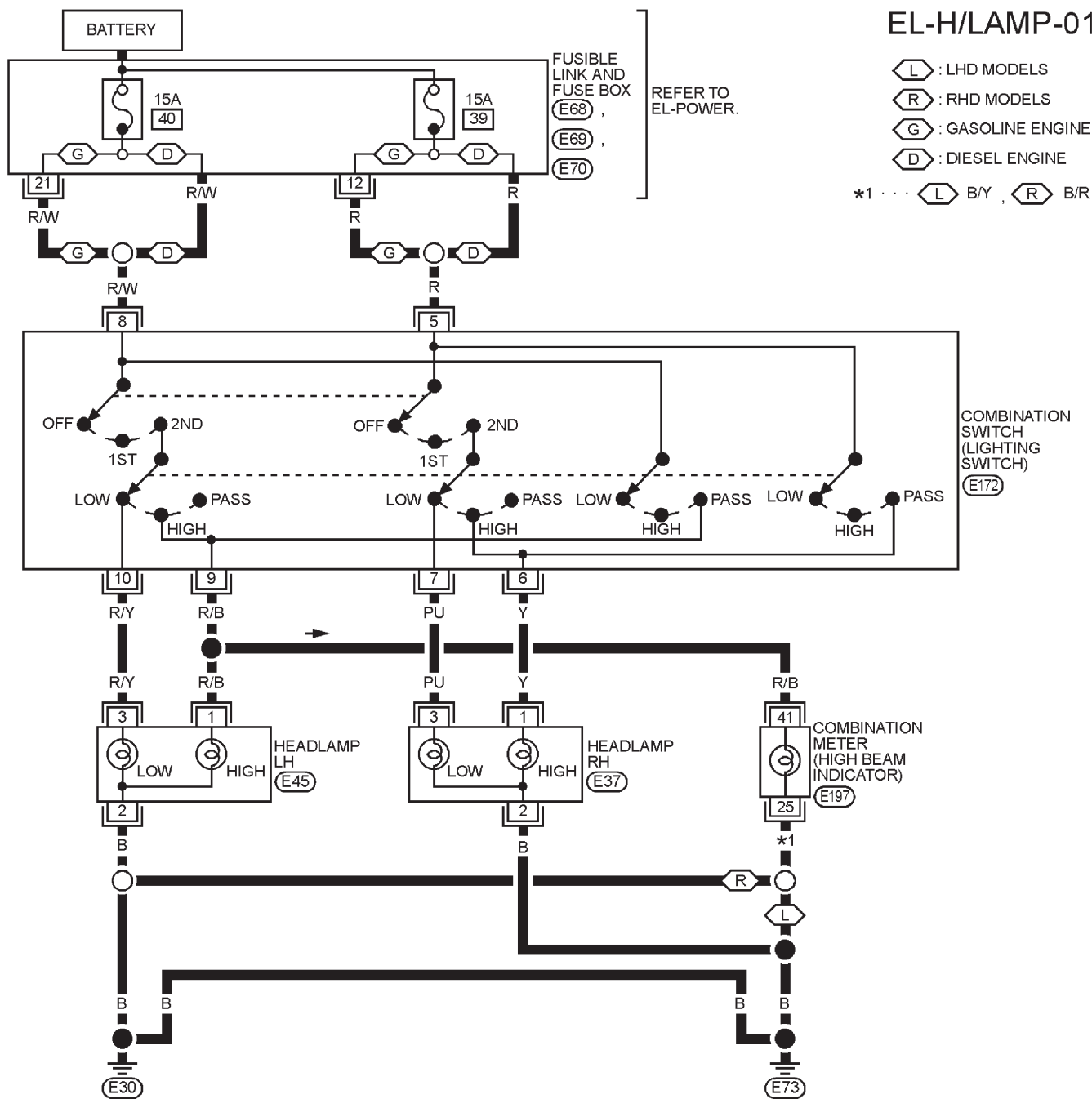
# HEADLAMP

Wiring Diagram — H/LAMP —

## Wiring Diagram — H/LAMP —

NJEL0420

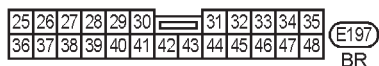
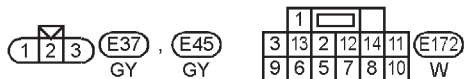
### EL-H/LAMP-01



- ⬡ : LHD MODELS
- ⬡ : RHD MODELS
- ⬡ : GASOLINE ENGINE
- ⬡ : DIESEL ENGINE
- \*1 ... ⬡ B/Y, ⬡ B/R

COMBINATION SWITCH (LIGHTING SWITCH) (E172)

COMBINATION METER (HIGH BEAM INDICATOR) (E197)



REFER TO THE FOLLOWING.  
(E68), (E69), (E70) - FUSE  
AND FUSIBLE LINK BOX

YEL618C

# HEADLAMP

Trouble Diagnoses

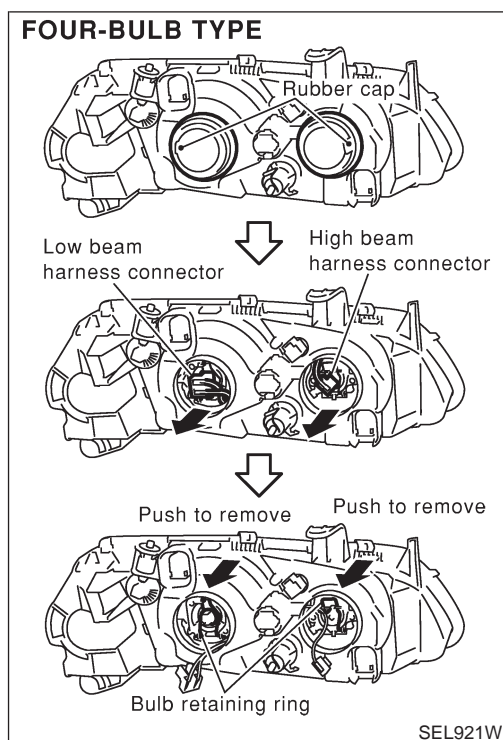
## Trouble Diagnoses

NJEL0202

Symptom	Possible cause	Repair order
Neither headlamp operates.	1. Lighting switch	1. Check Lighting switch.
LH headlamp (low and high beam) does not operate, but RH headlamp (low and high beam) does operate.	1. 15A fuse 2. Headlamp LH ground circuit 3. Lighting switch	1. Check 15A fuse (No. 40, located in fusible link and fuse box). Verify battery positive voltage is present at lighting switch terminal 8. 2. Check headlamp LH ground circuit. 3. Check lighting switch.
RH headlamp (low and high beam) does not operate, but LH headlamp (low and high beam) does operate.	1. 15A fuse 2. Headlamp RH ground circuit 3. Lighting switch	1. Check 15A fuse (No. 39, located in fusible link and fuse box). Verify battery positive voltage is present at lighting switch terminal 5. 2. Check headlamp RH ground circuit. 3. Check lighting switch.
LH high beam does not operate, but LH low beam does operate.	1. Bulb 2. Open in LH high beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and LH high beam for an open circuit. 3. Check lighting switch.
LH low beam does not operate, but LH high beam does operate.	1. Bulb 2. Open in LH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and LH low beam for an open circuit. 3. Check lighting switch.
RH high beam does not operate, but RH low beam does operate.	1. Bulb 2. Open in RH high beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and RH high beam for an open circuit. 3. Check lighting switch.
RH low beam does not operate, but RH high beam does operate.	1. Bulb 2. Open in RH low beam circuit 3. Lighting switch	1. Check bulb. 2. Check the harness between lighting switch and RH low beam for an open circuit. 3. Check lighting switch.
High beam indicator does not work.	1. Bulb 2. Ground circuit 3. Open in high beam circuit	1. Check bulb in combination meter. 2. Check harness between high beam indicator and ground. 3. Check the harness between lighting switch and combination meter for an open circuit.

# HEADLAMP

## Bulb Replacement



## Bulb Replacement

NJEL0015

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

### CAUTION:

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

## Aiming Adjustment

NJEL0016

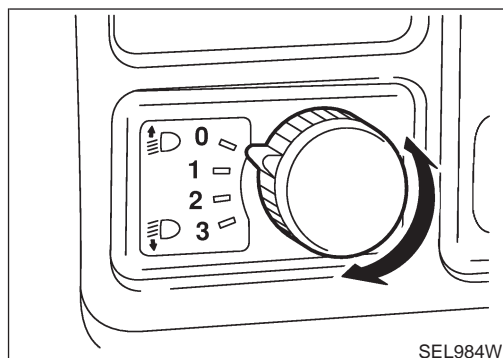
**For details, refer to the regulations in your own country.**

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).

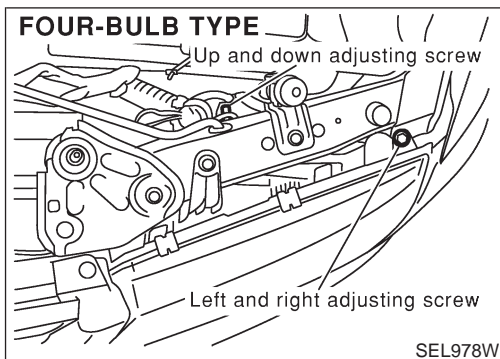
### CAUTION:

**Be sure aiming switch is set to "0" when performing aiming adjustment on vehicles equipped with headlamp aiming control.**



# HEADLAMP

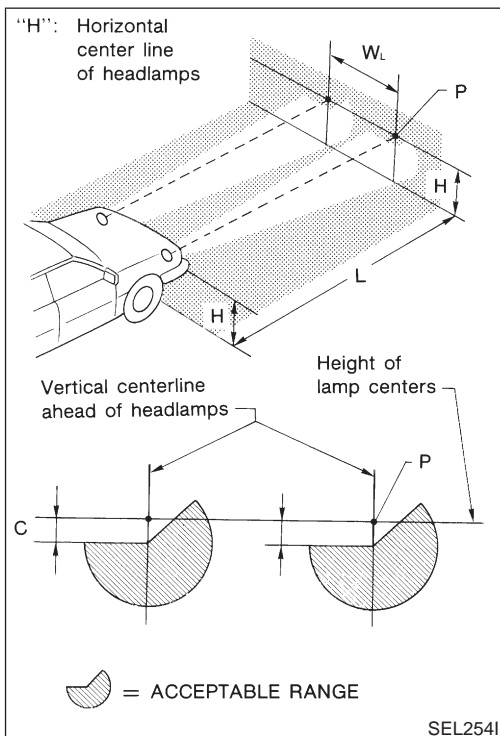
Aiming Adjustment (Cont'd)



## LOW BEAM

=NJEL0016S02

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.**



- **Adjust headlamps so that main axis of light is parallel to center line of body and is aligned with point P shown in illustration.**
- **Figure to the left shows headlamp aiming pattern for driving on right side of road; for driving on left side of road, aiming pattern is reversed.**
- **Dotted lines to point P in illustration show center of headlamp.**

"H": Horizontal center line of headlamps  
"W<sub>L</sub>": Distance between each headlamp center  
"L": 5,000 mm (196.85 in)  
"C": 65 mm (2.56 in)

# HEADLAMP — DAYTIME LIGHT SYSTEM —

System Description

## System Description

NJEL0351

The headlamp system on vehicles for North Europe contains a daytime light unit. The unit activates the following whenever the engine is running with the lighting switch in the OFF position:

- Low beam headlamps
- Parking, license, tail and illumination lamps

Power is supplied at all times

- through 10A fuse (No. 38, located in the fusible link and fuse box)
- to daytime light unit terminal 1 and
- to lighting switch terminal 11.

Power is also supplied at all times

- through 15A fuse (No. 39, located in the fusible link and fuse box)
- to daytime light unit terminal 3 and
- to lighting switch terminal 5.

Power is also supplied at all times

- through 15A fuse (No. 40, located in the fusible link and fuse box)
- to daytime light unit terminal 2 and
- to lighting switch terminal 8.

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

- through 10A fuse [No. 20, located in the fuse block (J/B)]
- to daytime light unit terminal 7.

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

- through 10A fuse [No. 21, located in the fuse block (J/B)]
- to daytime light unit terminal 6.

Ground is supplied to daytime light unit terminal 9 through body grounds E30 and E73.

### HEADLAMP OPERATION (DAYTIME LIGHT CANCEL OPERATION)

NJEL0351S01

When the lighting switch is turned to the 1st or 2nd position, power is supplied

- through lighting switch terminal 12,
- to daytime light unit terminal 11.

Then daytime light will be canceled. And the lighting system operation will be the same as no daytime light system.

### DAYTIME LIGHT OPERATION

NJEL0351S02

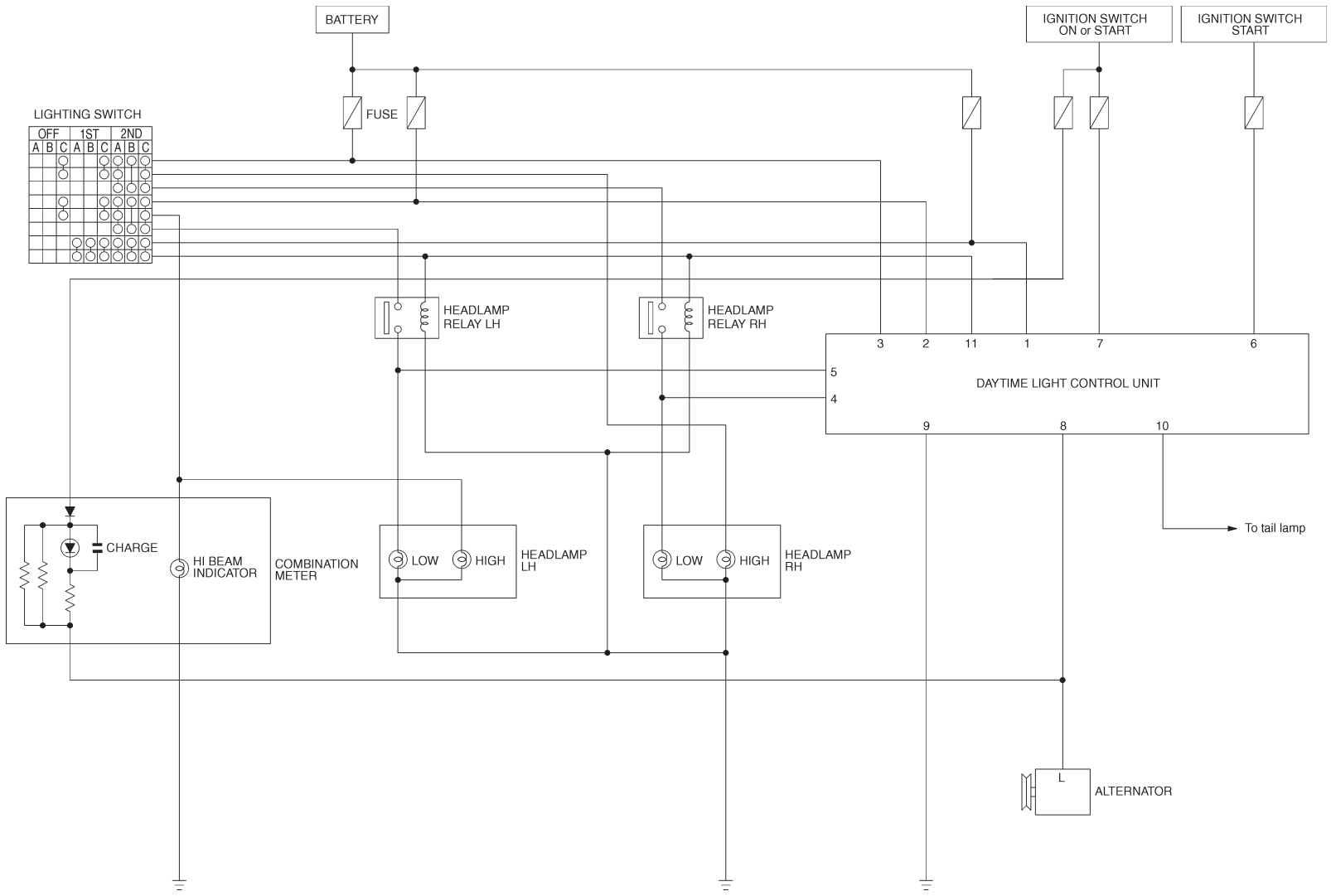
With the engine running and the lighting switch in the OFF position, power is supplied

- from alternator terminal 3
- to daytime light unit terminal 8,
- through daytime light unit terminal 5
- to terminal 3 of headlamp LH,
- through daytime light unit terminal 4
- to terminal 3 of headlamp RH and
- through daytime light unit terminal 10
- to tail lamp and illumination.

Ground is supplied to terminal 2 of each headlamp through body grounds E30 and E73.



# HEADLAMP — DAYTIME LIGHT SYSTEM —



Schematic

N/E/L0421

Schematic

EL-45

YEL619C

# HEADLAMP — DAYTIME LIGHT SYSTEM —

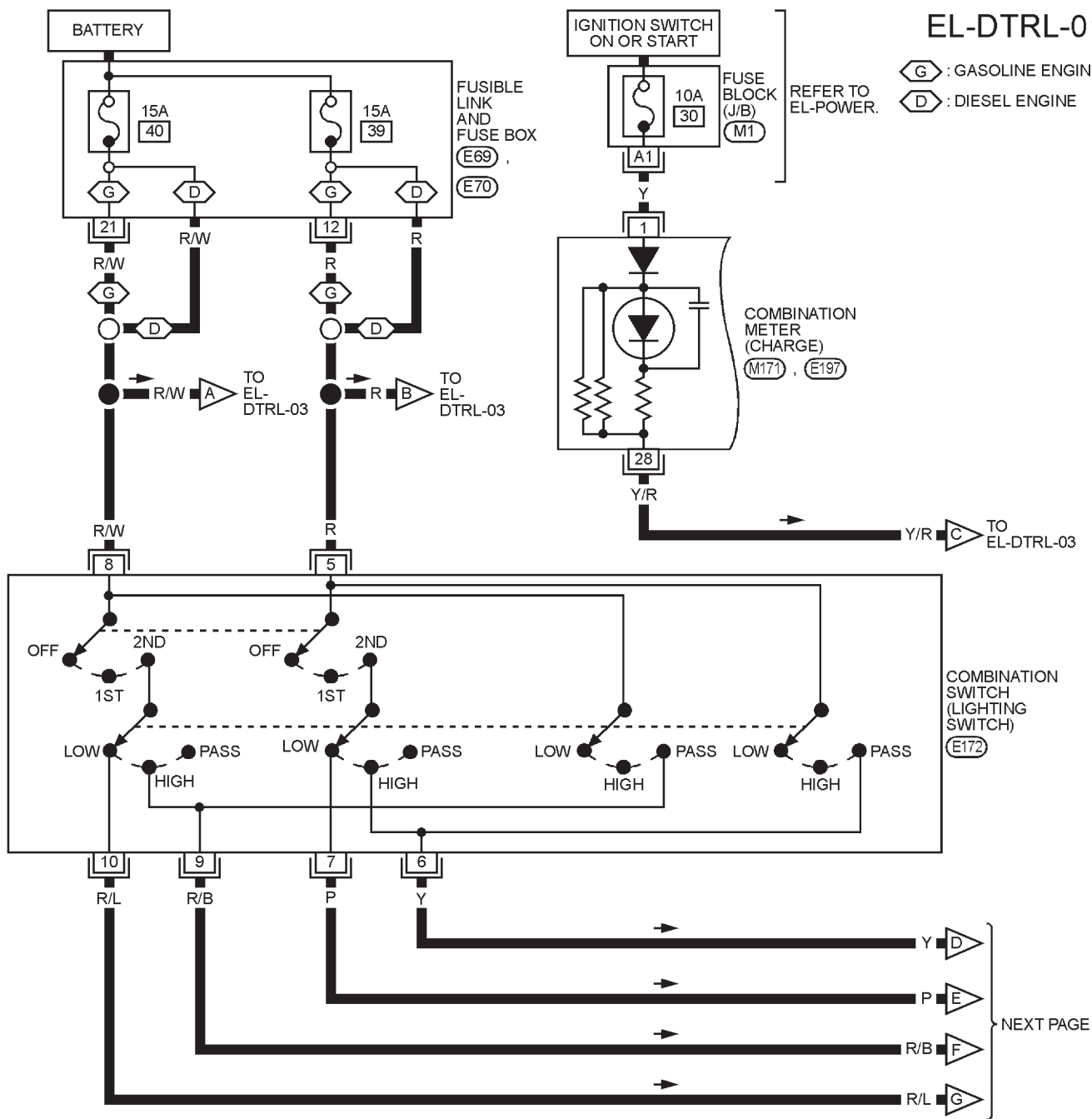
Wiring Diagram — DTRL —

## Wiring Diagram — DTRL —

NJEL0422

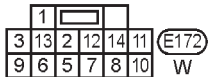
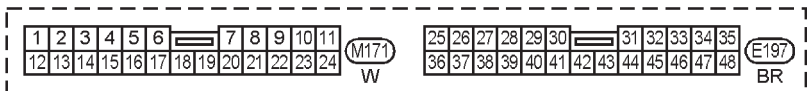
**EL-DTRL-01**

G : GASOLINE ENGINE  
D : DIESEL ENGINE



NEXT PAGE

REFER TO THE FOLLOWING.  
M1 - FUSE BLOCK-JUNCTION BOX (J/B)  
E69 , E70 - FUSE AND FUSIBLE LINK BOX

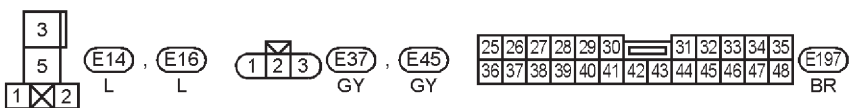
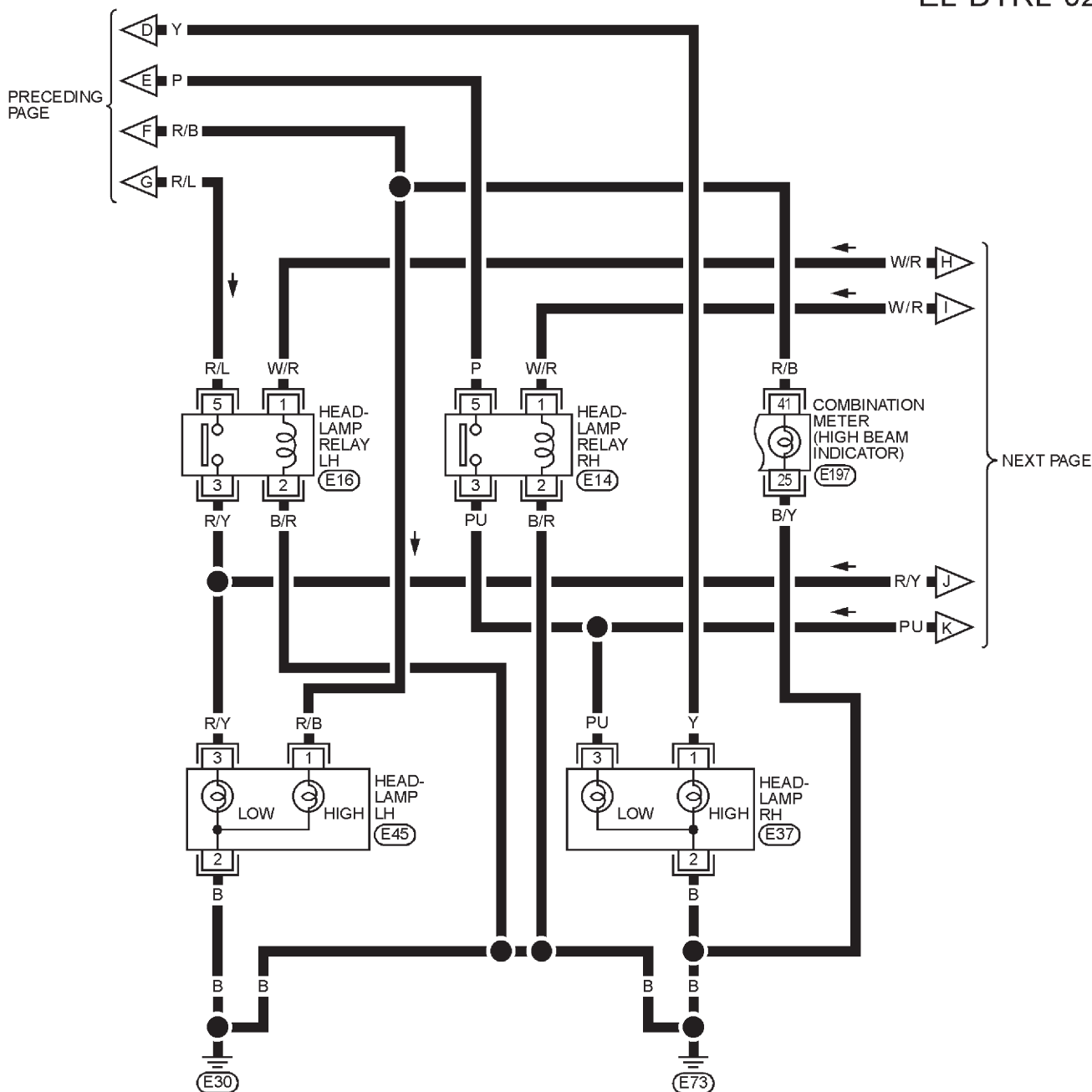


YEL620C

# HEADLAMP — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-02



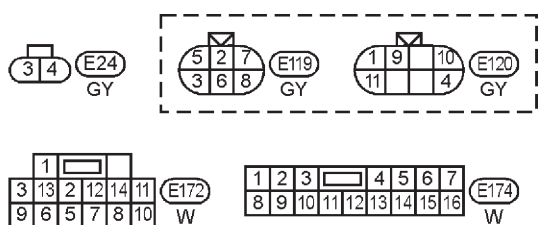
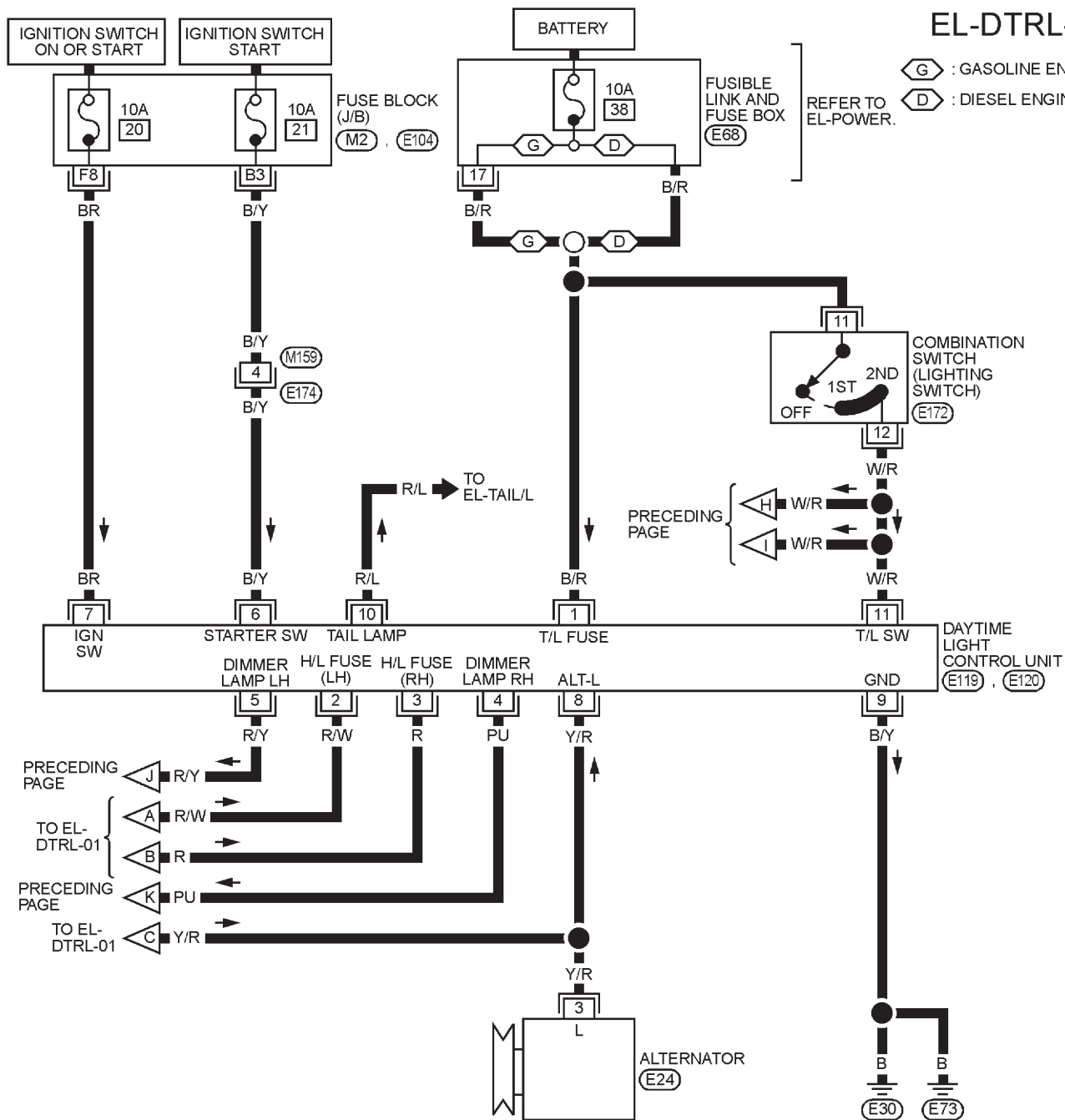
YEL621C

# HEADLAMP — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-03

G : GASOLINE ENGINE  
D : DIESEL ENGINE



REFER TO THE FOLLOWING:  
 (M2), (E104) - FUSE BLOCK-JUNCTION BOX (J/B)  
 (E68) - FUSE AND FUSIBLE LINK BOX

YEL622C

# HEADLAMP — DAYTIME LIGHT SYSTEM —

Trouble Diagnoses

## Trouble Diagnoses DAYTIME LIGHT UNIT INSPECTION TABLE

NJEL0354

NJEL0354S01

Terminal No.	Connections	INPUT (I)/ OUTPUT (O)	Operated condition	Voltage (V) (Approximate values)	
1	Power source for illumination & tail lamp	—	—	12	
2	Power source for headlamp LH	—	—	12	
3	Power source for headlamp RH	—	—	12	
4	Headlamp RH	O	ON (daytime light operating*)	12	
			OFF	0	
5	Headlamp LH	O	ON (daytime light operating*)	12	
			OFF	0	
6	Start signal	I	Ignition switch	START	12
			ON, ACC or OFF	0	
7	Power source	—	Ignition switch	ON or START	12
			ACC or OFF	0	
8	Alternator "L" terminal	I	Engine	Running	12
			Stopped	0	
9	Ground	—	—	—	
10	Illumination & tail lamp	O	ON (daytime light operating*)	12	
			OFF	0	
11	Lighting switch	I	1ST-2ND position	12	
			OFF	0	

\*: Daytime light operating: Lighting switch in "OFF" position with engine running.

### Bulb Replacement

Refer to "HEADLAMP" (EL-42).

NJEL0355

## HEADLAMP — DAYTIME LIGHT SYSTEM —

*Aiming Adjustment*

---

### **Aiming Adjustment**

Refer to “HEADLAMP” (EL-42).

NJEL0356

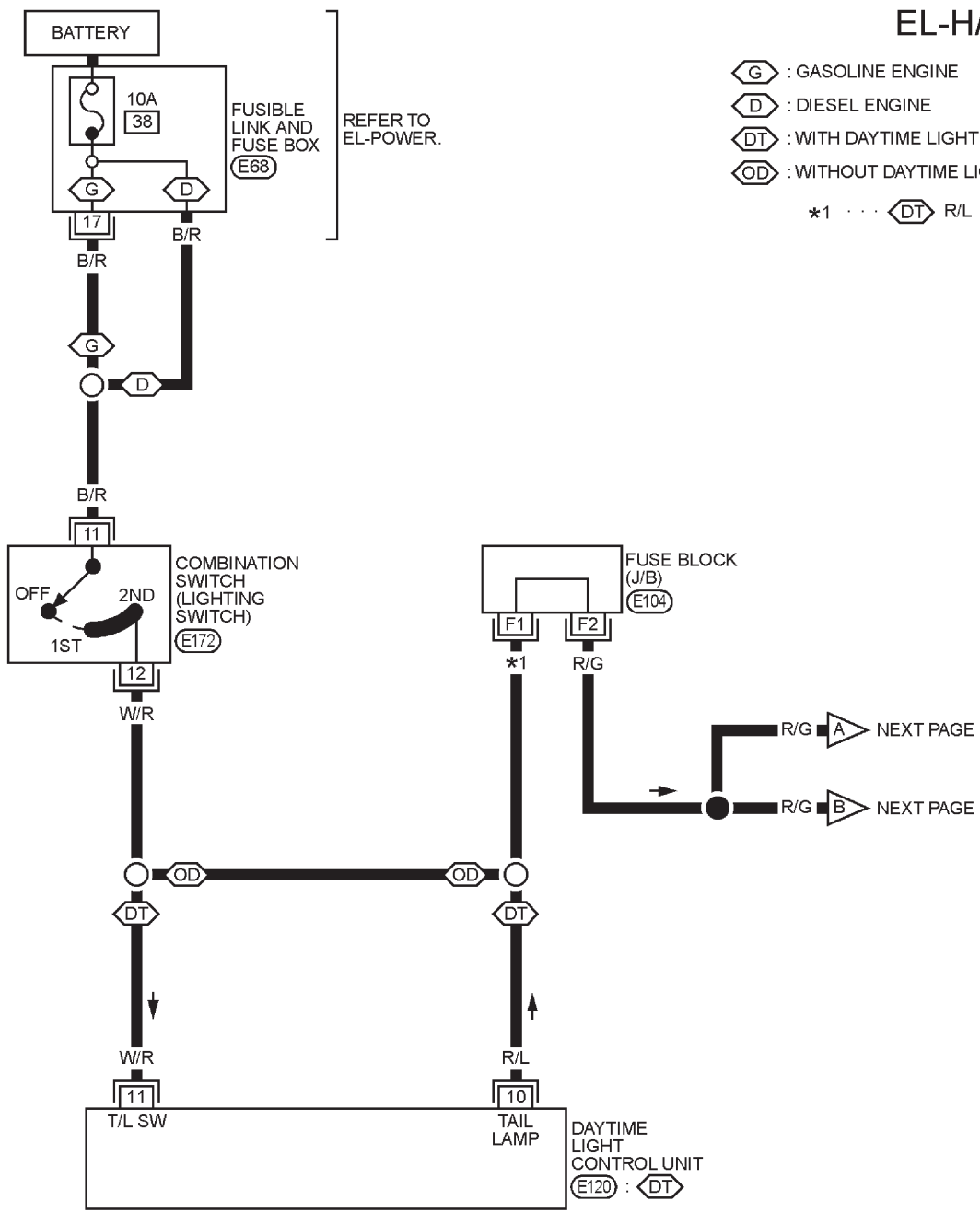
# HEADLAMP — HEADLAMP AIMING CONTROL —

Wiring Diagram — H/AIM —

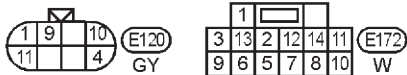
## Wiring Diagram — H/AIM —

NJEL0424

### EL-H/AIM-01



- G : GASOLINE ENGINE
  - D : DIESEL ENGINE
  - DT : WITH DAYTIME LIGHT SYSTEM
  - OD : WITHOUT DAYTIME LIGHT SYSTEM
- \*1 . . . DT R/L , OD W/R



REFER TO THE FOLLOWING.

- E104 - FUSE BLOCK- JUNCTION BOX (J/B)
- E68 - FUSE AND FUSIBLE LINK BOX

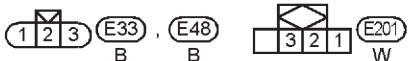
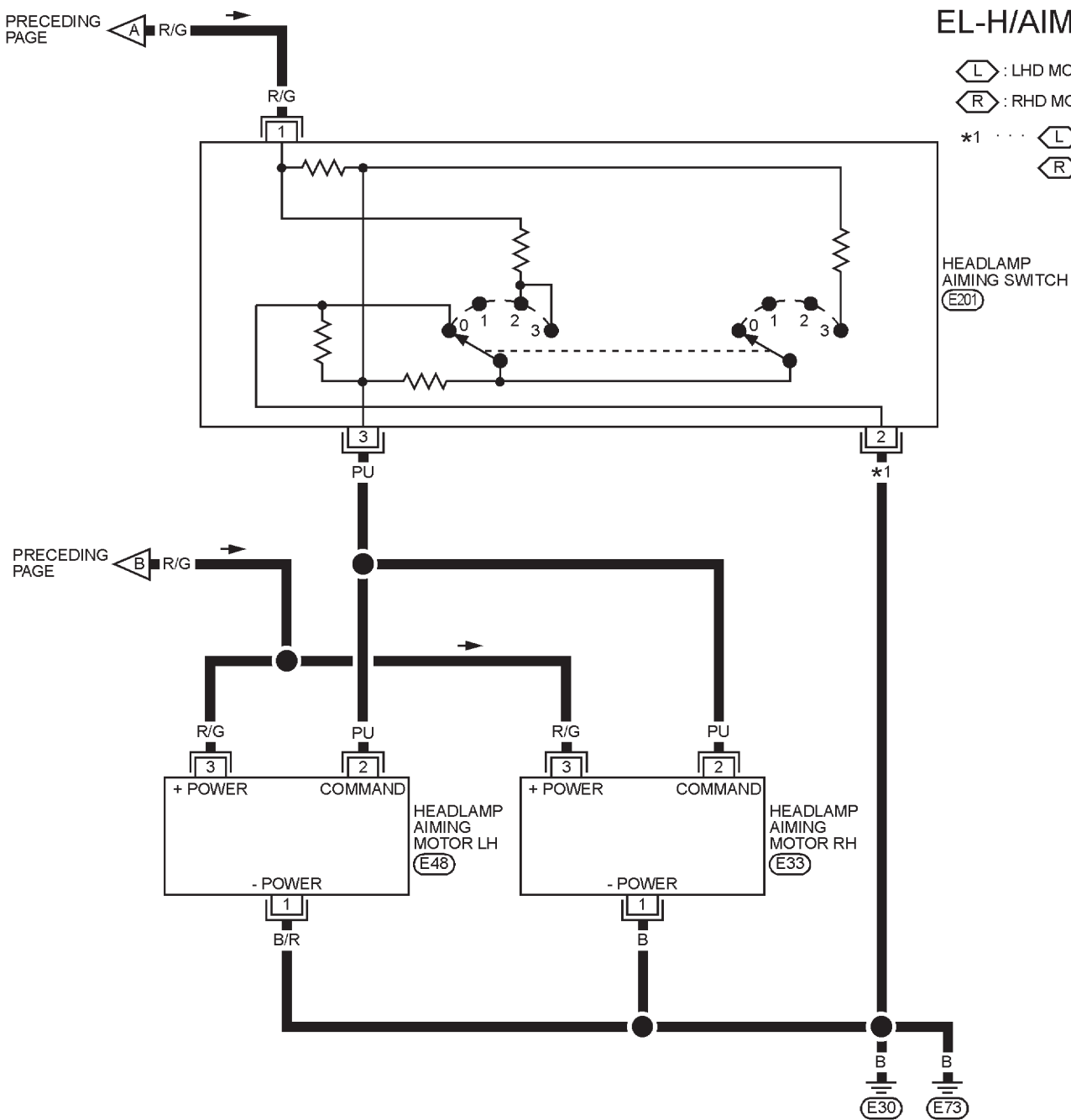
YEL623C

# HEADLAMP — HEADLAMP AIMING CONTROL —

Wiring Diagram — H/AIM — (Cont'd)

EL-H/AIM-02

- L : LHD MODELS
- R : RHD MODELS
- \*1 L B/Y,
- R B



YEL624C



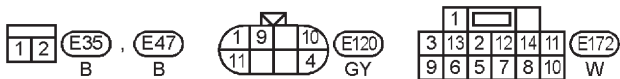
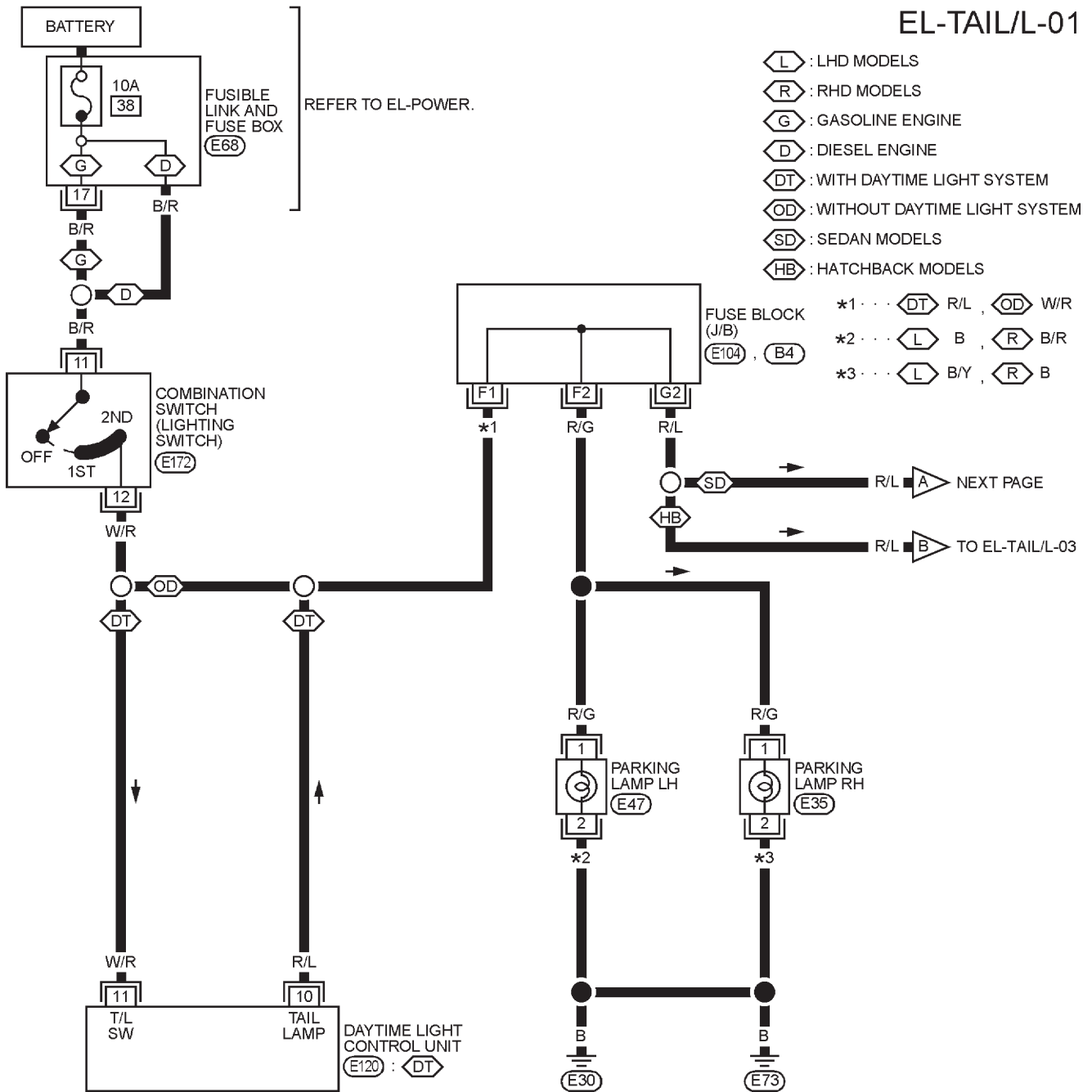
# PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L —

## Wiring Diagram — TAIL/L —

NJEL0425

### EL-TAIL/L-01



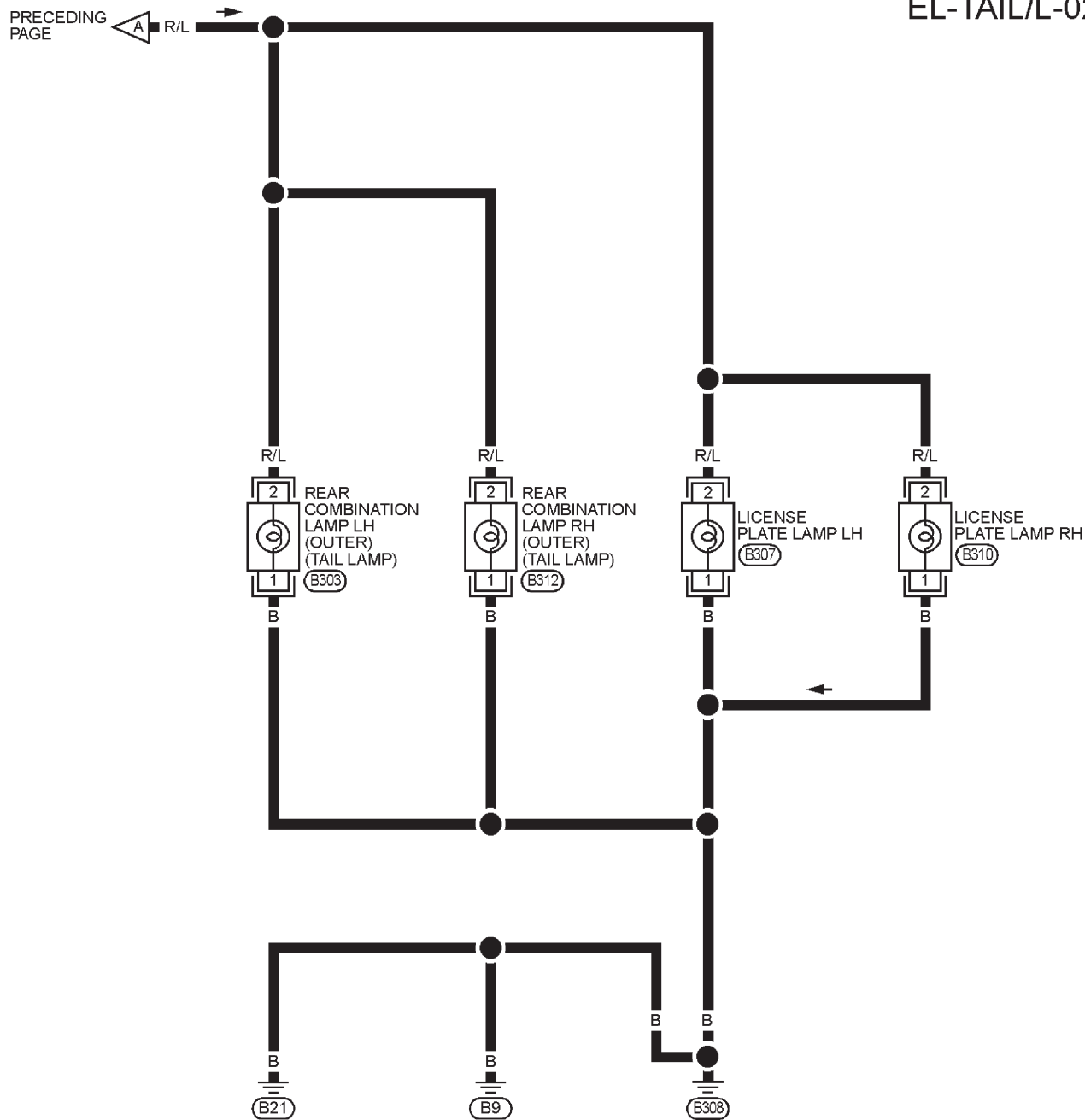
REFER TO THE FOLLOWING.  
 (E104) , (B4) -FUSE BLOCK-JUNCTION BOX (J/B)  
 (E68) -FUSE AND FUSIBLE LINK BOX

YEL625C

# PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

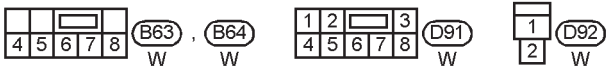
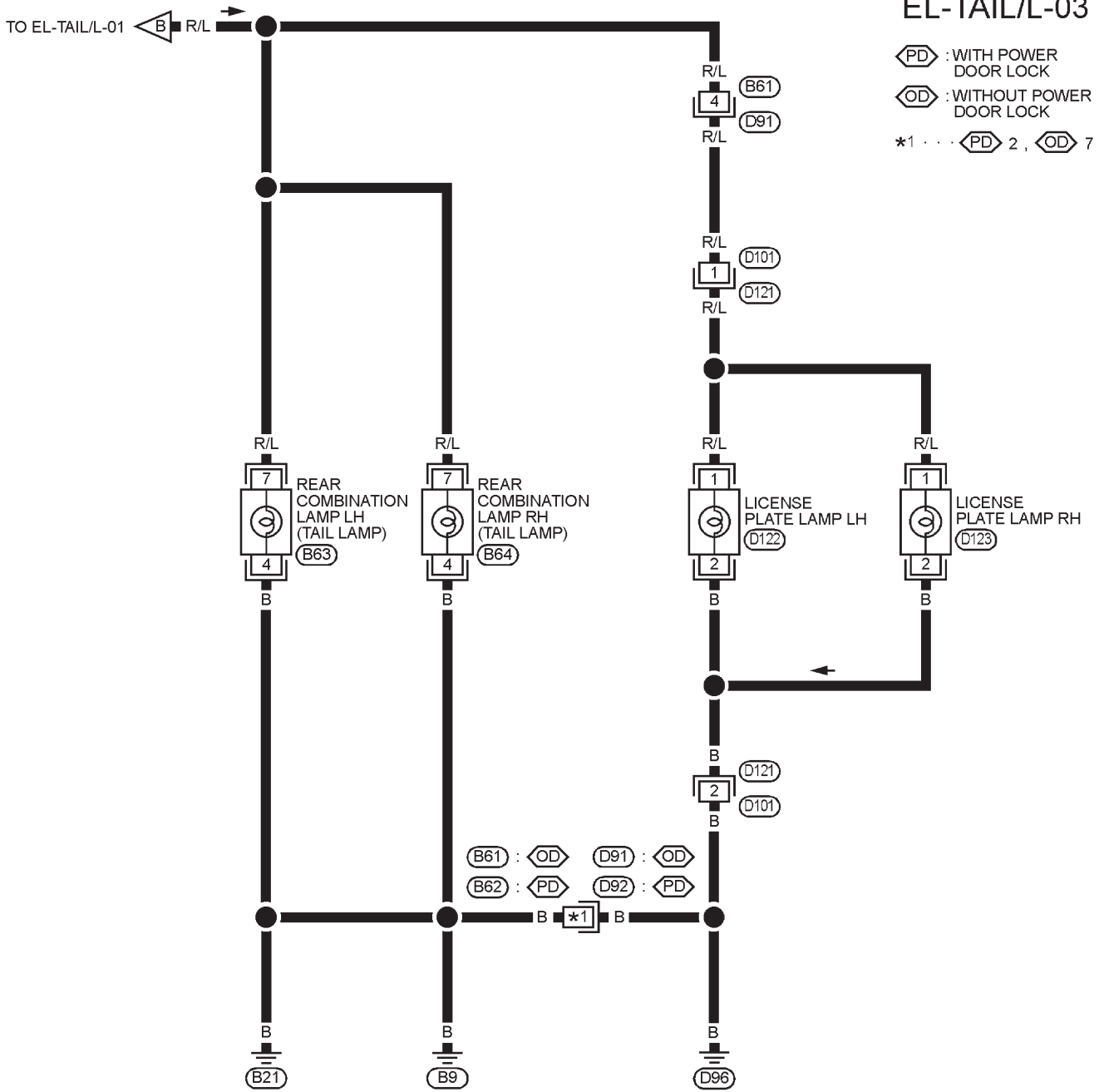
EL-TAIL/L-02



YEL626C

# PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)



YEL627C

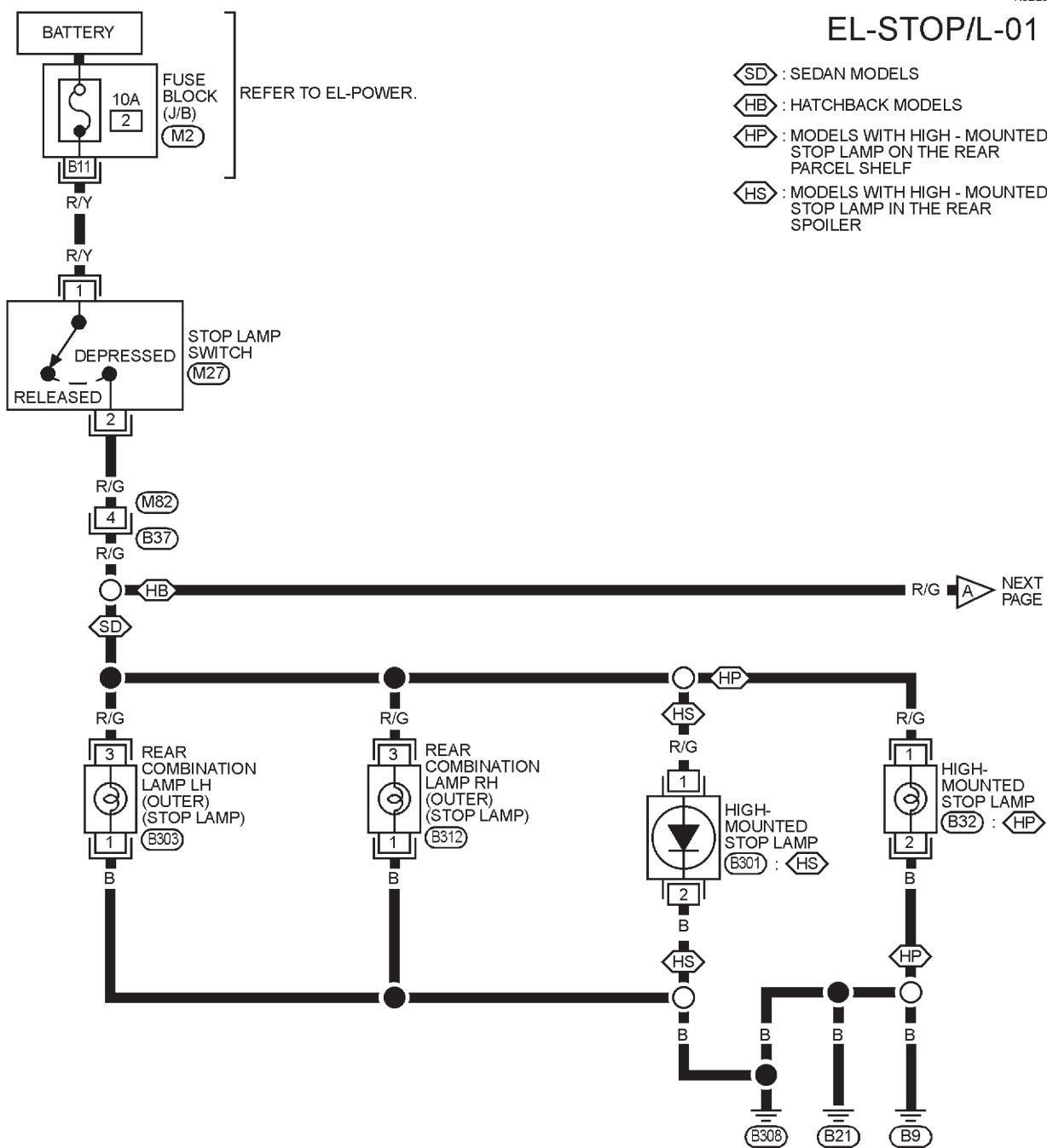
# STOP LAMP

Wiring Diagram — STOP/L —

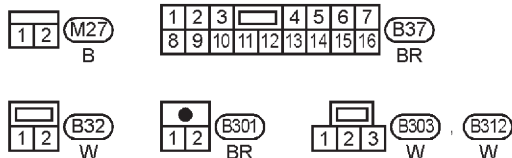
## Wiring Diagram — STOP/L —

NJEL0426

### EL-STOP/L-01



NEXT PAGE A



REFER TO THE FOLLOWING.  
M2 - FUSE BLOCK-  
 JUNCTION BOX (J/B)

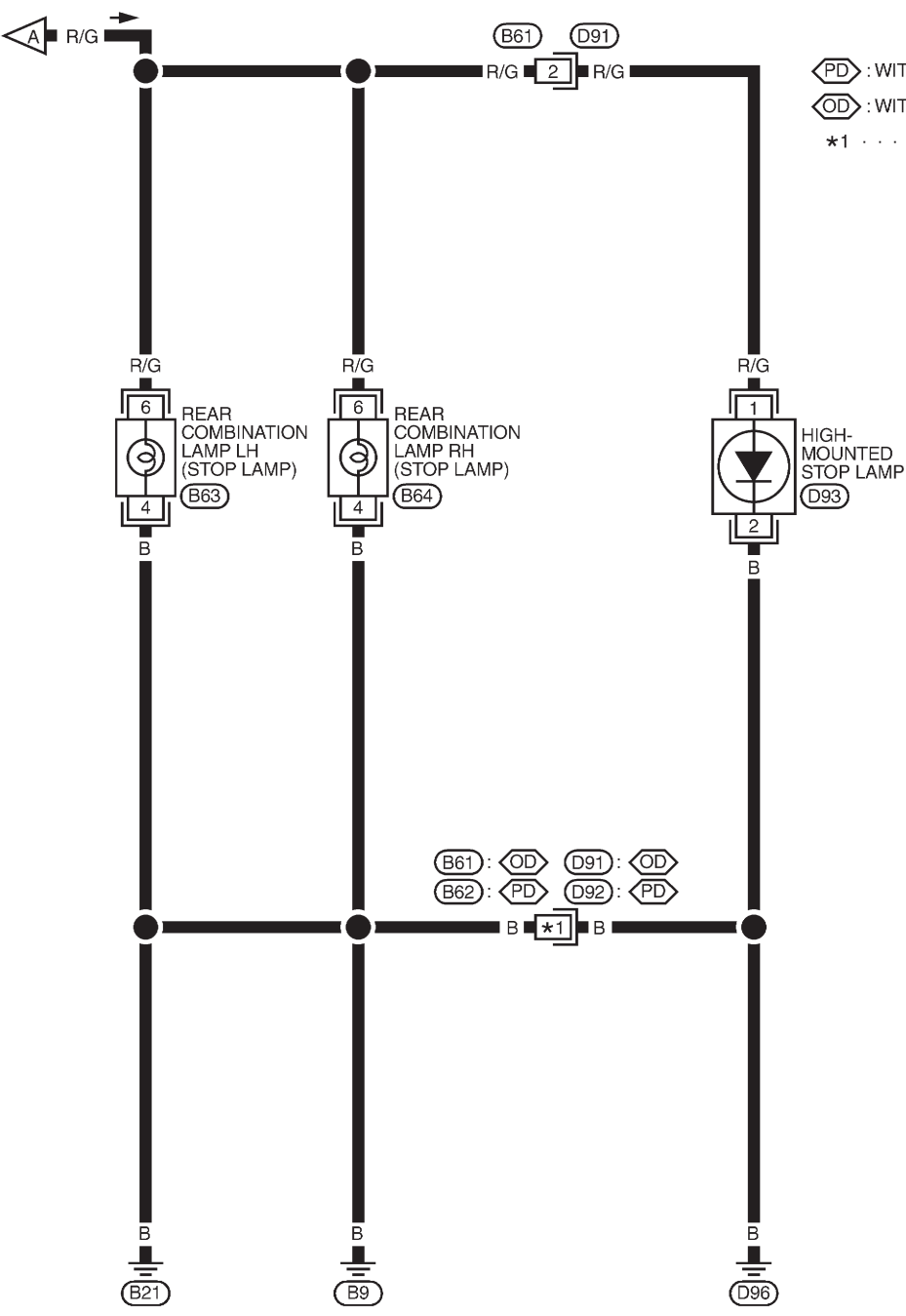
YEL628C

# STOP LAMP

Wiring Diagram — STOP/L — (Cont'd)

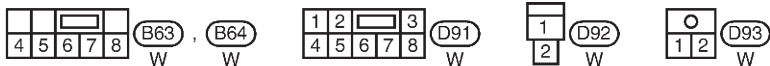
## EL-STOP/L-02

PRECEDING PAGE



PD : WITH POWER DOOR LOCK  
OD : WITHOUT POWER DOOR LOCK  
 \*1 . . . PD 2 , OD 7

B61 : OD    D91 : OD  
B62 : PD    D92 : PD



YEL629C

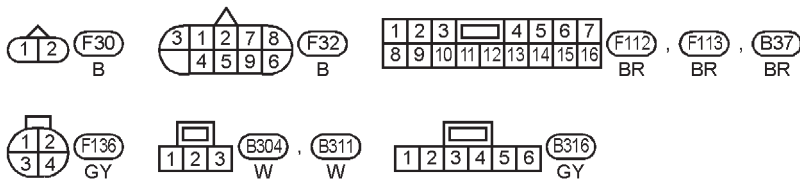
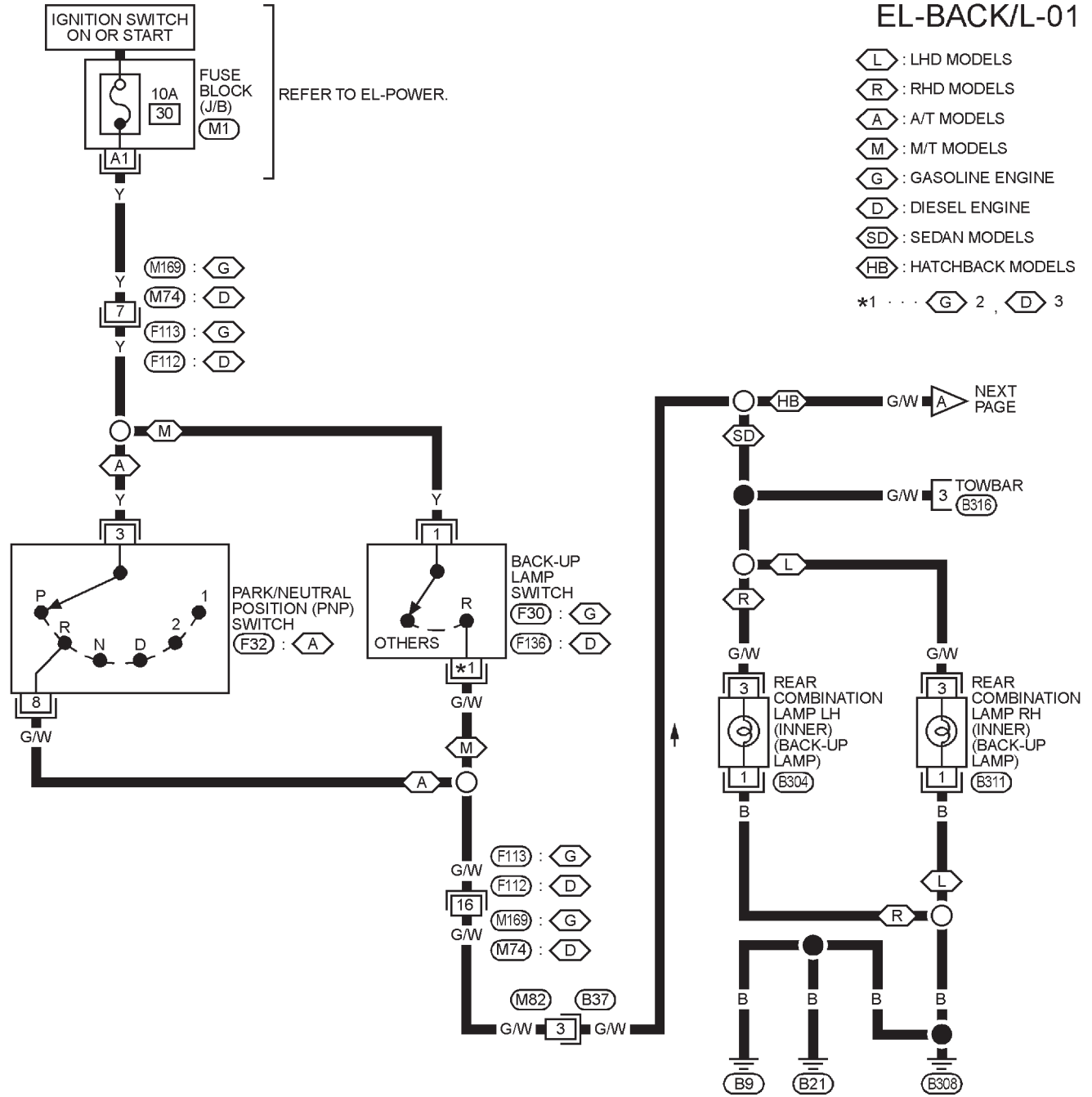
# BACK-UP LAMP

Wiring Diagram — BACK/L —

## Wiring Diagram — BACK/L —

NJEL0427

### EL-BACK/L-01



REFER TO THE FOLLOWING.  
 (M1) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL630C

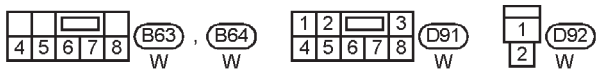
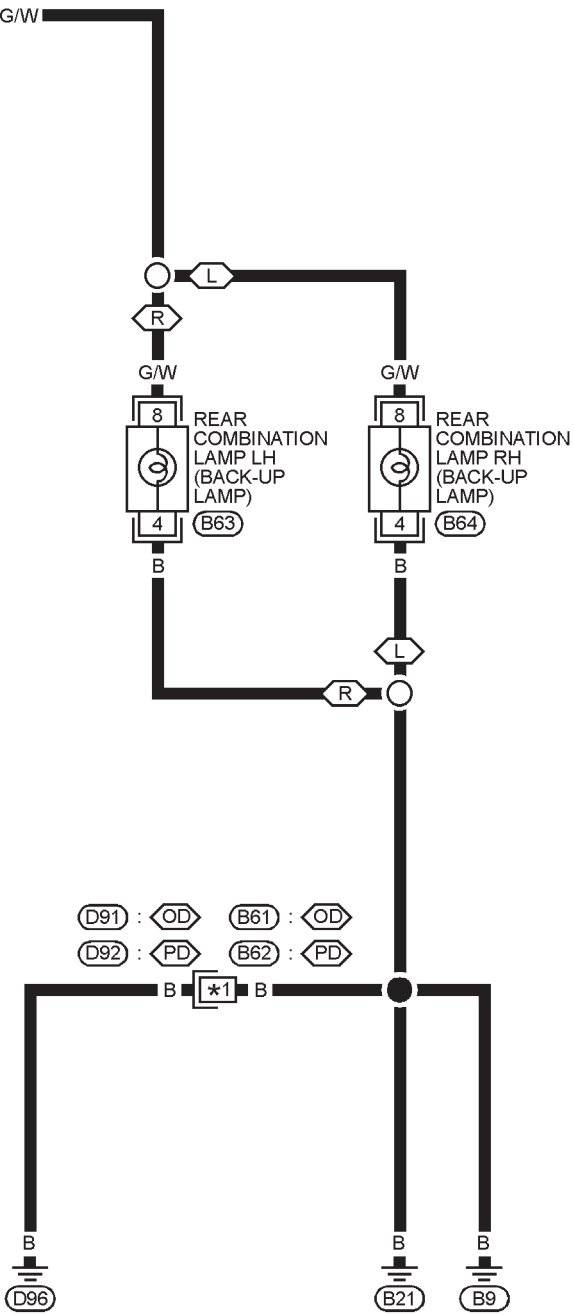
# BACK-UP LAMP

Wiring Diagram — BACK/L — (Cont'd)

## EL-BACK/L-02

PRECEDING PAGE A G/W

- : LHD MODELS
- : RHD MODELS
- : WITH POWER DOOR LOCK
- : WITHOUT POWER DOOR LOCK
- \*1 . . . 2 , 7



YEL631C

# FRONT FOG LAMP

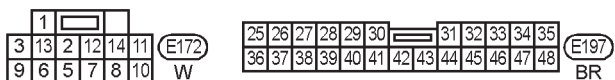
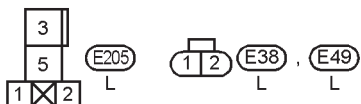
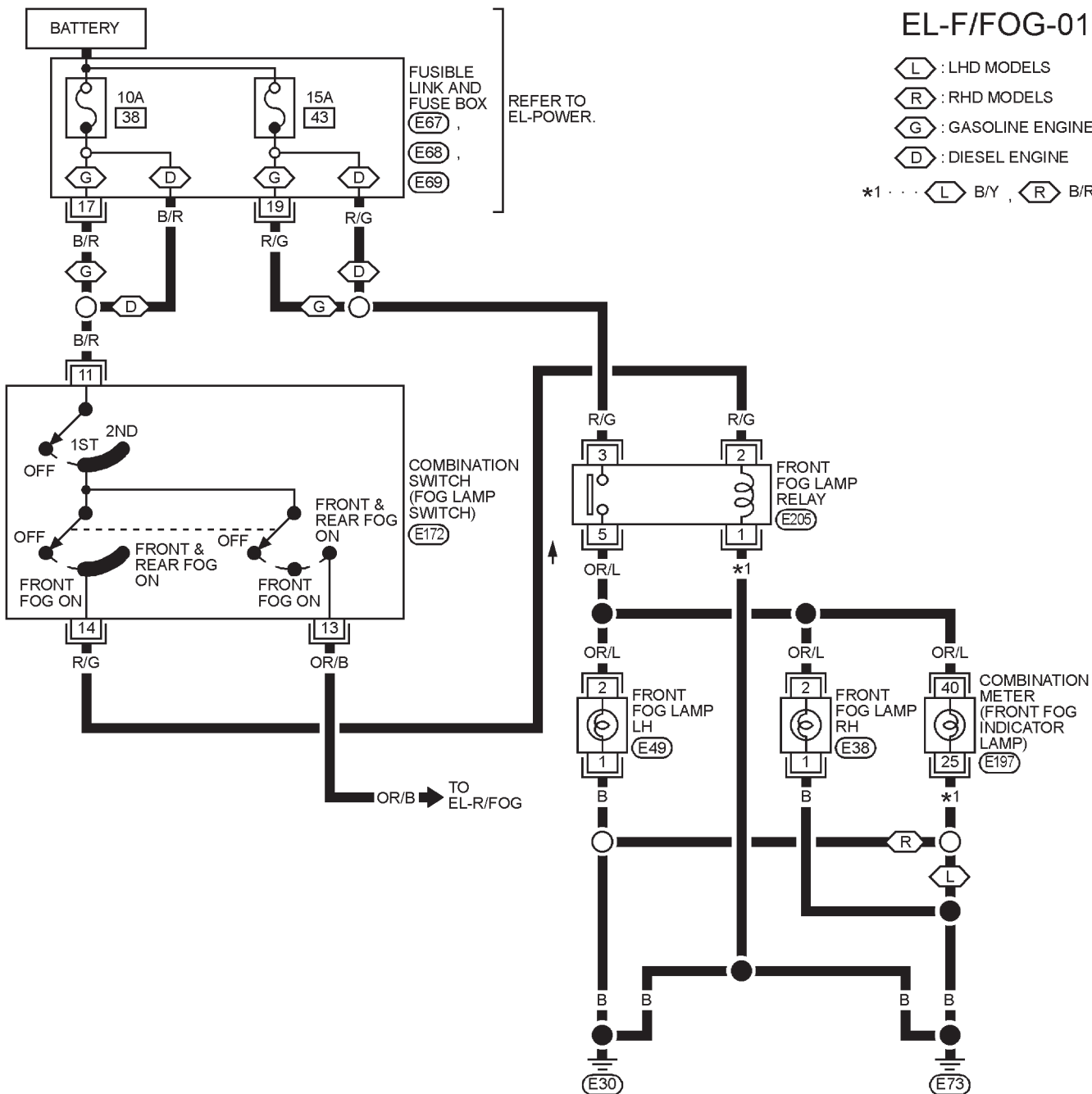
Wiring Diagram — F/FOG —

## Wiring Diagram — F/FOG —

NJEL0428

### EL-F/FOG-01

- ⬡ : LHD MODELS
- ⬢ : RHD MODELS
- ⬤ : GASOLINE ENGINE
- ⬥ : DIESEL ENGINE
- \*1 ⬡ B/Y , ⬢ B/R



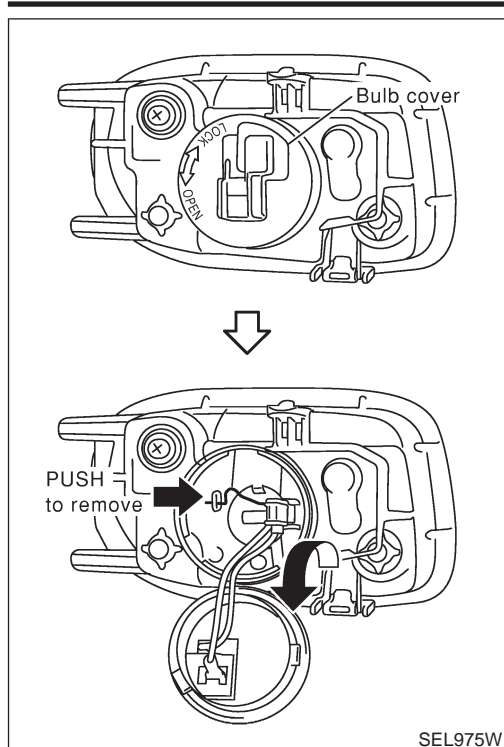
REFER TO THE FOLLOWING.  
 (E67) , (E68) , (E69) -FUSE  
 AND FUSIBLE LINK BOX

YEL632C



## FRONT FOG LAMP

Bulb Replacement



### Bulb Replacement

NJEL0314

The front fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

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

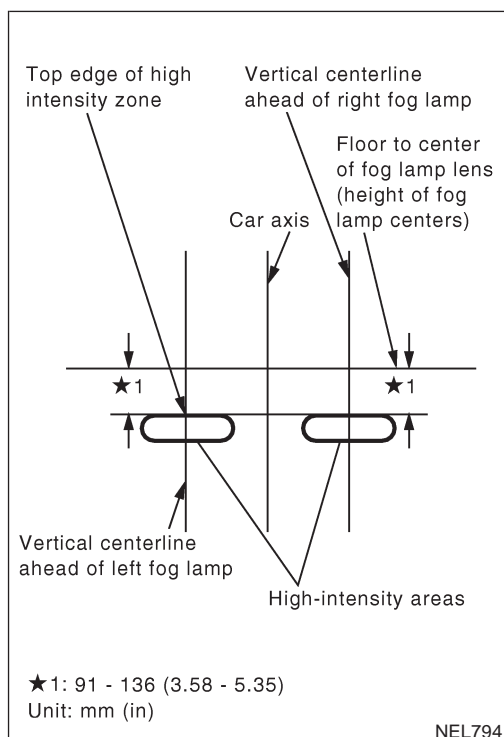
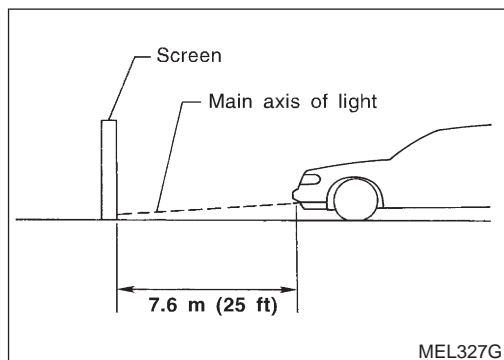
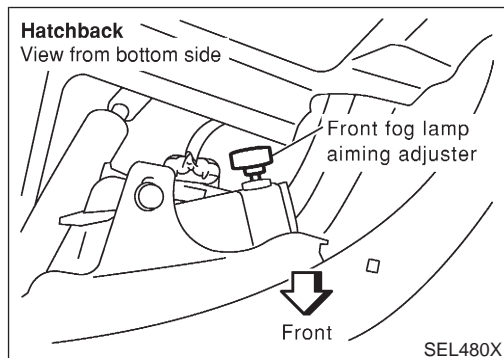
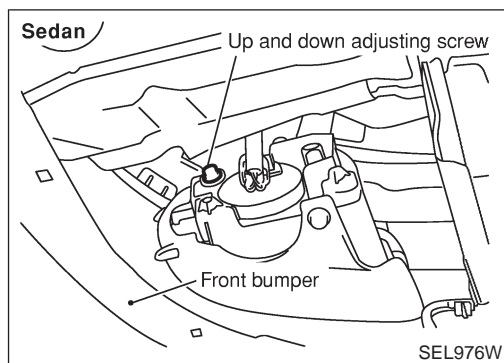
1. Disconnect the battery cable.
2. Disconnect the harness connector from the back side of the bulb.
3. Pull off the bulb cover.
4. Remove the front fog lamp bulb carefully. Do not shake or rotate the bulb when removing it.
5. Install in the reverse order of removal.

#### CAUTION:

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

## FRONT FOG LAMP

### Aiming Adjustment



### Aiming Adjustment

=NJEL0029

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 152 mm (6.0 in) (Sedan) or 91 to 136 mm (3.58 to 5.35 in) (Hatchback) below the height of the fog lamp centers as shown at left.
  - When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.

# REAR FOG LAMP

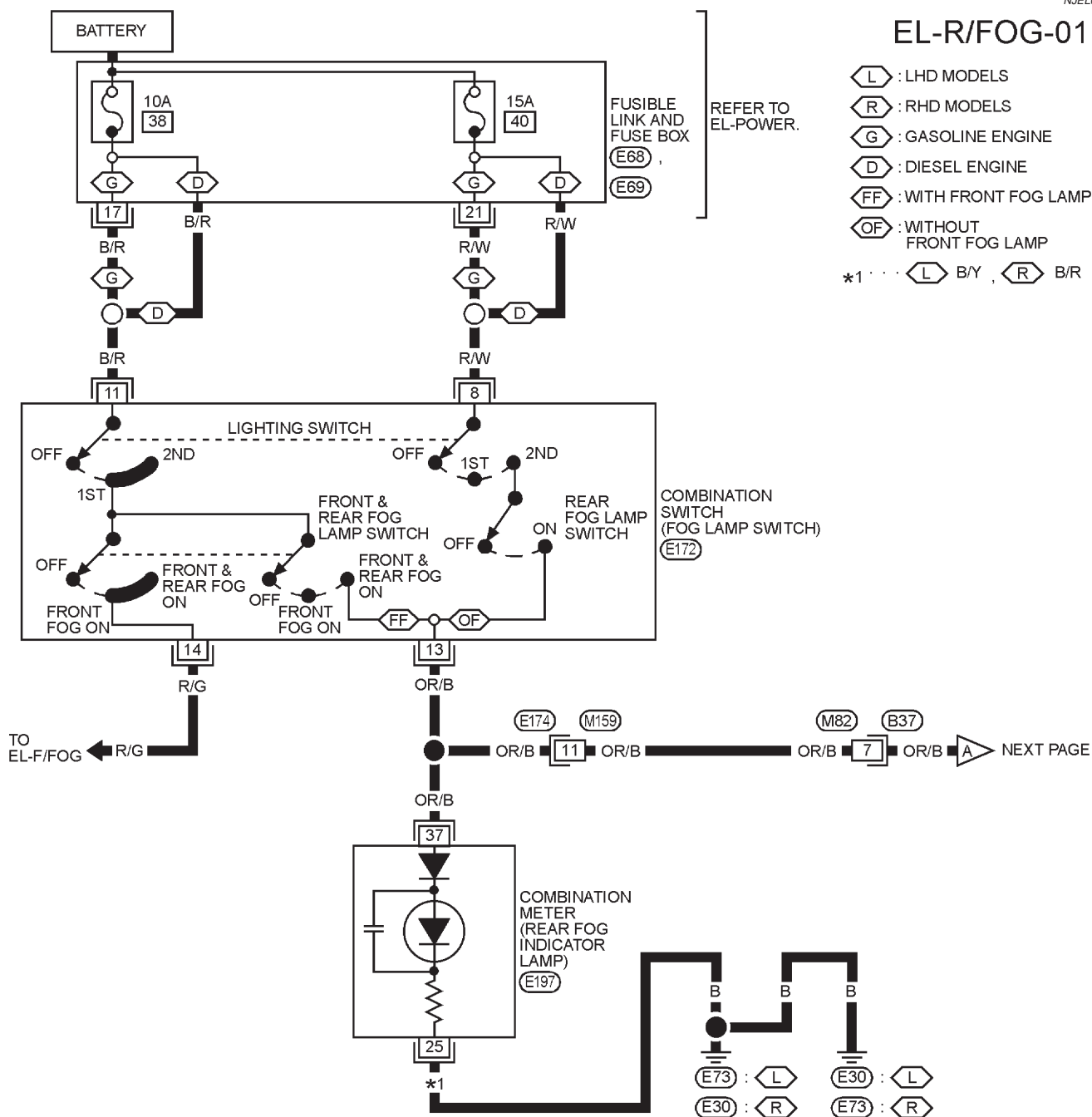
Wiring Diagram — R/FOG —

## Wiring Diagram — R/FOG —

NJEL0429

### EL-R/FOG-01

- L : LHD MODELS
- R : RHD MODELS
- G : GASOLINE ENGINE
- D : DIESEL ENGINE
- FF : WITH FRONT FOG LAMP
- OF : WITHOUT FRONT FOG LAMP
- \*1 L B/Y , R B/R



1	2	3	4	5	
3	13	2	12	14	11
9	6	5	7	8	10

(E172) W

25	26	27	28	29	30	31	32	33	34	35		
36	37	38	39	40	41	42	43	44	45	46	47	48

(E197) BR

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

(E174) W, (B37) BR

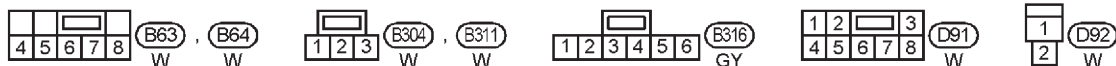
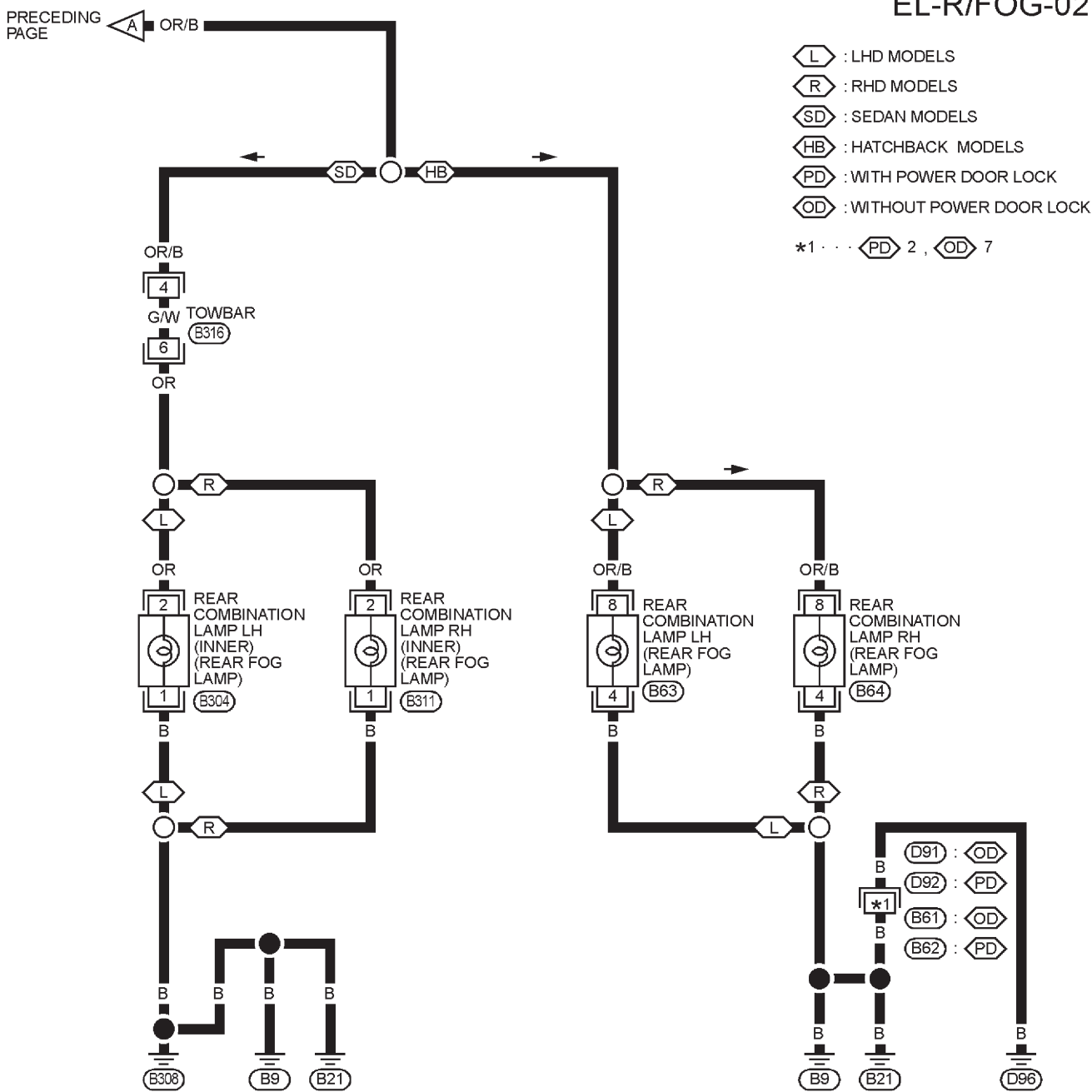
REFER TO THE FOLLOWING.  
(E68), (E69) - FUSE AND FUSIBLE LINK BOX

YEL633C

# REAR FOG LAMP

Wiring Diagram — R/FOG — (Cont'd)

EL-R/FOG-02



YEL634C

# TURN SIGNAL AND HAZARD WARNING LAMPS

System Description

## System Description

### TURN SIGNAL OPERATION

NJEL0430

Power is supplied at all times

- through 15A fuse [No. 5, located in fuse block (J/B)]
- to time control unit terminal 9

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

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

Ground is supplied to time control unit terminal 16 through body grounds M28 and M67.

NJEL0430S01

### LH Turn

When the turn signal switch is moved to the L position, ground is supplied from body grounds E30 and E73 to

NJEL0430S0101

- time control unit terminal 2
- through turn signal switch terminal 3

With ground is supplied, time control unit controls the flashing of the LH turn signal lamps.

### RH Turn

When the turn signal switch is moved to the R position, ground is supplied from body grounds E30 and E73 to

NJEL0430S0102

- time control unit terminal 4
- through turn signal switch terminal 2

With ground is supplied, time control unit controls the flashing of the RH turn signal lamps.

### HAZARD LAMP OPERATION

Power is supplied at all times

- through 15A fuse [No. 5, located in fuse block (J/B)]
- to time control unit terminal 9

Ground is supplied to time control unit terminal 16 through body grounds M28 and M67.

With the hazard switch in the ON position, ground is supplied from body grounds M28 and M67 to

- time control unit terminals 1 and 5
- through hazard switch terminal 3

With ground is supplied, time control unit controls the flashing of the hazard warning lamps.

NJEL0430S02

### HAZARD REMINDER OPERATION FOR MULTI-REMOTE CONTROL SYSTEM

When the doors are locked or unlocked by multi-remote controller, time control unit controls turn lamps hazard reminder flashes as follows.

NJEL0430S04

- Locked operation: Flash once
- Unlock operation: Flash twice

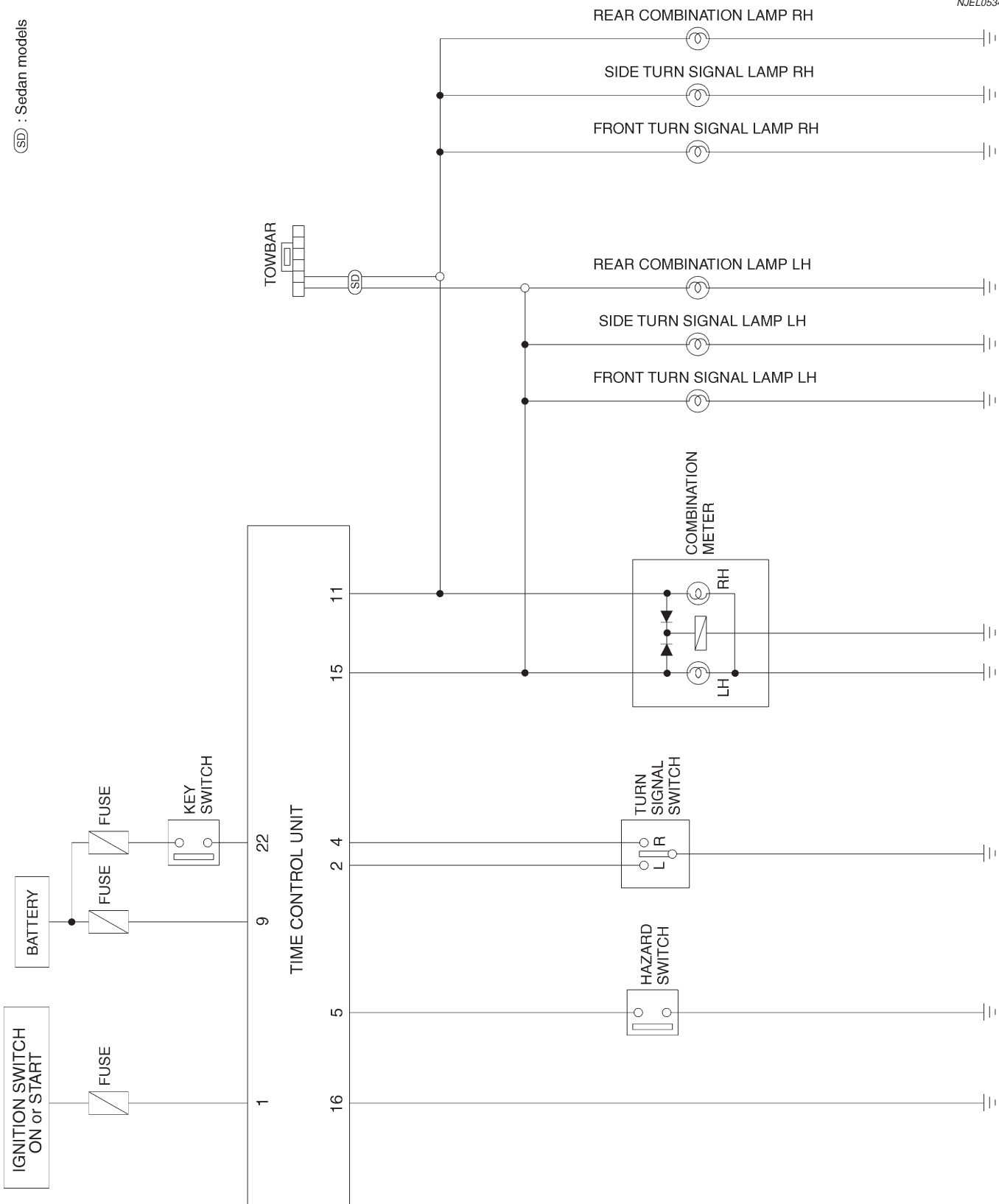
# TURN SIGNAL AND HAZARD WARNING LAMPS

Schematic

SD : Sedan models

## Schematic

NJEL0534



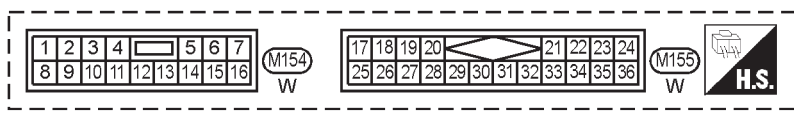
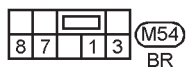
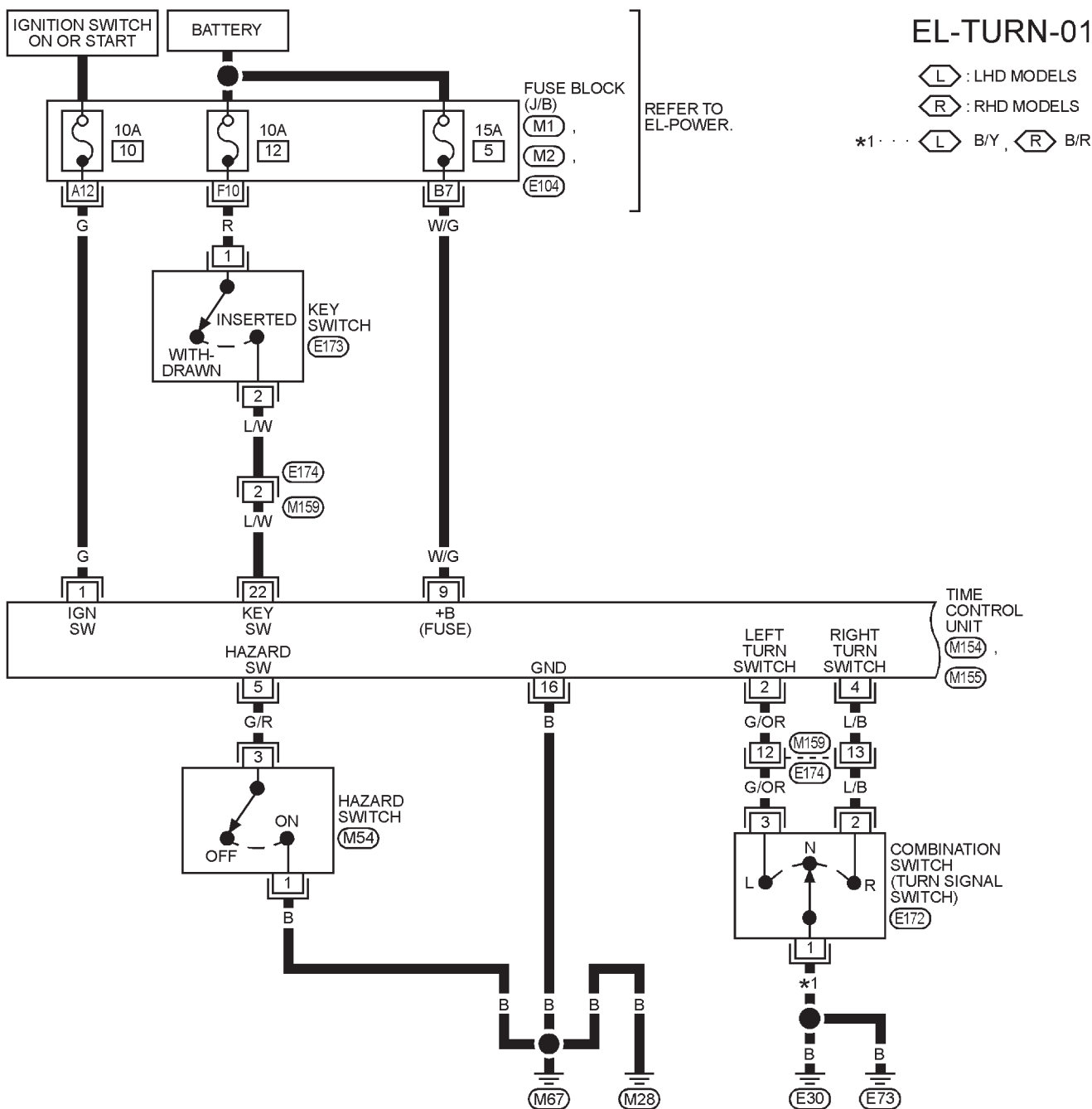
YEL635C

# TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —

## Wiring Diagram — TURN —

NJEL0431



REFER TO THE FOLLOWING.  
 (M1) , (M2) , (E104) -FUSE  
 BLOCK- JUNCTION BOX (J/B)

YEL636C

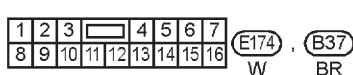
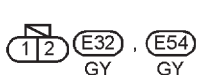
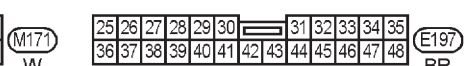
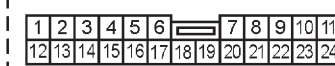
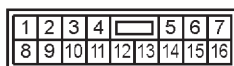
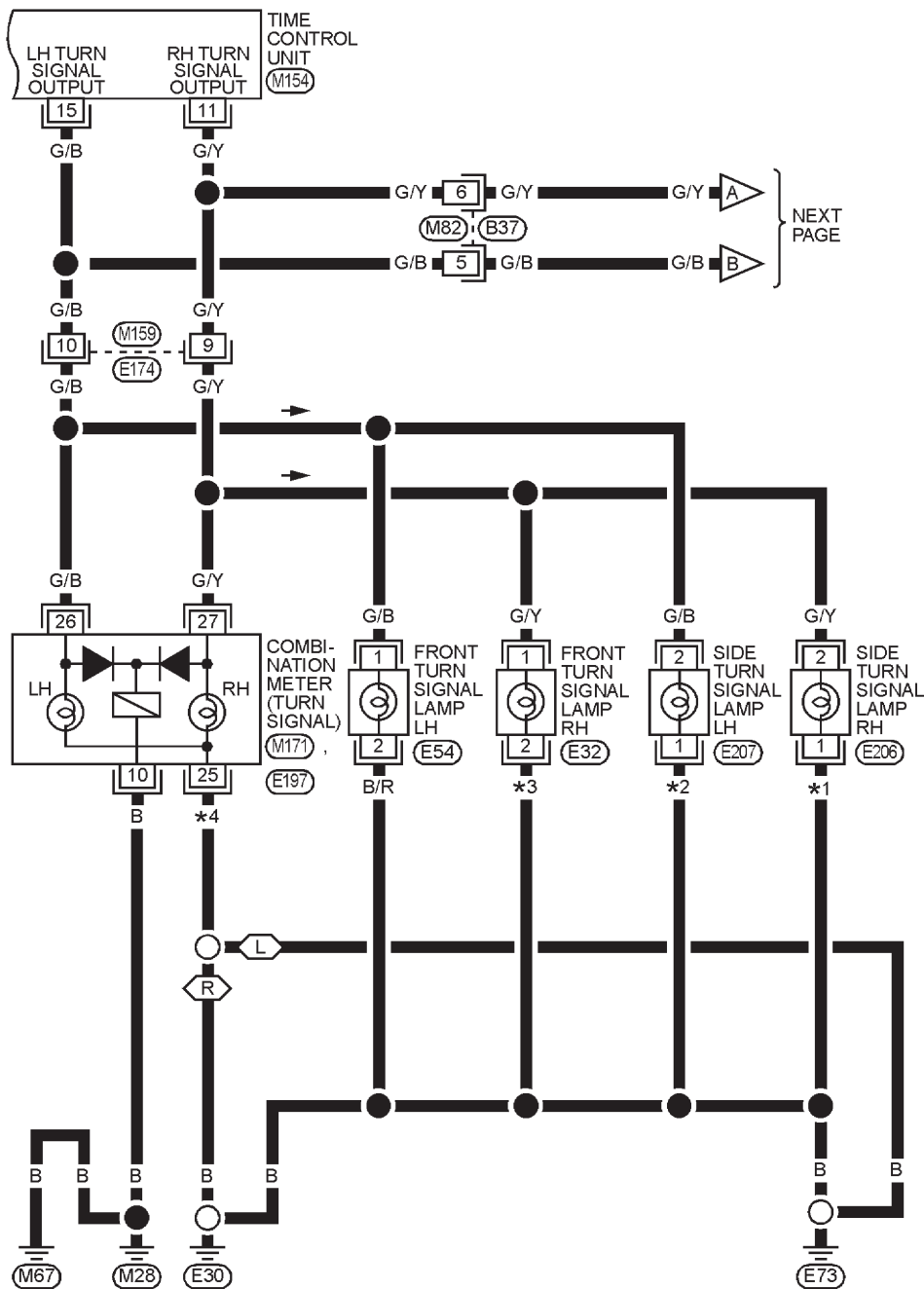
# TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN — (Cont'd)

## EL-TURN-02

L : LHD MODELS  
R : RHD MODELS

- \*1 . . . L B/R , R B/W
- \*2 . . . L B/W , R B/Y
- \*3 . . . L B/W , R B
- \*4 . . . L B/Y , R B/R

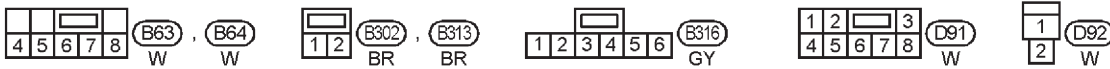
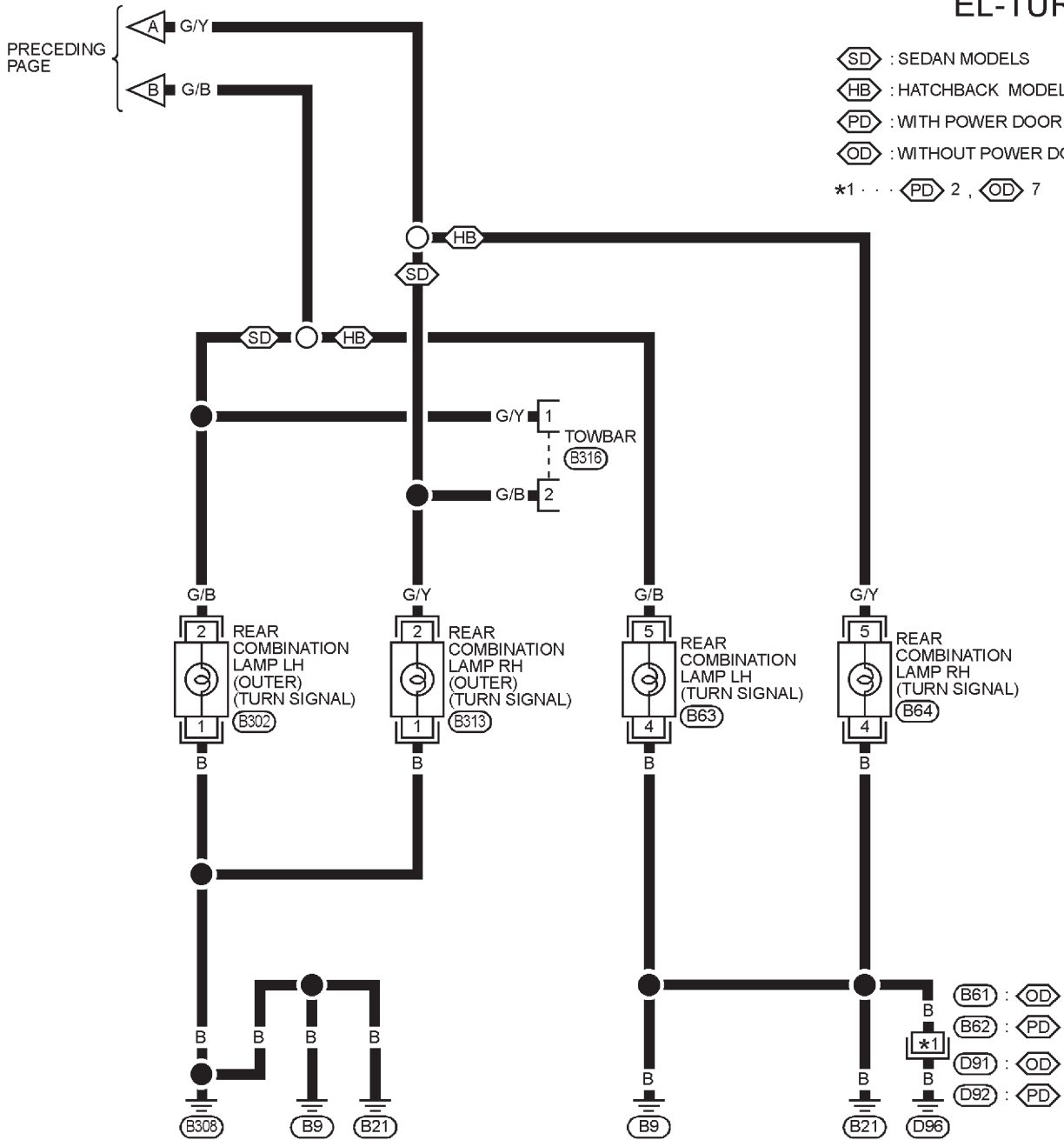




# TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN — (Cont'd)

## EL-TURN-03



YEL638C

## TURN SIGNAL AND HAZARD WARNING LAMPS

Trouble Diagnoses

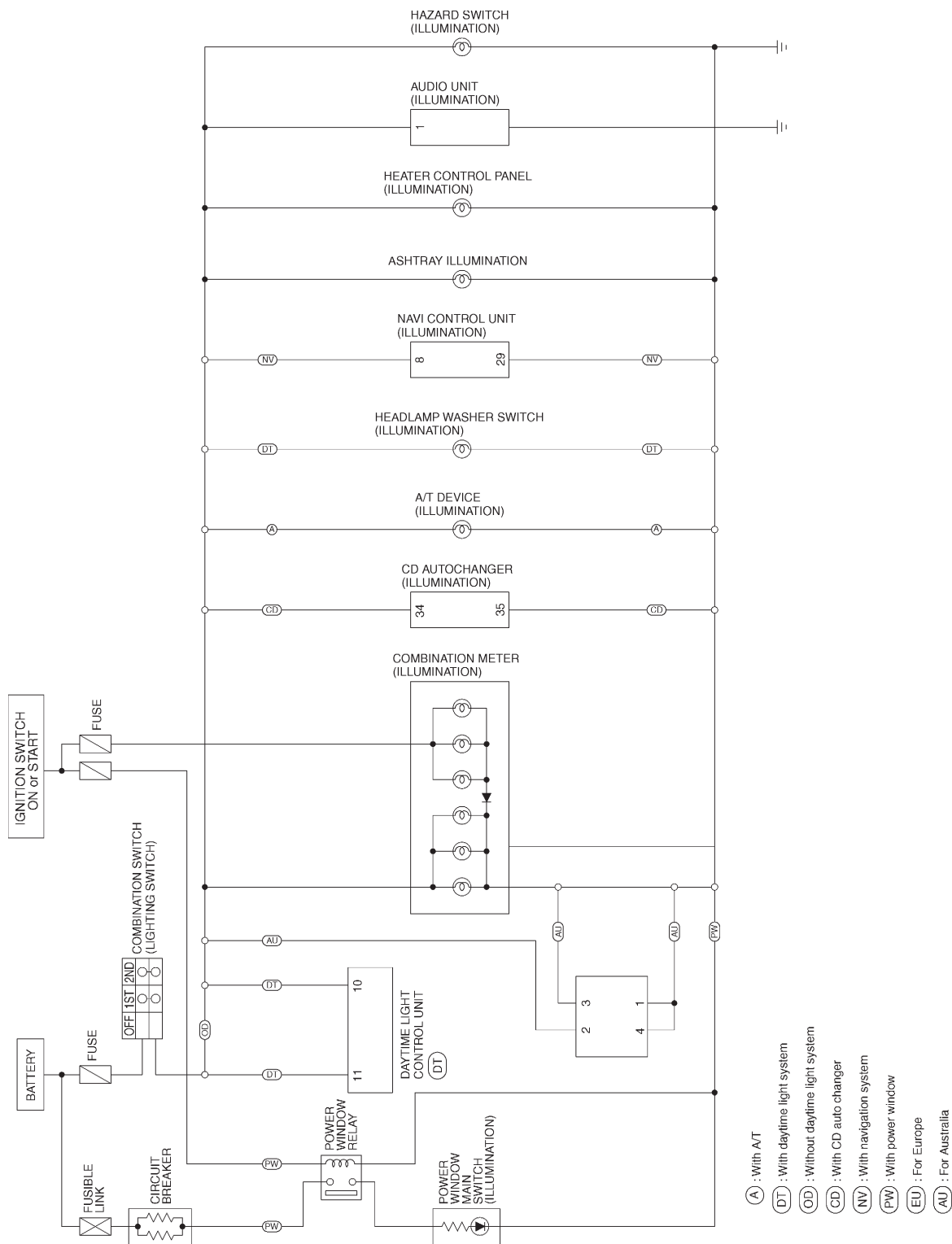
### Trouble Diagnoses

NJEL0432

Symptom	Possible cause	Repair order
Turn signal and hazard warning lamps do not operate.	<ol style="list-style-type: none"> <li>1. Time control unit</li> <li>2. Time control unit circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power door lock operation.</li> <li>2. Check power supply and ground circuit for time control unit.</li> </ol>
Turn signal lamps do not operate but hazard warning lamps operate.	<ol style="list-style-type: none"> <li>1. Turn signal switch</li> <li>2. Open in turn signal switch circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check turn signal switch.</li> <li>2. Check turn signal switch ground for open circuit.</li> </ol>
Hazard warning lamps do not operate but turn signal lamps operate.	<ol style="list-style-type: none"> <li>1. Hazard switch</li> <li>2. Open in hazard switch circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check hazard switch.</li> <li>2. Check hazard switch ground for open circuit.</li> </ol>
Front turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in front turn signal lamp circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check power supply and ground circuit for front turn signal lamp.</li> </ol>
Side turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in rear combination lamp circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check power supply and ground circuit for rear combination lamp.</li> </ol>
Rear combination lamp LH or RH does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in side turn signal lamp circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check grounds check power supply and ground circuit for rear combination lamp.</li> </ol>
LH and RH turn indicators do not operate.	<ol style="list-style-type: none"> <li>1. Ground</li> </ol>	<ol style="list-style-type: none"> <li>1. Check grounds E30 and E73</li> </ol>
LH or RH turn indicator does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb in combination meter.</li> </ol>

## Schematic

NJEL0433



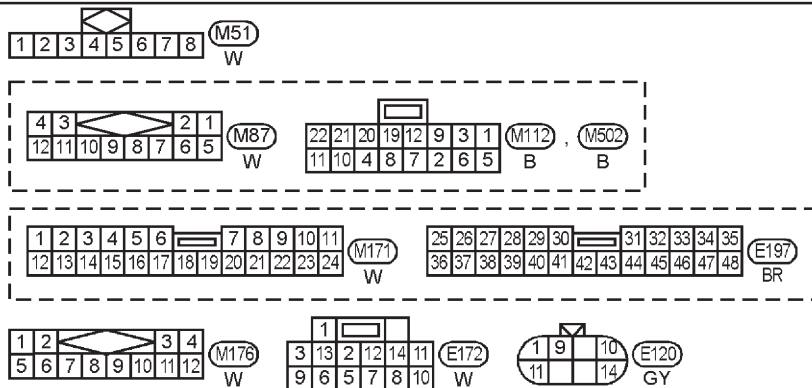
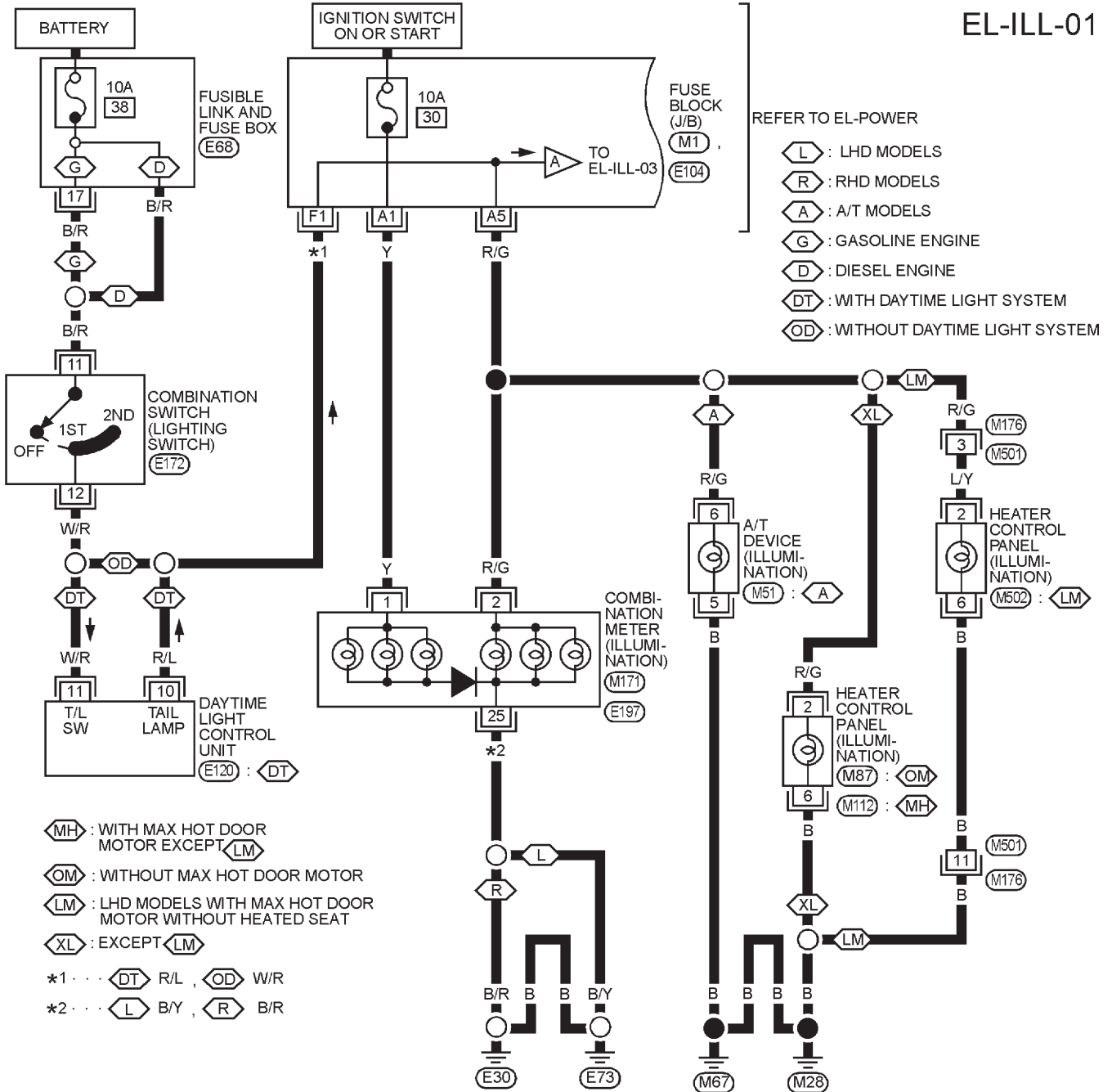
# ILLUMINATION

Wiring Diagram — ILL —

## Wiring Diagram — ILL —

NJEL0434

EL-ILL-01



REFER TO THE FOLLOWING.  
 (M1), (E104) - FUSE BLOCK-JUNCTION BOX (J/B)  
 (E68) - FUSE AND FUSIBLE LINK BOX

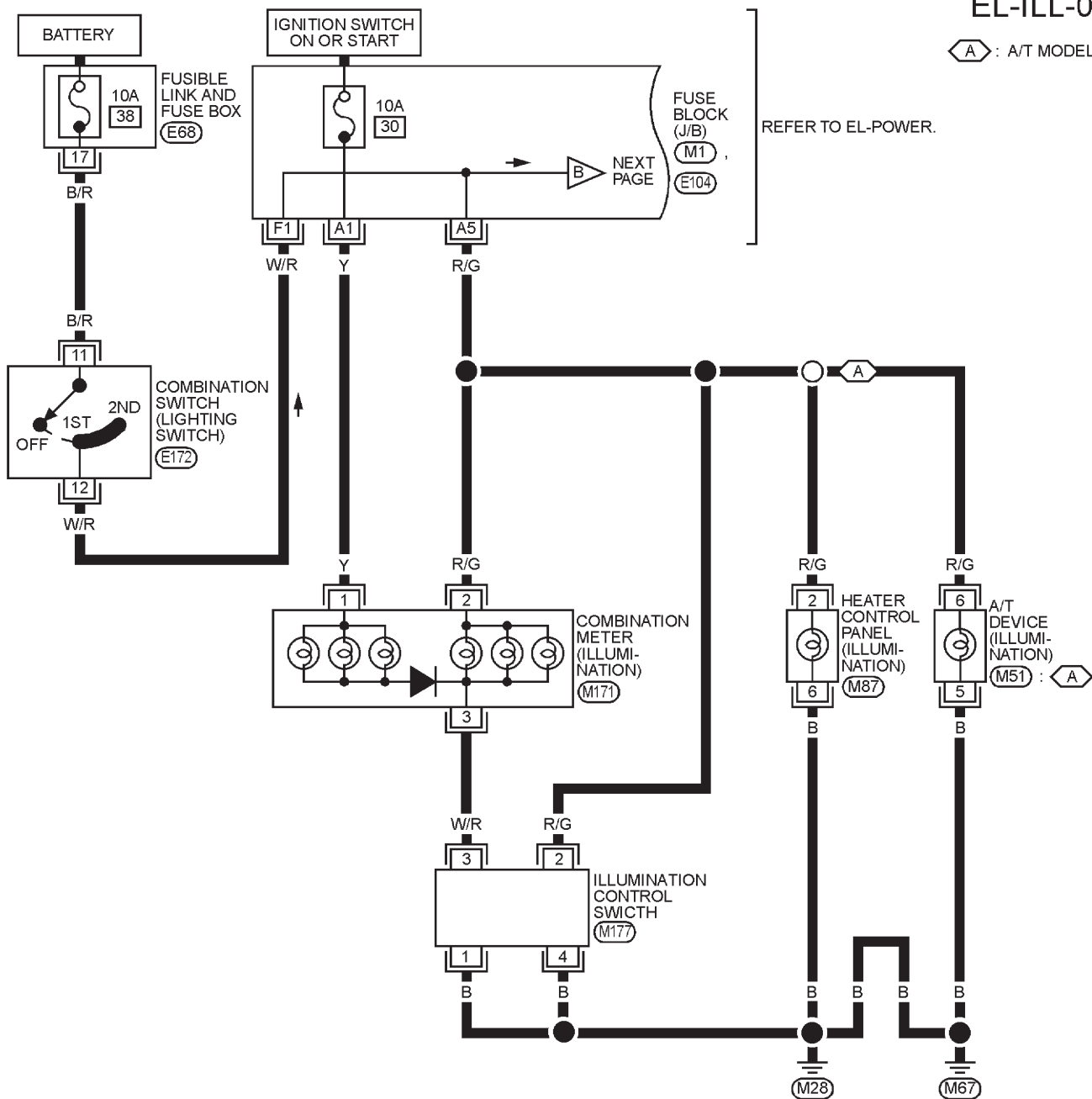
YEL640C

# ILLUMINATION

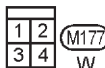
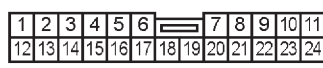
Wiring Diagram — ILL — (Cont'd)

## EL-ILL-02

⬡ : A/T MODELS



REFER TO EL-POWER.



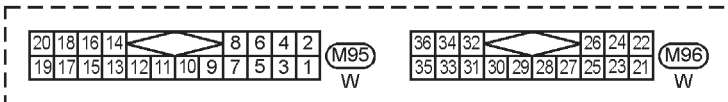
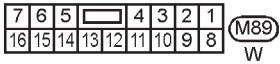
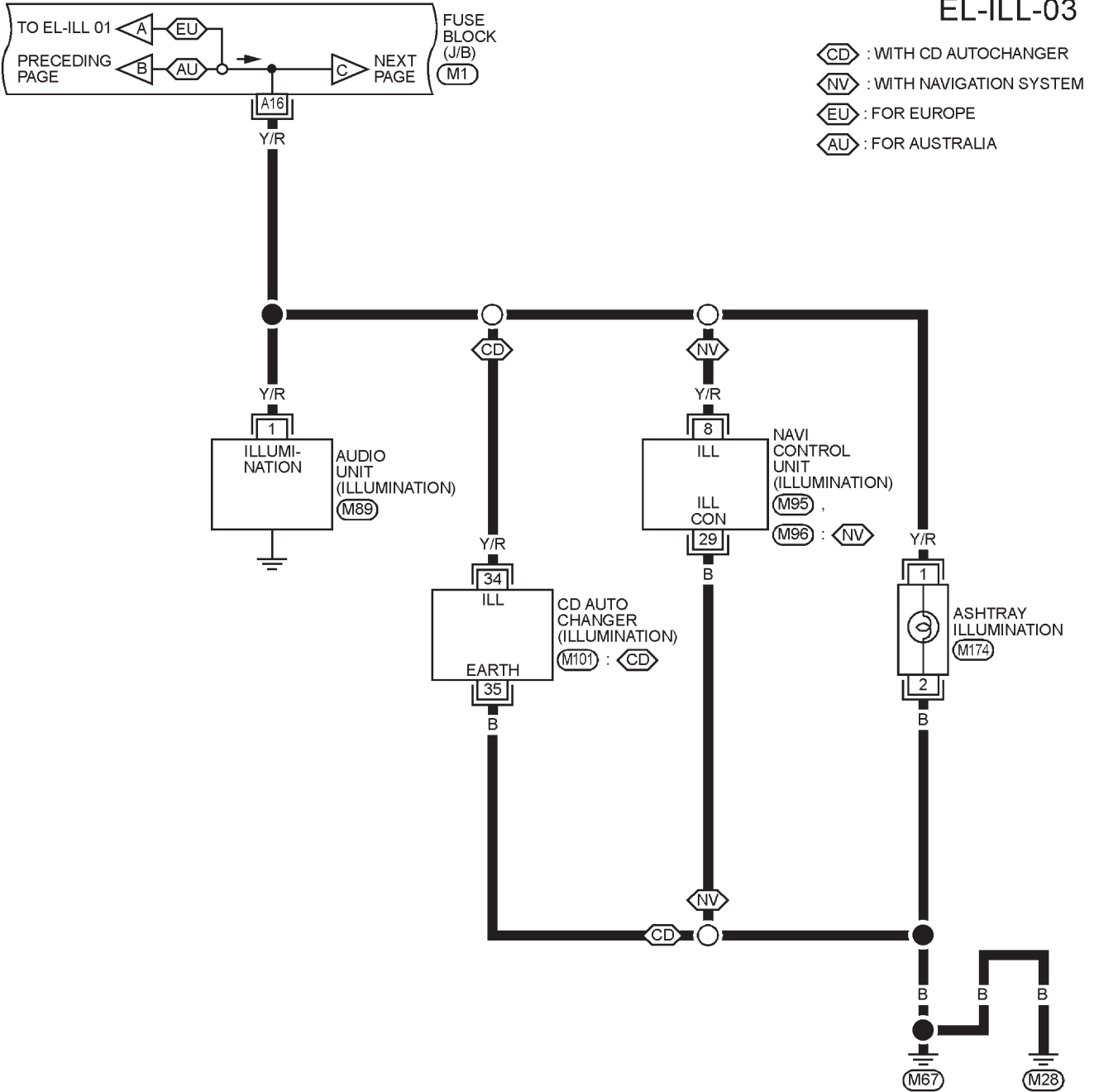
REFER TO THE FOLLOWING.  
 (M1), (E104) - FUSE BLOCK-JUNCTION BOX (J/B)  
 (E68) - FUSE AND FUSIBLE LINK BOX

YEL773C

# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

## EL-ILL-03



REFER TO THE FOLLOWING.

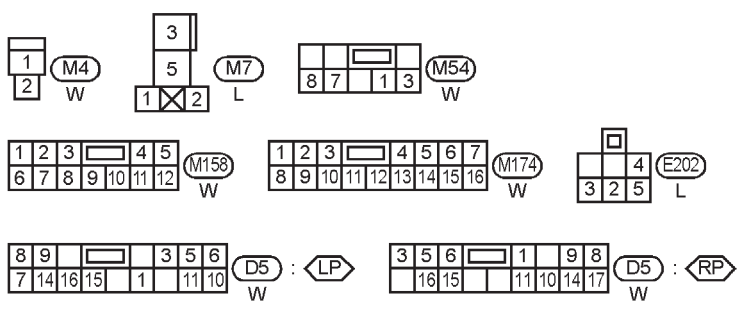
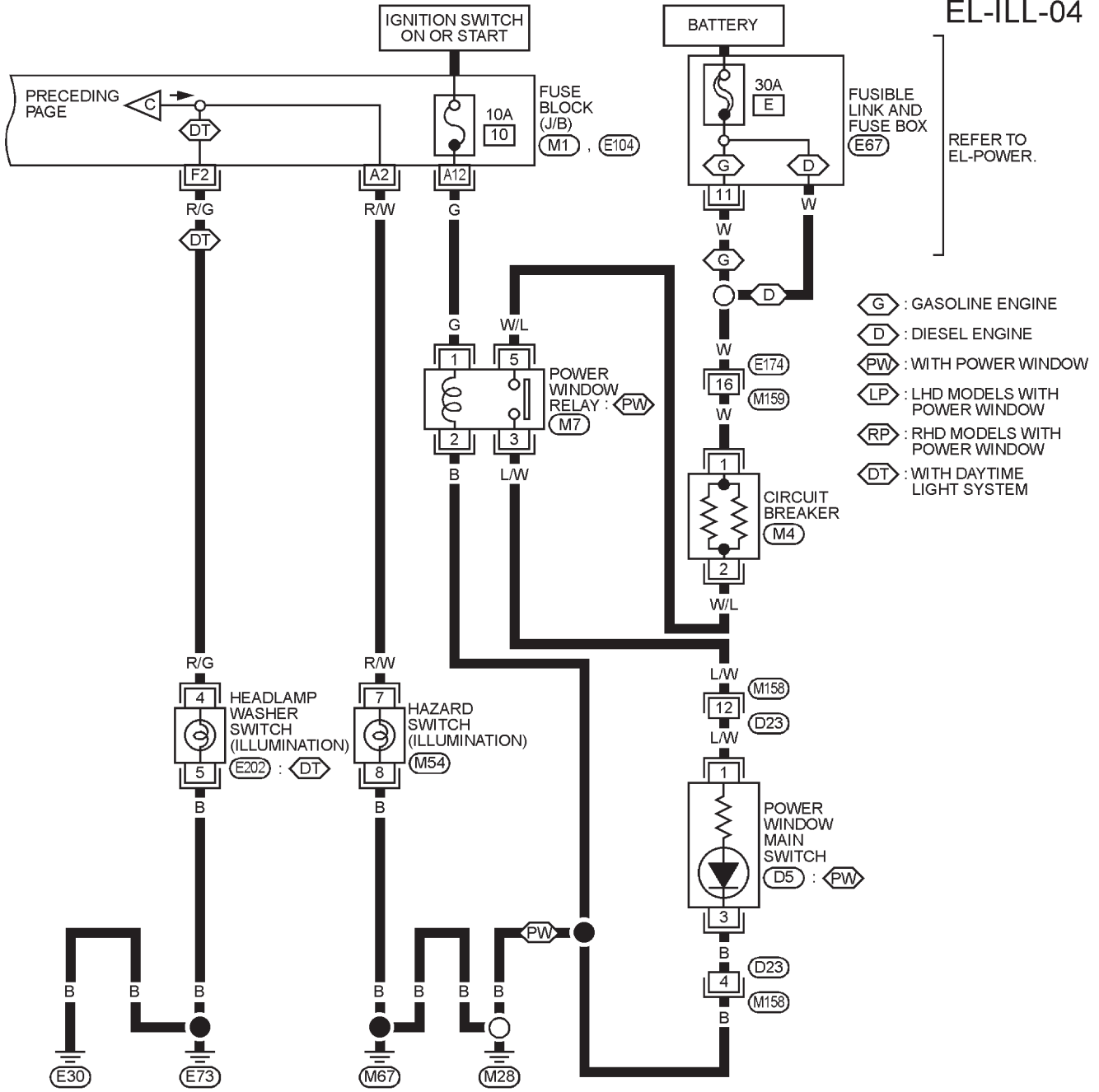
(M1) - FUSE BLOCK-  
JUNCTION BOX (J/B)

YEL641C

# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-04



REFER TO THE FOLLOWING.  
M1 , E104 - FUSE BLOCK-JUNCTION BOX (J/B)  
E67 - FUSE AND FUSIBLE LINK BOX

YEL642C

# INTERIOR ROOM LAMP

System Description/ With Interior Room Lamp Timer

## System Description/ With Interior Room Lamp Timer

=NJEL0435

NJEL0435S01

### POWER SUPPLY AND GROUND

Power is supplied at all times:

- through 15A fuse [No. 5, located in the fuse block (J/B)]
- to time control unit terminal 9,
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 1 and
- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to interior room lamp terminal 1.

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

- through key switch terminal 2
- to time control unit terminal 22.

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

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

Ground is supplied:

- through body grounds terminals M28 and M67
- to time control unit terminal 16

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

- through body grounds B9, B21 and D96 (Hatchback) or B308 (Sedan)
- to door switch driver side terminal 3
- from door switch driver side terminal 2
- to time control unit terminal 6.

When any door is opened, ground is supplied:

- through case ground of each door switch
- to each door switch terminal 1
- to time control unit terminal 7.

When the driver side door is unlocked, the time control unit receives a ground signal:

- through body grounds terminals M28 and M67
- to door unlock sensor terminal 2 (RHD models) or 4 (LHD models)
- from door unlock sensor terminal 5 (RHD models) or 2 (LHD models)
- to time control unit terminal 35.

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

- through time control unit terminal 12
- to interior room lamp terminal 2.

With power and ground supplied, the interior room lamp illuminates when interior room lamp switch is in "DOOR" position.

### SWITCH OPERATION

NJEL0435S02

When interior room lamp switch is in "ON" position, ground is supplied:

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

With power and ground supplied, the interior room lamp illuminates.

### INTERIOR ROOM LAMP TIMER OPERATION

NJEL0435S03

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

- unlock signal is supplied from driver's door unlock sensor while all doors are closed
- key is removed from ignition key cylinder while all doors are closed
- driver's door is opened and then closed

The timer is canceled when:



## INTERIOR ROOM LAMP

*System Description/ With Interior Room Lamp Timer (Cont'd)*

---

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

### **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. NJEL0435S04

### **BATTERY SAVER**

The interior room lamp is turned OFF automatically with the lamp switch in the "DOOR" position after about 30 minutes, if the lamp remains lit by the door switch open signal. NJEL0435S11

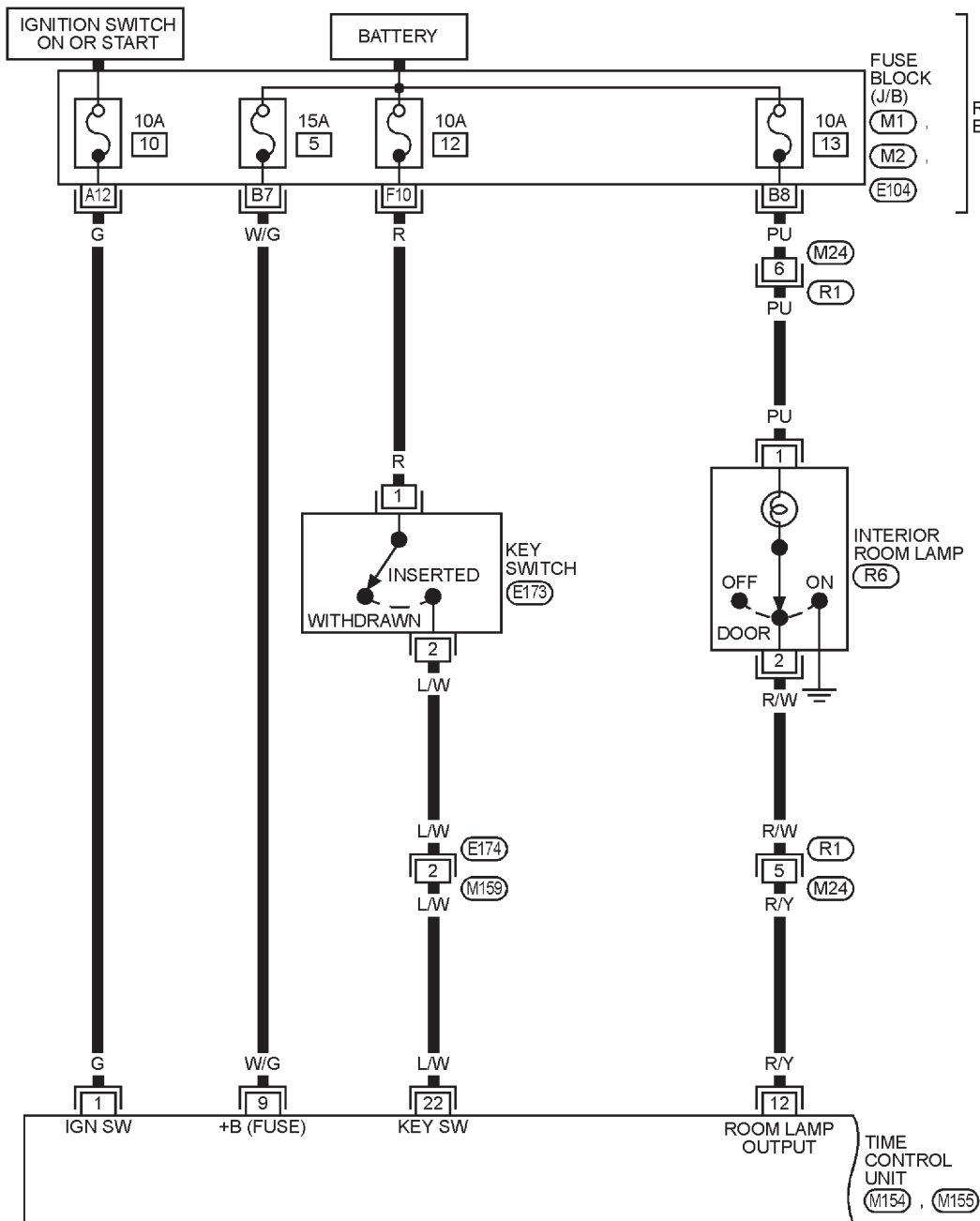
# INTERIOR ROOM LAMP

Wiring Diagram — ROOM/L —/ With Interior Room Lamp Timer

## Wiring Diagram — ROOM/L —/ With Interior Room Lamp Timer

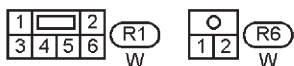
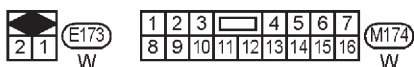
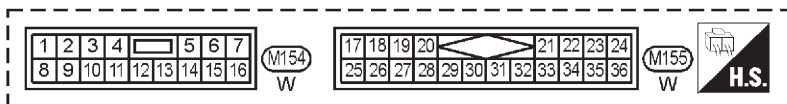
NJEL0436

EL-ROOM/L-01



REFER TO EL-POWER.

REFER TO THE FOLLOWING.  
 (M1) , (M2) , (E104) -FUSE  
 BLOCK-JUNCTION BOX (J/B)

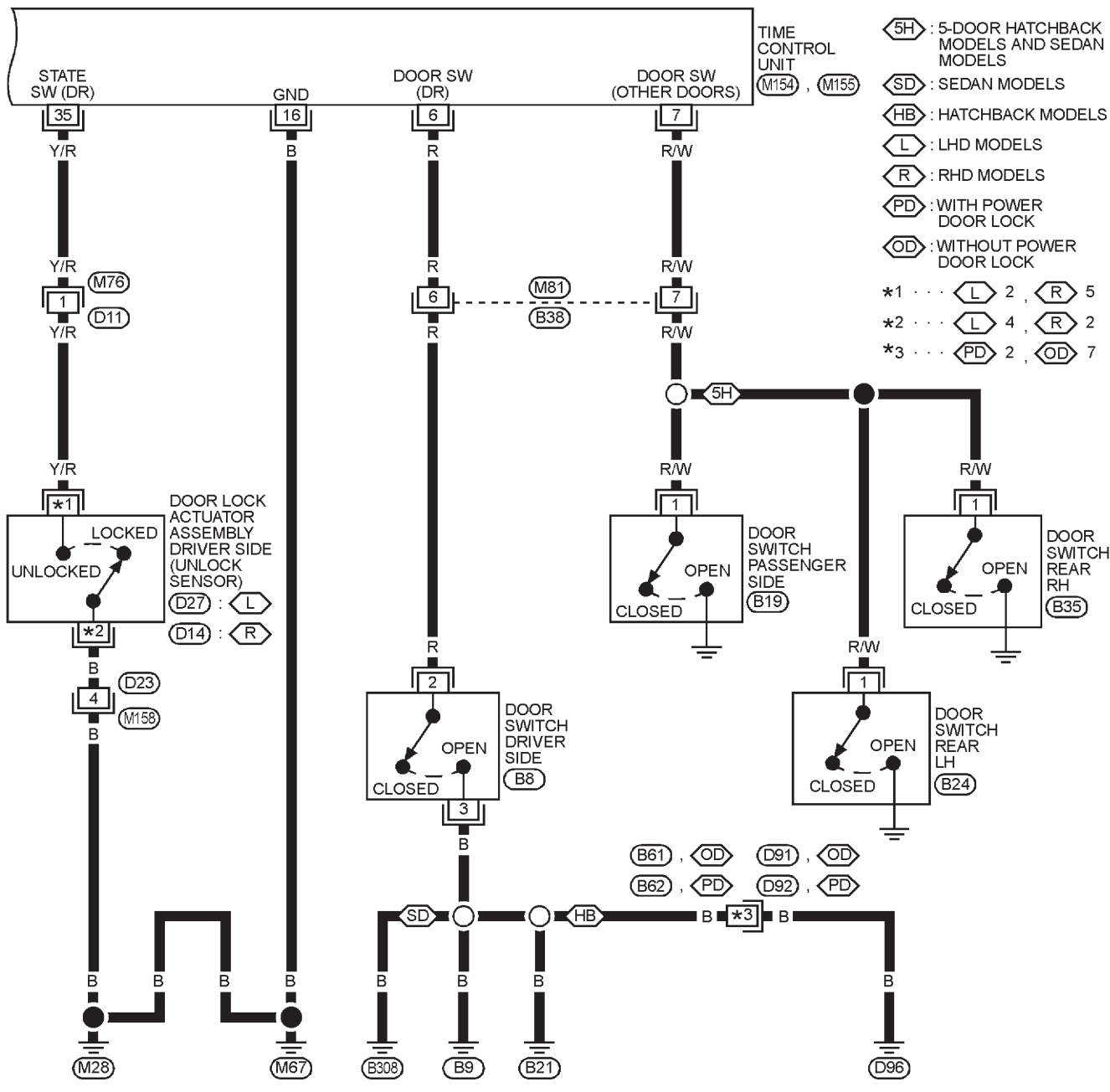


YEL643C

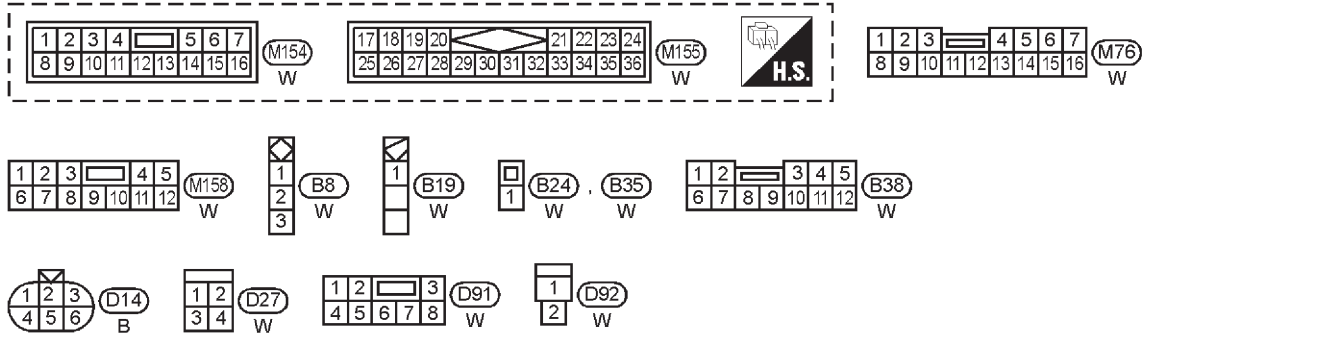
# INTERIOR ROOM LAMP

Wiring Diagram — ROOM/L —/ With Interior Room Lamp Timer (Cont'd)

## EL-ROOM/L-02



- 5H : 5-DOOR HATCHBACK MODELS AND SEDAN MODELS
- SD : SEDAN MODELS
- HB : HATCHBACK MODELS
- L : LHD MODELS
- R : RHD MODELS
- PD : WITH POWER DOOR LOCK
- OD : WITHOUT POWER DOOR LOCK
- \*1 ... L 2, R 5
- \*2 ... L 4, R 2
- \*3 ... PD 2, OD 7



YEL644C

# INTERIOR ROOM LAMP

Trouble Diagnoses/ With Interior Room Lamp Timer

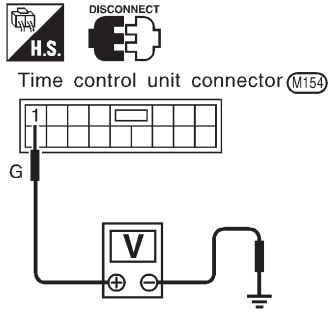
## Trouble Diagnoses/ With Interior Room Lamp Timer

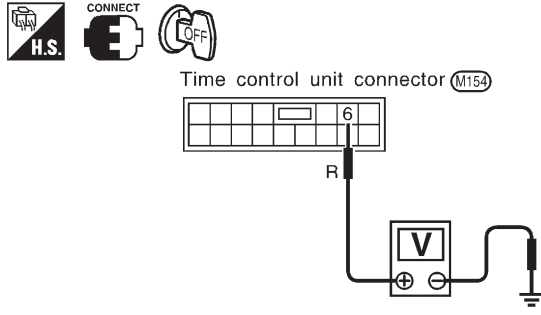
=NJEL0437

### DIAGNOSTIC PROCEDURE 1

NJEL0437S01

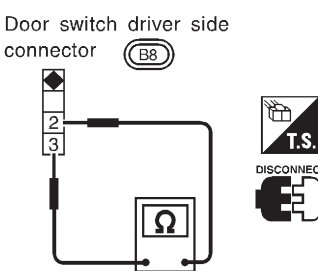
**SYMPTOM: Interior room lamp timer does not operate.**

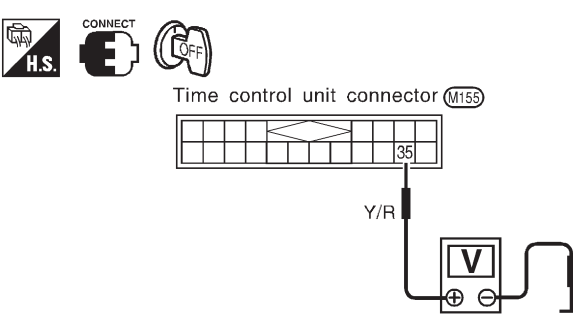
<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>															
<p>Check voltage between time control unit harness connector terminal 1 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p style="text-align: center;">Time control unit connector (M154)</p> </div> <div style="width: 50%;"> <table border="1" style="width: 100%; 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>1</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL429X</p> <p style="text-align: center;"><b>OK or NG</b></p>		Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	1	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position														
(+)	(-)	OFF	ACC	ON												
1	Ground	0V	0V	Battery voltage												
OK	▶	GO TO 2.														
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse</li> </ul>														

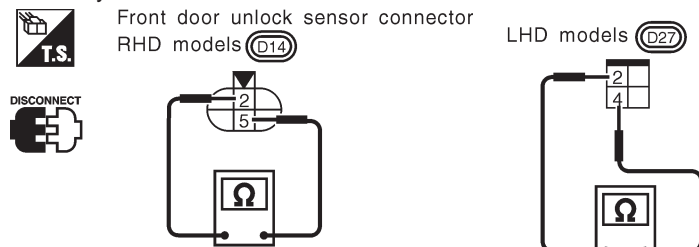
<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>	
<p>Check voltage between time control unit harness connector terminal 6 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p style="text-align: center;">Time control unit connector (M154)</p> </div> <div style="width: 50%;"> <p><b>Voltage [V]:</b></p> <p><b>Condition of driver's door: CLOSED</b></p> <p style="padding-left: 20px;">Approx. 5</p> <p><b>Condition of driver's door: OPEN</b></p> <p style="padding-left: 20px;">0</p> </div> </div> <p style="text-align: right;">SEL430X</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 4.
NG	▶	GO TO 3.

# INTERIOR ROOM LAMP

Trouble Diagnoses/ With Interior Room Lamp Timer (Cont'd)

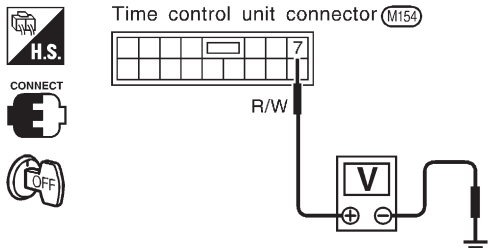
<b>3</b>	<b>CHECK DRIVER SIDE DOOR SWITCH</b>	<p>Check continuity between door switch terminals 2 and 3.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Door switch driver side connector (B8)</p> </div> <div style="width: 45%;"> <p><b>Continuity:</b></p> <p><b>Door switch is pushed.</b> No</p> <p><b>Door switch is released.</b> Yes</p> </div> </div> <p style="text-align: right;">SEL325WA</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Driver side door switch ground circuit and condition</li> <li>● Harness for open or short between time control unit and driver side door switch</li> </ul>		
NG	▶	<p>Replace driver side door switch.</p>		

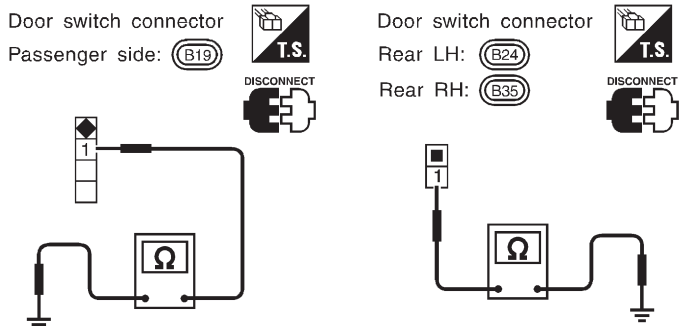
<b>4</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL</b>	<p>Check voltage between time control unit harness connector terminal 35 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Time control unit connector (M15)</p> </div> <div style="width: 45%;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">Terminals</th> <th rowspan="2">Condition (Driver's door)</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">35</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL431X</p> <p style="text-align: center;"><b>OK or NG</b></p>			Terminals		Condition (Driver's door)	Voltage [V]	(+)	(-)	35	Ground	Locked	Approx. 5	Unlocked	0
Terminals		Condition (Driver's door)	Voltage [V]													
(+)	(-)															
35	Ground	Locked	Approx. 5													
		Unlocked	0													
OK	▶	<p>GO TO 6.</p>														
NG	▶	<p>GO TO 5.</p>														

<b>5</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR</b>	<p>1. Disconnect front door unlock sensor harness connector. 2. Check continuity between door unlock sensor terminals.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Front door unlock sensor connector RHD models (D14)      LHD models (D27)</p> </div> <div style="width: 45%;"> <p><b>Continuity:</b></p> <p><b>Condition: Locked</b> No</p> <p><b>Condition: Unlocked</b> Yes</p> </div> </div> <p style="text-align: right;">YEL790C</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between time control unit and door unlock sensor</li> </ul>		
NG	▶	<p>Replace door unlock sensor.</p>		

## INTERIOR ROOM LAMP




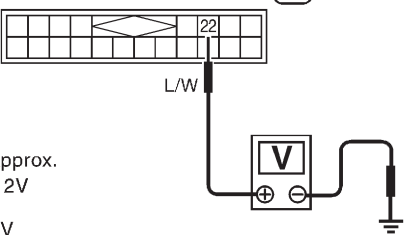
Trouble Diagnoses/ With Interior Room Lamp Timer (Cont'd)

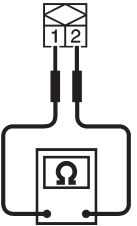


6	<b>CHECK DOOR SWITCHES INPUT SIGNAL</b>												
<p>Check voltage between time control unit harness connector terminal 7 and ground.</p>													
													
<table border="1" style="border-collapse: collapse;"> <thead> <tr> <th colspan="2">Terminals</th> <th rowspan="2">Condition (All doors)</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">7</td> <td rowspan="2" style="text-align: center;">Ground</td> <td style="text-align: center;">Open</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">Closed</td> <td style="text-align: center;">Approx. 5</td> </tr> </tbody> </table>		Terminals		Condition (All doors)	Voltage [V]	(+)	(-)	7	Ground	Open	0	Closed	Approx. 5
Terminals		Condition (All doors)	Voltage [V]										
(+)	(-)												
7	Ground	Open	0										
		Closed	Approx. 5										
SEL432X													
<b>OK or NG</b>													
OK	▶ GO TO 8.												
NG	▶ GO TO 7.												

7	<b>CHECK DOOR SWITCHES</b>										
<p>1. Disconnect door switch harness connector. 2. Check continuity between door switch terminal 1 and ground.</p>											
											
<table border="1" style="border-collapse: collapse;"> <thead> <tr> <th></th> <th>Terminals</th> <th>Condition</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">Door switches</td> <td rowspan="2" style="text-align: center;">1 - Ground</td> <td style="text-align: center;">Closed</td> <td style="text-align: center;">No</td> </tr> <tr> <td style="text-align: center;">Open</td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table>			Terminals	Condition	Continuity	Door switches	1 - Ground	Closed	No	Open	Yes
	Terminals	Condition	Continuity								
Door switches	1 - Ground	Closed	No								
		Open	Yes								
SEL794WA											
<b>OK or NG</b>											
OK	▶ <b>Check the following.</b>										
<ul style="list-style-type: none"> <li>● Door switch ground condition</li> <li>● Harness for open or short between time control unit and door switch</li> </ul>											
NG	▶ Replace door switch.										

## INTERIOR ROOM LAMP

*Trouble Diagnoses/ With Interior Room Lamp Timer (Cont'd)*

8	<b>CHECK KEY SWITCH INPUT SIGNAL</b>		
<p>Check voltage between time control unit harness connector terminal 22 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">  <p><b>CONNECT</b></p>  <p>: Approx. 12V</p>  <p>: 0V</p> </div> <div style="width: 30%; text-align: center;"> <p>Time control unit connector (M155)</p>  </div> <div style="width: 30%;"> <p><b>Voltage [V]:</b></p> <p><b>Condition of switch: Key is inserted.</b> Approx. 12</p> <p><b>Condition of switch: Key is removed.</b> 0</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL433X</p>			
<b>OK or NG</b>			
OK	▶	Replace time control unit.	
NG	▶	GO TO 9.	

9	<b>CHECK KEY SWITCH (INSERT)</b>		
<p>Check continuity between terminals 1 and 2.</p> <p>Key switch connector (E173)</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">  </div> <div style="width: 30%; text-align: center;">  <p><b>DISCONNECT</b></p>  </div> <div style="width: 30%;"> <p><b>Continuity:</b></p> <p><b>Condition of key switch: Key is inserted.</b> Yes</p> <p><b>Condition of key switch: Key is removed.</b> No</p> </div> </div> <p style="text-align: right; margin-top: 10px;">YEL791C</p>			
<b>OK or NG</b>			
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between time control unit and key switch</li> </ul>	
NG	▶	Replace key switch.	



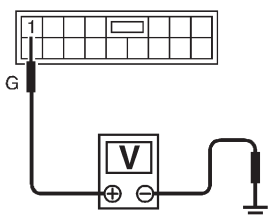
# INTERIOR ROOM LAMP




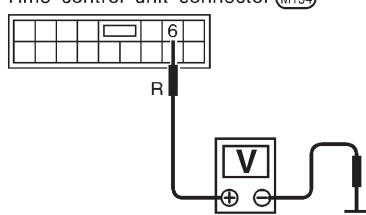
Trouble Diagnoses/ With Interior Room Lamp Timer (Cont'd)

## DIAGNOSTIC PROCEDURE 2

=NJEL0437S02

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

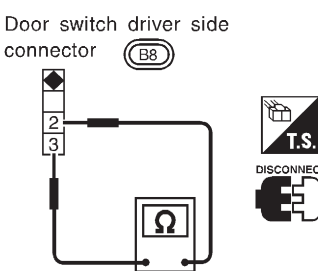
<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>																
<p>Check voltage between time control unit harness connector terminal 1 and ground.</p>																	
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">                           Time control unit connector (M154)                        </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>1</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	1	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position															
(+)	(-)	OFF	ACC	ON													
1	Ground	0V	0V	Battery voltage													
SEL429X																	
<b>OK or NG</b>																	
OK	▶	GO TO 2.															
NG	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse</li> </ul>															

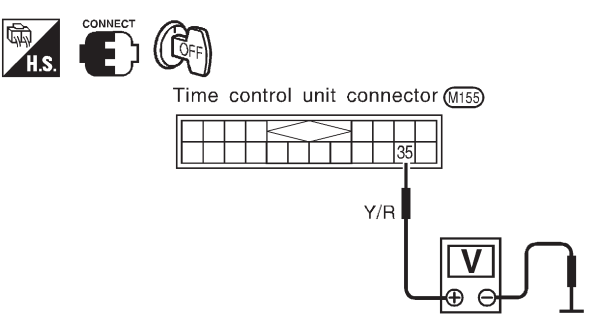
<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>	
<p>Check voltage between time control unit harness connector terminal 6 and ground.</p>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">                              Time control unit connector (M154)                        </div> <div style="margin-left: auto;"> <p><b>Voltage [V]:</b></p> <p><b>Condition of driver's door: CLOSED</b></p> <p style="padding-left: 20px;">Approx. 5</p> <p><b>Condition of driver's door: OPEN</b></p> <p style="padding-left: 20px;">0</p> </div> </div>		
SEL430X		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	GO TO 3.

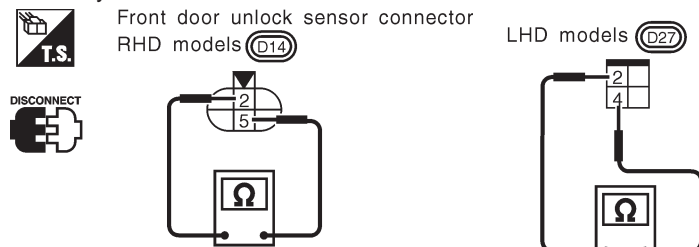


# INTERIOR ROOM LAMP

Trouble Diagnoses/ With Interior Room Lamp Timer (Cont'd)

<b>3</b>	<b>CHECK DRIVER SIDE DOOR SWITCH</b>
Check continuity between terminals 2 and 3.	
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Door switch driver side connector (B8)</p> </div> <div style="width: 50%;"> <p><b>Continuity:</b></p> <p><b>Door switch is pushed.</b> No</p> <p><b>Door switch is released.</b> Yes</p> </div> </div>	
SEL325WA	
<b>OK or NG</b>	
OK	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>● Driver side door switch ground circuit and condition</li> <li>● Harness for open or short between time control unit and driver side door switch</li> </ul>
NG	▶ Replace driver side door switch.

<b>4</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL</b>												
Check voltage between time control unit harness connector terminal 35 and ground.													
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Time control unit connector (M15)</p> </div> <div style="width: 50%;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">Terminals</th> <th rowspan="2">Condition (Driver's door)</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">35</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table> </div> </div>		Terminals		Condition (Driver's door)	Voltage [V]	(+)	(-)	35	Ground	Locked	Approx. 5	Unlocked	0
Terminals		Condition (Driver's door)	Voltage [V]										
(+)	(-)												
35	Ground	Locked	Approx. 5										
		Unlocked	0										
SEL431X													
<b>OK or NG</b>													
OK	▶ Replace time control unit.												
NG	▶ GO TO 5.												

<b>5</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR</b>
<ol style="list-style-type: none"> <li>1. Disconnect front door unlock sensor harness connector.</li> <li>2. Check continuity between door unlock sensor terminals.</li> </ol>	
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Front door unlock sensor connector RHD models (D14)      LHD models (D27)</p> </div> <div style="width: 50%;"> <p><b>Continuity:</b></p> <p><b>Condition: Locked</b> No</p> <p><b>Condition: Unlocked</b> Yes</p> </div> </div>	
YEL792C	
<b>OK or NG</b>	
OK	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between time control unit and door unlock sensor</li> </ul>
NG	▶ Replace door unlock sensor.

# INTERIOR ROOM LAMP

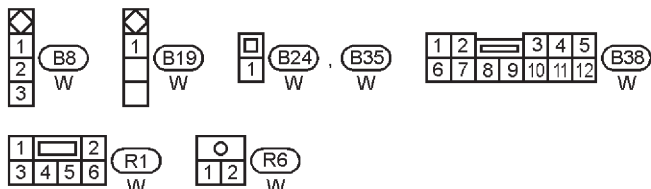
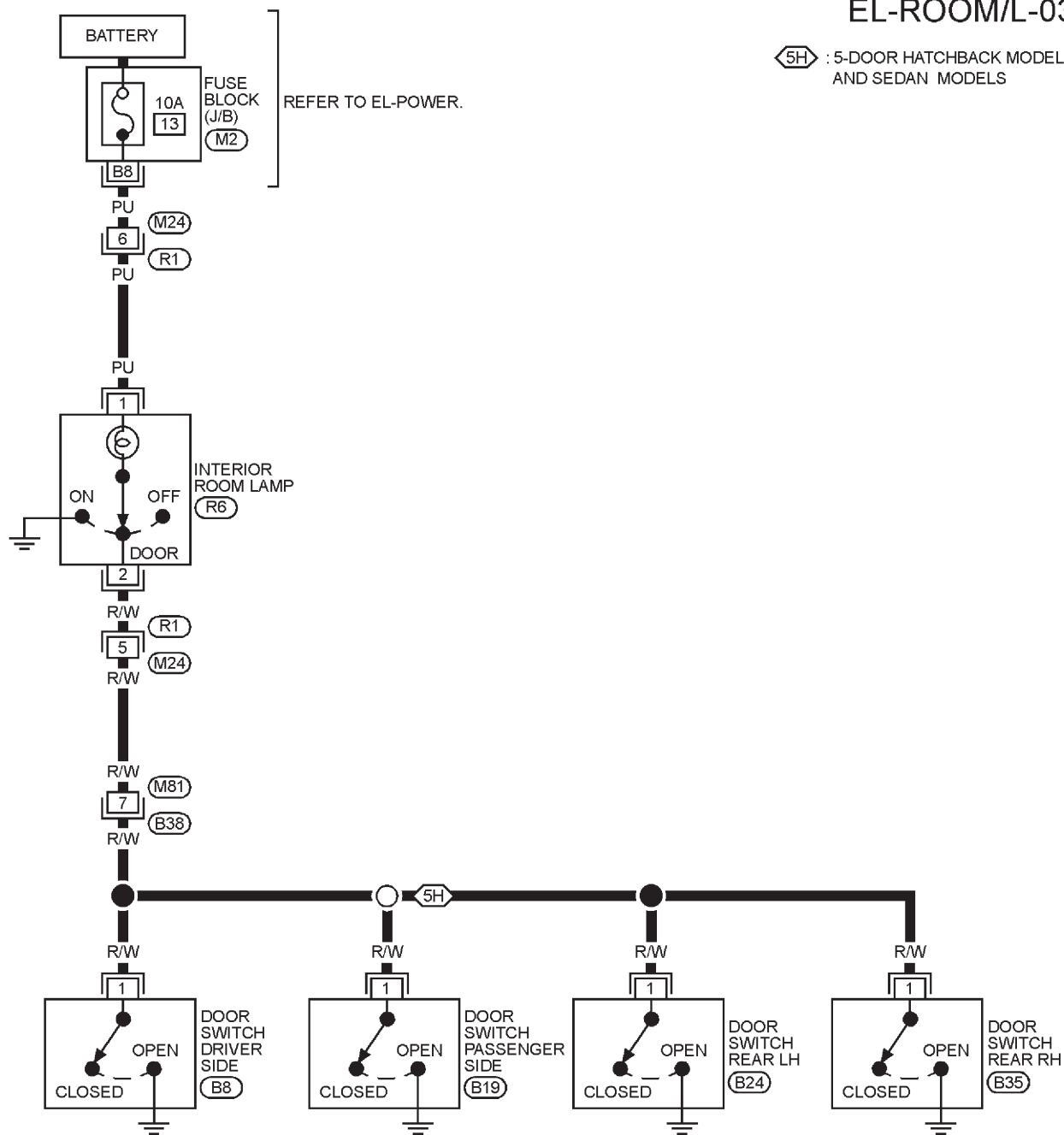
Wiring Diagram — ROOM/L —/ Without Timer

## Wiring Diagram — ROOM/L —/ Without Timer

N/JEL0438

### EL-ROOM/L-03

⬡5H : 5-DOOR HATCHBACK MODELS  
AND SEDAN MODELS



REFER TO THE FOLLOWING.  
 ⬡M2 - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL645C

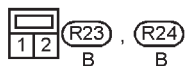
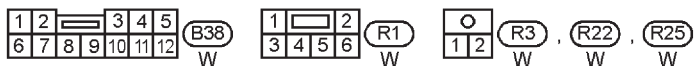
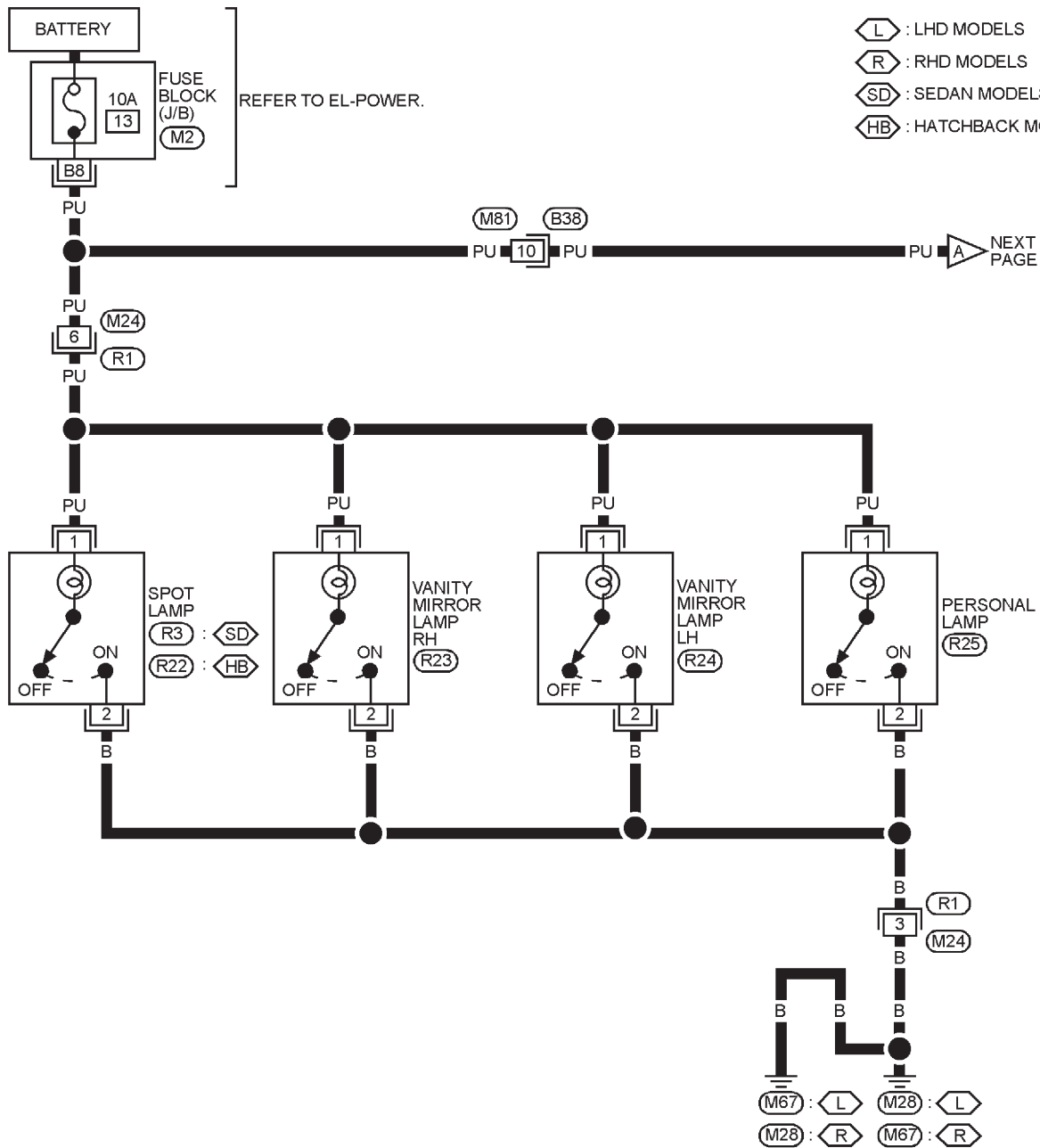
# SPOT AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L —

## Wiring Diagram — INT/L —

NJEL0439

### EL-INT/L-01



REFER TO THE FOLLOWING.

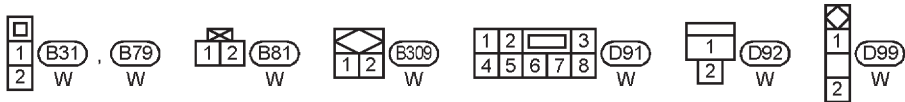
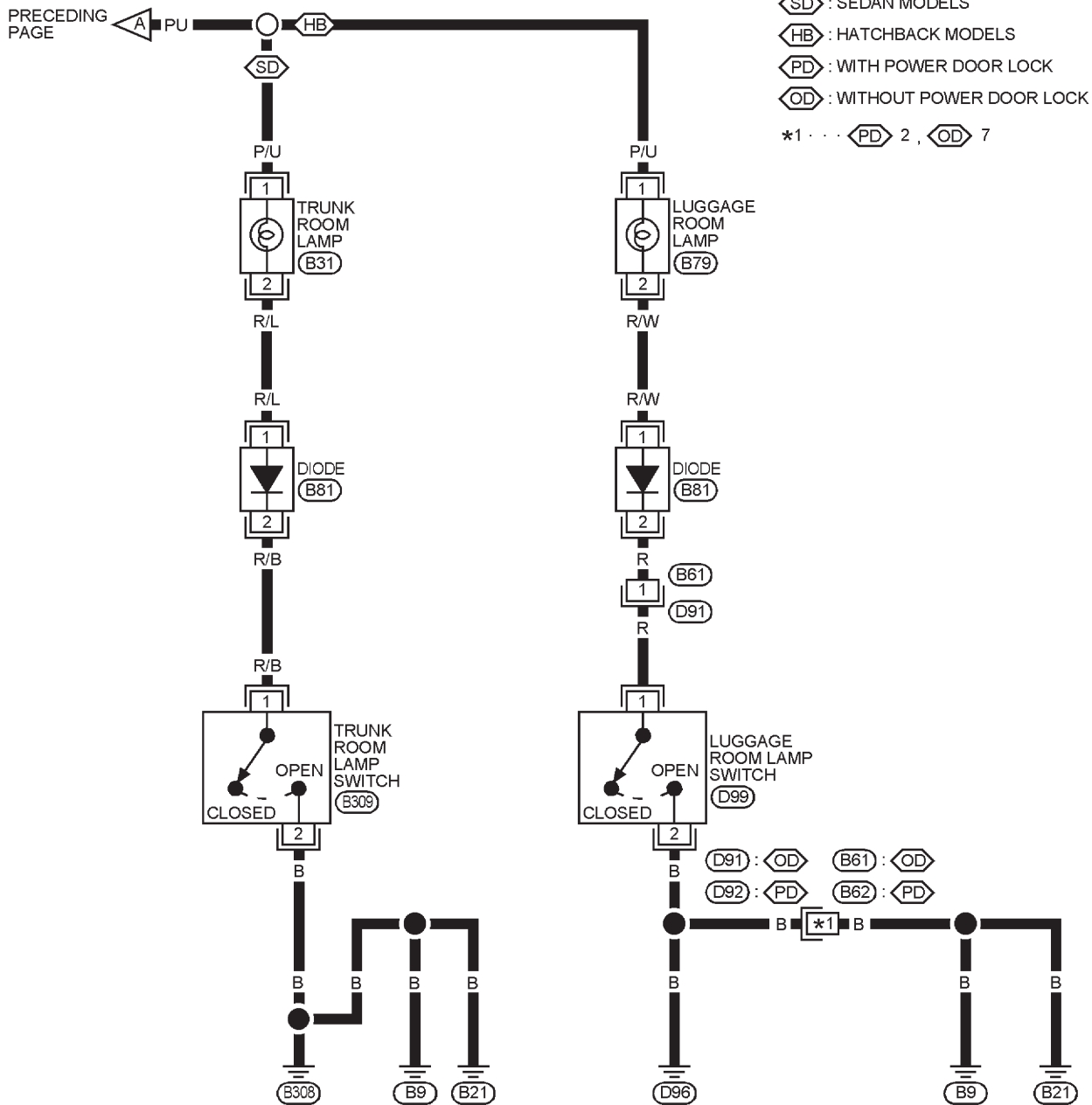
(M2) - FUSE BLOCK-  
JUNCTION BOX (J/B)

YEL646C

# SPOT AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-02



YEL647C

# METERS AND GAUGES

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

For details, refer to "ELECTRICAL UNIT LOCATION" (EL-319) and "HARNESS LAYOUT" (EL-324).

NJEL0441

## System Description

NJEL0442

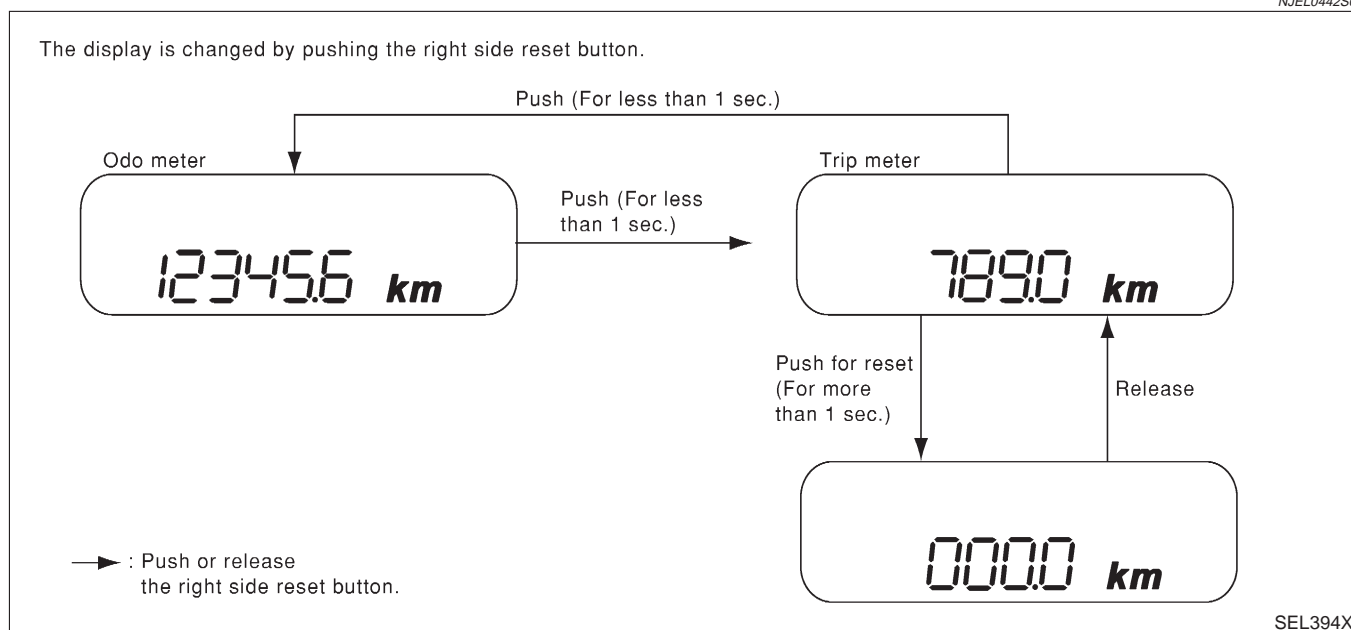
### UNIFIED CONTROL METER

NJEL0442S01

- 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 segment can be checked in diagnosis mode.
- Meter/gauge can be checked in diagnosis mode.

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

NJEL0442S02



#### NOTE:

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

### POWER SUPPLY AND GROUND CIRCUIT

NJEL0442S03

Power is supplied at all times

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to combination meter terminal 23

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 1

Ground is supplied

- through body grounds M28 and M67
- to combination meter terminal 10

## METERS AND GAUGES

System Description (Cont'd)

---

### WATER TEMPERATURE GAUGE

NJEL0442S04

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 20 of the combination meter for the water temperature gauge. The needle on the gauge moves from "C" to "H".

### TACHOMETER

NJEL0442S05

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

The tachometer is regulated by a signal

- from terminal 32 (Gasoline engine models) or 439 (Diesel engine models) of the ECM
- to combination meter terminal 22 for the tachometer.

### FUEL GAUGE

NJEL0442S06

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

The fuel gauge is regulated by a variable ground signal supplied

- from body grounds M28 and M67
- through terminals 9 and 10 of combination meter,
- through terminal 1 of the fuel level sensor unit and
- through terminal 4 of the fuel level sensor unit
- to combination meter terminal 24 for the fuel gauge.

### SPEEDOMETER

NJEL0442S07

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

The voltage is supplied

- from combination meter terminal 5 for the speedometer
- to terminal 1 of the vehicle speed sensor.

Ground is supplied

- from body grounds M28 and M67
- through terminals 10 and 11 of combination meter
- to terminal 2 of the vehicle speed sensor.

The speedometer converts the voltage into the vehicle speed displayed.

# METERS AND GAUGES

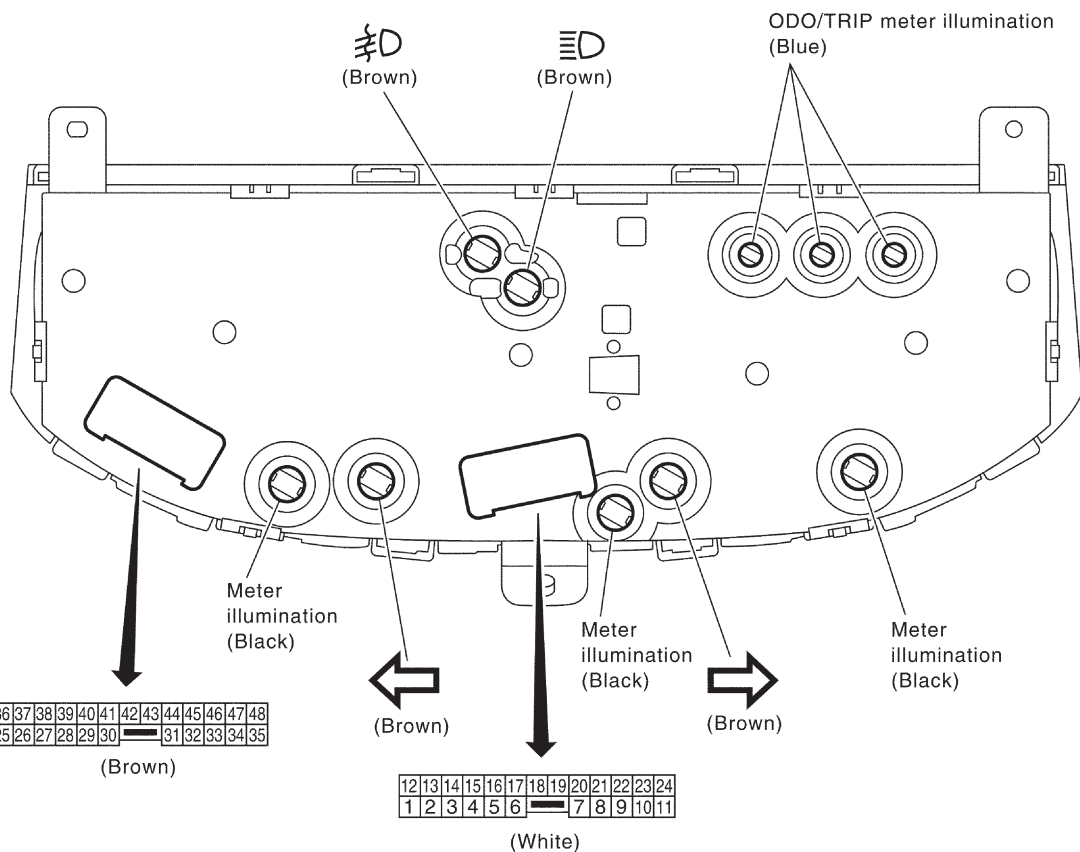
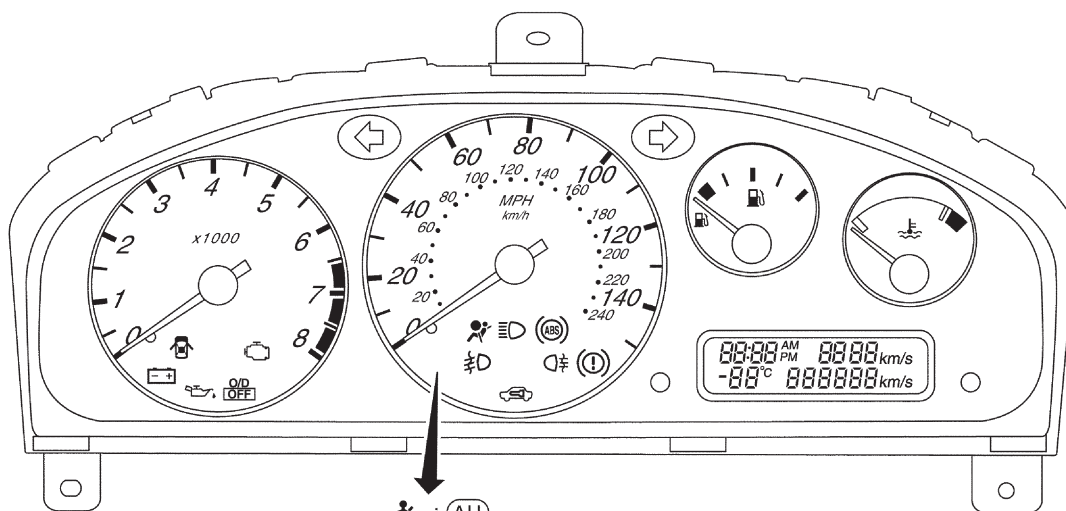
Combination Meter

## Combination Meter

NJEL0443

NJEL0443S01

### CHECK



Bulb socket color	Bulb wattage
Brown	1.4 W
Black	3.0 W
Blue	0.56 W

( ): Warning bulb socket color

(AU) : For Australia  
(D) : Diesel engine

YEL648C

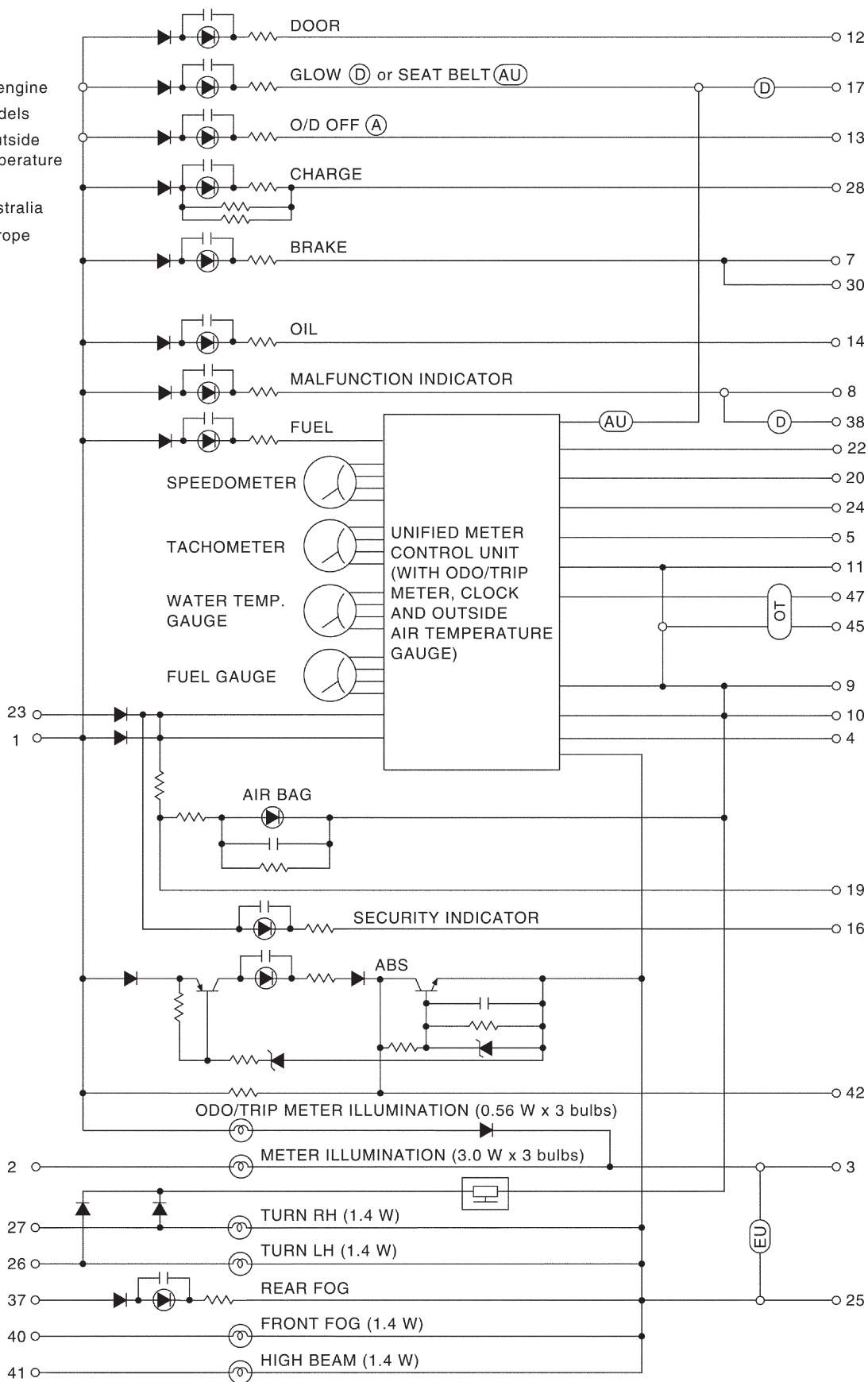
# METERS AND GAUGES

Schematic

NJEL0444

## Schematic

- ⓓ : Diesel engine
- Ⓐ : A/T models
- ⓄⓉ : With outside air temperature gauge
- Ⓐⓤ : For Australia
- Ⓔⓤ : For Europe



YEL649C

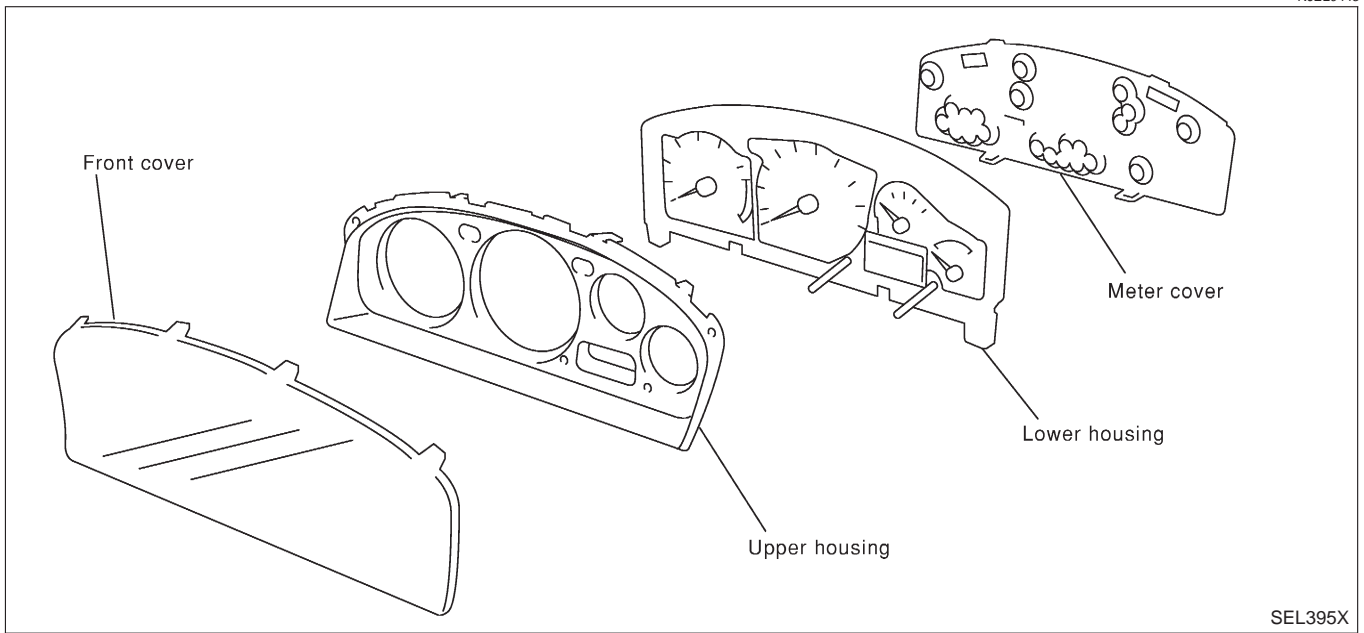


# METERS AND GAUGES

Construction

## Construction

NJEL0445



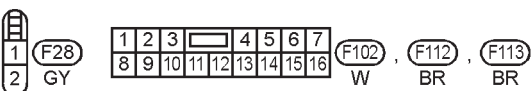
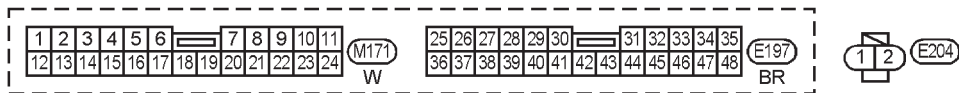
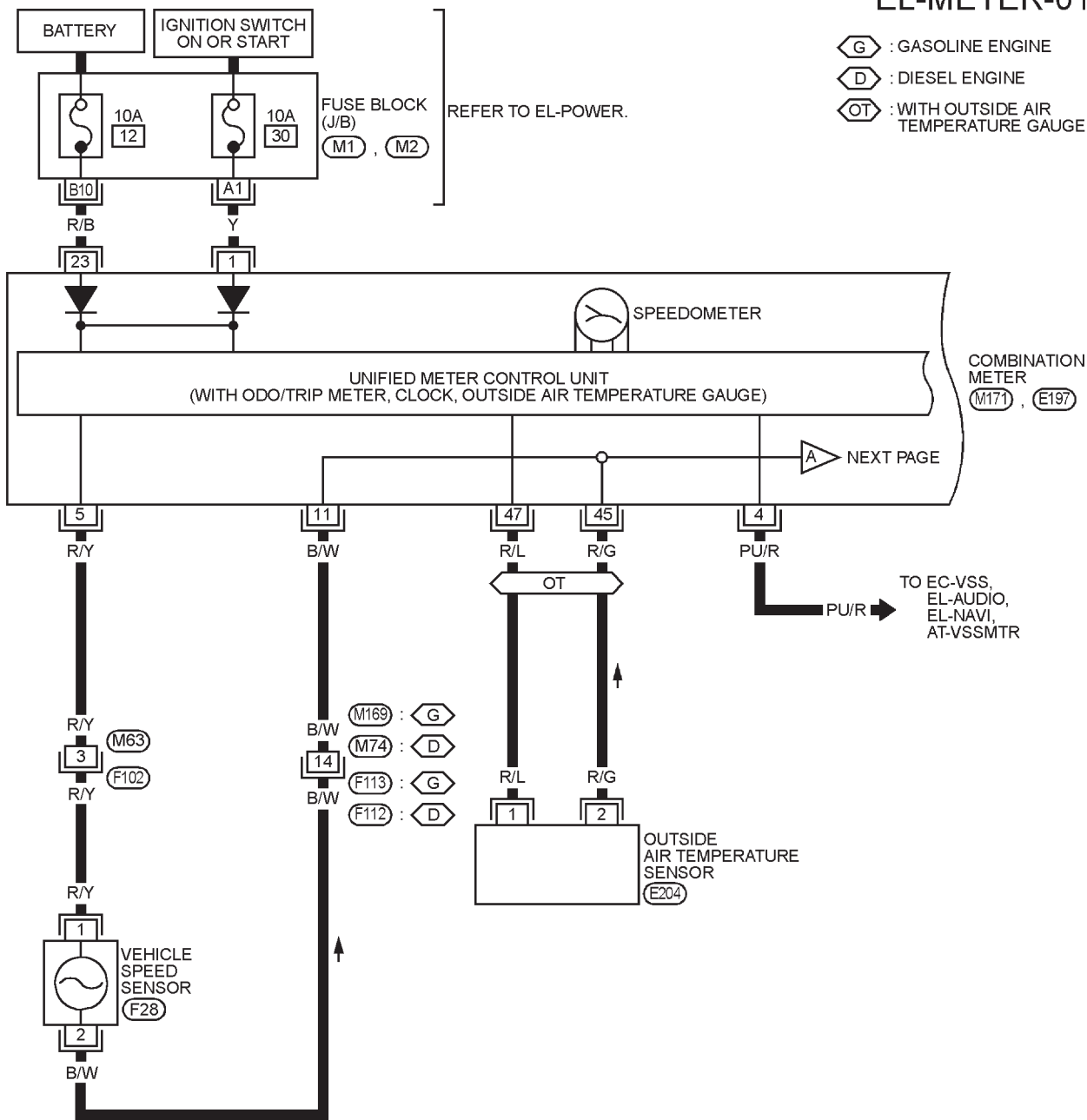
# METERS AND GAUGES

Wiring Diagram — METER —

## Wiring Diagram — METER —

NJEL0446

### EL-METER-01



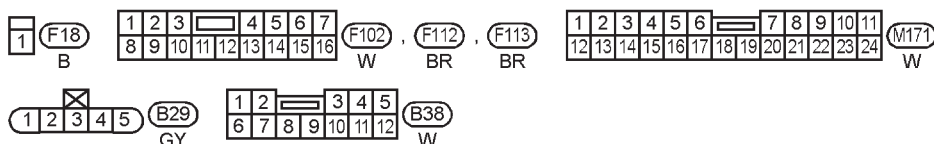
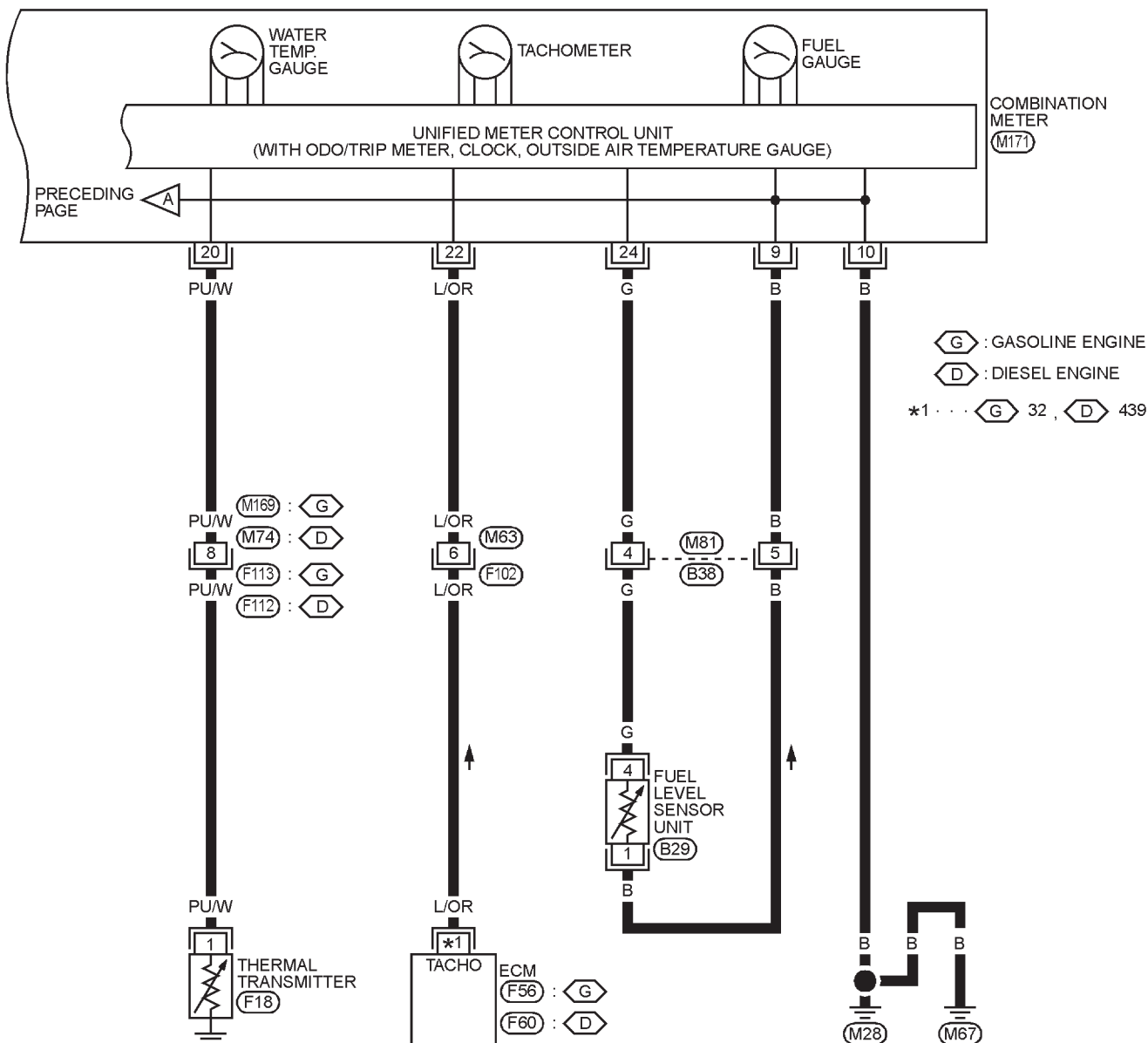
REFER TO THE FOLLOWING.  
 (M1), (M2) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL650C

# METERS AND GAUGES

Wiring Diagram — METER — (Cont'd)

## EL-METER-02



REFER TO THE FOLLOWING.  
(F56), (F60) - ELECTRICAL UNITS

YEL651C

## METERS AND GAUGES

### Combination Meter Self-Diagnosis

NJEL0447


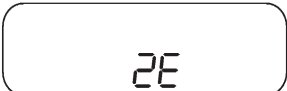





#### PERFORMING SELF-DIAGNOSIS MODE

NJEL0447S01

1. Turn the ignition switch to the "LOCK" position.
2. Press both reset buttons on the combination meter and keep them depressed.
3. Turn the ignition switch to the "ON" position, while keeping the reset buttons pressed.
4. Release both reset buttons then self-diagnosis will start. The sequence (A to L) is activated by press the either reset buttons.

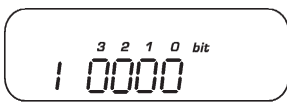


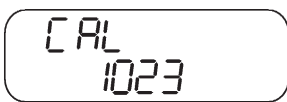
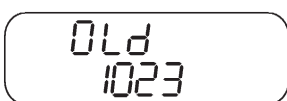
**NOTE:**

If either reset button is not pressed for 20 seconds at each step or if the ignition switch is turned OFF, the self-diagnosis mode is exited.

	Check items	Display	Remarks
A)	Odometer segment test	 <small>SEL434X</small>	All odo trip meter segments are ON.
B)	Work instruction code	 <small>This code is an example. SEL435X</small>	This information is not used for service. Please skip this step.
C)	Software code	 <small>SEL436X</small>	This information is not used for service. Please skip this step.
D)	EEPROM code	 <small>SEL437X</small>	This information is not used for service. Please skip this step.
E)	Hardware code	 <small>SEL438X</small>	This information is not used for service. Please skip this step.
F)	PCB code	 <small>SEL439X</small>	This information is not used for service. Please skip this step.
G)	Meter/gauge test (Sweeping movement)	 <small>Flashing SEL440X</small>	Tachometer, speedometer, fuel level gauge and water temperature gauge have sweeping movement test. (The meter/gauges operate MIN. → MAX., MAX. → MIN. for 2 times) The odo trip meter segment flushes during the sweep movement.

## METERS AND GAUGES

Combination Meter Self-Diagnosis (Cont'd)

	Check items	Display	Remarks
H)	Error 1 (Bit 0 - Bit 3)	 SEL441X	The segment of each bit displays "0", meaning no failure. If the bit(s) displays figures other than "0", the item of the bit has failed. For details, refer to "Failure chart for Error 1 and Error E" below.
I)	Error E (Bit 4 - Bit 7)	 SEL442X	
J)	Fuel warning lamp test	 SEL443X	Fuel warning lamp is on and odo trip meter segment "FUEL" flashes.
K)	Fuel gauge calibration (CAL)	 This value is an example. SEL444X	This information is not used for service. Please skip this step.
L)	Fuel gauge calibration (OLD)	 This value is an example. SEL445X	This information is not used for service. Please skip this step.

### Failure Chart for "Error 1" and "Error E"

NJEL0447S0101

Bit	Detectable items	Description of the failure	Displayed figure on the bit	
			Failure	No failure
0	Speedometer input signal	No input signal When no signal is detected for 30 minutes continuously with the ignition ON, it should be judged as signal failure. (If input signal is detected later, then the judgement will be canceled immediately.)	1	0
		Abnormal input signal When any signal of frequency which would not exist in normal conditions is detected, it should be judged as signal failure.	2	
1	Tachometer input signal	No input signal When no signal is detected for 30 minutes continuously with the ignition ON, it should be judged as signal failure. (If input signal is detected later, then the judgement will be canceled immediately.)	1	0
		Abnormal input signal When any signal of frequency which would not exist in normal conditions is detected, it should be judged as signal failure.	2	

## METERS AND GAUGES

### Combination Meter Self-Diagnosis (Cont'd)

Bit	Detectable items	Description of the failure	Displayed figure on the bit		
			Failure	No failure	
2	Fuel level input signal	Short circuit When short circuit of the signal line is detected for 5 seconds or more, it should be judged as short-circuit failure.	1	0	
		Open circuit When open circuit of the signal line is detected for 5 seconds or more, it should be judged as open-circuit failure.	2		
3	Water temperature input signal	Short circuit When short circuit of the signal line is detected for 5 seconds or more, it should be judged as short-circuit failure.	1	0	
		Open circuit When open circuit of the signal line is detected for 5 seconds or more, it should be judged as open-circuit failure.	2		
4	Outside air temperature input signal	Short circuit When short circuit of the signal line is detected for 5 seconds or more, it should be judged as short-circuit failure.	1	0	
		Open circuit When open circuit of the signal line is detected for 5 seconds or more, it should be judged as open-circuit failure.	2		
5	Reset buttons	Short circuit for reset buttons When the short circuit is continuously detected for 5 minutes or more, it should be judged as short-circuit failure.	Right side reset button has failed.	1	0
			Left side reset button has failed.	2	
			Both reset buttons have failed.	3	
6	—	—	0	0	
7	CPU	EEPROM failure	1	0	
		CPU RAM failure	2		

### Combination Meter Calibration

After replacing a combination meter, it might be necessary to calibrate the fuel gauge/low fuel warning lamp. In case the fuel warning lamp is flashing after replacing the combination meter perform the following:

1. Press both reset buttons.
2. Turn the ignition ON **and keep the reset buttons depressed for at least 5 seconds.**
3. Release both reset buttons.

The low fuel warning lamp will stop flashing and the combination meter will show CALL and possibly CALL FAIL. Showing CALL FAIL does not indicate a concern as this might be related to the current (unexpected) amount of fuel in the tank.

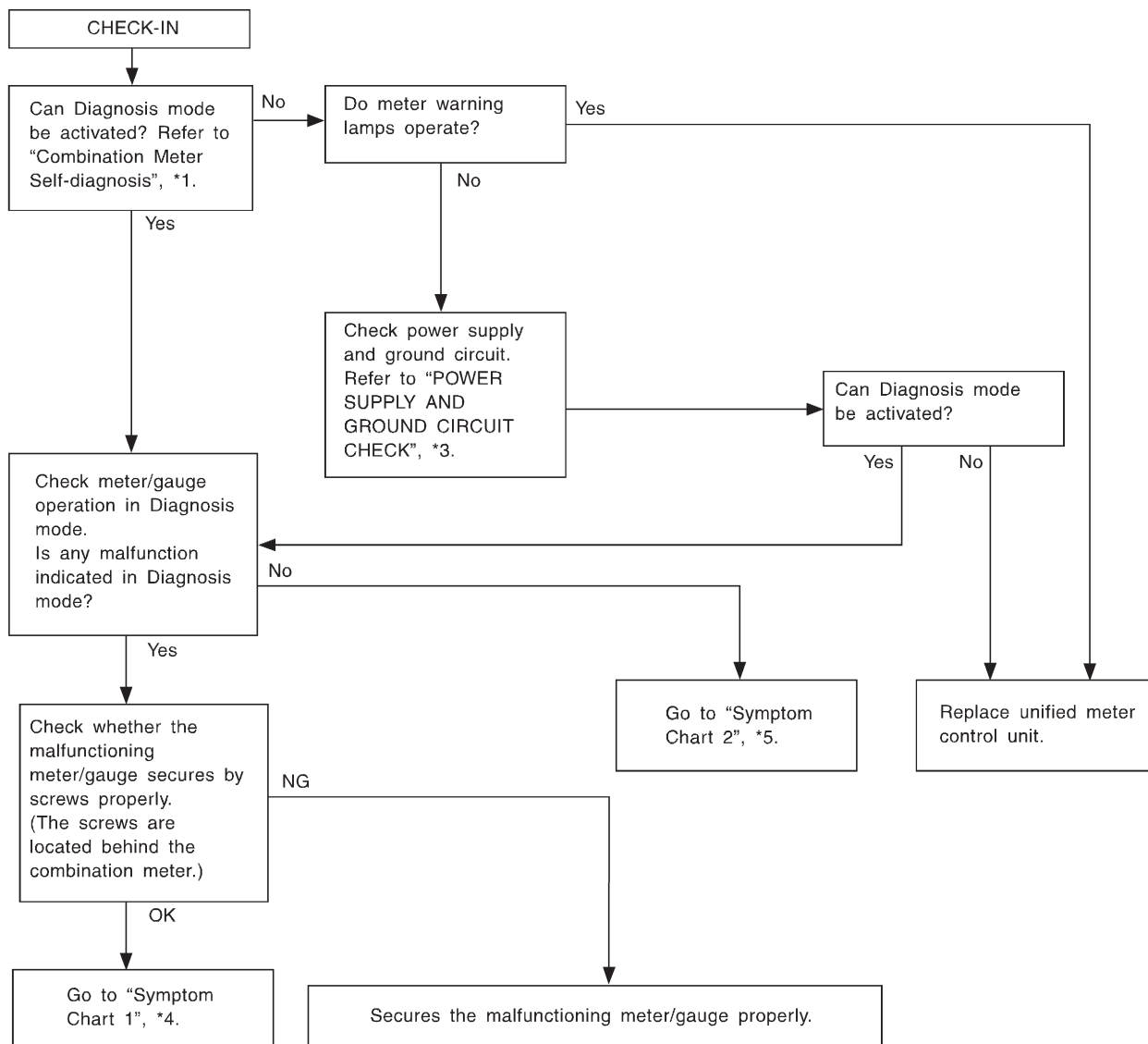
# METERS AND GAUGES

## Trouble Diagnoses PRELIMINARY CHECK

Trouble Diagnoses

NJEL0448

NJEL0448S01



SEL361WA

\*1: Combination Meter Self-Diagnosis (EL-96)

\*3: POWER SUPPLY AND GROUND CIRCUIT CHECK (EL-101)

\*4: Symptom Chart 1 (EL-100)

\*5: Symptom Chart 2 (EL-100)

## METERS AND GAUGES

Trouble Diagnoses (Cont'd)

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

NJEL0448S02

NJEL0448S0201

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

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

NJEL0448S0202

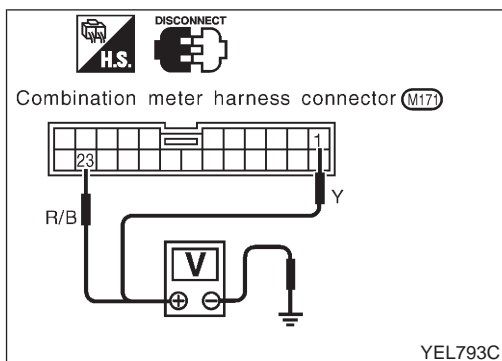
Symptom	Possible causes	Repair order
One of speedometer/tachometer/fuel gauge/water temp. gauge is malfunctioning.	<ol style="list-style-type: none"> <li>Sensor signal                             <ul style="list-style-type: none"> <li>- Vehicle speed signal</li> <li>- Engine revolution signal</li> <li>- Fuel gauge</li> <li>- Water temp. gauge</li> </ul> </li> <li>Unified meter control unit</li> </ol>	<ol style="list-style-type: none"> <li>Check the sensor for malfunctioning meter/gauge. INSPECTION/VEHICLE SPEED SENSOR (Refer to EL-102.) INSPECTION/ENGINE REVOLUTION SIGNAL (Refer to EL-103.) INSPECTION/FUEL LEVEL SENSOR UNIT (Refer to EL-104.) INSPECTION/THERMAL TRANSMITTER (Refer to EL-105.)</li> <li>Replace unified meter control unit.</li> </ol>
Multiple meter/gauge are malfunctioning. (except odo/trip meter)		

Before starting trouble diagnoses below, perform PRELIMINARY CHECK, EL-99.



# METERS AND GAUGES

Trouble Diagnoses (Cont'd)



## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NJEL0448S03

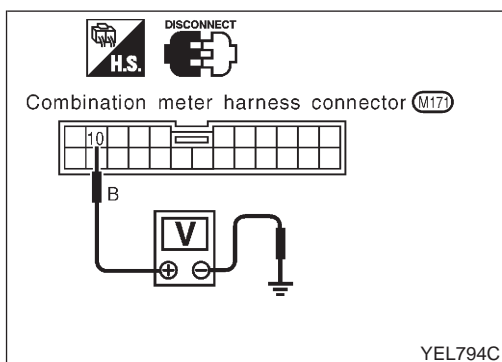
### Power Supply Circuit Check

NJEL0448S0301

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
23	Ground	Battery voltage	Battery voltage	Battery voltage
1	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

NJEL0448S0302

Terminals	Continuity	
10 - Ground	Yes	

# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/VEHICLE SPEED SENSOR

=NJEL0448S04

<b>1</b>	<b>CHECK VEHICLE SPEED SENSOR OUTPUT</b>	
<p>1. Remove vehicle speed sensor from transmission.                  2. Check voltage between combination meter terminal 5 and ground while quickly turning speed sensor pinion.</p>		
OK	▶	Vehicle speed sensor is OK.
NG	▶	GO TO 2.

YEL795C

<b>2</b>	<b>CHECK VEHICLE SPEED SENSOR</b>	
<p>Check resistance between vehicle speed sensor terminals 1 and 2.</p>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Harness between combination meter and vehicle speed sensor</li> <li>● Vehicle speed sensor ground circuit</li> </ul>
NG	▶	Replace vehicle speed sensor.

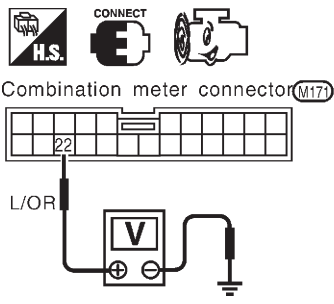
SEL645WA

# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/ENGINE REVOLUTION SIGNAL

=NJEL0448S05


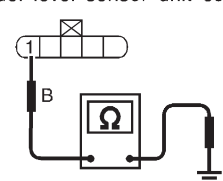
<b>1</b>	<b>CHECK ECM OUTPUT</b>		
<p>1. Start engine.                  2. Check voltage between combination meter terminals 22 and ground at idle and 2,000 rpm.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">  <p>Combination meter connector (M17)</p> </div> <div style="text-align: left;"> <p><b>Higher rpm = Higher voltage</b>  <b>Lower rpm = Lower voltage</b>  <b>Voltage should change with rpm.</b></p> </div> </div> <p style="text-align: right;">YEL796C</p>			
<b>OK or NG</b>			
OK	▶	Engine revolution signal is OK.	
NG	▶	Harness for open or short between ECM and combination meter	

## METERS AND GAUGES


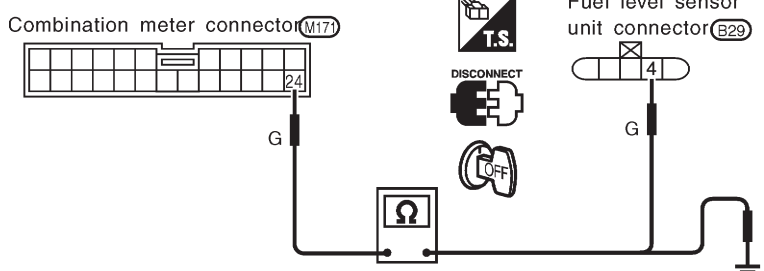
Trouble Diagnoses (Cont'd)

### INSPECTION/FUEL LEVEL SENSOR UNIT

=NJEL0448S06

<b>1</b>	<b>CHECK GROUND CIRCUIT FOR FUEL LEVEL SENSOR UNIT</b>	
<p>Check harness continuity between fuel level sensor unit connector terminal 1 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Fuel level sensor unit connector (B29)</p>  </div> <div style="text-align: center;"> <p><b>Continuity should exist.</b></p> </div> </div> <p style="text-align: right;">SEL400X</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 2.
NG	▶	Repair harness or connector.

<b>2</b>	<b>CHECK FUEL LEVEL SENSOR UNIT</b>	
<p>Refer to "FUEL LEVEL SENSOR UNIT CHECK" (EL-106).</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 3.
NG	▶	Replace fuel level sensor unit.

<b>3</b>	<b>CHECK HARNESS FOR OPEN OR SHORT</b>	
<p>1. Disconnect combination meter connector and fuel level sensor unit connector.                  2. Check continuity between combination meter terminal 24 and fuel level sensor unit connector terminal 4.  <b>Continuity should exist.</b>                  3. Check continuity between combination meter terminal 24 and ground.  <b>Continuity should not exist.</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Combination meter connector (M17)</p>  </div> <div style="text-align: center;"> <p>Fuel level sensor unit connector (B29)</p> </div> </div> <p style="text-align: right;">YEL797C</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	Fuel level sensor unit is OK.
NG	▶	Repair harness or connector.

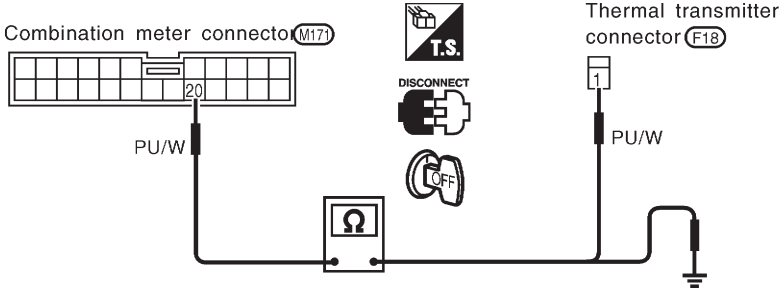
# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/THERMAL TRANSMITTER

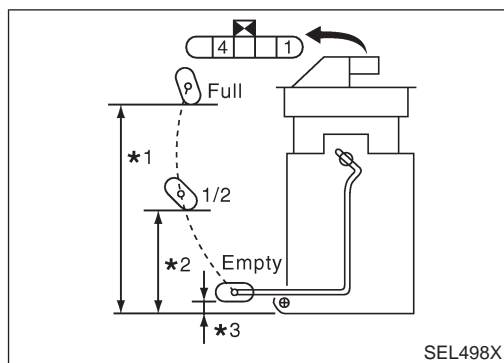
=NJEL0448S07

<b>1</b>	<b>CHECK THERMAL TRANSMITTER</b>	
Refer to "THERMAL TRANSMITTER CHECK" (EL-106).		
<b>OK or NG</b>		
OK	▶	GO TO 2.
NG	▶	Replace.

<b>2</b>	<b>CHECK HARNESS FOR OPEN OR SHORT</b>	
<p>1. Disconnect combination meter connector and thermal transmitter connector.</p> <p>2. Check continuity between combination meter terminal 20 and thermal transmitter terminal 1.  <span style="color: blue;"><b>Continuity should exist.</b></span></p> <p>3. Check continuity between combination meter terminal 20 and ground.  <span style="color: blue;"><b>Continuity should not exist.</b></span></p>		
		
<b>OK or NG</b>		
OK	▶	Thermal transmitter is OK.
NG	▶	Repair harness or connector.

YEL798C

# METERS AND GAUGES



## Electrical Components Inspection FUEL LEVEL SENSOR UNIT CHECK

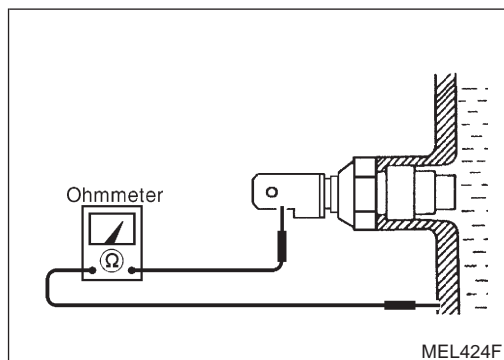
=NJEL0449

NJEL0449S02

- For removal, refer to FE-6, FE-18, "FUEL SYSTEM".
- Check the resistance between terminals 4 and 1.

Ohmmeter		Float position mm (in)			Resistance value $\Omega$
(+)	(-)				
4	1	*1	Full	142.5 (5.61)	Approx. 4 - 6
		*2	1/2	88.7 (3.492)	
		*3	Empty	11.1 (0.437)	

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

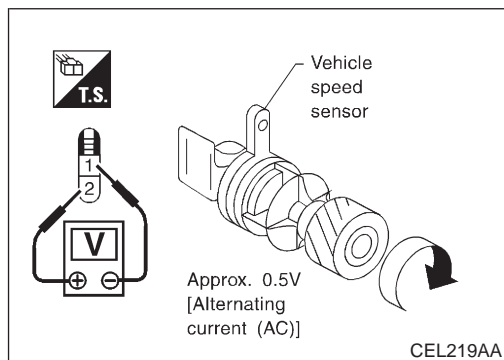


## THERMAL TRANSMITTER CHECK

NJEL0449S03

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

Water temperature	Resistance
65°C (149°F)	Approx. 1,179 - 1,417 $\Omega$
91°C (196°F)	Approx. 474 - 568 $\Omega$



## VEHICLE SPEED SENSOR SIGNAL CHECK

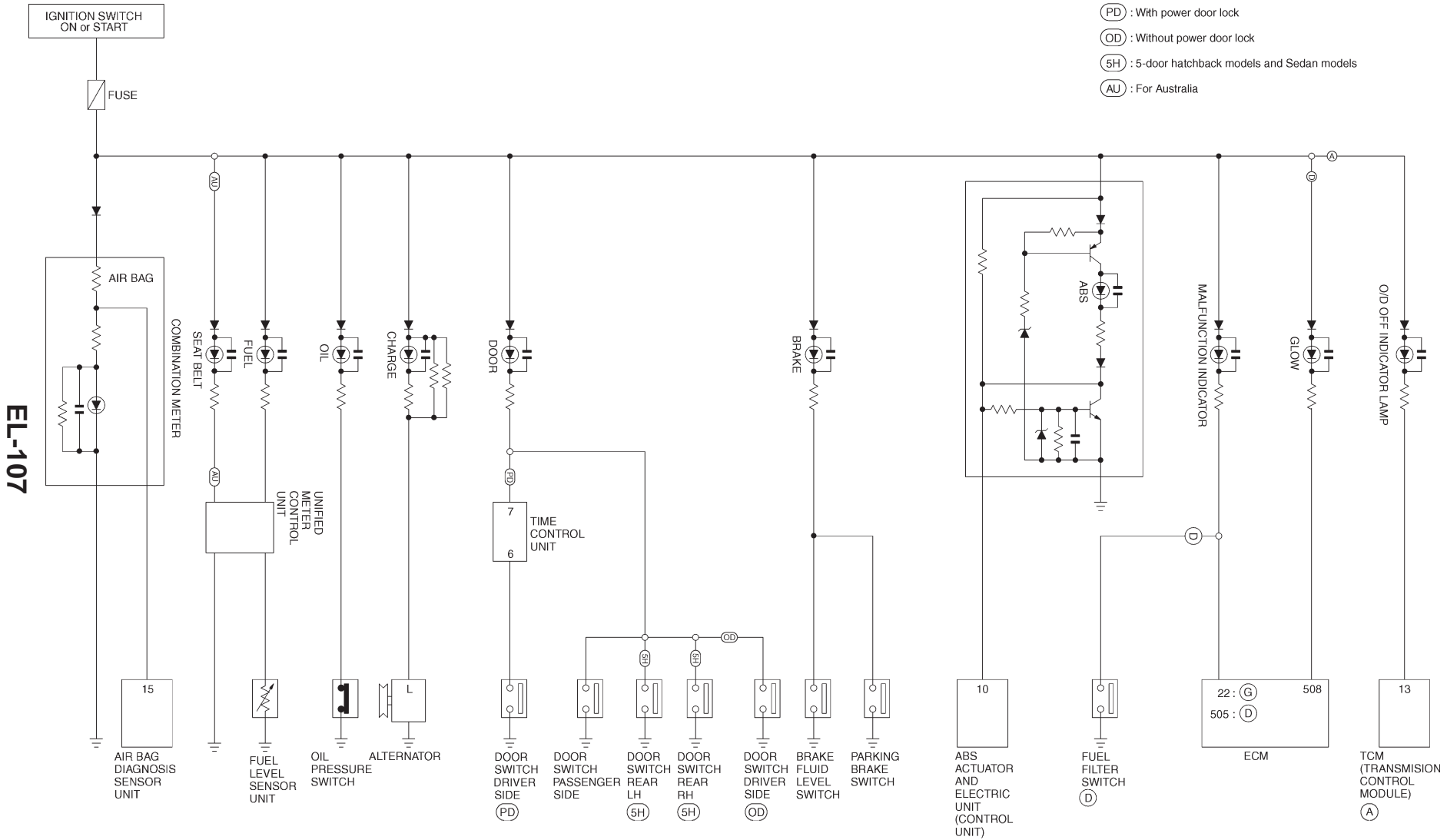
NJEL0449S04

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

# WARNING LAMPS

## Schematic

- (A) : A/T models
- (G) : Gasoline engine
- (D) : Diesel engine
- (PD) : With power door lock
- (OD) : Without power door lock
- (5H) : 5-door hatchback models and Sedan models
- (AU) : For Australia



EL-107

YEL652C

NJEL0450

Schematic

# WARNING LAMPS

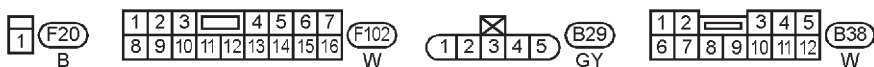
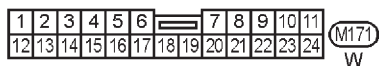
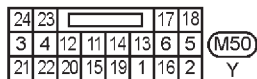
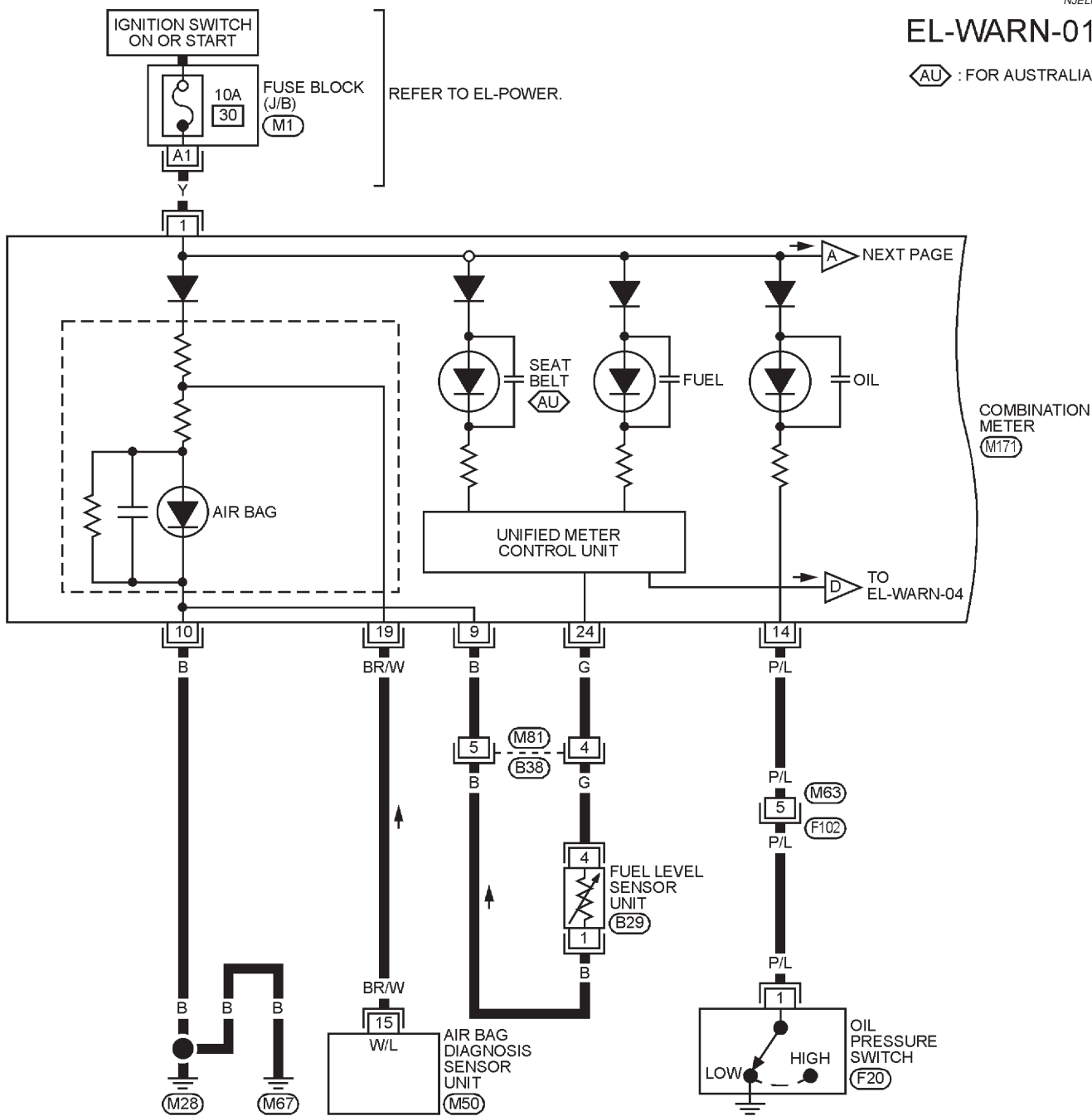
Wiring Diagram — WARN —

## Wiring Diagram — WARN —

NJEL0451

**EL-WARN-01**

⬡ (AU) : FOR AUSTRALIA



REFER TO THE FOLLOWING.  
 (M1) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL653C

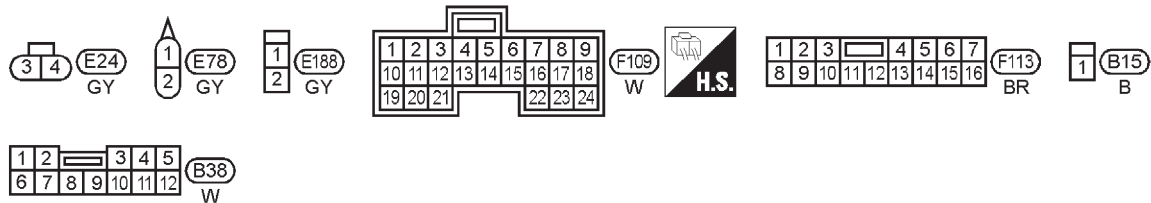
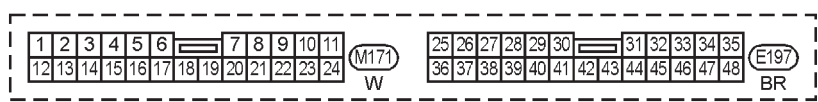
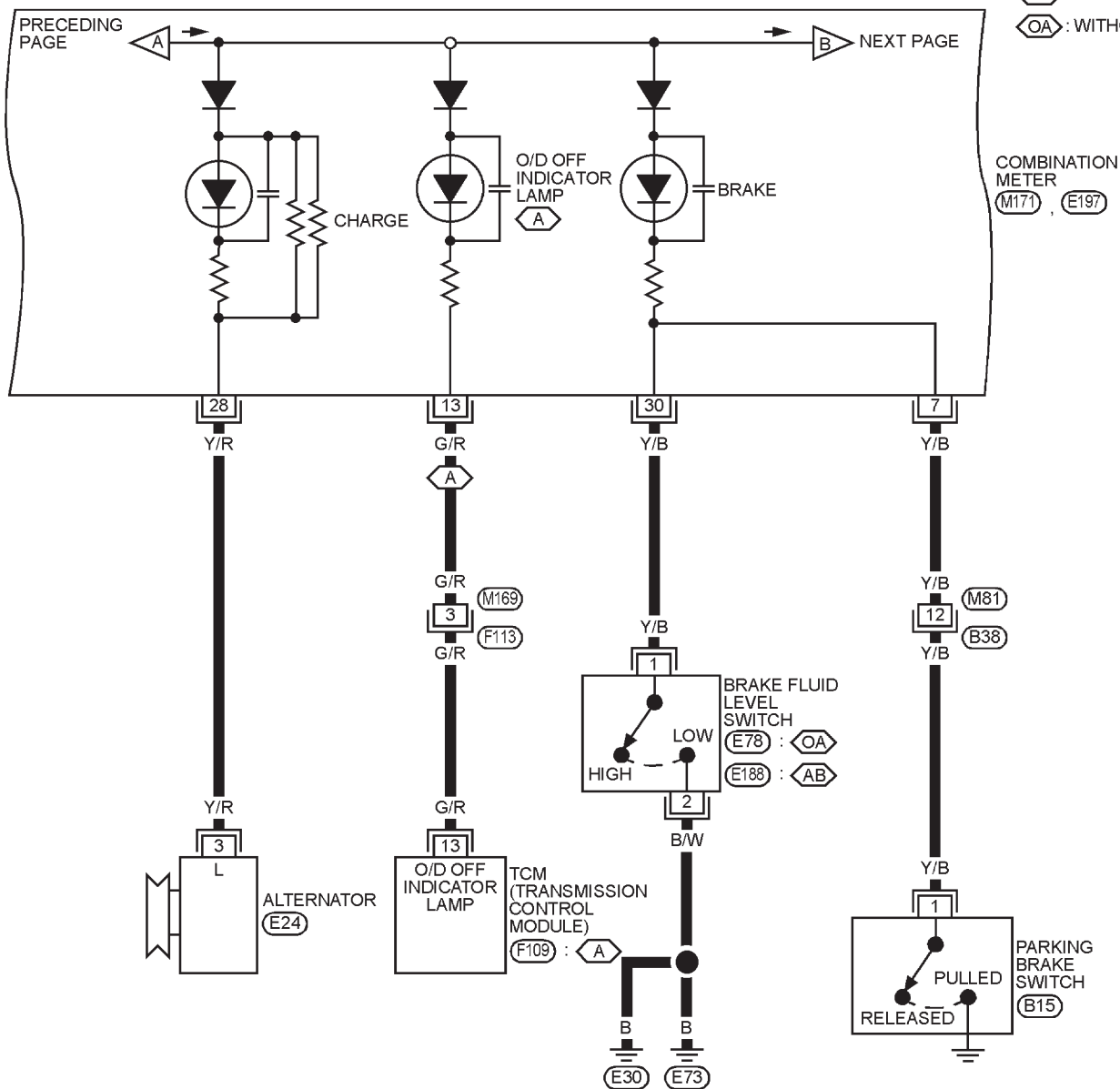


# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

## EL-WARN-02

- A : A/T MODELS
- AB : WITH ABS
- OA : WITHOUT ABS

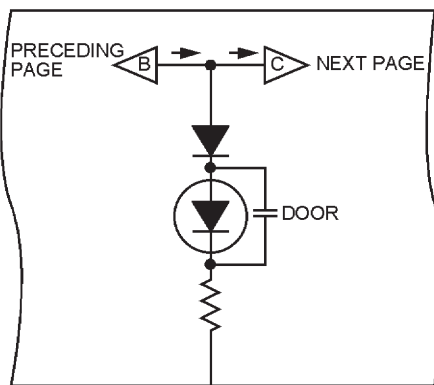


YEL654C

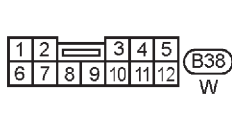
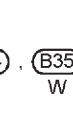
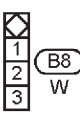
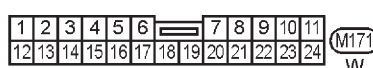
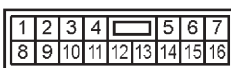
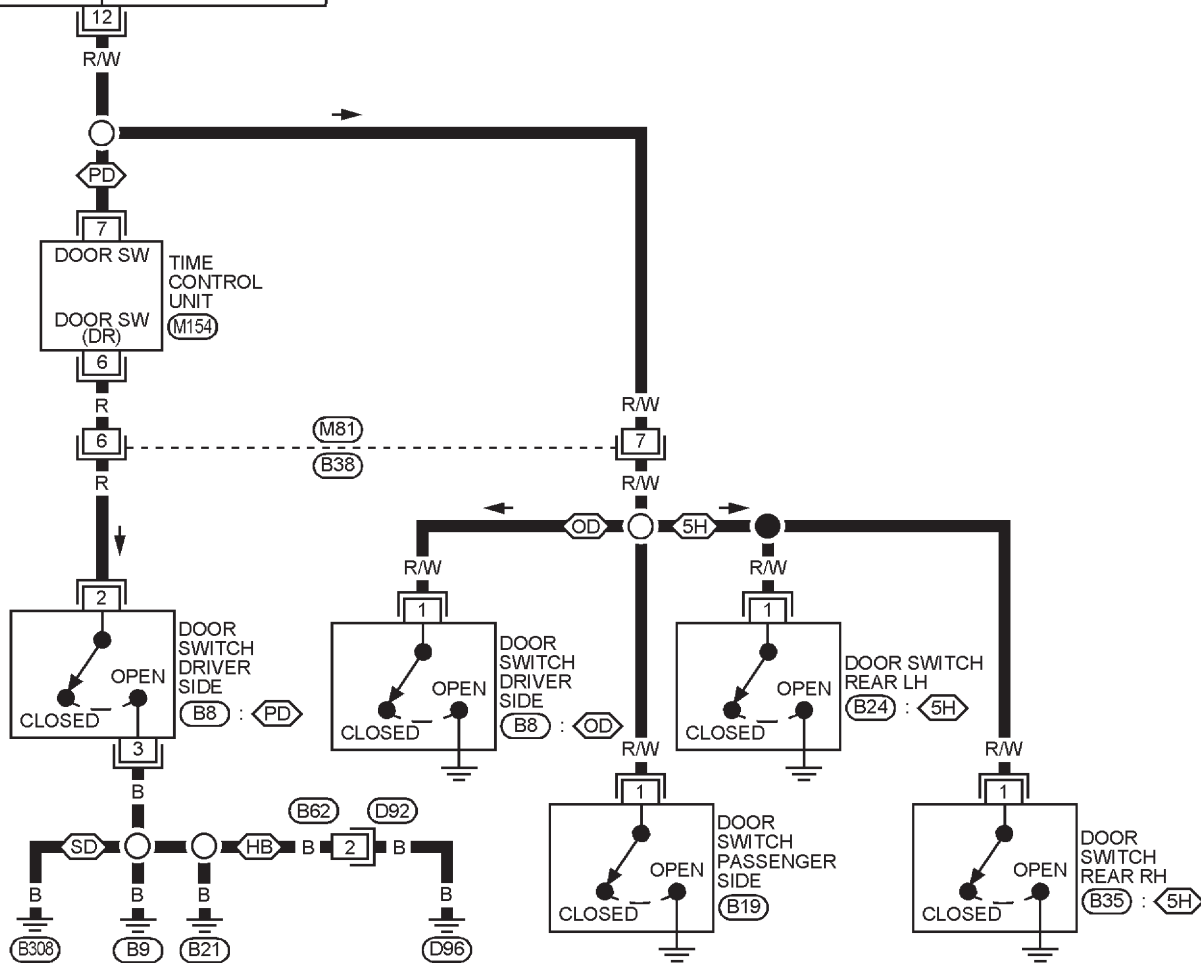
# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

## EL-WARN-03



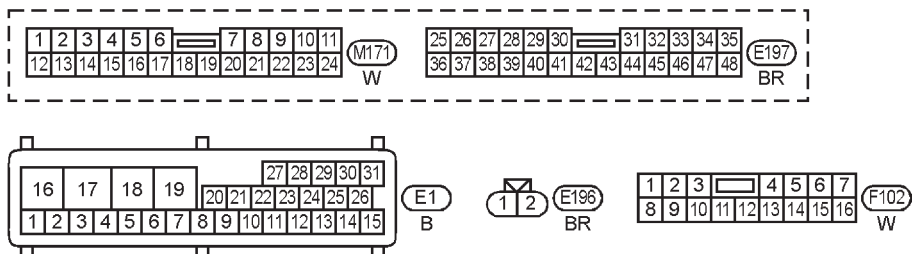
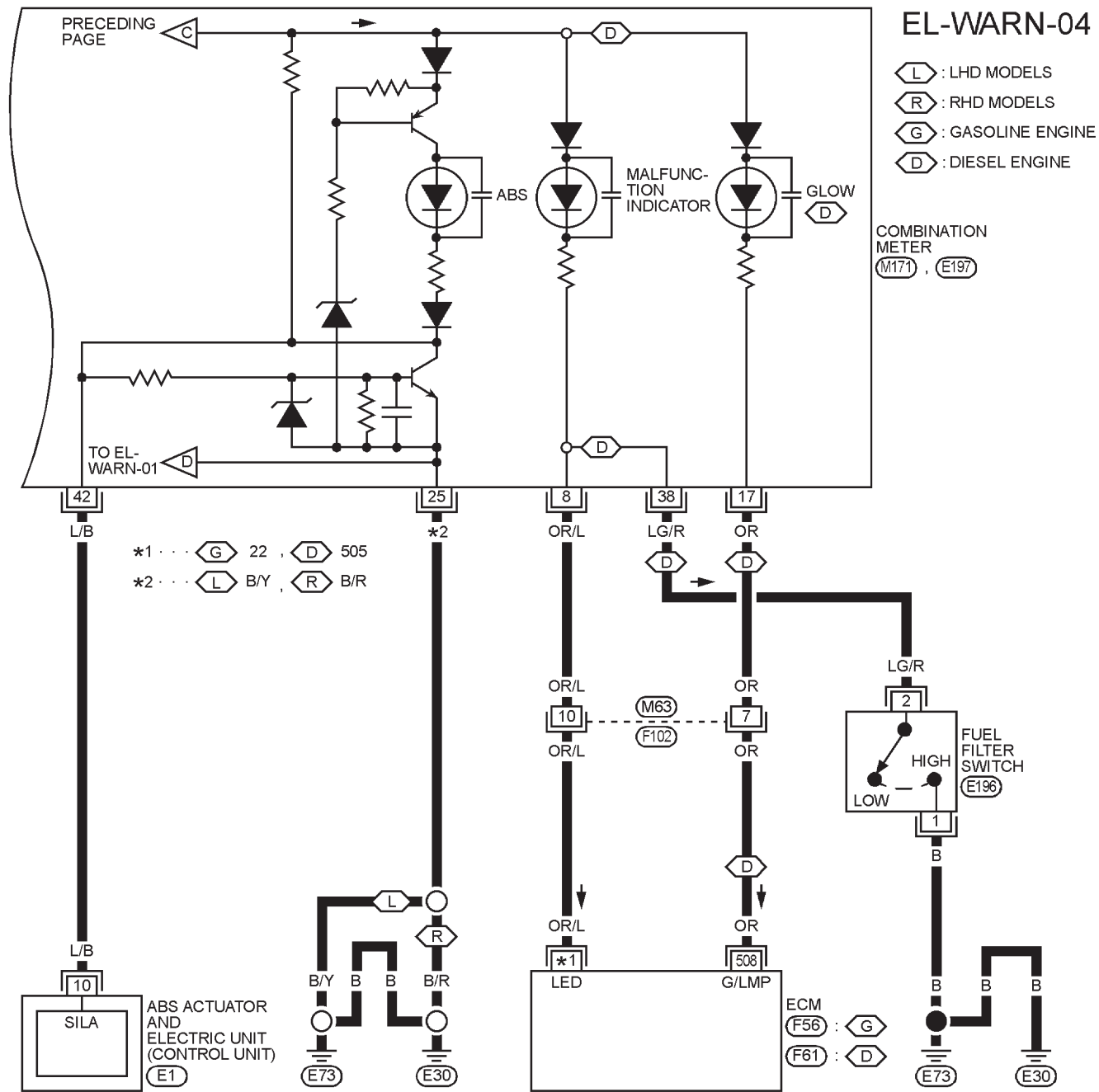
- ⬡PD : WITH POWER DOOR LOCK
- ⬡OD : WITHOUT POWER DOOR LOCK
- ⬡5H : 5-DOOR HATCHBACK MODELS AND SEDAN MODELS
- ⬡SD : SEDAN MODELS
- ⬡HB : HATCHBACK MODELS



YEL655C

# WARNING LAMPS

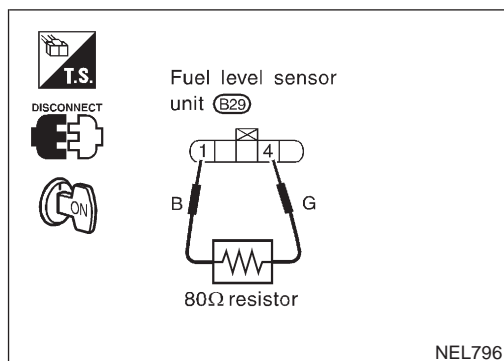
Wiring Diagram — WARN — (Cont'd)



REFER TO THE FOLLOWING.  
F56 , F61 -ELECTRICAL UNITS

YEL656C

## WARNING LAMPS



### Electrical Components Inspection FUEL WARNING LAMP OPERATION CHECK

NJEL0051

NJEL0051S01

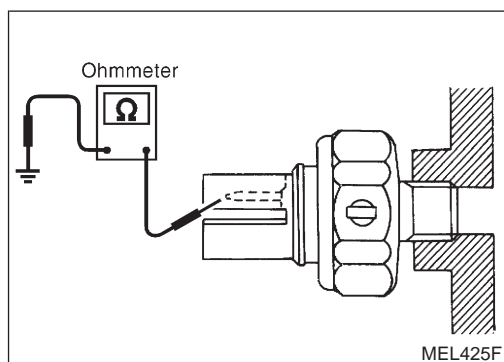
1. Turn ignition switch "OFF".
2. Disconnect fuel level sensor unit harness connector B29.
3. Connect a resistor (80Ω) between fuel level sensor unit harness connector terminals 4 and 1.
4. Turn ignition switch "ON".

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

**NOTE:**

**For QG Engine Only**

ECM might store the DTC P0180 during this inspection. If the DTC is stored in ECM memory, erase the DTC after reconnecting the fuel level sensor unit and fuel pump harness connector. Refer to EC-68, "HOW TO ERASE EMISSION-RELATED DIAGNOSTIC INFORMATION", "Emission-related Diagnostic Information", "ON BOARD DIAGNOSTIC SYSTEM DESCRIPTION".

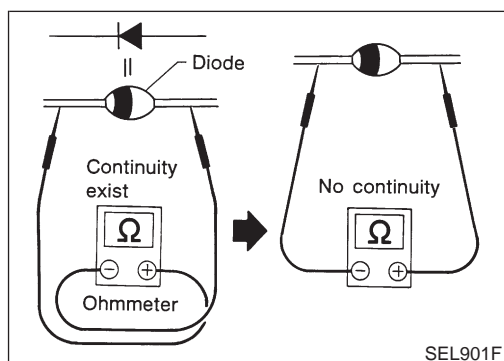


### OIL PRESSURE SWITCH CHECK

NJEL0051S02

	Oil pressure kPa (bar, kg/cm <sup>2</sup> , psi)	Continuity
Engine running	More than 10 - 20 (0.10 - 0.20, 0.1 - 0.2, 1 - 3)	No
Engine not running	Less than 10 - 20 (0.10 - 0.20, 0.1 - 0.2, 1 - 3)	Yes

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



### DIODE CHECK

NJEL0051S03

- 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-108, "WARNING LAMP" wiring diagrams.

**NOTE:**

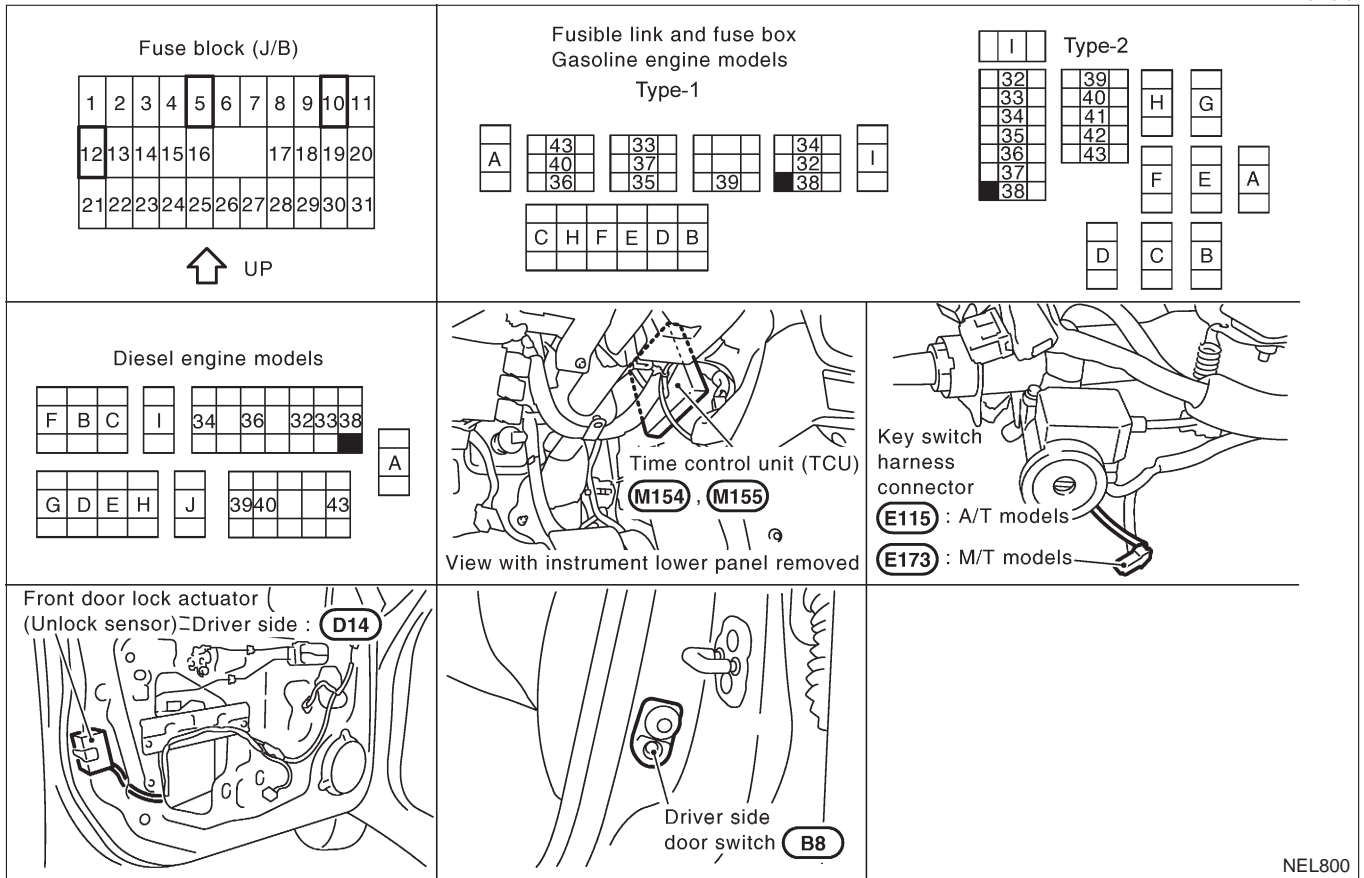
Specification may vary depending on the type of tester. Before performing this inspection, be sure to refer to the instruction manual for the tester to be used.

# WARNING CHIME

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NJEL0452



## System Description

NJEL0453

The warning chime is controlled by the time control unit.

The warning chime is located in the time control unit.

Power is supplied at all times

- through 15A fuse [No. 5, located in fuse block (J/B)]
- to time control unit terminal 9.
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 1.
- through 10A fuse (No. 38, located in the fuse and fusible link box)
- to lighting switch terminal 11.

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 time control unit terminal 1.

Ground is supplied to time control unit terminal 16 through body grounds M28 and M67.

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

### IGNITION KEY WARNING CHIME

NJEL0453S01

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

- from key switch terminal 2
- to time control unit terminal 22.

Ground is supplied

## WARNING CHIME

### System Description (Cont'd)

---

- from body grounds B9, B21 and D96 (Hatchback) or B308 (Sedan)
- through front door switch (driver side) terminal 3 and 2
- to time control unit terminal 6, and

Ground is interrupted,

- from body grounds M28 and M67
- to time control unit terminal 35

### LIGHT WARNING CHIME

With ignition switch OFF, driver's door open, and lighting switch in 1ST or 2ND position, warning chime will sound. Power is supplied. NJEL0453S02

- from lighting switch terminal 12
- to time control unit terminal 10

Ground is supplied

- from front door switch (driver side) terminal 2
- to time control unit terminal 6.

Front door switch (driver side) terminal 3 is grounded through body grounds B9, B21 and D96 (Hatchback) or B308 (Sedan).

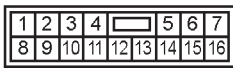
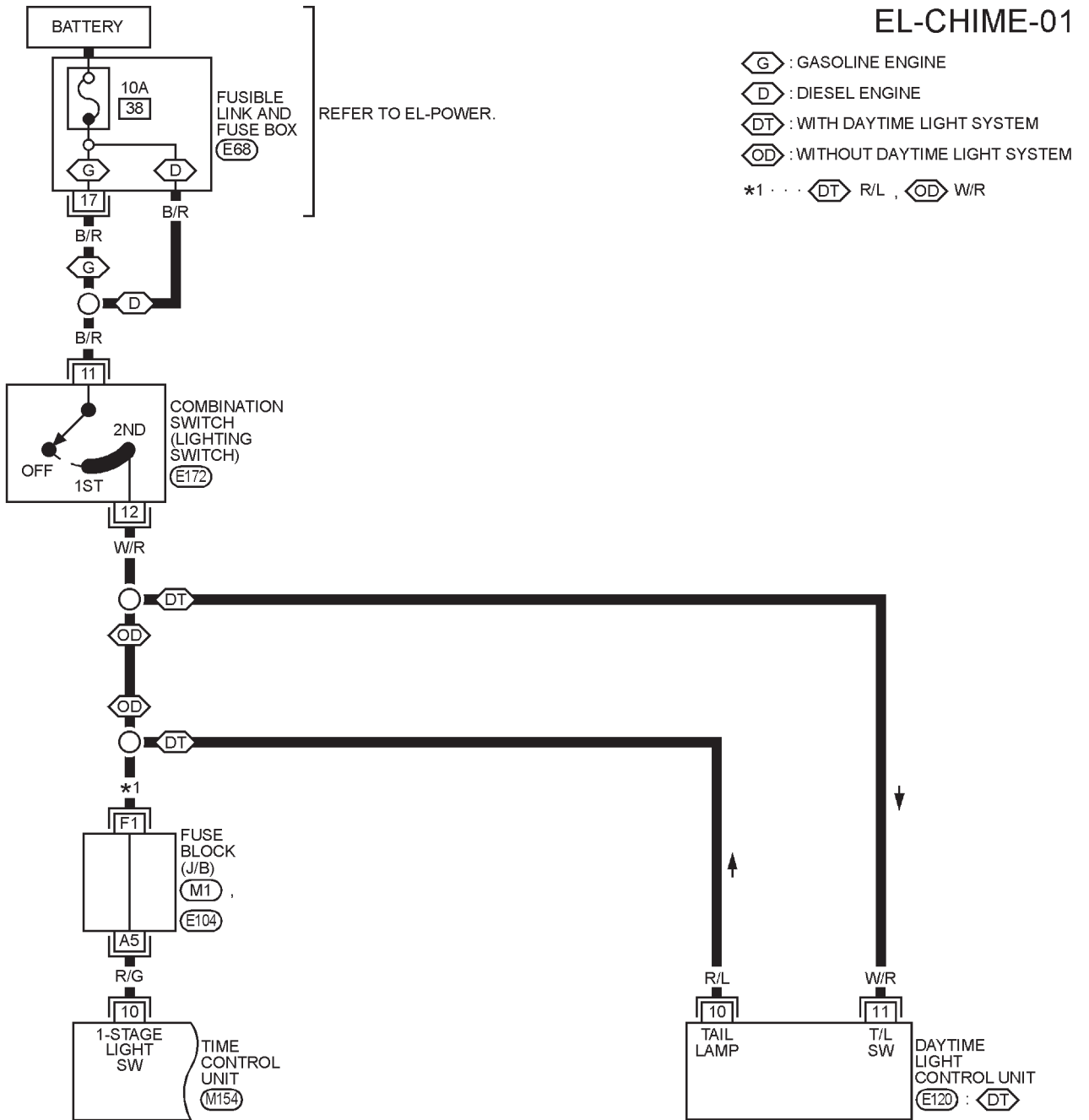
# WARNING CHIME

Wiring Diagram — CHIME —

## Wiring Diagram — CHIME —

NJEL0454

### EL-CHIME-01



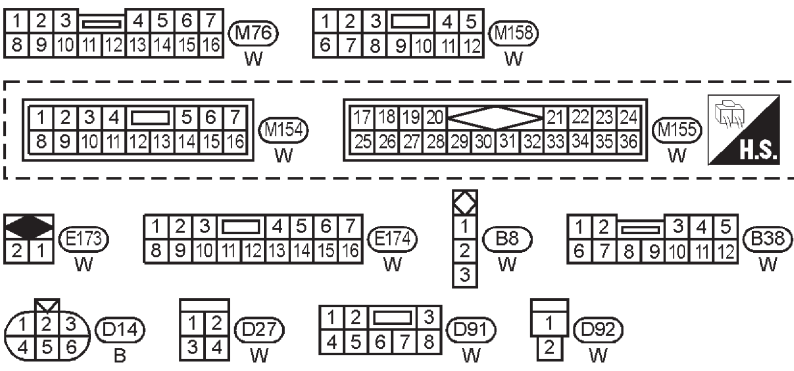
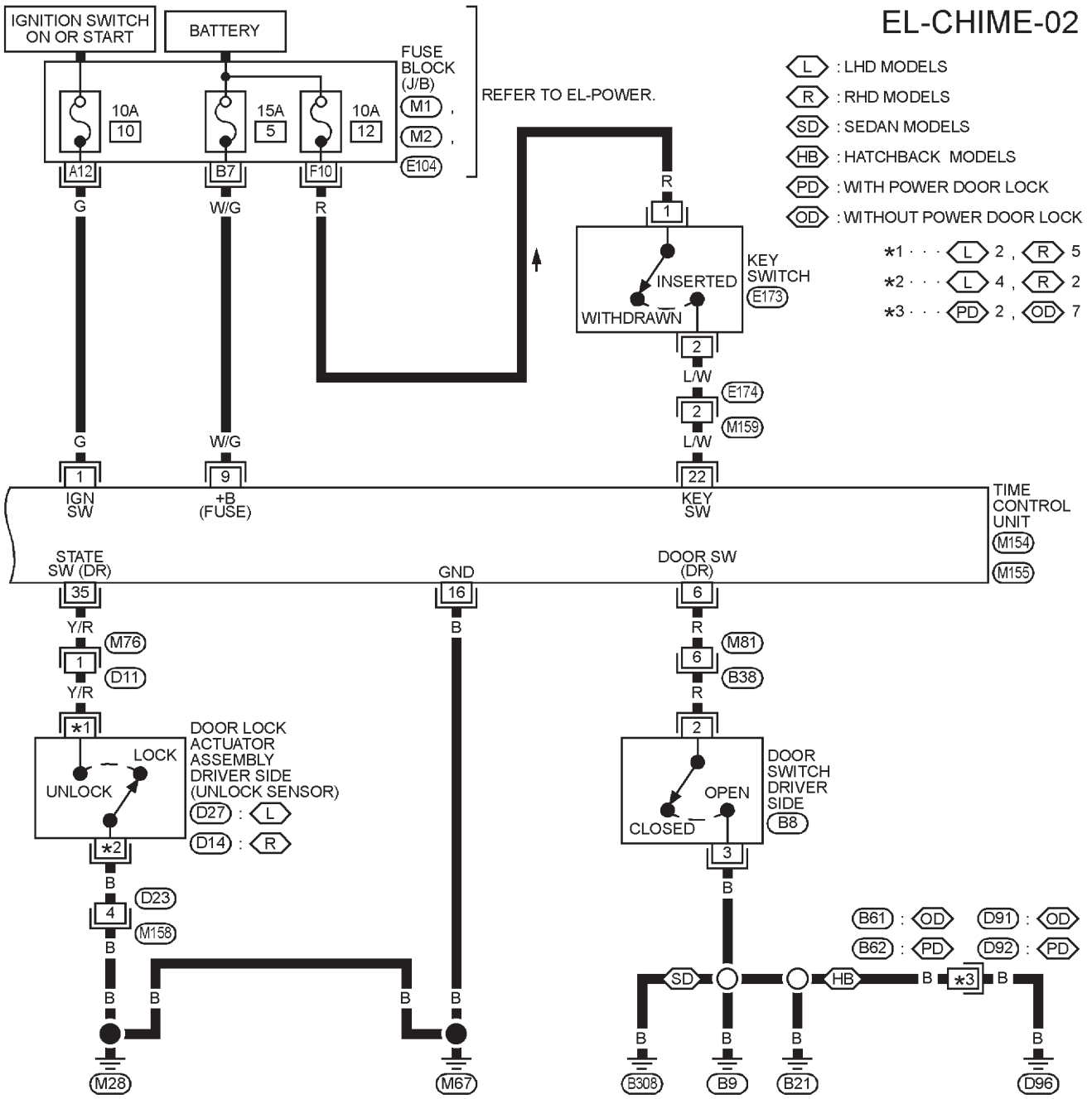
REFER TO THE FOLLOWING.  
 (M1) , (E104) -FUSE BLOCK-  
 JUNCTION BOX (J/B)  
 (E68) -FUSE AND  
 FUSIBLE LINK BOX

YEL657C

# WARNING CHIME

Wiring Diagram — CHIME — (Cont'd)

## EL-CHIME-02



REFER TO THE FOLLOWING.  
 (M1), (M2), (E104)  
 -FUSE BLOCK-  
 -JUNCTION BOX (J/B)

YEL658C



# WARNING CHIME

Trouble Diagnoses

## Trouble Diagnoses SYMPTOM CHART

NJEL0455

NJEL0455S01

REFERENCE PAGE (EL- )	117	118	119	120	121
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 (DOOR UNLOCK SENSOR CHECK)	DIAGNOSTIC PROCEDURE 4
Light warning chime does not activate.	X	X			X
Ignition key warning chime does not activate.	X		X	X	X
All warning chimes do not activate.	X				X

### POWER SUPPLY AND GROUND CIRCUIT CHECK Power Supply Circuit Check

NJEL0455S02

NJEL0455S0201

Time control unit connector (M154)

Terminal 9: W/G

Terminal 1: G

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

SEL447X

### Ground Circuit Check

NJEL0455S0202

Time control unit connector (M154)

Terminal 16: B

Continuity should exist.

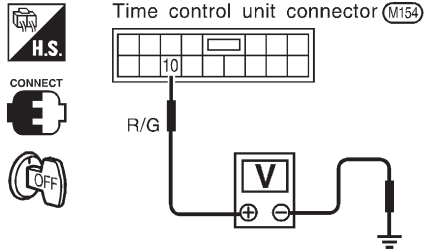
SEL448X

## WARNING CHIME

Trouble Diagnoses (Cont'd)

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

=NJEL0455S03



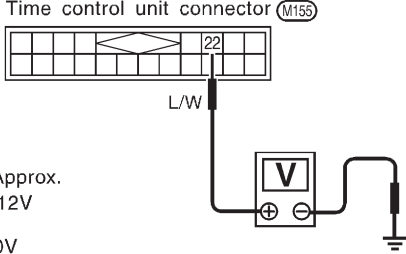
<b>1</b>	<b>CHECK LIGHTING SWITCH INPUT SIGNAL</b>	
<p>Check voltage between time control unit terminal 10 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">  </div> <div style="width: 60%;"> <p><b>Voltage [V]:</b>  <b>Condition of lighting switch: 1st or 2nd</b>  <b>Approx. 12</b>  <b>Condition of lighting switch: OFF</b></p> </div> </div> <p style="text-align: right;">SEL449X</p>		
<b>OK or NG</b>		
OK	▶	Lighting switch is OK.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 38, located in the fuse and fusible link box)</li> <li>● Harness for open or short between time control unit and lighting switch/daytime light control unit</li> <li>● Lighting switch</li> </ul>

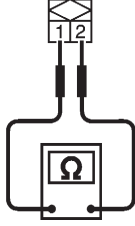


# WARNING CHIME

Trouble Diagnoses (Cont'd)

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

=NJEL0455S04

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	
Check voltage between time control unit terminal 22 and ground.		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">   <p>ST : Approx. 12V</p> <p>Key : 0V</p> </div> <div style="width: 30%; text-align: center;"> <p>Time control unit connector (M155)</p>  </div> <div style="width: 30%;"> <p><b>Voltage [V]:</b></p> <p>Condition of switch: Key is inserted. Approx. 12</p> <p>Condition of switch: Key is removed. 0</p> </div> </div> <p style="text-align: right;">SEL433X</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	Key switch is OK.
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK KEY SWITCH (INSERT)</b>	
Check continuity between terminals 1 and 2.		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p>Key switch connector (E173)</p>  </div> <div style="width: 30%; text-align: center;">   <p>Key</p> </div> <div style="width: 30%;"> <p><b>Continuity:</b></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;">YEL799C</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between time control unit and key switch</li> </ul>
NG	▶	Replace key switch.

## WARNING CHIME

Trouble Diagnoses (Cont'd)

### DIAGNOSTIC PROCEDURE 3 (DOOR UNLOCK SENSOR CHECK)

NJEL0455S05

<b>1</b>	<b>CHECK DOOR UNLOCK SENSOR INPUT SIGNAL</b>													
Check voltage between time control unit terminal 35 and ground.														
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> </div> <div> <p>Time control unit connector (M15)</p> </div> </div> <table border="1" style="margin-left: 20px; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">Terminals</th> <th rowspan="2">Condition (Driver's door)</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">35</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table>			Terminals		Condition (Driver's door)	Voltage [V]	(+)	(-)	35	Ground	Locked	Approx. 5	Unlocked	0
Terminals		Condition (Driver's door)	Voltage [V]											
(+)	(-)													
35	Ground	Locked	Approx. 5											
		Unlocked	0											
SEL431X														
<b>OK or NG</b>														
OK	▶	Door unlock sensor is OK.												
NG	▶	GO TO 2.												


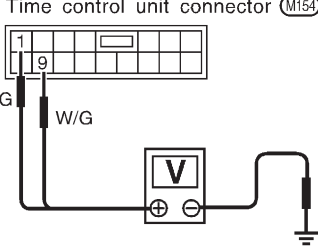
<b>2</b>	<b>CHECK DOOR UNLOCK SENSOR</b>	
1. Disconnect door unlock sensor connector. 2. Check continuity between door unlock sensor terminals 2 and 5 (RHD models) or 2 and 4 (LHD models).		
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> </div> <div> <p>Front door unlock sensor connector</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>RHD models (D14)</p> </div> <div style="text-align: center;"> <p>LHD models (D27)</p> </div> </div> </div> </div> <div style="margin-left: 20px; text-align: right;"> <p><b>Continuity:</b>  <b>Condition: Locked</b>        No  <b>Condition: Unlocked</b>        Yes</p> </div>		
YEL800C		
<b>OK or NG</b>		
OK	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between time control unit and door unlock sensor</li> </ul>
NG	▶	Replace door unlock sensor.


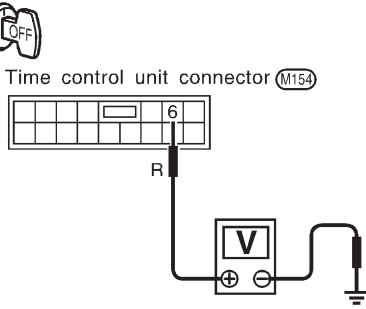
# WARNING CHIME

Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 4

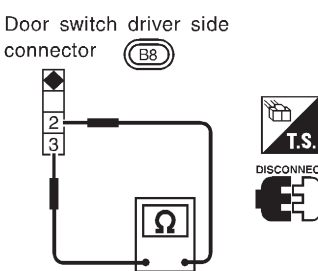
NJEL0455S06

<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>																					
Check voltage between time control unit terminal 1 or 9 and ground.																						
		<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>9</td> <td>Ground</td> <td>Battery voltage</td> <td>Battery voltage</td> <td>Battery voltage</td> </tr> <tr> <td>1</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table>	Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	9	Ground	Battery voltage	Battery voltage	Battery voltage	1	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position																				
(+)	(-)	OFF	ACC	ON																		
9	Ground	Battery voltage	Battery voltage	Battery voltage																		
1	Ground	0V	0V	Battery voltage																		
SEL447X																						
<b>OK or NG</b>																						
OK	▶	GO TO 2.																				
NG	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● 15A fuse [No. 5, located in the fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse</li> </ul>																				

<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>	
Check voltage between time control unit terminal 6 and ground.		
		<p><b>Voltage [V]:</b></p> <p><b>Condition of driver's door: CLOSED</b> Approx. 5</p> <p><b>Condition of driver's door: OPEN</b> 0</p>
SEL430X		
<b>OK or NG</b>		
OK	▶	System is OK.
NG	▶	Check voltage between time control unit terminal 6 and body ground with disconnecting front door switch (driver side). If approx. 5V is supplied, GO TO 3. If approx. 5V is not supplied, replace time control unit.

## WARNING CHIME

Trouble Diagnoses (Cont'd)

<b>3 CHECK DRIVER SIDE DOOR SWITCH</b>	
<p>Check continuity between terminals 2 and 3.</p> <div style="display: flex; align-items: center;"><div style="flex: 1;"><p>Door switch driver side connector (B8)</p></div><div style="flex: 1; padding-left: 20px;"><p><b>Continuity:</b> Door switch is pushed. No Door switch is released. Yes</p></div></div> <p style="text-align: right;">SEL325WA</p> <p style="text-align: center;">OK or NG</p>	
OK	<p>▶ <b>Check the following.</b></p> <ul style="list-style-type: none"><li>● Driver side door switch ground circuit and condition</li><li>● Harness for open or short between time control unit and driver side door switch</li></ul>
NG	<p>▶ Replace driver side door switch.</p>

## System Description

NJEL0456

NJEL0456S01

### WIPER OPERATION

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

- LO speed
- HI speed
- INT (Intermittent)

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

- through 20A fuse [No. 25, located in the fuse block (J/B)]
- to front wiper motor terminal 5 and front wiper relay terminal 2.

### Low and High Speed Wiper Operation

NJEL0456S0101

Ground is supplied to wiper and washer switch terminal 17 through body grounds E30 and E73.

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

- through terminal 14 of the front wiper and washer switch
- to front wiper motor terminal 2.

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 front wiper and washer switch
- to wiper motor terminal 1.

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

### Auto Stop Operation

NJEL0456S0102

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 front wiper and washer switch
- to front wiper motor terminal 2, in order to continue wiper motor operation at low speed.

Ground is also supplied

- through terminal 13 of the front wiper and washer switch
- to front wiper relay terminal 3
- through terminal 4 of the front wiper relay.
- to front wiper motor terminal 3
- through terminal 4 of front wiper motor
- through body grounds E30 and E73.

When wiper arms reach base of windshield, front wiper motor terminals 3 and 5 are connected instead of terminals 3 and 4. Wiper motor will then stop wiper arms at the STOP position.

### Intermittent Operation

NJEL0456S0103

The front wiper motor operates the wiper arms one time at low speed at a set interval of approximately 1 to 13 seconds. This feature is controlled by the wiper amplifier (INT SW) combined with front wiper switch.

When the wiper switch is placed in the INT position, ground is supplied to wiper amplifier (WIPER SW INT) and (ACC).

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

Then intermittent ground is supplied

- from body grounds E30 and E73
- through terminal 5 of front wiper relay,
- through terminal 3 of front wiper relay,
- through terminal 13 of front wiper switch and,
- through terminal 14 of front wiper switch
- to terminal 2 of front wiper motor.

The desired interval time is input

- to front wiper relay terminal 1
- from terminal 20 of front wiper switch

## FRONT WIPER AND WASHER

System Description (Cont'd)

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### WASHER OPERATION

NJEL0456S02

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

- through 10A fuse [No. 27, located in the fuse block (J/B)]
- to front wiper switch terminal 5.

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

- from body grounds E30 and E73,
- through terminal 4 of the front wiper switch, and
- through terminal 18 of the front wiper switch
- to front washer motor terminal 2.

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 —

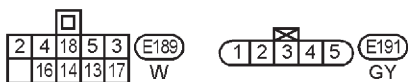
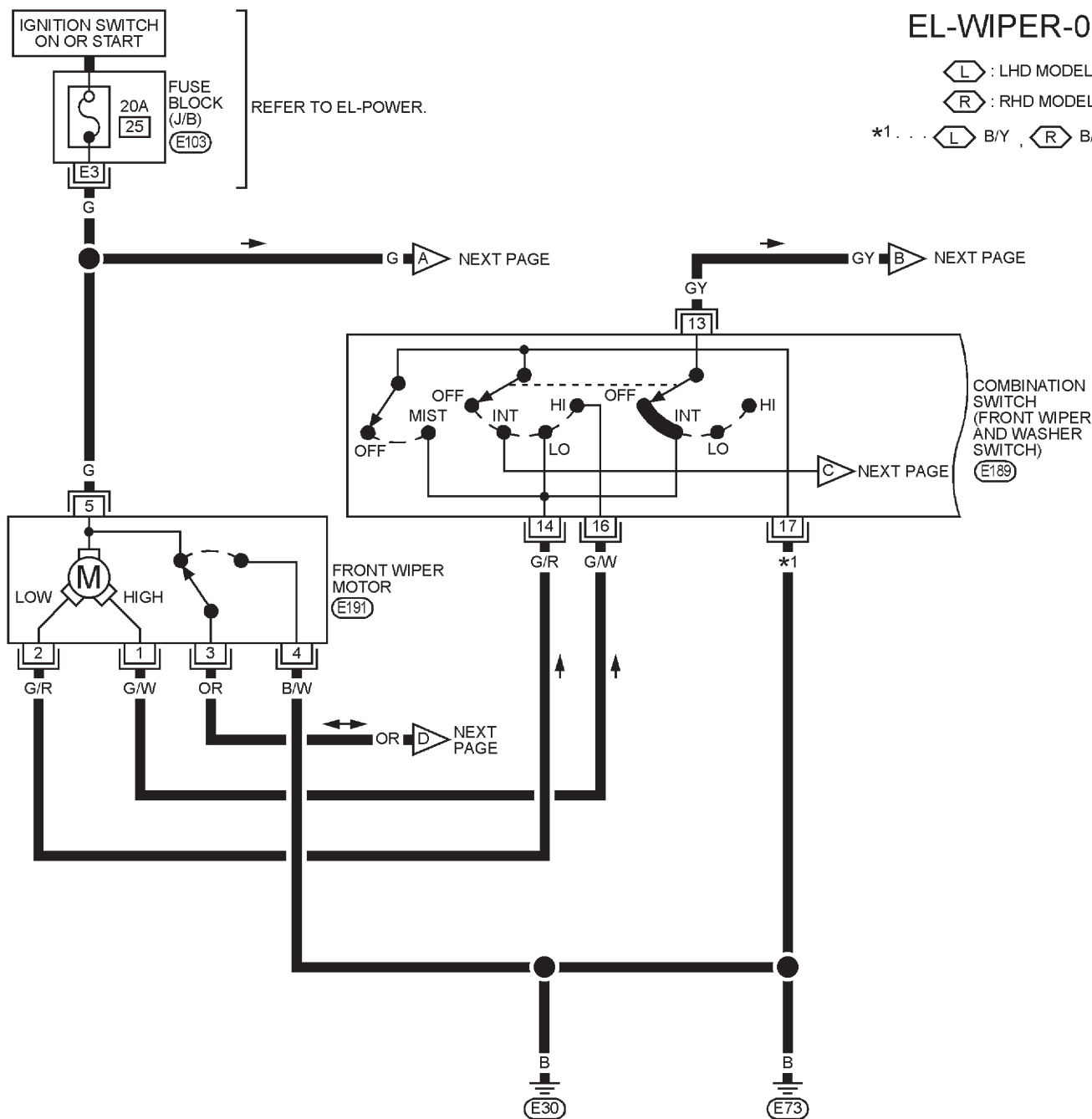
NJEL0457

### EL-WIPER-01

(L) : LHD MODELS

(R) : RHD MODELS

\*1. . . . (L) B/Y , (R) B/R



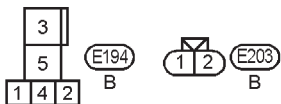
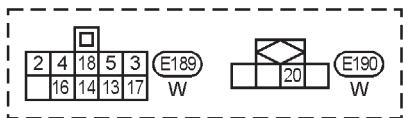
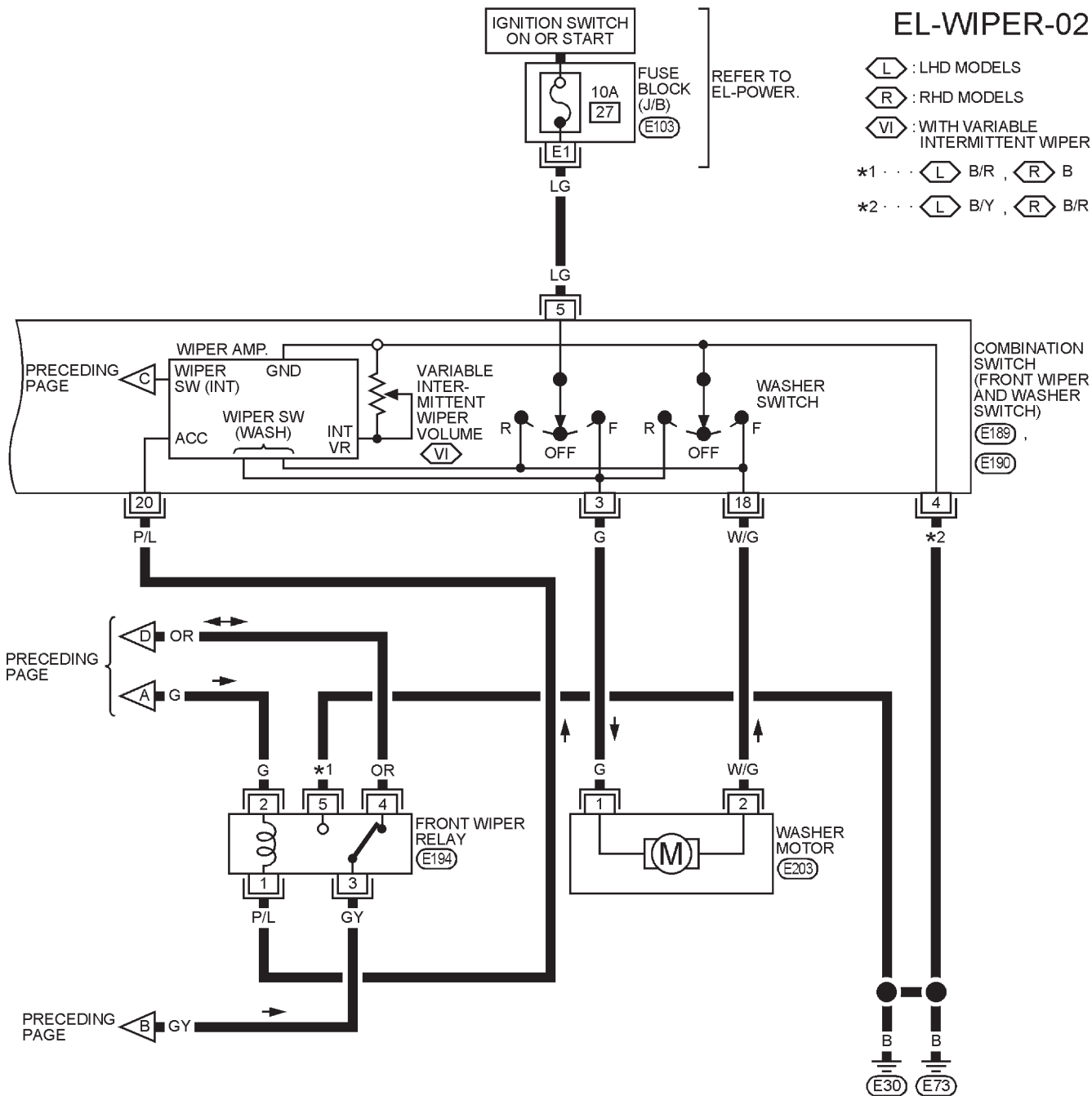
REFER TO THE FOLLOWING.  
 (E103) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL659C

# FRONT WIPER AND WASHER

Wiring Diagram — WIPER — (Cont'd)

## EL-WIPER-02

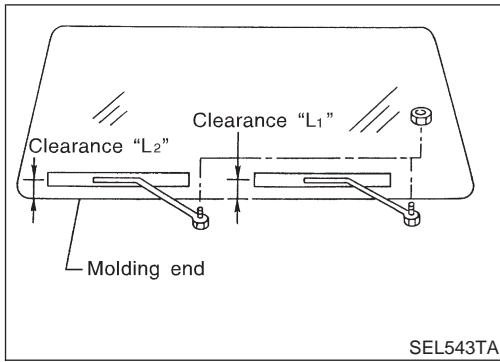


REFER TO THE FOLLOWING.  
(E103) - FUSE BLOCK - JUNCTION BOX (J/B)

YEL660C

# FRONT WIPER AND WASHER

Removal and Installation



## Removal and Installation

NJEL0060

### WIPER ARMS

NJEL0060S01

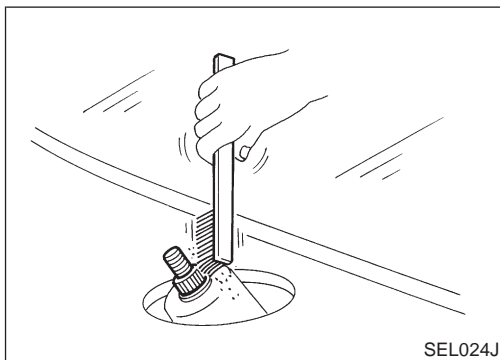
1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up and then set it down onto glass surface to set the blade center to clearance "L<sub>1</sub>" & "L<sub>2</sub>" immediately before tightening nut.
3. Eject washer fluid.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

**Clearance "L<sub>1</sub>": 23 - 37 mm (0.91 - 1.46 in)**

**Clearance "L<sub>2</sub>": 24 - 38 mm (0.94 - 1.50 in)**

- Tighten wiper arm nuts to specified torque.

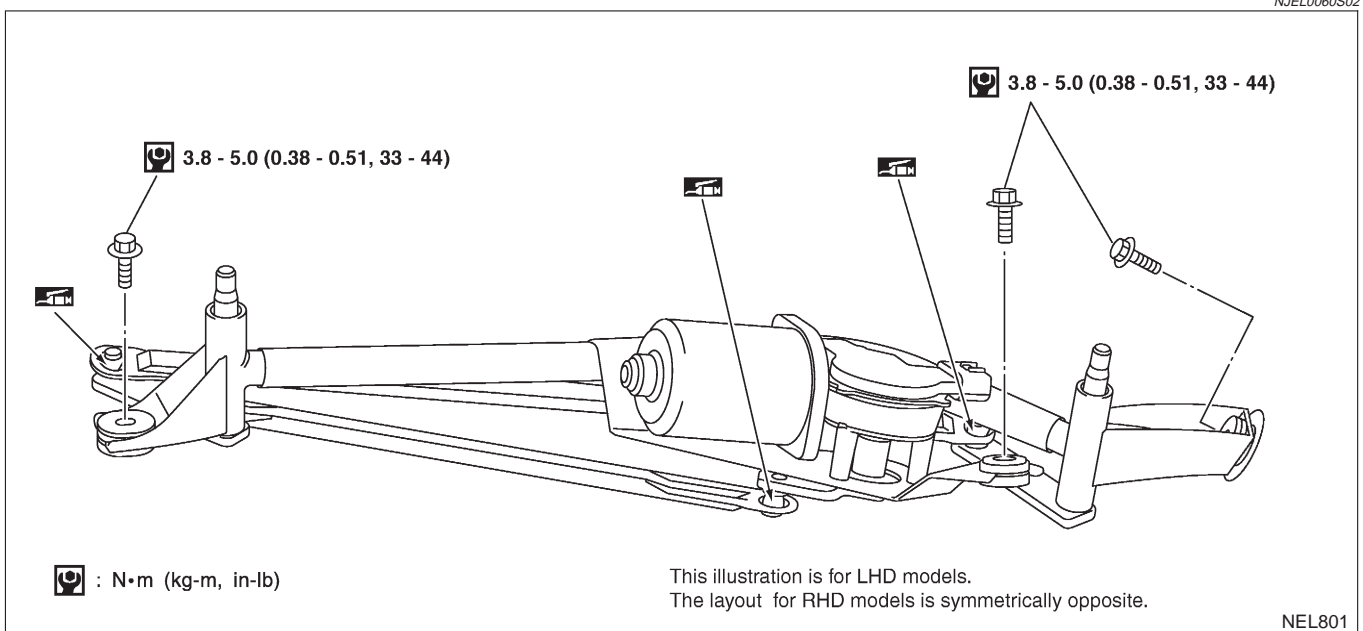
**Front wiper: 21 - 26 N·m (2.1 - 2.7 kg-m, 16 - 19 ft-lb)**



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

### WIPER LINKAGE

NJEL0060S02



This illustration is for LHD models.  
The layout for RHD models is symmetrically opposite.

# FRONT WIPER AND WASHER

Removal and Installation (Cont'd)

## Removal

NJEL0060S0201

1. Remove cowl top seal rubber and cowl top cover.
2. Remove wiper motor connector.
3. Remove 3 screws that secure wiper motor and wiper frame.
4. Detach wiper motor from wiper linkage at ball joint.
5. Remove wiper linkage.

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

## Installation

NJEL0060S0202

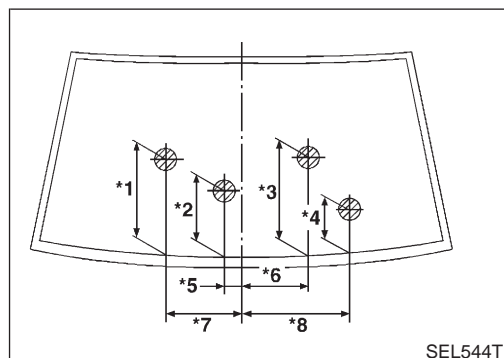
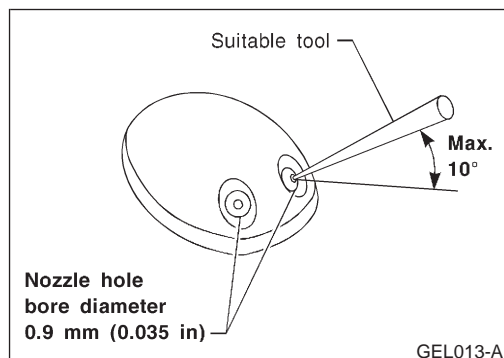
- Grease ball joint portion before installation.
1. Installation is the reverse order of removal.

## Washer Nozzle Adjustment

NJEL0061

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

**Adjustable range:  $\pm 10^\circ$  (In any direction)**



Unit: mm (in)

*1	450 (17.72)	*5	150 (5.91)
*2	225 (8.86)	*6	155 (6.10)
*3	380 (14.96)	*7	250 (9.84)
*4	165 (6.50)	*8	320 (12.60)

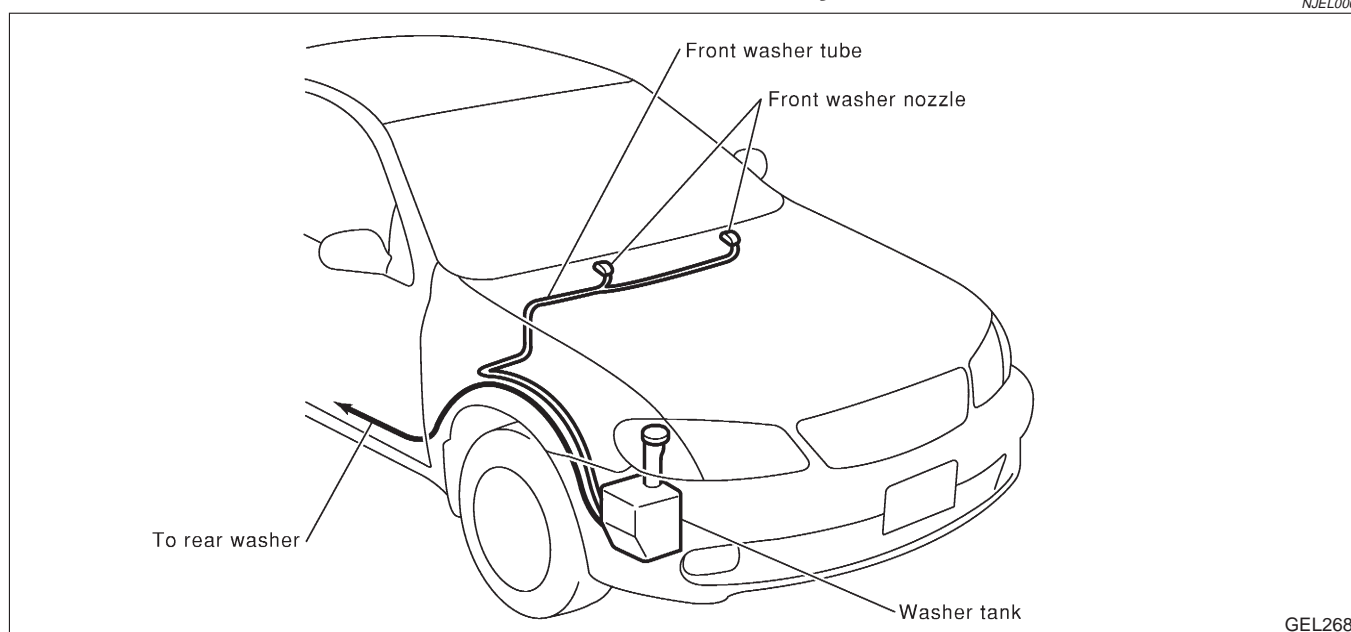
\*: The diameters of these circles are less than 80 mm (3.15 in).

**The figure shown is for LHD models.**

**The layout for RHD models is symmetrically opposite.**

## Washer Tube Layout

NJEL0062



# REAR WIPER AND WASHER

Wiring Diagram — WIP/R —

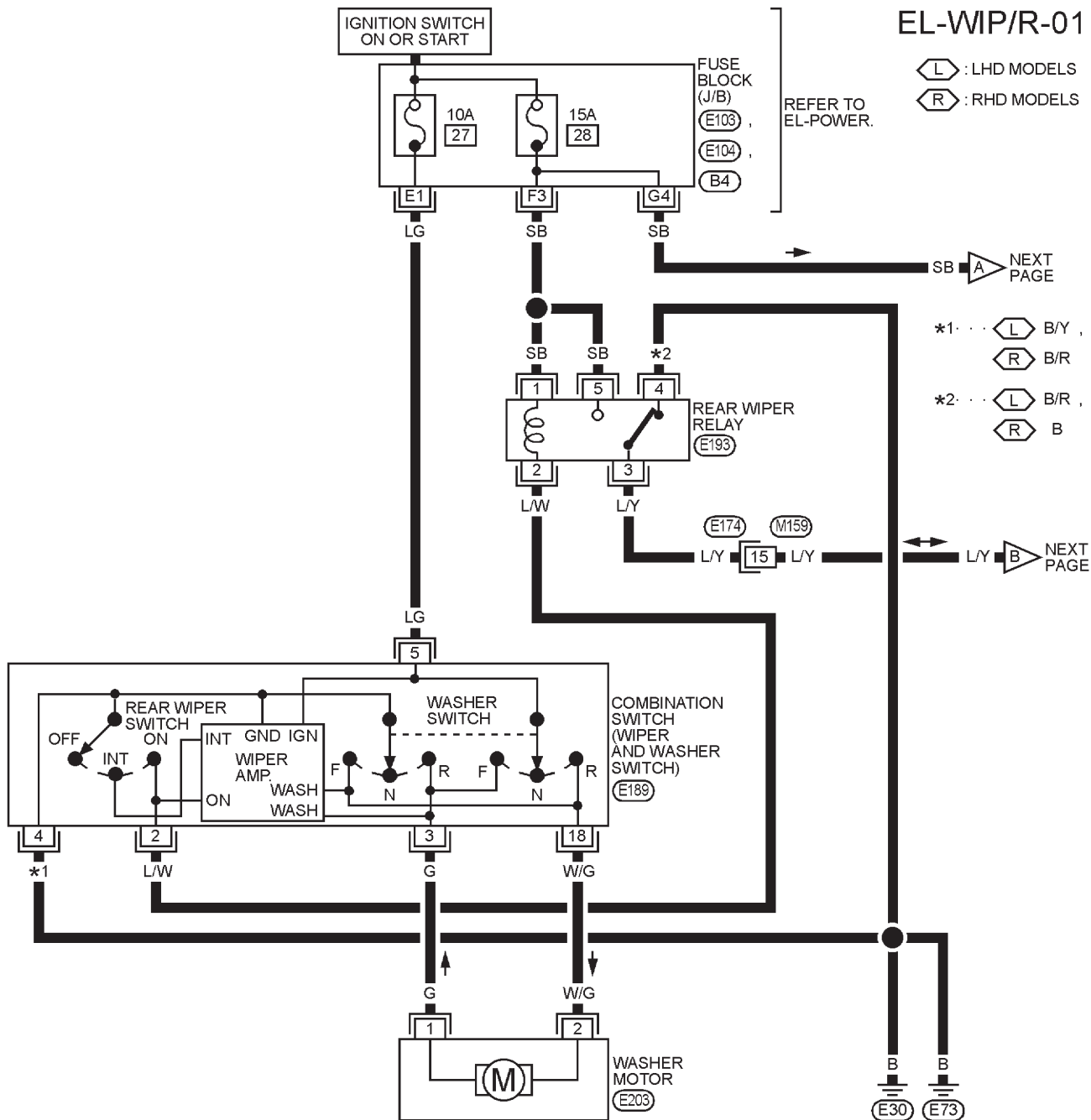
## Wiring Diagram — WIP/R —

NJEL0458

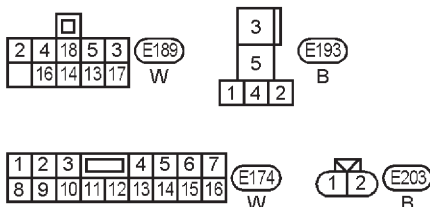
### EL-WIP/R-01

L : LHD MODELS  
R : RHD MODELS

REFER TO EL-POWER.



\*1 . . . L B/Y ,  
           R B/R  
 \*2 . . . L B/R ,  
           R B



REFER TO THE FOLLOWING.

E103 , E104 , B4

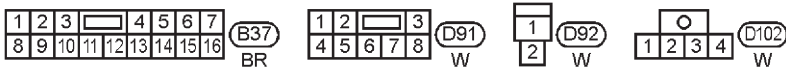
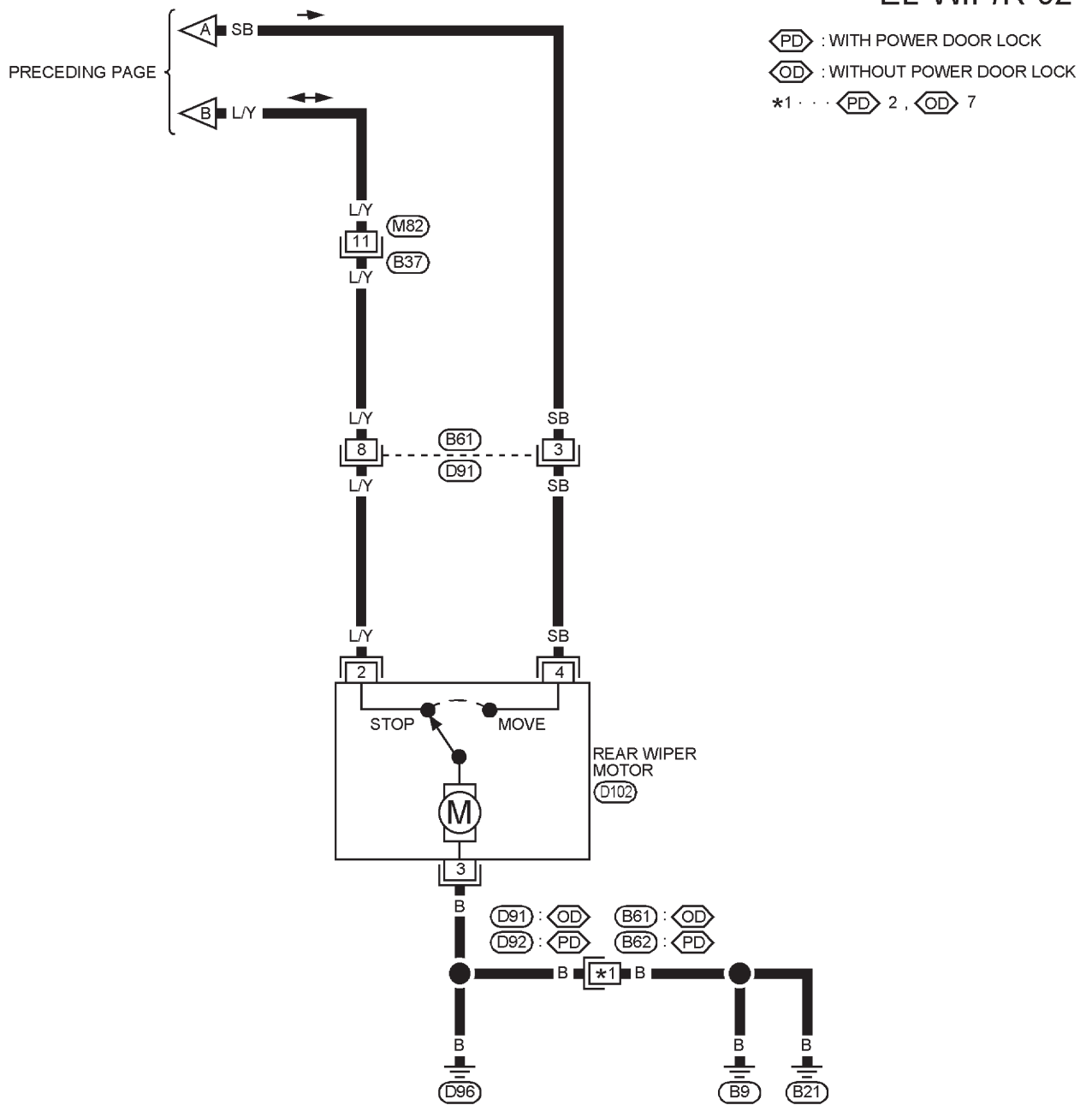
- FUSE BLOCK -  
- JUNCTION BOX (J/B)

YEL661C

# REAR WIPER AND WASHER

Wiring Diagram — WIP/R — (Cont'd)

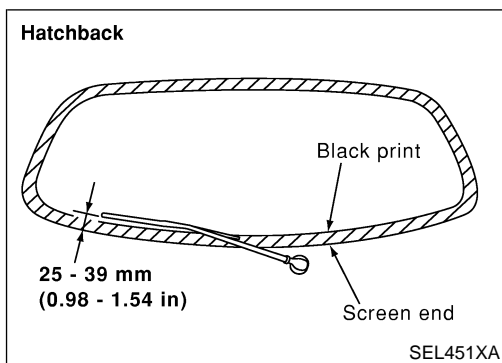
EL-WIP/R-02



YEL662C

# REAR WIPER AND WASHER

Removal and Installation



## Removal and Installation

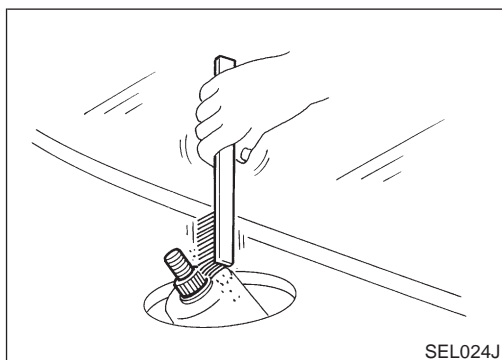
NJEL0301

### WIPER ARMS

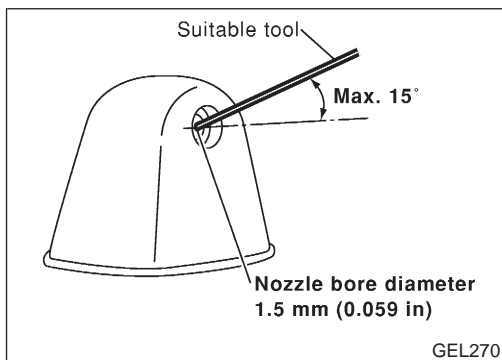
NJEL0301S01

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. Set the black center to clearance "E" immediately before tightening the nut.
  3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
  4. Ensure that wiper blades stop on the lowest heat wire.
- **Tighten windshield wiper arm nuts to specified torque.**

 : 13 - 18 N-m (1.3 - 1.8 kg-m, 10 - 13 ft-lb)



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

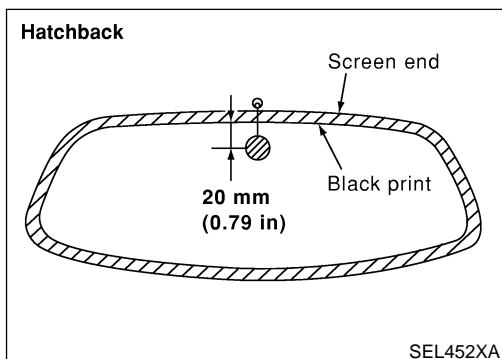


### Washer Nozzle Adjustment

NJEL0302

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

**Adjustable range:  $\pm 15^\circ$  (In any direction)**



The diameter of the washer spit circle is less than 30 mm (1.18 in).

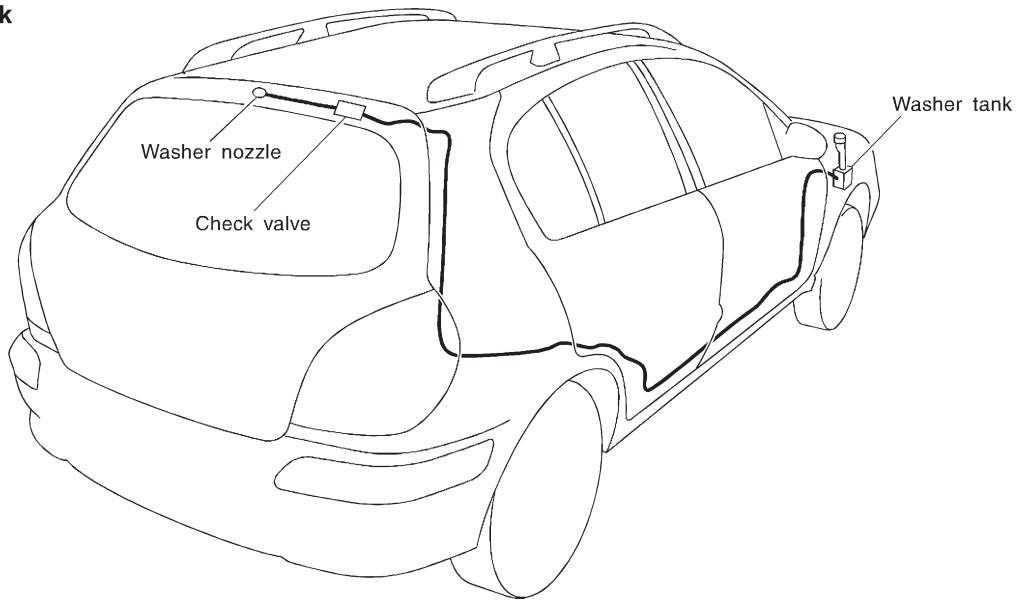
# REAR WIPER AND WASHER

Washer Tube Layout

## Washer Tube Layout

NJEL0303

Hatchback



SEL453X



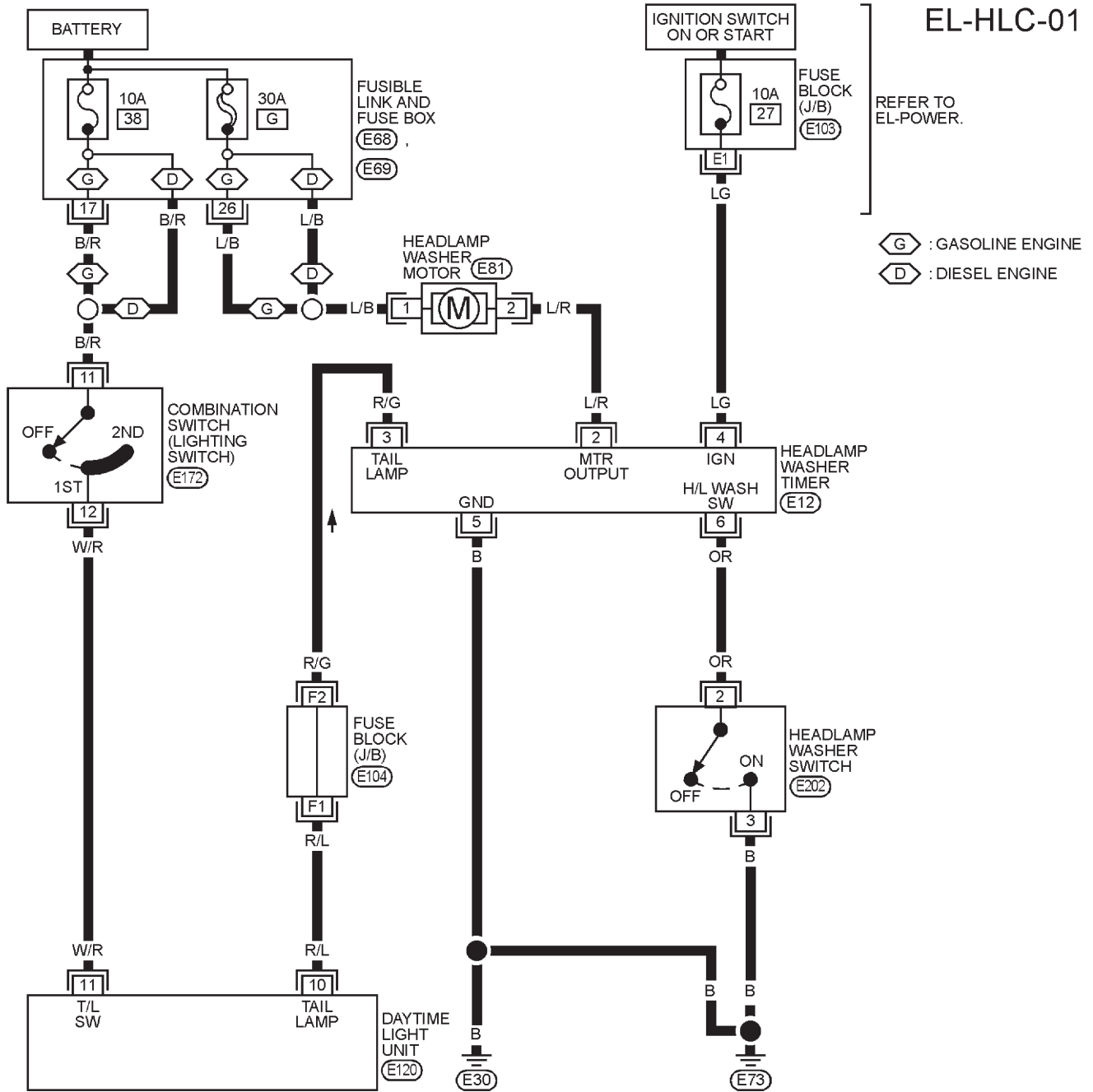
# HEADLAMP WASHER

Wiring Diagram — HLC —

## Wiring Diagram — HLC —

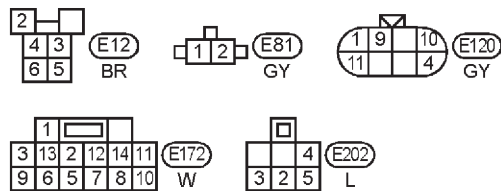
NJEL0459

### EL-HLC-01



REFER TO EL-POWER.

(G) : GASOLINE ENGINE  
(D) : DIESEL ENGINE

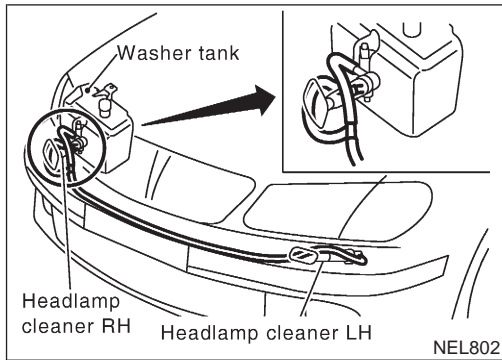


REFER TO THE FOLLOWING.  
 (E103), (E104) - FUSE BLOCK-JUNCTION BOX (J/B)  
 (E68), (E69) - FUSE AND FUSIBLE LINK BOX

YEL663C

# HEADLAMP WASHER

Washer Tube Layout



## Washer Tube Layout

NJEL0376



# HORN

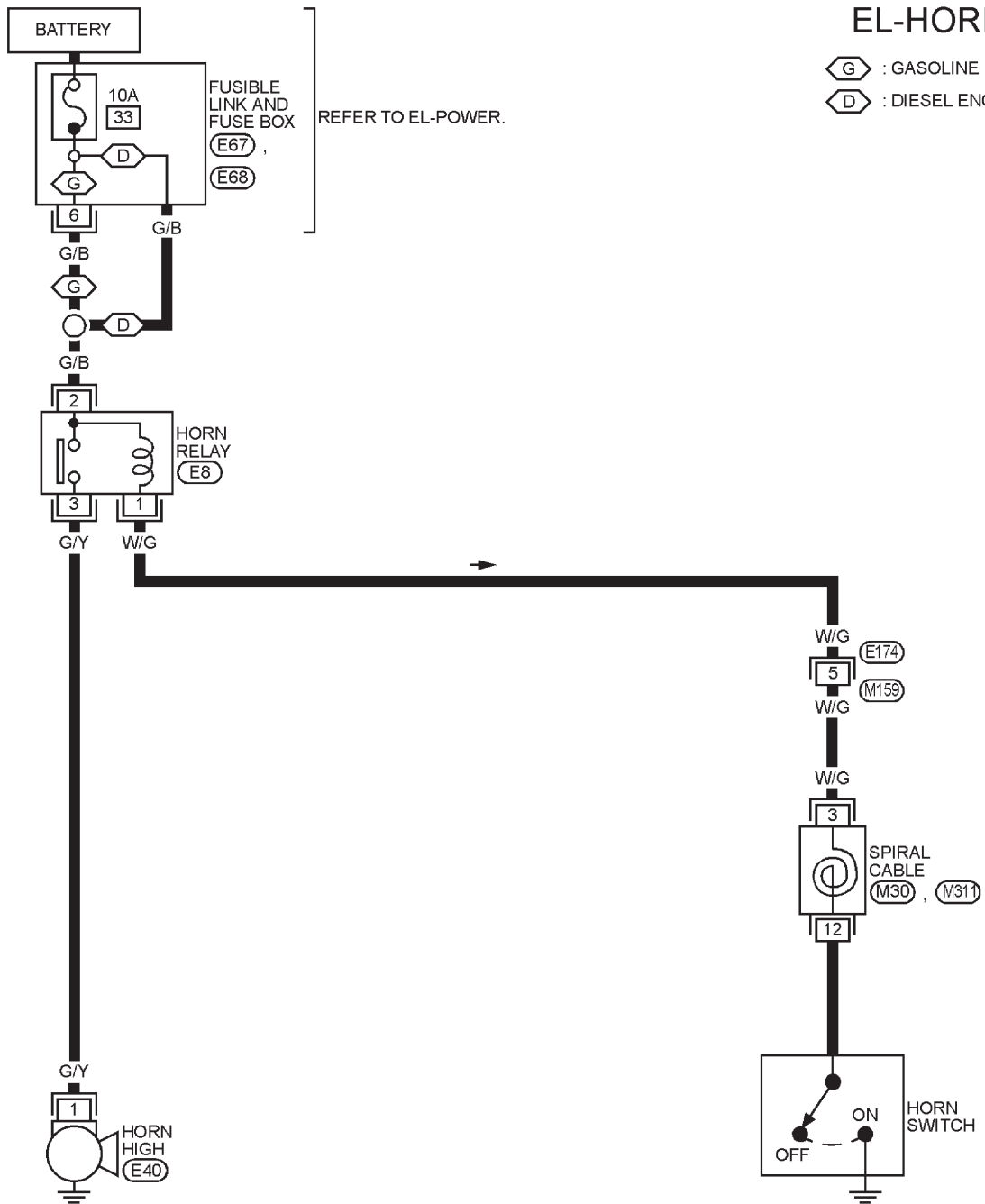
Wiring Diagram — HORN —



## Wiring Diagram — HORN —

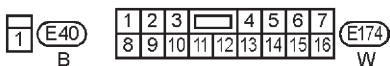
NJEL0460

### EL-HORN-01

-  : GASOLINE ENGINE
-  : DIESEL ENGINE



REFER TO THE FOLLOWING.  
 ,  - FUSE AND FUSIBLE LINK BOX



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

YEL664C

# CIGARETTE LIGHTER

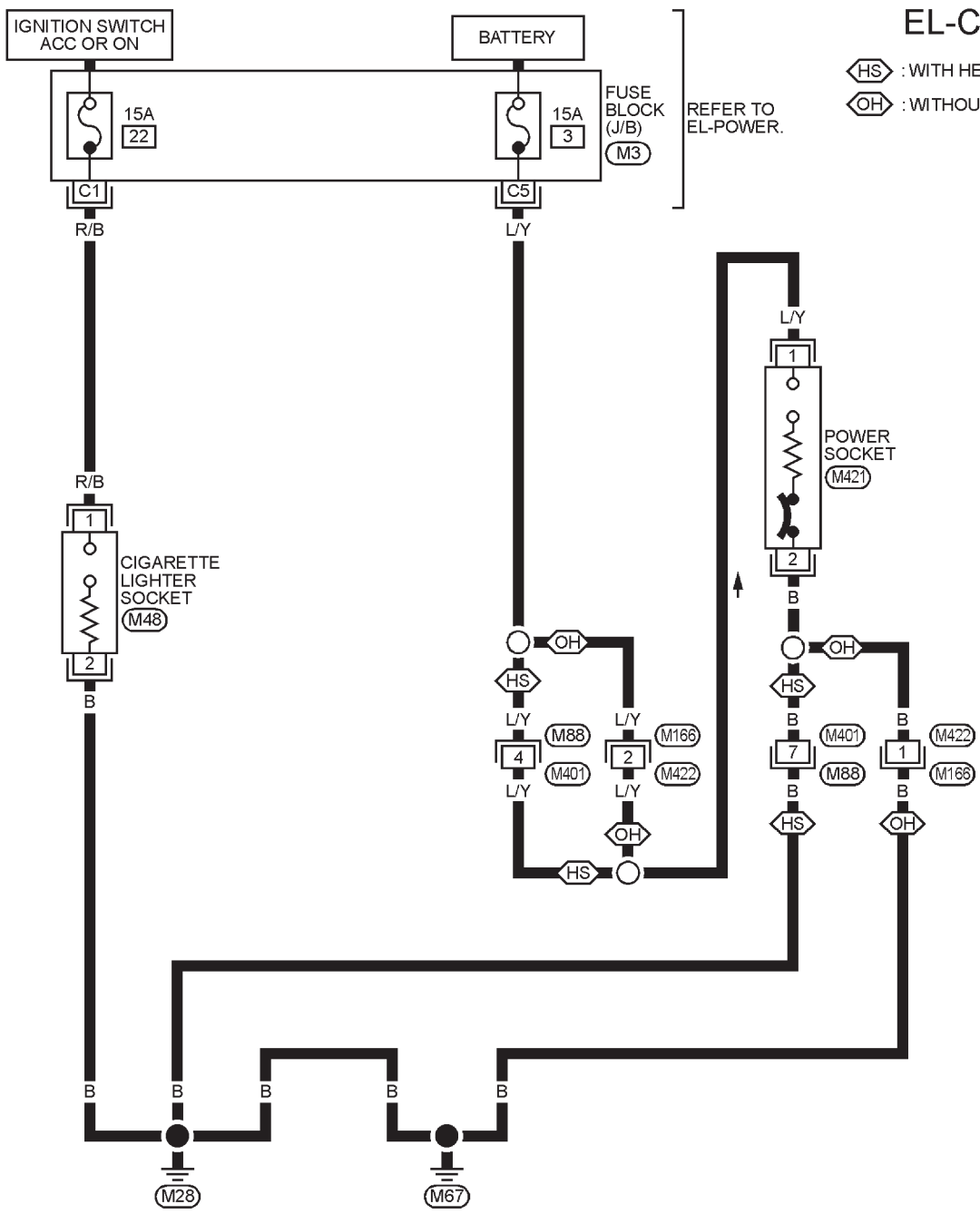
Wiring Diagram — CIGAR —

## Wiring Diagram — CIGAR —

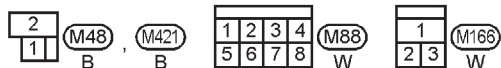
NJEL0461

### EL-CIGAR-01

- ⬡HS : WITH HEATED SEAT
- ⬡OH : WITHOUT HEATED SEAT



REFER TO EL-POWER.



REFER TO THE FOLLOWING.  
 (M3) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL665C

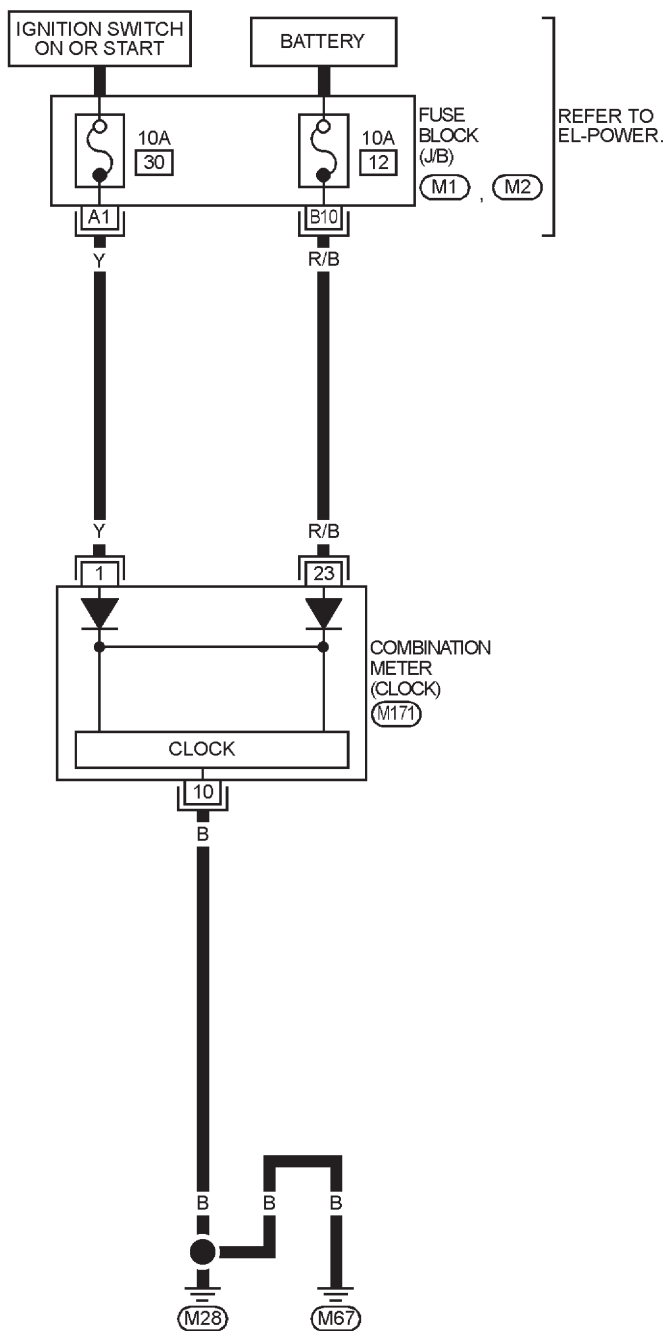
# CLOCK

Wiring Diagram — CLOCK —

## Wiring Diagram — CLOCK —

NJEL0462

### EL-CLOCK-01



REFER TO EL-POWER.

COMBINATION METER (CLOCK) (M171)

1	2	3	4	5	6	7	8	9	10	11		
12	13	14	15	16	17	18	19	20	21	22	23	24

(M171)  
W

REFER TO THE FOLLOWING.

(M1) , (M2)

-FUSE BLOCK-  
JUNCTION BOX (J/B)

YEL666C

# REAR WINDOW DEFOGGER

System Description

## System Description

=NJEL0463

The rear window defogger system is controlled by the time control unit. The rear window defogger operates only for approximately 15 minutes.

Power is supplied at all times

- through 20A fuse [No. 7, located in the fuse block (J/B)]
- to rear window defogger relay terminal 5 (B7 relay models) or 3 (B6 relay models)
- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to rear window defogger relay terminal 6 (B6 relay models).
- through 15A fuse [No. 5, located in the fuse block (J/B)]
- to time control unit terminal 9.

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 time control unit terminal 1.

Ground is supplied to terminal 5 of the rear window defogger switch through body grounds M28 and M67.

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

- through terminal 3 of the rear defogger switch
- to time control unit terminal 3.

Terminal 13 of time 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

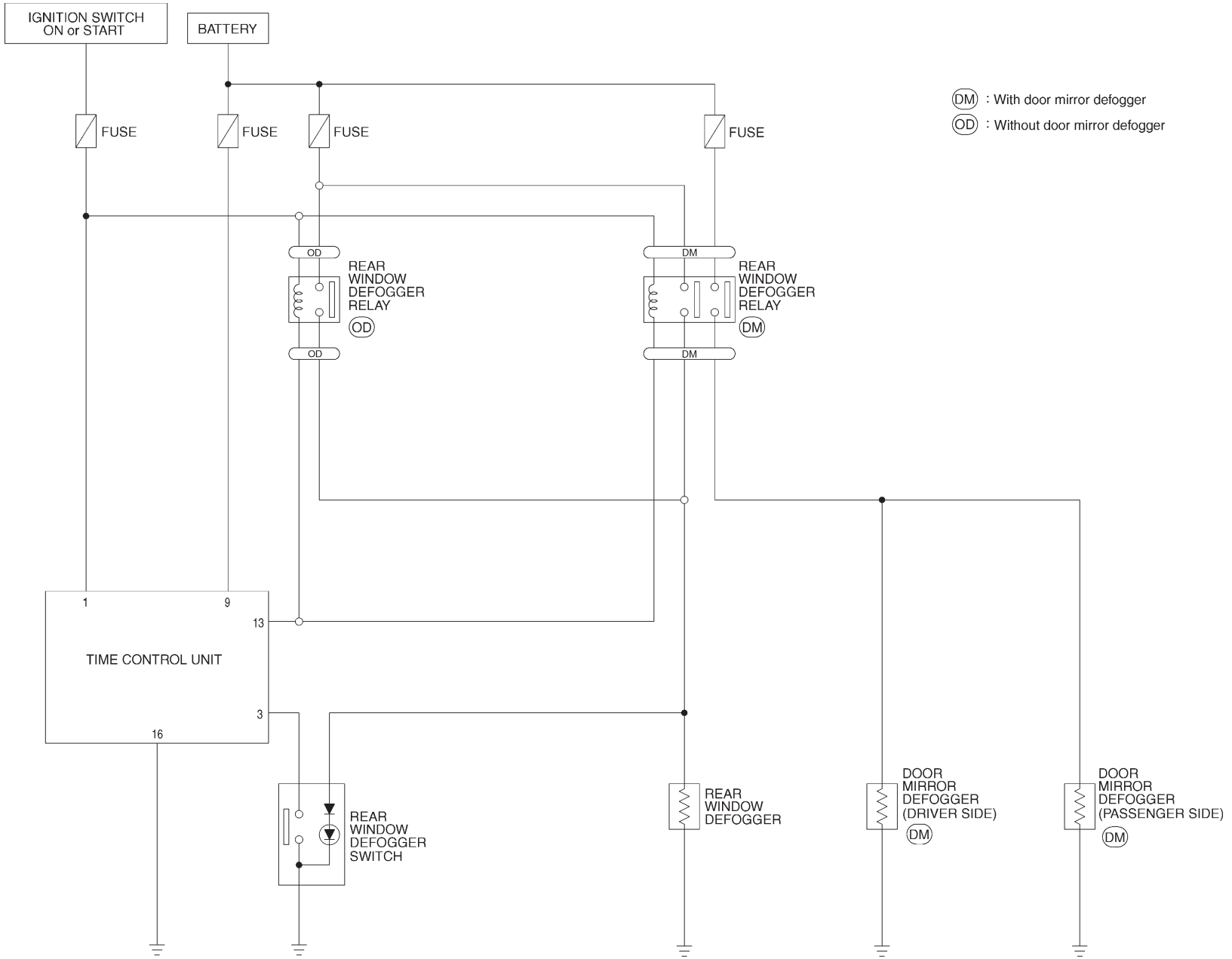
- through terminals 5 and 7 of the rear window defogger relay (B6 relay models) or
- through terminal 3 of the rear window defogger relay (B7 relay models)
- to the rear window defogger and door mirror defogger.

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.

EL-139



YEL667C

NJEL0533

Schematic

Schematic

REAR WINDOW DEFOGGER

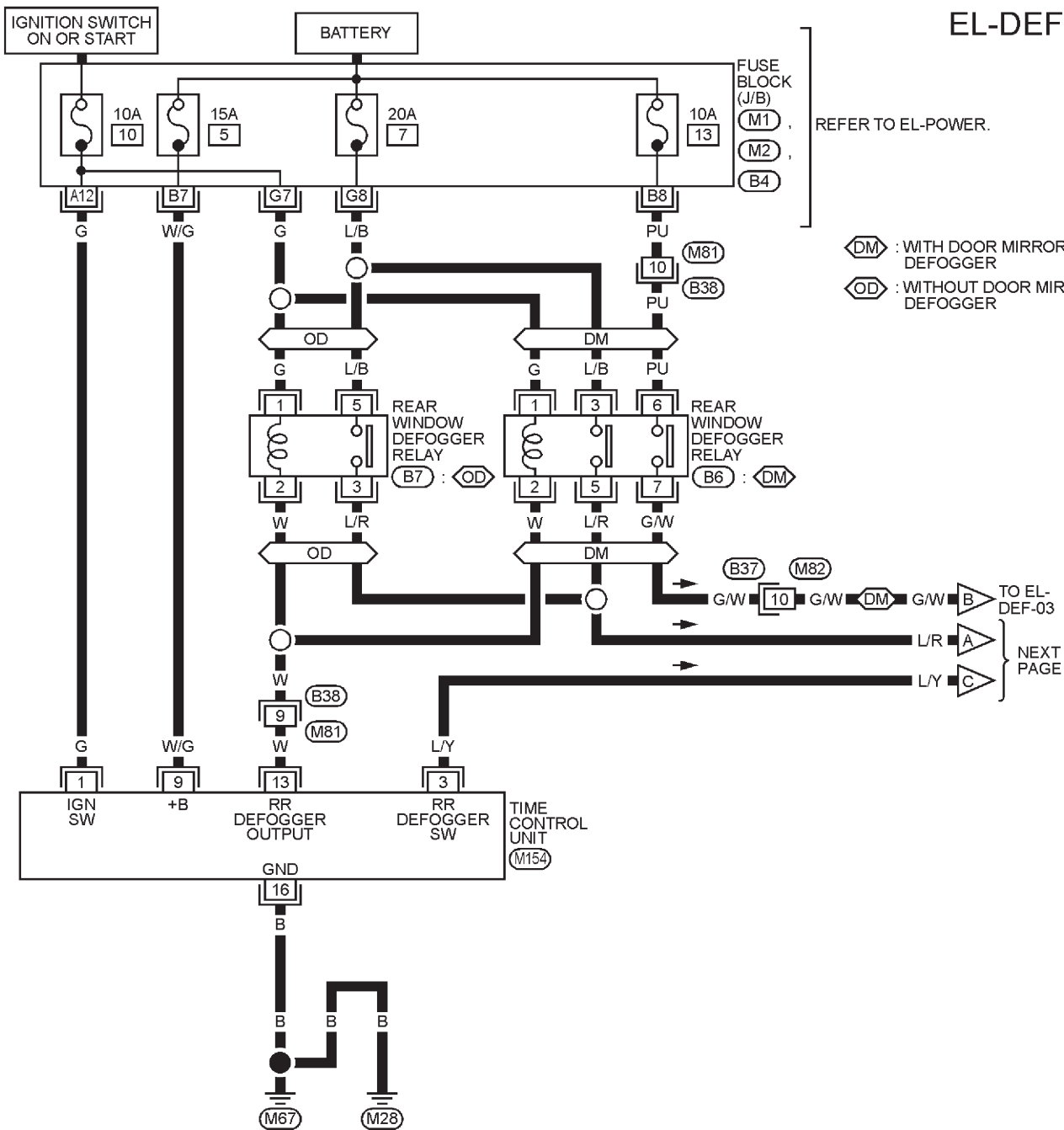
# REAR WINDOW DEFOGGER

Wiring Diagram — DEF —

## Wiring Diagram — DEF —

=NJEL0464

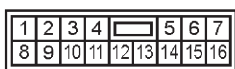
EL-DEF-01



REFER TO THE FOLLOWING.

M1 , M2 , B4

- FUSE BLOCK -  
JUNCTION BOX (J/B)



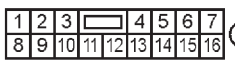
M154  
W



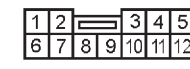
B6  
BR



B7  
L



B37  
BR



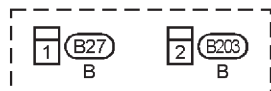
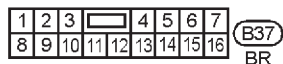
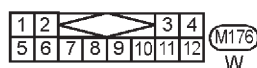
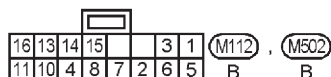
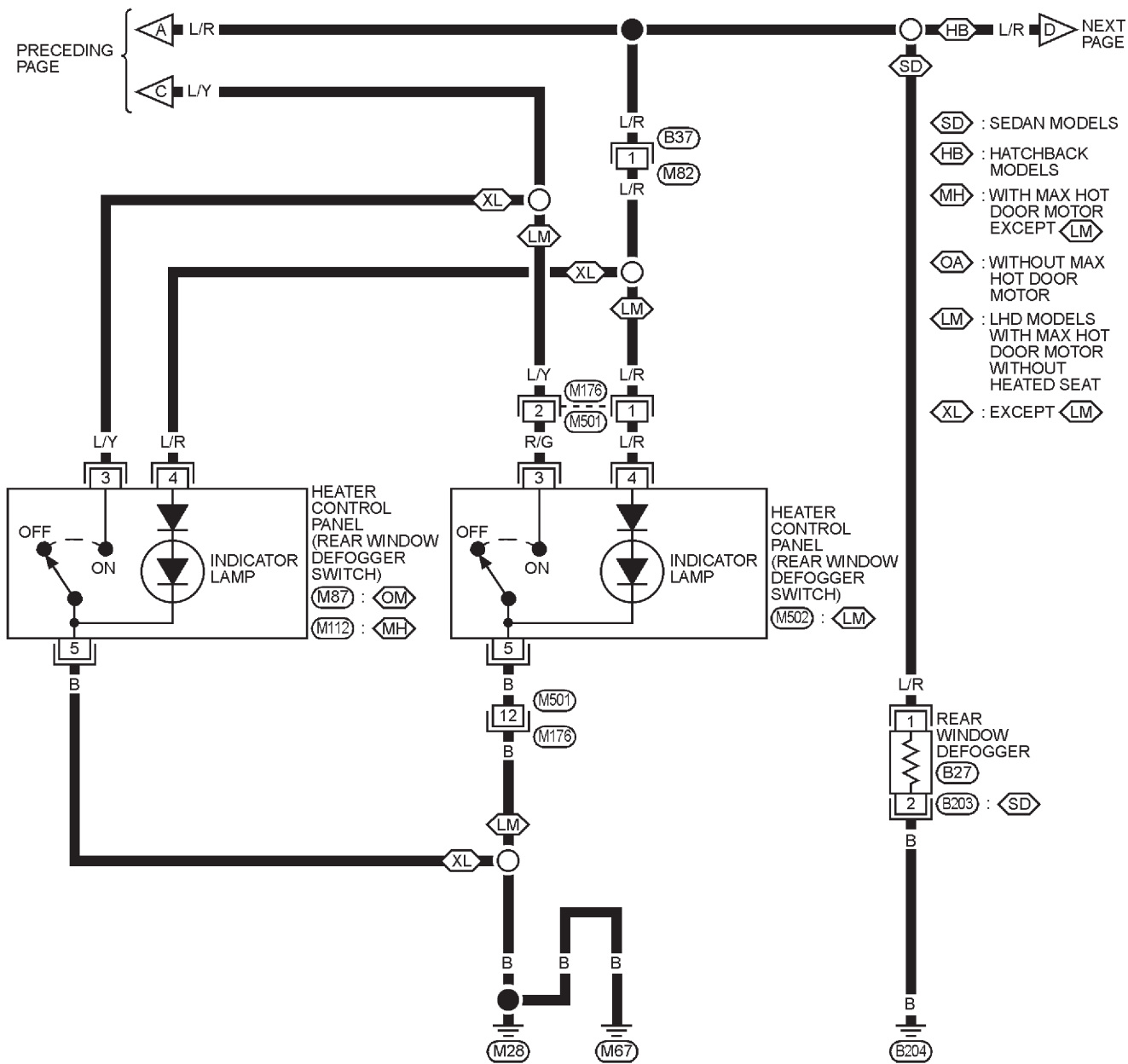
B38  
W



# REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

## EL-DEF-02

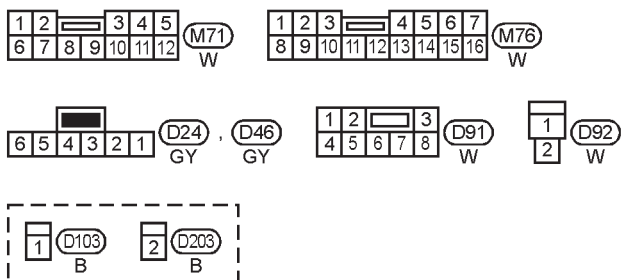
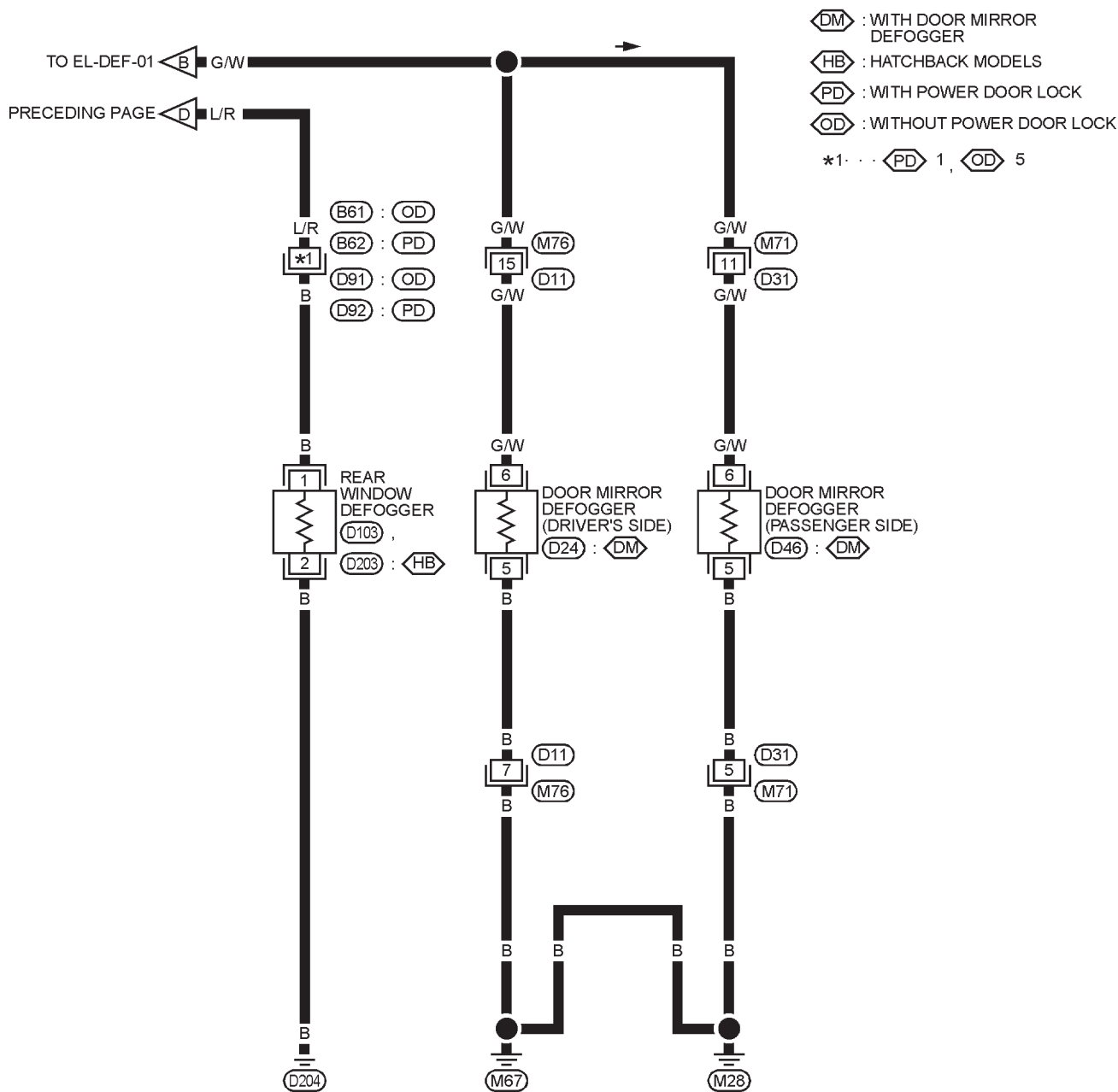


YEL669C

# REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

EL-DEF-03



YEL670C

# REAR WINDOW DEFOGGER

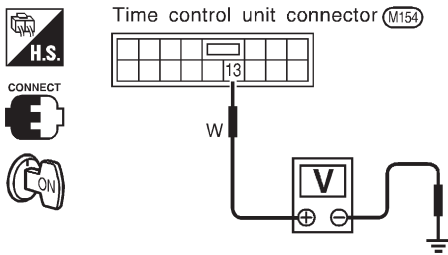
Trouble Diagnoses

## Trouble Diagnoses DIAGNOSTIC PROCEDURE

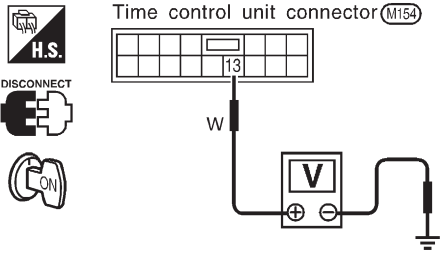
NJEL0465

NJEL0465S01

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

<b>1</b>	<b>CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL</b>	<p>1. Turn ignition switch to ON position. 2. Check voltage between time control unit harness terminal 13 and ground.</p> <div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;">  <p>Time control unit connector (M154)</p> </div> <div style="text-align: left;"> <p><b>Voltage [V]:</b> Rear window defogger switch is "OFF". Approx. 12 Rear window defogger switch is "ON". 0</p> </div> </div> <p style="text-align: right;">SEL455X</p> <p style="text-align: center;">OK or NG</p>
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Rear window defogger relay (Refer to EL-146.)</li> <li>● Rear window defogger circuit</li> <li>● Rear window defogger filament (Refer to EL-147.)</li> </ul>
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK DEFOGGER RELAY COIL SIDE CIRCUIT</b>	<p>1. Disconnect control unit connector. 2. Turn ignition switch to ON position. 3. Check voltage between time control unit terminal 13 and ground.</p> <div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;">  <p>Time control unit connector (M154)</p> </div> <div style="text-align: left;"> <p><b>Battery voltage should exist.</b></p> </div> </div> <p style="text-align: right;">SEL456X</p> <p style="text-align: center;">OK or NG</p>
OK	▶	GO TO 3.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in the fuse block (J/B)]</li> <li>● Rear window defogger relay</li> <li>● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay</li> <li>● Harness for open or short between rear window defogger relay and time control unit</li> </ul>

## REAR WINDOW DEFOGGER

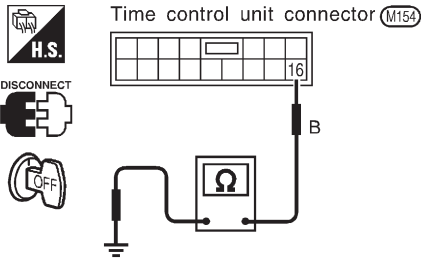
Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL</b>	
<p>Check continuity between time control unit terminal 3 and ground.</p>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> </div> <div style="width: 60%;"> <p><b>Continuity:</b></p> <p>Rear window defogger switch is pushed. Continuity should exist.</p> <p>Rear window defogger switch is released. Continuity should not exist.</p> </div> </div>		
SEL457X		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Rear window defogger switch (Refer to EL-146.)</li> <li>● Harness for open or short between time control unit and rear window defogger switch</li> <li>● Rear window defogger switch ground circuit</li> </ul>

<b>4</b>	<b>CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL</b>																					
<p>Check voltage between time control unit terminals 1 or 9 and ground.</p>																						
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> </div> <div style="width: 60%;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2" style="border: none;">Terminals</th> <th colspan="3" style="border: none;">Ignition switch position</th> </tr> <tr> <th style="border: none;">(+)</th> <th style="border: none;">(-)</th> <th style="border: none;">OFF</th> <th style="border: none;">ACC</th> <th style="border: none;">ON</th> </tr> </thead> <tbody> <tr> <td style="border: none;">9</td> <td style="border: none;">Ground</td> <td style="border: none;">Battery voltage</td> <td style="border: none;">Battery voltage</td> <td style="border: none;">Battery voltage</td> </tr> <tr> <td style="border: none;">1</td> <td style="border: none;">Ground</td> <td style="border: none;">0V</td> <td style="border: none;">0V</td> <td style="border: none;">Battery voltage</td> </tr> </tbody> </table> </div> </div>			Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	9	Ground	Battery voltage	Battery voltage	Battery voltage	1	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position																				
(+)	(-)	OFF	ACC	ON																		
9	Ground	Battery voltage	Battery voltage	Battery voltage																		
1	Ground	0V	0V	Battery voltage																		
SEL447X																						
<b>OK or NG</b>																						
OK	▶	GO TO 5.																				
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse or 15A fuse [No. 10 or No. 5, located in the fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse</li> </ul>																				

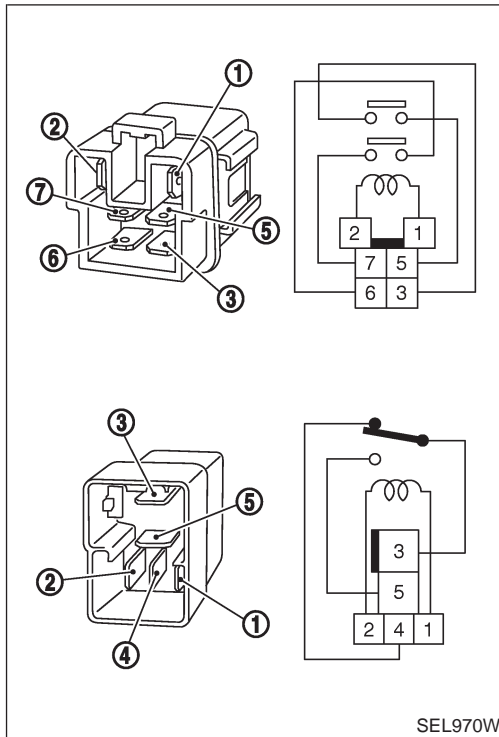
# REAR WINDOW DEFOGGER

Trouble Diagnoses (Cont'd)

5	CHECK CONTROL UNIT GROUND CIRCUIT
<p>Check continuity between time control unit terminal 16 and ground.</p> <div><p>The diagram shows a time control unit connector labeled M154 with terminal 16. A wire labeled 'B' connects terminal 16 to a ground symbol. A continuity tester, represented by a box with an ohm symbol (Ω), is connected between the ground and terminal 16. To the left, there are three icons: a hand holding a wire with 'H.S.' (High Speed) written below it, a 'DISCONNECT' symbol showing a plug being pulled out, and a switch with 'OFF' written below it.</p></div> <p>Continuity should exist.</p> <p>SEL448X</p>	
Yes	▶ Replace time control unit.
No	▶ Repair harness or connectors.

# REAR WINDOW DEFOGGER

Electrical Components Inspection



## Electrical Components Inspection

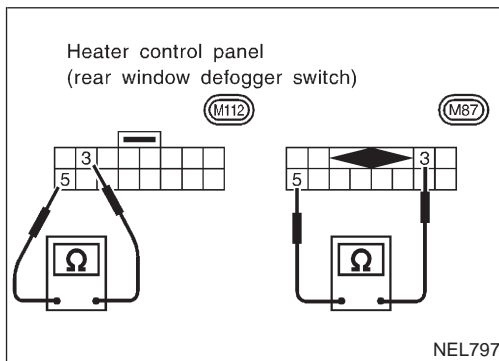
=NJEL0076

### REAR WINDOW DEFOGGER RELAY

NJEL0076S01

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



## REAR WINDOW DEFOGGER SWITCH

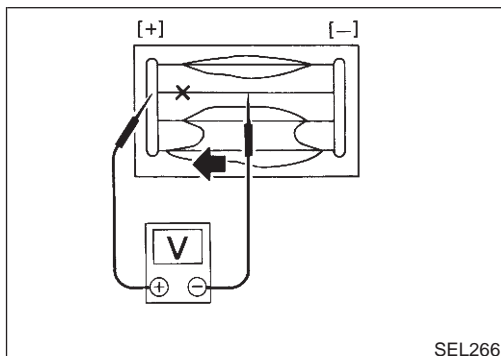
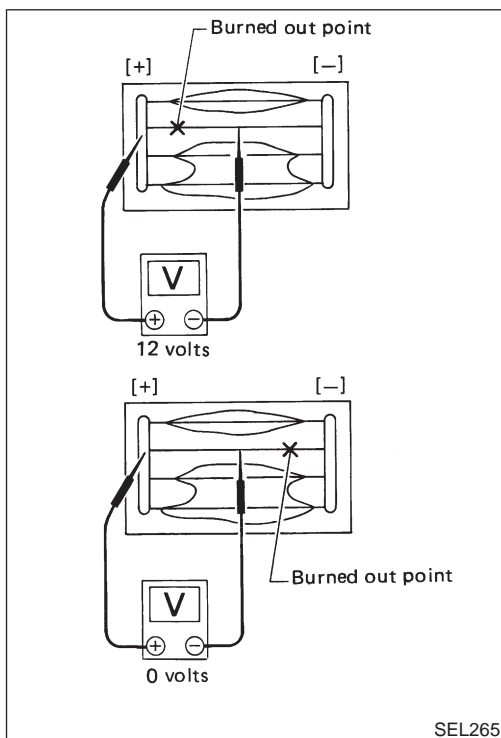
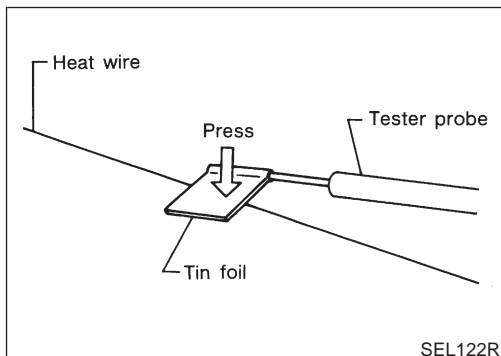
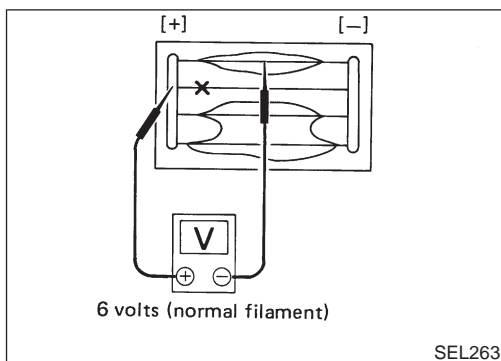
NJEL0076S02

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

Terminals	Condition	Continuity
3 - 5	Rear window defogger switch is pushed.	Yes
	Rear window defogger switch is released.	No

# REAR WINDOW DEFOGGER

Filament Check



## Filament Check

1. Attach probe circuit tester (in volt range) to middle portion of each filament. =NJEL0077

- 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.

# REAR WINDOW DEFOGGER

## Filament Repair

NJEL0078

### REPAIR EQUIPMENT

NJEL0078S01

- 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

NJEL0078S02

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.

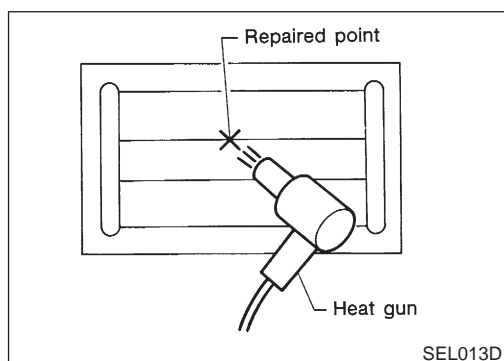
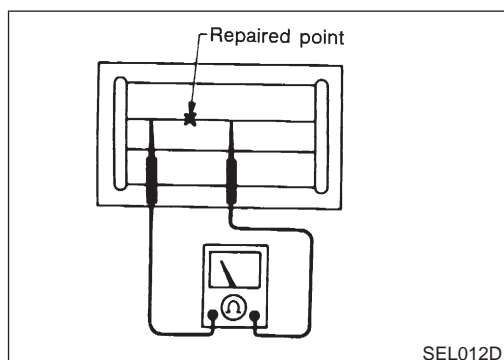
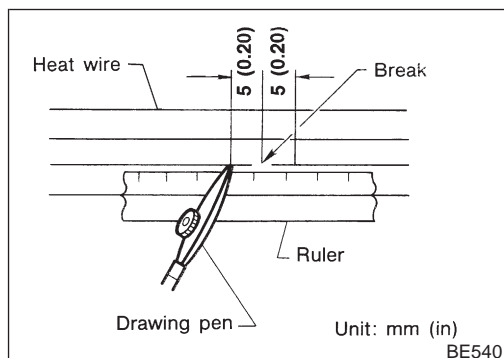
#### Shake silver composition container before use.

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

=NJEL0497

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

Power is supplied at all times

- through 15A fuse (No. 32, located in the fusible link and fuse block)
- to audio unit terminal 9
- to CD auto changer terminal 32.

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 3,
- to CD auto changer terminal 36 and

Ground is supplied through the case of the audio unit.

Audio signals are supplied

- through audio unit terminals 7, 10, 11, 12, 13, 14, 15, 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 and
- to terminals 1 and 2 of pillar tweeter LH and RH (with 6 speakers)

When the navigation system is triggered, power is supplied

- through navi control unit terminal 46
- to speaker relay terminal 2

Ground is supplied

- through navi control unit terminal 44
- to speaker relay terminal 1

With power and ground supplied, the relay is energized, and then audio signal is interrupted to front door speaker LH (LHD models) or RH (RHD models), and pillar tweeter LH (LHD models) or RH (RHD models) For detailed, refer to "NAVIGATION SYSTEM".

### NATS AUDIO LINK

NJEL0497S01

#### Description

NJEL0497S0101

The link with the NATS IMMU implies that the audio unit can basically only be operated if connected to the matching NATS IMMU to which the audio unit was initially fitted on the production line.

Since radio operation is impossible after the link with the NATS is disrupted theft of the audio unit is basically useless since special equipment is required to reset the audio unit.

#### Initialization process for audio units that are linked to the NATS IMMU

New audio units will be delivered to the factories in the "NEW" state, i.e. ready to be linked with the vehicle's NATS. When the audio unit in "NEW" state is first switched on at the factory, it will start up communication with the vehicle's immobiliser control unit (IMMU) and send a code (the "audio unit Code") to the IMMU. The IMMU will then store this code, which is unique to each audio unit, in its (permanent) memory.

Upon receipt of the code by the IMMU, the NATS will confirm correct receipt of the audio unit code to the audio unit. Hereafter, the audio unit will operate as normal.

During the initialisation process, "NEW" is displayed on the audio unit display. Normally though, communication between audio unit and IMMU takes such a short time (300 ms) that the audio unit seems to switch on directly without showing "NEW" on its display.

#### Normal operation

Each time the audio unit is switched on afterwards, the audio unit code will be verified between the audio unit and the NATS before the audio unit becomes operational. During the code verification process, "WAIT" is shown on the audio unit display. Again, the communication takes such a short time (300 ms) that the audio unit seems to switch on directly without showing "WAIT" on its display.

#### When the radio is locked

In case of a audio unit being linked with the vehicle's NATS (immobilizer system), disconnection of the link between the audio unit and the IMMU will cause the audio unit to switch into the lock ("SECURE") mode in which the audio unit is fully inoperative. Hence, repair of the audio unit is basically impossible, unless the audio unit is reset to the "NEW" state for which special decoding equipment is required.

Clarion has provided their authorized service representatives with so called "decoder boxes" which can bring the audio unit back to the "NEW" state, enabling the audio unit to be switched on after which repair can be

## AUDIO

### System Description (Cont'd)

---

carried out. Subsequently, when the repaired audio unit is delivered to the final user again, it will be in the "NEW" state as to enable re-linking the audio unit to the vehicle's immobiliser system. As a result of the above, repair of the audio unit can only be done by an authorized Clarion representative.

### SPEED DEPENDENT VOLUME CONTROL

NJEL0497S02

#### Description

NJEL0497S0201

If activated, the radio output volume will be automatically adjusted to compensate for increasing driving noises at higher driving speeds.

The radio receives a speed signal from the vehicle speed sensor (VSS) and selects the output volume.

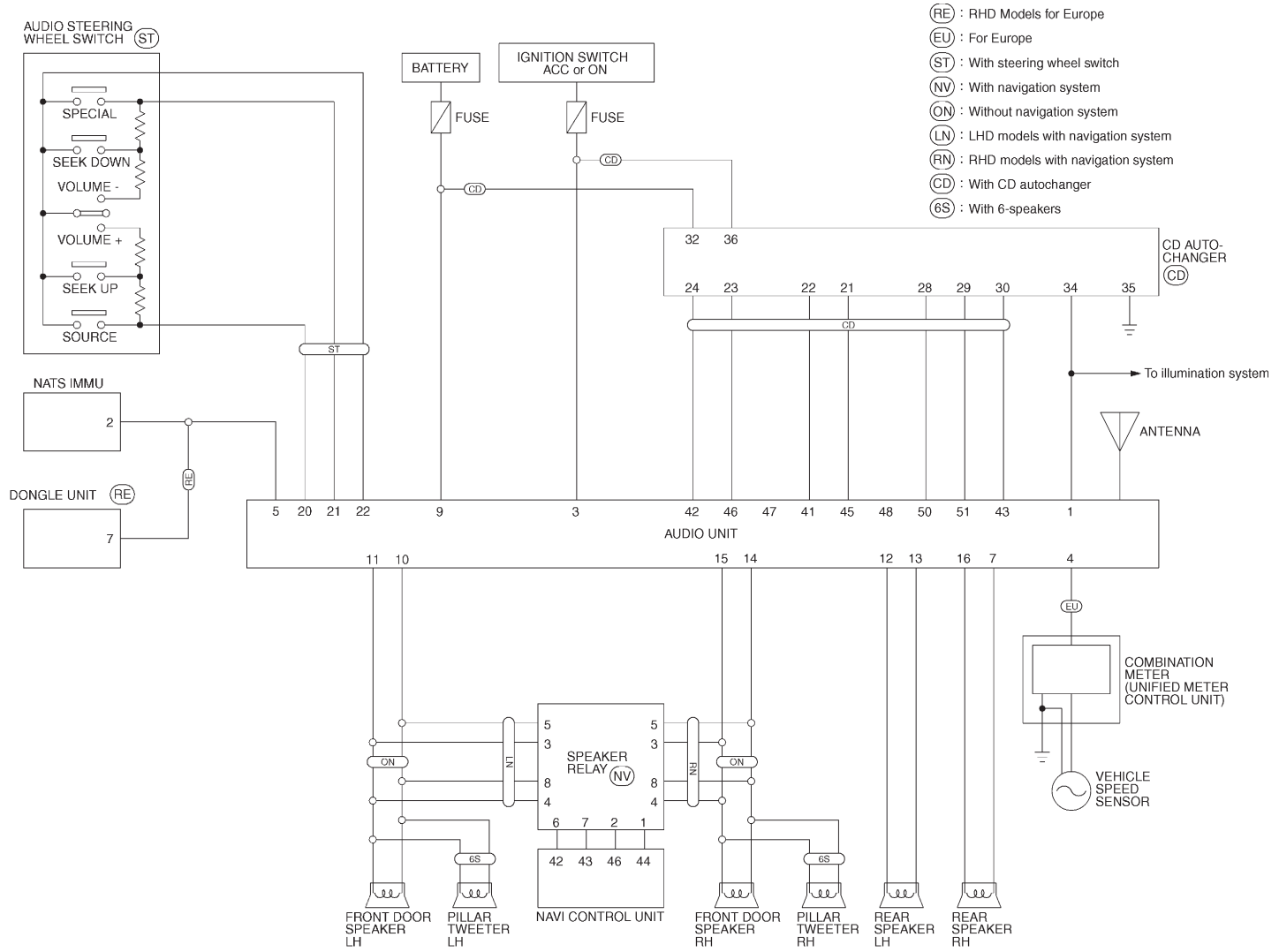
### PERSONAL AUDIO SETTINGS

NJEL0497S03

#### Description

NJEL0497S0301

The radio is designed to store several settings (volume, bass, treble, preset stations and level of speed dependent volume control) with every NATS ignition key used. Up to a maximum of 4 NATS keys can be registered. During the communication as mentioned under "NATS audio link", the radio will recognize the used ignition key and select the accompanying settings.



Schematic

AUDIO

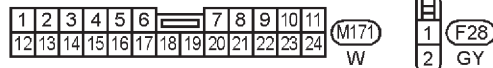
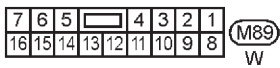
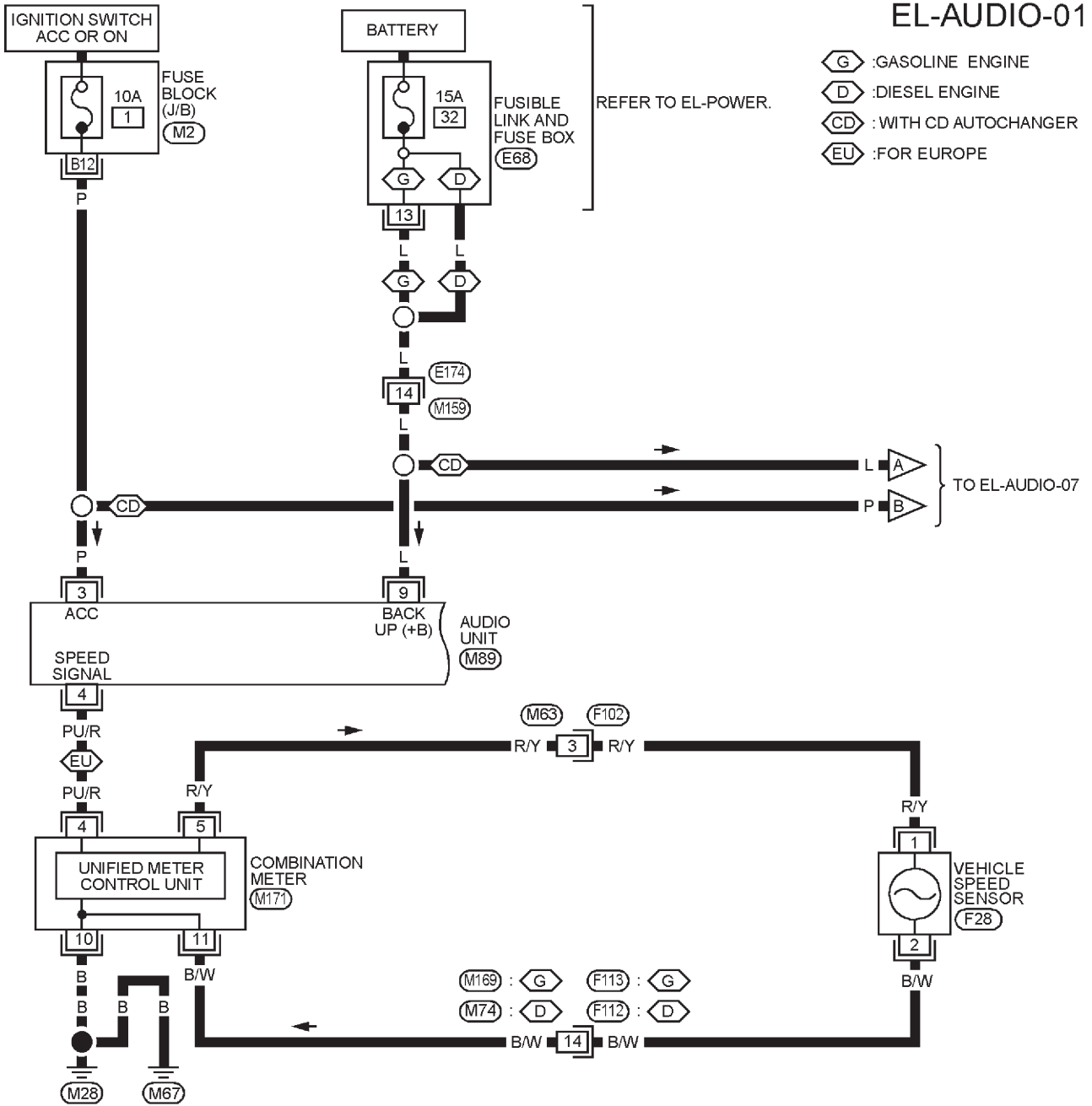
# AUDIO

Wiring Diagram — AUDIO —

## Wiring Diagram — AUDIO —

NJEL0467

### EL-AUDIO-01



REFER TO THE FOLLOWING.

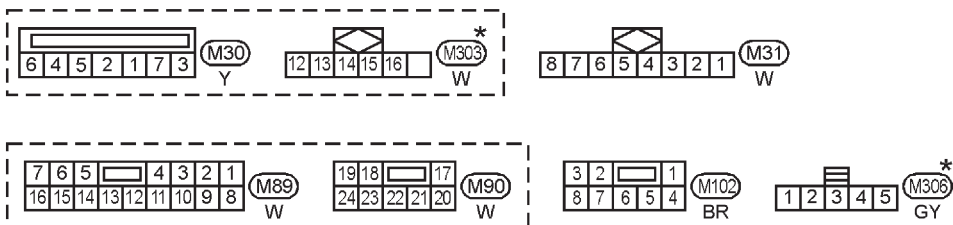
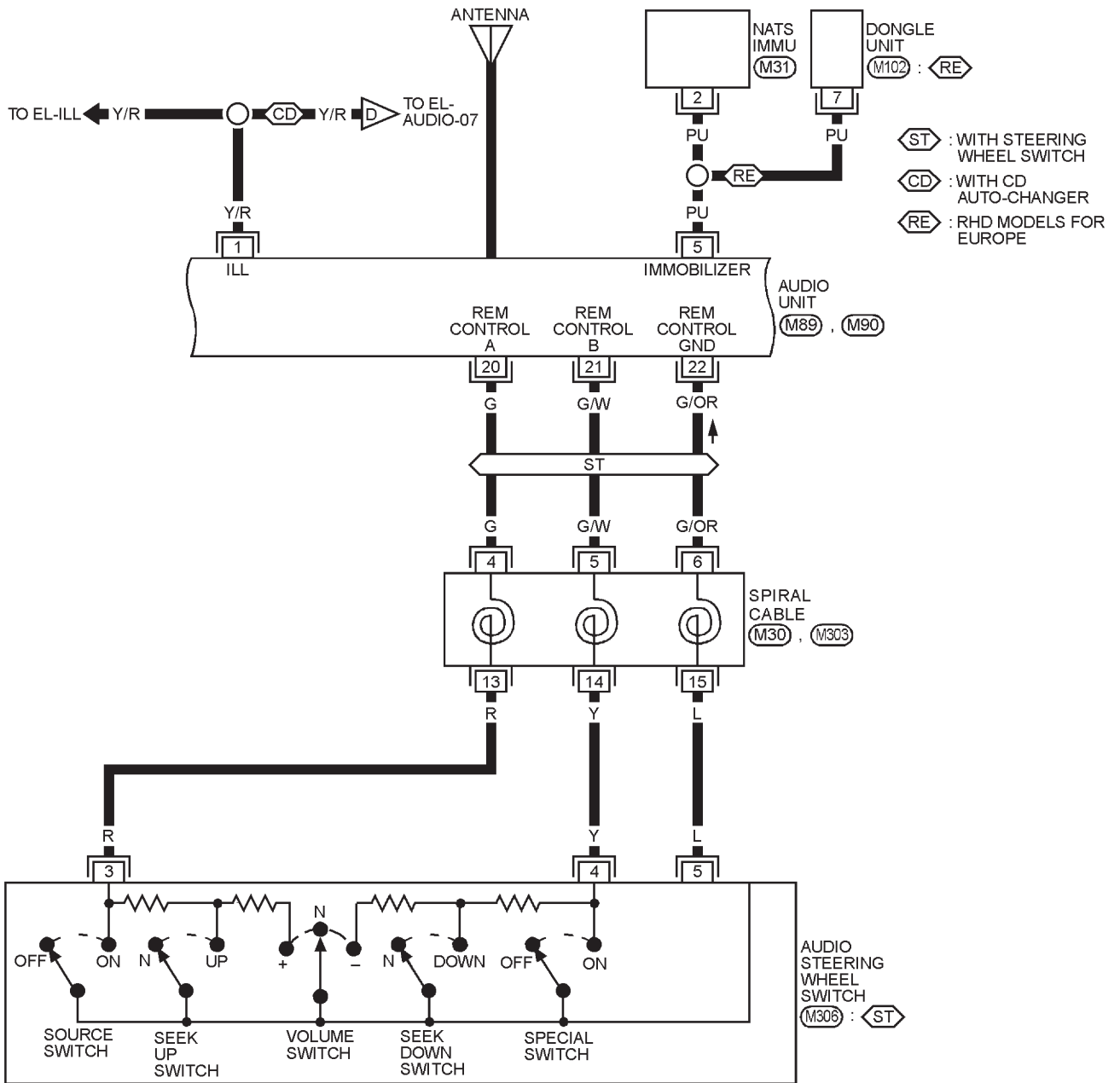
- (M2) - FUSE BLOCK-JUNCTION BOX (J/B)
- (E68) - FUSE AND FUSIBLE LINK BOX

YEL672C

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-02



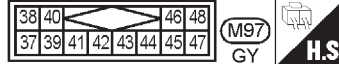
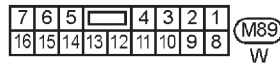
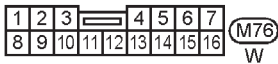
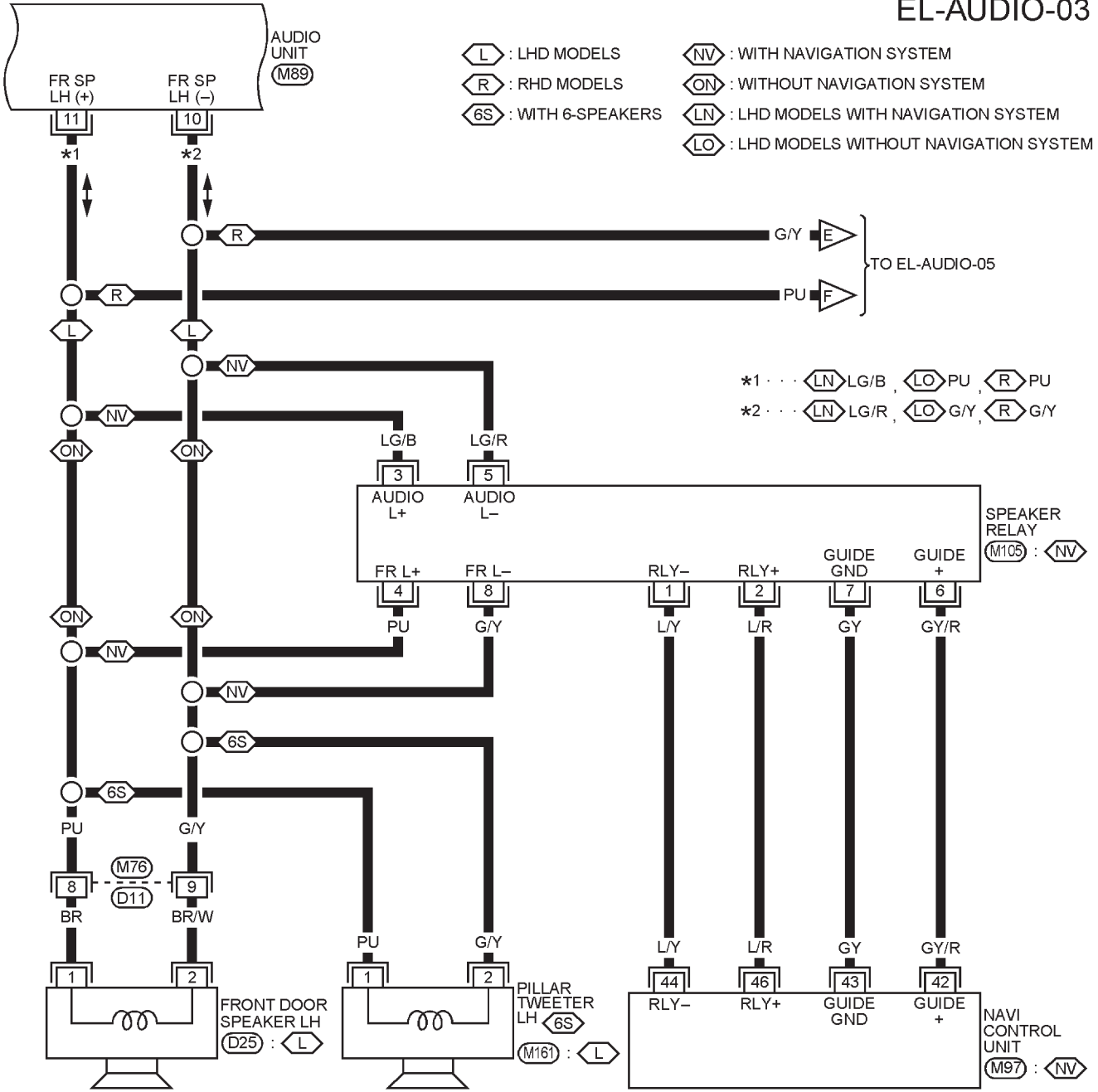
\* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", EL SECTION.

YEL673C

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-03

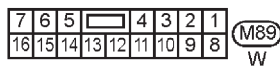
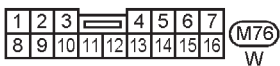
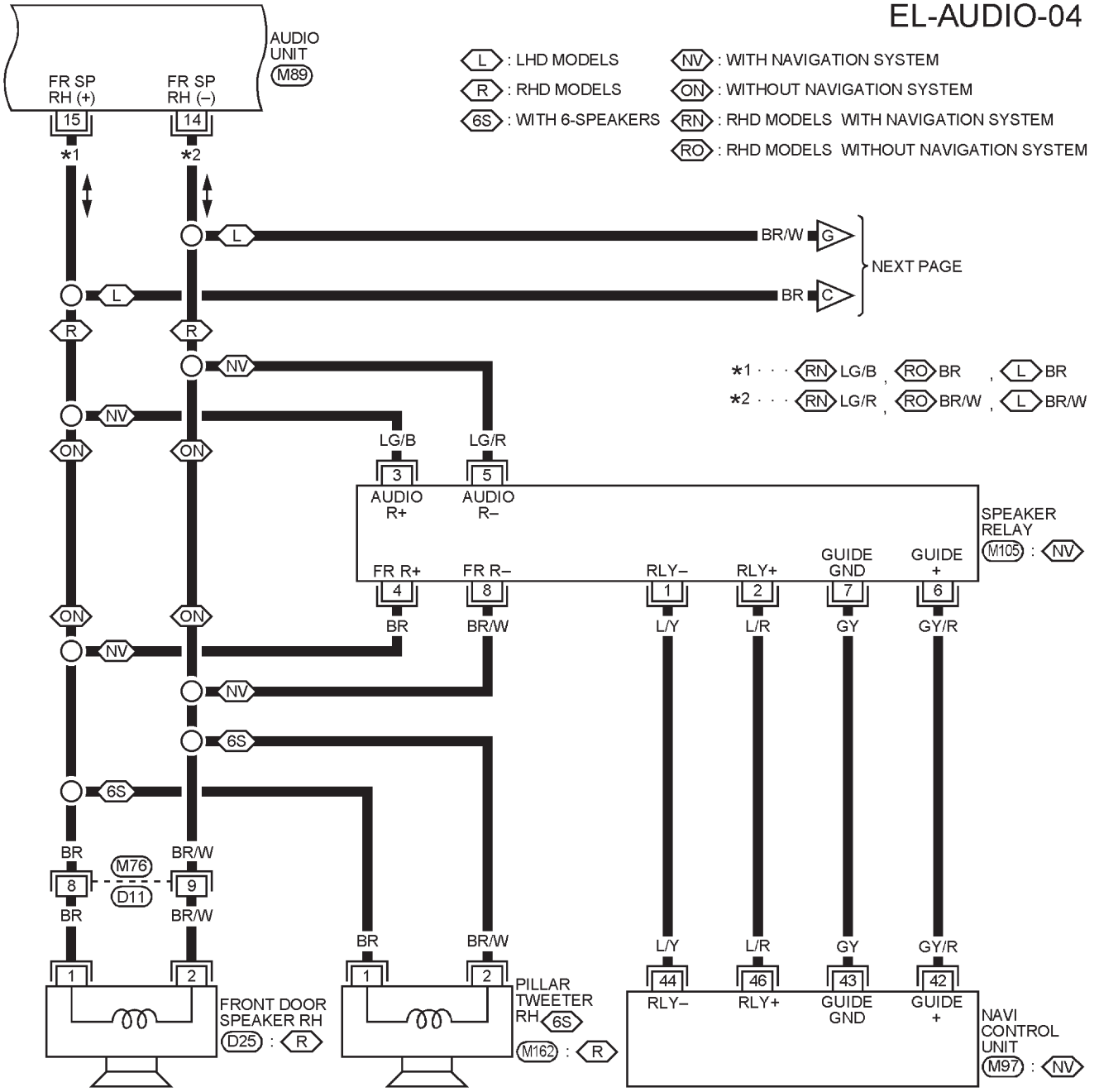


YEL674C

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-04



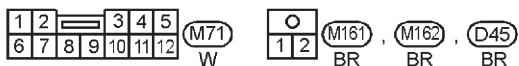
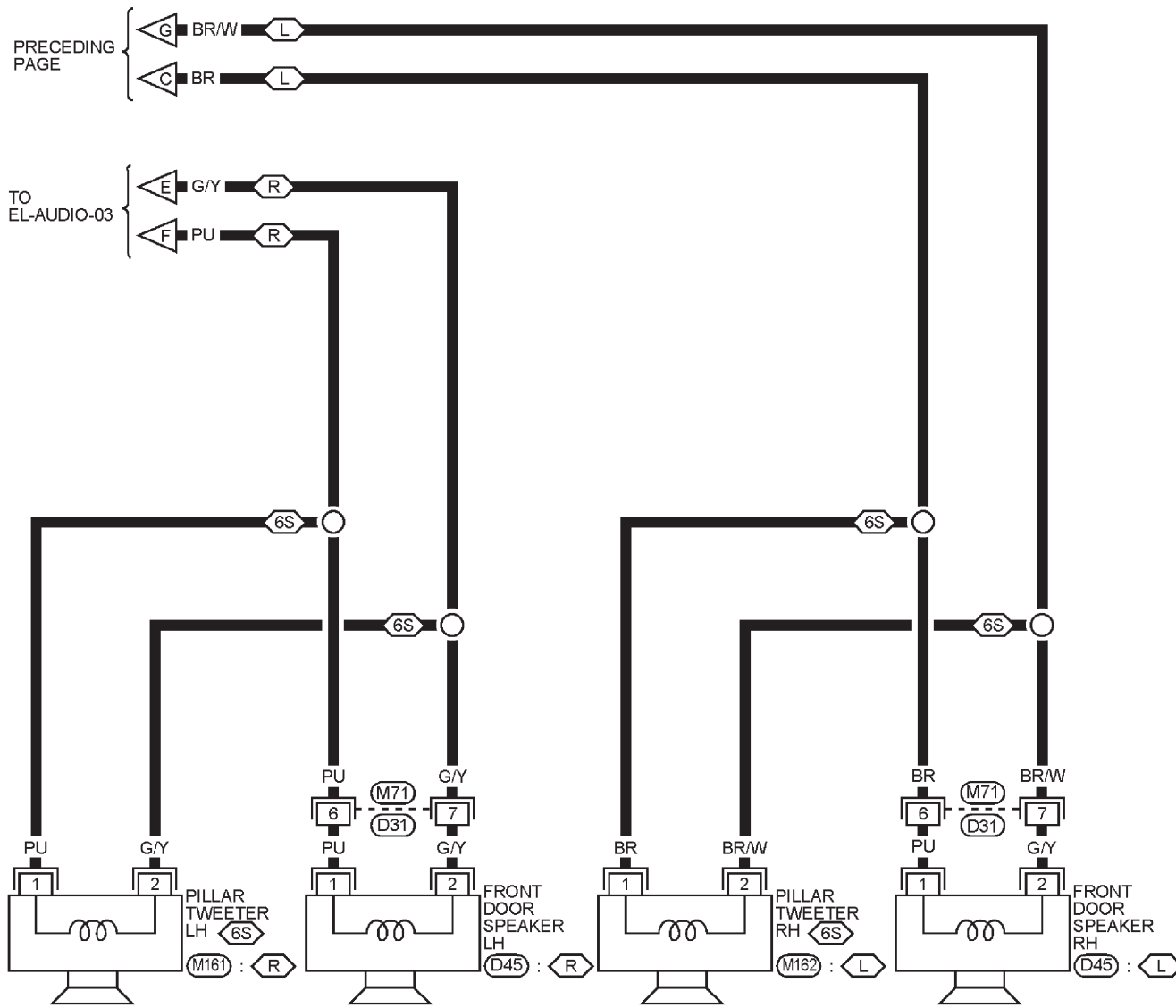
YEL675C

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-05

- L : LHD MODELS
- R : RHD MODELS
- 6S : WITH 6-SPEAKERS

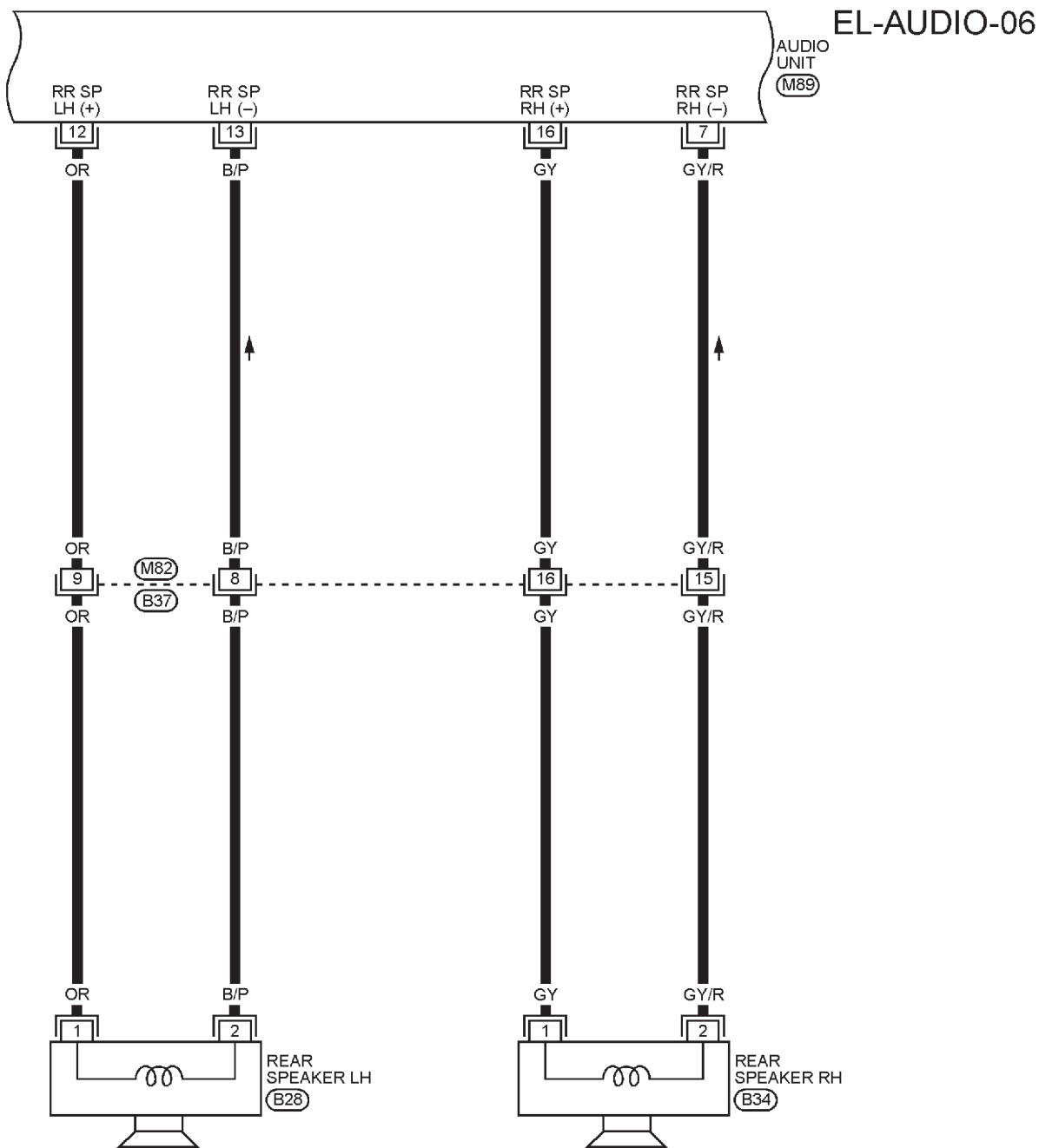


YEL676C



# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

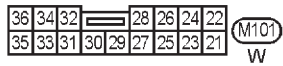
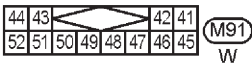
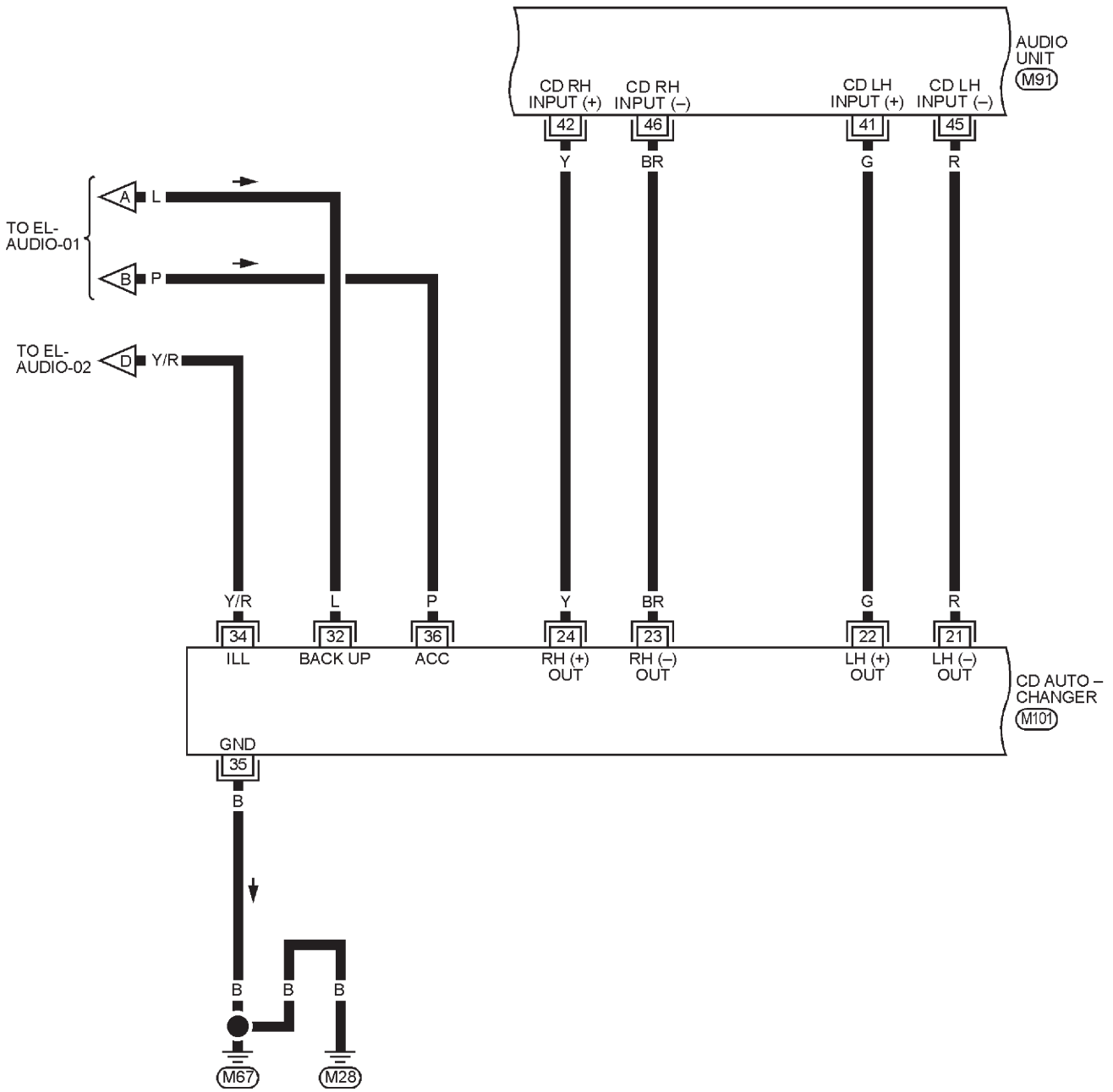


YEL677C

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-07

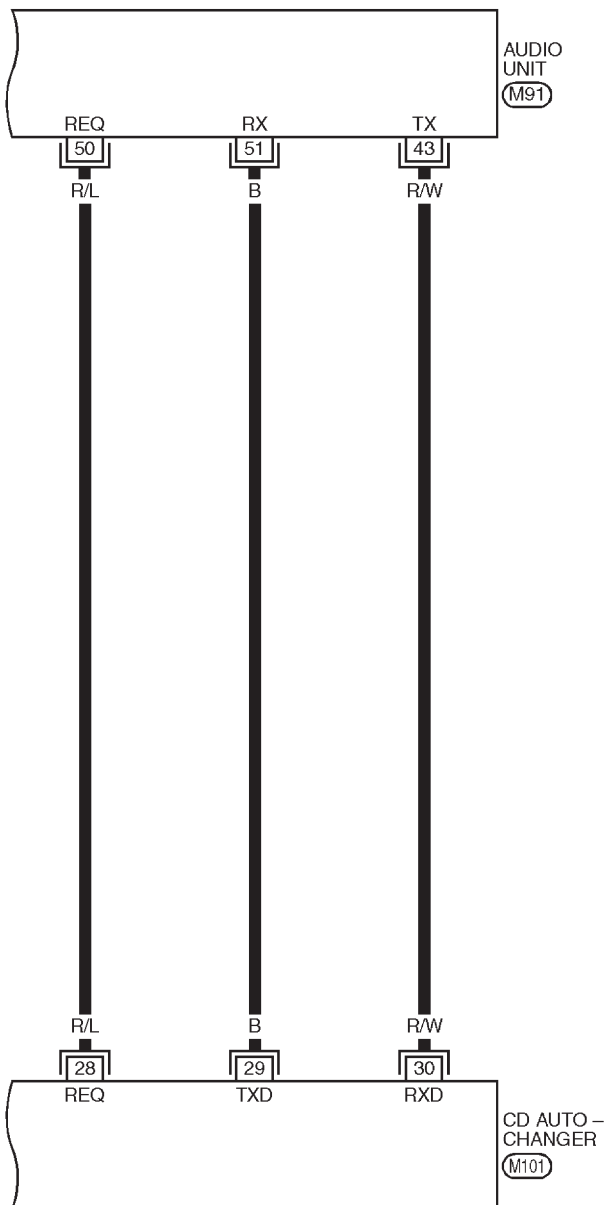


YEL678C

# AUDIO

Wiring Diagram — AUDIO — (Cont'd)

## EL-AUDIO-08



YEL679C

## AUDIO

Trouble Diagnoses

### Trouble Diagnoses

NJEL0385

#### AUDIO UNIT

NJEL0385S05

Symptom	Possible causes	Repair order
Audio unit inoperative (no digital display and no sound from speakers).	<ol style="list-style-type: none"> <li>10A fuse</li> <li>Poor audio unit case ground</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check 10A fuse [No. 1, located in fuse block (J/B)]. Turn ignition switch ON and verify that battery positive voltage is present at terminal 3 of audio unit.</li> <li>Check audio unit case ground.</li> <li>Remove audio unit for repair.</li> </ol>
Audio unit presets are lost when ignition switch is turned OFF.	<ol style="list-style-type: none"> <li>15A fuse</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check 15A fuse [No. 32, located in fuse block (J/B)] and verify that battery positive voltage is present at terminal 9 of audio unit.</li> <li>Remove audio unit for repair.</li> </ol>
Individual rear speaker is noisy or inoperative.	<ol style="list-style-type: none"> <li>Each speaker</li> <li>Output circuit to each speaker</li> </ol>	<ol style="list-style-type: none"> <li>Check speaker.</li> <li>Check the output circuits to each speaker <ul style="list-style-type: none"> <li>between audio unit and speaker amp.</li> <li>between speaker amp. and each speaker.</li> </ul> </li> </ol>
AM/FM stations are weak or noisy.	<ol style="list-style-type: none"> <li>Roof antenna</li> <li>Audio unit ground</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check roof antenna.</li> <li>Check audio unit ground condition.</li> <li>Remove audio unit for repair.</li> </ol>
Audio unit generates noise in AM and FM modes with engine running.	<ol style="list-style-type: none"> <li>Poor audio unit ground</li> <li>Loose or missing ground bonding straps</li> <li>Ignition condenser or rear window defogger noise suppressor condenser</li> <li>Ignition coil or secondary wiring</li> <li>Audio unit</li> </ol>	<ol style="list-style-type: none"> <li>Check audio unit ground.</li> <li>Check ground bonding straps.</li> <li>Replace ignition condenser or rear window defogger noise suppressor condenser.</li> <li>Check ignition coil and secondary wiring.</li> <li>Remove audio unit for repair.</li> </ol>
Audio unit generates noise in AM and FM modes with accessories on (switch pops and motor noise).	<ol style="list-style-type: none"> <li>Poor audio unit ground</li> <li>Antenna</li> <li>Accessory ground</li> <li>Faulty accessory</li> </ol>	<ol style="list-style-type: none"> <li>Check audio unit ground.</li> <li>Check antenna.</li> <li>Check accessory ground.</li> <li>Replace accessory.</li> </ol>

#### CD AUTOCHANGER

NJEL0385S06

##### Testing Magazines and Discs

NJEL0385S0601

- Confirm discs are installed correctly into the magazine (not upside down).
- Visually inspect/compare the customer's discs with each other and other discs. Identify any of the following conditions:
  - Discs with a large outside diameter. [Normal size is 120 mm (4.72 in).]
  - Discs with rough or lipped edges.
  - Discs with excessive thickness [Normal size is 1.2 mm (0.047 in).]
  - Discs with scratches, abrasions, or pits on the surface.
  - Discs with grease/oil, fingerprints, foreign material.
  - Discs are warped due to excessive heat exposure.
- Slide/place the discs in and out of the various magazine positions. Identify any discs and/or positions that require additional force for placement/ejection. If interference (sticking, excessive tensions) is found, replace the magazine or the discs.

##### NOTE:

- Discs which are marginally out of specification (ex. dirty, scratched and so on) may play correctly on a home stereo. However, when used in the automotive environment skipping may occur due to the added vehicle movement and/or vibration due to road conditions. Autochangers should not be replaced when discs are at fault.**
- Use a soft damp cloth to wipe the discs starting from the center outward in radial direction. Never use chemical cleaning solutions to clean the discs.**

# AUDIO

Inspection

---

## Inspection

=NJEL0221

NJEL0221S01

### AUDIO UNIT

All voltage inspections are made with:

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

### ANTENNA

NJEL0221S02

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

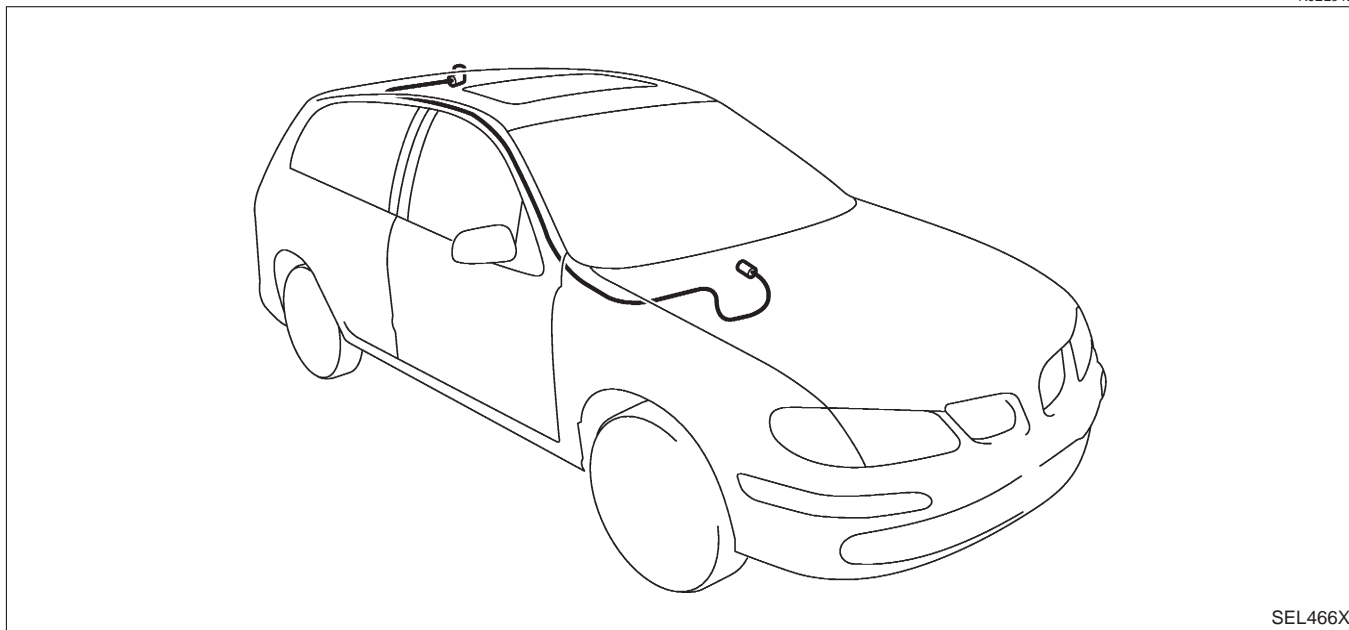
- If reception improves, check antenna ground (at body surface).
- If reception does not improve, check main feeder cable for short circuit or open circuit.

# AUDIO ANTENNA

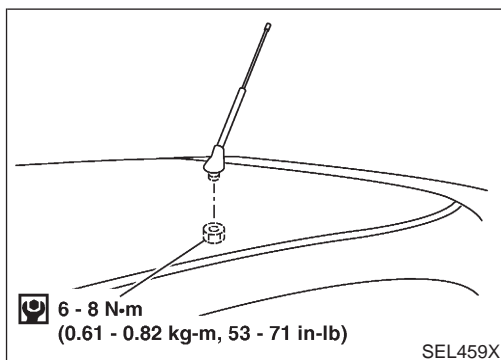
Location of Antenna

## Location of Antenna

NJEL0468



SEL466X



SEL459X

## Antenna Rod Replacement REMOVAL

NJEL0469

NJEL0469S01

1. Remove rear portion of head lining.
2. Remove antenna nut and antenna base.

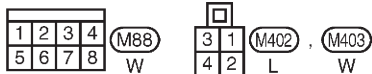
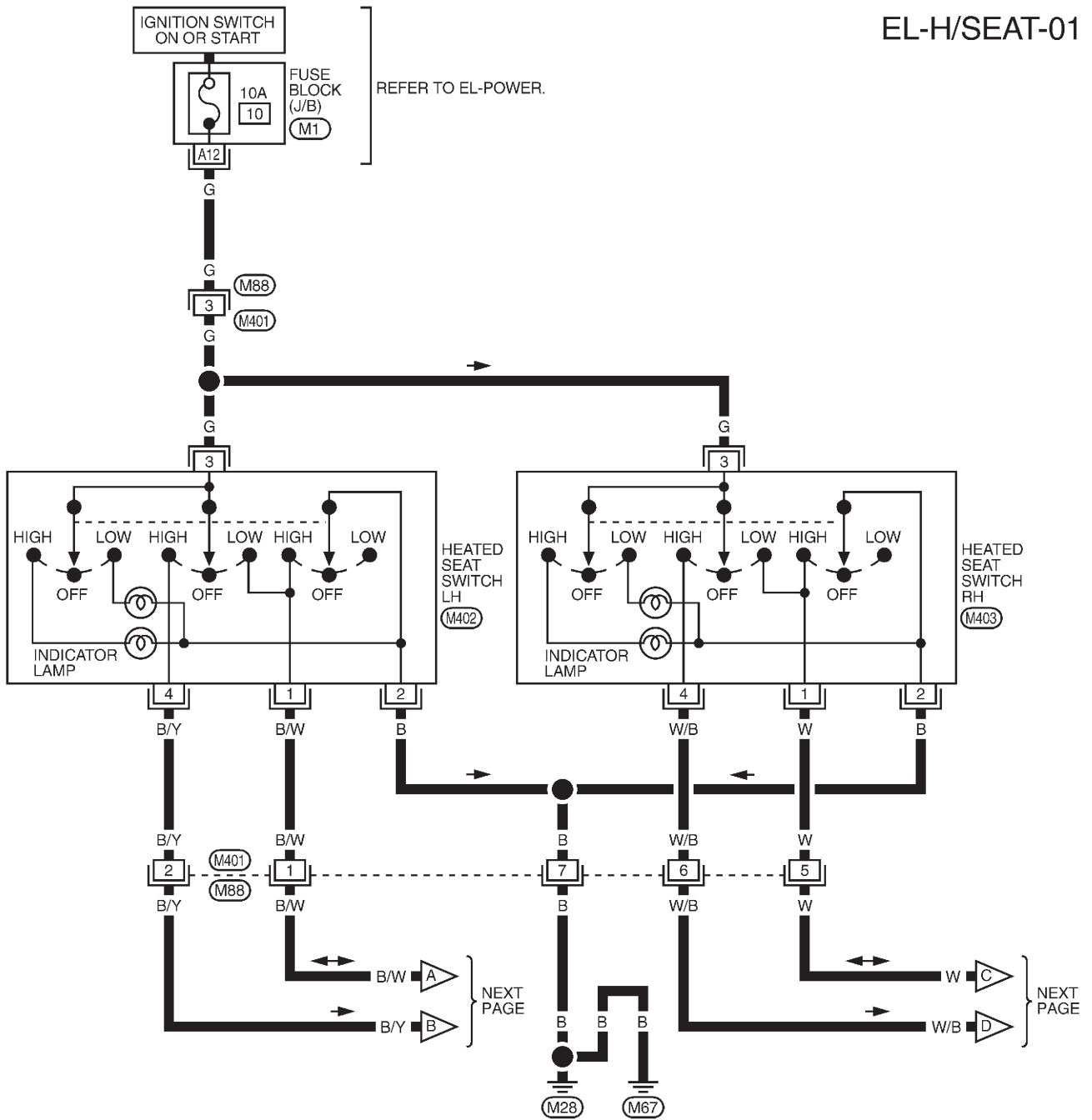
# HEATED SEAT

Wiring Diagram — H/SEAT —

## Wiring Diagram — H/SEAT —

NJEL0471

EL-H/SEAT-01



REFER TO THE FOLLOWING.  
 (M1) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

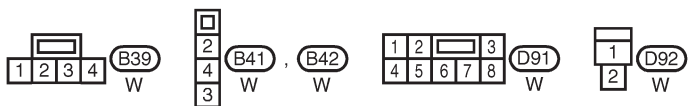
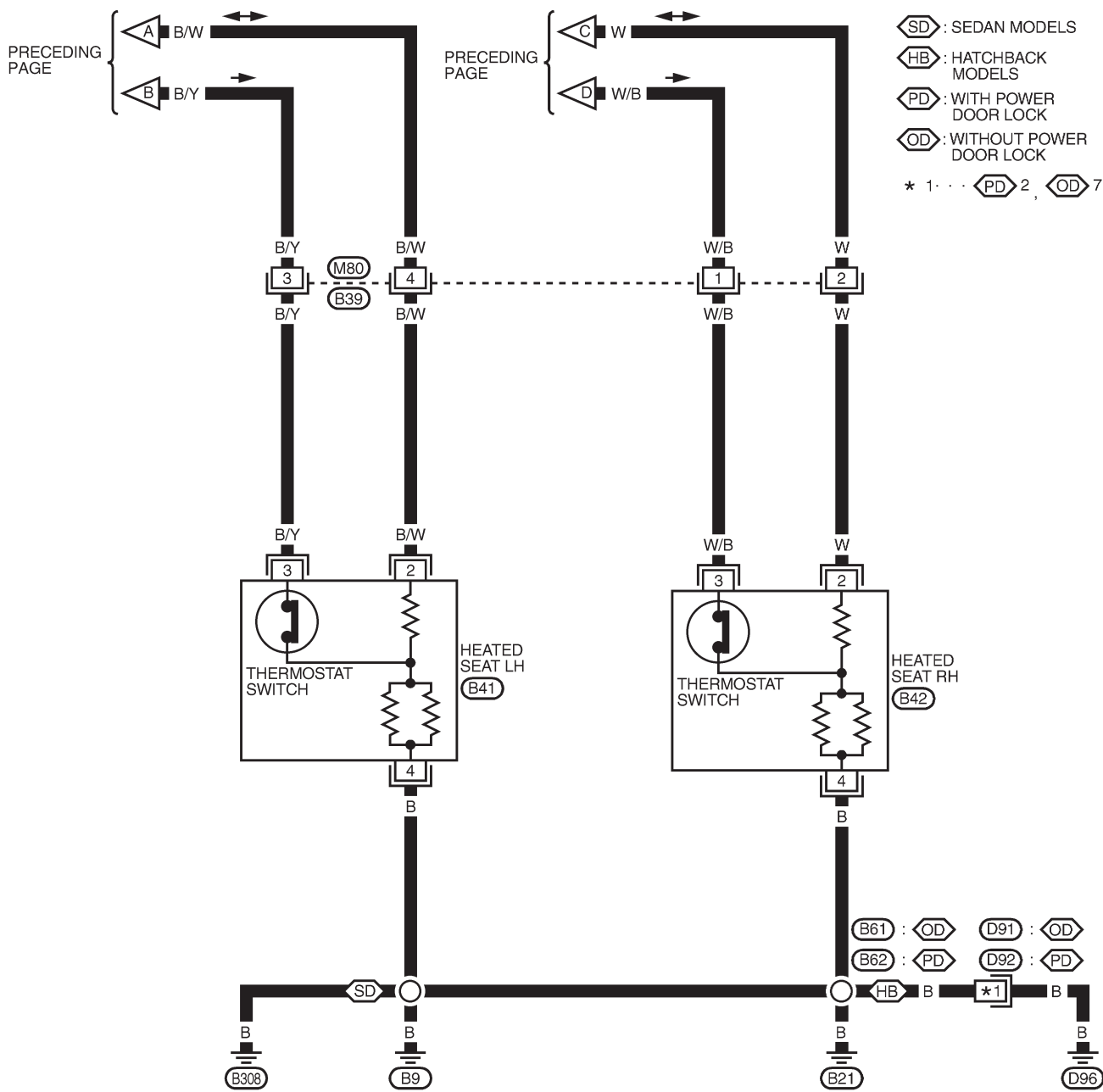
YEL680C

# HEATED SEAT

Wiring Diagram — H/SEAT — (Cont'd)

## EL-H/SEAT-02

- SD : SEDAN MODELS
- HB : HATCHBACK MODELS
- PD : WITH POWER DOOR LOCK
- OD : WITHOUT POWER DOOR LOCK
- \* 1... PD 2, OD 7



YEL681C



# POWER SUNROOF

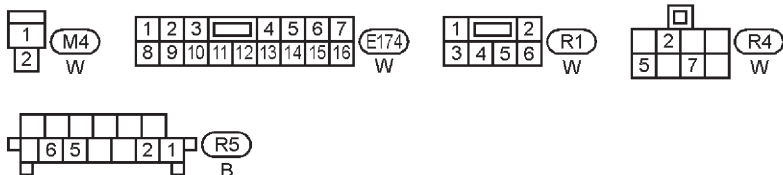
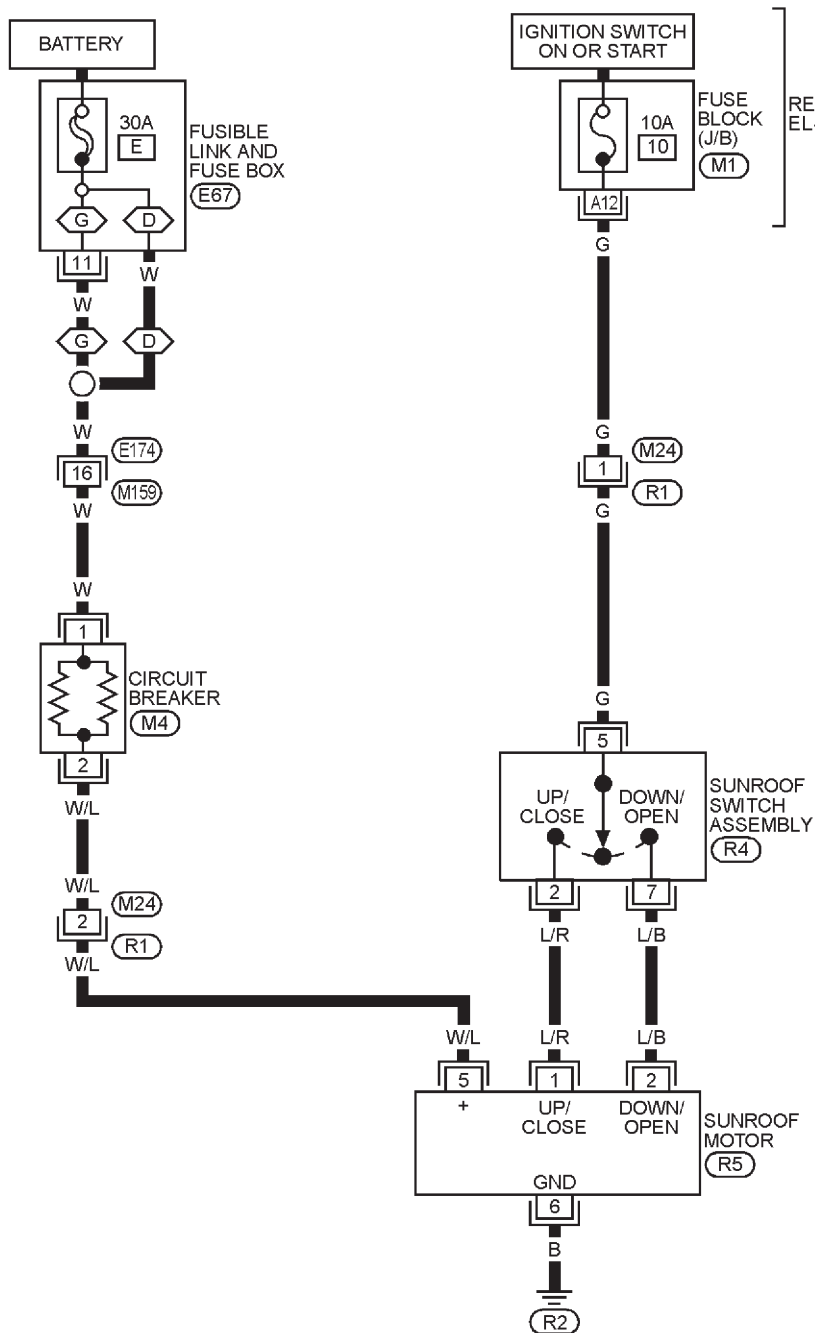
Wiring Diagram — SROOF —

## Wiring Diagram — SROOF —

NJEL0089

### EL-SROOF-01

- G : GASOLINE ENGINE
- D : DIESEL ENGINE



REFER TO THE FOLLOWING.

- M1 - FUSE BLOCK-JUNCTION BOX (J/B)
- E67 - FUSE AND FUSIBLE LINK BOX

YEL682C

## POWER SUNROOF

### Trouble Diagnoses

### Trouble Diagnoses

NJEL0225

Symptom	Possible cause	Repair order
Power sunroof cannot be operated using any switch.	<ol style="list-style-type: none"><li>1. 10A fuse, 30A fusible link and M4 circuit breaker</li><li>2. Sunroof motor ground circuit</li><li>3. Sunroof switch</li><li>4. Sunroof switch circuit</li><li>5. Sunroof motor</li></ol>	<ol style="list-style-type: none"><li>1. Check 10A fuse [No. 10, located in fuse block (J/B)], 30A fusible link (letter E, located in fuse and fusible link box) and M4 circuit breaker. Verify battery positive voltage is present at terminal 5 of sunroof motor. And then turn ignition switch "ON" and verify battery positive voltage is present at terminal 5 of sunroof switch.</li><li>2. Check sunroof motor ground circuit.</li><li>3. Check sunroof switch.</li><li>4. Check harness between sunroof switch and sunroof motor.</li><li>5. Check sunroof motor.</li></ol>
Power sunroof cannot be operated using one of the sunroof switches.	<ol style="list-style-type: none"><li>1. Sunroof switch</li><li>2. Sunroof switch circuit</li></ol>	<ol style="list-style-type: none"><li>1. Check sunroof switch.</li><li>2. Check the harness between sunroof motor and sunroof switch.</li></ol>

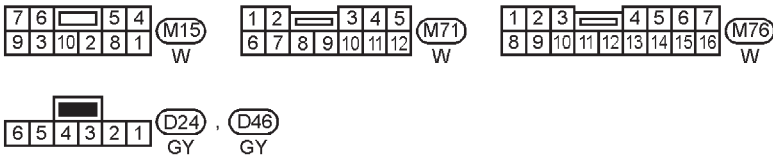
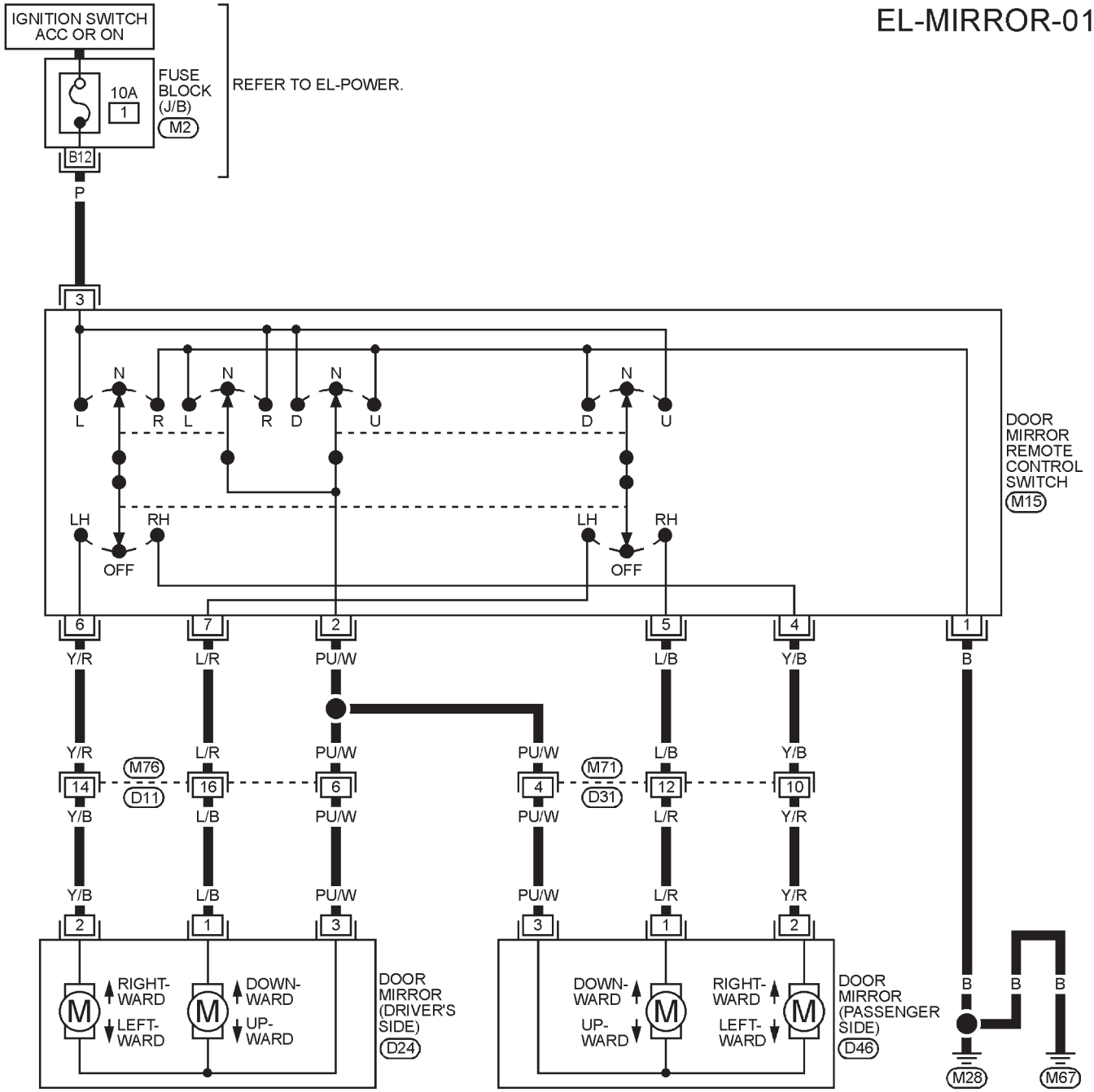
# DOOR MIRROR

Wiring Diagram — MIRROR —

## Wiring Diagram — MIRROR —

NJEL0472

### EL-MIRROR-01



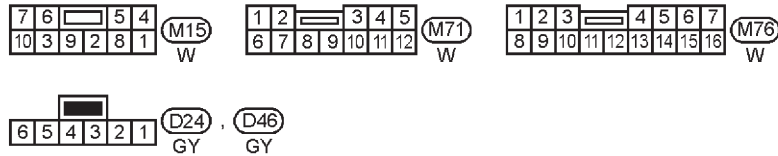
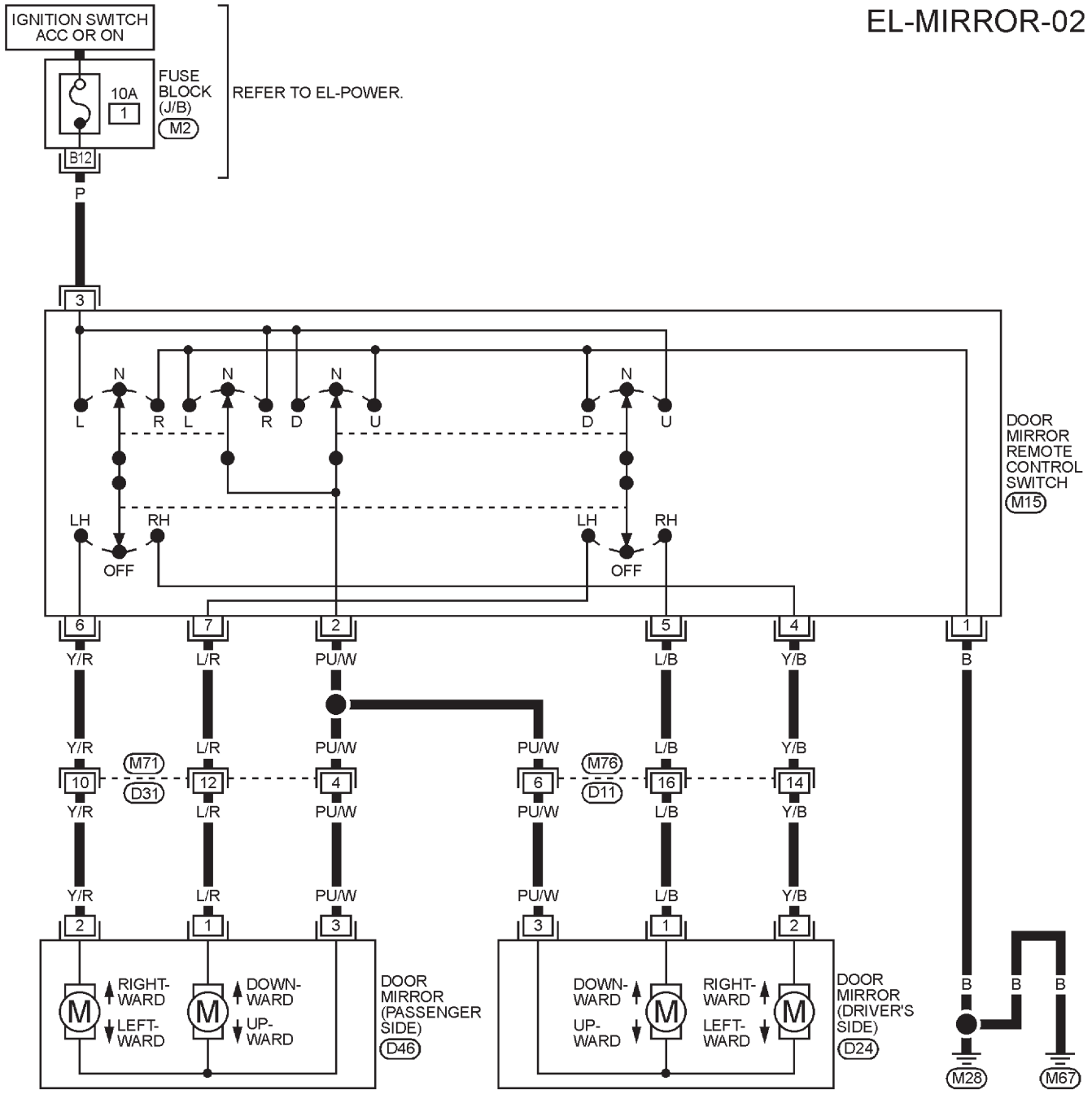
REFER TO THE FOLLOWING.  
 (M2) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL683C

# DOOR MIRROR

Wiring Diagram — MIRROR — (Cont'd)

EL-MIRROR-02



REFER TO THE FOLLOWING.  
 (M2) - FUSE BLOCK-  
 JUNCTION BOX (J/B)

YEL684C

## System Description

=NJEL0498

Power is supplied at all times

- from 30A fusible link (letter **E**, located in the fuse and fusible link box)
- to circuit breaker terminal 1
- through circuit breaker terminal 2
- to power window relay 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 1

Ground is supplied to power window relay terminal 2

- through body grounds M28 and M67.

The power window relay is energized and power is supplied

- through power window relay terminal 3
- to power window main switch terminal 1,
- to front power window sub-switch terminal 5,
- to rear power window sub-switch LH and RH terminals 5 (models with rear power window).

### MANUAL OPERATION

#### Front Door (Driver Side)

NJEL0498S01

NJEL0498S0101

Ground is supplied

- to power window main switch terminal 3
- through body grounds M28 and M67.

#### WINDOW UP

When the driver's window switch in the power window main switch is pressed in the up position, power is supplied

- through power window main switch terminal 9
- to driver side power window regulator terminal 1.

Ground is supplied

- through power window main switch terminal 2
- to driver side power window regulator terminal 8.

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

#### WINDOW DOWN

When the driver's window switch in the power window main switch is pressed in the down position, power is supplied

- through power window main switch terminal 8
- to driver side power window regulator terminal 2.

Ground is supplied

- to driver side power window regulator terminal 1
- through power window main switch terminal 9.

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

#### Front Door (Passenger Side)

NJEL0498S0102

Ground is supplied

- to power window main switch terminal 3
- through body grounds M28 and M67.

#### NOTE:

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

#### POWER WINDOW MAIN SWITCH OPERATION

Power is supplied

- through power window main switch (5, 6)
- to front power window sub-switch (3, 4).

## POWER WINDOW

System Description (Cont'd)

---

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

### FRONT POWER WINDOW SUB-SWITCH OPERATION

Power is supplied

- through front power window sub-switch (1, 2)
- to front passenger side power window regulator (1, 2).

Ground is supplied

- to front passenger side power window regulator (2, 1)
- through front power window sub-switch (2, 1)
- to front power window sub-switch (4, 3)
- through power window main switch (6, 5).

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 passenger's door window.

NJEL0498S0103

### 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 sub-switches in the power window main switch is disconnected. This prevents the power window motors from operating.

NJEL0498S02

### AUTO OPERATION

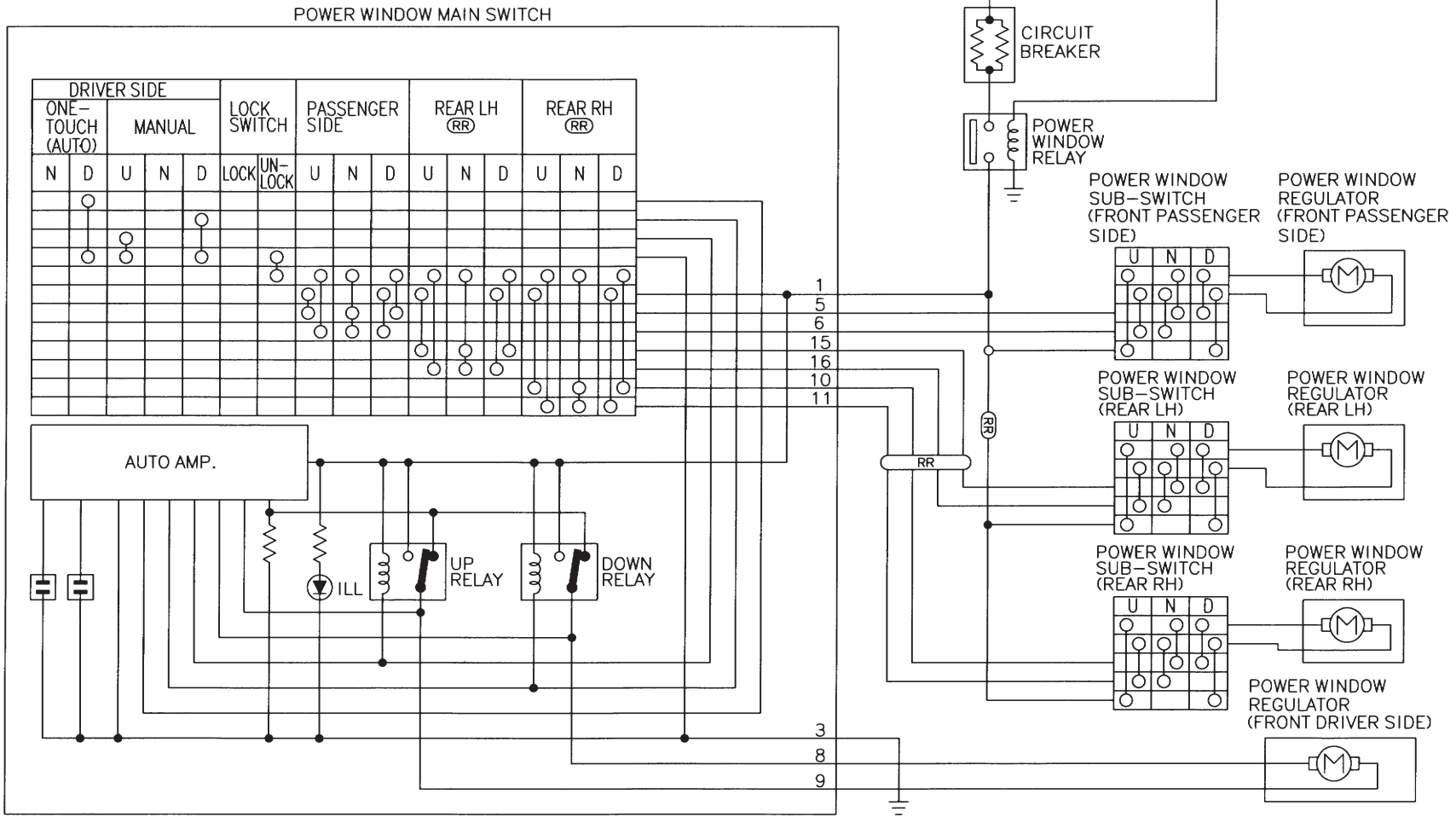
The power window AUTO feature enables the driver to open the driver's window without holding the window switch in the down position.

The AUTO feature operates on the driver's window.

NJEL0498S03

EL-171

(RR) : Models with rear power window



Schematic

POWER WINDOW

Schematic

NJEL0499

MEL916L

# POWER WINDOW

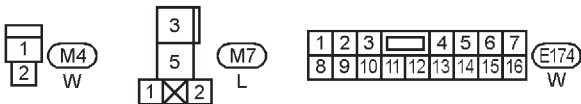
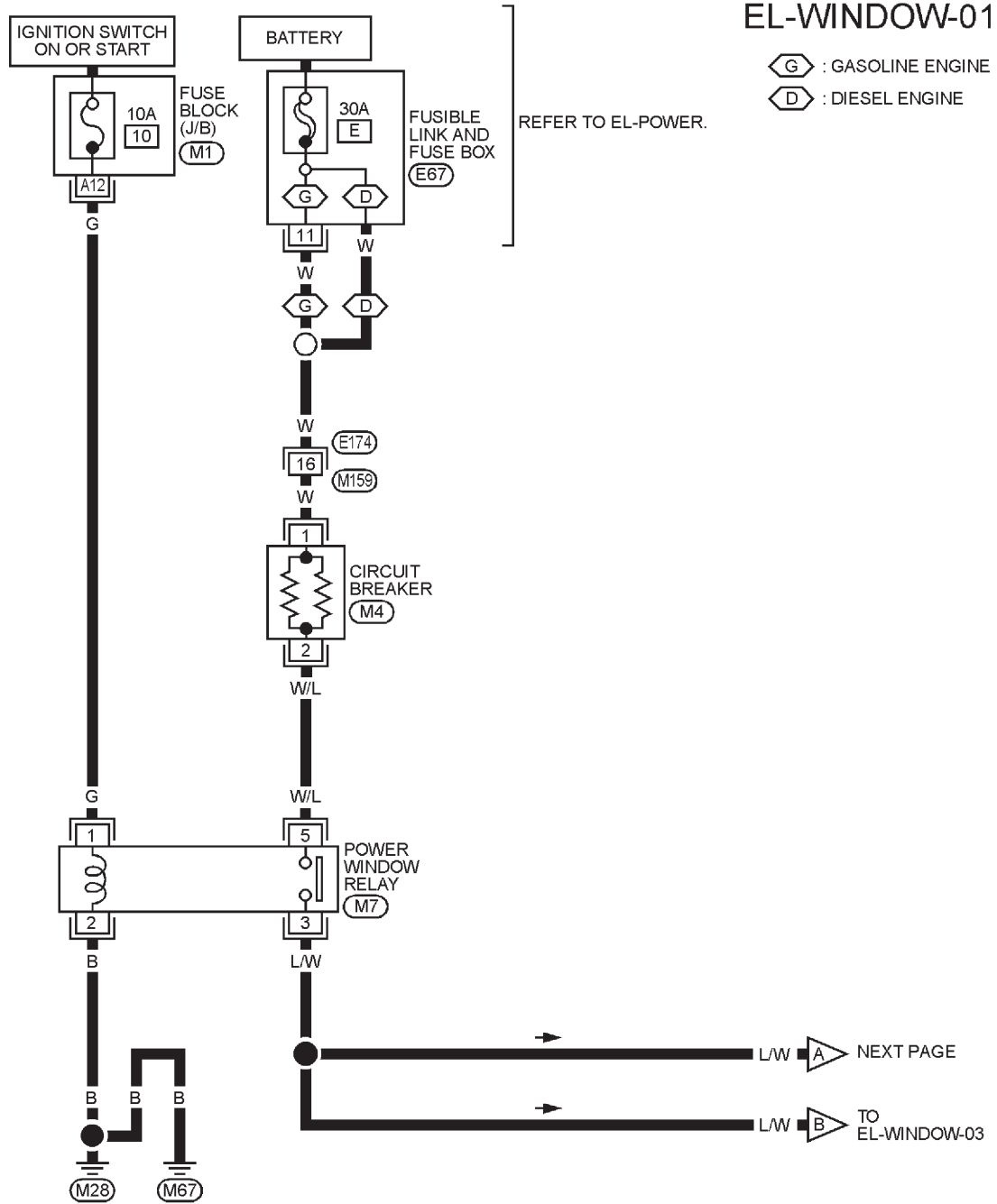
Wiring Diagram — WINDOW —

## Wiring Diagram — WINDOW —

NJEL0500

### EL-WINDOW-01

- G : GASOLINE ENGINE
- D : DIESEL ENGINE



REFER TO THE FOLLOWING.

- M1 - FUSE BLOCK-JUNCTION BOX (J/B)
- E67 - FUSE AND FUSIBLE LINK BOX

YEL686C

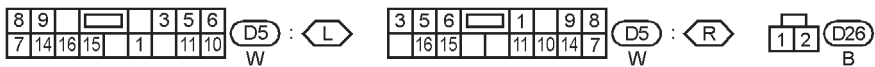
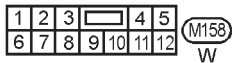
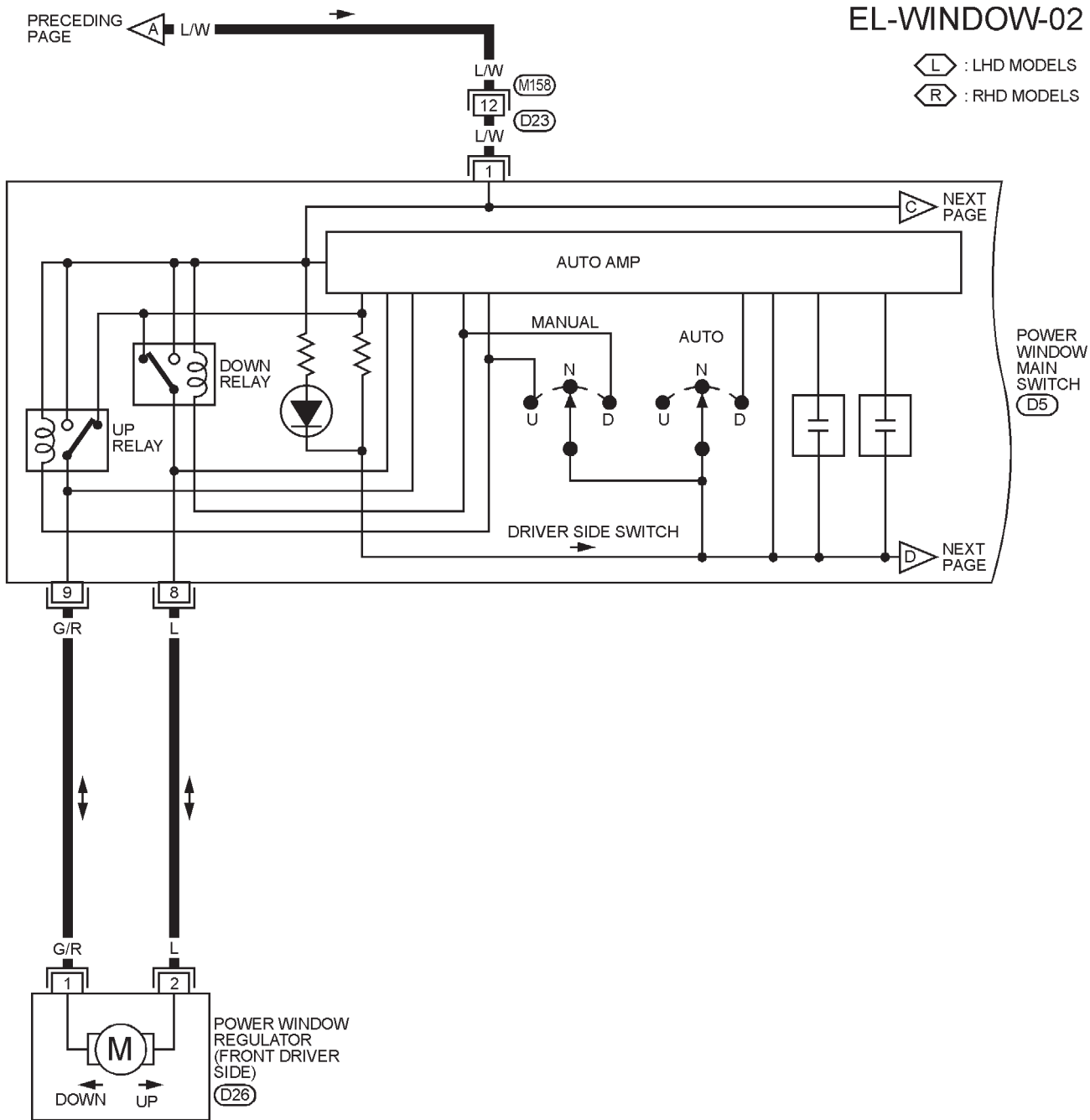


# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

## EL-WINDOW-02

- L : LHD MODELS
- R : RHD MODELS

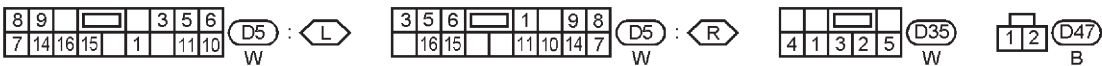
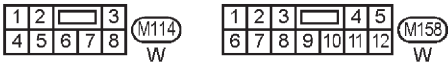
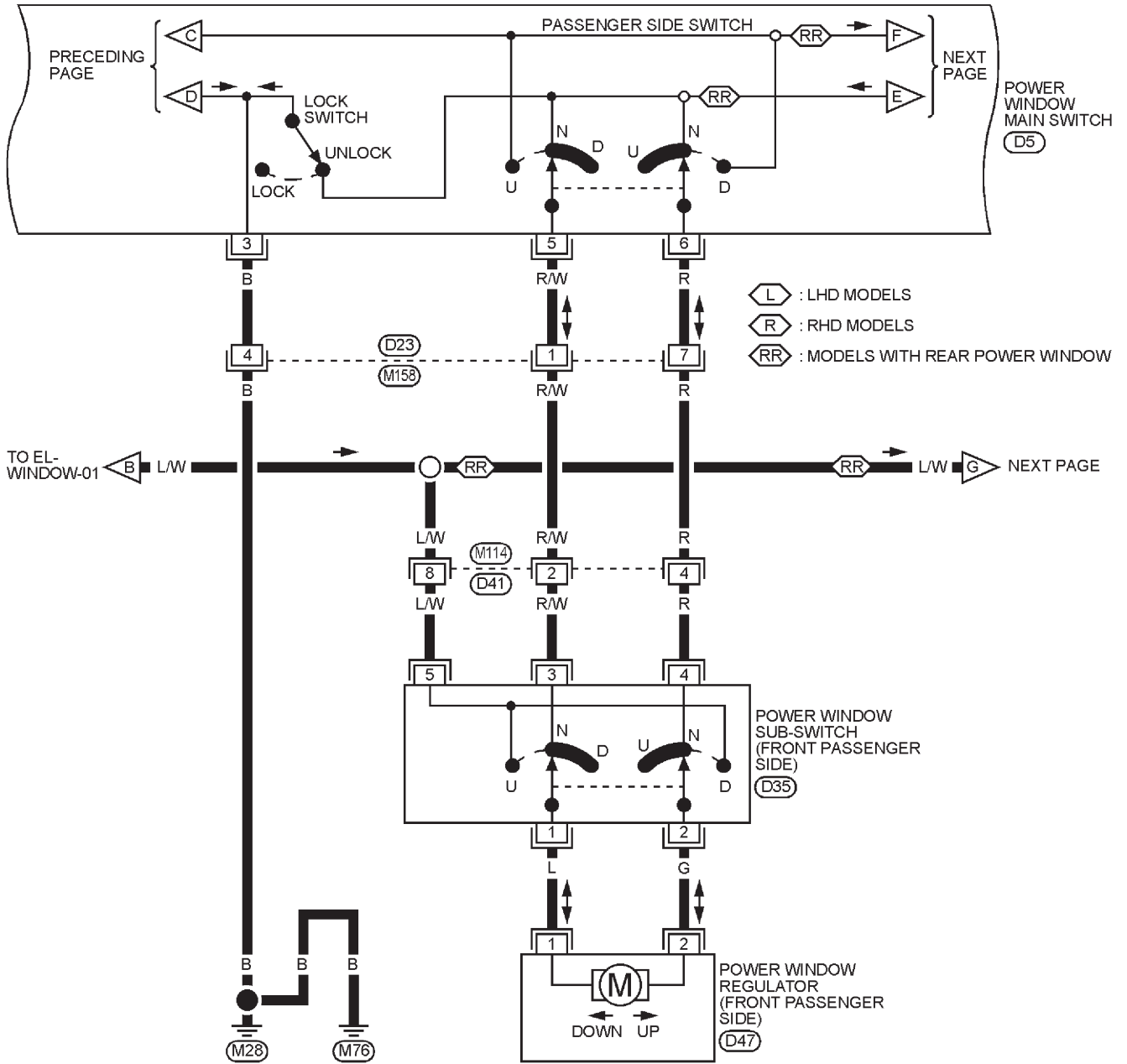


YEL687C

# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-03

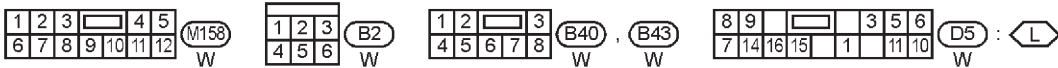
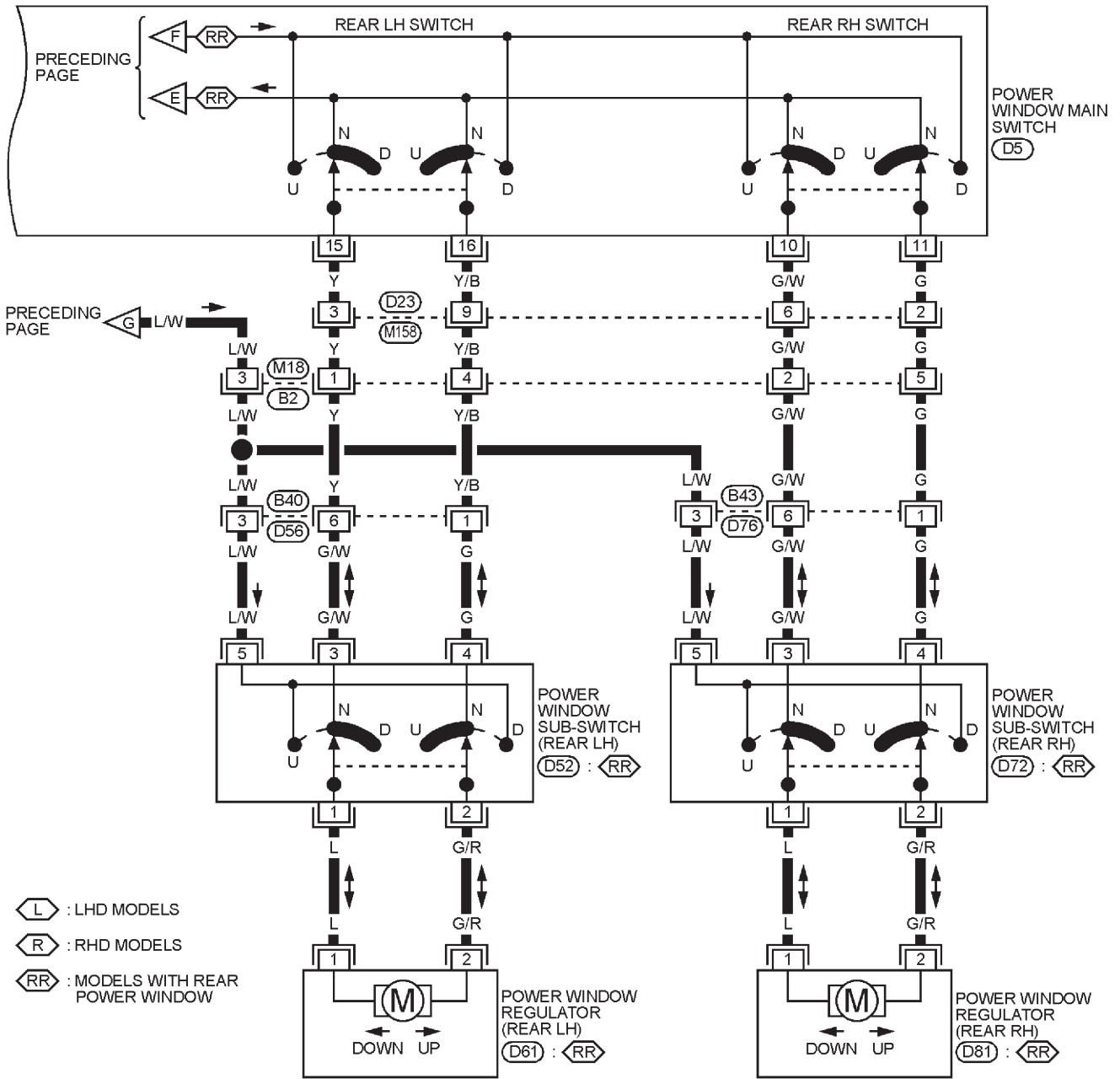


YEL688C

# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

## EL-WINDOW-04



YEL689C

## POWER WINDOW

Trouble Diagnoses

### Trouble Diagnoses

NJEL0501

Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	<ol style="list-style-type: none"> <li>1. 10A fuse</li> <li>2. 30A fusible link, M4 circuit breaker</li> <li>3. Power window relay</li> <li>4. Ground circuit</li> <li>5. Power window main switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check 10A fuse [No. 10, located in fuse block (J/B)] Turn ignition switch "ON" and verify positive battery voltage is present at terminal 1 of power window relay.</li> <li>2. Check 30A fusible link (letter E, located in fuse and fusible link box) and M4 circuit breaker. Verify positive battery voltage is present at terminal 5 of power window relay.</li> <li>3. Check power window relay.</li> <li>4. Check the following:               <ol style="list-style-type: none"> <li>a. Check ground circuit of power window main switch.</li> <li>b. Check power window relay ground circuit.</li> </ol> </li> <li>5. Check power window main switch.</li> </ol>
Driver side power window cannot be operated but other windows can be operated.	<ol style="list-style-type: none"> <li>1. Driver side power window regulator circuit</li> <li>2. Driver side power window regulator</li> <li>3. Power window main switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check harness between power window main switch and driver side power window regulator for open or short circuit.</li> <li>2. Check driver side power window regulator.</li> <li>3. Check power window main switch.</li> </ol>
One or more power windows except driver's side window cannot be operated.	<ol style="list-style-type: none"> <li>1. Power window sub-switches</li> <li>2. Power window regulators</li> <li>3. Power window main switch</li> <li>4. Power window circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power window sub-switch.</li> <li>2. Check power window regulator.</li> <li>3. Check power window main switch.</li> <li>4. Check the following.               <ol style="list-style-type: none"> <li>a. Check harness between the power window relay terminal 3 and power window sub-switch terminal 5.</li> <li>b. Check harnesses between power window main switch and power window sub-switch for open/short circuit.</li> <li>c. Check harnesses between power window sub-switch and power window regulator for open/short circuit.</li> </ol> </li> </ol>
Power windows except driver's side window cannot be operated using power window main switch but can be operated by power window sub-switch.	<ol style="list-style-type: none"> <li>1. Power window main switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power window main switch.</li> </ol>
Driver side power window automatic operation does not function properly.	<ol style="list-style-type: none"> <li>1. Power window main switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power window main switch.</li> </ol>

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## System Description

=NJEL0502

NJEL0502S02

### OPERATION

#### Power door lock/unlock operation by door key cylinder

- With the key inserted into front door key cylinder, turning it to LOCK will lock all doors.
- With the key inserted into front door key cylinder, turning it to UNLOCK will unlock all doors.

#### Power door lock/unlock operation by multi-remote controller (If equipped)

- Pressing multi-remote controller LOCK button will lock all doors.
- Pressing multi-remote controller UNLOCK button once will unlock driver door. Then, if an unlock signal is sent from the remote controller again within 5 seconds, all other doors will be unlocked.

#### Power door lock/unlock operation by lock/unlock switch

- With lock/unlock switch on driver door trim setting to LOCK will lock all doors.
- With lock/unlock switch on driver door trim setting to UNLOCK will unlock all doors.

#### Key reminder system

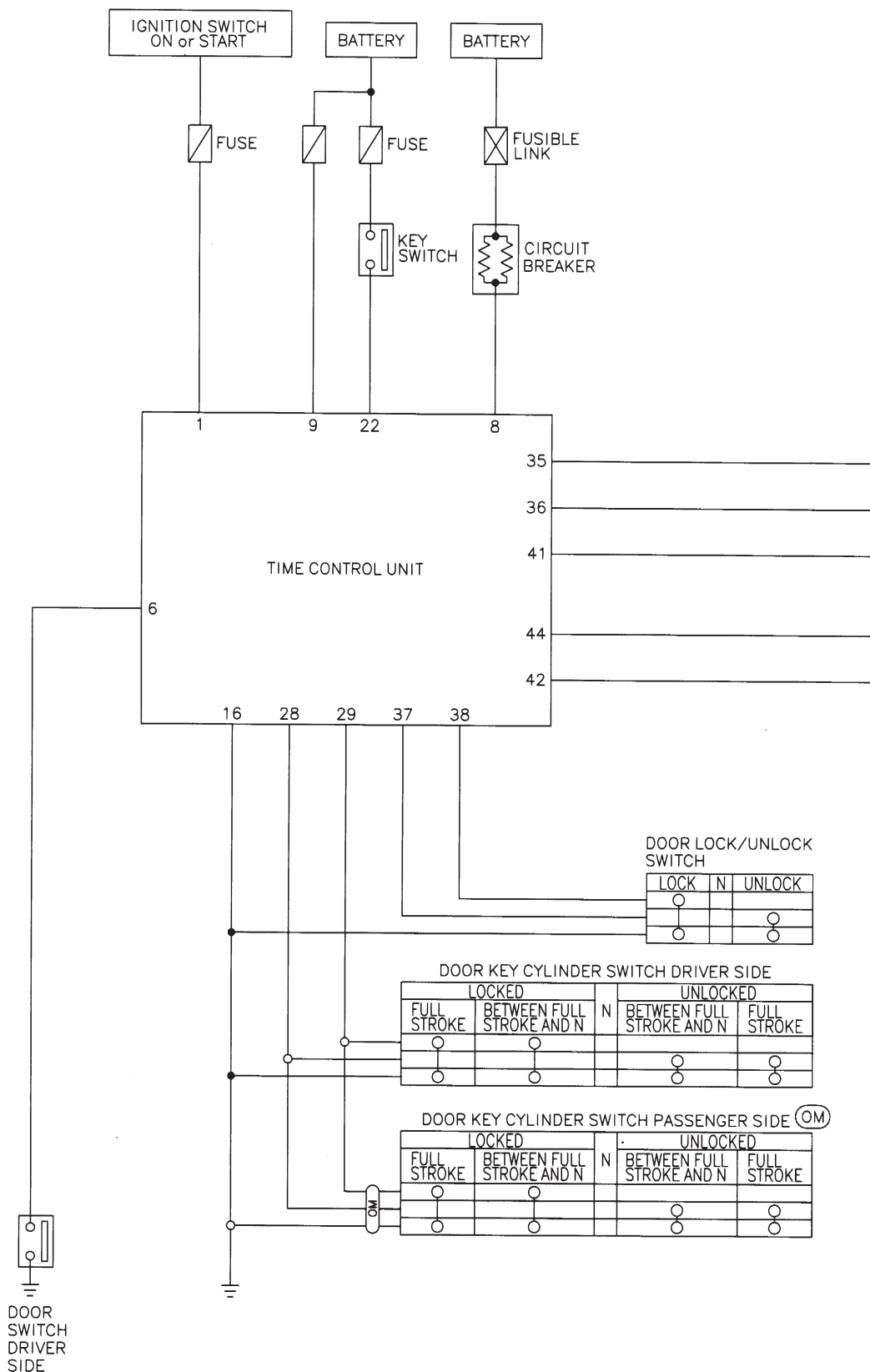
- If the ignition key is in the ignition key cylinder and driver door is open, setting lock/unlock switch, lock knob, key or multi-remote controller to "LOCK" locks the door once but then immediately unlocks all doors. (signal from door unlock sensor driver side)

# POWER DOOR LOCK

Schematic

NJEL0503

## Schematic



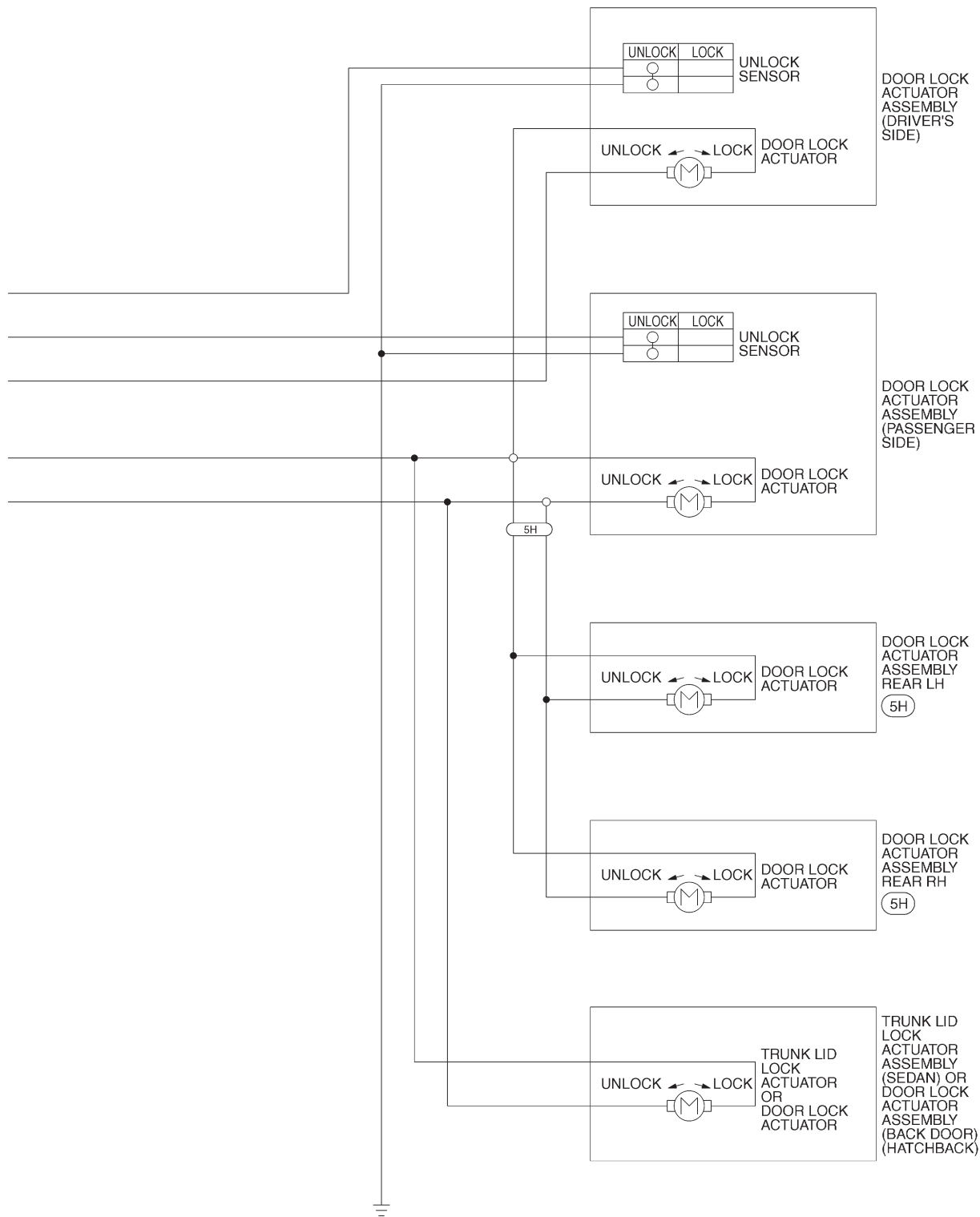
MEL221M

# POWER DOOR LOCK

Schematic (Cont'd)

(5H) : 5-door hatchback models  
and Sedan models

(OM) : Without multi-remote control system



YEL691C

# POWER DOOR LOCK

Wiring Diagram — D/LOCK —

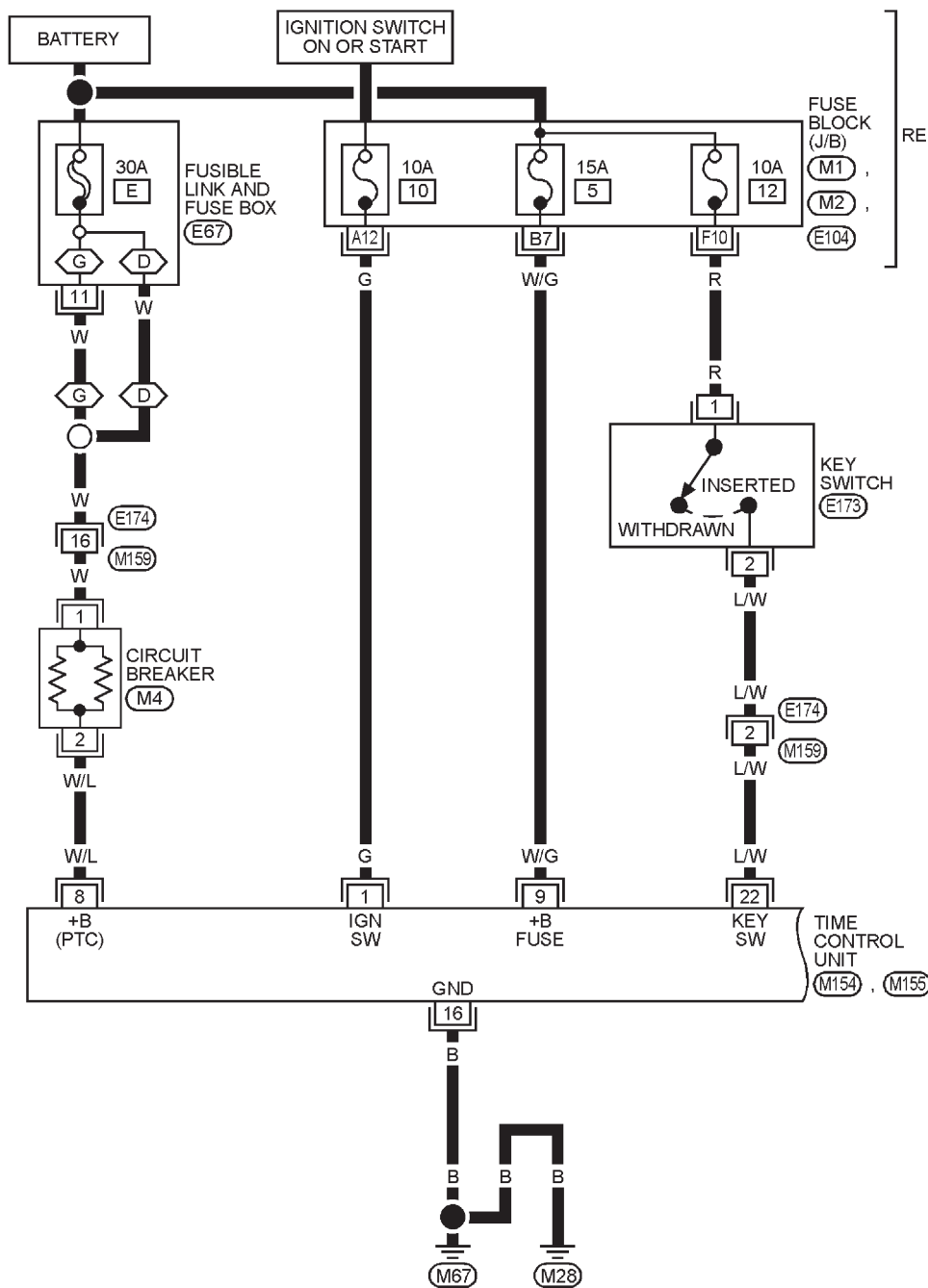
## Wiring Diagram — D/LOCK —

NJEL0504

NJEL0504S01

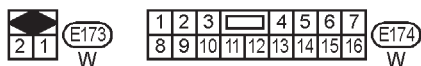
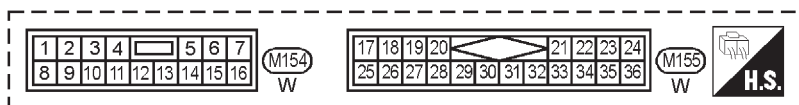
FIG. 1

EL-D/LOCK-01



REFER TO EL-POWER.

⬡ G : GASOLINE ENGINE  
⬡ D : DIESEL ENGINE



REFER TO THE FOLLOWING.

(M1), (M2), (E104)

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

(E67) - FUSE AND  
FUSIBLE LINK BOX

YEL692C



# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

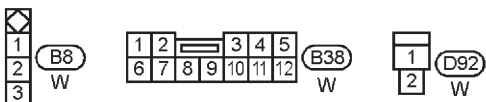
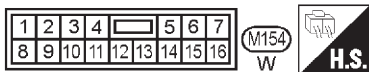
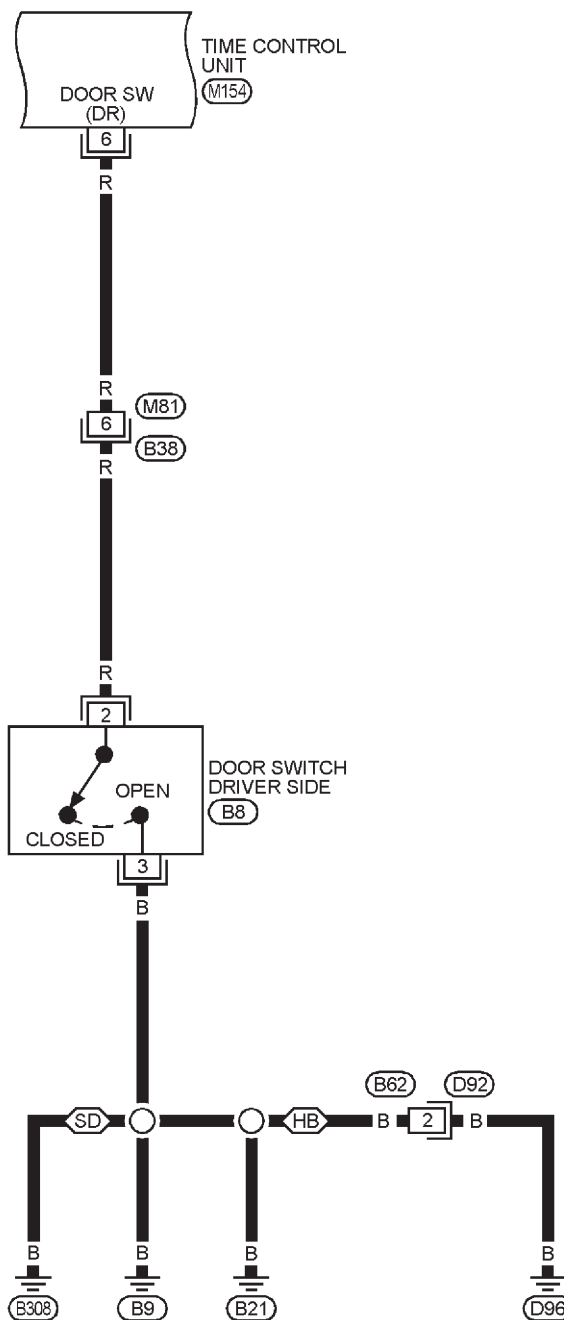
FIG. 2

NJEL0504S02

## EL-D/LOCK-02

SD : SEDAN MODELS

HB : HATCHBACK MODELS



YEL693C

# POWER DOOR LOCK

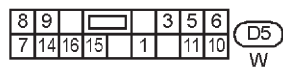
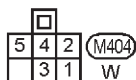
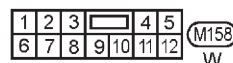
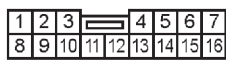
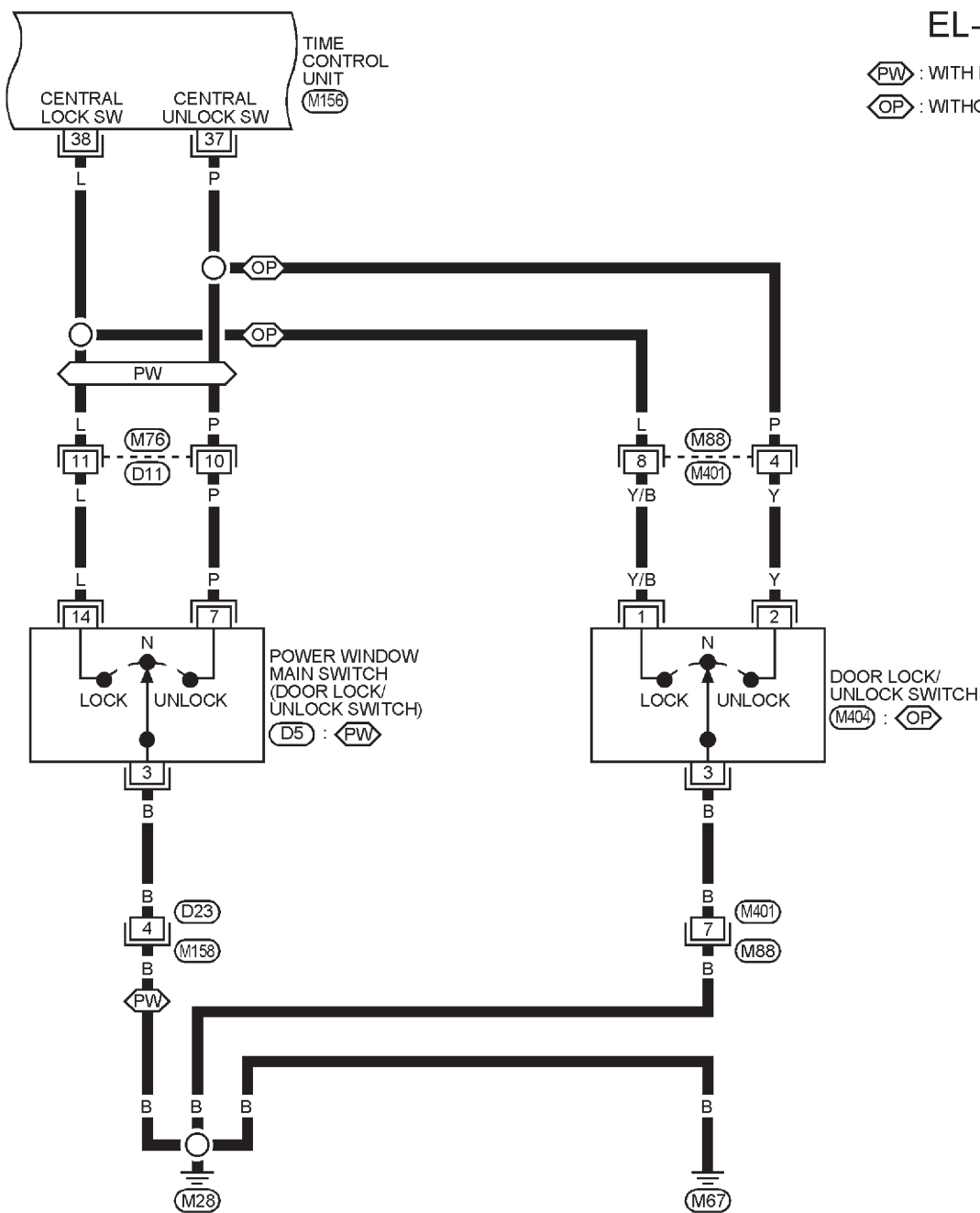
Wiring Diagram — D/LOCK — (Cont'd)

**FIG. 3**

NJEL0504S03

## EL-D/LOCK-03

PW : WITH POWER WINDOW  
OP : WITHOUT POWER WINDOW



YEL694C

# POWER DOOR LOCK

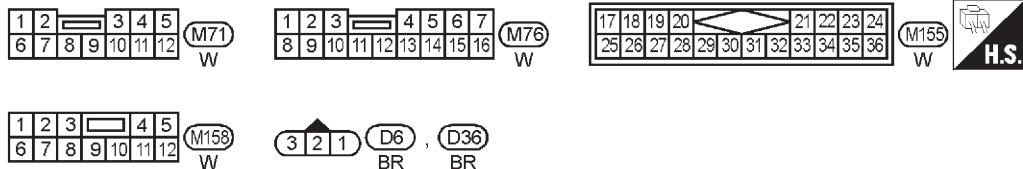
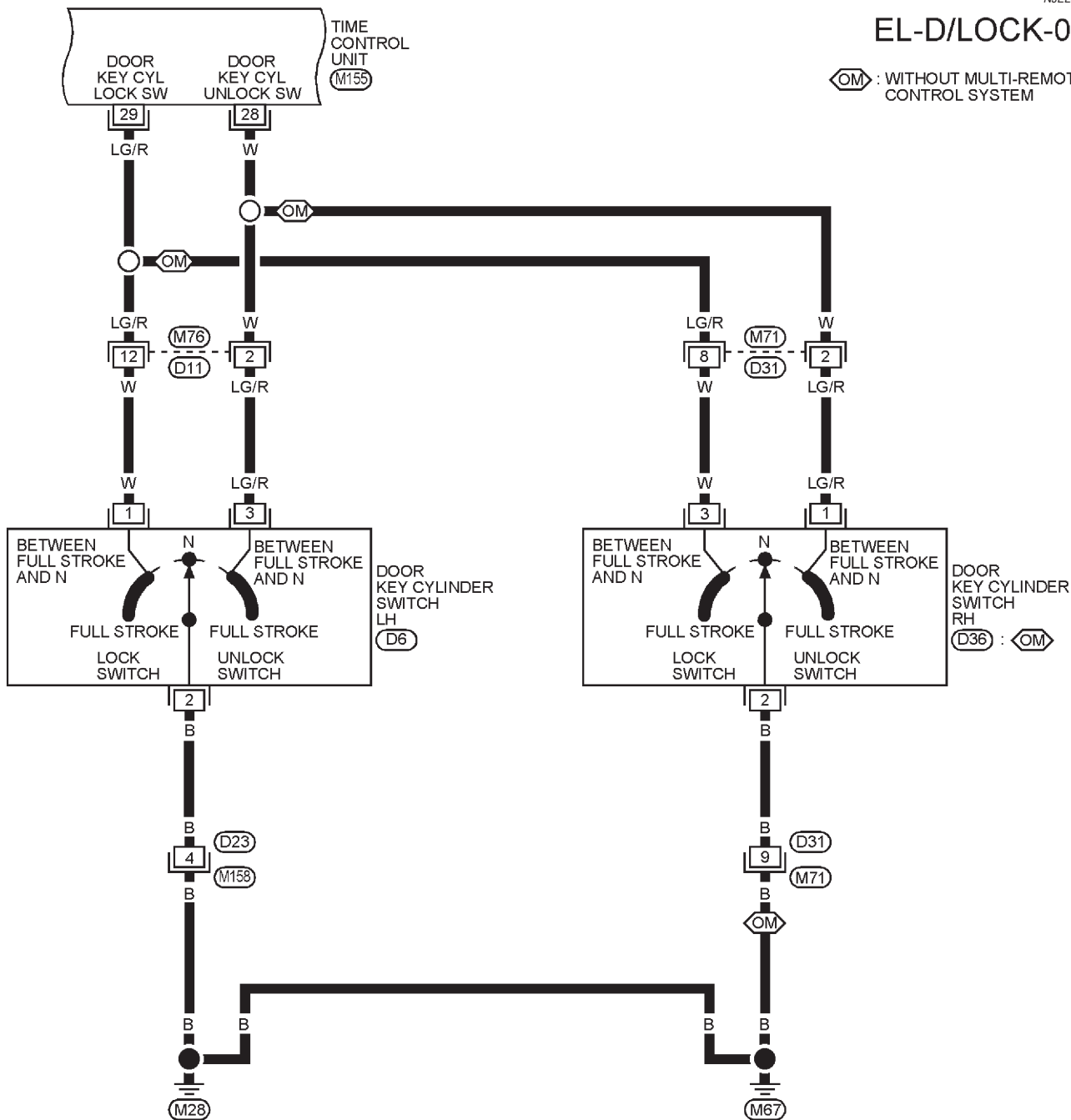
Wiring Diagram — D/LOCK — (Cont'd)

**FIG. 4**

NJEL0504S04

## EL-D/LOCK-04

◊OM◊ : WITHOUT MULTI-REMOTE CONTROL SYSTEM



YEL695C

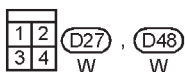
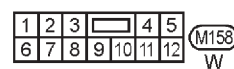
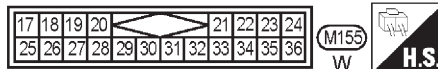
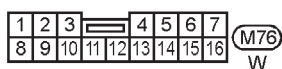
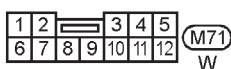
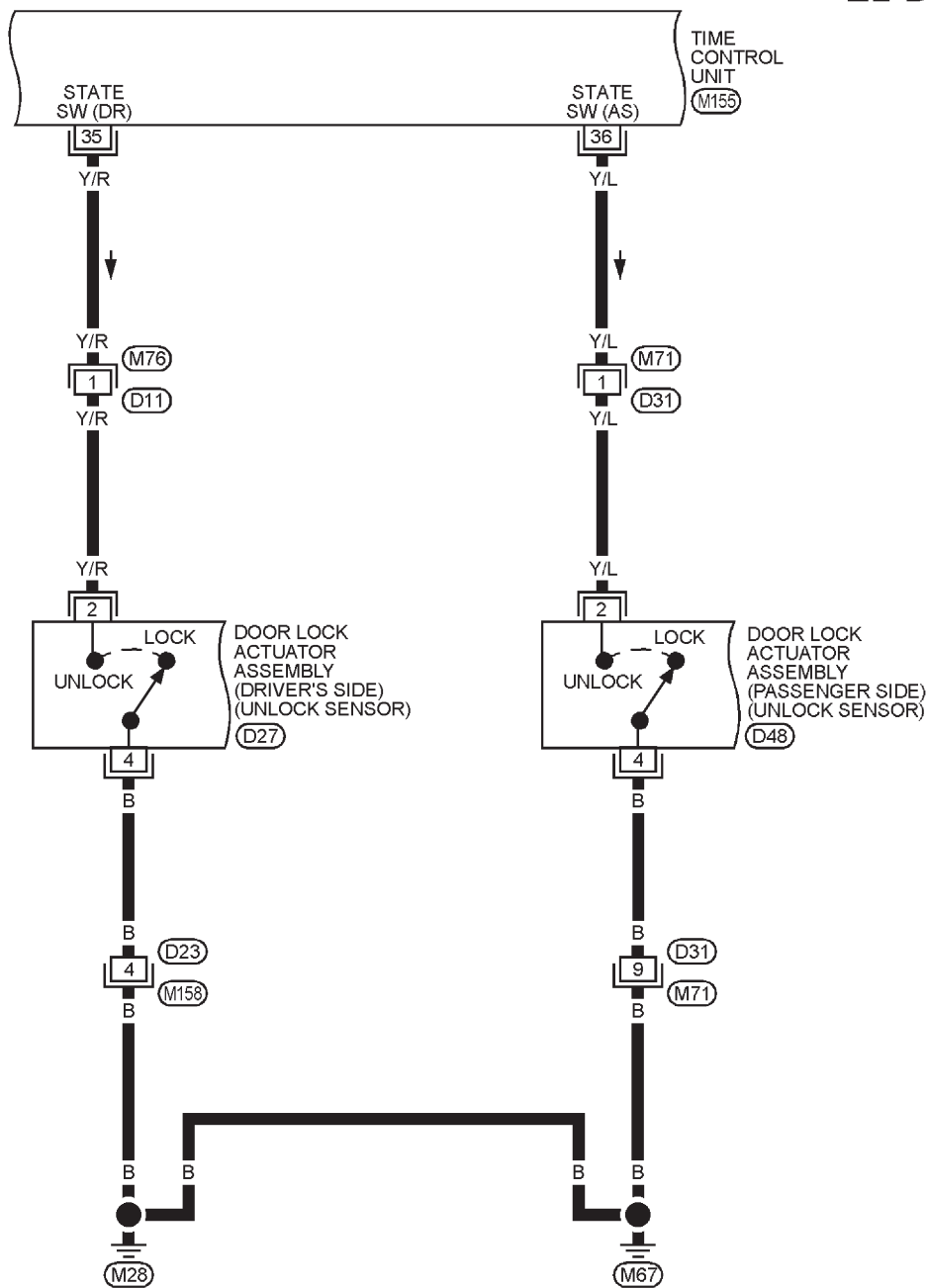
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

**FIG. 5**

NJEL0504S05

**EL-D/LOCK-05**



YEL696C

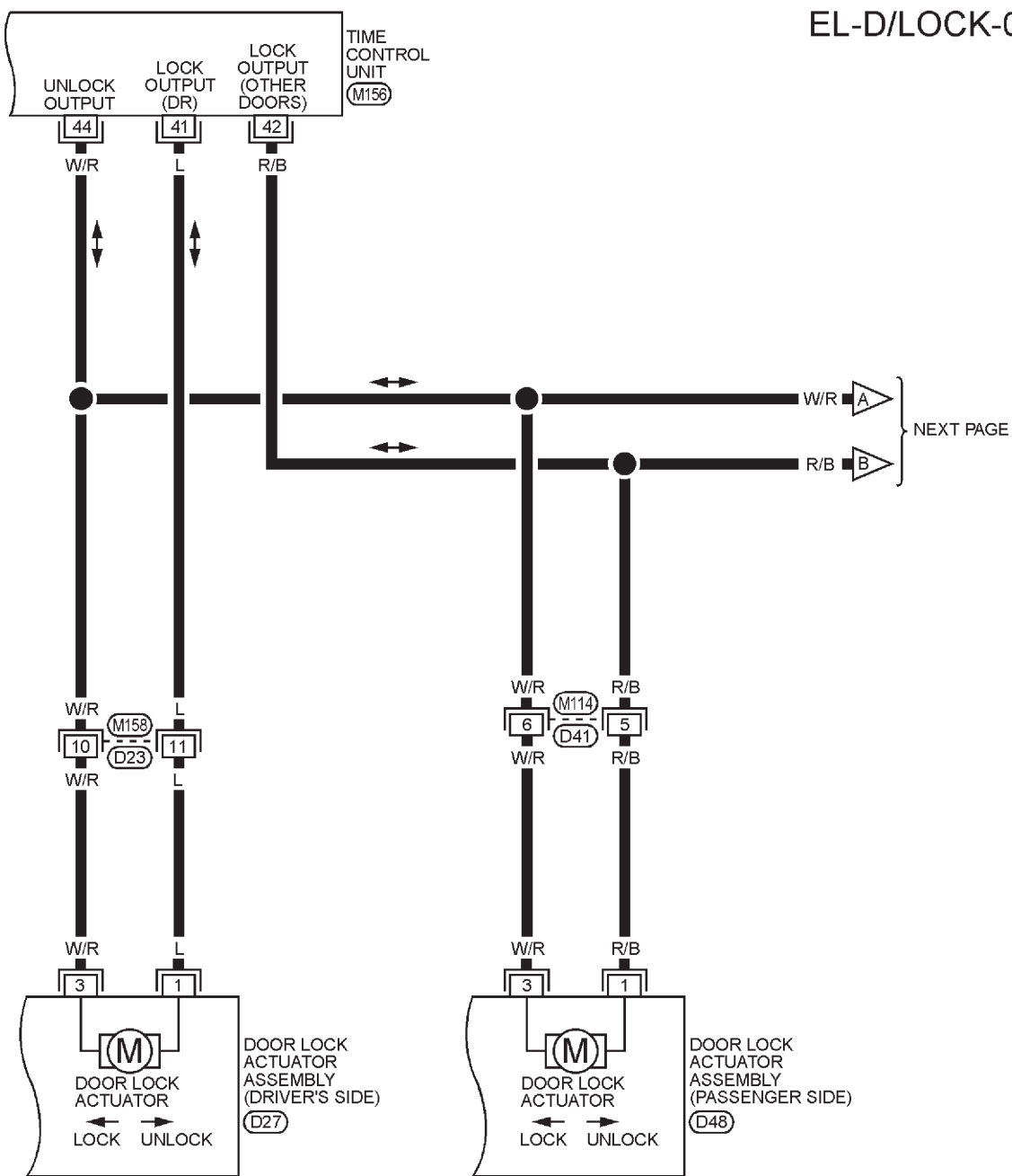
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

**FIG. 6**

NJEL0504S06

**EL-D/LOCK-06**



YEL697C

# POWER DOOR LOCK

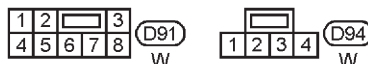
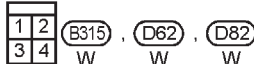
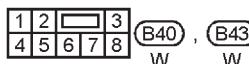
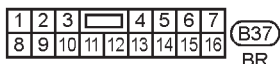
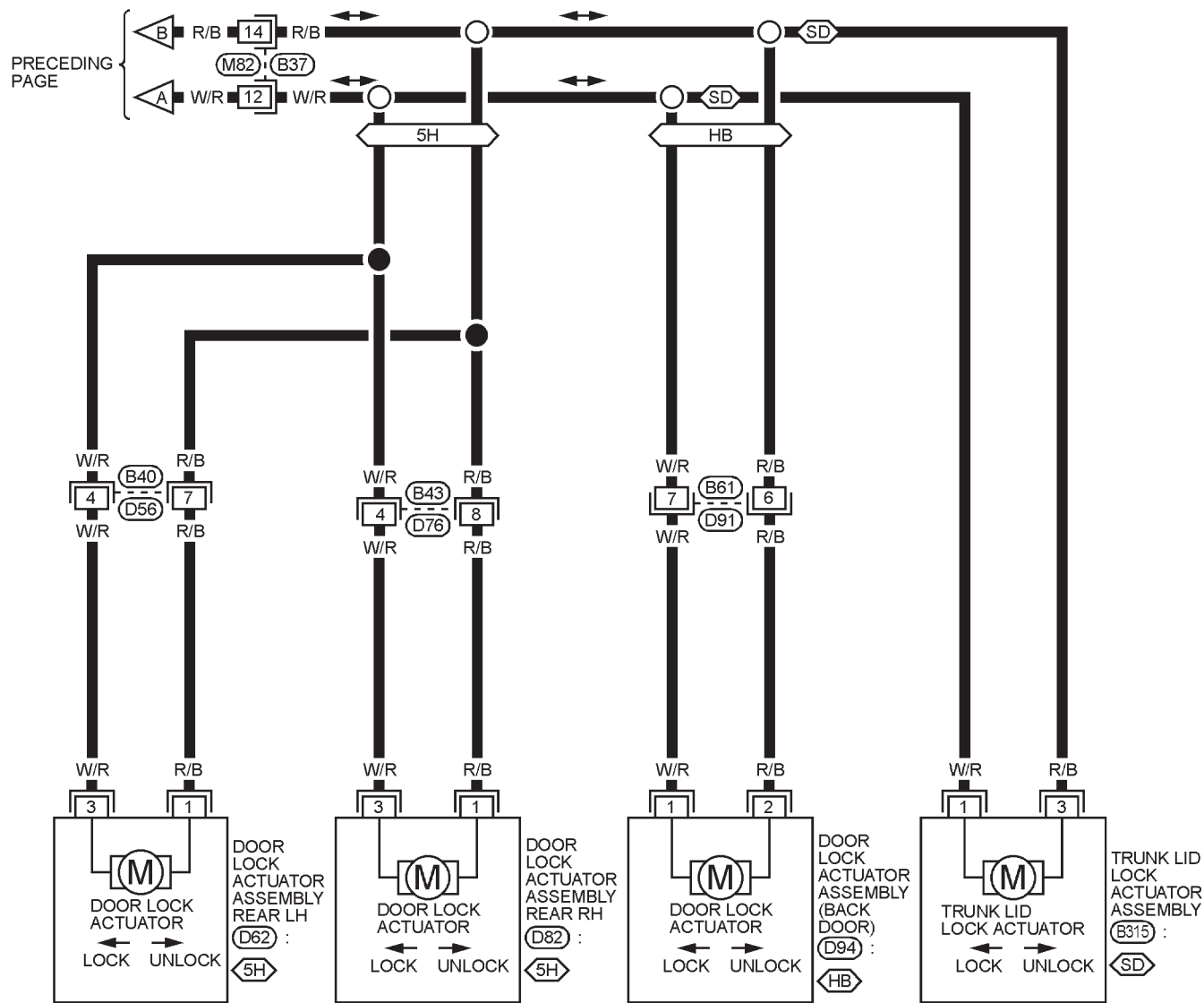
Wiring Diagram — D/LOCK — (Cont'd)

**FIG. 7**

NJEL0504S07

## EL-D/LOCK-07

- 5H : 5-DOOR HATCHBACK MODELS AND SEDAN MODELS
- SD : SEDAN MODELS
- HB : HATCHBACK MODELS



YEL698C

# POWER DOOR LOCK

Trouble Diagnoses

## Trouble Diagnoses

### SYMPTOM CHART

NJEL0505

NJEL0505S02

REFERENCE PAGE (EL- )	188	189	190	191	193	194	195
SYMPTOM	Main power supply and ground circuit check	Door lock/unlock switch check	Door key cylinder switch check	Door lock actuator check	Door switch check	Door unlock sensor check	Key switch check
1	Power door lock does not operate using any switch.	X		X			
2	Power door lock does not operate with lock/unlock switch.		X				
3	Power door lock does not operate with door key cylinder switch.		X				
4	Specific door lock actuator does not operate.			X			
5	*Key reminder system does not operate.				X	X	X

X: Applicable

\*: Make sure the power door lock system operates properly.

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

=NJEL0505S03

### Main Power Supply Circuit Check

NJEL0505S0301

Time control unit connector (M154)

8 9

W/L W/G

V

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
8	Ground	Battery voltage		
9				

SEL467X

### Ground Circuit Check

NJEL0505S0302

Time control unit connector (M154)

16

B

Ω

**Continuity should exist.**

SEL448X

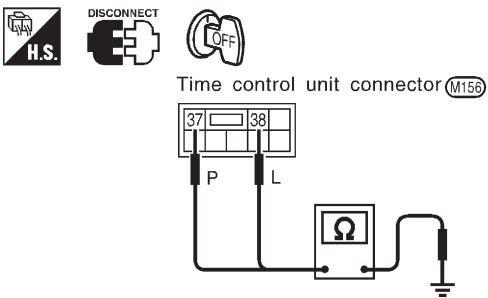


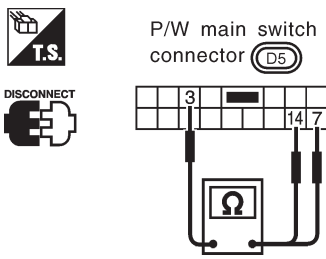
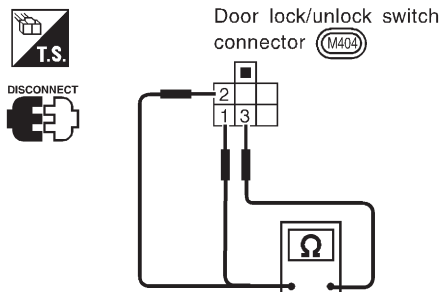
# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## DOOR LOCK/UNLOCK SWITCH CHECK

=NJEL0505S04

<b>1</b>	<b>CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL</b>														
<p>1. Disconnect time control unit harness connector.                  2. Check continuity between time control unit harness connector terminal 37 or 38 and ground.</p>															
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p style="text-align: center;">Time control unit connector (M156)</p> </div> <div style="flex: 1; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Terminals</th> <th>Door lock/unlock switch condition</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">38 - Ground</td> <td>Lock</td> <td>Yes</td> </tr> <tr> <td>N and Unlock</td> <td>No</td> </tr> <tr> <td rowspan="2">37 - Ground</td> <td>Unlock</td> <td>Yes</td> </tr> <tr> <td>N and Lock</td> <td>No</td> </tr> </tbody> </table> </div> </div>			Terminals	Door lock/unlock switch condition	Continuity	38 - Ground	Lock	Yes	N and Unlock	No	37 - Ground	Unlock	Yes	N and Lock	No
Terminals	Door lock/unlock switch condition	Continuity													
38 - Ground	Lock	Yes													
	N and Unlock	No													
37 - Ground	Unlock	Yes													
	N and Lock	No													
SEL468X															
<b>OK or NG</b>															
OK	▶	Door lock/unlock switch is OK.													
NG	▶	GO TO 2.													

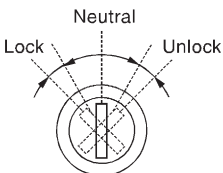
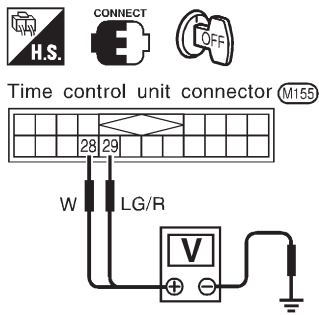
<b>2</b>	<b>CHECK DOOR LOCK/UNLOCK SWITCH</b>																				
<p>1. Disconnect door lock/unlock switch harness connector.                  2. Check continuity between each door lock/unlock switch terminals.</p> <ul style="list-style-type: none"> <li>Power window main switch (Door lock/unlock switch) (With power window)</li> </ul>																					
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p style="text-align: center;">P/W main switch connector (D5)</p> </div> <div style="flex: 1; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>3</th> <th>14</th> <th>7</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>			Condition	Terminals			3	14	7	Lock	○	○		N	No continuity			Unlock	○		○
Condition	Terminals																				
	3	14	7																		
Lock	○	○																			
N	No continuity																				
Unlock	○		○																		
<ul style="list-style-type: none"> <li>Door lock/unlock switch (Without power window)</li> </ul>																					
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p style="text-align: center;">Door lock/unlock switch connector (M404)</p> </div> <div style="flex: 1; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>3</th> <th>2</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>Unlock</td> <td>○</td> <td>○</td> <td></td> </tr> <tr> <td>N</td> <td colspan="3">No continuity</td> </tr> <tr> <td>Lock</td> <td>○</td> <td></td> <td>○</td> </tr> </tbody> </table> </div> </div>			Condition	Terminals			3	2	1	Unlock	○	○		N	No continuity			Lock	○		○
Condition	Terminals																				
	3	2	1																		
Unlock	○	○																			
N	No continuity																				
Lock	○		○																		
SEL469X																					
<b>OK or NG</b>																					
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>Ground circuit for door lock/unlock switch</li> <li>Harness for open or short between door lock/unlock switch and time control unit connector</li> </ul>																			
NG	▶	Replace door lock/unlock switch.																			

# POWER DOOR LOCK

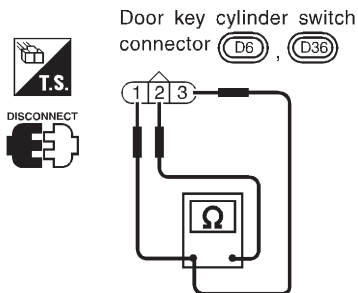
Trouble Diagnoses (Cont'd)

## DOOR KEY CYLINDER SWITCH CHECK

NJEL0505S05

<b>1</b>	<b>CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)</b>																				
Check voltage between time control unit harness connector terminals 28 or 29 and ground.																					
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse;"> <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;">29</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;">28</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> </div> </div>				Terminals		Key position	Voltage [V]	(+)	(-)	29	Ground	Neutral/Unlock	Approx. 5	Lock	0	28	Ground	Neutral/Lock	Approx. 5	Unlock	0
Terminals		Key position	Voltage [V]																		
(+)	(-)																				
29	Ground	Neutral/Unlock	Approx. 5																		
		Lock	0																		
28	Ground	Neutral/Lock	Approx. 5																		
		Unlock	0																		
Refer to wiring diagram in EL-183.																					
<b>OK or NG</b>																					
OK	▶	Door key cylinder switch is OK.																			
NG	▶	GO TO 2.																			

SEL470X

<b>2</b>	<b>CHECK DOOR KEY CYLINDER SWITCH</b>																	
<ol style="list-style-type: none"> <li>1. Disconnect door key cylinder switch harness connector.</li> <li>2. Check continuity between door key cylinder switch terminals.</li> </ol>																		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">  </div> <div style="text-align: center;"> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th>Terminals</th> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td>① - ② (LH side)</td> <td>Neutral/Unlock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>② - ③ (RH side)</td> <td>Lock</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td>① - ② (RH side)</td> <td>Neutral/Lock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>② - ③ (LH side)</td> <td>Unlock</td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table> </div> </div>				Terminals	Key position	Continuity	① - ② (LH side)	Neutral/Unlock	No	② - ③ (RH side)	Lock	Yes	① - ② (RH side)	Neutral/Lock	No	② - ③ (LH side)	Unlock	Yes
Terminals	Key position	Continuity																
① - ② (LH side)	Neutral/Unlock	No																
② - ③ (RH side)	Lock	Yes																
① - ② (RH side)	Neutral/Lock	No																
② - ③ (LH side)	Unlock	Yes																
<b>OK or NG</b>																		
OK	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door key cylinder switch ground circuit</li> <li>● Harness for open or short between time control unit and door key cylinder switch</li> </ul>																
NG	▶	Replace door key cylinder switch.																

SEL471X

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

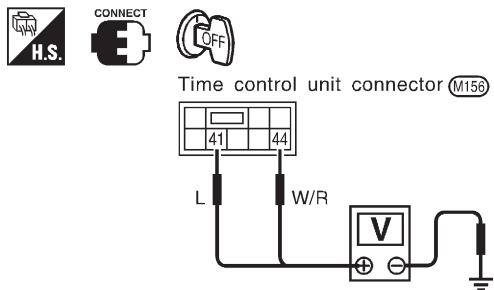
## DOOR LOCK ACTUATOR CHECK

NJEL0505S06

### 1 CHECK DOOR LOCK ACTUATOR OUTPUT SIGNAL

Check voltage for door lock actuator.

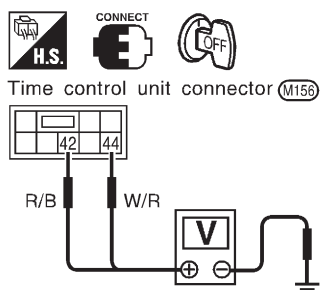
- Door lock actuator driver's side



Door lock/unlock switch condition	Terminals		Voltage [V]
	(+)	(-)	
Lock	41	Ground	Approx. 12
Unlock	44	Ground	

SEL472X

- Door lock actuator passenger side and rear



Door lock/unlock switch condition	Terminals		Voltage [V]
	(+)	(-)	
Lock	42	Ground	Approx. 12
Unlock	44	Ground	

SEL473X

Refer to wiring diagram in EL-185.

**OK or NG**

OK	▶	GO TO 2.
NG	▶	Replace time control unit. (Before replacing the control unit, perform "DOOR LOCK/ UNLOCK SWITCH CHECK".)

# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

2	CHECK DOOR LOCK ACTUATOR		
<p>1. Disconnect door lock actuator harness connector.                      2. Apply 12V direct current to door lock actuator and check operation.</p>			
<p>● Front and rear door</p>			
		<p>Door lock actuator connector</p> <p>Driver side: (D27)</p> <p>Passenger side: (D48)</p> <p>Rear LH: (D62)</p> <p>Rear RH: (D82)</p>	<p><b>Door lock actuator operation:</b>                      Terminals 1 (+) and 3 (-)                      Unlocked → Locked                      Terminals 3 (+) and 1 (-)                      Locked → Unlocked</p>
<p>● Back door</p>			
		<p>Door lock actuator connector (D94)</p>	<p><b>Door lock actuator operation:</b>                      Terminals 2 (+) and 1 (-)                      Unlocked → Locked                      Terminals 1 (+) and 2 (-)                      Locked → Unlocked</p>
<p><b>OK or NG</b></p>			
OK	▶	Check harness for open or short between time control unit connector and door lock actuator.	
NG	▶	Replace door lock actuator.	

YEL784C




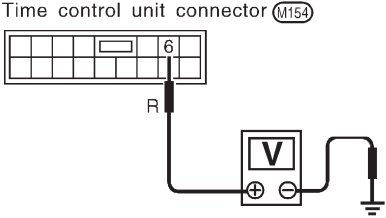
SEL491X

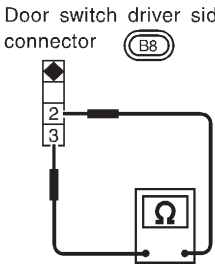


# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## DOOR SWITCH CHECK

=NJEL0505S08

<b>1</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>															
<p>Check voltage between time control unit harness connector terminals 6 or 7 and ground.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">    </div> <div> <p>Time control unit connector (M154)</p>  </div> </div> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Driver's door switch</td> <td rowspan="2">6</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> </tbody> </table> <p style="text-align: right;">SEL475X</p>				Terminals		Condition	Voltage [V]	(+)	(-)	Driver's door switch	6	Ground	Open	0	Closed	Approx. 5
	Terminals			Condition	Voltage [V]											
	(+)	(-)														
Driver's door switch	6	Ground	Open	0												
			Closed	Approx. 5												
<p>Refer to wiring diagram in EL-181.</p> <p style="text-align: center;"><b>OK or NG</b></p>																
OK	▶	Door switch is OK.														
NG	▶	GO TO 2.														

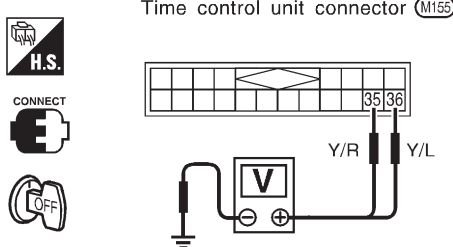
<b>2</b>	<b>CHECK DOOR SWITCH</b>	
<p>1. Disconnect door switch harness connector. 2. Check continuity between door switch terminals.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Door switch driver side connector (B8)</p>  </div> <div>   </div> </div> <div style="margin-left: 20px;"> <p><b>Continuity:</b>  <b>Door switch is pushed.</b>  <b>No</b>  <b>Door switch is released.</b>  <b>Yes</b></p> </div> <p style="text-align: right;">SEL325WA</p>		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door switch ground circuit or door switch ground condition</li> <li>● Harness for open or short between smart entrance control unit and door switch</li> </ul>
NG	▶	Replace door switch.

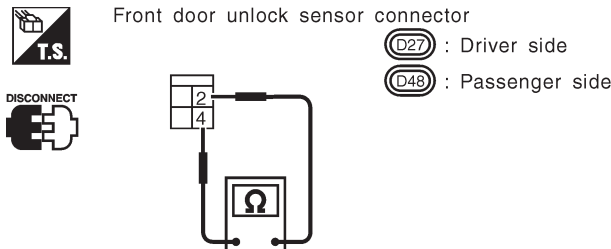
# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## DOOR UNLOCK SENSOR CHECK

=NJEL0505S09

<b>1</b>	<b>CHECK DOOR UNLOCK SENSOR INPUT SIGNAL</b>																			
<p>Check voltage between time control unit terminal 35 or 36 and ground.</p>																				
																				
<table border="1" style="margin-left: auto; margin-right: 0;"> <thead> <tr> <th colspan="2">Terminals</th> <th rowspan="2">Condition (Driver's or passenger door)</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">35</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> <tr> <td rowspan="2">36</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table>			Terminals		Condition (Driver's or passenger door)	Voltage [V]	(+)	(-)	35	Ground	Locked	Approx. 5	Unlocked	0	36	Ground	Locked	Approx. 5	Unlocked	0
Terminals		Condition (Driver's or passenger door)	Voltage [V]																	
(+)	(-)																			
35	Ground	Locked	Approx. 5																	
		Unlocked	0																	
36	Ground	Locked	Approx. 5																	
		Unlocked	0																	
SEL476X																				
Refer to wiring diagram in EL-184.																				
<b>OK or NG</b>																				
OK	▶	Door unlock sensor is OK.																		
NG	▶	GO TO 2.																		



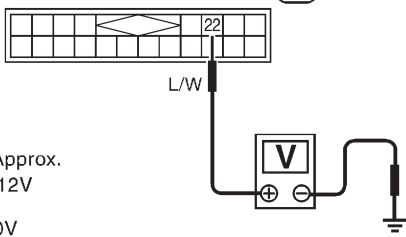
<b>2</b>	<b>CHECK DOOR UNLOCK SENSOR</b>	
<p>1. Disconnect door unlock sensor connector. 2. Check continuity between door unlock sensor terminals 2 and 4.</p>		
		
<p><b>Continuity:</b>  <b>Condition: Locked</b>  <b>No</b>  <b>Condition: Unlocked</b>  <b>Yes</b></p>		
YEL785C		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between time control unit and door unlock sensor</li> </ul>
NG	▶	Replace door unlock sensor.



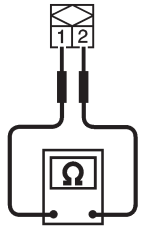
# POWER DOOR LOCK

Trouble Diagnoses (Cont'd)

## KEY SWITCH (INSERT) CHECK

=NJEL0505S11

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	
<p>Check voltage between time control unit terminal 22 and ground.</p>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">  <p><b>CONNECT</b></p>  <p>Key switch : Approx. 12V Key removed : 0V</p> </div> <div style="width: 30%; text-align: center;"> <p>Time control unit connector (M155)</p>  </div> <div style="width: 30%;"> <p><b>Voltage [V]:</b></p> <p>Condition of switch: Key is inserted. Approx. 12</p> <p>Condition of switch: Key is removed. 0</p> </div> </div>		
SEL433X		
Refer to wiring diagram in EL-200.		
<b>OK or NG</b>		
OK	▶	Key switch is OK.
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK KEY SWITCH (INSERT)</b>	
<p>Check continuity between key switch terminals 1 and 2.</p>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">  <p><b>DISCONNECT</b></p>  </div> <div style="width: 30%; text-align: center;"> <p>Key switch connector (E173)</p>  </div> <div style="width: 30%;"> <p><b>Continuity:</b></p> <p>Condition of key switch: Key is inserted. Yes</p> <p>Condition of key switch: Key is removed. No</p> </div> </div>		
YEL802C		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between time control unit and key switch</li> </ul>
NG	▶	Replace key switch.

# POWER DOOR LOCK — SUPER LOCK —

System Description

## System Description

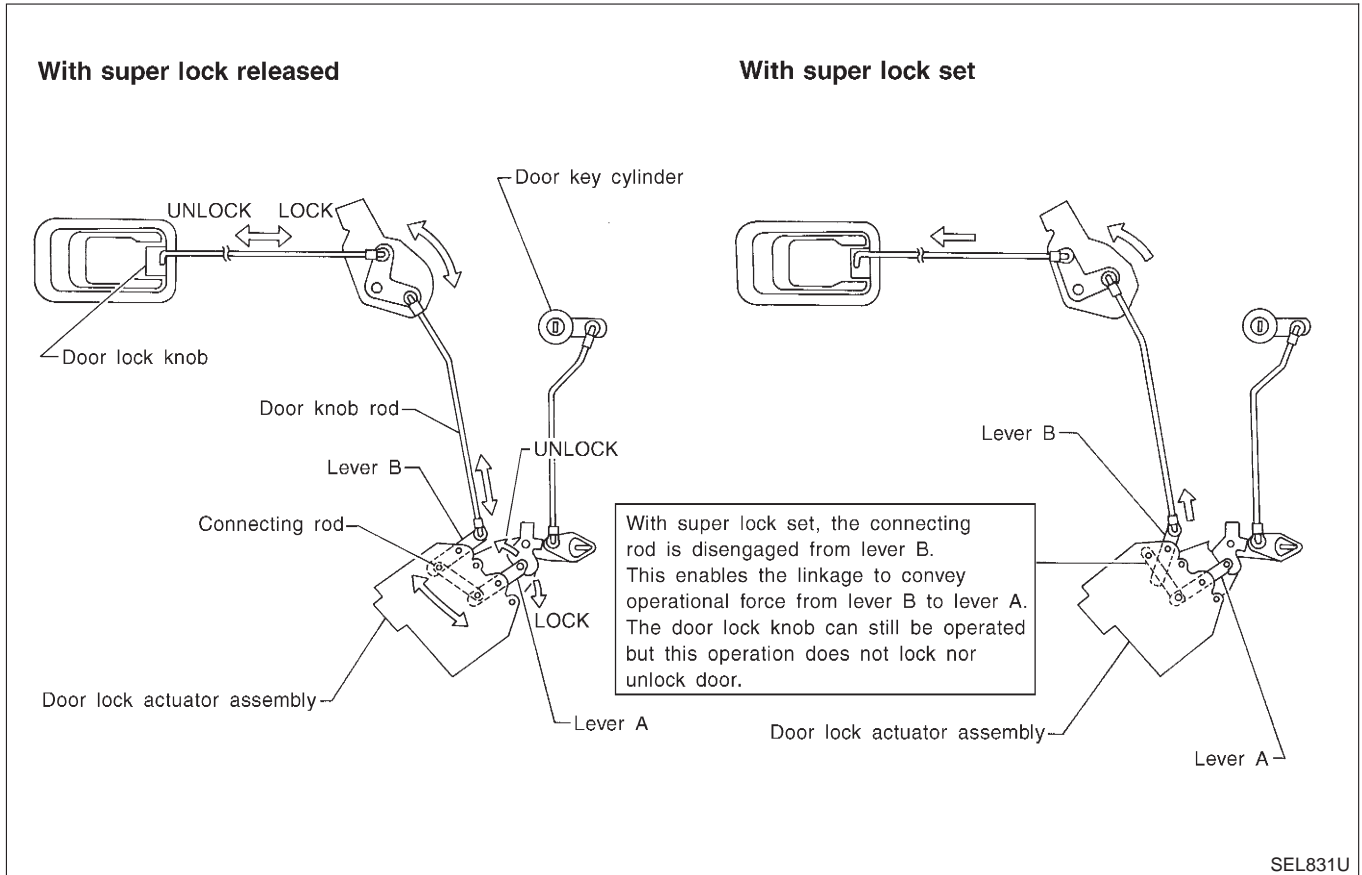
NJEL0395

### OUTLINE

NJEL0395S01

Power door lock system with super lock and key reminder is controlled by time control unit. Super lock has a higher anti-theft performance than conventional power door lock systems.

When super lock is in released condition, lock knob operation locks or unlocks door.  
When super lock is in set condition, lock knob operation cannot lock nor unlock door.



### OPERATION

NJEL0395S02

#### Power door lock/unlock and super lock set/release operation by door key cylinder

- With the key inserted into front door key cylinder, turning it to LOCK will lock all doors and set super lock. (Super lock will not be set while key is inserted in the ignition key cylinder.)
- With the key inserted into front door key cylinder, turning it to UNLOCK will unlock all doors and release super lock.

#### Power door lock/unlock and super lock set/release operation by multi-remote controller (If equipped)

- Pressing multi-remote controller LOCK button will lock all doors and set super lock. (Super lock will not be set while key is inserted in the ignition key cylinder.)
- Pressing multi-remote controller UNLOCK button once will unlock driver door and release super lock. Then, if an unlock signal is sent from the remote controller again within 5 seconds, all other doors will be unlocked.

#### Power door lock and super lock release operation (by NATS IMMU signal)

- When the super lock is set, turning the ignition key switch to ON will release the super lock. All doors will unlock once, but then immediately lock again.

#### Power door lock/unlock operation by lock/unlock switch

- With lock/unlock switch on driver door trim setting to LOCK will lock all doors.
- With lock/unlock switch on driver door trim setting to UNLOCK will unlock all doors.

#### Lock/unlock switch operation cannot control super lock.

#### Key reminder system

- If the ignition key is in the ignition key cylinder and driver door is open, setting lock/unlock switch, lock



## POWER DOOR LOCK — SUPER LOCK —

*System Description (Cont'd)*

---

knob, key or multi-remote controller to “LOCK” locks the door once but then immediately unlocks all doors. (signal from door unlock sensor driver side)

### **System initialization**

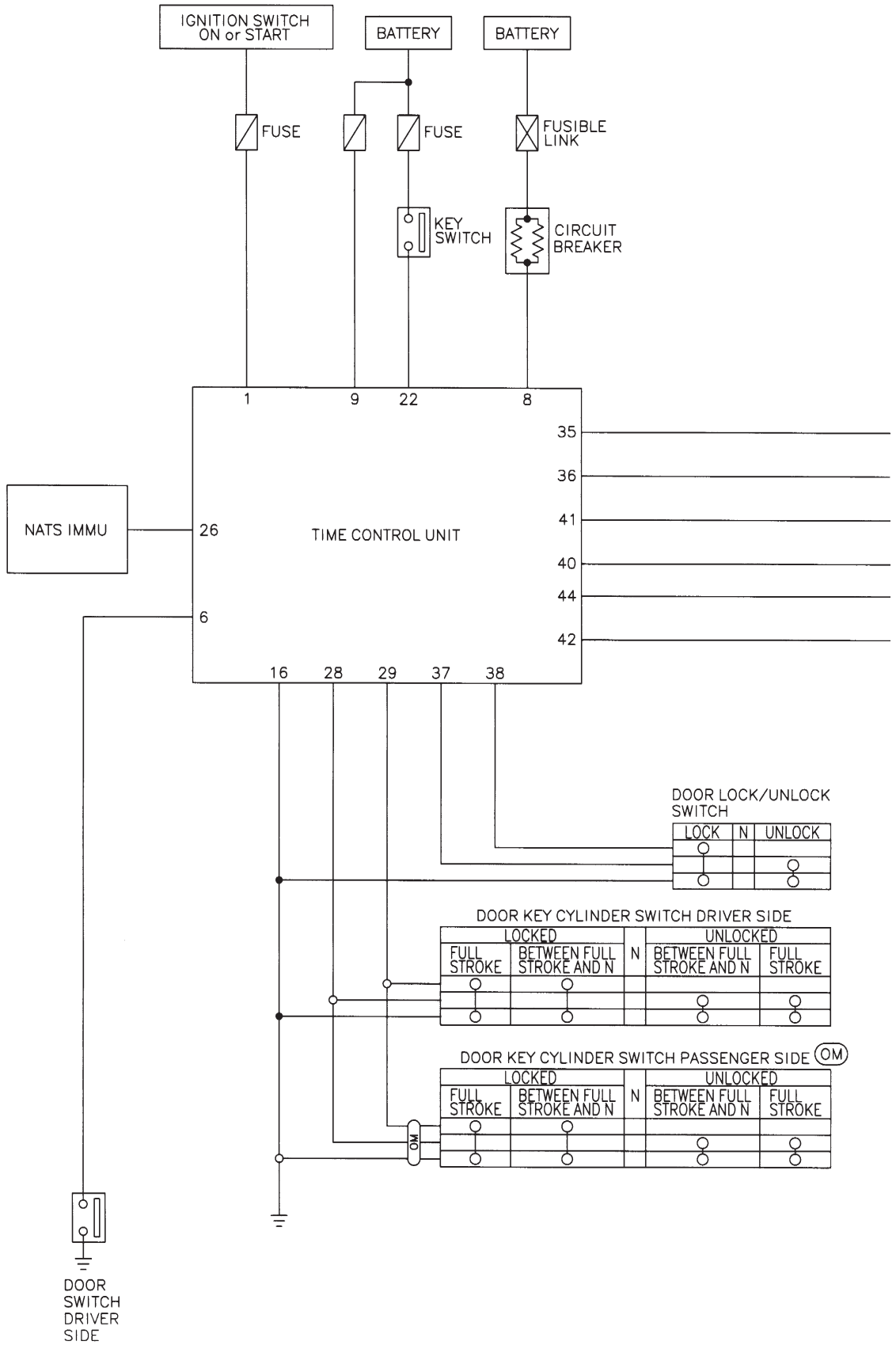
- System initialization is required when battery cables are reconnected. Conduct the following to release super lock once;
  - insert the key into the ignition key cylinder and turn it to ON.
  - LOCK/UNLOCK operation using door key cylinder or multi-remote controller.

# POWER DOOR LOCK — SUPER LOCK —

Schematic

## Schematic

NJEL0475

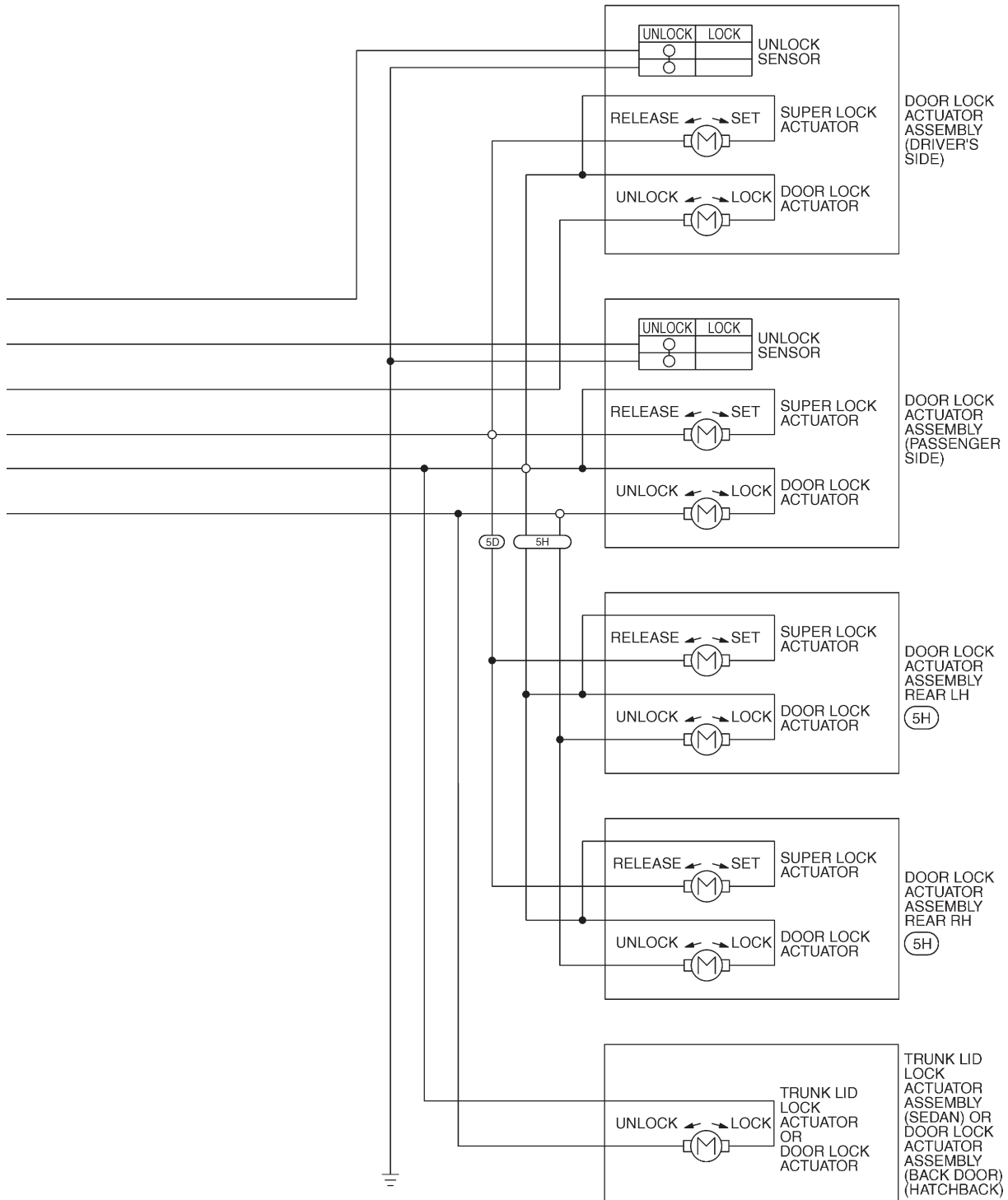


MEL921L

# POWER DOOR LOCK — SUPER LOCK —

Schematic (Cont'd)

- (5H) : 5-door hatchback models and Sedan models
- (OM) : Without multi-remote control system
- (5D) : 5-door hatchback models



YEL700C

# POWER DOOR LOCK — SUPER LOCK —

Wiring Diagram — S/LOCK —

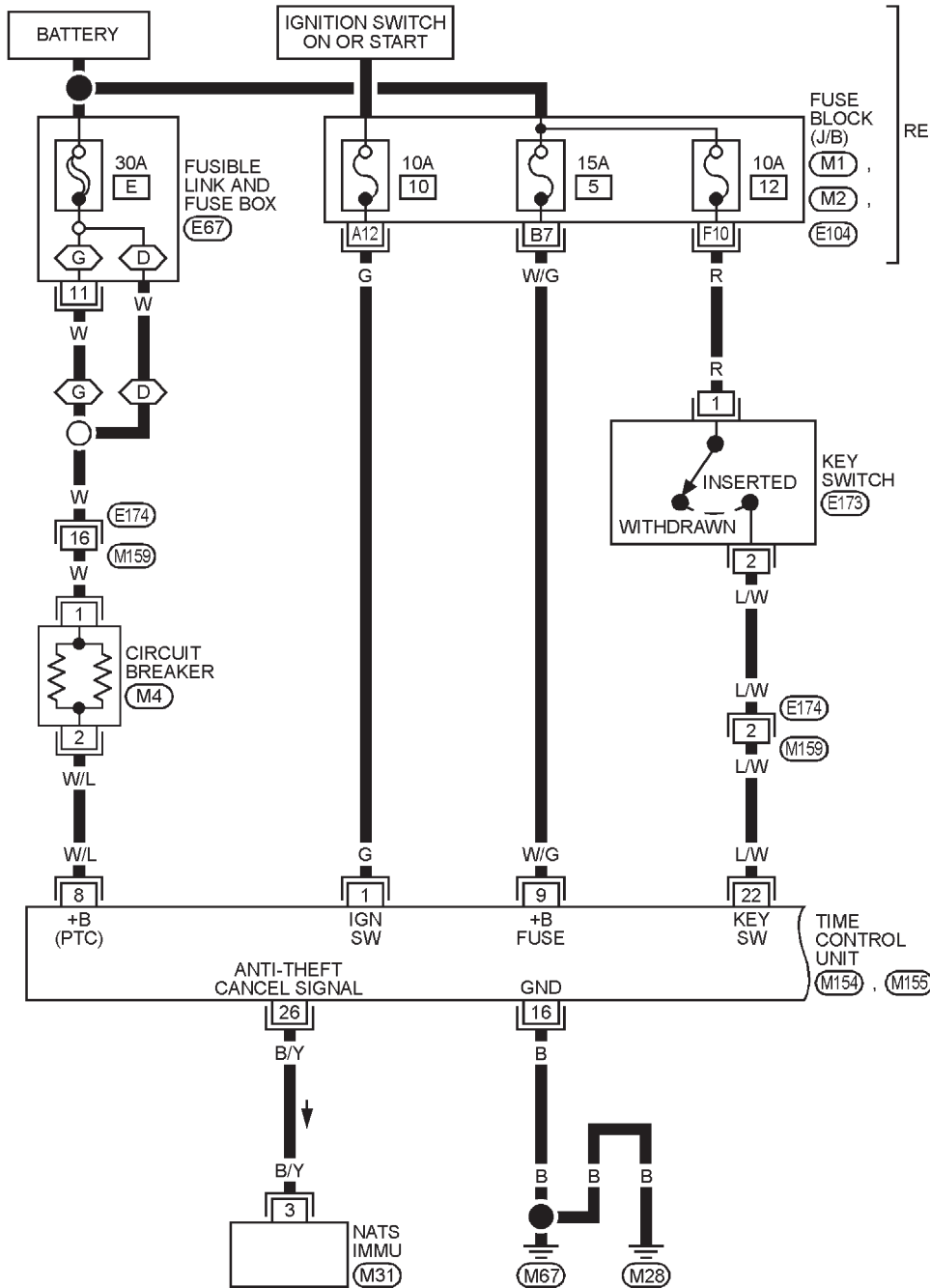
## Wiring Diagram — S/LOCK —

NJEL0476

NJEL0476S01

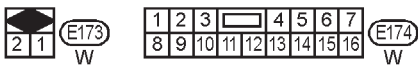
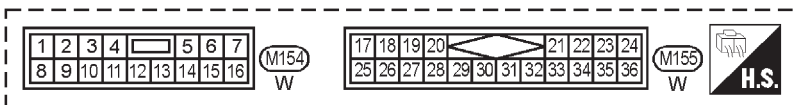
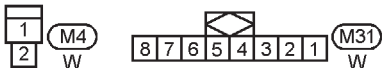
FIG. 1

### EL-S/LOCK-01



REFER TO EL-POWER.

G : GASOLINE ENGINE  
D : DIESEL ENGINE



REFER TO THE FOLLOWING.

M1 , M2 , E104

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

E67 -FUSE AND  
FUSIBLE LINK BOX

YEL701C

# POWER DOOR LOCK — SUPER LOCK —

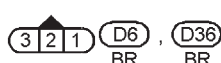
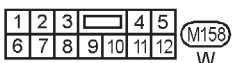
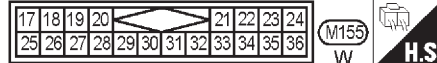
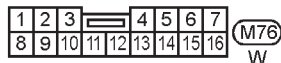
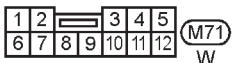
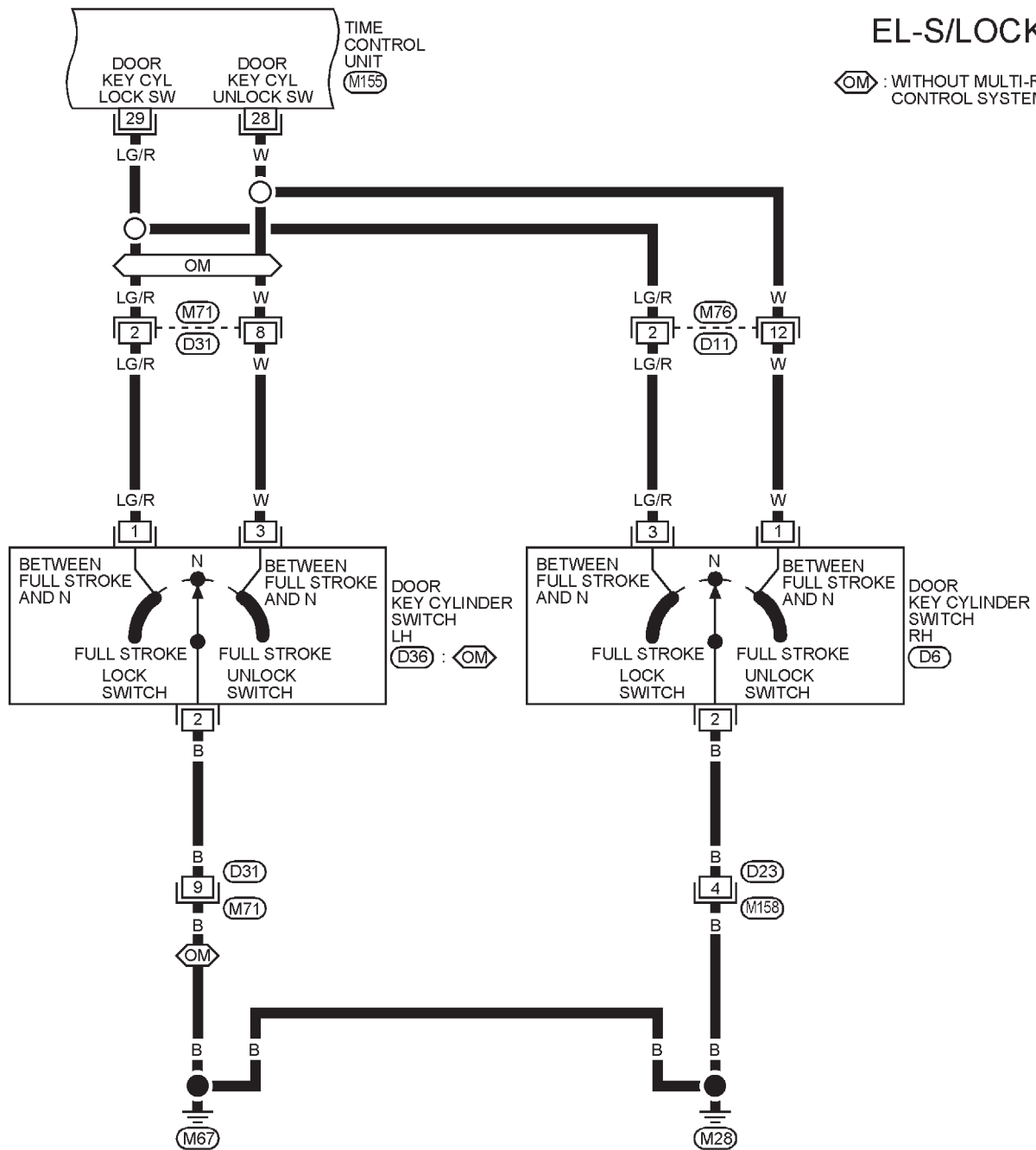
Wiring Diagram — S/LOCK — (Cont'd)

**FIG. 3**

NJEL0476S03

## EL-S/LOCK-02

◊ : WITHOUT MULTI-REMOTE CONTROL SYSTEM



YEL702C

# POWER DOOR LOCK — SUPER LOCK —

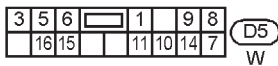
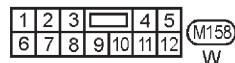
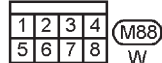
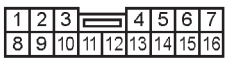
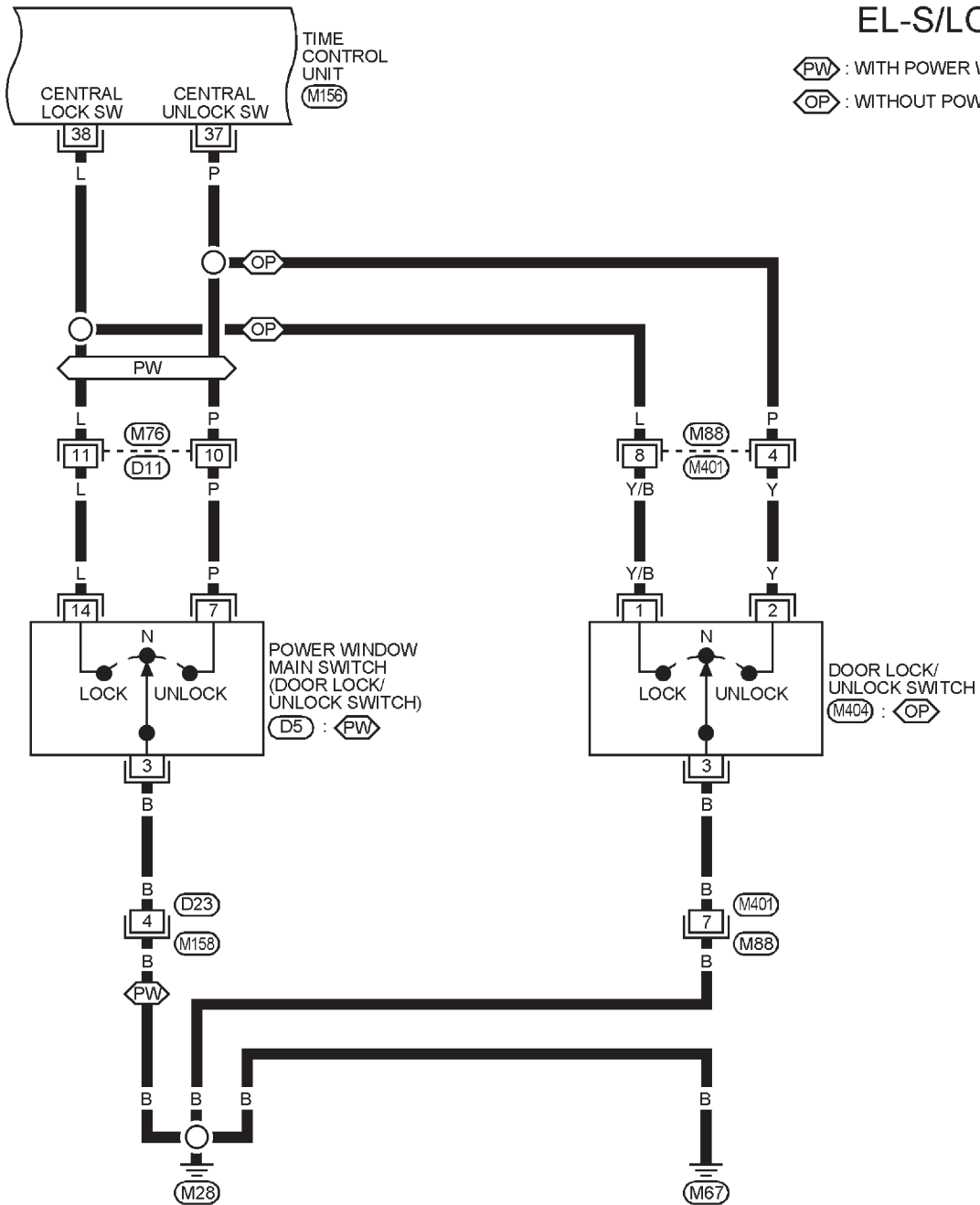
Wiring Diagram — S/LOCK — (Cont'd)

**FIG. 4**

NJEL0476S04

## EL-S/LOCK-03

PW : WITH POWER WINDOW  
OP : WITHOUT POWER WINDOW



YEL703C

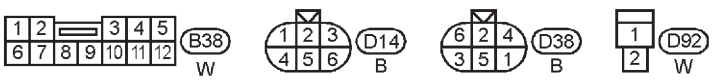
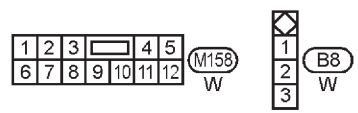
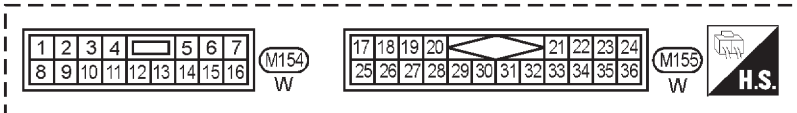
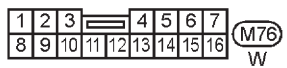
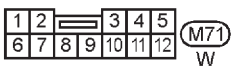
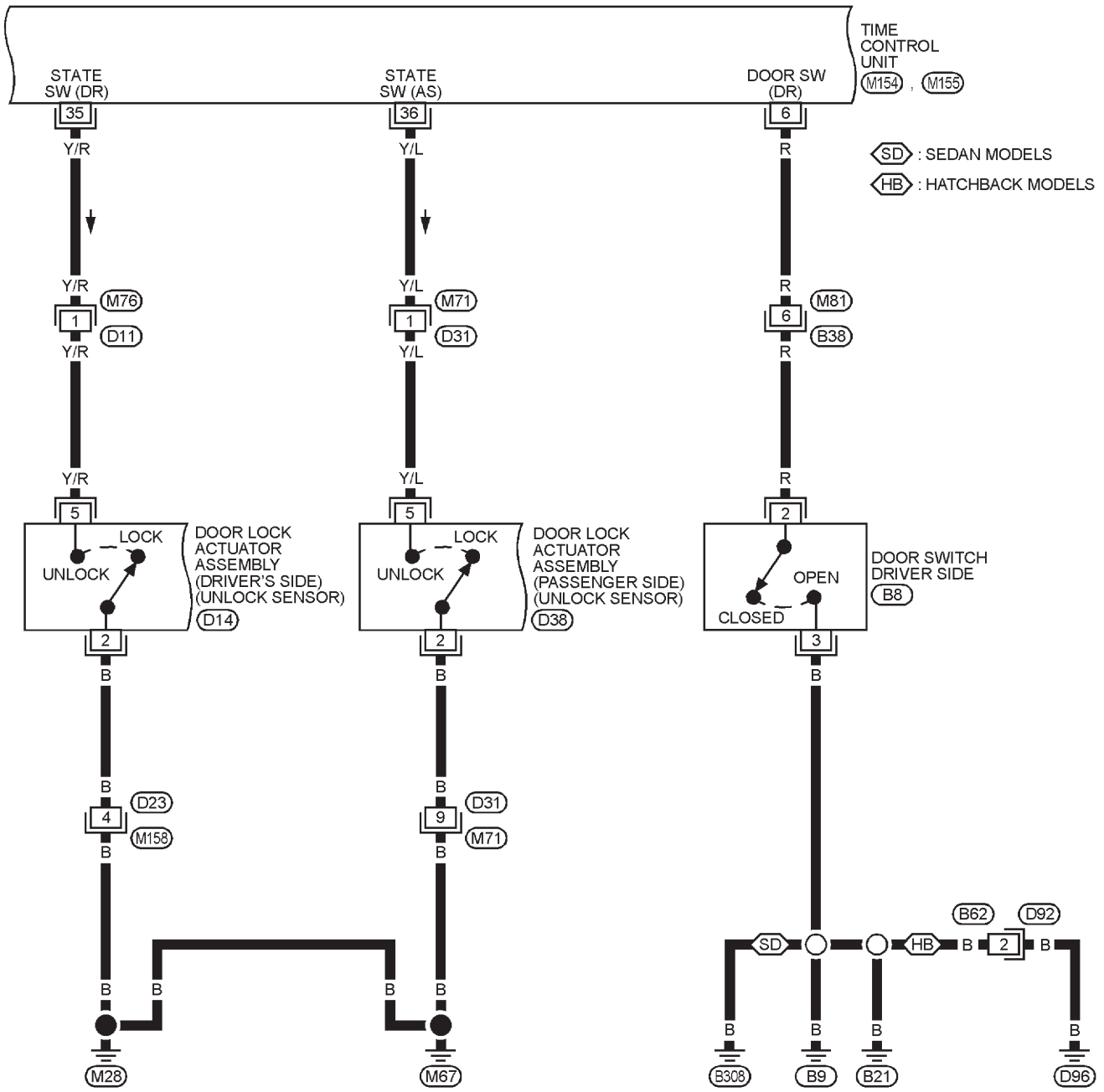
# POWER DOOR LOCK — SUPER LOCK —

Wiring Diagram — S/LOCK — (Cont'd)

**FIG. 5**

NJEL0476S05

## EL-S/LOCK-04



YEL704C

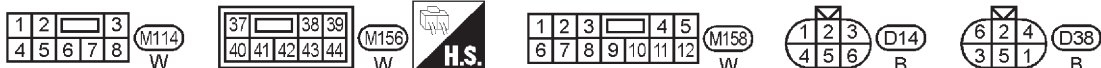
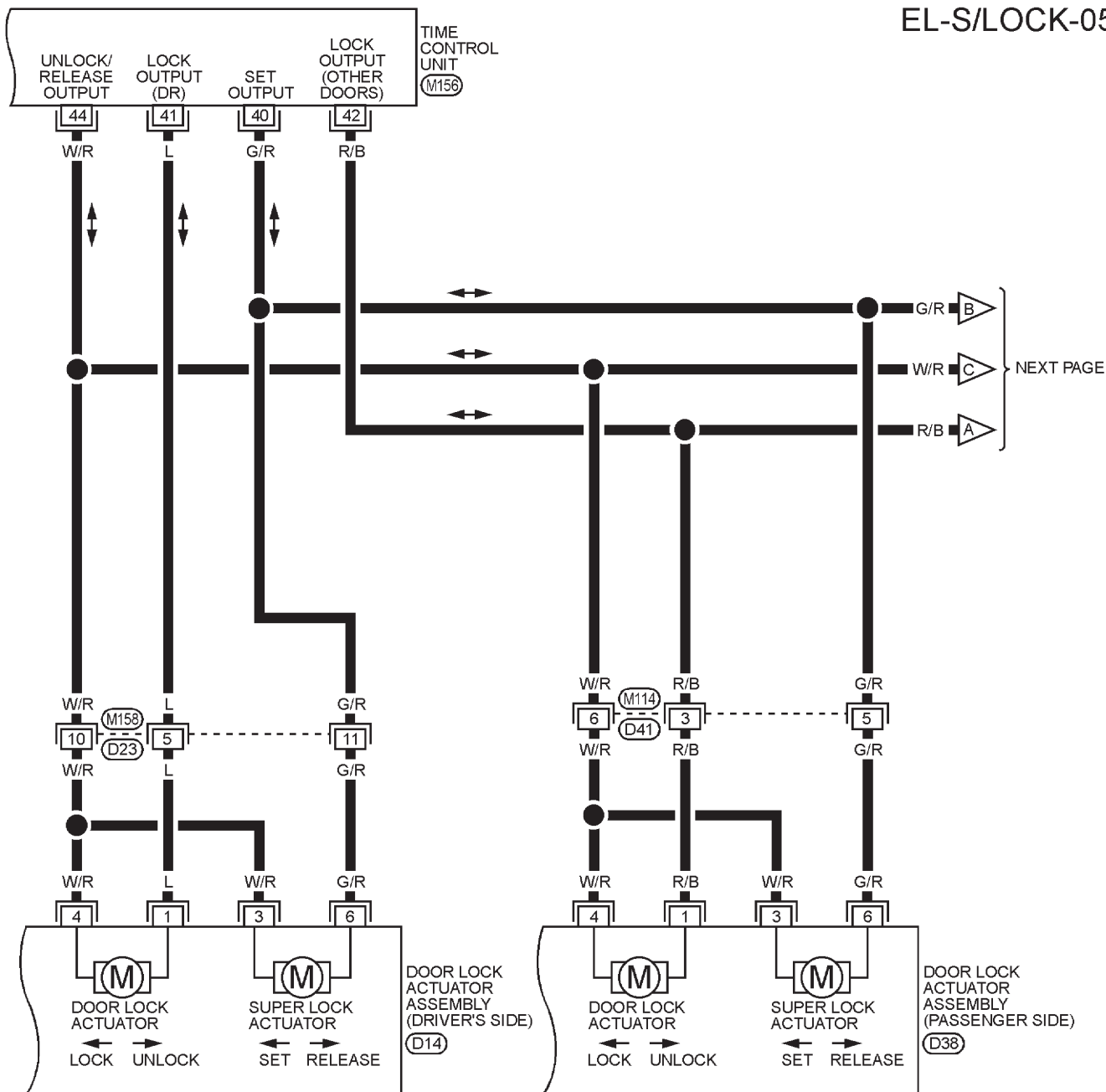
# POWER DOOR LOCK — SUPER LOCK —

Wiring Diagram — S/LOCK — (Cont'd)

**FIG. 6**

NJEL0476S06

EL-S/LOCK-05



YEL705C



# POWER DOOR LOCK — SUPER LOCK —

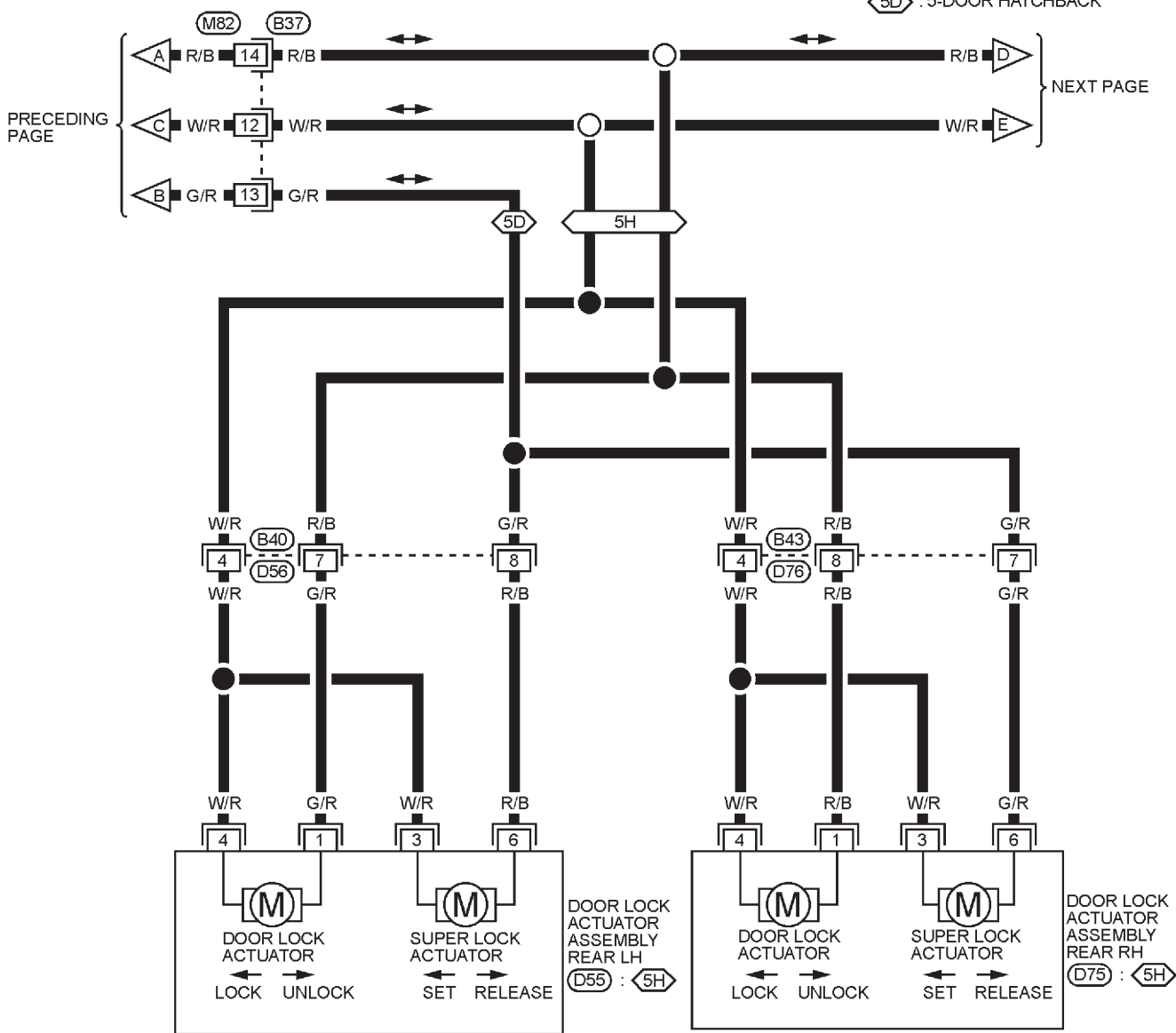
Wiring Diagram — S/LOCK — (Cont'd)

FIG. 7

NJEL0476S07

## EL-S/LOCK-06

- 5H : 5-DOOR HATCHBACK MODELS AND SEDAN MODELS
- 5D : 5-DOOR HATCHBACK



YEL706C

# POWER DOOR LOCK — SUPER LOCK —

Wiring Diagram — S/LOCK — (Cont'd)

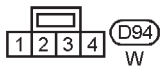
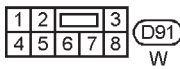
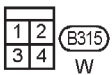
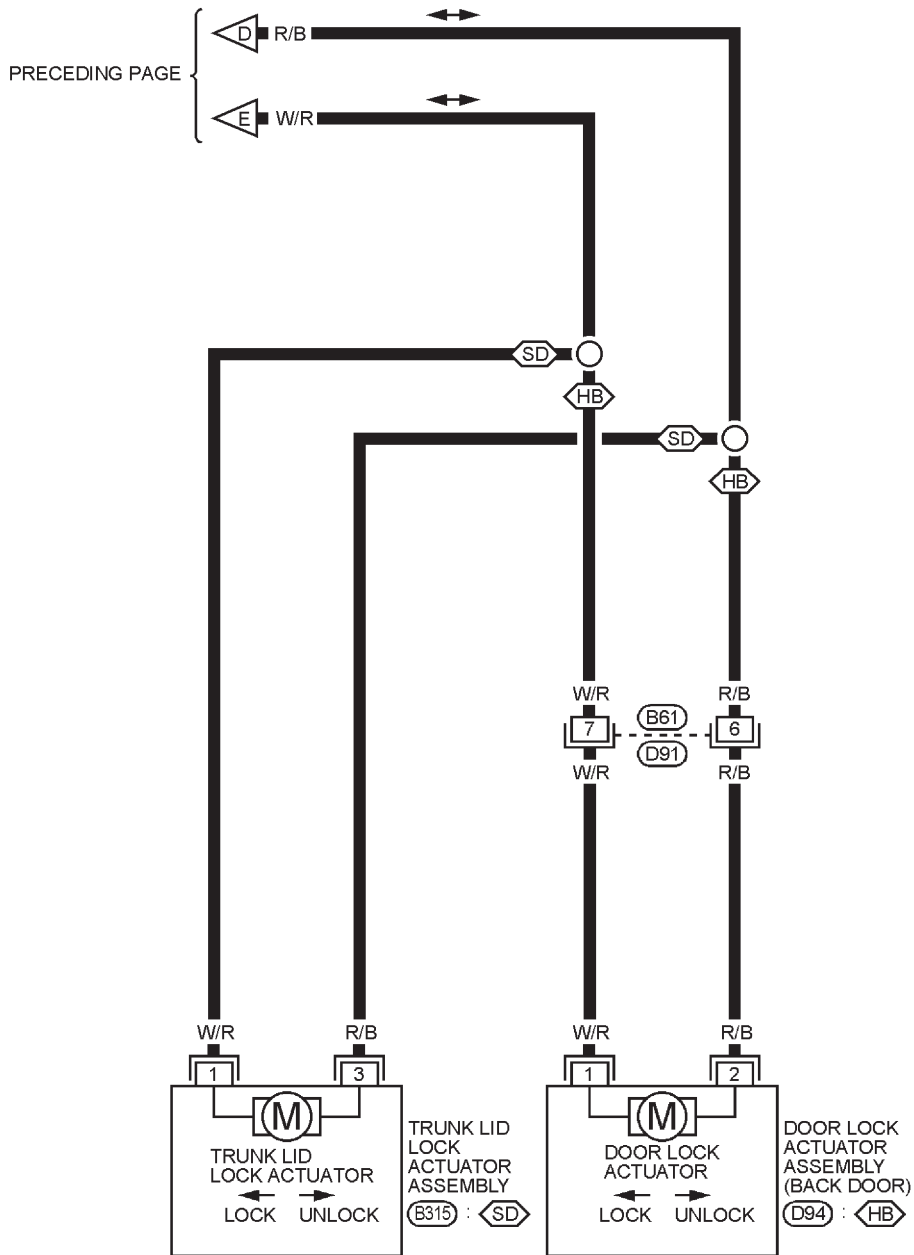
**FIG. 8**

NJEL0476S08

## EL-S/LOCK-07

(SD) : SEDAN MODELS

(HB) : HATCHBACK MODELS



YEL707C

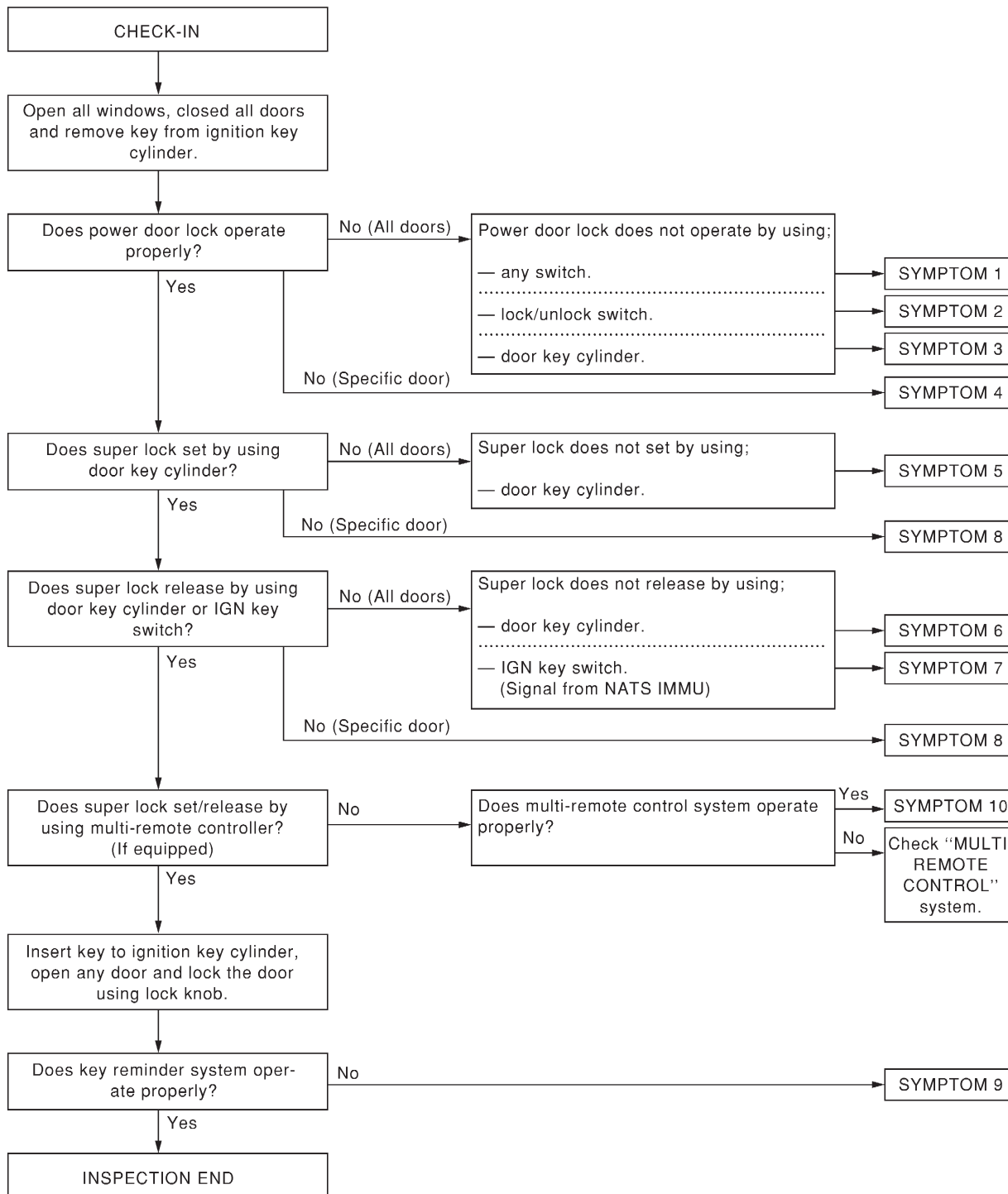
# POWER DOOR LOCK — SUPER LOCK —

## Trouble Diagnoses

NJEL0477

NJEL0477S01

### PRELIMINARY CHECK



SEL062X

**After performing preliminary check, go to SYMPTOM CHART.**  
**Before starting trouble diagnoses below, perform preliminary check, EL-207.**  
 Symptom numbers in the symptom chart correspond with those of Preliminary check.

## POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

### SYMPTOM CHART

NJEL0477S02

REFERENCE PAGE (EL- )	209	210	211	212	214	215	216	217	218	219	219
SYMPTOM	Main power supply and ground circuit check	Door lock/unlock switch check	Door key cylinder switch check	Door lock actuator check	Super lock actuator check	Door switch check	Door unlock sensor check	NATS release signal check	Key switch check	Ignition switch "ON" circuit check	Remote controller signal check
1	X			X							
2		X									
3			X								
4				X							
5			X		X				X	X	
6			X		X						
7					X			X		X	
8					X						
9						X	X		X		
10							X				X

X: Applicable

\*: Make sure the power door lock system operates properly.

# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

NJEL0477S03

### Main Power Supply Circuit Check

NJEL0477S0301

Time control unit connector (M154)

DISCONNECT H.S.

W/L W/G

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
8	Ground	Battery voltage		
9				

SEL467X

### Ground Circuit Check

NJEL0477S0302

Time control unit connector (M154)

DISCONNECT H.S.

OFF

B

**Continuity should exist.**

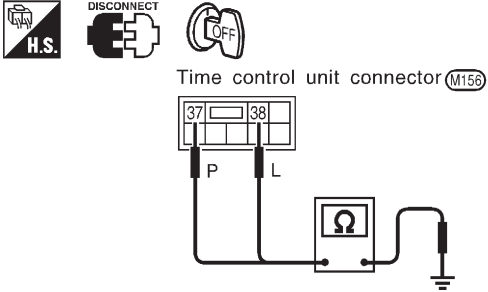
SEL448X

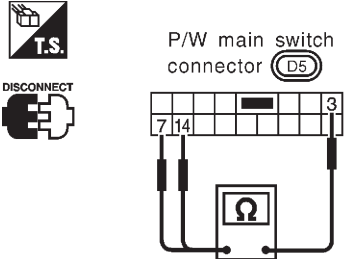
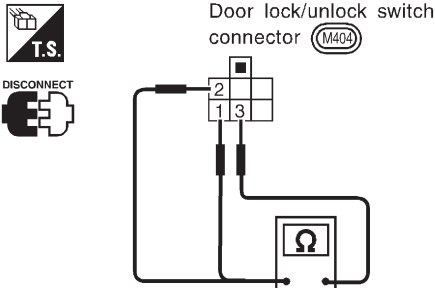
# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## DOOR LOCK/UNLOCK SWITCH CHECK

=NJEL0477S04

<b>1</b>	<b>CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL</b>														
<p>1. Disconnect time control unit harness connector.                  2. Check continuity between time control unit harness connector terminal 37 or 38 and ground.</p>															
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p style="text-align: center;">Time control unit connector (M156)</p> </div> <div style="flex: 1; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="border: none;">Terminals</th> <th style="border: none;">Door lock/unlock switch condition</th> <th style="border: none;">Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="border: none;">38 - Ground</td> <td style="border: none;">Lock</td> <td style="border: none;">Yes</td> </tr> <tr> <td style="border: none;">N and Unlock</td> <td style="border: none;">No</td> </tr> <tr> <td rowspan="2" style="border: none;">37 - Ground</td> <td style="border: none;">Unlock</td> <td style="border: none;">Yes</td> </tr> <tr> <td style="border: none;">N and Lock</td> <td style="border: none;">No</td> </tr> </tbody> </table> </div> </div>			Terminals	Door lock/unlock switch condition	Continuity	38 - Ground	Lock	Yes	N and Unlock	No	37 - Ground	Unlock	Yes	N and Lock	No
Terminals	Door lock/unlock switch condition	Continuity													
38 - Ground	Lock	Yes													
	N and Unlock	No													
37 - Ground	Unlock	Yes													
	N and Lock	No													
SEL468X															
<b>OK or NG</b>															
OK	▶	Door lock/unlock switch is OK.													
NG	▶	GO TO 2.													

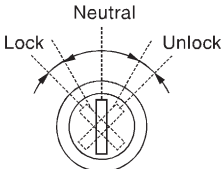



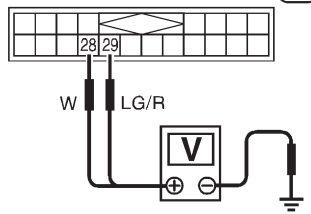
<b>2</b>	<b>CHECK DOOR LOCK/UNLOCK SWITCH</b>																					
<p>1. Disconnect door lock/unlock switch harness connector.                  2. Check continuity between each door lock/unlock switch terminals.</p> <ul style="list-style-type: none"> <li>● Power window main switch (Door lock/unlock switch) (With power window)</li> </ul>																						
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p style="text-align: center;">P/W main switch connector (D5)</p> </div> <div style="flex: 1; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="border: none;">Condition</th> <th colspan="3" style="border: none;">Terminals</th> </tr> <tr> <th style="border: none;"></th> <th style="border: none;">3</th> <th style="border: none;">14</th> <th style="border: none;">7</th> </tr> </thead> <tbody> <tr> <td style="border: none;">Lock</td> <td style="border: none;">○</td> <td style="border: none;">○</td> <td style="border: none;">○</td> </tr> <tr> <td style="border: none;">N</td> <td colspan="3" style="border: none;">No continuity</td> </tr> <tr> <td style="border: none;">Unlock</td> <td style="border: none;">○</td> <td style="border: none;">○</td> <td style="border: none;">○</td> </tr> </tbody> </table> </div> </div>			Condition	Terminals				3	14	7	Lock	○	○	○	N	No continuity			Unlock	○	○	○
Condition	Terminals																					
	3	14	7																			
Lock	○	○	○																			
N	No continuity																					
Unlock	○	○	○																			
<ul style="list-style-type: none"> <li>● Door lock/unlock switch (Without power window)</li> </ul>																						
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p style="text-align: center;">Door lock/unlock switch connector (M404)</p> </div> <div style="flex: 1; margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="border: none;">Condition</th> <th colspan="3" style="border: none;">Terminals</th> </tr> <tr> <th style="border: none;"></th> <th style="border: none;">3</th> <th style="border: none;">2</th> <th style="border: none;">1</th> </tr> </thead> <tbody> <tr> <td style="border: none;">Unlock</td> <td style="border: none;">○</td> <td style="border: none;">○</td> <td style="border: none;">○</td> </tr> <tr> <td style="border: none;">N</td> <td colspan="3" style="border: none;">No continuity</td> </tr> <tr> <td style="border: none;">Lock</td> <td style="border: none;">○</td> <td style="border: none;">○</td> <td style="border: none;">○</td> </tr> </tbody> </table> </div> </div>			Condition	Terminals				3	2	1	Unlock	○	○	○	N	No continuity			Lock	○	○	○
Condition	Terminals																					
	3	2	1																			
Unlock	○	○	○																			
N	No continuity																					
Lock	○	○	○																			
SEL469X																						
<b>OK or NG</b>																						
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Ground circuit for door lock/unlock switch</li> <li>● Harness for open or short between door lock/unlock switch and time control unit connector</li> </ul>																				
NG	▶	Replace door lock/unlock switch.																				


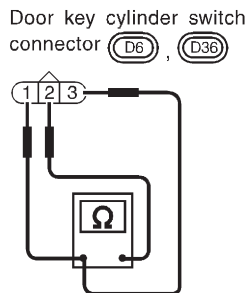
# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## DOOR KEY CYLINDER SWITCH CHECK

NJEL0477S05

<b>1</b>	<b>CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)</b>																			
Check voltage between time control unit harness connector terminals 28 or 29 and ground.																				
	  																			
Time control unit connector (M155)																				
																				
		<table border="1" style="width: 100%; border-collapse: collapse;"> <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;">29</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;">28</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]	(+)	(-)	29	Ground	Neutral/Unlock	Approx. 5	Lock	0	28	Ground	Neutral/Lock	Approx. 5	Unlock	0
Terminals		Key position	Voltage [V]																	
(+)	(-)																			
29	Ground	Neutral/Unlock	Approx. 5																	
		Lock	0																	
28	Ground	Neutral/Lock	Approx. 5																	
		Unlock	0																	
SEL470X																				
Refer to wiring diagram in EL-201.																				
<b>OK or NG</b>																				
OK	▶	Door key cylinder switch is OK.																		
NG	▶	GO TO 2.																		

<b>2</b>	<b>CHECK DOOR KEY CYLINDER SWITCH</b>																
<ol style="list-style-type: none"> <li>1. Disconnect door key cylinder switch harness connector.</li> <li>2. Check continuity between door key cylinder switch terminals.</li> </ol>																	
																	
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Terminals</th> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td>① - ② (LH side)</td> <td>Neutral/Unlock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>② - ③ (RH side)</td> <td>Lock</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td>① - ② (RH side)</td> <td>Neutral/Lock</td> <td style="text-align: center;">No</td> </tr> <tr> <td>② - ③ (LH side)</td> <td>Unlock</td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table>	Terminals	Key position	Continuity	① - ② (LH side)	Neutral/Unlock	No	② - ③ (RH side)	Lock	Yes	① - ② (RH side)	Neutral/Lock	No	② - ③ (LH side)	Unlock	Yes
Terminals	Key position	Continuity															
① - ② (LH side)	Neutral/Unlock	No															
② - ③ (RH side)	Lock	Yes															
① - ② (RH side)	Neutral/Lock	No															
② - ③ (LH side)	Unlock	Yes															
SEL471X																	
<b>OK or NG</b>																	
OK	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door key cylinder switch ground circuit</li> <li>● Harness for open or short between time control unit and door key cylinder switch</li> </ul>															
NG	▶	Replace door key cylinder switch.															

# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

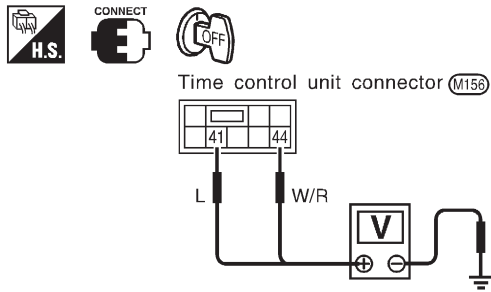
## DOOR LOCK ACTUATOR CHECK

NJEL0477S06

### 1 CHECK DOOR LOCK ACTUATOR OUTPUT SIGNAL

Check voltage for door lock actuator.

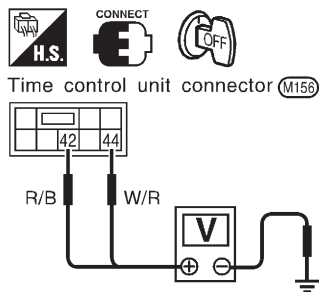
- Door lock actuator driver's side



Door lock/unlock switch condition	Terminals		Voltage [V]
	(+)	(-)	
Lock	41	Ground	Approx. 12
Unlock	44	Ground	

SEL472X

- Door lock actuator passenger side and rear



Door lock/unlock switch condition	Terminals		Voltage [V]
	(+)	(-)	
Lock	42	Ground	Approx. 12
Unlock	44	Ground	

SEL473X

Refer to wiring diagram in EL-204.

**OK or NG**

OK	▶	GO TO 2.
NG	▶	Replace time control unit. (Before replacing the control unit, perform "DOOR LOCK/ UNLOCK SWITCH CHECK".)



# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)




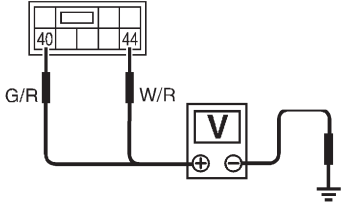
2	CHECK DOOR LOCK ACTUATOR		
<p>1. Disconnect door lock actuator harness connector.                      2. Apply 12V direct current to door lock actuator and check operation.</p>			
<p>● Front and rear door</p>			
		<p>Door lock actuator connector</p> <p>Passenger side: (D38) Rear LH: (D55)</p> <p>Driver side: (D14) Rear RH: (D75)</p>	<p><b>Door lock actuator operation:</b>                      Terminals 1 (+) and 4 (-)                      Unlocked → Locked                      Terminals 4 (+) and 1 (-)                      Locked → Unlocked</p>
YEL804C			
<p>● Back door (Hatchback)</p>			
		<p>Door lock actuator connector (D94)</p>	<p><b>Door lock actuator operation:</b>                      Terminals 2 (+) and 1 (-)                      Unlocked → Locked                      Terminals 1 (+) and 2 (-)                      Locked → Unlocked</p>
SEL491X			
<p>● Trunk lid (Sedan)</p>			
		<p>Trunk lid lock actuator connector (E315)</p>	<p><b>Trunk lid lock actuator operation:</b>                      Terminals 3 (+) and 1 (-)                      Unlocked → Locked                      Terminals 1 (+) and 3 (-)                      Locked → Unlocked</p>
YEL805C			
<b>OK or NG</b>			
OK	▶	Check harness for open or short between time control unit connector and door lock actuator.	
NG	▶	Replace door lock actuator.	



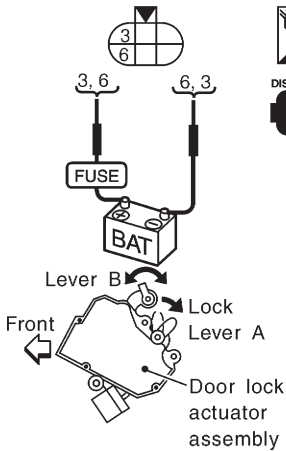
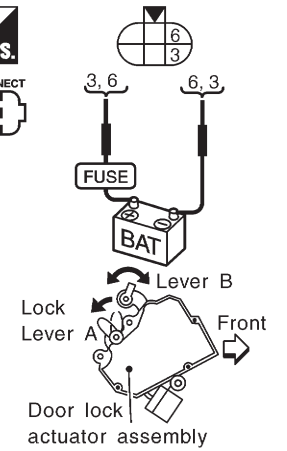
# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## SUPER LOCK ACTUATOR CHECK

=NJEL0477S07

<b>1</b>	<b>CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR</b>															
<p>Check voltage for super lock actuator.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p><b>H.S.</b></p> </div> <div style="text-align: center;">  <p><b>CONNECT</b></p> </div> <div style="text-align: center;">  <p><b>OFF</b></p> </div> </div> <p>Time control unit connector (M156)</p>  <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Door key cylinder switch condition</th> <th colspan="2">Terminals</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td>Lock (Set)</td> <td>40</td> <td>Ground</td> <td rowspan="2">Approx. 12</td> </tr> <tr> <td>Unlock (Released)</td> <td>44</td> <td>Ground</td> </tr> </tbody> </table> <p style="text-align: right;">SEL474X</p>				Door key cylinder switch condition	Terminals		Voltage [V]	(+)	(-)	Lock (Set)	40	Ground	Approx. 12	Unlock (Released)	44	Ground
Door key cylinder switch condition	Terminals		Voltage [V]													
	(+)	(-)														
Lock (Set)	40	Ground	Approx. 12													
Unlock (Released)	44	Ground														
<p>Refer to wiring diagram in EL-204.</p> <p style="text-align: center;"><b>OK or NG</b></p>																
OK	▶	GO TO 2.														
NG	▶	Replace time control unit. (Before replacing the unit, perform "DOOR KEY CYLINDER SWITCH CHECK".)														

<b>2</b>	<b>CHECK SUPER LOCK ACTUATOR</b>																
<ol style="list-style-type: none"> <li>1. Disconnect door lock actuator assembly connector.</li> <li>2. Set lever A in lock position.</li> <li>3. Apply 12V direct current to door lock actuator assembly and check operation.</li> </ol>																	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Super lock actuator connector</p> <p>(D14): Driver side</p> <p>(D75): Rear RH</p> </div> <div style="width: 45%;"> <p>Super lock actuator connector</p> <p>(D38): Passenger side</p> <p>(D55): Rear LH</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;">  <p><b>T.S.</b></p> </div> <div style="text-align: center;">  <p><b>DISCONNECT</b></p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Super lock actuator operation</th> <th colspan="2">Terminals</th> <th rowspan="2">Connection from lever B to lever A</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td>Released → Set</td> <td>6</td> <td>3</td> <td>Disconnect</td> </tr> <tr> <td>Set → Release</td> <td>3</td> <td>6</td> <td>Connect</td> </tr> </tbody> </table> <p style="text-align: right;">YEL806C</p>				Super lock actuator operation	Terminals		Connection from lever B to lever A	(+)	(-)	Released → Set	6	3	Disconnect	Set → Release	3	6	Connect
Super lock actuator operation	Terminals		Connection from lever B to lever A														
	(+)	(-)															
Released → Set	6	3	Disconnect														
Set → Release	3	6	Connect														
<b>OK or NG</b>																	
OK	▶	Check harness for open or short between time control unit and super lock actuator.															
NG	▶	Replace super lock actuator.															

# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## DOOR SWITCH CHECK

=NJEL0477S08

<b>1</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>																
Check voltage between time control unit harness connector terminals 6 or 7 and ground.																	
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> </div> <div> <p>Time control unit connector (M154)</p> </div> </div> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <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">Driver's door switch</td> <td rowspan="2">6</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> </tbody> </table>					Terminals		Condition	Voltage [V]	(+)	(-)	Driver's door switch	6	Ground	Open	0	Closed	Approx. 5
	Terminals		Condition		Voltage [V]												
	(+)	(-)															
Driver's door switch	6	Ground	Open	0													
			Closed	Approx. 5													
Refer to wiring diagram in EL-203. <span style="float: right;">SEL475X</span>																	
<b>OK or NG</b>																	
OK	▶	Door switch is OK.															
NG	▶	GO TO 2.															

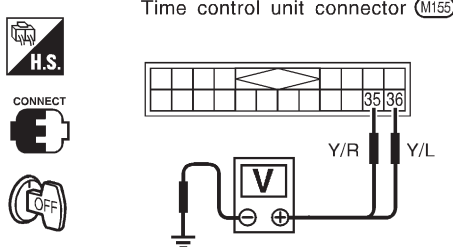
<b>2</b>	<b>CHECK DOOR SWITCH</b>		
<ol style="list-style-type: none"> <li>1. Disconnect door switch harness connector.</li> <li>2. Check continuity between door switch terminals.</li> </ol>			
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Door switch driver side connector (B8)</p> </div> <div> </div> </div> <div style="margin-left: 20px; text-align: center;"> <p><b>Continuity:</b></p> <p><b>Door switch is pushed.</b></p> <p><b>No</b></p> <p><b>Door switch is released.</b></p> <p><b>Yes</b></p> </div>			
<b>OK or NG</b>			
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door switch ground circuit or door switch ground condition</li> <li>● Harness for open or short between smart entrance control unit and door switch</li> </ul>	
NG	▶	Replace door switch.	

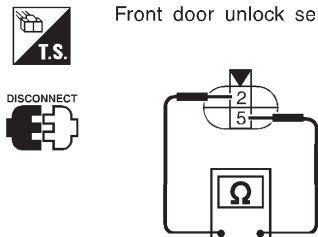
# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## DOOR UNLOCK SENSOR CHECK

=NJEL0477S13

<b>1</b>	<b>CHECK DOOR UNLOCK SENSOR INPUT SIGNAL</b>																			
<p>Check voltage between time control unit terminal 35 or 36 and ground.</p>																				
																				
<table border="1" style="margin-left: auto; margin-right: 0;"> <thead> <tr> <th colspan="2">Terminals</th> <th rowspan="2">Condition (Driver's or passenger door)</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">35</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> <tr> <td rowspan="2">36</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table>			Terminals		Condition (Driver's or passenger door)	Voltage [V]	(+)	(-)	35	Ground	Locked	Approx. 5	Unlocked	0	36	Ground	Locked	Approx. 5	Unlocked	0
Terminals		Condition (Driver's or passenger door)	Voltage [V]																	
(+)	(-)																			
35	Ground	Locked	Approx. 5																	
		Unlocked	0																	
36	Ground	Locked	Approx. 5																	
		Unlocked	0																	
SEL476X																				
Refer to wiring diagram in EL-203.																				
<b>OK or NG</b>																				
OK	▶	Door unlock sensor is OK.																		
NG	▶	GO TO 2.																		

<b>2</b>	<b>CHECK DOOR UNLOCK SENSOR</b>	
<p>1. Disconnect door unlock sensor connector. 2. Check continuity between door unlock sensor terminals 2 and 5.</p>		
		
<p>Front door unlock sensor connector</p> <p>(D14) : Driver side (D38) : Passenger side</p>		
<p><b>Continuity:</b>  <b>Condition: Locked</b>  <b>No</b>  <b>Condition: Unlocked</b>  <b>Yes</b></p>		
SEL477X		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between time control unit and door unlock sensor</li> </ul>
NG	▶	Replace door unlock sensor.

# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## NATS RELEASE SIGNAL CHECK

=NJEL0477S09

<b>1</b>	<b>CHECK NATS SIGNAL CIRCUIT</b>	
<p>1. Disconnect battery cable (-) terminal. 2. Disconnect time control unit connector and NATS IMMU connector.</p>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p style="text-align: center;">OK or NG</p> </div> <div style="width: 50%;"> <p>Check continuity between time control unit terminal 26 and NATS IMMU terminal 3. <b>Continuity should exist.</b></p> <p>Check continuity between time control unit terminal 26 and ground. <b>Continuity should not exist.</b></p> </div> </div>		
SEL478X		
OK	▶	GO TO 2.
NG	▶	Repair harness.


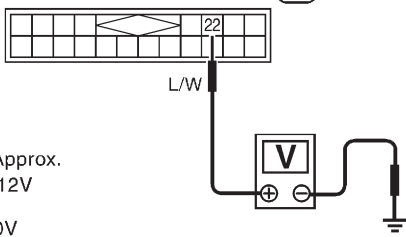
<b>2</b>	<b>CHECK NATS RELEASE SIGNAL</b>									
<p>1. Connect time control unit connector and NATS IMMU connector. 2. Connect battery cable (-) terminal. 3. Check voltage between time control unit terminal 26 and ground.</p>										
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 35%;"> </div> <div style="width: 30%;"> </div> <div style="width: 30%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Ignition switch condition</th> <th style="text-align: center;">Voltage [V]</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">OFF</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">More than 17 seconds after ignition switch is turned to ON</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">For 17 seconds after ignition switch is turned to ON</td> <td style="text-align: center;">pulse</td> </tr> </tbody> </table> </div> </div>			Ignition switch condition	Voltage [V]	OFF	5	More than 17 seconds after ignition switch is turned to ON	5	For 17 seconds after ignition switch is turned to ON	pulse
Ignition switch condition	Voltage [V]									
OFF	5									
More than 17 seconds after ignition switch is turned to ON	5									
For 17 seconds after ignition switch is turned to ON	pulse									
SEL479X										
OK or NG										
OK	▶	Replace super lock control unit.								
NG	▶	Check NATS system.								



# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

## KEY SWITCH (INSERT) CHECK

=NJEL0477S10

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	
<p>Check voltage between time control unit terminal 22 and ground.</p>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">  <p><b>H.S.</b> CONNECT</p> </div> <div style="width: 40%;"> <p>Time control unit connector (M155)</p>  </div> <div style="width: 25%;"> <p><b>Voltage [V]:</b>                      Condition of switch: Key is inserted.                      Approx. 12                      Condition of switch: Key is removed.                      0</p> </div> </div> <p>Refer to wiring diagram in EL-200.</p> <p style="text-align: right;">SEL433X</p>		
<b>OK or NG</b>		
OK	▶	Key switch is OK.
NG	▶	GO TO 2.

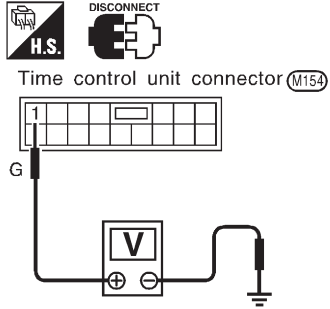
<b>2</b>	<b>CHECK KEY SWITCH (INSERT)</b>	
<p>Check continuity between key switch terminals 1 and 2.</p>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;">  <p><b>T.S.</b> DISCONNECT</p> </div> <div style="width: 40%;"> <p>Key switch connector (E173)</p>  </div> <div style="width: 25%;"> <p><b>Continuity:</b>                      Condition of key switch: Key is inserted.                      Yes                      Condition of key switch: Key is removed.                      No</p> </div> </div> <p style="text-align: right;">YEL802C</p>		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between time control unit and key switch</li> </ul>
NG	▶	Replace key switch.

# POWER DOOR LOCK — SUPER LOCK —

Trouble Diagnoses (Cont'd)

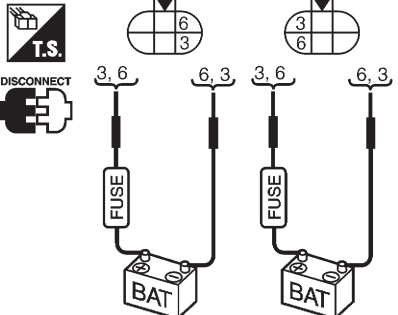
## IGNITION SWITCH "ON" CIRCUIT CHECK

=NJEL0477S11

<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>																
<p>Check voltage between time control unit terminal 1 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  <p>Time control unit connector (M154)</p> </div> <div style="width: 45%;"> <table border="1" style="width: 100%; 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>1</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">SEL429X</p> <p style="text-align: center;"><b>OK or NG</b></p>			Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	1	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position															
(+)	(-)	OFF	ACC	ON													
1	Ground	0V	0V	Battery voltage													
OK		▶ Ignition switch "ON" circuit is OK.															
NG		▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>10A fuse [No. 10, located in fuse block (J/B)]</li> <li>Harness for open or short between time control unit and fuse</li> </ul>															

## REMOTE CONTROLLER SIGNAL CHECK

NJEL0477S12

<b>1</b>	<b>CHECK OUTPUT SIGNAL FOR SUPER LOCK ACTUATOR BY MULTI-REMOTE CONTROLLER</b>	
<p>1. Withdraw key from ignition key cylinder.                  2. Check voltage between time control unit terminal 40 or 44 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;">  </div> <div style="width: 45%;"> <p>Door lock actuator connector</p> <p>Passenger side: (D38) Rear LH: (D55)</p> <p>Driver side: (D14) Rear RH: (D75)</p> </div> </div> <div style="margin-top: 20px;"> <p><b>Super lock actuator operation:</b></p> <p><b>Terminals 6 (+) and 3 (-)</b>                  Released → Set</p> <p><b>Terminals 3 (+) and 6 (-)</b>                  Set → Released</p> </div> <p style="text-align: right;">YEL807C</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK		▶ System is OK.
NG		▶ Replace time control unit. (Before replacing the unit, make sure the remote controller ID registration for time control unit and the remote controller battery once again.)

# MULTI-REMOTE CONTROL SYSTEM

System Description

---

## System Description

NJEL0480

### FUNCTION

Multi-remote control system has the following function.

NJEL0480S01

- Door lock (and set super lock)
- Door unlock (and release super lock)
- Hazard reminder

### LOCK OPERATION

To lock door by multi-remote controller, the key switch must be at OFF.

NJEL0480S02

When the LOCK signal is input to time control unit (the antenna of the system is combined with time control unit)

Then time control unit controls to lock doors and set super lock (models with super lock).

### UNLOCK OPERATION

When the UNLOCK signal is input to time control unit (the antenna of the system is combined with time control unit)

NJEL0480S03

Time control unit controls to unlock driver's door and release super lock (models with super lock).

Then, if an unlock signal is sent from the remote controller again within 5 seconds, all other doors will be unlocked.

### HAZARD REMINDER

When the doors are locked or unlocked by multi-remote controller, supply power to turn lamps hazard reminder flashes as follows

NJEL0480S04

- Lock operation: Flash once
- Unlock operation: Flash twice

### MULTI-REMOTE CONTROLLER ID CODE ENTRY

A maximum of four remote controllers can be entered.

NJEL0480S05

To enter ID code entry, the following signals must be input to the time control unit.

- Ignition switch (ON)
- Signal from remote controller

For detailed procedure, refer to "ID Code Entry Procedure" in EL-227.



# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI —

## Wiring Diagram — MULTI —

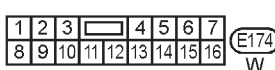
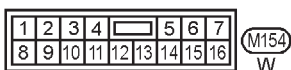
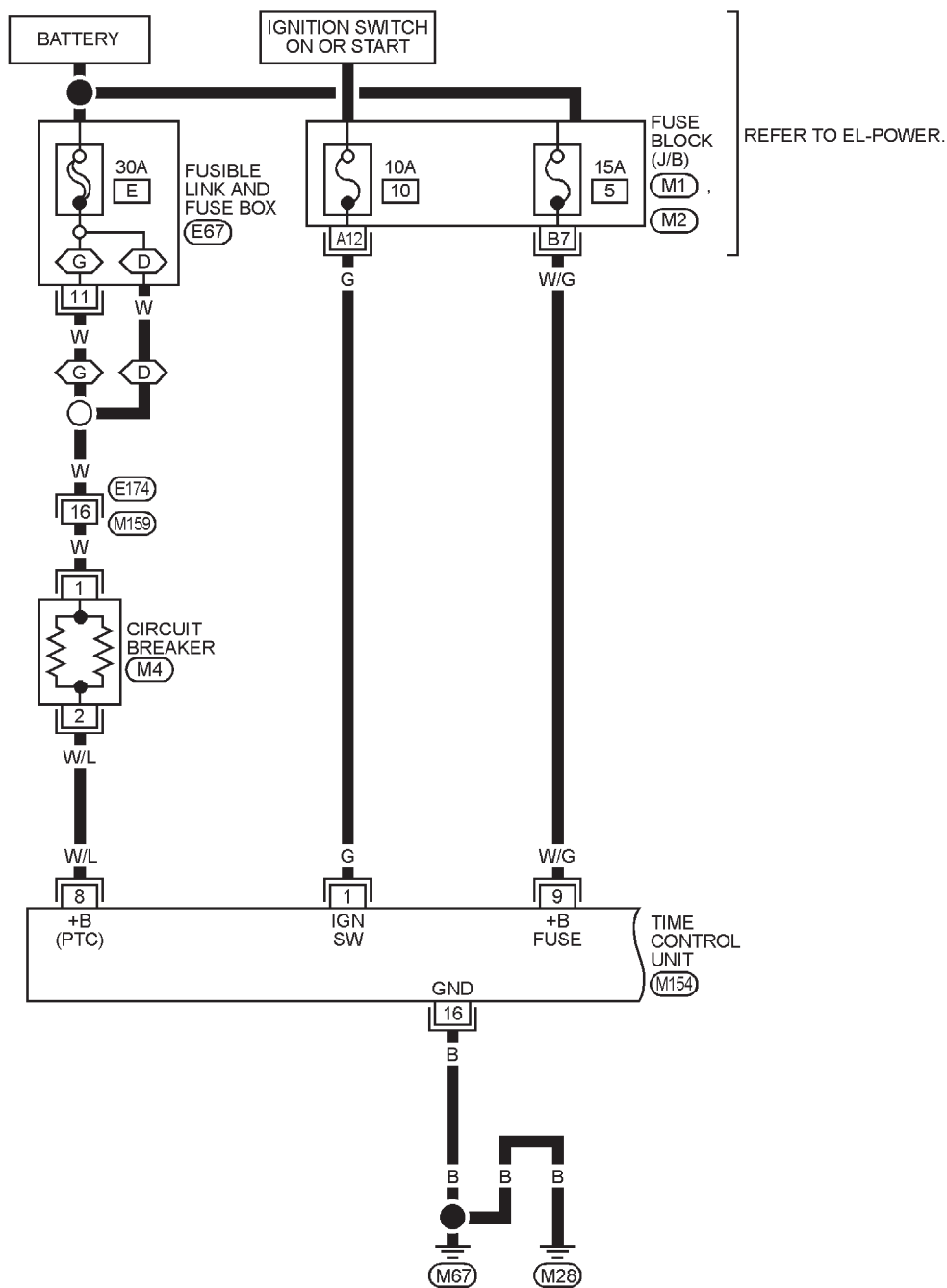
NJEL0481

NJEL0481S01

FIG. 1

### EL-MULTI-01

G : GASOLINE ENGINE  
D : DIESEL ENGINE



REFER TO THE FOLLOWING.

- M1 , M2
- FUSE BLOCK- JUNCTION BOX (J/B)
- E67 - FUSE AND FUSIBLE LINK BOX

YEL708C

# MULTI-REMOTE CONTROL SYSTEM

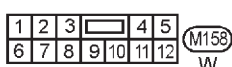
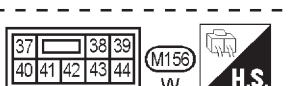
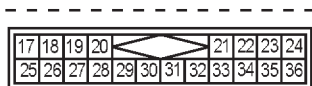
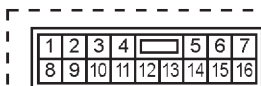
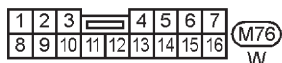
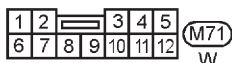
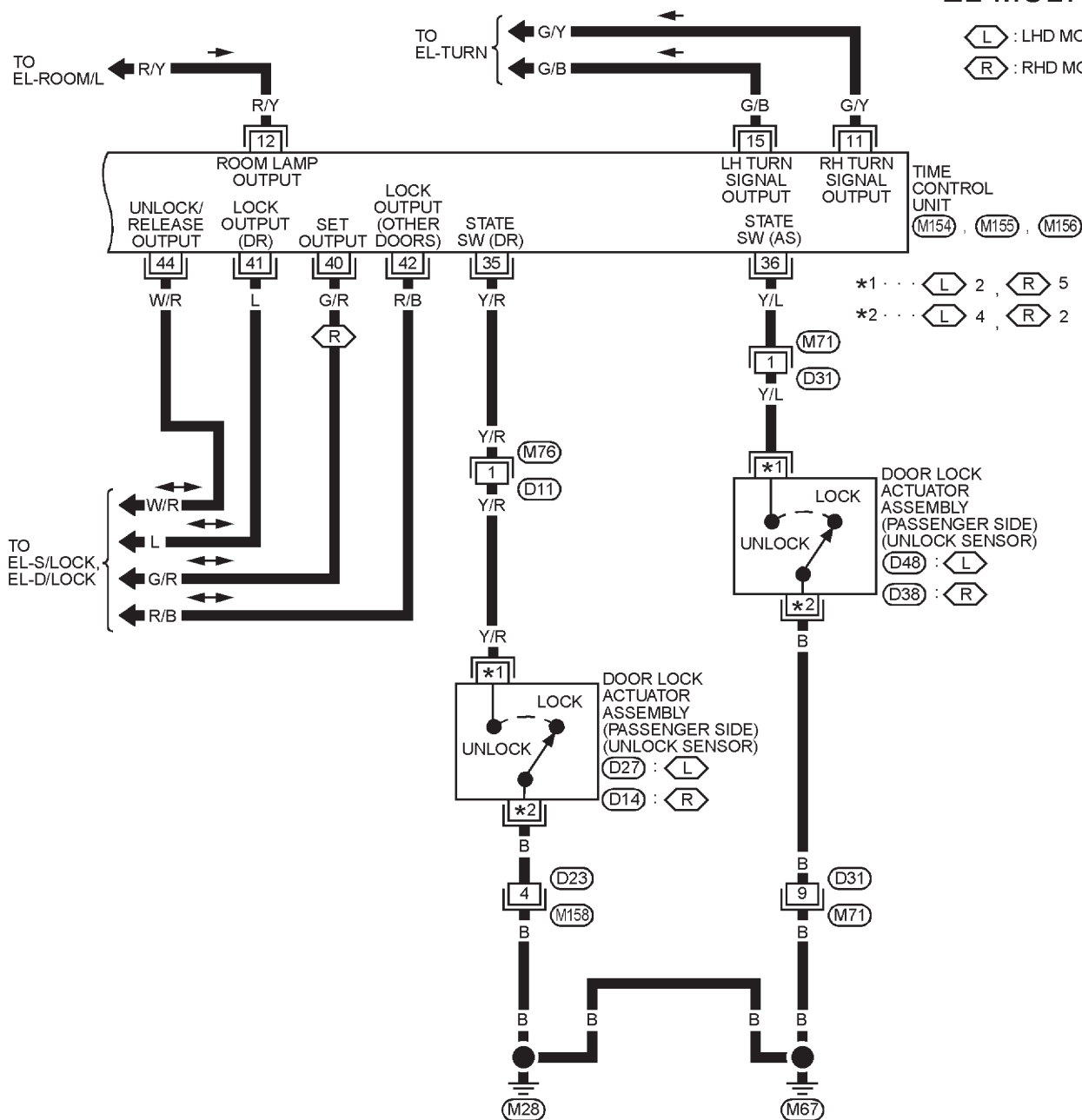
Wiring Diagram — MULTI — (Cont'd)

FIG. 2

NJEL0481S02

## EL-MULTI-02

L : LHD MODELS  
R : RHD MODELS



YEL709C

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses

## Trouble Diagnoses

### SYMPTOM CHART

NJEL0482

NJEL0482S01

#### NOTE:

Always check remote controller battery before replacing remote controller.

Symptom	Diagnoses/service procedure	Reference page (EL- )
No doors can be locked or unlocked by remote control operation. (Make sure that power door lock operates properly. If NG, check power door lock.)	1. Remote controller battery check	224
	2. Power supply and ground circuit for time control unit check	225
	3. Replace remote controller. Refer to ID Code Entry Procedure.	227
The new ID of remote controller cannot be entered.	1. Remote controller battery check	224
	2. Power supply and ground circuit for time control unit check	225
	3. Ignition "ON" power supply circuit for time control unit	226
	4. Replace remote controller. Refer to ID Code Entry Procedure.	227
Hazard reminder does not activate properly when pressing lock or unlock button of remote controller.	1. Remote controller battery	224
	2. Hazard reminder check	226
	3. Replace remote controller. Refer to ID Code Entry Procedure.	227

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## REMOTE CONTROLLER BATTERY AND FUNCTION CHECK

=NJEL0482S02

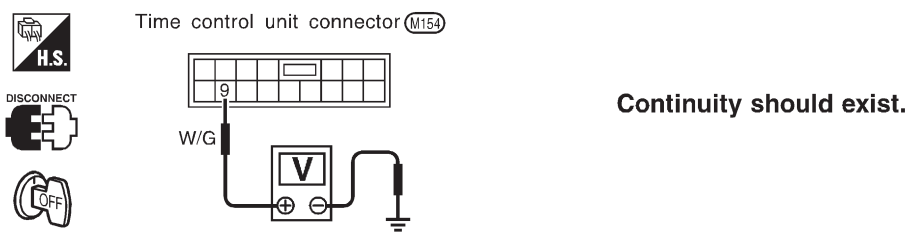
<b>1</b>	<b>CHECK REMOTE CONTROLLER BATTERY</b>
<p>Remove battery (refer to EL-228) and measure voltage across battery positive and negative terminals, (+) and (-). <b>Voltage [V]:</b> <b>2.5 - 3.0</b></p> <p><b>NOTE:</b> Remote controller does not function if battery is not set correctly.</p> <div></div> <p style="text-align: right;">SEL237W</p>	
<b>OK or NG</b>	
OK	▶ Check remote controller battery terminals for corrosion or damage.
NG	▶ Replace battery.

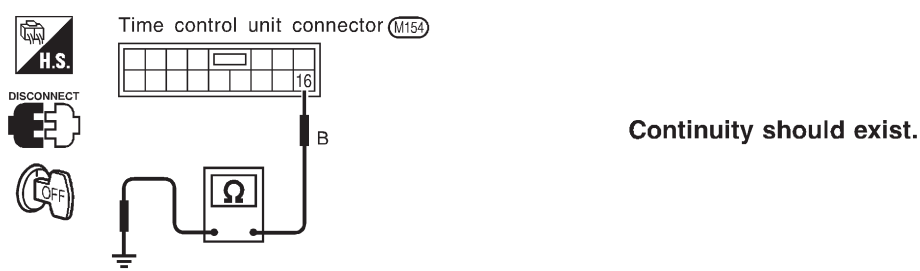
# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NJEL0482S03

<b>1</b>	<b>CHECK MAIN POWER SUPPLY CIRCUIT FOR TIME CONTROL UNIT</b>	
<p>1. Disconnect time control unit harness connector.                  2. Check voltage between time control unit harness connector terminal 9 and ground.</p>		
		
SEL487X		
Refer to wiring diagram in EL-221.		
<b>OK or NG</b>		
OK	▶	GO TO 2.
NG	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● 15A fuse [No. 5, located in fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse</li> </ul>

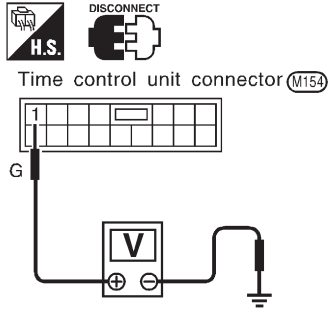
<b>2</b>	<b>CHECK GROUND CIRCUIT FOR TIME CONTROL UNIT</b>	
Check continuity between time control unit harness connector terminal 16 and ground.		
		
SEL448X		
Refer to wiring diagram in EL-221.		
<b>OK or NG</b>		
OK	▶	Power supply and ground circuits are OK.
NG	▶	Check ground harness.

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## IGNITION "ON" POWER SUPPLY CIRCUIT FOR TIME CONTROL UNIT

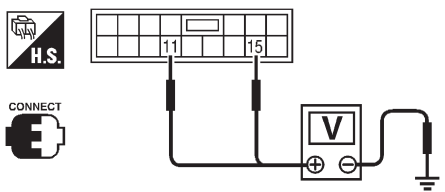
=NJEL0482S17

<b>1</b>	<b>CHECK IGNITION "ON" POWER SUPPLY CIRCUIT FOR TIME CONTROL UNIT</b>																
<p>1. Disconnect time control unit harness connector.                  2. Check voltage between time control unit terminal 1 and ground.</p>																	
																	
<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>1</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table>			Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	1	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position															
(+)	(-)	OFF	ACC	ON													
1	Ground	0V	0V	Battery voltage													
SEL429X																	
<b>OK or NG</b>																	
OK	▶	Ignition "ON" power supply circuit is OK.															
NG	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse.</li> </ul>															

## HAZARD REMINDER CHECK

NJEL0482S18

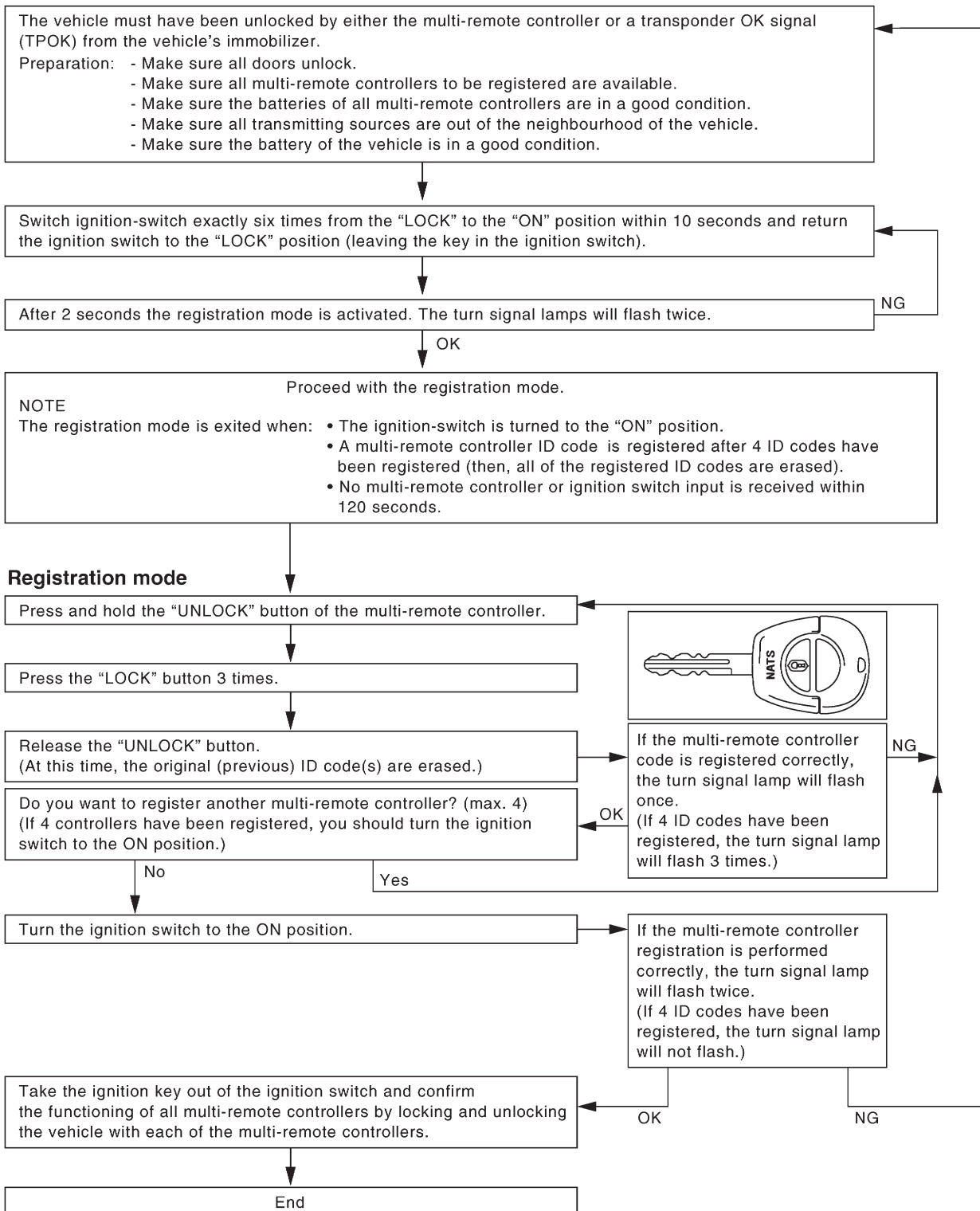
<b>1</b>	<b>CHECK HAZARD WARNING LAMP</b>	
Check if hazard warning lamp flashes with hazard switch.		
<b>Does hazard warning lamp operate?</b>		
Yes	▶	GO TO 2.
No	▶	Check hazard warning lamp circuit.

<b>2</b>	<b>CHECK HAZARD REMINDER OPERATION</b>	
<p>Check the following at when push the multi-remote control switch.                  Check voltage between terminal 11 and ground.                  Check voltage between terminal 15 and ground.</p>		
		
<b>Battery voltage should exist.</b>		
SEL499X		
<b>OK or NG</b>		
OK	▶	System is OK.
NG	▶	Replace time control unit. (Before replacing the unit, make sure the remote controller ID registration for time control unit and the remote controller battery once again.)

# MULTI-REMOTE CONTROL SYSTEM

## ID Code Entry Procedure

### Activation of the registration mode:



## MULTI-REMOTE CONTROL SYSTEM

Remote Controller Battery Replacement

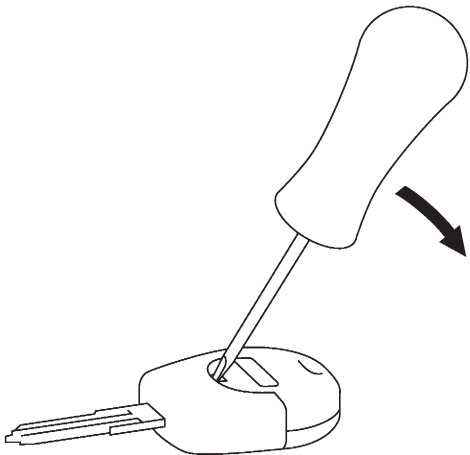
### Remote Controller Battery Replacement

NJEL0484

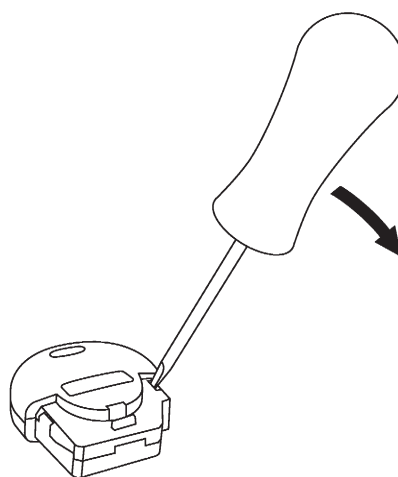
**NOTE:**

- 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.
- Push the remote controller button two or three times to check its operation after replacing battery.

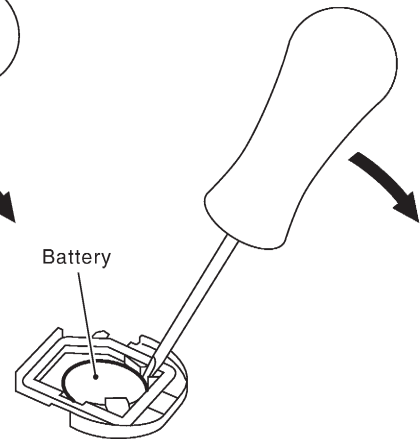
STEP 1



STEP 2



STEP 3



SEL241X



# TIME CONTROL UNIT

*Description*

## Description

The TCU has the following functions.

=NJEL0485

### INTERIOR LAMP TIMER

The interior lamp timer is controlled by the TCU.

For further information, refer to “INTERIOR ROOM LAMP” (EL-76).

NJEL0485S01

### IGNITION KEY WARNING CHIME AND LIGHT WARNING CHIME

The ignition key and light warning chime are controlled by the TCU.

For further information, refer to “WARNING CHIME” (EL-113).

NJEL0485S02

### REAR WINDOW DEFOGGER TIMER

The rear window defogger and door mirror defogger system are controlled by the TCU.

For further information, refer to “REAR WINDOW DEFOGGER” (EL-138).

NJEL0485S03

### POWER DOOR LOCK (SUPER LOCK)

The power door lock (super lock) is controlled by the TCU.

For further information, refer to “POWER DOOR LOCK — Super Lock —” (EL-196).

NJEL0485S04

### MULTI-REMOTE CONTROL SYSTEM

The multi-remote control system is controlled by the TCU.

For further information, refer to “MULTI-REMOTE CONTROL SYSTEM” (EL-220).

NJEL0485S05

### FUNCTION

- The TCU has the following control function.

NJEL0485S06

Item	Details of control
Direction indicators	Switches the direction indicators (Left, Right or All) when the combination switch or hazard switch is operated.
Light warning chime	Sounds warning chime when driver's door is opened with light switch in the 1st or 2nd position and ignition switch “OFF”.
Ignition key warning chime	Sounds warning chime when driver's door is opened with key in ignition and the driver door lock knob (unlock sensor) is moved from the “unlock” position to the “lock” position.
Rear window defogger timer	Turn off rear window defogger and door mirror heater, if equipped, about 15 minutes after the rear window defogger switch is turned “ON”.
Battery saver	Shuts off interior lamp in 30 minutes if any door is left open when ignition switch is “OFF”. The battery saver will reset if ignition switch is cycled or any door is opened or closed.
Interior lamp timer	Keep interior lamp illuminated for about 30 seconds when: <ul style="list-style-type: none"> <li>● driver's door is unlocked,</li> <li>● the ignition is switched off,</li> <li>● driver's door is opened and then closed.</li> </ul> The timer is cancelled, and interior lamp turns off when: <ul style="list-style-type: none"> <li>● driver's door is locked, or</li> <li>● ignition switch is turned “ON”.</li> </ul>
Power door lock	Centrally locks and unlocks the vehicle
Super lock	Activates and de-activates the super lock system.

# TIME CONTROL UNIT

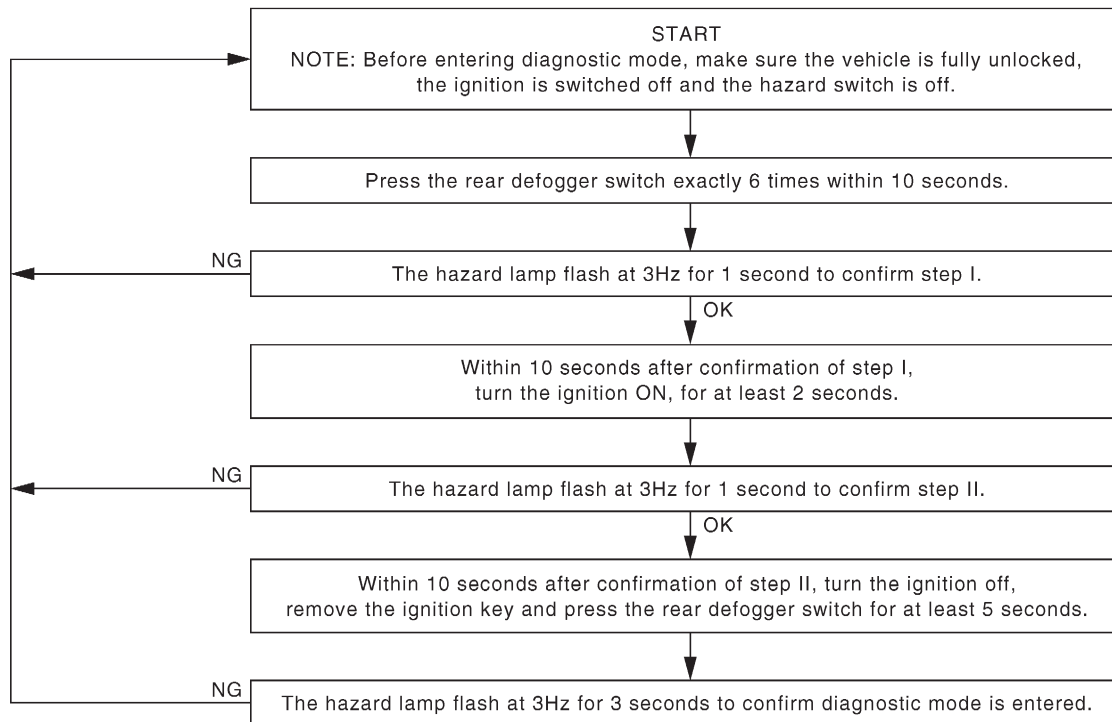
Trouble Diagnoses

## Trouble Diagnoses

=NJEL0486

The Timer Control Unit includes software to help during development testing, manufacturing and service. It allows the technician to put it into Diagnostic Mode. In this mode, all switch inputs can be tested for continuity.

When the timer control unit is in Diagnostic Mode, the control unit tests the component and indicate the result by the hazard lamp flashing.



SEL496X

### Checks

Once in Diagnostic Mode, the following inputs can be tested.

USER ACTION	TCU Reaction	COMPONENT TESTED
Driver's door opened from closed (all other doors closed)	Hazards flash once	Driver's door open signal
Passenger or rear door opened from closed (all other doors closed)	Hazard flash once	Door open signal for opened door
Driver's door locked from unlocked	Hazard flash once	Driver's door unlock sensor signal
Passenger door locked from unlocked	Hazard flash once	Assist door unlock sensor signal
Hazard switch is pressed from off	Hazard flash once	Hazard switch signal
Turn signal switch is moved to left from off	Hazard flash once	Left turn signal
Turn signal switch is moved to right from off	Hazards flash once	Right turn signal
Key turned to lock position is door	Hazard flash once*	Key cylinder lock switch signal

## TIME CONTROL UNIT

*Trouble Diagnoses (Cont'd)*

USER ACTION	TCU Reaction	COMPONENT TESTED
Lighting switch turned 1st position or 2nd position from off	Hazard flash once	Tail lamp signal
Key put in ignition from out	Hazard flash once	Key in detect signal
Door lock/unlock switch is pressed	Hazard flash once	Central door lock/unlock signal

\*) Hazard may flash a second time because of Driver's door status signal change. The min. delay time between flash actions is 100 ms.

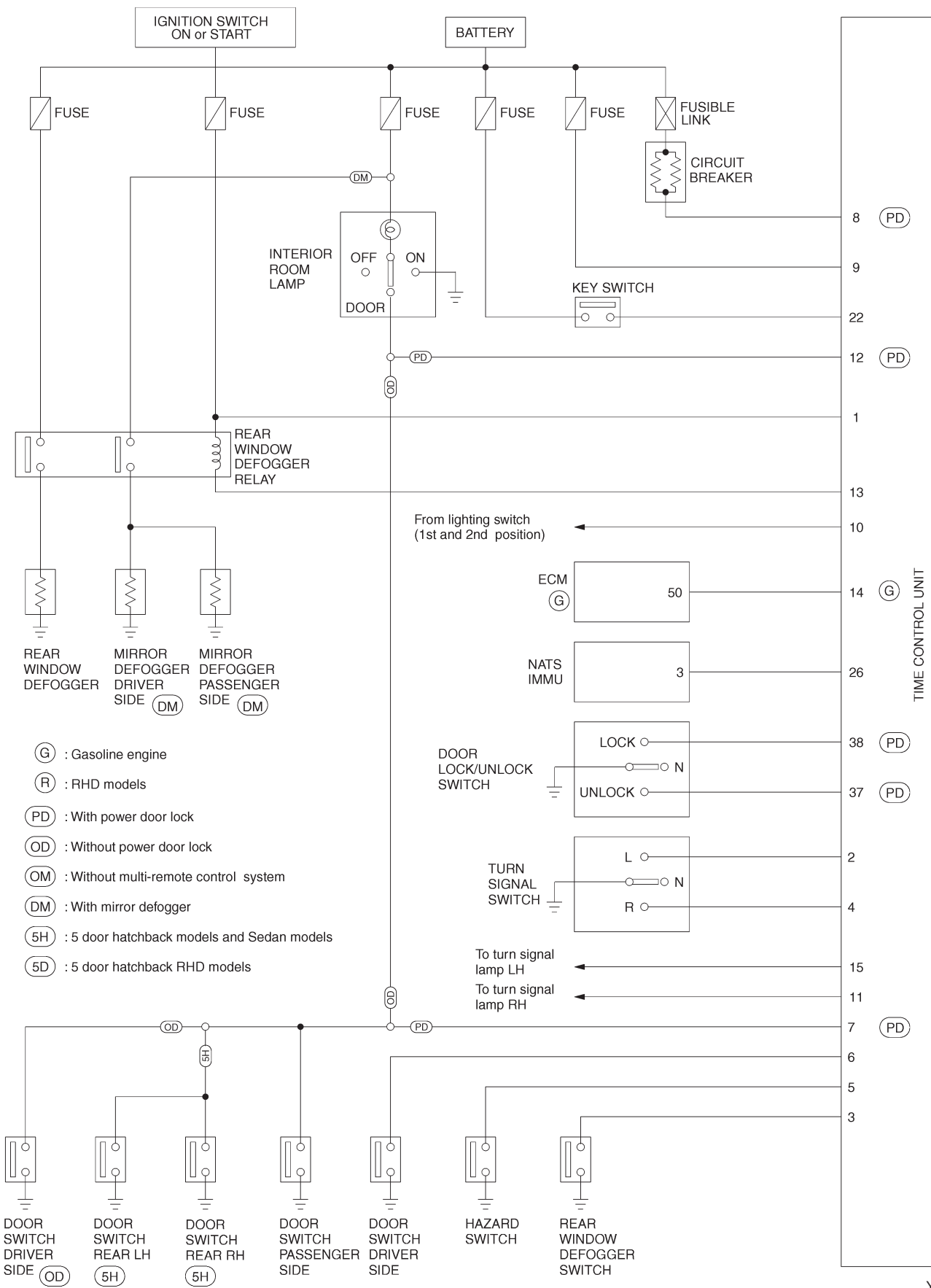
In case the system does not operate as described above, check the concerned circuit for open or short. After completion, the Diagnostic Mode can be switched off by pressing the rear defogger switch or by turning the ignition to "ON". The hazard lamp will flash at 3 Hz for 3 seconds to confirm that Diagnostic Mode has been switched off.

# TIME CONTROL UNIT

Schematic

## Schematic

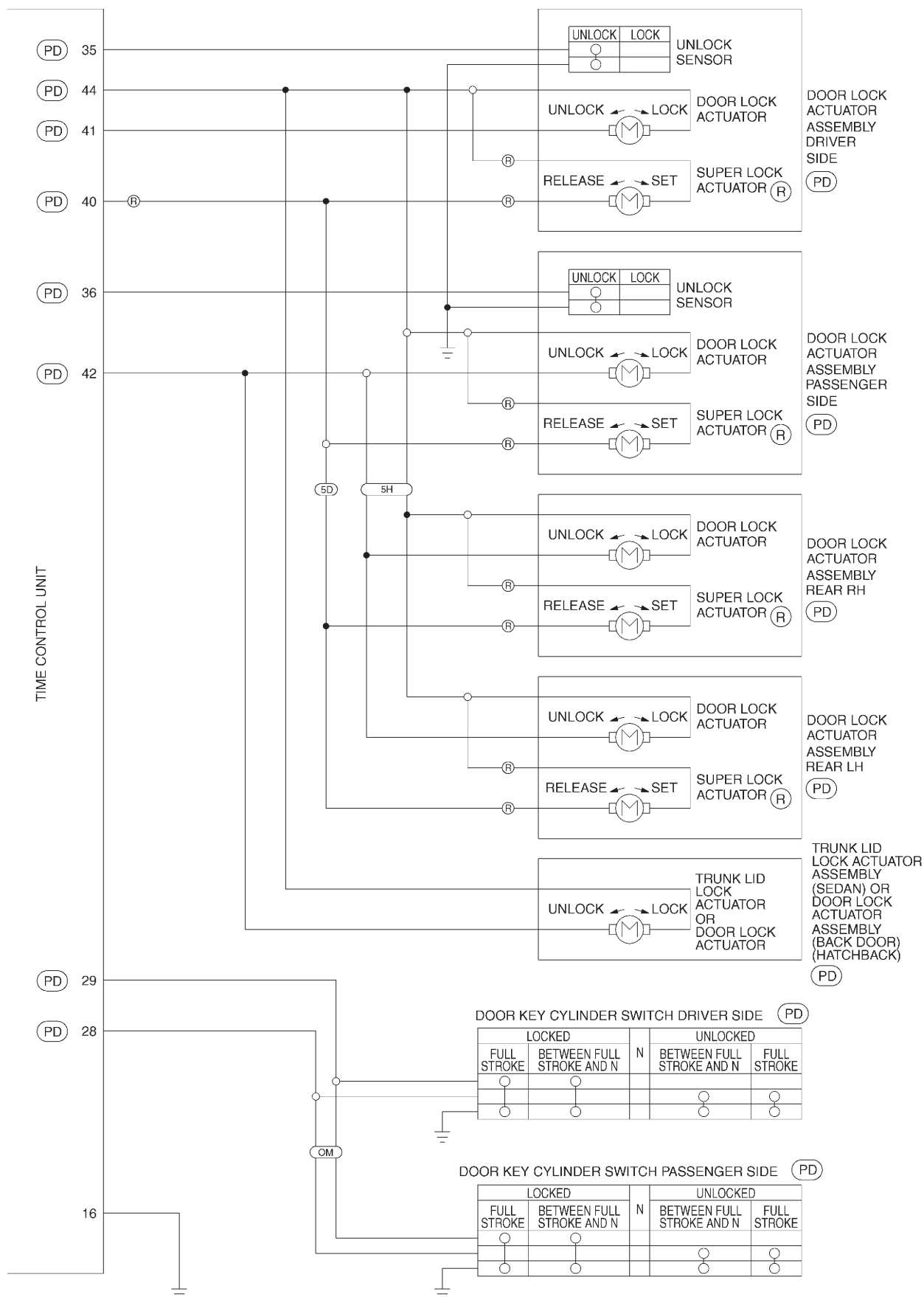
NJEL0506



YEL710C

# TIME CONTROL UNIT

Schematic (Cont'd)



YEL711C

## NATS (NISSAN ANTI-THEFT SYSTEM)

Component Parts and Harness Connector Location

### Component Parts and Harness Connector Location

NJEL0406

For details, refer to "ELECTRICAL UNIT LOCATION" (EL-319) and "HARNESS LAYOUT" (EL-324).

### System Description

NJEL0407

NATS (Nissan Anti-Theft System) has the following immobilizer functions:

- Since only NATS ignition keys, whose ID nos. have been registered into the ECM and IMMU of NATS, allow the engine to run, operation of a stolen vehicle without a NATS registered key is prevented by NATS. That is to say, NATS will immobilize the engine if someone tries to start it without the registered key of NATS.
- This version of NATS has dongle unit to improve its anti-theft performance (RHD models for Europe). Dongle unit has its own ID which is registered into NATS IMMU. So if dongle unit is replaced, initialization must be carried out.
- When malfunction of dongle unit is detected:  
The security indicator lamp illuminates for about 15 minutes after ignition switch is turned to ON.
- When dongle unit has a malfunction and the indicator lamp is illuminated, engine can not be started. However engine can be started only one time when security indicator lamp turns off in about 15 minutes after ignition switch is turned to ON.
- All of the originally supplied ignition key IDs have been NATS registered.  
If requested by the vehicle owner, a maximum of five key IDs can be registered into the NATS components.
- The security indicator blinks when the ignition switch is in "OFF" or "ACC" position. Therefore, NATS warns outsiders that the vehicle is equipped with the anti-theft system.
- When NATS detects trouble, the security indicator lamp lights up as follows.

Condition IGN ON and	With dongle		Without dongle	
	MIL	Security indicator	MIL	Security indicator
NATS malfunction (except dongle unit) is detected	—	1. 6 times blinking 2. Staying ON after ignition switch is turned ON	—	Staying ON
Only malfunction of dongle unit is detected.	—	Staying ON for about 15 minutes after ignition switch is turned ON	—	—
Malfunction of NATS and engine related parts are detected.	Staying ON	1. 6 times blinking 2. Staying ON after ignition switch is turned ON	Staying ON	Staying ON
Only engine related part malfunction is detected.	Staying ON	—	Staying ON	—
Just after initialization of NATS	—	6 times blinking	—	—

- NATS trouble diagnoses, system initialization and additional registration of other NATS ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II NATS software.  
Regarding the procedures of NATS initialization and NATS ignition key ID registration, refer to CONSULT-II operation manual, NATS.
- **When servicing a malfunction of the NATS (indicated by lighting up of Security Indicator Lamp) or**

## **NATS (NISSAN ANTI-THEFT SYSTEM)**

*System Description (Cont'd)*

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registering another NATS ignition key ID no., it may be necessary to re-register original key identification. Therefore, be sure to receive ALL KEYS from vehicle owner.

# NATS (NISSAN ANTI-THEFT SYSTEM)

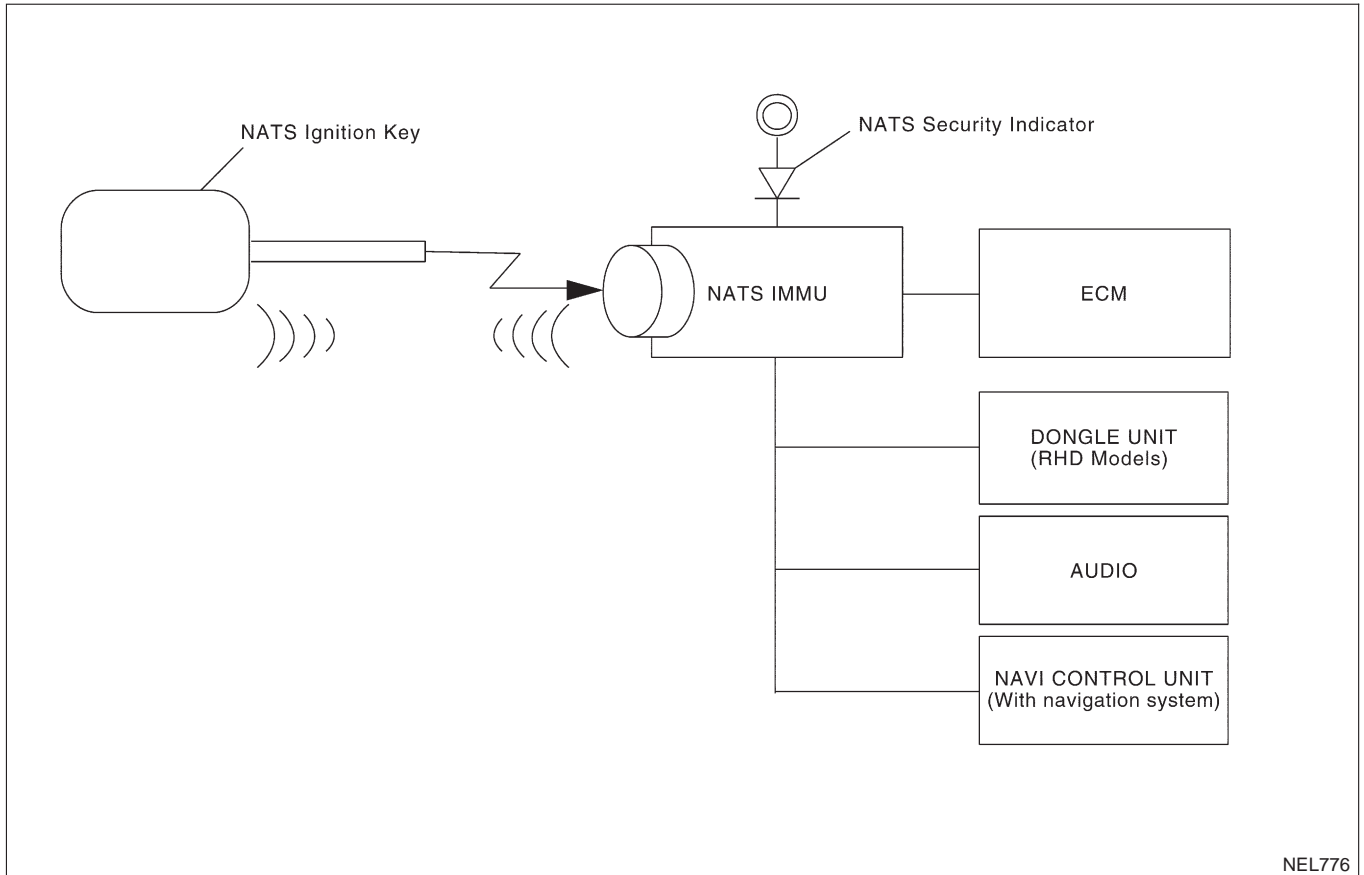
System Composition

## System Composition

=NJEL0408

The immobilizer function of the NATS consists of the following:

- NATS ignition key
- NATS immobilizer control unit (IMMU) located in the ignition key cylinder
- Engine control module (ECM)
- Dongle unit (RHD models)
- Security indicator
- Navigation control unit (Models with Navigation system)



NEL776



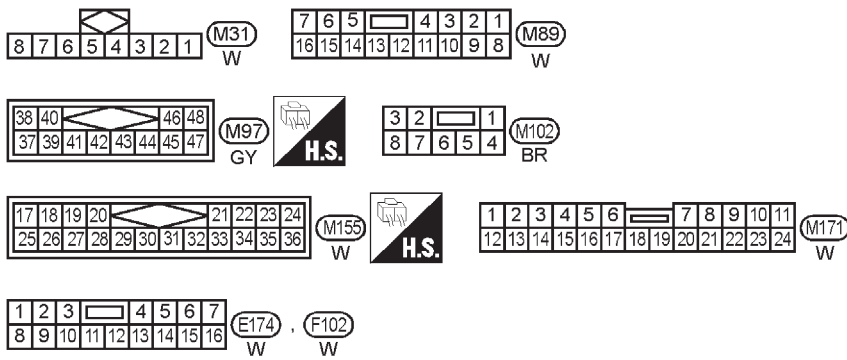
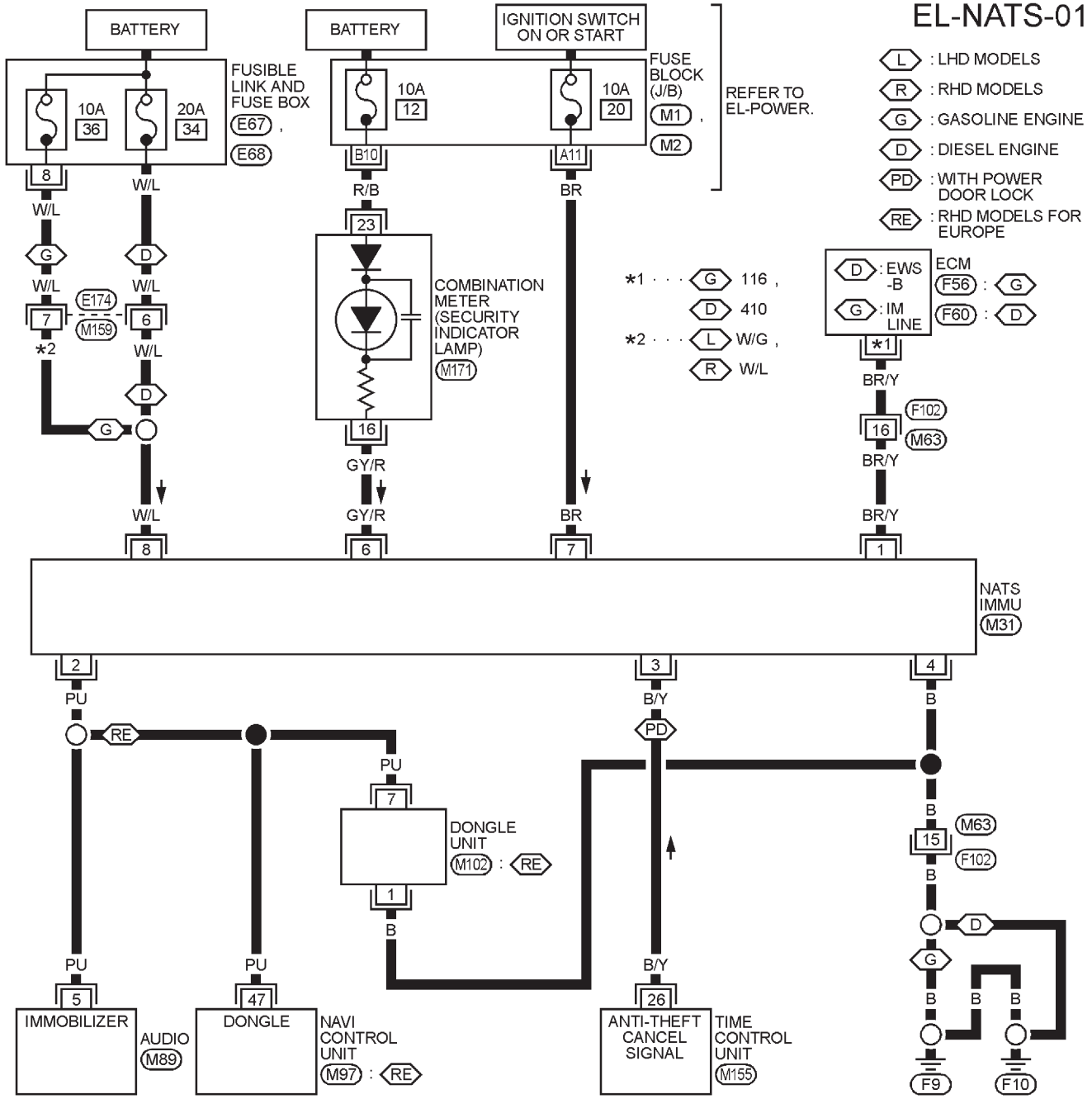
# NATS (NISSAN ANTI-THEFT SYSTEM)

Wiring Diagram — NATS —

## Wiring Diagram — NATS —

NJEL0487

### EL-NATS-01

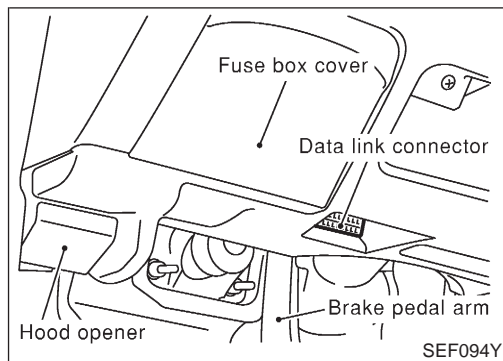


REFER TO THE FOLLOWING.  
 (M1) , (M2) -FUSE BLOCK-JUNCTION BOX (J/B)  
 (E67) , (E68) -FUSE AND FUSIBLE LINK BOX  
 (F56) , (F60) -ELECTRICAL UNITS

YEL712C

# NATS (NISSAN ANTI-THEFT SYSTEM)

CONSULT-II

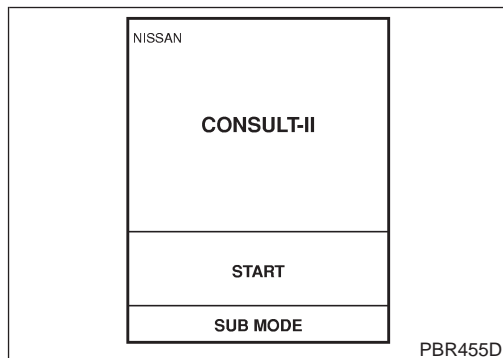


## CONSULT-II CONSULT-II INSPECTION PROCEDURE

NJEL0410

NJEL0410S01

1. Turn ignition switch OFF.



2. Insert NATS program card into CONSULT-II.

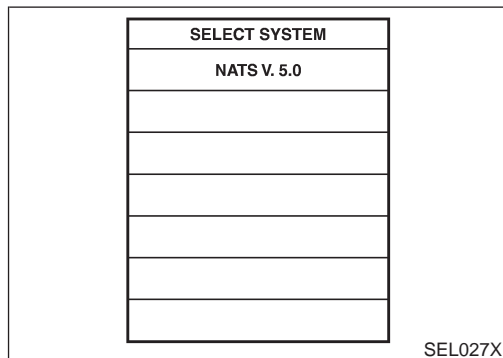
◀ : Program card

NATS-AEN00B

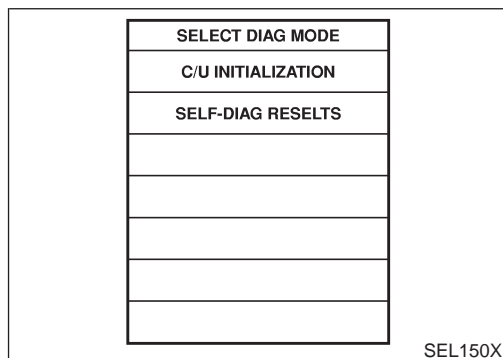
3. Connect CONSULT-II to data link connector.

4. Turn ignition switch ON.

5. Touch "START".



6. Select "NATS V.5.0".



7. Perform each diagnostic test mode according to each service procedure.

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

# NATS (NISSAN ANTI-THEFT SYSTEM)

CONSULT-II (Cont'd)

## CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

=NJEL0410S02

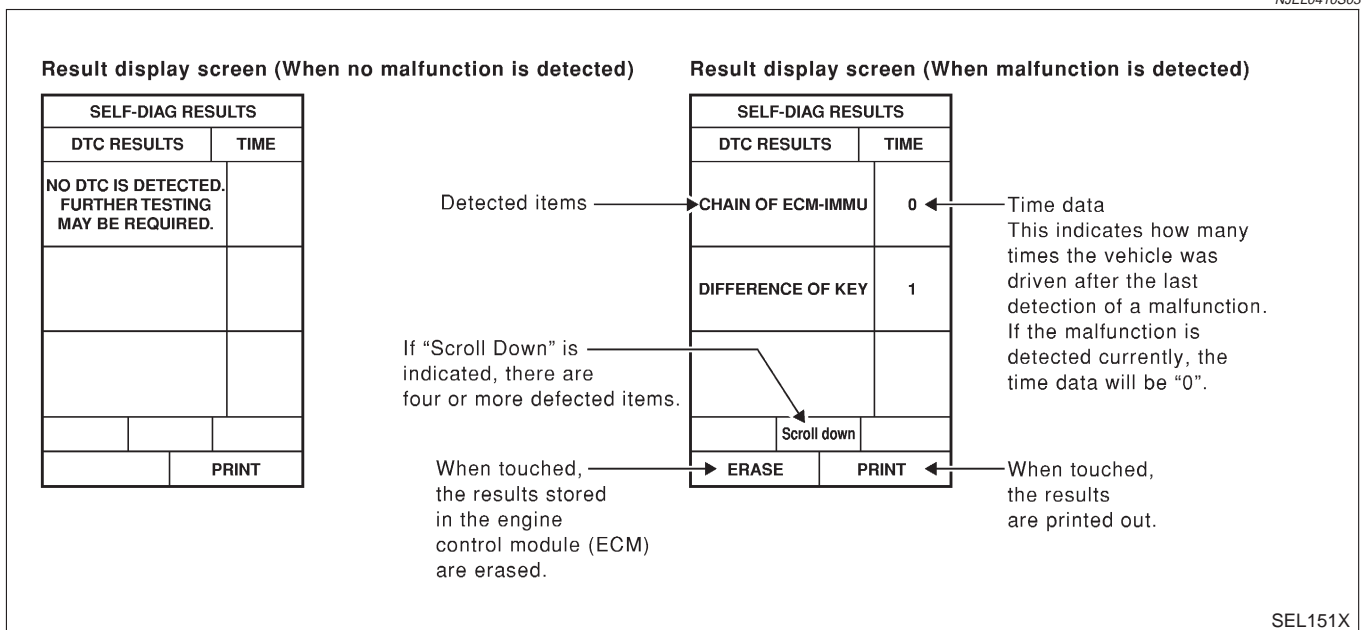
CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following components, C/U initialization and re-registration of all NATS ignition keys are necessary. [NATS ignition key/IMMU/ECM/Dongle unit]
SELF-DIAG RESULTS	Detected items (screen terms) are as shown in the chart EL-239.

**NOTE:**

- **When any initialization is performed, all ID previously registered will be erased and all NATS ignition keys must be registered again.**
- The engine cannot be started with an unregistered key. In this case, the system may show "DIFFERENCE OF KEY" or "LOCK MODE" as a self-diagnostic result on the CONSULT-II screen.
- When initialization is performed for RHD models for Europe, security indicator will flash six times to demonstrate recognition of the dongle unit ID.
- In rare case, "CHAIN OF ECM-IMMU" might be stored as a self-diagnostic result during key registration procedure, even if the system is not malfunctioning.

### HOW TO READ SELF-DIAGNOSTIC RESULTS

NJEL0410S03



## NATS (NISSAN ANTI-THEFT SYSTEM)

CONSULT-II (Cont'd)

### NATS SELF-DIAGNOSTIC RESULTS ITEM CHART

=NJEL0410S04

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-244
CHAIN OF ECM-IMMU	NATS MAL-FUNCTION P1612	Communication impossible between ECM and IMMU (In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.)	EL-245
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-249
CHAIN OF IMMU-KEY	NATS MAL-FUNCTION P1614	IMMU cannot receive the key ID signal.	EL-250
ID DISCORD, IMM-ECM	NATS MAL-FUNCTION P1611	The result of ID verification between IMMU and ECM is NG. System initialization is required.	EL-252
LOCK MODE	NATS MAL-FUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NATS will shift the mode to one which prevents the engine from being started. <ul style="list-style-type: none"> <li>● Unregistered ignition key is used.</li> <li>● IMMU or ECM's malfunctioning.</li> </ul>	EL-255
DON'T ERASE BEFORE CHECKING ENG DIAG	—	All engine trouble codes except NATS trouble code has been detected in ECM.	EL-241

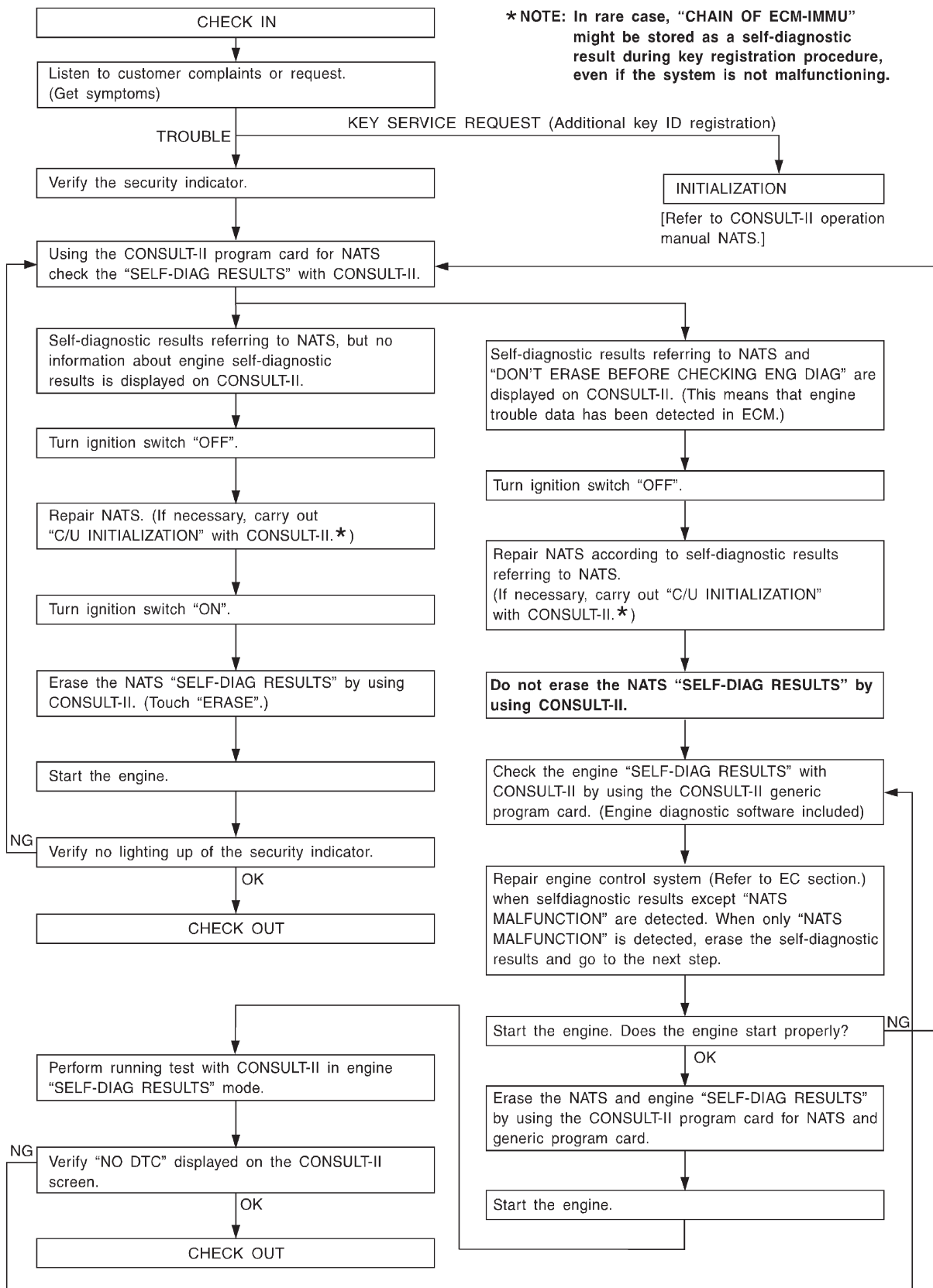
# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses

## Trouble Diagnoses WORK FLOW

NJEL0411

NJEL0411S01



SEL729WE

## NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

### SYMPTOM MATRIX CHART 1 (Self-diagnosis related item)

NJEL0411S02

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
<ul style="list-style-type: none"> <li>● Security indicator lighting up*</li> <li>● Engine cannot be started</li> </ul>	ECM INT CIRC-IMMU	PROCEDURE 1 (EL-244)	ECM	B
	CHAIN OF ECM-IMMU	PROCEDURE 2 (EL-245)	In rare case, "CHAIN OF ECM-IMMU" might be stored during 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-249)
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 4 (EL-250)	Malfunction of key ID chip	E
			IMMU	A
			Open circuit in ground line of dongle unit circuit	C6
			Open or short circuit in line between IMMU and dongle unit	C5
			Dongle unit	G
	ID DISCORD, IMM-ECM	PROCEDURE 5 (EL-252)	System initialization has not yet been completed.	F
			ECM	B
	LOCK MODE	PROCEDURE 7 (EL-255)	LOCK MODE	D

# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
<ul style="list-style-type: none"> <li>MIL staying ON</li> <li>Security indicator lighting up*</li> </ul>	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (EL-241)	Engine trouble data and NATS trouble data have been detected in ECM	—

\*: When NATS detects trouble, the security indicator lights up while ignition key is in the "ON" position.

\*: When the vehicle is equipped with a dongle unit (RHD models for Europe), the security indicator blinks 6 times just after the ignition switch is turned to ON. Then the security indicator lights up while the ignition key is in the "ON" position.

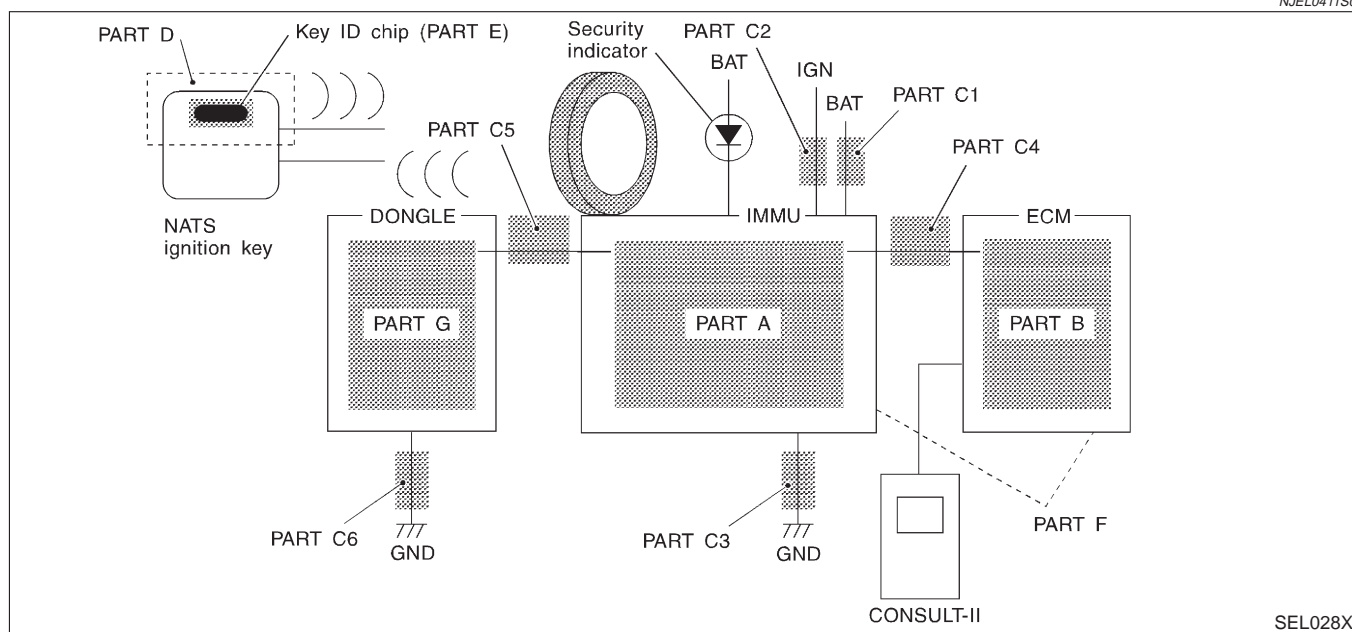
## SYMPTOM MATRIX CHART 2 (Non self-diagnosis related item)

NJEL0411S03

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON SYSTEM DIAGRAM
Security ind. does not light up.	PROCEDURE 6 (EL-253)	Security ind.	—
		Open circuit between Fuse and IMMU	—
		Continuation of initialization mode	—
		IMMU	A
Security ind. does not blink just after initialization even if the vehicle is equipped with dongle unit.	PROCEDURE 8 (EL-257)	NATS might be initialized without connecting dongle unit properly.	—
		Open circuit in ground line of dongle unit circuit	C6
Security ind. does not blink just after ignition switch is turned to ON when some malfunction related to NATS is detected even if the vehicle is equipped with dongle unit.		Open or short circuit in communication line between IMMU and dongle unit	C5
		Dongle unit	G

## DIAGNOSTIC SYSTEM DIAGRAM

NJEL0411S04



SEL028X

## NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

SELF-DIAG RESULTS	
DTC RESULTS	TIME
ECM INT CIRC-IMMU	0

SEL152X

### DIAGNOSTIC PROCEDURE 1

NJEL0411S05

#### 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 NATS”.



# NATS (NISSAN ANTI-THEFT SYSTEM)

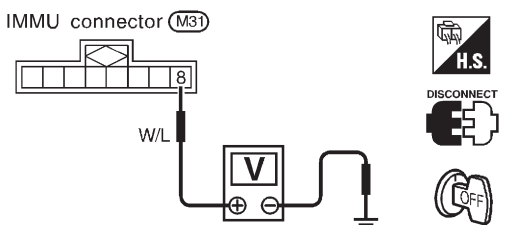
Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 2

=NJEL0411S06

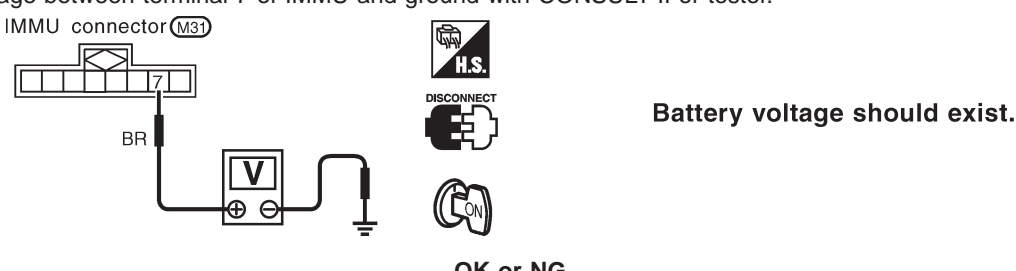
**Self-diagnostic results:  
"CHAIN OF ECM-IMMU" displayed on CONSULT-II screen**

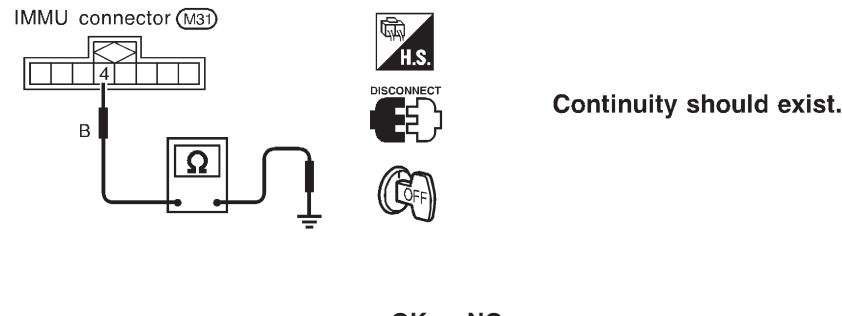
<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
<p>Confirm SELF-DIAGNOSTIC RESULTS "CHAIN OF ECM-IMMU" displayed on CONSULT-II screen.</p> <p><b>NOTE:</b> In rare case, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.</p>												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAG RESULTS</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 DIAG RESULTS		DTC RESULTS	TIME	CHAIN OF ECM-IMMU	0				
SELF DIAG RESULTS												
DTC RESULTS	TIME											
CHAIN OF ECM-IMMU	0											
SEL366X												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>CHECK POWER SUPPLY CIRCUIT FOR IMMU</b>	
<p>1. Disconnect IMMU connector.</p> <p>2. Check voltage between terminal 8 of IMMU and ground with CONSULT-II or tester.</p>		
		
<b>Battery voltage should exist.</b>		
SEL302WB		
<b>OK or NG</b>		
OK	▶	GO TO 3.
NG	▶	<p><b>Check the following</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 36, located in the fusible link and fuse box) — (Gasoline engine)</li> <li>● 20A fuse (No. 34, located in the fusible link and fuse box) — (Diesel engine)</li> <li>● Harness for open or short between fuse and IMMU connector</li> </ul> <p><b>Ref. Part No. C1</b></p>

## NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK IGN SW. ON SIGNAL</b>	
<p>1. Turn ignition switch ON. 2. Check voltage between terminal 7 of IMMU and ground with CONSULT-II or tester.</p>		
		
YEL808C		
OK	▶	GO TO 4.
NG	▶	<p><b>Check the following</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 20, located in the fuse block (J/B)]</li> <li>● Harness for open or short between fuse and IMMU connector</li> </ul> <p><b>Ref. part No. C2</b></p>

<b>4</b>	<b>CHECK GROUND CIRCUIT FOR IMMU</b>	
<p>1. Turn ignition OFF. 2. Check harness continuity between IMMU terminal 4 and ground.</p>		
		
SEL304WB		
OK or NG		
OK	▶	GO TO 5.
NG	▶	Repair harness. <b>Ref. part No. C3</b>

# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

5	CHECK COMMUNICATION LINE OPEN CIRCUIT
<p>1. Disconnect ECM connector.                      2. Check harness continuity between ECM terminal 116 (Gasoline engine) or 410 (Diesel engine) and IMMU terminal 1.</p>	
SEL305WB	
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 (Gasoline engine) or 410 (Diesel engine) or IMMU terminal 1 and ground.</p>	
SEL306WB	
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

## NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

7	CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT
<p>1. Turn ignition switch OFF.                      2. Check continuity between ECM terminal 116 (Gasoline engine) or 410 (Diesel engine) or IMMU terminal 1 and ground.</p>	
SEL307WB	
OK or NG	
OK	▶ GO TO 8.
NG	▶ Communication line is short-circuited with ground line. Repair harness or connectors. <b>Ref. part No. C4</b>

8	SIGNAL FROM ECM TO IMMU CHECK
<p>1. Check the signal between ECM terminal 116 (Gasoline engine) or 410 (Diesel engine) 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>	
SEL730W	
OK or NG	
OK	▶ IMMU is malfunctioning. Replace IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual NATS".
NG	▶ ECM is malfunctioning. Replace ECM. <b>Ref. part No. B</b> Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II Operation Manual NATS".

# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 3

=NJEL0411S07

**Self-diagnostic results:  
"DIFFERENCE OF KEY" displayed on CONSULT-II screen**

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS "DIFFERENCE OF KEY" displayed on CONSULT-II screen.												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAG RESULTS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">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 DIAG RESULTS		DTC RESULTS	TIME	DIFFERENCE OF KEY	0				
SELF DIAG RESULTS												
DTC RESULTS	TIME											
DIFFERENCE OF KEY	0											
SEL367X												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>				
Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs. For initialization and registration of NATS ignition key IDs, refer to "CONSULT-II operation manual NATS".					
<table border="1" style="margin: auto;"> <thead> <tr> <th>IMMU INITIALIZATION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td style="text-align: center;">THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </tbody> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
<b>NOTE:</b>					
If the initialization is not completed or fails, CONSULT-II shows above message on the screen.					
<b>Can the system be initialized and can the engine be started with re-registered NATS ignition key?</b>					
Yes	▶	Ignition key ID was unregistered. <b>Ref. part No. D</b>			
No	▶	IMMU is malfunctioning. Replace IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".			

# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 4

=NJEL0411S08

**Self-diagnostic results:**

**“CHAIN OF IMMU-KEY” displayed on CONSULT-II screen**




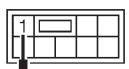

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.												
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2">SELF DIAG RESULTS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">CHAIN OF IMMU-KEY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="height: 20px;"> </td> <td> </td> </tr> <tr> <td style="height: 20px;"> </td> <td> </td> </tr> </tbody> </table>			SELF DIAG RESULTS		DTC RESULTS	TIME	CHAIN OF IMMU-KEY	0				
SELF DIAG RESULTS												
DTC RESULTS	TIME											
CHAIN OF IMMU-KEY	0											
SEL368X												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										




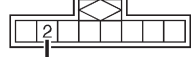


<b>2</b>	<b>CHECK NATS IGNITION KEY ID CHIP</b>	
Start engine with another registered NATS ignition key.		
<b>Does the engine start?</b>		
Yes	▶	Ignition key ID chip is malfunctioning. Replace the ignition key. <b>Ref. part No. E</b> Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”.
No	▶	<b>Models without dongle unit</b> IMMU is malfunctioning. Replace IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”. <b>Models with dongle unit</b> GO TO 3.

<b>3</b>	<b>CHECK HARNESS CONNECTOR CONNECTION</b>	
Check harness connector connection between M31 and M102.		
<b>Does the engine start?</b>		
Yes	▶	System is OK. (The malfunction is caused by improper connector connection.)
No	▶	GO TO 4.

# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

4	<b>CHECK GROUND CIRCUIT FOR DONGLE UNIT</b>
<p>Check continuity between dongle unit terminal 1 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">        </div> <div style="text-align: center;"> <p>Dongle unit connector (M102)</p>  </div> <div style="text-align: center;"> <p><b>Continuity should exist.</b></p> </div> </div> <div style="text-align: center; margin-top: 20px;">  </div> <p style="text-align: right;">SEL029X</p> <p style="text-align: center;">Yes or No</p>	
Yes	▶ GO TO 5.
No	▶ Repair harness.

5	<b>CHECK INTERFACE CIRCUIT</b>
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">        </div> <div style="text-align: center;"> <p>IMMU connector (M31)</p>  </div> <div style="text-align: center;"> <p>Dongle unit connector (M102)</p>  </div> </div> <div style="text-align: center; margin-top: 20px;">  </div> <div style="text-align: right; margin-top: 20px;"> <p>Check continuity between IMMU terminal 2 and dongle unit terminal 7 (Open circuit check).  <b>Continuity should exist.</b></p> <p>Check continuity between IMMU terminal 2 and ground (Short circuit check).  <b>Continuity should not exist.</b></p> <p style="text-align: right;">SEL030X</p> </div> <p style="text-align: center;">Yes or No</p>	
Yes	▶ <b>Dongle unit is malfunctioning.</b> 1. Replace dongle unit. 2. Perform initialization with CONSULT-II. For the initialization procedure, refer to "CONSULT-II operation manual NATS."
No	▶ Repair harness.

# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 5

=NJEL0411S09

**Self-diagnostic results:  
"ID DISCORD, IMM-ECM" displayed on CONSULT-II screen**

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
<p>Confirm SELF-DIAGNOSTIC RESULTS "ID DISCORD, IMM-ECM" displayed on CONSULT-II screen.</p>												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAG RESULTS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>ID DISCORD, IMM-ECM</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAG RESULTS		DTC RESULTS	TIME	ID DISCORD, IMM-ECM	0				
SELF DIAG RESULTS												
DTC RESULTS	TIME											
ID DISCORD, IMM-ECM	0											
SEL369X												
<p><b>NOTE:</b> "ID DISCORD IMM-ECM": Registered ID of IMM-ECM is in discord with that of ECM.</p>												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>				
<p>Perform initialization with CONSULT-II. Re-register all NATS ignition key IDs. For initialization, refer to "CONSULT-II operation manual NATS".</p>					
<table border="1" style="margin: auto;"> <thead> <tr> <th>IMMU INITIALIZATION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td style="text-align: center;">THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </tbody> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
<p><b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows above message on the screen.</p>					
<b>Can the system be initialized?</b>					
Yes	▶	Start engine. (END) (System initialization had not been completed. <b>Ref. part No. B</b> )			
No	▶	ECM is malfunctioning. Replace ECM. <b>Ref. part No. B</b> Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".			



# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

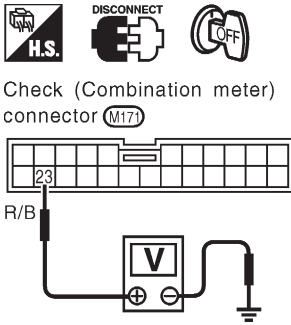
## DIAGNOSTIC PROCEDURE 6

### “SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

=NJEL0411S10

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

<b>2</b>	<b>CHECK SECURITY INDICATOR LAMP</b>	
1. Install 10A fuse. 2. Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II Operation Manual NATS”. 3. Turn ignition switch OFF. 4. Start engine and turn ignition switch OFF. 5. Check the security indicator lamp lighting. <b>Security indicator lamp should be light up.</b>		
<b>OK or NG</b>		
OK	▶	INSPECTION END
NG	▶	GO TO 3.

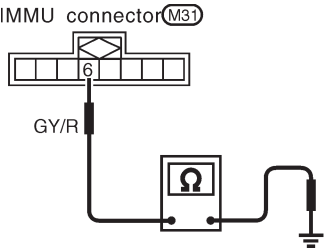

<b>3</b>	<b>CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT</b>	
1. Disconnect combination meter connector. 2. Check voltage between combination meter (security indicator lamp) connector terminal 23 and ground.		
 <p style="text-align: center;">Check (Combination meter) connector (M17)</p> <p style="text-align: center;"><b>Battery voltage should exist.</b></p>		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	Check harness for open or short between fuse and combination meter.

YEL809C

<b>4</b>	<b>CHECK SECURITY INDICATOR LAMP</b>	
Check security Indicator Lamp.		
<b>Is security indicator lamp OK?</b>		
Yes	▶	GO TO 5.
No	▶	Repair or replace combination meter.

## NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

5	CHECK IMMU FUNCTION	
	<p>1. Connect IMMU connector.                      2. Disconnect combination meter connector.                      3. Check continuity between IMMU terminal 6 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">  <p>IMMU connector(M31)</p> <p>GY/R</p> </div> <div style="text-align: center;">  <p>H.S.</p> <p>CONNECT</p> <p>OFF</p> </div> <div style="text-align: center;"> <p><b>Continuity should exist intermittently.</b></p> </div> </div> <p style="text-align: right; margin-top: 10px;">YEL810C</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>	
OK	▶	Check harness for open or short between security indicator lamp and IMMU.
NG	▶	IMMU is malfunctioning. Replace IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".

# NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 7

=NJEL0411S11

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

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS "LOCK MODE" is displayed on CONSULT-II screen.												
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="2">SELF DIAG RESULTS</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 DIAG RESULTS		DTC RESULTS	TIME	LOCK MODE	0				
SELF DIAG RESULTS												
DTC RESULTS	TIME											
LOCK MODE	0											
SEL371X												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

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

<b>3</b>	<b>CHECK IMMU ILLUSTRATION</b>	
Check IMMU installation. Refer to "How to Replace IMMU" in EL-258.		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	Reinstall IMMU correctly.

## NATS (NISSAN ANTI-THEFT SYSTEM)

Trouble Diagnoses (Cont'd)

4	PERFORM INITIALIZATION WITH CONSULT-II				
<p>Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".</p>					
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 2px;">IMMU INITIALIZATION</td> </tr> <tr> <td style="text-align: center; padding: 10px;">INITIALIZATION FAIL</td> </tr> <tr> <td style="text-align: center; padding: 2px;">THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
<p><b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.</p>					
<p><b>Can the system be initialized?</b></p>					
Yes	▶	System is OK.			
No	▶	GO TO 5.			

5	PERFORM INITIALIZATION WITH CONSULT-II AGAIN				
<p>1. Replace IMMU. 2. Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".</p>					
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 2px;">IMMU INITIALIZATION</td> </tr> <tr> <td style="text-align: center; padding: 10px;">INITIALIZATION FAIL</td> </tr> <tr> <td style="text-align: center; padding: 2px;">THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
<p><b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.</p>					
<p><b>Can the system be initialized?</b></p>					
Yes	▶	System is OK. (IMMU is malfunctioning. <b>Ref. part No. A</b> )			
No	▶	ECM is malfunctioning. Replace ECM. <b>Ref. part No. B</b> Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II operation manual NATS".			

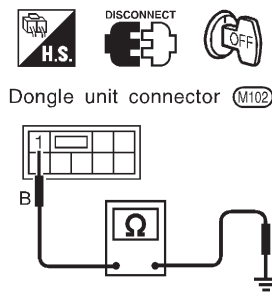
# NATS (NISSAN ANTI-THEFT SYSTEM)

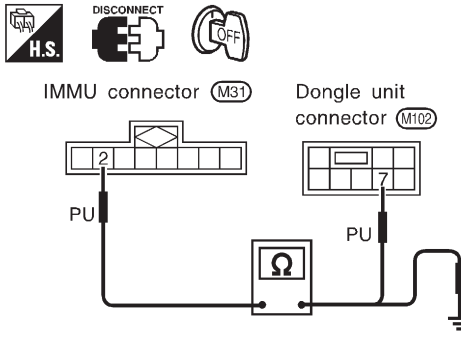
Trouble Diagnoses (Cont'd)

## DIAGNOSTIC PROCEDURE 8

=NJEL0411S14

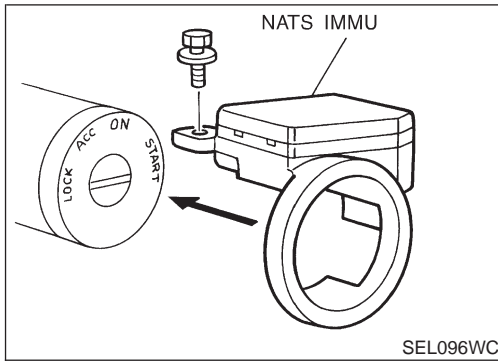
<b>1</b>	<b>CHECK HARNESS CONNECTOR CONNECTION</b>	
Perform initialization with CONSULT-II. Check harness connector connection between M31 and M102. Then initialize NATS. For the initialization operation, refer to "CONSULT-II operation NATS".		
<b>Does the security indicator blink just after initialization?</b>		
Yes	▶	System is OK. (The malfunction is caused by improper connector connection.)
No	▶	GO TO 2.

<b>2</b>	<b>CHECK GROUND CIRCUIT FOR DONGLE UNIT</b>	
Check continuity between dongle unit terminal 1 and ground.		
		
		<b>Continuity should exist.</b>
SEL029X		
Yes or No		
Yes	▶	GO TO 3.
No	▶	Repair harness.

<b>3</b>	<b>CHECK INTERFACE CIRCUIT</b>	
		
		Check continuity between IMMU terminal 2 and dongle unit terminal 7 (Open circuit check). <b>Continuity should exist.</b>
		Check continuity between IMMU terminal 2 and ground (Short circuit check). <b>Continuity should not exist.</b>
SEL030X		
Yes or No		
Yes	▶	<b>Dongle unit is malfunctioning.</b> 1. Replace dongle unit. 2. Perform initialization with CONSULT-II. For the initialization procedure, refer to "CONSULT-II Operation Manual NATS".
No	▶	Repair harness.

## NATS (NISSAN ANTI-THEFT SYSTEM)

How to Replace NATS IMMU



### How to Replace NATS IMMU

NJEL0412

#### NOTE:

- If NATS IMMU is not installed correctly, NATS system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show "LOCK MODE".

---

## Precautions

NJEL0514

### **WARNING:**

Do not attempt to disassemble the monitor. Parts of the monitor have high voltages that can result in severe and dangerous electric shock.

### **CAUTION:**

- Do not reverse battery connections.
- Do not attach unauthorized parts.
- Protect the unit from severe impact.

### **NOTE:**

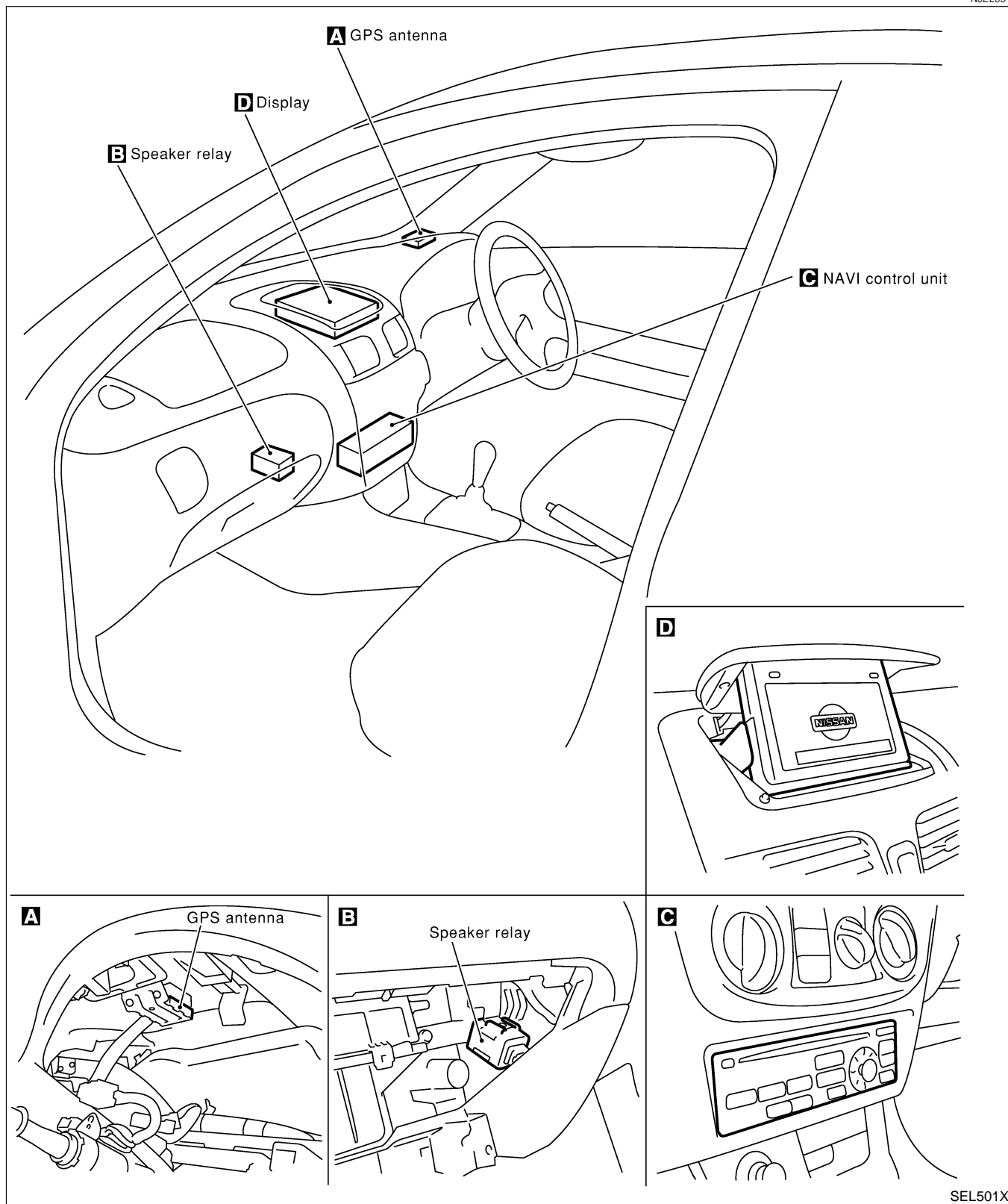
Before beginning repair, determine whether or not the unit is defective. Refer to “This Condition Is Not Abnormal” (EL-309).

# NAVIGATION SYSTEM

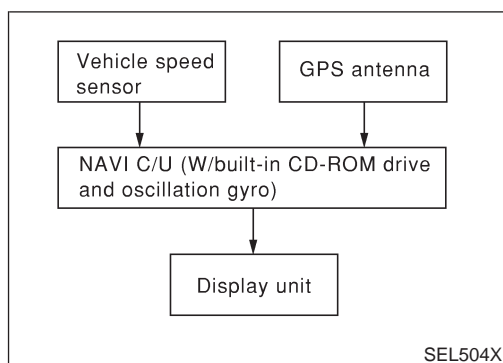
Component Parts Location

## Component Parts Location

NJEL0515







## System Description

NJEL0516

### OUTLINE

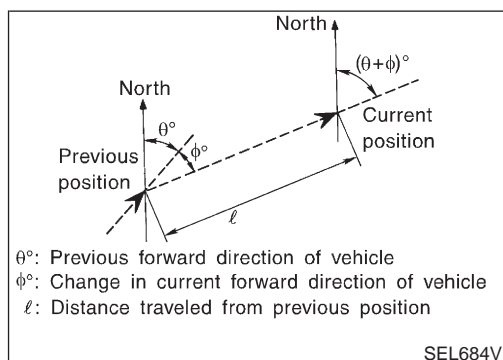
NJEL0516S01

The Navigation System (Multi-AV System) relies upon three sensing devices in order to determine vehicle location at regular time intervals.

1. Vehicle speed sensor: Determines the distance the vehicle has traveled.
2. Gyro (Angular velocity sensor): Determines vehicle steering angle and directional change.
3. GPS antenna (GPS data): Determines vehicle forward movement and direction.

The data provided by the three sensing functions together with a comparison of the mapping information read from the CD-ROM drive permit accurate determination of the vehicle's current location and subsequent course (map matching). The information appears on a liquid crystal display.

This comparison of GPS data (vehicle position sensing) and map matching permits precise determination of vehicle location.



## Position Sensor Operating Principles

NJEL0516S0101

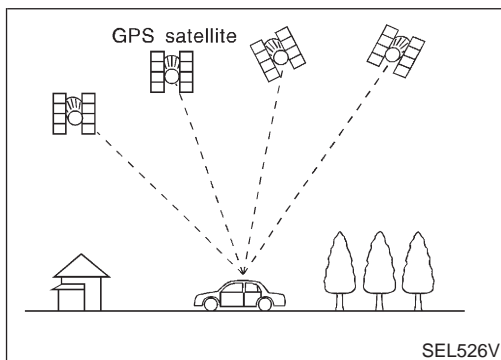
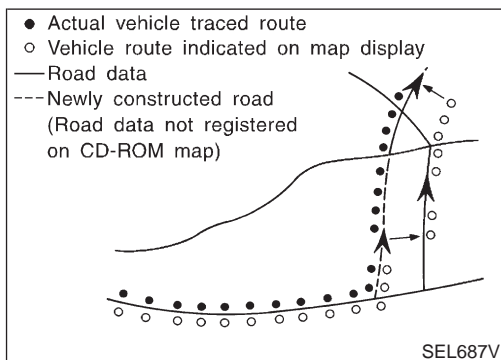
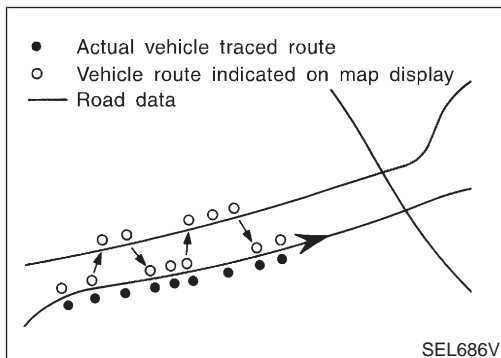
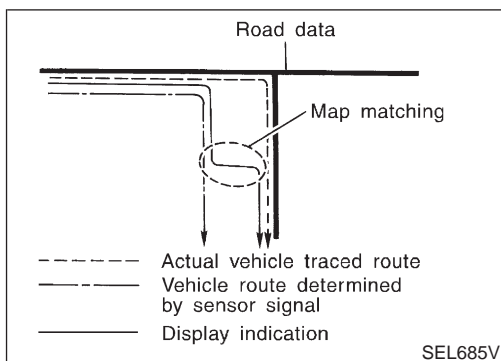
The sensor determines current vehicle location by calculating the previously sensed position, the distance traveled from this position, and the directional changes occurring during this travel.

1. Distance traveled  
The distance traveled is calculated using signals received from the vehicle speed sensor. The sensor automatically compensates for the slightly reduced wheel and tire diameter resulting from tire wear.
2. Forward movement (Direction)  
Changes in the direction of forward movement are calculated by the gyro (angular velocity sensor) and the GPS antenna (GPS data). Each of these functions has its advantage and disadvantages. Depending upon conditions, one function takes precedence over the other to accurately determine the direction of forward movement.

Function type	Advantage	Disadvantage
Gyro (Angular velocity sensor)	<ul style="list-style-type: none"> <li>• Able to accurately detect minute changes in steering angle and direction.</li> </ul>	<ul style="list-style-type: none"> <li>• Calculation errors may accumulate over a long period of continuous vehicle travel.</li> </ul>
GPS antenna (GPS data)	<ul style="list-style-type: none"> <li>• Able to sense vehicle travel in four general directions (North, South, East, and West)</li> </ul>	<ul style="list-style-type: none"> <li>• Unable to detect direction of vehicle travel at low vehicle speeds.</li> </ul>

# NAVIGATION SYSTEM

## System Description (Cont'd)



## Map Matching

NJEL0516S0102

Map matching allows the driver to compare the sensed vehicle location data with the road map contained in the CD-ROM drive. Vehicle position is marked on the CD-ROM map. This permits the driver to accurately determine his/her present position on the highway and to make appropriate course decisions.

When GPS data reception is poor during travel, the vehicle position is not amended. At this time, manual manipulation of the CD-ROM map position marker is required.

Map matching permits the driver to make priority judgments about possible appropriate roads other than the one currently being traveled.

If there is an error in the distance or direction of travel, there will also be an error in the relative position of other routes. When two routes are closely parallel to one another, the indicated position for both routes will be nearly the same priority. This is so that, slight changes in the steering direction may cause the marker to indicate both routes alternately.

Newly constructed roads may not appear on the CD-ROM map. In this case, map matching is not possible. Changes in the course of a road will also prevent accurate map matching.

When driving on a road not shown on the CD-ROM map, the position marker used for map matching may indicate a different route. Even after returning to a route shown on the map, the position marker may jump to the position currently detected.

## GPS (Global Positioning System)

NJEL0516S0103

GPS is the global positioning system developed and operated by the US Department of Defense. GPS satellites (NAVSTAR) transmit radio waves and orbit around the earth at an altitude of approximately 21,000 km (13,000 miles).

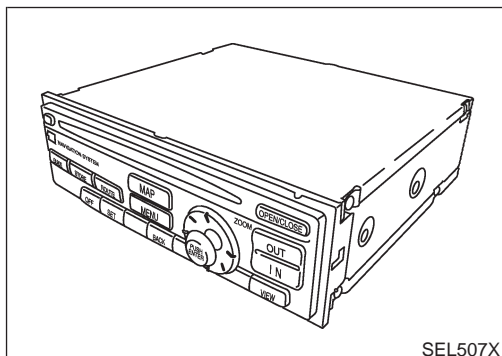
GPS receiver calculates the three-dimensional position of the vehicle (latitude, longitude, and altitude from the sea level) by the time difference of the radio wave arriving from more than four GPS satellites (three-dimensional positioning).

When the radio wave is received from only three GPS satellites, the two-dimensional position (latitude and longitude) is calculated, using the altitude from the sea level data calculated by using four GPS satellites (two-dimensional positioning).

Positioning capability is degraded in the following cases.

- In two-dimensional positioning, when the vehicle's altitude from the sea level changes, the precision becomes lower.
- The location detection performance can have an error of about 100 m (300 ft) even in three-dimensional positioning with high precision. Because the precision is influenced by the location of GPS satellites used for positioning, the location detection performance may drop depending on the location of GPS satellites.
- When the radio wave from GPS satellites cannot be received,

for example, when the vehicle is in a tunnel, in a parking lot inside building, under an elevated superhighway or near strong power lines, the location may not be detected. Turbulent/electric weather conditions may also affect positioning performance. If something is placed on the antenna, the radio wave from GPS satellites may not be received.



SEL507X

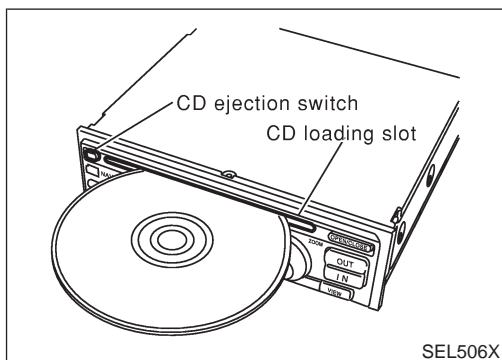
## COMPONENT DESCRIPTION

### NAVI Control Unit

NJEL0516S02

NJEL0516S0201

- The gyro (angular speed sensor) and the CD-ROM drive are built-in units that control the navigation functions.
- Signals are received from the gyro, the vehicle speed sensor, and the GPS antenna. Vehicle location is determined by combining this data with the data contained in the CD-ROM map. Locational information is shown on liquid crystal display panel.



SEL506X

### CD-ROM Driver

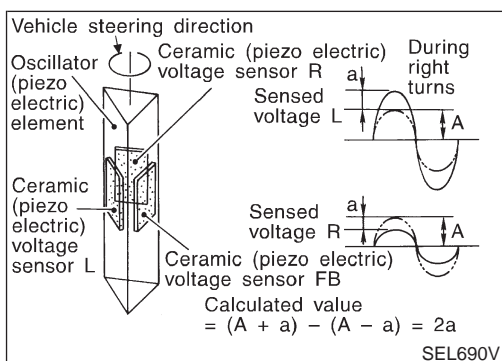
NJEL0516S0202

Maps, traffic control regulations, and other pertinent information can be easily read from the CD-ROM disc.

### Map CD-ROM

NJEL0516S0203

- The map CD-ROM has maps, traffic control regulations, and other pertinent information.
- To improve CD-ROM map matching and route determination functions, the CD-ROM uses an exclusive Nissan format. Therefore, the use of a CD-ROM provided by other manufacturers cannot be used.



SEL690V

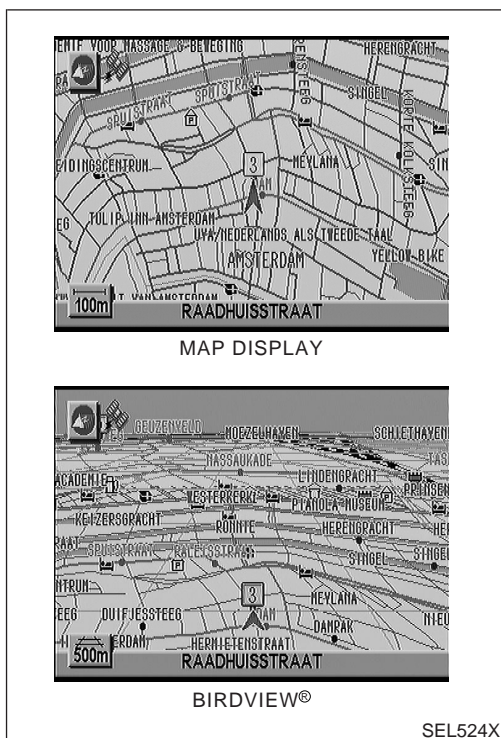
### Gyro (Angular Speed Sensor)

NJEL0516S0204

- The oscillator gyro sensor is used to detect changes in vehicle steering angle.
- The oscillator gyro periodically senses oscillatory variation at the oscillation terminals. This variation is caused by changes in the vehicle angular velocity. Voltage variations are sensed by ceramic voltage sensors at the left and right sides of the terminals. Vehicle angular velocity corresponds directly with these changes in voltage.
- The gyro is built into the navigation (NAVI) control unit.

# NAVIGATION SYSTEM

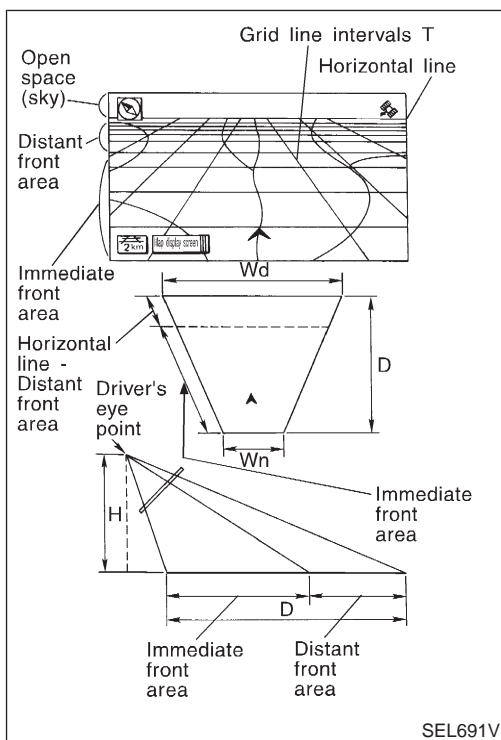
System Description (Cont'd)



## BIRDVIEW®

NJEL0516S0205

The BIRDVIEW® provides a detailed and easily seen display of road conditions covering the vehicle's immediate to distant area.



## Description

NJEL0516S0206

- Display area: Trapezoidal representation showing approximate distances ( $W_n$ ,  $D$ , and  $W_d$ ).
- Ten horizontal grid lines indicate display width while six vertical grid lines indicate display depth and direction.
- Drawing line area shows open space, depth, and immediate front area. Each area is to a scale of approximately 5:6:25.
- Pushing the "ZOOM IN" button during operation displays the scale change and the view point height on the left side of the screen. The height of the view point increases or decreases when "ZOOM" or "WIDE" is selected with the joystick.

# NAVIGATION SYSTEM

System Description (Cont'd)

## MAP DISPLAY

=NJEL0516S03



SEL525X

Function of each icon is as follows:

- 1) Azimuth indication
- 2) Position marker  
The tip of the arrow shows the current position. The shaft of the arrow indicates the direction in which the vehicle is traveling.
- 3) GPS reception signal (indicates current reception conditions)
- 4) Distance display (shows the distance in a reduced scale)

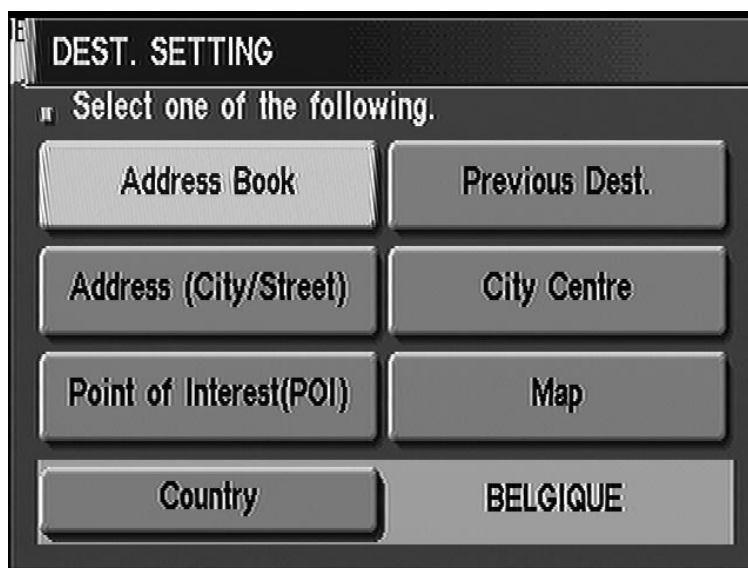
## NAVIGATION SYSTEM

System Description (Cont'd)

### FUNCTION OF PANEL SWITCH Display with Pushed "DEST" Switch

=NJEL0516S04

NJEL0516S0401



SEL615X

The function of each icon is as follows:

Icon	Description
Address Book	Favorite areas can be saved to memory.
Address (City/Street)	The information can be searched from the address.
Point of Interest (POI)	The information of favorite areas can be searched.
Previous Dest.	The previous ten destinations stored in memory are displayed.
City Centre	The information can be searched from city name.
Map	The information can be searched from the map.
Country	When two or more countries are included in a map CD-ROM, the destination can be searched for under the country name.

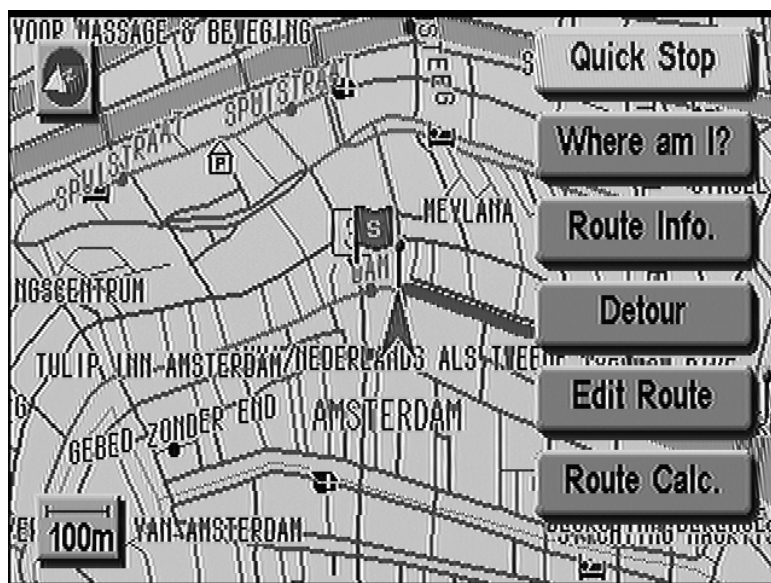


# NAVIGATION SYSTEM

System Description (Cont'd)

## Display with Pushed "ROUTE" Switch

=NJEL0516S0402



SEL526X

The function of each icon is as follows:

Icon	Description
Quick Stop	Select facility is set as destination or waypoint. (Route guidance has been turned OFF or the destination has been reached.)
Where am I?	Next current and previous street names can be displayed.
Route Info.*	The following items can be set. <ul style="list-style-type: none"> <li>● Complete Route</li> <li>● Turn List</li> <li>● Route Simulation</li> </ul> (Displayed only when the destination area has been set.)
Detour*	Based on the selected distance, an alternative route is searched. [Displayed only when the recommended route (not its reverse) is followed.]
Edit Route*	Change the destination or add the transit points of the route set in the route guide. (Displayed only when the automatic reroute function has been turned OFF and the recommended route is not followed.)
Route Calc.	Search for a recommended route between the vehicle's current location and the destination area. (Displayed only when the destination area has been set.)

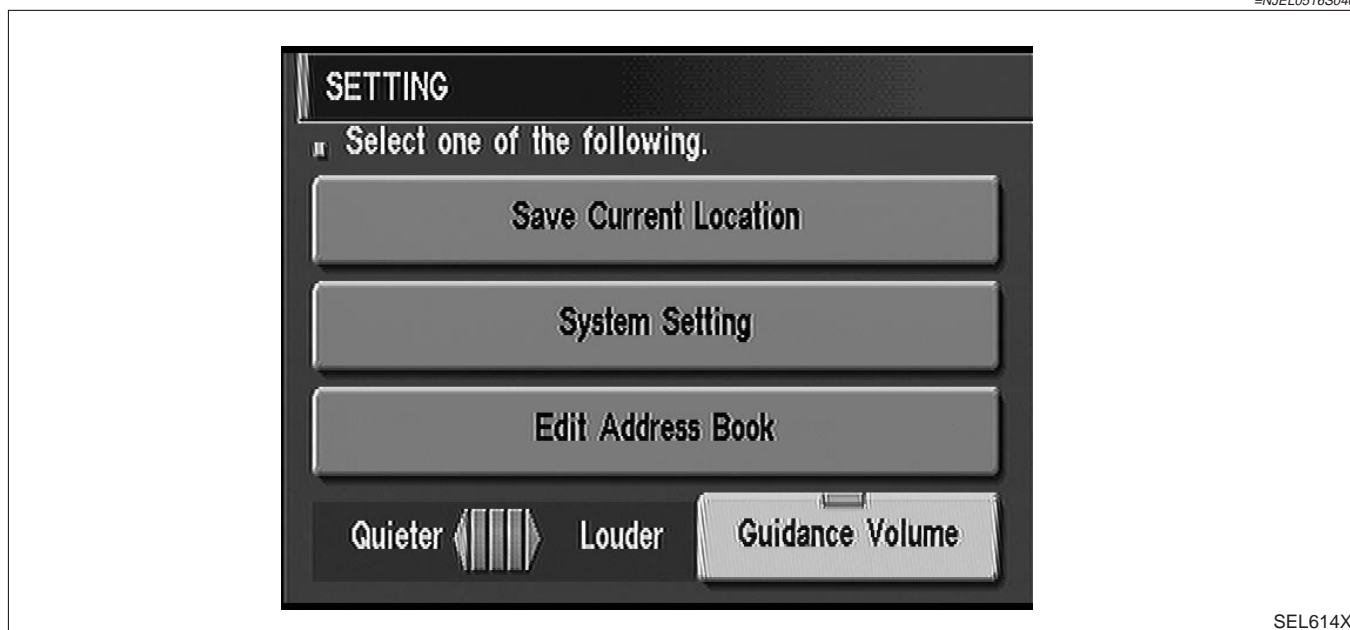
\*: When destinations have been entered, route guidance OFF or destination have been reached, "Route Info.", "Detour", "Edit Route" and "Route Clac." are not displayed.

## NAVIGATION SYSTEM

System Description (Cont'd)

### Display with Pushed "SETTING" Switch

=NJEL0516S0403



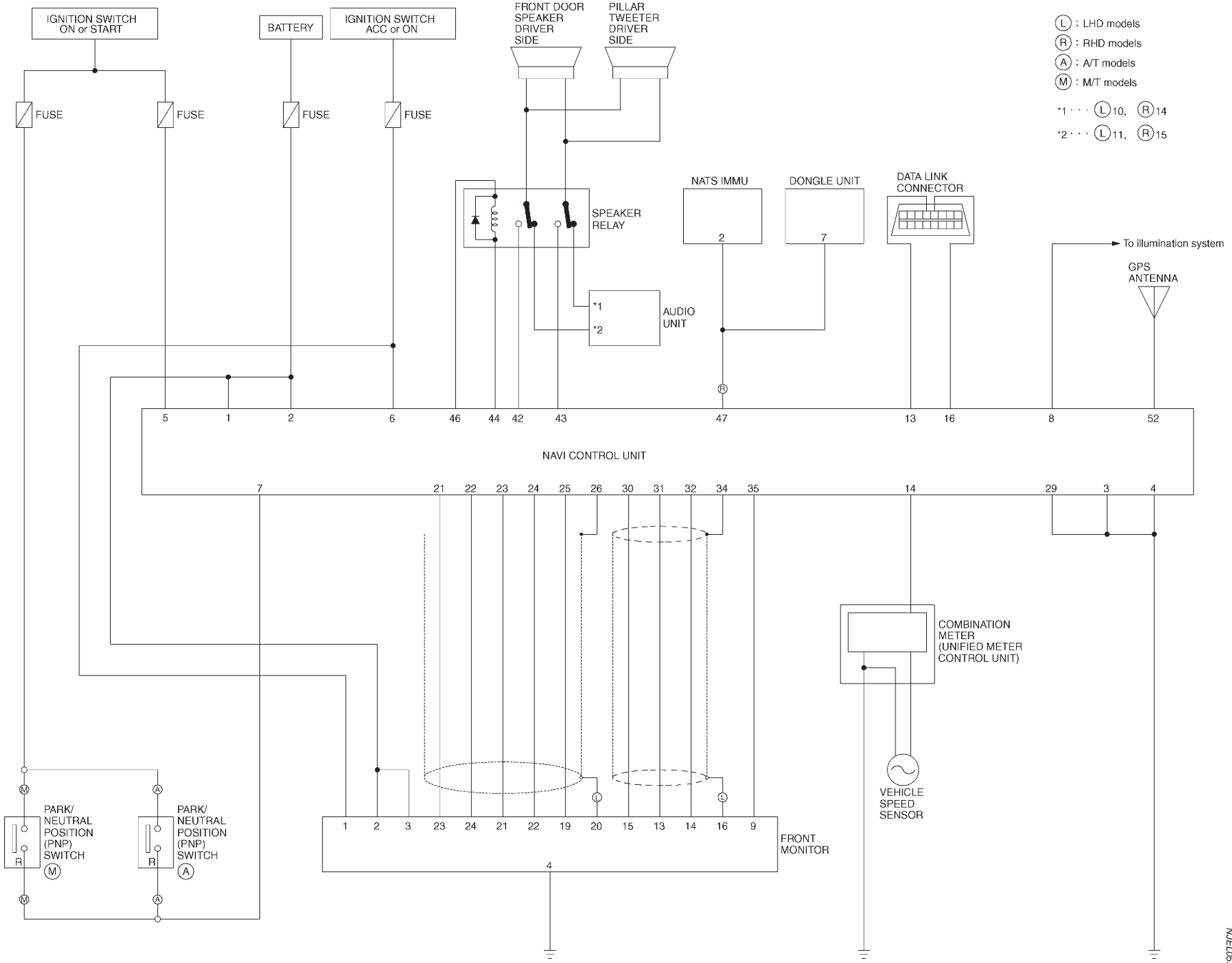
The function of each icon is as follows:

Icon	Description
Save Current Location	The current location can be stored in the Address Book.
System Setting	Many adjustments and settings can be made for maximum driving pleasure and convenience.
Edit Address Book	The Address Book data can be edited.
Guidance Volume	The volume and/or on/off of voice prompt can be controlled by the joystick.



EL-269

YEL713C



- Ⓛ : LHD models
- Ⓡ : RHD models
- Ⓐ : A/T models
- Ⓜ : M/T models
- \*1 ··· Ⓛ10, Ⓡ14
- \*2 ··· Ⓛ11, Ⓡ15

Schematic

NAVIGATION SYSTEM

Schematic

NJEL0530

# NAVIGATION SYSTEM

Wiring Diagram — NAVI —

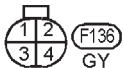
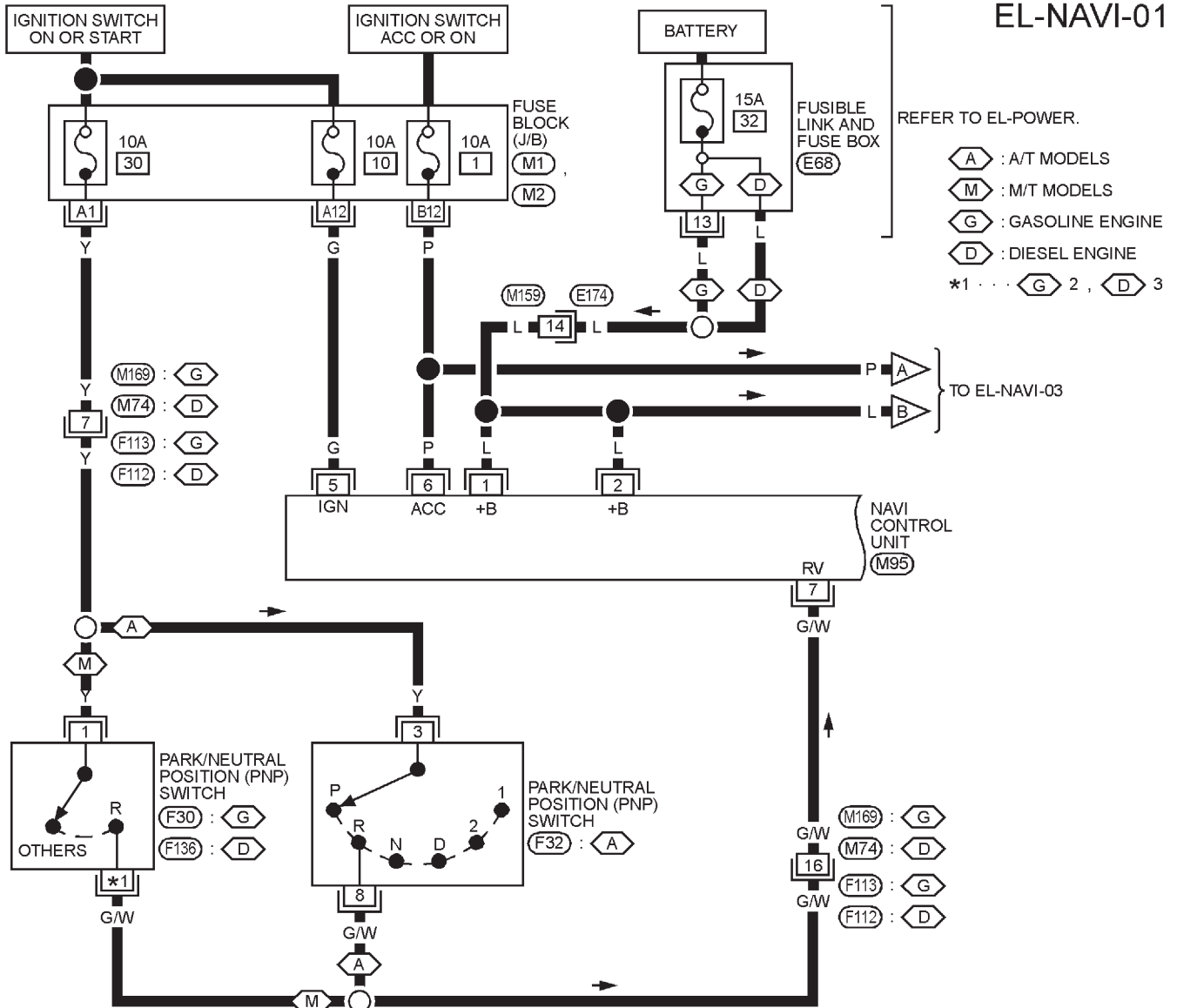
## Wiring Diagram — NAVI —

NJEL0531

NJEL0531S01

### LHD MODELS

### EL-NAVI-01



REFER TO THE FOLLOWING.

M1 , M2 - FUSE BLOCK-JUNCTION BOX (J/B)

E68 - FUSE AND FUSIBLE LINK BOX

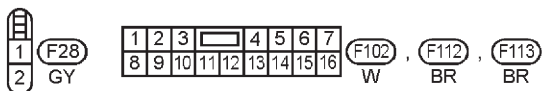
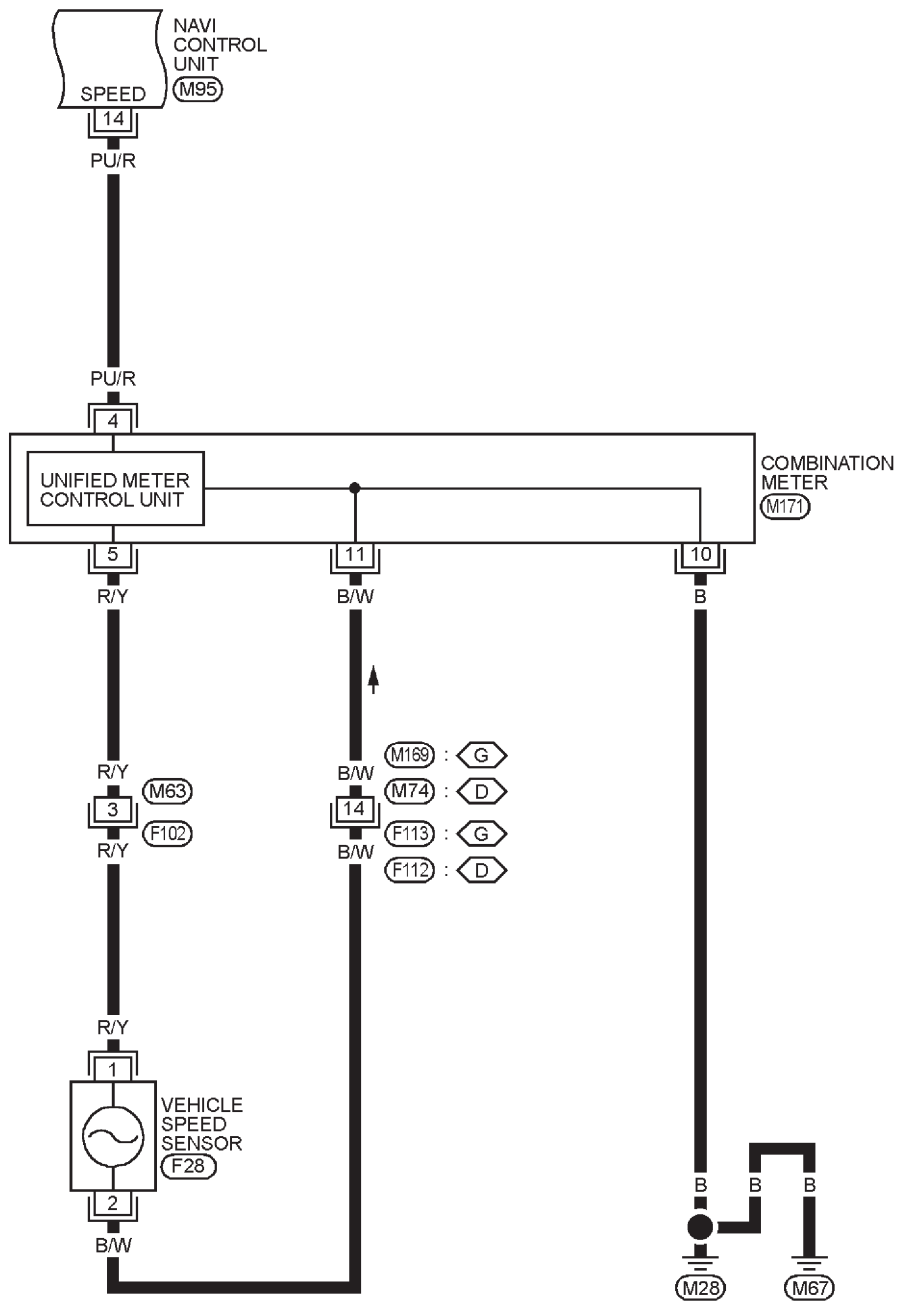
YEL714C

# NAVIGATION SYSTEM

Wiring Diagram — NAVI — (Cont'd)

## EL-NAVI-02

- G : GASOLINE ENGINE
- D : DIESEL ENGINE

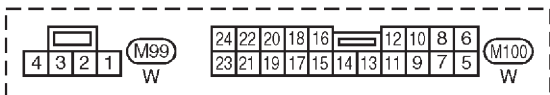
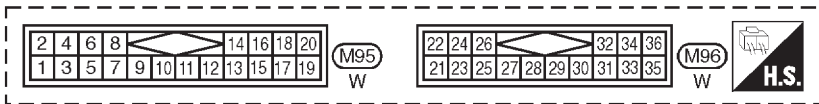
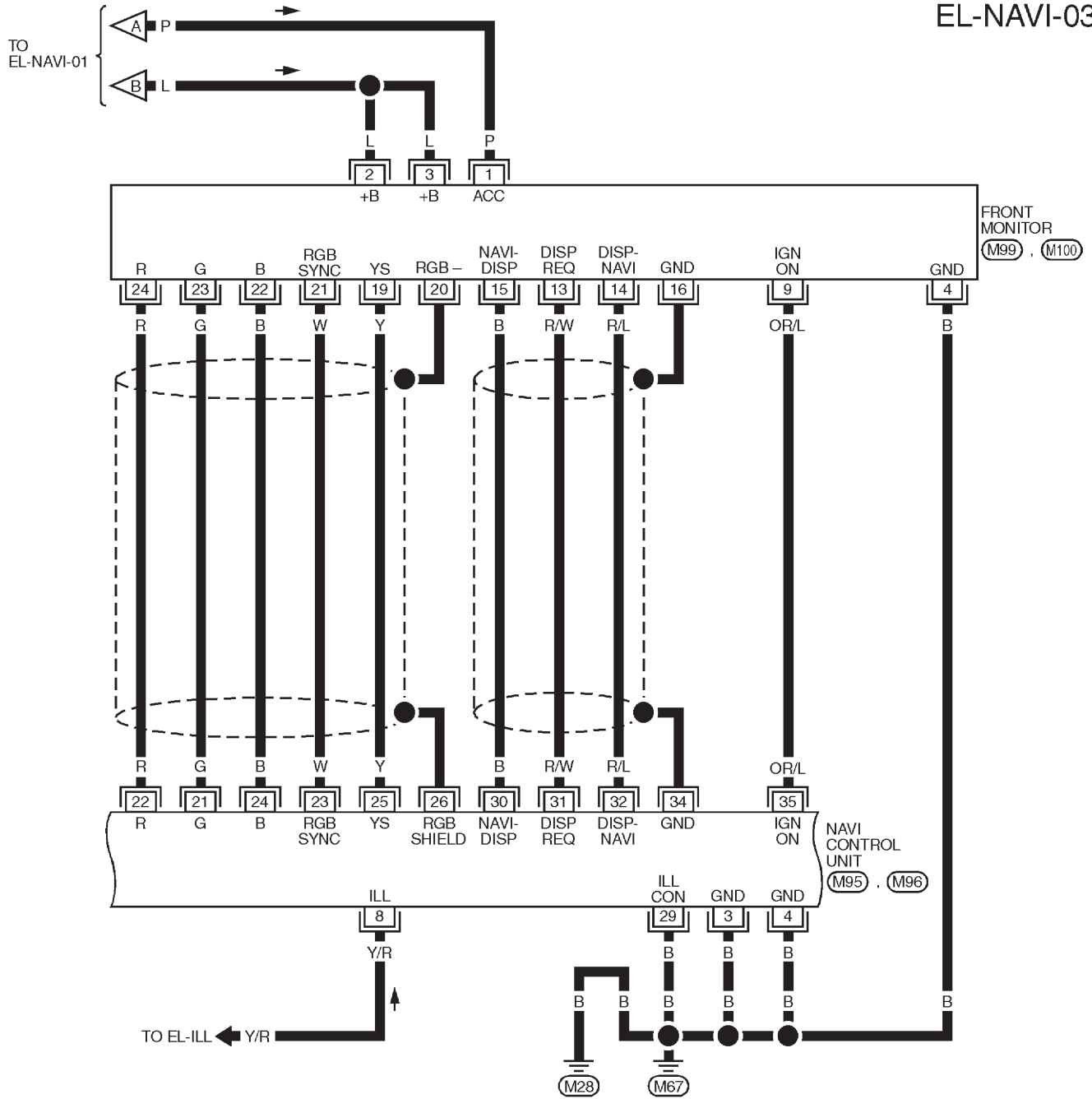


YEL715C

# NAVIGATION SYSTEM

Wiring Diagram — NAVI — (Cont'd)

EL-NAVI-03

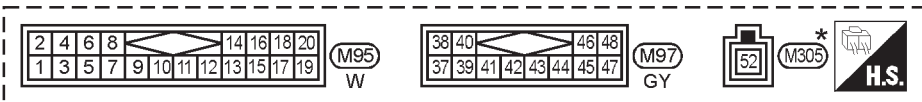
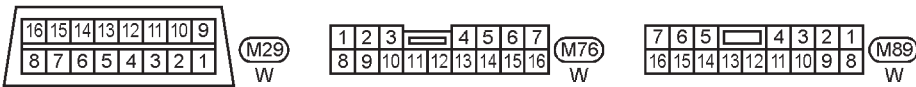
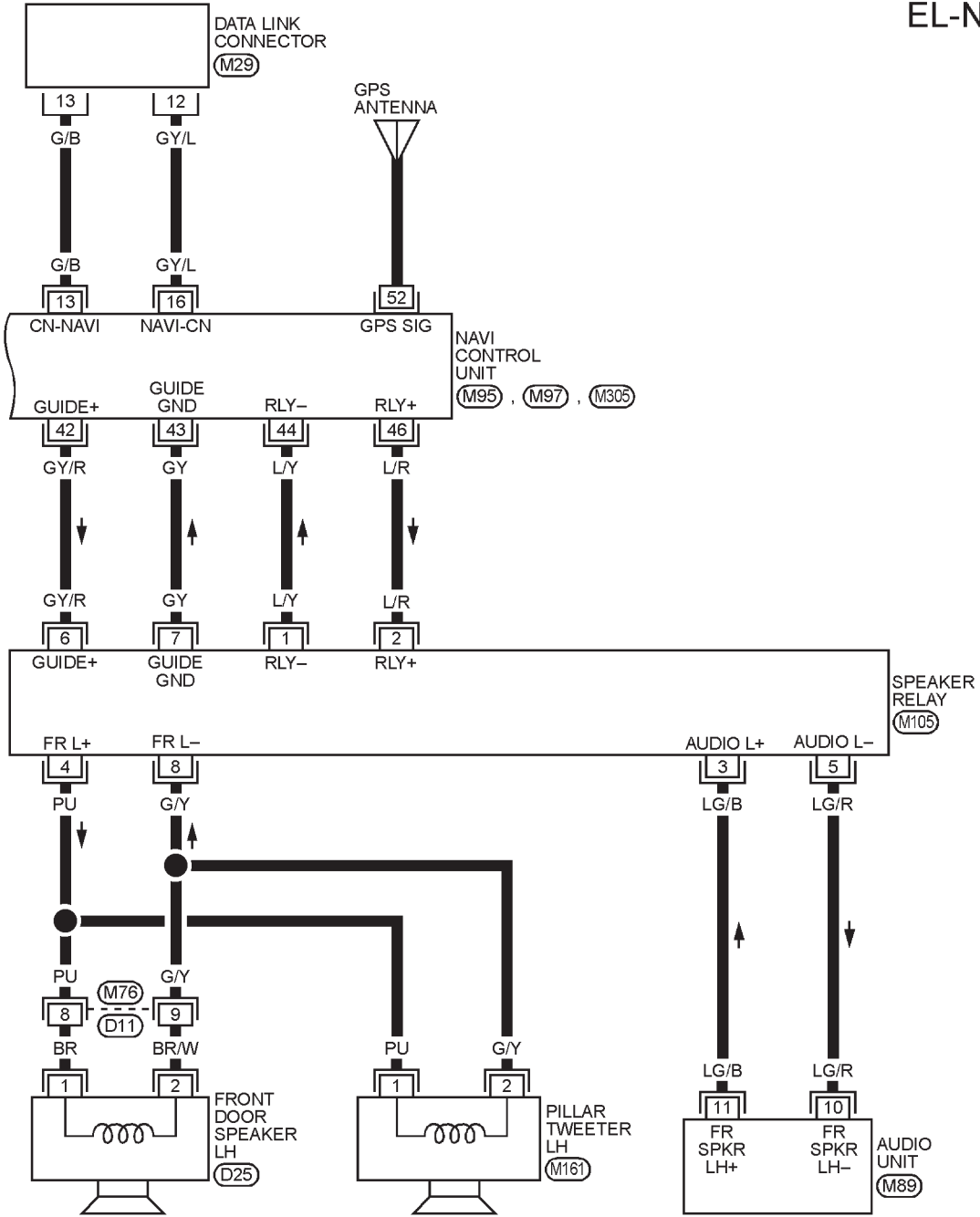


YEL716C

# NAVIGATION SYSTEM

Wiring Diagram — NAVI — (Cont'd)

EL-NAVI-04



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

YEL717C

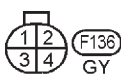
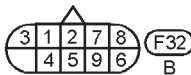
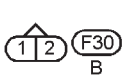
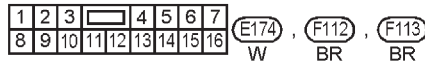
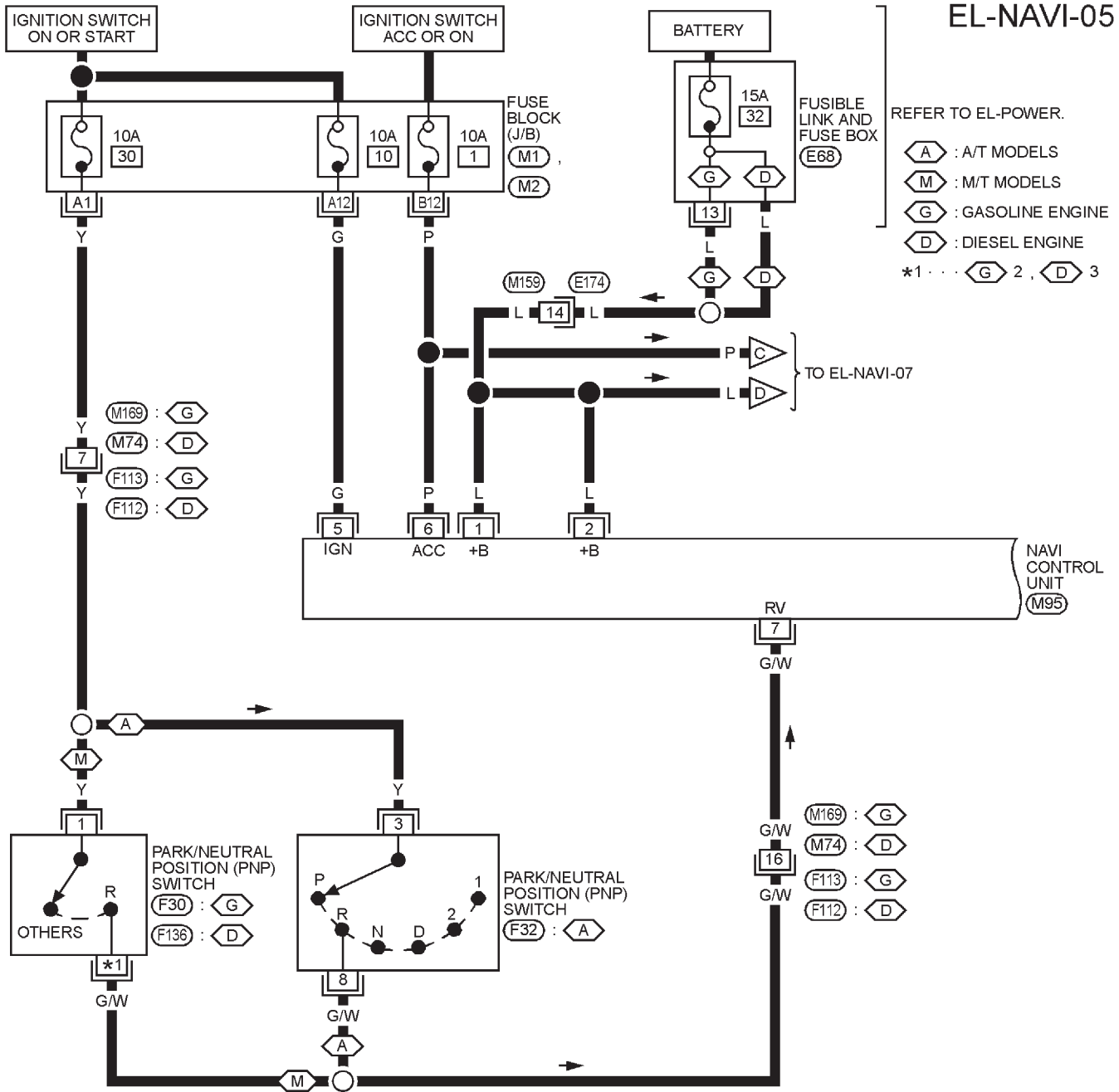
# NAVIGATION SYSTEM

Wiring Diagram — NAVI — (Cont'd)

## RHD MODELS

NJEL0531S02

### EL-NAVI-05



REFER TO THE FOLLOWING.  
 (M1), (M2) - FUSE BLOCK-JUNCTION BOX (J/B)  
 (E68) - FUSE AND FUSIBLE LINK BOX

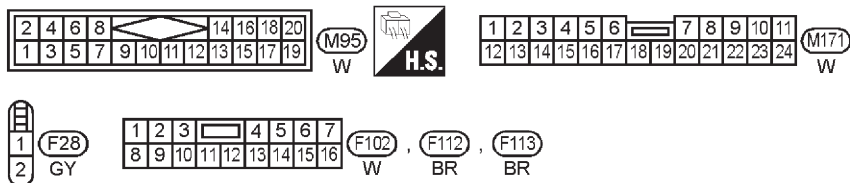
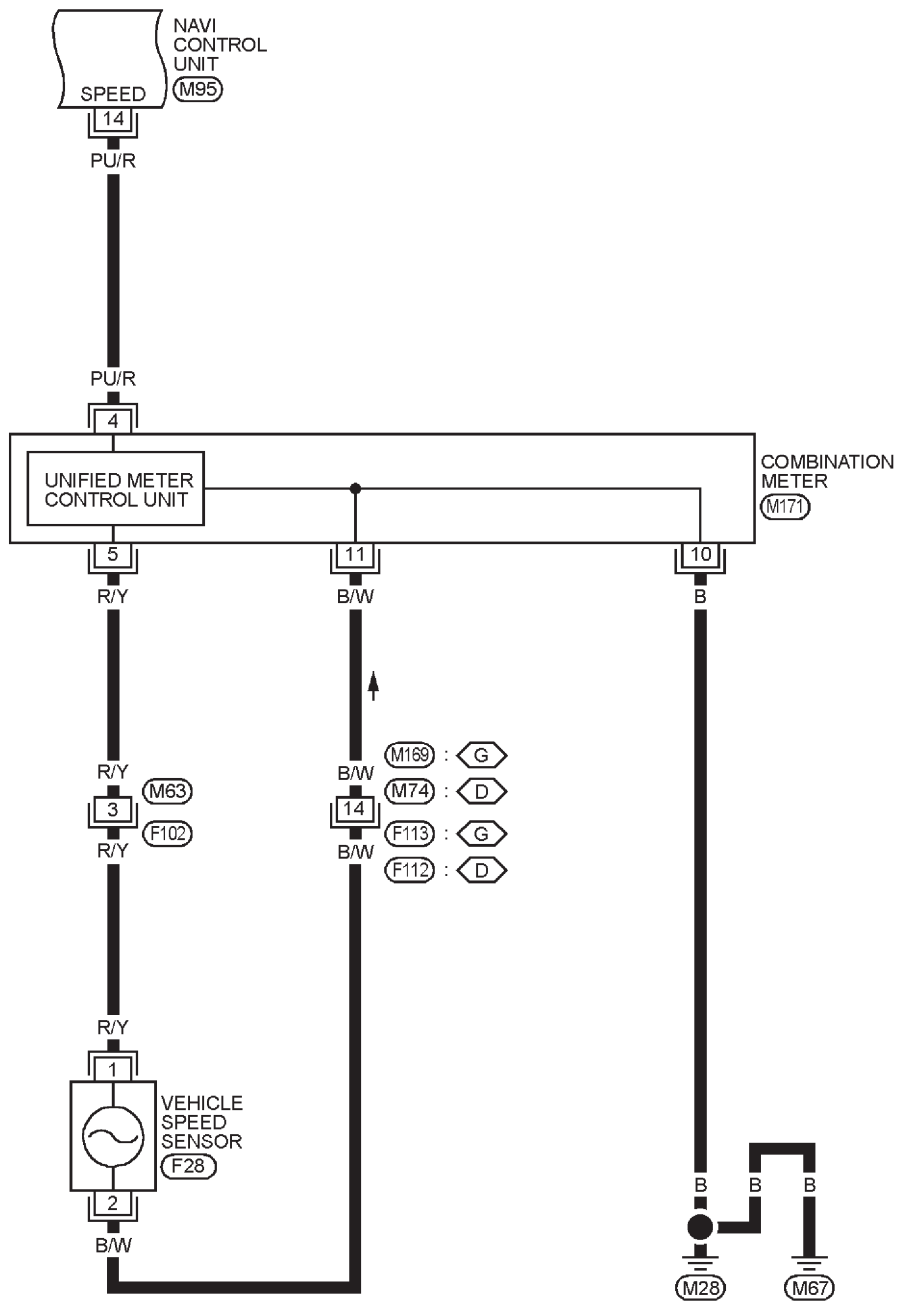
YEL718C

# NAVIGATION SYSTEM

Wiring Diagram — NAVI — (Cont'd)

## EL-NAVI-06

- G : GASOLINE ENGINE
- D : DIESEL ENGINE

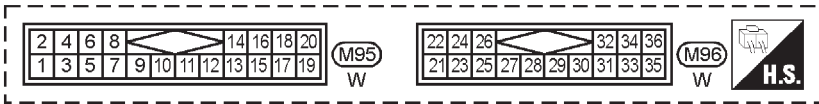
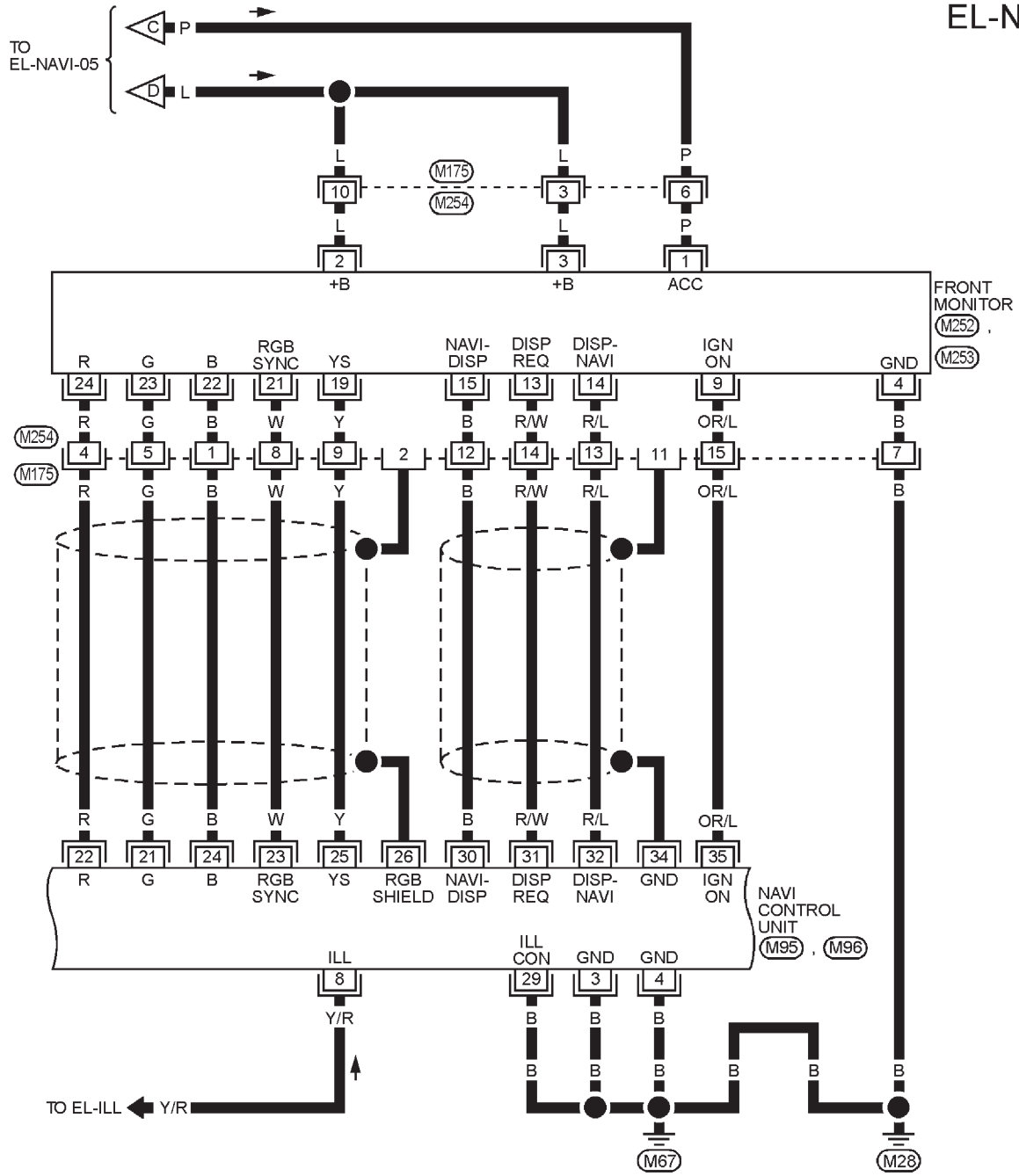


YEL719C

# NAVIGATION SYSTEM

Wiring Diagram — NAVI — (Cont'd)

EL-NAVI-07



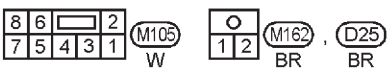
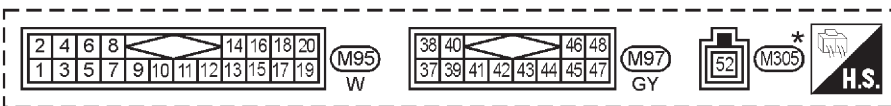
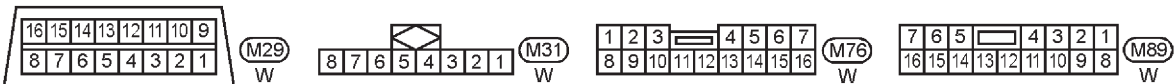
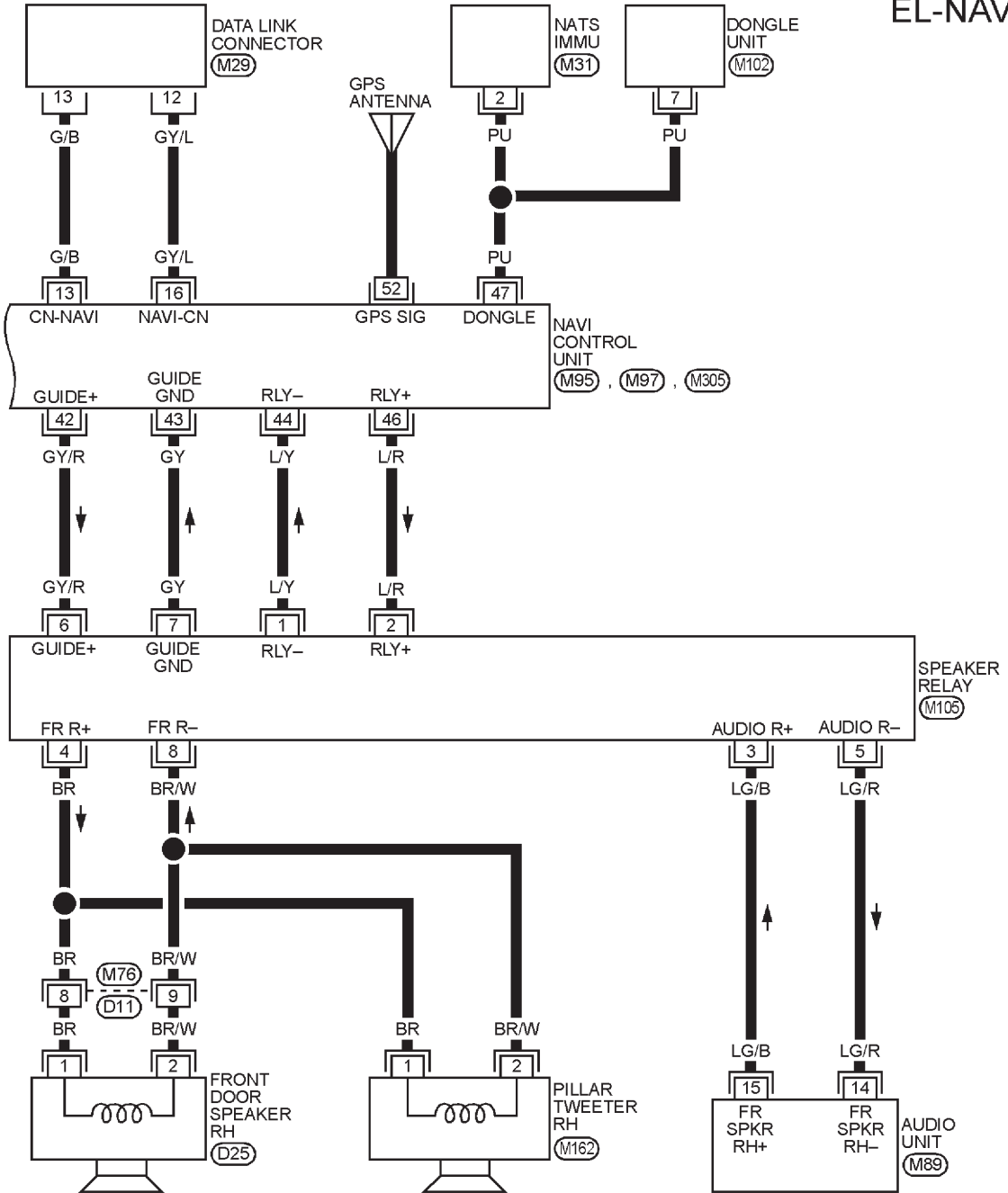
YEL720C



# NAVIGATION SYSTEM

Wiring Diagram — NAVI — (Cont'd)

EL-NAVI-08



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

YEL721C

# NAVIGATION SYSTEM

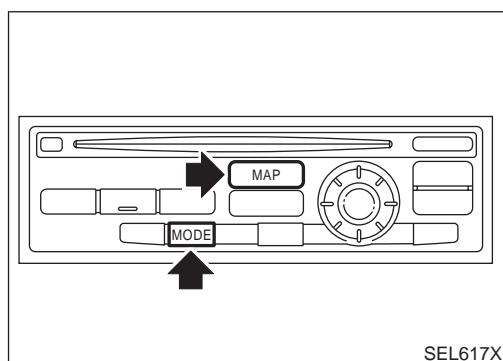
Self-diagnosis Mode

## Self-diagnosis Mode APPLICATION ITEMS

NJEL0519

NJEL0519S01

Mode	Description	Reference page		
Self Diagnosis	Self-diagnosis for Navigation, Display and GPS Antenna connection.	EL-279		
Confirmation/ adjustment	Diagnose the Display	Color and gray gradation of display can be checked in this mode.	EL-287	
	Diagnosis for Signals from the Car	Several input signals to NAVI control unit, can be monitored in this mode.	EL-285	
	Navigation	Check the map CD-ROM version	The version (parts number) of inserted CD-ROM can be checked in this model.	EL-286
		Error history	Diagnosis results previously stored in the memory (before turning ignition switch ON) are displayed in this mode. Time and location when/where the errors occurred are also displayed.	EL-281
		Longitude & Latitude	Display the map. Use the joystick to adjust position. Longitude and latitude will be displayed.	EL-288
		Adjust the Angle	Turning angle of the vehicle on the display can be adjusted in this mode.	EL-289
		Speed Calibration	Under ordinary conditions, the navigation system distance measuring function will automatically compensate for minute decreases in wheel and tire diameter caused by tire wear or low pressure. Speed calibration immediately restores system accuracy in cases such as when distance calibration is needed because of the use of tire chains in inclement weather.	EL-290
Initialize Location	This mode is for initializing the current location. Use when the vehicle is transported a long distance by a trailer, etc.	EL-291		



### HOW TO PERFORM SELF-DIAGNOSIS MODE

NJEL0519S02

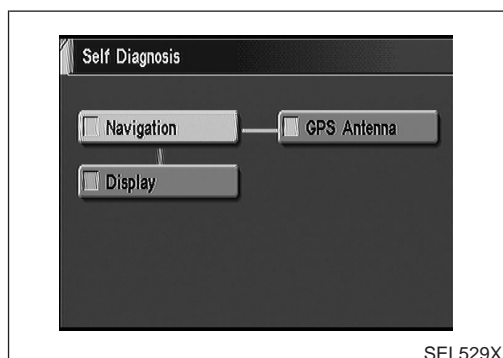
1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both of "MAP" and "MODE" switches at the same time for more than five seconds.
4. Select "Self Diagnosis" or "Confirmation/ adjustment".
  - For further procedure, refer to the following pages which describe each application item of the self-diagnosis mode.



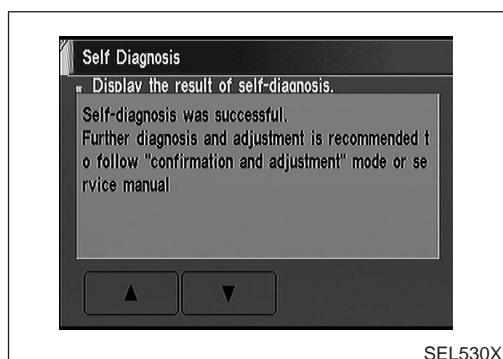
SEL527X



SEL528X



SEL529X



SEL530X

## “Self Diagnosis”

NJEL0519S0201

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both “MAP” and “MODE” switches at the same time for more than 5 seconds.
4. Select “Self Diagnosis”.
5. Self-diagnosis will be performed.
6. Diagnosis results will be displayed. Diagnosis results are indicated by display color. For details refer to EL-280, “SELF-DIAGNOSIS RESULTS”.

To obtain detailed diagnosis results on the screen, touch “Navigation” or “Display” or “GPS Antenna”.

## NAVIGATION SYSTEM

Self-diagnosis Mode (Cont'd)

### SELF-DIAGNOSIS RESULTS

=NJEL0519S03

Diagnosed item	Displayed color	Detailed result	Description	Diagnoses/service procedure <b>Recheck system at each check or replacement (When malfunction is eliminated, further repair work is not required.)</b>
“GPS Antenna” (GPS antenna connection)	Green	—	GPS antenna is connected to NAVI control unit correctly.	—
	Yellow	Connection to the following unit is abnormal. See the Service Manual for further diagnosis.	GPS antenna connection error is detected.	<ol style="list-style-type: none"> <li>1. Check GPS antenna feeder cable connection at NAVI control unit.</li> <li>2. Visually check GPS antenna feeder cable. If NG, replace GPS antenna assembly.</li> <li>3. Replace GPS antenna.</li> </ol>
“Navigation”	Green	—	No failure is detected.	—
	Red	[*** is abnormal.]	NAVI control unit is malfunctioning.	Replace NAVI control unit.
	Gray	Self-diagnosis for CD-ROM DRIVER of NAVI was not conducted due to no insertion of CD-ROM.	Any CD-ROM is not inserted or NAVI control unit is malfunctioning.	<ol style="list-style-type: none"> <li>1. Confirm that map CD-ROM is not inserted into NAVI control unit.</li> <li>2. Replace NAVI control unit.</li> </ol>
	Yellow	CD-ROM or CD-ROM DRIVER of NAVI is abnormal. See the Service Manual for further diagnosis.	NAVI control unit judges that inserted CD-ROM is malfunctioning. Map CD-ROM or CD-ROM driver of the unit is malfunctioning.	<ol style="list-style-type: none"> <li>1. Confirm the disc is installed correctly (not up side down.)</li> <li>2. Perform “Check the Map CD-ROM version MODE” in EL-286 to confirm whether correct CD-ROM is inserted or not.</li> <li>3. Check the disc surface. Are there any scratches, abrasions or pits on the surface?</li> <li>4. Replace the CD-ROM.</li> <li>5. Replace NAVI control unit.</li> </ol>
		CD-ROM is abnormal. Please check the disc.	Inserted map CD-ROM can not be read. Map CD-ROM or CD-ROM driver of the unit is malfunctioning.	
	Connection to the following unit is abnormal. See the Service Manual for further diagnosis.	GPS antenna connection error is detected.	<ol style="list-style-type: none"> <li>1. Check GPS antenna feeder cable connection at NAVI control unit.</li> <li>2. Visually check GPS antenna feeder cable. If NG, replace GPS antenna assembly.</li> <li>3. Replace GPS antenna.</li> </ol>	

**NOTE:**

**Connection between NAVI control unit and display unit should be normal. Therefore, “Display connection error” will not occur when the display can be opened or closed properly.**

## Confirmation/Adjustment Mode

=NJEL0520

### “ERROR HISTORY” MODE

NJEL0520S01

#### Description

NJEL0520S0101

In this mode, historical errors of the system are displayed with the following data.

- How many times the error was detected
- The last time data when the error was detected
- The last place where the error was detected

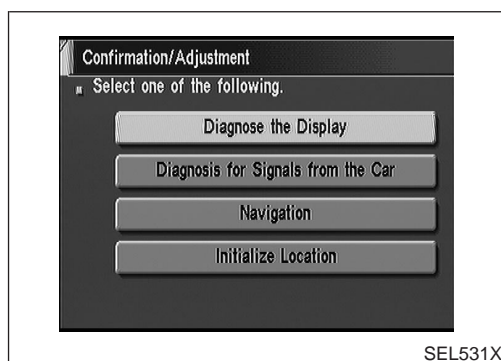
#### NOTE:

- **The number of errors can be counted up to 50 times. More than 51 times will be indicated as 50 times.**
- **Malfunction of the GPS board (inside the NAVI control unit) will result in the display of incorrect time data.**
- **When an error occurs, an incorrect position marker appears on the display. The accuracy of the display data (position marker) will be affected.**

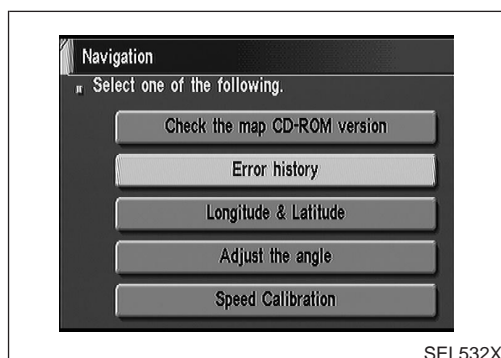
#### How to Perform

NJEL0520S0102

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both “MAP” and “MODE” switch at the same time for more than 5 seconds.
4. Select “Confirmation/ adjustment”.



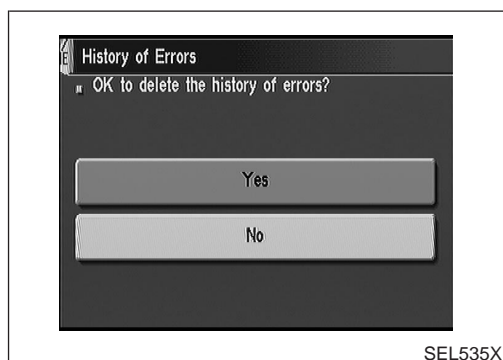
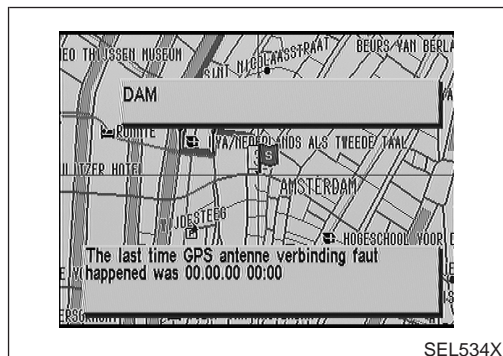
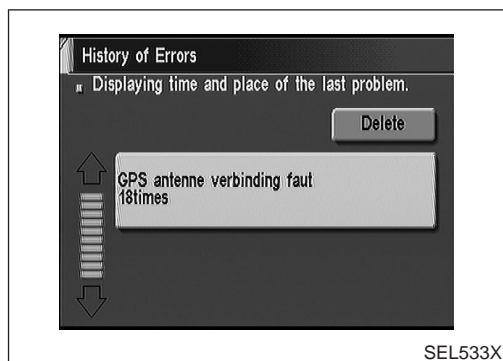
5. Select “Navigation”.



6. Select “Error history”.

## NAVIGATION SYSTEM

### Confirmation/Adjustment Mode (Cont'd)



7. If trouble items are displayed with time count, repair/replace the system according to "Error history" TABLE, EL-283.

8. If necessary, touch error item to display the time when the error was detected and the place where the error was detected.

9. After repairing the system, erase the diagnosis memory.

#### NOTE:

**When the NAVI control unit must be replaced, do not erase the diagnosis memory for further inspection of malfunctions.**

- 1) Start the engine.
- 2) Push both "Map" and "MODE" switches at the same time for more than 5 seconds.
- 3) Select "Confirmation/ adjustment".
- 4) Select "Navigation".
- 5) Select "Error history".
- 6) Select "Delete".
- 7) Select "Yes".

# NAVIGATION SYSTEM

Confirmation/Adjustment Mode (Cont'd)

## “HISTORY OF ERRORS” TABLE

=NJEL0520S02

Detected items	Description	Diagnosis/service procedure	Reference page
Gyro sensor disconnected	Communications malfunction between NAVI control unit and internal gyro	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-278
Connection problem of speed sensor	Input malfunction of NAVI control unit and speed sensor	Check vehicle speed sensor signal in “Diagnosis for signals from the car” mode. If the input signal is not detected correctly, check harness for open or short between combination meter and NAVI control unit.	EL-285
GPS disconnected	Communications malfunction between NAVI control unit and GPS board	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-278
GPS transmission cable malfunction			
GPS input line connection error			
GPS TCXO over	The transmission circuit of the GPS board frequency synchronization oscillator (inside the NAVI control unit) is sending an oscillation frequency that is greater or less than the set value.	A location error occurs. Strong electromagnetic wave interference may have occurred. The GPS antenna may be in a very hot or very cold environment. This is usually a temporary malfunction.	—
GPS TCXO under			
GPS ROM malfunction	Internal malfunction of GPS board RAM or ROM inside the NAVI control unit.	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-278
GPS RAM malfunction			
GPS RTC malfunction	Malfunction of GPS board clock IC inside the NAVI control unit.		
GPS antenna disconnected	—	Perform self-diagnosis to confirm GPS antenna connection. If no failure is detected, a momentary and/or temporary malfunction may have been caused by a strong impact.	EL-278
Low voltage of GPS	Power supply voltage for GPS board inside the NAVI control unit is low.	1. Check power supply circuits for NAVI control unit.	EL-306
		2. Perform self-diagnosis to confirm GPS antenna connection.	EL-278
		3. If above diagnosis results are OK, a momentary and/or temporary malfunction may have been caused by a strong impact.	—
CD-ROM communication error	CD-ROM driver malfunction (inside the NAVI control unit)	Perform self-diagnosis to confirm whether the NAVI control unit is malfunctioning or not. If no failure is detected, a momentary and/or temporary malfunction may have been caused by strong electromagnetic wave interference.	EL-278

## NAVIGATION SYSTEM

Confirmation/Adjustment Mode (Cont'd)

Detected items	Description	Diagnosis/service procedure	Reference page
Loading mechanism malfunction	—	Check that whether the disc can be inserted and ejected correctly. If the loading function does not operate correctly, replace NAVI control unit.	—
CD-ROM reading error	It is confirmed that the appropriate CD-ROM disc is positioned in the CD-ROM loader. However, no data can be read.	Perform self-diagnosis to confirm whether the inserted disc is malfunctioning or not.	EL-278
Malfunctioning of error correction for CD-ROM	Erroneous data is read from the CD-ROM. The errors cannot be corrected.		
CD-ROM focus error	CD-ROM data reading beam is out of focus.	Rough road driving might create CD skipping like music CD audio unit.	—
CD-ROM malfunction	—	Perform self-diagnosis to confirm whether the inserted disc is malfunctioning or not.	EL-278



# NAVIGATION SYSTEM

Confirmation/Adjustment Mode (Cont'd)

## “DIAGNOSIS FOR SIGNALS FROM THE CAR” MODE =NJEL0520S03

### Description

In “Diagnosis for Signals from the Car” mode, following input signals to the NAVI control unit can be checked on the display. NJEL0520S0301

Item	Indication	Vehicle condition
Vehicle Speed*	ON	Vehicle speed is greater than 0 km/h (0 MPH).
	OFF	Vehicle speed is 0 km/h (0 MPH).
Light	ON	Lighting switch is in 1st or 2nd position.
	OFF	Lighting switch is in “OFF” position.
IGN	ON	Ignition switch is in “ON” position.
	OFF	Ignition switch is in “ACC” position.
Reverse*	ON	Selector/shift lever is in “Reverse” position.
	OFF	Selector/shift lever is in other than “Reverse” position.

\*: When ignition switch is in “ACC” position, indication will be changed to “-”.

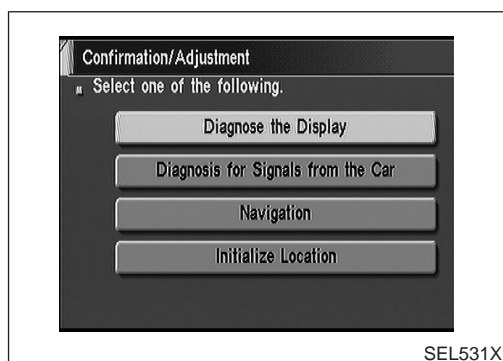
### How to Perform

NJEL0520S0302

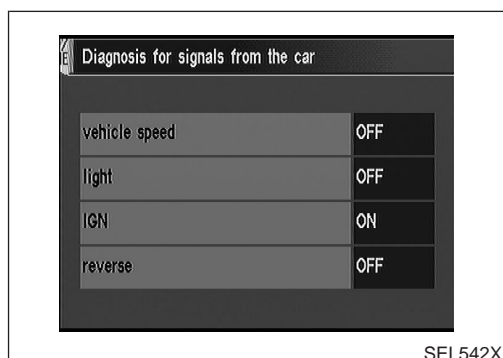
1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both “MAP” and “MODE” switches at the same time for more than 5 seconds.
4. Select “Confirmation/ adjustment”.



SEL527X



SEL531X

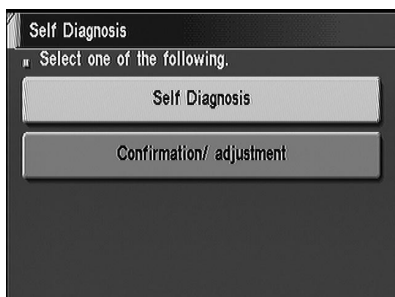


SEL542X

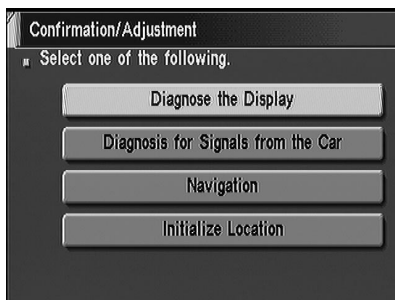
5. Select “Diagnosis for Signals from the Car”.
6. Then “Diagnosis for Signals from the Car” mode is performed.

## NAVIGATION SYSTEM

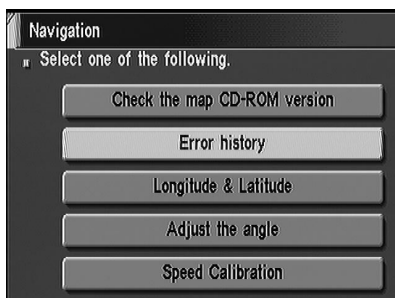
### Confirmation/Adjustment Mode (Cont'd)



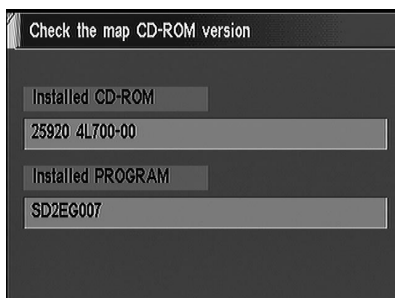
SEL527X



SEL531X



SEL532X



SEL536X

### "CHECK THE MAP CD-ROM VERSION" MODE

=NJEL0520S04

#### How to Perform

NJEL0520S0401

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push both "MAP" and "MODE" switches at the same time for more than 5 seconds.
4. Select "Confirmation/ adjustment".
5. Select "Navigation".
6. Select "Check the map CD-ROM version".
7. The version (parts number) of CD-ROM loaded to the NAVI control unit will be displayed.

## “DIAGNOSE THE DISPLAY” MODE

=NJEL0520S05

### Description

NJEL0520S0501

Use the “Diagnose the Display” mode to check the display color brightness and shading. The NAVI control unit must be replaced if the color brightness and shading are abnormal.

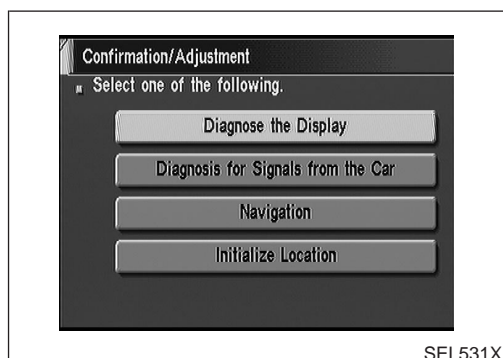
### How to Perform

NJEL0520S0502

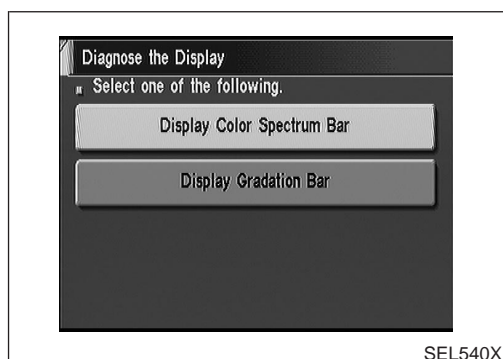
1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both “MAP” and “MODE” switches at the same time for more than 5 seconds.
4. Select “Confirmation/ adjustment”.
5. Select “Diagnose the Display”.
6. Select “Display color spectrum bar” or “Display gradation bar”.
7. Then color bar/gray scale will be displayed.



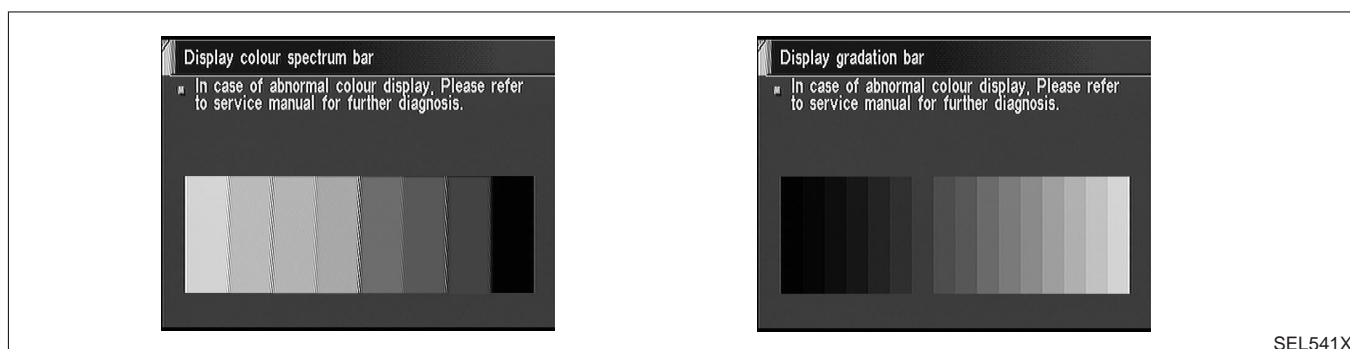
SEL527X



SEL531X



SEL540X



SEL541X

# NAVIGATION SYSTEM

Confirmation/Adjustment Mode (Cont'd)

## “LONGITUDE & LATITUDE” MODE

NJEL0520S06

### Description

NJEL0520S0601

The “Longitude & Latitude” is used to confirm the longitude and latitude of some optional area point.

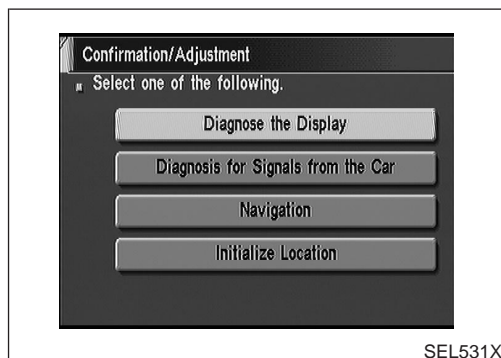
### How to Perform

NJEL0520S0602

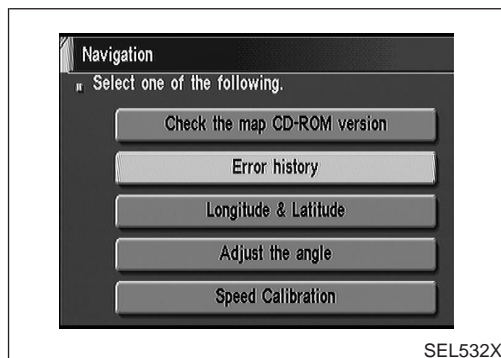
1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both “MAP” and “MODE” switches at the same time for more than 5 seconds.
4. Select “Confirmation/ adjustment”.
5. Select “Navigation”.
6. Select “Longitude & Latitude”.
7. Adjust the pointer with using the joystick and touch “Set”.
8. The longitude and latitude are displayed.



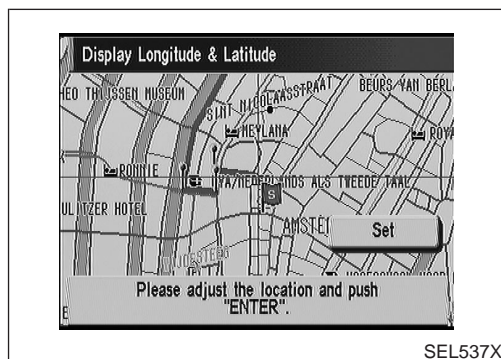
SEL527X



SEL531X



SEL532X



SEL537X

## “ADJUST THE ANGLE” MODE

NJEL0520S07

### Description

NJEL0520S0701

If the display indicates a larger or smaller turning angle than the actual turning angle, the gyro (angular speed sensor) sensing values must be checked.

In case that the vehicle on the display makes larger angle turn than reality, touch “-”. In case that the vehicle on the display makes smaller angle turn than reality, touch “+”.

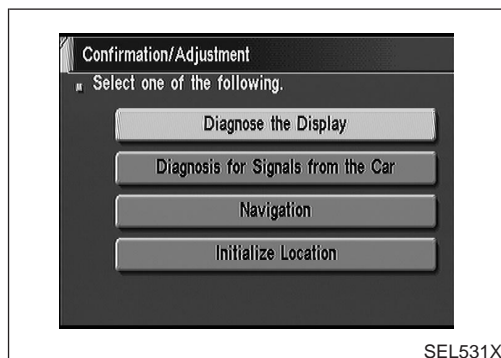
### How to Perform

NJEL0520S0702

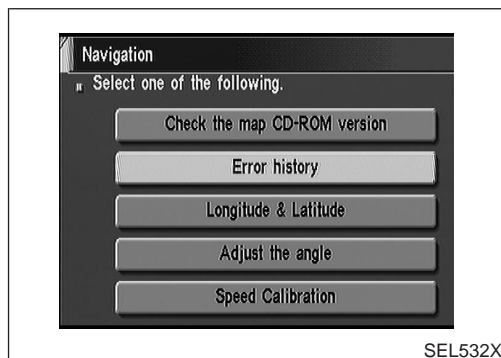
1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both “MAP” and “MODE” switches at the same time for more than 5 seconds.
4. Select “Confirmation/ adjustment”.
5. Select “Navigation”.
6. Select “Adjust the angle”.
7. Select “Left Turn” to adjust the angle to the left. Touch “Right Turn” to adjust the angle to the right.
8. Select “+” to increase the angle change coefficient or “-” to reduce the angle change coefficient.
9. Select “Set” to save the changed values in memory.
10. Then the vehicle turning angle on the display has adjusted.



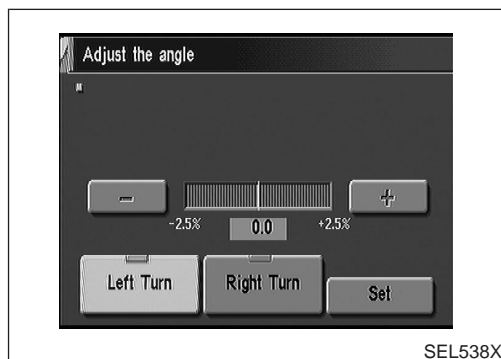
SEL527X



SEL531X



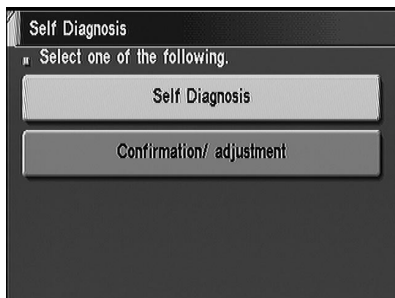
SEL532X



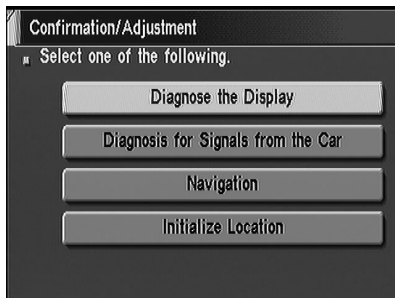
SEL538X

# NAVIGATION SYSTEM

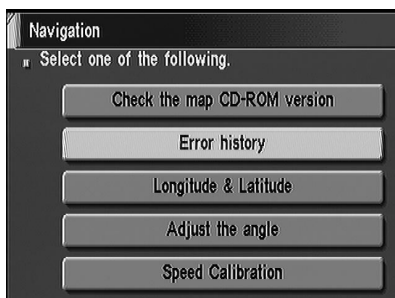
## Confirmation/Adjustment Mode (Cont'd)



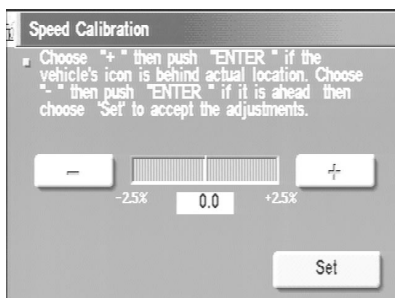
SEL527X



SEL531X



SEL532X



SEL539X

## “SPEED CALIBRATION” MODE

NJEL0520S08

### How to Perform

NJEL0520S0801

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push both “MAP” and “MODE” switches at the same time for more than 5 seconds.
4. Select “Confirmation/ adjustment”.
5. Select “Navigation”.
6. Touch “Speed Calibration”.
7. Touch “+” or “-” to adjust the distance change coefficient.
  - To make the distance change coefficient smaller, touch “-”.
  - To make the distance change coefficient larger, touch “+”.
8. Select “Set”.

## “INITIALIZE LOCATION” MODE

=NJEL0520S09

This procedure is for initializing the current location. Perform “Initialize Location” when the vehicle has been transported a long distance by trailer, etc.

Map with grey background appears and the vehicle location cannot be adjusted by scrolling the display when the vehicle location in the memory is out of the area of the inserted map data.

Perform “Initialize Location” when this occurs.

### NOTE:

- Only initialize the system when the NAVI control unit is replaced. If the system is initialized in other cases, it may cause inaccurate positioning of the position marker for a while.
- Initialize the system outside for receiving the radio wave from the GPS satellite.

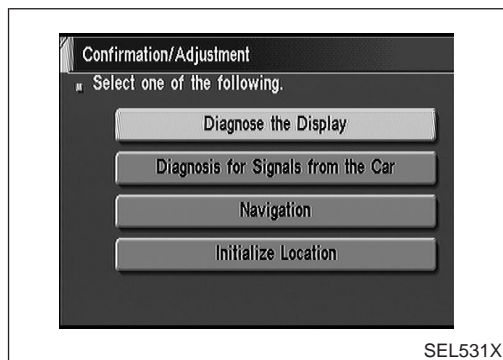
### How to Perform

NJEL0520S0901

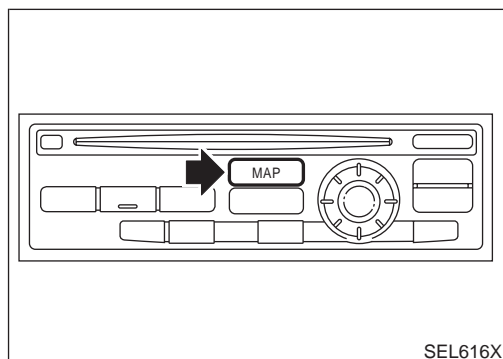
1. Switch the navigation system mode to self-diagnosis by pushing both “MAP” and “MODE” switches at the same time for more than 5 seconds.



2. Select “Confirmation/ adjustment”.



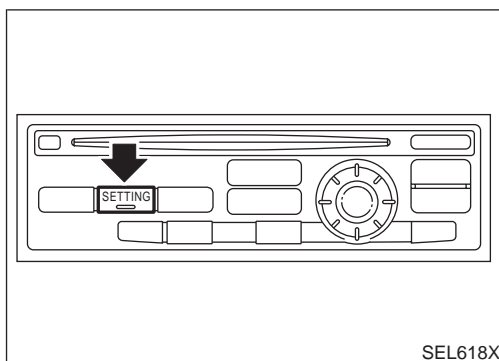
3. Select “Initialize Location”. Then the previous screen is displayed.



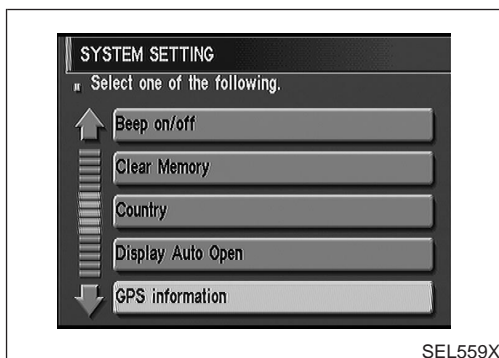
4. Push “MAP” switch.

## NAVIGATION SYSTEM

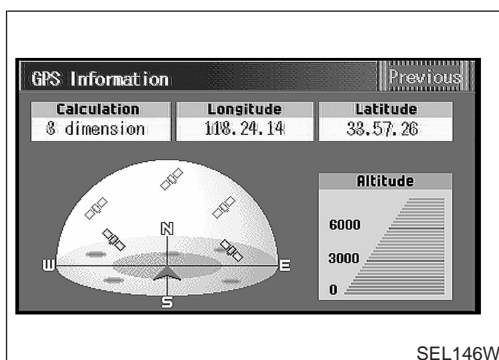
Confirmation/Adjustment Mode (Cont'd)



5. Push "SETTING" switch.
6. Select "System Setting".



7. Select "GPS Information".



8. More than one GPS satellite icon turns green. (It may take 1 to 15 minutes.)

### NOTE:

Drive the vehicle for a while\* in order to change the receiving condition of the radio wave from the GPS satellite if the GPS icon does not turn green.

\* The driving distance which is necessary depends on the receiving condition of the radio wave from the GPS satellite.

9. Push "MAP" switch and check the following.
  - Confirm that the GPS icon on the map turns green.
  - Then the position marker should show the current location.
  - Position marker rotates corresponding to the movement of the vehicle.
10. Initialization is completed.



# NAVIGATION SYSTEM

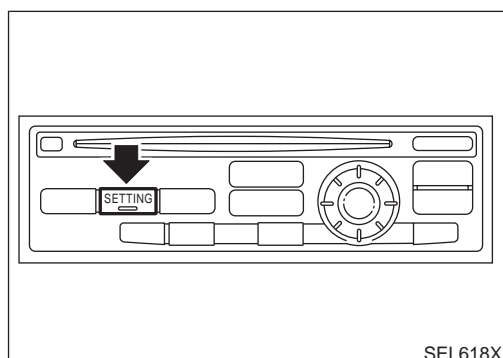
Control Panel Mode

## Control Panel Mode APPLICATION ITEMS

=NJEL0521

NJEL0521S01

Mode	Description	Reference page
Display Auto Open	Display can be set to open by either of the following controls. <ul style="list-style-type: none"> <li>● Display will be opened when OPEN/CLOSE SW is selected with Key SW positioned ACC.</li> <li>● Display will be automatically opened when Key SW is turned from OFF to ACC.</li> </ul>	EL-294
GPS Information	The GPS data includes longitude, latitude and altitude (distance above sea level) of the present vehicle position, and current date and time for the area in which the vehicle is being driven. Also indicated are the GPS reception conditions and the GPS satellite position.	EL-294
Language	Language can be selected for the display and voice guidance. Use the program CD-ROM disk to change the language.	EL-295
Quick Stop Customer Setting	One facility of your selection can be added to your Quick Stop.	EL-295
Route Priorities	Priorities of search request and automatic re-searching can be set for route search.	EL-295
Tracking	Tracking to the present vehicle position can be displayed.	EL-296
Display Setting	The following display settings can be customized. <ul style="list-style-type: none"> <li>● Display color (Day mode or Night mode)</li> <li>● Brightness of display</li> </ul>	EL-296
Heading	Heading of the map display can be customized for either north heading or the actual driving direction of the vehicle.	EL-297
Nearby Display Icons	Icons of facilities can be displayed. Facilities to be displayed can be selected from the variety selections.	EL-297
Adjust Current Location	Current location of position marker can be adjusted. Direction of position marker also can be calibrated when heading direction of the vehicle on the display is not matched with the actual direction.	EL-298
Avoid Area Setting	A particular area can be avoided when routing.	—
Beep On/Off	Beep sounds which corresponds to the system operation can be activated/deactivated.	EL-298
Clear Memory	Address book, Previous destination or Avoid area can be deleted.	EL-299
Country	When two or more countries are included in one CD-ROM disk, the destination can be selected from the country name.	EL-299



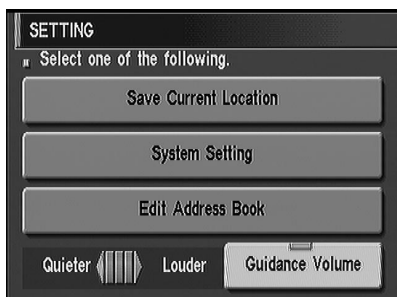
### HOW TO PERFORM CONTROL PANEL MODE

NJEL0521S02

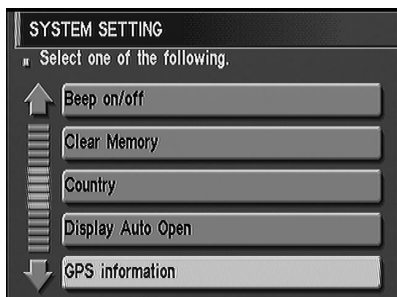
1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
  - For further procedures, refer to the following pages which describe each application item of the control panel mode.

## NAVIGATION SYSTEM

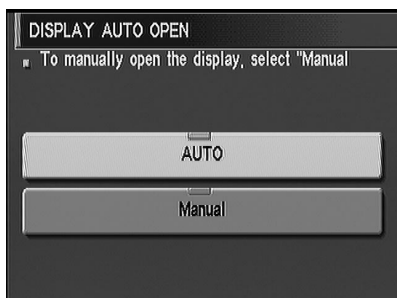
Control Panel Mode (Cont'd)



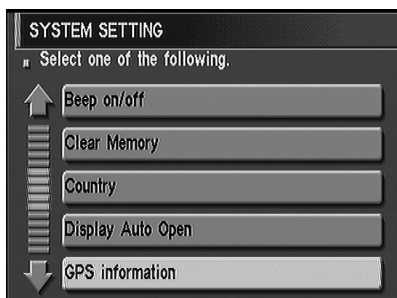
SEL619X



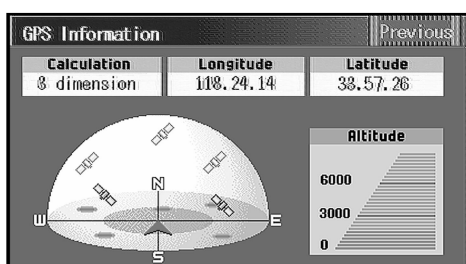
SEL620X



SEL621X



SEL559X



SEL146W

### “DISPLAY AUTO OPEN” MODE

NJEL0521S03

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Select “System Setting”.

5. Select “Display Auto Open”.

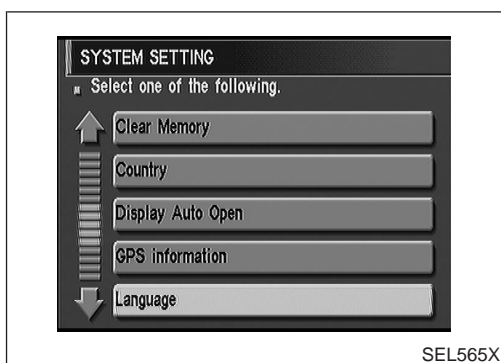
6. Select “Auto” or “Manual” icon.
  - To manually open the display, select “Manual”.
  - To automatically open the display, select “Auto”.
7. Push “MAP” switch, then the display will go back to the current location map.

### “GPS INFORMATION” MODE

NJEL0521S04

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Select “System Setting”.
5. Select “GPS information”.

6. Then GPS information will be displayed.



SEL565X

## “LANGUAGE” MODE

=NJEL0521S05

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Select “System Setting”.
5. Select “Language”.

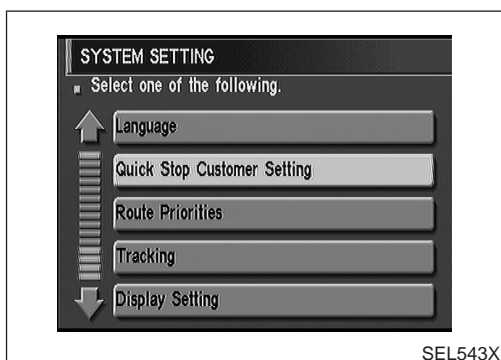


SEL566X

6. Select “English” or “German” icon.
  - When display indicates English, select “English”.
  - When display indicates German, select “German”.
7. Push “MAP” switch, then the display will go back to the current location map.

### NOTE:

Use the program CD-ROM disk to change the language.



SEL543X

## “QUICK STOP CUSTOMER SETTING” MODE

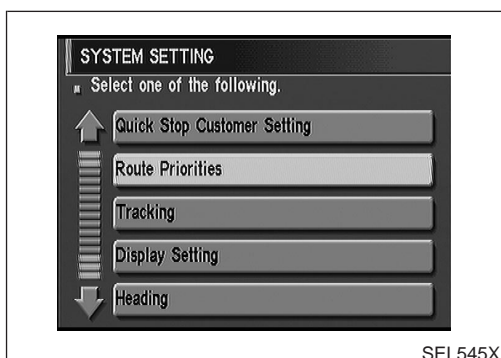
NJEL0521S06

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Select “System Setting”.
5. Select “Quick Stop Customer Setting”.



SEL544X

6. Select an item from the list.



SEL545X

## “ROUTE PRIORITIES” MODE

NJEL0521S07

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Select “System Setting”.
5. Select “Route Priorities”.

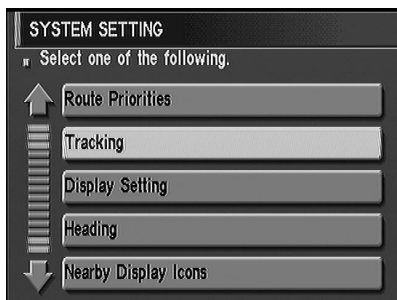
## NAVIGATION SYSTEM

### Control Panel Mode (Cont'd)



SEL546X

6. Select an item from the list.

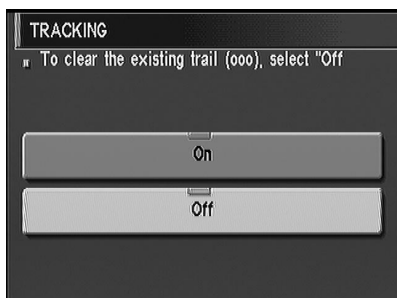


SEL547X

### “TRACKING” MODE

NJEL0521S08

1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Select “System Setting”.
5. Select “Tracking”.

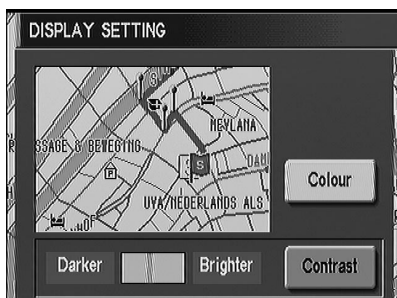


SEL548X

6. Select “On” or “Off” icon.
  - To leave no trail on the map, select “Off”.
  - To leave a trail in the map, select “On”.
7. Push “MAP” switch, then the display will go back to the current location map.

#### NOTE:

**When a trail display is turned OFF, trail data is erased from the memory.**



SEL560X

### “DISPLAY SETTING” MODE

NJEL0521S09

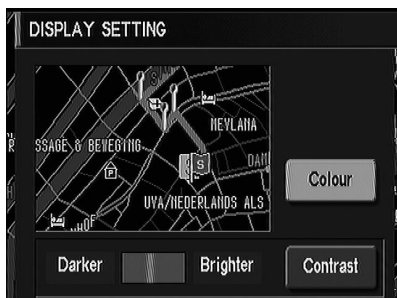
#### Display Color Setting

NJEL0521S0901

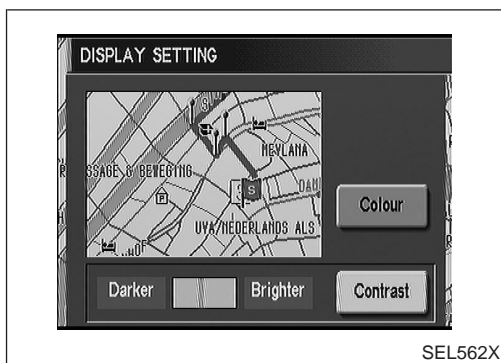
1. Start the engine.
2. Push “OPEN/CLOSE” switch and then open the display.
3. Push “SETTING” switch.
4. Select “System Setting”.
5. Select “Color”. Display color will change to Day mode/Night mode.
6. Select “MAP” switch, then the display will go back to the current location map.

#### NOTE:

- Display color can be changed independently when lighting switch is turned on and off.
- Initial setting of the color is as follows:  
 When lighting switch is turned off: Day mode  
 When lighting switch is turned on: Night mode  
 Day mode: White background  
 Night mode: Black background



SEL561X



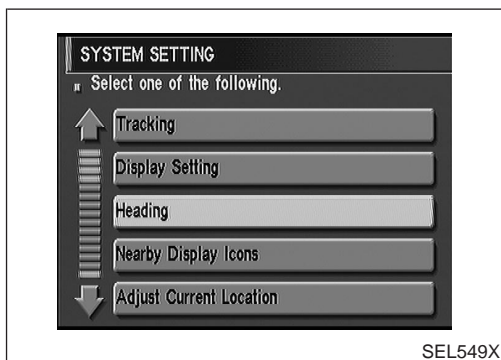
## Brightness Setting

NJEL0521S0902

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Bright" or "Dark" to adjust the brightness of display.
6. Select "MAP" switch, then the display will go back to the current location map.

### NOTE:

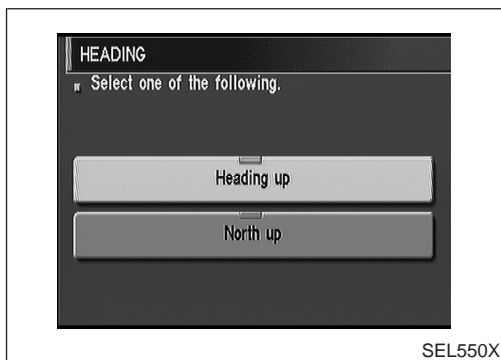
**Display brightness can be adjusted independently when lighting switch is turned on and off.**



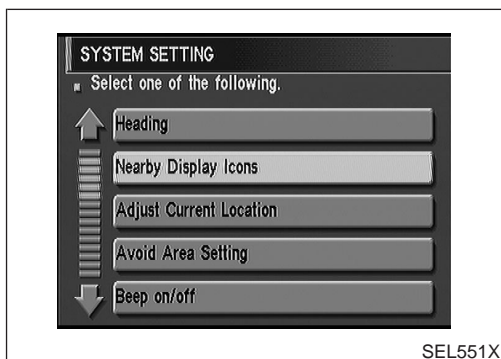
## "HEADING" MODE

NJEL0521S10

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Heading".



6. Select "Heading up" or "North up" icon.
  - To display North up, select "North up".
  - To display the car heading up, select "Heading up".
7. Push "MAP" switch, then the display will go back to the current location map.



## "NEARBY DISPLAY ICONS" MODE

NJEL0521S11

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Nearby Display Icons".



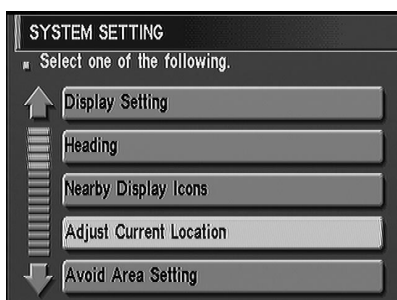
## NAVIGATION SYSTEM

### Control Panel Mode (Cont'd)



SEL552X

6. Select and touch an item on the list.
7. Push "MAP" switch, then the display will go back to the current location map.

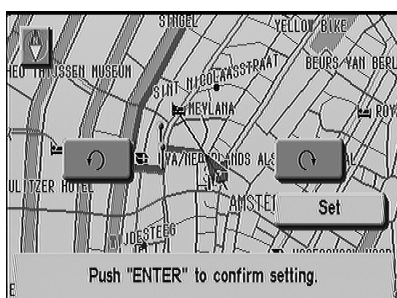


SEL553X

### "ADJUST CURRENT LOCATION" MODE

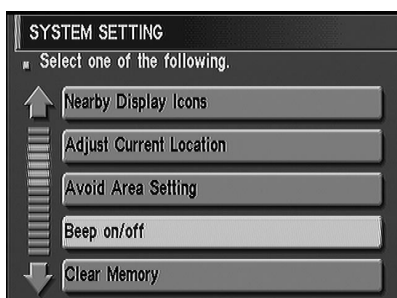
NJEL0521S12

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Select "Adjust Current Location".



SEL554X

6. Select "↶" or "↷" to calibrate the heading direction. (Arrow marks will rotate corresponding to the calibration key.)
7. Select "Set". Then the vehicle mark will be matched to the arrow mark.
8. Display will show "Heading direction has been calibrated" and then go back to the current location map.

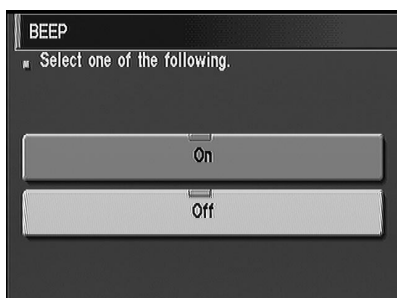


SEL555X

### "BEEP ON/OFF" MODE

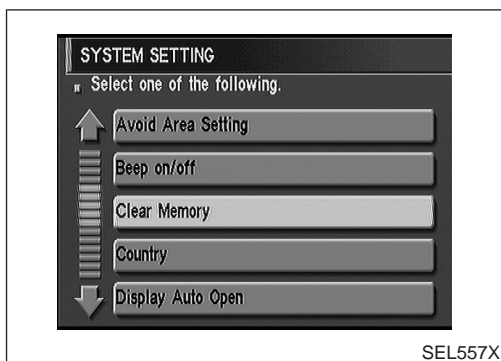
NJEL0521S13

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open display.
3. Push "SETTING" switch.
4. Select "System Setting".
5. Touch "Beep On/Off".

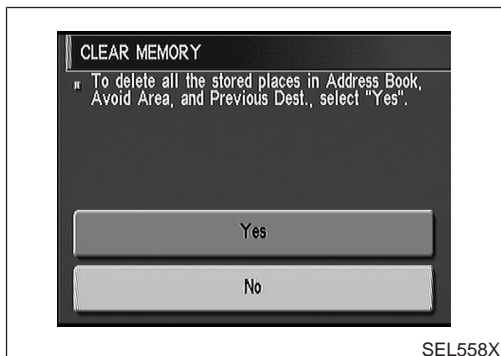


SEL556X

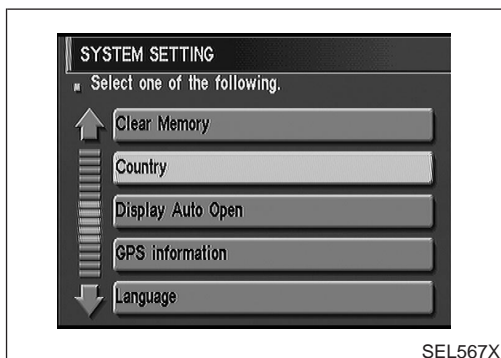
6. Select "On" or "Off" icon.
  - If you want the beep sound, select "On".
  - If you do not want the beep sound, select "Off".
7. Push "PREVIOUS" switch, then the display will go back to the current location map.



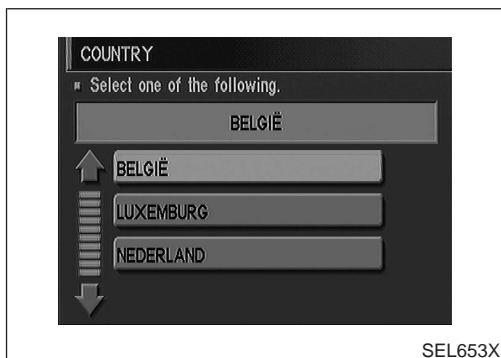
SEL557X



SEL558X



SEL567X



SEL653X

## “CLEAR MEMORY” MODE

=NJEL0521S14

1. Start the engine.
  2. Push “OPEN/CLOSE” switch and then open the display.
  3. Push “SETTING” switch.
  4. Select “System Setting”.
  5. Select “Clear Memory”.
- 
6. To delete all the stored places in “Address Book”, “Avoid Area” and “Previous Dest”, select “Yes”.

## “COUNTRY” MODE

NJEL0521S15

1. Start the engine.
  2. Push “OPEN/CLOSE” switch and then open the display.
  3. Push “SETTING” switch.
  4. Select “System Setting”.
  5. Select “Country”.
- 
6. Select and touch an item on the list.

# NAVIGATION SYSTEM

## Guide Volume Setting

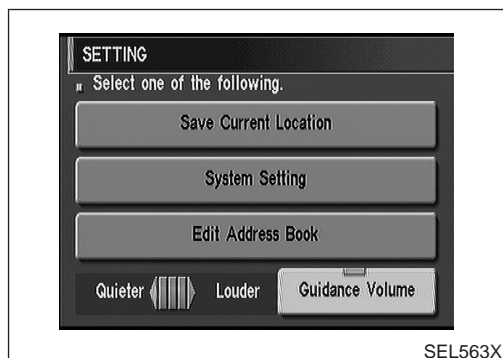
=NJEL0522

### DESCRIPTION

NJEL0522S01

Following voice guidance setting can be changed.

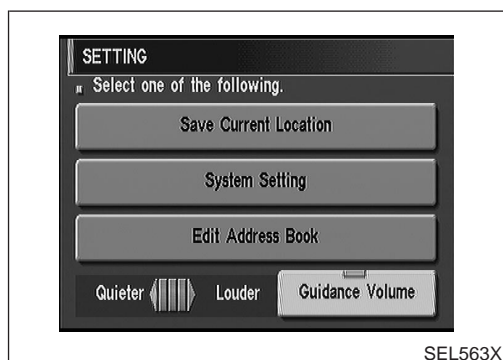
- Voice guidance activation/deactivation
- Voice volume of the guidance



### ACTIVATION/DEACTIVATION SETTING

NJEL0522S02

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. The voice prompt can be turned on/off by pressing the "Guidance Volume" button.



### VOICE VOLUME SETTING

NJEL0522S03

1. Start the engine.
2. Push "OPEN/CLOSE" switch and then open the display.
3. Push "SETTING" switch.
4. Volume of the voice can be controlled by bending the joystick to left/right.



---

## Anti-theft System

### DESCRIPTION

=NJEL0523

The 4-digit PIN must be entered when the display shows "enter your PIN" at the time the vehicle is purchased.

NJEL0523S03

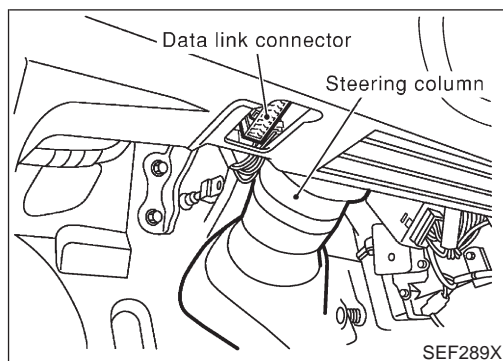
### RHD Models

NJEL0523S0301

By integrating the Navigation System in the vehicle's interior and linking it to the vehicle's immobilizer system, the possibility of the Navigation unit being stolen is effectively reduced. Each time the Navigation System is switched on, the Navigation System will start up communication with the vehicle's immobilizer control unit (IMMU) and verify an identification code. If communication cannot be established, or the verified code is incorrect, the Navigation System will lock up showing "ANTI-THEFT FUNCTION" on the Navigation display.

# NAVIGATION SYSTEM

CONSULT-II

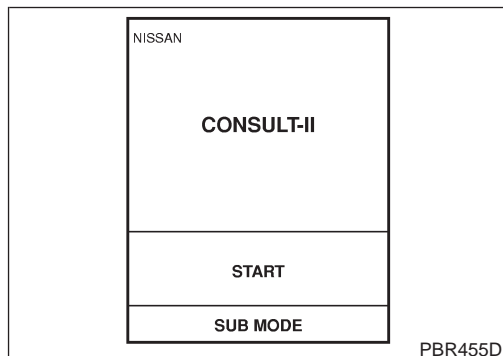


## CONSULT-II CONSULT-II INSPECTION PROCEDURE

=NJEL0524

NJEL0524S01

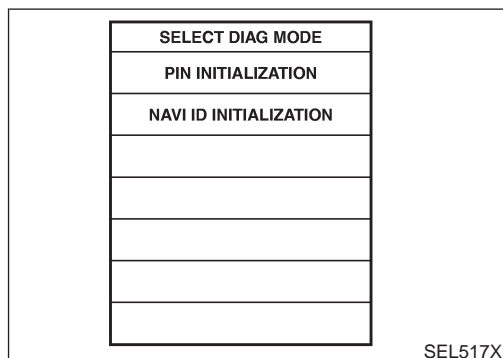
1. Turn ignition switch OFF.
2. Connect CONSULT-II to data link connector.



3. Insert NATS program card into CONSULT-II.

← : Program card  
NATS-AEN00B

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, NATS.**

## CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

NJEL0524S02

CONSULT-II DIAGNOSTIC TEST MODE	Description
PIN INITIALIZATION	Navigation system will be locked when the vehicle's owner enters the wrong PIN five consecutive times. To release the lock, use "PIN INITIALIZATION".
NAVI ID INITIALIZATION	In normal times regulation codes are being communicated between Navigation Control Unit and Dongle Control Unit. Use "NAVI ID INITIALIZATION" to match the codes when either one has been replaced due to breakdown or etc.

**NOTE:**

**When any initialization is performed, all NAVI ID and PIN previously registered will be erased and then must be registered again.**

# NAVIGATION SYSTEM

Trouble Diagnoses

## Trouble Diagnoses SYMPTOM CHART

=NJEL0525

NJEL0525S01

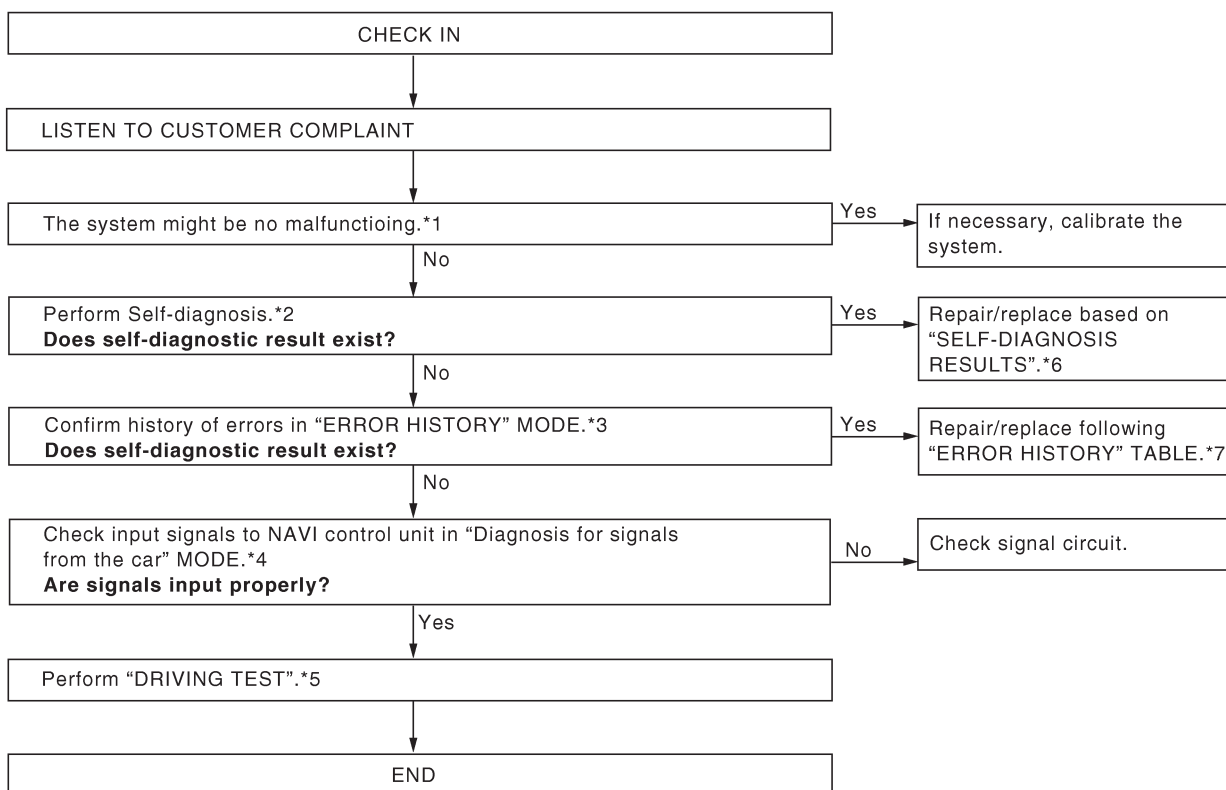
Symptom	Diagnoses/service procedure	Reference page
Any function of the system does not operate.	Check power supply and ground circuit for NAVI control unit.	EL-306
Strange screen color or unusual screen brightness.	1. Check "Display Setting" MODE.	EL-296
	2. Check display in "Diagnose the Display" MODE.	EL-287
The display is not dimmed when turning lighting switch to ON.	1. Check "Display Setting" MODE.	EL-296
	2. Check lighting switch signal input to NAVI control unit correctly in "Diagnosis for the signals from the car" MODE.	EL-285
No navigation guide voice are heard from front driver side speaker.	1. Check "Guide Volume Setting".	EL-300
	2. Check speaker relay.	EL-307
Beep does not sound when the system guides route.	Check "Beep On/Off" MODE.	EL-298
Position marker does not trace along the route being traveled.	Go to "WORK FLOW FOR NAVIGATION INSPECTION".	EL-304
Position marker does not indicate forward or backward movement.	Check reverse signal input to NAVI control unit correctly by "Diagnosis for the signals from the car" MODE.	EL-285
Radio wave of GPS cannot be received. (GPS marker on the display does not become green color.)	1. Is there anything obstructing the GPS antenna on the rear parcel finisher? (GPS antenna located under the rear parcel finisher.)	—
	2. Check GPS radio wave receive condition in "GPS Information MODE".	EL-294
	3. Check GPS antenna in "Self Diagnosis" MODE.	EL-279
Heading direction of position marker does not match vehicle direction.	1. Perform "Adjust Current Location" MODE.	EL-298
	2. Go to "WORK FLOW FOR NAVIGATION INSPECTION".	EL-304
Stored location in the address book and other memory functions are lost when battery is disconnected or becomes discharged.	Stored location in the address book and other memory functions may be lost if the battery is disconnected or becomes discharged. If this should occur, charge or replace the battery as necessary and re-enter the information.	—
Map appears grey and cannot be scrolled.	The current location in the memory is out of the map data area. Perform "Initialize Location".	EL-291

# NAVIGATION SYSTEM

Trouble Diagnoses (Cont'd)

## WORK FLOW FOR NAVIGATION INSPECTION

=NJEL0525S02



SEL519X

\*1: EL-309

\*2: EL-278

\*3: EL-281

\*4: EL-285

\*5: EL-305

\*6: EL-280

\*7: EL-283

## DRIVING TEST

During the driving test, diagnose the system by checking the difference of symptoms with each sensor ON or OFF. =NJEL0525S03

### Test Pattern 1

Test method in which current position adjustment is not made according to GPS data. NJEL0525S0301

- Remove the GPS antenna connector from the NAVI control unit. Drive the vehicle.  
Before driving the vehicle, perform "Adjust Current Location" MODE (EL-298).

### Test Pattern 2

Test procedure in which map matching is not used. NJEL0525S0302

- Before driving the vehicle, perform "Adjust Current Location" MODE (EL-298). With the ignition switch OFF and the map CD-ROM removed from the NAVI control unit, drive the vehicle. After driving the vehicle, reinstall the map CD-ROM. Compare the saved driving tracks for the vehicle's current location with roads on the map.

### Example

<The position marker consistently indicates the wrong position when driving in the same area. Determine if this is the result of the map matching function or the GPS function.> NJEL0525S0303

→ Perform test pattern 1.

<To verify the accuracy of the road configuration shown on the display>

→ Perform test patterns 1 and 2.

- Compare the map and the saved driving tracks. The precision of the saved driving tracks is within several hundred meters.

<To make distance calibration and adjustments>

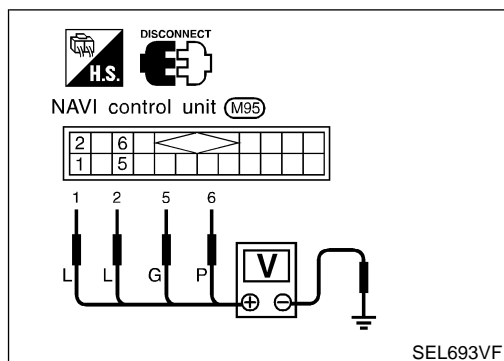
→ Perform test patterns 1 and 2.

- Make adjustments by driving the vehicle over a known course (highway or other road where distances are clearly marked). Calibrate the distance against the known distance. Use the formula below.

Calibration value = Screen display distance/Actual distance

## NAVIGATION SYSTEM

Trouble Diagnoses (Cont'd)



### POWER SUPPLY AND GROUND CIRCUIT CHECK FOR NAVI CONTROL UNIT

=NJEL0525S04

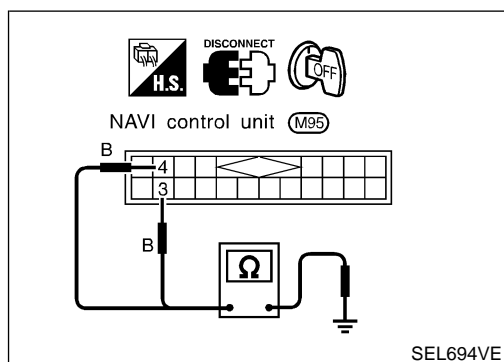
#### Power Supply Circuit Check

NJEL0525S0401

Terminal		Ignition switch		
(+)	(-)	OFF	ACC	ON
1	Ground	Battery voltage	Battery voltage	Battery voltage
2	Ground	Battery voltage	Battery voltage	Battery voltage
5	Ground	0V	0V	Battery voltage
6	Ground	0V	Battery voltage	Battery voltage

If NG, check the following.

- 10A fuse [No. 1, located in the fuse block (J/B)]
- 10A fuse [No. 10, located in the fuse block (J/B)]
- 15A fuse [No. 32, located in the fuse block (J/B)]
- Harness for open or short between fuse and NAVI control unit



#### Ground Circuit Check

NJEL0525S0402

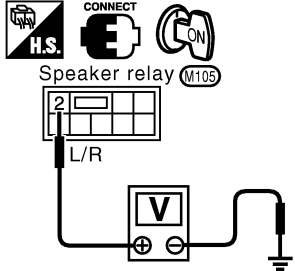
Terminals	Continuity
3 - Ground	Yes
4 - Ground	Yes

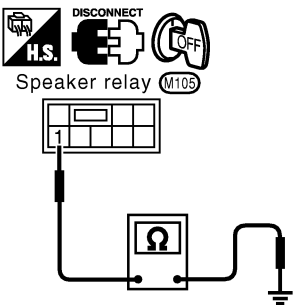
# NAVIGATION SYSTEM

Trouble Diagnoses (Cont'd)

## SPEAKER RELAY CHECK



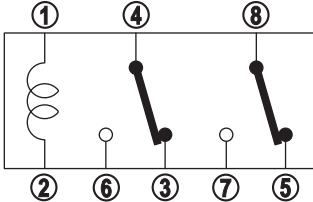
=NJEL0525S05

<b>1</b>	<b>CHECK RELAY ON SIGNAL</b>	
<p>1. Push "VOICE" button. 2. Check voltage between speaker relay terminal 2 and ground.</p>		
		
SEL622XA		
<b>OK or NG</b>		
OK	▶	GO TO 2.
NG	▶	Check harness for open or short between NAVI control unit terminal 46 and speaker relay terminal 2.

<b>2</b>	<b>CHECK GROUND CIRCUIT FOR SPEAKER RELAY</b>	
<p>1. Disconnect speaker relay. 2. Check continuity between speaker relay terminal 1 and ground.</p>		
		
SEL623XA		
<b>Does continuity exist?</b>		
<b>OK or NG</b>		
OK	▶	GO TO 3.
NG	▶	Repair harness.

## NAVIGATION SYSTEM

Trouble Diagnoses (Cont'd)

3	<b>CHECK SPEAKER RELAY</b>																											
<p>Check continuity speaker relay terminals in the condition below.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">       <p>Speaker relay</p> </div> <div style="text-align: center;">  </div> <div style="border: 1px solid black; padding: 5px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2" style="padding: 2px;">Condition</th> <th colspan="6" style="padding: 2px;">Terminal</th> </tr> <tr> <th style="padding: 2px;">③</th> <th style="padding: 2px;">④</th> <th style="padding: 2px;">⑤</th> <th style="padding: 2px;">⑥</th> <th style="padding: 2px;">⑦</th> <th style="padding: 2px;">⑧</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px; text-align: left;">5V direct current applied between terminal ① and ②</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">○—○</td> </tr> <tr> <td style="padding: 2px; text-align: left;">Other than above</td> <td style="text-align: center;">○—○</td> <td></td> <td style="text-align: center;">○—○</td> <td></td> <td></td> <td style="text-align: center;">○—○</td> </tr> </tbody> </table> </div> </div>		Condition	Terminal						③	④	⑤	⑥	⑦	⑧	5V direct current applied between terminal ① and ②						○—○	Other than above	○—○		○—○			○—○
Condition	Terminal																											
	③	④	⑤	⑥	⑦	⑧																						
5V direct current applied between terminal ① and ②						○—○																						
Other than above	○—○		○—○			○—○																						
SEL624X																												
<b>OK or NG</b>																												
OK	▶ GO TO 4.																											
NG	▶ Replace speaker relay.																											

4	<b>CHECK SPEAKER OPERATION</b>
<p>Does front LH speaker sound when audio operates?</p> <p style="text-align: center;"><b>Yes or No</b></p>	
Yes	▶ Check harness for open or short between speaker relay terminals 6, 7 and also between NAVI control unit terminals 42 and 43.
No	▶ Check the following. <ul style="list-style-type: none"> <li>● Speaker</li> <li>● Harness for open or short between audio and speaker relay</li> </ul>



## NAVIGATION SYSTEM

*This Condition Is Not Abnormal*

### This Condition Is Not Abnormal

=NJEL0526

#### EXAMPLE OF BASIC OPERATIONAL ERRORS

NJEL0526S01

Symptom	Possible cause	Repair order
No image is displayed.	Monitor brightness control is set to full dark.	Readjust monitor brightness.
Map does not appear on display.	Map CD is not inserted or inserted upside down.	Insert the map CD with the label facing up.
	Map mode is turned OFF.	Press the "MAP" button.
No guide tone is heard.	Voice guide adjustment OFF/Volume is set to the lowest or highest level.	Adjust the voice guide level.
Voice guide volume is too high or too low.		
Dark display/Slow image movement	Low vehicle interior temperature	Wait until vehicle interior temperature rises to appropriate level.
Small black or white dots appear on the screen.	Unique liquid crystal display phenomena	No problem
"Unable to read CD" message appears only during specified operation.	Map CD surface is tainted/CD surface is partially scratched.	Check map CD surface. If dirty, wipe clean with a soft cloth.
		If map CD surface is damaged, replace the CD.

#### **Area place names are not displayed.**

If area place names do not appear on the map display, these names may not be available. Use the BIRDVIEW<sup>®</sup> flat surface map display function. Display output may differ. Note the items related to BIRDVIEW<sup>®</sup> below.

- Priority is given to the display of place names in the direction of vehicle travel.
- Extended display of vehicle travel distance for both surfaces and steering angle (flat directional changes). This phenomenon disappears after the display image has been replaced by another one.
- The names of route and area might vary between the immediate front area and distance front area.
- Alphanumeric display characters are limited to maintain display simplicity and clarity. Display details may differ with time and place.
- Identical place and road names may appear on the display at more than one location.

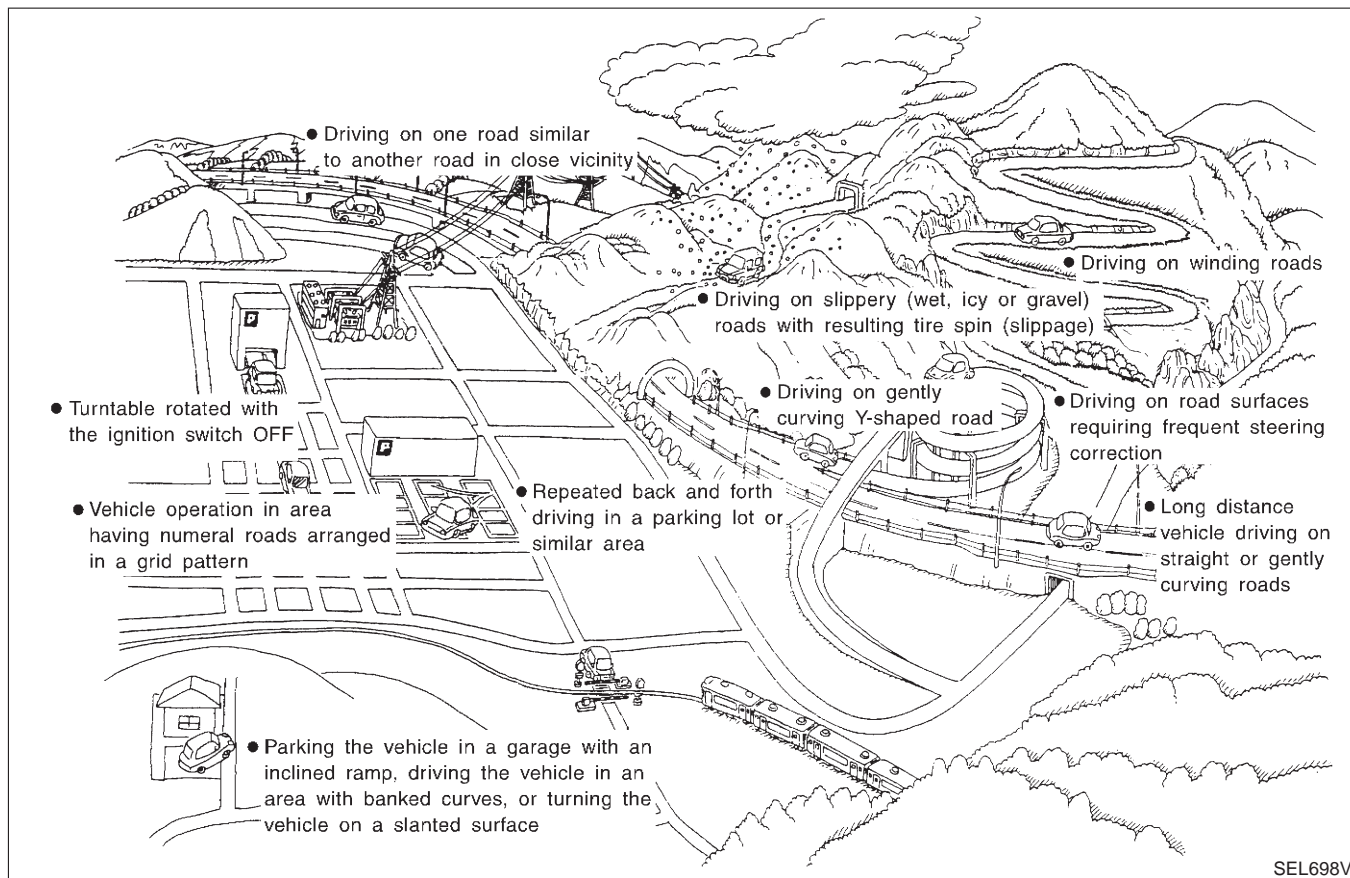
## NAVIGATION SYSTEM

This Condition Is Not Abnormal (Cont'd)

### EXAMPLE OF CURRENT VEHICLE POSITION MARKER ERROR

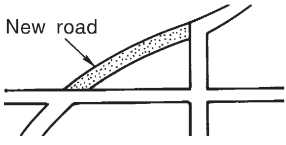

=NJEL0526S02

The navigation system reads the vehicle distance and steering angle data. Because the vehicle is moving, there will be an error in the current position indication. After the error appears, drive the vehicle for a short distance. Stop the vehicle. If the position marker does not return to its original position, perform "Adjust Current Location" MODE (EL-298).



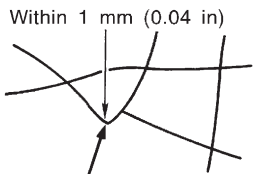
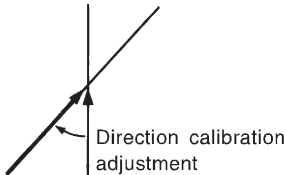
## NAVIGATION SYSTEM

*This Condition Is Not Abnormal (Cont'd)*

	Possible cause	Drive condition	Service procedure
Area	Slippery road surface	On wet, icy, or gravel road where frequent wheel slippage occurs, distance calculations may be erroneous. The position marker may show the vehicle to be in inaccurate position.	
	Slanted area	Hilly areas where the road has banked curves. When the vehicle enters these banked curves, there may be an error in steering angle measurement. The position marker may show the vehicle to be in inaccurate position.	
Map data	Map display for a given road does not appear.   SEL699V	When the vehicle is driven on a newly constructed road that does not appear on the existing map. Map marking and calibration are not possible. The position marker may indicate inaccurate position in close proximity to the actual position. Subsequently, when the vehicle is driven on a road which is available as map data, the position marker may still indicate an inaccurate position.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Adjust Current Location" MODE (EL-298). If necessary, perform "Speed Calibration" (EL-290).
	The vehicle is driven on a road whose course has been altered (usually to improve the road or to eliminate some hazard).   SEL700V	When the map data shown on the display and the actual conditions are different. Map matching will not be possible. The position marker may indicate inaccurate position in close proximity to the actual position. If the vehicle is driven on the indicated road, further errors may occur.	
Vehicle	Use of tire chains (Stormy weather)	Tire chains will affect distance sensing. The position marker may indicate inaccurate position.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Speed Calibration" (EL-290). After removing the tire chains, sensing accuracy may recover by itself.

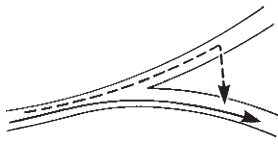
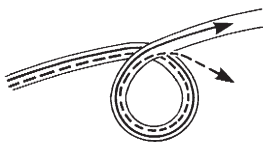
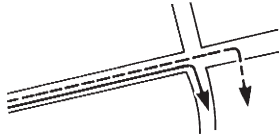
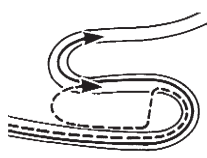
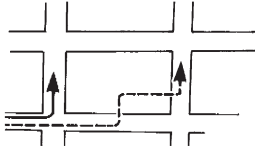
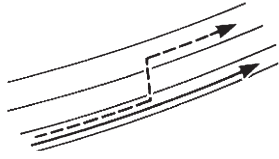
## NAVIGATION SYSTEM

*This Condition Is Not Abnormal (Cont'd)*

	Possible cause	Drive condition	Service procedure
Operation	Driving immediately after starting engine.	The gyro (angular velocity sensor) needs about 15 seconds after the engine is started to precisely sense the angular velocity. Directional sensing errors will occur if the vehicle is moved immediately after starting the engine. The position marker may indicate inaccurate position.	Wait a few moments between starting the engine and actually driving the vehicle.
	Continuous driving for long distances (non-stop)	When the vehicle is driven continuously without stopping over a long distance, errors in directional sensing may occur. The position marker may indicate inaccurate position.	Stop the vehicle. Perform "Speed Calibration" (EL-290).
	Rough or violent driving	Wheel spinning (peeling out) or similar rough driving techniques can adversely affect sensing accuracy. The position marker may indicate inaccurate position.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Adjust Current Location" MODE (EL-298).
Positional calibration procedures	Positional calibration precision  Within 1 mm (0.04 in) SEL701V	If current vehicle location is roughly set, the system may be unable to locate the road that the vehicle is traveling on. (This is especially true in an area where there are many roads.)	Perform "Adjust Current Location" MODE (EL-298) within a precision standard of 1 mm (0.04 in) on the display. <b>NOTE:</b> During calibration, use the most detailed map possible.
	Position calibration direction  Direction calibration adjustment SEL702V	When calibrating the position, check the vehicle direction. If the vehicle direction is not correct, subsequent precision of current location will be affected.	Perform "Adjust Current Location" MODE, refer to EL-298.

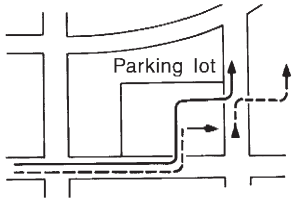
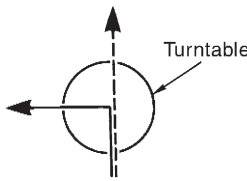
# NAVIGATION SYSTEM

*This Condition Is Not Abnormal (Cont'd)*

Possible cause: —: Vehicle running    - - -: Indication		Drive condition	Service procedure
Road shapes	<p>Y-intersection</p>  <p style="text-align: right;">SEL703V</p>	<p>In Y-intersections with a very gradual change in course, a directional sensing may be inaccurate. This may result in the position marker giving the wrong road indication.</p>	<p>If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Store place". If required, also perform "Adjust Current Location" MODE (EL-298).</p>
	<p>Spiral road</p>  <p style="text-align: right;">SEL704V</p>	<p>On loop bridges and similar structures which result in a large and continuous turn, turning angle may be sensed inaccurately. As a result, the position marker may separate from the route on the map.</p>	
	<p>Straight road</p>  <p style="text-align: right;">SEL705V</p>	<p>In long distance driving on a straight road or road with very gradual curves, map marking inaccuracies may occur. In such cases, the position marker may stray from the route being traveled during subsequent turns due to inaccurate distance calculation.</p>	
	<p>Winding road</p>  <p style="text-align: right;">SEL706V</p>	<p>Directional sensing precision errors may occur when traveling on winding roads. During map matching, the position marker may stray to an adjacent road having a similar shape. Subsequent position marker error may occur.</p>	
	<p>Grid-like road shape</p>  <p style="text-align: right;">SEL707V</p>	<p>Directional sensing and distance sensing, precision errors may occur because of many roads having a similar shape in the immediate area. During map matching, the position marker may stray to an adjacent road having a similar shape. Subsequent position marker error may occur.</p>	
	<p>Parallel roads</p>  <p style="text-align: right;">SEL708V</p>	<p>When driving on a parallel road, map matching errors may occur. Subsequent position marker error may also occur.</p>	

## NAVIGATION SYSTEM

*This Condition Is Not Abnormal (Cont'd)*

Possible cause: —: Vehicle running    ---: Indication		Drive condition	Service procedure
Location	Parking lot or similar area  SEL709V	When the vehicle is driven in a parking lot or similar area, such as in an area not normally marked as a road on map, during map matching, the system may select nearby roads. This error may continue after the vehicle exits the parking area and begins to run on ordinary roads. Vehicle operation in a parking area may involve frequent turns and up and/or down operation. Directional sensing errors may occur leading to subsequent route and position mistakes.	If the position marker does not move to the correct position even after the vehicle has been driven approximately 10 km (6 miles), perform "Store place". If required, also perform "Adjust Current Location" MODE (EL-298).
	Turntable  SEL710V	When the ignition switch is OFF (the usual situation when the vehicle is on a turntable), the navigation system receives no data from the gyro (angular velocity sensor). When the turntable rotates, no directional change is sensed. During subsequent vehicle operation, directional and route errors may occur.	

### Position marker displays a completely different location

In circumstances such as those described below, GPS signal reception conditions may result in an erroneous position of the position marker. Perform "Adjust Current Location" MODE (EL-298).

#### NOTE:

- When GPS satellite signal reception conditions are poor, the position of position marker may be erroneous. If correction is not made immediately, the position marker error will be compounded and a completely different location will be indicated. In an area where GPS satellite signal reception conditions are good, the system can be returned to normal operation.
- The vehicle is driven aboard a car ferry or is towed for some distance with the ignition switch OFF. Vehicle movement is not sensed. Current location calculations do not occur and current location data does not appear on the display screen. Use GPS to accurately determine actual vehicle position. The system can be returned to normal operation when the GPS satellite signal reception conditions are good.

### Position marker jumps

In circumstances such as those described below, the position marker may jump as a result of automatic current location corrections made by the system.

During map matching

- During map matching, the position marker may jump from one spot to another. In this case, it may be corrected to a wrong road or to an area where no road exist.

GPS location correcting

- Vehicle current location is sensed using the GPS data. Positional calibration is performed. The position marker continues to be in the wrong position. It may jump about from one area of the screen to another. In this case, it may be corrected to a wrong road or to an area where no road exist.

### Position marker indicates that the vehicle is in the middle of an ocean or large river

The navigation system does not distinguish between land and water surfaces. In some cases, a position marker error may cause the display to show the vehicle above a water surface.

### Position of position marker varies when the vehicle is repeatedly operated on the same road

Driving lane and steering wheel movement results in a variety of different positions of the position mark when traveling on the same road based on sensing results by the GPS antenna and gyro (angular velocity sensor).

Slow locational correction using map matching

- The map matching function requires verification of local data. To make the map matching function, some distance needs to be driven.
- The map matching function may not provide accurate performance in an area where there are numerous parallel roads. Until the system judges the road characteristics, an incorrect position may be shown.

## NAVIGATION SYSTEM

*This Condition Is Not Abnormal (Cont'd)*

**GPS signal reception conditions are good. However, the position mark does not return to its proper position.**

- The system senses the vehicle location with an error of approximately 100 m (328 ft). Due to the limitation of precision, the position marker may be inaccurate even if the GPS signal reception condition is good.
- The navigation system uses GPS data to determine vehicle location. GPS data is compared with other locational sensing data during the map matching process. The system decides which data is more precise and uses that data.
- When the vehicle is stationary, GPS data cannot be used to make system corrections.

**Area designations on the map display and the BIRDVIEW® display differ.**

To prevent the display from becoming congested, alphanumeric information is abridged.

[No problem]

**Correct position of your vehicle is not displayed.**

Vehicle position changed after ignition key was turned to the OFF position (Vehicle is transported on car ferry, car train, or by some other means).

[Operate vehicle for short time under GPS receiving conditions.]

**The display does not change to night-time mode even though the light switch has been turned ON.**

Lights have been turned on. In "DISPLAY CHANGE" mode, night-time mode on display has been switched to day-time mode and still is.

[Turn lights on again. Set the display to night-time mode. Refer to EL-296.]

**Map does not scroll even though the position of your vehicle is changed.**

Present area does not appear on the display.

[Press the "MAP" switch.]

**Vehicle position marker does not appear.**

Present area does not appear on the display.

[Press the "MAP" switch.]

**The map surface precision display (GPS satellite marker) still remains gray.**

Vehicle is parked inside a building or in the shadow of a large building. This intercepts the GPS signal.

[Move the vehicle to a more open position.]

GPS signal is not received because objects are placed on the rear parcel shelf.

[Remove objects from the rear parcel shelf.]

GPS satellite position is bad.

[Wait until GPS satellite position improves.]

**Vehicle position precision is bad.**

The map surface precision display (GPS satellite marker) still remains gray.

[Refer to "The map surface precision display (GPS satellite marker) still remains gray" item (Symptoms)]

Vehicle speed and elapsed distance is calculated from the vehicle speed pulse. This pulse is dependent upon tire size. If tire chains are used on the vehicle, accuracy will be affected (pulse rate will be too fast or too slow). The same is true if the system installed to your vehicle is removed and installed on another vehicle.

[Drive the vehicle at a speed higher than 30 km/h (19 MPH) for approximately 30 minutes. Automatic readjustment should occur. If it does not (remains too fast or too slow), distance calibration is required. Or, drive the vehicle for a short distance. Perform "SPEED CALIBRATION" (EL-290). After removing the tire chains, sensing accuracy may recover by itself.]

Bad map data or system defect (same error consistently occurs in the same area)

### ROUTE SEARCH/ROUTE GUIDE

NJEL0526S03

- If the present location or the destination location is displayed in the avoid area, it is not possible to search routes.
- If the avoid area is set to wide range area, it may not be possible to find appropriate routes or search for alternate routes.
- The automatic re-route calculates a return to the original route. Because of this, it may not be possible to search appropriate new routes. If you deviate from the original route and wish to select an appropriate new route, touch "Route Calculation".
- The automatic re-route function may sometimes require considerable time.
- Displayed route number and directional information at a highway junction may differ from the information posted on the actual road signs.
- Displayed street name information at a highway exit may differ from the information posted on the actual road signs.
- Street name information displayed on the enlarged intersection map may differ from the information posted on the actual road signs.



## NAVIGATION SYSTEM

*This Condition Is Not Abnormal (Cont'd)*

- The enlarged intersection map may display an “Unknown street” message at some street intersections.
- Because of road configuration, etc. the guide may finish early. If this occurs, follow the marker to reach your destination.
- Destination area side information (left side and right side) may differ from actual conditions because of data error.

### Unable to Set Destination, Way Point, and/or menu items

NJEL0526S0301

Symptom	Possible cause	Repair order
Unable to search way points in re-search mode	A way point already crossed or determined to have been crossed.	If you desire to pass through a way point for a second time, reperform route edit.
Turn list is not displayed.	Route search does not occur.	Set designation areas and perform route search.
	Car marker does not appear on recommended route.	Drive on the recommended route.
	Route guide is canceled.	Turn the route guide ON. (Push “VOICE” switch)
Automatic search does not function.	Vehicle is not running on search object route (road indicated by orange, brown or red line).	Drive the vehicle on the search object route or perform a manual route search. Note that all routes will be re-searched at this time.
Unable to select detour route.	Vehicle is not running on recommended route.	Use the “RE-ROUTE” mode to search again or return to the recommended route.
Detour route search results are identical to previous search.	All possible conditions were considered, but results are the same.	This is not abnormal.
Unable to set a way point.	More than five way points have been previously set (and not cleared).	More than five way points cannot be specified at the same time. Break down into smaller segments and perform search.
Unable to select starting point during route edit.	Starting point will normally be your present location during route edit.	This is not abnormal.
Cannot select certain menu items.	While vehicle is running.	Park the vehicle in a safe area and perform operation.

### Voice Guide Information

NJEL0526S0302

Symptom	Possible cause	Repair order
Voice guide does not function.	Voice guide is only available at certain intersections (marked with ♯). In some cases, the guide is not available even when the vehicle makes a turn.	This is not abnormal.
	Vehicle is not running on recommended route.	Return to recommended route or reperform route search.
	Voice guide is OFF.	Set voice guide to the ON position.
	Route guide is canceled.	Turn the route guide ON.
The guide content does not correspond to actual conditions.	The content of the voice guide may vary depending on the type of junction.	Operate vehicle following the traffic rules and regulation.

### Route Search Information

NJEL0526S0303

Symptom	Possible cause	Repair order
Proceeding in desired direction. However, route search in desired direction does not function.	Unable to find appropriate route in the desired direction.	This is not abnormal.



## NAVIGATION SYSTEM

*This Condition Is Not Abnormal (Cont'd)*

Symptom	Possible cause	Repair order
No route is displayed.	No object route is searched near destination area.	Adjust position to wide road (brown) near destination area. In an area where traffic direction is displayed separately, pay close attention to the direction of travel. Set the destination area and the way point over the road.
	Starting point and destination areas are very near.	Move destination areas away from starting point on the screen.
Recommended route which has been passed disappears from the display.	The recommended route is divided into individual control segments. When way point 1 is passed, the data from the starting point to the way point 1 is erased.	This is not abnormal.
Search recommends roundabout route.	There may be special conditions for roads near the starting point and destination area (one-way traffic, etc.). A roundabout route may be displayed.	Slightly change starting point and destination area settings.
Landmark display does not show actual conditions.	Mistaken or missing map data may result in erroneous display.	Change map CD.
Recommended route drawn slightly away from starting point, way points, and destination area.	Course search data may not exist for closely positioned starting point, way points, and destination area shown on the map. Route guide starting point, way point, and destination point may be separated.	Set the destination area to the general route (indicated by a thick brown line). However, even if the selected route is a major one, appropriate route search data may not be available.

### LOCATION OF CAR MARKER

NJEL0526S04

- If the vehicle has been parked in a multi-level parking facility or underground parking facility, the car marker position may be inaccurate immediately after exiting the parking facility.
- The GPS accuracy is within  $\pm 100$  m (300 ft). Even when receiving conditions are excellent, further positional correction may not occur.

### STREET INDICATION

NJEL0526S05

- Street names displayed on the map may differ from the actual street names.
- An "Unknown street" message may appear on the map in place of street name information.

### RESEARCH

NJEL0526S06

- Position may be searched by house number. However, the displayed position and street may differ from the actual position and street.
- When position is searched using POI, the displayed position may differ from the actual position.
- Some data may not be available for new buildings and other structures in a map.

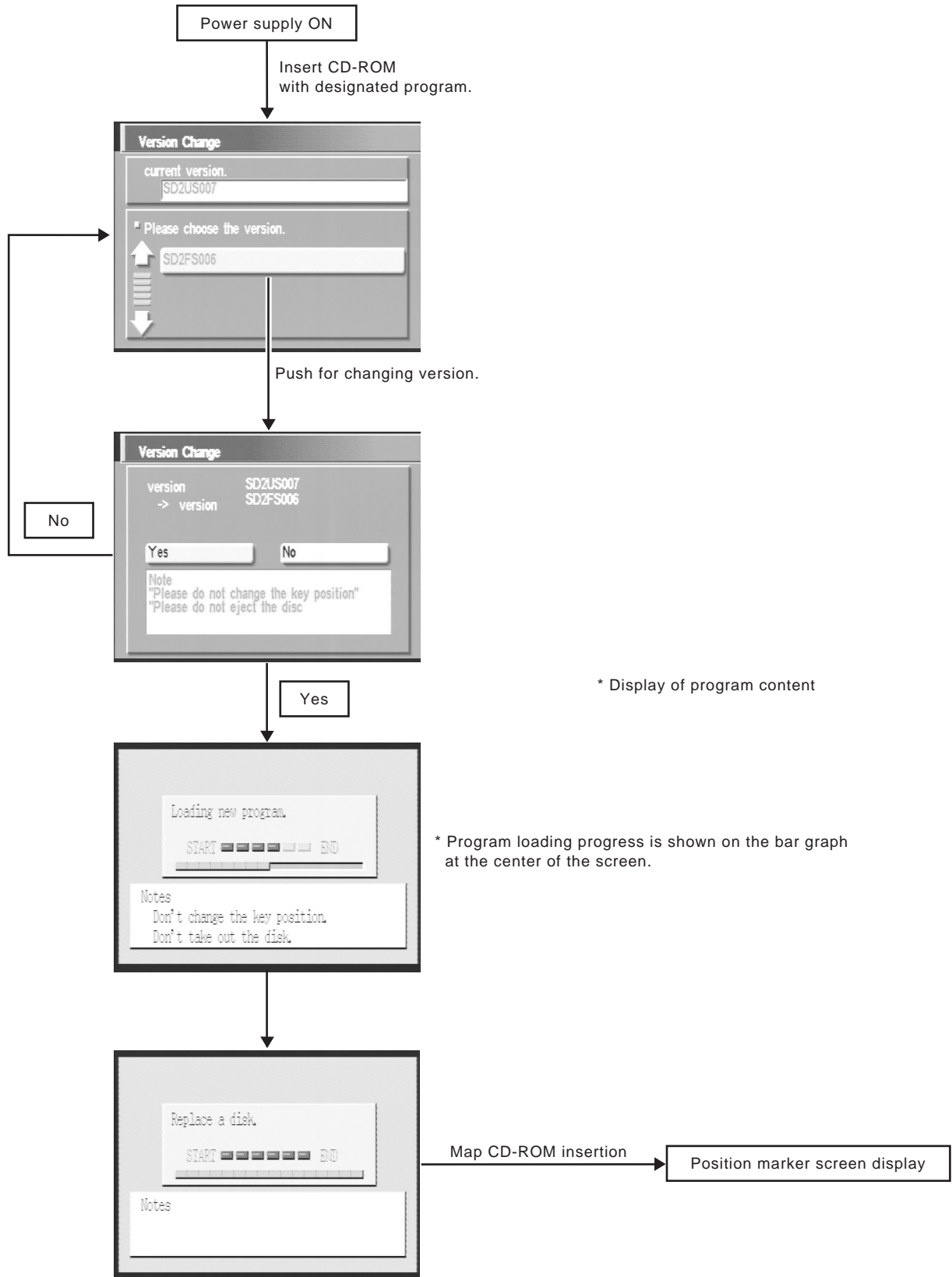
### GPS ANTENNA

NJEL0526S07

- Do not place metal objects above the GPS antenna mounted on the rear parcel shelf. This will cause interference with signal reception.
- Do not place mobile telephones or vehicle radio transceivers in close proximity to the GPS antenna mounted on the rear parcel shelf. This may cause interference with signal reception.

# NAVIGATION SYSTEM

## Program Loading



\* Display of program content

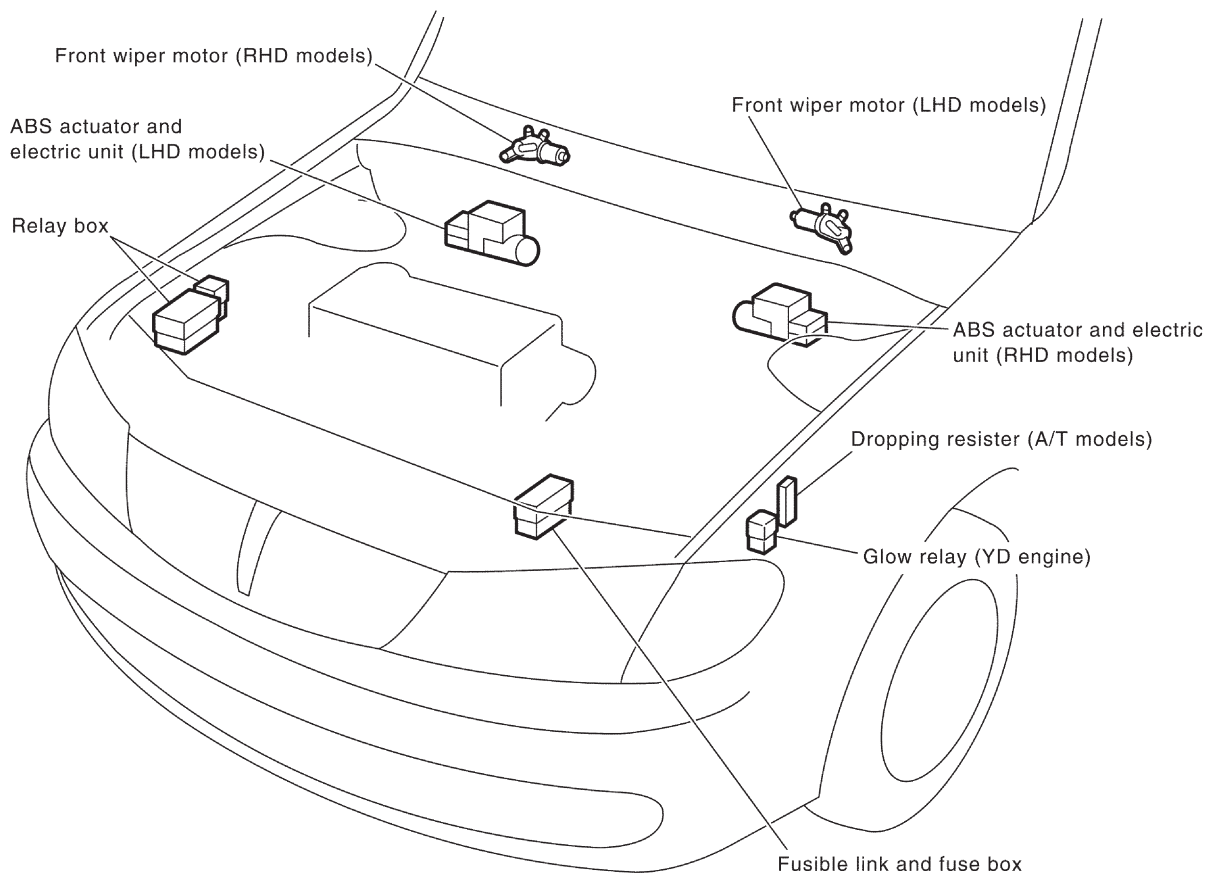
\* Program loading progress is shown on the bar graph at the center of the screen.

Note: Load the program only after the engine has been started.

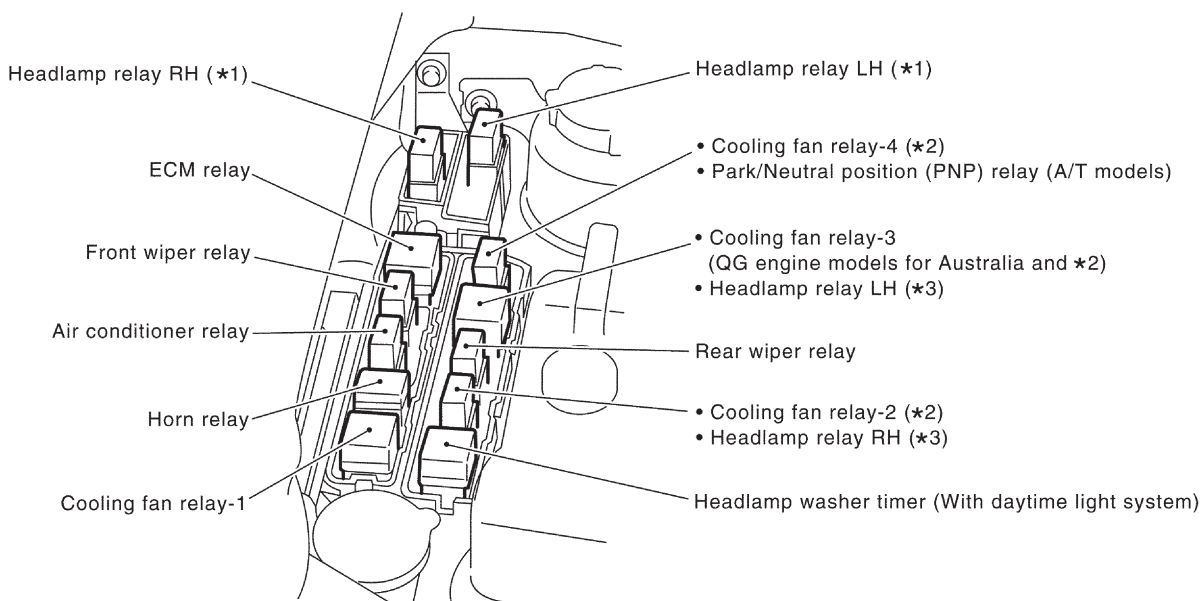
# ELECTRICAL UNITS LOCATION

## Engine Compartment

NJEL0129



### RELAY BOX



\*1 : YD engine models with daytime light system

\*2 : YD engine models

\*3 : QG engine models with daytime light system

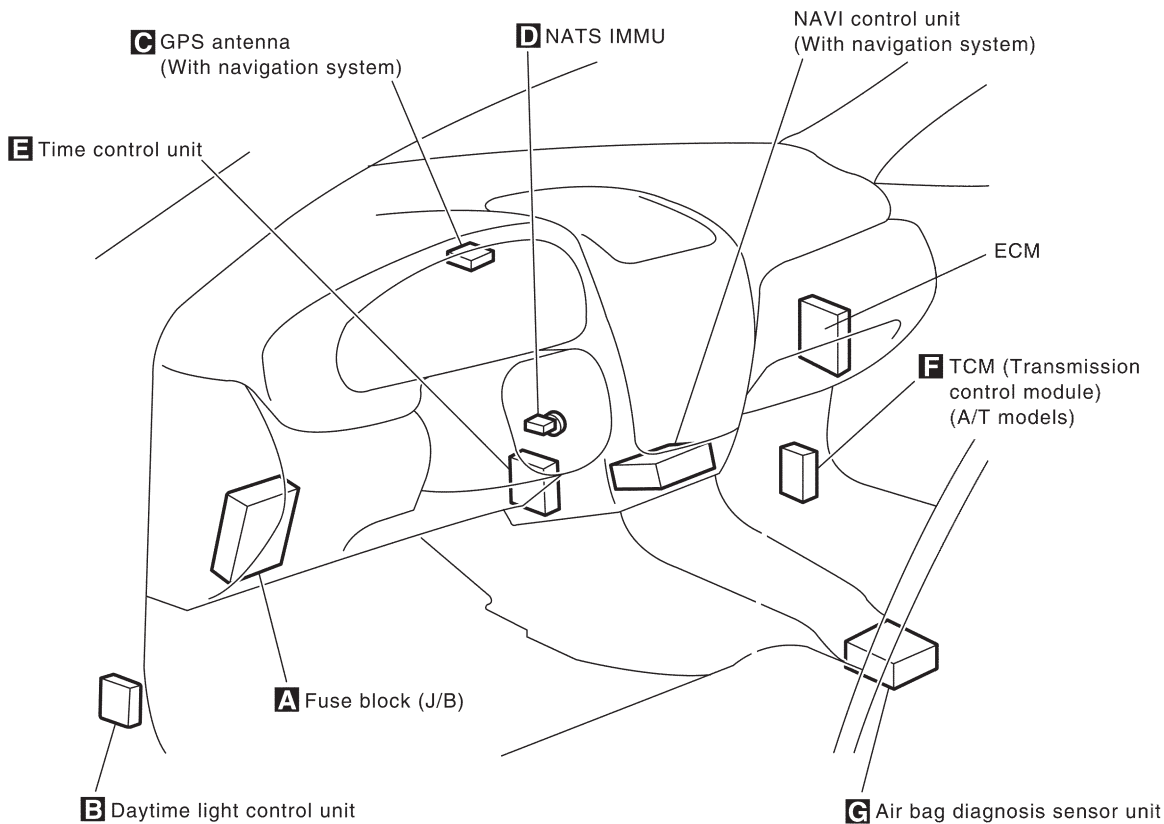
YEL722C

# ELECTRICAL UNITS LOCATION

Passenger Compartment/LHD Models

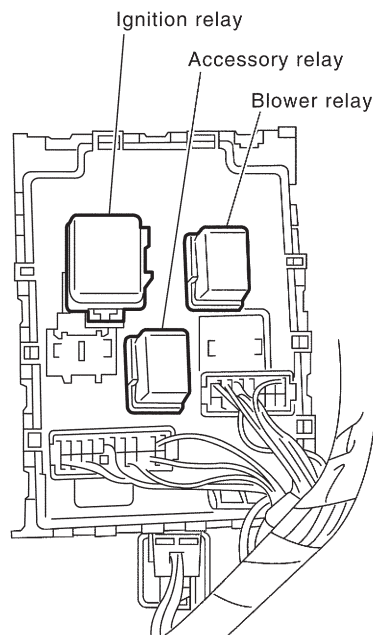
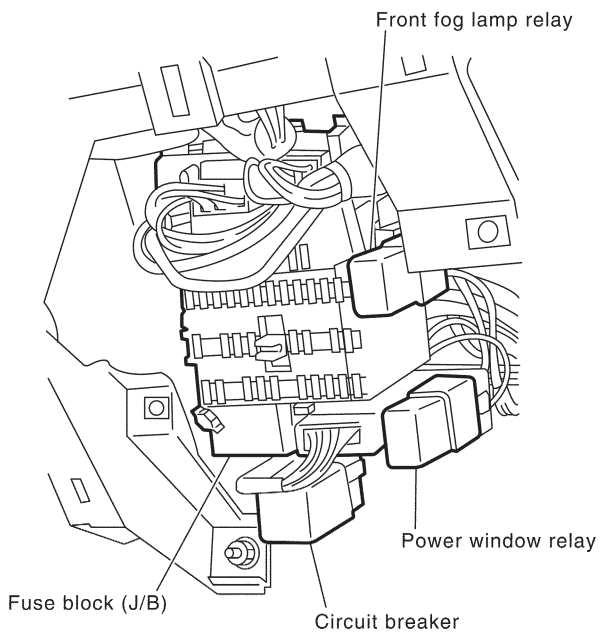
## Passenger Compartment/LHD Models

NJEL0130



**A** Instrument panel LH side

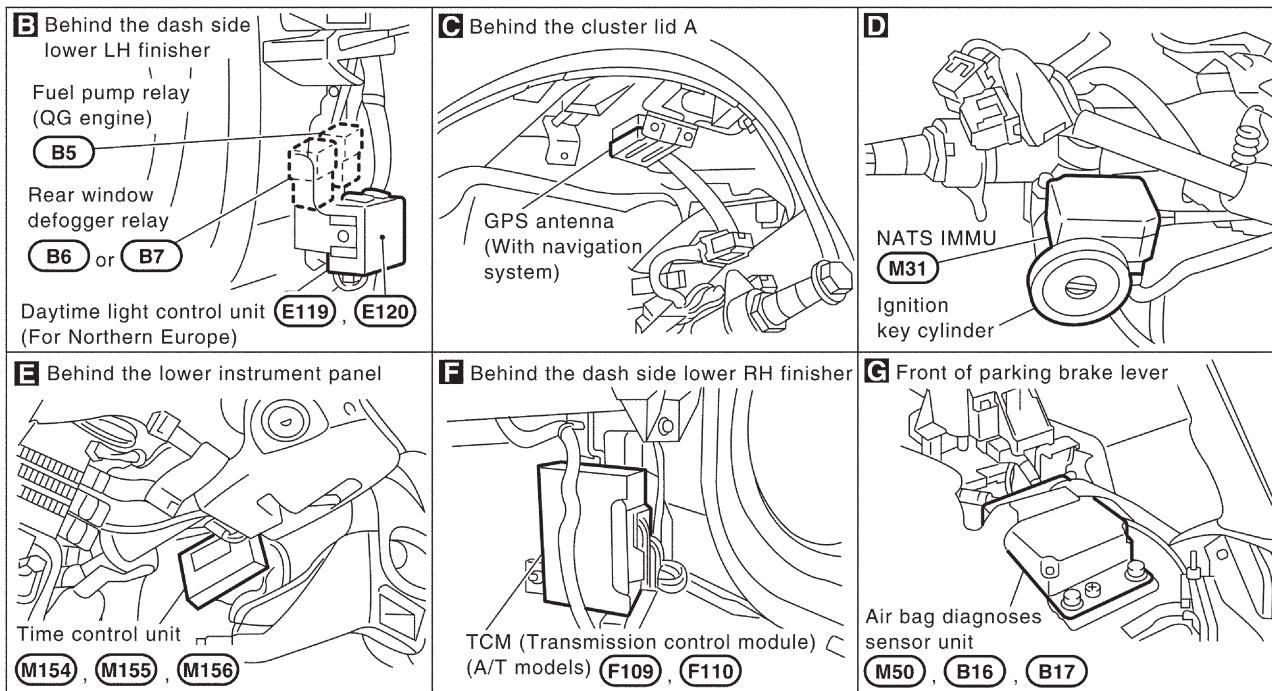
The back of the fuse block (J/B)



YEL723C

# ELECTRICAL UNITS LOCATION

Passenger Compartment/LHD Models (Cont'd)

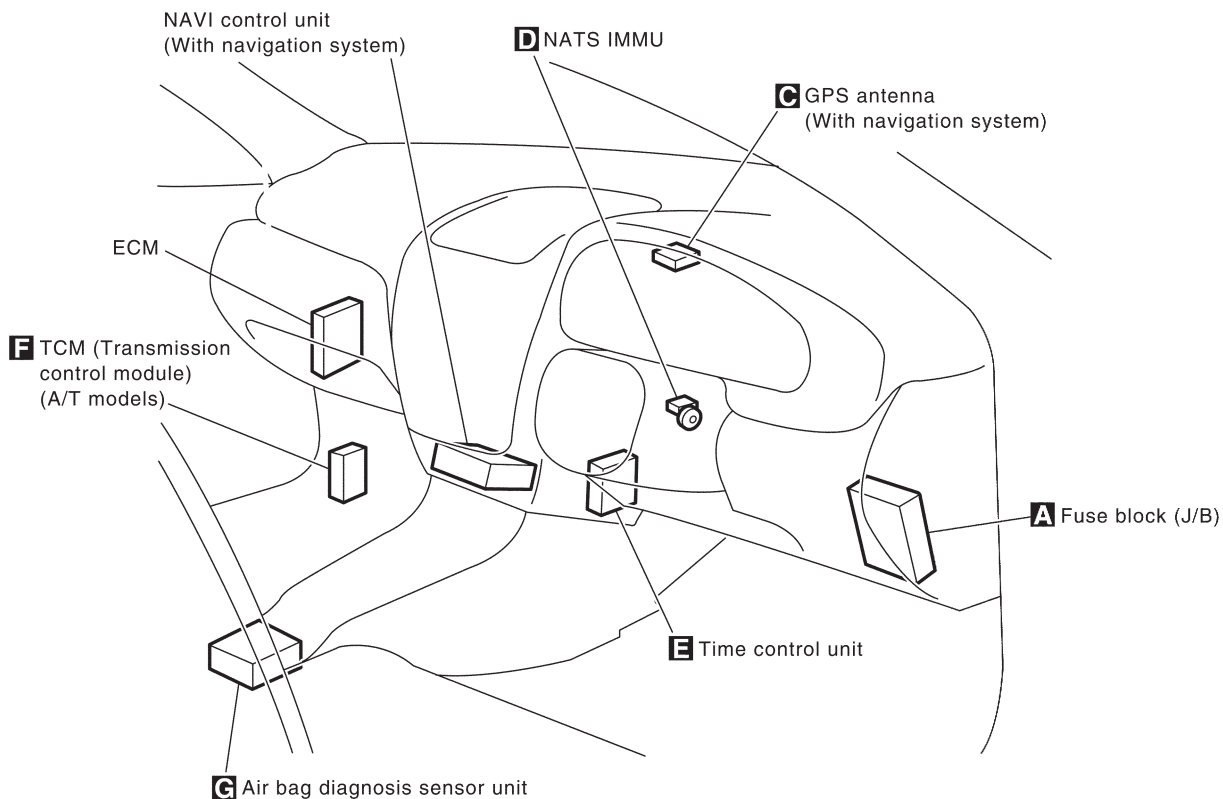


# ELECTRICAL UNITS LOCATION

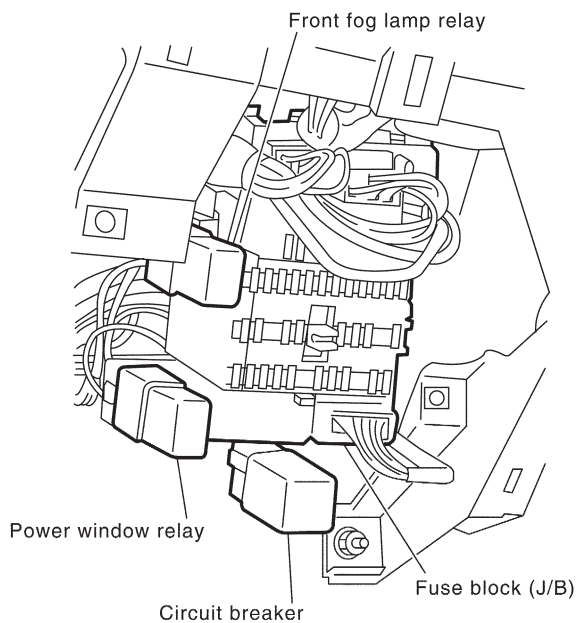
Passenger Compartment/RHD Models

## Passenger Compartment/RHD Models

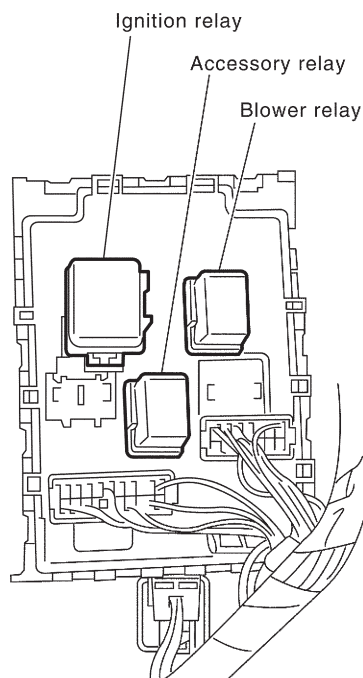
NJEL0345



**A** Instrument panel RH side



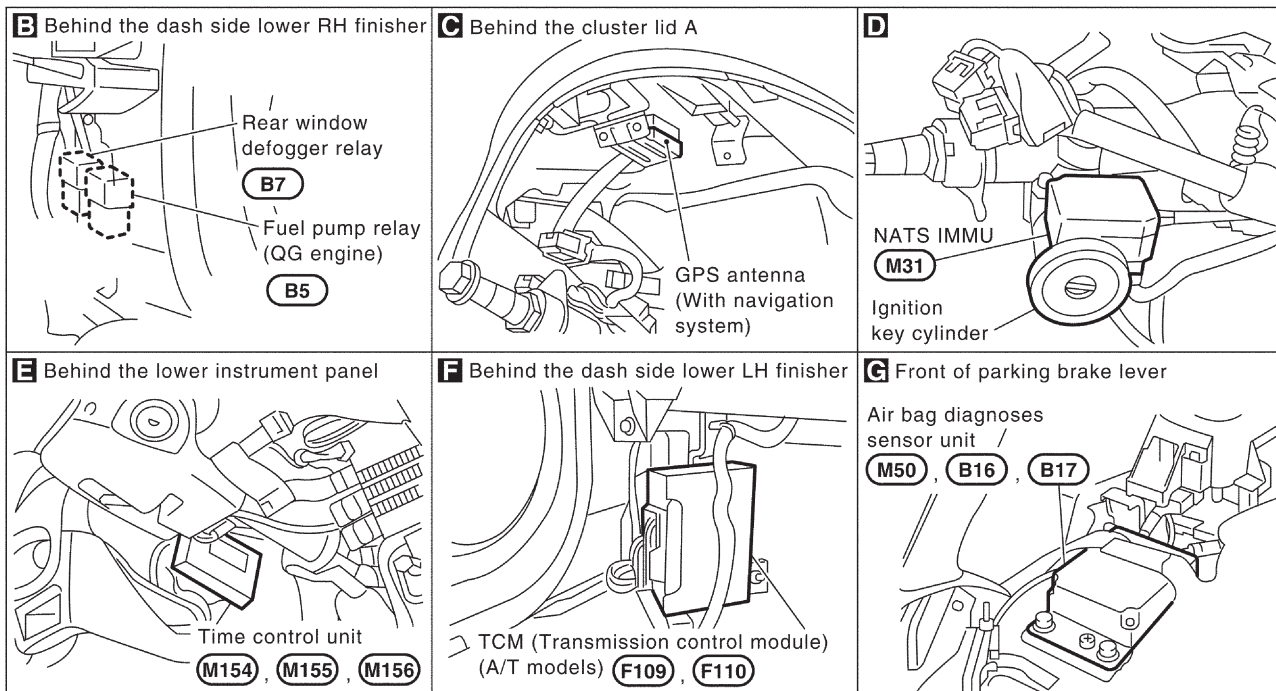
The back of the fuse block (J/B)



YEL725C

# ELECTRICAL UNITS LOCATION

Passenger Compartment/RHD Models (Cont'd)



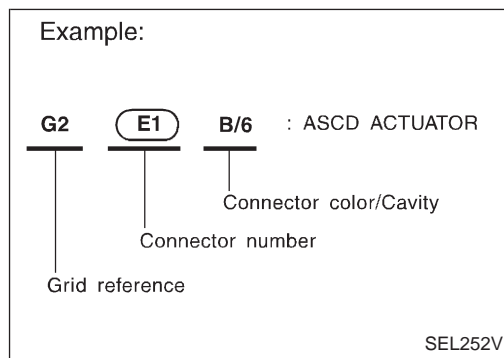
YEL726C

# HARNES LAYOUT

How to Read Harness Layout

## How to Read Harness Layout

NJEL0131



The following Harness Layouts use a map style grid to help locate connectors on the drawings:

- Main Harness
- Engine Room Harness (Engine Compartment)
- Engine Control Harness
- Body Harness

### 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.

NJEL0131S01

### CONNECTOR SYMBOL

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

NJEL0131S02

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



# HARNES LAYOUT

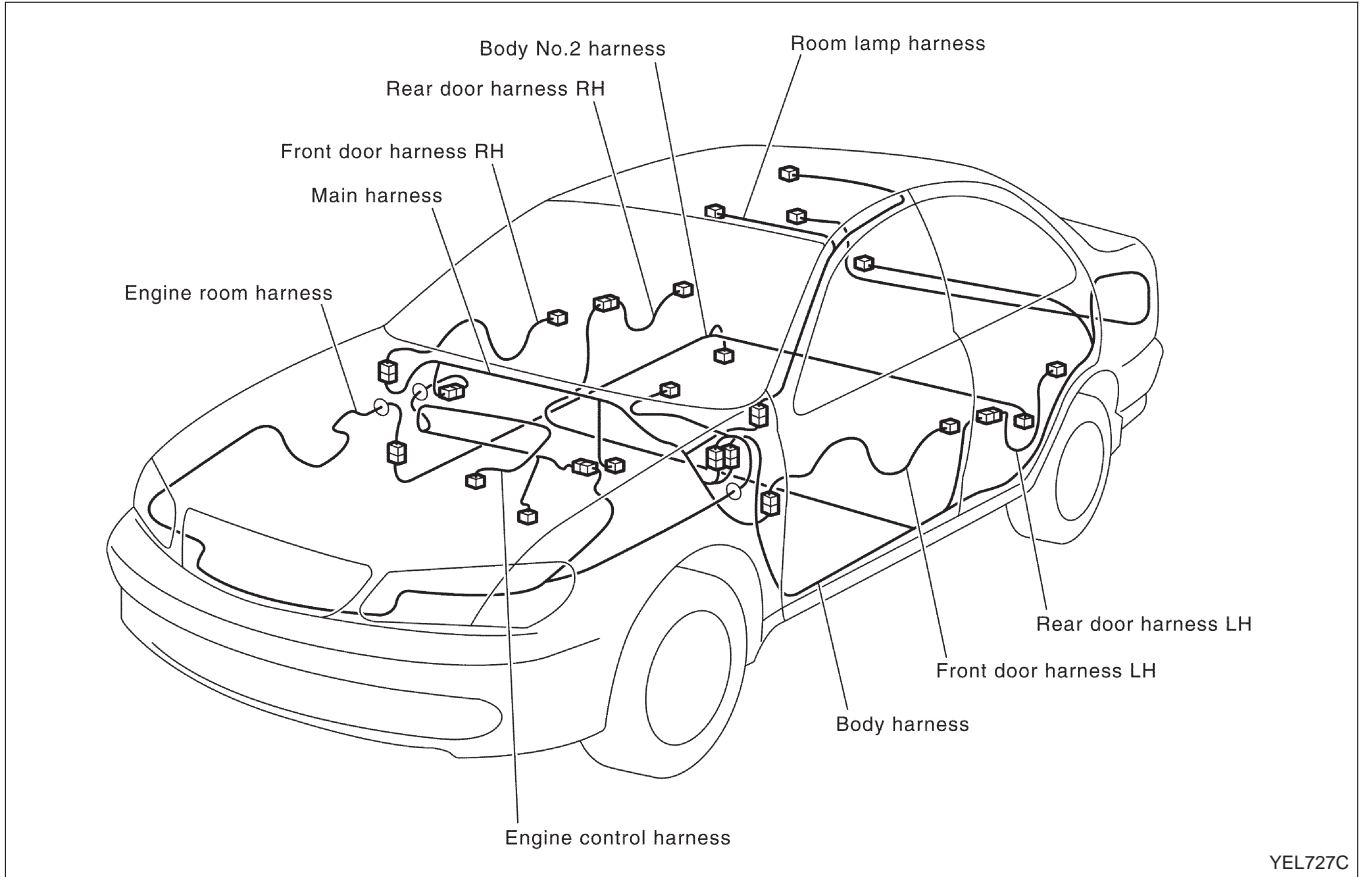
Outline/Sedan

## Outline/Sedan

### LHD MODELS

NJEL0132

NJEL0132S03



**NOTE:**

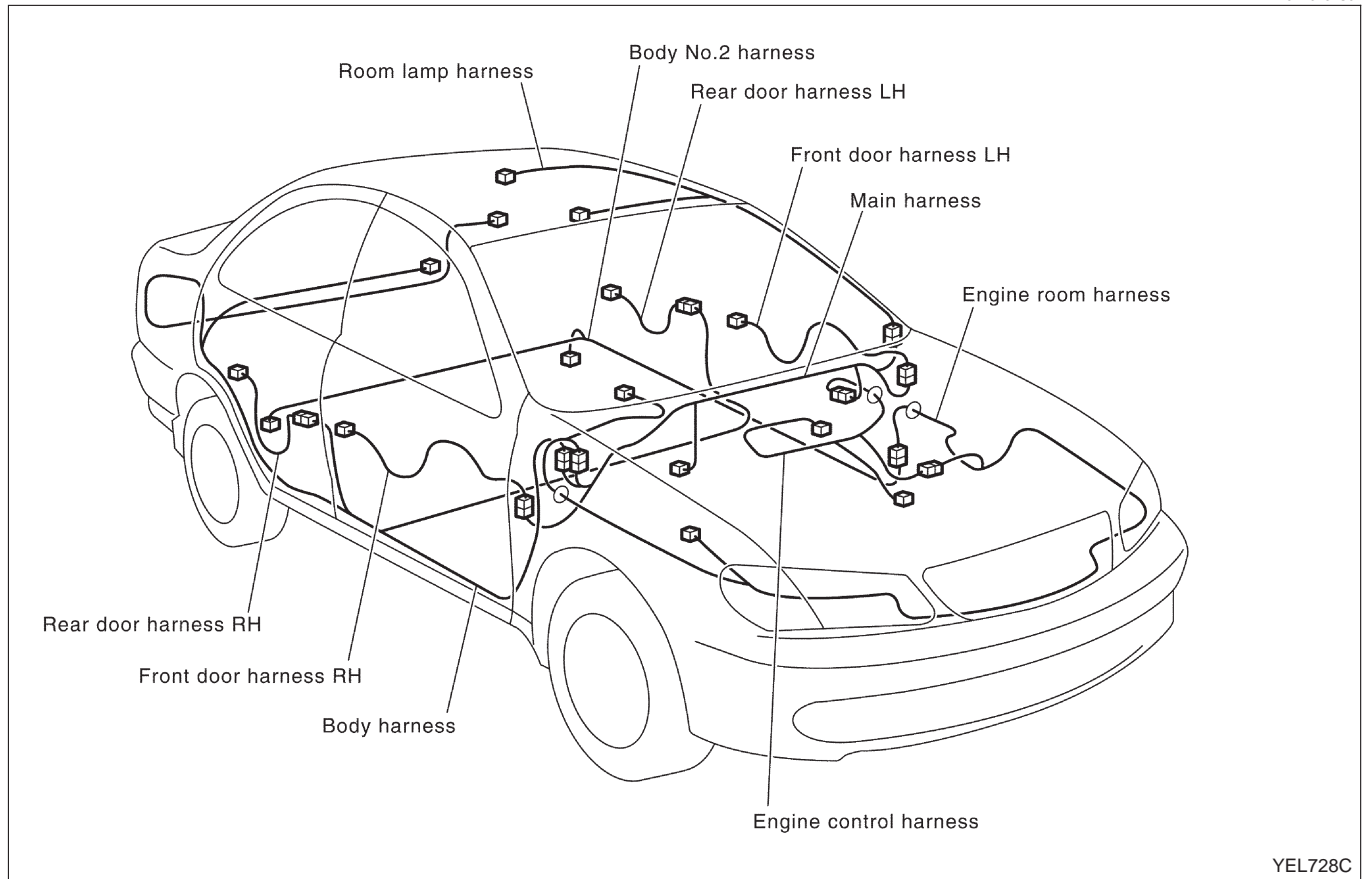
For detailed ground distribution information, refer to "Ground Distribution", "GROUND", EL-23.

# HARNESS LAYOUT

Outline/Sedan (Cont'd)

## RHD MODELS

NJEL0132S04



YEL728C

**NOTE:**

For detailed ground distribution information, refer to "Ground Distribution", "GROUND", EL-23.

# HARNESS LAYOUT

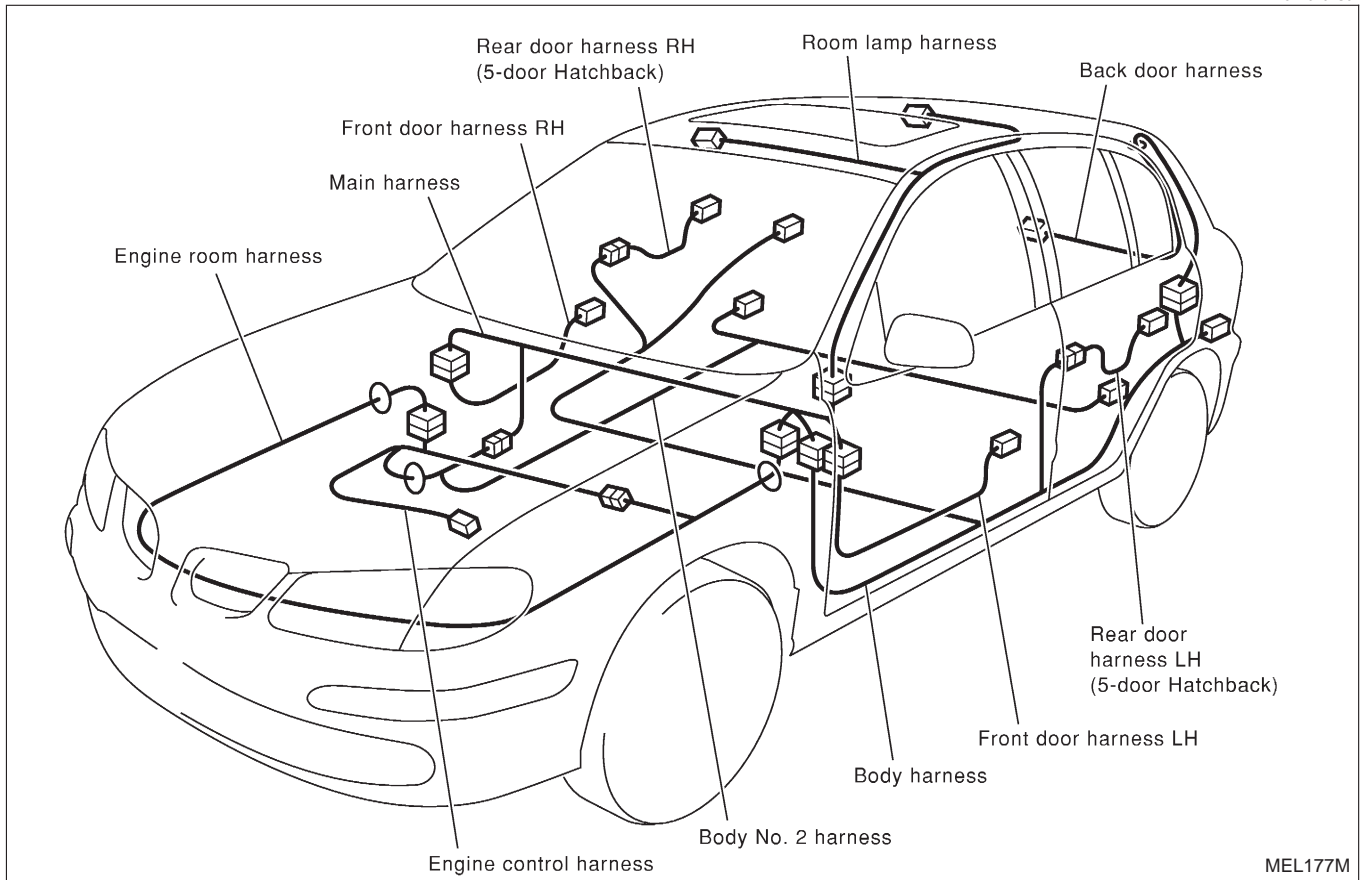
Outline/Hatchback

## Outline/Hatchback

### LHD MODELS

NJEL0491

NJEL0491S01



#### NOTE:

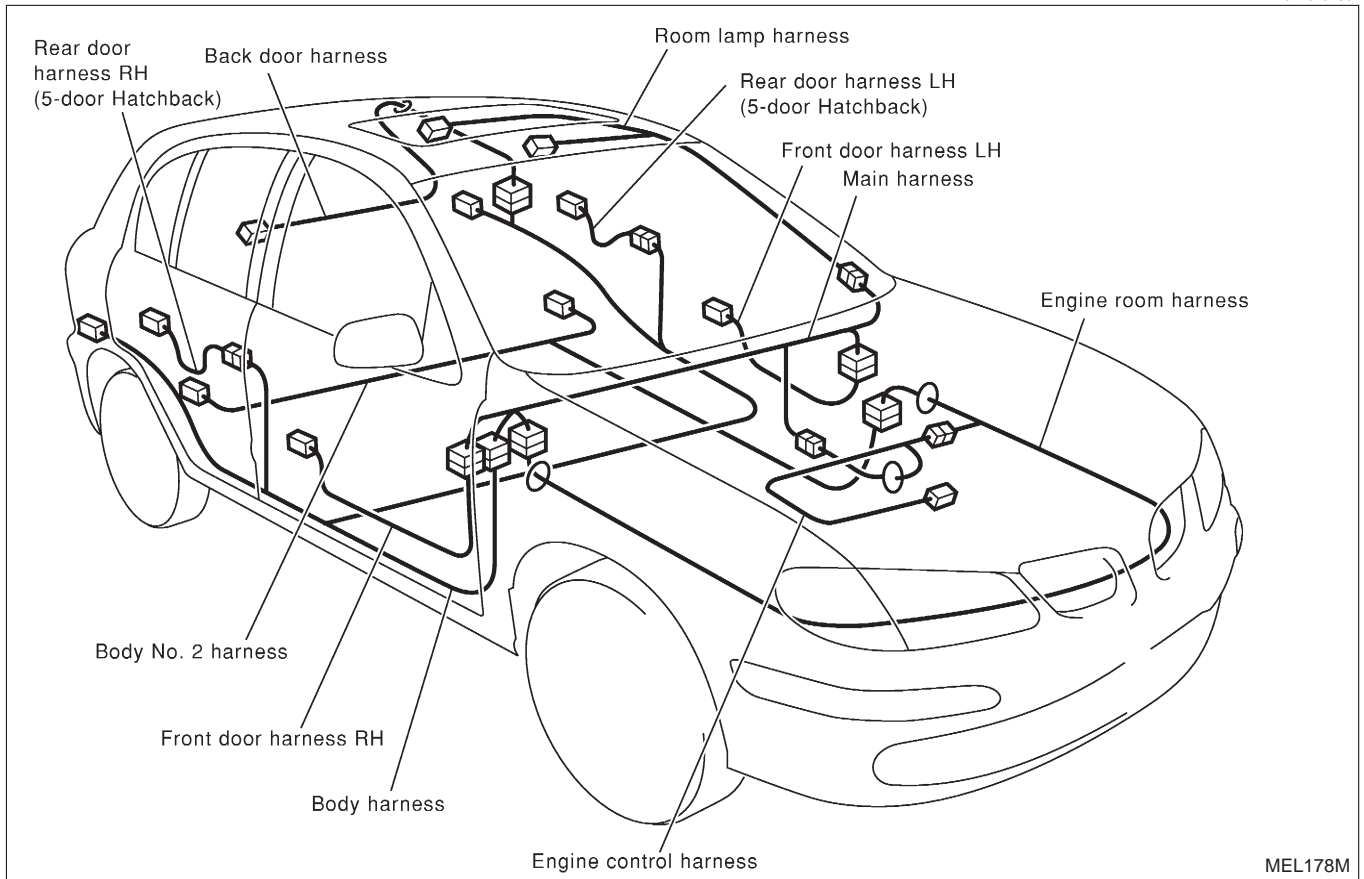
For detailed ground distribution information, refer to "Ground Distribution", "GROUND", EL-23.

# HARNESS LAYOUT

Outline/Hatchback (Cont'd)

## RHD MODELS

NJEL0491S02



MEL178M

**NOTE:**

For detailed ground distribution information, refer to "Ground Distribution", "GROUND", EL-23.

# HARNES LAYOUT

*Outline/Hatchback (Cont'd)*

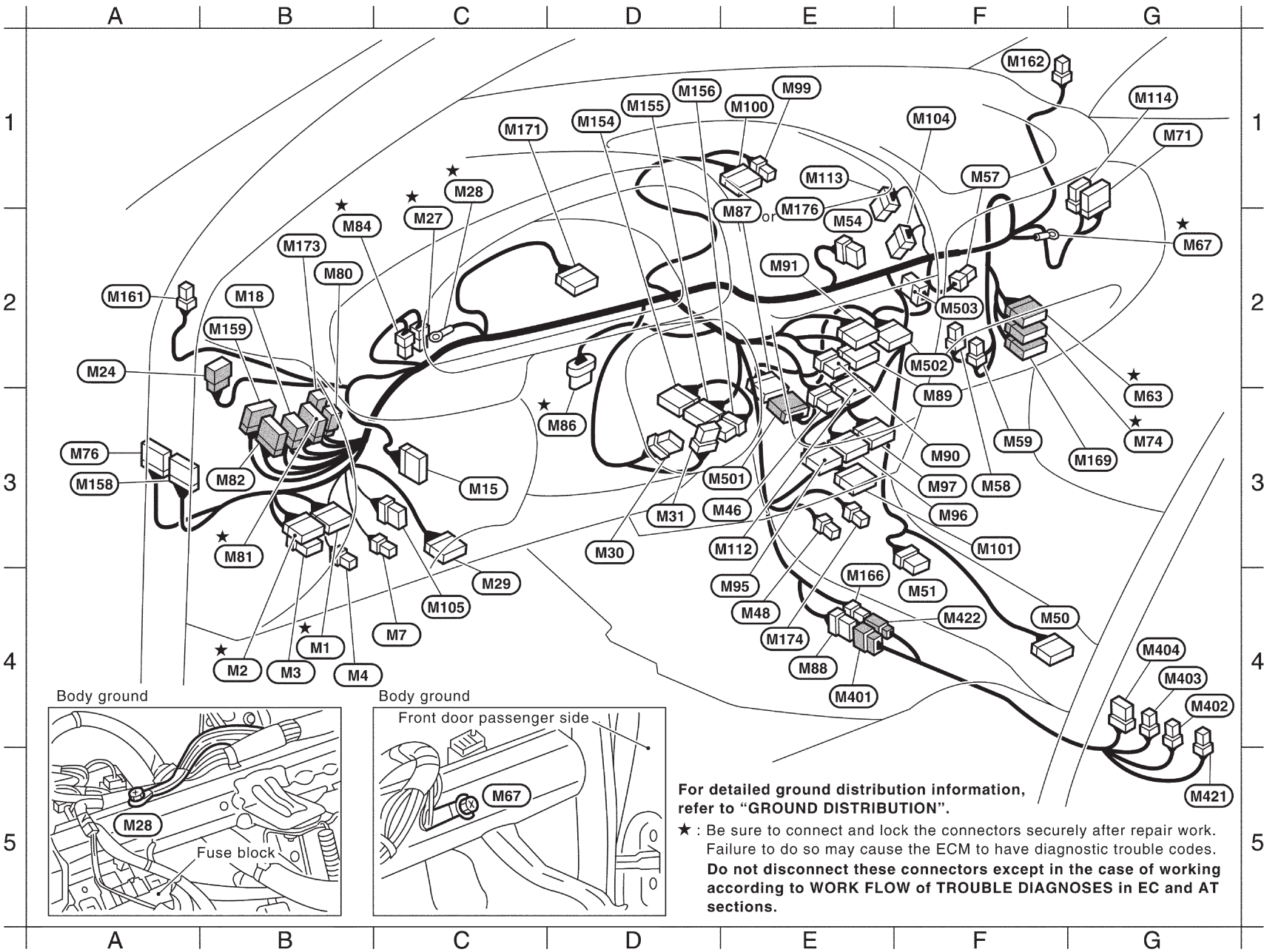
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**NOTE:**

**HARNES LAYOUT**

**Main Harness**

LHD MODELS



EL-330

YEL731C

N/ELO347  
N/ELO347S01

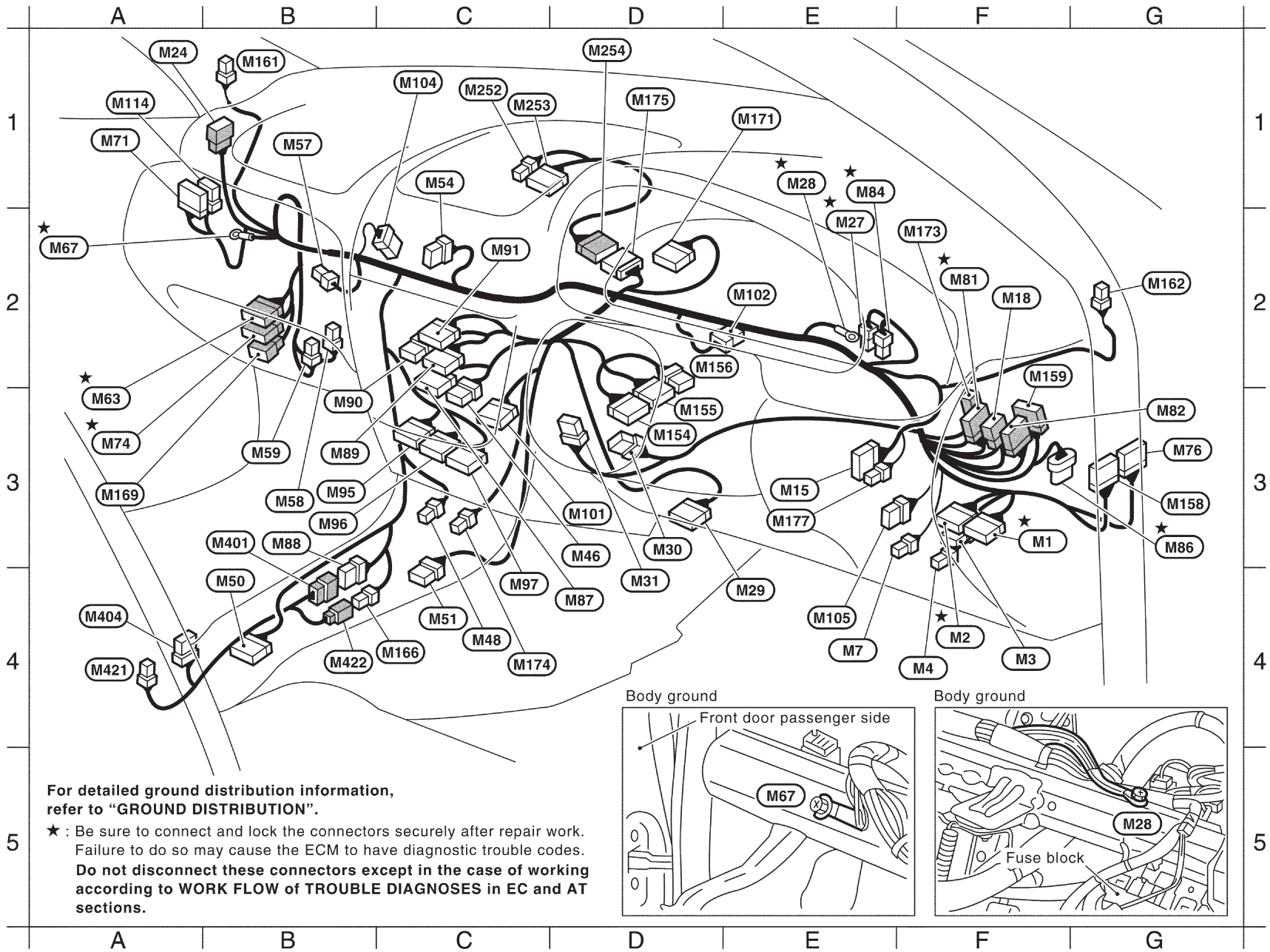
For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

B4	★	(M1)	W/16	:	Fuse block (J/B)
B4	★	(M2)	W/12	:	Fuse block (J/B)
B4		(M3)	W/6	:	Fuse block (J/B)
B4		(M4)	W/2	:	Circuit breaker
C4		(M7)	L/4	:	Power window relay (With power window)
C3		(M15)	W/10	:	Door mirror remote control switch
B2		(M18)	W/6	:	To (B2) (With power window)
A2		(M24)	W/6	:	To (R1)
C2	★	(M27)	B/2	:	Stop lamp switch
C1	★	(M28)	-	:	Body ground
C4		(M29)	W/16	:	Data link connector
D3		(M30)	Y/7	:	Spiral cable
D3		(M31)	W/8	:	NATS IMMU
E3		(M46)	W/6	:	Heater control panel (Fan switch)
E4		(M48)	B/2	:	Cigarette lighter socket
F4		(M50)	Y/20	:	Air bag diagnosis sensor unit
F4		(M51)	W/8	:	A/T device (A/T models)
E2		(M54)	W/8	:	Hazard switch
F1		(M57)	Y/2	:	Front passenger air bag module
F3		(M58)	BR/4	:	Fan resistor
F3		(M59)	W/2	:	Blower motor
G3	★	(M63)	W/16	:	To (F102)
G2	★	(M67)	-	:	Body ground
G1		(M71)	W/12	:	To (D31)
G3	★	(M74)	BR/16	:	To (F112) (YD engine)
A3		(M76)	W/16	:	To (D11)
B2		(M80)	W/4	:	To (B39) (With heated seat)
B3	★	(M81)	W/12	:	To (B38)
B3		(M82)	BR/16	:	To (B37)
B2	★	(M84)	BR/2	:	Brake pedal position switch (YD engine)
D3	★	(M86)	B/5	:	Accelerator work unit (YD engine)
E1		(M87)	W/12	:	Heater control panel (A/C switch • DEF switch) (Without max hot door motor)
E4		(M88)	W/8	:	To (M401) (With heated seat or with power door lock without power window)
F3		(M89)	W/16	:	Audio unit
F3		(M90)	W/8	:	Audio unit (With steering wheel switch)
E2		(M91)	W/12	:	Audio unit (With CD auto-changer)
E4		(M95)	W/20	:	NAVI control unit (With navigation system)
F3		(M96)	W/16	:	NAVI control unit (With navigation system)
F3		(M97)	GY/12	:	NAVI control unit (With navigation system)
E1		(M99)	W/4	:	Front monitor (With navigation system)
E1		(M100)	W/20	:	Front monitor (With navigation system)
F3		(M101)	W/16	:	CD auto-changer
F1		(M104)	B/6	:	Intake door motor
C4		(M105)	W/8	:	Speaker relay (With navigation system)
E3		(M112)	B/16	:	Heater control panel (A/C switch • DEF switch) (With max hot door motor with heated seat)
E1		(M113)	W/8	:	Max hot door motor (With heated seat)
G1		(M114)	W/8	:	To (D41)
D1		(M154)	W/16	:	Time control unit
D1		(M155)	W/20	:	Time control unit
D1		(M156)	W/8	:	Time control unit
A3		(M158)	W/12	:	To (D23)
B2		(M159)	W/16	:	To (E174)
A2		(M161)	BR/2	:	Pillar tweeter LH
F1		(M162)	BR/2	:	Pillar tweeter RH
E4		(M166)	W/3	:	To (M422) (Without heated seat)
G3		(M169)	BR/16	:	To (F113) (QG engine)
C1		(M171)	W/24	:	Combination meter
B2		(M173)	W/4	:	To (E200)
E4		(M174)	W/2	:	Ashtray illumination
E1		(M176)	W/12	:	To (M501) (With max hot door motor without heated seat)
<b>Console harness</b>					
E4		(M401)	W/8	:	To (M88)
G4		(M402)	L/4	:	Heated seat switch LH (With heated seat)
G4		(M403)	W/4	:	Heated seat switch RH (With heated seat)
G4		(M404)	W/6	:	Door lock/unlock switch (With power door lock without power window)
G5		(M421)	B/2	:	Power socket
F4		(M422)	W/3	:	To (M166)
<b>Sub-harness (With max hot door motor without heated seat)</b>					
E3		(M501)	W/12	:	To (M176)
F2		(M502)	B/16	:	Heater control panel (A/C switch • DEF switch)
F2		(M503)	W/8	:	Max hot door motor

★ : 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.**





For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

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F3	★	(M1)	W/16	:	Fuse block (J/B)
F4	★	(M2)	W/12	:	Fuse block (J/B)
F4		(M3)	W/6	:	Fuse block (J/B)
F4		(M4)	W/2	:	Circuit breaker
E4		(M7)	L/4	:	Power window relay (With power window)
E3		(M15)	W/10	:	Door mirror remote control switch
F2		(M18)	W/6	:	To (B2) (With power window)
A1		(M24)	W/6	:	To (R1)
E2	★	(M27)	B/2	:	Stop lamp switch
E1	★	(M28)	—	:	Body ground
E4		(M29)	W/16	:	Data link connector
D3		(M30)	Y/7	:	Spiral cable
D4		(M31)	W/8	:	NATS IMMU
D3		(M46)	W/6	:	Heater control panel (Fan switch)
C4		(M48)	B/2	:	Cigarette lighter socket
B4		(M50)	Y/20	:	Air bag diagnosis sensor unit
C4		(M51)	W/8	:	A/T device (A/T models)
C1		(M54)	W/8	:	Hazard switch
B1		(M57)	Y/2	:	Front passenger air bag module
B3		(M58)	BR/4	:	Fan resistor
B3		(M59)	W/2	:	Blower motor
A3	★	(M63)	W/16	:	To (F102)
A2	★	(M67)	—	:	Body ground
A1		(M71)	W/12	:	To (D31)
A3	★	(M74)	BR/16	:	To (F112) (YD engine)
G3		(M76)	W/16	:	To (D11)
F2	★	(M81)	W/12	:	To (B38)
G3		(M82)	BR/16	:	To (B37)
E1	★	(M84)	BR/2	:	Brake pedal position switch (YD engine)
G3	★	(M86)	B/5	:	Accelerator work unit (YD engine)
D4		(M87)	W/12	:	Heater control panel (A/C switch • DEF switch)
B3		(M88)	W/8	:	To (M401) (With power door lock without power window)
B3		(M89)	W/16	:	Audio unit
B3		(M90)	W/8	:	Audio unit (With steering wheel switch)
C2		(M91)	W/12	:	Audio unit (With CD auto-changer)
B3		(M95)	W/20	:	NAVI control unit (With navigation system)
B3		(M96)	W/16	:	NAVI control unit (With navigation system)
C4		(M97)	GY/12	:	NAVI control unit (With navigation system)

D3		(M101)	W/16	:	CD auto-changer
E2		(M102)	BR/8	:	Dongle unit (For Europe)
C1		(M104)	B/6	:	Intake door motor
E4		(M105)	W/8	:	Speaker relay (With navigation system)
A1		(M114)	W/8	:	To (D41)
D3		(M154)	W/16	:	Time control unit
D3		(M155)	W/20	:	Time control unit
D2		(M156)	W/8	:	Time control unit
G3		(M158)	W/12	:	To (D23)
F2		(M159)	W/16	:	To (E174)
B1		(M161)	BR/2	:	Pillar tweeter LH
G2		(M162)	BR/2	:	Pillar tweeter RH
C4		(M166)	W/3	:	To (M422) (With power socket)
A3		(M169)	BR/16	:	To (F113) (QG engine)
E1		(M171)	W/24	:	Combination meter
F2		(M173)	W/4	:	To (E200)
C4		(M174)	W/2	:	Ashtray illumination
D1		(M175)	W/16	:	To (M254)
E3		(M177)	W/4	:	Illumination control switch (For Australia)

#### Sub-harness (With navigation system)

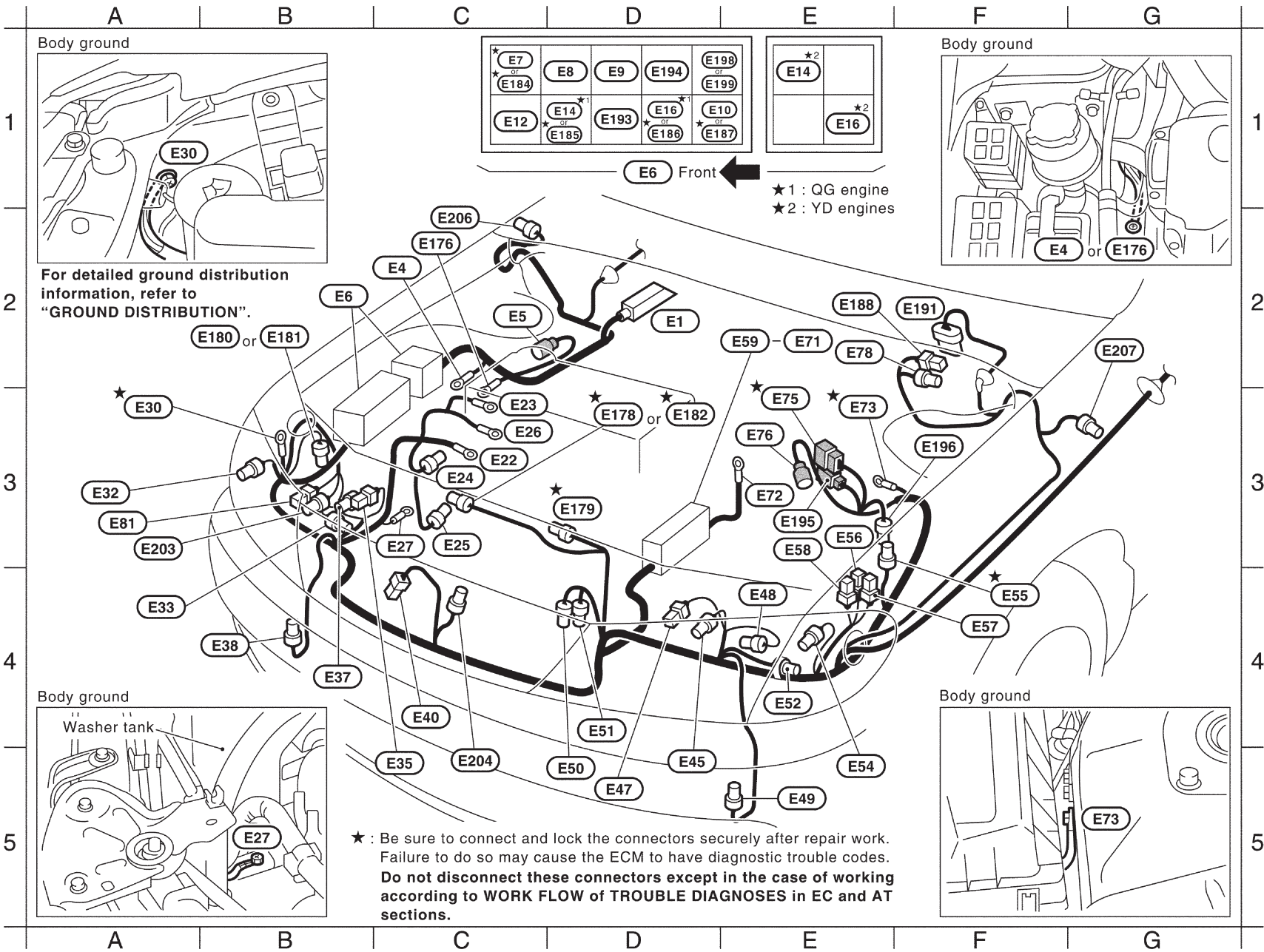
C1		(M252)	W/4	:	Front monitor
C1		(M253)	W/20	:	Front monitor
D1		(M254)	W/16	:	To (M175)

#### Console haness

B3		(M401)	W/8	:	To (M88)
A4		(M404)	W/6	:	Door lock/unlock switch (With power door lock without power window)
A4		(M421)	B/2	:	Power socket
B4		(M422)	W/3	:	To (M166)

★ : Be sure to connect and lock the connectors securely after repair work.  
Failure to do so may cause the ECM to have diagnostic trouble codes.

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

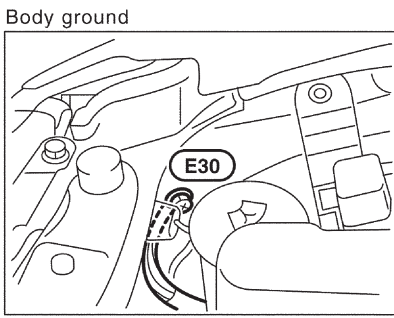
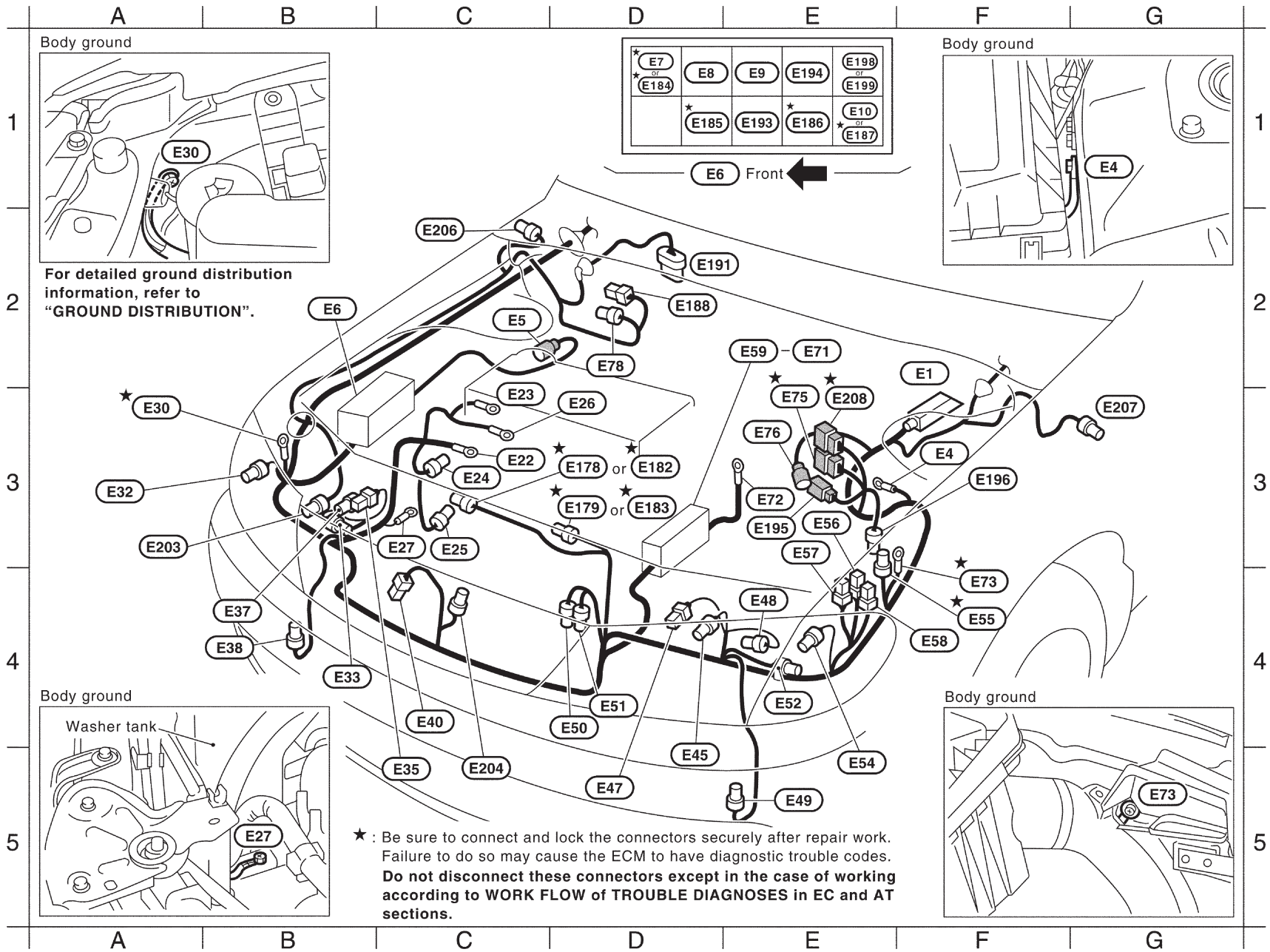


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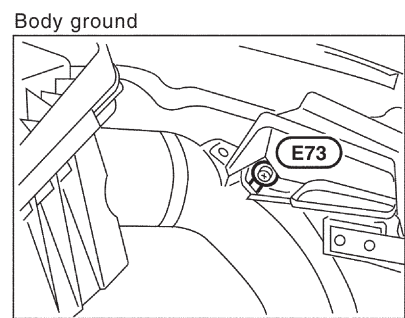
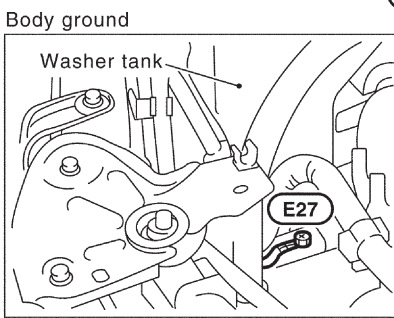
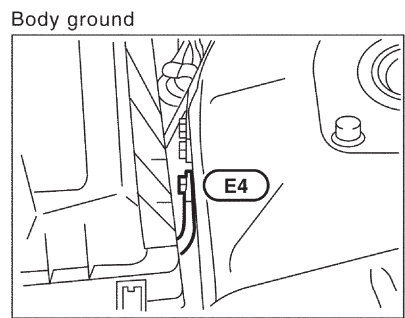
D2	(E1)	B/31	:	ABS actuator and electric unit (For ABS)	F4	(E57)	W/1	:	Glow relay (YD engine)	A3	(E81)	GY/2	:	Headlamp washer motor (★3)
C2	(E4)	-	:	Body ground (For ABS with YD engine)	E3	(E58)	G/2	:	Glow relay (YD engine)	C2	(E176)	-	:	Body ground (For ABS with QG engine)
C2	(E5)	GY/2	:	Front wheel sensor RH (For ABS)	E2	(E59)	-	:	Fusible link and fuse box	D3★	(E178)	B/2	:	Cooling fan motor-1 (QG engine)
B2	(E6)	-	:	Relay box	E2	(E60)	B/2	:	Fusible link and fuse box (★1)	D3★	(E179)	B/2	:	Cooling fan motor-2
C1★	(E7)	BR/6	:	Cooling fan relay-1 (QG engine)	E2	(E61)	W/1	:	Fusible link and fuse box (★2)	B2	(E180)	B/1	:	Option connector for A/C (M/T models with QG engine without A/C)
D1	(E8)	W/3	:	Horn relay	E2	(E62)	B/1	:	Fusible link and fuse box (QG engine)	B2	(E181)	B/2	:	Option connector for A/C (M/T models with YD engine without A/C)
D1	(E9)	L/4	:	Air conditioner relay	E2	(E63)	B/1	:	Fusible link and fuse box (★1)	D3★	(E182)	B/2	:	Cooling fan motor-1 (YD engine)
D1	(E10)	L/4	:	Park/neutral position (PNP) relay (A/T models)	E2	(E64)	-	:	Fusible link and fuse box (YD engine and ★2)	C1★	(E184)	B/4	:	Cooling fan relay-1 (YD engine)
C1	(E12)	BR/6	:	Headlamp washer timer (★3)	E2	(E65)	-	:	Fusible link and fuse box (YD engine and ★2)	D1★	(E185)	B/5	:	Cooling fan relay-2 (YD engine)
D1•E1	(E14)	L/4	:	Headlamp relay RH (★3)	E2	(E66)	B/1	:	Fusible link and fuse box (★1)	D1★	(E186)	B/4	:	Cooling fan relay-3 (YD engine)
D1•E1	(E16)	L/4	:	Headlamp relay LH (★3)	E2★	(E67)	B/6	:	Fusible link and fuse box (QG engine)	D1★	(E187)	B/5	:	Cooling fan relay-4 (YD engine)
C3	(E22)	-	:	Alternator (B)	E2★	(E68)	W/6	:	Fusible link and fuse box (QG engine)	E2	(E188)	GY/2	:	Brake fluid level switch (With ABS)
C3	(E23)	-	:	Alternator (E)	E2★	(E69)	W/4	:	Fusible link and fuse box (QG engine)	F2	(E191)	GY/5	:	Wiper motor
C3	(E24)	GY/2	:	Alternator (S,L)	E2	(E70)	W/3	:	Fusible link and fuse box (★2)	D1	(E193)	B/5	:	Rear wiper relay
C3	(E25)	B/1	:	Compressor	E2	(E71)	G/2	:	Fusible link and fuse box (★1)	D1	(E194)	B/5	:	Front wiper relay
C3	(E26)	-	:	Glow plug (YD engine)	E3	(E72)	-	:	Battery	E3	(E195)	W/4	:	To (F115) (A/T models)
C3	(E27)	-	:	Body ground	E3★	(E73)	-	:	Body ground	F3	(E196)	BR/2	:	Fuel filter switch (YD engine)
A3★	(E30)	-	:	Body ground	E3★	(E75)	B/8	:	To (F36)	D1	(E198)	BR/6	:	ECM relay (QG engine)
A3	(E32)	GY/2	:	Front turn signal lamp RH	E3	(E76)	BR/2	:	Front wheel sensor LH (For ABS)	D1	(E199)	BR/6	:	ECM relay (YD engine)
A4	(E33)	B/3	:	Headlamp aiming motor RH	E2	(E78)	GY/2	:	Brake fluid level switch (Without ABS)	A3	(E203)	B/2	:	Washer motor
C5	(E35)	B/2	:	Parking lamp RH						C5	(E204)	-/2	:	Outside air temperature sensor
B4	(E37)	GY/3	:	Headlamp RH						C2	(E206)	-/2	:	Side turn signal lamp RH
B4	(E38)	L/2	:	Front fog lamp RH						G2	(E207)	-/2	:	Side turn signal lamp LH
C4	(E40)	B/1	:	Horn high										
D5	(E45)	GY/3	:	Headlamp LH										
D5	(E47)	B/2	:	Parking lamp LH										
E4	(E48)	B/3	:	Headlamp aiming motor LH										
E5	(E49)	L/2	:	Front fog lamp LH										
D5	(E50)	B/3	:	Refrigerant pressure sensor (QG engine)										
D4	(E51)	B/2	:	Dual-pressure switch (YD engine)										
E4	(E52)	GY/2	:	Not used										
E5	(E54)	GY/2	:	Front turn signal lamp LH										
F4★	(E55)	GY/2	:	Dropping resistor (A/T models)										
E3	(E56)	W/1	:	Glow relay (YD engine)										

- ★1 : QG engine without daytime light system
- ★2 : QG engine with daytime light system
- ★3 : With daytime light system

★ : 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.**



For detailed ground distribution information, refer to "GROUND DISTRIBUTION".



★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.

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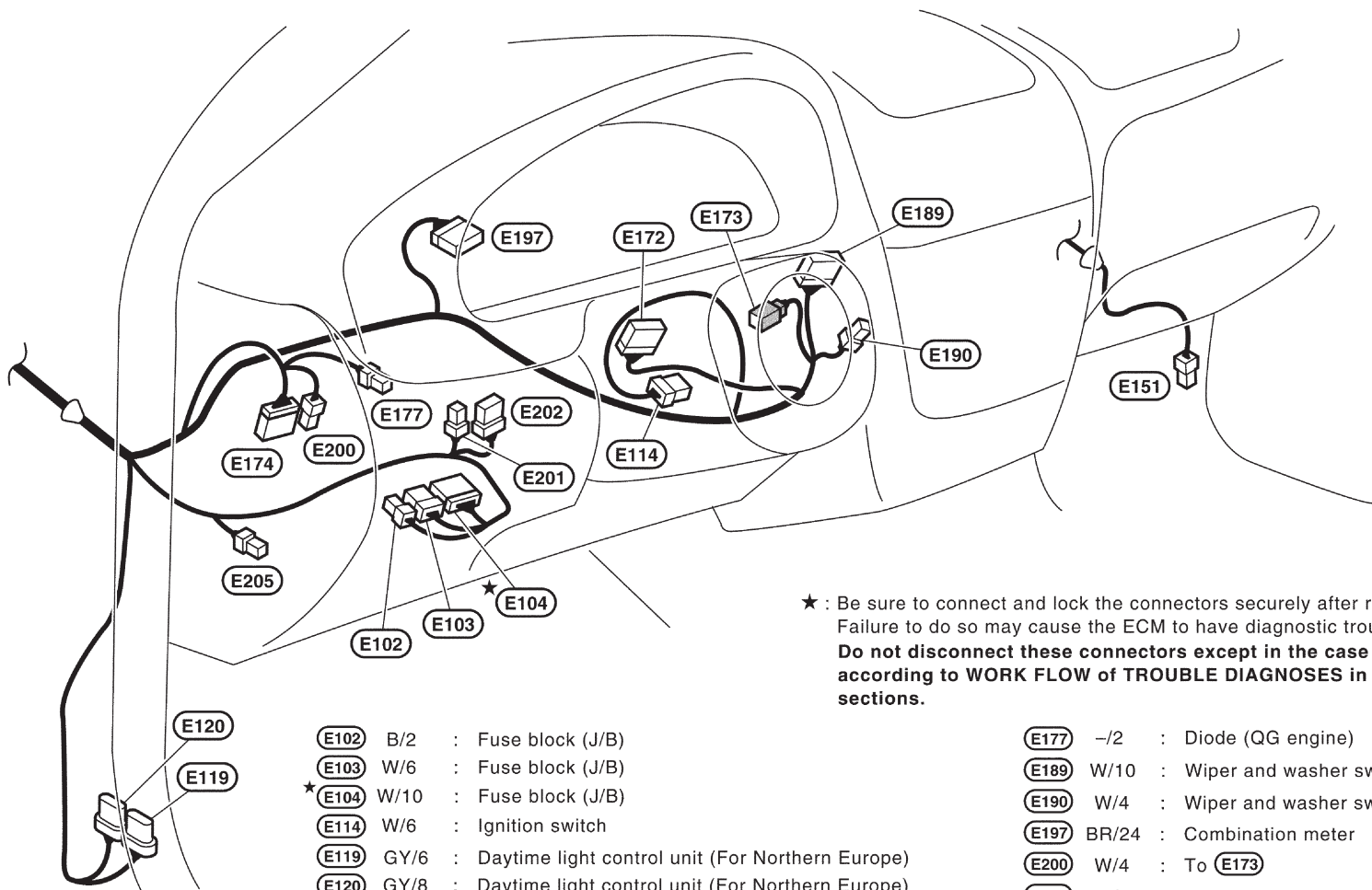


F2	(E1)	B/31	:	ABS actuator and electric unit (For ABS)	F4	(E58)	G/2	:	Glow relay (YD engine)	D1	★(E184)	B/4	:	Cooling fan relay-1 (YD engine and ★2)
F3	(E4)	-	:	Body ground (For ABS)	E2	(E59)	-	:	Fusible link and fuse box	D1	★(E185)	B/5	:	Cooling fan relay-2 (YD engine)
C2	(E5)	GY/2	:	Front wheel sensor RH (For ABS)	E2	(E60)	B/2	:	Fusible link and fuse box (★1)	E1	★(E186)	B/4	:	Cooling fan relay-3 (YD engine and ★2)
B2	(E6)	-	:	Relay box	E2	(E61)	W/1	:	Fusible link and fuse box (★2)	E1	★(E187)	B/5	:	Cooling fan relay-4 (YD engine)
D1	★(E7)	BR/6	:	Cooling fan relay-1 (QG engine for Europe)	E2	(E62)	B/1	:	Fusible link and fuse box (QG engine)	D2	(E188)	GY/2	:	Brake fluid level switch (With ABS)
D1	(E8)	W/3	:	Horn relay	E2	(E63)	B/1	:	Fusible link and fuse box (★1)	D2	(E191)	GY/5	:	Wiper motor
E1	(E9)	L/4	:	Air conditioner relay	E2	(E64)	-	:	Fusible link and fuse box (YD engine and ★2)	E1	(E193)	B/5	:	Rear wiper relay
E1	(E10)	L/4	:	Park/neutral position (PNP) relay (A/T models)	E2	(E65)	-	:	Fusible link and fuse box (YD engine and ★2)	E1	(E194)	B/5	:	Front wiper relay
C3	(E22)	-	:	Alternator (B)	E2	(E66)	B/1	:	Fusible link and fuse box (★1)	E3	(E195)	W/4	:	To (F115) (A/T models for Europe and M/T models For Australia)
C3	(E23)	-	:	Alternator (E)	E2	★(E67)	B/6	:	Fusible link and fuse box (QG engine)	F3	(E196)	BR/2	:	Fuel filter switch (YD engine)
C3	(E24)	GY/2	:	Alternator (S,L)	E2	★(E68)	W/6	:	Fusible link and fuse box (QG engine)	E1	(E198)	BR/6	:	ECM relay (QG engine)
C3	(E25)	B/1	:	Compressor	E2	★(E69)	W/4	:	Fusible link and fuse box (QG engine)	E1	(E199)	BR/6	:	ECM relay (YD engine)
D3	(E26)	-	:	Glow plug (YD engine)	E2	(E70)	W/3	:	Fusible link and fuse box (★2)	A3	(E203)	B/2	:	Washer motor
C3	(E27)	-	:	Body ground	E2	(E71)	G/2	:	Fusible link and fuse box (★1) (QG engine)	C5	(E204)	-/2	:	Outside air temperature sensor
A3	★(E30)	-	:	Body ground	E3	(E72)	-	:	Battery	C2	(E206)	-/2	:	Side turn signal lamp RH
A3	(E32)	GY/2	:	Front turn signal lamp RH	F4	★(E73)	-	:	Body ground	G3	(E207)	-/2	:	Side turn signal lamp LH
B4	(E33)	B/3	:	Headlamp aiming motor RH (For Europe)	E3	(E75)	B/8	:	To (F36)	E3	(E208)	W/6	:	To (F116) (A/T models for Australia)
C5	(E35)	B/2	:	Parking lamp RH	E3	(E76)	BR/2	:	Front wheel sensor LH (For ABS)					
B4	(E37)	GY/3	:	Headlamp RH	D2	(E78)	GY/2	:	Brake fluid level switch (Without ABS)					
B4	(E38)	L/2	:	Front fog lamp RH (For Europe)	D3	★(E178)	B/2	:	Cooling fan motor-1 (★1)					
C4	(E40)	B/1	:	Horn high	D3	★(E179)	B/2	:	Cooling fan motor-2 (For Europe)					
D5	(E45)	GY/3	:	Headlamp LH	D3	★(E182)	B/2	:	Cooling fan motor-1 (YD engine and ★2)					
D5	(E47)	B/2	:	Parking lamp LH	D3	★(E183)	B/2	:	Cooling fan motor-2 (For Australia)					
E4	(E48)	B/3	:	Headlamp aiming motor LH (For Europe)										
E5	(E49)	L/2	:	Front fog lamp LH (For Europe)										
D4	(E50)	B/3	:	Refrigerant pressure sensor (QG engine)										
D4	(E51)	B/2	:	Dual-pressure switch (YD engine)										
E4	(E52)	GY/2	:	Not used										
E5	(E54)	GY/2	:	Front turn signal lamp LH										
F4	★(E55)	GY/2	:	Dropping resistor (A/T models)										
E3	(E56)	W/1	:	Glow relay (YD engine)										
E3	(E57)	W/1	:	Glow relay (YD engine)										

★1 : QG engine for Europe

★2 : QG engine for Australia

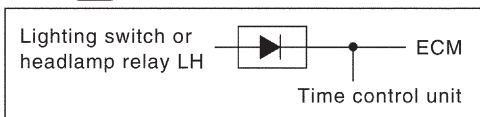
★ : Be sure to connect and lock the connectors securely after repair work.  
Failure to do so may cause the ECM to have diagnostic trouble codes.**Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**



★ : 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.**

- |         |      |   |  |        |       |   |                         |
|---------|------|---|--|--------|-------|---|-------------------------|
| (E102)  | B/2  | : | Fuse block (J/B)                                 | (E177) | -/2   | : | Diode (QG engine)       |
| (E103)  | W/6  | : | Fuse block (J/B)                                 | (E189) | W/10  | : | Wiper and washer switch |
| ★(E104) | W/10 | : | Fuse block (J/B)                                 | (E190) | W/4   | : | Wiper and washer switch |
| (E114)  | W/6  | : | Ignition switch                                  | (E197) | BR/24 | : | Combination meter       |
| (E119)  | GY/6 | : | Daytime light control unit (For Northern Europe) | (E200) | W/4   | : | To (E173)               |
| (E120)  | GY/8 | : | Daytime light control unit (For Northern Europe) | (E201) | W/4   | : | Headlamp aiming switch  |
| (E151)  | W/4  | : | To (B101) (For ABS)                              | (E202) | L/6   | : | Headlamp washer switch  |
| (E172)  | W/14 | : | Lighting switch                                  | (E205) | L/4   | : | Front fog lamp relay    |
| (E173)  | W/2  | : | Key switch                                       |        |       |   |                         |
| (E174)  | W/16 | : | To (E159)  |        |       |   |                         |

Diode (E177)



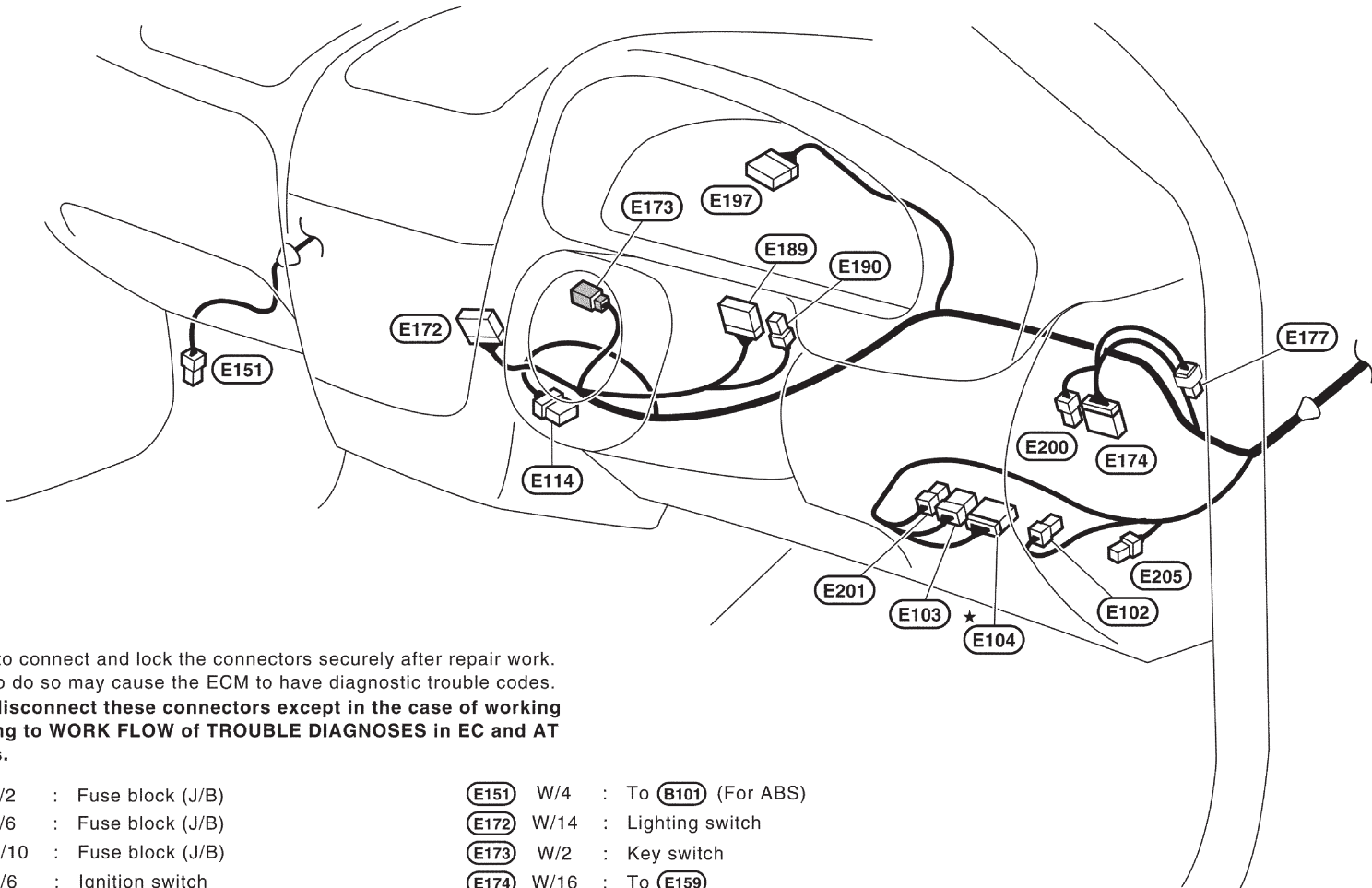
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# HARNES LAYOUT

## PASSENGER COMPARTMENT — RHD MODELS

Engine Room Harness (Cont'd)

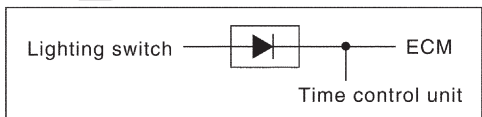
N/E/L03/2S05



★ : 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.**

- |         |      |                    |        |       |                                       |
|---------|------|--------------------|--------|-------|---------------------------------------|
| (E102)  | B/2  | : Fuse block (J/B) | (E151) | W/4   | : To (B101) (For ABS)                 |
| (E103)  | W/6  | : Fuse block (J/B) | (E172) | W/14  | : Lighting switch                     |
| ★(E104) | W/10 | : Fuse block (J/B) | (E173) | W/2   | : Key switch                          |
| (E114)  | W/6  | : Ignition switch  | (E174) | W/16  | : To (E159)                           |
|         |      |                    | (E177) | -/2   | : Diode (QG engine)                   |
|         |      |                    | (E189) | W/10  | : Wiper and washer switch             |
|         |      |                    | (E190) | W/4   | : Wiper and washer switch             |
|         |      |                    | (E197) | BR/24 | : Combination meter                   |
|         |      |                    | (E200) | W/4   | : To (E173)                           |
|         |      |                    | (E201) | W/4   | : Headlamp aiming switch (For Europe) |
|         |      |                    | (E205) | L/4   | : Front fog lamp relay (For Europe)   |

Diode (E177)



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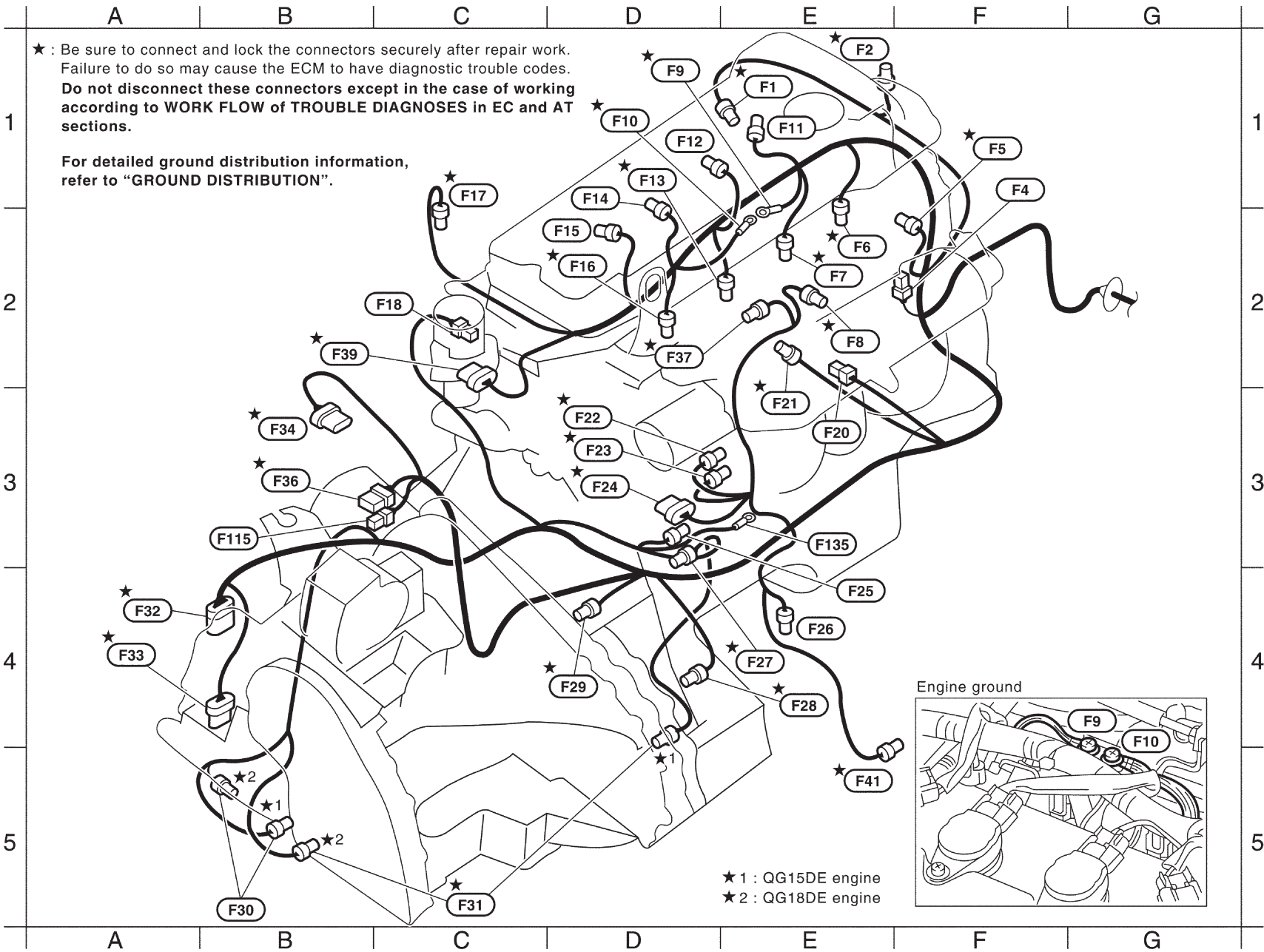
YEL740C

**HARNES LAYOUT**

**Engine Control Harness/QG Engine Models**

LHD MODELS

NJEL0135  
NJEL0135S01



★ : 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.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

★ 1 : QG15DE engine  
★ 2 : QG18DE engine

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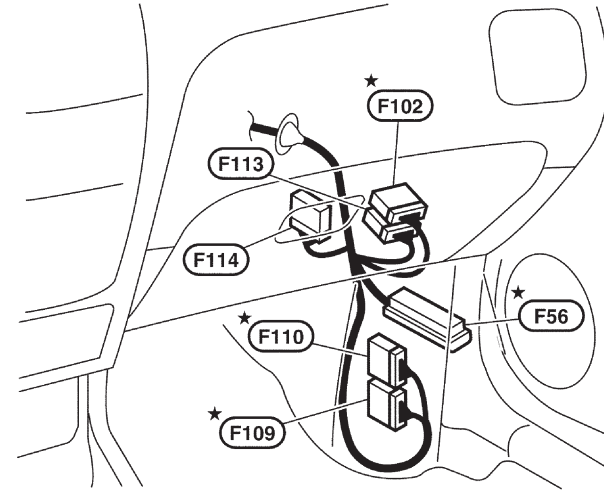
YEL741C



- E1★ (F1) GY/2 : Engine coolant temperature sensor
- E1★ (F2) B/3 : Camshaft position sensor (PHASE)
- F1 (F4) GY/2 : Condenser
- F1★ (F5) GY/2 : Intake valve timing control solenoid valve (QG18DE engine with three way catalyst)
  
- E2★ (F6) GY/2 : Injector No.1
- E2★ (F7) GY/2 : Injector No.2
- E2★ (F8) L/2 : EVAP canister purge volume control solenoid valve
- D1★ (F9) - : Engine ground
- D1★ (F10) - : Engine ground
- E1 (F11) GY/3 : Ignition coil No.1 (With power transistor)
- D1 (F12) GY/3 : Ignition coil No.2 (With power transistor)
- D1★ (F13) GY/2 : Injector No.3
- D1 (F14) GY/3 : Ignition coil No.3 (With power transistor)
- D2 (F15) GY/3 : Ignition coil No.4 (With power transistor)
- D2★ (F16) GY/2 : Injector No.4
- C1★ (F17) SB/3 : Heated oxygen sensor 1 (Front) (With three way catalyst)
- C2 (F18) B/1 : Thermal transmitter
- E3 (F20) B/1 : Oil pressure switch
- E3★ (F21) GY/2 : Knock sensor
- D3★ (F22) BR/3 : Throttle position sensor
- D3★ (F23) GY/3 : Throttle position switch
- D3★ (F24) GY/6 : IACV-AAC valve
- E4 (F25) GY/1 : Starter motor (Except M/T models without daytime light system)
  
- E4 (F26) GY/2 : Power steering oil pressure switch
- E4★ (F27) B/3 : Crankshaft position sensor (POS)
- E4★ (F28) GY/2 : Vehicle speed sensor
- D4★ (F29) BR/3 : Revolution sensor (A/T models)
- B5 (F30) B/2 : Back-up lamp switch (M/T models)
- C5★ (F31) B/2 : Park/neutral position (PNP) switch (M/T models)
- A4★ (F32) B/10 : Park/neutral position (PNP) switch (A/T models)
- A4★ (F33) B/8 : A/T solenoid valves (A/T models)
- B3★ (F34) GY/5 : Mass air flow sensor
- B3★ (F36) B/8 : To (E75)
- D2★ (F37) GY/2 : EGR temperature sensor
- B2★ (F39) GY/6 : EGR volume control valve
- E5★ (F41) G/4 : Heated oxygen sensor 2 (Rear)

- B3 (F115) W/4 : To (E195) (A/T models)
- E3 (F135) - : Starter motor (M/T models without daytime light system)

**PASSENGER COMPARTMENT**



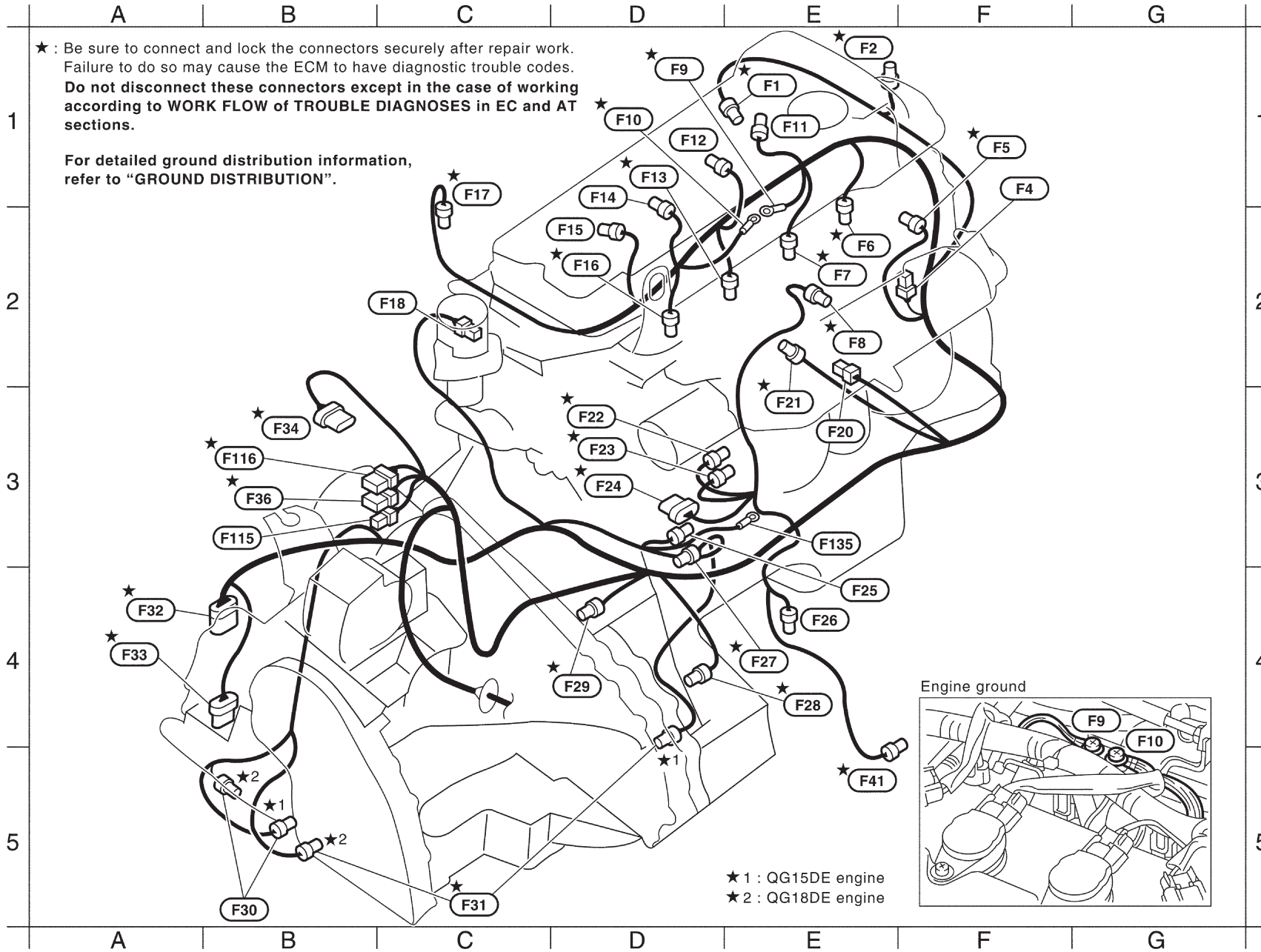
★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

- ★ (F56) GY/111 : ECM
- ★ (F102) W/16 : To (M63)
- ★ (F109) W/24 : TCM (Transmission control modure) (A/T models)
- ★ (F110) GY/24 : TCM (Transmission control modure) (A/T models)
- (F113) BR/16 : To (M169)
- (F114) -/20 : Joint connector-6

# HARNES LAYOUT

Engine Control Harness/QG Engine Models (Cont'd)

**RHD MODELS**



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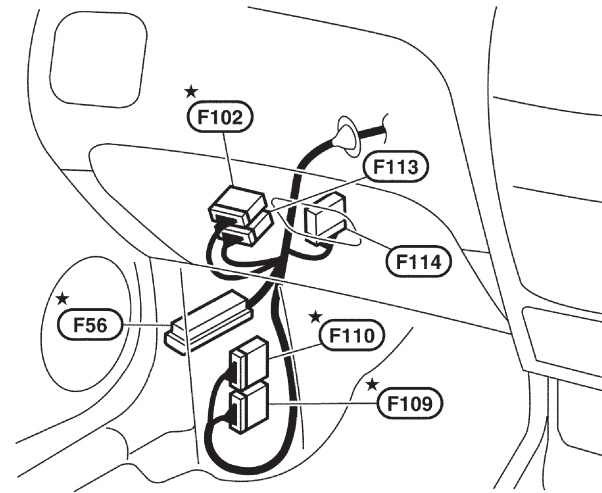
YEL743C

N/ELO1365/02

- E1★ (F1) GY/2 : Engine coolant temperature sensor
- E1★ (F2) B/3 : Camshaft position sensor (PHASE)
- F1 (F4) GY/2 : Condenser
- F1★ (F5) G/2 : Intake valve timing control solenoid valve (QG18DE engine with three way catalyst)
  
- E2★ (F6) GY/2 : Injector No.1
- E2★ (F7) GY/2 : Injector No.2
- E2★ (F8) L/2 : EVAP canister purge volume control solenoid valve
- D1★ (F9) - : Engine ground
- D1★ (F10) - : Engine ground
- E1 (F11) GY/3 : Ignition coil No.1 (With power transistor)
- D1 (F12) GY/3 : Ignition coil No.2 (With power transistor)
- D1★ (F13) GY/2 : Injector No.3
- D1 (F14) GY/3 : Ignition coil No.3 (With power transistor)
- D2 (F15) GY/3 : Ignition coil No.4 (With power transistor)
- D2★ (F16) GY/2 : Injector No.4
- C1★ (F17) SB/3 : Heated oxygen sensor 1 (Front) (With three way catalyst)
- C2 (F18) B/1 : Thermal transmitter
- E3 (F20) B/1 : Oil pressure switch
- E3★ (F21) GY/2 : Knock sensor
- D3★ (F22) BR/3 : Throttle position sensor
- D3★ (F23) GY/3 : Throttle position switch
- D3★ (F24) GY/6 : IACV-AAC valve
- E4 (F25) GY/1 : Starter motor (A/T models)
- E4 (F26) GY/2 : Power steering oil pressure switch
- E4★ (F27) B/3 : Crankshaft position sensor (POS)
- E4★ (F28) GY/2 : Vehicle speed sensor
- D4★ (F29) BR/3 : Revolution sensor (A/T models)
- B5 (F30) B/2 : Back-up lamp switch (M/T models)
- C5★ (F31) B/2 : Park/neutral position (PNP) switch (M/T models)
- A4★ (F32) B/10 : Park/neutral position (PNP) switch (A/T models)
- A4★ (F33) B/8 : A/T solenoid valves (A/T models)
- B3★ (F34) GY/5 : Mass air flow sensor
- B3★ (F36) B/8 : To (E75)
- E5★ (F41) G/4 : Heated oxygen sensor 2 (Rear)

- B3 (F115) W/4 : To (E195) (A/T models for Europe and M/T models for Australia)
- B3 (F116) W/6 : To (E208) (A/T models for Australia)
- E3 (F135) - : Starter motor (M/T models)

**PASSENGER COMPARTMENT**



★ : 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.**

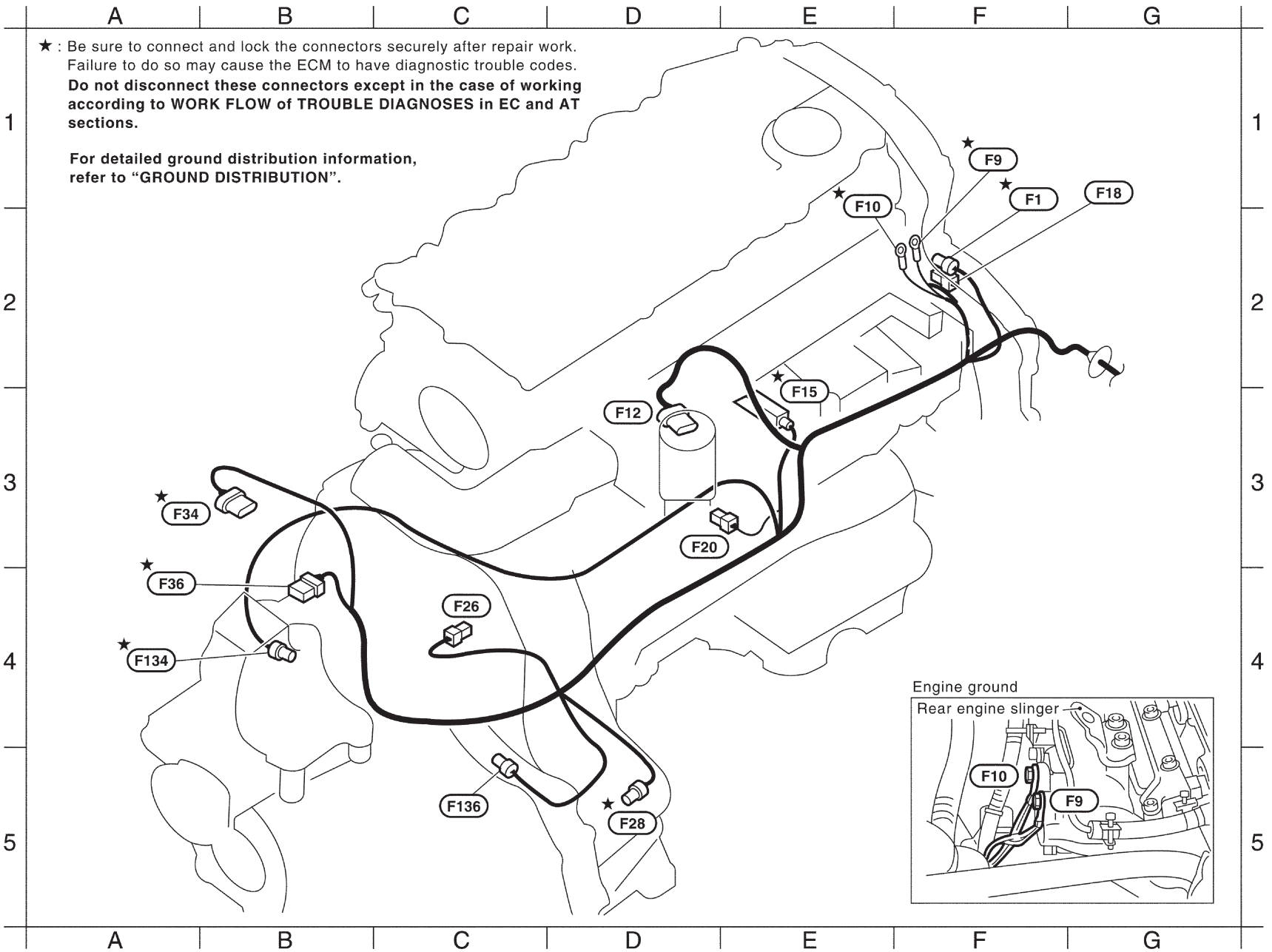
- ★ (F56) GY/111 : ECM
- ★ (F102) W/16 : To (M63)
- ★ (F109) W/24 : TCM (Transmission control module) (A/T models)
- ★ (F110) GY/24 : TCM (Transmission control module) (A/T models)
- (F113) BR/16 : To (M169)
- (F114) -/20 : Joint connector-6

# HARNES LAYOUT

## Engine Control Harness/YD Engine Models

LHD MODELS

N/EI.0343  
N/EI.0343S01



★ : 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.

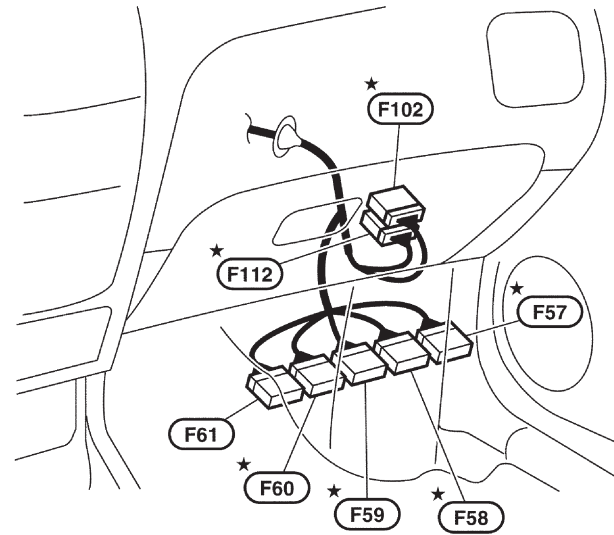
For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

EL-344

YEL745C

- F1 ★ (F1) GY/2 : Engine coolant temperature sensor
- F1 ★ (F9) - : Engine ground
- E1 ★ (F10) - : Engine ground
- D3 (F12) GY/6 : EGR volume control valve
- E3 ★ (F15) B/8 : Electronic control fuel injection pump
- G1 (F18) B/1 : Thermal transmitter
- D3 (F20) B/1 : Oil pressure switch
- C4 (F26) B/1 : Starter motor
- D5 ★ (F28) GY/2 : Vehicle speed sensor
- A3 ★ (F34) GY/5 : Mass air flow sensor
- A4 ★ (F36) B/8 : To (E75)
- A4 ★ (F134) GY/2 : Crankshaft position sensor (TDC)
- C5 ★ (F136) GY/4 : Park/neutral position (PNP) and back-up lamp switch

PASSENGER COMPARTMENT



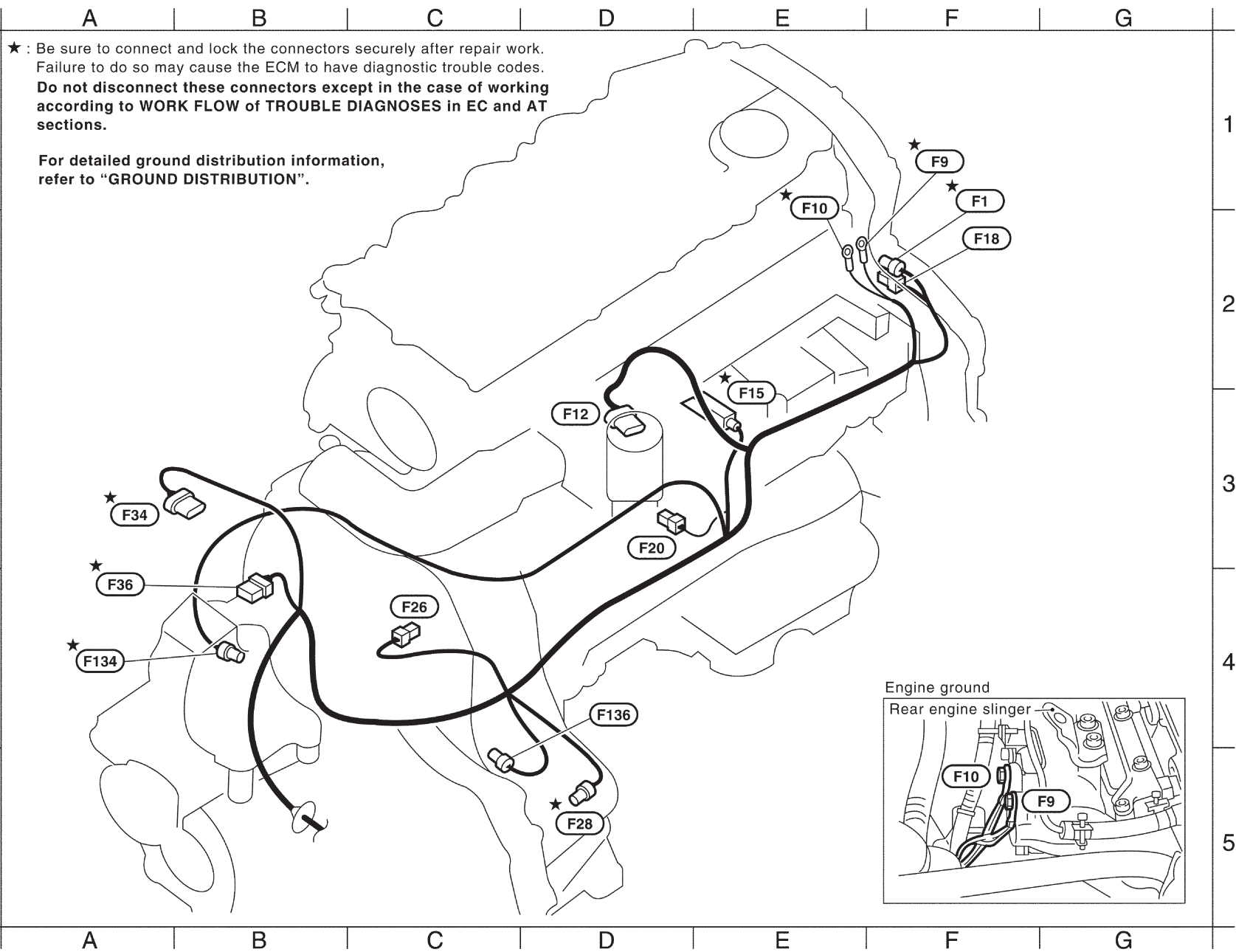
★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

- ★ (F57) -/9 : ECM
- ★ (F58) -/24 : ECM
- ★ (F59) -/52 : ECM
- ★ (F60) -/40 : ECM
- ★ (F61) -/9 : ECM
- ★ (F102) W/16 : To (M63)
- ★ (F112) BR/16 : To (M74)

# HARNISS LAYOUT

Engine Control Harness/YD Engine Models (Cont'd)

RHD MODELS



★ : 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.

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

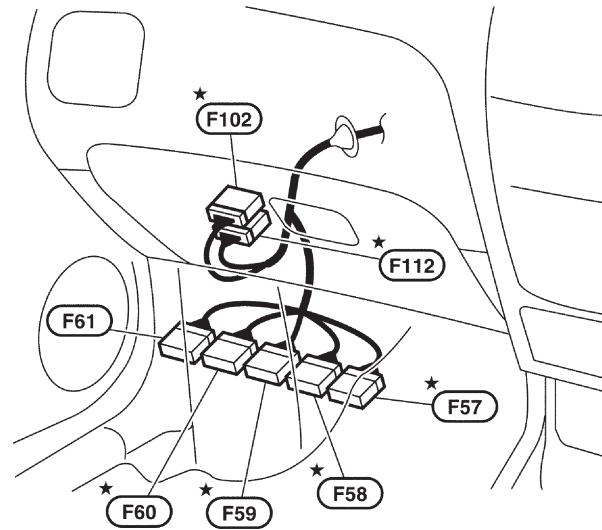
EL-346

YEL747C

NEEL0343S02

- F2 ★ (F1) GY/2 : Engine coolant temperature sensor
- F1 ★ (F9) - : Engine ground
- E1 ★ (F10) - : Engine ground
- D3 (F12) GY/6 : EGR volume control valve
- E3 ★ (F15) B/8 : Electronic control fuel injection pump
- F2 (F18) B/1 : Thermal transmitter
- D3 (F20) B/1 : Oil pressure switch
- C4 (F26) B/1 : Starter motor
- D5 ★ (F28) GY/2 : Vehicle speed sensor
- A3 ★ (F34) GY/5 : Mass air flow sensor
- A4 ★ (F36) B/8 : To (E75)
- A4 ★ (F134) GY/2 : Crankshaft position sensor (TDC)
- D4 ★ (F136) GY/4 : Park/neutral position (PNP) and back-up lamp switch

**PASSENGER COMPARTMENT**



★ : 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.**

- ★ (F57) -/9 : ECM
- ★ (F58) -/24 : ECM
- ★ (F59) -/52 : ECM
- ★ (F60) -/40 : ECM
- (F61) -/9 : ECM
- ★ (F102) W/16 : To (M63)
- ★ (F112) BR/16 : To (M74)

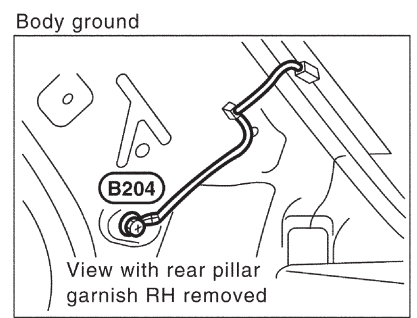
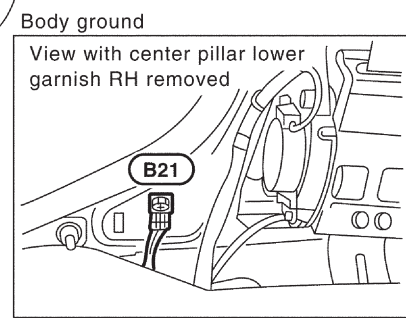
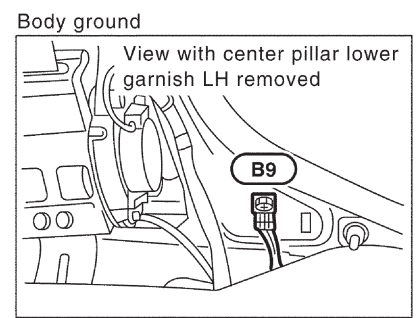
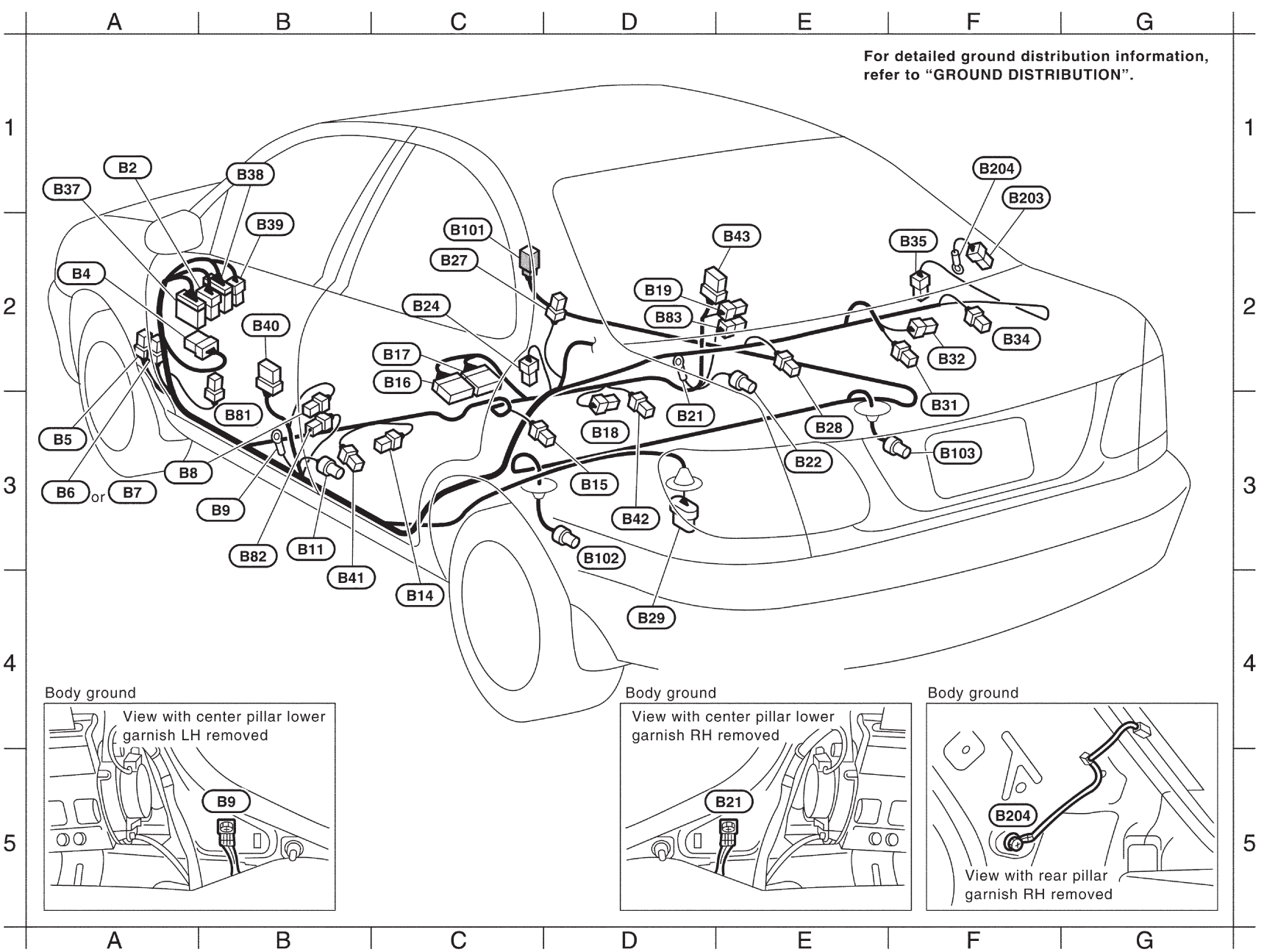


**HARNES LAYOUT**

**Body Harness/Sedan**

**INTERIOR ROOM SIDE — LHD MODELS**

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".



EL-348



A1	(B2)	W/6	:	To (M18)	(With power window)
A2	(B4)	W/8	:	Fuse block	(J/B)
A3	(B5)	L/4	:	Fuel pump relay	(QG engine)
A3	(B6)	BR/6	:	Rear window defogger relay	(For rear window defogger and mirror defogger)
A3	(B7)	L/4	:	Rear window defogger relay	(For rear window defogger only)
A3	(B8)	W/3	:	Door switch driver side	
B3	(B9)	-	:	Body ground	
B3	(B11)	Y/2	:	LH side air bag (satellite) sensor	(With side air bag)
C4	(B14)	Y/2	:	Front LH side air bag module	(With side air bag)
D3	(B15)	B/1	:	Parking brake switch	
C2	(B16)	Y/12	:	Air bag diagnosis sensor unit	
C2	(B17)	Y/12	:	Air bag diagnosis sensor unit	
D3	(B18)	Y/2	:	Front RH side air bag module	(With side air bag)
D2	(B19)	W/3	:	Door switch passenger side	
D3	(B21)	-	:	Body ground	
E3	(B22)	Y/2	:	RH side air bag (satellite) sensor	(With side air bag)
C2	(B24)	W/1	:	Rear door switch LH	
C2	(B27)	B/1	:	Rear window defogger	(+)
E3	(B28)	BR/2	:	Rear speaker LH	
D4	(B29)	GY/5	:	Fuel level sensor unit and fuel pump	
F3	(B31)	W/2	:	Trunk room lamp	
F2	(B32)	W/2	:	High-mounted stop lamp	(On the rear parcel shelf)
F2	(B34)	BR/2	:	Rear speaker RH	
F2	(B35)	W/1	:	Rear door switch RH	
A1	(B37)	BR/16	:	To (M82)	
B1	(B38)	W/12	:	To (M81)	

B2	(B39)	W/4	:	To (M80)	(For heated seat)
B2	(B40)	W/8	:	To (D56)	
B4	(B41)	W/3	:	Heated seat LH	(For cold areas)
D3	(B42)	W/3	:	Heated seat RH	(For cold areas)
E2	(B43)	W/8	:	To (D76)	
B3	(B81)	-/2	:	Diode	
B3	(B82)	Y/2	:	Front LH seat belt pre-tensioner	
D2	(B83)	Y/2	:	Front RH seat belt pre-tensioner	

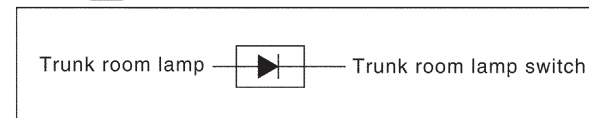
### Body No.2 harness (For ABS)

C2	(B101)	W/4	:	To (E151)	
D3	(B102)	BR/2	:	Rear wheel sensor LH	
F3	(B103)	GY/2	:	Rear wheel sensor RH	

### Sub-harness

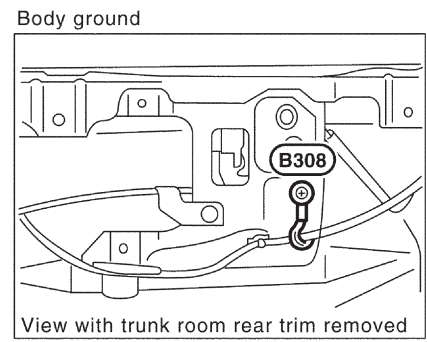
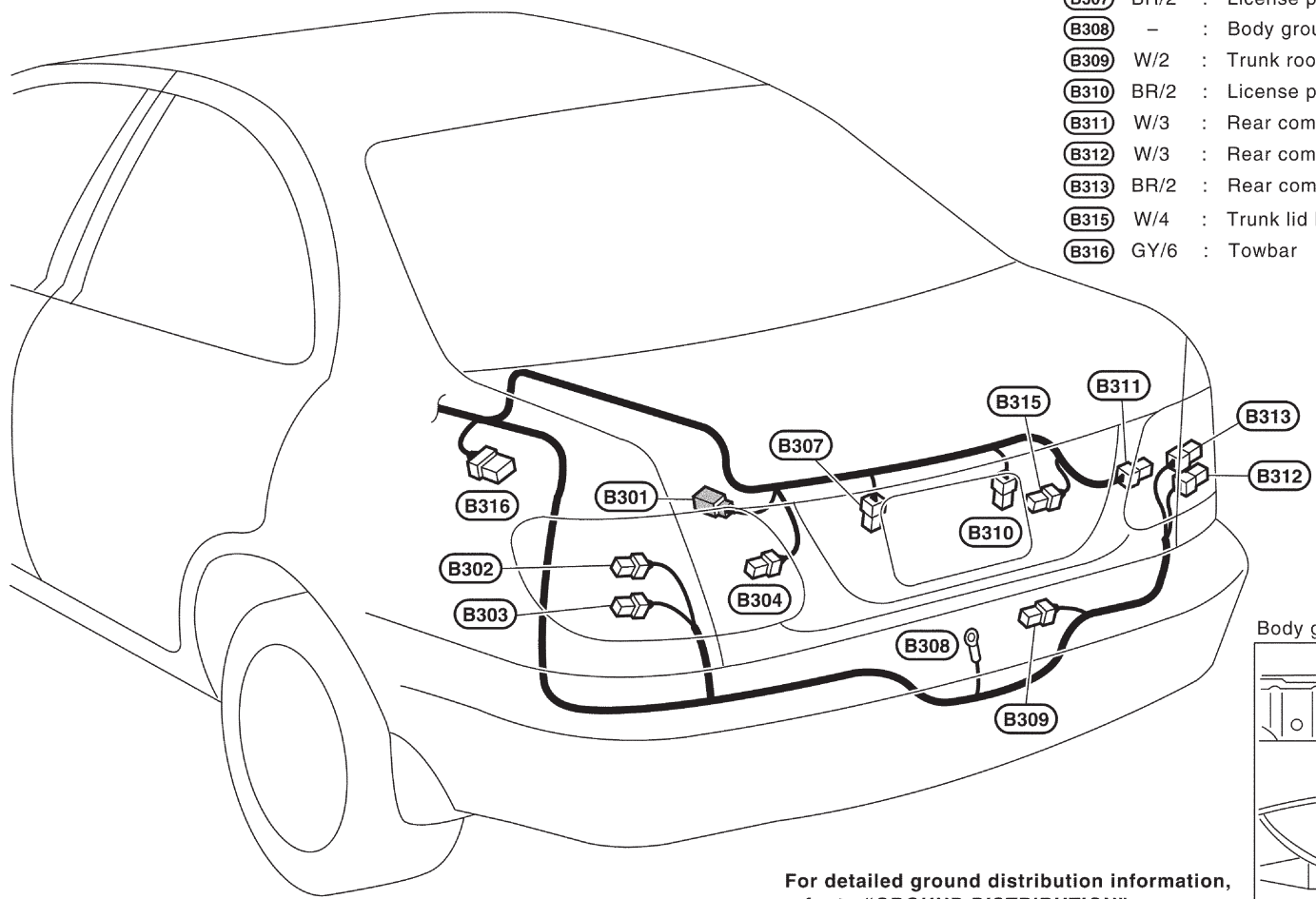
F1	(B203)	B/1	:	Rear window defogger	(-)
F1	(B204)	-	:	Body ground	

Diode (B81)



**TRUNK ROOM SIDE — LHD MODELS**

- (B301) BR/2 : High-mounted stop lamp (In the rear spoiler)
- (B302) BR/2 : Rear combination lamp LH (Outer)
- (B303) W/3 : Rear combination lamp LH (Outer)
- (B304) W/3 : Rear combination lamp LH (Inner)
- (B307) BR/2 : License plate lamp LH
- (B308) - : Body ground
- (B309) W/2 : Trunk room lamp switch
- (B310) BR/2 : License plate lamp RH
- (B311) W/3 : Rear combination lamp RH (Inner)
- (B312) W/3 : Rear combination lamp RH (Outer)
- (B313) BR/2 : Rear combination lamp RH (Outer)
- (B315) W/4 : Trunk lid lock actuator
- (B316) GY/6 : Towbar

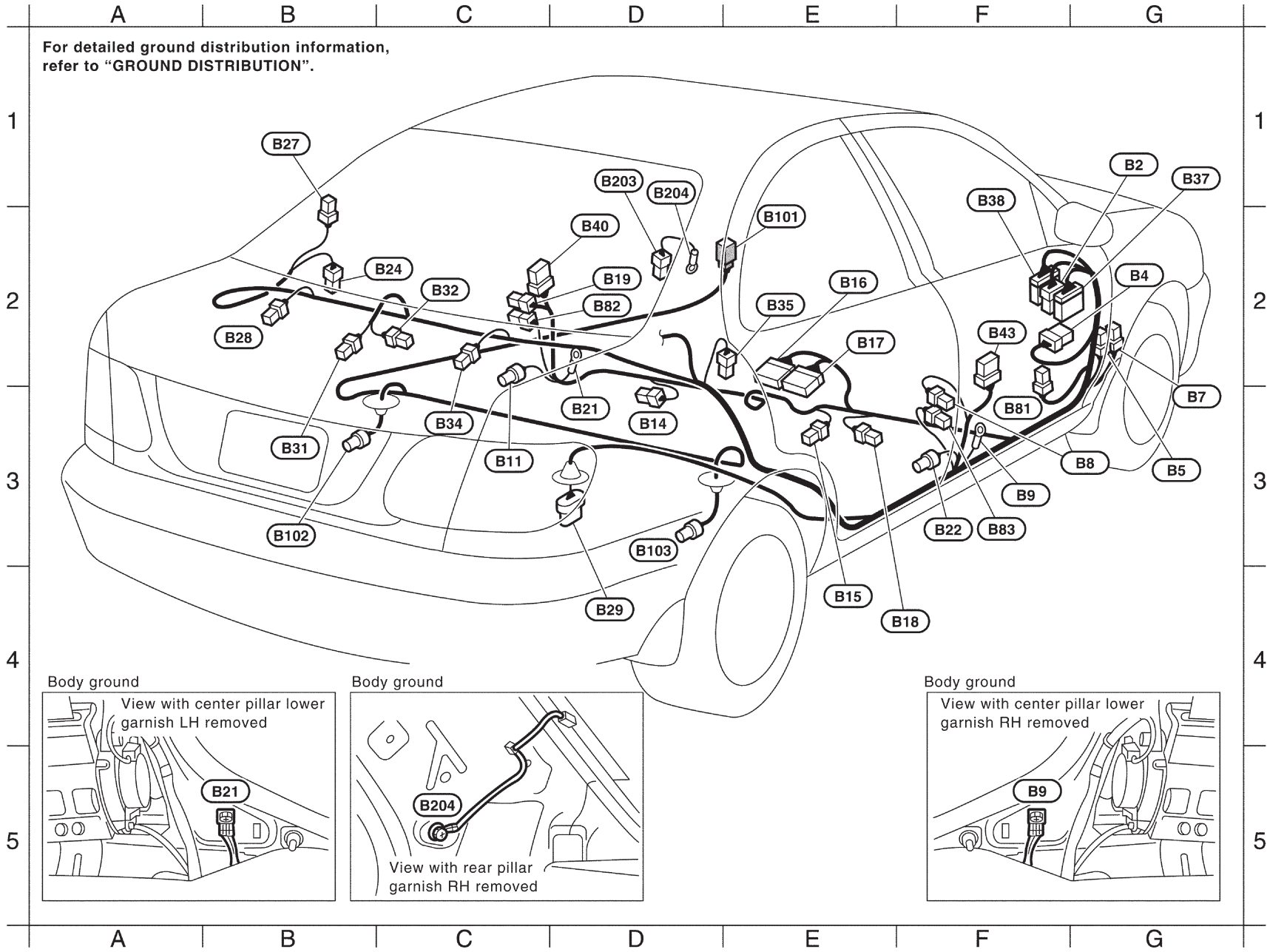


For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

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For detailed ground distribution information, refer to "GROUND DISTRIBUTION".



INTERIOR ROOM SIDE — RHD MODELS

HARNES LAYOUT

Body Harness/Sedan (Cont'd)

YEL752C

N/ELO136S04

G1	(B2)	W/6	:	To (M18)	(With power window)
G2	(B4)	W/8	:	Fuse block (J/B)	
G3	(B5)	L/4	:	Fuel pump relay (QG engine)	
G3	(B7)	L/4	:	Rear window defogger relay	
G3	(B8)	W/3	:	Door switch driver side	
F3	(B9)	-	:	Body ground	
C3	(B11)	Y/2	:	LH side air bag (satellite) sensor (With side air bag)	
D3	(B14)	Y/2	:	Front LH side air bag module (With side air bag)	
E4	(B15)	B/1	:	Parking brake switch	
E2	(B16)	Y/12	:	Air bag diagnosis sensor unit	
E2	(B17)	Y/12	:	Air bag diagnosis sensor unit	
F4	(B18)	Y/2	:	Front RH side air bag module (With side air bag)	
D2	(B19)	W/3	:	Door switch passenger side	
D3	(B21)	-	:	Body ground	
F3	(B22)	Y/2	:	RH side air bag (satellite) sensor (With side air bag)	
C2	(B24)	W/1	:	Rear door switch LH	
B1	(B27)	B/1	:	Rear window defogger (+)	
B2	(B28)	BR/2	:	Rear speaker LH	
D4	(B29)	GY/5	:	Fuel level sensor unit and fuel pump	
B3	(B31)	W/2	:	Trunk room lamp	
C2	(B32)	W/2	:	High-mounted stop lamp (On the rear parcel shelf)	
C3	(B34)	BR/2	:	Rear speaker RH	
E2	(B35)	W/1	:	Rear door switch RH	
G1	(B37)	BR/16	:	To (M82)	
F1	(B38)	W/12	:	To (M81)	
D2	(B40)	W/8	:	To (D56)	
F2	(B43)	W/8	:	To (D76)	
F3	(B81)	-/2	:	Diode	
D2	(B82)	Y/2	:	Front LH seat belt pre-tensioner	
F3	(B83)	Y/2	:	Front RH seat belt pre-tensioner	

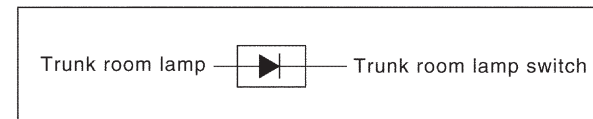
**Body No.2 harness (For ABS)**

E2	(B101)	W/4	:	To (E151)
B3	(B102)	BR/2	:	Rear wheel sensor LH
D3	(B103)	GY/2	:	Rear wheel sensor RH

**Sub-harness**

D1	(B203)	B/1	:	Rear window defogger (-)
D1	(B204)	-	:	Body ground

Diode (B81)



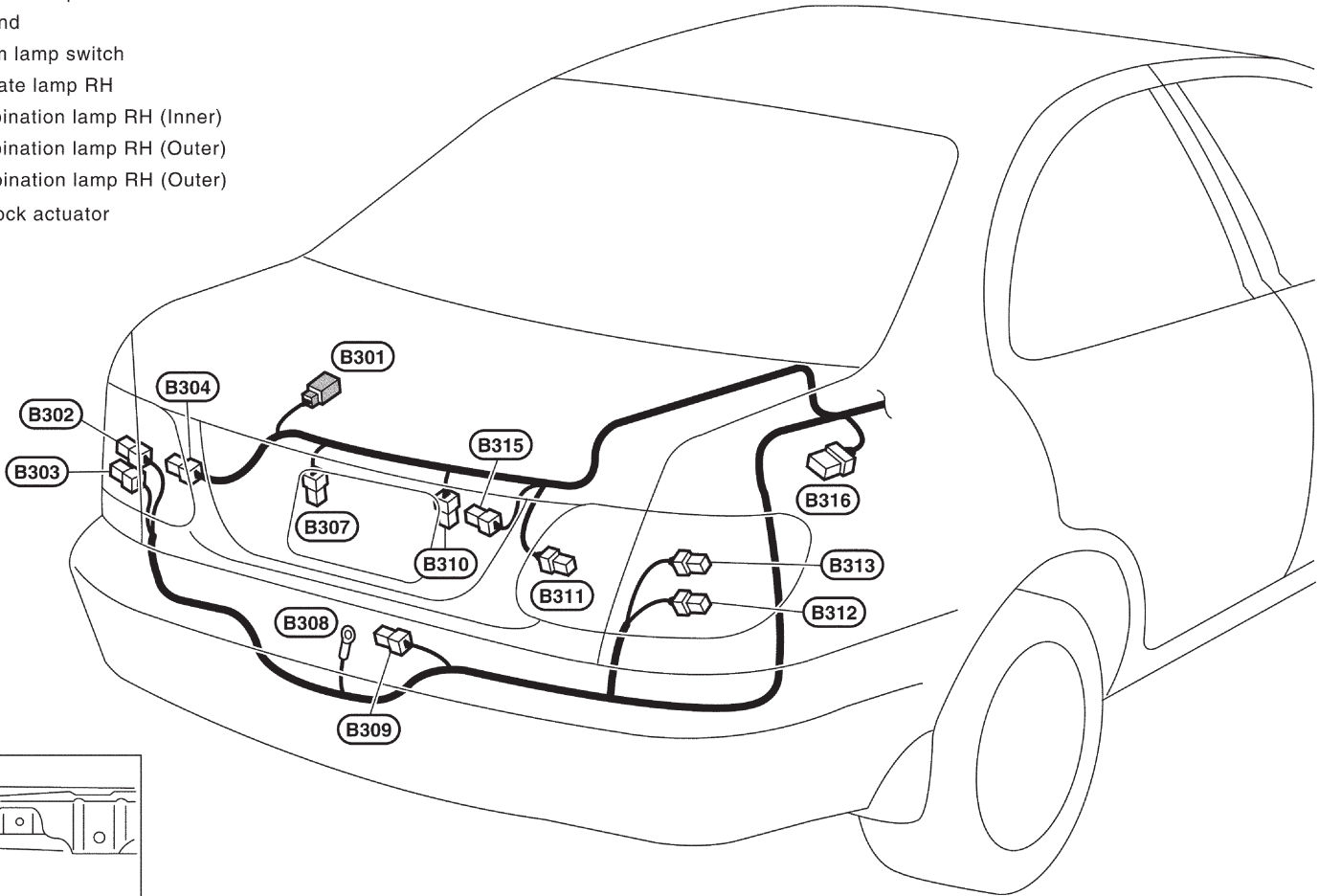
# HARNES LAYOUT

## TRUNK ROOM SIDE — RHD MODELS

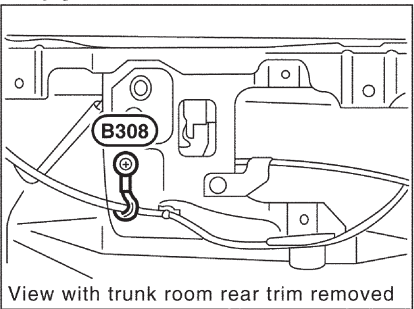
Body Harness/Sedan (Cont'd)

N/E/L0136S/06

- (B301)** BR/2 : High-mounted stop lamp (In the rear spoiler)
- (B302)** BR/2 : Rear combination lamp LH (Outer)
- (B303)** W/3 : Rear combination lamp LH (Outer)
- (B304)** W/3 : Rear combination lamp LH (Inner)
- (B307)** BR/2 : License plate lamp LH
- (B308)** - : Body ground
- (B309)** W/2 : Trunk room lamp switch
- (B310)** BR/2 : License plate lamp RH
- (B311)** W/3 : Rear combination lamp RH (Inner)
- (B312)** W/3 : Rear combination lamp RH (Outer)
- (B313)** BR/2 : Rear combination lamp RH (Outer)
- (B315)** W/4 : Trunk lid lock actuator
- (B316)** GY/6 : Towbar



Body ground



View with trunk room rear trim removed

For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

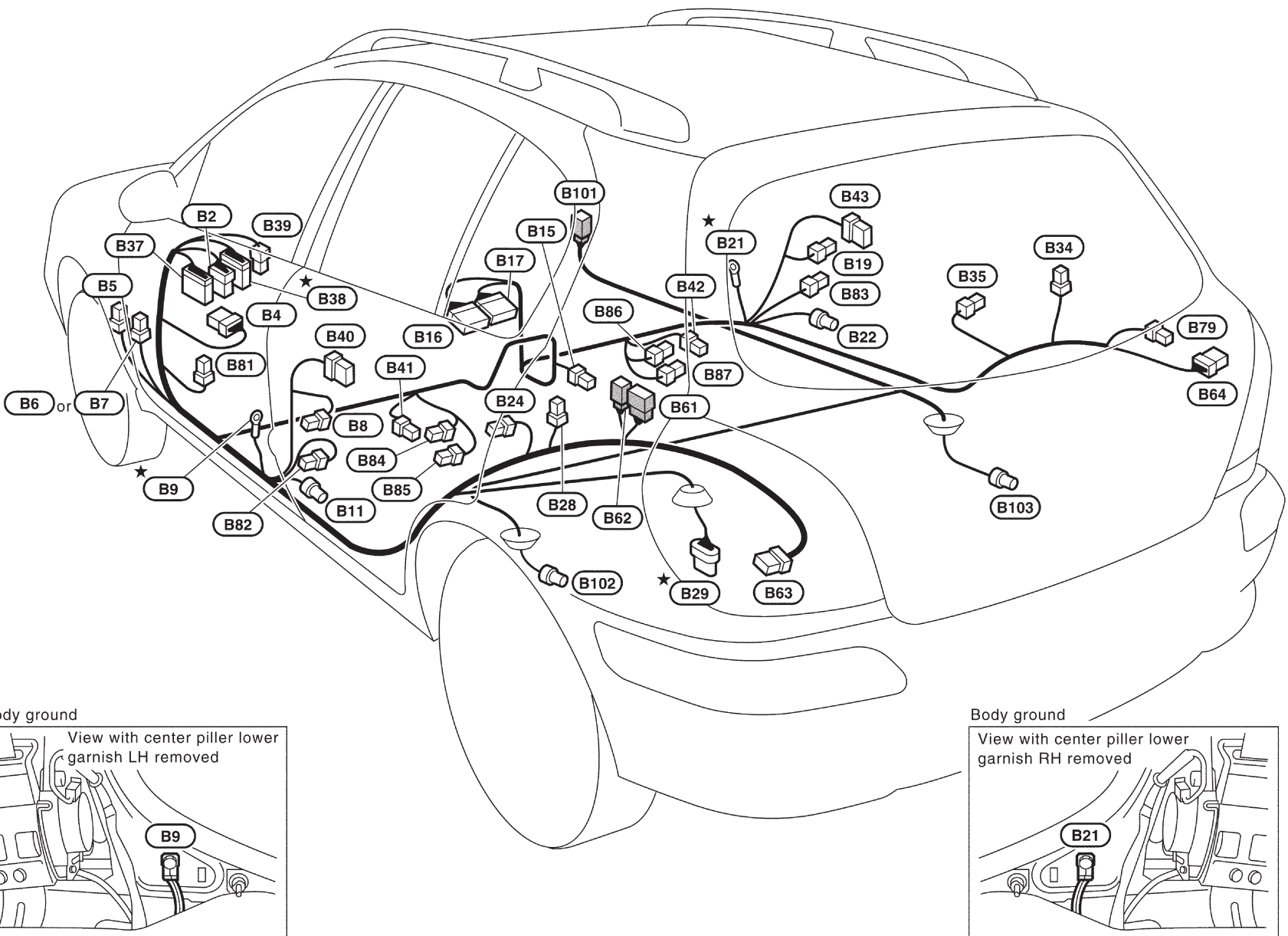
EL-353

YEL754C

**HARNES LAYOUT**

**Body Harness/Hatchback**

**LHD MODELS**



EL-354

YEL755C

NJEL0348  
NJEL0348S01

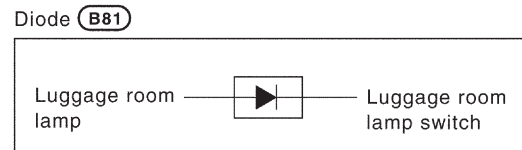
- (B2) W/6 : To (M18) (With power window)
- (B4) W/8 : Fuse block (J/B)
- (B5) L/4 : Fuel pump relay (QG engine)
- (B6) BR/6 : Rear window defogger relay  
(For rear window defogger and mirror defogger)
  
- (B7) L/4 : Rear window defogger relay  
(For rear window defogger only)
  
- (B8) W/3 : Door switch driver side
- ★ (B9) - : Body ground
- (B11) Y/2 : LH side air bag (satellite) sensor (With side air bag)
- (B15) B/1 : Parking brake switch
- (B16) Y/12 : Air bag diagnosis sensor unit
- (B17) Y/12 : Air bag diagnosis sensor unit
- (B19) W/3 : Door switch passenger side
- (B21) - : Body ground
- (B22) Y/2 : RH side air bag (satellite) sensor (With side air bag)
- (B24) W/1 : Door switch rear LH (5-door Hatchback)
- (B28) BR/2 : Rear speaker LH
- ★ (B29) GY/5 : Fuel level sensor unit and fuel pump
- (B34) BR/2 : Rear speaker RH
- (B35) W/1 : Door switch rear RH (5-door Hatchback)
- (B37) BR/16 : To (M82)
- ★ (B38) W/12 : To (M81)

- (B39) W/4 : To (M80) (For heated seat)
- (B40) W/8 : To (D56) (5-door Hatchback)
- (B41) W/3 : Heated seat LH (For cold areas)
- (B42) W/3 : Heated seat RH (For cold areas)
- (B43) W/8 : To (D76) (5-door Hatchback)
- (B61) W/8 : To (D91)
- (B62) W/2 : To (D92) (With power door lock)
- (B63) W/8 : Rear combination lamp LH
- (B64) W/8 : Rear combination lamp RH
- (B79) W/2 : Luggage room lamp
- (B81) -/2 : Diode
- (B82) Y/2 : Front LH seat belt pre-tensioner
- (B83) Y/2 : Front RH seat belt pre-tensioner
- (B84) -/2 : Front LH side air bag module (With side air bag)
- (B85) -/1 : Front LH side air bag module (With side air bag)
- (B86) -/2 : Front RH side air bag module (With side air bag)
- (B87) -/1 : Front RH side air bag module (With side air bag)

**Body No.2 harness (For ABS)**

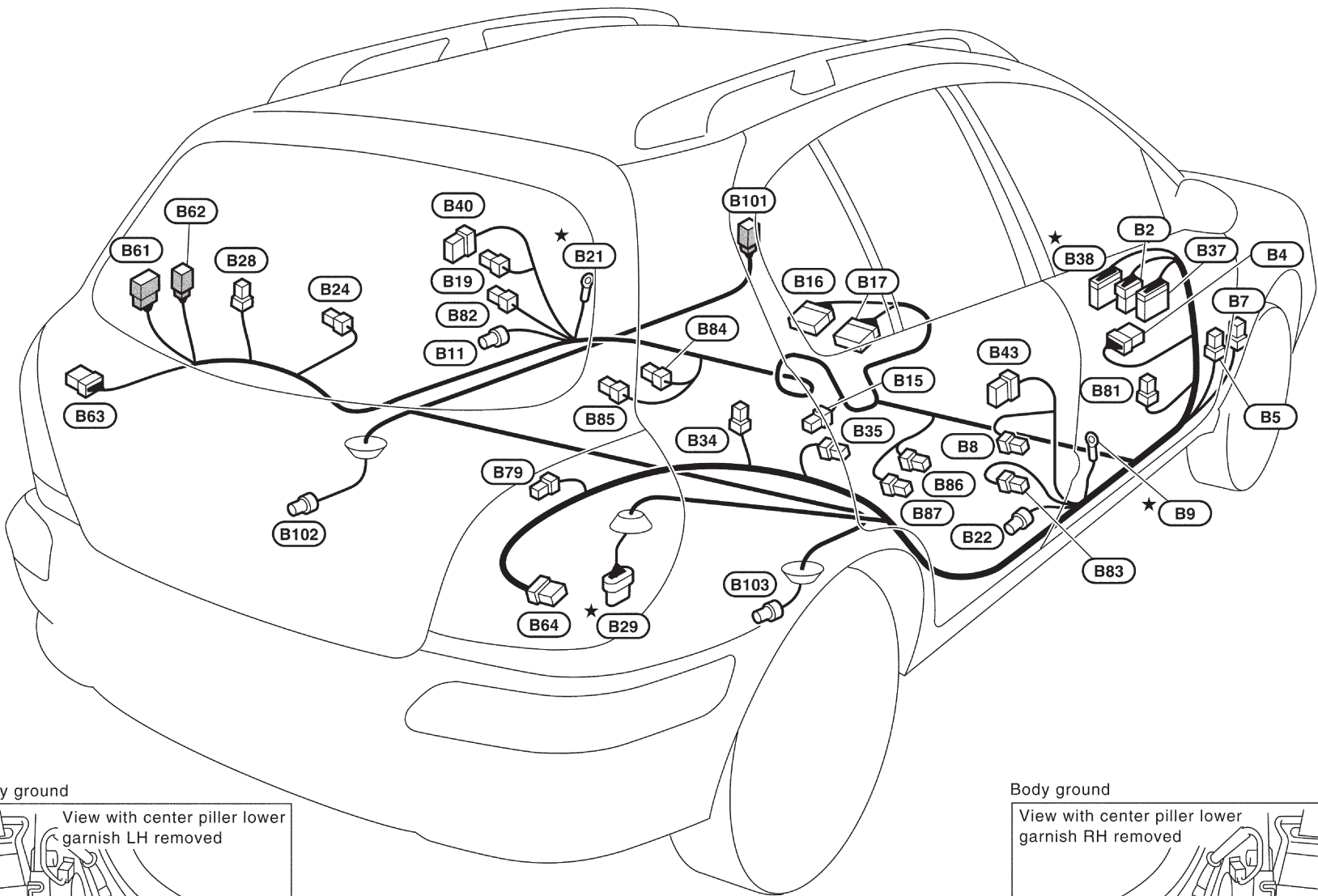
- (B101) W/4 : To (E151)
- (B102) BR/2 : Rear wheel sensor LH
- (B103) GY/2 : Rear wheel sensor RH

★ : 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.**

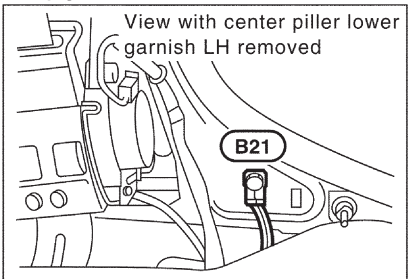




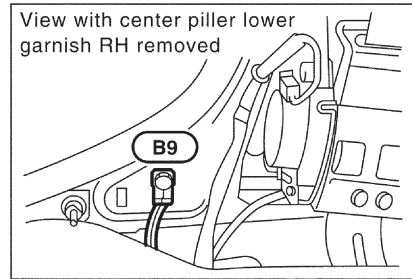
**HARNES LAYOUT**



Body ground



Body ground



EL-356

YEL757C

N/E/L0346S02



- (B2) W/6 : To (M18) (With power window)
- (B4) W/8 : Fuse block (J/B)
- (B5) L/4 : Fuel pump relay (QG engine)
- (B7) L/4 : Rear window defogger relay
- (B8) W/3 : Door switch driver side
- ★ (B9) – : Body ground
- (B11) Y/2 : LH side air bag (satellite) sensor (With side air bag)
- (B15) B/1 : Parking brake switch
- (B16) Y/12 : Air bag diagnosis sensor unit
- (B17) Y/12 : Air bag diagnosis sensor unit
- (B19) W/3 : Door switch passenger side
- ★ (B21) – : Body ground
- (B22) Y/2 : RH side air bag (satellite) sensor (With side air bag)
- (B24) W/1 : Door switch rear LH (5-door Hatchback)
- (B28) BR/2 : Rear speaker LH
- ★ (B29) GY/5 : Fuel level sensor unit and fuel pump
- (B34) BR/2 : Rear speaker RH
- (B35) W/1 : Door switch rear RH (5-door Hatchback)
- (B37) BR/16 : To (M82)
- ★ (B38) W/12 : To (M81)

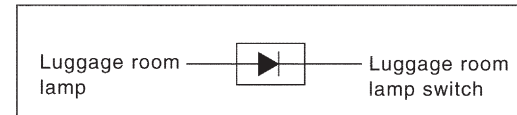
- (B40) W/8 : To (D56) (5-door Hatchback)
- (B43) W/8 : To (D76) (5-door Hatchback)
- (B61) W/8 : To (D91)
- (B62) W/2 : To (D92) (With power door lock)
- (B63) W/8 : Rear combination lamp LH
- (B64) W/8 : Rear combination lamp RH
- (B79) W/2 : Luggage room lamp
- (B81) –/2 : Diode
- (B82) Y/2 : Front LH seat belt pre-tensioner
- (B83) Y/2 : Front RH seat belt pre-tensioner
- (B84) –/2 : Front LH side air bag module (With side air bag)
- (B85) –/1 : Front LH side air bag module (With side air bag)
- (B86) –/2 : Front RH side air bag module (With side air bag)
- (B87) –/1 : Front RH side air bag module (With side air bag)

**Body No.2 harness (For ABS)**

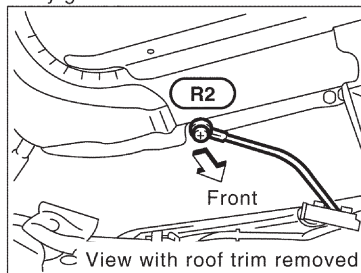
- (B101) W/4 : To (E151)
- (B102) BR/2 : Rear wheel sensor LH
- (B103) GY/2 : Rear wheel sensor RH

★ : 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.**

Diode (B81)

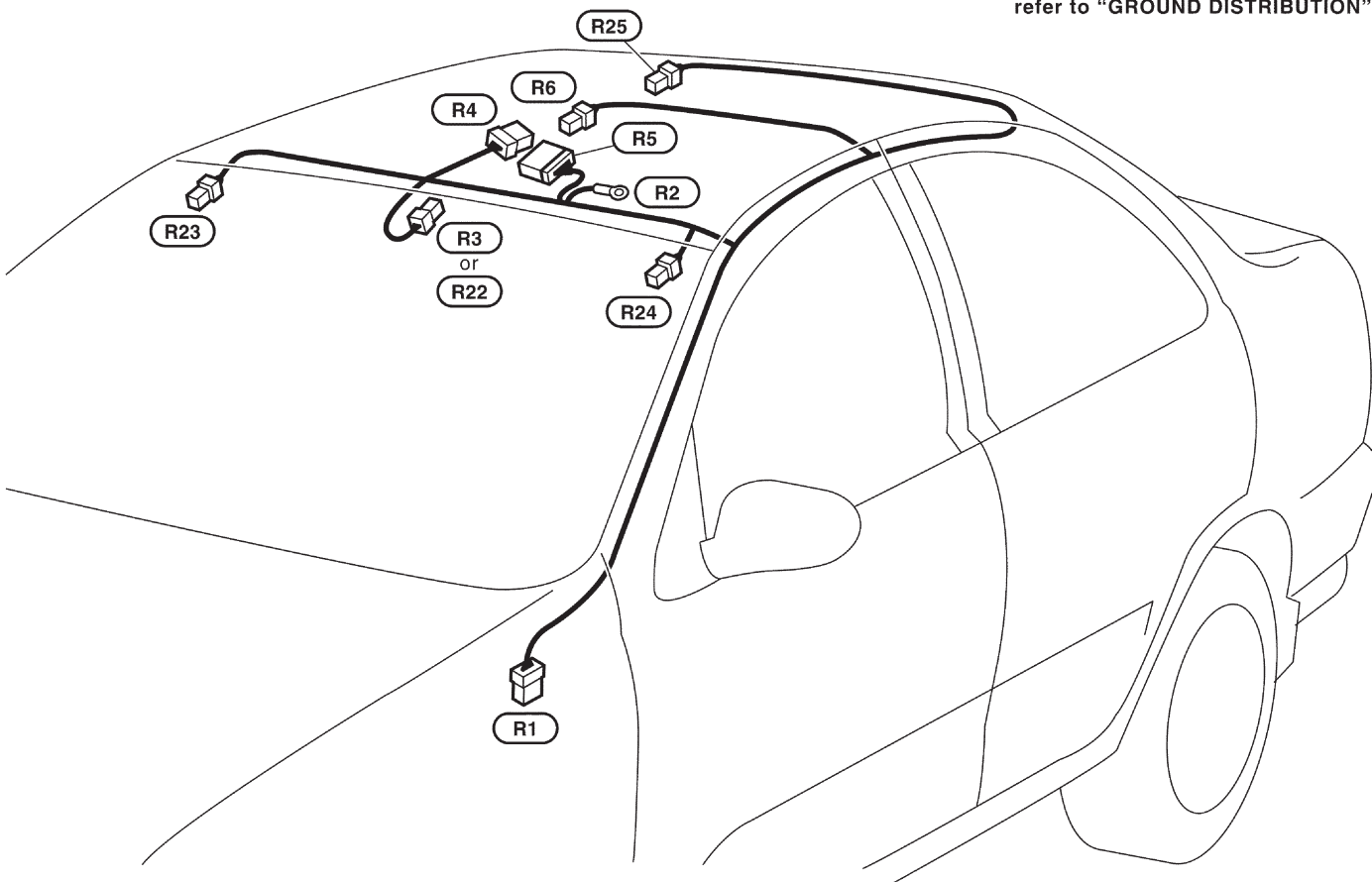


Body ground



For detailed ground distribution information, refer to "GROUND DISTRIBUTION".

- R1** W/6 : To **M24**
- R2** - : Body ground (With sunroof)
- R3** W/2 : Spot lamp (Sedan with spot lamp)
- R4** W/8 : Sunroof switch (With sunroof)
- R5** B/12 : Sunroof motor assembly (With sunroof)
- R6** W/2 : Interior room lamp
- R22** W/2 : Spot lamp (Hatchback)
- R23** B/2 : Vanity mirror lamp RH (With rear seat armrest)
- R24** B/2 : Vanity mirror lamp LH (With rear seat armrest)
- R25** W/2 : Personal lamp (Hatchback with rear seat armrest)



# HARNES LAYOUT

Front Door Harness/LHD Models

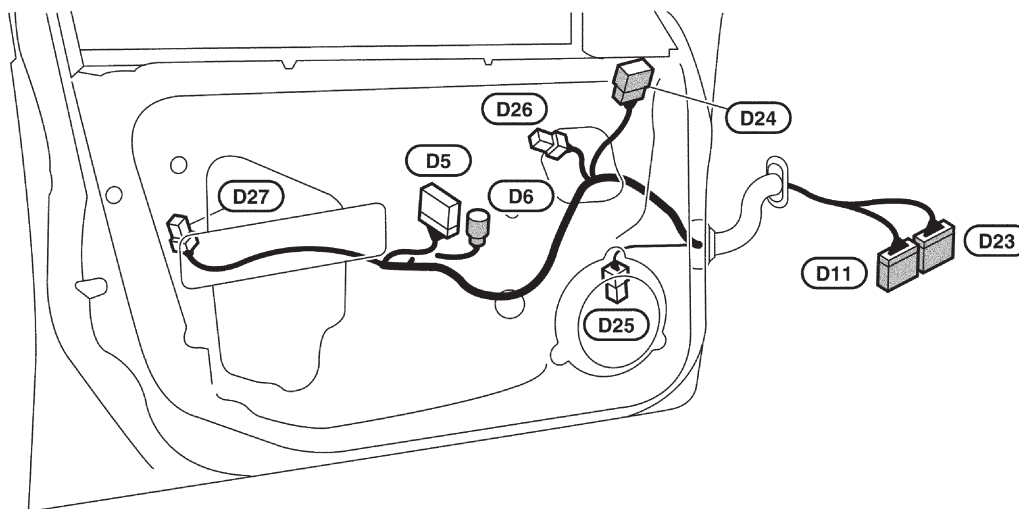
## Front Door Harness/LHD Models

NJEL0142

### LH SIDE

NJEL0142S07

- (D5)** W/16 : Power window main switch (With power window)
- (D6)** BR/3 : Door key cylinder switch (With power door lock)
- (D11)** W/16 : To **(M76)**
- (D23)** W/12 : To **(M158)**
- (D24)** GY/6 : Door mirror actuator and defogger
- (D25)** BR/2 : Front door speaker
- (D26)** B/2 : Power window regulator (With power window)
- (D27)** W/4 : Door lock actuator assembly



YEL760C

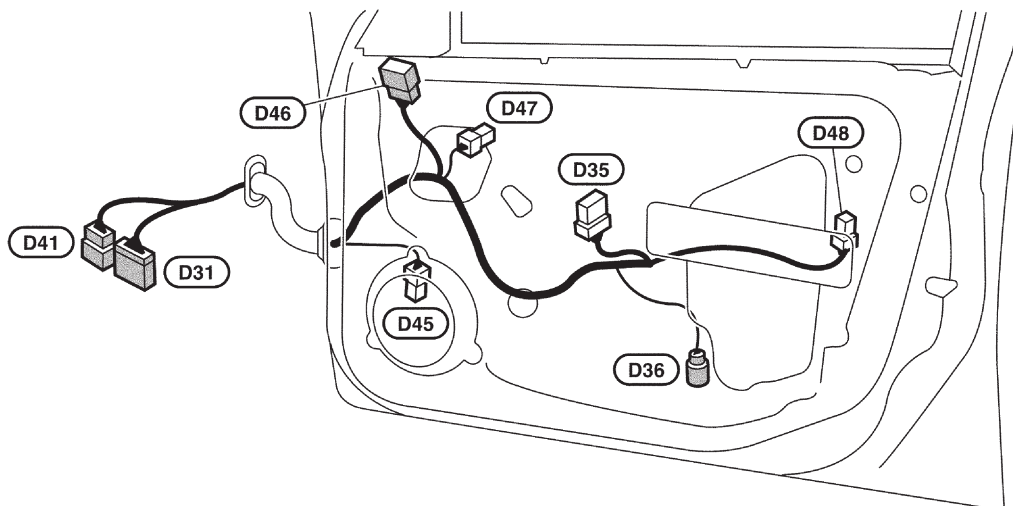
## HARNESS LAYOUT

Front Door Harness/LHD Models (Cont'd)

### RH SIDE

NJEL0142S06

- (D31) W/12 : To (M71)
- (D35) W/8 : Power window sub-switch (With power window)
- (D36) BR/3 : Door key cylinder switch (With power door lock)
- (D41) W/8 : To (M114)
- (D45) BR/2 : Front door speaker
- (D46) GY/6 : Door mirror actuator and defogger
- (D47) B/2 : Power window regulator (With power window)
- (D48) W/4 : Door lock actuator assembly (With power door lock)



YEL761C

# HARNES LAYOUT

Front Door Harness/RHD Models

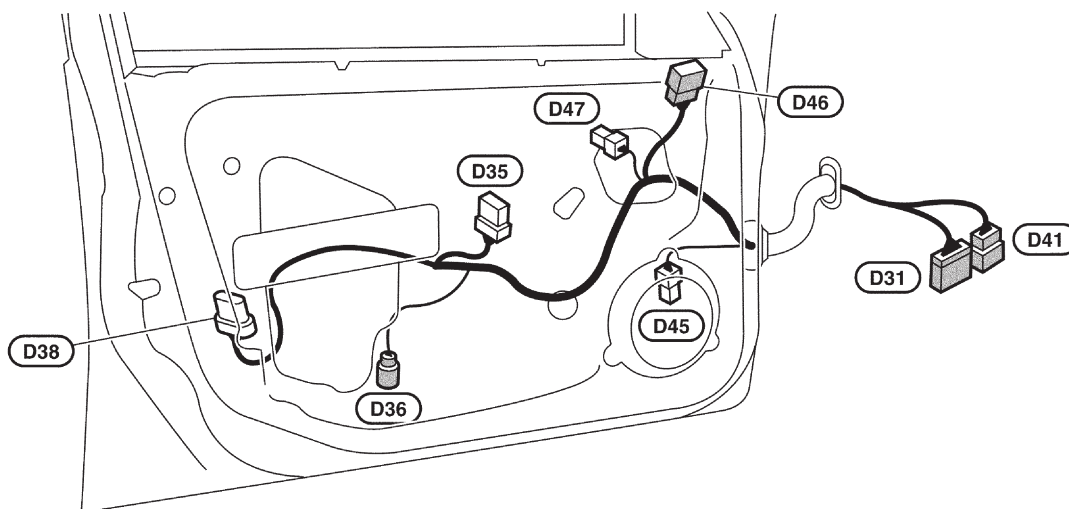
## Front Door Harness/RHD Models

NJEL0349

### LH SIDE

NJEL0349S01

- (D31) W/12 : To (M71)
- (D35) W/8 : Power window sub-switch (With power window)
- (D36) BR/3 : Door key cylinder switch (With power door lock)
- (D38) B/6 : Door lock actuator assembly (With super lock)
- (D41) W/8 : To (M114)
- (D45) BR/2 : Front door speaker
- (D46) GY/6 : Door mirror actuator
- (D47) B/2 : Power window regulator (With power window)



YEL762C

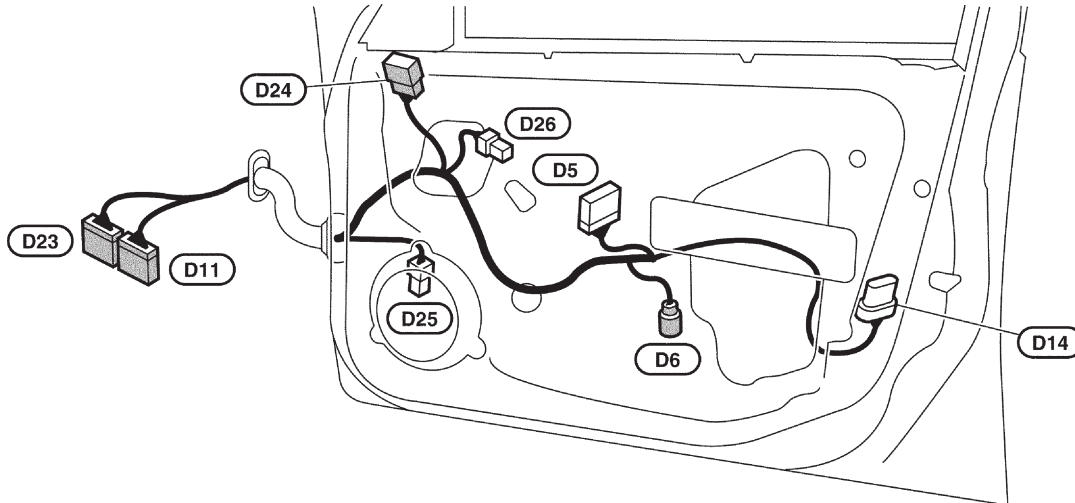
# HARNES LAYOUT

Front Door Harness/RHD Models (Cont'd)

## RH SIDE

NJEL0349S03

- (D5) W/16 : Power window main switch (With power window)
- (D6) BR/3 : Door key cylinder switch (With power door lock)
- (D11) W/16 : To (M76)
- (D14) B/6 : Door lock actuator assembly (With super lock)
- (D23) W/12 : To (M158)
- (D24) GY/6 : Door mirror actuator
- (D25) BR/2 : Front door speaker
- (D26) B/2 : Power window regulator (With power window)



YEL763C

# HARNESS LAYOUT

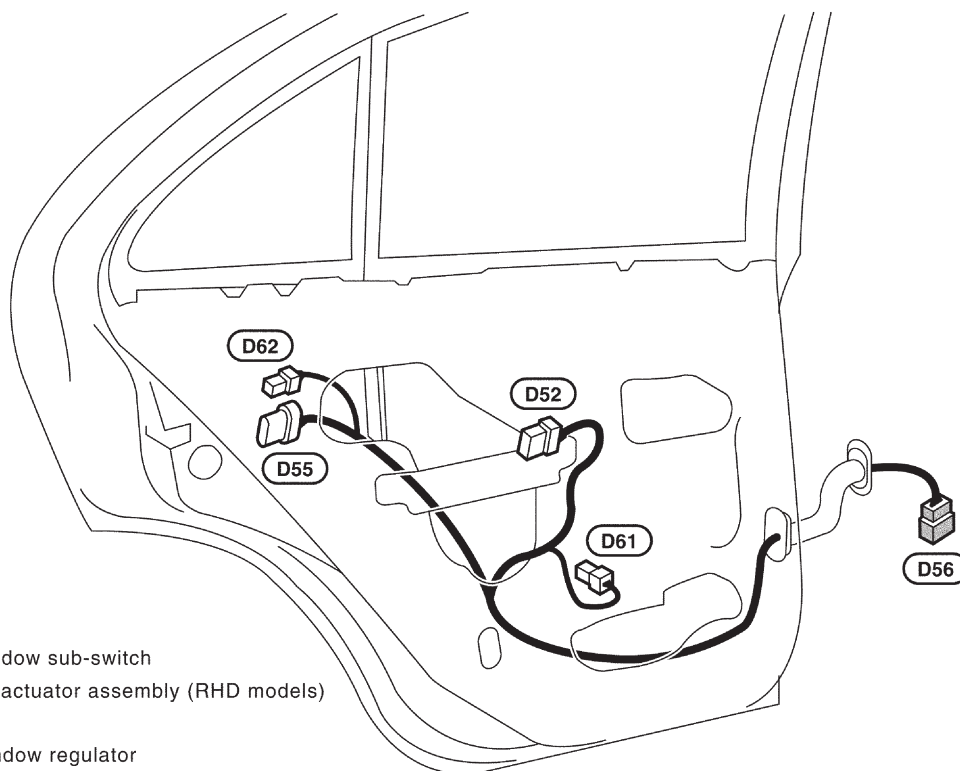
Rear Door Harness

## Rear Door Harness

LH SIDE

NJEL0416

NJEL0416S01



- (D52) W/8 : Power window sub-switch
- (D55) B/6 : Door lock actuator assembly (RHD models)
- (D56) W/8 : To (B40)
- (D61) B/2 : Power window regulator
- (D62) W/4 : Door lock actuator assembly (LHD models)

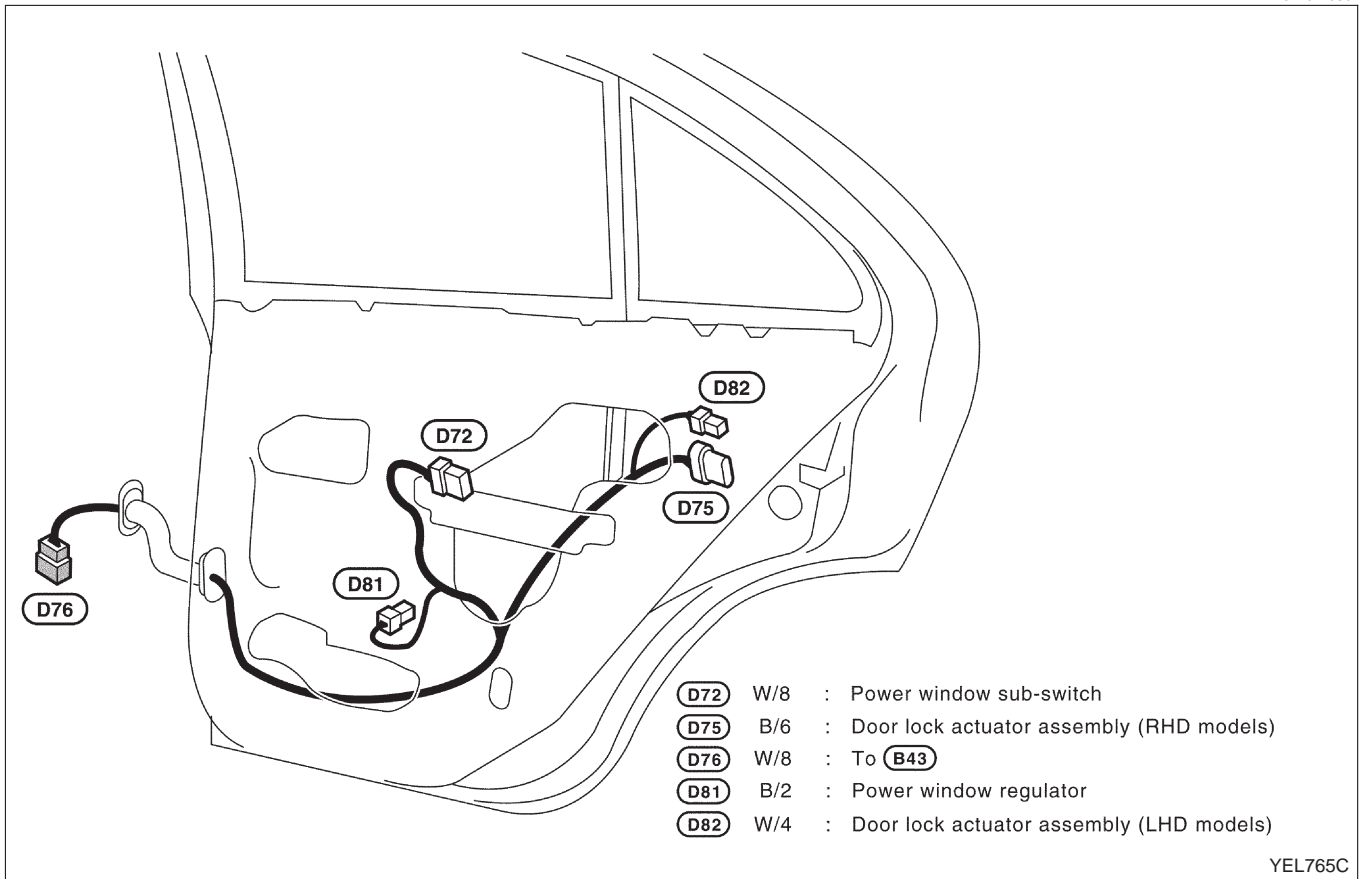
YEL764C

# HARNESS LAYOUT

Rear Door Harness (Cont'd)

RH SIDE

NJEL0416S02



YEL765C



# HARNISS LAYOUT

## Back Door Harness

Back Door Harness

NJEL0492

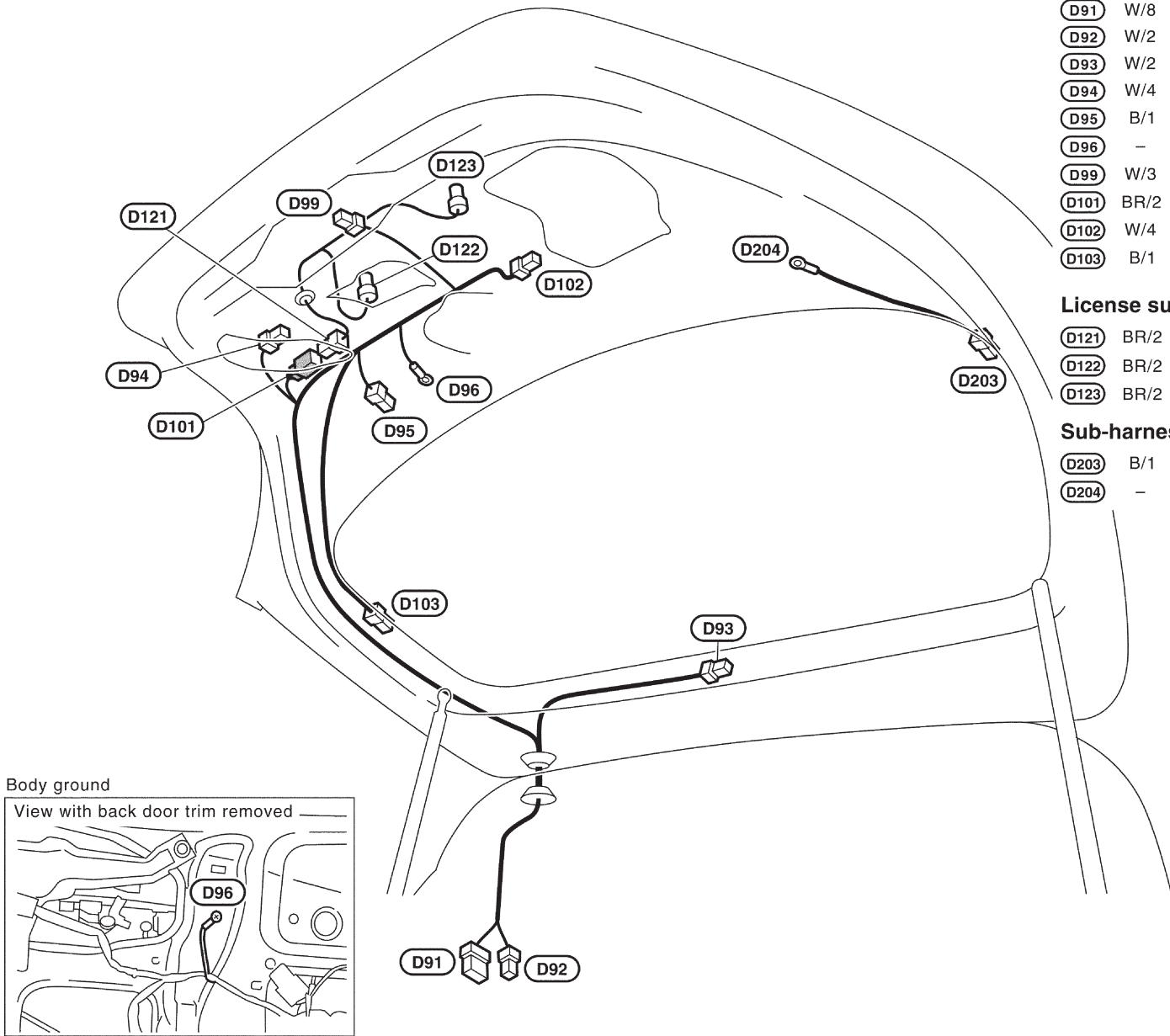
- (D91) W/8 : To (B61)
- (D92) W/2 : To (B62)
- (D93) W/2 : High-mounted stop lamp
- (D94) W/4 : Back door lock actuator
- (D95) B/1 : Condenser
- (D96) - : Body ground
- (D99) W/3 : Luggage room lamp switch
- (D101) BR/2 : To (D121)
- (D102) W/4 : Rear wiper motor
- (D103) B/1 : Rear window defogger (+)

### License sub-harness

- (D121) BR/2 : To (D101)
- (D122) BR/2 : License plate lamp LH
- (D123) BR/2 : License plate lamp RH

### Sub-harness

- (D203) B/1 : Rear window defogger (-)
- (D204) - : Body ground



Body ground

View with back door trim removed

EL-365

YEL766C

## BULB SPECIFICATIONS

### Headlamp

<b>Headlamp</b>		
		<small>NJEL0144S03</small>
	Item	Wattage (W)
High/Low (Semi-sealed beam)	2-bulbs type	60/55 (H4)
	4-bulbs type	55 (H1)/55 (*1)

\*1 H1LL ... RHD models except for Europe, H7 ... RHD models for Europe and LHD models

### Exterior Lamp

		<small>NJEL0144S01</small>
	Item	Wattage (W)
Front fog lamp		55 (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	18
	Rear fog lamp	21
Rear side marker lamp		3.8
License lamp		5
High-mounted stop lamp	On the rear parcel shelf	18
	In the air spoiler (LED)	3.2

### Interior Lamp

		<small>NJEL0144S02</small>
	Item	Wattage (W)
Interior room lamp		10
Map lamp	With roof console	3
	Without roof console	8
Vanity mirror lamp		8
Personal lamp		5
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
ISTSIG	AT	A/T 1ST Signal
2NDSIG	AT	A/T 2ND Signal
3RDSIG	AT	A/T 3RD Signal
4THSIG	AT	A/T 4TH Signal
A/C, M	HA	Manual Air Conditioner
A/CCUT	EC	Air Conditioner Cut Control
AAC/V	EC	IACV-AAC Valve
AACVLV	EC	IACV-AAC Valve
ABS	BR	Anti-lock Brake System
APS	EC	Accelerator Position Sensor
AT/C	EC	A/T Control
ATCONT	EC	A/T Control
ATDIAG	EC	A/T Diagnosis Communication Line
AUDIO	EL	Audio
BA/FTS	AT	A/T Fluid Temperature Sensor and TCM Power Supply
BACK/L	EL	Back-up Lamp
BRK/SW	EC	Brake Pedal Position Switch
CHARGE	SC	Charging System
CHIME	EL	Warning Chime
CIGAR	EL	Cigarette Lighter
CKPS	EC	Crankshaft Position Sensor (POS)
CKPS	EC	Crankshaft Position Sensor (TDC)
CLOCK	EL	Clock
COOL/F	EC	Cooling Fan Control
D/LOCK	EL	Power Door Lock
DEF	EL	Rear Window Defogger
DTRL	EL	Headlamp — With Daytime Light System
ECMRLY	EC	ECM Relay
ECTS	EC	Engine Coolant Temperature Sensor
EGR/TS	EC	EGR Temperature Sensor
EGRC1	EC	EGR Function
EGVC/V	EC	EGR Volume Control Valve
ENGSS	AT	Engine Speed Signal

Code	Section	Wiring Diagram Name
F/FOG	EL	Front Fog Lamp
F/PUMP	EC	Fuel Pump
FRO2	EC	Front Heated Oxygen Sensor (Non E-OBD)
FRO2/H	EC	Front Heated Oxygen Sensor Heater (Non E-OBD)
FTS	AT	A/T Fluid Temperature Sensor
FUEL	EC	Fuel Injection System Function
GLOW	EC	Glow Control System
H/AIM	EL	Headlamp Aiming Control System
H/LAMP	EL	Headlamp
H/SEAT	EL	Heated Seat
HEATER	HA	Heater System
HLC	EL	Headlamp Washer
HORN	EL	Horn
IATS	EC	Intake Air Temperature Sensor
IATSEN	EC	Intake Air Temperature Sensor
IGN/SG	EC	Ignition Signal
ILL	EL	Illumination
INJECT	EC	Injector
INJPMP	EC	Injection Pump
INT/L	EL	Spot, Vanity Mirror, Personal and Trunk Room Lamps
IVC	EC	Intake Valve Timing Control Solenoid Valve
IVC/V	EC	Intake Valve Timing Control Solenoid Valve
KS	EC	Knock Sensor
LOAD	EC	Load Signal
LPSV	AT	Line Pressure Solenoid Valve
MAFS	EC	Mass Air Flow Sensor
MAIN	AT	Main Power Supply and Ground Circuit
MAIN	EC	Main Power Supply and Ground Circuit
METER	EL	Speedometer, Tachometer, Temp. and Fuel Gauges
MIL/DL	EC	MIL and Data Link Connectors
MIRROR	EL	Door Mirror
MULTI	EL	Multi-remote Control System
NATS	EL	Nissan Anti-Theft System

## WIRING DIAGRAM CODES (CELL CODES)

Code	Section	Wiring Diagram Name	Code	Section	Wiring Diagram Name
NAVI	EL	Navigation System	TPS	EC	Throttle Position Sensor
NONDTC	AT	Non-detectable Items	TURN	EL	Turn Signal and Hazard Warning Lamps
O2H1B1	EC	Front Heated Oxygen Sensor Heater (E-OBD)	VSS	EC	Vehicle Speed Sensor
O2H2B1	EC	Rear Heated Oxygen Sensor Heater (E-OBD)	VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)
O2S1B1	EC	Front Heated Oxygen Sensor (E-OBD)	VSSMTR	AT	Vehicle Speed Sensor MTR
O2S2B1	EC	Rear Heated Oxygen Sensor (E-OBD)	WARN	EL	Warning Lamps
OVRCSV	AT	Overrun Clutch Solenoid Valve	WINDOW	EL	Power Window
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve	WIP/R	EL	Rear Wiper and Washer
PHASE	EC	Camshaft Position Sensor (PHASE)	WIPER	EL	Front Wiper and Washer
PNP/SW	EC	Park/Neutral Position Switch			
PNP/SW	AT	Park/Neutral Position Switch			
PNPSW1	EC	Park/Neutral Position Switch			
POS	EC	Crankshaft Position Sensor (POS)			
POWER	EL	Power Supply Routing			
PRGVLV	EC	EVAP Canister Purge Volume Control Solenoid Valve			
PST/SW	EC	Power Steering Oil Pressure Switch			
R/FOG	EL	Rear Fog Lamp			
ROOM/L	EL	Interior Room Lamp			
RP/SEN	EC	Refrigerant Pressure Sensor			
RRO2	EC	Rear Heated Oxygen Sensor (Non E-OBD)			
RRO2/H	EC	Rear Heated Oxygen Sensor Heater (Non E-OBD)			
S/SIG	EC	Start Signal			
SHIFT	AT	A/T Shift Lock System			
S/LOCK	EL	Power Door Lock — Super Lock —			
SROOF	EL	Sunroof			
SRS	RS	Supplemental Restraint System			
SSV/A	AT	Shift Solenoid Valve A			
SSV/B	AT	Shift Solenoid Valve B			
START	SC	Starting System			
STOP/L	EL	Stop Lamp			
TAIL/L	EL	Parking, License and Tail Lamps			
TCV	AT	Torque Converter Clutch Solenoid Valve			
TPS	AT	Throttle Position Sensor			