

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"

NIEL0001

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 B15 is as follows:

- 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 connectors.**

Wiring Diagrams and Trouble Diagnosis

NIEL0002

When you read wiring diagrams, refer to the following:

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

When you perform trouble diagnosis, refer to the following:

- **GI-35**, "How to Follow Test Groups in Trouble Diagnoses"
- **GI-24**, "HOW TO PERFORM EFFICIENT DIAGNOSIS FOR AN ELECTRICAL INCIDENT"

Check for any Service bulletins before servicing the vehicle.

Description

NIEL0003

NIEL0003S01

HARNESS CONNECTOR (TAB-LOCKING TYPE)

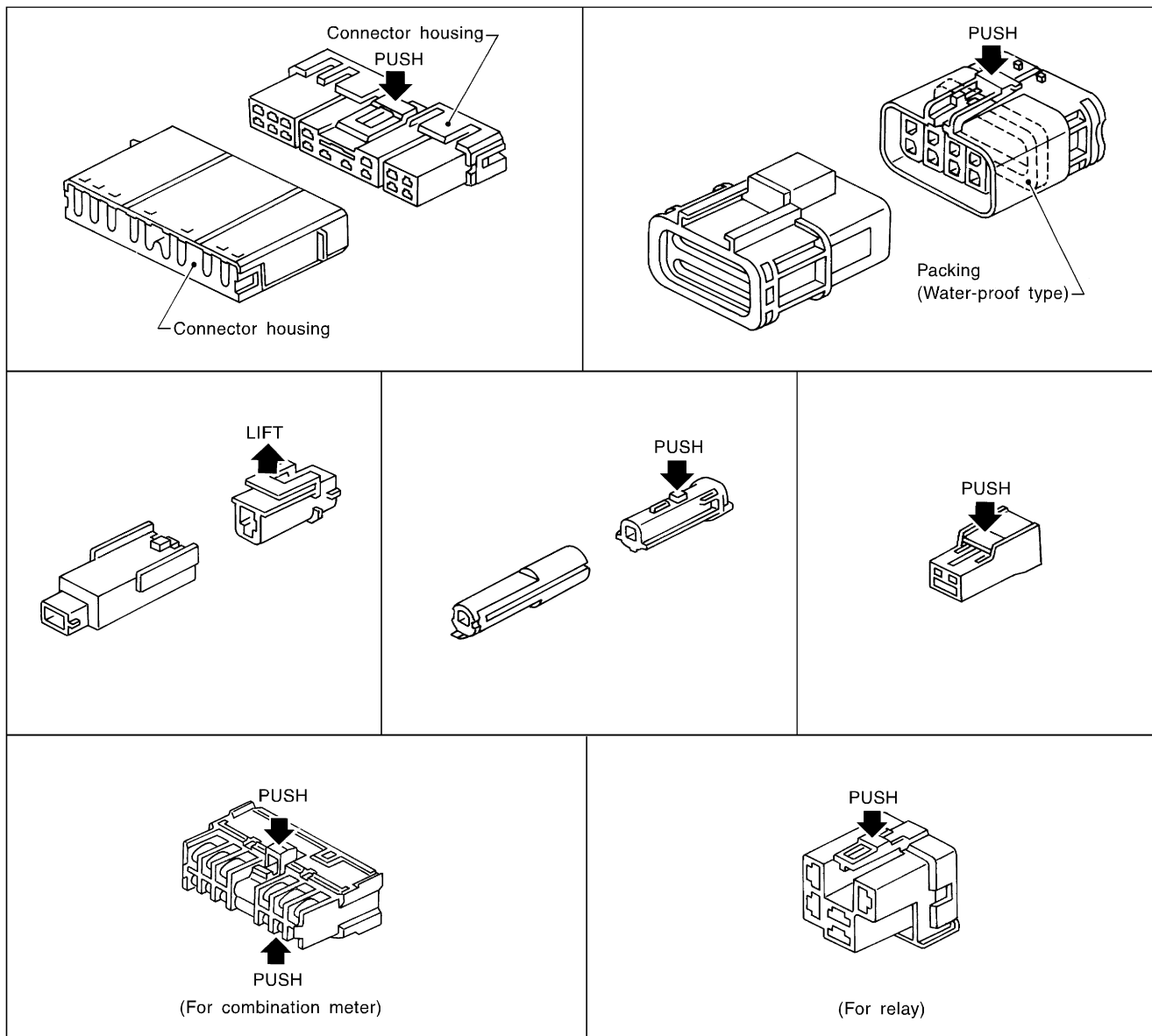
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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]



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HARNESS CONNECTOR

Description (Cont'd)

HARNESS CONNECTOR (SLIDE-LOCKING TYPE)

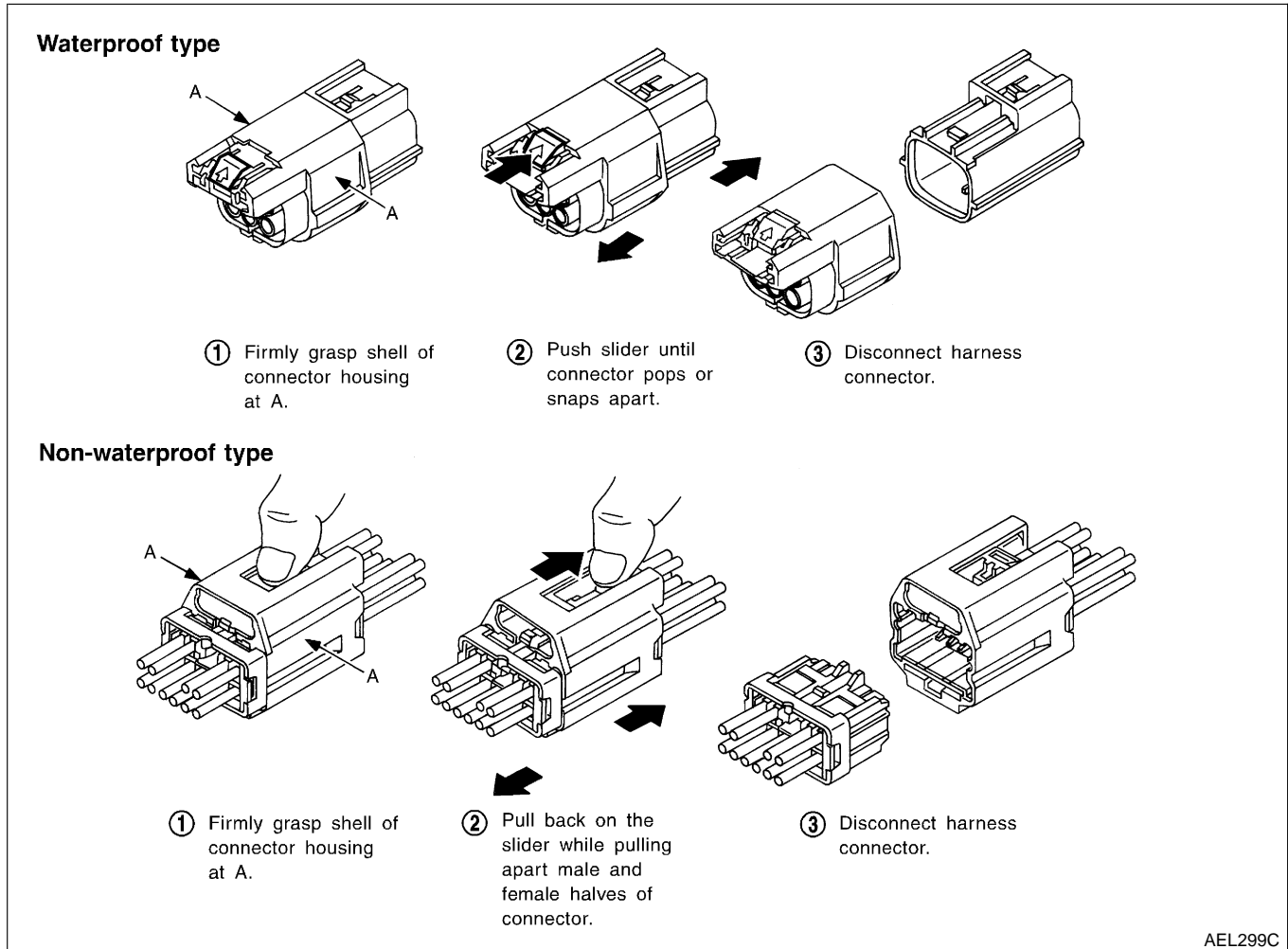
-NIEL0003S02

- 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]



AEL299C

STANDARDIZED RELAY

Description

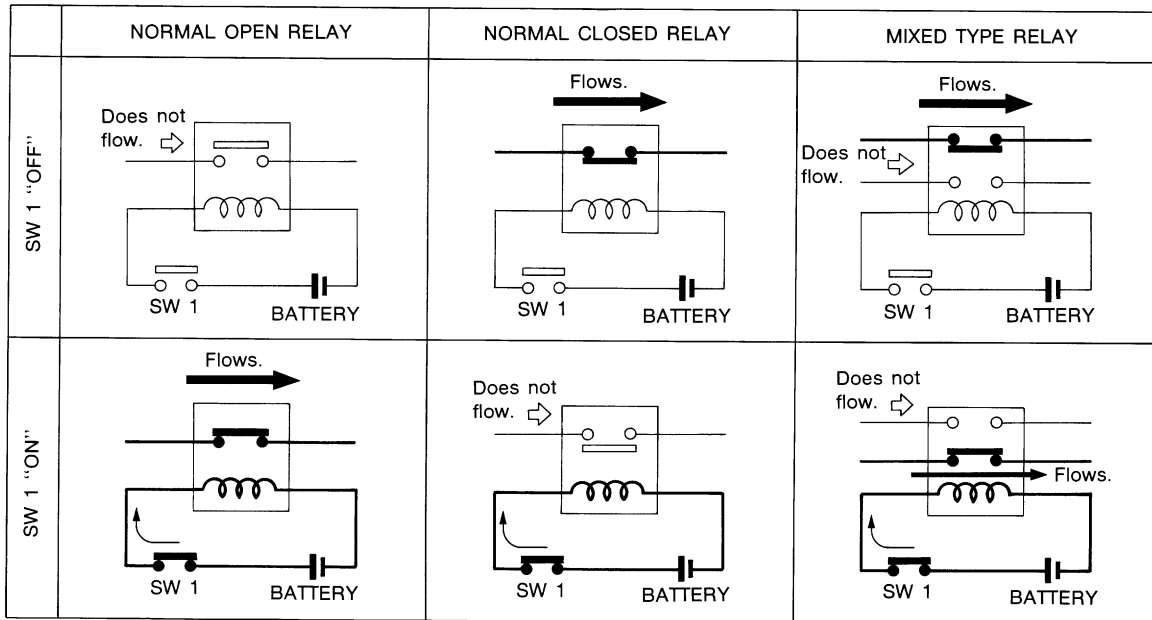
Description

NORMAL OPEN, NORMAL CLOSED AND MIXED TYPE RELAYS

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

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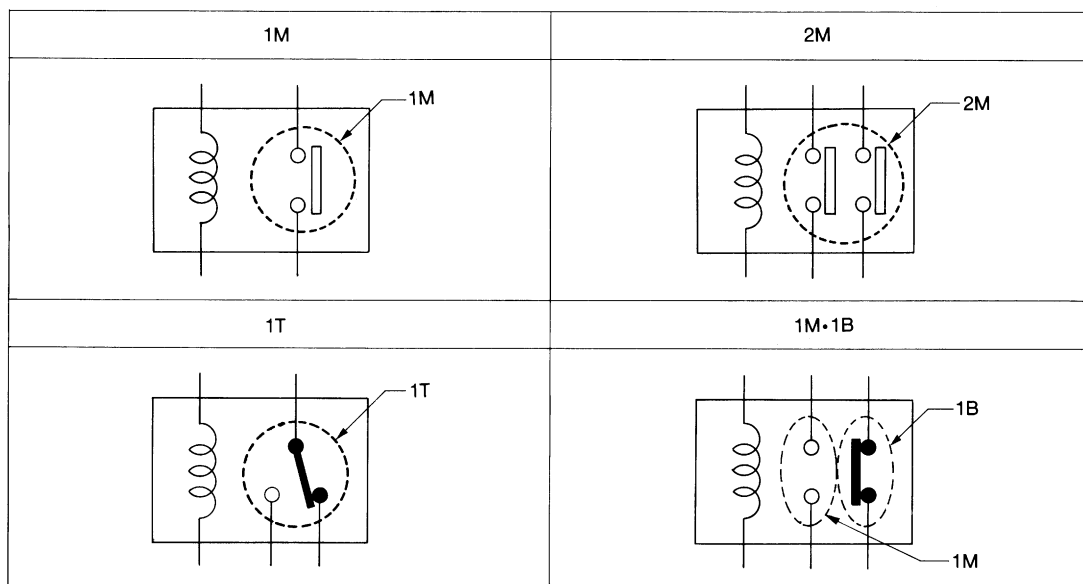


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TYPE OF STANDARDIZED RELAYS

NIEL0004S02

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



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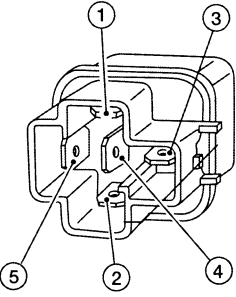
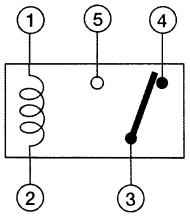
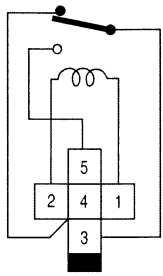
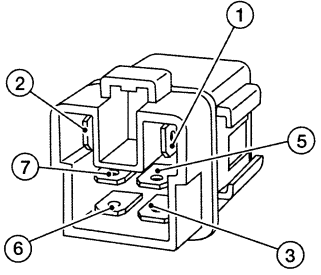
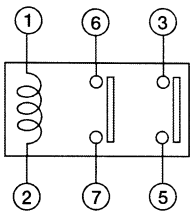
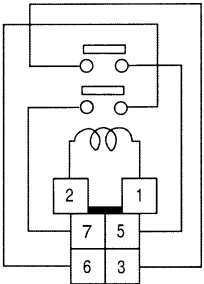
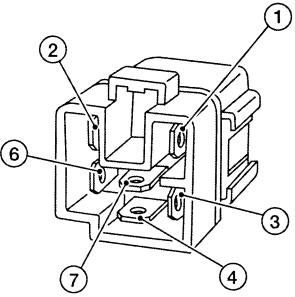
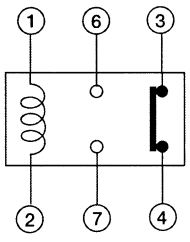
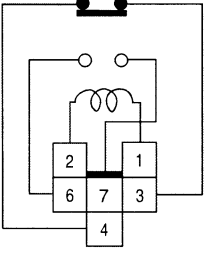
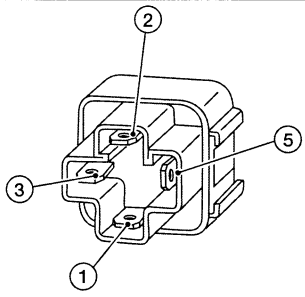
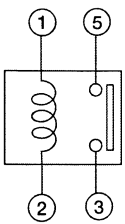
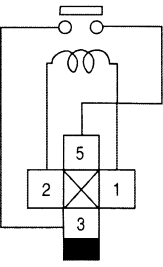
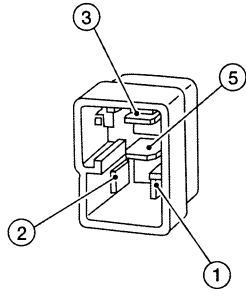
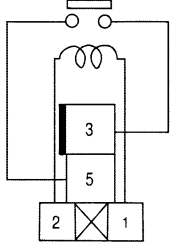
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STANDARDIZED RELAY

Description (Cont'd)

Type	Outer view	Circuit	Connector Symbol and connection	Case color
1T				BLACK
2M				BROWN
1M · 1B				GRAY
1M				BLUE OR GRAY
				

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

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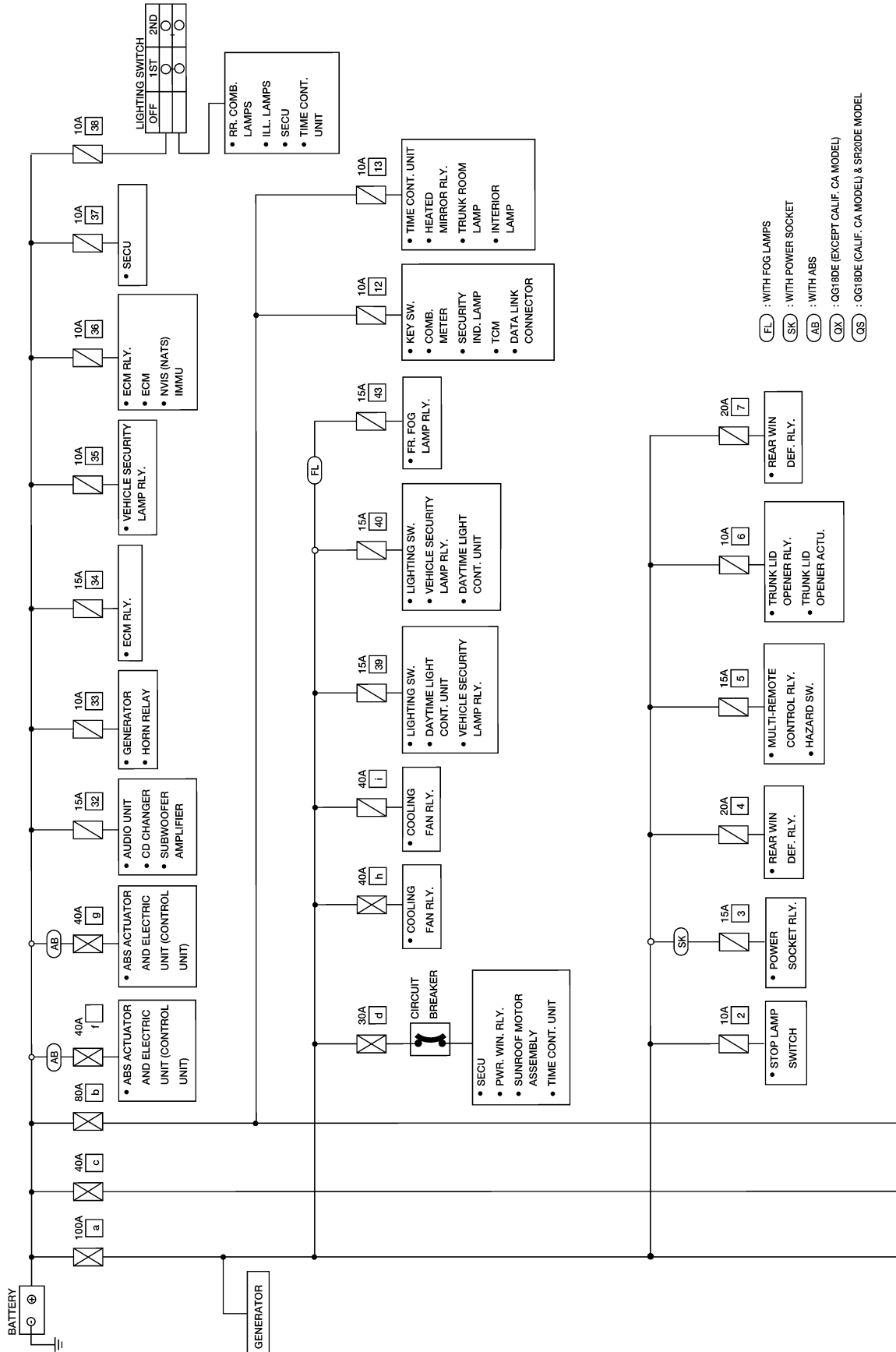
POWER SUPPLY ROUTING

Schematic

Schematic

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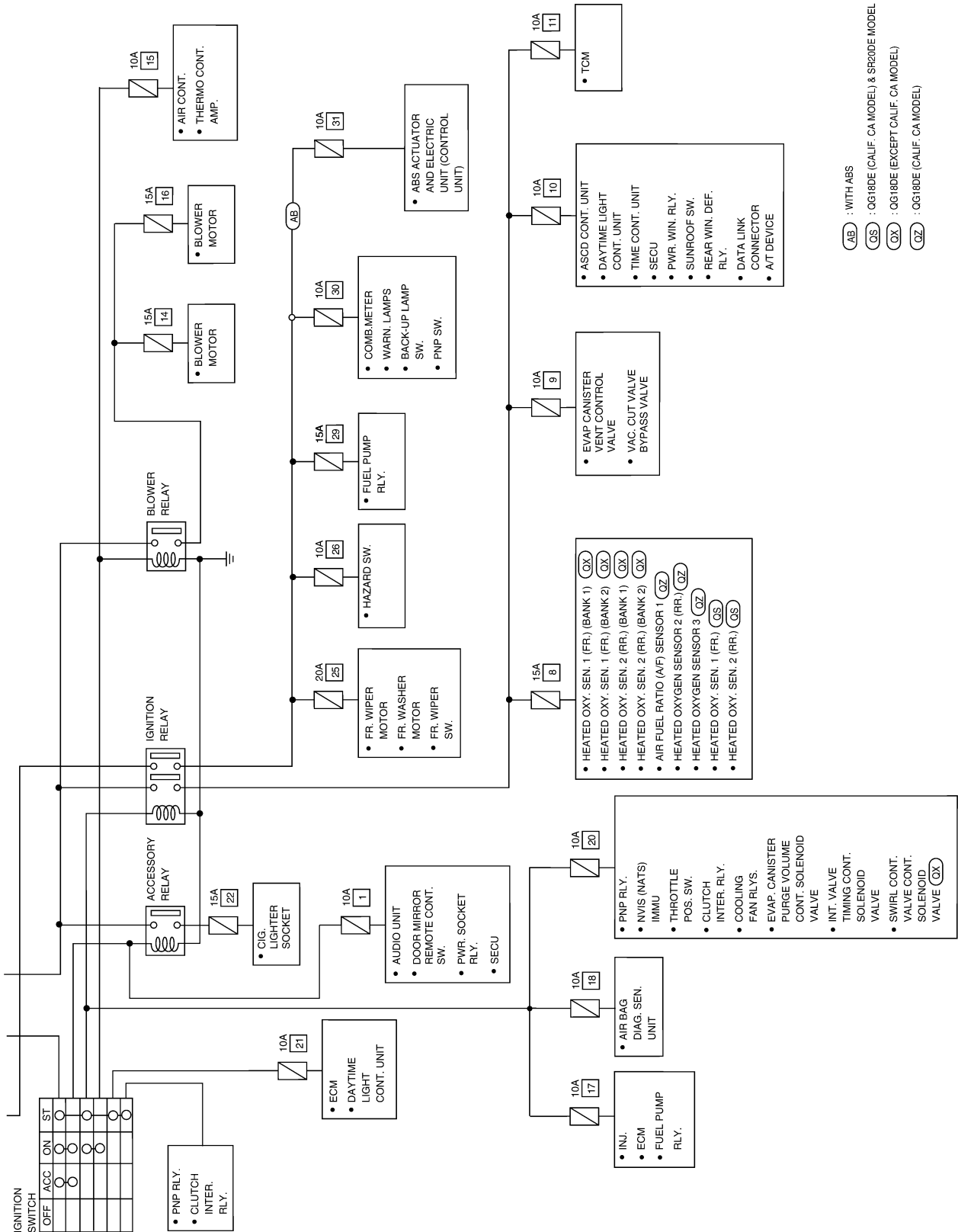
For detailed ground distribution information, refer to "Ground Distribution", EL-20.



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POWER SUPPLY ROUTING

Schematic (Cont'd)



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POWER SUPPLY ROUTING

Wiring Diagram — POWER —

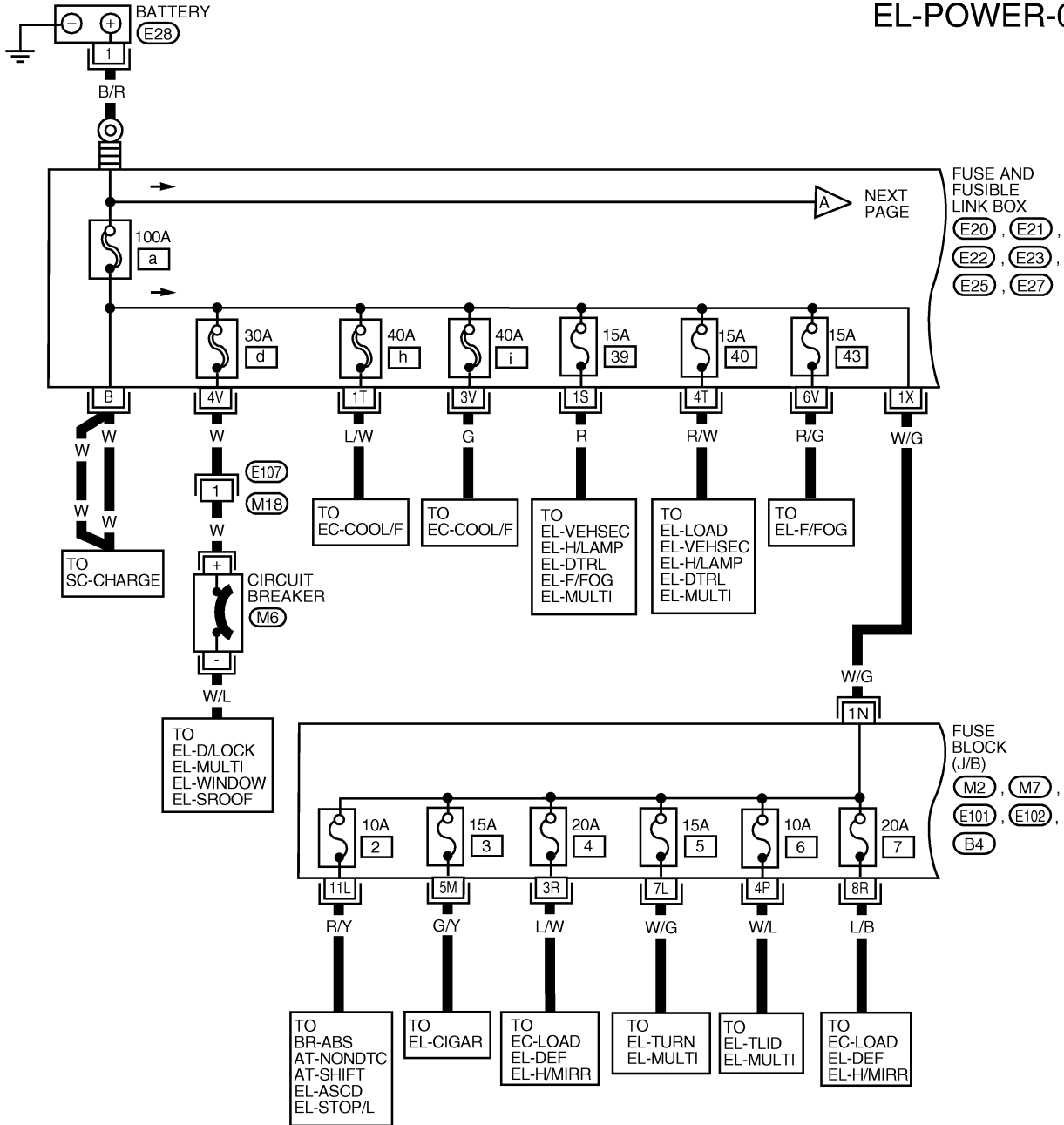
Wiring Diagram — POWER —

BATTERY POWER SUPPLY — IGNITION SW. IN ANY POSITION

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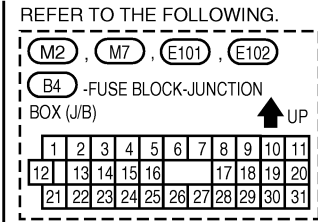
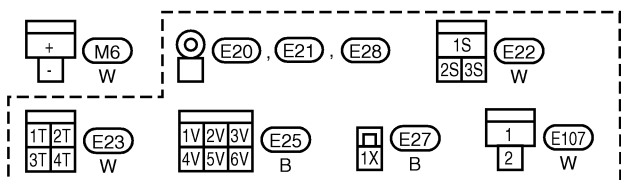
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EL-POWER-01



FUSE AND FUSIBLE LINK BOX
 (E20), (E21),
 (E22), (E23),
 (E25), (E27)

FUSE BLOCK (J/B)
 (M2), (M7),
 (E101), (E102),
 (B4)



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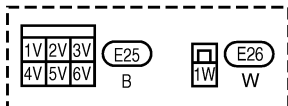
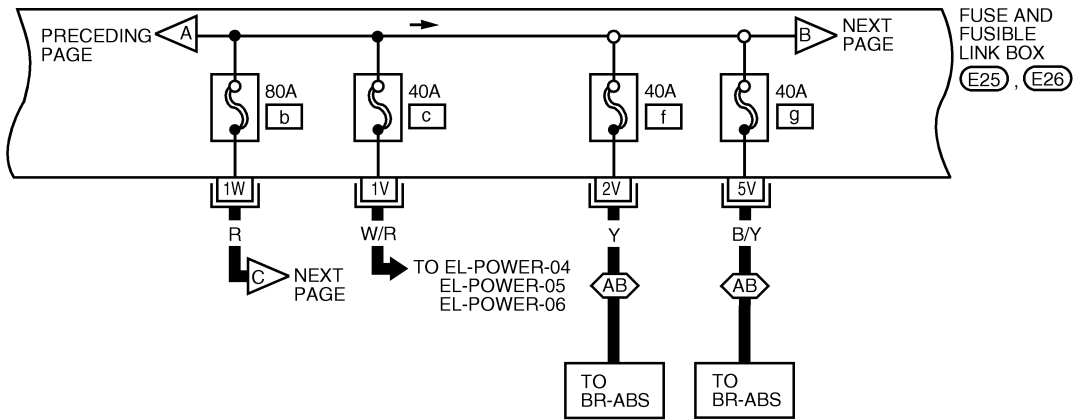
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POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-02

 : WITH ABS

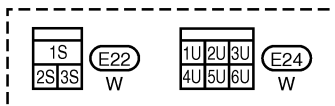
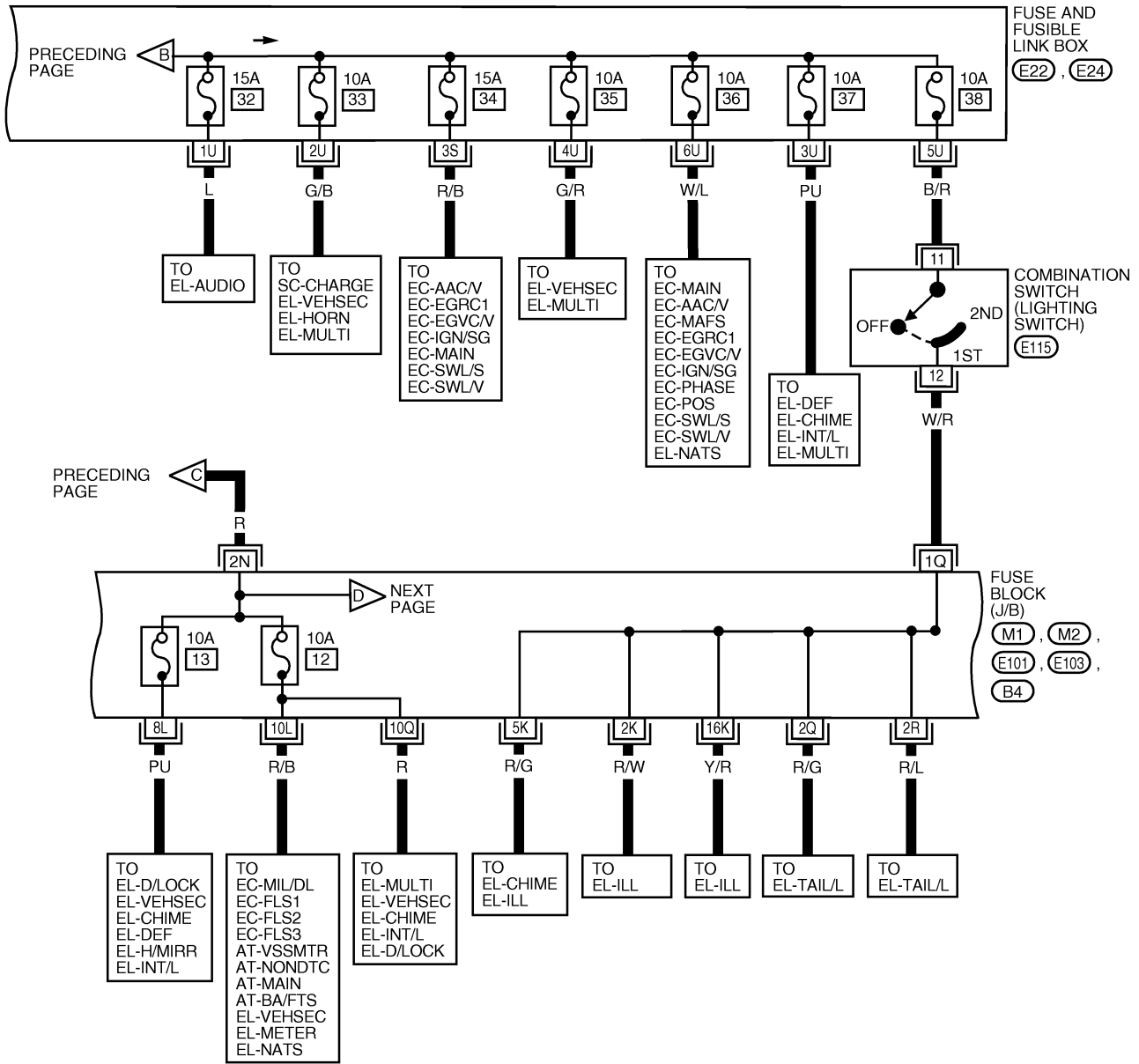


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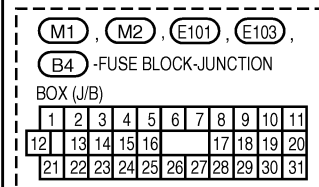
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-03



REFER TO THE FOLLOWING.



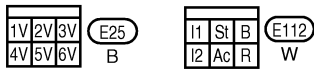
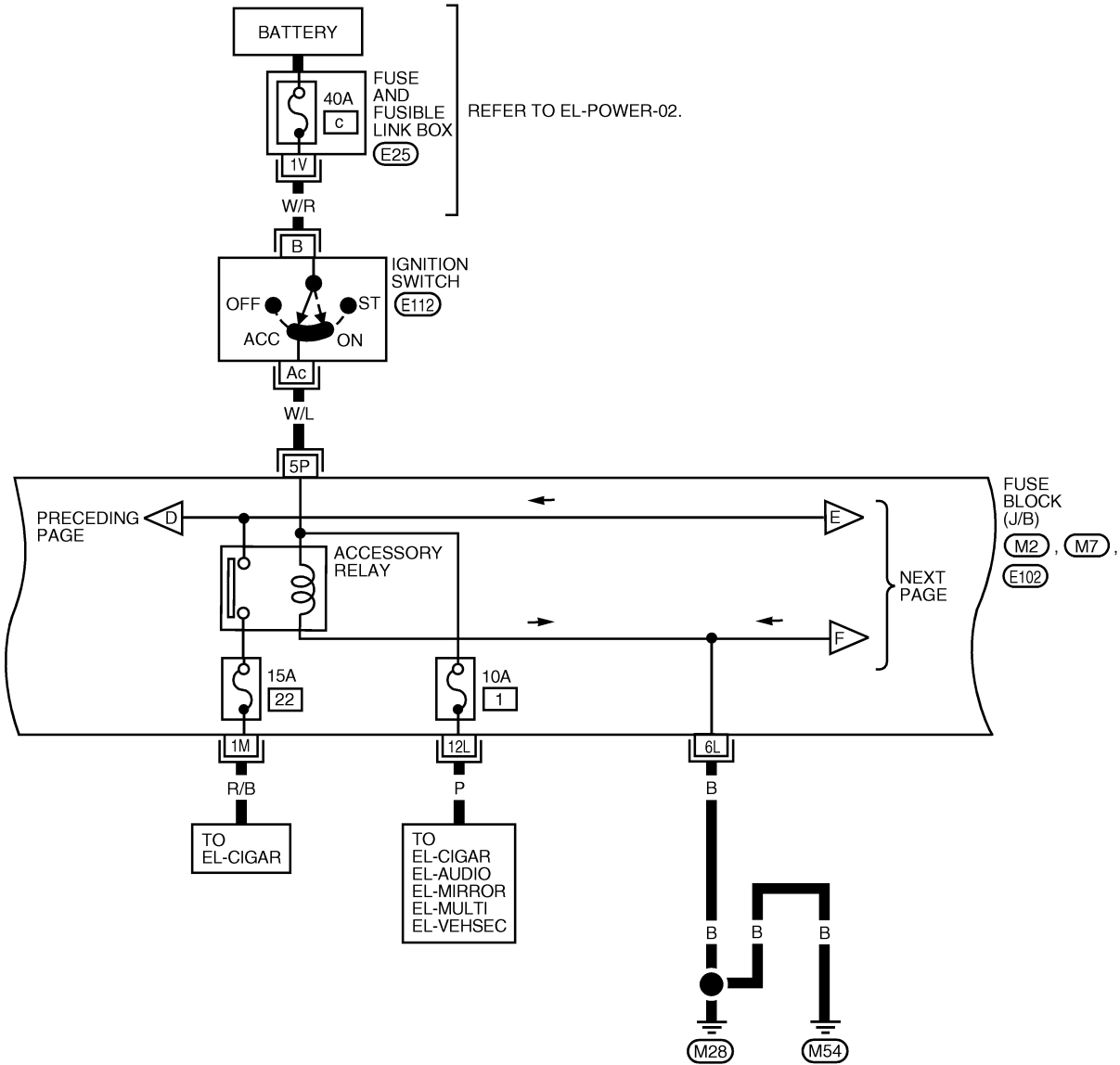
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

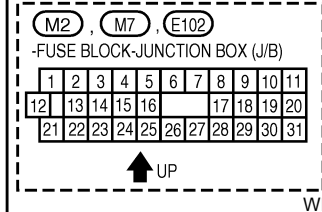
ACCESSORY POWER SUPPLY — IGNITION SW. IN "ACC" OR "ON"

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EL-POWER-04



REFER TO THE FOLLOWING.



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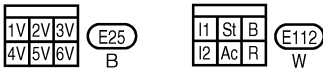
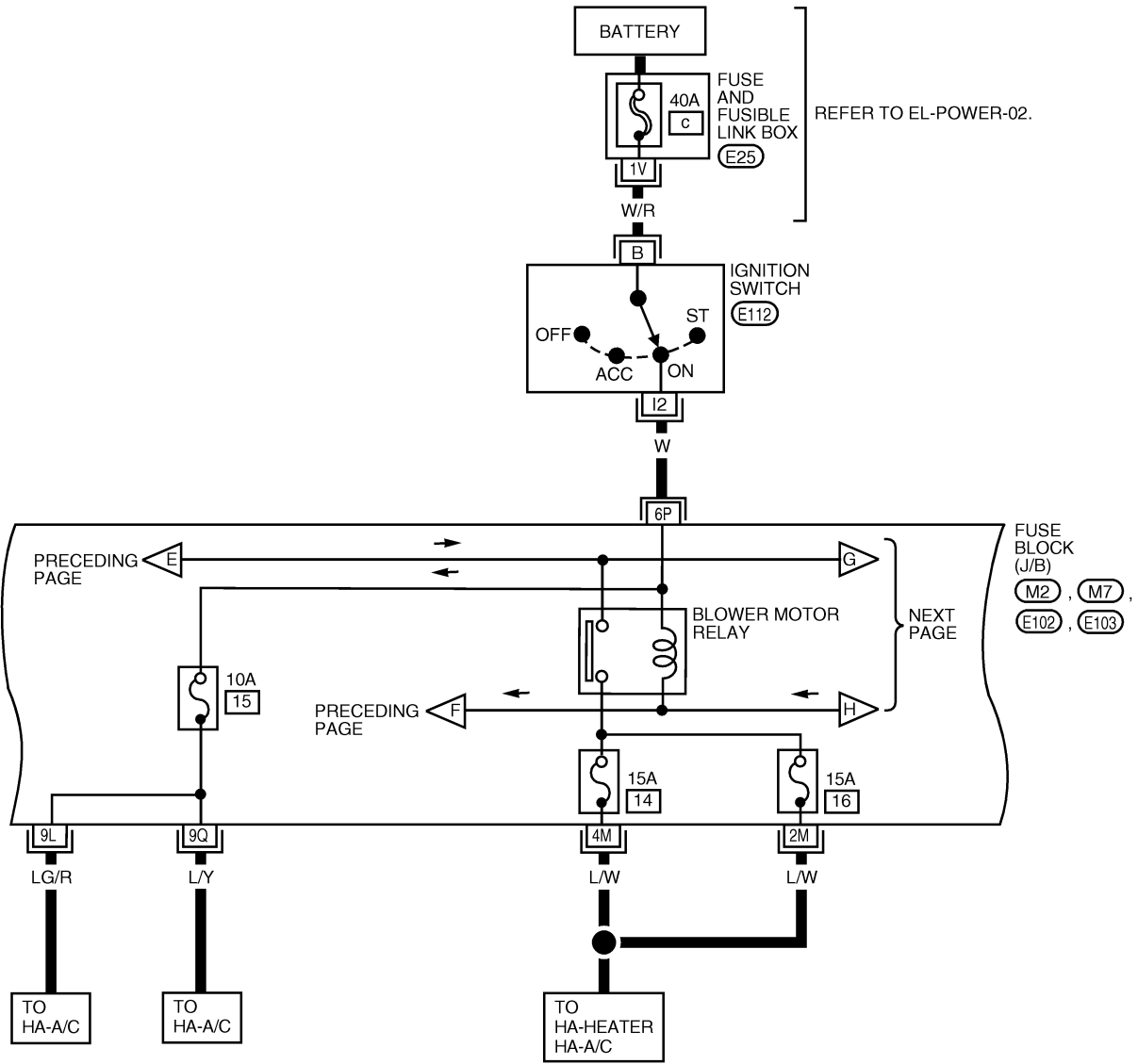
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

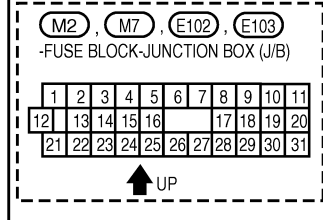
IGNITION POWER SUPPLY — IGNITION SW. IN "ON"

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EL-POWER-05



REFER TO THE FOLLOWING.



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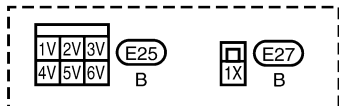
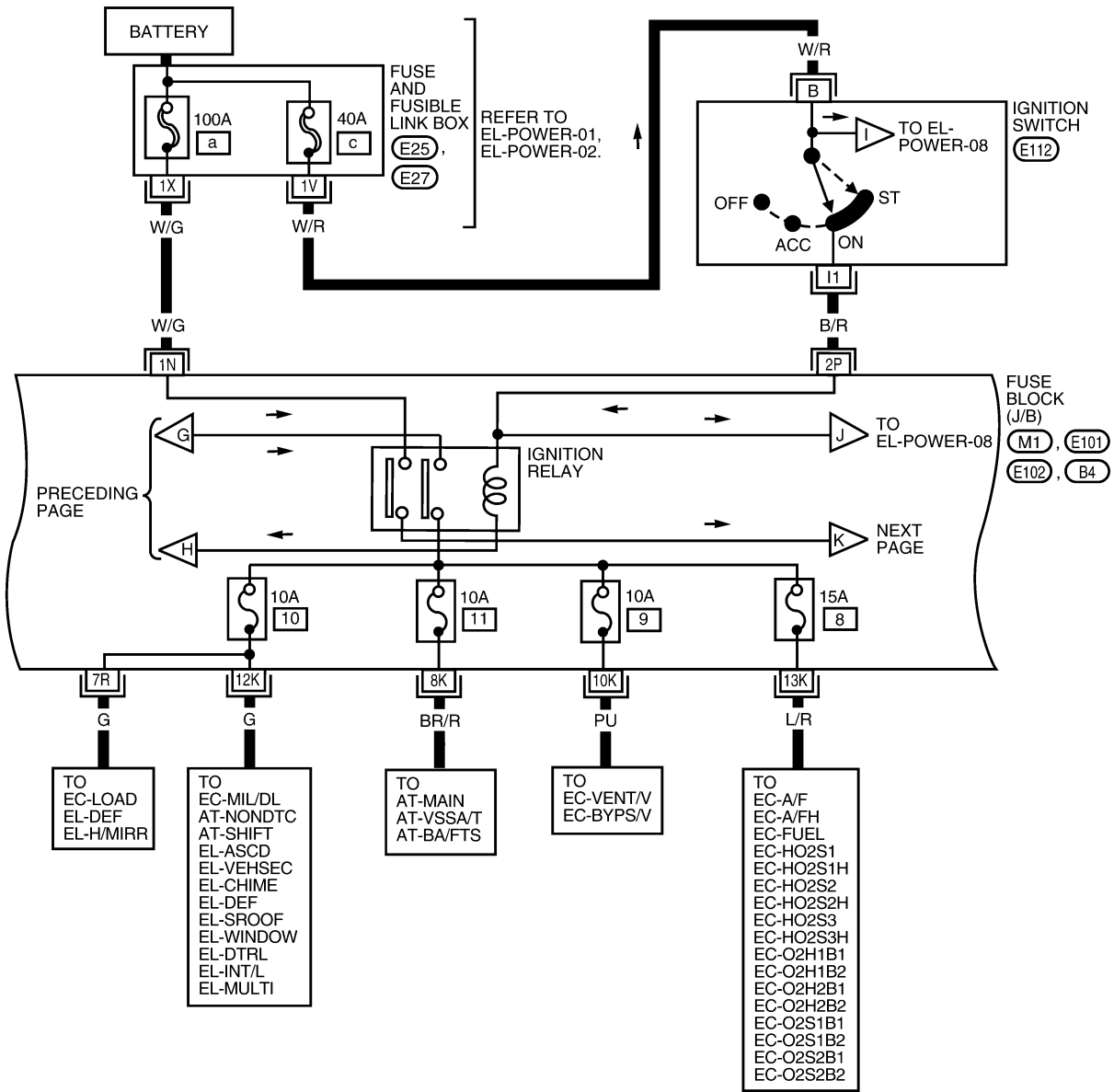
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

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

NIEL0006S03

EL-POWER-06



REFER TO THE FOLLOWING.

(M1), (E101), (E102), (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

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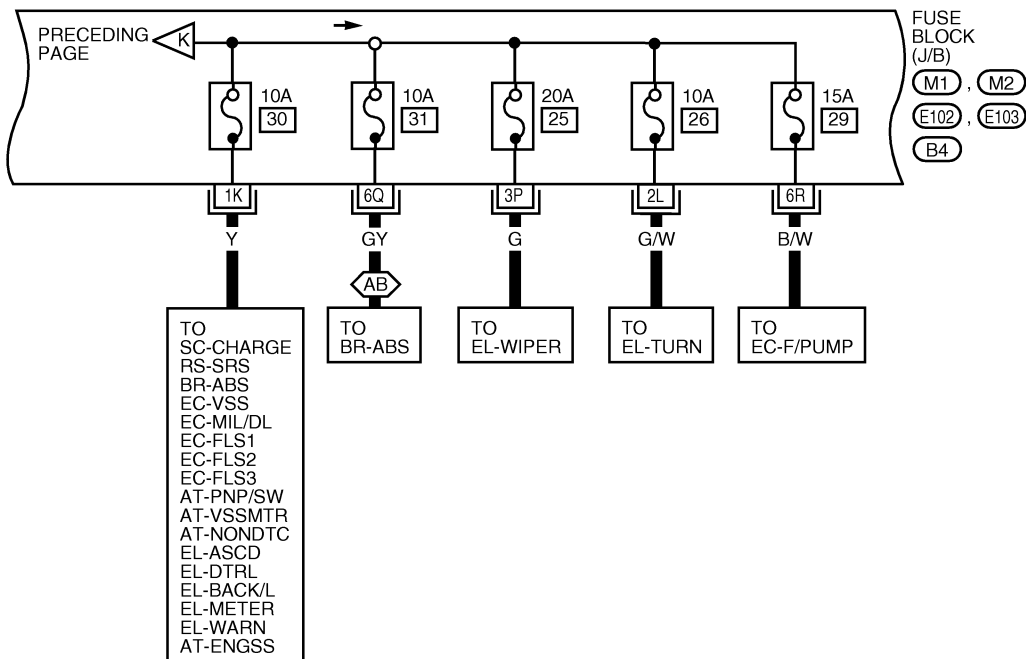
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POWER SUPPLY ROUTING

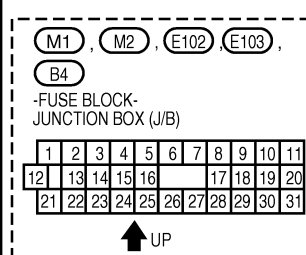
Wiring Diagram — POWER — (Cont'd)

EL-POWER-07

◊AB◊ : With ABS



REFER TO THE FOLLOWING.



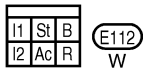
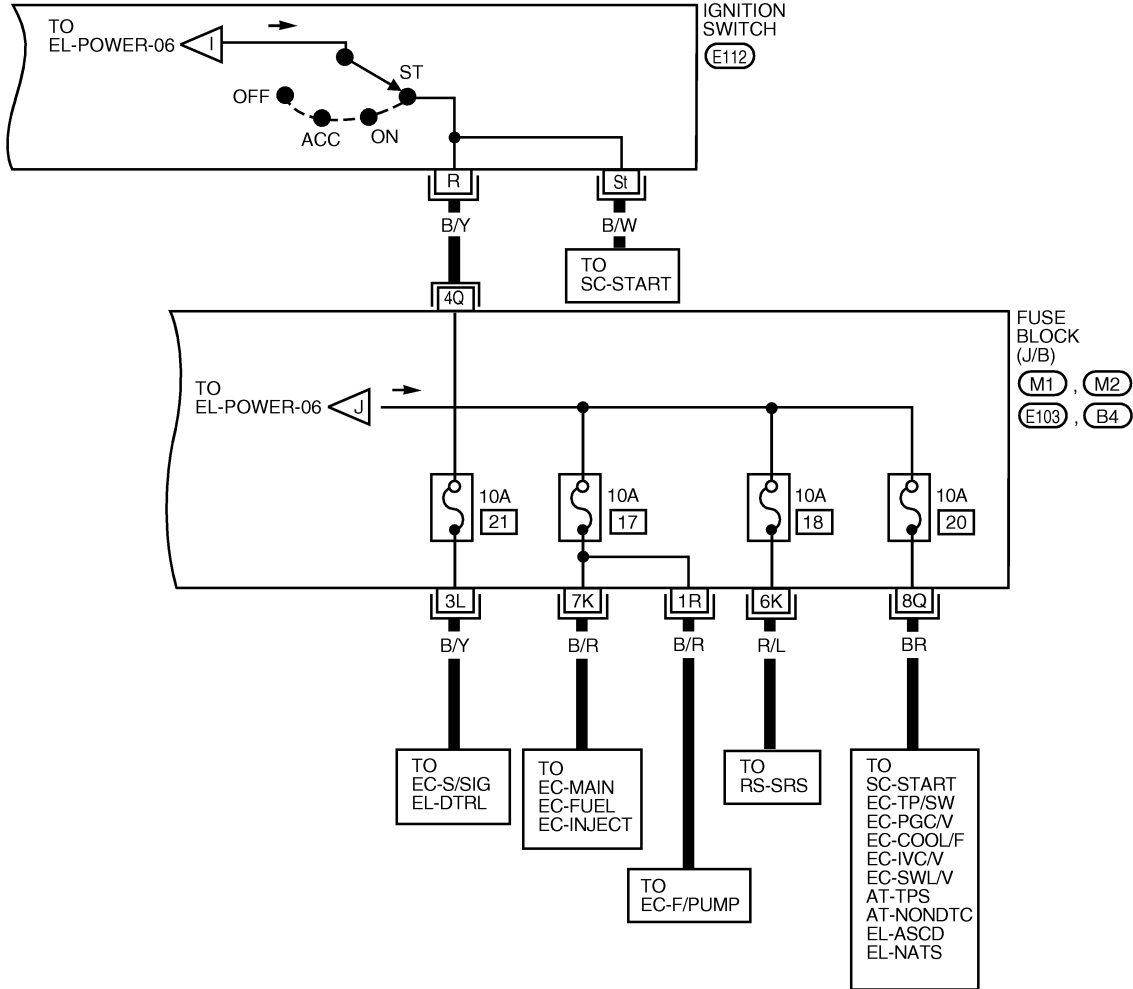
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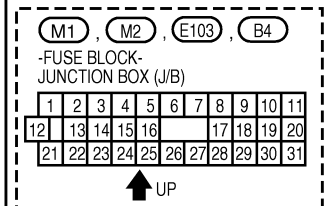
POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

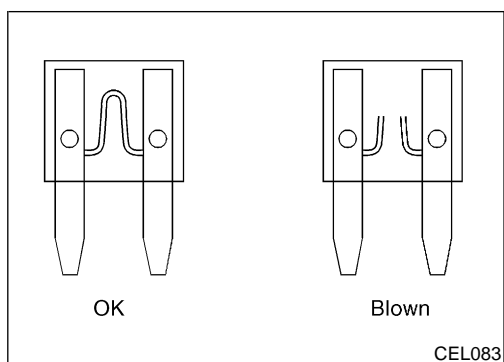
EL-POWER-08



REFER TO THE FOLLOWING.



LEL416



Inspection

FUSE

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

NIEL0007

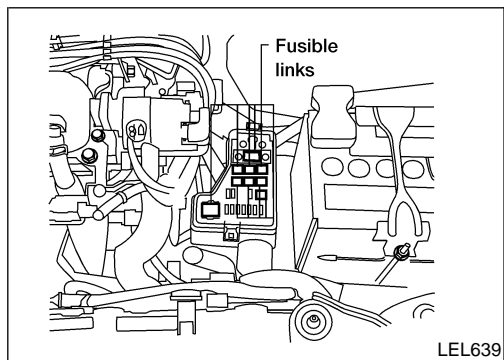
NIEL0007S01

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FUSIBLE LINK

A melted fusible link can be detected either by visual inspection or by feeling with fingertip. 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.

NIEL0007S02

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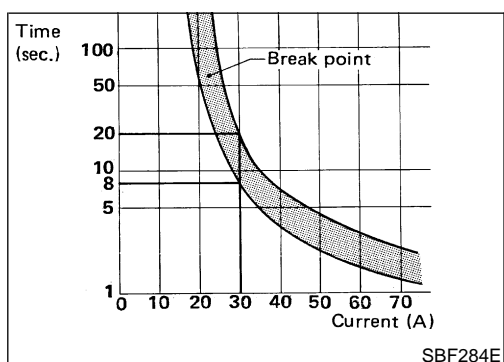
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CIRCUIT BREAKER

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

A circuit breaker is used for the following systems:

- Power door locks
- Power sunroof
- Power windows
- Multi-remote control system

NIEL0007S03

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GROUND

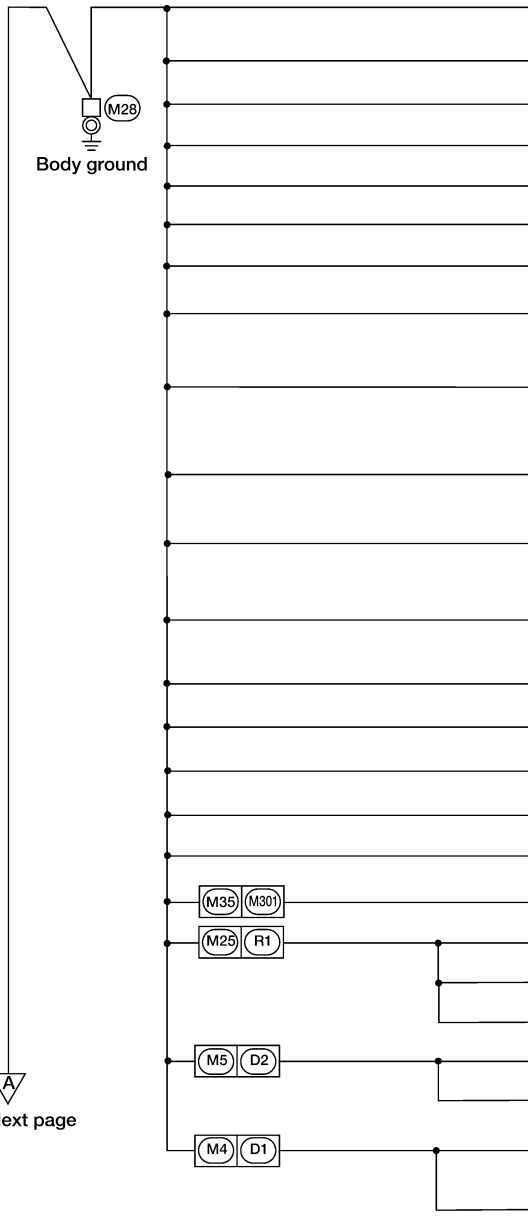
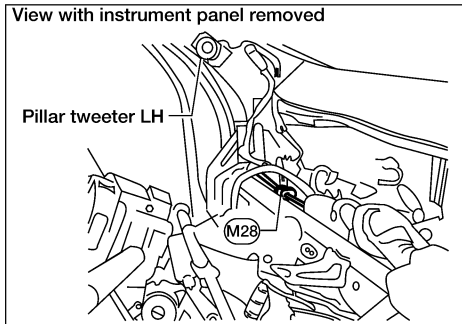
Ground Distribution

Ground Distribution

NIEL0008

NIEL0008S01

MAIN HARNESS



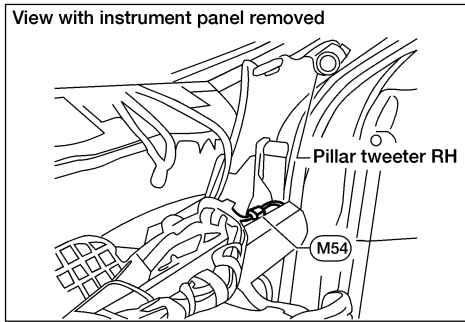
CONNECTOR NUMBER	CONNECT TO
(M2)	Fuse block (J/B) (Blower motor relay, ignition relay, accessory relay)
(M3)	Heated mirror relay
(M8)	Data link connector
(M9)	Power window relay
(M10)	Trunk lid opener relay
(M22)	Illumination control
(M23)	Door mirror remote control switch
(M29)	Combination meter (Terminal No.3) (High beam indicator) (With tachometer)
(M29)	Combination meter (terminal No.12) (Turn signal indicator lamps) (With tachometer)
(M29)	Combination meter (Terminal No.14) (High beam indicator) (Without tachometer)
(M30)	Combination meter (Terminal No. 27) (Speedometer) (Without tachometer)
(M30)	Combination meter (Terminal No. 39) (Turn signal indicator lamps) (Without tachometer)
(M30)	Combination meter (Terminal No. 48) (Speedometer) (With tachometer)
(M31)	Fan control switch
(M37)	ASCD control unit
(M38)	Smart entrance control unit
(M40)	Time cont. unit (With power door locks) (Terminal No. 6)
(M302)	Power socket
(R2)	Vanity lamp LH
(R3)	Map lamp
(R7)	Vanity lamp RH
(D4)	Door mirror LH
(D8)	Front door key cylinder switch LH
(D6)	Main power window and door lock / unlock switch
(D7)	Front door lock actuator (door unlock sensor) LH

Next page

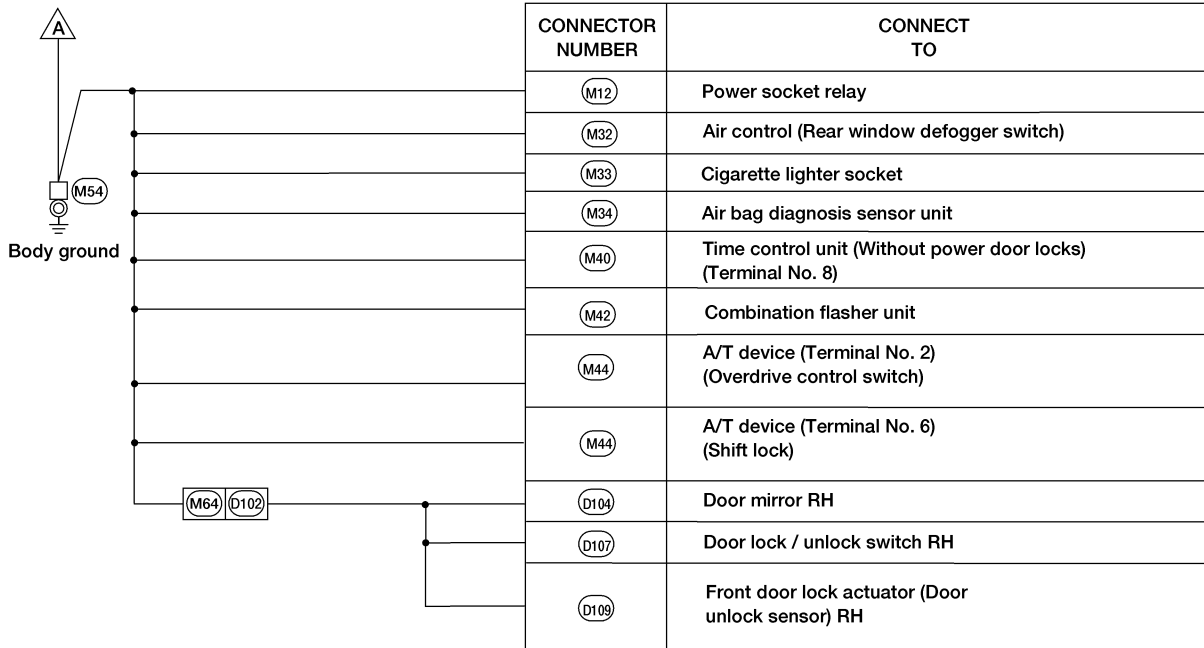
WEL619A

GROUND

Ground Distribution (Cont'd)



Preceding page



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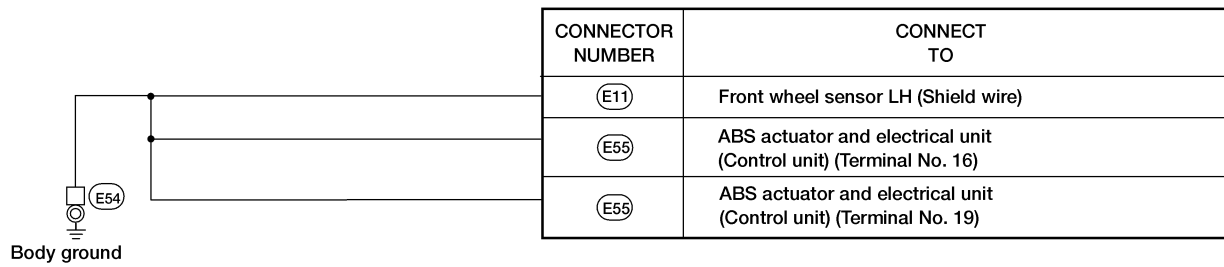
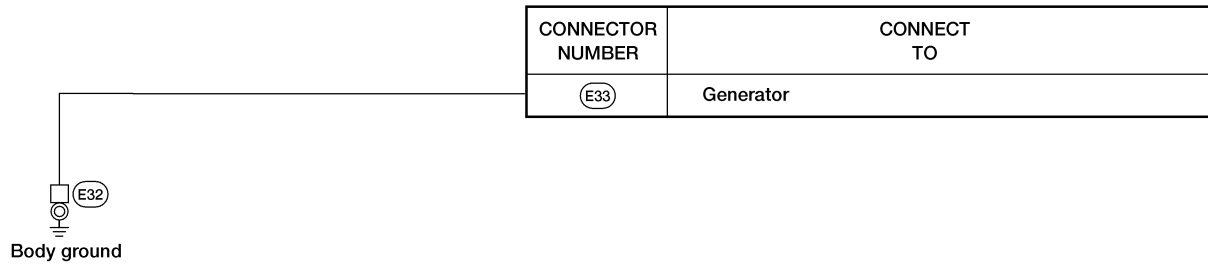
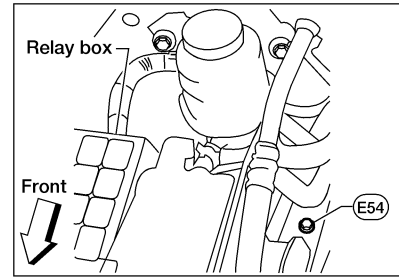
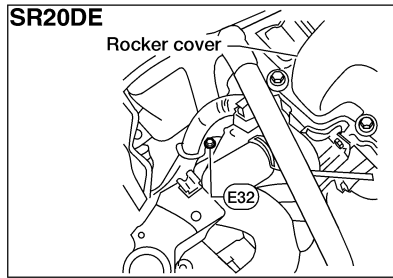
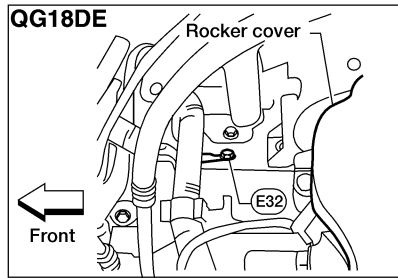
WEL172A

GROUND

Ground Distribution (Cont'd)

ENGINE ROOM HARNESS

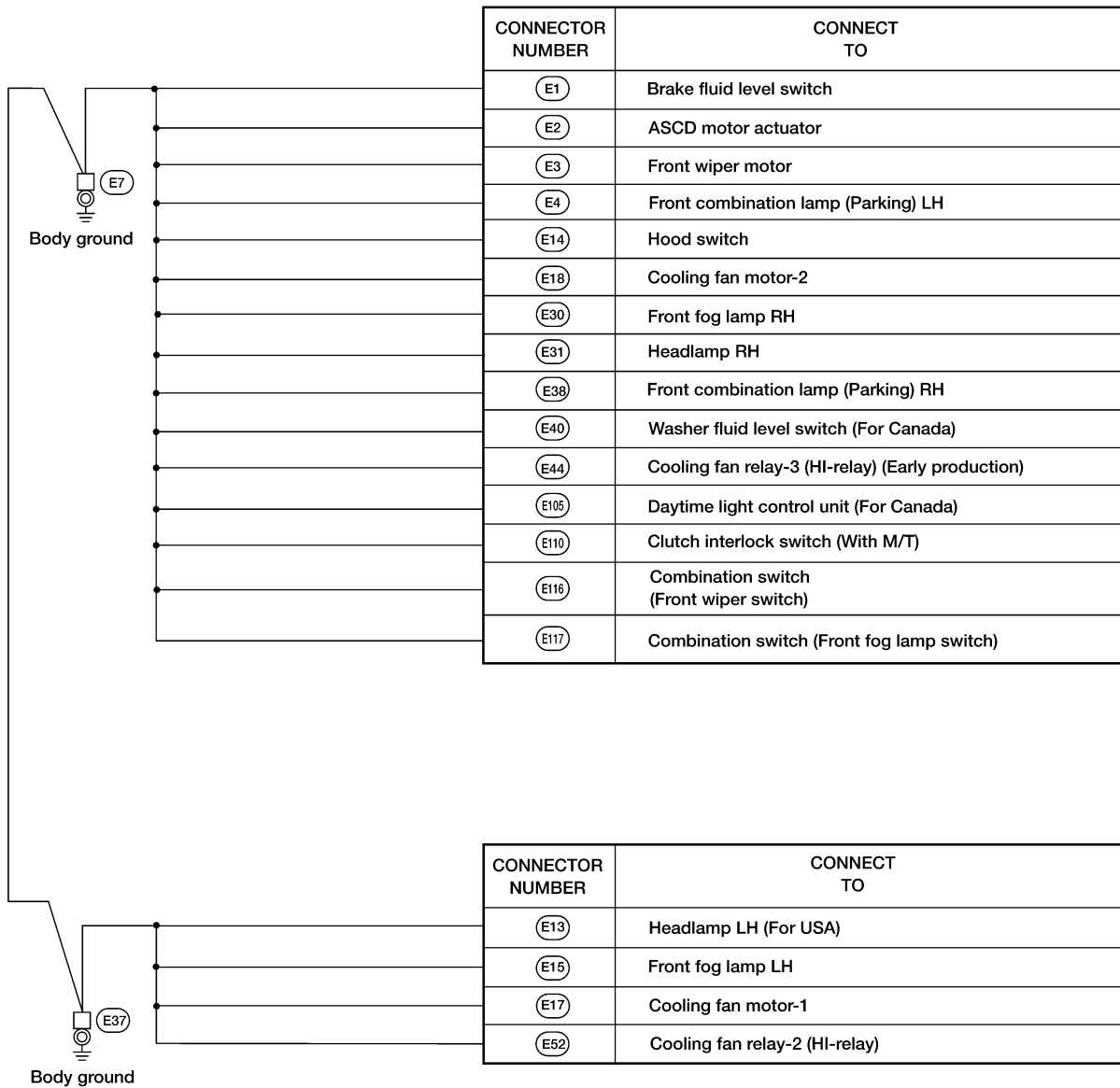
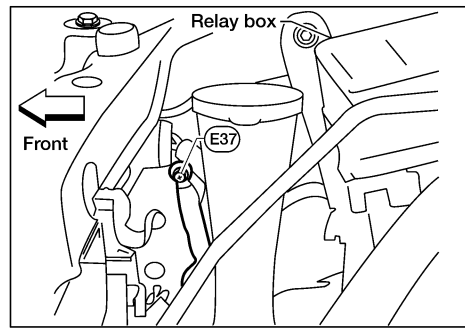
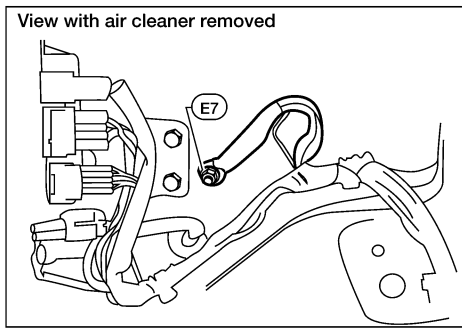
NIEL0008S02



LEL425

GROUND

Ground Distribution (Cont'd)



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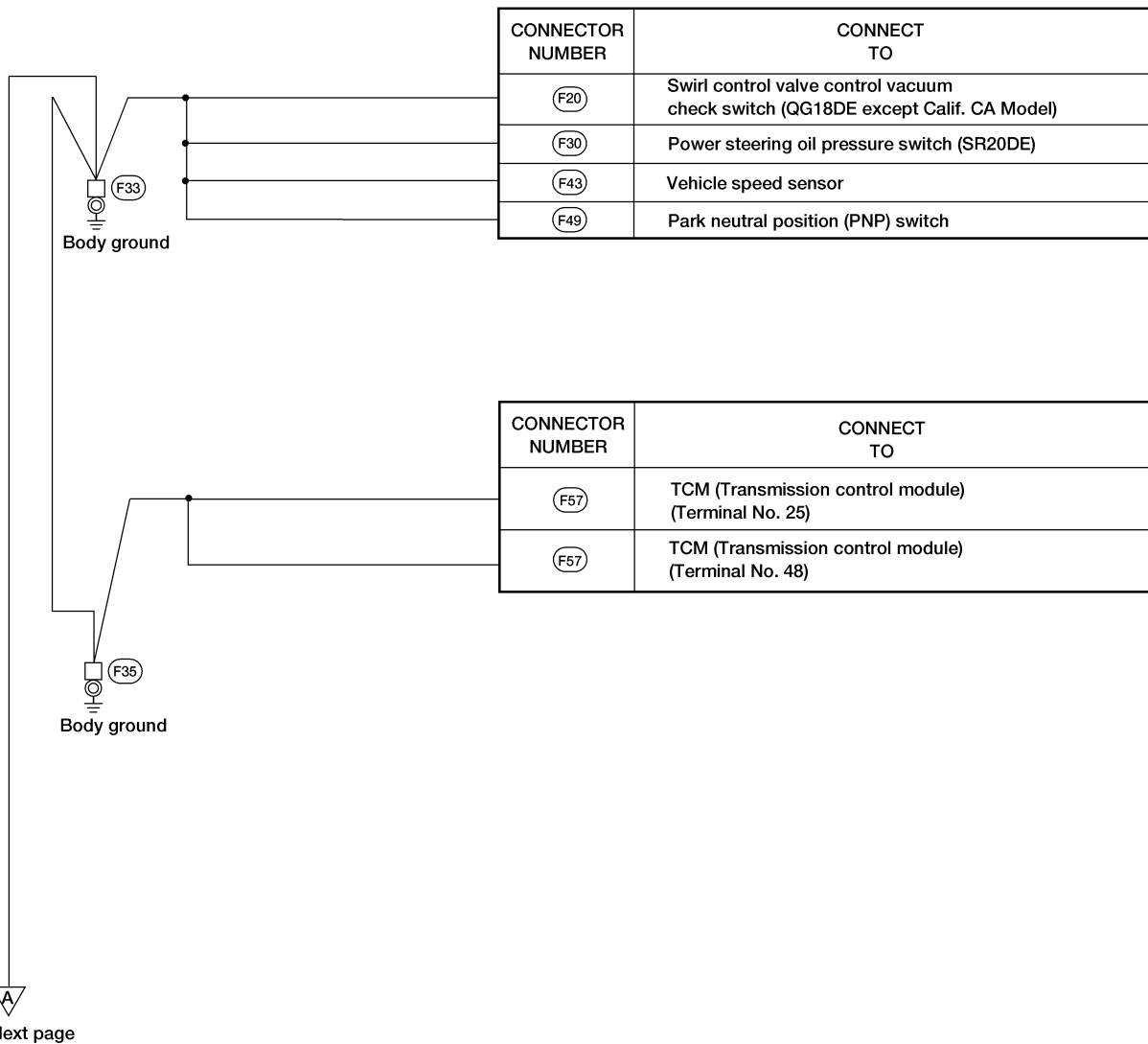
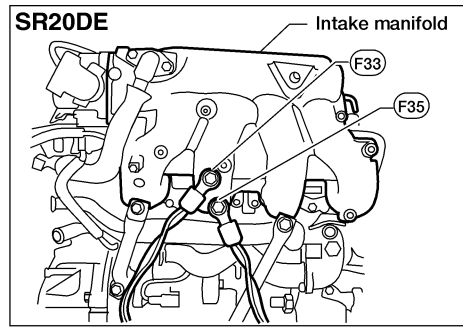
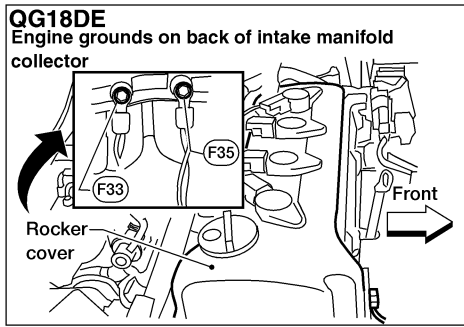
WEL038B

GROUND

Ground Distribution (Cont'd)

ENGINE CONTROL HARNESS

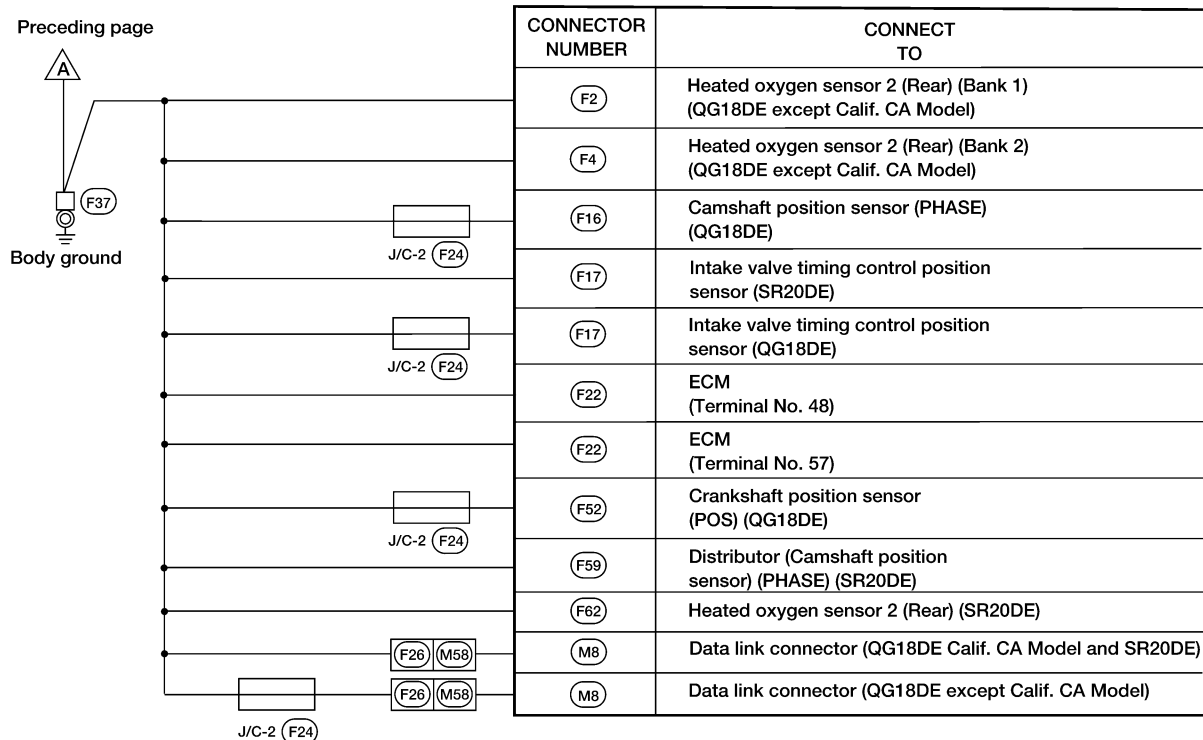
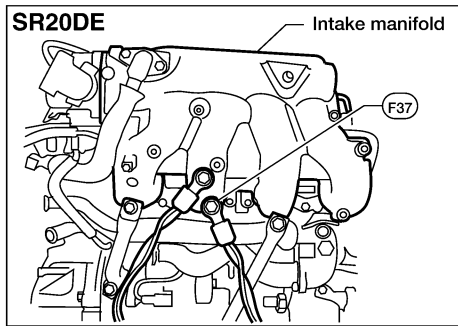
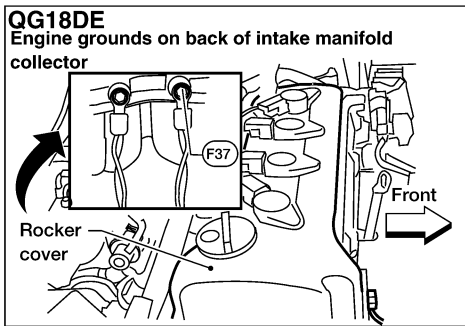
NIEL0008S03



WEL081A

GROUND

Ground Distribution (Cont'd)

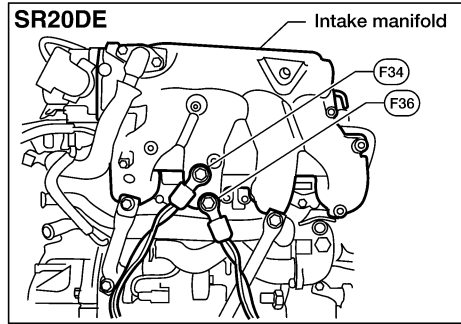
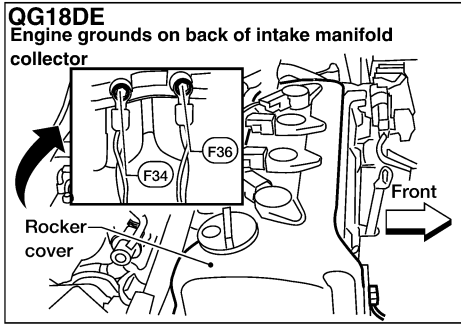


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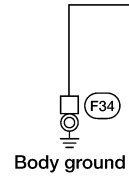
WEL561A

GROUND

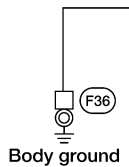
Ground Distribution (Cont'd)



CONNECTOR NUMBER	CONNECT TO
F7	Ignition coil No. 4 (QG18DE)
F9	Ignition coil No. 3 (QG18DE)
F11	Ignition coil No. 2 (QG18DE)
F13	Ignition coil No. 1 (QG18DE)
F19	Condenser (QG18DE)
F22	ECM (QG18DE Calif. CA Model and SR20DE) (Terminal No. 106)
F22	ECM (QG18DE Calif. CA Model and SR20DE) (Terminal No. 108)
F59	Distributor (SR20DE)
F62	Heated oxygen sensor 3 (QG18DE Calif. CA Model)
F64	Heated oxygen sensor 2 (Rear) (QG18DE Calif. CA Model)



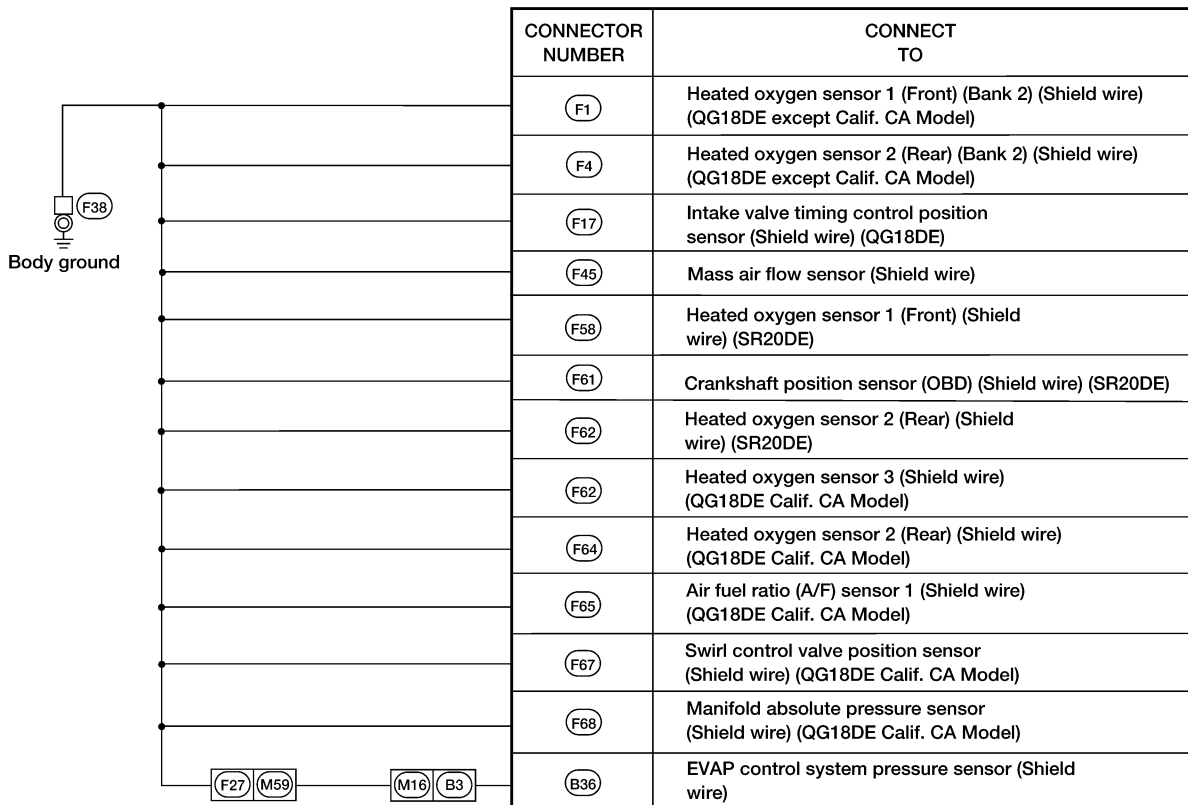
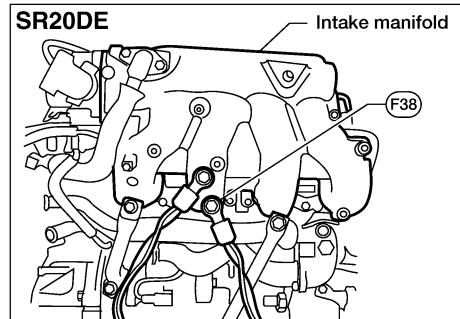
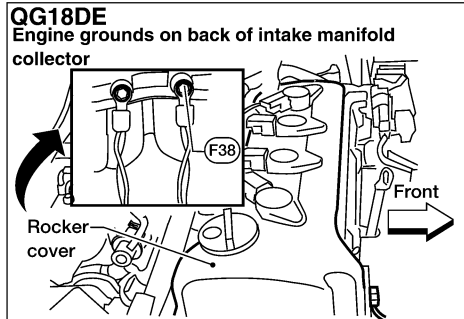
CONNECTOR NUMBER	CONNECT TO
F2	Heated oxygen sensor 2 (Rear) (Bank 1) (Shield wire) (QG18DE except Calif. CA Model)
F3	Heated oxygen sensor 1 (Front) (Bank 1) (Shield wire) (QG18DE except Calif. CA Model)
F16	Camshaft position sensor (PHASE) (Shield wire) (QG18DE)
F41	Throttle position sensor (Shield wire)
F52	Crankshaft position sensor (POS) (Shield wire) (QG18DE)
F69	Barometric pressure sensor (Shield wire) (QG18DE Calif. CA Model)



WEL562A

GROUND

Ground Distribution (Cont'd)



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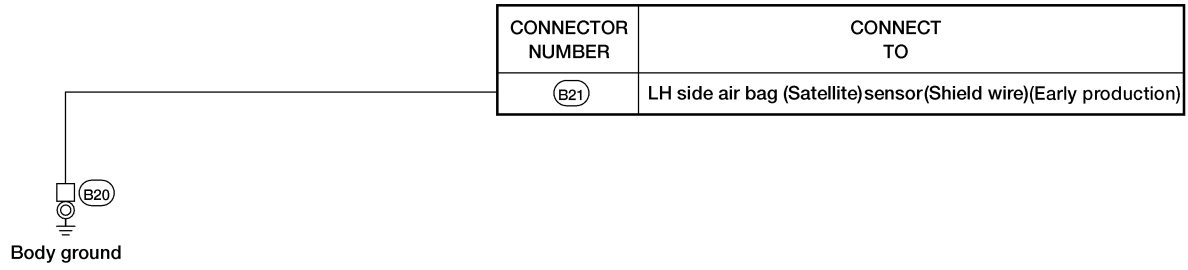
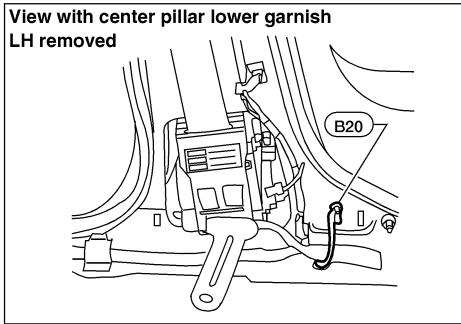
WEL563A

GROUND

Ground Distribution (Cont'd)

BODY HARNESS

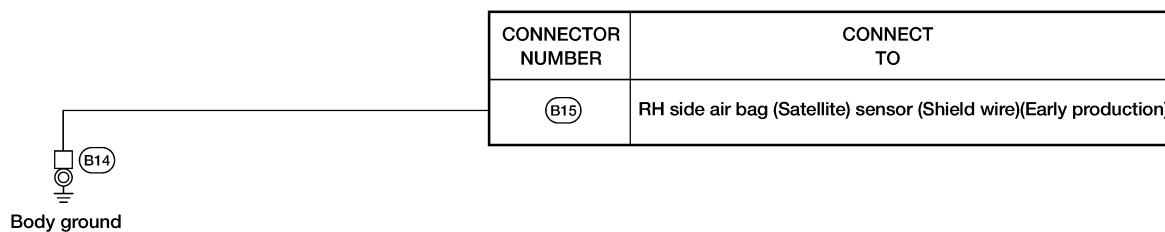
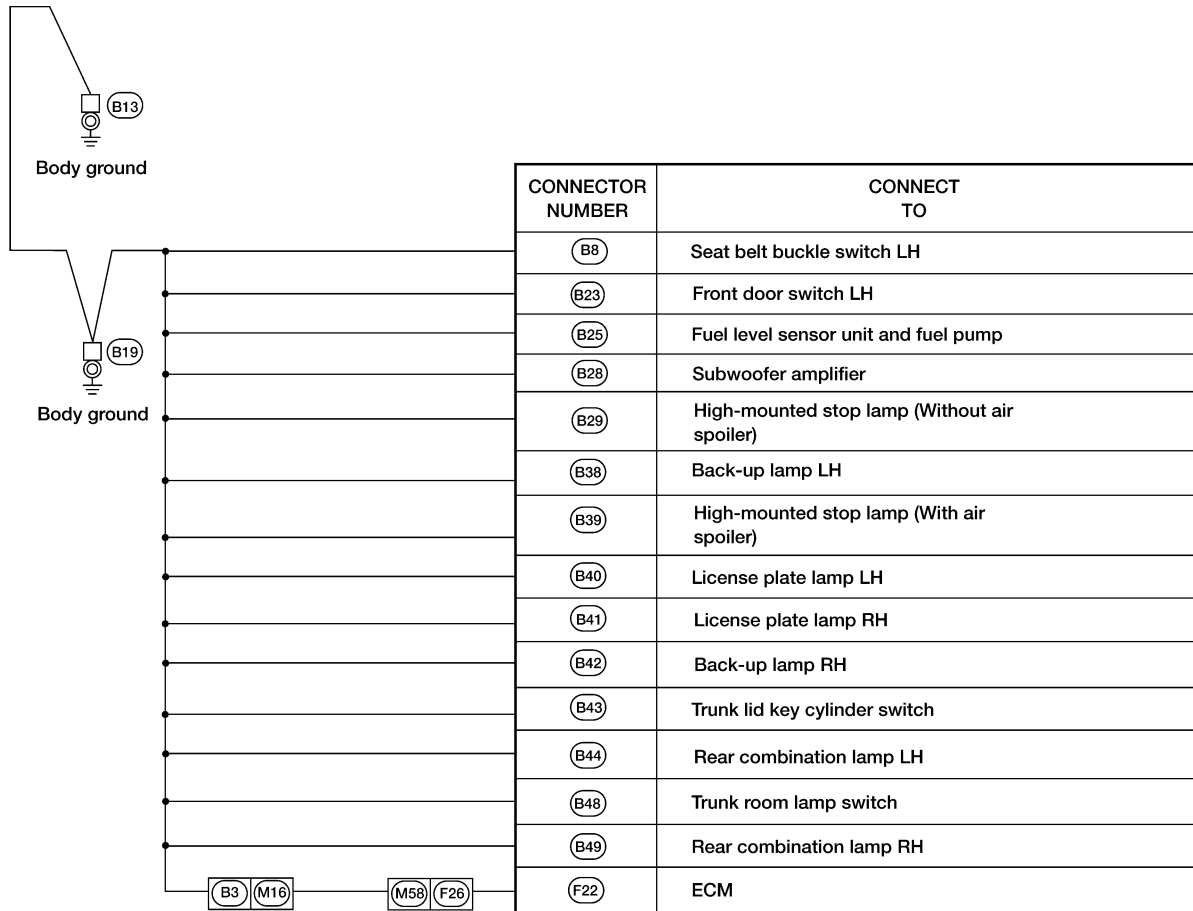
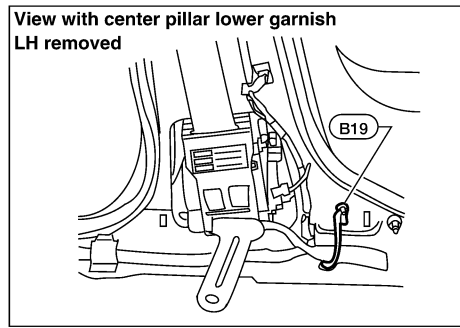
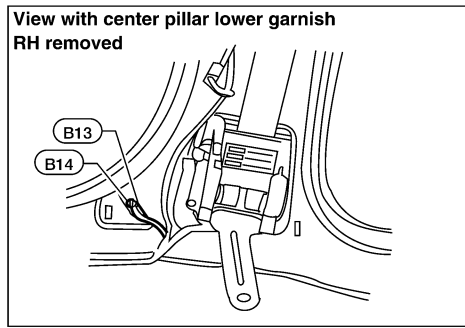
NIEL0008S04



WEL014B

GROUND

Ground Distribution (Cont'd)



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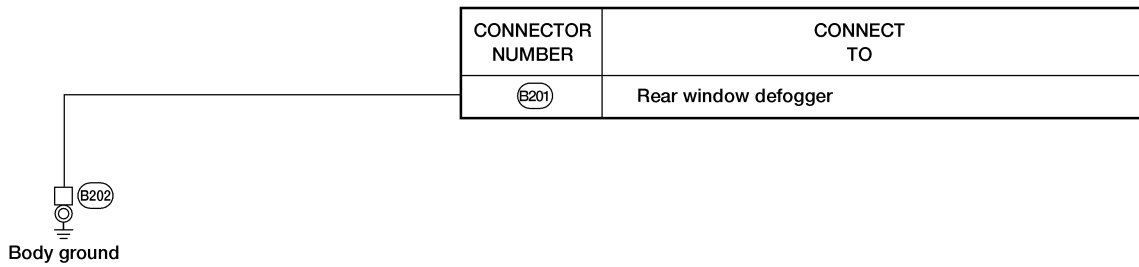
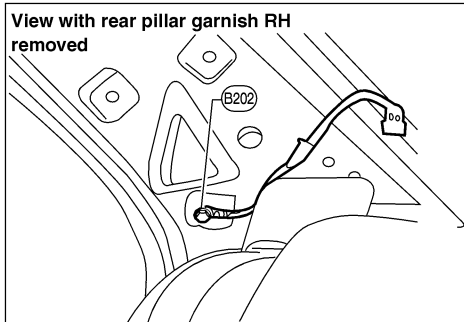
WEL015B

GROUND

Ground Distribution (Cont'd)

BODY NO. 2 HARNESS

-NIEL0008S05



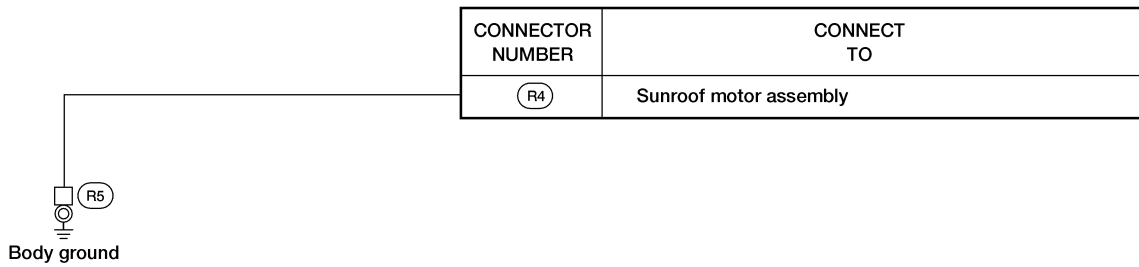
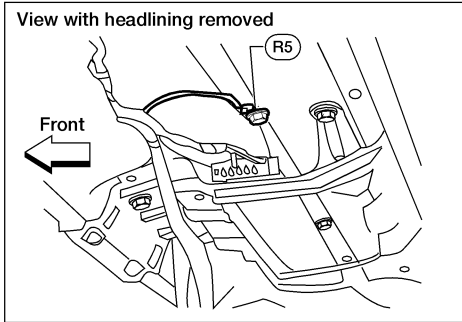
LEL434

GROUND

Ground Distribution (Cont'd)

ROOM HARNESS

NIEL0008S06



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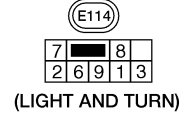
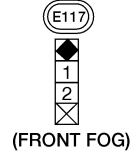
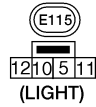
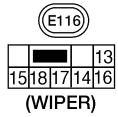
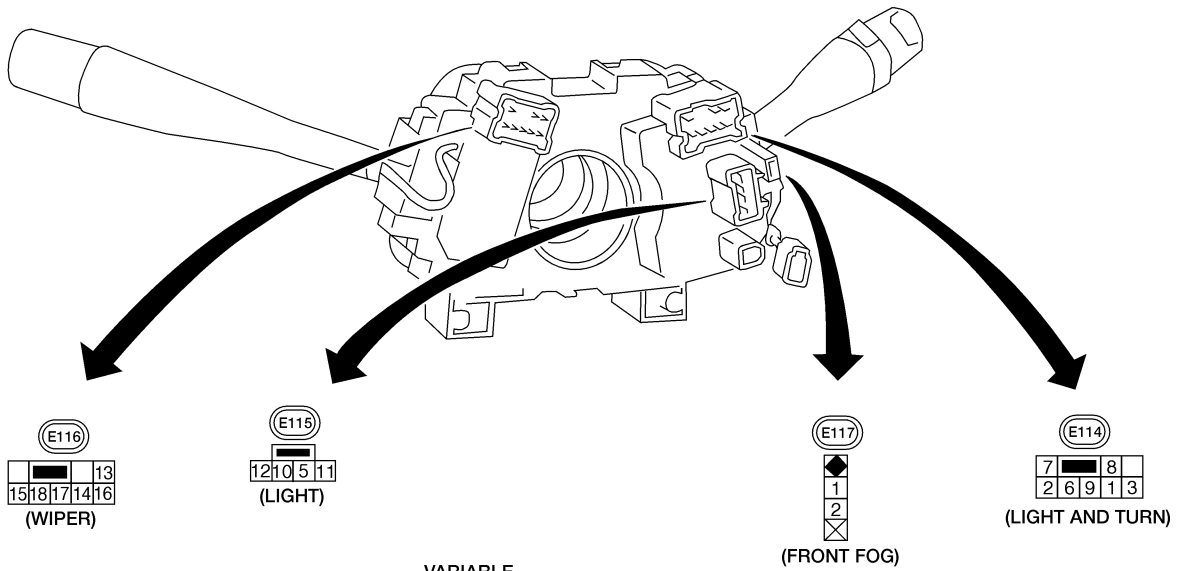
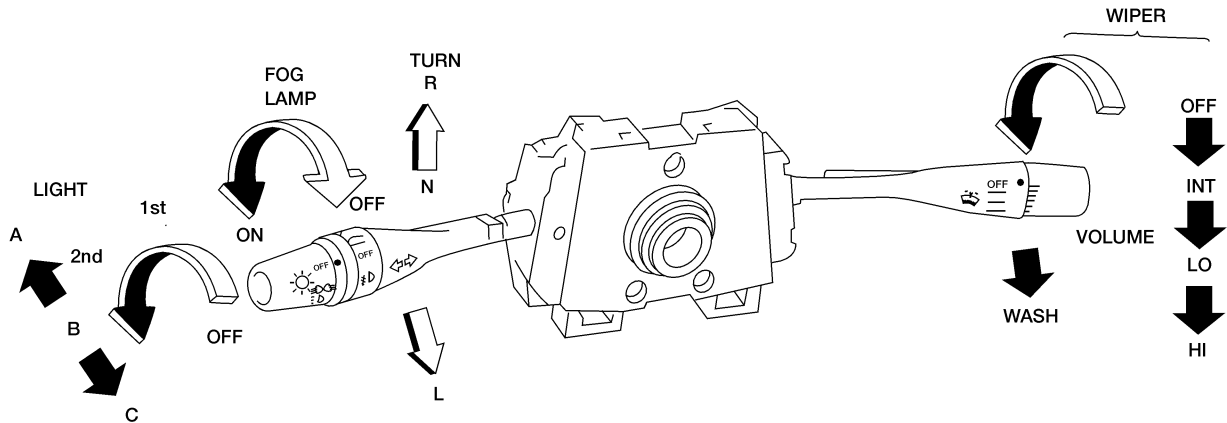
LEL433

COMBINATION SWITCH

Check

Check

NIEL0009



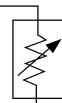
FRONT WIPER AND WASHER SWITCH (WITH INTERMITTENT OPERATION)

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

WIPER AMP.

14 15 13 16 17 18

VARIABLE INTERMITTENT WIPER VOLUME



LIGHTING SWITCH

	OFF			1ST			2ND		
	A	B	C	A	B	C	A	B	C
5	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
8	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
10			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TURN SIGNAL LAMP SWITCH

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

WIPER SWITCH (WITHOUT INTERMITTENT OPERATION)

	OFF	LO	HI	WASH
13	<input type="checkbox"/>			
14	<input type="checkbox"/>	<input type="checkbox"/>		
16		<input type="checkbox"/>	<input type="checkbox"/>	
17		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18				<input type="checkbox"/>

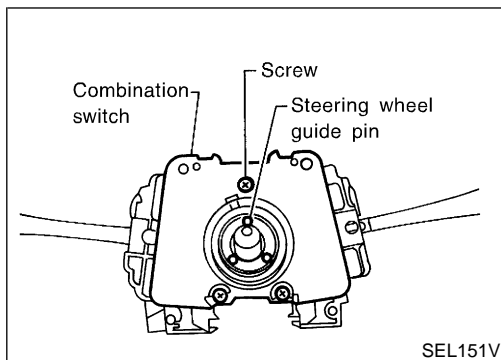
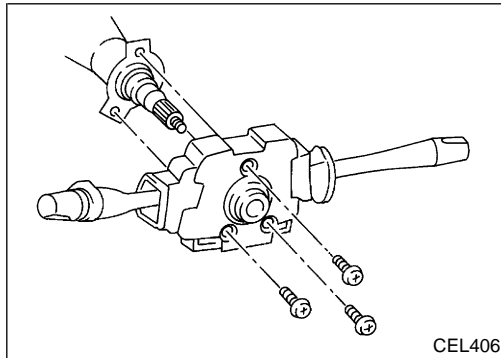
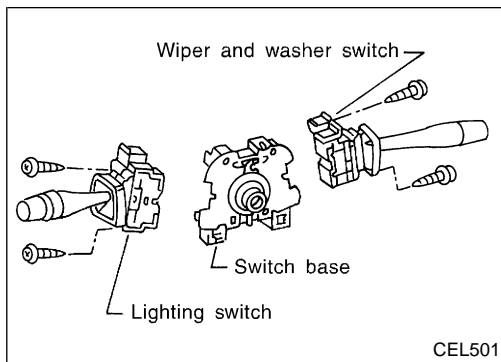
FRONT FOG LAMP SWITCH

	OFF	ON
1		<input type="checkbox"/>
2		<input type="checkbox"/>

LEL576

COMBINATION SWITCH

Replacement



Replacement

For removal and installation of spiral cable, refer to ^{NIEL0010}RS-21 "Driver Air Bag Module and Spiral Cable".

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

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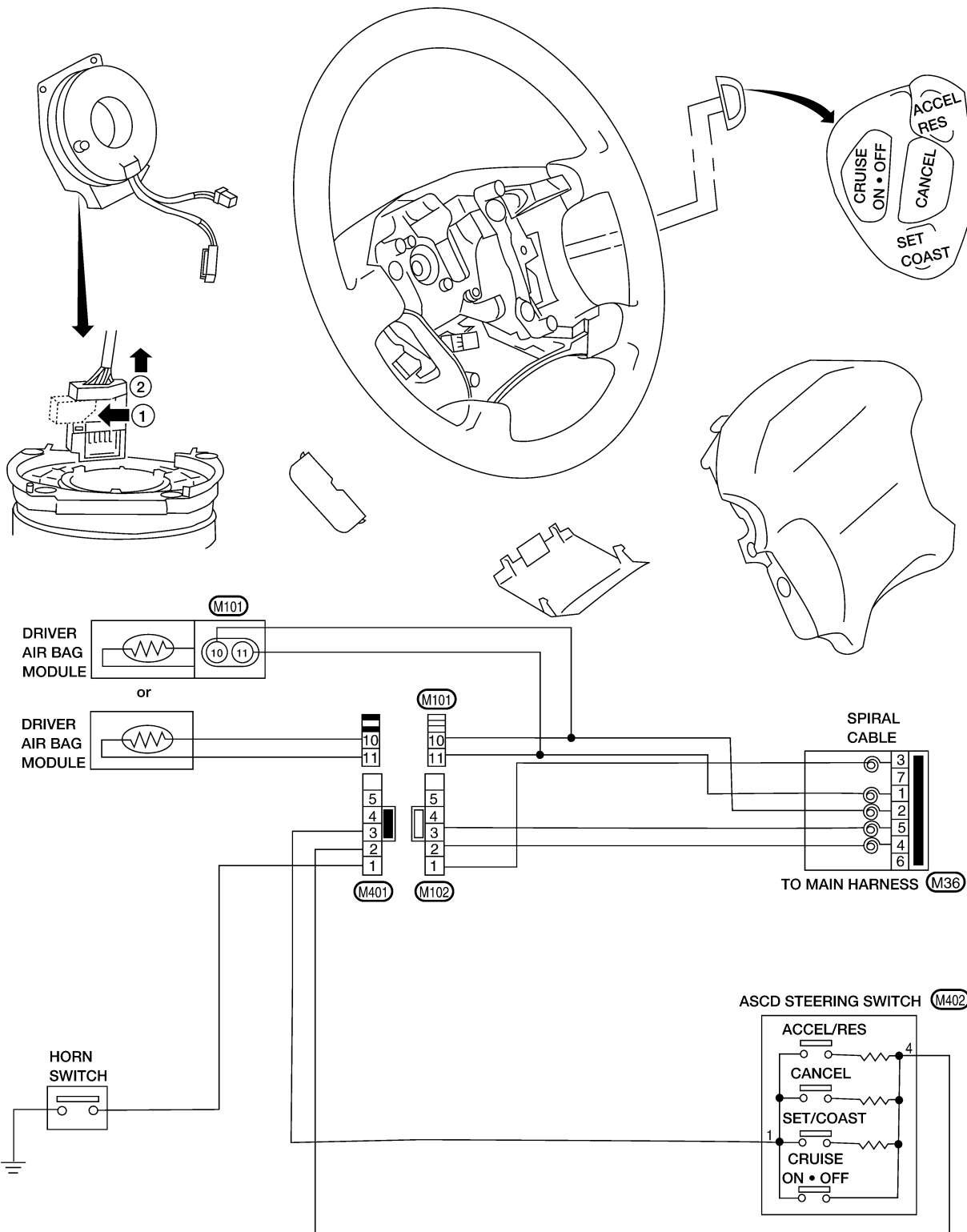
IDX

STEERING SWITCH

Check

Check

NIEL0011



WEL596A

System Description

The headlamps are controlled by the lighting switch which is built into the combination switch. Power is supplied at all times: NIEL0198

- to lighting switch terminal 5
- through 15A fuse (No. 39, located in the fuse and fusible link box), and
- to lighting switch terminal 8
- through 15A fuse (No. 40, located in the fuse and fusible link box).

LOW BEAM OPERATION

When the lighting switch is turned to headlamp "ON" (2ND) position, "LOW BEAM" (B), power is supplied: NIEL0198S02

- from lighting switch terminal 10
- to terminal LO of the LH headlamp, and
- from lighting switch terminal 7
- to terminal LO of the RH headlamp.

Ground is supplied:

- to RH and LH headlamp terminal E
- through body grounds E7 and E37.

With power and ground supplied, the headlamps will illuminate.

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

When the lighting switch is turned to headlamp "ON" (2ND) position, "HIGH BEAM" (A) or "FLASH TO PASS" (C) position, power is supplied: NIEL0198S03

- from lighting switch terminal 9
- to terminal HI of the LH headlamp, and
- from lighting switch terminal 6
- to terminal HI of the RH headlamp, and
- to combination meter terminal 2 (with tachometer), 12 (without tachometer) for the high beam indicator.

Ground is supplied to terminal 3 (with tachometer), 14 (without tachometer) of the combination meter through body grounds M28 and M54.

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

VEHICLE SECURITY SYSTEM

The vehicle security system will flash the high beams if the system is triggered. Refer to "VEHICLE SECURITY (THEFT WARNING) SYSTEM," (EL-258). NIEL0198S05

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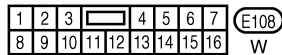
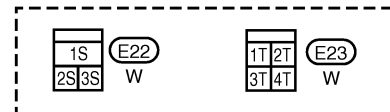
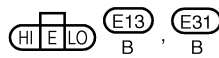
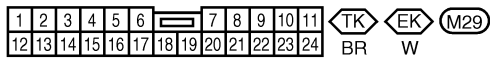
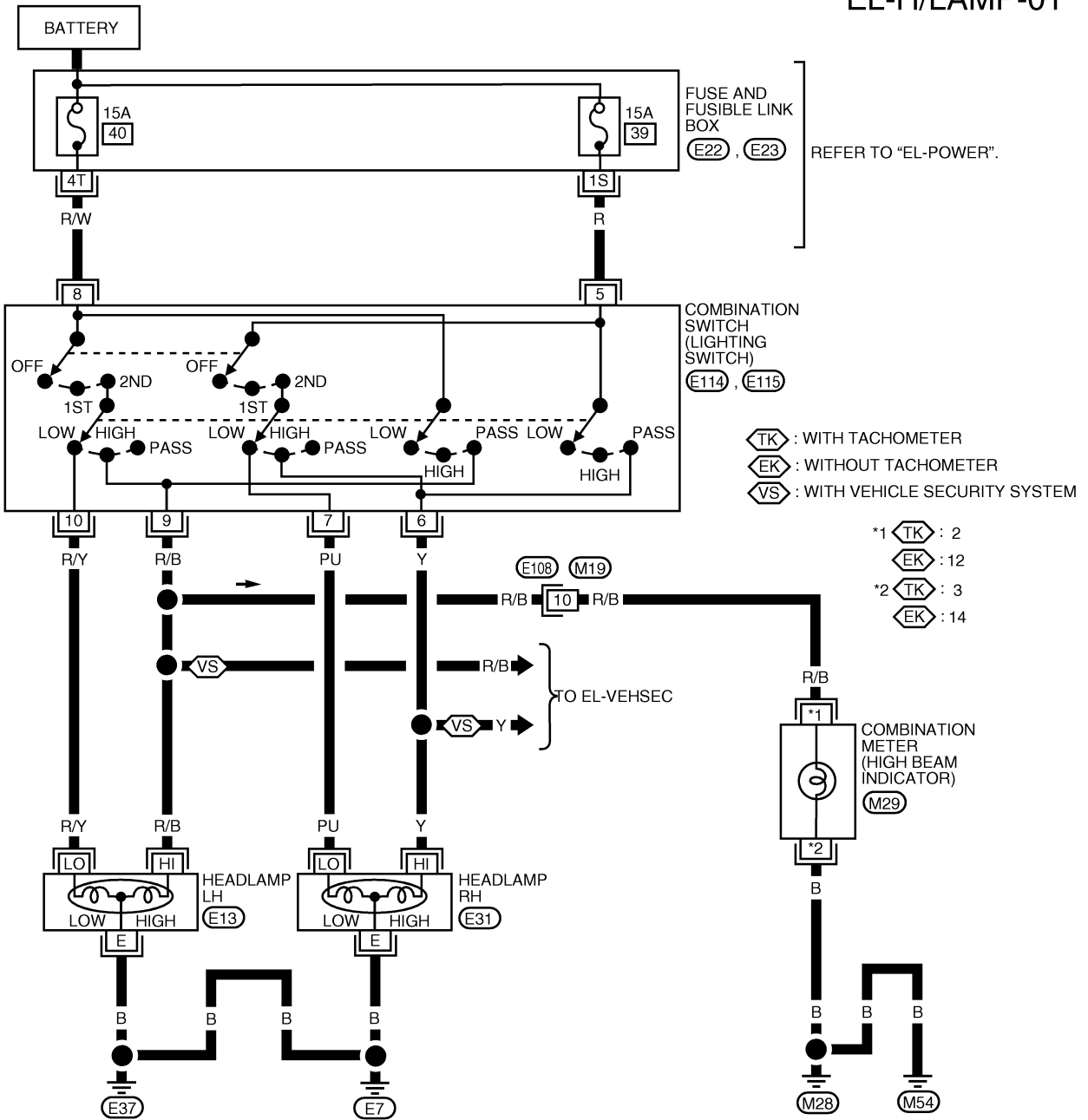
HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP —

Wiring Diagram — H/LAMP —

NIEL0013

EL-H/LAMP-01



LEL141A

HEADLAMP (FOR USA)

Trouble Diagnoses

Trouble Diagnoses

NIEL0202

Symptom	Possible cause	Repair order
LH headlamp does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds E7 and E37 3. 15A fuse 4. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds E7 and E37. 3. Check 15A fuse (No. 40, located in fuse and fusible link box.) Verify battery positive voltage is present at terminal 8 of lighting switch. 4. Check lighting switch.
RH headlamp does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds E7 and E37 3. 15A fuse 4. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds E7 and E37 3. Check 15A fuse (No. 39, located in fuse and fusible link box). Verify battery positive voltage is present at terminal 5 of lighting switch. 4. Check lighting switch.
LH high beam does not operate, but LH low beam operates.	<ol style="list-style-type: none"> 1. Bulb 2. Open in LH high beam circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check R/B wire between lighting switch and LH headlamp for an open circuit. 3. Check lighting switch.
LH low beam does not operate, but LH high beam operates.	<ol style="list-style-type: none"> 1. Bulb 2. Open in LH low beam circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check R/Y wire between lighting switch and LH headlamp for an open circuit. 3. Check lighting switch.
RH high beam does not operate, but RH low beam operates.	<ol style="list-style-type: none"> 1. Bulb 2. Open in RH high beam circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check Y wire between lighting switch and RH headlamp for an open circuit. 3. Check lighting switch.
RH low beam does not operate, but RH high beam operates.	<ol style="list-style-type: none"> 1. Bulb 2. Open in RH low beam circuit 3. Lighting switch 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check PU wire between lighting switch and RH headlamp for an open circuit. 3. Check lighting switch.
High beam indicator does not work.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds M28 and M54 3. Open in high beam circuit 	<ol style="list-style-type: none"> 1. Check bulb in combination meter. 2. Check grounds M28 and M54. 3. Check R/B wire between lighting switch and combination meter for an open circuit.

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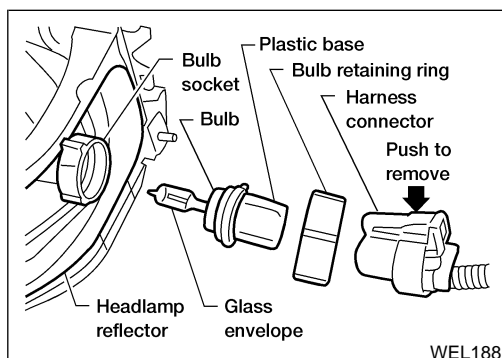
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Bulb Replacement

NIEL0015

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

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

1. Disconnect the battery cable.
2. Disconnect the harness connector from the back side of the headlamp bulb.
3. Turn the bulb retaining ring counterclockwise and remove.
4. Remove the bulb by pulling it straight out of the headlamp

HEADLAMP (FOR USA)

assembly. Do not shake the bulb when removing it.

5. Install in the reverse order of removal.

CAUTION:

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

Aiming Adjustment

NIEL0016

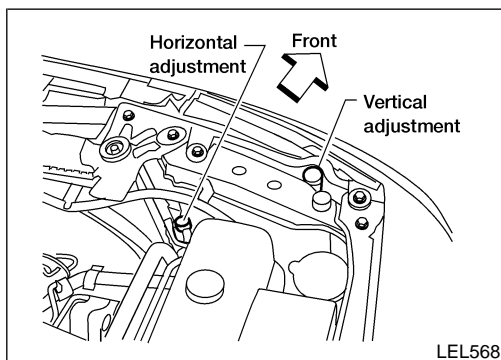
For details, refer to the regulations in your own country.

NOTE:

By regulation, no means for horizontal adjustment is provided from the factory on a finished vehicle. Horizontal aim will only be serviced in the case of headlamp replacement. After initial aim is set on the replacement headlamp, access to the horizontal adjusting screw must be prevented by installation of the headlamp aim locking cap that is provided with the replacement headlamp assembly.

Before performing aiming adjustment, check the following.

- 1) Keep all tires inflated to correct pressures.
- 2) Place vehicle on flat surface.
- 3) See that the 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 the driver's seat.



LOW BEAM

NIEL0016S02

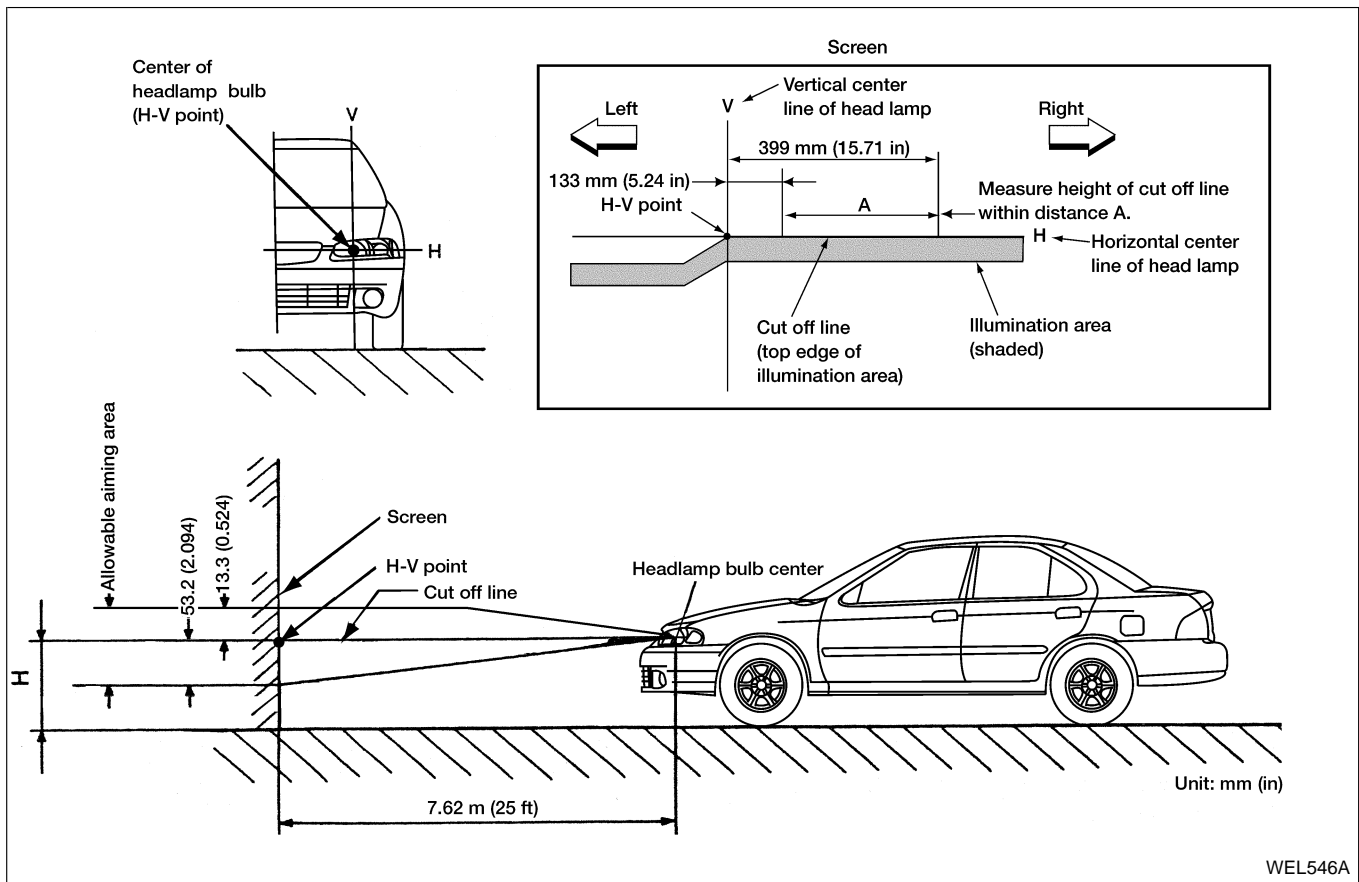
1. Turn headlamp low beam on.
2. Use adjusting screws to perform aiming adjustment.

CAUTION:

Do not tighten adjusting screws beyond a torque of 1.67 N·m (17 kg·cm, 14.8 in·lb) or damage may occur.

HEADLAMP (FOR USA)

Aiming Adjustment (Cont'd)



WEL546A

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

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

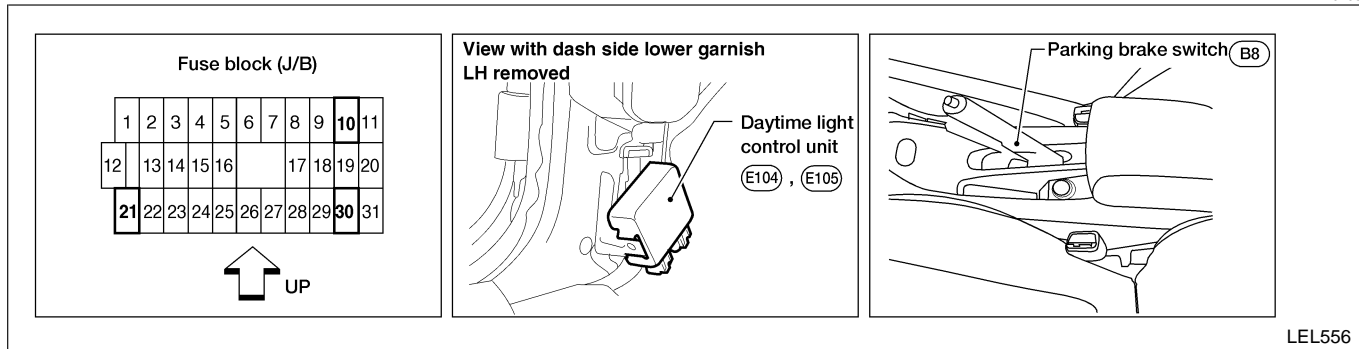
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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NIEL0203



LEL556

System Description

NIEL0204

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

Power is supplied at all times:

- through 15A fuse (No. 39, located in the fuse and fusible link box)
- to daytime light control unit terminal 2 and
- to lighting switch terminal 5.

Power is also supplied at all times:

- through 15A fuse (No. 40, located in the fuse and fusible link box)
- to daytime light control unit terminal 3 and
- to lighting switch terminal 8.

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 daytime light control unit terminal 12.

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 control unit terminal 1.

Ground is supplied to daytime light control unit terminal 9 through body grounds E7 and E37.

HEADLAMP OPERATION

NIEL0204S01

Low Beam Operation

NIEL0204S0103

When the lighting switch is turned to headlamp "ON" (2ND) position, "LOW BEAM" (B) position, power is supplied:

- from lighting switch terminal 7
- to RH headlamp terminal LO.

Ground is supplied:

- to RH headlamp terminal E
- through body grounds E7 and E37.

Also, when the lighting switch is moved to headlamp "ON" (2ND) position, "LOW BEAM" (B) position, power is supplied:

- from lighting switch terminal 10
- to LH headlamp terminal LO.

Ground is supplied:

- to LH headlamp terminal E
- from daytime light control unit terminal 7

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

System Description (Cont'd)

- through daytime light control unit terminal 9
- through body grounds E7 and E37.

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

GI

High Beam Operation/Flash-to-pass Operation

When the lighting switch is moved to headlamp “ON” (2ND) position, “HIGH BEAM” (A) or “FLASH TO PASS” (C) position, power is supplied:

NIEL0204S0104

MA

- from lighting switch terminal 6
- to RH headlamp terminal HI, and
- from lighting switch terminal 9
- to daytime light control unit terminal 5, and
- to combination meter terminal 2 (with tachometer), 12 (without tachometer) for the high beam indicator
- through daytime light control unit terminal 6
- to LH headlamp terminal HI.

EM

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Ground is supplied in the same manner as low beam operation.

Ground is supplied to terminal 3 (with tachometer), 14 (without tachometer) of the combination meter through body grounds M28 and M54.

FE

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

CL

DAYTIME LIGHT OPERATION

With the engine running and the lighting switch in the “OFF” or parking lamp (1ST) position and parking brake released, power is supplied:

NIEL0204S03

MT

- to daytime light control unit terminal 3
- through daytime light control unit terminal 6
- to LH headlamp terminal HI
- through LH headlamp terminal E
- to daytime light control unit terminal 7
- through daytime light control unit terminal 8
- to RH headlamp terminal HI.

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Ground is supplied:

- to RH headlamp terminal E
- through body grounds E7 and E37.

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

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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

System Description (Cont'd)

OPERATION (FOR CANADA)

-NIEL0204S04

The headlamps' high beams automatically turn on after starting the engine with the lighting switch in the "OFF" or parking lamp (1st) position. Lighting switch operations other than the above are the same as conventional light systems.

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

A: "HIGH BEAM" position

B: "LOW BEAM" position

C: "FLASH TO PASS" position

O : Lamp ON

X : Lamp OFF

△ : Lamp on at half brightness

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

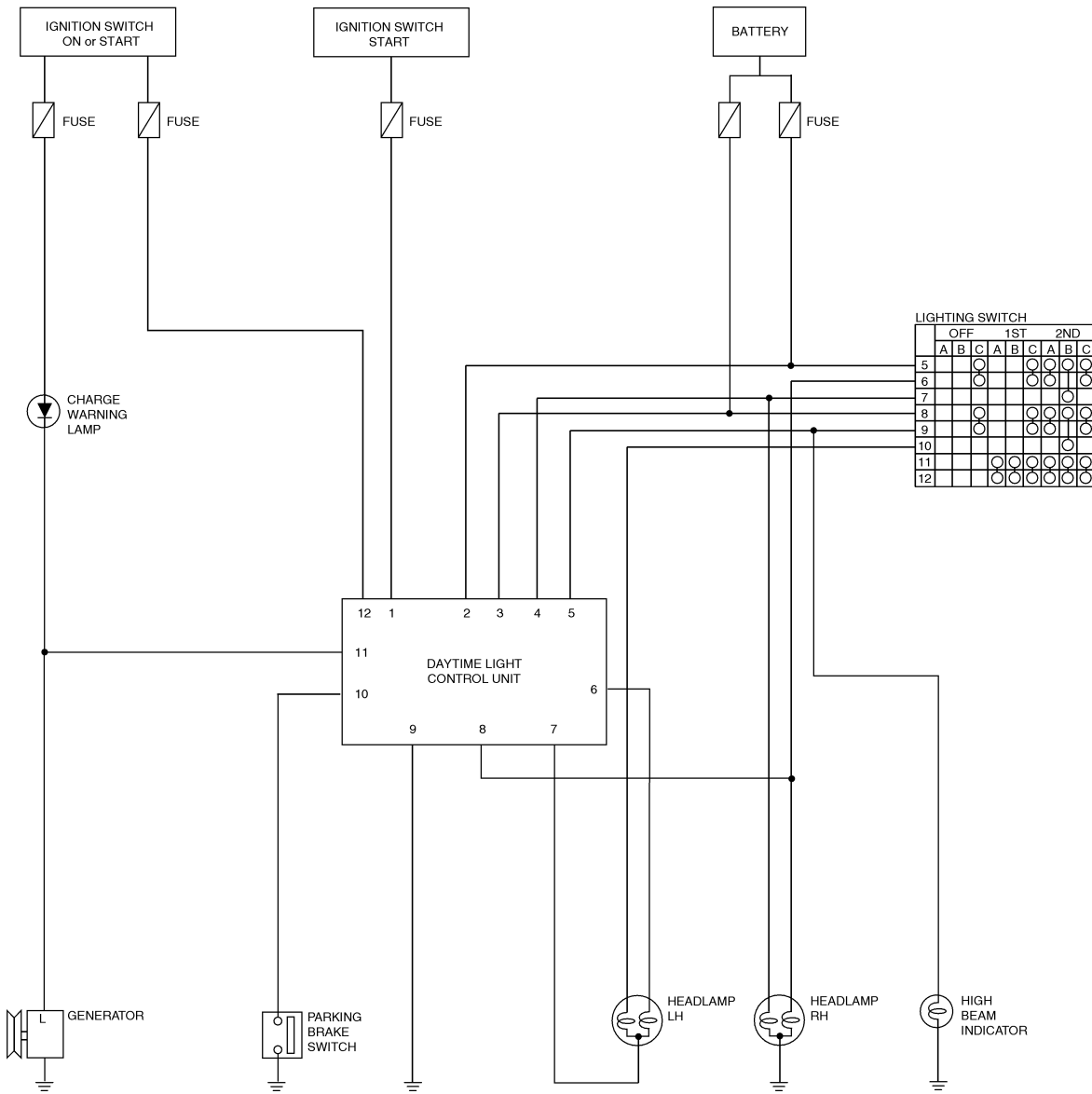
When starting the engine with the parking brake applied, the daytime light will not come ON. Once the parking brake is released, the daytime light will come ON. Thereafter, the daytime light will continue to operate when the parking brake is applied. If the daytime light control unit receives a ground signal from the generator, the daytime light will not come ON. The daytime light will come ON when battery voltage is sent to the daytime light control unit from the generator (engine is running).

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Schematic

Schematic

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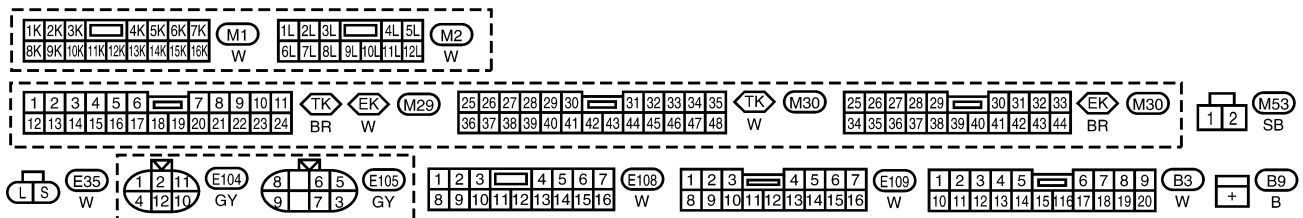
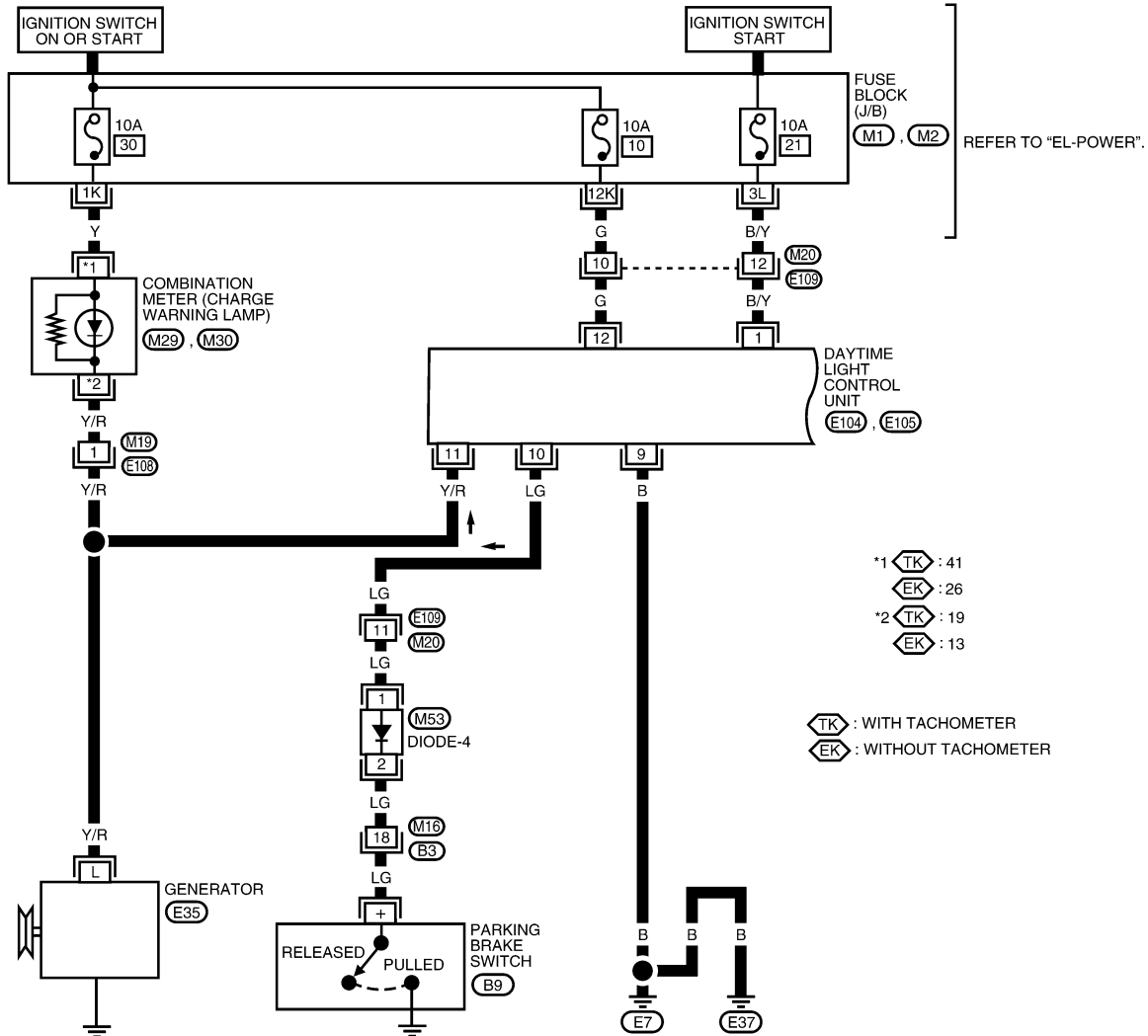
HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL —

Wiring Diagram — DTRL —

NIEL0020

EL-DTRL-01



WEL017B

DAYTIME LIGHT CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

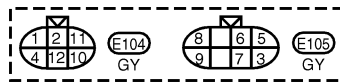
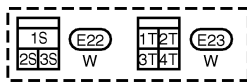
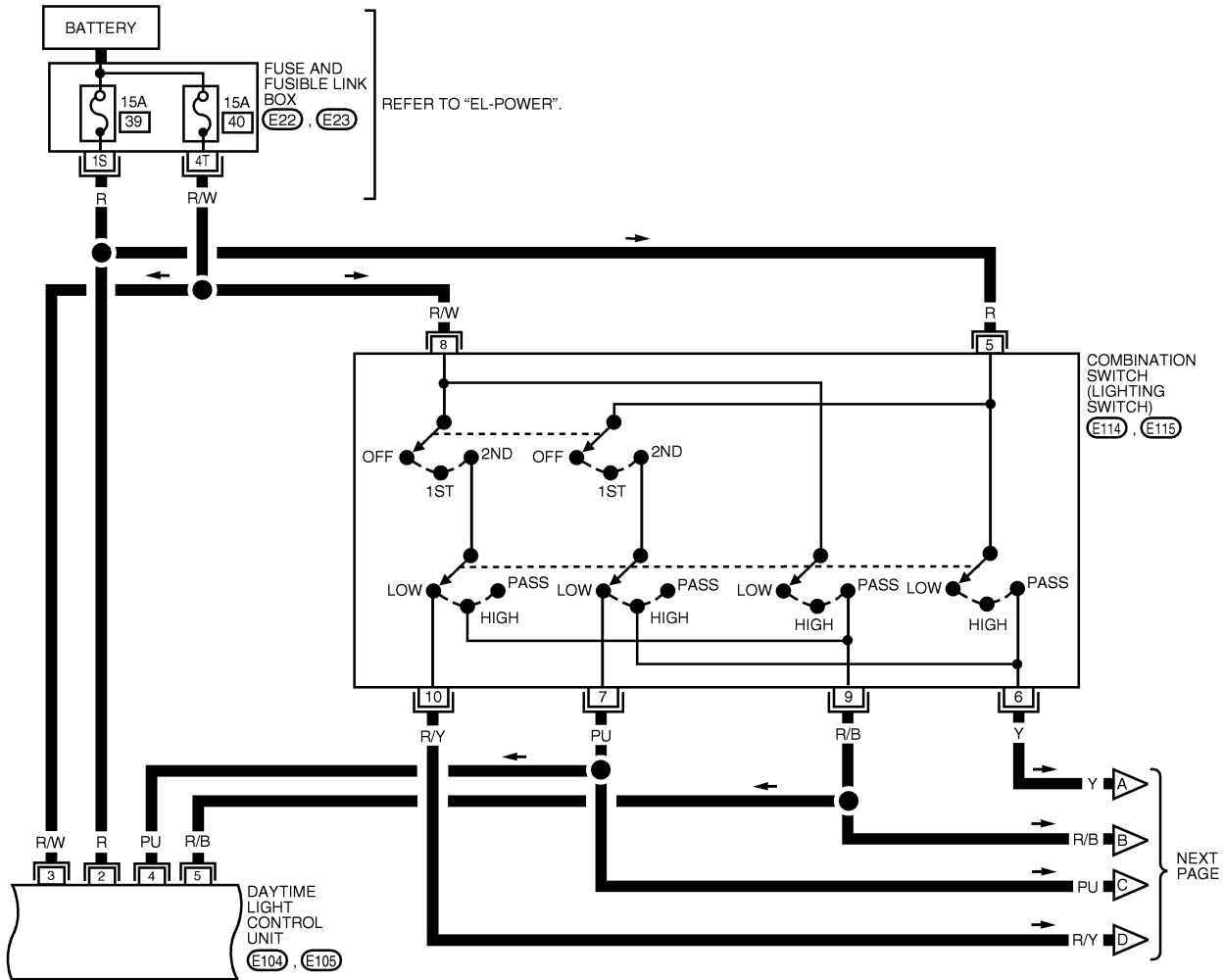
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	B/Y	IGNITION SWITCH (START)	WHEN TURNING IGNITION SWITCH TO START POSITION	BATTERY VOLTAGE
9	B	DAYTIME LIGHT CONTROL UNIT GROUND	—	—
10	LG	PARKING BRAKE SWITCH	WHEN PARKING BRAKE IS RELEASED WHEN PARKING BRAKE IS APPLIED	BATTERY VOLTAGE 1.5V OR LESS
11	Y/R	GENERATOR	WHEN TURNING IGNITION SWITCH TO ON POSITION WHEN ENGINE IS RUNNING WHEN TURNING IGNITION SWITCH TO OFF POSITION	4.6V OR LESS B+ VOLTAGE 1V OR LESS
12	G	IGNITION SWITCH (ON OR START)	WHEN TURNING IGNITION SWITCH TO ON POSITION WHEN TURNING IGNITION SWITCH TO START POSITION	BATTERY VOLTAGE BATTERY VOLTAGE

LEL592

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-02



WEL326

DAYTIME LIGHT CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
2	R	POWER SOURCE	WHEN TURNING IGNITION SWITCH TO ON POSITION	BATTERY VOLTAGE
			WHEN TURNING IGNITION SWITCH TO OFF POSITION	BATTERY VOLTAGE
3	R/W	POWER SOURCE	WHEN TURNING IGNITION SWITCH TO ON POSITION	BATTERY VOLTAGE
			WHEN TURNING IGNITION SWITCH TO OFF POSITION	BATTERY VOLTAGE
4	PU	LIGHTING SWITCH (LOW BEAM)	WHEN TURNING LIGHTING SWITCH TO HEADLAMP ON (2ND) POSITION, LOW BEAM	BATTERY VOLTAGE
5	R/B	LIGHTING SWITCH (HIGH BEAM)	WHEN TURNING LIGHTING SWITCH TO HIGH (A)	BATTERY VOLTAGE
			WHEN TURNING LIGHTING SWITCH TO FLASH TO PASS	BATTERY VOLTAGE

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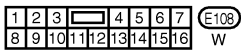
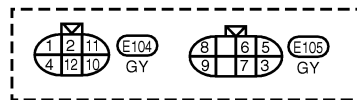
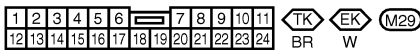
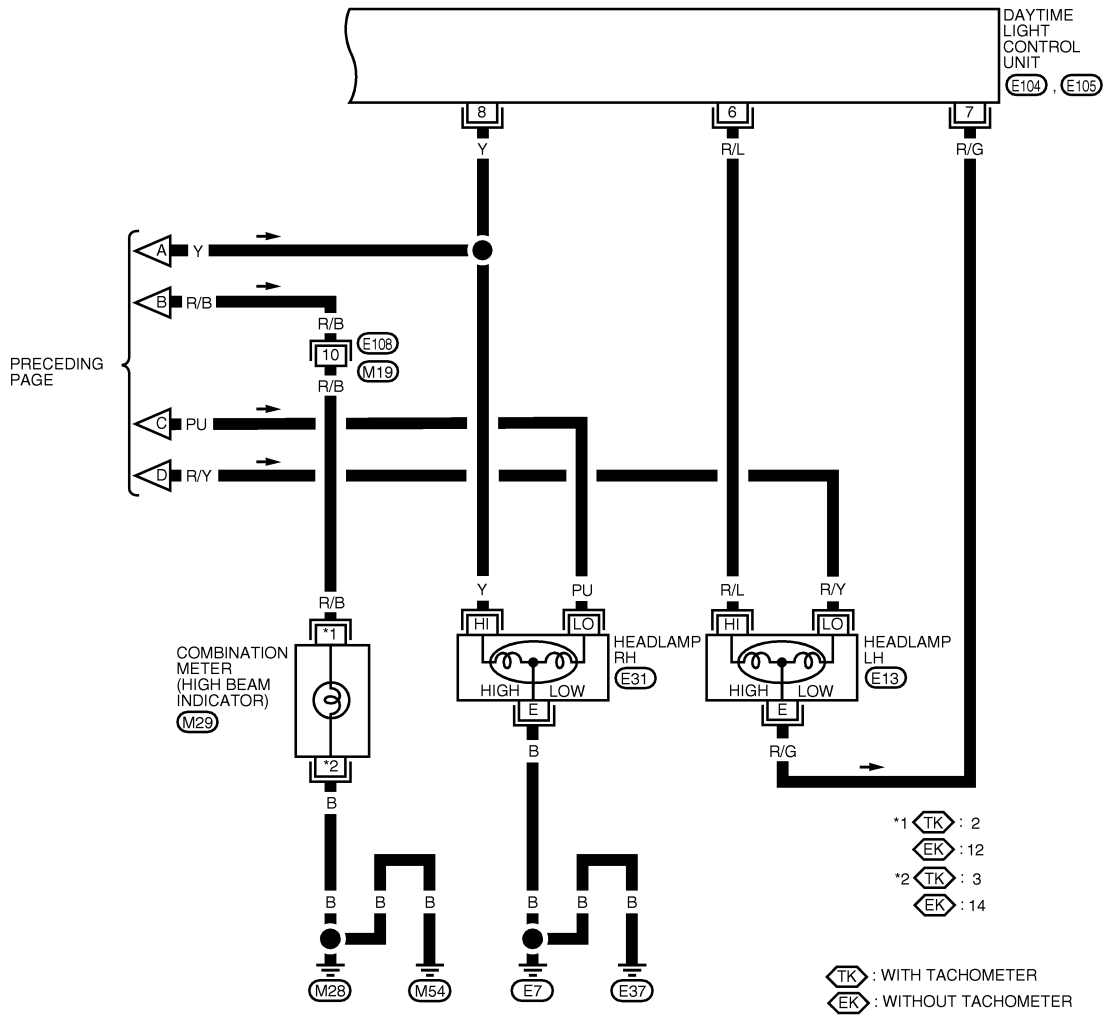
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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL — (Cont'd)

EL-DTRL-03



WEL327

DAYTIME LIGHT CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
6	R/L	LH HIGH BEAM	WHEN TURNING LIGHTING SWITCH TO HIGH (A) WHEN RELEASING PARKING BRAKE WITH ENGINE RUNNING AND TURNING LIGHTING SWITCH TO OFF (DAYTIME LIGHT OPERATION) CAUTION: BLOCK WHEELS AND ENSURE SELECTOR LEVER IS IN N OR P POSITION	BATTERY VOLTAGE
7	R/G	LH HEADLAMP CONTROL (GROUND)	WHEN LIGHTING SWITCH IS TURNED TO HEADLAMP ON (2ND) POSITION, LOW BEAM WHEN RELEASING PARKING BRAKE WITH ENGINE RUNNING AND TURNING LIGHTING SWITCH TO OFF (DAYTIME LIGHT OPERATION) CAUTION: BLOCK WHEELS AND ENSURE SELECTOR LEVER IS IN N OR P POSITION.	1V OR LESS APPROX. HALF OF BATTERY VOLTAGE
8	Y	RH HIGH BEAM	WHEN TURNING LIGHTING SWITCH TO HIGH (A) WHEN RELEASING PARKING BRAKE WITH ENGINE RUNNING AND TURNING LIGHTING SWITCH TO OFF (DAYTIME LIGHT OPERATION) CAUTION: BLOCK WHEELS AND ENSURE SELECTOR LEVER IS IN N OR P POSITION.	BATTERY VOLTAGE APPROX. HALF OF BATTERY VOLTAGE

LEL594

HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —












Trouble Diagnoses

Trouble Diagnoses

NIEL0206

NIEL0206S01

DAYTIME LIGHT CONTROL UNIT INSPECTION TABLE

Terminal No.	Wire color	Item	Condition	Voltage (Approx. values)
1	B/Y	Start signal	 When turning ignition switch to ST	Battery voltage
			 When turning ignition switch to ON from ST	Less than 1V
			 When turning ignition switch to OFF	Less than 1V
2	R	Power source	 When turning ignition switch to ON	Battery voltage
			 When turning ignition switch to OFF	Battery voltage
3	R/W	Power source	 When turning ignition switch to ON	Battery voltage
			 When turning ignition switch to OFF	Battery voltage
4	PU	Lighting switch (Low beam)	 When turning lighting switch to headlamp ON (2ND) position, LOW BEAM	Battery voltage
5	R/B	Lighting switch (High beam)	When turning lighting switch to HIGH (A)	Battery voltage
			When turning lighting switch to FLASH TO PASS	Battery voltage
6	R/L	LH high beam	When turning lighting switch to HIGH (A)	Battery voltage
			 When releasing parking brake with engine running and turning lighting switch to OFF (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Battery voltage
7	R/G	LH headlamp control (ground)	When lighting switch is turned to headlamp ON (2ND) position, LOW BEAM	1V or less
			 When releasing parking brake with engine running and turning lighting switch OFF (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Half battery voltage
8	Y	RH high beam	When turning lighting switch to HIGH (A)	Battery positive voltage
			 When releasing parking brake with engine running and turning lighting switch OFF (daytime light operation) CAUTION: Block wheels and ensure selector level is in N or P position.	Half battery voltage
9	B	Ground	—	—
10	LG	Parking brake switch	When parking brake is released	Battery voltage
			When parking brake is applied	1.5V or less

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HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Trouble Diagnoses (Cont'd)

Terminal No.	Wire color	Item	Condition		Voltage (Approx. values)
10	LG	Parking brake switch		When parking brake is released	Battery voltage
				When parking brake is applied	1.5V or less
11	Y/R	Generator		When turning ignition switch ON	4.6V or less
				When engine is running	Battery voltage
				When turning ignition switch OFF	1V or less
12	G	Power source		When turning ignition switch ON	Battery voltage
				When turning ignition switch to ST	Battery voltage
				When turning ignition switch OFF	1V or less

Bulb Replacement

Refer to "Bulb Replacement", EL-37.

NIEL0022

Aiming Adjustment

Refer to "Aiming Adjustment", EL-38.

NIEL0023

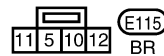
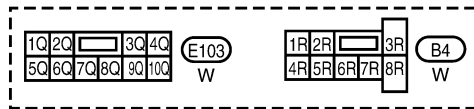
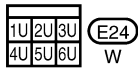
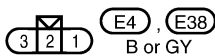
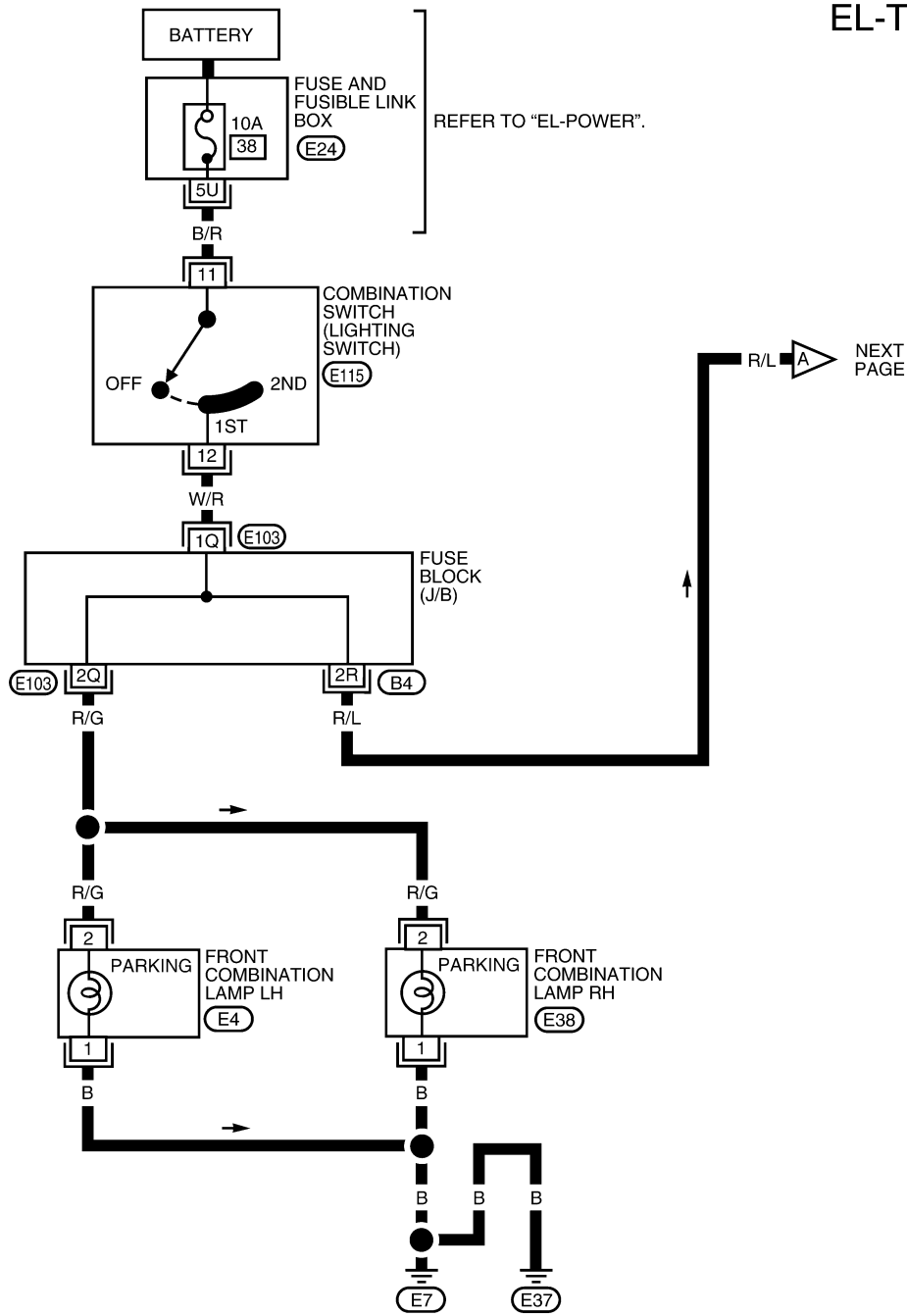
PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L —

Wiring Diagram — TAIL/L —

NIEL0024

EL-TAIL/L-01



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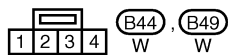
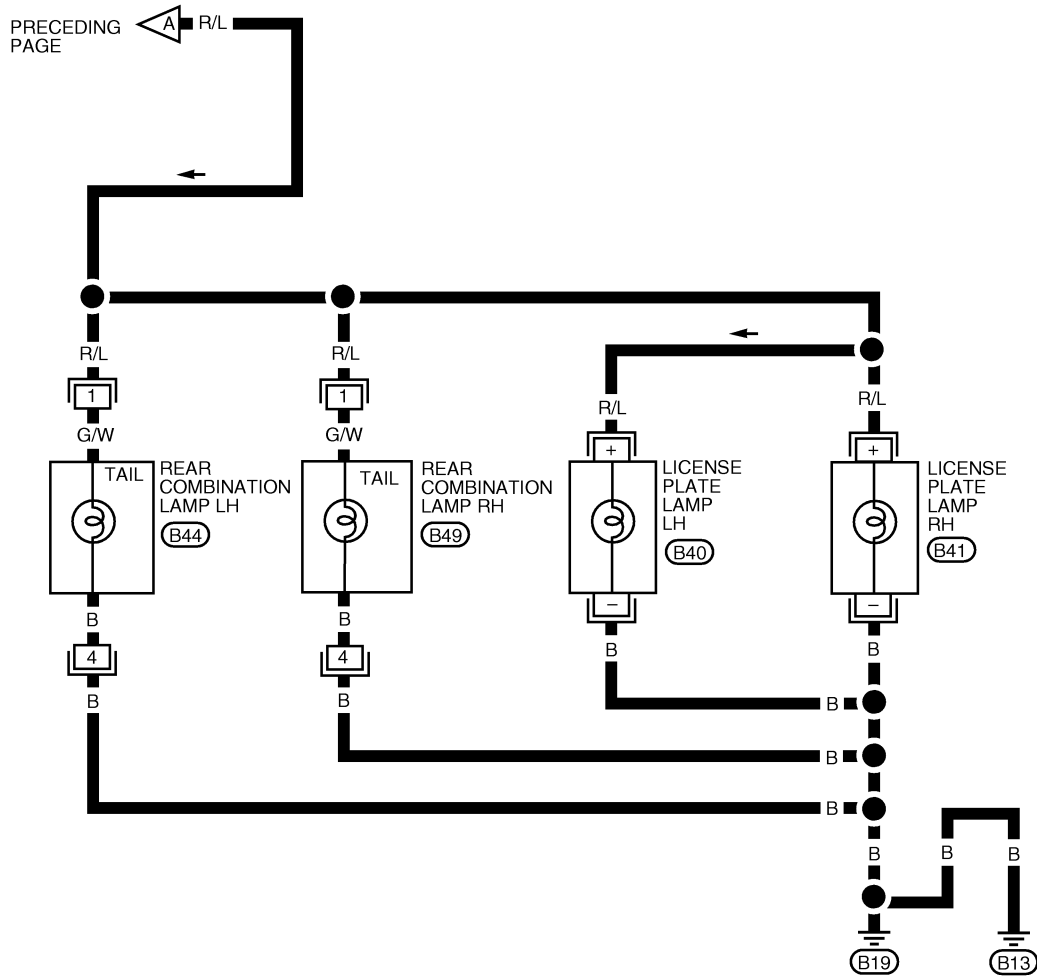
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PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

EL-TAIL/L-02



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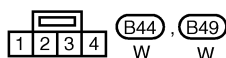
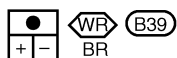
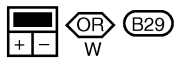
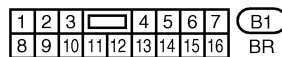
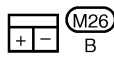
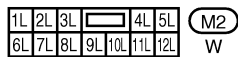
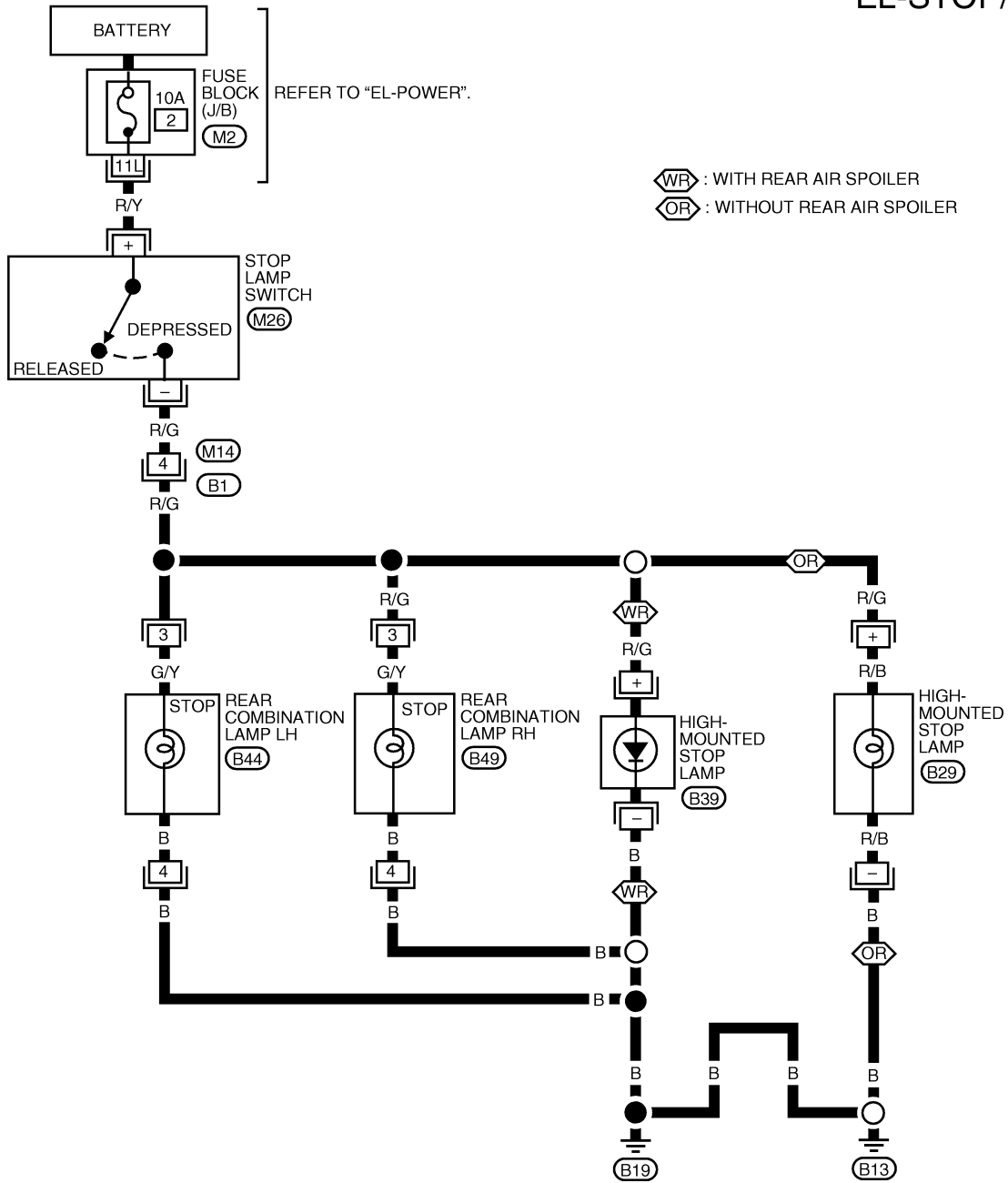
STOP LAMP

Wiring Diagram — STOP/L —

Wiring Diagram — STOP/L —

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EL-STOP/L-01



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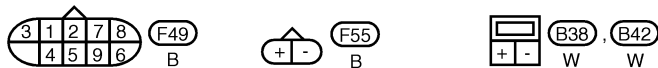
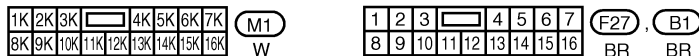
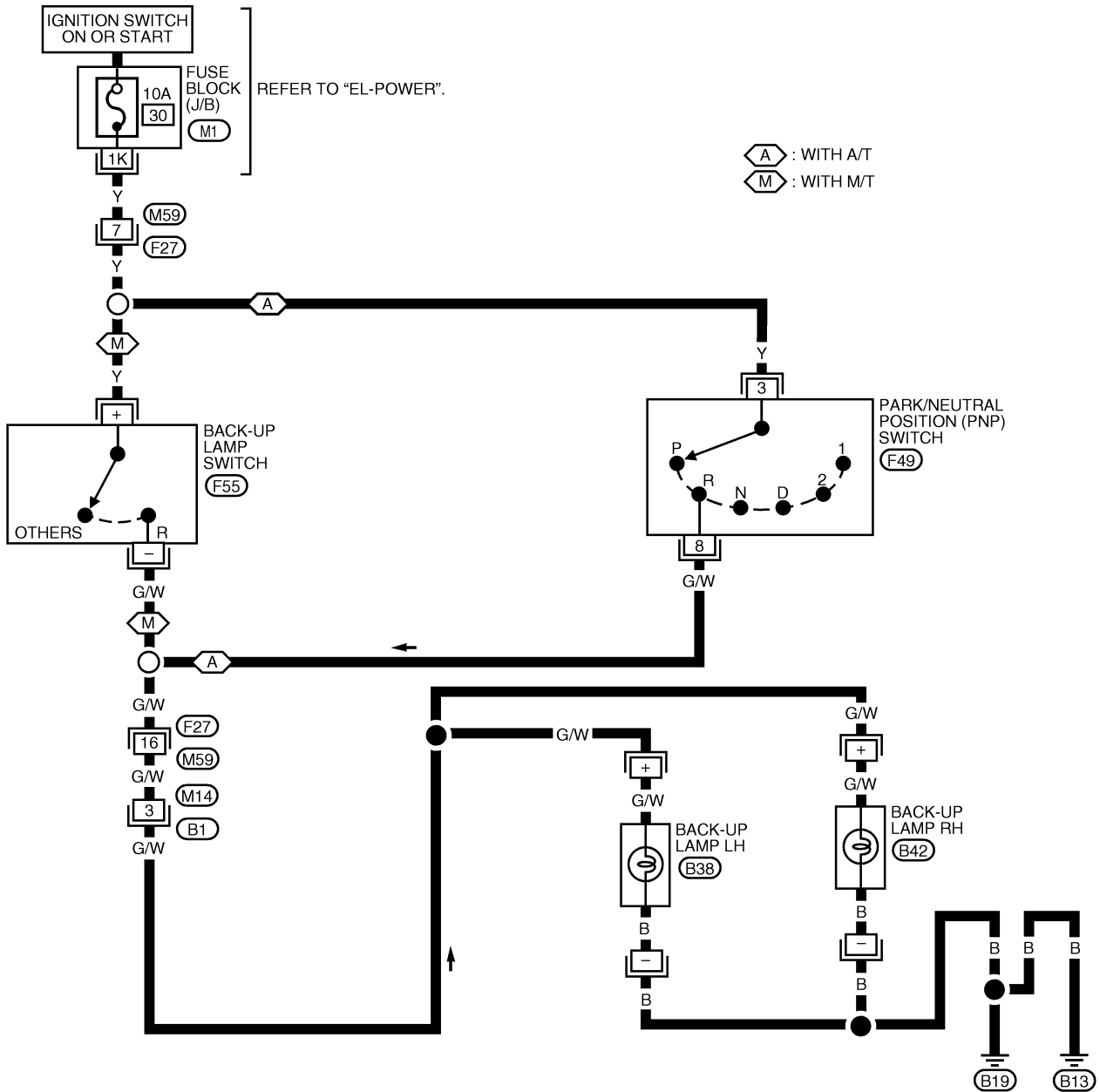
BACK-UP LAMP

Wiring Diagram — BACK/L —

Wiring Diagram — BACK/L —

NIEL0026

EL-BACK/L-01



WEL331

FRONT FOG LAMP

System Description

System Description

NIEL0164

Power is supplied at all times to front fog lamp relay terminal 5 through:

- 15A fuse (No. 43, located in the fuse and fusible link box.)

With the lighting switch in headlamp "ON" (2ND) position, "LOW BEAM" (B) position, power is supplied:

- through 15A fuse (No. 39, located in the fuse and fusible link box)
- to lighting switch terminal 5
- through terminal 7 of the lighting switch
- to front fog lamp relay terminal 1.

FOG LAMP OPERATION

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

With the front fog lamp switch in the ON position ground is supplied:

- to front fog lamp relay terminal 2
- through the front fog lamp switch
- to body grounds E7 and E37.

The front fog lamp relay is energized and power is supplied:

- from front fog lamp relay terminal 3
- to terminal + of each front fog lamp.

Ground is supplied to terminal - of each front fog lamp through body grounds E7 and E37.

With power and ground supplied, the front fog lamps illuminate.

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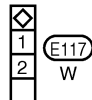
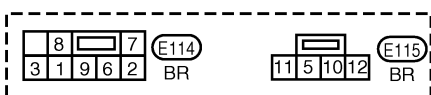
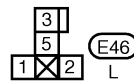
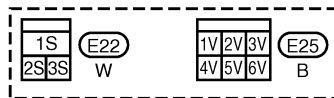
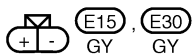
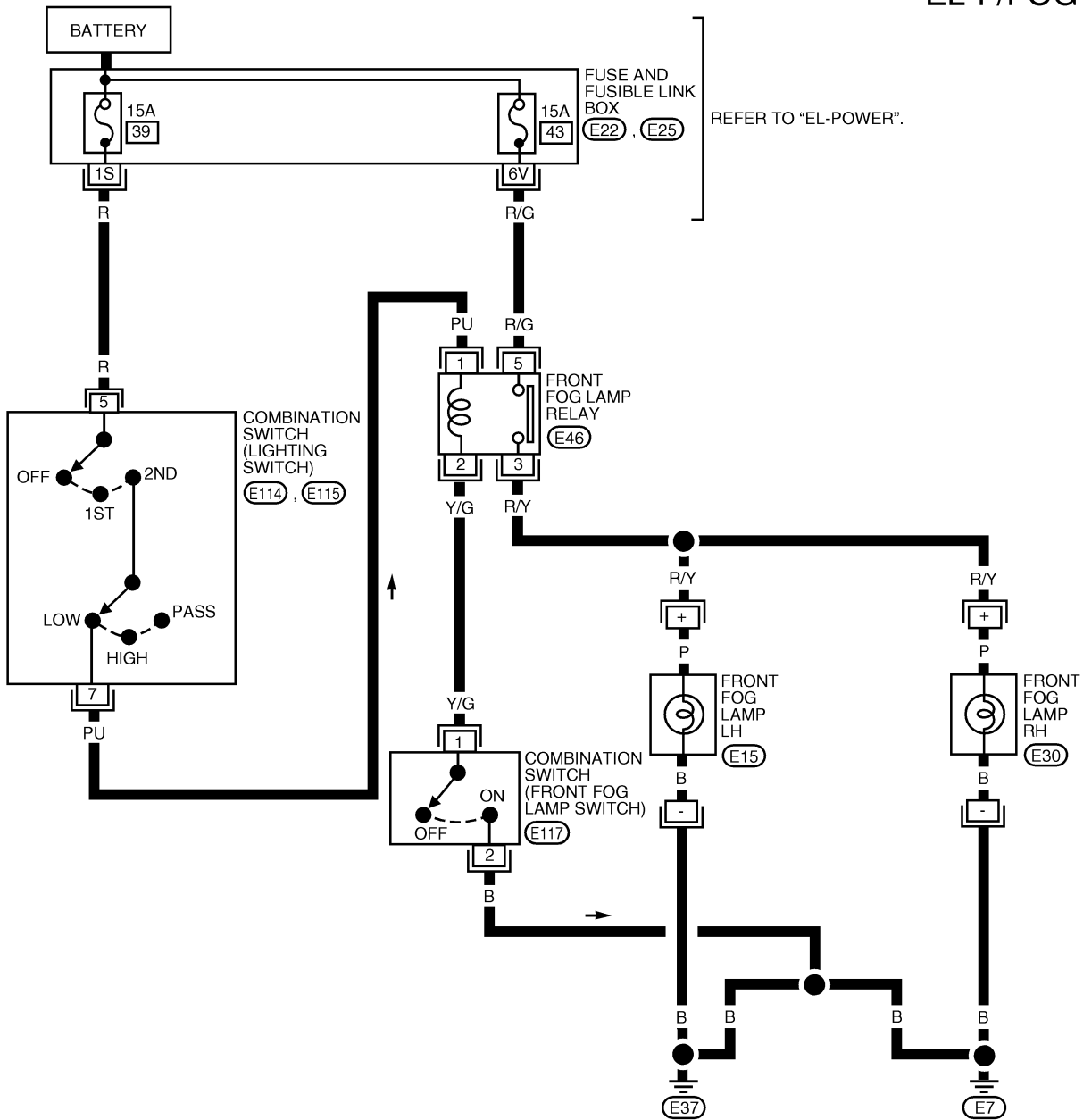
FRONT FOG LAMP

Wiring Diagram — F/FOG —

Wiring Diagram — F/FOG —

NIEL0028

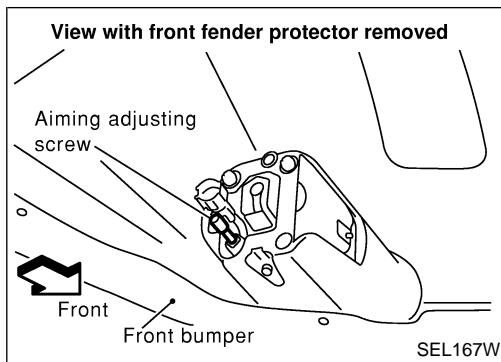
EL-F/FOG-01



WEL332

FRONT FOG LAMP

Aiming Adjustment

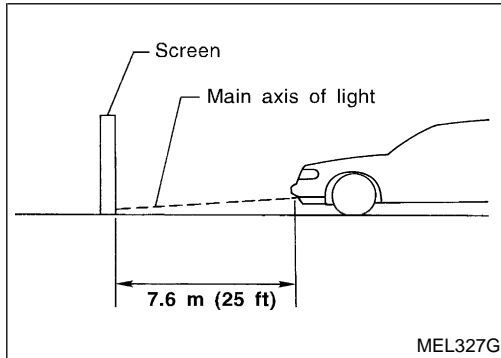


Aiming Adjustment

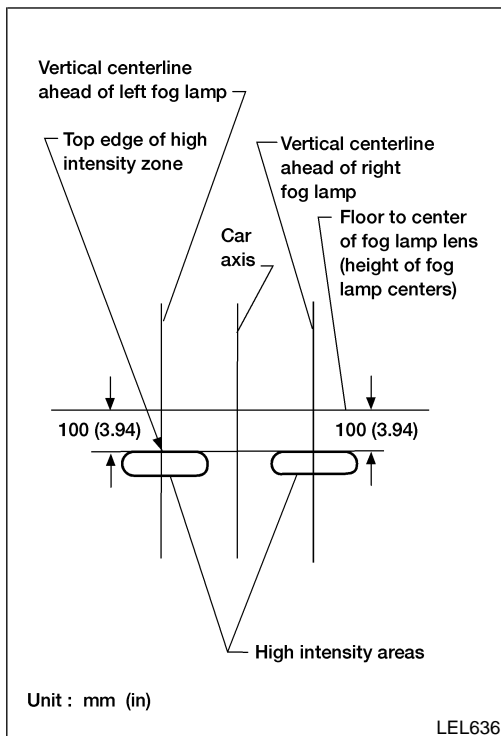
Before performing aiming adjustment, make sure of the following. ^{=N/EL0029}

- 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. Turn front fog lamps ON.



3. Adjust front fog lamps so that the top edge of the high intensity zone is 100 mm (3.94 in) below the height of the fog lamp centers as shown at left.
- When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.

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TURN SIGNAL AND HAZARD WARNING LAMPS

System Description

System Description

NIEL0030

TURN SIGNAL OPERATION

NIEL0030S01

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

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

Ground is supplied to combination flasher unit terminal E through body grounds M28 and M54.

LH Turn

NIEL0030S0101

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

- front combination lamp LH terminal 3
- combination meter terminal 35 (with tachometer) or 40 (without tachometer)
- rear combination lamp LH terminal 2.

Ground is supplied to the front combination lamp LH terminal 1 through body grounds E7 and E37.

Ground is supplied to the rear combination lamp LH terminal 4 through body grounds B13 and B19.

Ground is supplied to combination meter terminal 12 (with tachometer) or 39 (without tachometer) through body grounds M28 and M54.

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

RH Turn

NIEL0030S0102

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

- front combination lamp RH terminal 3
- combination meter terminal 4 (with tachometer) or 41 (without tachometer)
- rear combination lamp RH terminal 2.

Ground is supplied to the front combination lamp RH terminal 1 through body grounds E7 and E37.

Ground is supplied to the rear combination lamp RH terminal 4 through body grounds B13 and B19.

Ground is supplied to combination meter terminal 12 (with tachometer) or 39 (without tachometer) through body grounds M28 and M54.

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

HAZARD LAMP OPERATION

NIEL0030S02

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

- 15A fuse [No. 5, located in the fuse block (J/B)].

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

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

Ground is supplied to combination flasher unit terminal E through body grounds M28 and M54.

Power is supplied through terminal 5 of the hazard switch to:

- front combination lamp LH terminal 3
- combination meter terminal 35 (with tachometer) or 40 (without tachometer)
- rear combination lamp LH terminal 2.

Power is supplied through terminal 6 of the hazard switch to:

- front combination lamp RH terminal 3
- combination meter terminal 4 (with tachometer) or 41 (without tachometer)
- rear combination lamp RH terminal 2.

TURN SIGNAL AND HAZARD WARNING LAMPS

System Description (Cont'd)

Ground is supplied to terminal 1 of each front combination lamp through body grounds E7 and E37.
Ground is supplied to terminal 4 of each rear combination lamp through body grounds B13 and B19.
Ground is supplied to combination meter terminal 12 (with tachometer) or 39 (without tachometer) through body grounds M28 and M54.
With power and ground supplied, the combination flasher unit controls the flashing of the hazard warning lamps.

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MULTI-REMOTE CONTROL SYSTEM OPERATION

NIEL0030S03

Power is supplied at all times:

- through 15A fuse [No. 5, located in the fuse block (J/B)]
- to multi-remote control relay terminals 1, 6 and 3.

EM

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

LC

Refer to "MULTI-REMOTE CONTROL SYSTEM", EL-226.

The multi-remote control relay is energized.

EC

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

- to front combination lamp LH terminal 3
- to combination meter terminal 35 (with tachometer) or 40 (without tachometer)
- to rear combination lamp LH terminal 2.

FE

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

- to front combination lamp RH terminal 3
- to combination meter terminal 4 (with tachometer) or 41 (without tachometer)
- to rear combination lamp RH terminal 2.

CL

MT

Ground is supplied to terminal 1 of each front combination lamp through body grounds E7 and E37.

AT

Ground is supplied to terminal 4 of each rear combination lamp through body grounds B13 and B19.

Ground is supplied to combination meter terminal 12 (with tachometer) or 39 (without tachometer) through body grounds M28 and M54.

AX

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

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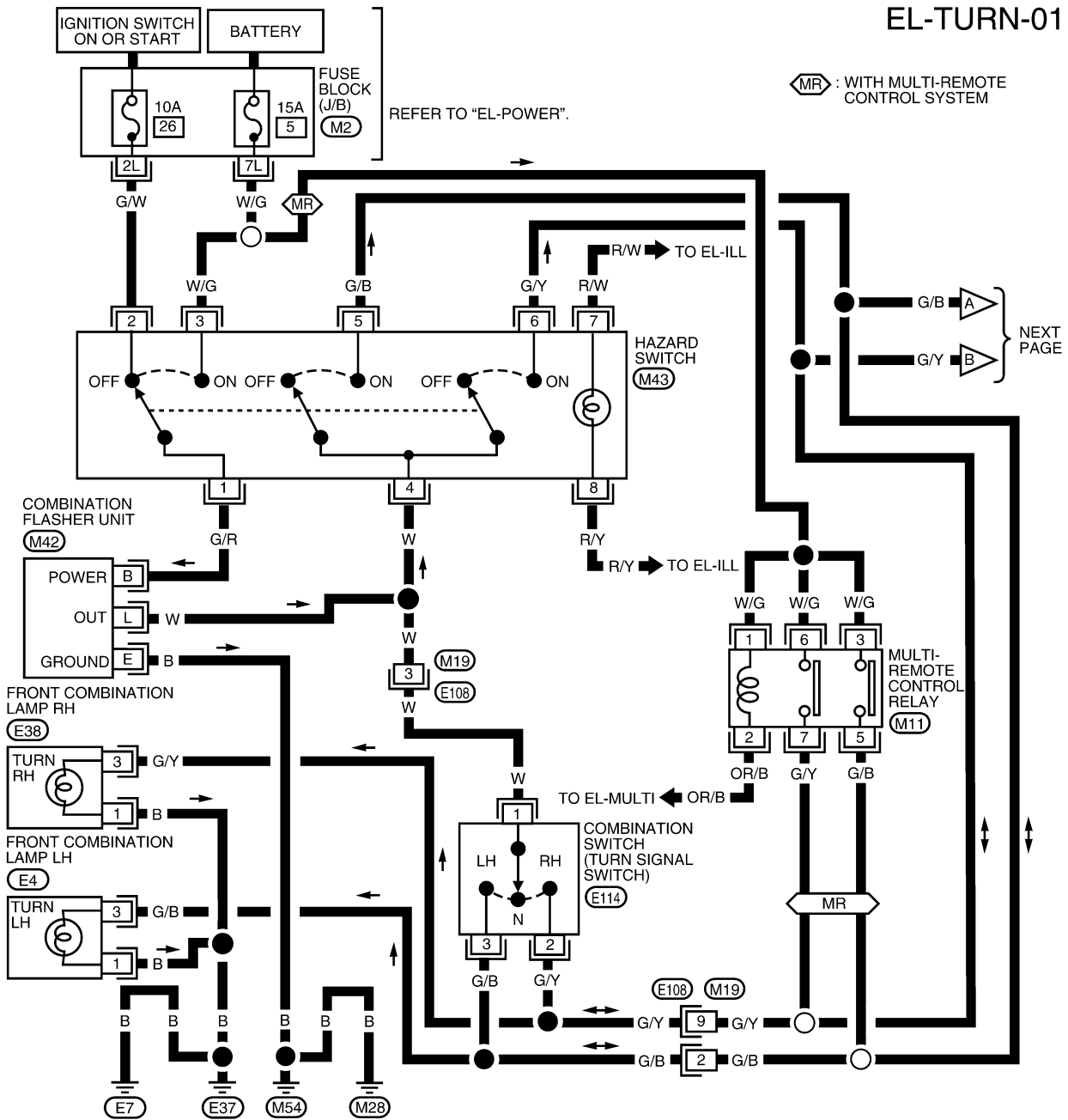
TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —

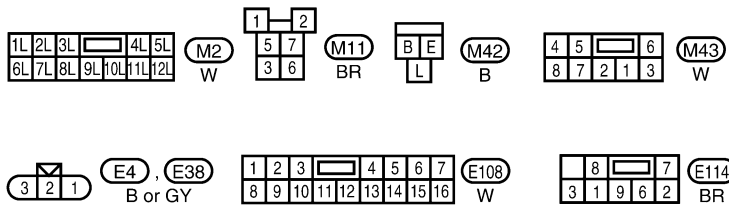
Wiring Diagram — TURN —

NIEL0032

EL-TURN-01



NEXT PAGE



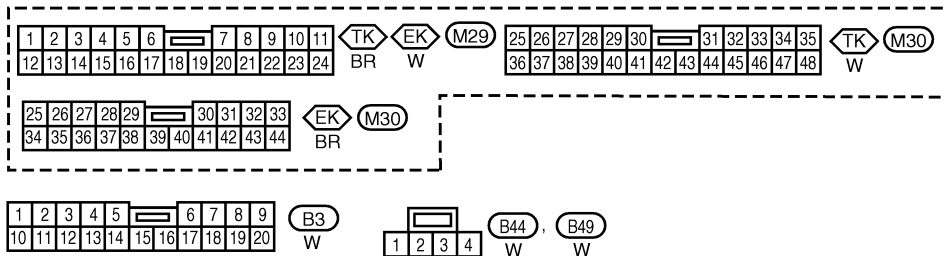
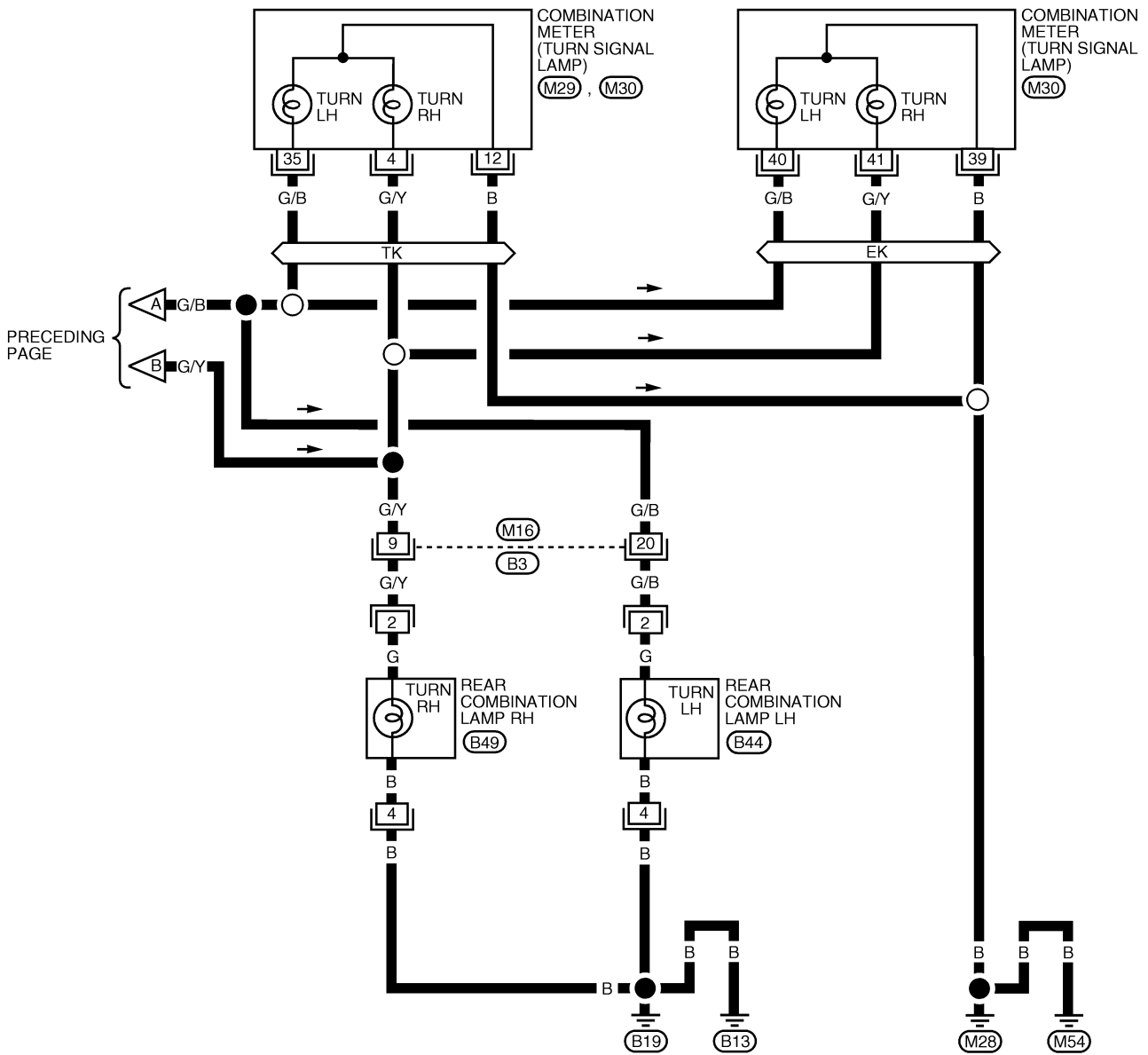
WEL070B

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN — (Cont'd)

EL-TURN-02

TK : WITH TACHOMETER
 EK : WITHOUT TACHOMETER



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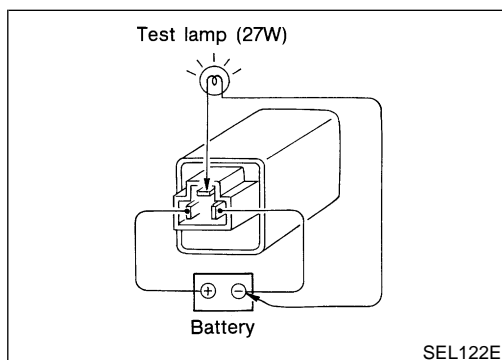
TURN SIGNAL AND HAZARD WARNING LAMPS

Trouble Diagnoses

Trouble Diagnoses

NIEL0033

Symptom	Possible cause	Repair order
Turn signal and hazard warning lamps do not operate.	<ol style="list-style-type: none"> 1. Hazard switch 2. Combination flasher unit 3. Open in combination flasher unit circuit 	<ol style="list-style-type: none"> 1. Check hazard switch. 2. Refer to combination flasher unit check. 3. Check wiring to combination flasher unit for open circuit.
Turn signal lamps do not operate but hazard warning lamps operate.	<ol style="list-style-type: none"> 1. 10A fuse 2. Hazard switch 3. Turn signal switch 4. Open in turn signal switch circuit 	<ol style="list-style-type: none"> 1. Check 10A fuse [No. 26, located in fuse block (J/B)]. Turn ignition switch ON and verify battery positive voltage is present at terminal 2 of hazard switch. 2. Check hazard switch. 3. Check turn signal switch. 4. Check the wire between combination flasher unit terminal L and turn signal switch terminal 1 for open circuit.
Hazard warning lamps do not operate but turn signal lamps operate.	<ol style="list-style-type: none"> 1. 15A fuse 2. Hazard switch 3. Open in hazard switch circuit 	<ol style="list-style-type: none"> 1. Check 15A fuse [No. 5, located in fuse block (J/B)]. Verify battery positive voltage is present at terminal 3 of hazard switch. 2. Check hazard switch. 3. Check the wire between combination flasher unit terminal L and hazard switch terminal 4 for open circuit.
Front turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds E7 and E37 3. Open in front combination lamp circuit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds E7 and E37. 3. Check the wire between combination switch terminal 3 (LH) or terminal 2 (RH) and front combination lamp terminal 3.
Rear turn signal lamp LH or RH does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Grounds B13 and B19 3. Open in rear combination lamp circuit 	<ol style="list-style-type: none"> 1. Check bulb. 2. Check grounds B13 and B19. 3. Check the wire between combination switch terminal 3 (LH) or terminal 2 (RH) and rear combination lamp terminal 2.
LH and RH turn indicators do not operate.	<ol style="list-style-type: none"> 1. Ground 	<ol style="list-style-type: none"> 1. Check grounds M28 and M54.
LH or RH turn indicator does not operate.	<ol style="list-style-type: none"> 1. Bulb 2. Turn indicator circuit 	<ol style="list-style-type: none"> 1. Check bulb in combination meter. 2. Check the wire between combination switch and combination meter.



Electrical Components Inspection COMBINATION FLASHER UNIT CHECK

NIEL0034

NIEL0034S01

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

ILLUMINATION

System Description

System Description

NIEL0035

Power is supplied at all times:

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

The lighting switch must be in parking lamp (1ST) or headlamp "ON" (2ND) position for illumination. The illumination control switch controls the amount of current to the illumination system. As the amount of current increases, the illumination becomes brighter.

The following chart shows the power and ground connector terminals for the components included in the illumination system.

Component	Connector No.	Power terminal	Ground terminal
Illumination control switch	M22	1	3
Combination meter	M29 or M30	16 or 33	17 or 32
Hazard switch	M43	7	8
Air control	M32	2	6
A/T device indicator*	M44	3	4
Main power window and door lock/unlock switch*	D6	4	2
Audio unit	M45	8	7
CD changer*	M47, M48	23	25

* If equipped.

The ground for all of the components is controlled through terminals 2 and 3 of the illumination control switch to body grounds M28 and M54.

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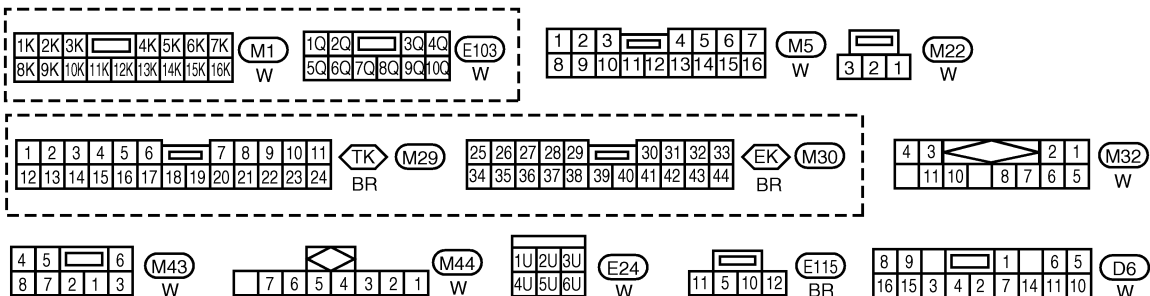
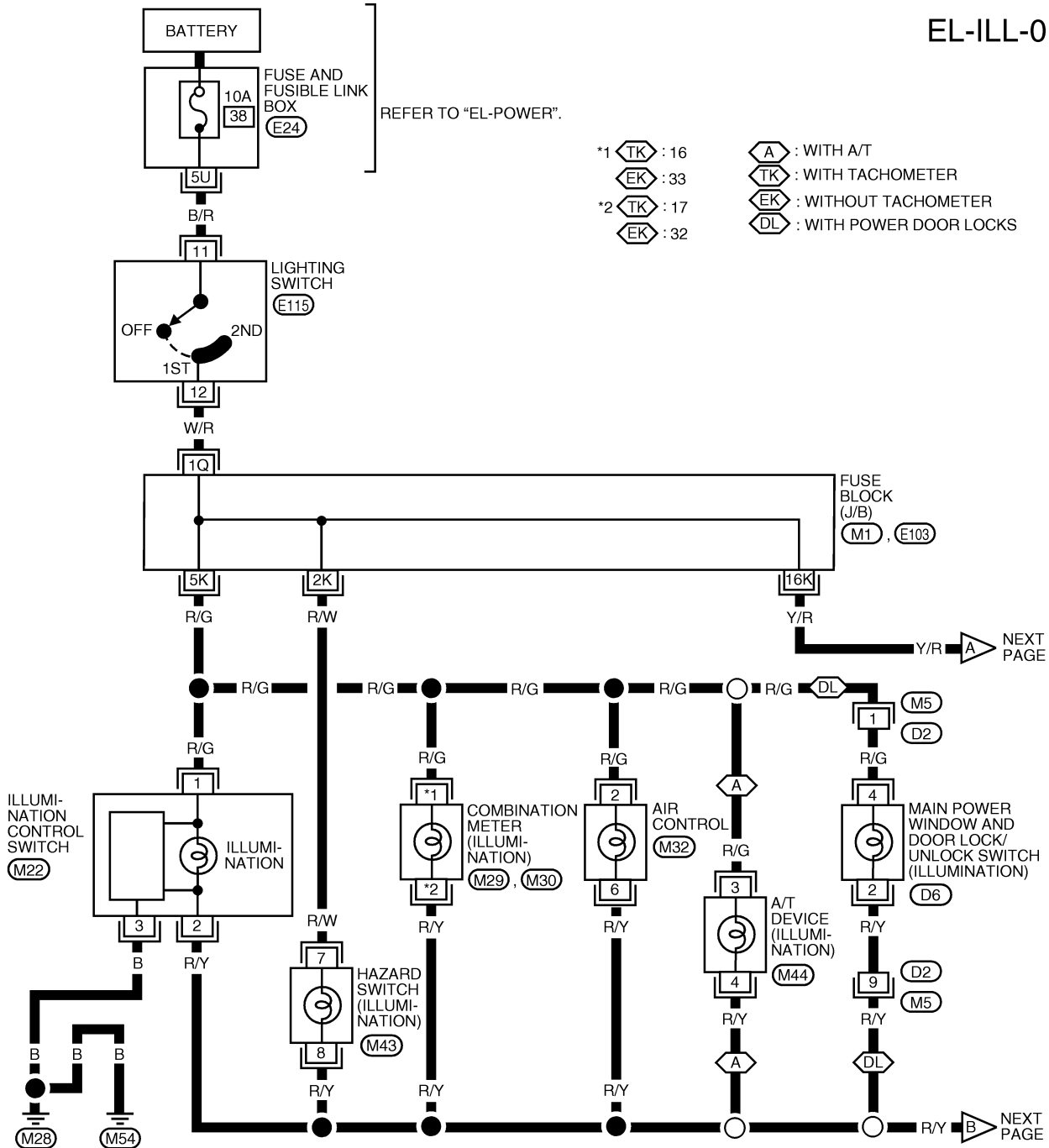
ILLUMINATION

Wiring Diagram — ILL —

Wiring Diagram — ILL —

NIEL0037

EL-ILL-01



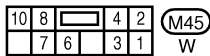
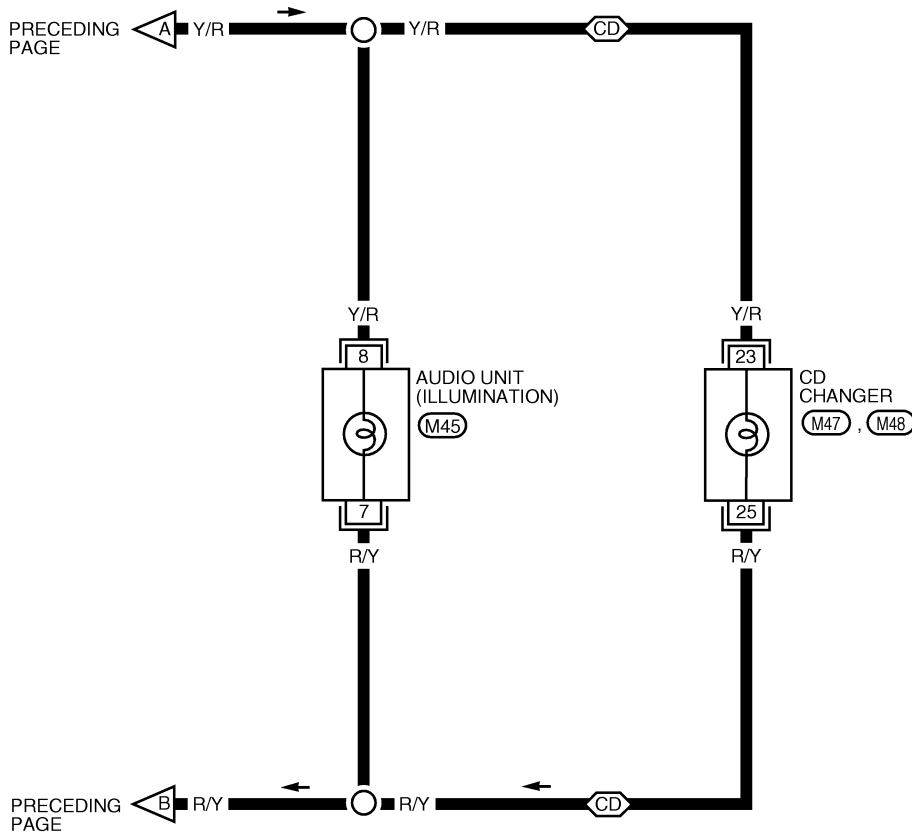
WEL335

ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-02

 : WITH CD CHANGER



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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

System Description

System Description

NIEL0165

WITHOUT POWER DOOR LOCKS

Power Supply and Ground

Power is supplied at all times:

- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to interior lamp terminal +.

When interior lamp switch is in the DOOR position and any door is opened, ground is supplied to interior lamp through the door switches.

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

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

NIEL0165S11

NIEL0165S1101

WITH POWER DOOR LOCKS AND WITHOUT MULTI-REMOTE CONTROL SYSTEM

Power Supply and Ground

Power is supplied at all times:

- through 10A fuse (No. 13, located in the fuse block (J/B))
- to time control unit terminal 2 and
- to trunk room lamp terminal 1.

Power is supplied at all times:

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

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

- through key switch terminal 1
- to time control unit terminal 11.

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 13.

Ground is supplied:

- to time control unit terminal 6
- through body grounds M28 and M54.

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

- through body grounds B13 and B19
- to front door switch LH terminal 3
- from front door switch LH terminal 2
- to time control unit terminal 7.

When any other door (except front driver side door) is opened, ground is supplied to time control unit terminal 9.

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

- through body grounds M28 and M54
- to front door lock actuator LH (door unlock sensor) terminal 4
- from front door lock actuator LH (door unlock sensor) terminal 2
- to time control unit terminal 22.

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

- through time control unit terminal 16
- to interior lamp terminal DR.

With power and ground supplied, the interior lamp illuminates.

Switch Operation

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

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

Power is supplied:

- to interior lamp terminal +

NIEL0165S12

NIEL0165S1201

NIEL0165S1202

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

System Description (Cont'd)

- from time control unit terminal 3.

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

- through body grounds M28 and M54
- to map lamp terminal –.

Power is supplied:

- to map lamp terminal +
- from time control unit terminal 3.

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

- through body grounds M28 and M54
- to vanity lamps (LH and RH) terminal 2.

Power is supplied:

- to vanity lamps (LH and RH) terminal 1
- from time control unit terminal 3.

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

- through body grounds B13 and B19
- to trunk room lamp switch terminal –
- from trunk room lamp switch terminal +
- to trunk room lamp terminal 2

With power and ground supplied, interior lamps turn ON.

Interior Lamp Timer Operation

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

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

The timer is canceled when:

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

ON-OFF Control

When the front 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.

Battery Saver

The lamp turns off automatically when interior lamp, map lamp, and/or vanity lamps are illuminated with the ignition key in OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in ON position for approximately 10 minutes.

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

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

WITH MULTI-REMOTE CONTROL SYSTEM

Power Supply and Ground

Power is supplied at all times:

- through 10A fuse (No. 37, located in the fuse and fusible link box)
- to smart entrance control unit terminal 10.

Power is supplied at all times:

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

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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

System Description (Cont'd)

- through 10A fuse [No. 13, located in the fuse block (J/B)]
- to trunk room lamp terminal 1.

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

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

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

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

Ground is supplied:

- to smart entrance control unit terminal 16
- through body grounds M28 and M54.

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

- through body grounds B13 and B19
- to front door switch LH terminal 3
- from front door switch LH terminal 2
- to smart entrance control unit terminal 29.

When any other door (except front driver side door) is opened, ground is supplied to smart entrance control unit terminal 28.

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

- through body grounds M28 and M54
- to front door lock actuator LH (door unlock sensor) terminal 4
- from front door lock actuator LH (door unlock sensor) terminal 2
- to smart entrance control unit terminal 36.

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

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

With power and ground supplied, the interior lamp illuminates.

Switch Operation

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

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

Power is supplied:

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

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

- through body grounds M28 and M54
- to map lamp terminal –.

Power is supplied:

- to map lamp terminal +
- from smart entrance control unit terminal 17.

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

- through body grounds M28 and M54
- to vanity lamps (LH and RH) terminal 2.

Power is supplied:

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

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

- through body grounds B13 and B19
- to trunk room lamp switch terminal –
- from trunk room lamp switch terminal +
- to trunk room lamp terminal 2

NIEL0165S1302

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

System Description (Cont'd)

With power and ground supplied, interior lamps turn ON.

Interior Lamp Timer Operation

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

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

When interior lamp switch is in the "DOOR" position and unlock signal is supplied from multi-remote controller while driver side door is locked and all doors are closed (even if key is inserted), the smart entrance control unit keeps the interior lamp illuminated for about 30 seconds.

The timer is canceled when:

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

ON-OFF Control

When the front 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.

Battery Saver

The lamps turn off automatically when interior lamp, map lamp and/or vanity lamps are illuminated with the ignition key in OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in ON position for approximately 10 minutes.

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

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

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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L —

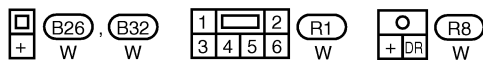
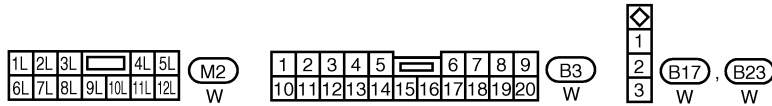
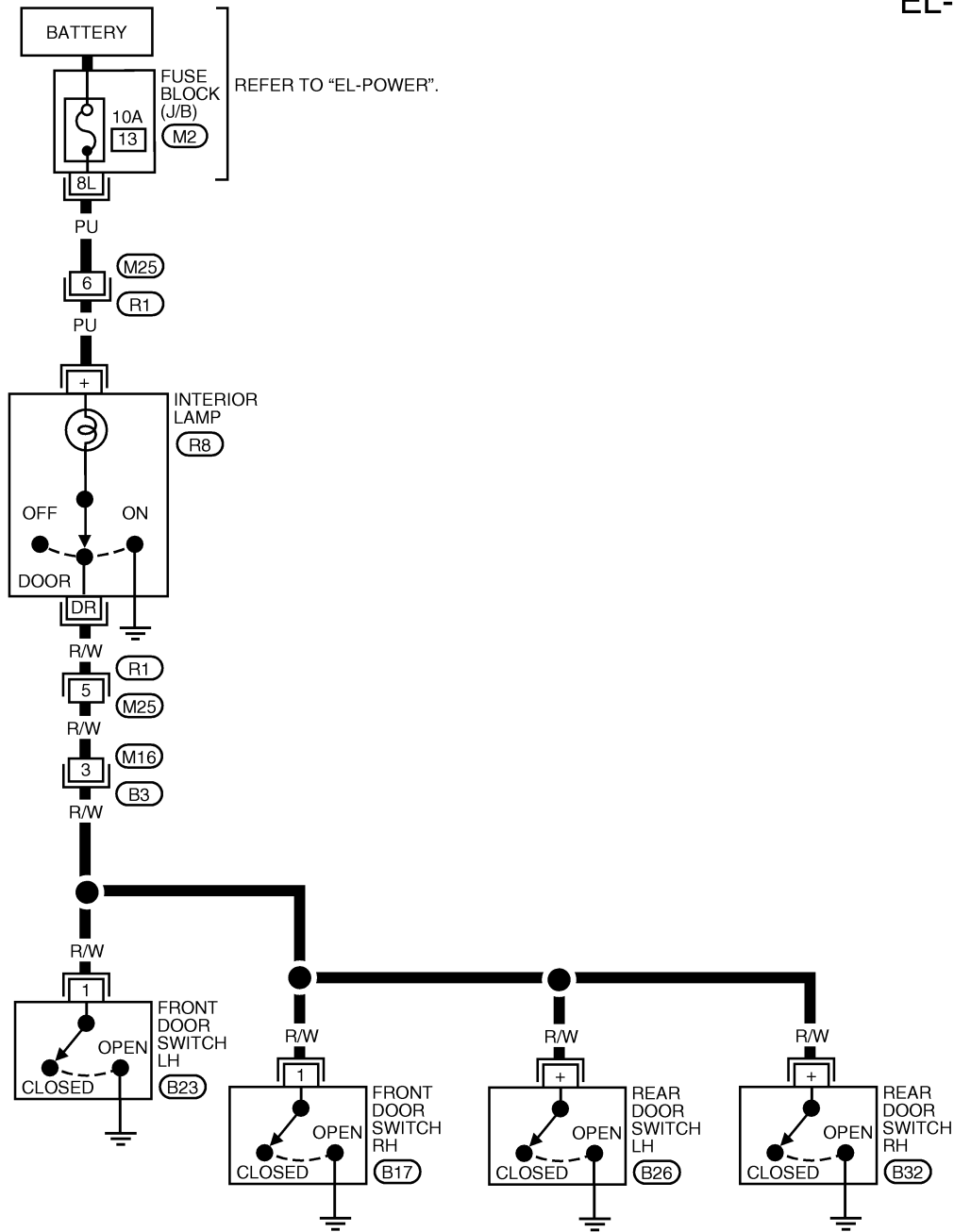
Wiring Diagram — INT/L —

NIEL0163

NIEL0163S01

WITHOUT POWER DOOR LOCKS

EL-INT/L-01



LEL341

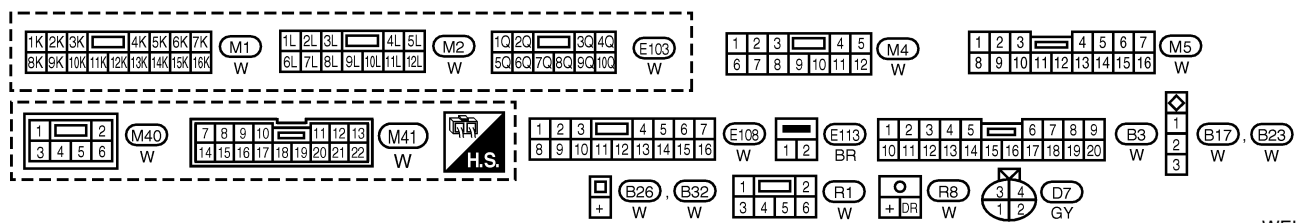
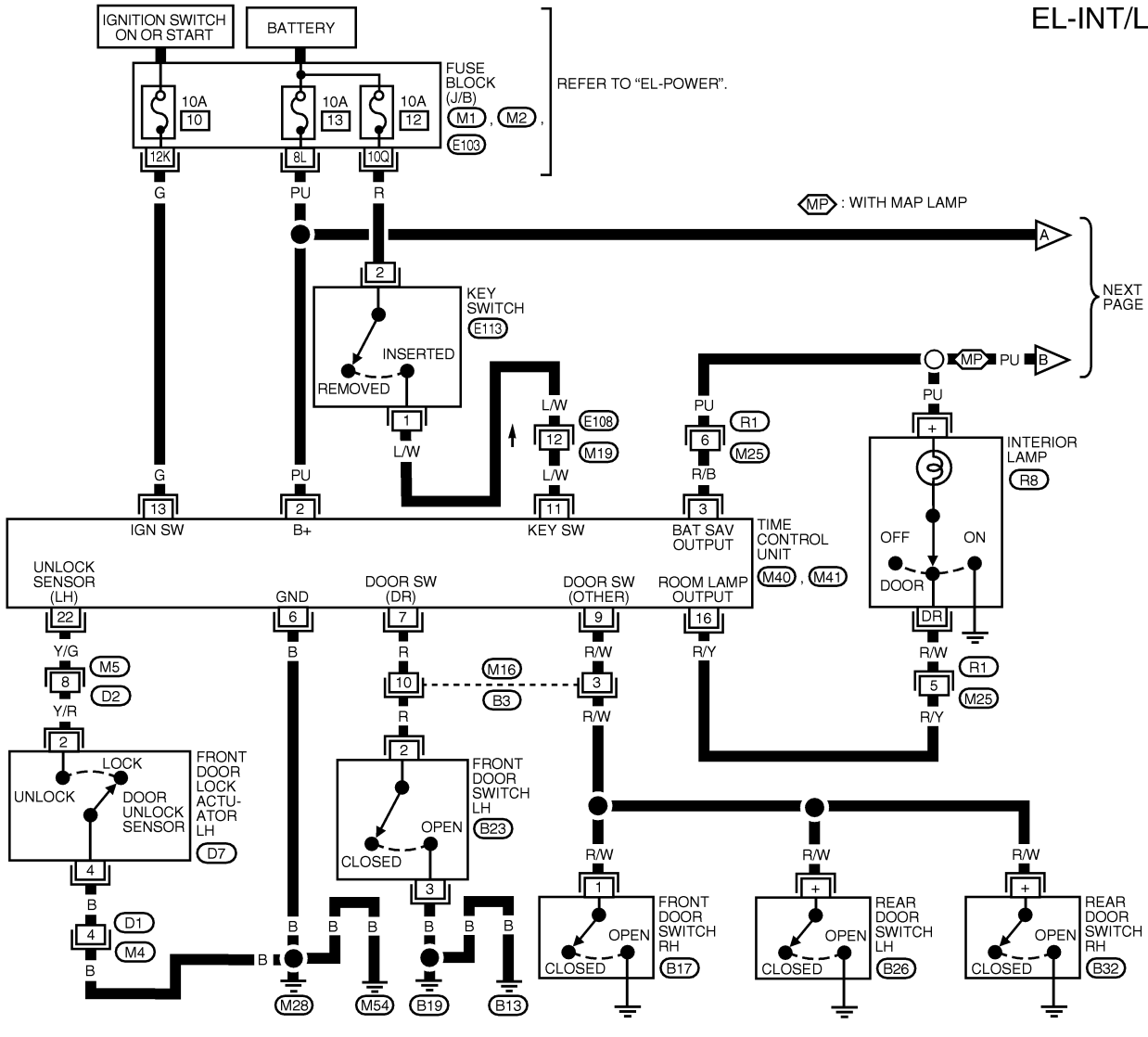
INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

WITH POWER DOOR LOCKS AND WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0163S02

EL-INT/L-02



WEL175A

TIME CONTROL UNIT (WITH POWER DOOR LOCKS) TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

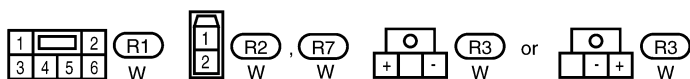
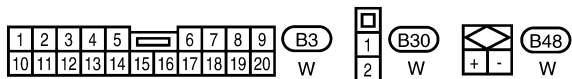
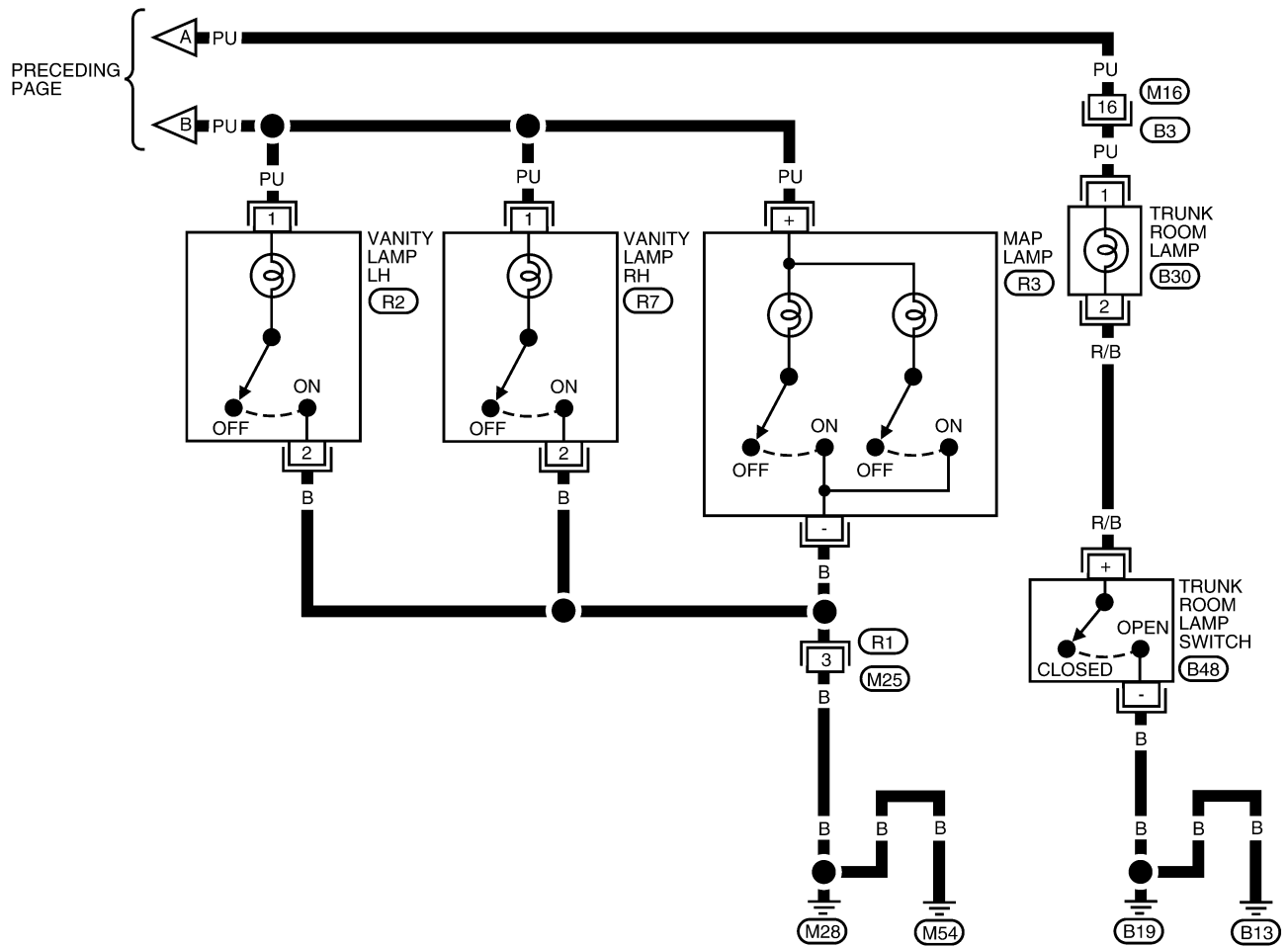
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
2	PU	POWER SOURCE (FUSE)	—	12V
3	R/B	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOES NOT OPERATE BATTERY SAVER OPERATES	12V 0V
6	B	GROUND	—	0V
7	R	FRONT DOOR SWITCH LH	OFF (CLOSED) ON (OPEN)	5V 0V
9	R/W	OTHER DOOR SWITCHES	OFF (CLOSED) ON (OPEN)	5V 0V
11	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED IGNITION KEY IS REMOVED	12V 0V
13	G	IGNITION SWITCH (ON) IGNITION SWITCH (START)	IGNITION KEY IS IN ON POSITION IGNITION KEY IS IN START POSITION	12V 12V
16	R/Y	INTERIOR LAMP LAMP SWITCH IN DOOR POSITION	— LAMP SWITCH IN DOOR POSITION	— 12V
22	Y/G	DOOR UNLOCK SENSOR LH	DRIVER DOOR: LOCKED DRIVER DOOR: UNLOCKED	5V 0V

LEL595

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-03



WEL647A

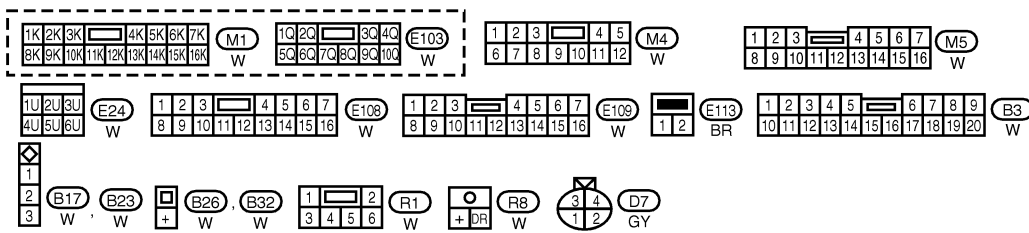
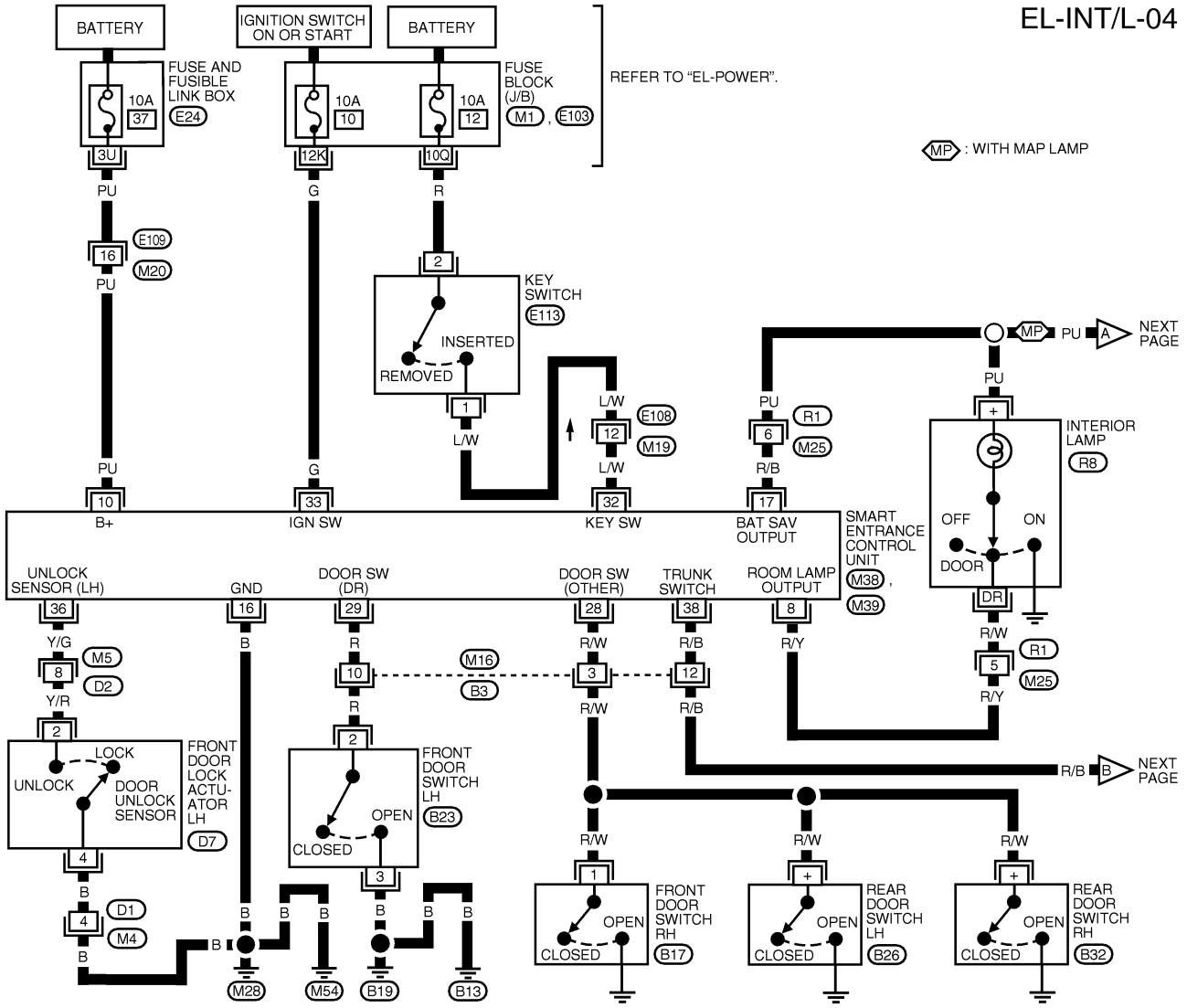
INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0163S03

EL-INT/L-04



REFER TO THE FOLLOWING.
 (M38), (M39) - ELECTRICAL UNITS

LEL339

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
8	R/Y	INTERIOR LAMP	LAMP SWITCH IN DOOR POSITION	12V
10	PU	POWER SOURCE (FUSE)		12V
16	B	GROUND		
17	R/B	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOES NOT OPERATE	12V
			BATTERY SAVER OPERATES	0V
28	R/W	OTHER DOOR SWITCHES	OFF (CLOSED)	5V
			ON (OPEN)	0V
29	R	FRONT DOOR SWITCH LH	OFF (CLOSED)	5V
			ON (OPEN)	0V
32	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED	12V
			IGNITION KEY IS REMOVED	0V
33	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN ON POSITION	12V
			IGNITION SWITCH (START)	12V
36	Y/G	DOOR UNLOCK SENSOR LH	DRIVER DOOR: LOCKED	5V
			DRIVER DOOR: UNLOCKED	0V
38	R/B	TRUNK ROOM LAMP SWITCH	ON (OPEN)	0V
			OFF (CLOSED)	12V

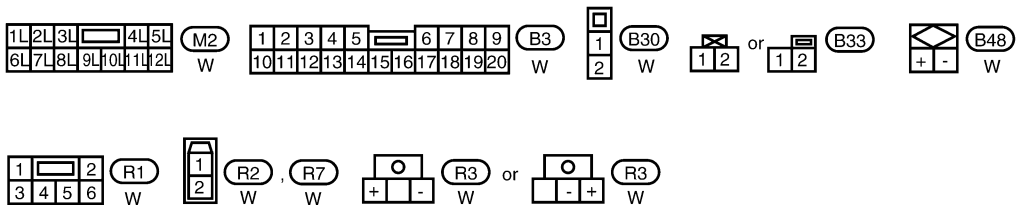
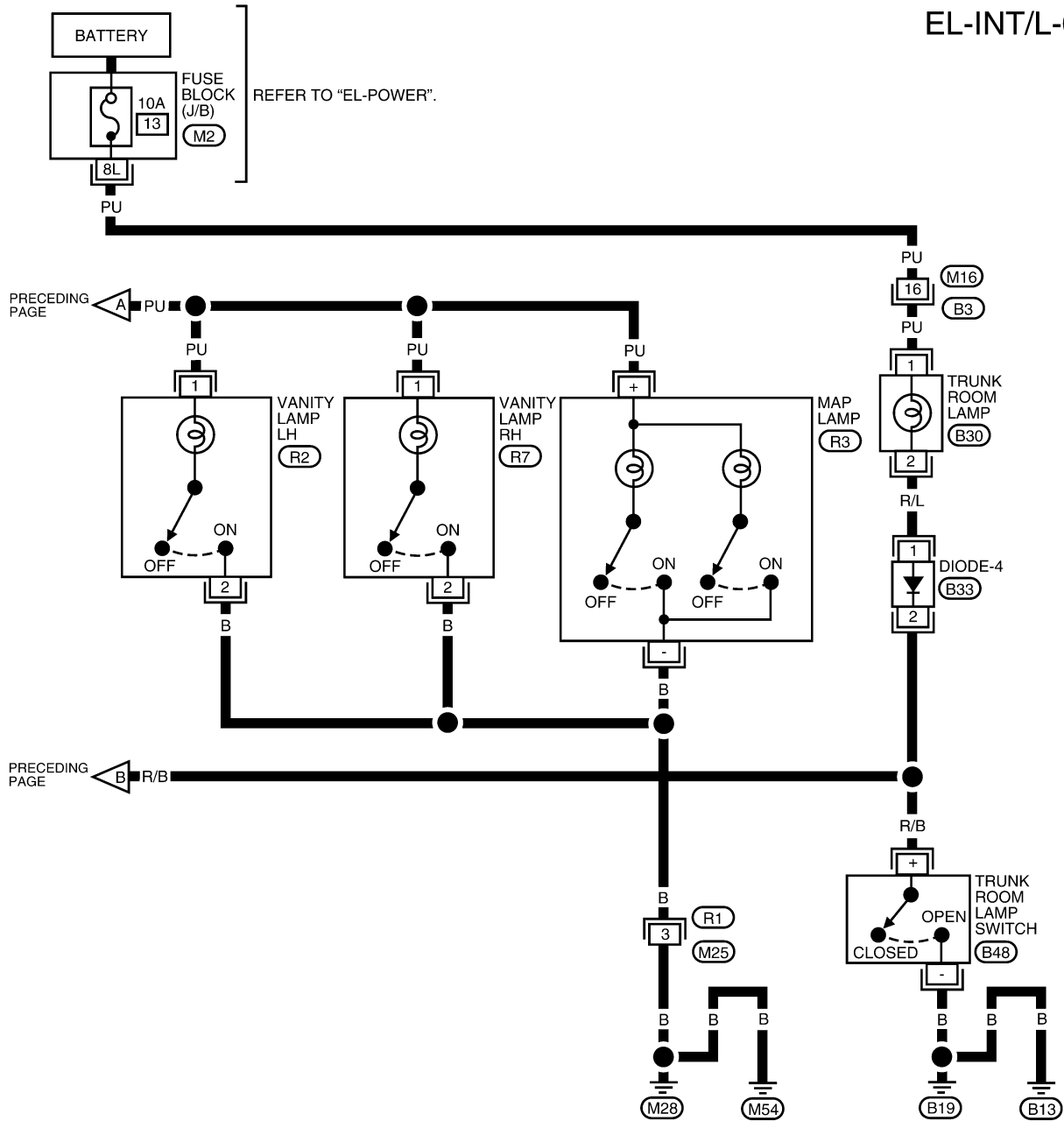
LEL596

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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

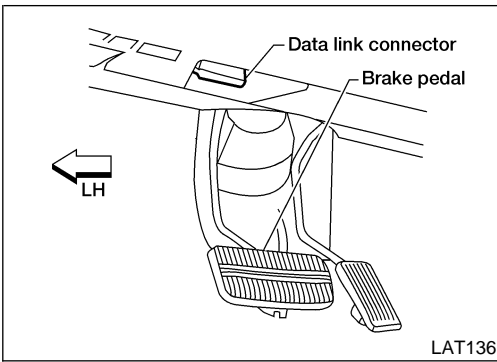
EL-INT/L-05



WEL036B

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

CONSULT-II Inspection Procedure (With Multi-Remote Control System)



LAT136

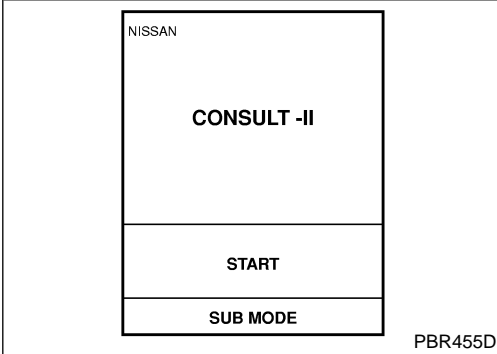
CONSULT-II Inspection Procedure (With Multi-Remote Control System)

=NIEL0213

NIEL0213S01

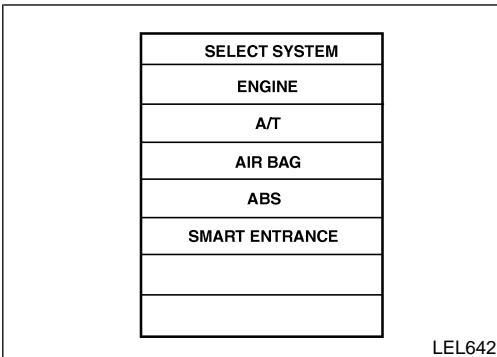
“INT LAMP”/“BATTERY SAVER”

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



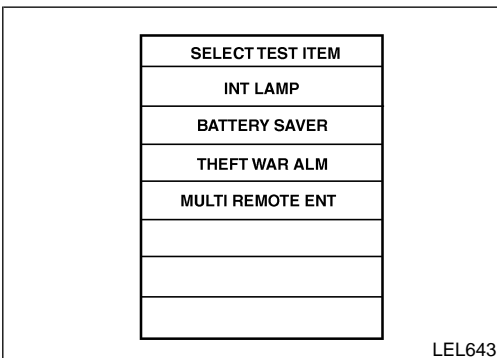
PBR455D

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



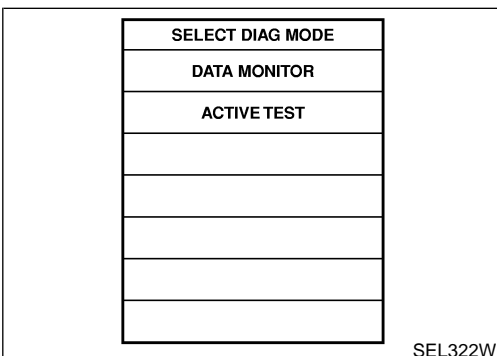
LEL642

5. Touch “SMART ENTRANCE”.



LEL643

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



SEL322W

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

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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

CONSULT-II Application Items (With Multi-Remote Control System)

CONSULT-II Application Items (With Multi-Remote Control System)

NIEL0214

NIEL0214S01

NIEL0214S0101

“INT LAMP”

Data Monitor

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

Active Test

NIEL0214S0102

Test Item	Description
INT LAMP	<p>This test enables to check interior lamp, map lamp, and vanity lamps operations. When touch “ON” on CONSULT-II screen.</p> <ul style="list-style-type: none">• Interior lamp turns on when the switch is in DOOR or ON. (Smart entrance control unit supplies power and ground to interior lamp.)• Map lamp and vanity lamps turn on when the switch is in ON. (Smart entrance control unit supplies power to map lamp and vanity lamps.)

“BATTERY SAVER”

Data Monitor

NIEL0214S02

NIEL0214S0201

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

Active Test

NIEL0214S0202

Test Item	Description
BATTERY SAVER	<p>This test enables to check interior lamp, map lamp, and vanity lamp operations. When touch “ON” on CONSULT-II screen.</p> <ul style="list-style-type: none">• Interior lamp turns on when the switch is in ON. (Smart entrance control unit supplies power to interior lamp.)• Map lamp and vanity lamps turn on when the switch is in ON. (Smart entrance control unit supplies power to map lamps and vanity lamps.)

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System)

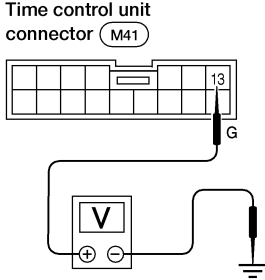

Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System)

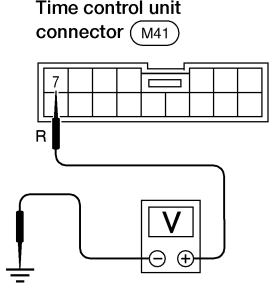

=NIEL0215

DIAGNOSTIC PROCEDURE 1

NIEL0215S01

SYMPTOM: Interior lamp timer does not operate properly.

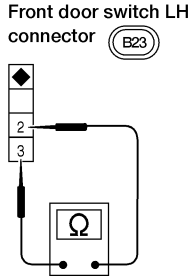


1	CHECK IGNITION ON SIGNAL																
<p>Check voltage between time control unit harness connector terminal 13 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Time control unit connector (M41)</p>  </div> <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 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>13</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">LEL441</p> <p style="text-align: center;">OK or NG</p>			Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	13	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position															
(+)	(-)	OFF	ACC	ON													
13	Ground	0V	0V	Battery voltage													
OK	▶	GO TO 2.															
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in fuse block (J/B)] ● Harness for open or short between time control unit and fuse 															

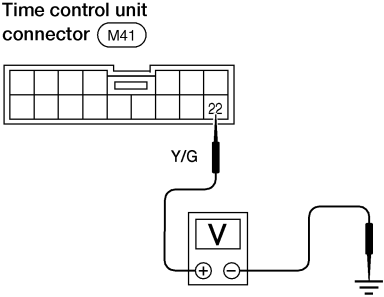


2	CHECK FRONT DOOR SWITCH LH INPUT SIGNAL	
<p>Check voltage between time control unit harness connector terminal 7 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Time control unit connector (M41)</p>  </div> <div style="text-align: center;">  </div> <div style="text-align: left;"> <p>Voltage [V]:</p> <p>Condition of driver's door: CLOSED Approx. 5</p> <p>Condition of driver's door: OPENED 0</p> </div> </div> <p style="text-align: right;">LEL442</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 4.
NG	▶	GO TO 3.

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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System) (Cont'd)

3	CHECK FRONT DOOR SWITCH LH	<p>Check continuity between front door switch LH terminals 2 and 3.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Front door switch LH connector (B23)</p>  </div> <div style="text-align: center;">  <p>DISCONNECT</p>  </div> <div style="text-align: center;"> <p>Continuity: Door switch is pushed. No Door switch is released. Yes</p> </div> </div> <p style="text-align: right;">LEL443</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Front door switch LH ground circuit and condition ● Harness for open or short between time control unit and front door switch LH 		
NG	▶	<p>Replace front door switch LH.</p>		

4	CHECK DOOR UNLOCK SENSOR LH INPUT SIGNAL	<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="text-align: center;"> <p>Time control unit connector (M41)</p>  </div> <div style="text-align: center;">  <p>CONNECT</p>  <p>OFF</p> </div> <div style="flex-grow: 1;"> <table border="1" style="width: 100%; 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">Front LH door</td> <td rowspan="2">22</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;">LEL444</p> <p style="text-align: center;">OK or NG</p>				Terminals		Condition	Voltage [V]	(+)	(-)	Front LH door	22	Ground	Locked	Approx. 5	Unlocked	0
	Terminals		Condition	Voltage [V]														
	(+)	(-)																
Front LH door	22	Ground	Locked	Approx. 5														
			Unlocked	0														
OK	▶	<p>GO TO 6.</p>																
NG	▶	<p>GO TO 5.</p>																

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System) (Cont'd)

5 CHECK DOOR UNLOCK SENSOR LH

1. Disconnect door unlock sensor LH harness connector.
2. Check continuity between door unlock sensor LH terminals.

Front door lock actuator LH connector (D7)

Continuity:
Condition: Locked
 No
Condition: Unlocked
 Yes

WEL497

OK or NG

OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Door unlock sensor LH ground circuit ● Harness for open or short between time control unit and door unlock sensor LH
NG	▶	Replace door unlock sensor LH.

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6 CHECK DOOR SWITCHES INPUT SIGNAL

Check voltage between time control unit harness connector terminal 9 and ground.

Time control unit connector (M41)

	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front RH and rear door switches	9	Ground	Open	0
			Closed	Approx. 5

LEL446

OK or NG

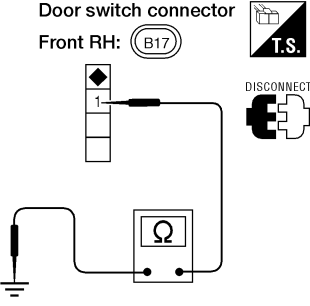
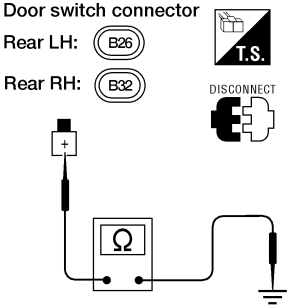
OK	▶	GO TO 8.
NG	▶	GO TO 7.

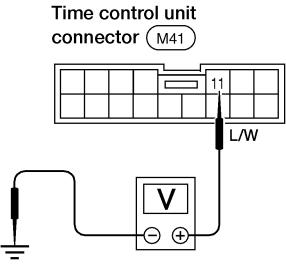
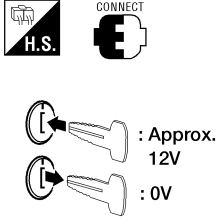
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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System) (Cont'd)

7	CHECK DOOR SWITCHES	<p>1. Disconnect door switch harness connector.</p> <p>2. Check continuity between door switch terminals 1, + and ground.</p>																	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Door switch connector Front RH: (B17)</p>  </div> <div style="text-align: center;"> <p>Door switch connector Rear LH: (B26) Rear RH: (B32)</p>  </div> </div>			<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Terminals</th> <th>Condition</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front door switch RH</td> <td rowspan="2">1 - Ground</td> <td>Closed</td> <td>No</td> </tr> <tr> <td>Open</td> <td>Yes</td> </tr> <tr> <td rowspan="2">Rear door switches</td> <td rowspan="2">(+)- Ground</td> <td>Closed</td> <td>No</td> </tr> <tr> <td>Open</td> <td>Yes</td> </tr> </tbody> </table>		Terminals	Condition	Continuity	Front door switch RH	1 - Ground	Closed	No	Open	Yes	Rear door switches	(+)- Ground	Closed	No	Open	Yes
	Terminals	Condition	Continuity																
Front door switch RH	1 - Ground	Closed	No																
		Open	Yes																
Rear door switches	(+)- Ground	Closed	No																
		Open	Yes																
OK or NG		LEL447																	
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Door switch ground circuit or door switch ground condition ● Harness for open or short between time control unit and door switch 																	
NG	▶	Replace door switch.																	

8	CHECK KEY SWITCH INPUT SIGNAL	<p>Check voltage between time control unit harness connector terminal 11 and ground.</p>		
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Time control unit connector (M41)</p>  </div> <div style="text-align: center;"> <p>H.S. CONNECT</p>  <p>: Approx. 12V : 0V</p> </div> </div>			<p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p>	
OK or NG		LEL448		
OK	▶	Replace time control unit.		
NG	▶	GO TO 9.		

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System) (Cont'd)

9	CHECK KEY SWITCH
<p>Check continuity between terminals 1 and 2.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="324 283 576 556"> <p>Key switch connector (E113)</p> </div> <div data-bbox="609 304 722 535"> </div> <div data-bbox="901 357 1372 483"> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> </div> </div> <p style="text-align: right;">LEL449</p> <p style="text-align: center;">OK or NG</p>	
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between time control unit and key switch
NG	<p>▶ Replace key switch.</p>

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INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System)





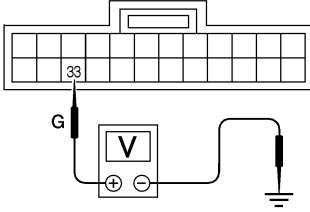
Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System)

=NIEL0252

DIAGNOSTIC PROCEDURE 1

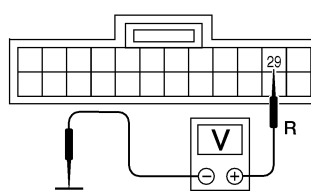



NIEL0252S01

SYMPTOM: Interior lamp timer does not operate properly.

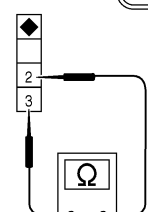


1	CHECK IGNITION ON SIGNAL																
<p> With CONSULT-II Check ignition switch ON signal ("IGN ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>																	
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>IGN ON SW</td><td>ON</td></tr> </table>			DATA MONITOR		MONITOR		IGN ON SW	ON									
DATA MONITOR																	
MONITOR																	
IGN ON SW	ON																
		<p>When ignition switch is ON: IGN ON SW ON</p> <p>When ignition switch is OFF: IGN ON SW OFF</p>															
		SEL318W															
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 33 and ground.</p>																	
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">   </div> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div> <table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">Terminals</th> <th colspan="3">Ignition switch position</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>OFF</th> <th>ACC</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>33</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div> </div>			Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	33	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position															
(+)	(-)	OFF	ACC	ON													
33	Ground	0V	0V	Battery voltage													
		LEL450															
OK or NG																	
OK	▶	GO TO 2.															
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in fuse block (J/B)] ● Harness for open or short between smart entrance control unit and fuse 															

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System) (Cont'd)



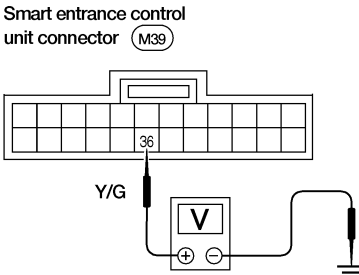



2	CHECK DOOR SWITCH INPUT SIGNAL								
<p>Ⓜ With CONSULT-II Check driver door switch signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.</p>									
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>DOOR SW-DR</td> <td>OFF</td> </tr> </tbody> </table>		DATA MONITOR		MONITOR		DOOR SW-DR	OFF	<p>When driver's door is open: DOOR SW-DR ON</p> <p>When driver's door is closed: DOOR SW-DR OFF</p>	
DATA MONITOR									
MONITOR									
DOOR SW-DR	OFF								
SEL319W									
<p>⊗ Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 29 and ground.</p>									
<p>Smart entrance control unit connector (M39)</p> 		 CONNECT  OFF 	<p>Voltage [V]: Condition of driver's door: CLOSED Approx. 5 Condition of driver's door: OPENED 0</p>						
LEL451									
OK or NG									
OK	▶	GO TO 4.							
NG	▶	GO TO 3.							

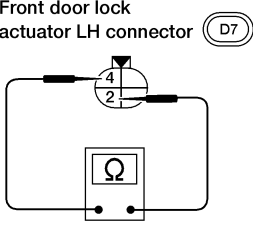



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3	CHECK FRONT DOOR SWITCH LH		
<p>Check continuity between front door switch LH terminals 2 and 3.</p>			
<p>Front door switch LH connector (E23)</p> 		 DISCONNECT 	<p>Continuity: Door switch is pushed. No Door switch is released. Yes</p>
LEL443			
OK or NG			
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Front door switch LH ground circuit and condition ● Harness for open or short between smart entrance control unit and front door switch LH 	
NG	▶	Replace front door switch LH.	

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System) (Cont'd)

4	CHECK DOOR UNLOCK SENSOR LH INPUT SIGNAL																
<p> With CONSULT-II Perform "LOCK SIG DR" in "DATA MONITOR" mode with CONSULT-II.</p>																	
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>LOCK SIG DR</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		LOCK SIG DR	OFF	<p>When front LH door is locked: LOCK SIG DR OFF</p> <p>When front LH door is unlocked: LOCK SIG DR ON</p>									
DATA MONITOR																	
MONITOR																	
LOCK SIG DR	OFF																
SEL344W																	
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 36 and ground.</p>																	
<p>Smart entrance control unit connector (M39)</p> 		  	<table border="1" style="margin: auto;"> <thead> <tr><th rowspan="2"></th><th colspan="2">Terminals</th><th rowspan="2">Condition</th><th rowspan="2">Voltage [V]</th></tr> <tr><th>(+)</th><th>(-)</th></tr> </thead> <tbody> <tr> <td rowspan="2">Front LH door</td> <td rowspan="2">36</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table>		Terminals		Condition	Voltage [V]	(+)	(-)	Front LH door	36	Ground	Locked	Approx. 5	Unlocked	0
	Terminals		Condition		Voltage [V]												
	(+)	(-)															
Front LH door	36	Ground	Locked	Approx. 5													
			Unlocked	0													
LEL452																	
OK or NG																	
OK	▶	GO TO 6.															
NG	▶	GO TO 5.															

5	CHECK DOOR UNLOCK SENSOR LH		
<p>1. Disconnect door unlock sensor LH harness connector. 2. Check continuity between door unlock sensor LH terminals.</p>			
<p>Front door lock actuator LH connector (D7)</p> 		  	<p>Continuity: Condition: Locked No Condition: Unlocked Yes</p>
WEL497			
OK or NG			
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Door unlock sensor LH ground circuit ● Harness for open or short between smart entrance control unit and door unlock sensor LH 	
NG	▶	Replace door unlock sensor LH.	

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System) (Cont'd)

6 CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II
 Check door switches ("DOOR SW-ALL") in "DATA MONITOR" mode with CONSULT-II.

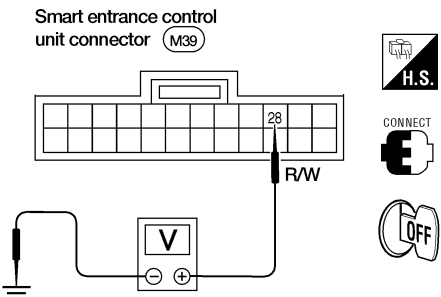
DATA MONITOR	
MONITOR	
DOOR SW-ALL	OFF

When any doors are open:
DOOR SW-ALL ON

When all doors are closed:
DOOR SW-ALL OFF

SEL323W

Without CONSULT-II
 Check voltage between smart entrance control unit harness connector terminal 28 and ground.



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front RH and rear door switches	28	Ground	Open	0
			Closed	Approx. 5

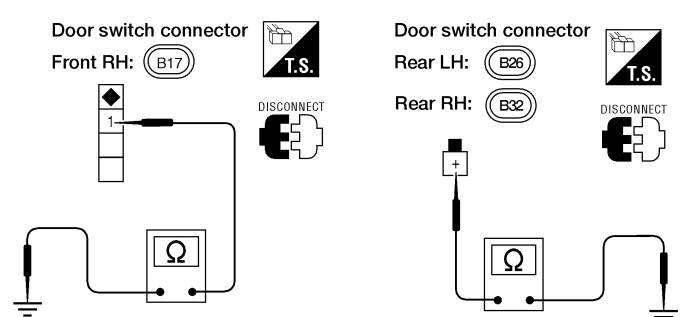
LEL453

OK or NG

OK	▶	GO TO 8.
NG	▶	GO TO 7.

7 CHECK DOOR SWITCHES

- Disconnect door switch harness connector.
- Check continuity between door switch terminals 1, + and ground.



	Terminals	Condition	Continuity
Front door switch RH	1 - Ground	Closed	No
		Open	Yes
Rear door switches	(+)- Ground	Closed	No
		Open	Yes

LEL447

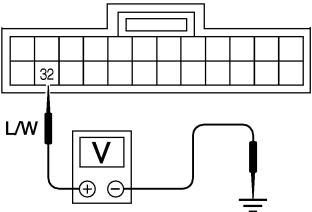

OK or NG

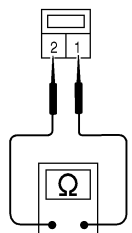

OK	▶	Check the following. <ul style="list-style-type: none"> Door switch ground circuit or door switch ground condition Harness for open or short between smart entrance control unit and door switch
NG	▶	Replace door switch.

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

INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System) (Cont'd)

8	CHECK KEY SWITCH INPUT SIGNAL	<p>With CONSULT-II Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; align-items: flex-start;"> <table border="1" style="margin-right: 20px;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>KEY ON SW</td> <td>ON</td> </tr> </tbody> </table> <div> <p>When key is inserted to ignition key cylinder: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p> </div> </div>		DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR									
MONITOR									
KEY ON SW	ON								
		SEL315W							
<p>Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 32 and ground.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="margin-right: 20px;"> <p>CONNECT</p>  </div> <div> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> </div> </div>									
		LEL454							
OK or NG									
OK	▶	Replace smart entrance control unit.							
NG	▶	GO TO 9.							

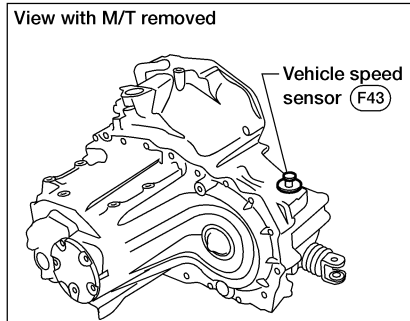
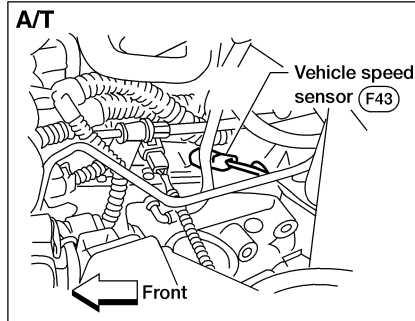
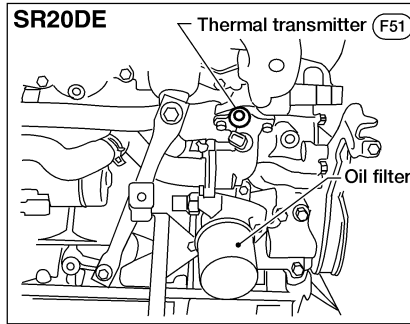
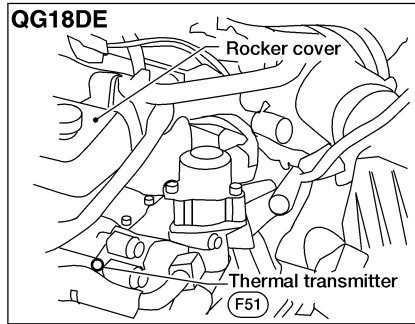
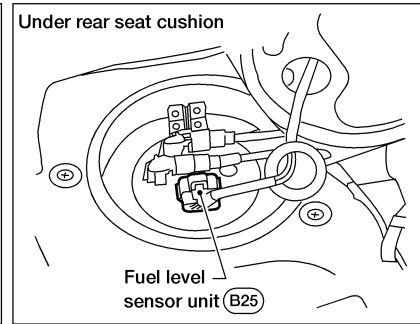
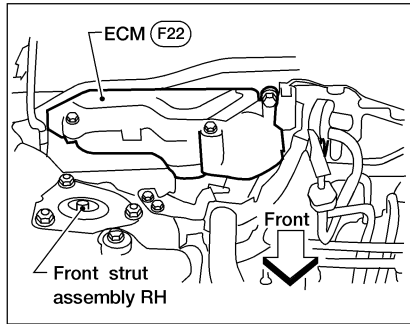
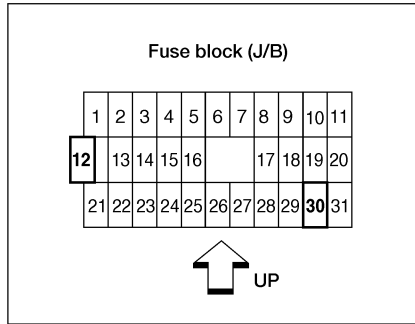
9	CHECK KEY SWITCH	<p>Check continuity between terminals 1 and 2.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Key switch connector (E113)</p>  </div> <div style="margin-right: 20px;"> <p>T.S.</p> <p>DISCONNECT</p>  </div> <div> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> </div> </div>	
		LEL449	
OK or NG			
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch 	
NG	▶	Replace key switch.	

METERS AND GAUGES

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NIEL0041



WEL085A

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

METERS AND GAUGES

System Description

System Description

=NIEL0042

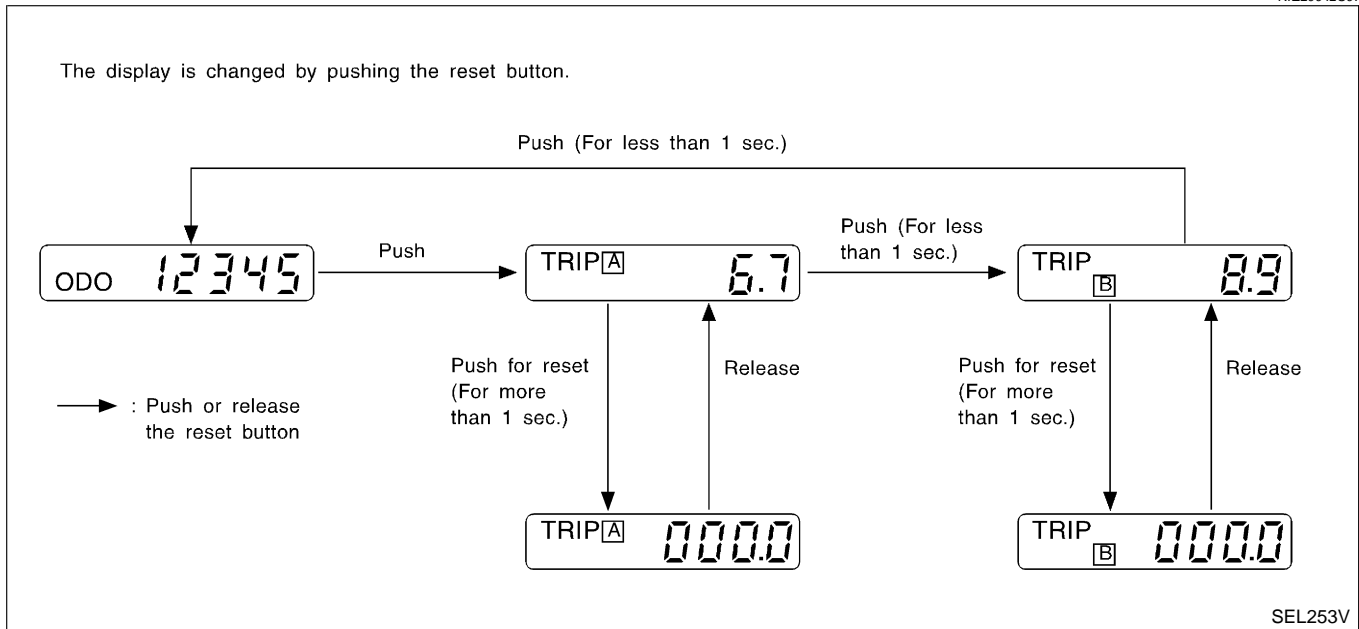
UNIFIED CONTROL METER

NIEL0042S06

- Speedometer, odo/trip meter, tachometer (if equipped), 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 odometer 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

NIEL0042S07



NOTE:

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

POWER SUPPLY AND GROUND CIRCUIT

NIEL0042S08

Power is supplied at all times:

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to combination meter terminal 25 (without tachometer) or 42 (with tachometer).

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 26 (without tachometer) or 41 (with tachometer).

Ground is supplied:

- to combination meter terminal 27 (without tachometer) or 48 (with tachometer)
- through body grounds M28 and M54.

WATER TEMPERATURE GAUGE

NIEL0042S01

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 31 (without tachometer) or 43 (with tachometer) of the combination meter for the water temperature gauge. The needle on the gauge moves from "C" to "H".

TACHOMETER

NIEL0042S02

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

The tachometer is regulated by a signal:

- from terminal 32 of the ECM
- to combination meter terminal 45 for the tachometer.

METERS AND GAUGES

System Description (Cont'd)

FUEL GAUGE

NIEL0042S03

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

The fuel gauge is regulated by a variable ground signal supplied:

- to combination meter terminal 30 (without tachometer) or 44 (with tachometer) for the fuel gauge
- from terminal 2 of the fuel level sensor unit and fuel pump
- through terminal 5 of the fuel level sensor unit and fuel pump, and
- through body grounds B13 and B19.

GI

MA

EM

SPEEDOMETER

NIEL0042S04

The combination meter receives a voltage signal from the vehicle speed sensor for the speedometer.

The voltage is supplied:

- to combination meter terminal 29 (without tachometer) or 47 (with tachometer) for the speedometer
- from terminal 1 of the vehicle speed sensor.

LC

EC

The speedometer converts the voltage into the vehicle speed displayed.

FE

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HA

SC

EL

IDX

METERS AND GAUGES

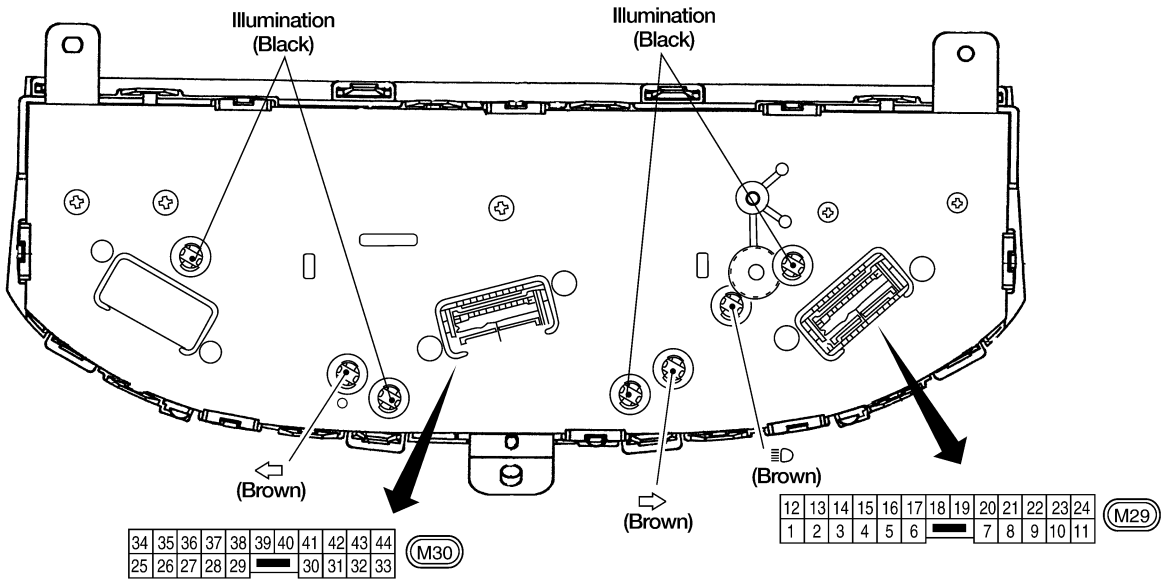
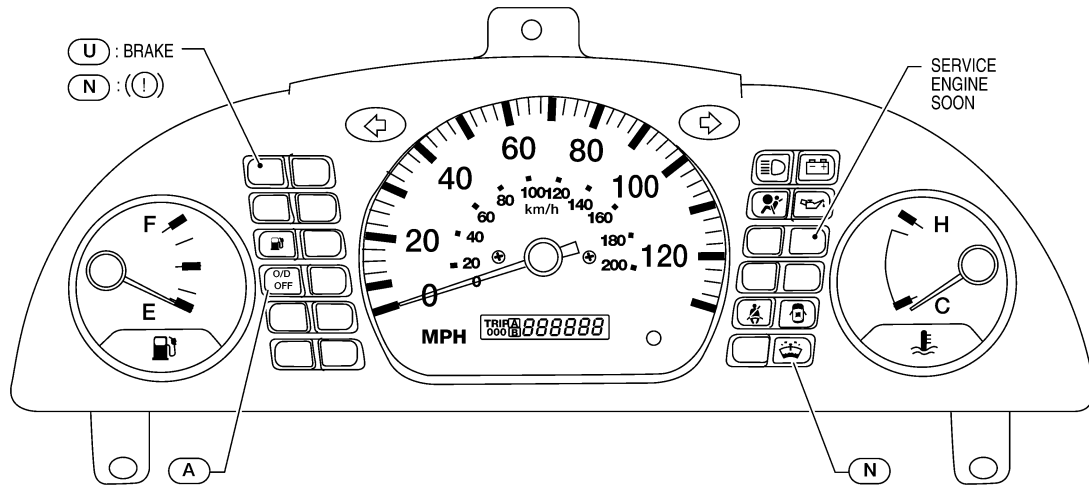
Combination Meter

Combination Meter

WITHOUT TACHOMETER

NIEL0043

NIEL0043S05



- (U) : For U.S.A
- (N) : For Canada
- (A) : With A/T
- (AB) : With ABS

Bulb socket color	Bulb wattage
Brown	1.4W
Black	3.0W

() : Bulb socket color

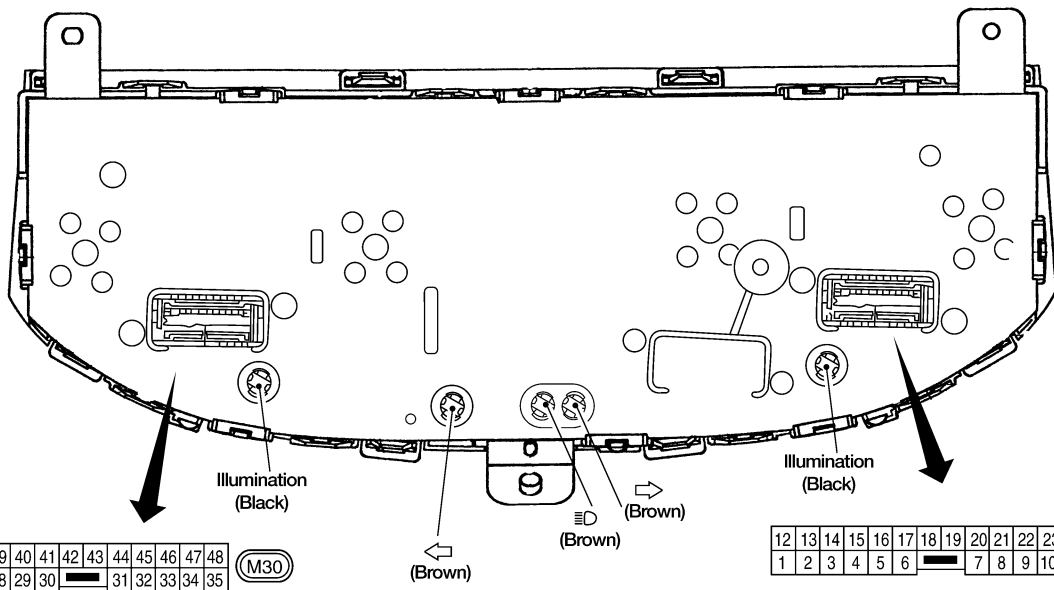
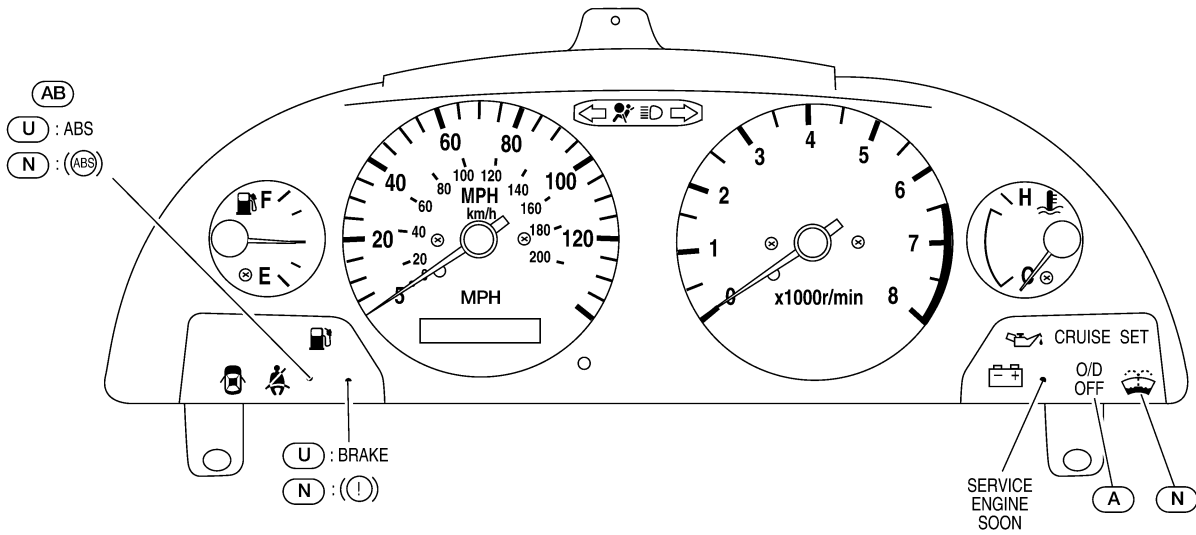
WEL018B

METERS AND GAUGES

Combination Meter (Cont'd)

WITH TACHOMETER

NIEL0043S04



- U** : For U.S.A
- N** : For Canada
- A** : With A/T
- AB** : With ABS

Bulb socket color	Bulb wattage
Brown	1.4W
Black	3.0W

(): Bulb socket color

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

WEL019B

METERS AND GAUGES

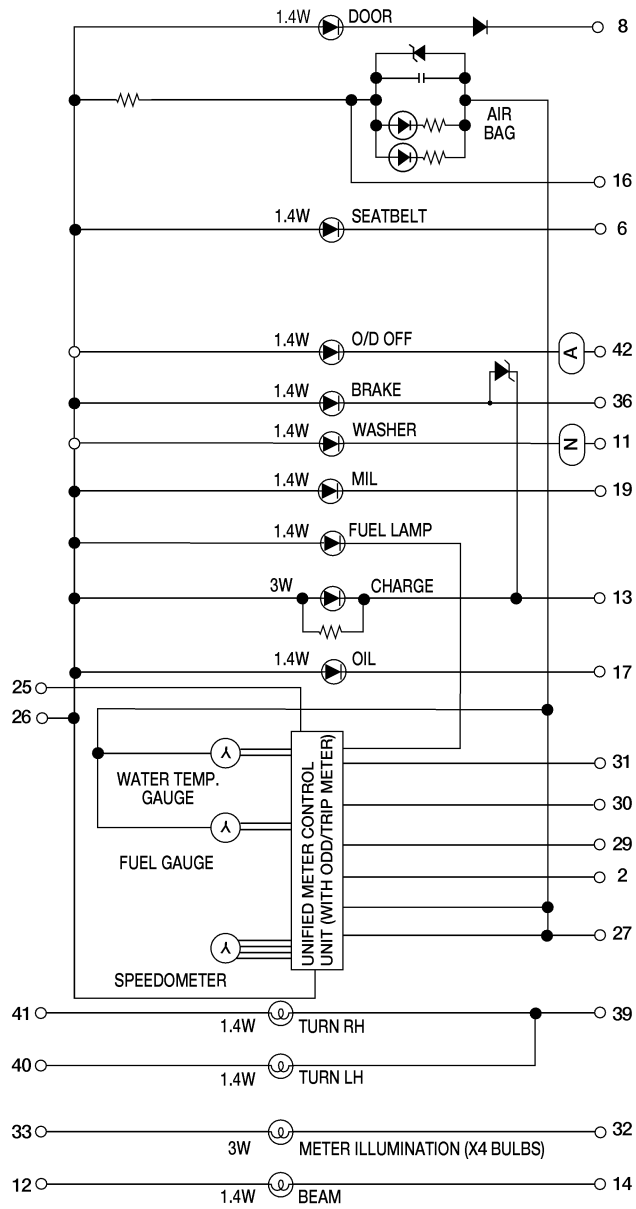
Schematic

Schematic

WITHOUT TACHOMETER

NIEL0253

NIEL0253S02



(A) : With A/T

(N) : For Canada

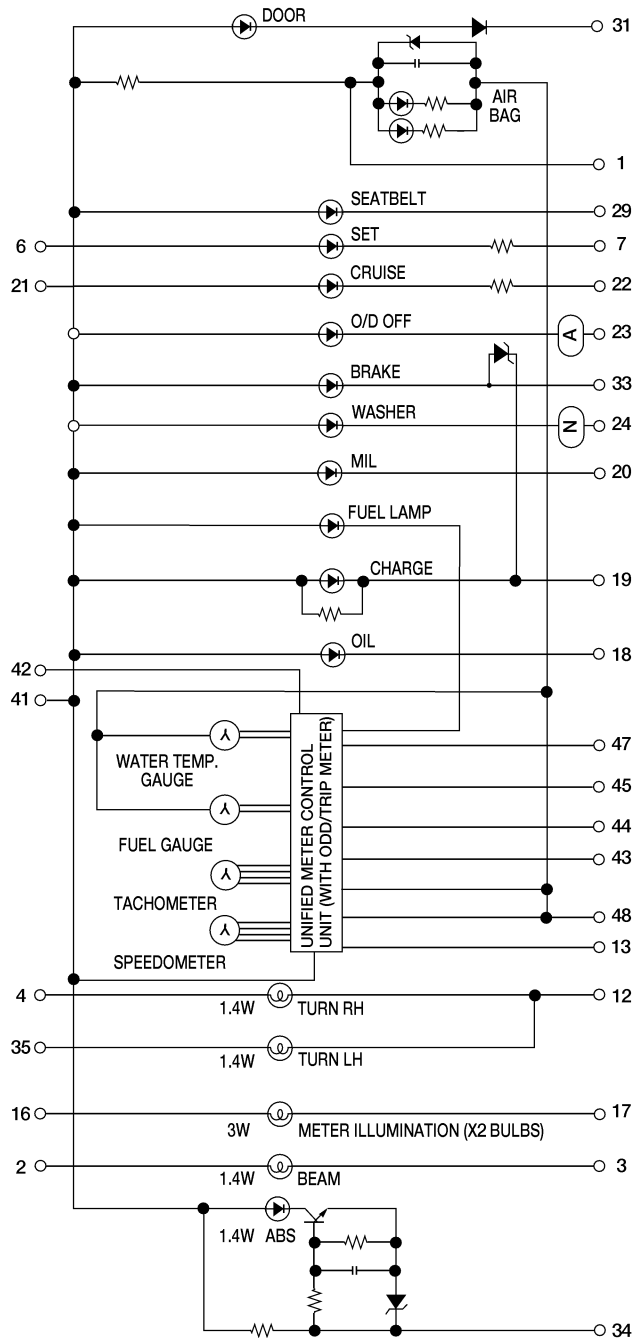
WEL020B

METERS AND GAUGES

Schematic (Cont'd)

WITH TACHOMETER

NIEL0253S01



(A) : With A/T
 (N) : For Canada

GI
 MA
 EM
 LC
 EC
 FE
 CL
 MT
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 BR
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 RS
 BT
 HA
 SC
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 IDX

WEL021B

METERS AND GAUGES

Wiring Diagram — METER —

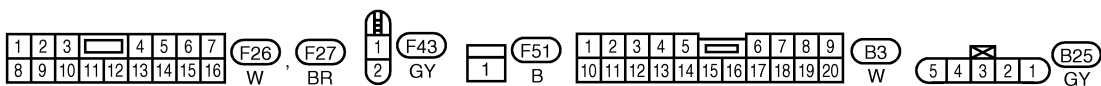
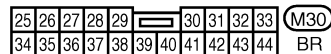
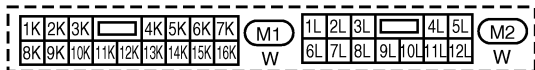
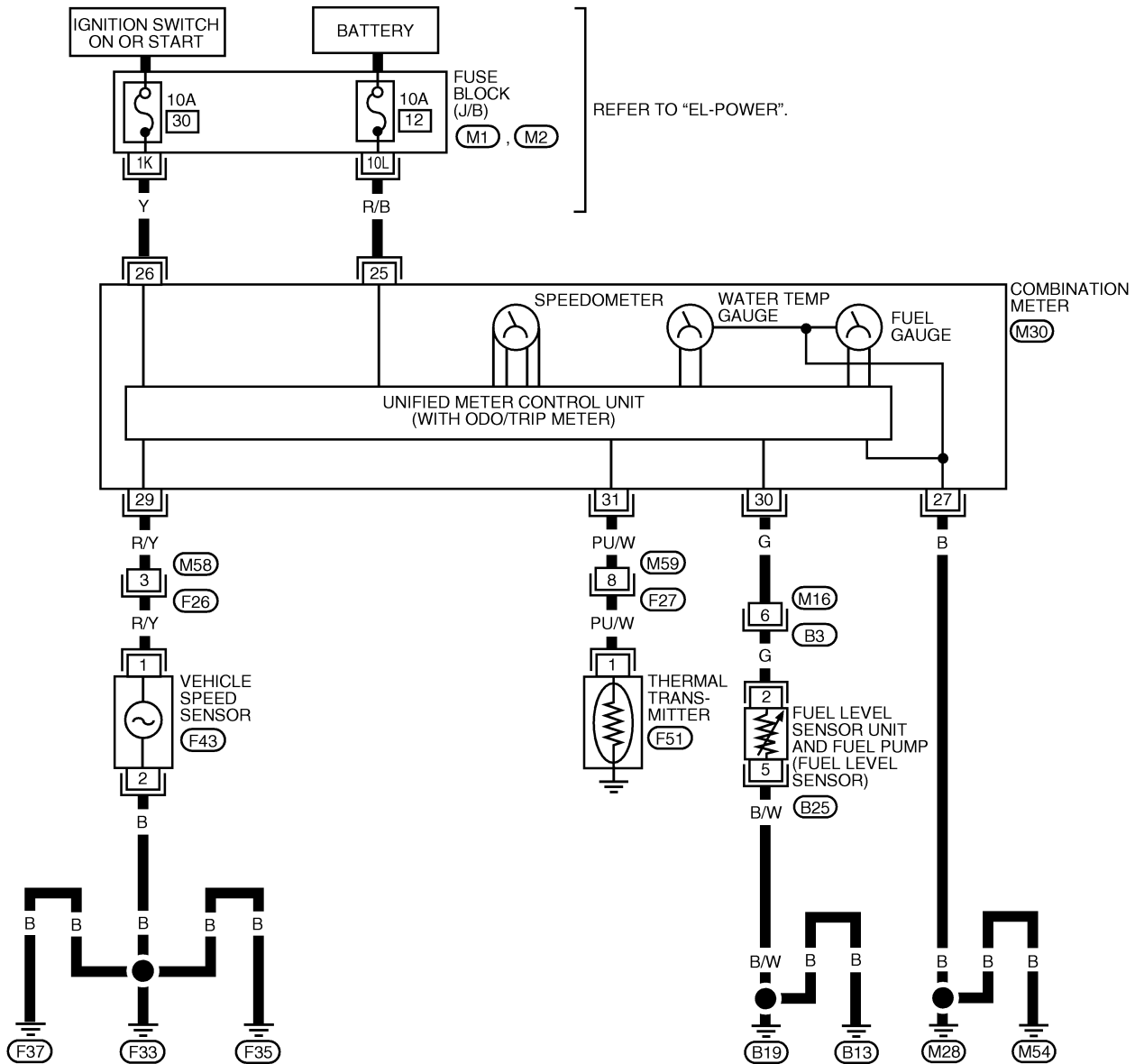
Wiring Diagram — METER —

NIEL0045

NIEL0045S01

WITHOUT TACHOMETER

EL-METER-01



WEL346

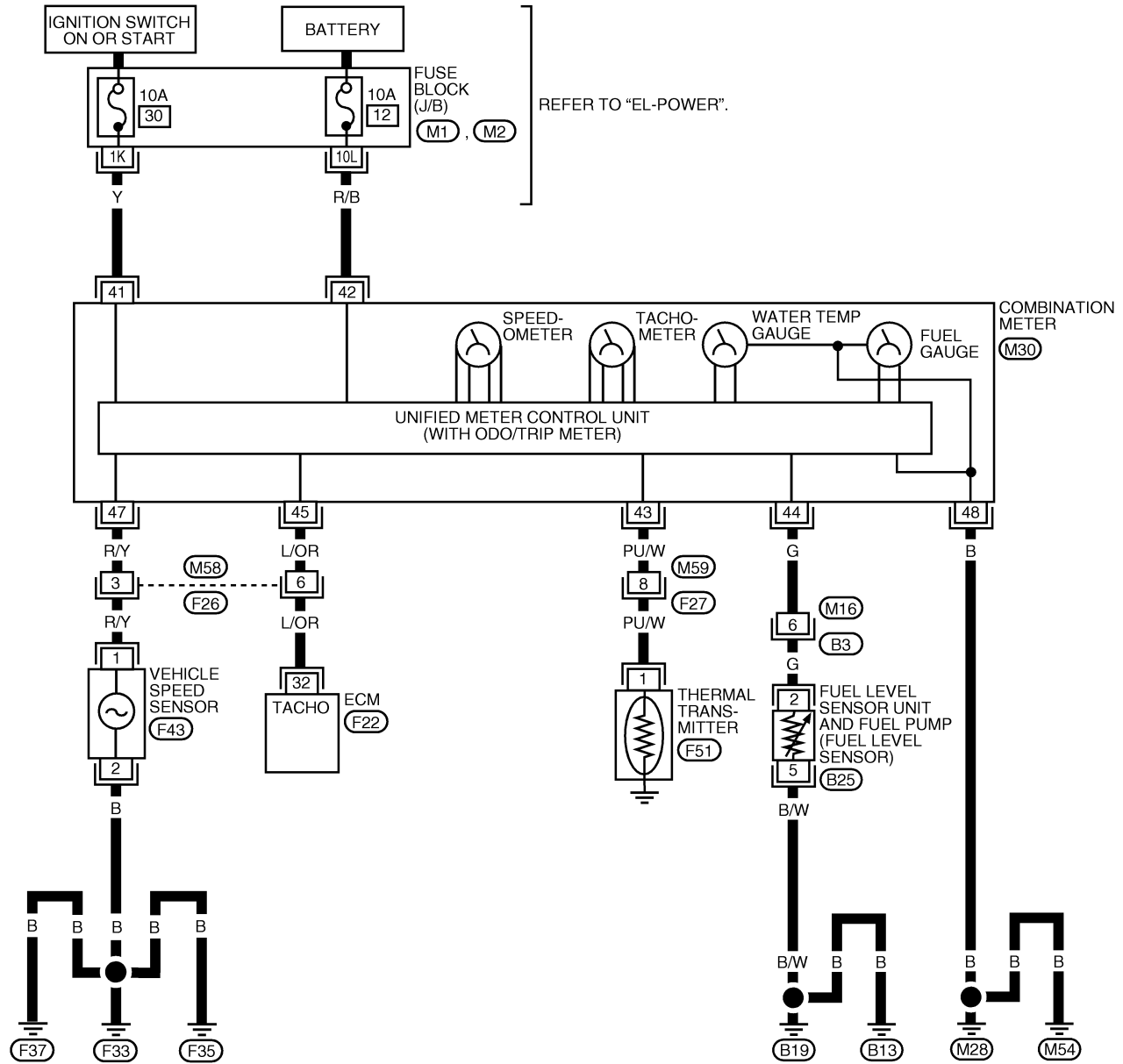
METERS AND GAUGES

Wiring Diagram — METER — (Cont'd)

WITH TACHOMETER

NIEL0045S02

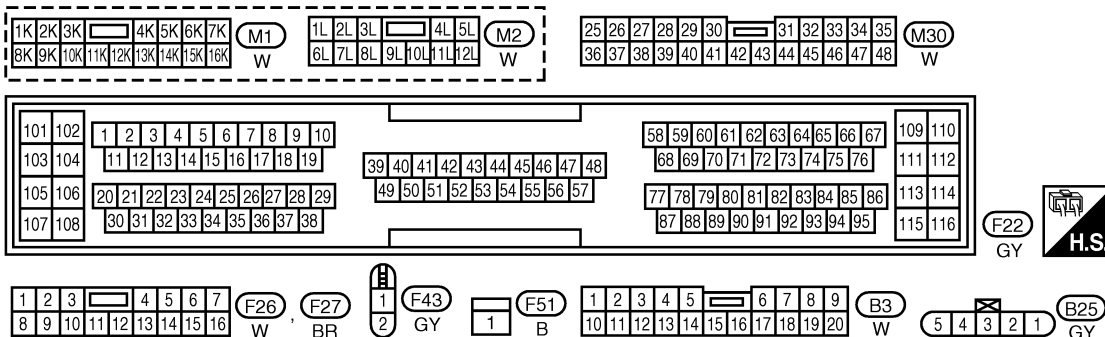
EL-METER-02



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

EL

IDX



LLE088A

METERS AND GAUGES

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

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

NIEL0151

DIAGNOSIS FUNCTION

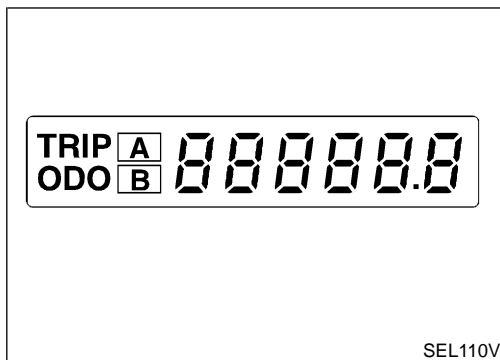
NIEL0151S01

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

HOW TO ALTERNATE DIAGNOSIS MODE

NIEL0151S02

1. Turn ignition switch to ON and change odo/trip meter to "TRIP A" or "TRIP B".
2. Turn ignition switch to OFF.
3. Turn ignition switch to ON when pushing odo/trip meter switch.
4. Release odo/trip meter switch 1 second after ignition switch is turned ON.
5. Push odo/trip meter switch three times within 7 seconds.

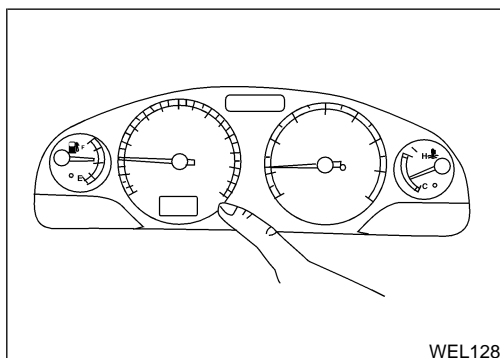


6. All odo/trip meter segments should be turned on.

NOTE:

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

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



7. Push odo/trip meter switch. Indication of each meter/gauge should be as shown in figure at left during pushing odo/trip meter switch if it is not malfunctioning.

NOTE:

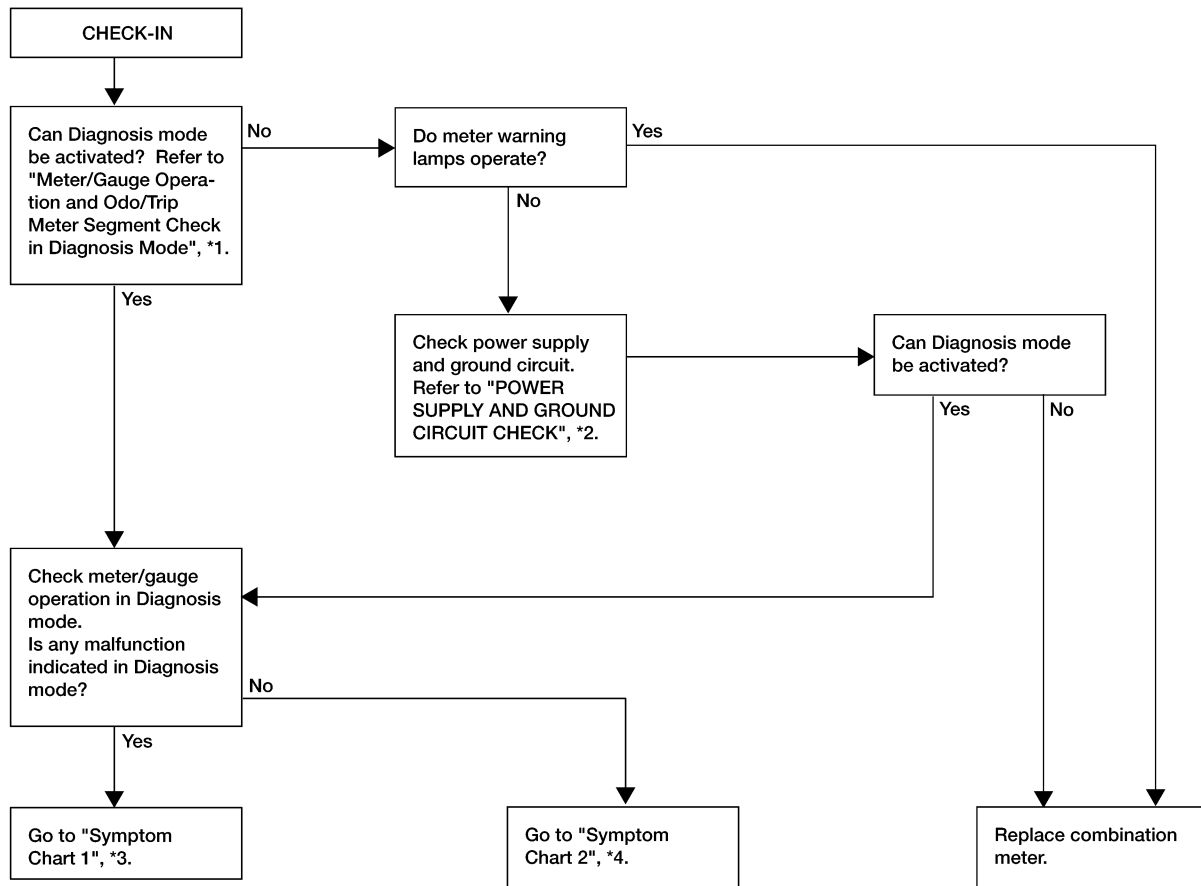
It takes a few seconds for indication of fuel gauge and water temperature gauge to become stable.

8. Turn ignition switch to OFF or start engine to cancel diagnosis mode.

Trouble Diagnoses PRELIMINARY CHECK

NIEL0046

NIEL0046S04



GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

WEL022B

*1: EL-94

*3: EL-96

*4: EL-96

*2: EL-97

SC

EL

IDX

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

SYMPTOM CHART

NIEL0046S10

Symptom Chart 1 (Malfunction is Indicated in Diagnosis Mode)

NIEL0046S1001

Symptom	Possible causes	Repair order
Odo/trip meter indicate(s) malfunction in Diagnosis mode.	Unified meter control unit	Replace unified meter control unit.
Multiple meter/gauge indicate malfunction in Diagnosis mode.		
One of speedometer/tachometer/fuel gauge/water temp. gauge indicates malfunction in Diagnosis mode.		

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

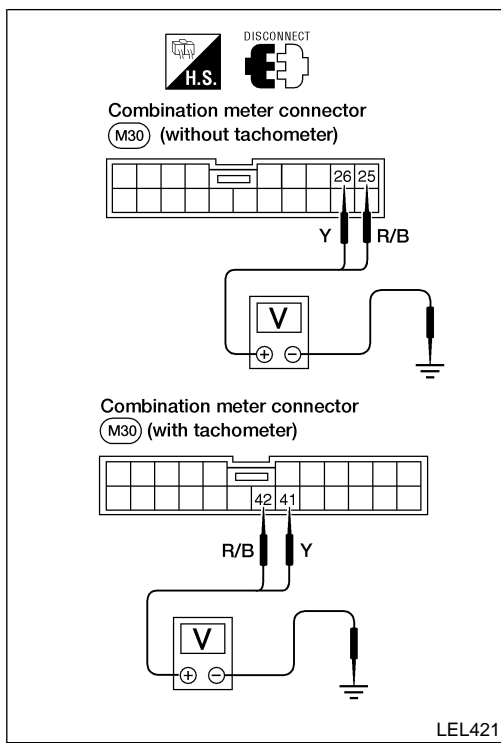
NIEL0046S1002

Symptom	Possible causes	Repair order
One of speedometer/tachometer/fuel gauge/water temp. gauge is malfunctioning.	<ol style="list-style-type: none"> Sensor signal <ul style="list-style-type: none"> Vehicle speed signal Engine revolution signal Fuel gauge Water temp. gauge Unified meter control unit 	<ol style="list-style-type: none"> Check the sensor for malfunctioning meter/gauge. <ul style="list-style-type: none"> "INSPECTION/VEHICLE SPEED SENSOR", EL-98. "INSPECTION/ENGINE REVOLUTION SIGNAL", EL-99. "INSPECTION/FUEL LEVEL SENSOR UNIT AND FUEL PUMP", EL-100. "INSPECTION/THERMAL TRANSMITTER", EL-101. Replace combination meter.
Multiple meter/gauge are malfunctioning. (except odo/trip meter)		

Before starting trouble diagnoses below, perform "PRELIMINARY CHECK", EL-95.

METERS AND GAUGES

Trouble Diagnoses (Cont'd)



POWER SUPPLY AND GROUND CIRCUIT CHECK

=NIEL0046S07

Power Supply Circuit Check

NIEL0046S0701

Without tachometer

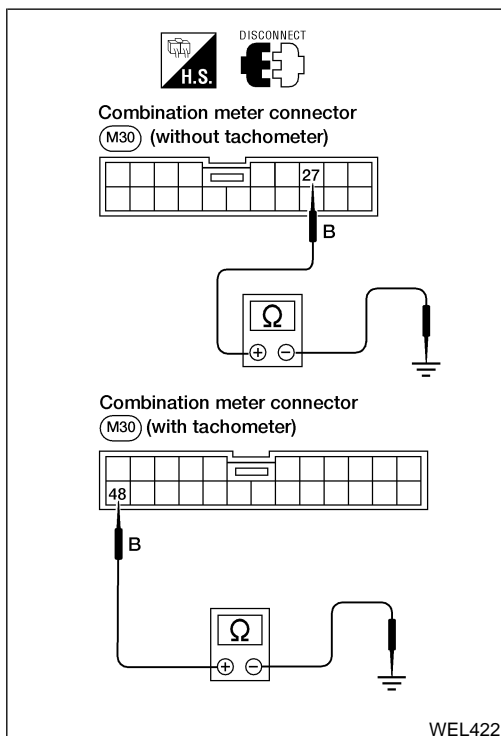
Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
25	Ground	Battery voltage	Battery voltage	Battery voltage
26	Ground	0V	0V	Battery voltage

With tachometer

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
42	Ground	Battery voltage	Battery voltage	Battery voltage
41	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

Without tachometer

NIEL0046S0702

Terminals	Continuity
27 - Ground	Yes

With tachometer

Terminals	Continuity
48 - Ground	Yes

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

INSPECTION/VEHICLE SPEED SENSOR

=NIEL0046S03

1	CHECK VEHICLE SPEED SENSOR OUTPUT	<p>1. Remove vehicle speed sensor from transmission. 2. Check voltage between combination meter terminals 29 (without tachometer) or 47 (with tachometer) and ground while quickly turning speed sensor pinion.</p>	
		LEL660	
OK or NG			
OK	▶	Vehicle speed sensor is OK.	
NG	▶	GO TO 2.	

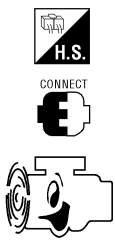
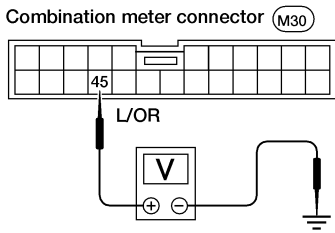
2	CHECK VEHICLE SPEED SENSOR	<p>Check resistance between vehicle speed sensor terminals 1 and 2.</p>	
		WEL435	
OK or NG			
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Harness between combination meter and vehicle speed sensor. ● Vehicle speed sensor ground circuit. 	
NG	▶	Replace vehicle speed sensor.	

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

INSPECTION/ENGINE REVOLUTION SIGNAL

NIEL0046S02

1	CHECK ECM OUTPUT	<p>1. Start engine. 2. Check voltage between combination meter terminal 45 and ground at idle and 2,000 rpm.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>Combination meter connector (M30)</p>  </div> <div style="text-align: center;"> <p>Higher RPM = Higher voltage Lower RPM = Lower voltage Voltage should change with RPM</p> </div> </div> <p style="text-align: right;">LEL436</p>	<p>GI MA EM LC EC FE CL MT AT AX SU BR ST RS BT HA SC</p>
OK or NG			
OK	▶	Engine revolution signal is OK.	
NG	▶	Harness for open or short between ECM and combination meter.	

EL

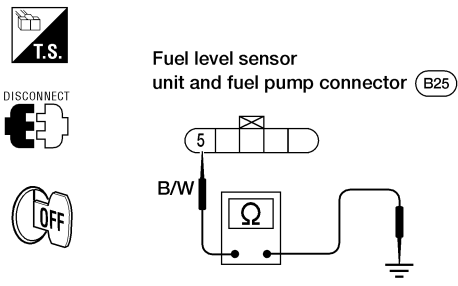
IDX

METERS AND GAUGES

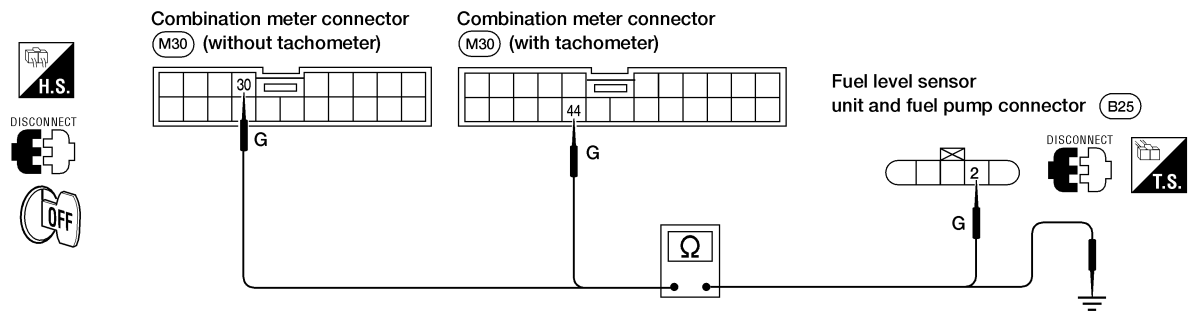
Trouble Diagnoses (Cont'd)

INSPECTION/FUEL LEVEL SENSOR UNIT AND FUEL PUMP

=NIEL0046S08

1	CHECK GROUND CIRCUIT FOR FUEL LEVEL SENSOR UNIT	
Check harness continuity between fuel level sensor unit and fuel pump connector terminal 5 and ground.		
		
Continuity should exist.		
WEL437		
OK or NG		
OK	▶	GO TO 2.
NG	▶	Repair harness or connector.

2	CHECK FUEL LEVEL SENSOR UNIT	
Refer to "FUEL LEVEL SENSOR UNIT CHECK" (EL-102).		
OK or NG		
OK	▶	GO TO 3.
NG	▶	Replace fuel level sensor unit.

3	CHECK HARNESS FOR OPEN OR SHORT	
<ol style="list-style-type: none"> 1. Disconnect combination meter connector, ECM and fuel level sensor unit and fuel pump connector. 2. Check continuity between combination meter terminal 30 (without tachometer) or 44 (with tachometer) and fuel level sensor unit and fuel pump connector terminal 2. <p style="margin-left: 20px;">Continuity should exist.</p> <ol style="list-style-type: none"> 3. Check continuity between combination meter terminal 30 (without tachometer) or 44 (with tachometer) and ground. <p style="margin-left: 20px;">Continuity should not exist.</p>		
		
WEL438		
OK or NG		
OK	▶	Fuel level sensor unit is OK.
NG	▶	Repair harness or connector.

METERS AND GAUGES

Trouble Diagnoses (Cont'd)

INSPECTION/THERMAL TRANSMITTER

=NIEL0046S09

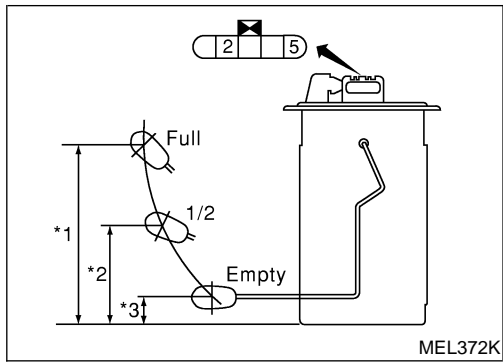
1	CHECK THERMAL TRANSMITTER	
Refer to "THERMAL TRANSMITTER CHECK", EL-102.		
OK or NG		
OK	▶	GO TO 2.
NG	▶	Replace thermal transmitter.

2	CHECK HARNESS FOR OPEN OR SHORT	
<p>1. Disconnect combination meter connector and thermal transmitter connector.</p> <p>2. Check continuity between combination meter terminal 31 (without tachometer) or 43 (with tachometer) and thermal transmitter terminal 1.</p> <p>Continuity should exist.</p> <p>3. Check continuity between combination meter terminal 31 (without tachometer) or 43 (with tachometer) and ground.</p> <p>Continuity should not exist.</p>		
OK or NG		
OK	▶	Thermal transmitter is OK.
NG	▶	Repair harness or connector.

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METERS AND GAUGES

Electrical Components Inspection



Electrical Components Inspection FUEL LEVEL SENSOR UNIT CHECK

=NIEL0047

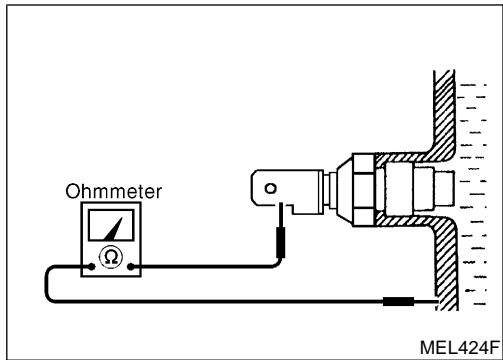
NIEL0047S01

- For removal, refer to **FE-8**, "Fuel Pump, Fuel Level Sensor Unit and Fuel Filter".

Check the resistance between terminals 2 and 5.

Ohmmeter		Float position mm (in)			Resistance (Approx.)
(+)	(-)				
2	5	*1	Full	136.1 (5.358)	4.5 - 5.5 Ω
		*2	1/2	89.8 (3.535)	31.5 - 33.5 Ω
		*3	Empty	31.3 (1.232)	80 - 83 Ω

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

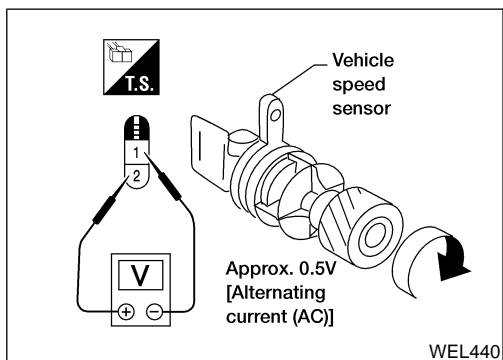


THERMAL TRANSMITTER CHECK

NIEL0047S02

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

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



VEHICLE SPEED SENSOR SIGNAL CHECK

NIEL0047S03

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

WARNING LAMPS

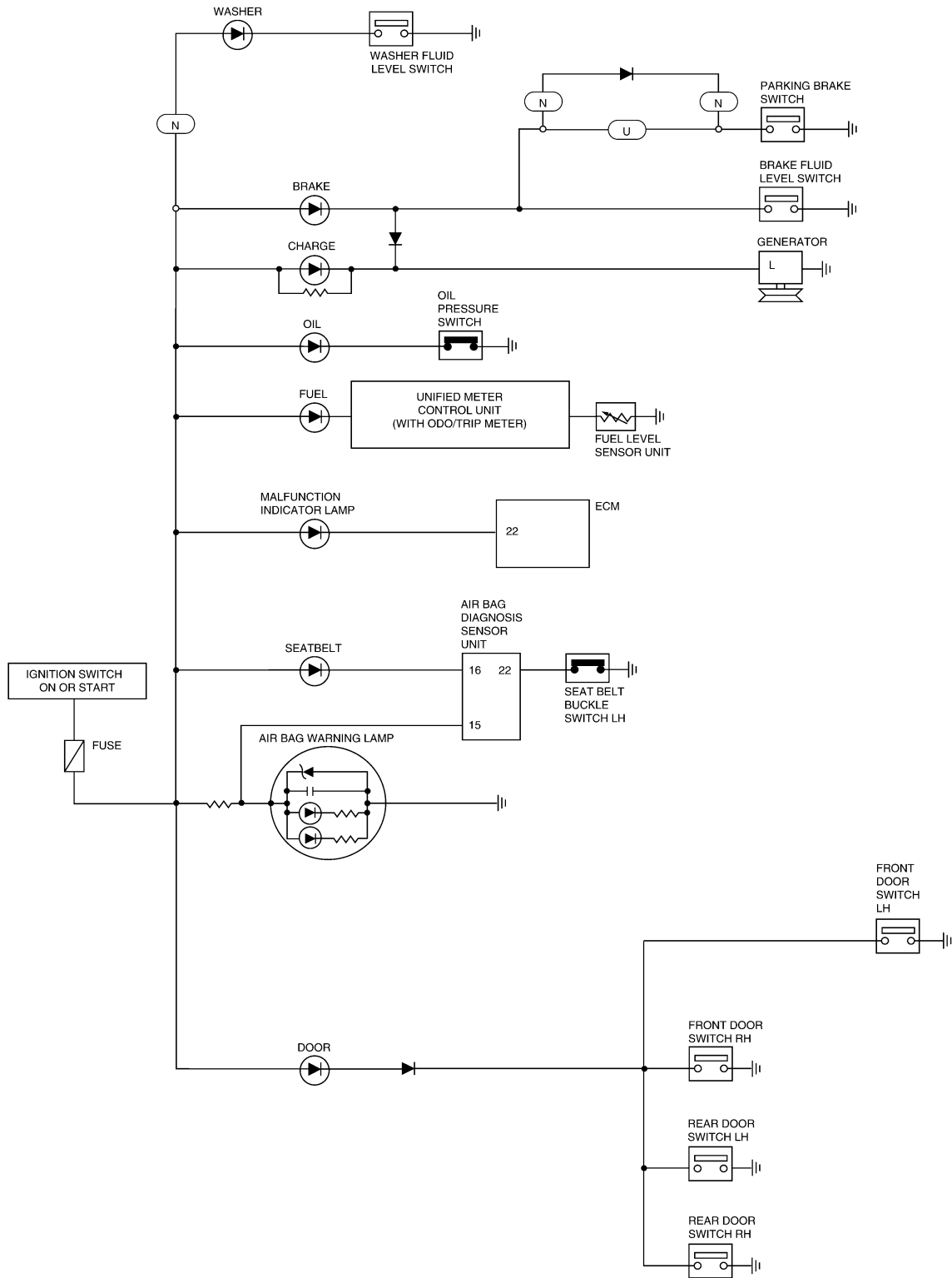
Schematic

WITHOUT TACHOMETER

NIEL0049

NIEL0049S01

U : USA
N : CANADA



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WEL023B

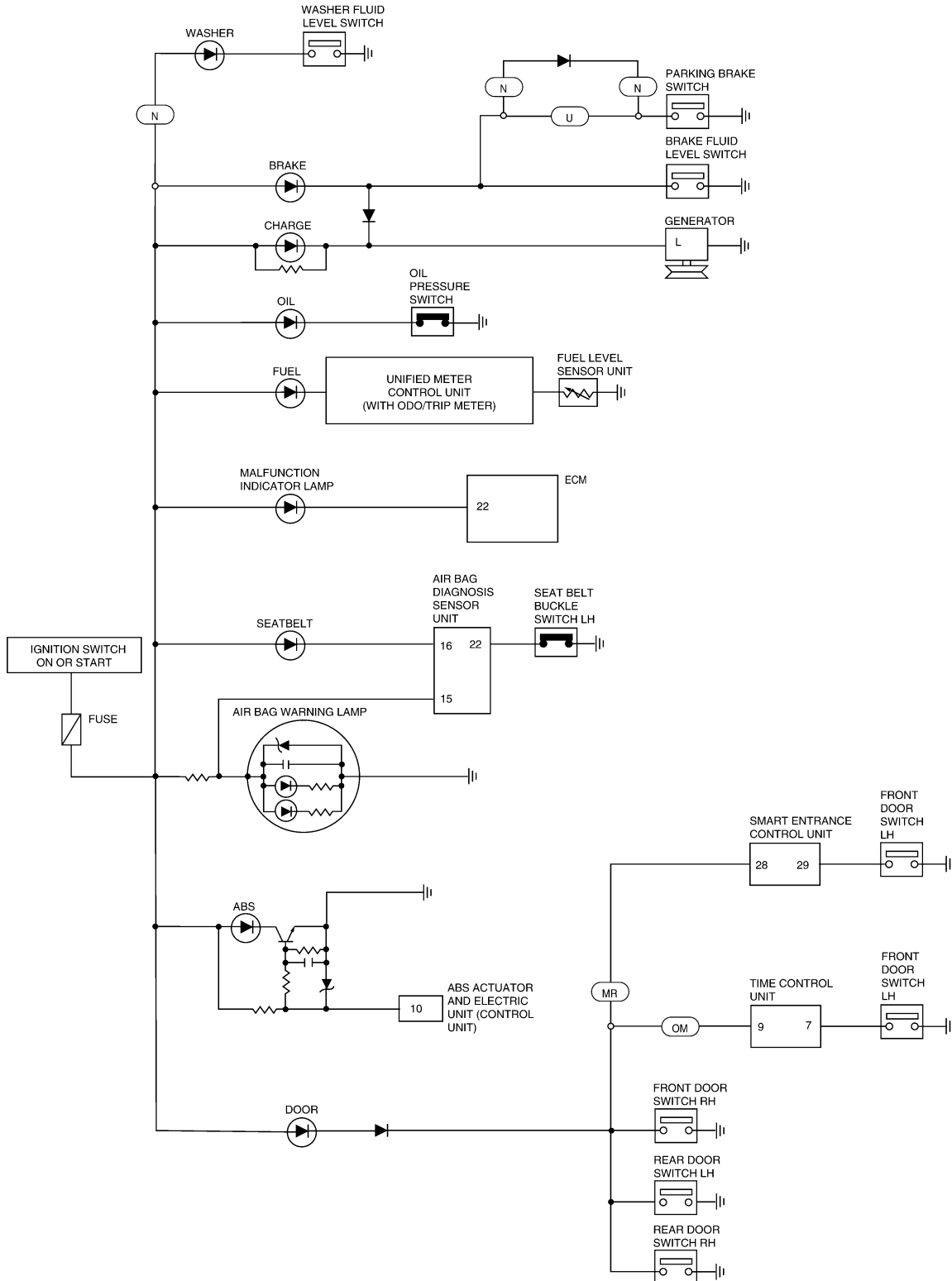
WARNING LAMPS

Schematic (Cont'd)

WITH TACHOMETER

NIEL0049S02

- MR : WITH MULTI-REMOTE CONTROL SYSTEM
- OM : WITHOUT MULTI-REMOTE CONTROL SYSTEM
- U : USA
- N : CANADA



WEL024B

WARNING LAMPS

Wiring Diagram — WARN —

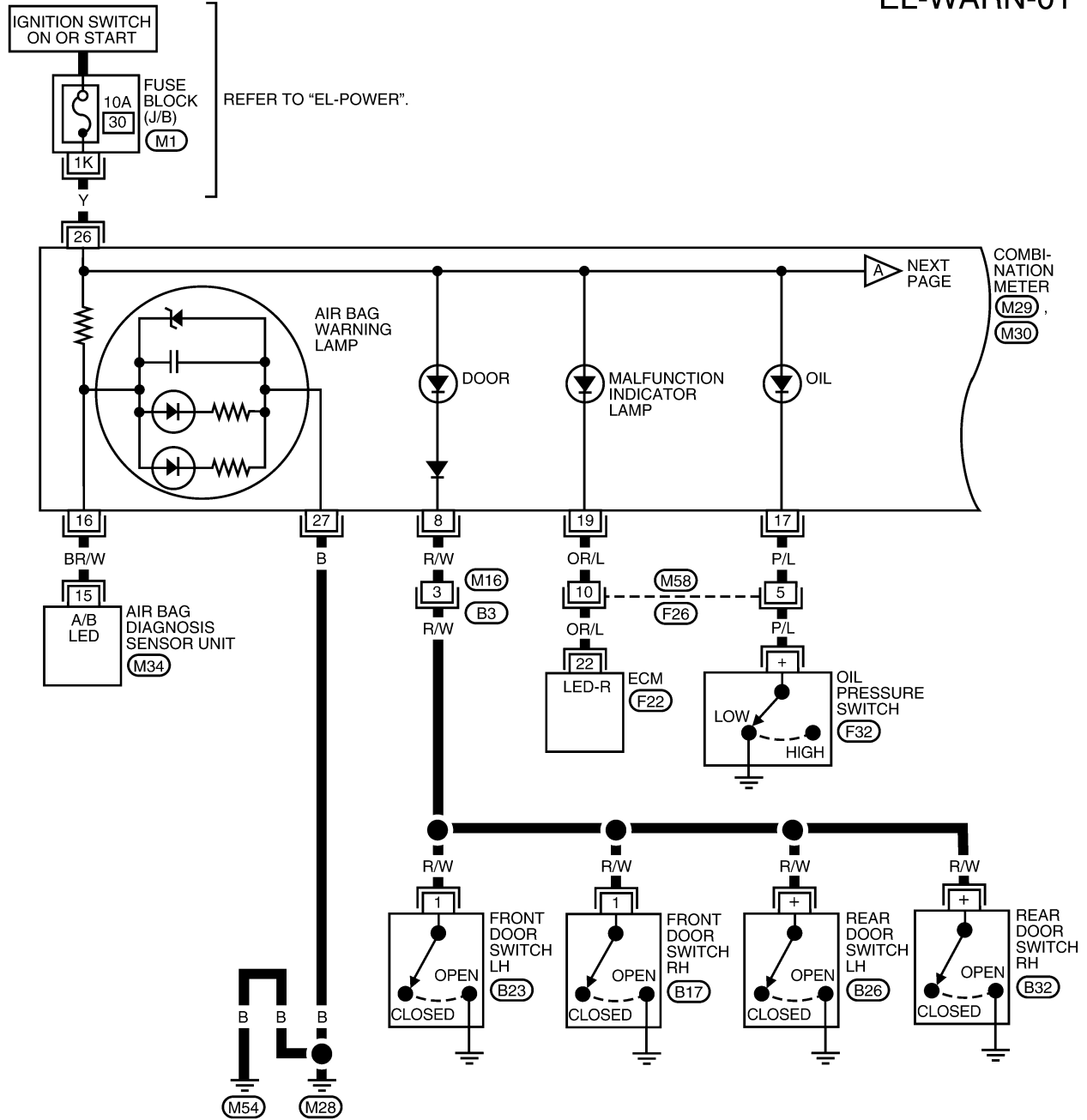
Wiring Diagram — WARN —

WITHOUT TACHOMETER

NIEL0050

NIEL0050S01

EL-WARN-01

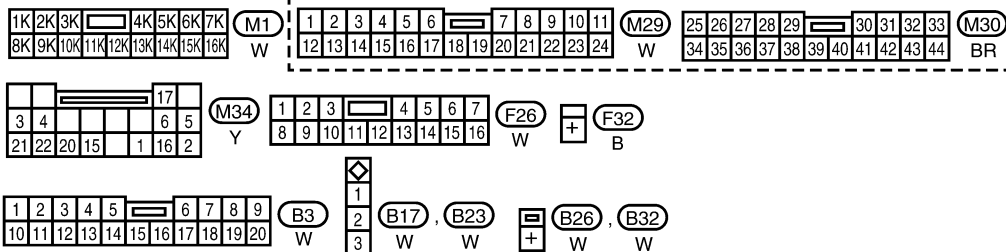


COMBINATION METER (M29), (M30)

▶ A NEXT PAGE

REFER TO THE FOLLOWING.

(F22) - ELECTRICAL UNITS



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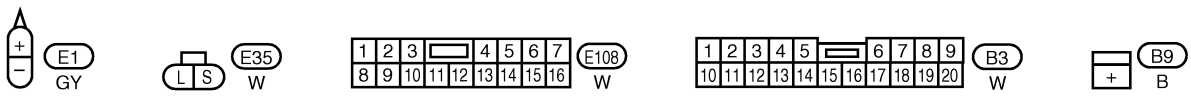
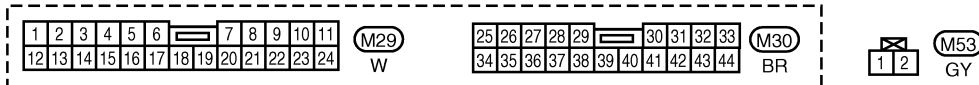
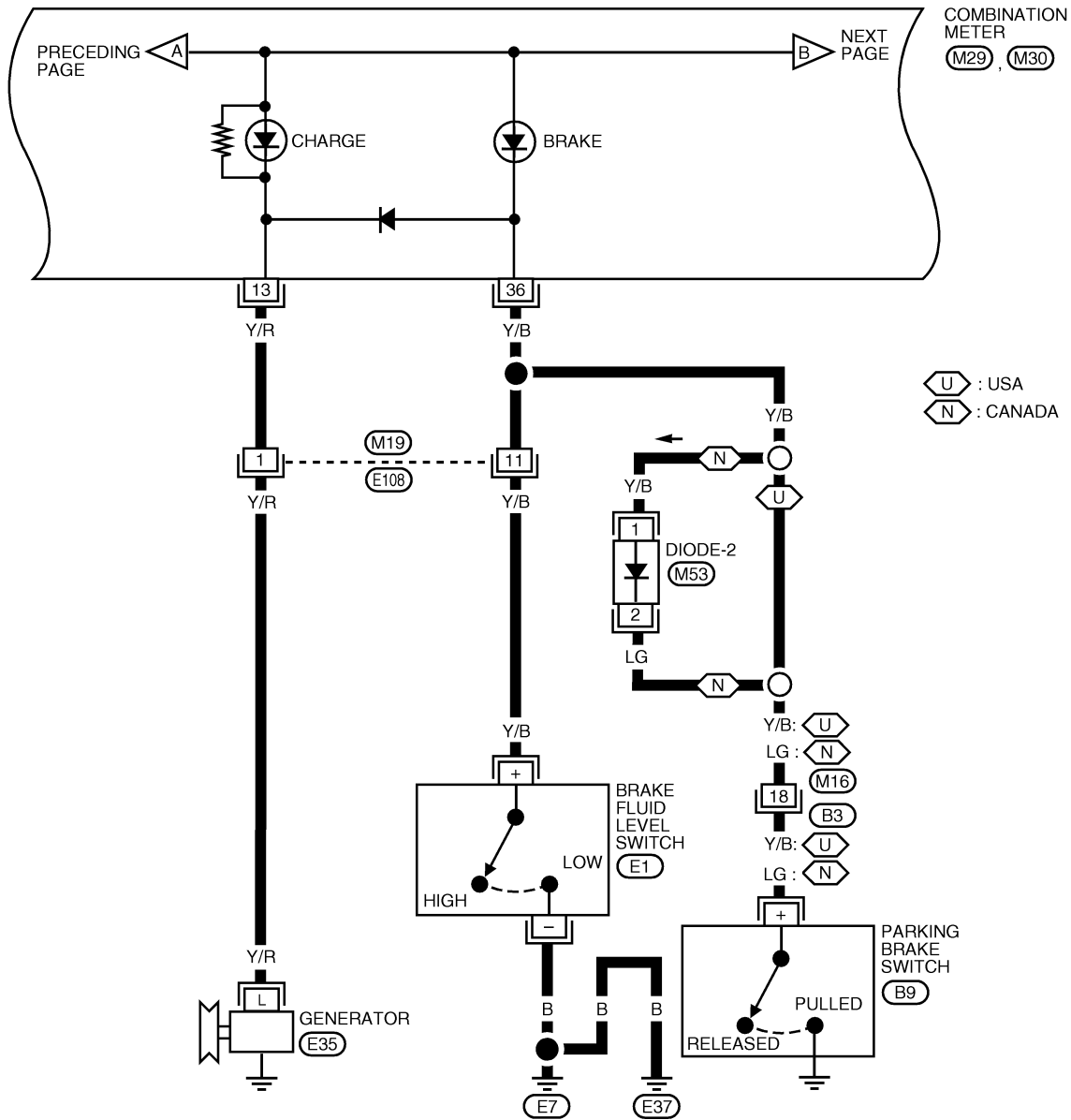
EL

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WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-02

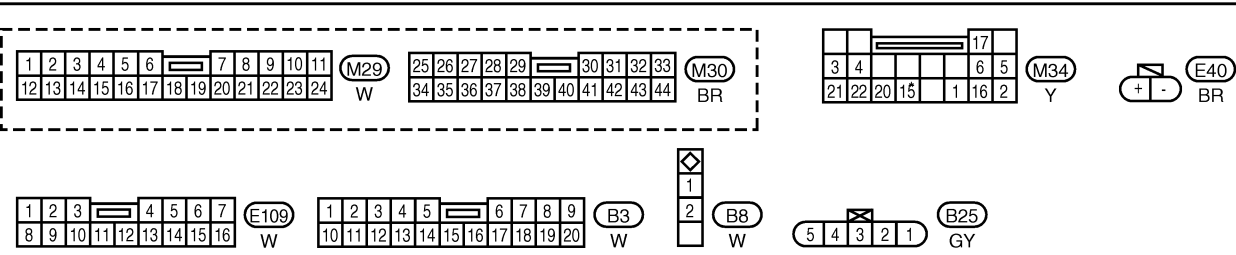
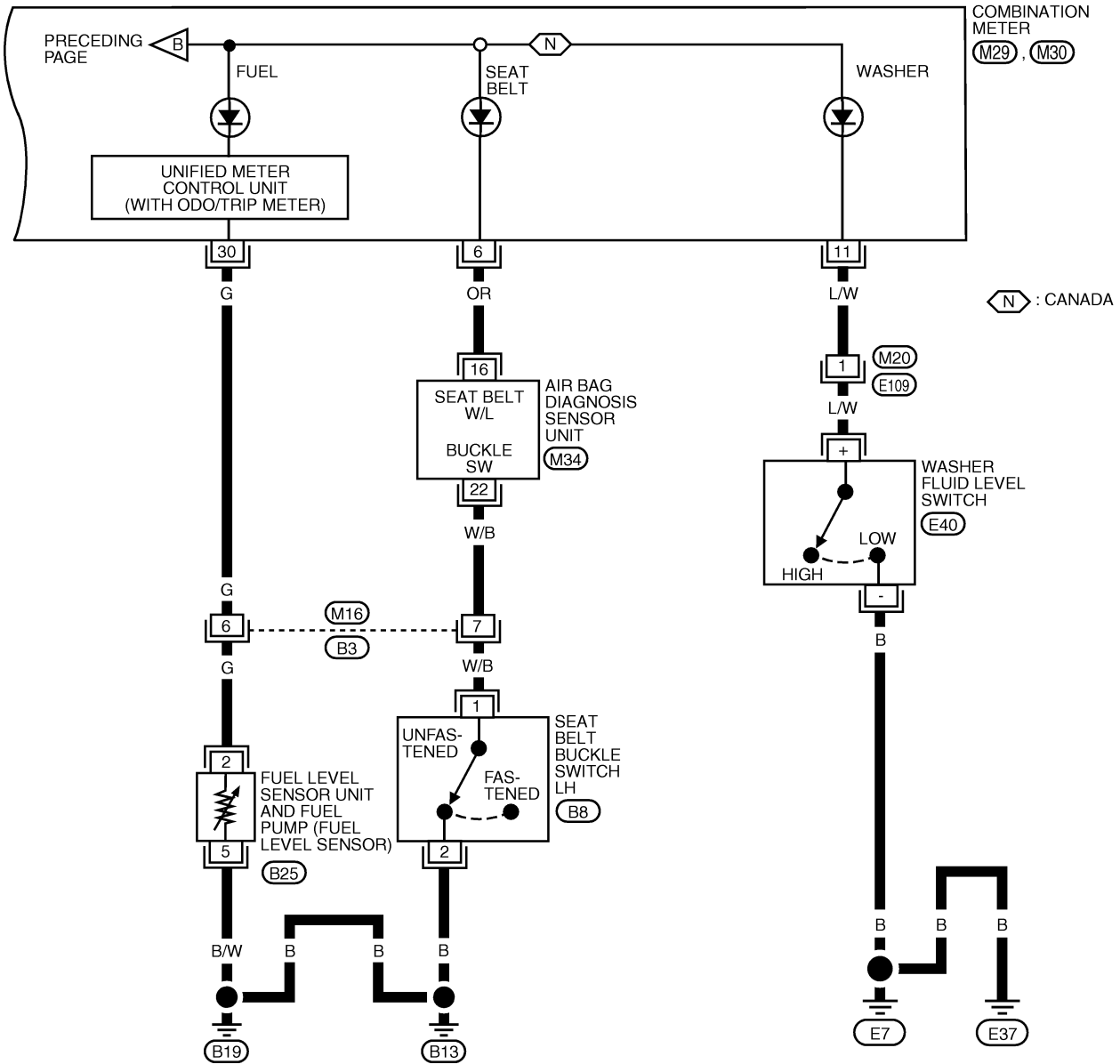


WEL026B

WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-03



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WEL027B

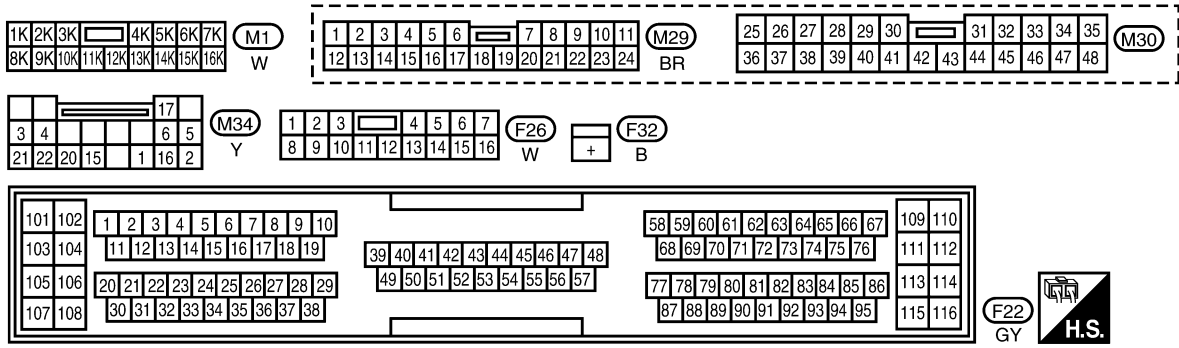
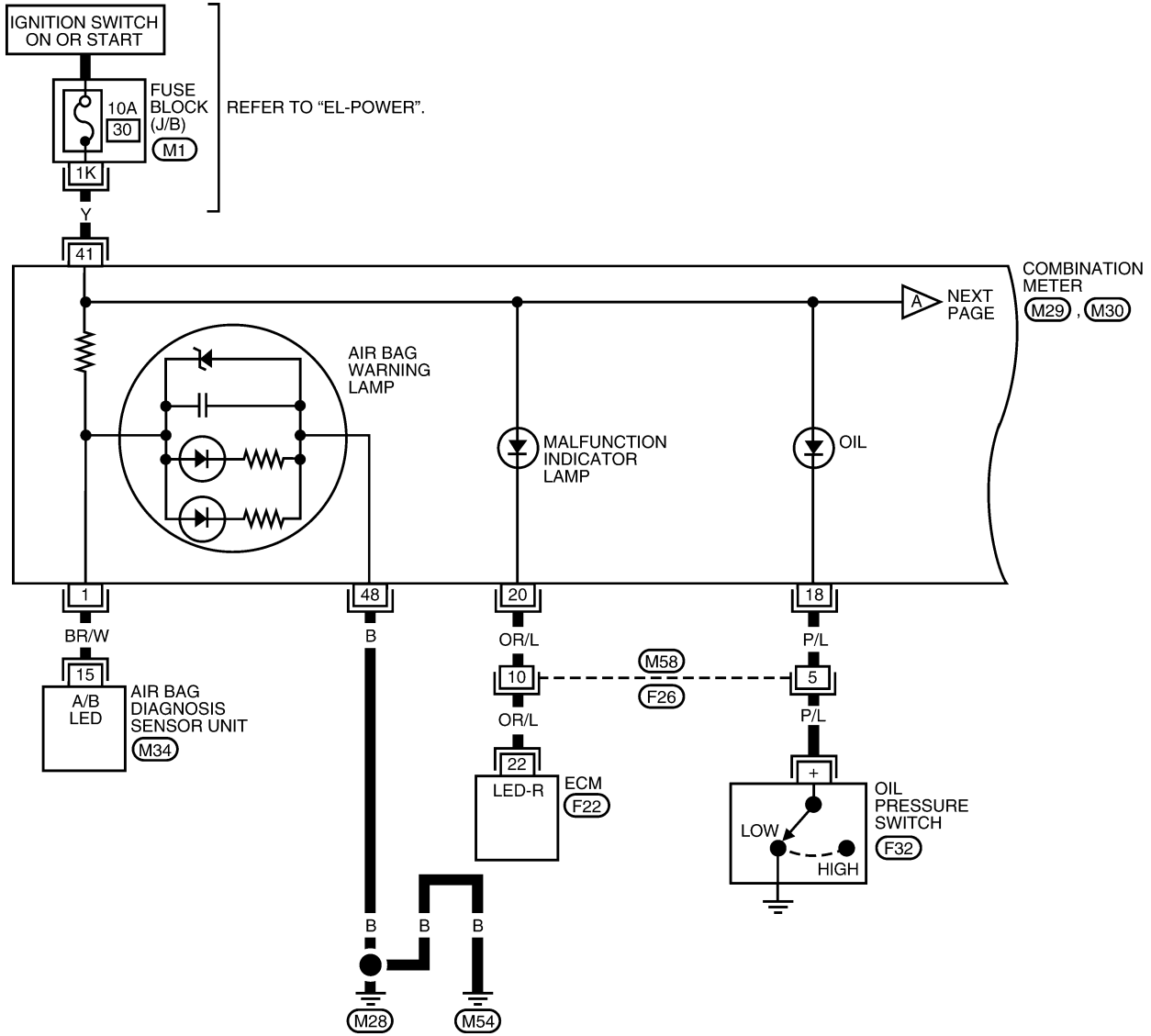
WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

WITH TACHOMETER

NIEL0050S02

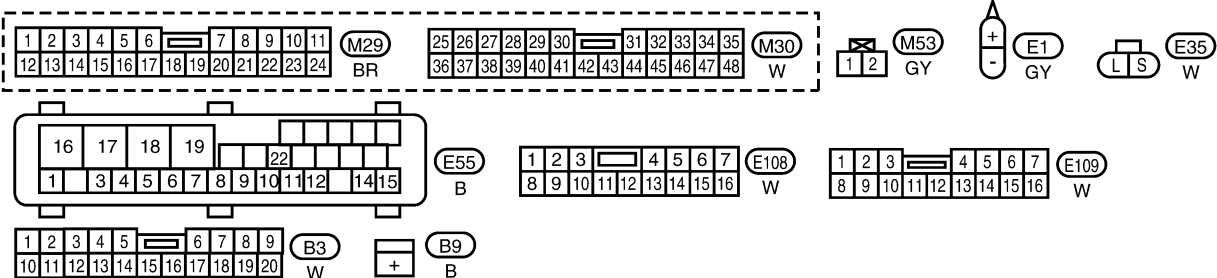
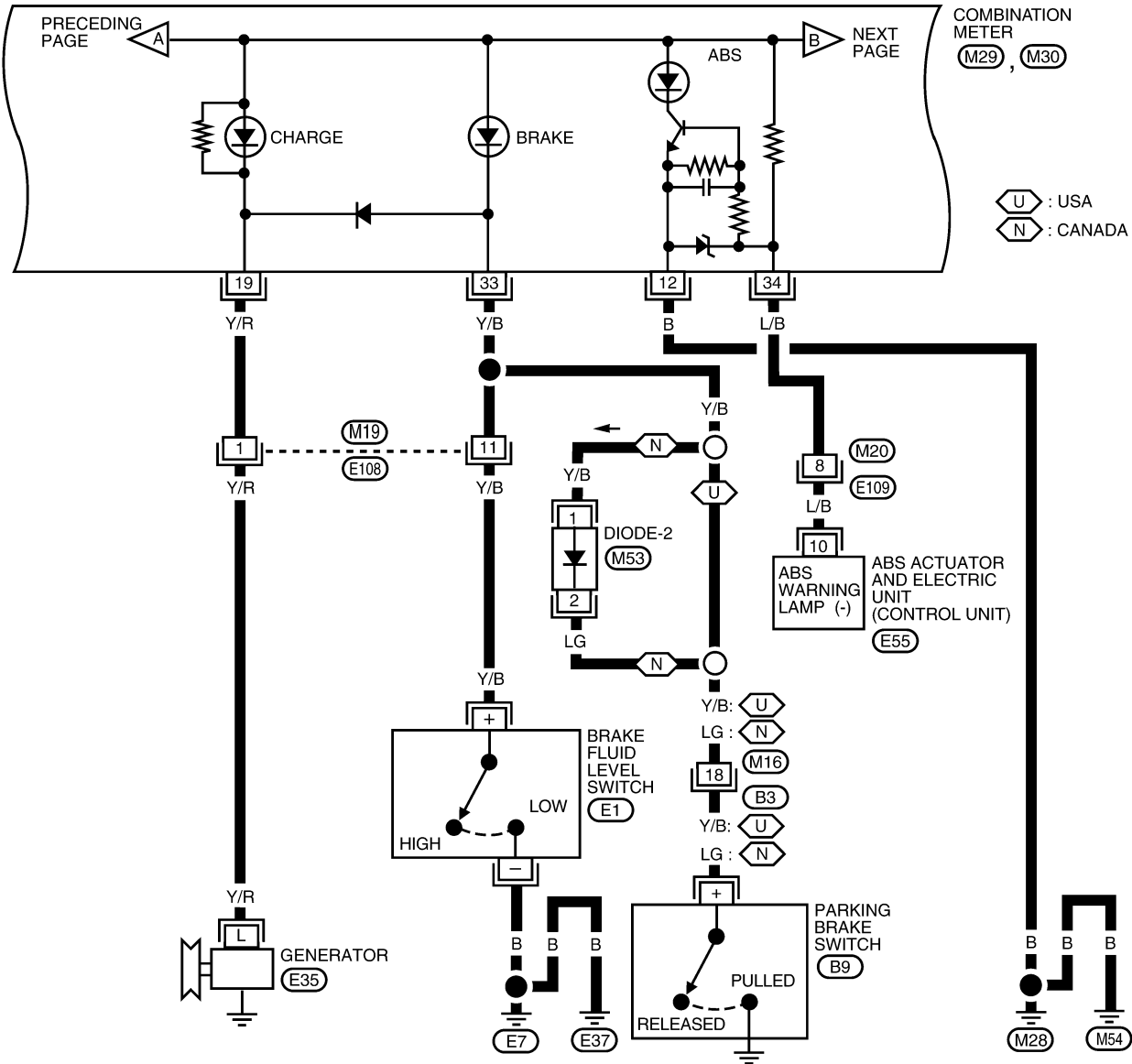
EL-WARN-04



WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-05



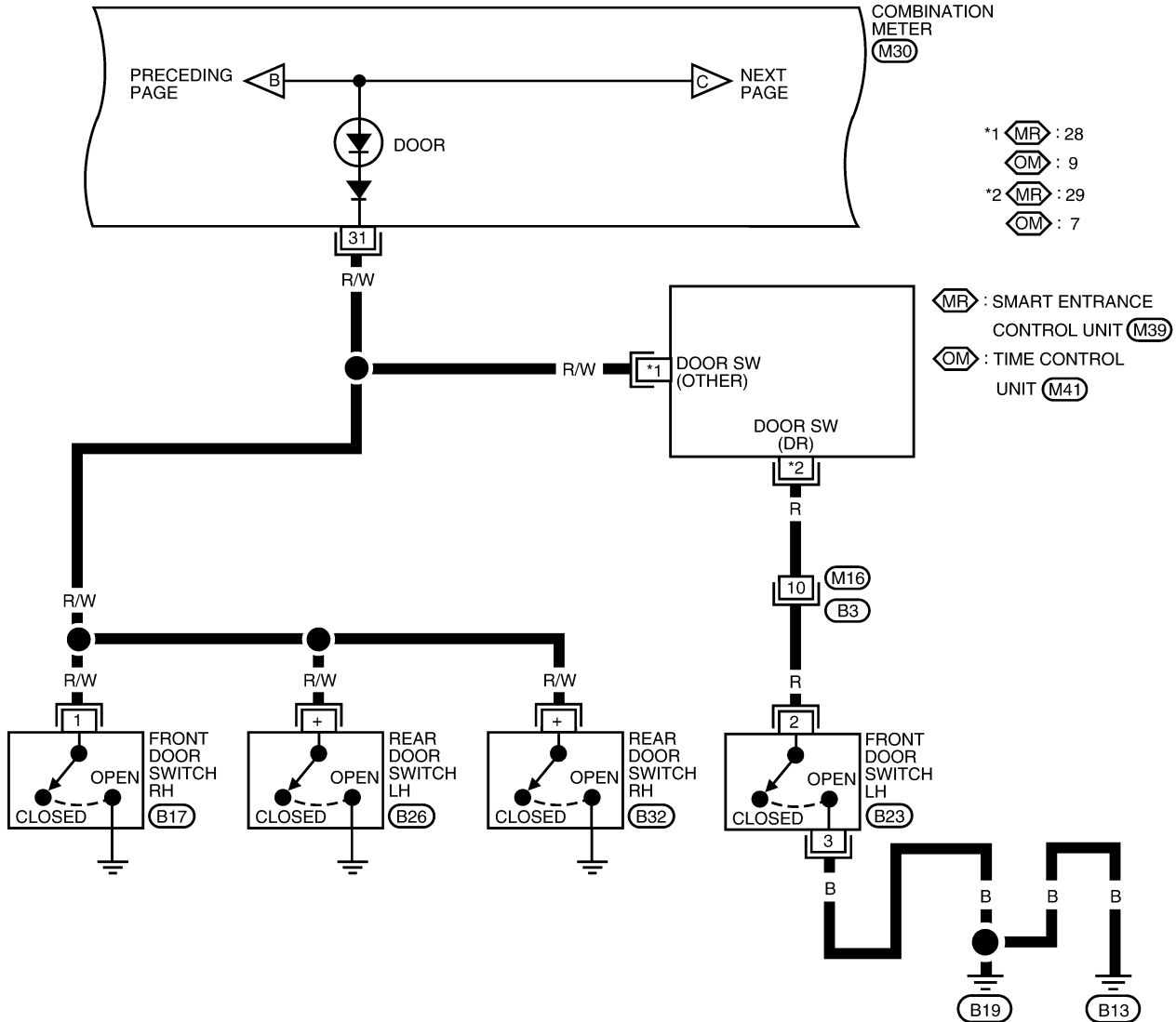
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WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-06

: WITH MULTI-REMOTE CONTROL SYSTEM
 : WITHOUT MULTI-REMOTE CONTROL SYSTEM



25	26	27	28	29	30	31	32	33	34	35	(M30)		
36	37	38	39	40	41	42	43	44	45	46	47	48	W

1	2	3	4	5	6	7	8	9	(B3)		
10	11	12	13	14	15	16	17	18	19	20	W

1	(B17)	(B23)	(B26)	(B32)
2	W	W	W	W
3				

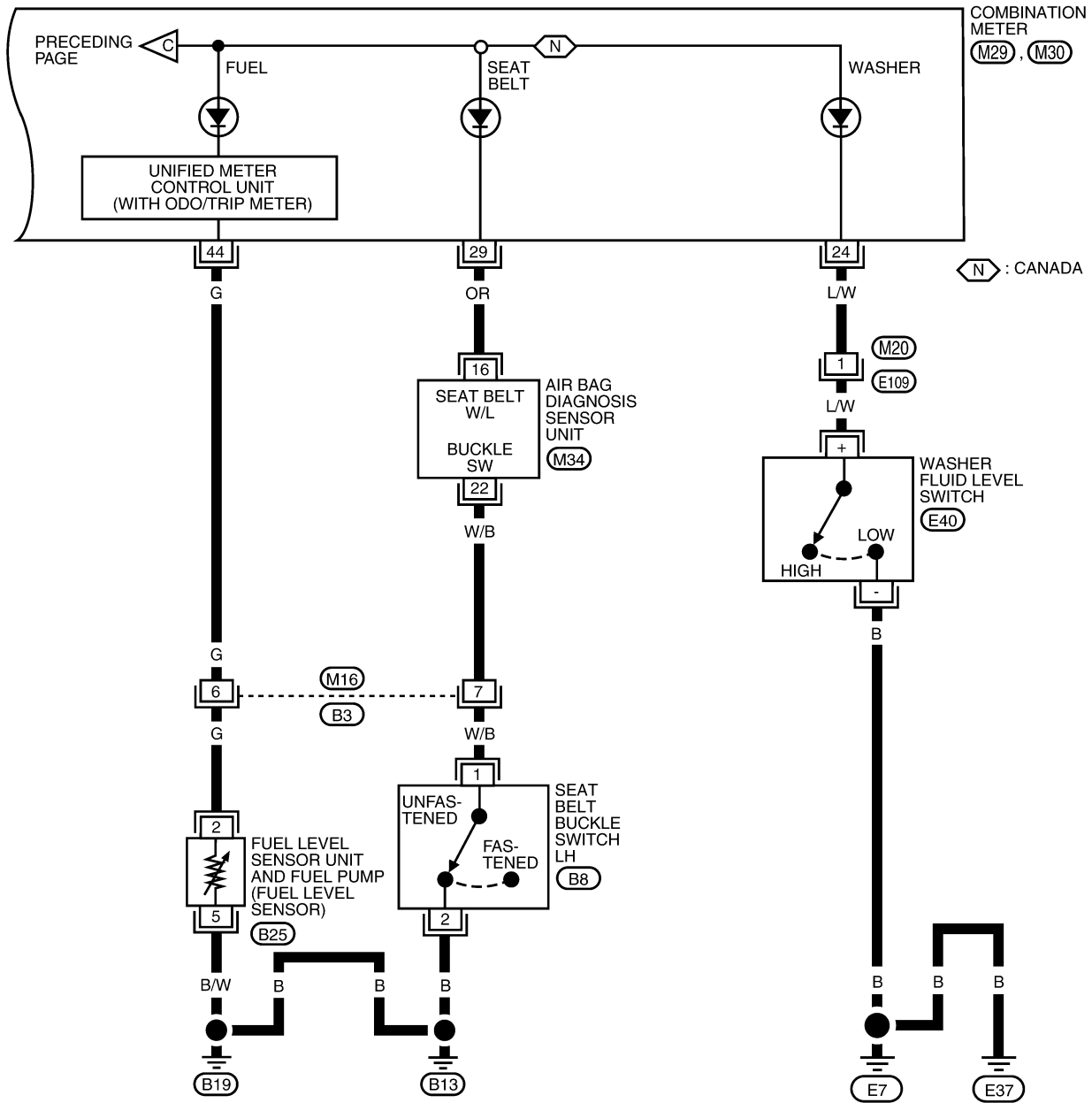
REFER TO THE FOLLOWING.
(M39), (M41) - ELECTRICAL UNITS

WEL030B

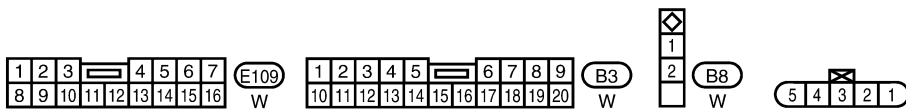
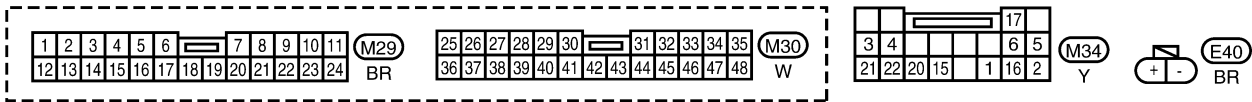
WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

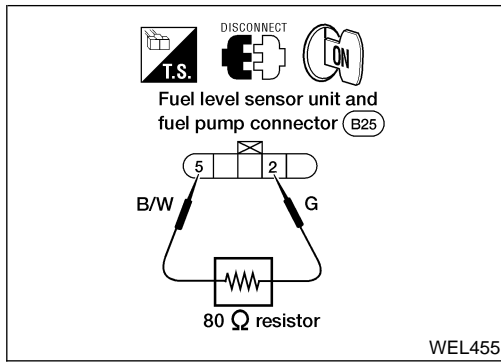
EL-WARN-07



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WARNING LAMPS



Electrical Components Inspection FUEL WARNING LAMP OPERATION CHECK

NIEL0051
NIEL0051S01

1. Turn ignition switch "OFF".
2. Disconnect fuel level sensor unit and fuel pump harness connector B25.
3. Connect a resistor (80Ω) between fuel level sensor unit and fuel pump harness connector terminals 2 and 5.
4. Turn ignition switch "ON".

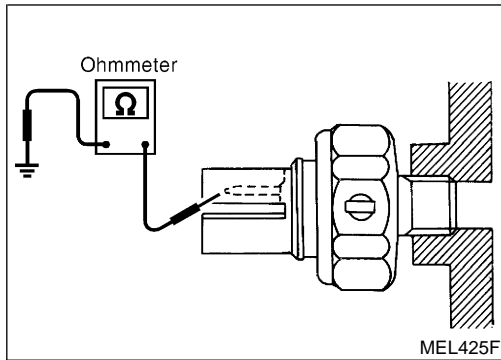
The fuel warning lamp should come on.

NOTE:

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

If the DTC is stored in ECM memory, erase the DTC after reconnecting fuel level sensor unit and fuel pump harness connector.

Refer to **EC-98**[QG18DE (except Calif. CA Model)], **EC-769**[QG18DE (Calif. CA Model)], or **EC-1433** (SR20DE), "HOW TO ERASE EMISSION-RELATED DIAGNOSTIC INFORMATION".

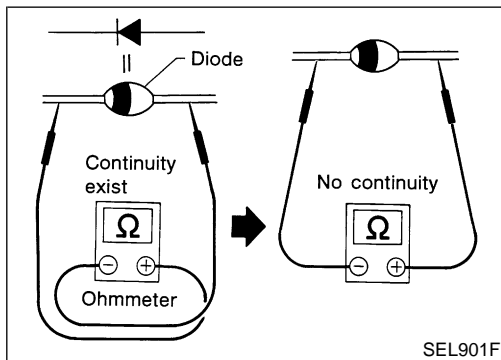


OIL PRESSURE SWITCH CHECK

NIEL0051S02

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

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



DIODE CHECK

NIEL0051S03

- 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 "WARNING LAMPS", EL-105.

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

NIEL0052

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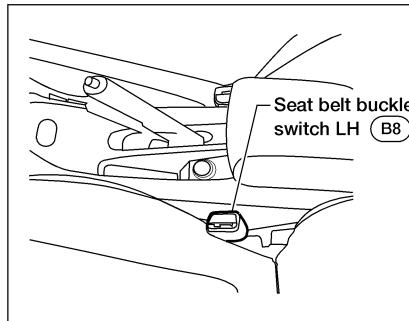
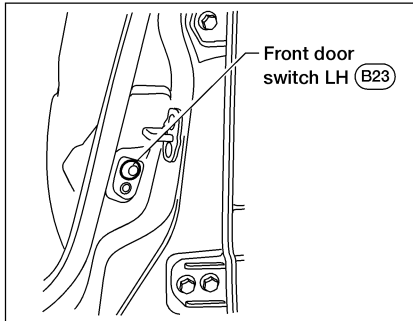
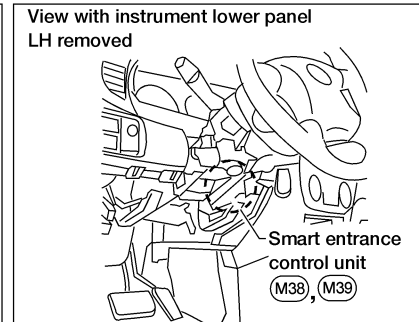
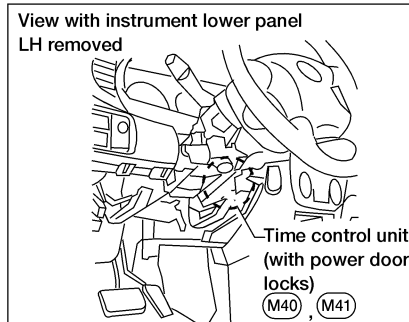
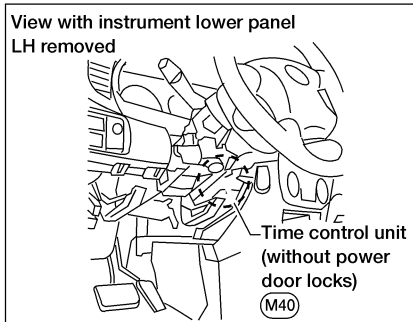
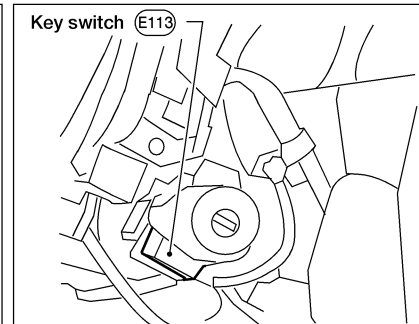
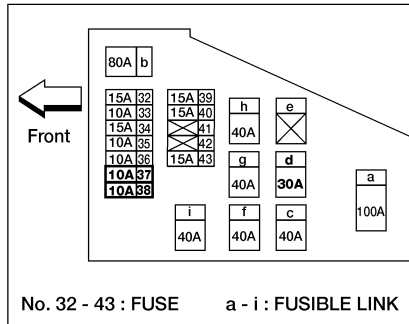
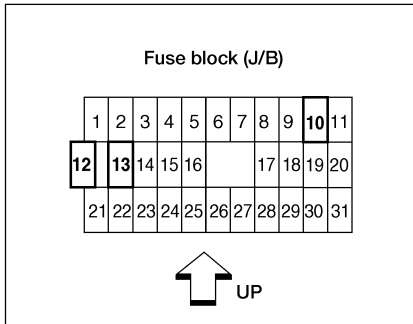
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LEL558

WARNING CHIME

System Description

System Description

=NIEL0053

NIEL0053S05

WITHOUT MULTI-REMOTE CONTROL SYSTEM

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 10A fuse [No. 13, located in fuse block (J/B)]
- to time control unit terminal 7 (without power door locks) or 2 (with power door locks)
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 2,
- 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 9 (without power door locks) or 13 (with power door locks).

Ground is supplied to time control unit terminal 8 (without power door locks) or 6 (with power door locks) through body grounds M28 and M54.

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

Ignition Key Warning Chime

NIEL0053S0501

With the key in the ignition switch in the OFF position, and the driver door open, the warning chime will sound.

Power is supplied:

- from key switch terminal 1
- to time control unit terminal 4 (without power door locks) or 11 (with power door locks).

Ground is supplied:

- from front door switch LH terminal 2
- to time control unit terminal 2 (without power door locks) or 7 (with power door locks).

Front door switch LH terminal 3 is grounded through body grounds B13 and B19.

Light Warning Chime

NIEL0053S0502

With ignition switch OFF, driver door open, and lighting switch in parking lamp (1ST) or "ON" (2ND) position, warning chime will sound. Power is supplied:

- from lighting switch terminal 12
- to time control unit terminal 5 (without power door locks) or 21 (with power door locks).

Ground is supplied:

- from front door switch LH terminal 2
- to time control unit terminal 2 (without power door locks) or 7 (with power door locks).

Front door switch (driver side) terminal 3 is grounded through body grounds B13 and B19.

Seat Belt Warning Chime

NIEL0053S0503

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

Ground is supplied:

- from seat belt buckle switch LH terminal 1
- to time control unit terminal 1 (without power door locks) or 20 (with power door locks).

Seat belt buckle switch LH terminal 2 is grounded through body grounds B13 and B19.

WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0053S06

The warning chime is controlled by the smart entrance control unit.

The warning chime is located in the smart entrance control unit.

Power is supplied at all times:

- through 10A fuse (No. 37, located in fuse and fusible link box)
- to smart entrance control unit terminal 10,
- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to key switch terminal 2,
- through 10A fuse (No. 38, located in the fuse and fusible link box)

WARNING CHIME

System Description (Cont'd)

- 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 smart entrance control unit terminal 33.

Ground is supplied to smart entrance control unit terminal 16 through body grounds M28 and M54.

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

Ignition Key Warning Chime

With the key in the ignition switch in the OFF position, and the driver door open, the warning chime will sound. NIEL0053S0601

Power is supplied:

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

Ground is supplied:

- from front door switch LH terminal 2
- to smart entrance control unit terminal 29.

Front door switch LH terminal 3 is grounded through body grounds B13 and B19.

Light Warning Chime

With ignition switch OFF, driver door open, and lighting switch in parking lamp (1ST) or "ON" (2ND) position, warning chime will sound. Power is supplied: NIEL0053S0602

- from lighting switch terminal 12
- to smart entrance control unit terminal 34.

Ground is supplied:

- from front door switch LH terminal 2
- to smart entrance control unit terminal 29.

Front door switch LH terminal 3 is grounded through body grounds B13 and B19.

Seat Belt Warning Chime

With ignition switch turned ON and seat belt unfastened (seat belt switch ON), warning chime will sound for approximately 6 seconds. NIEL0053S0603

Ground is supplied:

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

Seat belt buckle switch LH terminal 2 is grounded through body grounds B13 and B19.

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WARNING CHIME

Wiring Diagram — CHIME —

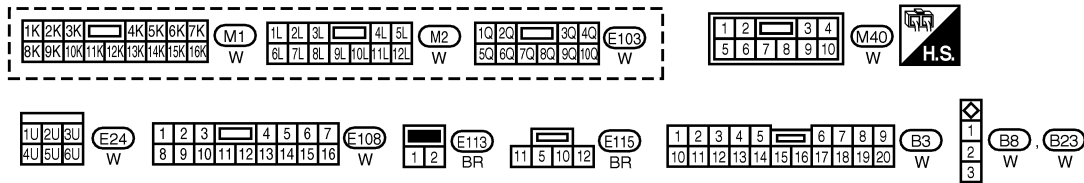
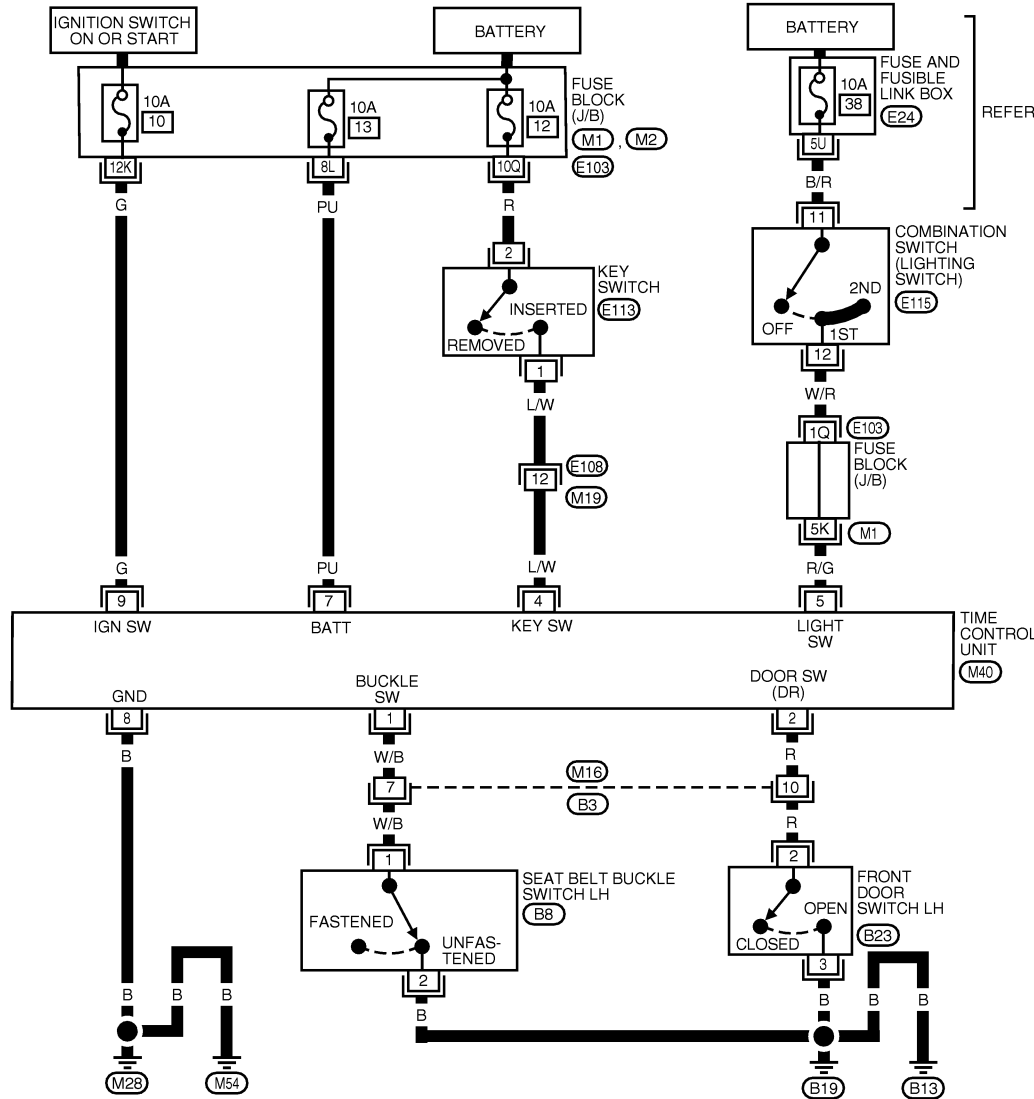
Wiring Diagram — CHIME —

WITHOUT POWER DOOR LOCKS

=NIEL0054

NIEL0054S01

EL-CHIME-01



LEL357

TIME CONT. UNIT (WITHOUT POWER DOOR LOCKS) TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	W/B	SEAT BELT BUCKLE SWITCH LH	UNFASTEN (IGNITION KEY IN ON POSITION)	0V
			FASTEN (IGNITION SWITCH IN ON POSITION)	5V
2	R	FRONT DOOR SWITCH LH	OFF (CLOSED)	5V
			ON (OPEN)	0V
4	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED	12V
			IGNITION KEY IS REMOVED	0V
5	R/G	COMBINATION SWITCH (LIGHTING SWITCH)	1ST, 2ND POSITIONS: ON	12V
			OFF	0V
7	PU	POWER SOURCE (FUSE)	—	12V
8	B	GROUND	—	—
9	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN ON POSITION	12V
			IGNITION SWITCH (START)	12V

LEL597

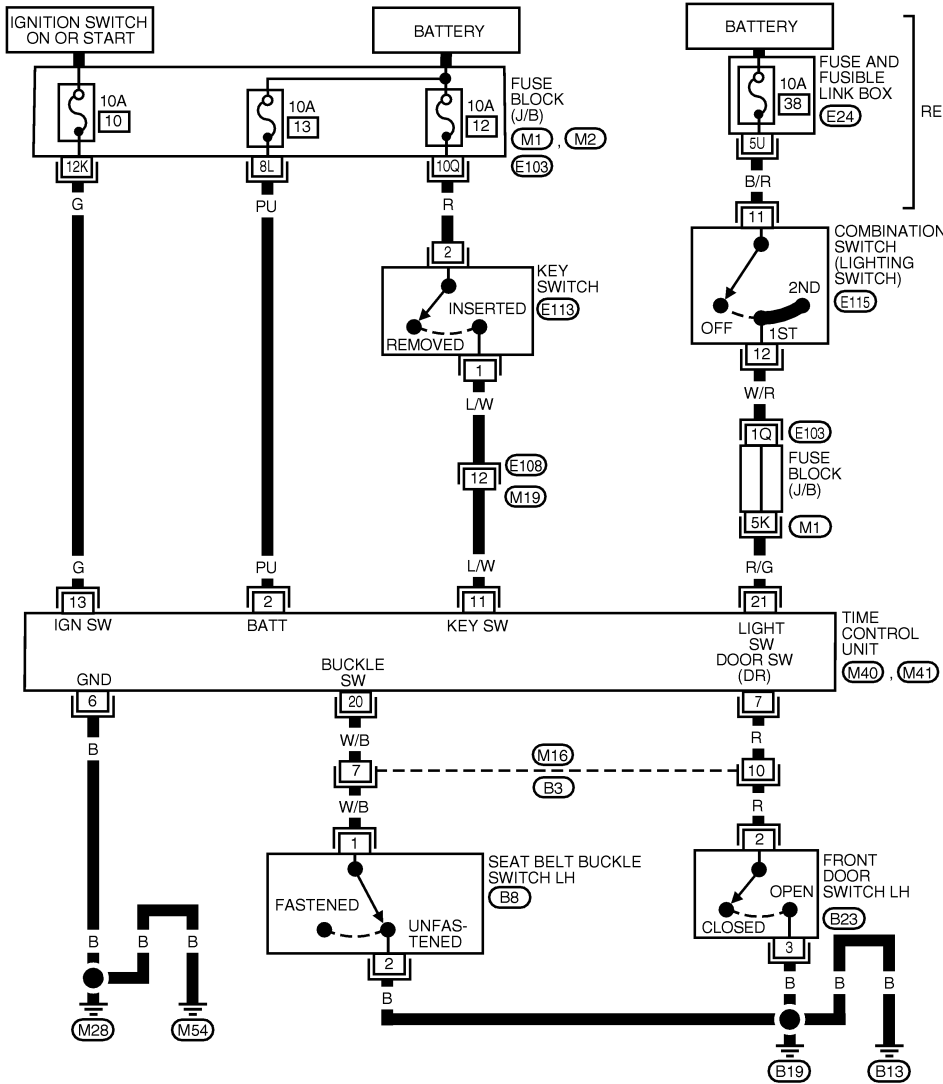
WARNING CHIME

Wiring Diagram — CHIME — (Cont'd)

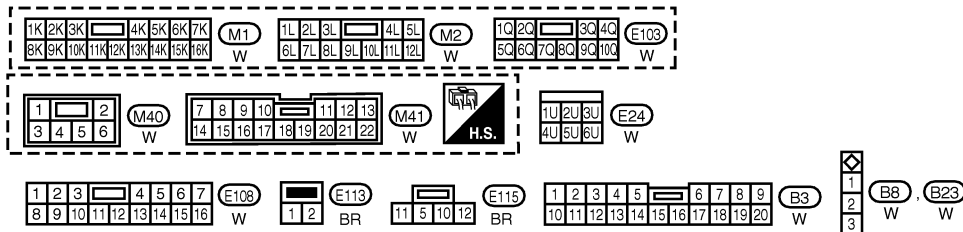
WITH POWER DOOR LOCKS AND WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0054S02

EL-CHIME-02



REFER TO "EL-POWER".



LEL358

TIME CONTROL UNIT (WITH POWER DOOR LOCKS) TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
2	PU	POWER SOURCE (FUSE)	—	12V
6	B	GROUND	—	—
7	R	FRONT DOOR SWITCH LH	OFF (CLOSED)	5V
			ON (OPEN)	0V
11	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED	12V
			IGNITION KEY IS REMOVED	0V
13	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN ON POSITION	12V
			IGNITION KEY IS IN START POSITION	12V
20	W/B	SEAT BELT BUCKLE SWITCH LH	UNFASTEN (IGNITION SWITCH IN ON POSITION)	0V
			FASTEN (IGNITION SWITCH IN ON POSITION)	5V
21	R/G	COMBINATION SWITCH (LIGHTING SWITCH)	1ST, 2ND POSITIONS: ON	12V
			OFF	0V

LEL598

WARNING CHIME

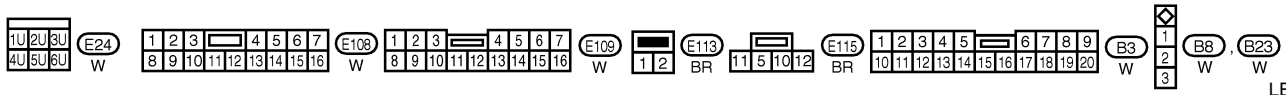
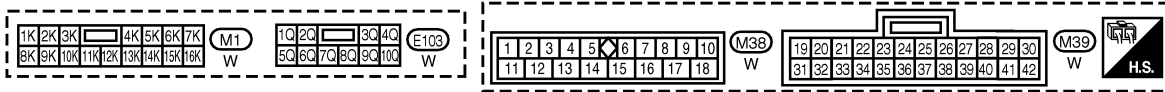
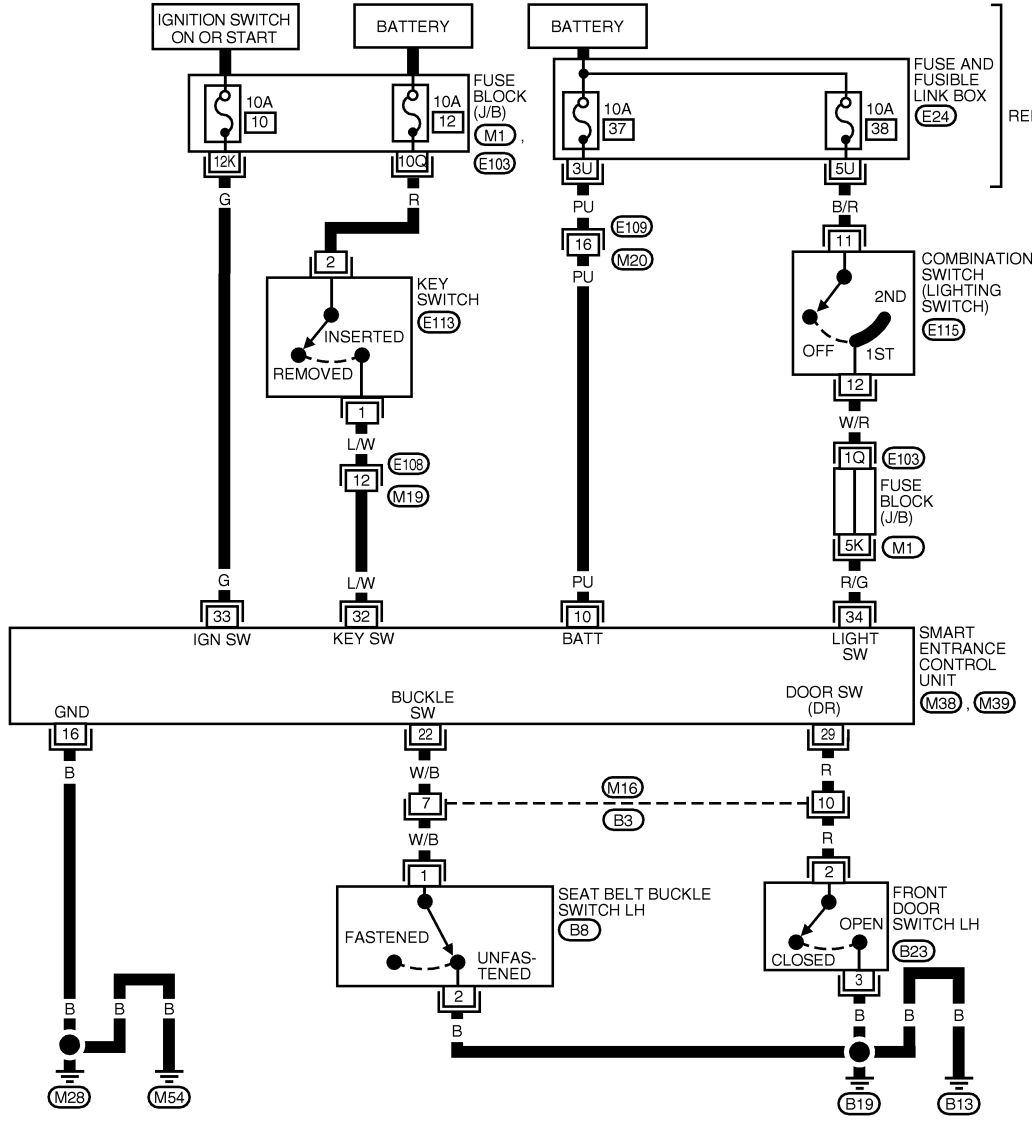
Wiring Diagram — CHIME — (Cont'd)

WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0054S03

EL-CHIME-03

REFER TO "EL-POWER".



LEL359

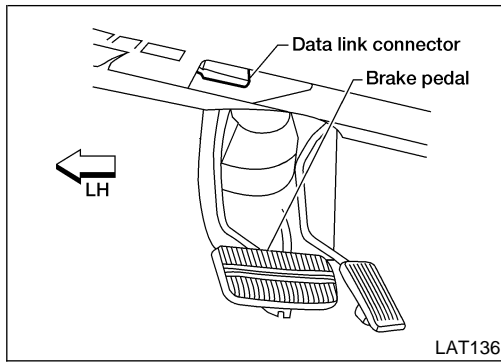
SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	PU	POWER SOURCE (FUSE)	—	12V
16	B	GROUND	—	—
22	W/B	SEAT BELT BUCKLE SWITCH LH	UNFASTEN (IGNITION KEY IN ON POSITION) FASTEN (IGNITION KEY IN ON POSITION)	0V 5V
29	R	FRONT DOOR SWITCH LH	OFF (CLOSED) ON (OPEN)	5V 0V
32	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED IGNITION KEY IS REMOVED	12V 0V
33	G	IGNITION SWITCH (START)	IGNITION KEY IS IN ON POSITION IGNITION KEY IS IN START POSITION	12V 12V
34	R/G	COMBINATION SWITCH (LIGHTING SWITCH)	1ST, 2ND POSITIONS: ON OFF	12V 0V

LEL599

WARNING CHIME

CONSULT-II Inspection Procedure (With Multi-Remote Control System)



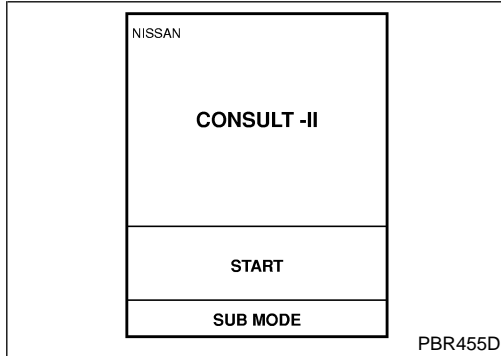
LAT136

CONSULT-II Inspection Procedure (With Multi-Remote Control System) “KEY WARN ALM”/“LIGHT WARN ALM”/“SEAT WARN ALM”

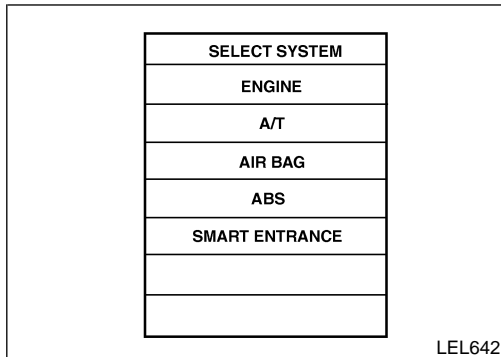
=NIEL0216

NIEL0216S01

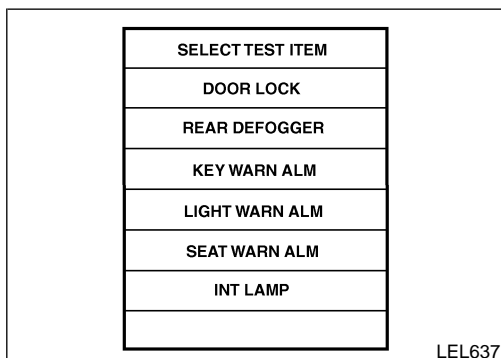
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



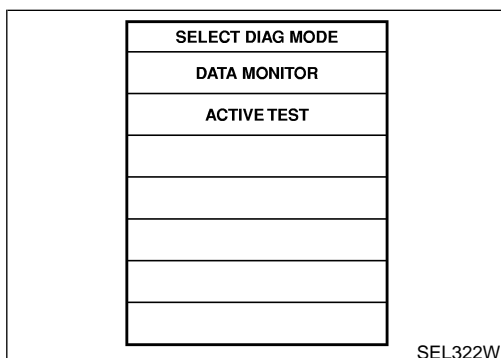
PBR455D



LEL642



LEL637



SEL322W

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

5. Touch “SMART ENTRANCE”.

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

7. Select diagnosis mode. “DATA MONITOR” and “ACTIVE TEST” are available for the warning chime.

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WARNING CHIME

CONSULT-II Application Items (With Multi-Remote Control System)

CONSULT-II Application Items (With Multi-Remote Control System)

NIEL0217

“KEY WARN ALARM”

NIEL0217S01

Data Monitor

NIEL0217S0101

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

Active Test

NIEL0217S0102

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

“LIGHT WARN ALM”

NIEL0217S02

Data Monitor

NIEL0217S0201

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

Active Test

NIEL0217S0202

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

“SEAT WARN ALM”

NIEL0217S03

Data Monitor

NIEL0217S0301

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

Active Test

NIEL0217S0302

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

WARNING CHIME

Trouble Diagnoses (Without Multi-Remote Control System)

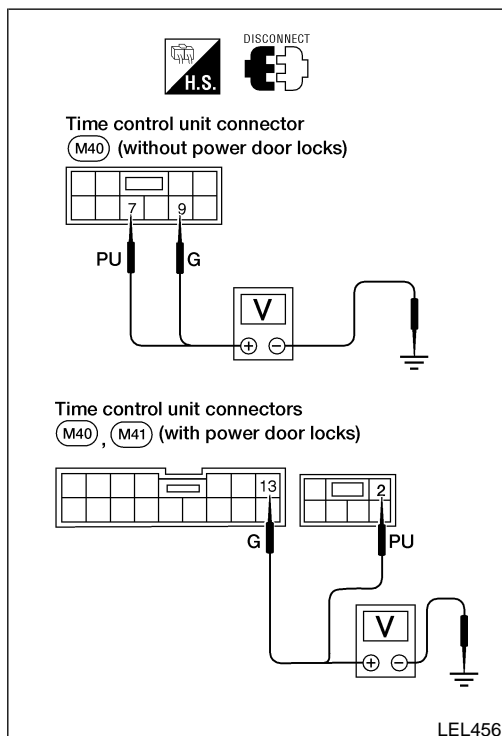
Trouble Diagnoses (Without Multi-Remote Control System) SYMPTOM CHART

NIEL0055

NIEL0055S01

REFERENCE PAGE (EL-)	121	123	124	125	126
SYMPTOM	POWER SUPPLY AND GROUND CIRCUIT CHECK	DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 3 (SEAT BELT BUCKLE SWITCH LH CHECK)	DIAGNOSTIC PROCEDURE 4
Light warning chime does not activate.	X	X			X
Ignition key warning chime does not activate.	X		X		X
Seat belt warning chime does not activate.	X			X	X
All warning chimes do not activate.	X				X

X: Applicable



POWER SUPPLY AND GROUND CIRCUIT CHECK Power Supply Circuit Check

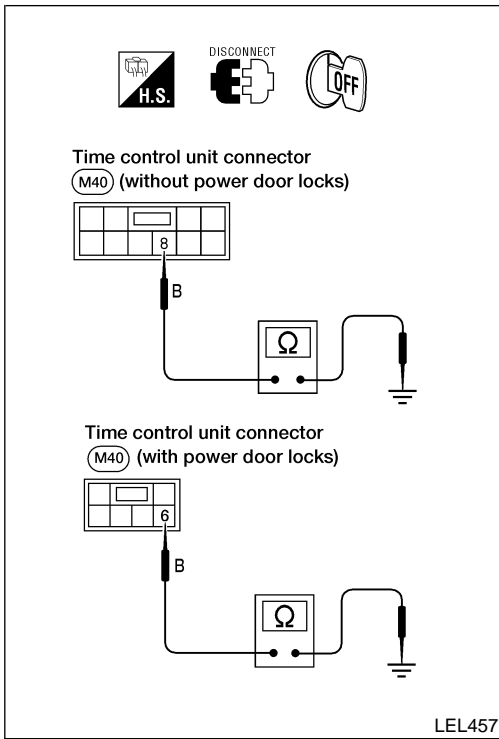
NIEL0055S02

NIEL0055S0201

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
7 (without power door locks) 2 (with power door locks)	Ground	Battery voltage	Battery voltage	Battery voltage
9 (without power door locks) 13 (with power door locks)	Ground	0V	0V	Battery voltage

WARNING CHIME

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)



Ground Circuit Check

NIEL0055S0202

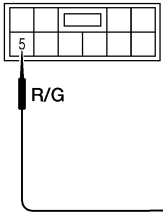
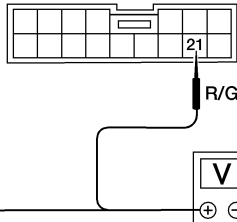

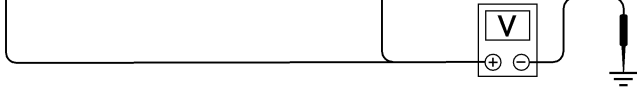
Terminals	Continuity
8 (without power door locks) - Ground	Yes
6 (with power door locks) - Ground	

WARNING CHIME

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)

=NIEL0055S03

1	CHECK LIGHTING SWITCH INPUT SIGNAL
<p>Check voltage between time control unit terminal 5 (without power door locks) or 21 (with power door locks) and ground.</p>	
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Time control unit connector (M40) (without power door locks)</p>  </div> <div style="text-align: center;"> <p>Time control unit connector (M41) (with power door locks)</p>  </div> <div style="text-align: center;">  <p>Voltage [V]: Condition of lighting switch: Parking lamp (1ST) or ON (2ND) Approx. 12 Condition of lighting switch: OFF 0</p> </div> </div> 	
LEL458	
OK or NG	
OK	▶ Lighting switch is OK.
NG	▶ Check the following.
	<ul style="list-style-type: none"> ● 10A fuse (No. 38, located in the fuse and fusible link box) ● Harness for open or short between control unit and lighting switch

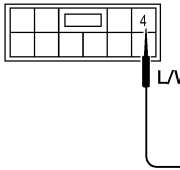
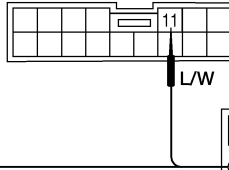

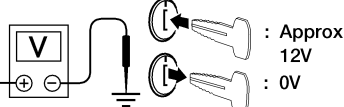
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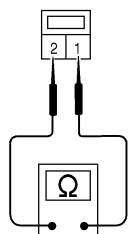
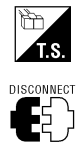
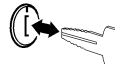
WARNING CHIME

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)

=NIEL0055S04

1	CHECK KEY SWITCH INPUT SIGNAL
<p>Check voltage between time control unit terminal 4 (without power door locks) or 11 (with power door locks) and ground.</p>	
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Time control unit connector (M40) (without power door locks)</p>  </div> <div style="text-align: center;"> <p>Time control unit connector (M41) (with power door locks)</p>  </div> <div style="text-align: center;"> <p>H.S.</p> <p>CONNECT</p>  </div> <div style="text-align: left;"> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p>  </div> </div>	
LEL459	
OK or NG	
OK	▶ Key switch is OK.
NG	▶ GO TO 2.

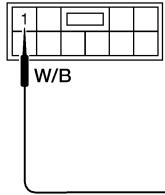
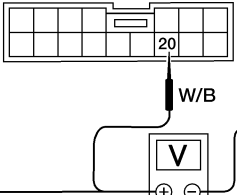


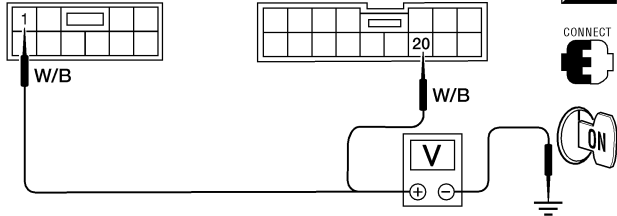
2	CHECK KEY SWITCH
<p>Check continuity between terminals 1 and 2.</p>	
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Key switch connector (E113)</p>  </div> <div style="text-align: center;"> <p>T.S.</p> <p>DISCONNECT</p>  </div> <div style="text-align: left;"> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p>  </div> </div>	
LEL449	
OK or NG	
OK	▶ Check the following.
<ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between time control unit and key switch 	
NG	▶ Replace key switch.

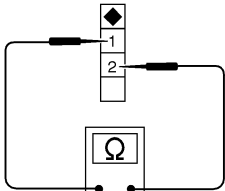


WARNING CHIME

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

DIAGNOSTIC PROCEDURE 3 (SEAT BELT BUCKLE SWITCH LH CHECK)

=NIEL0055S05

1	CHECK SEAT BELT BUCKLE SWITCH LH INPUT SIGNAL	<p>1. Turn ignition switch "ON". 2. Check voltage between time control unit terminal 1 (without power door locks) or 20 (with power door locks) and ground.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Time control unit connector (M40) (without power door locks)</p>  </div> <div style="text-align: center;"> <p>Time control unit connector (M41) (with power door locks)</p>  </div> <div style="text-align: center;">  <p>CONNECT</p>  </div> </div> <div style="margin-top: 10px;">  </div> <div style="margin-top: 10px;"> <p>Voltage [V]: Condition of seat belt buckle switch LH: Fastened Approx. 5 Condition of seat belt buckle switch LH: Unfastened 0</p> </div> <p style="text-align: right;">LEL461</p>
OK or NG		
OK	▶	Seat belt buckle switch LH is OK.
NG	▶	GO TO 2.

2	CHECK SEAT BELT BUCKLE SWITCH LH	<p>Check continuity between terminals 1 and 2 when seat belt is fastened and unfastened.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Seat belt buckle switch LH connector (B8)</p>  </div> <div style="text-align: center;">  <p>DISCONNECT</p>  </div> </div> <div style="margin-top: 10px;"> <p>Continuity: Seat belt is fastened. No Seat belt is unfastened. Yes</p> </div> <p style="text-align: right;">LEL462</p>
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Seat belt buckle switch LH ground circuit ● Harness for open or short between time control unit and seat belt buckle switch LH
NG	▶	Replace seat belt buckle switch LH.

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WARNING CHIME

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

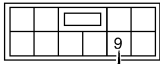
DIAGNOSTIC PROCEDURE 4

NIEL0055S06

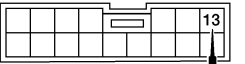
1 CHECK IGNITION ON SIGNAL


Check voltage between time control unit terminal 9 (without power door locks) or 13 (with power door locks) and ground.

Time control unit connector
(M40) (without power door locks)

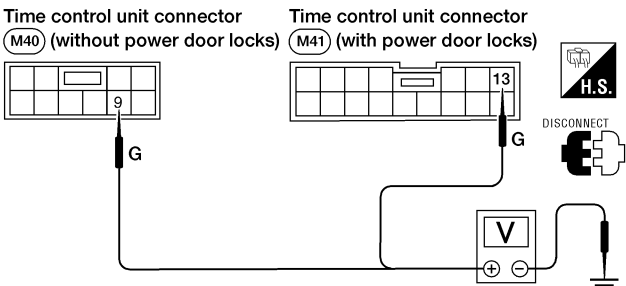


Time control unit connector
(M41) (with power door locks)





Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
9 (without power door locks)	Ground	0V	0V	Battery voltage
13 (with power door locks)	Ground	0V	0V	Battery voltage



LEL463


OK or NG

OK	▶	GO TO 2.
NG	▶	Check the following. <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in fuse block (J/B)] ● Harness for open or short between time control unit and fuse

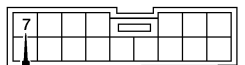
2 CHECK FRONT DOOR SWITCH LH INPUT SIGNAL


Check voltage between time control unit terminal 2 (without power door locks) or 7 (with power door locks) and ground.

Time control unit connector
(M40) (without power door locks)

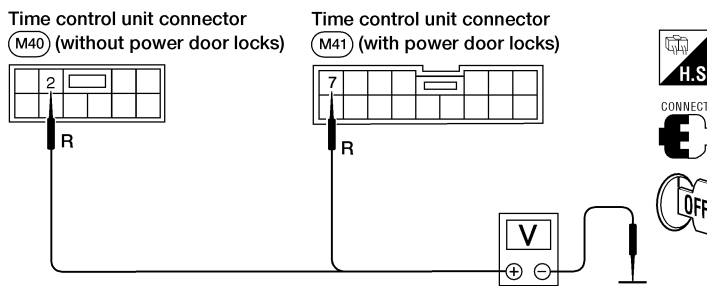


Time control unit connector
(M41) (with power door locks)





Voltage [V]:
 Condition of driver's door: **CLOSED**
 Approx. 5
 Condition of driver's door: **OPENED**
 0



LEL464

OK or NG

OK	▶	System is OK.
NG	▶	GO TO 3.

WARNING CHIME

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

3	CHECK FRONT DOOR SWITCH LH
<p>Check continuity between terminals 2 and 3.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Front door switch LH connector (B23)</p> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>Continuity: Door switch is pushed. No Door switch is released. Yes</p> </div> </div> <p style="text-align: right;">LEL465</p> <p style="text-align: center;">OK or NG</p>	
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● Front door switch LH ground circuit and condition ● Harness for open or short between time control unit and front door switch LH
NG	▶ Replace front door switch LH.

Trouble Diagnoses (With Multi-Remote Control System)

SYMPTOM CHART

NIEL0257

NIEL0257S01

REFERENCE PAGE (EL-)	128	129	130	131	132
SYMPTOM	POWER SUPPLY AND GROUND CIRCUIT CHECK	DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)	DIAGNOSTIC PROCEDURE 3 (SEAT BELT BUCKLE SWITCH LH CHECK)	DIAGNOSTIC PROCEDURE 4
Light warning chime does not activate.	X	X			X
Ignition key warning chime does not activate.	X		X		X
Seat belt warning chime does not activate.	X			X	X
All warning chimes do not activate.	X				X

X: Applicable

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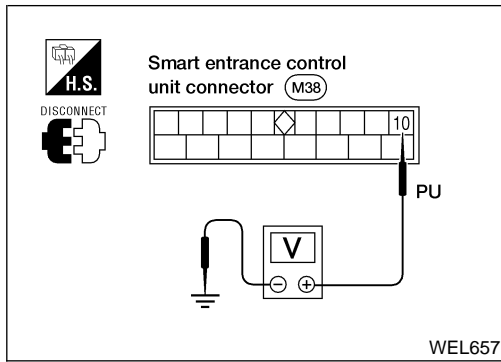
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WARNING CHIME

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)



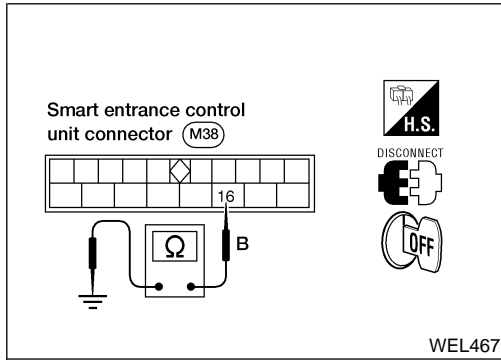
POWER SUPPLY AND GROUND CIRCUIT CHECK

Power Supply Circuit Check

NIEL0257S02

NIEL0257S0201

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



Ground Circuit Check

NIEL0257S0202



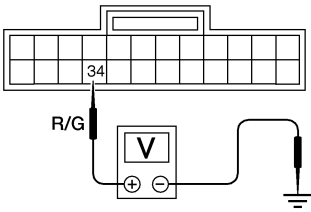



Terminals	Continuity
16 - Ground	Yes

WARNING CHIME

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

DIAGNOSTIC PROCEDURE 1 (LIGHTING SWITCH INPUT SIGNAL CHECK)

=NIEL0257S03

1	CHECK LIGHTING SWITCH INPUT SIGNAL	GI						
<p> With CONSULT-II Check lighting switch ("HD/LMP 1ST SW") in "DATA MONITOR" mode with CONSULT-II.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th colspan="2">MONITOR</th> </tr> </thead> <tbody> <tr> <td>HD/LMP 1ST SW</td> <td>OFF</td> </tr> </tbody> </table> <p style="margin-left: 200px;">When lighting switch is in 1st or 2nd position: HD/LMP 1ST SW ON</p> <p style="margin-left: 200px;">When lighting switch is in OFF position: HD/LMP 1ST SW OFF</p> <p style="text-align: right;">SEL316W</p>		DATA MONITOR		MONITOR		HD/LMP 1ST SW	OFF	MA EM LC EC FE
DATA MONITOR								
MONITOR								
HD/LMP 1ST SW	OFF							
<p> Without CONSULT-II Check voltage between smart entrance control unit terminal 34 and ground.</p> <div style="display: flex; align-items: center; justify-content: space-around;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="text-align: center;">    </div> <div style="text-align: left;"> <p>Voltage [V]: Condition of lighting switch: Parking lamp (1ST) or ON (2ND) Approx. 12 Condition of lighting switch: OFF 0</p> <p style="text-align: right;">WEL468</p> </div> </div> <p style="text-align: center; margin-top: 10px;">OK or NG</p>		CL MT AT AX SU						
OK	▶	Lighting switch is OK.	BR					
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse (No. 38, located in the fuse and fusible link box) ● Harness for open or short between smart entrance control unit and lighting switch 	ST					



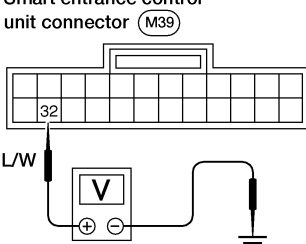


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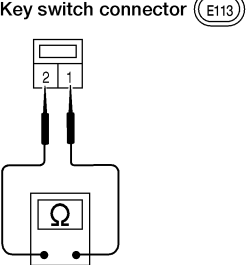


WARNING CHIME

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

DIAGNOSTIC PROCEDURE 2 (KEY SWITCH INSERT SIGNAL CHECK)

=NIEL0257S04

1	CHECK KEY SWITCH INPUT SIGNAL						
<p> With CONSULT-II Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> </thead> <tbody> <tr><td>KEY ON SW</td><td>ON</td></tr> </tbody> </table> </div> <div> <p>When key is inserted to ignition key cylinder: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p> </div> </div> <p style="text-align: right;">SEL315W</p>		DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR							
MONITOR							
KEY ON SW	ON						
<p> Without CONSULT-II Check voltage between smart entrance control unit terminal 32 and ground.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="margin-right: 20px;"> <p> CONNECT</p>  </div> <div> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> </div> </div> <p style="text-align: right;">WEL469</p>							
OK or NG							
OK	▶ Key switch is OK.						
NG	▶ GO TO 2.						



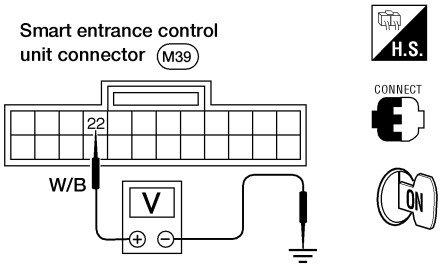
2	CHECK KEY SWITCH
<p>Check continuity between terminals 1 and 2.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Key switch connector (E113)</p>  </div> <div style="margin-right: 20px;"> <p> DISCONNECT</p>  </div> <div> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> </div> </div> <p style="text-align: right;">LEL449</p>	
OK or NG	
OK	▶ Check the following. <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch
NG	▶ Replace key switch.

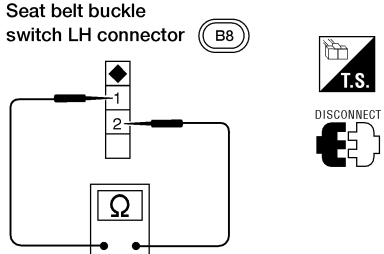
WARNING CHIME

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

DIAGNOSTIC PROCEDURE 3 (SEAT BELT BUCKLE SWITCH LH CHECK)

=NIEL0257S05

1	CHECK SEAT BELT BUCKLE SWITCH LH INPUT SIGNAL							
<p> With CONSULT-II Check seat belt buckle switch LH ("SEAT BELT SW") in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>SEAT BELT SW</td> <td>ON</td> </tr> </tbody> </table>			DATA MONITOR		MONITOR		SEAT BELT SW	ON
DATA MONITOR								
MONITOR								
SEAT BELT SW	ON							
<p>When seat belt is fastened: SEAT BELT SW OFF</p> <p>When seat belt is released: SEAT BELT SW ON</p>								
LEL658								
<p> Without CONSULT-II</p> <p>1. Turn ignition switch "ON". 2. Check voltage between smart entrance control unit terminal 22 and ground.</p>								
								
<p>Voltage [V]: Condition of seat belt buckle switch LH: Fastened Approx. 5 Condition of seat belt buckle switch LH: Unfastened 0</p>								
WEL470								
OK or NG								
OK	▶	Seat belt buckle switch LH is OK.						
NG	▶	GO TO 2.						

2	CHECK SEAT BELT BUCKLE SWITCH LH	
Check continuity between terminals 1 and 2 when seat belt is fastened and unfastened.		
		
<p>Continuity: Seat belt is fastened. No Seat belt is unfastened. Yes</p>		
LEL462		
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Seat belt buckle switch LH ground circuit ● Harness for open or short between smart entrance control unit and seat belt buckle switch LH
NG	▶	Replace seat belt buckle switch LH.



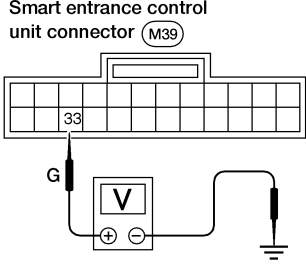


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WARNING CHIME

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)



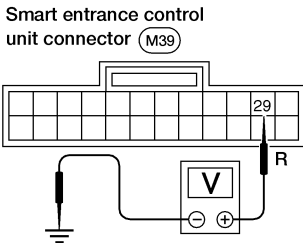


DIAGNOSTIC PROCEDURE 4

NIEL0257S06

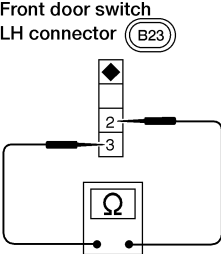


1	CHECK IGNITION ON SIGNAL																		
<p> With CONSULT-II Check ignition switch ON signal ("IGN ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>																			
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> <tr><td>IGN ON SW</td><td>ON</td></tr> </table>					DATA MONITOR		MONITOR		IGN ON SW	ON									
DATA MONITOR																			
MONITOR																			
IGN ON SW	ON																		
<p>When ignition switch is ON: IGN ON SW ON</p> <p>When ignition switch is OFF: IGN ON SW OFF</p>																			
SEL318W																			
<p> Without CONSULT-II Check voltage between smart entrance control unit terminal 33 and ground.</p>																			
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="text-align: center;">  H.S.  DISCONNECT </div> <div> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Terminals</th> <th colspan="3">Ignition switch position</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>OFF</th> <th>ACC</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>33</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table> </div> </div>					Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	33	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position																	
(+)	(-)	OFF	ACC	ON															
33	Ground	0V	0V	Battery voltage															
WEL471																			
OK or NG																			
OK	▶	GO TO 2.																	
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in fuse block (J/B)] ● Harness for open or short between smart entrance control unit and fuse 																	

WARNING CHIME

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

2	CHECK FRONT DOOR SWITCH LH INPUT SIGNAL								
<p> With CONSULT-II Check front door switch LH signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.</p>									
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th colspan="2">MONITOR</th> </tr> </thead> <tbody> <tr> <td>DOOR SW-DR</td> <td>OFF</td> </tr> </tbody> </table>		DATA MONITOR		MONITOR		DOOR SW-DR	OFF	<p>When driver's door is open: DOOR SW-DR ON</p> <p>When driver's door is closed: DOOR SW-DR OFF</p>	
DATA MONITOR									
MONITOR									
DOOR SW-DR	OFF								
SEL319W									
<p> Without CONSULT-II Check voltage between smart entrance control unit terminal 29 and ground.</p>									
		 CONNECT 							
		<p>Voltage [V]: Condition of driver's door: CLOSED Approx. 5 Condition of driver's door: OPENED 0</p>							
WEL472									
OK or NG									
OK	▶	GO TO 4.							
NG	▶	GO TO 3.							

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3	CHECK FRONT DOOR SWITCH LH		
<p>Check continuity between terminals 2 and 3.</p>			
		 DISCONNECT 	
		<p>Continuity: Door switch is pushed. No Door switch is released. Yes</p>	
LEL465			
OK or NG			
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Front door switch LH ground circuit and condition ● Harness for open or short between smart entrance control unit and front door switch LH 	
NG	▶	Replace front door switch LH.	

WARNING CHIME

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

4	CHECK WARNING CHIME						
<p data-bbox="154 214 389 241">④ With CONSULT-II</p> <p data-bbox="154 243 812 273">Perform "CHIME" in "ACTIVE TEST" mode with CONSULT-II.</p> <div data-bbox="457 289 721 613" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"><table border="1" style="width: 100%; text-align: center;"><thead><tr><th colspan="2">ACTIVE TEST</th></tr></thead><tbody><tr><td>CHIME</td><td>OFF</td></tr><tr><td>ON</td><td></td></tr></tbody></table></div> <p data-bbox="876 436 1266 466" style="text-align: center;">Warning chime should operate.</p> <p data-bbox="1380 604 1469 630" style="text-align: right;">SEL320W</p> <p data-bbox="755 646 868 676" style="text-align: center;">OK or NG</p>		ACTIVE TEST		CHIME	OFF	ON	
ACTIVE TEST							
CHIME	OFF						
ON							
OK	▶ System is OK.						
NG	▶ Replace smart entrance control unit.						

System Description

WIPER OPERATION

NIEL0057

NIEL0057S01

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

- LO speed
- HI speed
- INT (with intermittent operation)

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

- through 20A fuse [No. 25, located in the fuse block (J/B)]
- to wiper motor terminal B, and
- to front wiper switch terminal 15 (with intermittent operation).

Low and High Speed Wiper Operation

NIEL0057S0101

Ground is supplied to wiper switch terminal 17 through body grounds E7 and E37.

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

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

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

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

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

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

Auto Stop Operation

NIEL0057S0102

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

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

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

Ground is also supplied:

- through terminal 13 of the wiper switch
- to wiper motor terminal P
- through terminal E of the wiper motor, and
- through body grounds E7 and E37.

When wiper arms reach base of windshield, wiper motor terminals P and B are connected instead of terminals P and E. Wiper motor will then stop wiper arms at the STOP position.

Intermittent Operation

NIEL0057S0103

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

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

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

Then intermittent ground is supplied:

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

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

WASHER OPERATION

NIEL0057S02

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

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

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

- to washer motor terminal -

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FRONT WIPER AND WASHER

System Description (Cont'd)

- from terminal 18 of the wiper switch
- through terminal 17 of the wiper switch, and
- through body grounds E7 and E37.

Without intermittent operation, the wiper motor operates while the lever is pulled to the WASH position.

With power and ground supplied, the washer motor operates.

With intermittent operation, 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 —

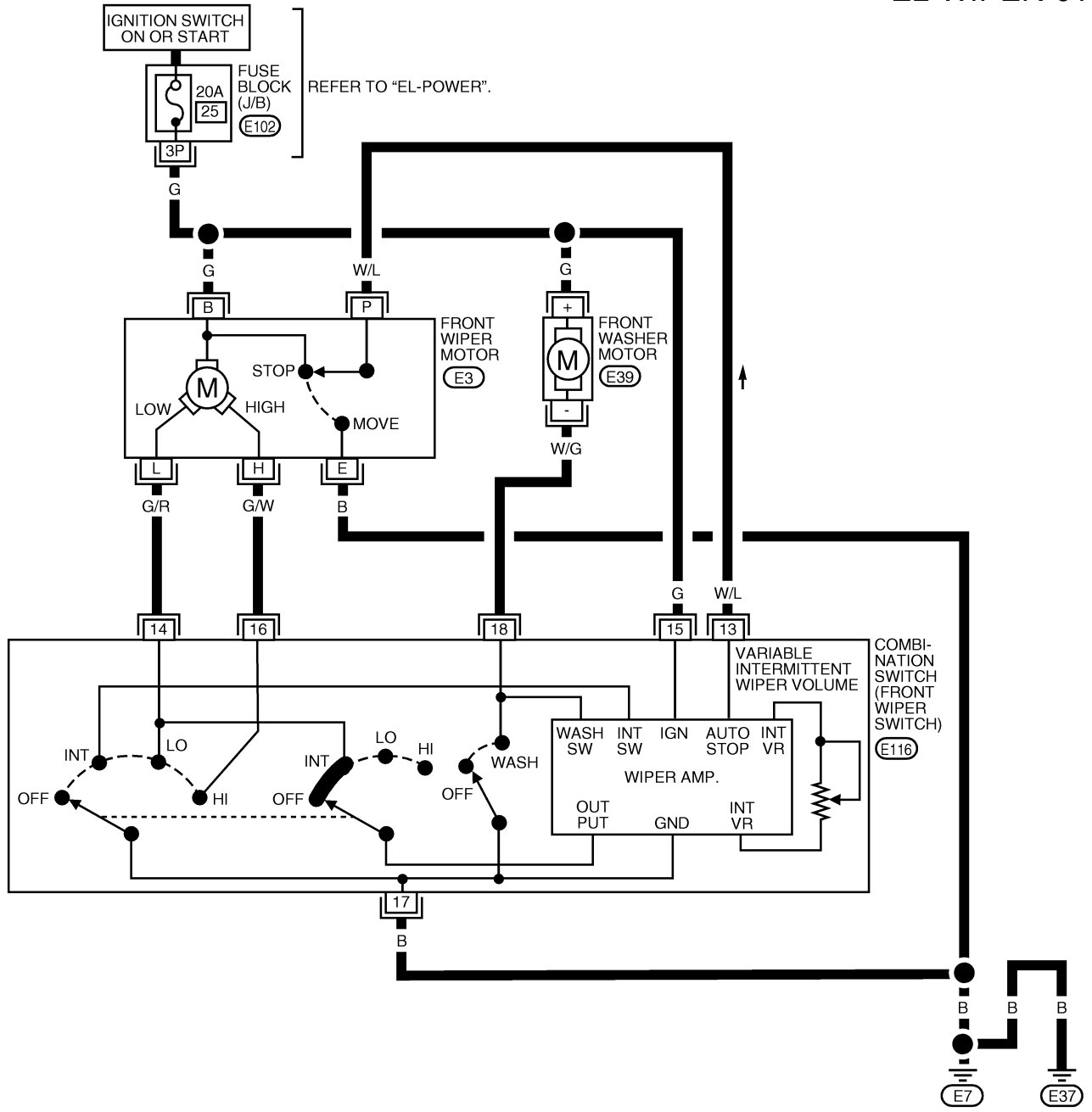
Wiring Diagram — WIPER —

WITH INTERMITTENT WIPERS

NIEL0058

NIEL0058S01

EL-WIPER-01



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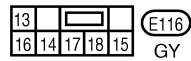
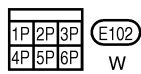
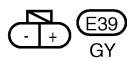
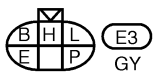
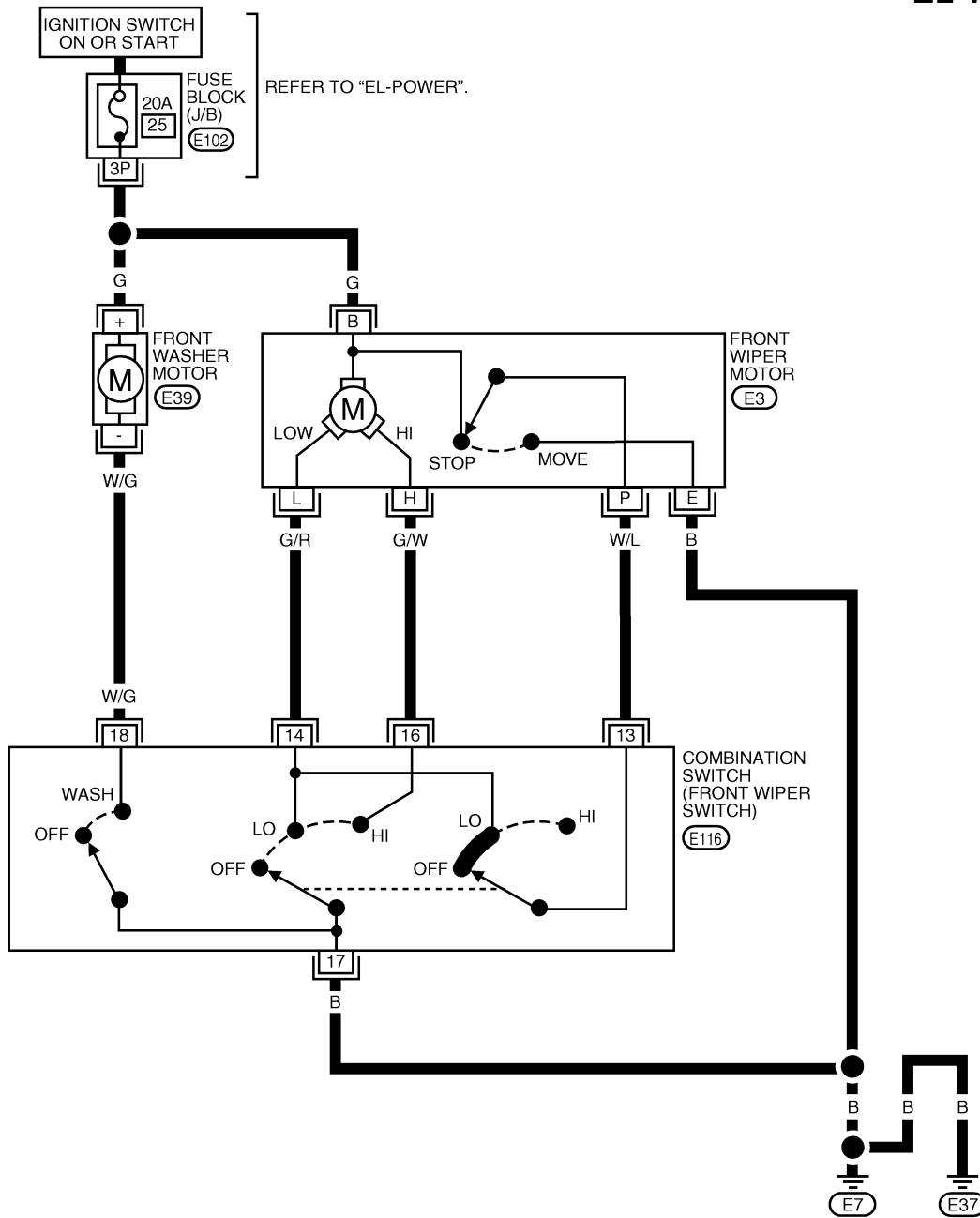
FRONT WIPER AND WASHER

Wiring Diagram — WIPER — (Cont'd)

WITHOUT INTERMITTENT WIPERS

NIEL0058S02

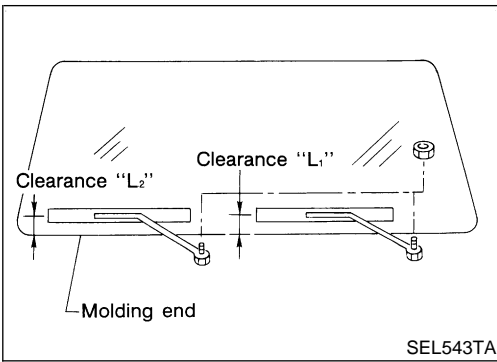
EL-WIPER-02



WEL361

FRONT WIPER AND WASHER

Removal and Installation



Removal and Installation

WIPER ARMS

NIEL0060

NIEL0060S01

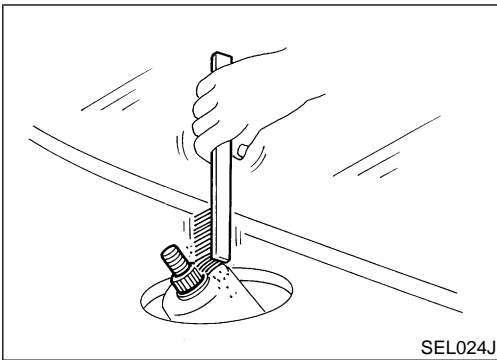
1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up approximately 100 mm (3.94 in) and then set it down onto glass surface to set the blade center to clearance "L₁" & "L₂" immediately before tightening nut.
3. Eject washer fluid. Turn on wiper switch to operate wiper motor and then turn it "OFF".
4. Ensure that wiper blades stop within clearance "L₁" & "L₂".

Clearance "L₁": 27.5 - 42.5 mm (1.08 - 1.67 in)

Clearance "L₂": 34.5 - 49.5 mm (1.36 - 1.95 in)

- Tighten wiper arm nuts to specified torque.

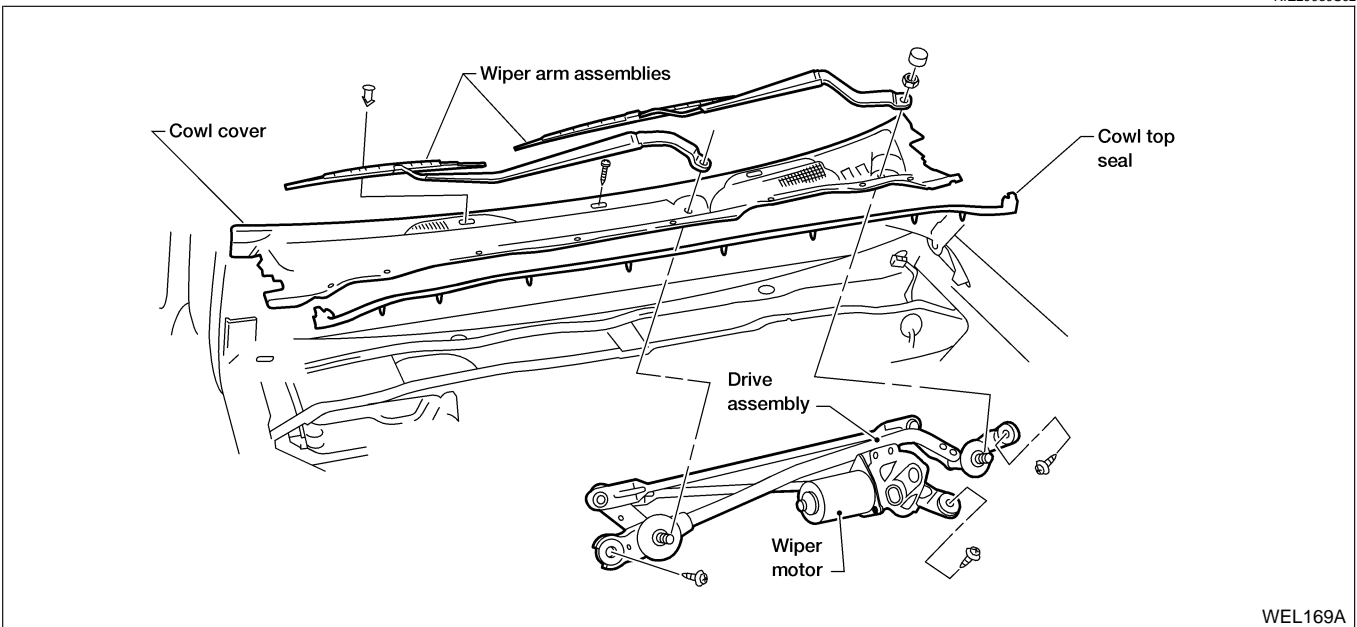
Front wiper: 21 - 26 N·m (2.1 - 2.7 kg·m, 16 - 19 ft·lb)



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

WIPER LINKAGE

NIEL0060S02



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FRONT WIPER AND WASHER

Removal and Installation (Cont'd)

Removal

NIEL0060S0201

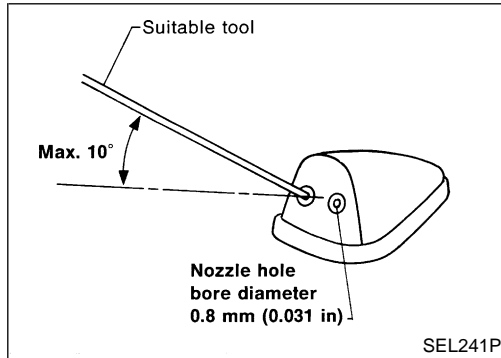
1. Remove 4 bolts that secure wiper motor.
2. Detach wiper motor from wiper linkage at ball joint.
3. Remove wiper linkage.

Be careful not to break ball joint rubber boot.

Installation

NIEL0060S0202

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

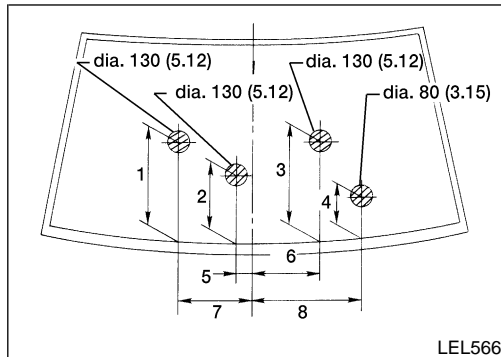


Washer Nozzle Adjustment

NIEL0061

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

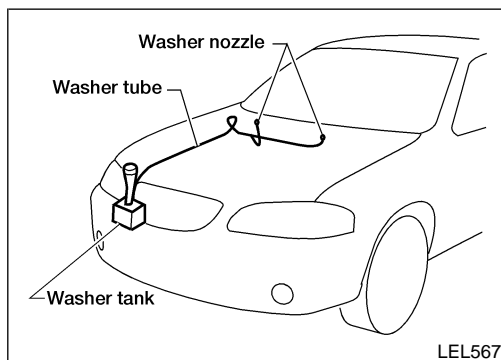
Adjustable range: ±10°



Unit: mm (in)

1	400 (15.75)	5	151 (5.94)
2	325 (12.80)	6	155 (6.10)
3	425 (16.73)	7	250 (9.84)
4	226 (8.90)	8	380 (14.96)

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



Washer Tube Layout

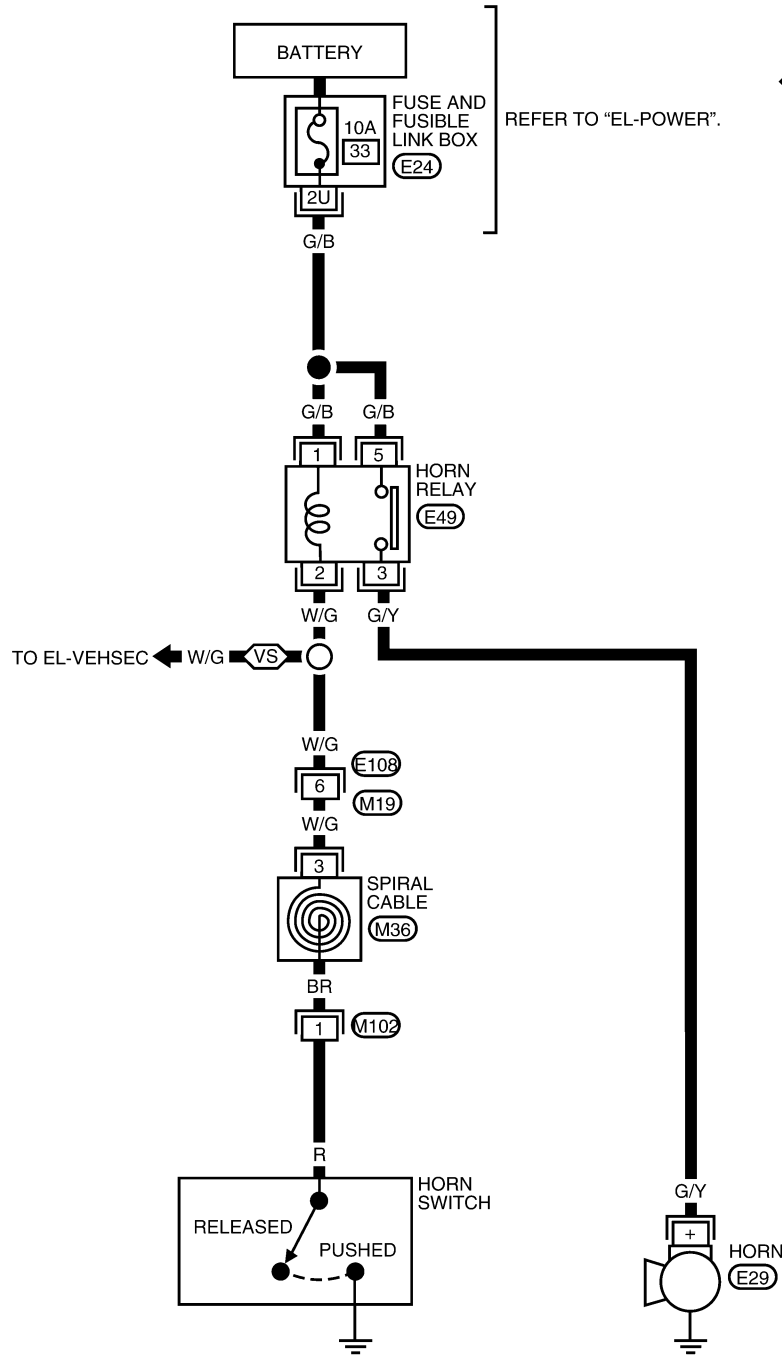
NIEL0062

HORN

Wiring Diagram — HORN —

Wiring Diagram — HORN —

NIEL0071



EL-HORN-01

VS : WITH VEHICLE SECURITY SYSTEM

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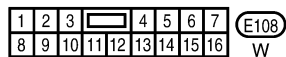
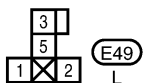
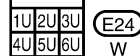
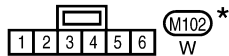
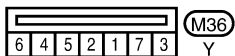
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* : THIS CONNECTOR IS NOT SHOWN IN "HARNES LAYOUT" OF EL SECTION.

WEL597A

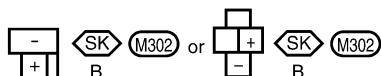
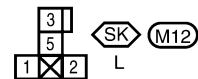
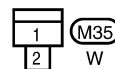
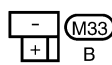
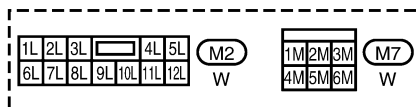
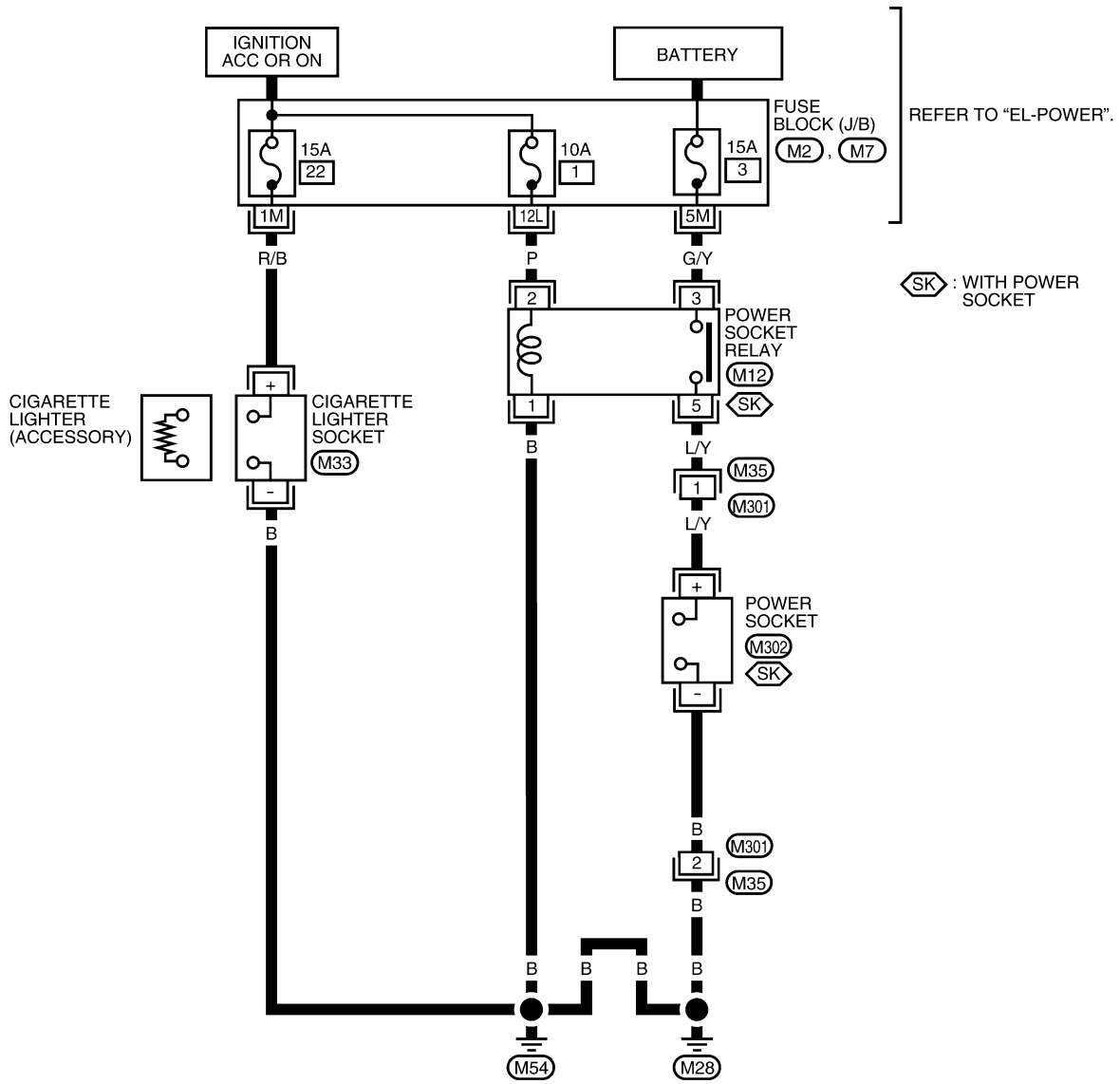
CIGARETTE LIGHTER

Wiring Diagram — CIGAR —

Wiring Diagram — CIGAR —

NIEL0156

EL-CIGAR-01



WEL627A

REAR WINDOW DEFOGGER

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NIEL0072

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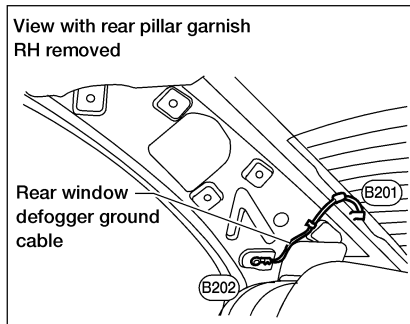
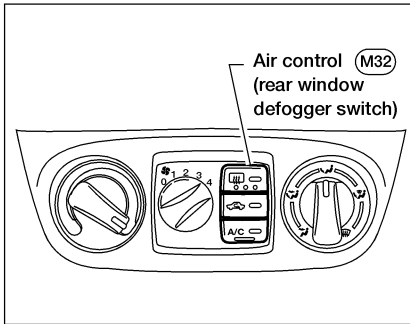
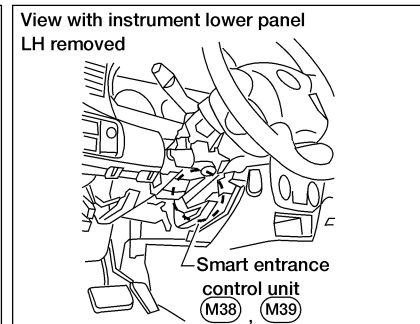
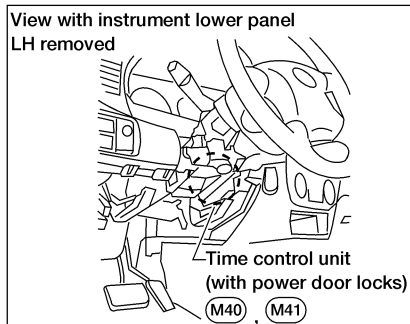
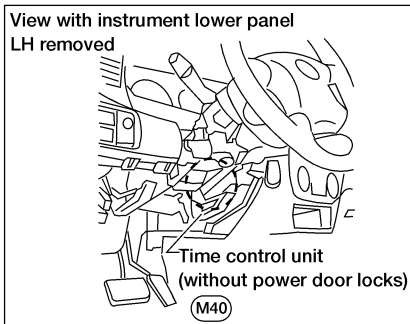
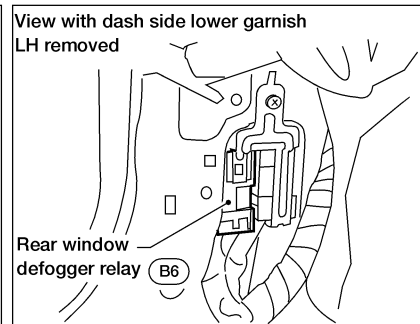
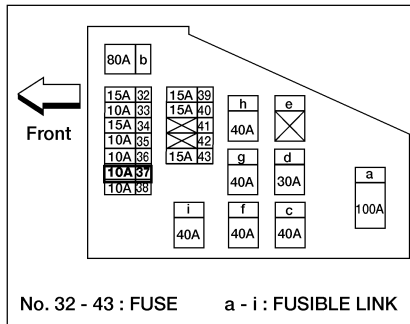
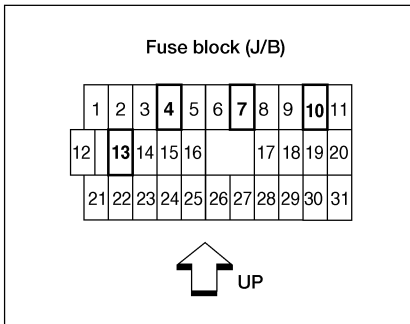
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LEL559

REAR WINDOW DEFOGGER

System Description

System Description

=NIEL0073

WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0073S02

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:

- to rear window defogger relay terminal 3
- through 20A fuse [No. 7, located in the fuse block (J/B)] and
- to rear window defogger relay terminal 6
- through 20A fuse [No. 4, located in the fuse block (J/B)].
- to time control unit terminal 7 (without power door locks) or 2 (with power door locks)
- through 10A fuse [No. 13, located in the fuse block (J/B)].

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 terminals 9 (without power door locks) or 13 (with power door locks).

Ground is supplied to terminal 5 of the rear window defogger switch (built into the air control) through body grounds M28 and M54.

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

- through terminal 3 of the rear window defogger switch
- to time control unit terminal 3 (without power door locks) or 10 (with power door locks).

Terminal 10 (without power door locks) or 12 (with power door locks) of the 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
- to the rear window defogger.

The rear window defogger has an independent ground.

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

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

Power is supplied:

- to terminal 4 of the rear window defogger switch
- from terminals 5 and 7 of the rear window defogger relay.

Terminal 5 of the rear window defogger switch is grounded through body grounds M28 and M54.

WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0073S01

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

Power is supplied at all times:

- to rear window defogger relay terminal 3
- through 20A fuse [No. 7, located in the fuse block (J/B)] and
- to rear window defogger relay terminal 6
- through 20A fuse [No. 4, located in the fuse block (J/B)].
- to smart entrance control unit terminal 10
- through 10A fuse (No. 37, located in the fuse and fusible link box).

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

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

Ground is supplied to terminal 5 of the rear window defogger switch (built into the air control) through body grounds M28 and M54.

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

- through terminal 3 of the rear window defogger switch
- to smart entrance control unit terminal 39.

REAR WINDOW DEFOGGER

System Description (Cont'd)

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

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

Power is supplied:

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

The rear window defogger has an independent ground.

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

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

Power is supplied:

- to terminal 4 of the rear window defogger switch
- from terminals 5 and 7 of the rear window defogger relay.

Terminal 5 of the rear window defogger switch is grounded through body grounds M28 and M54.

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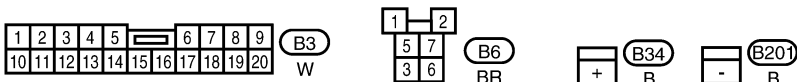
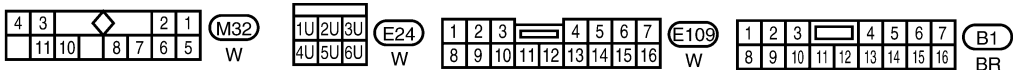
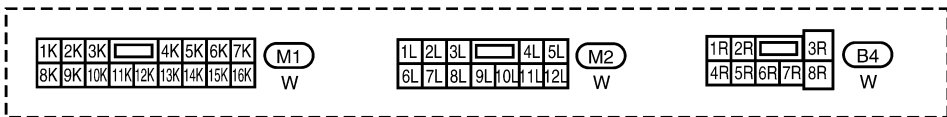
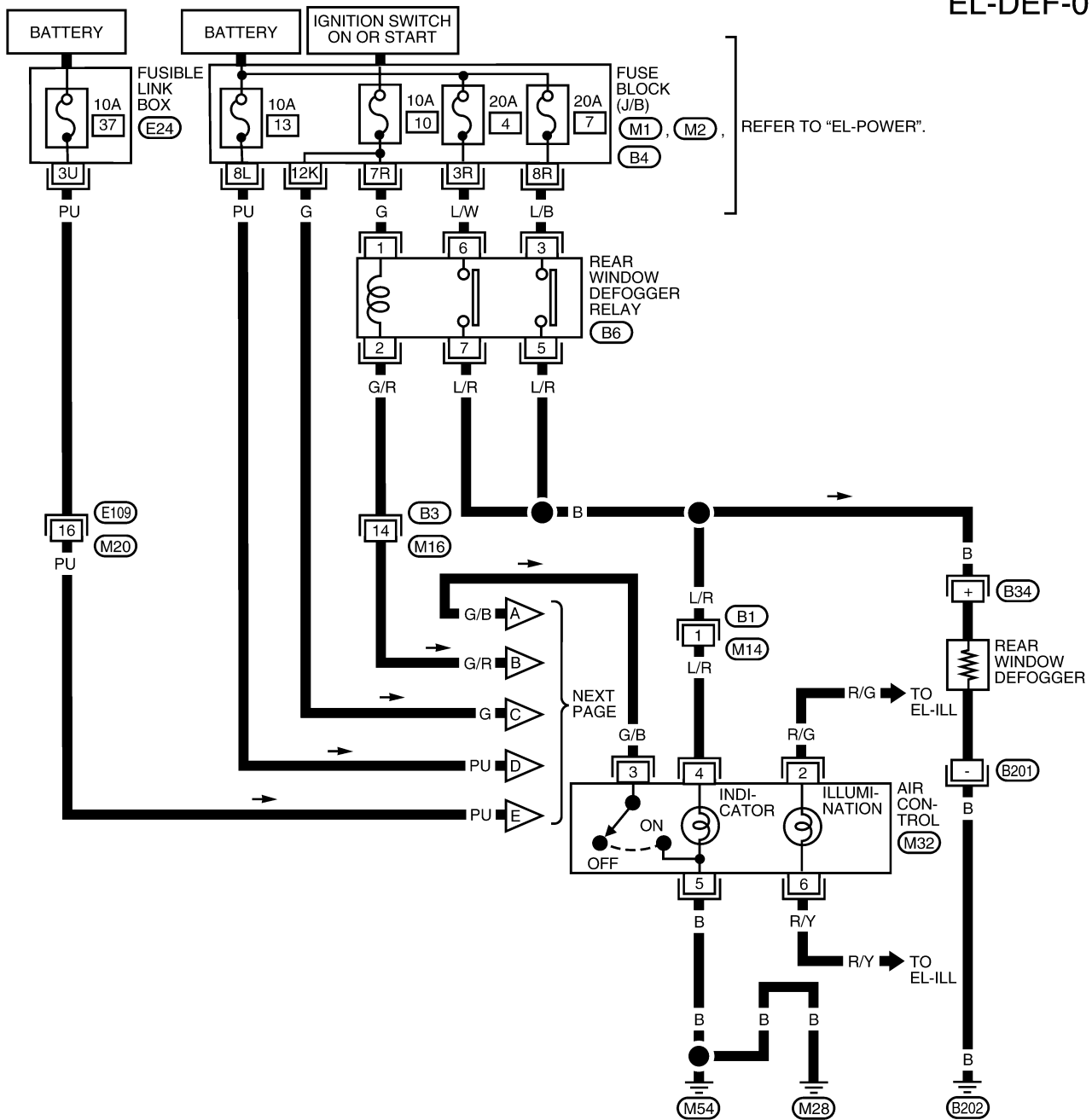
REAR WINDOW DEFOGGER

Wiring Diagram — DEF —

Wiring Diagram — DEF —

=NIEL0074

EL-DEF-01



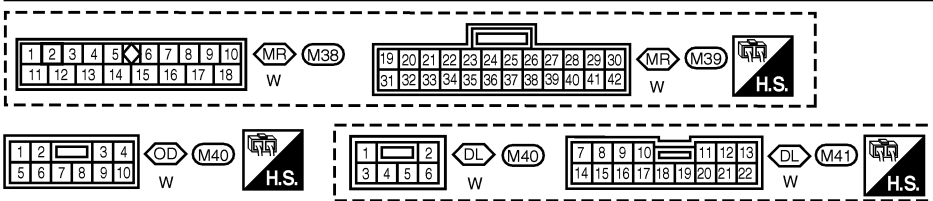
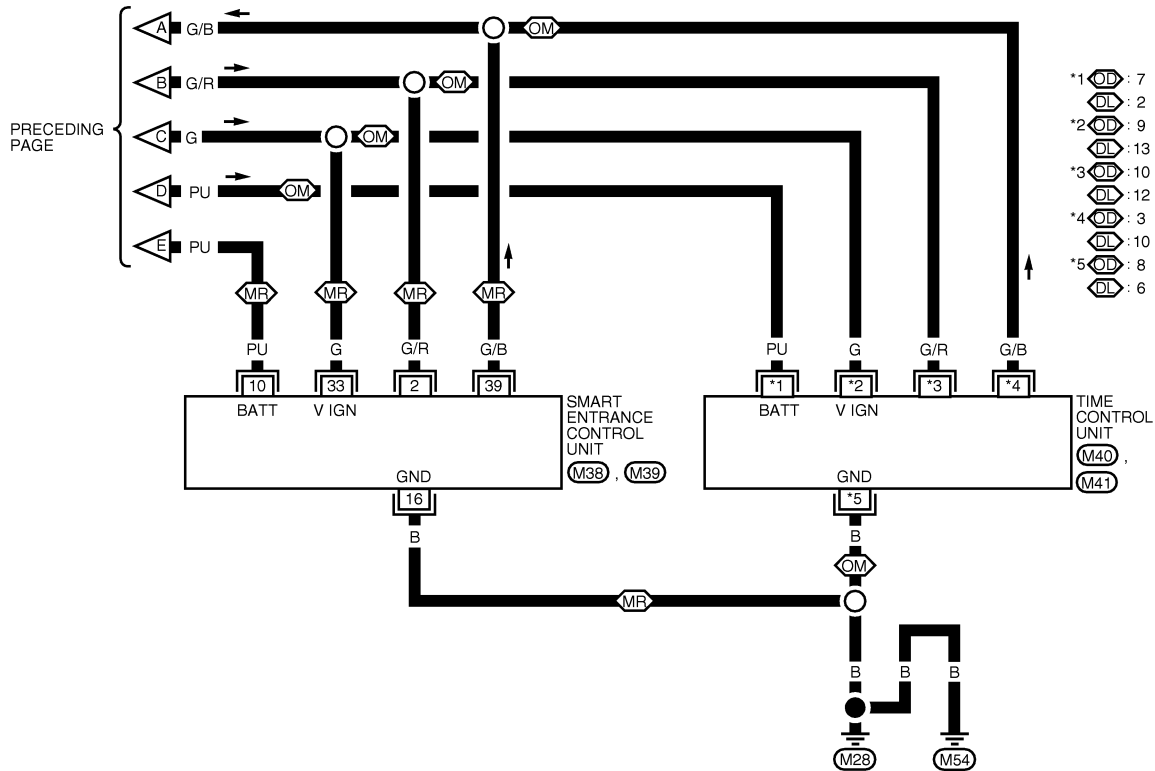
WEL612A

REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

EL-DEF-02

- ◊OD: WITHOUT POWER DOOR LOCKS
- ◊DL: WITH POWER DOOR LOCKS ONLY
- ◊MB: WITH MULTI-REMOTE CONTROL SYSTEM
- ◊OM: WITHOUT MULTI-REMOTE CONTROL SYSTEM



LEL365

TIME CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
*1	PU	POWER SOURCE (FUSE)	—	12V
*2	G	IGNITION SWITCH (ON)	IGNITION KEY IN ON POSITION	12V
		IGNITION SWITCH (START)	IGNITION KEY IN START POSITION	12V
*3	G/R	REAR WINDOW DEFOGGER RELAY	OFF	0V
			ON (IGNITION KEY IN ON POSITION)	12V
*4	G/B	AIR CONTROL (REAR WINDOW DEFOGGER SWITCH)	OFF	5V
			ON	0V
*5	B	GROUND	—	—

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

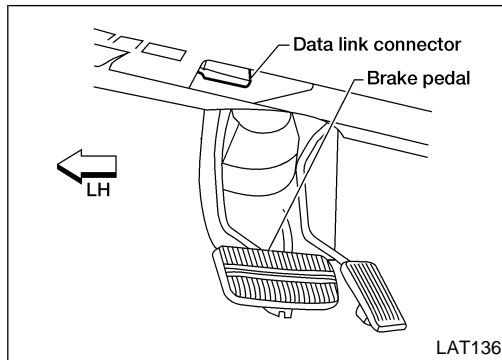
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
2	G/R	REAR WINDOW DEFOGGER RELAY	OFF	0V
10	PU	POWER SOURCE (FUSE)	ON (IGNITION KEY IN ON POSITION)	12V
			—	12V
16	B	GROUND	—	—
33	G	IGNITION SWITCH (ON)	IGNITION KEY IN ON POSITION	12V
			IGNITION SWITCH (START)	IGNITION KEY IN START POSITION
39	G/B	AIR CONTROL (REAR WINDOW DEFOGGER SWITCH)	OFF	5V
			ON	0V

- ◊OD: WITHOUT POWER DOOR LOCKS
- ◊DL: WITH POWER DOOR LOCKS ONLY
- *1 ◊OD: 7
- *2 ◊OD: 9
- *3 ◊OD: 10
- *4 ◊OD: 3
- *5 ◊OD: 8
- ◊DL: 2
- ◊DL: 13
- ◊DL: 12
- ◊DL: 10
- ◊DL: 6

LEL600

REAR WINDOW DEFOGGER

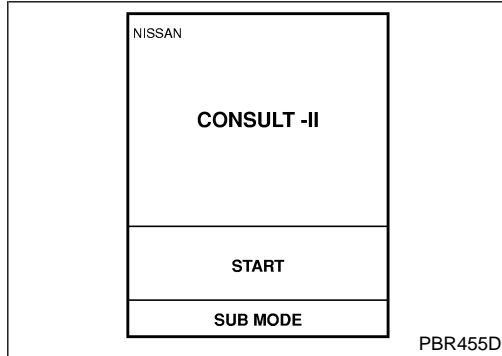
CONSULT-II Inspection Procedure (With Multi-Remote Control System)



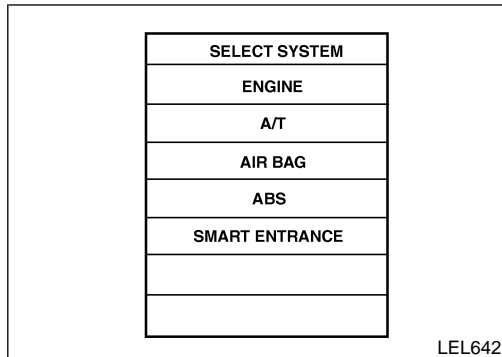
CONSULT-II Inspection Procedure (With Multi-Remote Control System) "REAR DEFOGGER"

NIEL0218
NIEL0218S01

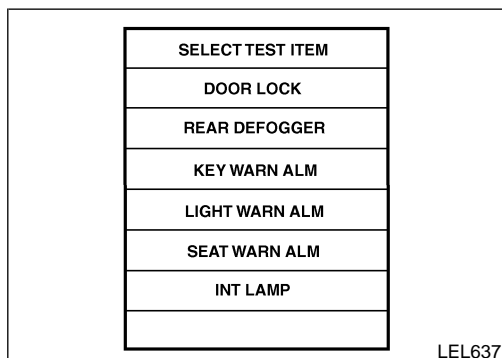
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



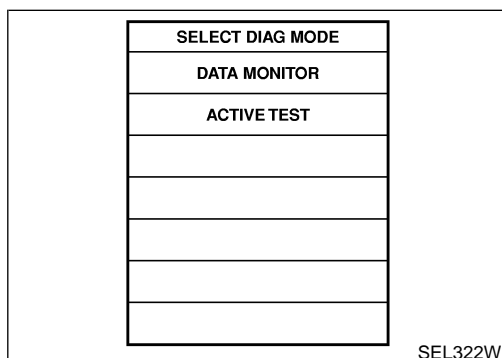
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Touch "REAR DEFOGGER".



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

REAR WINDOW DEFOGGER

CONSULT-II Application Items (With Multi-Remote Control System)

CONSULT-II Application Items (With Multi-Remote Control System)

“REAR DEFOGGER” Data Monitor

NIEL0219
NIEL0219S01
NIEL0219S0101

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

Active Test

NIEL0219S0102

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

Trouble Diagnoses (Without Multi-Remote Control System)

DIAGNOSTIC PROCEDURE

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

NIEL0075

NIEL0075S01

1	CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL
<p>1. Turn ignition switch to ON position. 2. Check voltage between time control unit harness terminal 10 (without power door locks) or 12 (with power door locks) and ground.</p>	
<p>Voltage [V]: Rear window defogger switch is "OFF". Approx. 12 Rear window defogger switch is "ON". 0</p>	
LEL477	
OK or NG	
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● Rear to “REAR WINDOW DEFOGGER RELAY”, EL-156. ● Rear window defogger circuit ● Refer to “Filament Check”, EL-156.
NG	▶ GO TO 2.

REAR WINDOW DEFOGGER

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

2 CHECK DEFOGGER RELAY COIL SIDE CIRCUIT	
<p>1. Disconnect control unit connector. 2. Turn ignition switch to ON position. 3. Check voltage between time control unit terminal 10 (without power door locks) or 12 (with power door locks) and ground.</p>	
<p style="text-align: right;">Battery voltage should exist.</p> <p style="text-align: right;">LEL478</p>	
OK or NG	
OK	▶ GO TO 3.
NG	▶ Check the following. <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in the fuse block (J/B)] ● Rear window defogger relay ● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay ● Harness for open or short between rear window defogger relay and time control unit

3 CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL	
<p>Check continuity between time control unit terminal 3 (without power door locks) or 10 (with power door locks) and ground.</p>	
<p style="text-align: right;">Continuity: Rear window defogger switch is pushed. Continuity should exist. Rear window defogger switch is released. Continuity should not exist.</p> <p style="text-align: right;">LEL479</p>	
OK or NG	
OK	▶ GO TO 4.
NG	▶ Check the following. <ul style="list-style-type: none"> ● Rear window defogger switch (Refer to "REAR WINDOW DEFOGGER SWITCH", EL-156.) ● Harness for open or short between time control unit and rear window defogger switch ● Rear window defogger switch ground circuit

REAR WINDOW DEFOGGER

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

4 CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL

Check voltage between time control unit power supply and ignition signal terminals and ground.

Time control unit connector (M40) (without power door locks)

Time control unit connector (M40) (with power door locks)

Time control unit connector (M41) (with power door locks)

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

LEL480

OK or NG

OK	▶	GO TO 5.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10 or No. 13, located in the fuse block (J/B)] ● Harness for open or short between time control unit and fuse

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5 CHECK TIME CONTROL UNIT GROUND CIRCUIT

Check continuity between time control unit terminal 8 (without power door locks) or 6 (with power door locks) and ground.

Time control unit connector (M40) (without power door locks)

Time control unit connector (M40) (with power door locks)

Continuity should exist.

LEL481

Yes	▶	Replace time control unit.
No	▶	Repair harness or connectors.

REAR WINDOW DEFOGGER

Trouble Diagnoses (With Multi-Remote Control System)



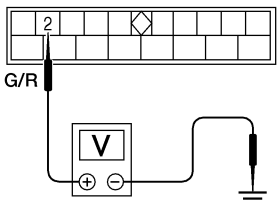



Trouble Diagnoses (With Multi-Remote Control System)

DIAGNOSTIC PROCEDURE

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

NIEL0260

NIEL0260S01

1	CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL
<p> With CONSULT-II Select "ACTIVE TEST" in "REAR DEFOGGER" with CONSULT-II.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>ACTIVE TEST</p> <p>REAR DEFOGGER OFF</p> <p>ON</p> </div> <div style="text-align: center;"> <p>Rear window defogger and rear window defogger switch indicator should operate when the "ON" button on the CONSULT-II screen is touched.</p> </div> </div> <p style="text-align: right;">SEL353W</p>	
<p> Without CONSULT-II</p> <ol style="list-style-type: none"> 1. Turn ignition switch to ON position. 2. Check voltage between smart entrance control unit harness terminal 2 and ground. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M38)</p>  </div> <div style="text-align: center;">  <p>H.S.</p> <p>CONNECT</p>   </div> <div style="text-align: center;"> <p>Voltage [V]:</p> <p>Rear window defogger switch is "OFF". Approx. 12</p> <p>Rear window defogger switch is "ON". 0</p> </div> </div> <p style="text-align: right;">LEL482</p>	
OK or NG	
OK	<p>Check the following.</p> <ul style="list-style-type: none"> ● Refer to "REAR WINDOW DEFOGGER RELAY", EL-156. ● Rear window defogger circuit ● Refer to "Filament Check", EL-156.
NG	GO TO 2.

REAR WINDOW DEFOGGER

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

2	CHECK DEFOGGER RELAY COIL SIDE CIRCUIT	
<p>1. Disconnect control unit connector. 2. Turn ignition switch to ON position. 3. Check voltage between smart entrance control unit terminal 2 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div data-bbox="305 373 581 634"> <p>Smart entrance control unit connector (M38)</p> <p>G/R</p> </div> <div data-bbox="673 388 743 592"> <p>H.S.</p> <p>DISCONNECT</p> <p>ON</p> </div> <div data-bbox="982 462 1307 493"> <p>Battery voltage should exist.</p> </div> </div> <p style="text-align: right;">LEL483</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	GO TO 3.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10, located in the fuse block (J/B)] ● Rear window defogger relay ● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay ● Harness for open or short between rear window defogger relay and smart entrance control unit

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REAR WINDOW DEFOGGER

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

3	CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL						
<p> With CONSULT-II Select "REAR DEF SW" in "DATA MONITOR" mode with CONSULT-II.</p>							
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>REAR DEF SW</td><td>ON</td></tr> </table>		DATA MONITOR		MONITOR		REAR DEF SW	ON
DATA MONITOR							
MONITOR							
REAR DEF SW	ON						
<p>When rear window defogger switch is pushed: REAR DEF SW should be ON.</p>							
SEL352W							
<p> Without CONSULT-II Check continuity between smart entrance control unit terminal 39 and ground.</p>							
<p>Continuity: Rear window defogger switch is pushed. Continuity should exist. Rear window defogger switch is released. Continuity should not exist.</p>							
LEL484							
OK or NG							
OK	▶ GO TO 4.						
NG	<p>Check the following.</p> <ul style="list-style-type: none"> ● Refer to "REAR WINDOW DEFOGGER SWITCH", EL-156. ● Harness for open or short between smart entrance control unit and rear window defogger switch ● Rear window defogger switch ground circuit 						

4	CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL																				
<p>Check voltage between smart entrance control unit terminals 10, 33 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>10</td> <td>Ground</td> <td>Battery voltage</td> <td>Battery voltage</td> <td>Battery voltage</td> </tr> <tr> <td>33</td> <td>Ground</td> <td>0V</td> <td>0V</td> <td>Battery voltage</td> </tr> </tbody> </table>		Terminals		Ignition switch position			(+)	(-)	OFF	ACC	ON	10	Ground	Battery voltage	Battery voltage	Battery voltage	33	Ground	0V	0V	Battery voltage
Terminals		Ignition switch position																			
(+)	(-)	OFF	ACC	ON																	
10	Ground	Battery voltage	Battery voltage	Battery voltage																	
33	Ground	0V	0V	Battery voltage																	
LEL485																					
OK or NG																					
OK	▶ GO TO 5.																				
NG	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 10 or No. 37, located in the fuse block (J/B)] ● Harness for open or short between smart entrance control unit and fuse 																				

REAR WINDOW DEFOGGER

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

5	CHECK SMART ENTRANCE CONTROL UNIT GROUND CIRCUIT	
Check continuity between smart entrance control unit terminal 16 and ground.		
<p style="text-align: right;">Continuity should exist.</p>		
LEL486		
Yes	▶	Replace smart entrance control unit.
No	▶	Repair harness or connectors.

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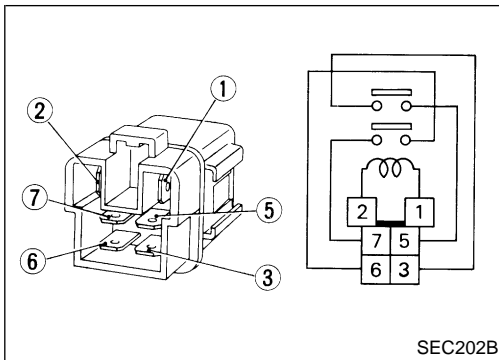
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REAR WINDOW DEFOGGER

Electrical Components Inspection



Electrical Components Inspection

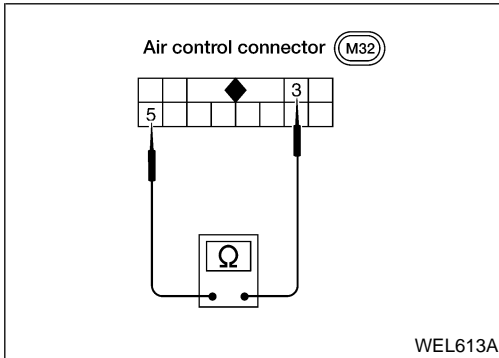
REAR WINDOW DEFOGGER RELAY

=NIEL0076

NIEL0076S01

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

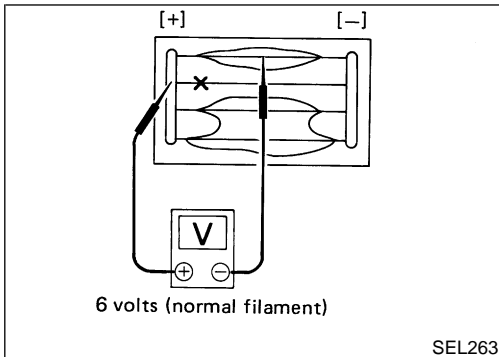


REAR WINDOW DEFOGGER SWITCH

NIEL0076S02

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

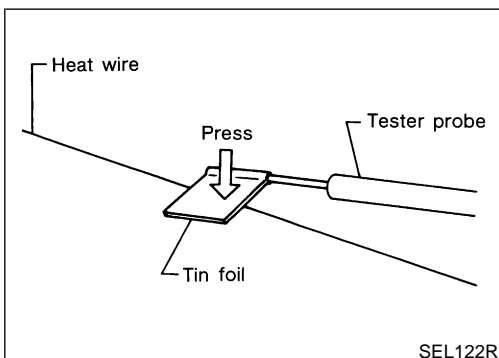
Terminals	Condition	Continuity
3-5	Rear window defogger switch is pushed.	Yes
	Rear window defogger switch is released.	No



Filament Check

NIEL0077

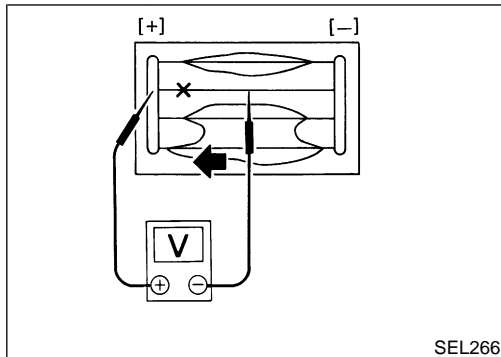
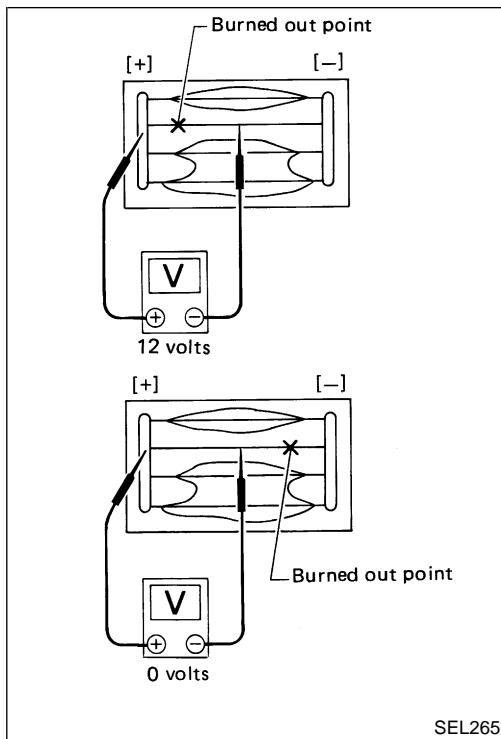
1. Attach probe circuit tester (in volt range) to middle portion of each filament.



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

REAR WINDOW DEFOGGER

Filament Check (Cont'd)



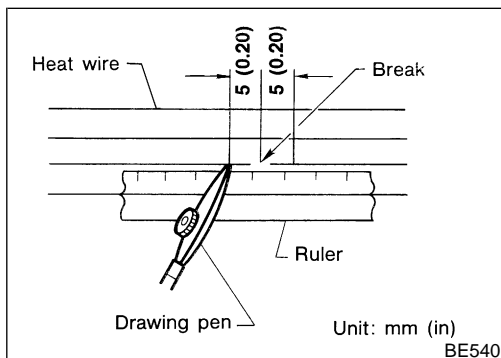
2. If a filament is burned out, circuit tester registers 0 or 12 volts.

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

Filament Repair

REPAIR EQUIPMENT

- 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

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.

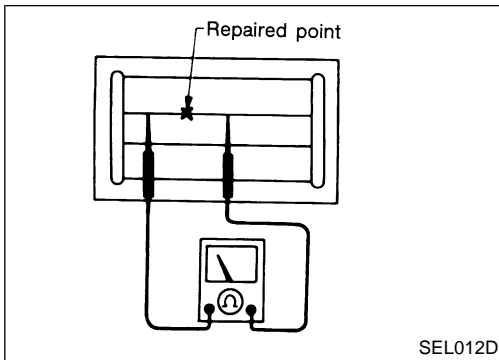
Shake silver composition container before use.

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.

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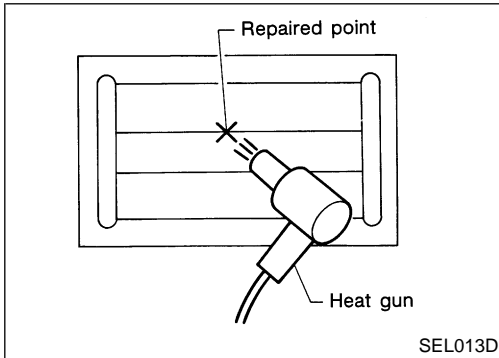
REAR WINDOW DEFOGGER

Filament Repair (Cont'd)



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

NIEL0079

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

Power is supplied at all times:

- through 15A fuse [No. 32, located in the fuse and fusible link box]
- to audio unit terminal 6,
- to CD player terminal 24 (with CD player), and
- to subwoofer amp. terminal 8 (with premium audio).

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

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

Ground is supplied through the case of the audio unit.

Ground is supplied to subwoofer amp. terminal 7 (with premium audio) through body grounds B13 and B19.

Audio signals are supplied:

- through audio unit terminals 1, 2, 3, 4, 13, 14, 15 and 16
- to terminals + and - of front speaker LH and RH
- to terminals + and - of rear speaker LH and RH
- to terminals + and - of pillar tweeter LH and RH (with premium audio)
- to terminals 1, 2, 3 and 4 of subwoofer amp. (with premium audio).

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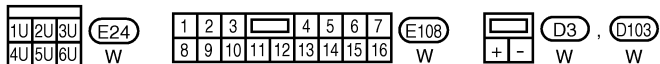
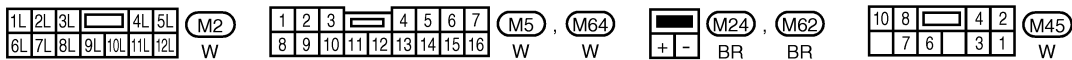
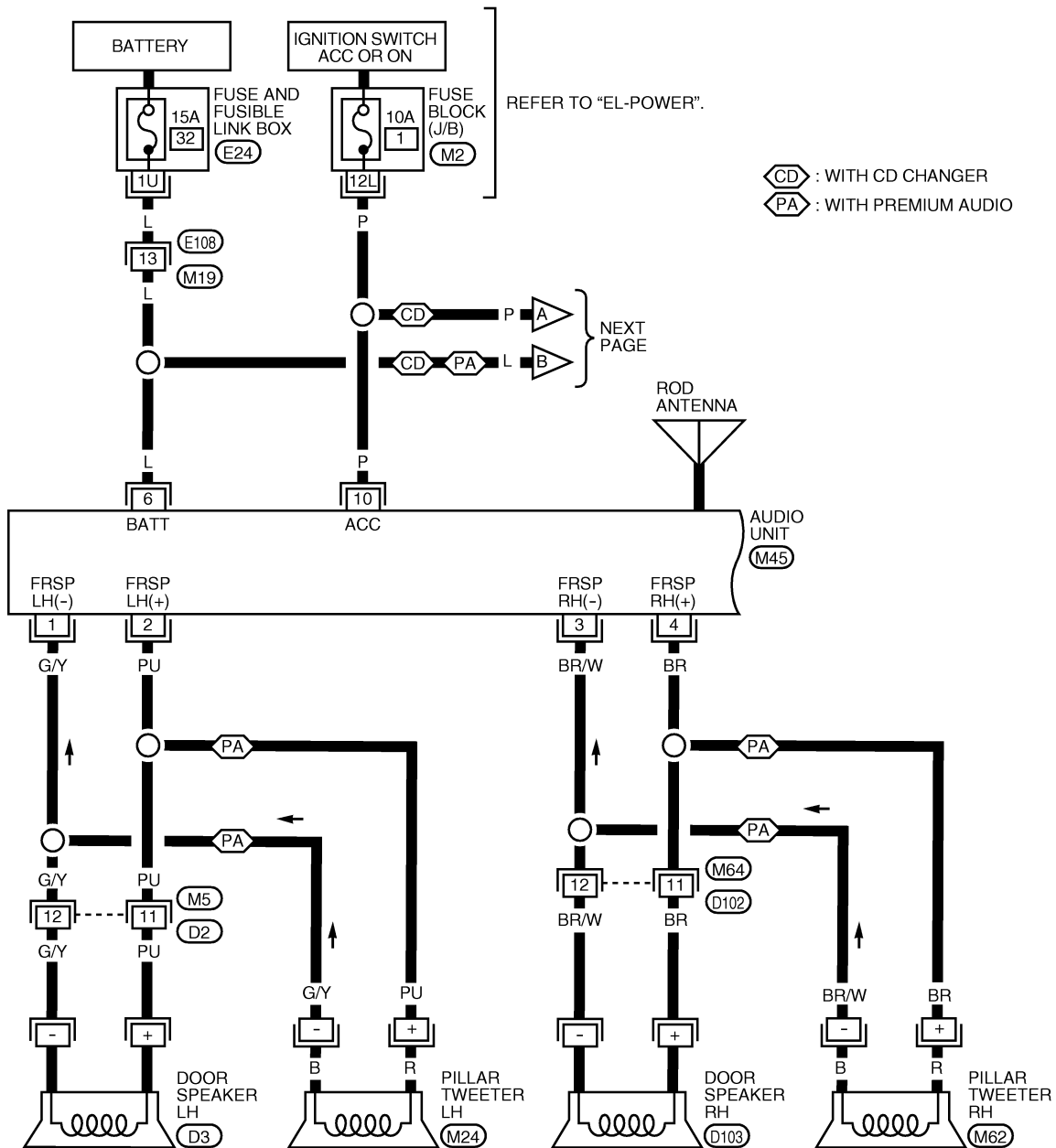
AUDIO

Wiring Diagram — AUDIO —

Wiring Diagram — AUDIO —

NIEL0081

EL-AUDIO-01

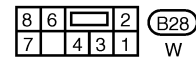
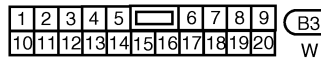
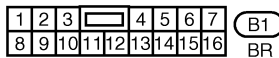
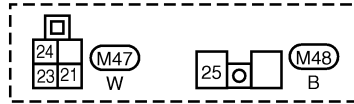
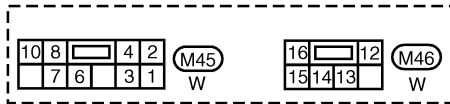
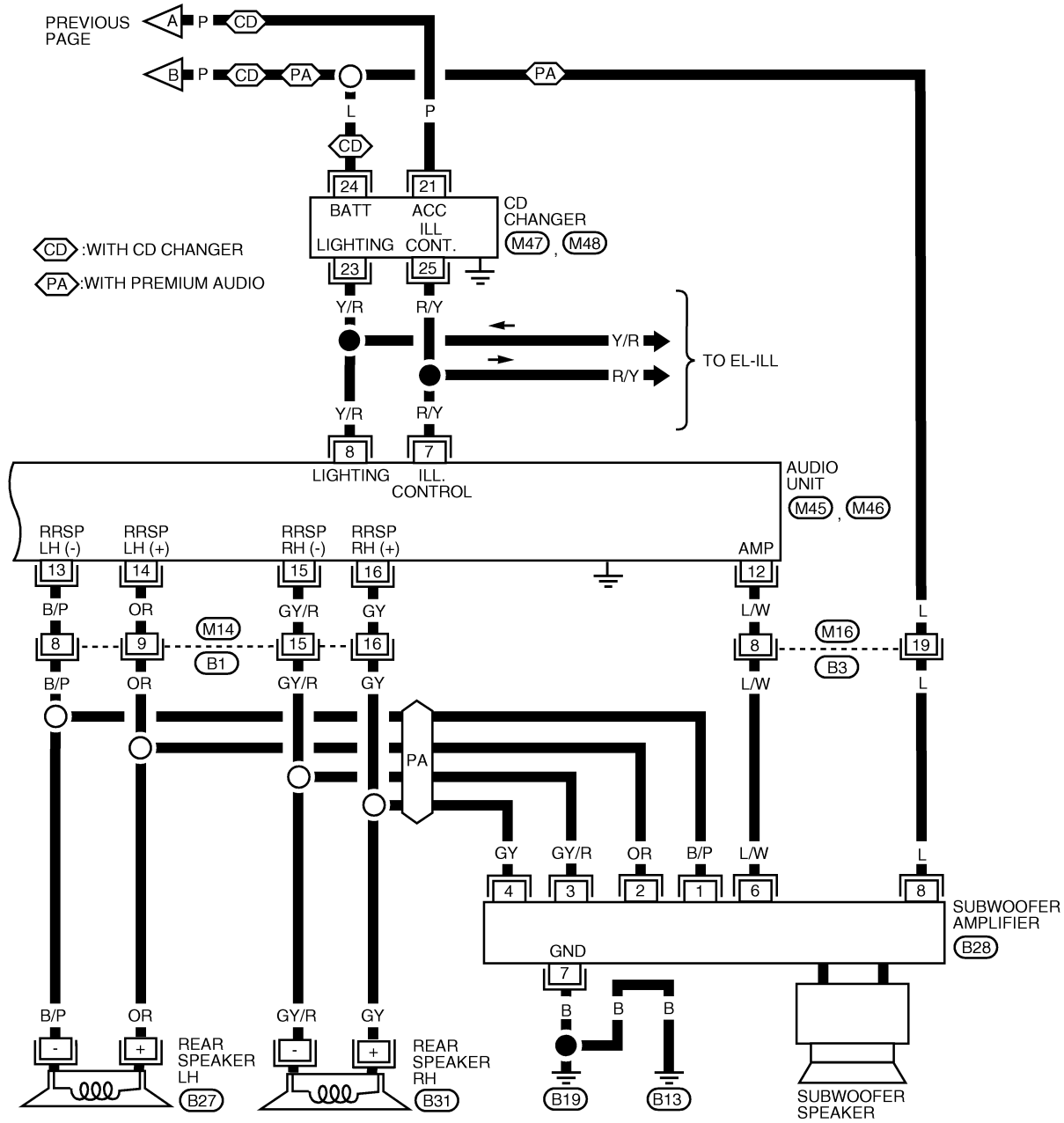


WEL366

AUDIO

Wiring Diagram — AUDIO — (Cont'd)

EL-AUDIO-02



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AUDIO

Trouble Diagnoses

Trouble Diagnoses

NIEL0220

Symptom	Possible causes	Repair order
Audio unit inoperative (no digital display and no sound from speakers).	<ol style="list-style-type: none"> 10A fuse Poor audio unit case ground Audio unit 	<ol style="list-style-type: none"> Check 10A fuse [No. 1, located in fuse block (J/B)]. Turn ignition switch ON and verify that battery positive voltage is present at terminal 10 of audio unit. Check audio unit case ground. Remove audio unit for repair.
Audio unit presets are lost when ignition switch is turned OFF.	<ol style="list-style-type: none"> 15A fuse Audio unit 	<ol style="list-style-type: none"> Check 15A fuse [No. 32, located in fuse and fusible link box] and verify that battery positive voltage is present at terminal 6 of audio unit. Remove audio unit for repair.
AM/FM stations are weak or noisy.	<ol style="list-style-type: none"> Antenna Audio unit ground Audio unit 	<ol style="list-style-type: none"> Check antenna. Check audio unit ground condition. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with engine running.	<ol style="list-style-type: none"> Poor audio unit ground Loose or missing ground bonding straps Ignition condenser or rear window defogger noise suppressor condenser Ignition coil(s) or secondary wiring Audio unit 	<ol style="list-style-type: none"> Check audio unit ground. Check ground bonding straps. Replace ignition condenser or rear window defogger noise suppressor condenser. Check ignition coil(s) and secondary wiring. Remove audio unit for repair.
Audio unit generates noise in AM and FM modes with accessories on (switch pops and motor noise).	<ol style="list-style-type: none"> Poor audio unit ground Antenna Accessory ground Faulty accessory 	<ol style="list-style-type: none"> Check audio unit ground. Check antenna. Check accessory ground. Replace accessory.
Individual speaker is noisy or inoperative.	<ol style="list-style-type: none"> Speaker Audio unit output Speaker circuit Audio unit 	<ol style="list-style-type: none"> Check speaker. Check audio unit output voltages. Check wires for open or short between audio unit and speaker. Remove audio unit for repair.
Subwoofer does not operate.	<ol style="list-style-type: none"> Power supply to subwoofer amp Amp ON/OFF signal circuit Subwoofer amp ground Output circuit to subwoofer amp Subwoofer unit 	<ol style="list-style-type: none"> Check 15A fuse [No. 32, located in fuse and fusible link box]. Verify battery positive voltage is present at terminal 8 of subwoofer amp. Check harness continuity between audio unit terminal 12 and subwoofer amp terminal 6. Check harness continuity between subwoofer amp terminal 7 and ground. Check the output circuits to subwoofer amp from audio unit. Replace subwoofer unit. NOTE: Remove subwoofer unit attaching bolts from top after removing rear pillar garnish and parcel shelf, then remove subwoofer unit from bottom.

Inspection

NIEL0221

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.)

NIEL0221S01

ANTENNA

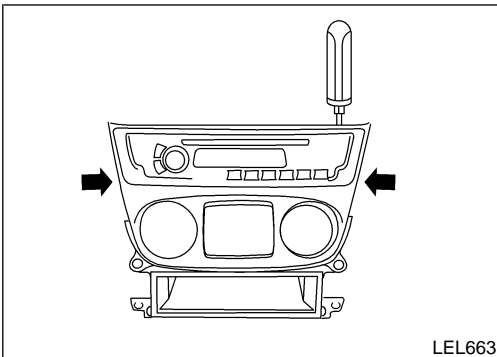
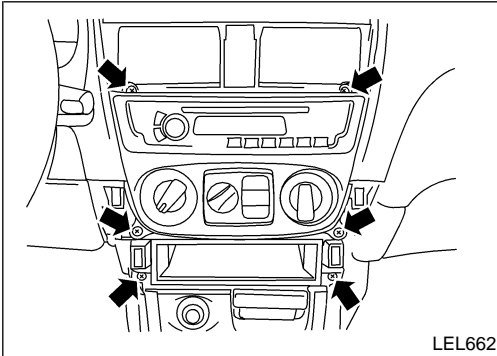
Using a jumper wire, clip an auxiliary ground between antenna and body.

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

NIEL0221S02

Audio Unit Removal and Installation

1. Lock the CD changer unit mechanism (if so equipped) prior to removing a malfunctioning CD changer unit. Refer to "LOCKING CD CHANGER UNIT MECHANISM", EL-163. =NIEL0273
2. Remove upper cluster lid C by firmly grasping and carefully pulling rearward from instrument panel. GI
3. Disconnect hazard switch connector. MA
4. Remove lower cluster lid C by firmly grasping and carefully pulling rearward from instrument panel. EM
5. Remove six screws and remove audio unit and storage bin/CD changer as an assembly. LC
6. Disconnect audio unit connectors. EC



CAUTION:

Do not pry or forcibly remove heater A/C control bezel from audio unit face plate or audio unit damage could result. AT

7. Release two tabs using a screwdriver and carefully remove heater A/C control bezel from audio unit face plate. AX
8. Remove brackets from audio unit and remove audio unit. SU
9. Install in reverse order of removal. BR

LOCKING CD CHANGER UNIT MECHANISM

NIEL0273S01

CAUTION:

- Prior to removing a malfunctioning CD changer unit that will be shipped for repair, the changer mechanism **MUST BE LOCKED** to prevent the mechanism from being damaged during shipping. ST
- If a CD is jammed or unable to be removed from the unit, do **NOT** lock the changer mechanism. If the unit is to be shipped for repair, carefully package the unit to prevent vibration and shock. RS

1. Eject and remove any CDs from the CD changer unit. BT
2. Turn ignition switch OFF. Wait until CD changer unit display is off and mechanism stops moving (mechanism sound stops). HA
3. Press any one of the disc selection buttons once. When a display shows on the CD changer unit, press the same disc selection button again within 5 seconds. SC
- The changer mechanism will lock itself within 10 seconds.
4. After mechanism stops moving (mechanism sound stops), disconnect the CD changer unit connectors. EL
5. Remove CD changer unit.

NOTE:

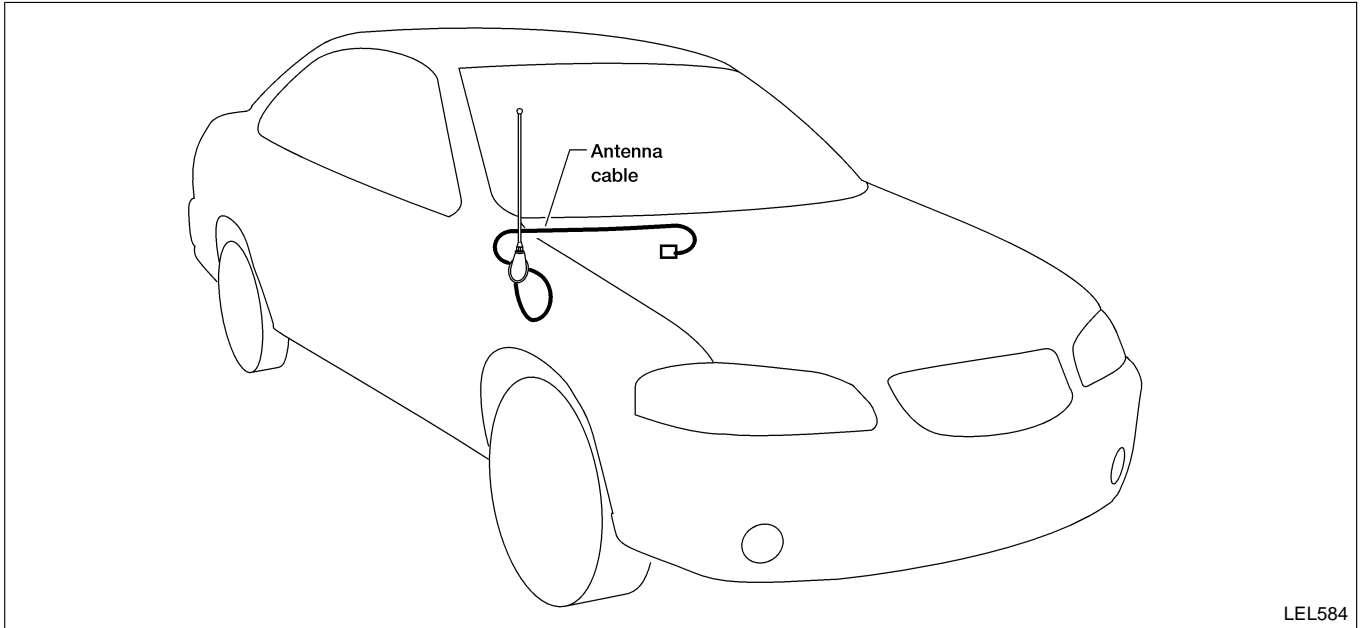
After installing a new or remanufactured CD changer unit, switching the CD changer unit ON will automatically unlock the mechanism. A special unlocking procedure is not required. IDX

AUDIO

Location of Antenna

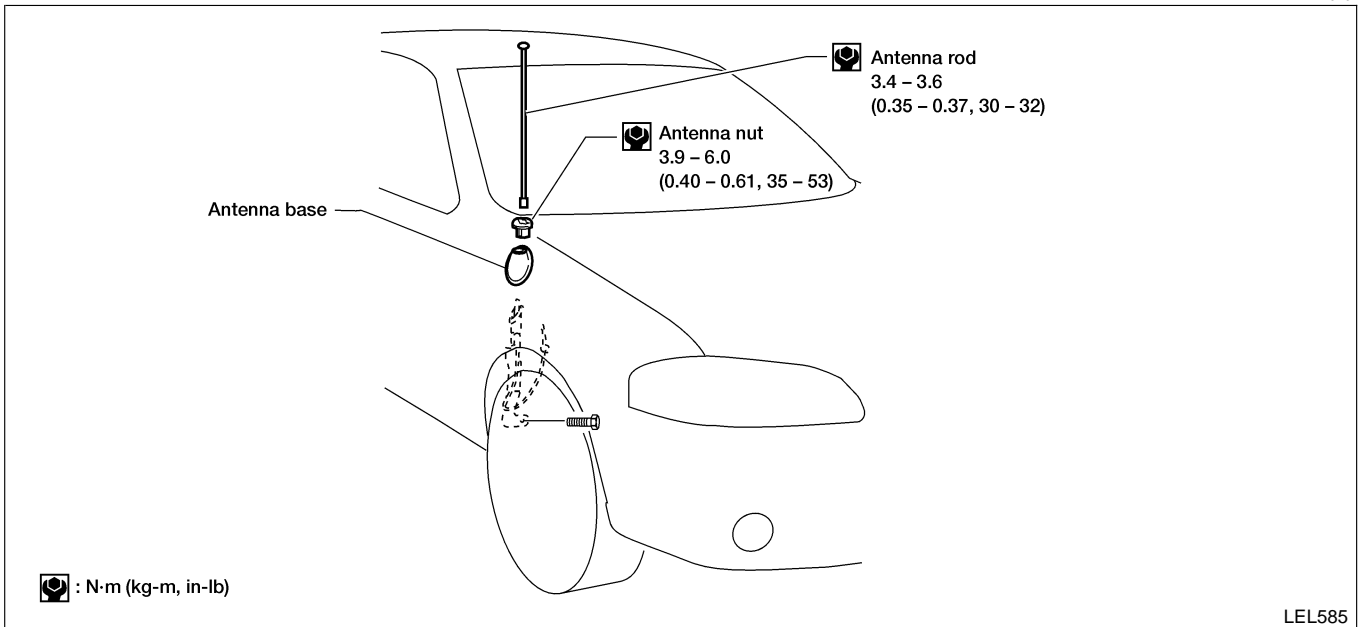
Location of Antenna

NIEL0261



Removal and Installation of Antenna

NIEL0262



System Description

NIEL0222

NIEL0222S01

POWER

Power is supplied at all times:

- through 30A fusible link (letter **d**, located in the fuse and fusible link box)
- to sunroof motor assembly terminal 5.

The power circuit is protected by the circuit breaker. The sunroof motor assembly is grounded through body ground R5.

NOTE:

When the battery or sunroof motor harness connector is disconnected during service, the sunroof will not operate properly.

Procedure for resetting motor memory:

From any sunroof position (full open, partially open, closed, partially vented, and vented), push and hold the button in the forward position until the sunroof vents in the **Full-Up** position. This resets the sunroof motor memory and now the sunroof will operate correctly.

TILT AND SLIDE OPERATION

The sunroof is controlled by the sunroof switch. With the sunroof in closed position, depressing UP/CLOSE switch will tilt rear of sunroof up. The sunroof will stop when the switch is released, or when the sunroof reaches its maximum tilt position.

The sunroof will tilt down when in tilt up position and DOWN/OPEN switch is depressed. The sunroof will stop when switch is released, or when sunroof is fully closed.

With sunroof in closed position, pressing DOWN/OPEN switch will cause sunroof to slide open. The sunroof will slide open until switch is released or until it is all the way open. The sunroof will close when in open position, and UP/CLOSE switch is depressed. The sunroof will slide until switch is released, or when sunroof is fully closed.

All automatic operations in sunroof are controlled by internal limit switches located in sunroof motor assembly.

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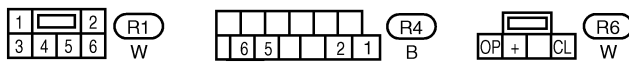
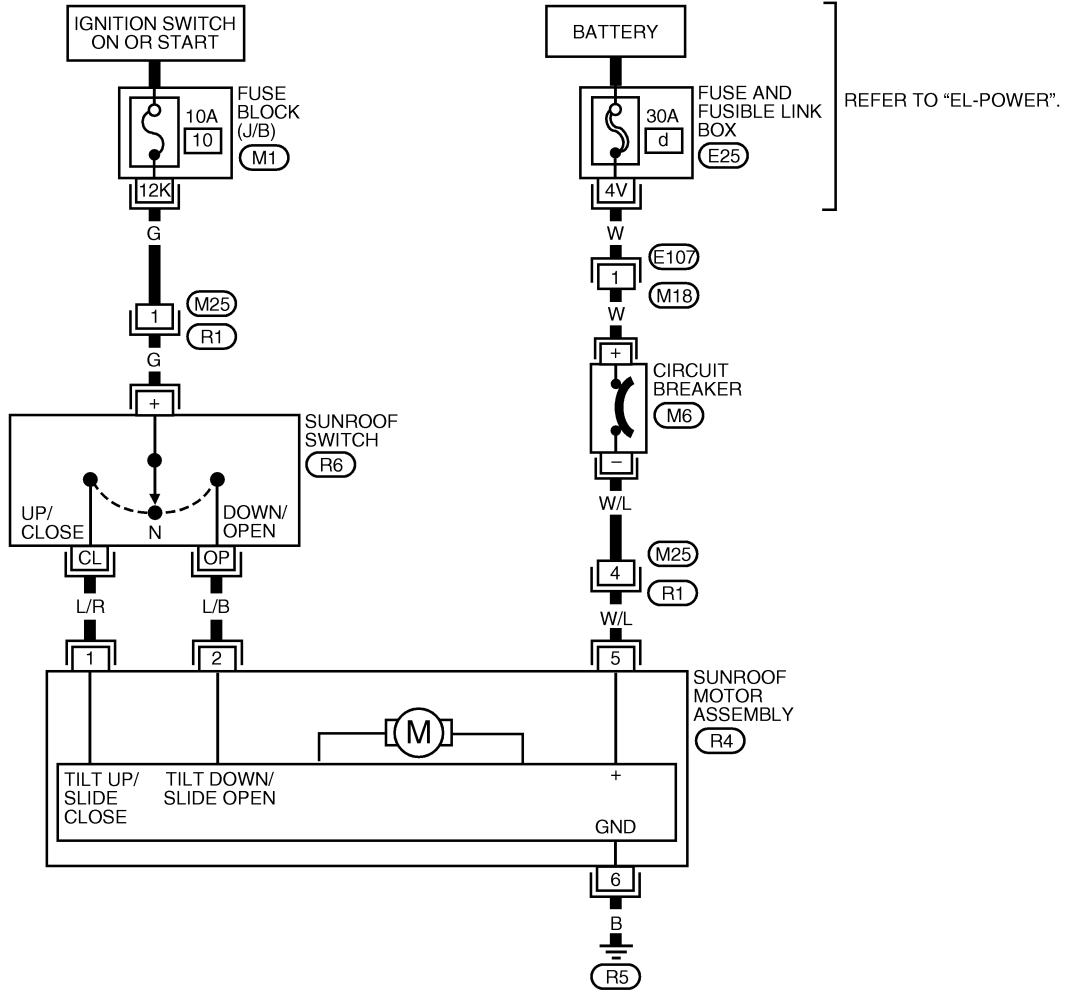
POWER SUNROOF

Wiring Diagram — SROOF —

Wiring Diagram — SROOF —

NIEL0089

EL-SROOF-01



WEL368

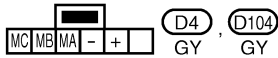
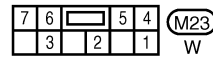
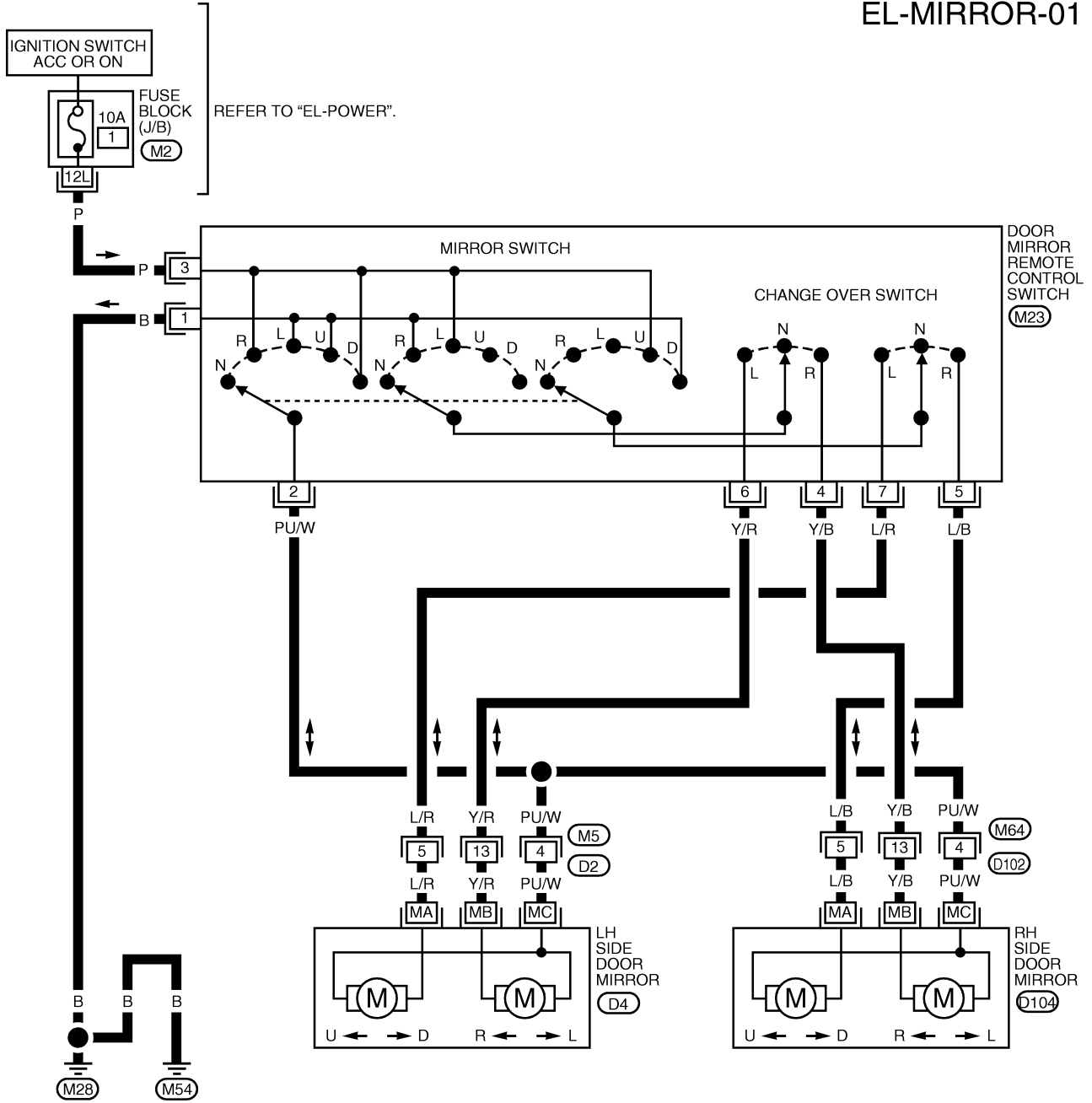
DOOR MIRROR

Wiring Diagram — MIRROR —

Wiring Diagram — MIRROR —

NIEL0090

EL-MIRROR-01



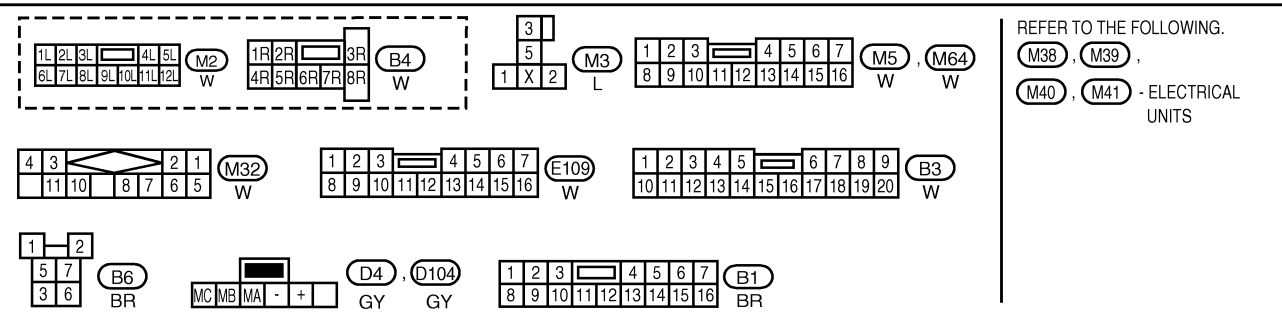
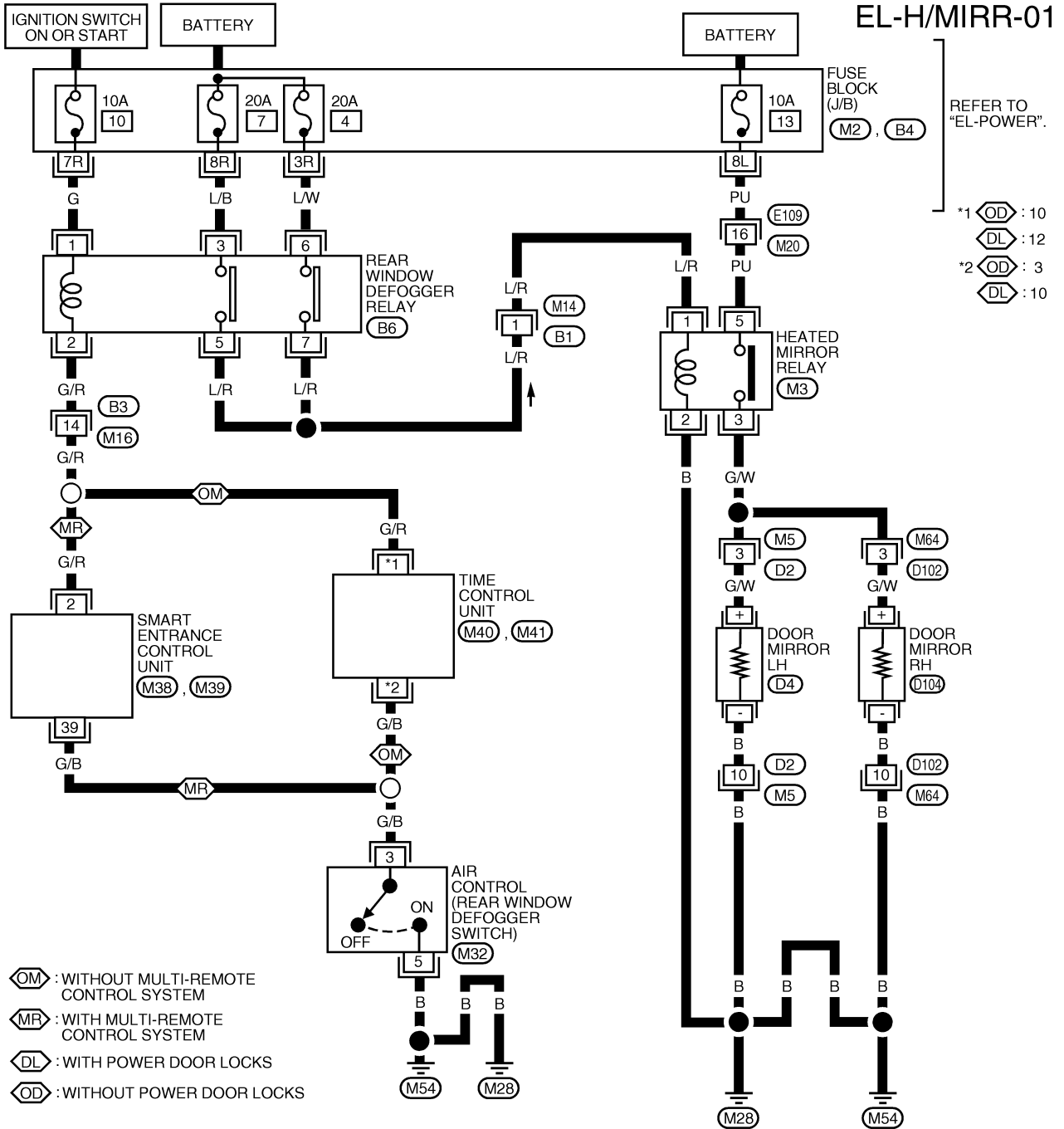
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HEATED MIRROR

Wiring Diagram — H/MIRR —

Wiring Diagram — H/MIRR —

NIEL0258



WEL094A

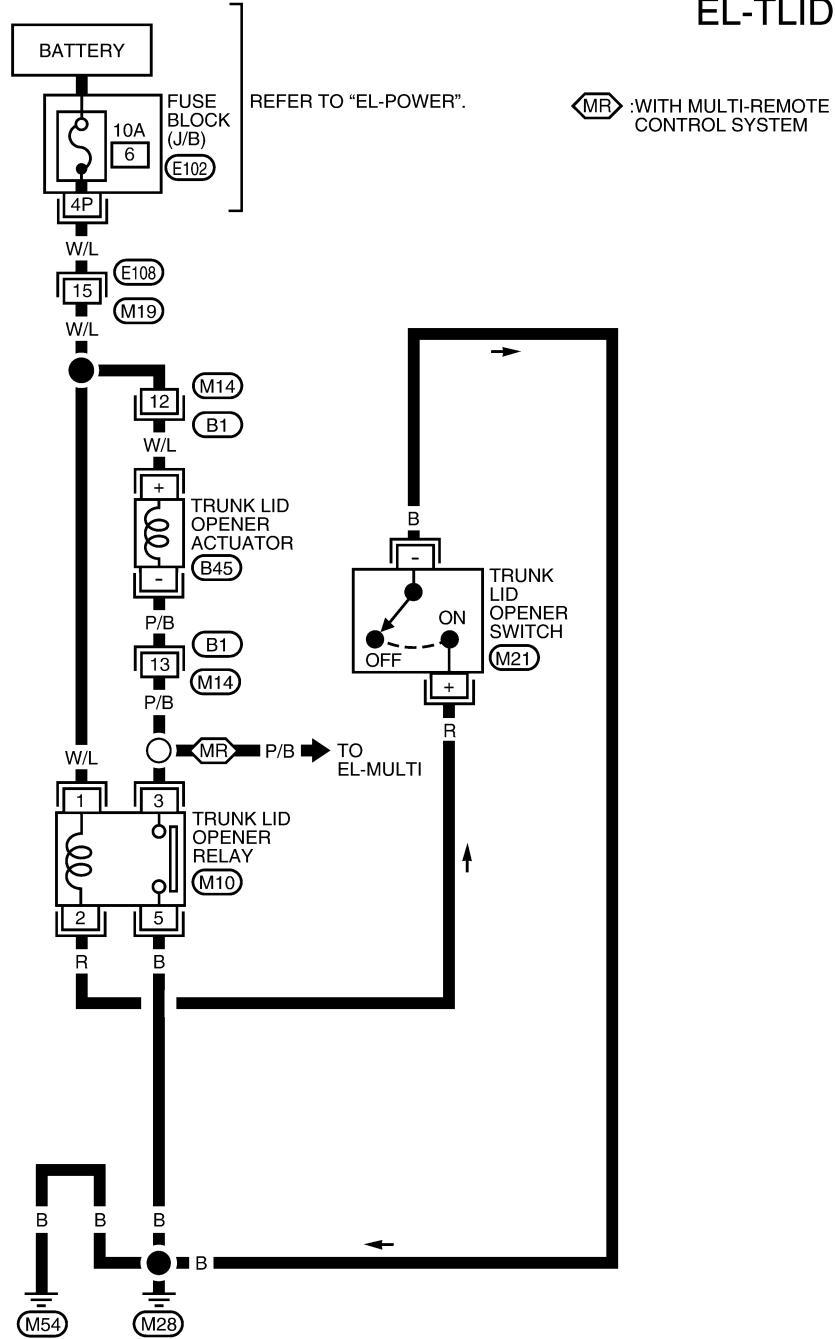
TRUNK LID OPENER

Wiring Diagram — TLID —

Wiring Diagram — TLID —

NIEL0168

EL-TLID-01

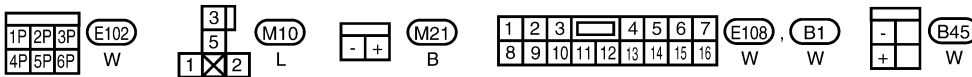


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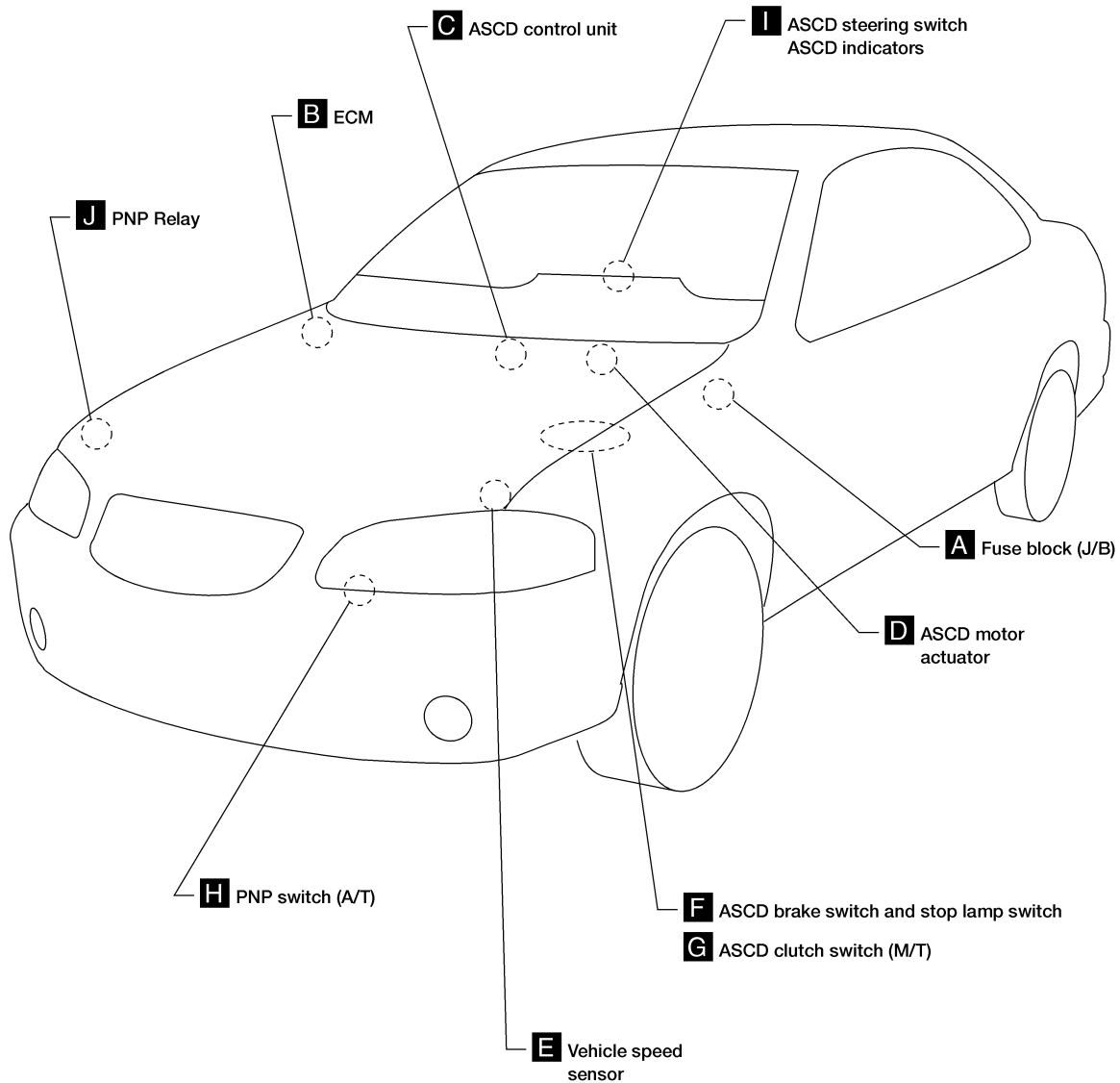
WEL035B

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

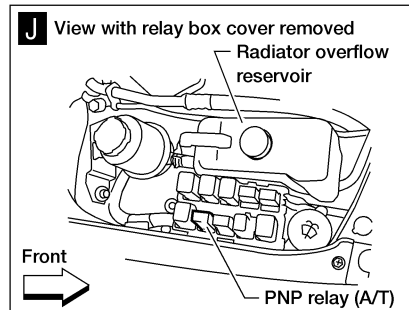
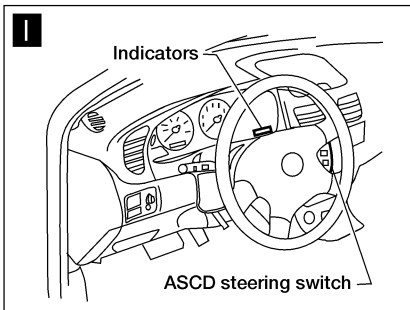
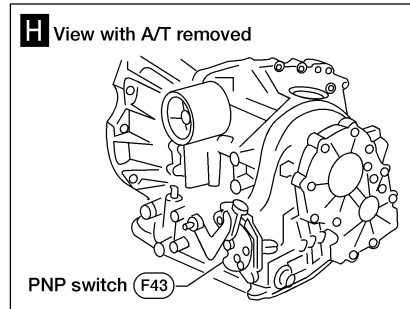
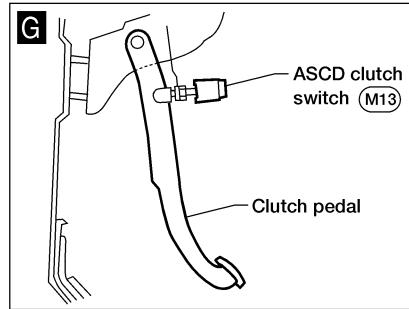
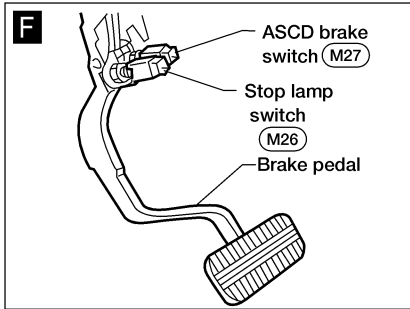
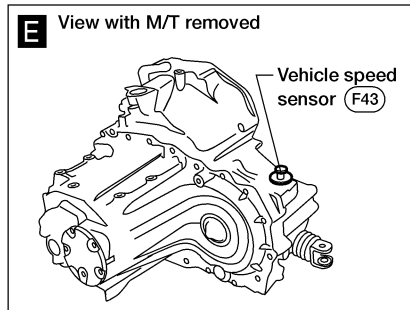
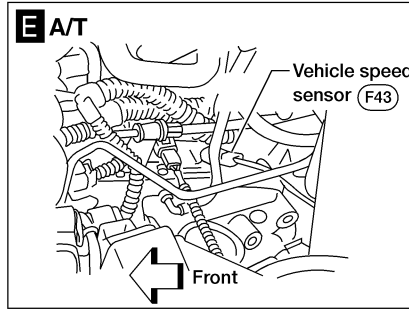
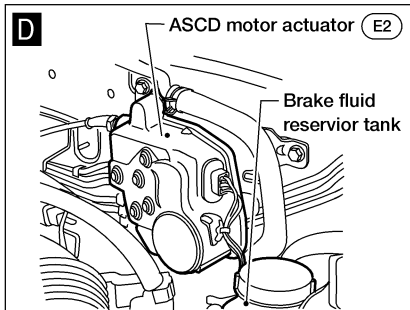
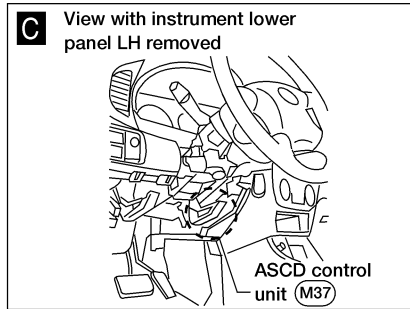
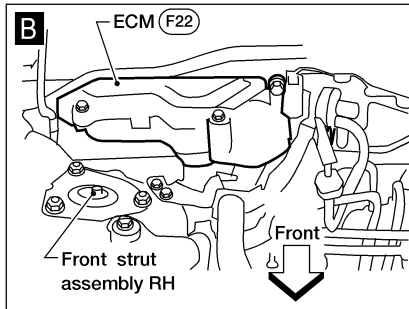
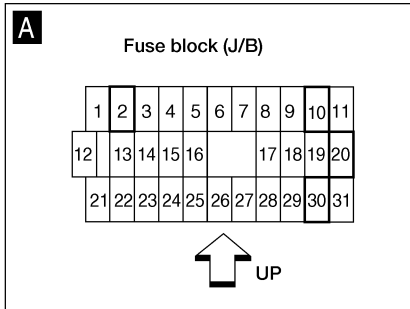
NIEL0094



WEL095A

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Component Parts and Harness Connector Location (Cont'd)



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WEL096A

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

System Description

System Description

NIEL0190

Refer to Owner's Manual for ASCD operating instructions.

POWER SUPPLY AND GROUND

NIEL0190S01

Power is supplied at all times:

- through 10A fuse [No. 2, located in the fuse block (J/B)]
- to the stop lamp switch terminal +

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

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to ASCD control unit terminal 5.
- through 10A fuse [No. 20, located in the fuse block (J/B)]
- to park/neutral position relay terminal 1,
- through 10A fuse [No. 30, located in the fuse block (J/B)]
- to combination meter terminal 6.

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

- to park/neutral position switch terminal 2
- through body grounds F33, F35, and F37.

When ASCD CRUISE/ON●OFF switch is depressed (ON), ground is supplied:

- to ASCD control unit terminal 11
- from ASCD steering switch terminal 4
- to ASCD steering switch terminal 1
- from ASCD control unit terminal 24

Then ASCD control unit illuminates CRUISE indicator.

Ground is supplied:

- to combination meter terminal 22
- from ASCD control unit terminal 15.

Ground is supplied:

- to ASCD control unit terminal 17
- through body grounds M28 and M54.

OPERATION

NIEL0190S02

Set Operation

NIEL0190S0201

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

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

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

- to ASCD control unit terminal 11,
- from ASCD steering switch terminal 4.

Then ASCD motor actuator is activated to control throttle wire and ASCD control unit supplies ground:

- to combination meter terminal 7 to illuminate SET indicator.

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

NIEL0190S0202

When the vehicle speed is approximately 5 km/h (3 MPH) below set speed, a signal is sent:

- from ASCD control unit terminal 10
- to TCM terminal 24

When this occurs, the TCM cancels overdrive.

When vehicle speed returns to approximately 0.6 km/h (0.4 MPH) below set speed, overdrive is reactivated.

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

System Description (Cont'd)

Coast Operation

NIEL0190S0203

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

If SET/COAST switch is pressed and released quickly during cruise control driving, vehicle set speed will be reduced by 1.6 km/h (1.0 MPH).

Accel Operation

NIEL0190S0204

When the ACCEL/RES switch is depressed, ground is supplied:

- from ASCD steering switch terminal 4
- to ASCD control unit terminal 11.

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

If ACCEL/RES switch is pressed and released quickly during cruise control driving, vehicle set speed will be increased by 1.6 km/h (1.0 MPH).

Cancel Operation

NIEL0190S0205

When any of following conditions exist, cruise operation will be canceled:

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

If CRUISE/ON●OFF switch is turned to OFF when ASCD is activated, all of ASCD operation will be canceled and vehicle speed memory will be erased.

Resume Operation

NIEL0190S0206

When the ACCEL/RES switch is depressed, after cancel operation other than depressing CRUISE/ON●OFF switch is performed, vehicle speed will return to last set speed. To resume vehicle set speed, vehicle condition must meet following conditions:

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

ASCD MOTOR ACTUATOR OPERATION

NIEL0190S03

When the ASCD activates, power is supplied:

- from terminal 7 of ASCD control unit
- to ASCD motor actuator terminal 1, and
- from terminal 12 of ASCD control unit
- to ASCD motor actuator terminal 6.

Ground is supplied:

- from ASCD control unit terminals 1, 13, and 14
- to terminals 3, 5, and 2 of ASCD motor actuator.

Power to the actuator motor is supplied constantly from the ASCD control unit. The ASCD control unit then switches the actuator motor ground signals ON and OFF to control actuator motor operation and vehicle speed.

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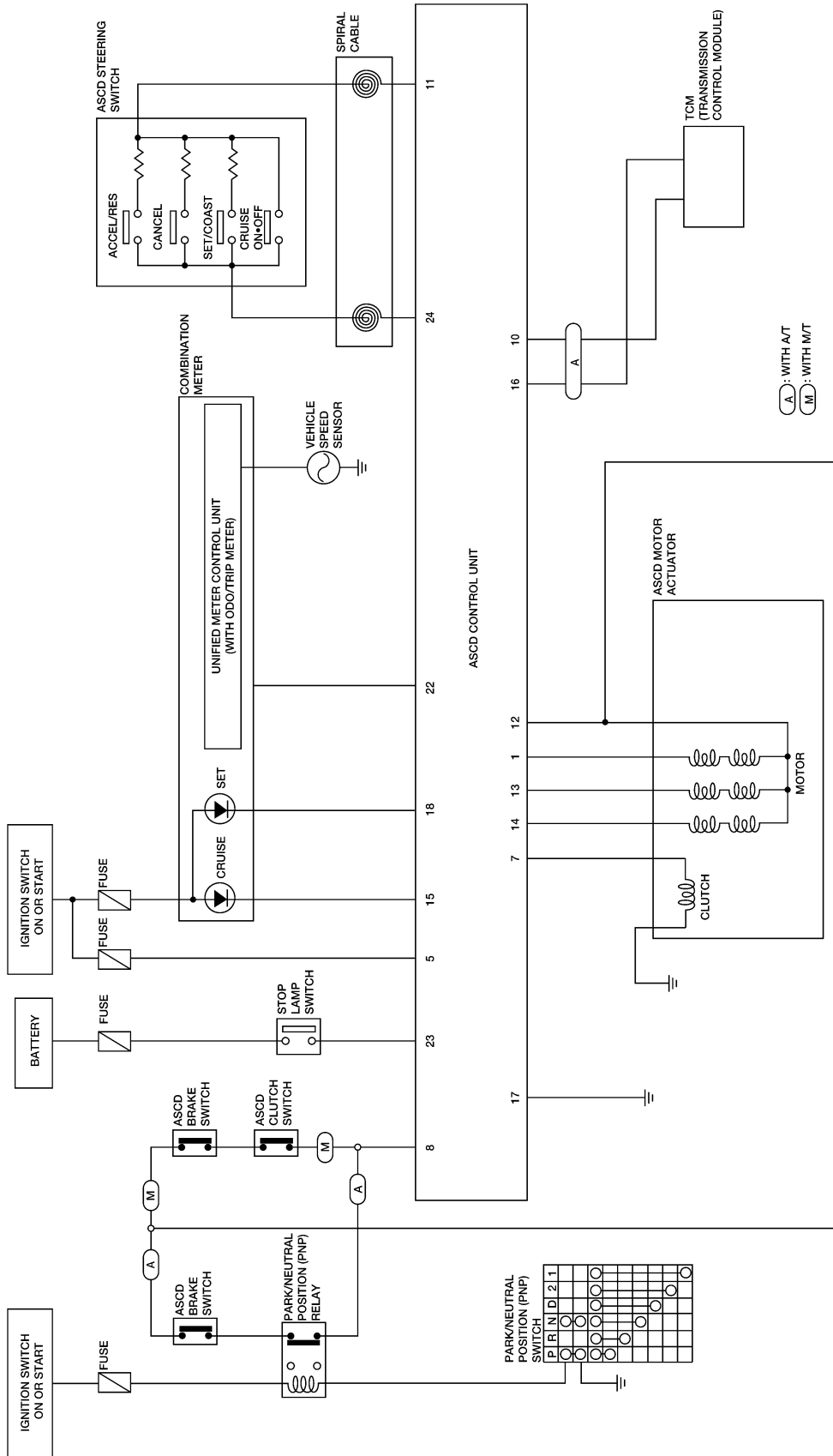
IDX

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Schematic

Schematic

NIEL0096



WEL032B

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD —

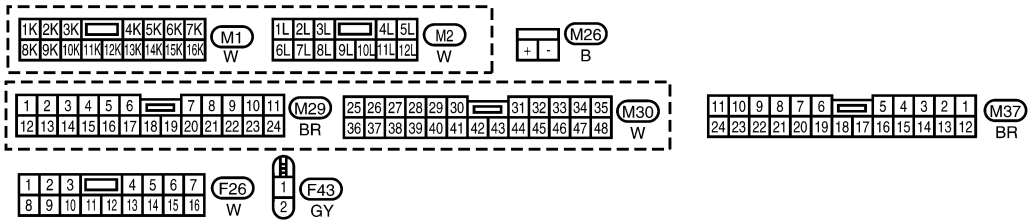
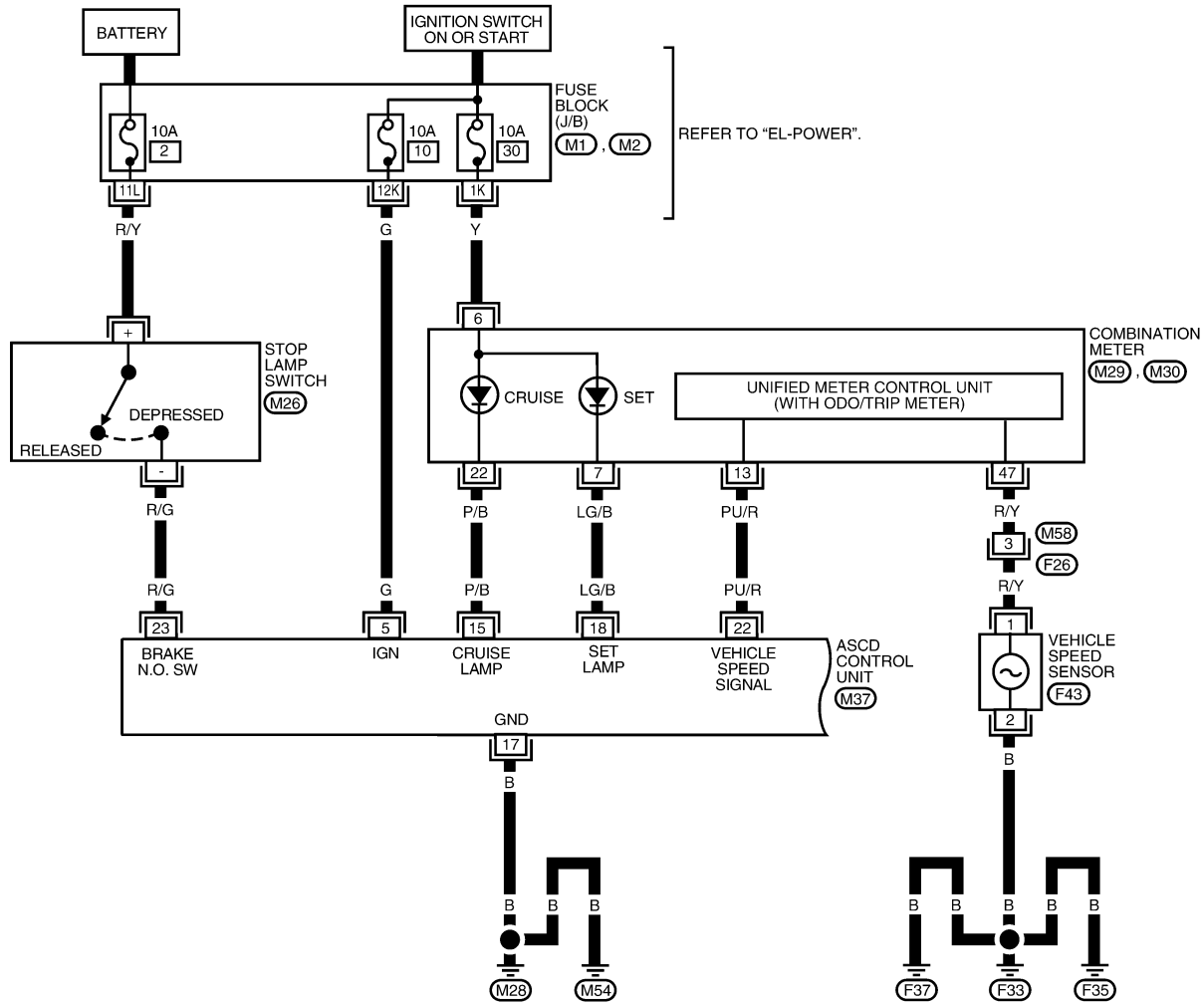
FIG. 1

Wiring Diagram — ASCD —

NIEL0097

NIEL0097S01

EL-ASCD-01



WEL033B

ASCD CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
5	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN ON POSITION	12V
		IGNITION SWITCH (START)	IGNITION KEY IS IN START POSITION	12V
17	B	GROUND	—	—
			—	—
23	R/G	STOP LAMP SWITCH	RELEASED	0V
			DEPRESSED	12V

LEL601

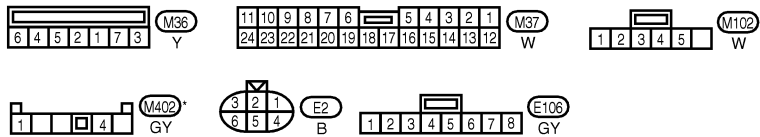
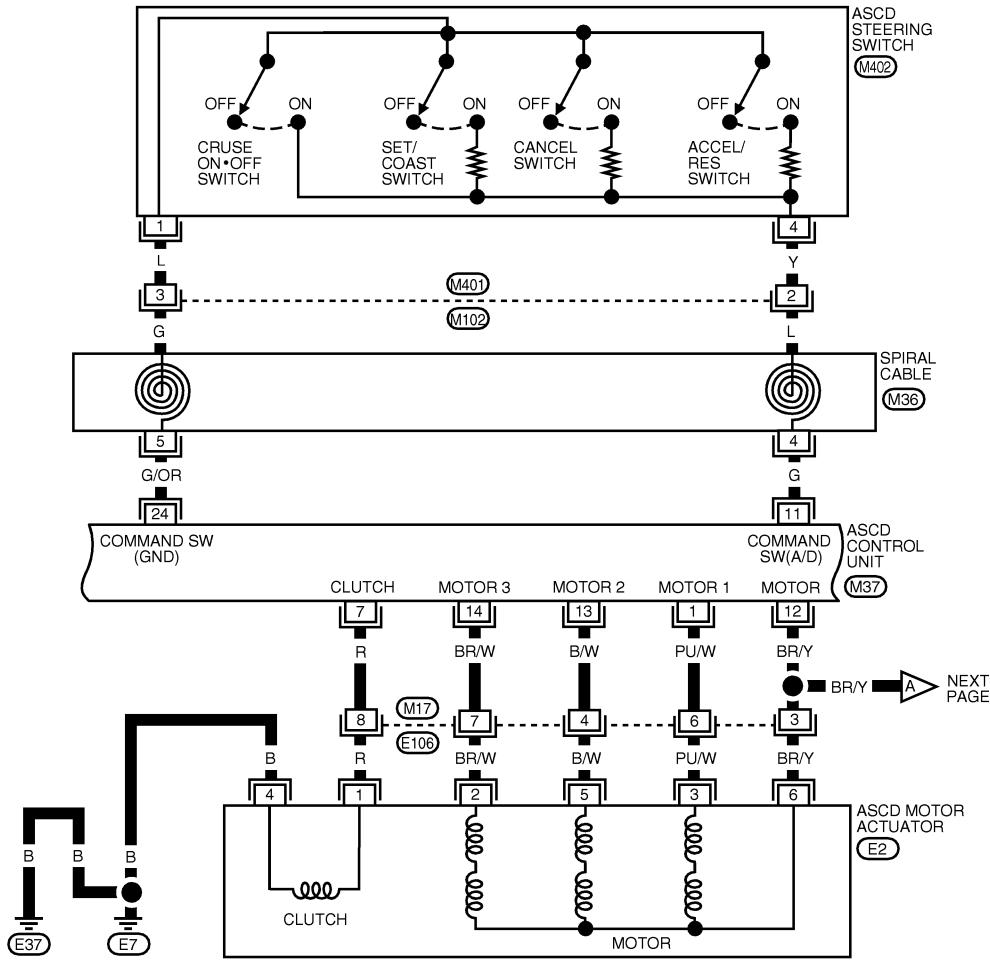
AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD — (Cont'd)

FIG. 2

NIEL0097S02

EL-ASCD-02



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

LEL400

ASCD CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	PU/W	MOTOR LOWER SIDE OUTPUT 1	IGNITION SWITCH ON, ACCEL/RES SWITCH IN ON POSITION, VEHICLE SPEED GREATER THAN 40 km/h (25 MPH)	0 - 1.2V
7	R	CLUTCH UPPER SIDE OUTPUT	SET SWITCH IN ON POSITION, VEHICLE SPEED GREATER THAN 40 km/h (25 MPH)	BATTERY VOLTAGE
11	G	COMMAND SWITCH (A/D) INPUT	CRUISE ON•OFF SWITCH IN ON POSITION	5.5V
12	BR/Y	MOTOR UPPER SIDE OUTPUT	IGNITION SWITCH ON, ACCEL/RES SWITCH IN ON POSITION, VEHICLE SPEED GREATER THAN 40 km/h (25 MPH)	BATTERY VOLTAGE
13	B/W	MOTOR LOWER SIDE OUTPUT 2	IGNITION SWITCH ON, ACCEL/RES SWITCH IN ON POSITION, VEHICLE SPEED GREATER THAN 40 km/h (25 MPH)	0 - 1.2V
14	BR/W	MOTOR LOWER SIDE OUTPUT 3	IGNITION SWITCH ON, ACCEL/RES SWITCH IN ON POSITION, VEHICLE SPEED GREATER THAN 40 km/h (25 MPH)	0 - 1.2V
24	G/OR	COMMAND SWITCH GROUND INPUT	—	—

CAUTION: FIX REAR TIRES WITH TIRE STOPPER. SUPPORT FRONT GARAGE JACK POINTS AND PUT SAFETY STANDS TO FRONT SAFETY STAND POINTS.

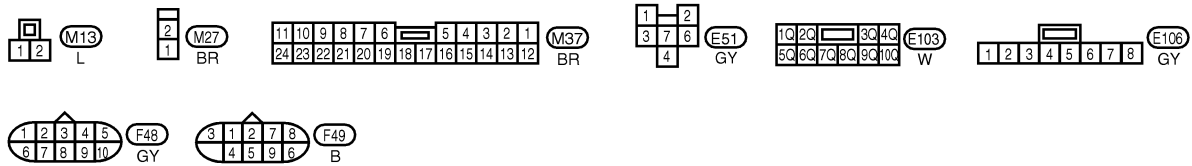
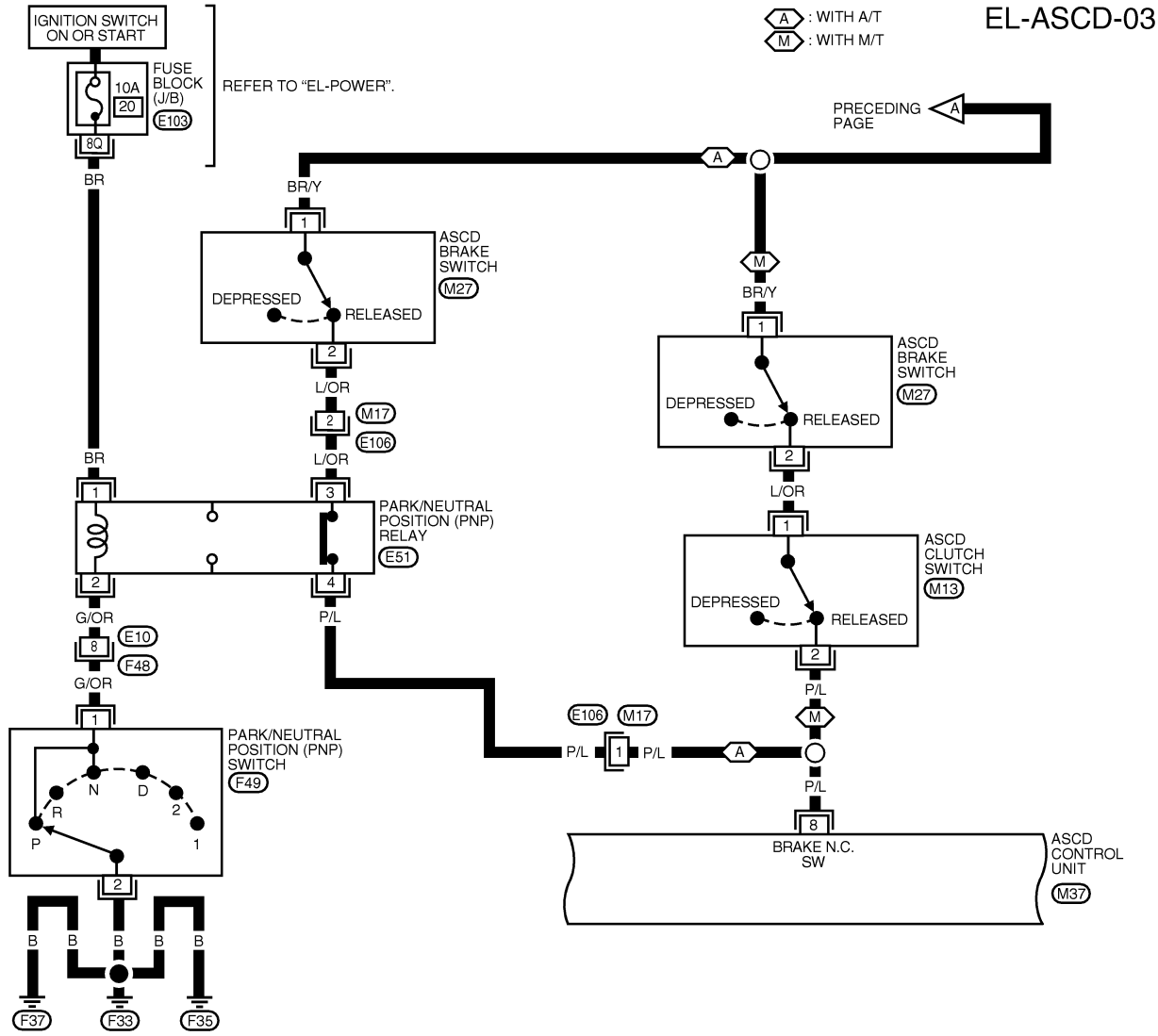
WEL431A

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD — (Cont'd)

FIG. 3

NIEL0097S03



LEL401

ASCD CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
8	P/L	ASCD BRAKE SWITCH, ASCD CLUTCH SWITCH (M/T)	RELEASED (ASCD OPERATING)	12V
			DEPRESSED (ASCD OPERATING)	0V
8	P/L	ASCD BRAKE SWITCH (A/T)	RELEASED (ASCD OPERATING)	12V
			DEPRESSED (ASCD OPERATING)	0V

LEL602

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

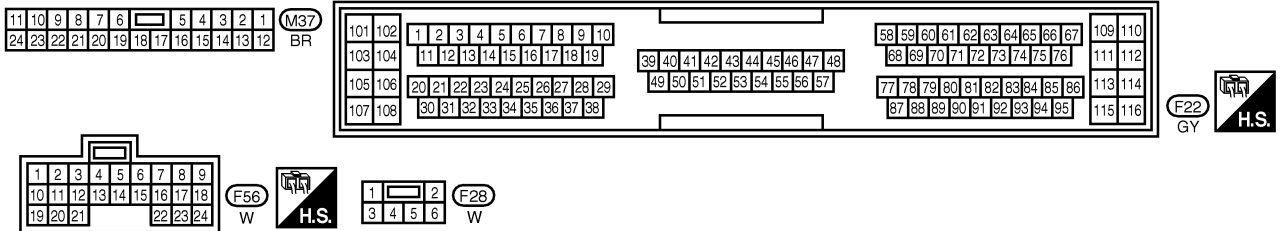
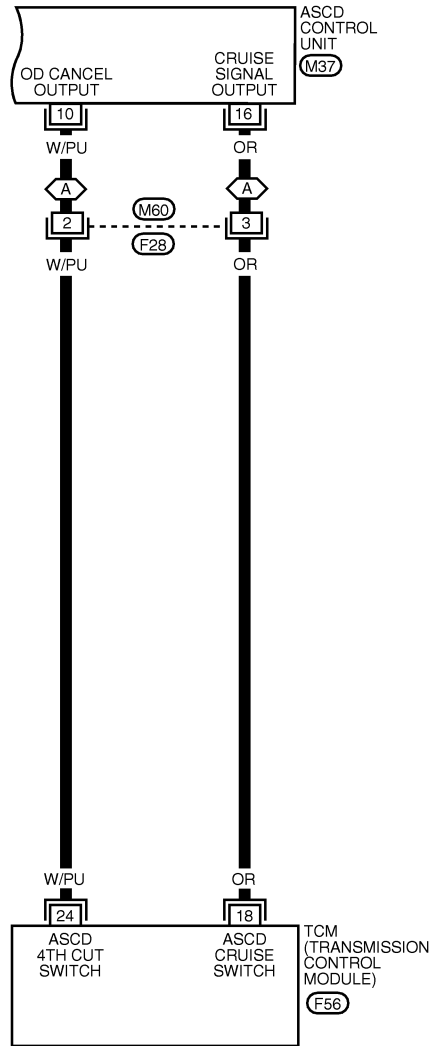
Wiring Diagram — ASCD — (Cont'd)

FIG. 4

NIEL0097S04

EL-ASCD-04

⬡ : WITH A/T



WEL140A

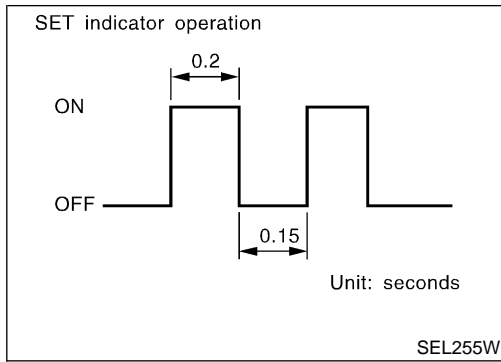
ASCD CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	W/PU	OD CANCEL OUTPUT	OD CANCEL OUTPUT TO TCM	APPROX. 1V
			OD RESUME OUTPUT TO TCM	0V
16	OR	CRUISE SIGNAL OUTPUT	EXCEPT CRUISE CONTROL DRIVING	1V OR LESS
			DURING CRUISE CONTROL DRIVING	BATTERY VOLTAGE

WEL098A

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Fail-safe System



Fail-safe System

DESCRIPTION

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

NIEL0228

NIEL0228S01

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MALFUNCTION DETECTION CONDITIONS

NIEL0228S02

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

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses

Trouble Diagnoses SYMPTOM CHART

=NIEL0232

NIEL0232S01

PROCEDURE	Diagnostic procedure						
REFERENCE PAGE (EL-)	181	182	183	184	185	185	187
SYMPTOM	FAIL-SAFE SYSTEM CHECK	POWER SUPPLY AND GROUND CIRCUIT CHECK	ASCD BRAKE/STOP LAMP SWITCH CHECK	ASCD STEERING SWITCH CHECK	VEHICLE SPEED SENSOR CHECK	ASCD MOTOR ACTUATOR CIRCUIT CHECK	ASCD MOTOR ACTUATOR CHECK
ASCD cannot be set. ("CRUISE" indicator lamp does not turn ON.)		X		X★3			
ASCD cannot be set. ("SET" indicator lamp does not turn ON.)			X	X	X		
ASCD cannot be set. ("SET" indicator lamp blinks.★1)	X		X	X	X	X	
Vehicle speed does not decrease after SET/COAST switch has been pressed.				X			X
Vehicle speed does not return to the set speed after ACCEL/RES switch has been pressed.★2				X			X
Vehicle speed does not increase after ACCEL/RES switch has been pressed.				X			X
System is not released after CANCEL switch (steering) has been pressed.				X			X
Large difference between set speed and actual vehicle speed.					X	X	X
Deceleration is greatest immediately after ASCD has been set.					X	X	X

X: Applicable

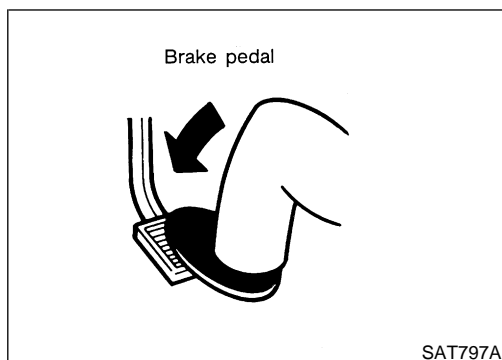
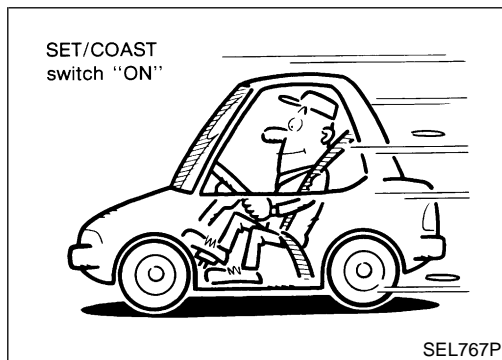
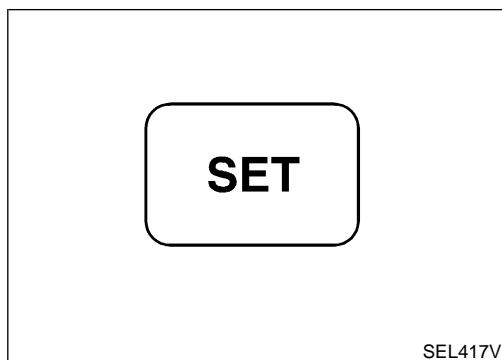
★1: It indicates that system is in fail-safe. After completing diagnostic procedures, perform "FAIL-SAFE SYSTEM CHECK", (EL-181) to verify repairs.

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

★3: Check only CRUISE ON●OFF switch built-in steering switch.

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)



FAIL-SAFE SYSTEM CHECK

-NIEL0232S02

1. Turn ignition switch to ON position.
2. Turn CRUISE ON●OFF switch to ON and check if the "SET" indicator blinks.

If the indicator lamp blinks, check the following.

- ASCD steering switch. Refer to "ASCD STEERING SWITCH CHECK", EL-184.

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

If the indicator lamp blinks, check the following.

- Vehicle speed sensor. Refer to "VEHICLE SPEED SENSOR CHECK", EL-185.
- ASCD motor actuator circuit. Refer to "ASCD MOTOR ACTUATOR CIRCUIT CHECK", EL-185.
- Replace control unit.

4. Drive the vehicle at more than 20 km/h (12 MPH).

If the indicator lamp blinks, check the following.

- Replace ASCD motor actuator.
- 5. Depress brake pedal slowly (brake pedal should be depressed more than 5 seconds).

If the indicator lamp blinks, check the following.

- ASCD brake/stop lamp switch. Refer to "ASCD BRAKE/STOP LAMP SWITCH CHECK", EL-183.

6. END. (System is OK.)

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

POWER SUPPLY AND GROUND CIRCUIT CHECK

=NIEL0232S03

1	CHECK POWER SUPPLY CIRCUIT FOR ASCD CONTROL UNIT	
<p>1. Disconnect ASCD control unit harness connector. 2. Turn ignition switch ON. 3. Check voltage between ASCD control unit harness connector terminal 5 and ground.</p>		
Does battery voltage exist?		
LEL516		
Refer to "Wiring Diagram —ASCD—", EL-175.		
Yes	▶	GO TO 2.
No	▶	Check the following. <ul style="list-style-type: none"> ● 10A fuse (No. 10 located in the fuse block) ● Harness for open or short

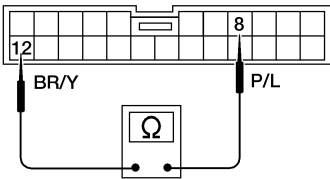



2	CHECK GROUND CIRCUIT FOR ASCD CONTROL UNIT	
Check continuity between ASCD control unit harness connector terminal 17 and body ground.		
Does continuity exist?		
LEL517		
Refer to "Wiring Diagram —ASCD—", EL-175.		
Yes	▶	Power supply and ground circuit is OK.
No	▶	Repair harness.

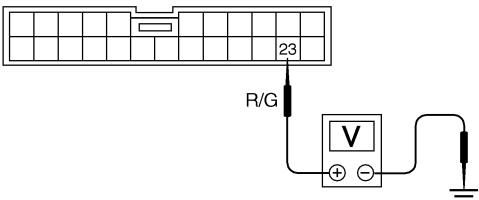


AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

ASCD BRAKE/STOP LAMP SWITCH CHECK

-NIEL0232S06

1	CHECK ASCD BRAKE SWITCH CIRCUIT	<p>1. Turn ignition switch OFF. 2. Disconnect ASCD control unit harness connector. 3. Check continuity between ASCD control unit harness connector terminal 8 and terminal 12.</p> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>ASCD control unit connector (M37)</p>  </div> <div style="flex: 1; padding-left: 20px;">  <p>When brake or clutch pedal is depressed (M/T), or when brake pedal is depressed or A/T selector lever is in "N" or "P" range (A/T): Continuity should not exist.</p>  <p>When brake and clutch pedal are released (M/T), or when both brake pedal is released and A/T selector lever is not in "N" or "P" range (A/T): Continuity should exist.</p>  </div> </div> <p style="text-align: right;">LEL518</p> <p style="text-align: center;">OK or NG</p>	<p>GI MA EM LC EC FE</p>
OK	▶	GO TO 2.	CL
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● ASCD brake switch Refer to "ASCD BRAKE SWITCH AND STOP LAMP SWITCH", EL-188. ● Park/neutral position switch (A/T) Refer to "PARK/NEUTRAL POSITION SWITCH (A/T)", EL-188. ● Park/neutral position relay (A/T) Refer to "PARK/NEUTRAL POSITION (PNP) RELAY", EL-188. ● ASCD clutch switch (M/T) Refer to "ASCD CLUTCH SWITCH (M/T)", EL-188. ● Harness for open or short ● ASCD control unit 	<p>MT AT AX SU</p>

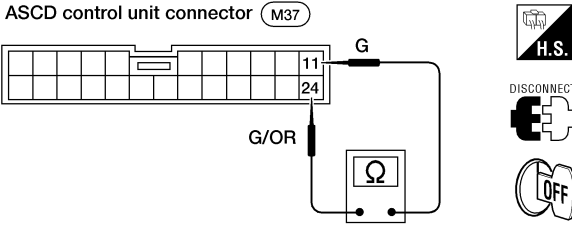
2	CHECK STOP LAMP SWITCH CIRCUIT	<p>1. Disconnect ASCD control unit harness connector. 2. Check voltage between ASCD control unit harness connector terminal 23 and ground.</p> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>ASCD control unit connector (M37)</p>  </div> <div style="flex: 1; padding-left: 20px;">  <p>Voltage [V]; Stop lamp switch: Depressed Approx. 12 Stop lamp switch: Released 0</p>  </div> </div> <p>Refer to "Wiring Diagram —ASCD—", EL-175.</p> <p style="text-align: right;">LEL519</p> <p style="text-align: center;">OK or NG</p>	<p>BR ST RS BT HA SC</p>
OK	▶	ASCD brake/stop lamp switch is OK.	EL
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 2, located in the fuse block (J/B)] ● Harness for open or short between ASCD control unit and stop lamp switch ● Harness for open or short between fuse and stop lamp switch ● Stop lamp switch Refer to "ASCD BRAKE SWITCH AND STOP LAMP SWITCH", EL-188. 	<p>IDX</p>

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

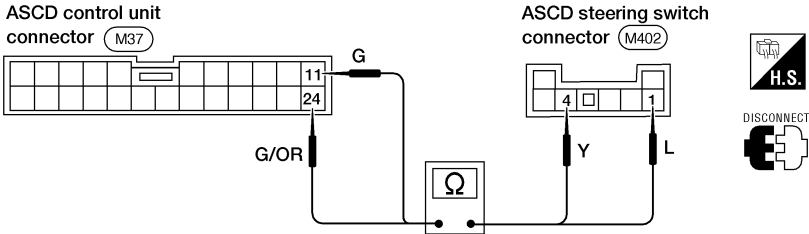
Trouble Diagnoses (Cont'd)

ASCD STEERING SWITCH CHECK

=NIEL0232S07

1	CHECK ASCD STEERING SWITCH CIRCUIT FOR ASCD CONTROL UNIT													
Check resistance between ASCD control unit harness connector terminals.														
														
<table border="1" style="border-collapse: collapse;"> <thead> <tr> <th></th> <th>Terminal No.</th> <th>Resistance (kΩ)</th> </tr> </thead> <tbody> <tr> <td>CRUISE/ON-OFF SW</td> <td rowspan="4" style="text-align: center;">11 - 24</td> <td style="text-align: center;">Approx. 0</td> </tr> <tr> <td>SET/COAST SW</td> <td style="text-align: center;">1.47 - 1.53</td> </tr> <tr> <td>ACCEL/RES SW</td> <td style="text-align: center;">3.24 - 3.36</td> </tr> <tr> <td>CANCEL SW</td> <td style="text-align: center;">5.00 - 5.20</td> </tr> </tbody> </table>				Terminal No.	Resistance (kΩ)	CRUISE/ON-OFF SW	11 - 24	Approx. 0	SET/COAST SW	1.47 - 1.53	ACCEL/RES SW	3.24 - 3.36	CANCEL SW	5.00 - 5.20
	Terminal No.	Resistance (kΩ)												
CRUISE/ON-OFF SW	11 - 24	Approx. 0												
SET/COAST SW		1.47 - 1.53												
ACCEL/RES SW		3.24 - 3.36												
CANCEL SW		5.00 - 5.20												
Refer to "Wiring Diagram —ASCD—", EL-176.														
OK or NG														
OK	▶	ASCD steering switch is OK.												
NG	▶	GO TO 2.												

LEL520

2	CHECK CIRCUIT CONTINUITY	
<ol style="list-style-type: none"> 1. Disconnect ASCD steering switch and ASCD control unit connector. 2. Check continuity between ASCD steering switch connector terminals 1 (4) and ASCD control unit connector terminal 24 (11). 		
		
Refer to "Wiring Diagram —ASCD—", EL-176.		
OK or NG		
OK	▶	Replace ASCD steering switch.
NG	▶	Repair or replace harness or connectors.

LEL521

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

VEHICLE SPEED SENSOR CHECK

-NIEL0232S08

1	CHECK SPEEDOMETER OPERATION	
Refer to "Wiring Diagram —ASCD—", EL-175.		
Does speedometer operate normally?		
Yes	▶	GO TO 2.
No	▶	Check speedometer and vehicle speed sensor circuit. Refer to "Trouble Diagnoses", EL-95.

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2	CHECK VEHICLE SPEED INPUT	
<p>1. Apply wheel chocks and jack up drive wheel. 2. Disconnect ASCD control unit harness connector. 3. Check voltage between control unit terminal 22 and ground while turning drive wheel slowly by hand.</p>		
Does voltage pointer deflect?		
LEL522		
Yes or No?		
Yes	▶	Vehicle speed sensor is OK.
No	▶	Check harness for open or short between ASCD control unit terminal 22 and combination meter terminal 13.

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ASCD MOTOR ACTUATOR CIRCUIT CHECK


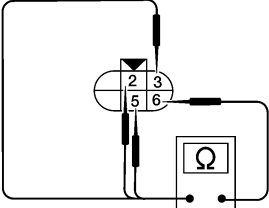
-NIEL0232S09

1	CHECK ASCD MOTOR ACTUATOR (CLUTCH)							
<p>1. Disconnect ASCD motor actuator connector. 2. Measure resistance between ASCD motor actuator terminals 1 and 4.</p>								
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">Terminals</th> <th>Resistance (Ω)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">4</td> <td style="text-align: center;">Approx. 38.5</td> </tr> </tbody> </table>			Terminals		Resistance (Ω)	1	4	Approx. 38.5
Terminals		Resistance (Ω)						
1	4	Approx. 38.5						
LEL618								
Refer to "Wiring Diagram —ASCD—", EL-176.								
OK or NG								
OK	▶	GO TO 2.						
NG	▶	Replace ASCD motor actuator.						

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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

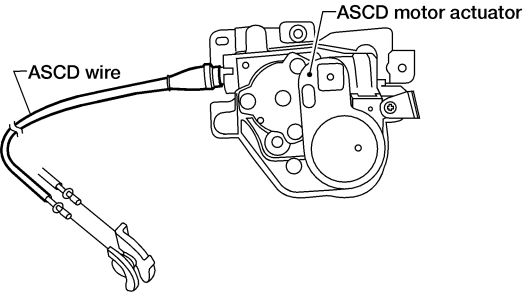
2	CHECK ASCD MOTOR ACTUATOR (MOTOR)											
<p>1. Disconnect ASCD motor actuator connector. 2. Measure resistance between ASCD motor actuator terminal 6 and terminals 2, 3, and 5.</p>												
<p>ASCD motor actuator connector</p>												
		<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">Terminals</th> <th style="text-align: center;">Resistance (Ω)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; width: 50px;">6</td> <td style="text-align: center; width: 50px;">2</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">Approx. 5.2</td> </tr> <tr> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> </tr> </tbody> </table>	Terminals		Resistance (Ω)	6	2	Approx. 5.2		3		5
Terminals		Resistance (Ω)										
6	2	Approx. 5.2										
	3											
	5											
WEL089B												
OK or NG												
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Harness for open or short between ASCD motor actuator and ASCD control unit ● ASCD motor actuator (clutch) ground circuit 										
NG	▶	Replace ASCD motor actuator.										

AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

ASCD MOTOR ACTUATOR CHECK

-NIEL0232S10

1	CHECK ASCD WIRE	<p>Check wire for improper installation, rust formation or breaks.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">LEL620</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Replace ASCD motor actuator.		
NG	▶	Repair or replace wire. Refer to "ASCD Wire Adjustment", EL-189.		

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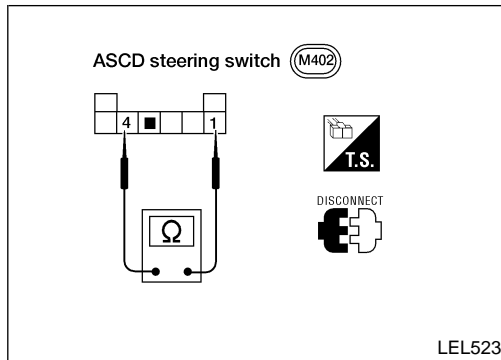
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AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Electrical Component Inspection



Electrical Component Inspection

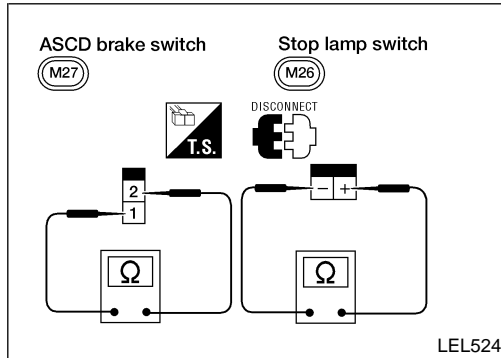
ASCD STEERING SWITCH

=NIEL0100

NIEL0100S01

Check continuity between terminals by pushing each button.

Button	Terminals	Resistance (Approx.)
CRUISE/ON•OFF	1 - 4	0 kΩ
SET/COAST		1.47 - 1.53 kΩ
ACCEL/RES		3.24 - 3.36 kΩ
CANCEL		5.00 - 5.20 kΩ

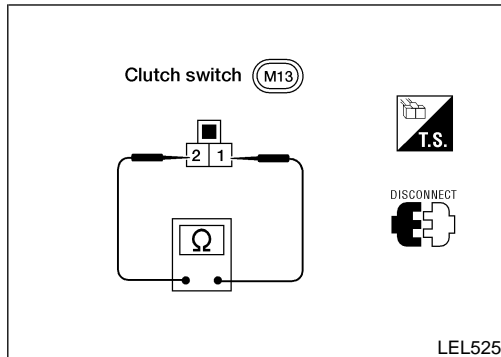


ASCD BRAKE SWITCH AND STOP LAMP SWITCH

NIEL0100S02

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

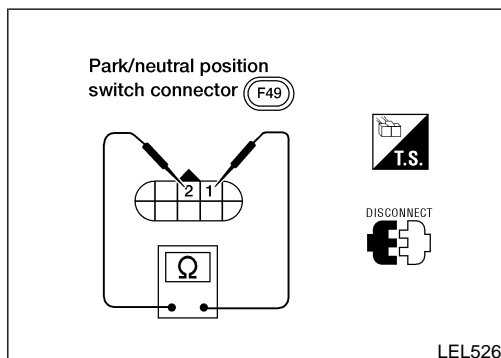
Check brake pedal adjustment after checking each switch. Refer to *BR-12*, "Adjustment".



ASCD CLUTCH SWITCH (M/T)

NIEL0100S04

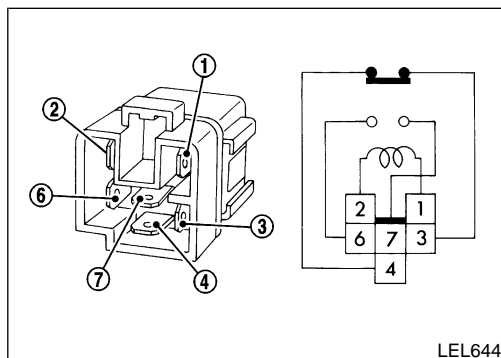
Condition	Continuity
When clutch pedal is depressed	No
When clutch pedal is released	Yes



PARK/NEUTRAL POSITION SWITCH (A/T)

NIEL0100S03

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



PARK/NEUTRAL POSITON (PNP) RELAY

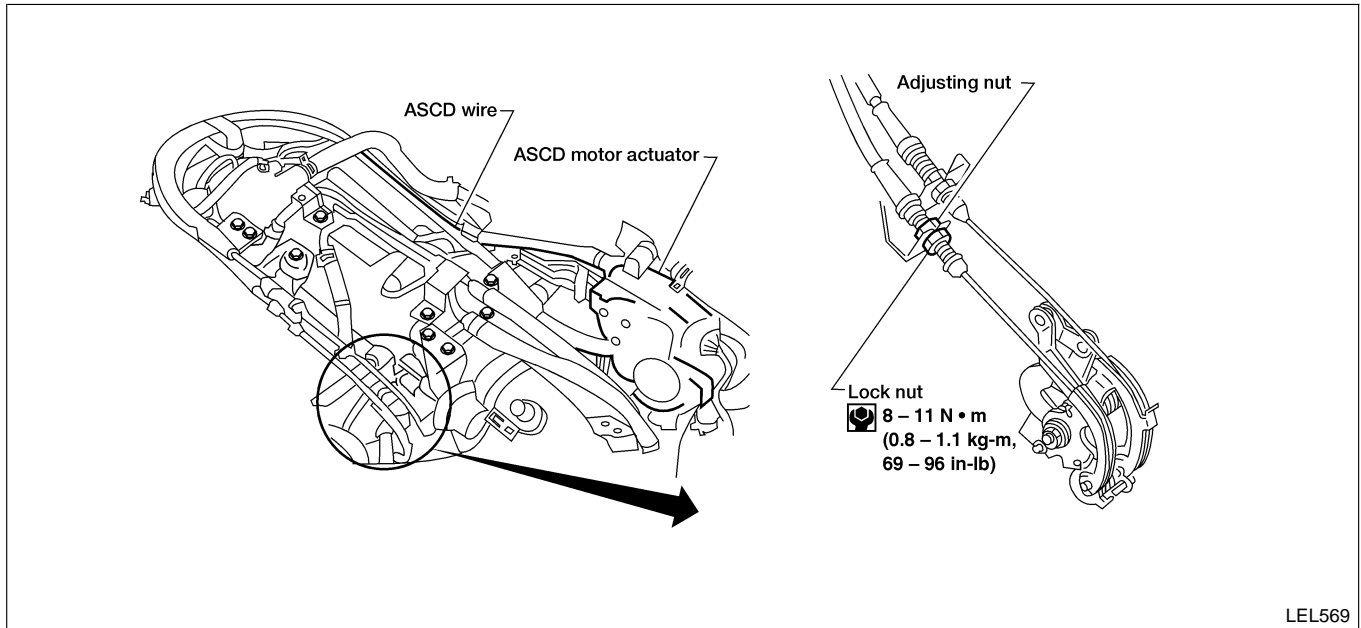
NIEL0100S05

Check continuity between terminals 3 and 4, 6 and 7.

Condition	Continuity
12V direct current supply between terminals 1 and 2	Between terminals 6 and 7
No current supply	Between terminals 3 and 4

ASCD Wire Adjustment

NIEL0101



CAUTION:

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

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POWER WINDOW

System Description

System Description

NIEL0191

Power is supplied at all times:

- from 30A fusible link (letter **d**, located in the fuse and fusible link box)
- to circuit breaker terminal +,
- through circuit breaker terminal -,
- 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 M54.

The power window relay is energized and power is supplied:

- through power window relay terminal 3,
- to main power window and door lock/unlock switch terminal 1,
- to front power window switch RH terminal 5,
- to rear power window switch LH and RH terminal 5.

MANUAL OPERATION

Front Door LH

NIEL0191S01

Ground is supplied:

- to main power window and door lock/unlock switch terminal 3,
- through body grounds M28 and M54.

WINDOW UP

When the front LH switch in the main power window and door lock/unlock switch is pressed in the up position, power is supplied:

- to front power window motor LH terminal UP,
- through main power window and door lock/unlock switch terminal 9.

Ground is supplied:

- to front power window motor LH terminal DN,
- through main power window and door lock/unlock switch terminal 8.

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

WINDOW DOWN

When the LH switch in the main power window and door lock/unlock switch is pressed in the down position, power is supplied:

- to front power window motor LH terminal DN,
- through main power window and door lock/unlock switch terminal 8.

Ground is supplied:

- to front power window motor LH terminal UP,
- through main power window and door lock/unlock switch terminal 9.

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

Front Door RH

NIEL0191S0102

Ground is supplied:

- to main power window and door lock/unlock switch terminal 3,
- through body grounds M28 and M54.

NOTE:

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

MAIN SWITCH OPERATION

Power is supplied:

- through main power window and door lock/unlock switch (5, 6),
- to front power window switch RH (3, 4).

POWER WINDOW

System Description (Cont'd)

The subsequent operation is the same as the sub-switch operation.

SUB-SWITCH OPERATION

Power is supplied:

- through front power window switch RH (1, 2),
- to front power window motor RH (UP, DN).

Ground is supplied:

- to front power window motor RH (DN, UP),
- through front power window switch RH (2, 1),
- to front power window switch RH (4, 3),
- through main power window and door lock/unlock 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 front door RH window.

AUTO OPERATION

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

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

POWER WINDOW LOCK

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

When the lock switch is pressed to lock position, ground of the sub-switches in the main power window and door lock/unlock switch is disconnected. This prevents the power window motors from operating.

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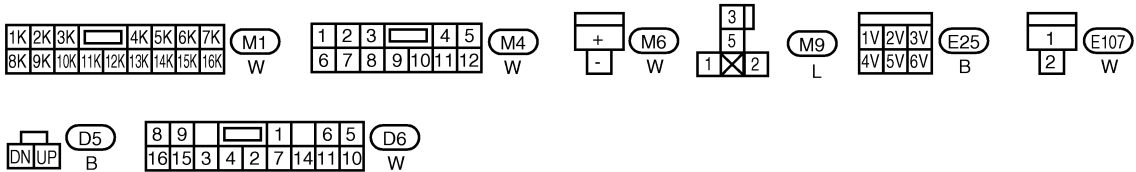
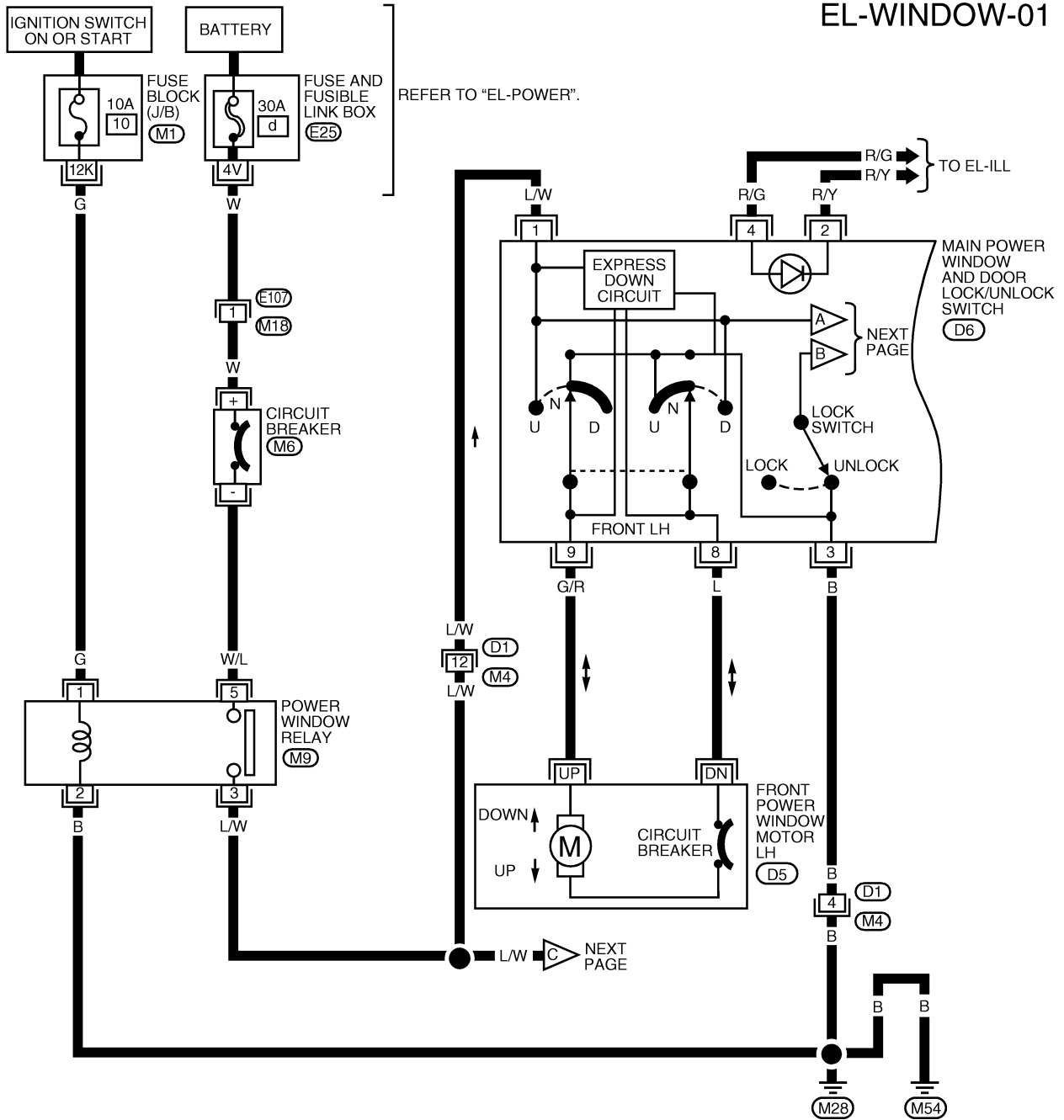
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POWER WINDOW

Wiring Diagram — WINDOW —

Wiring Diagram — WINDOW —

NIEL0259

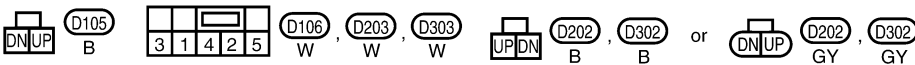
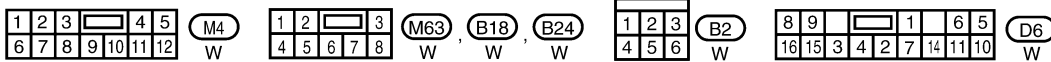
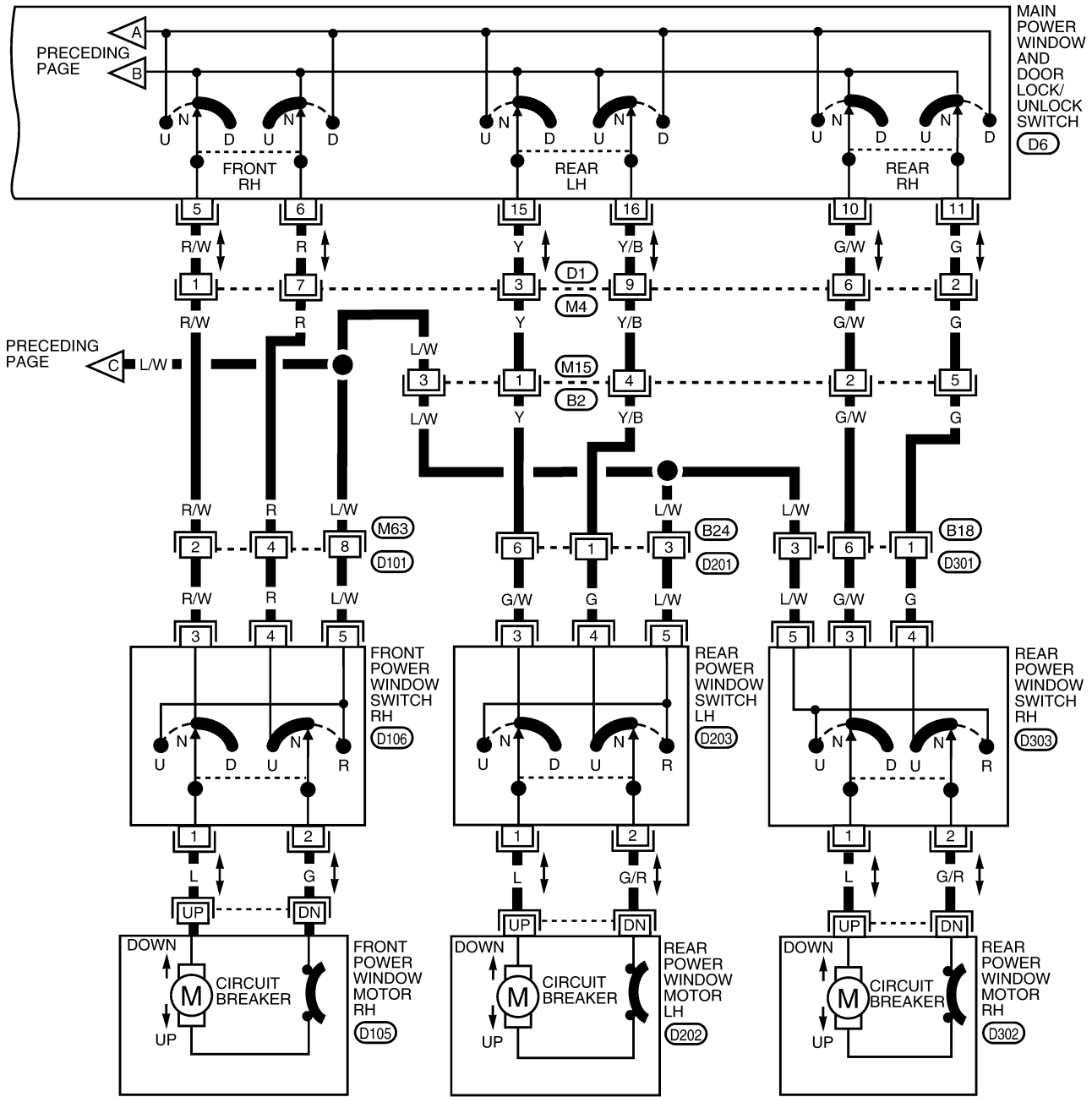


WEL373

POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-02



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WEL570A

POWER WINDOW

Trouble Diagnoses

NIEL0105

Trouble Diagnoses

Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	<ol style="list-style-type: none"> 10A fuse, 30A fusible link M6 circuit breaker Power window relay M6 circuit breaker circuit Ground circuit Main power window and door lock/unlock switch 	<ol style="list-style-type: none"> Check 10A fuse [No. 10, located in fuse block (J/B)], 30A fusible link (letter d, located in fuse and fusible link box). Check M6 circuit breaker. Check power window relay. Check the following. <ol style="list-style-type: none"> Check harness between M6 circuit breaker and 30A fusible link (letter d, located in fuse and fusible link box). Check harness between M6 circuit breaker and main power window and door lock/unlock switch. Check harness between 10A fuse [No. 10, located in fuse block (J/B)] and power window relay. Check the following. <ol style="list-style-type: none"> Check ground circuit of main power window and door lock/unlock switch terminal 3. Check power window relay ground circuit. Check main power window and door lock/unlock switch.
Driver side power window cannot be operated but other windows can be operated.	<ol style="list-style-type: none"> Driver side power window regulator circuit Driver side power window regulator Main power window and door lock/unlock switch circuit Main power window and door lock/unlock switch 	<ol style="list-style-type: none"> Check harness between main power window and door lock/unlock switch and driver side power window regulator for open or short circuit. Check driver side power window regulator. Check harness between power window relay and main power window and lock/unlock switch. Check main power window and door lock/unlock switch.
One or more power windows except driver's side window cannot be operated.	<ol style="list-style-type: none"> Power window sub-switches Power window regulators Main power window and door lock/unlock switch Power window circuit 	<ol style="list-style-type: none"> Check power window sub-switch. Check power window regulator. Check main power window and door lock/unlock switch. Check the following. <ol style="list-style-type: none"> Check harness between the power window sub switch terminal 5 and power window relay. Check harnesses between main power window and door lock/unlock switch and power window sub-switch for open/short circuit. Check harnesses between power window sub-switch and power window regulator for open/short circuit.
Power windows except driver's side window cannot be operated using main power window and door lock/unlock switch but can be operated by power window sub-switch.	<ol style="list-style-type: none"> Main power window and door lock/unlock switch 	<ol style="list-style-type: none"> Check main power window and door lock/unlock switch.

POWER DOOR LOCK

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NIEL0106

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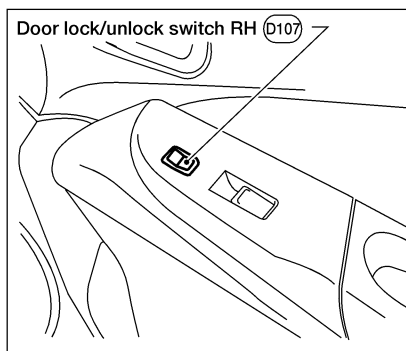
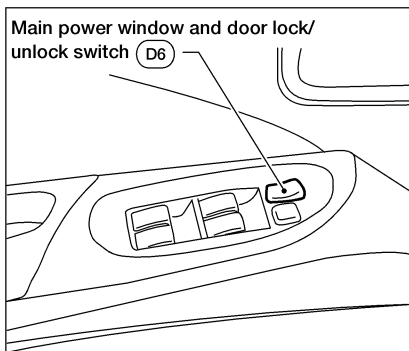
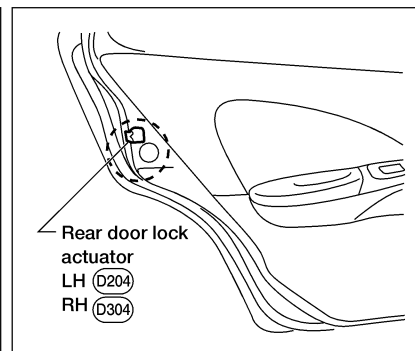
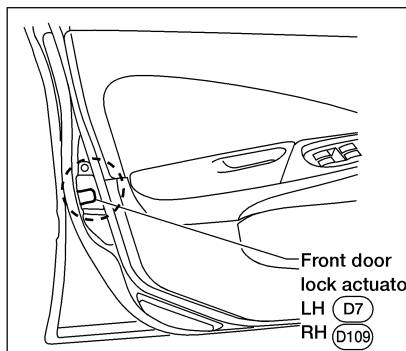
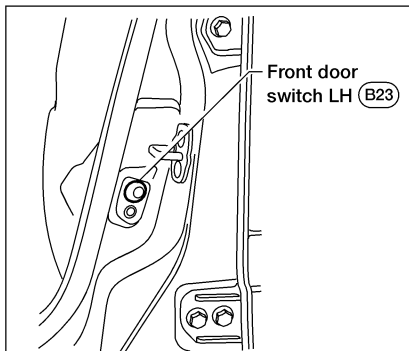
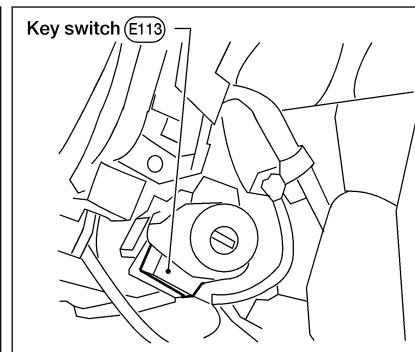
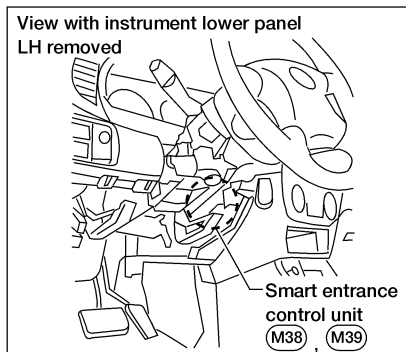
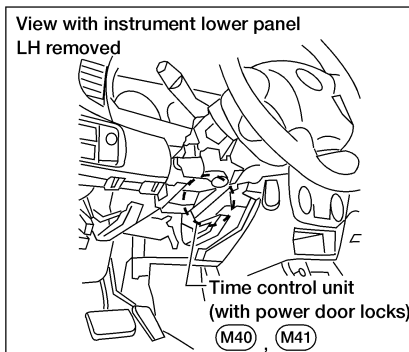
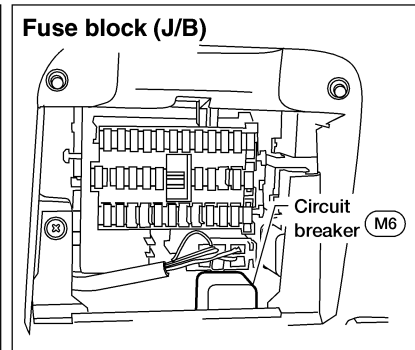
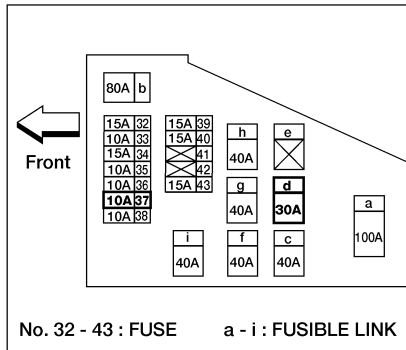
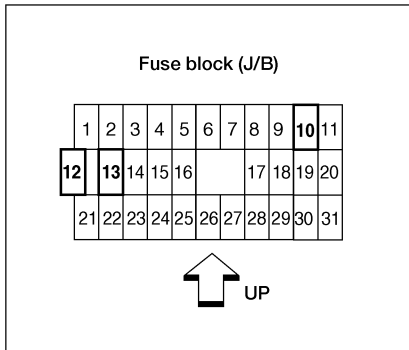
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POWER DOOR LOCK

System Description (Without Multi-Remote Control System)

System Description (Without Multi-Remote Control System)

=NIEL0107

NIEL0107S04

OPERATION

- The lock/unlock switches (LH and RH) on door trim can lock and unlock all doors.
- If the ignition key is in the ignition key cylinder and one or more of the doors are open, setting the lock/unlock switch (LH or RH) to "LOCK" locks the doors once but then immediately unlocks them (KEY REMINDER DOOR SYSTEM).

System Description (With Multi-Remote Control System)

NIEL0263

NIEL0263S01

OPERATION

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

POWER DOOR LOCK

Schematic

Schematic WITHOUT MULTI-REMOTE CONTROL SYSTEM

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NIEL0108S01

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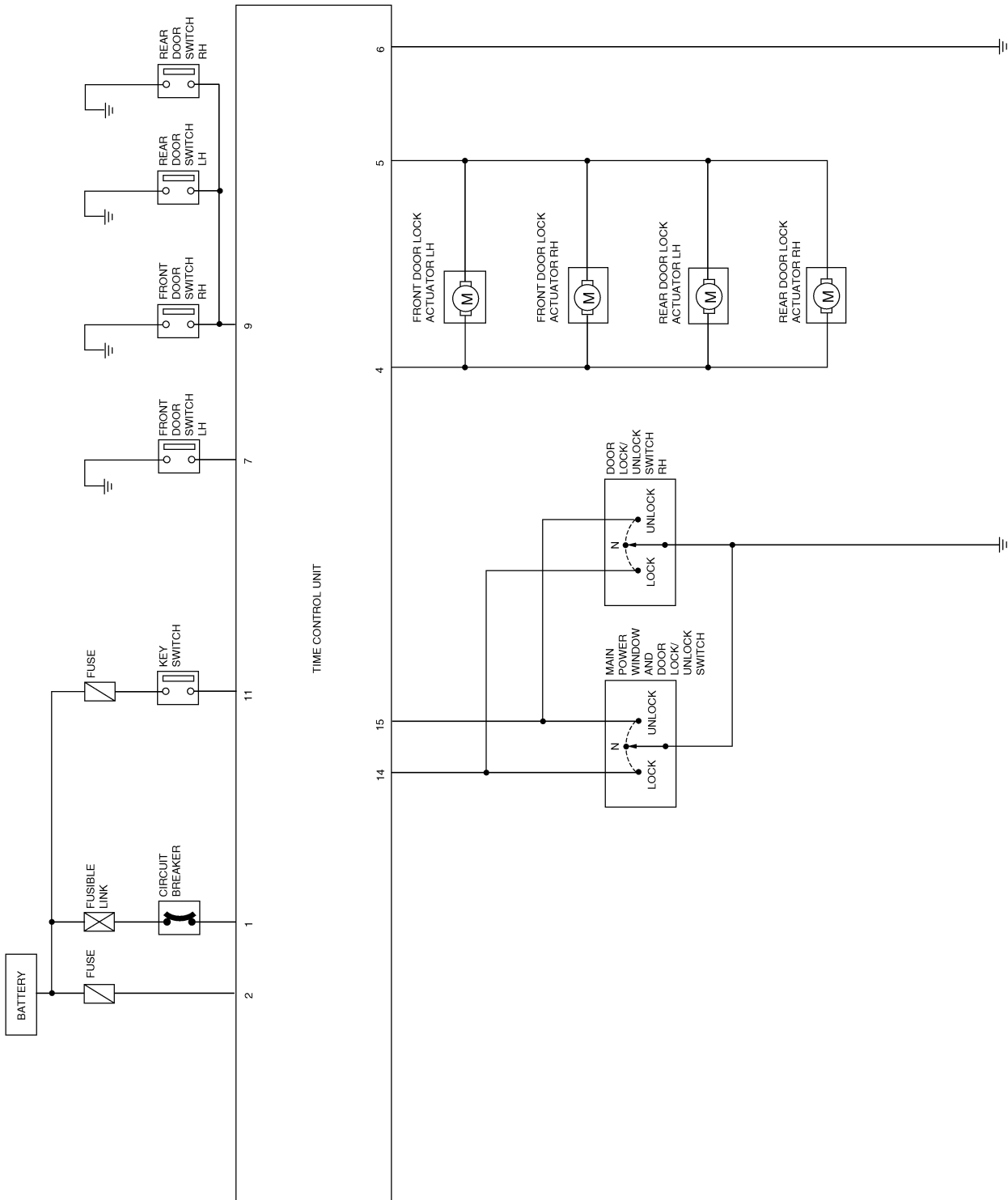
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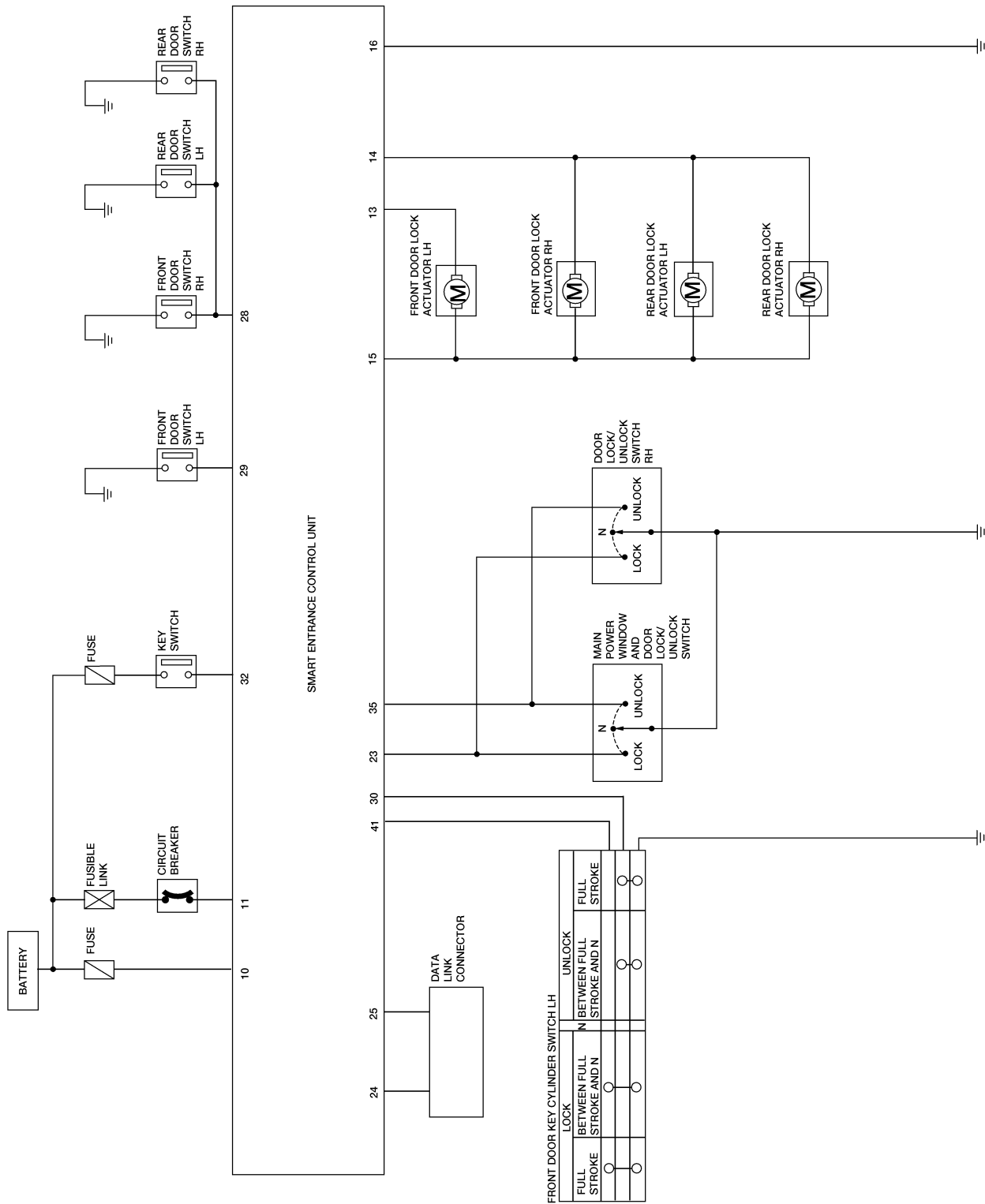


POWER DOOR LOCK

Schematic (Cont'd)

WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0108S02



LEL099A

POWER DOOR LOCK

Wiring Diagram — D/LOCK —

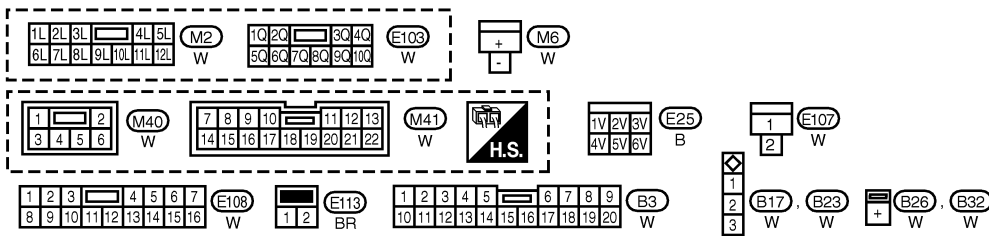
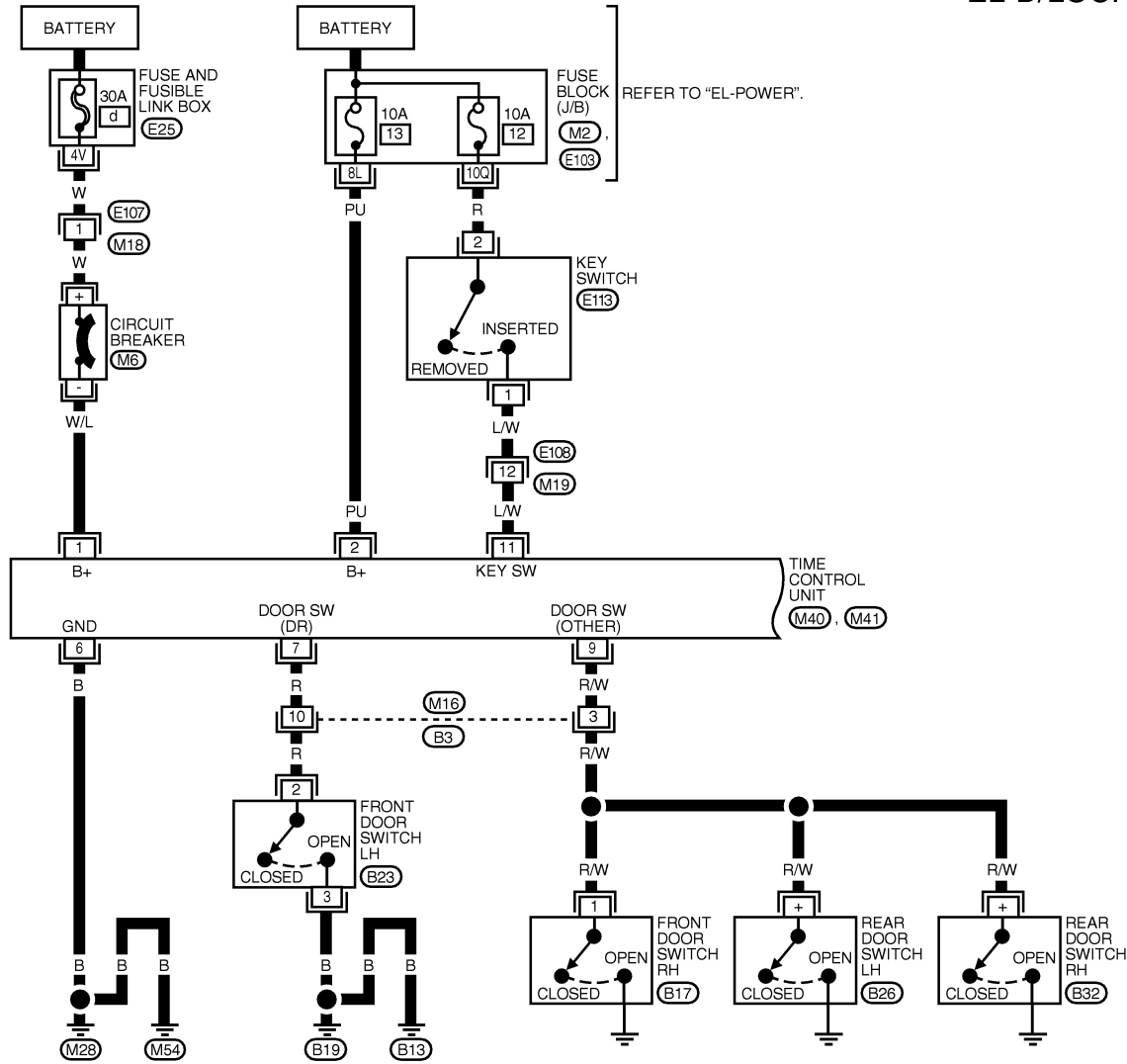
Wiring Diagram — D/LOCK —

FIG. 1 WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0109

NIEL0109S01

EL-D/LOCK-01



TIME CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	W/L	POWER SOURCE (CIRCUIT BREAKER)	—	12V
2	PU	POWER SOURCE (FUSE)	—	12V
6	B	GROUND	—	—
7	R	FRONT DOOR SWITCH LH	OFF (CLOSED)	5V
			ON (OPEN)	0V
9	R/W	OTHER DOOR SWITCHES	OFF (CLOSED)	5V
			ON (OPEN)	0V
11	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED	12V
			IGNITION KEY IS REMOVED	0V
13	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN ON POSITION	12V
			IGNITION SWITCH (START)	IGNITION KEY IS IN START POSITION

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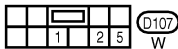
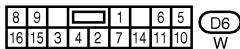
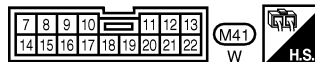
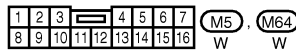
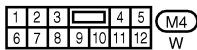
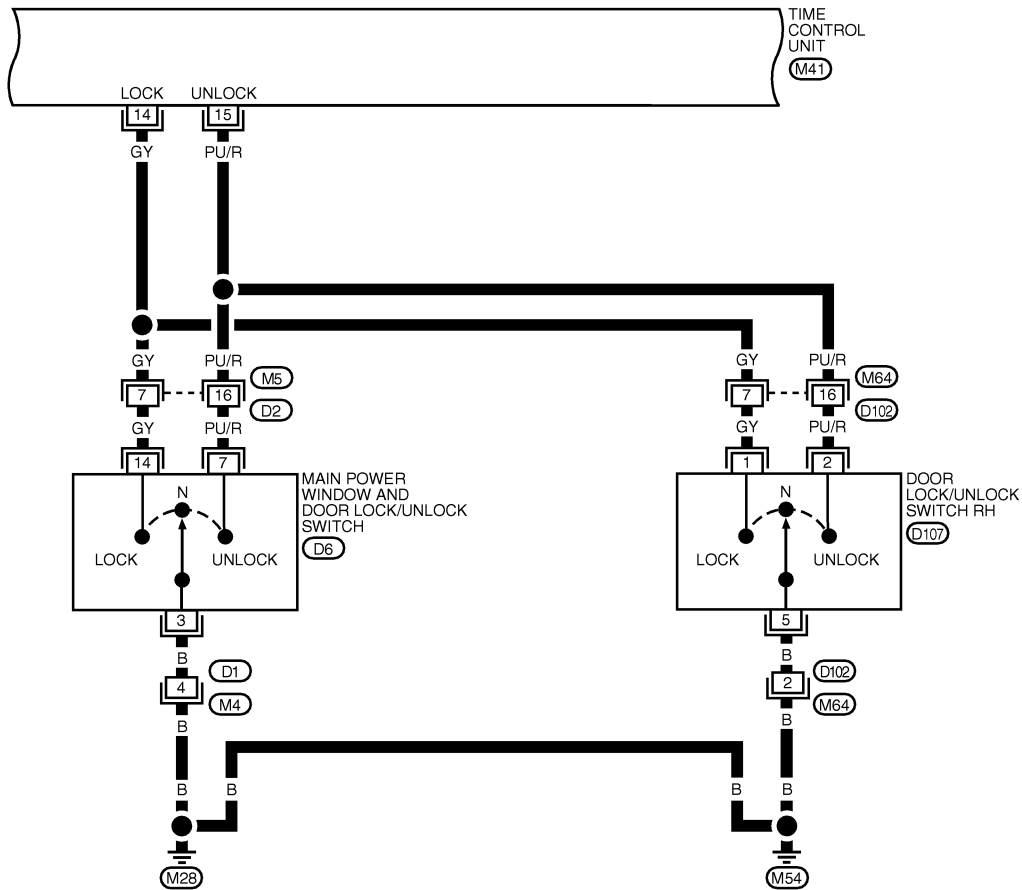
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 2 WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0109S02

EL-D/LOCK-02



LEL377

TIME CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
14	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			LOCKS	0V
15	PU/R	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			UNLOCKS	0V

LEL604

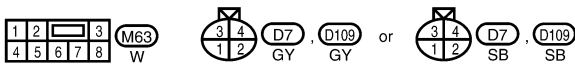
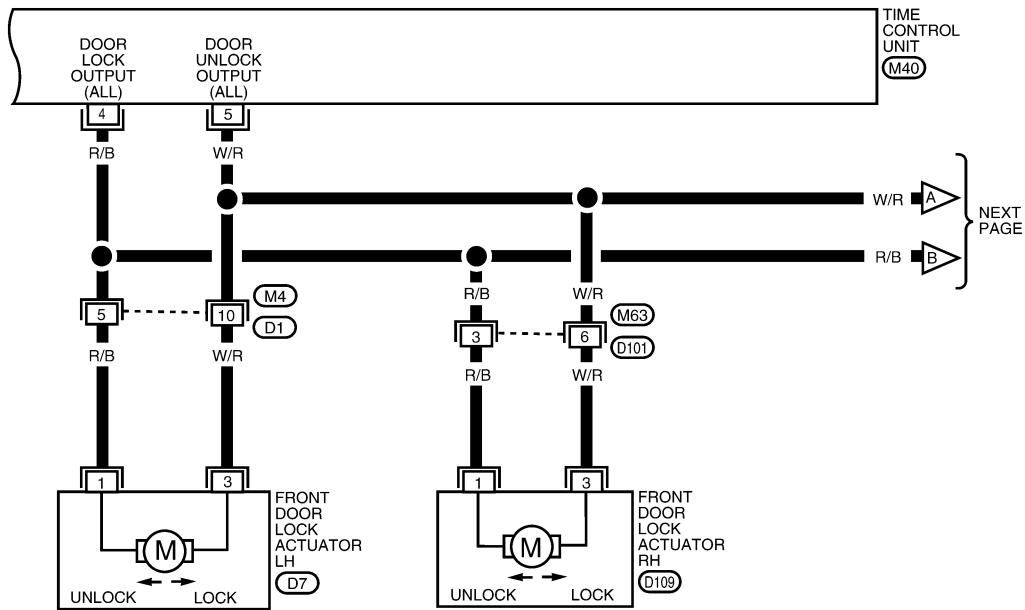
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 3 WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0109S03

EL-D/LOCK-03



WEL620A

TIME CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	
			CONDITION	DATA (DC)
4	R/B	DOOR LOCK ACTUATORS	DOOR LOCK/UNLOCK SWITCH (FREE)	0V
			DOOR LOCK/UNLOCK SWITCH (LOCKED)	12V
5	W/R	DOOR LOCK ACTUATORS	DOOR LOCK/UNLOCK SWITCH (FREE)	0V
			DOOR LOCK/UNLOCK SWITCH (UNLOCKED)	12V

LEL605

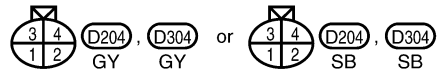
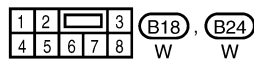
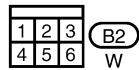
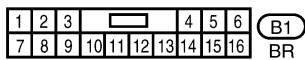
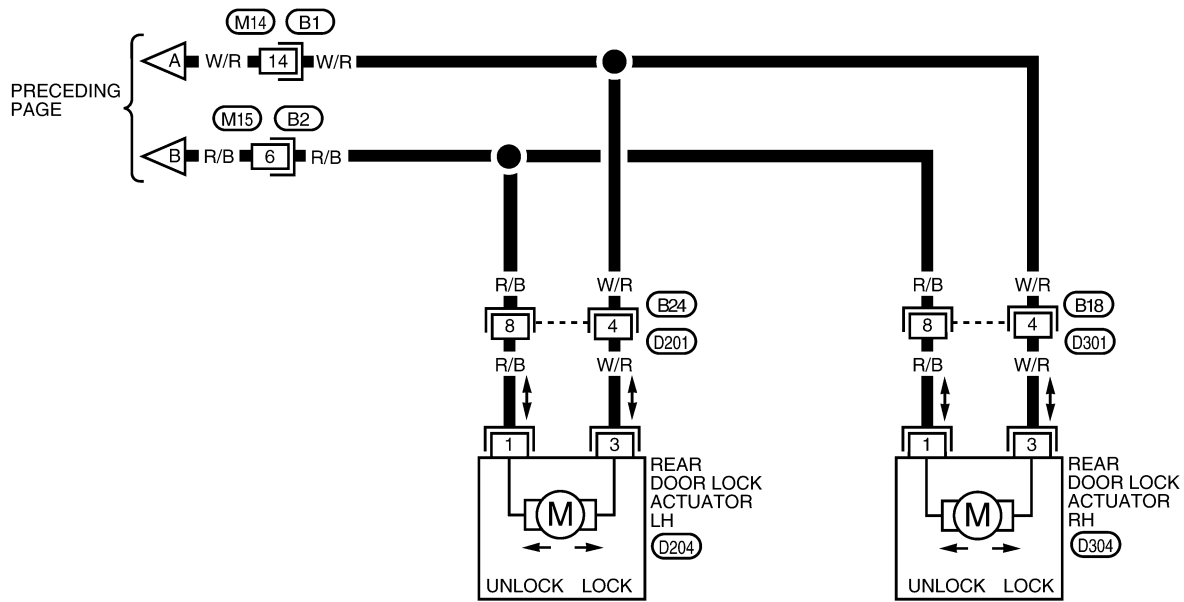
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 4 WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0109S05

EL-D/LOCK-04



WEL571A

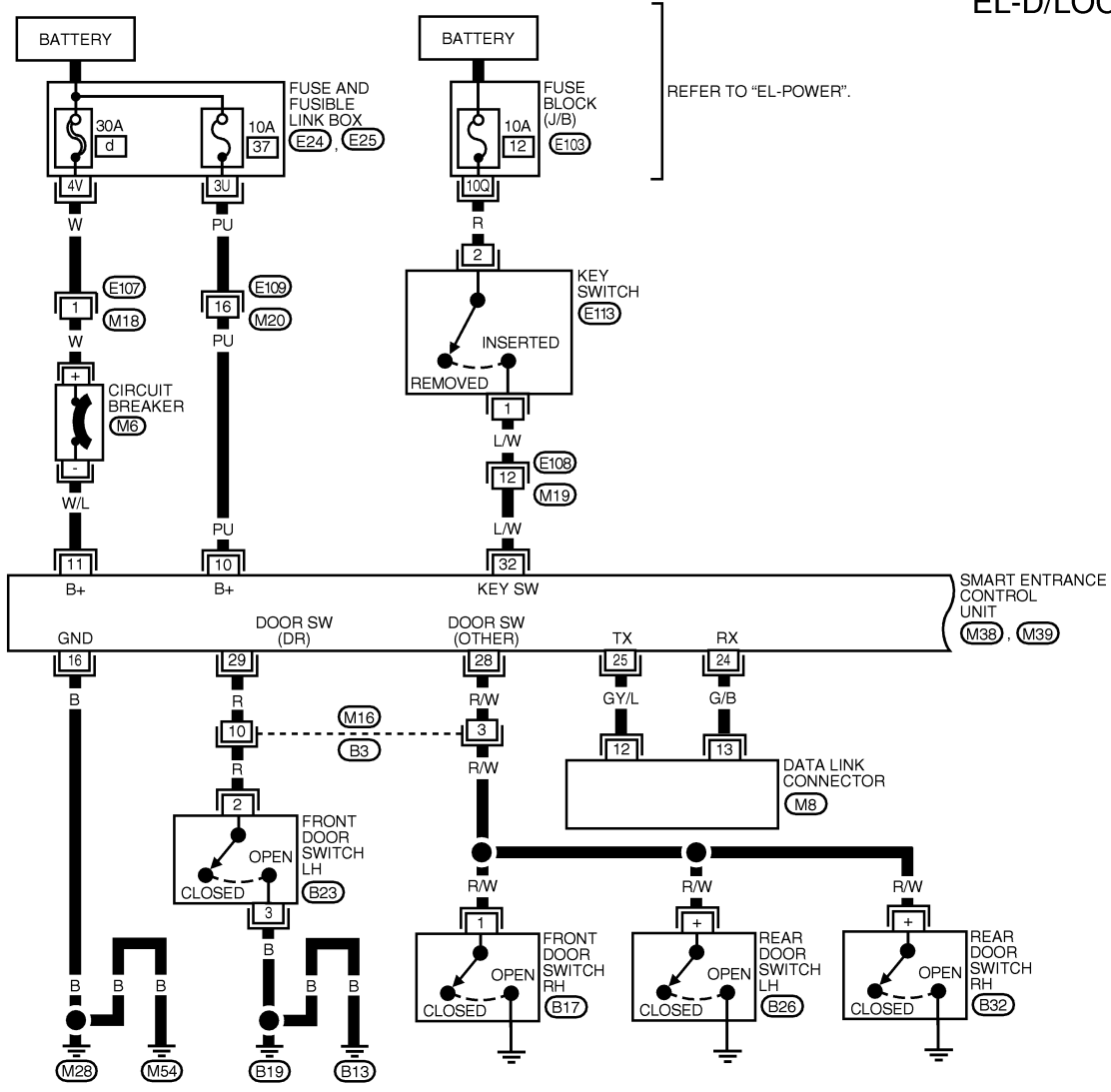
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

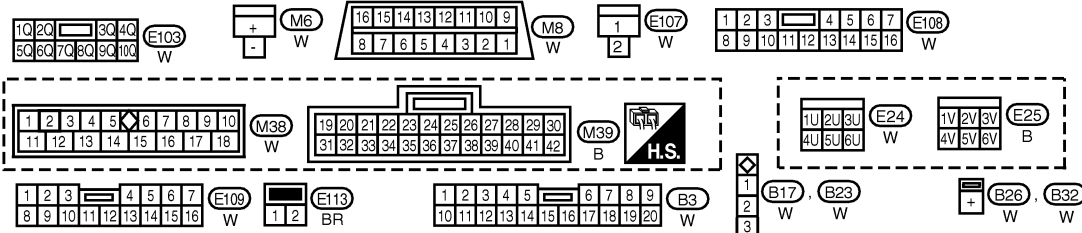
FIG. 5 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S06

EL-D/LOCK-05



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WEL381

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	PU	POWER SOURCE (FUSE)	—	12V
11	W/L	POWER SOURCE (CIRCUIT BREAKER)	—	12V
16	B	GROUND	—	—
28	R/W	OTHER DOOR SWITCHES	OFF (CLOSED)	5V
			ON (OPEN)	0V
29	R	FRONT DOOR SWITCH LH	OFF (CLOSED)	5V
			ON (OPEN)	0V
32	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED	12V
			IGNITION KEY IS REMOVED	0V
33	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS ON	12V
			IGNITION SWITCH (START)	12V

LEL606

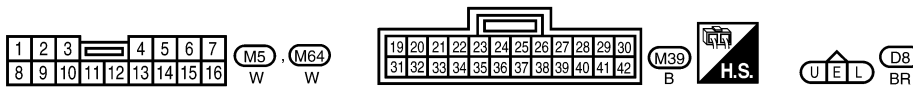
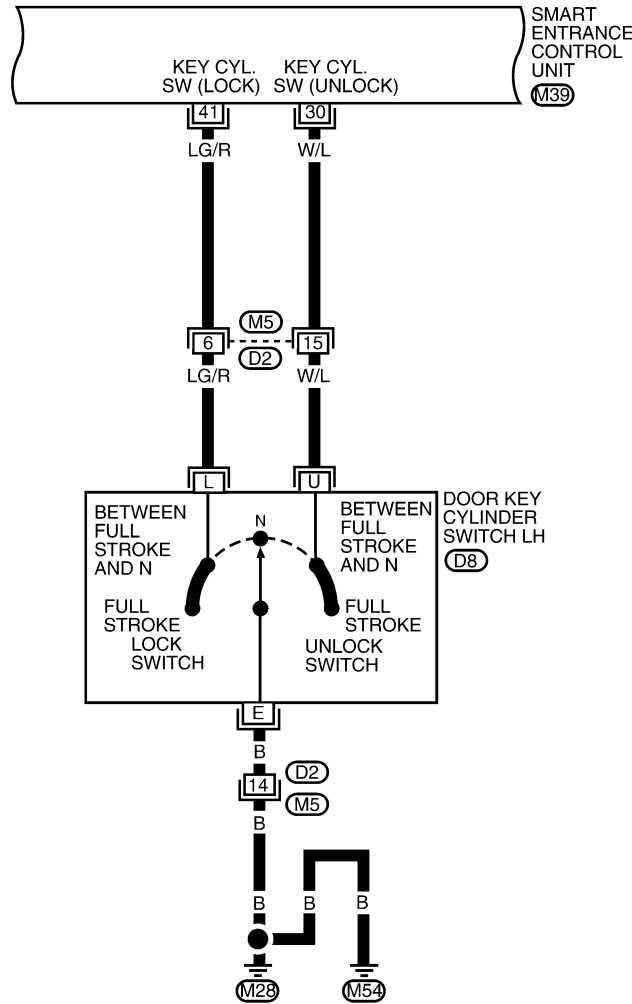
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 6 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S07

EL-D/LOCK-06



WEL100A

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
30	W/L	DOOR KEY CYLINDER UNLOCK SWITCH	OFF (NEUTRAL)	5V
			ON (UNLOCKED)	0V
41	LG/R	DOOR KEY CYLINDER LOCK SWITCH	OFF (NEUTRAL)	5V
			ON (LOCKED)	0V

LEL607

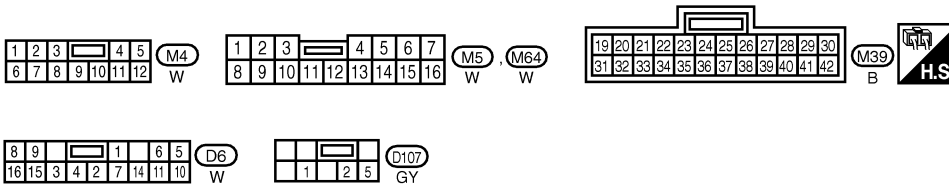
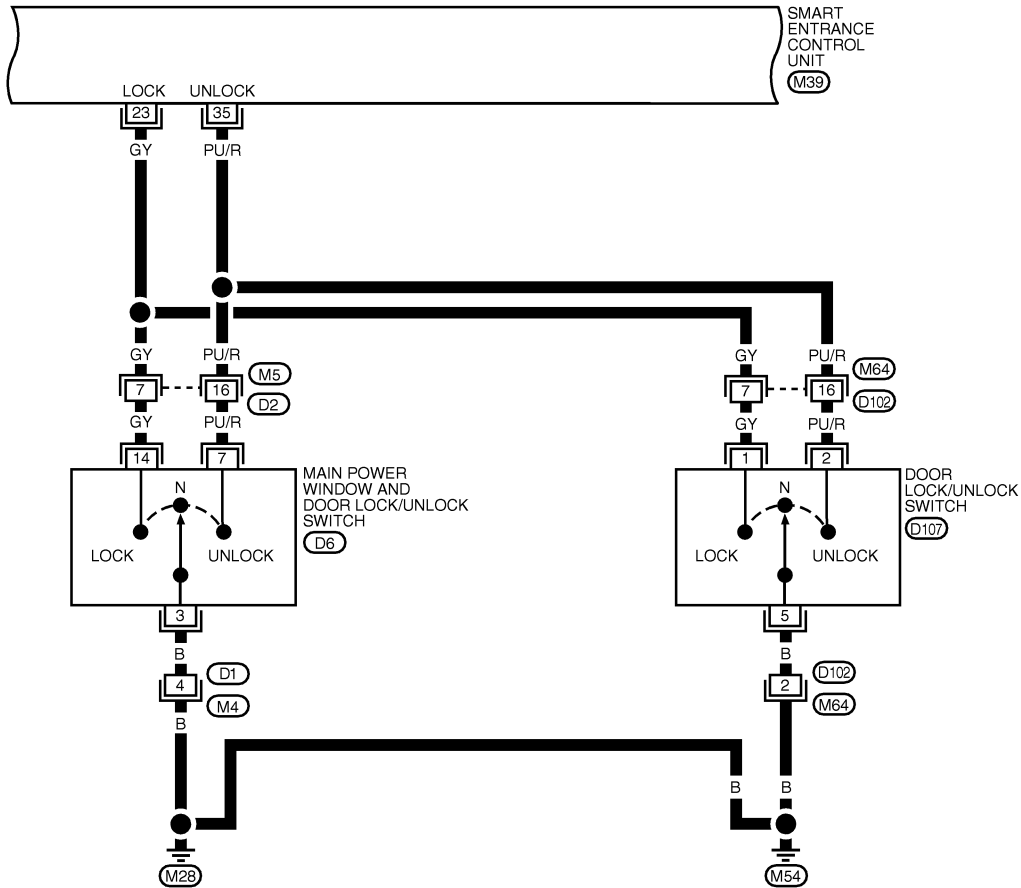
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 7 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S08

EL-D/LOCK-07



WEL383

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
23	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			LOCKS	0V
35	PU/R	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			UNLOCKS	0V

LEL608

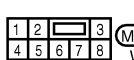
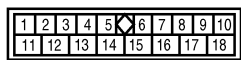
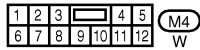
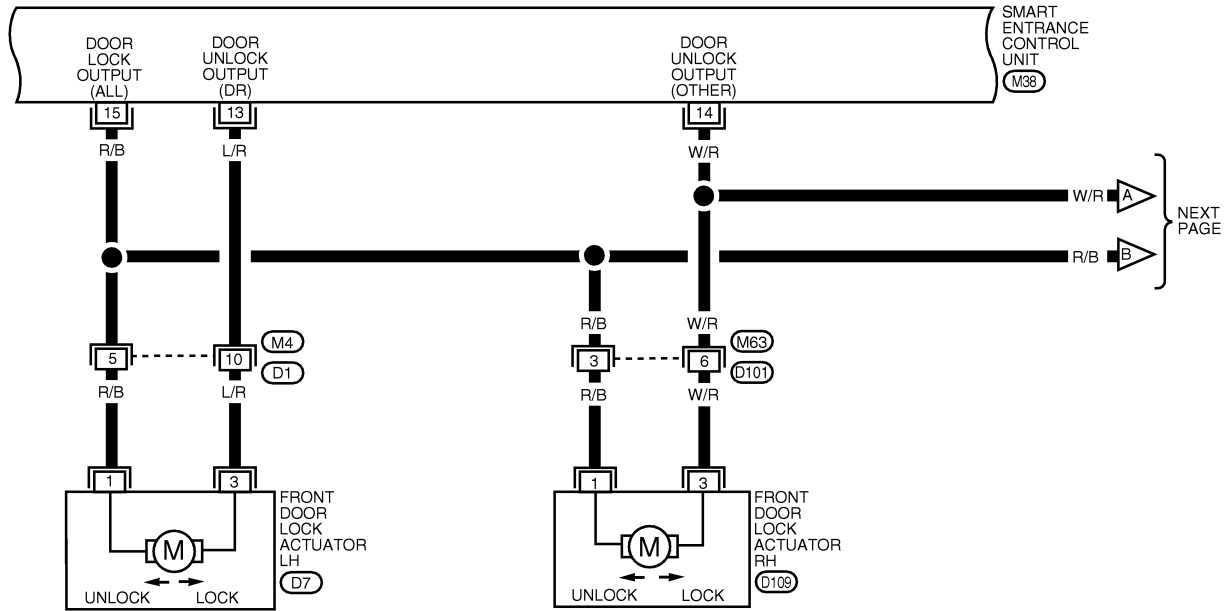
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 8 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S09

EL-D/LOCK-08



WEL621A

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
13	L/R	DRIVER DOOR LOCK ACTUATOR	DOOR LOCK/ UNLOCK SWITCH (FREE)	0V
			DOOR LOCK/ UNLOCK SWITCH (UNLOCKED)	12V
14	W/R	PASSENGER AND REAR DOORS LOCK ACTUATORS	DOOR LOCK/ UNLOCK SWITCH (FREE)	0V
			DOOR LOCK/ UNLOCK SWITCH (UNLOCKED)	12V
15	R/B	DOOR LOCK ACTUATORS	DOOR LOCK/ UNLOCK SWITCH (FREE)	0V
			DOOR LOCK/ UNLOCK SWITCH (LOCKED)	12V
36	Y/G	DOOR UNLOCK SENSOR LH	DRIVER DOOR: LOCKED	5V
			DRIVER DOOR: UNLOCKED	0V

LEL609

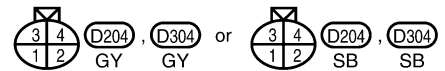
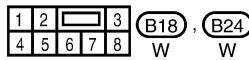
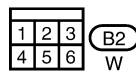
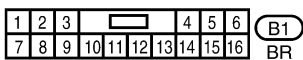
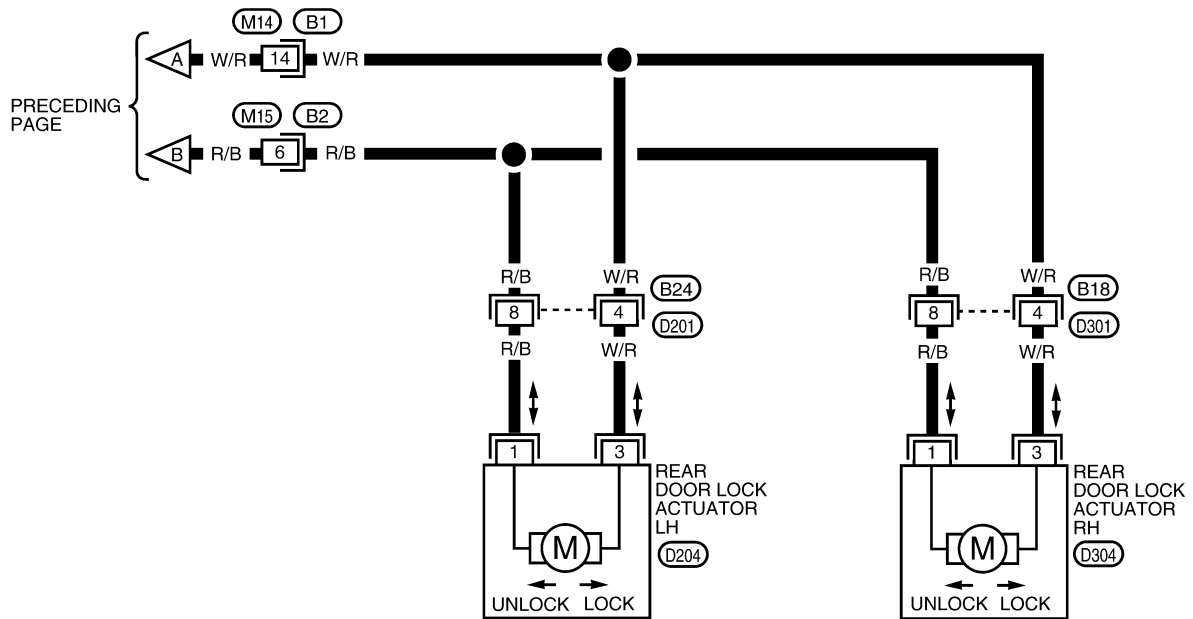
POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 9 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S10

EL-D/LOCK-09



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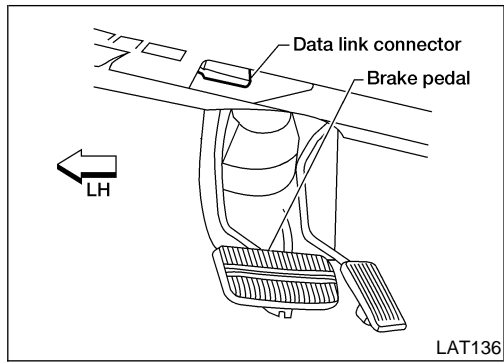
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POWER DOOR LOCK

CONSULT-II Inspection Procedure (With Multi-Remote Control System)



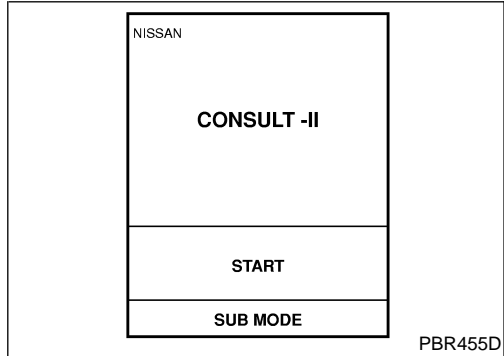
CONSULT-II Inspection Procedure (With Multi-Remote Control System)

=NIEL0238

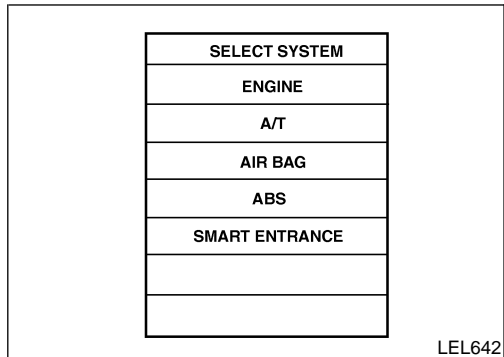
NIEL0238S01

“DOOR LOCK”

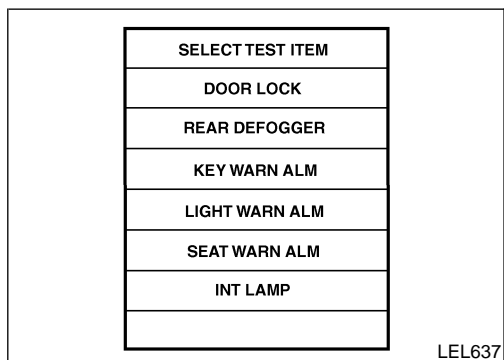
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



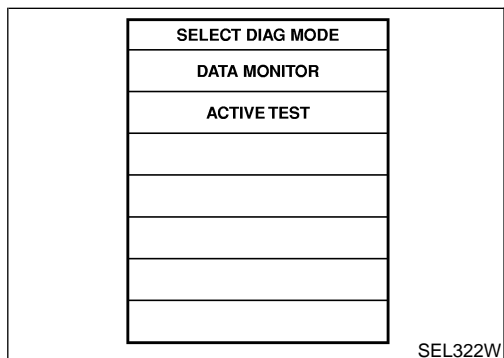
3. Turn ignition switch “ON”.
4. Turn “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “DOOR LOCK”.



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

POWER DOOR LOCK

CONSULT-II Application Items (With Multi-Remote Control System)

CONSULT-II Application Items (With Multi-Remote Control System)

“DOOR LOCK” Data Monitor

NIEL0239

NIEL0239S01

NIEL0239S0101

Monitored Item	Description
KEY ON SW	Indicates [ON/OFF] condition of key switch.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch LH and RH.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch LH and RH.
KEY CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (All).
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from remote controller.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.
UN BUTTON ON	Indicates [ON/OFF] condition of second unlock signal from remote controller within 5 seconds after first unlock operation.

Active Test

NIEL0239S0102

Test Item	Description
ALL D/LK MTR	This test is able to check all door lock actuators lock operation. These actuators lock when “ON” on CONSULT-II screen is touched.
DR D/UN MTR	This test is able to check front door lock actuator LH unlock operation. The actuator unlocks when “ON” on CONSULT-II screen is touched.
NON DR D/UN	This test is able to check door lock actuators (except front door lock actuator LH) unlock operation. These actuators unlock when “ON” on CONSULT-II screen is touched.

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POWER DOOR LOCK

Trouble Diagnoses (Without Multi-Remote Control System)

Trouble Diagnoses (Without Multi-Remote Control System) SYMPTOM CHART

=NIEL0193

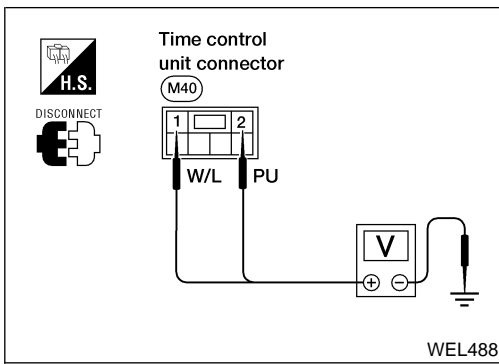
NIEL0193S01

REFERENCE PAGE (EL-)	211	212	213	214	215
SYMPTOM	MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR SWITCH CHECK	KEY SWITCH (INSERT) CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	DOOR LOCK ACTUATOR CHECK
Key reminder door system does not operate properly.	X	X	X		X
Specific door lock actuator does not operate.	X				X
Power door lock does not operate with door lock and unlock switch (LH and RH) on door trim.	X			X	

X: Applicable

POWER DOOR LOCK

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

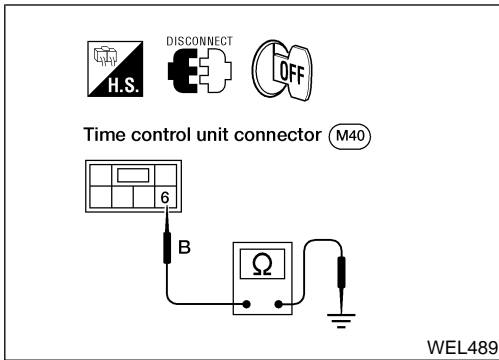


MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

-NIEL0193S02

NIEL0193S0201

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
1	Ground	Battery volt-age	Battery volt-age	Battery voltage
2	Ground	Battery volt-age	Battery volt-age	Battery voltage



Ground Circuit Check

NIEL0193S0202

Terminals	Continuity
6 - Ground	Yes

GI

MA

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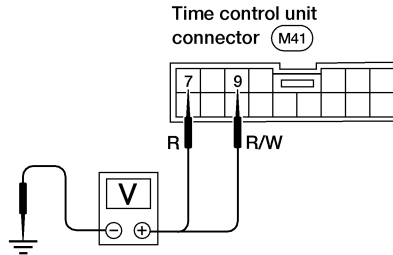



IDX



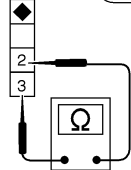
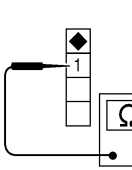
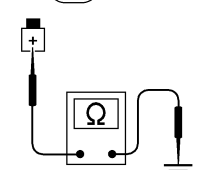
POWER DOOR LOCK

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

DOOR SWITCH CHECK

=NIEL0193S03

1	CHECK DOOR SWITCHES INPUT SIGNAL	<p>Check voltage between time control unit harness connector terminals 7 or 9 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Time control unit connector (M41)</p> </div> <div style="text-align: center;">    </div> </div> <table border="1" style="margin-top: 10px; border-collapse: collapse; width: 100%;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front door switch LH</td> <td rowspan="2">7</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> <tr> <td rowspan="2">Other door switches</td> <td rowspan="2">9</td> <td rowspan="2">Ground</td> <td>Open</td> <td>0</td> </tr> <tr> <td>Closed</td> <td>Approx. 5</td> </tr> </tbody> </table>				Terminals		Condition	Voltage [V]	(+)	(-)	Front door switch LH	7	Ground	Open	0	Closed	Approx. 5	Other door switches	9	Ground	Open	0	Closed	Approx. 5
	Terminals		Condition	Voltage [V]																					
	(+)	(-)																							
Front door switch LH	7	Ground	Open	0																					
			Closed	Approx. 5																					
Other door switches	9	Ground	Open	0																					
			Closed	Approx. 5																					
<p>Refer to "Wiring Diagram —D/LOCK—", EL-199.</p> <p style="text-align: right;">WEL490</p>		OK or NG																							
OK	▶	Door switch is OK.																							
NG	▶	GO TO 2.																							

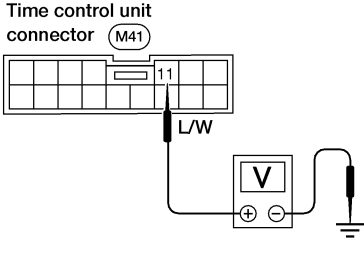



2	CHECK DOOR SWITCHES	<p>1. Disconnect door switch harness connectors. 2. Check continuity between door switch connector terminals.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">   </div> <div style="text-align: center;"> <p>Rear door switch connector</p> <p>LH: (B26)</p> <p>RH: (B32)</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> <div style="text-align: center;"> <p>Front door switch LH connector (B23)</p>  </div> <div style="text-align: center;"> <p>Front door switch RH connector (B17)</p>  </div> <div style="text-align: center;">  </div> </div> <table border="1" style="margin-top: 10px; border-collapse: collapse; width: 100%;"> <thead> <tr> <th></th> <th>Terminals</th> <th>Condition</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front door switch LH</td> <td rowspan="2">2 - 3</td> <td>Closed</td> <td>No</td> </tr> <tr> <td>Open</td> <td>Yes</td> </tr> <tr> <td rowspan="2">Front door switch RH</td> <td rowspan="2">1 - Ground</td> <td>Closed</td> <td>No</td> </tr> <tr> <td>Open</td> <td>Yes</td> </tr> <tr> <td rowspan="2">Rear door switches</td> <td rowspan="2">(+) - Ground</td> <td>Closed</td> <td>No</td> </tr> <tr> <td>Open</td> <td>Yes</td> </tr> </tbody> </table>				Terminals	Condition	Continuity	Front door switch LH	2 - 3	Closed	No	Open	Yes	Front door switch RH	1 - Ground	Closed	No	Open	Yes	Rear door switches	(+) - Ground	Closed	No	Open	Yes
	Terminals	Condition	Continuity																							
Front door switch LH	2 - 3	Closed	No																							
		Open	Yes																							
Front door switch RH	1 - Ground	Closed	No																							
		Open	Yes																							
Rear door switches	(+) - Ground	Closed	No																							
		Open	Yes																							
<p style="text-align: right;">WEL491</p>		OK or NG																								
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Door switch ground circuit or door switch ground condition ● Harness for open or short between time control unit and door switch 																								
NG	▶	Replace door switch.																								

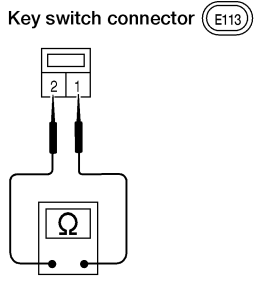

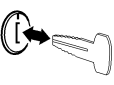
POWER DOOR LOCK

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

KEY SWITCH (INSERT) CHECK

—NIEL0193S04

1	CHECK KEY SWITCH INPUT SIGNAL		
Check voltage between time control unit harness connector terminal 11 and ground.			
			
		Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0	
		 : Approx. 12V  : 0V	
Refer to "Wiring Diagram —D/LOCK—", EL-199.			
WEL492			
OK or NG			
OK	▶	Key switch is OK.	
NG	▶	GO TO 2.	

2	CHECK KEY SWITCH		
Check continuity between key switch connector terminals 1 and 2.			
			
		Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No	
			
LEL449			
OK or NG			
OK	▶	Check the following. <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between time control unit and key switch 	
NG	▶	Replace key switch.	

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POWER DOOR LOCK

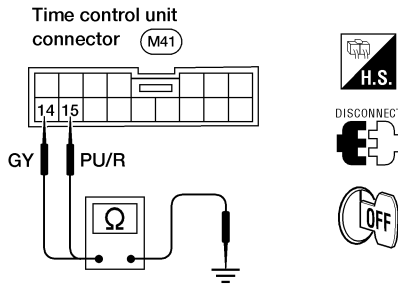
Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

DOOR LOCK/UNLOCK SWITCH CHECK

=NIEL0193S05

1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

1. Disconnect time control unit harness connector.
2. Check continuity between time control unit harness connector terminals 14 or 15 and ground.



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

Refer to "Wiring Diagram —D/LOCK—", EL-200.

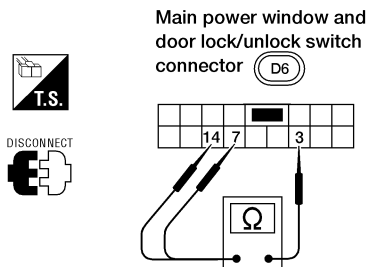
WEL493

OK or NG

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

2 CHECK DOOR LOCK/UNLOCK SWITCH

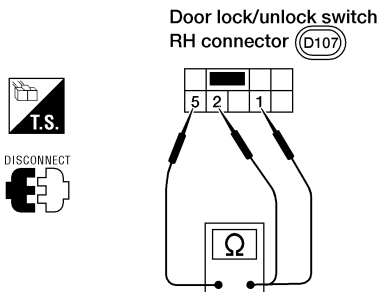
1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between each door lock/unlock switch terminals.
 - Main power window and door lock/unlock switch



Condition	Terminals		
	3	7	14
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

WEL494

- Door lock/unlock switch RH



Condition	Terminals		
	1	2	5
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

WEL495

OK or NG

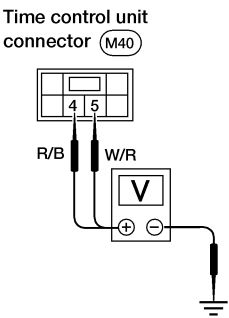



- | | | |
|----|---|---|
| OK | ▶ | Check the following. <ul style="list-style-type: none"> • Ground circuit for door lock/unlock switch • Harness for open or short between door lock/unlock switch and time control unit connector |
| NG | ▶ | Replace door lock/unlock switch. |



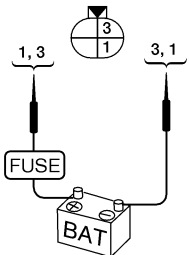
POWER DOOR LOCK

Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

DOOR LOCK ACTUATOR CHECK

=NIEL0193S08

1	CHECK DOOR LOCK ACTUATOR CIRCUIT	<p>Check voltage for door lock actuators.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Time control unit connector (M40)</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;"> <thead> <tr> <th rowspan="2">Door lock/unlock switch (LH or RH) 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</td> <td>4</td> <td>Ground</td> <td rowspan="2">Approx. 12</td> </tr> <tr> <td>Unlock</td> <td>5</td> <td>Ground</td> </tr> </tbody> </table> </div> </div>	Door lock/unlock switch (LH or RH) condition	Terminals		Voltage [V]	(+)	(-)	Lock	4	Ground	Approx. 12	Unlock	5	Ground
Door lock/unlock switch (LH or RH) condition	Terminals			Voltage [V]											
	(+)	(-)													
Lock	4	Ground	Approx. 12												
Unlock	5	Ground													
		WEL498													
		Refer to "Wiring Diagram —D/LOCK—", EL-201.													
		OK or NG													
OK	▶	GO TO 2.													
NG	▶	Replace time control unit. (Before replacing the control unit, perform "DOOR LOCK/ UNLOCK SWITCH CHECK".)													

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> <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: left;"> <p>Door lock actuator connector</p> <p>Front LH : (D7)</p> <p>Front RH : (D109)</p> <p>Rear LH : (D204)</p> <p>Rear RH : (D304)</p> </div> <div style="text-align: center;"> <p>Door lock actuator operation:</p> <p>Terminals between (+): 1 and (-): 3 Unlocked → Locked</p> <p>Terminals between (+): 3 and (-): 1 Locked → Unlocked</p> </div> </div>
		WEL499
		OK or NG
OK	▶	Check harness for open or short between time control unit connector and door lock actuator.
NG	▶	Replace door lock actuator.

GI
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POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System)

Trouble Diagnoses (With Multi-Remote Control System) SYMPTOM CHART

=NIEL0264

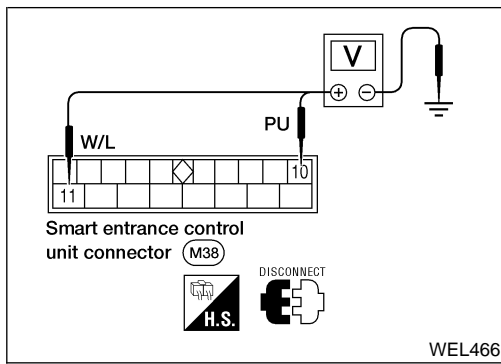
NIEL0264S01

REFERENCE PAGE (EL-)	217	218	219	220	222	224
SYMPTOM	MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR SWITCH CHECK	KEY SWITCH (INSERT) CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	FRONT DOOR KEY CYLINDER SWITCH CHECK	DOOR LOCK ACTUATOR CHECK
Key reminder door system does not operate properly.	X	X	X			X
Specific door lock actuator does not operate.	X					X
Power door lock does not operate with door lock and unlock switch (LH and RH) on door trim.	X			X		
Power door lock does not operate with front door key cylinder operation.	X				X	

X: Applicable

POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

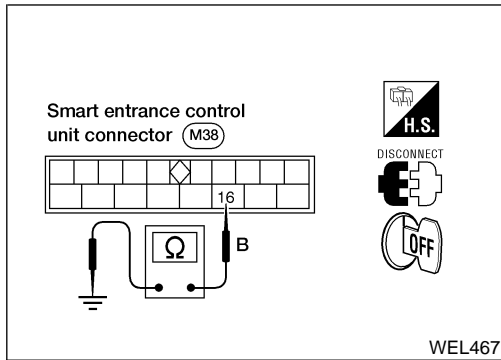


MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

-NIEL0264S02

NIEL0264S0201

Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
10	Ground	Battery volt- age	Battery volt- age	Battery voltage
11				



Ground Circuit Check

NIEL0264S0202

Terminals	Continuity
16 - Ground	Yes

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

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BR

ST

RS

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SC

EL

IDX

POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

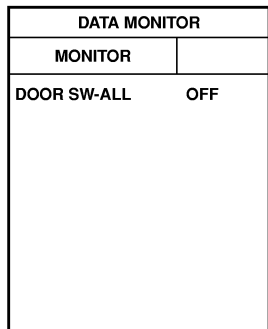
DOOR SWITCH CHECK

=NIEL0264S03

1 CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-II

Check door switches ("DOOR SW-ALL") in "DATA MONITOR" mode with CONSULT-II.



When any doors are open:

DOOR SW-ALL ON

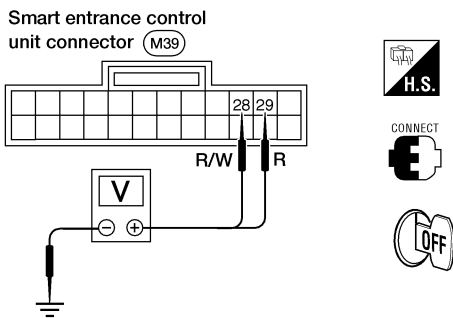
When all doors are closed:

DOOR SW-ALL OFF

SEL323W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminals 28 or 29 and ground.



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front door switch LH	29	Ground	Open	0
			Closed	Approx. 5
Other door switches	28	Ground	Open	0
			Closed	Approx. 5

WEL500

Refer to "Wiring Diagram —D/LOCK—", EL-203.

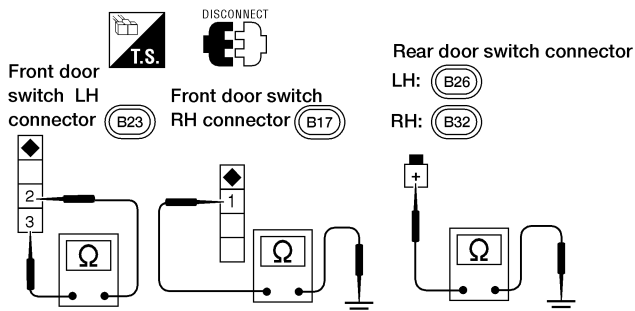
OK or NG

OK ► Door switch is OK.

NG ► GO TO 2.

2 CHECK DOOR SWITCHES

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



	Terminals	Condition	Continuity
Front door switch LH	2 - 3	Closed	No
		Open	Yes
Front door switch RH	1 - Ground	Closed	No
		Open	Yes
Rear door switches	(+) - Ground	Closed	No
		Open	Yes

WEL491

OK or NG

OK ► **Check the following.**

- Door switch ground circuit or door switch ground condition
- Harness for open or short between smart entrance control unit and door switch



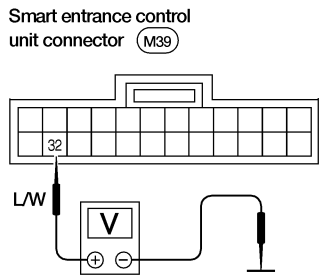




NG ► Replace door switch.

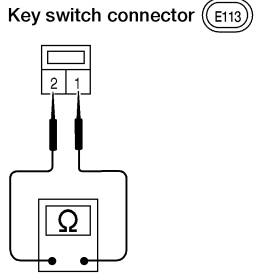


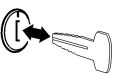
POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

KEY SWITCH (INSERT) CHECK

=NIEL0264S04

1	CHECK KEY SWITCH INPUT SIGNAL								
		<p> With CONSULT-II Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> </thead> <tbody> <tr> <td>KEY ON SW</td> <td>ON</td> </tr> </tbody> </table> </div> <div> <p>When key is inserted to ignition key cylinder: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p> </div> </div>	DATA MONITOR		MONITOR		KEY ON SW	ON	<p>GI MA EM LC EC FE CL MT AT AX SU</p>
DATA MONITOR									
MONITOR									
KEY ON SW	ON								
		SEL315W							
		<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 32 and ground.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div> <p> CONNECT </p> <p> : Approx. 12V</p> <p> : 0V</p> </div> <div style="margin-left: 20px;"> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> </div> </div>	<p>FE CL MT AT AX SU</p>						
		LEL454							
		Refer to "Wiring Diagram —D/LOCK—", EL-203.							
		OK or NG							
OK	▶	Key switch is OK.							
NG	▶	GO TO 2.							

2	CHECK KEY SWITCH		
		<p>Check continuity between key switch connector terminals 1 and 2.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Key switch connector (E113)</p>  </div> <div> <p> DISCONNECT </p> <p></p> </div> <div style="margin-left: 20px;"> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> </div> </div>	<p>ST RS BT HA SC</p>
		LEL449	
		OK or NG	
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch 	<p>EL IDX</p>
NG	▶	Replace key switch.	

POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

DOOR LOCK/UNLOCK SWITCH CHECK

=NIEL0264S05

1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-II

Check door lock/unlock switch ("LOCK SW DR/AS"/"UNLK SW DR/AS") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
LOCK SW DR/AS	OFF
UNLK SW DR/AS	OFF

When lock/unlock switch is turned to LOCK:

LOCK SW DR/AS ON

When lock/unlock switch is turned to UNLOCK:

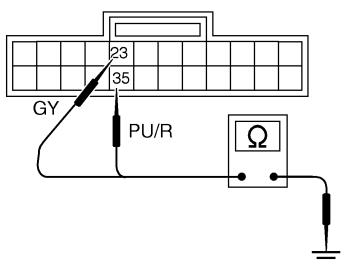
UNLK SW DR/AS ON

SEL341W

Without CONSULT-II

1. Disconnect smart entrance control unit harness connector .
2. Check continuity between smart entrance control unit harness connector terminal 23 or 35 and ground.

Smart entrance control unit connector (M39)



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

Refer to "Wiring Diagram —D/LOCK—", EL-205.

WEL501

OK or NG

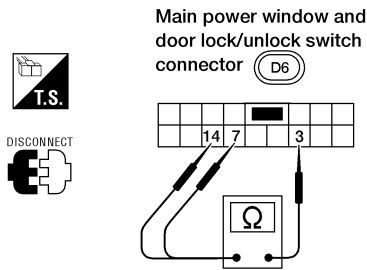
OK	▶	Door lock/unlock switch is OK.
NG	▶	GO TO 2.

POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

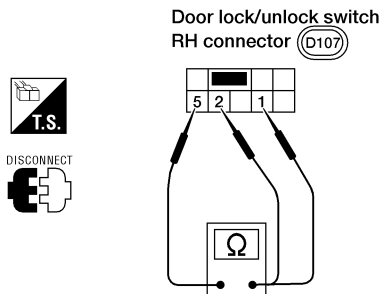
2 CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between each door lock/unlock switch terminals.
 - Main power window and door lock/unlock switch



Condition	Terminals		
	3	7	14
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

- Door lock/unlock switch RH



Condition	Terminals		
	1	2	5
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

WEL494

WEL495

OK or NG

OK



Check the following.

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

NG



Replace door lock/unlock switch.

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

FRONT DOOR KEY CYLINDER SWITCH CHECK

-NIEL0264S06

1 CHECK FRONT DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

With CONSULT-II

Check front door key cylinder switch ("KEY CYL LK-SW"/"KEY CYL UN-SW") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
KEY CYL LK-SW	OFF
KEY CYL UN-SW	OFF

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

KEY CYL LK-SW ON

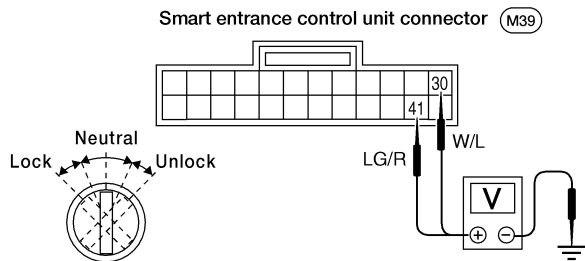
When key inserted in front key cylinder is turned to UNLOCK:

KEY CYL UN-SW ON

SEL342W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminals 30 or 41 and ground.



Terminals		Key position	Voltage [V]
(+)	(-)		
41	Ground	Neutral/Unlock	Approx. 5
		Lock	0
30	Ground	Neutral/Lock	Approx. 5
		Unlock	0

WEL502

Refer to "Wiring Diagram —D/LOCK—", EL-204.

OK or NG

OK	▶	Door key cylinder switch is OK.
NG	▶	GO TO 2.

POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

2	CHECK DOOR KEY CYLINDER SWITCH													
<p>1. Disconnect door key cylinder switch harness connector.</p> <p>2. Check continuity between door key cylinder switch connector D8 terminals L, E, and U, E.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div data-bbox="386 310 646 598" style="text-align: center;"> <p>Front door key cylinder switch LH connector</p> </div> <div data-bbox="950 315 1250 399" style="text-align: center;"> <p>ⓔ : Ground terminal ⓤ : Door unlock switch terminal Ⓛ : Door lock switch terminal</p> </div> <div data-bbox="880 415 1347 577"> <table border="1"> <thead> <tr> <th>Terminals</th> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Ⓛ - ⓔ</td> <td>Neutral/Unlock</td> <td>No</td> </tr> <tr> <td>Lock</td> <td>Yes</td> </tr> <tr> <td rowspan="2">ⓤ - ⓔ</td> <td>Neutral/Lock</td> <td>No</td> </tr> <tr> <td>Unlock</td> <td>Yes</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">LEL101A</p> <p style="text-align: center;">OK or NG</p>		Terminals	Key position	Continuity	Ⓛ - ⓔ	Neutral/Unlock	No	Lock	Yes	ⓤ - ⓔ	Neutral/Lock	No	Unlock	Yes
Terminals	Key position	Continuity												
Ⓛ - ⓔ	Neutral/Unlock	No												
	Lock	Yes												
ⓤ - ⓔ	Neutral/Lock	No												
	Unlock	Yes												
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> • Door key cylinder switch ground circuit • Harness for open or short between smart entrance control unit and door key cylinder switch 													
NG	<p>▶ Replace door key cylinder switch.</p>													

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POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

DOOR LOCK ACTUATOR CHECK

-NIEL0264S07

1 CHECK DOOR LOCK ACTUATOR OPERATION

With CONSULT-II

1. Select "ACTIVE TEST" in "DOOR LOCK" with CONSULT-II.
2. Select "ALL D/LK MTR" and touch "ON".
3. Then, select "DR D/UN MTR" and touch "ON".
4. Select "NON DR D/UN" and touch "ON".

ACTIVE TEST	
ALL D/LK MTR	OFF
or	
(DR D/UN MTR	OFF)
(NON DR D/UN	OFF)
ON	

Door lock motor should operate.

SEL343W

NOTE:

If CONSULT-II is not available, skip this procedure and go to the next step.

OK or NG

OK ► Door lock actuator is OK.

NG ► GO TO 2.

POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System) (Cont'd)

2 CHECK DOOR LOCK ACTUATOR CIRCUIT

Check voltage for door lock actuator.

- Door lock actuator front LH

Door lock/unlock switch condition	Terminals		Voltage [V]
	(+)	(-)	
Lock	15	Ground	Approx. 12
Unlock	13	Ground	

WEL504

- Door lock actuator front RH and rear

Door lock/unlock switch condition	Terminals		Voltage [V]
	(+)	(-)	
Lock	15	Ground	Approx. 12
Unlock	14	Ground	

WEL505

Refer to "Wiring Diagram —D/LOCK—", EL-206.

OK or NG

OK	▶	GO TO 3.
NG	▶	Replace smart entrance control unit. (Before replacing the smart entrance control unit, perform "DOOR LOCK/UNLOCK SWITCH CHECK", EL-220.)

3 CHECK DOOR LOCK ACTUATOR

- Disconnect door lock actuator harness connector.
- Apply 12V direct current to door lock actuator and check operation.

Door lock actuator connector

Front LH : (D7)

Front RH : (D109)

Rear LH : (D204)

Rear RH : (D304)

Door lock actuator operation:

Terminals between (+): 1 and (-): 3
 Unlocked → Locked

Terminals between (+): 3 and (-): 1
 Locked → Unlocked

WEL499

OK or NG

OK	▶	Check harness for open or short between smart entrance control unit connector and door lock actuator.
NG	▶	Replace door lock actuator.

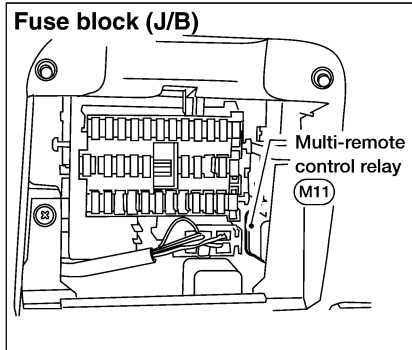
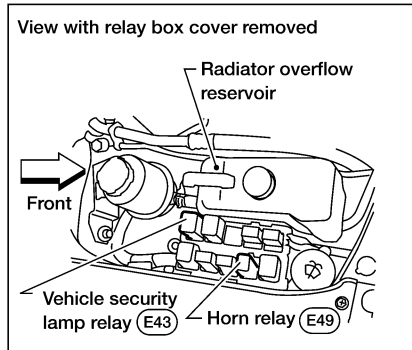
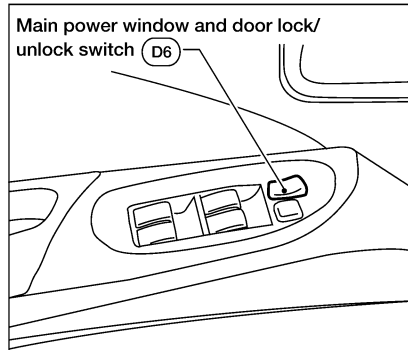
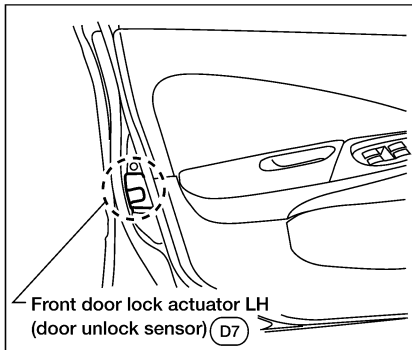
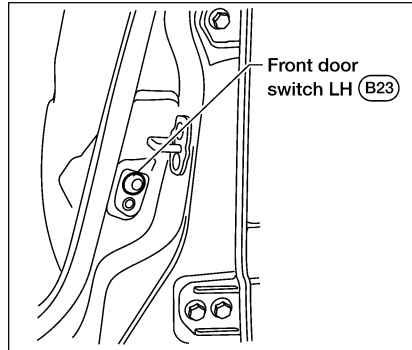
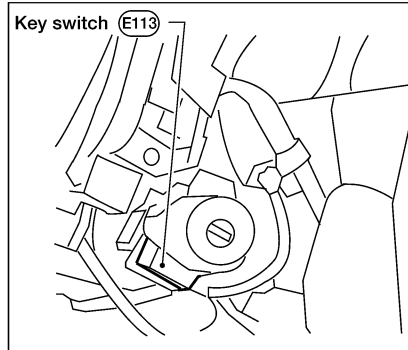
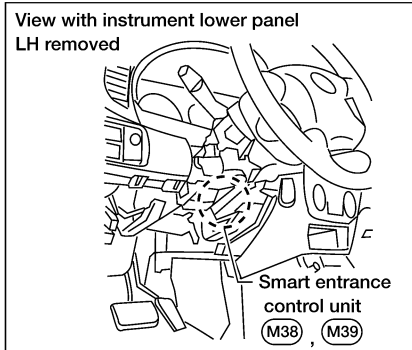
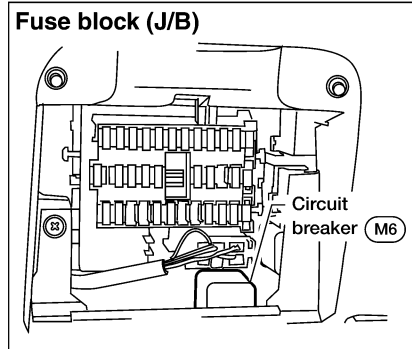
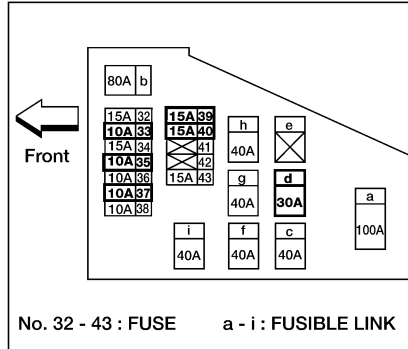
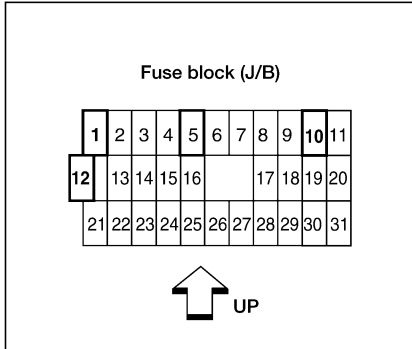
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REMOTE KEYLESS ENTRY SYSTEM

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NIEL0111



WEL599A

System Description

NIEL0194

NIEL0194S01

INPUTS

Power is supplied at all times:

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

When the key switch is ON (ignition key is inserted in key cylinder), power is supplied:

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

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

- to smart entrance control unit terminal 29
- through front door switch LH terminal 2
- to front door switch LH terminal 3
- through body grounds B13 and B19.

When the front door switch RH and rear door switches are ON (doors are OPEN), ground is supplied:

- to smart entrance control unit terminal 28
- through front door switch RH terminal 1 and rear door switches terminal +
- to front door switch RH case ground and rear door switches case grounds.

When main power window and door lock/unlock switch is LOCKED, ground is supplied:

- to smart entrance control unit terminal 23
- through main power window and door lock/unlock switch terminal 14 and
- through body grounds M28 and M54.

When main power window and door lock/unlock switch is UNLOCKED, ground is supplied:

- to smart entrance control unit terminal 35
- through main power window and door lock/unlock switch terminal 7 and
- through body grounds M28 and M54.

When front door unlock sensor LH is UNLOCKED, ground is supplied:

- to smart entrance control unit terminal 36,
- through front door unlock sensor LH terminal 2, and
- through body grounds M28 and M54.

Remote controller signal is input to smart entrance control unit (the antenna of the system is combined with smart entrance control unit).

The multi-remote control system controls operation of the:

- power door locks
- trunk lid opener
- interior lamp
- panic alarm
- hazard and horn reminder.

OPERATED PROCEDURE

Power Door Lock Operation

Smart entrance control unit receives a LOCK signal from remote controller. Smart entrance control unit locks all doors with input of LOCK signal from remote controller.

When an UNLOCK signal is sent from remote controller once, driver door will be unlocked.

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

Hazard and Horn Reminder

Power is supplied at all times:

- to multi-remote control relay terminals 1, 3 and 6
- through 15A fuse [No. 5, located in the fuse block (J/B)], and
- to horn relay terminals 1 and 5
- through 10A fuse (No. 33, located in the fuse and fusible link box).

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REMOTE KEYLESS ENTRY SYSTEM

System Description (Cont'd)

When smart entrance control unit receives LOCK or UNLOCK signal from remote controller, ground is supplied:

- to multi-remote control relay terminal 2
- through smart entrance control unit terminal 7, and
- to horn relay terminal 2
- through smart entrance control unit terminal 19.

Multi-remote control relay and horn relay are now energized, and hazard warning lamp flashes and horn sounds as a reminder.

The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

Operating function of hazard and horn reminder

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

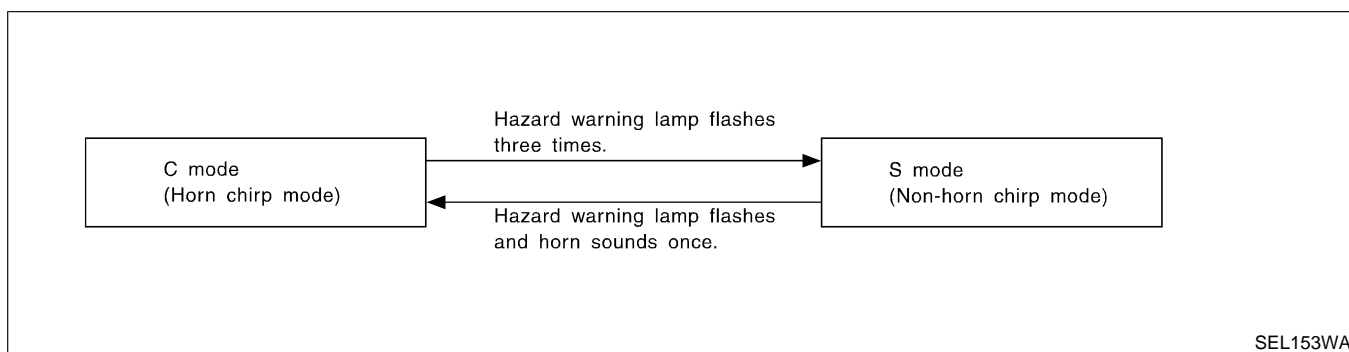
How to change hazard and horn reminder mode

☐ With CONSULT-II

Hazard and horn reminder can be changed using “WORK SUPPORT” mode in “MULTI REMOTE ENT”.

⊗ Without CONSULT-II

When LOCK and UNLOCK signals are sent from the remote controller for more than 2 seconds at the same time, the hazard and horn reminder mode is changed and hazard warning lamp flashes and horn sounds as follows:



Interior Lamp Operation

When the following input signals are both supplied:

- front door switch LH CLOSED (when driver door is closed);
- driver door LOCKED;

multi-remote control system turns on interior lamp (for 30 seconds) with input of UNLOCK signal from remote controller.

For detailed description, refer to “INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS”, EL-64.

Panic Alarm Operation

When key switch is OFF (when ignition key is not inserted in key cylinder), multi-remote control system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from remote controller.

The alarm automatically turns off after 25 seconds or when smart entrance control unit receives any signal from multi-remote controller.

For detailed description, refer to “PANIC ALARM OPERATION”, EL-260.

Trunk Lid Operation

Power is supplied at all times:

- through 10A fuse [No. 6, located in the fuse block (J/B)]
- to trunk lid opener actuator terminal +.

When a TRUNK OPEN signal is sent with key OFF (ignition key removed from key cylinder) from remote controller, ground is supplied:

REMOTE KEYLESS ENTRY SYSTEM

System Description (Cont'd)

- to trunk lid opener actuator terminal -
- through smart entrance control unit terminal 12.

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

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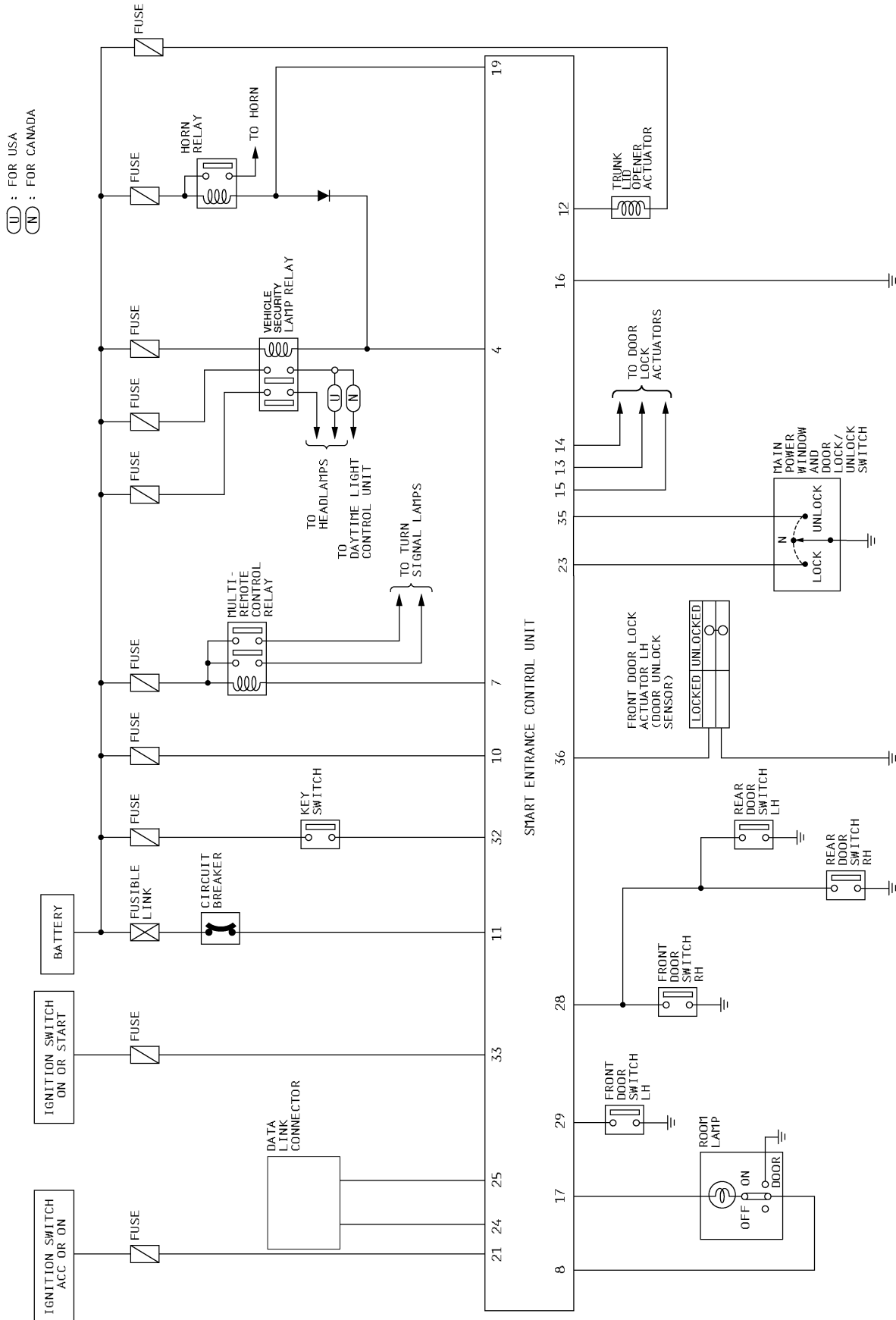
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REMOTE KEYLESS ENTRY SYSTEM

Schematic

Schematic

NIEL0171



WEL601A

REMOTE KEYLESS ENTRY SYSTEM

Wiring Diagram — MULTI —

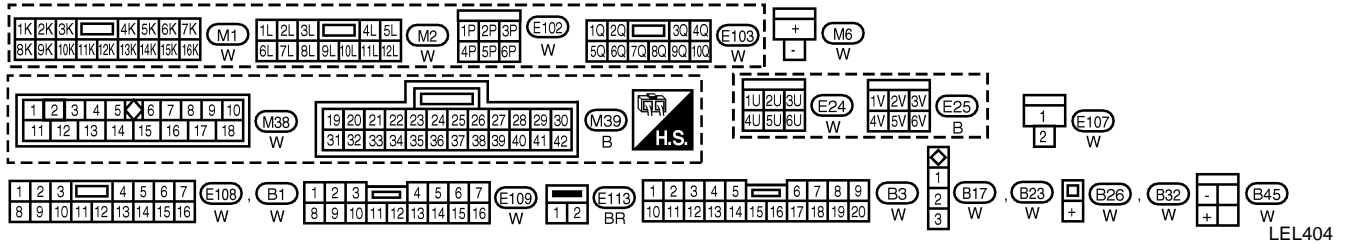
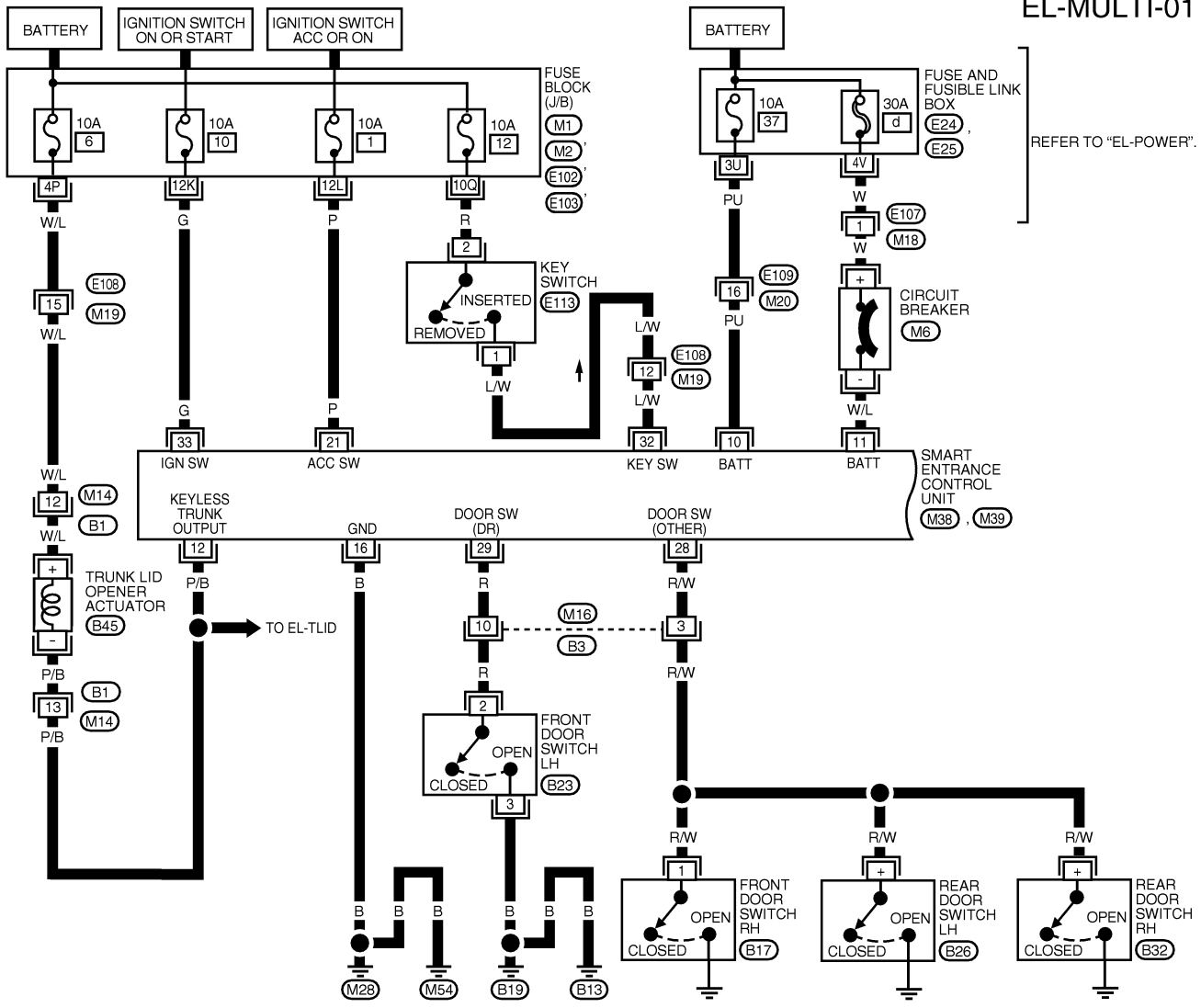
Wiring Diagram — MULTI —

FIG. 1

NIEL0114

NIEL0114S01

EL-MULTI-01



TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	PU	POWER SOURCE (FUSE)	—	12V
11	W/L	POWER SOURCE (CIRCUIT BREAKER)	—	12V
12	P/B	TRUNK LID OPENER ACTUATOR	ON (OPEN) OFF (CLOSED)	0V 12V
16	B	GROUND	—	—
21	P	IGNITION SWITCH (ACC, ON)	ACC OR ON POSITION OFF (CLOSED)	12V 5V
28	R/W	OTHER DOOR SWITCHES	ON (OPEN) OFF (CLOSED)	0V 5V
29	R	FRONT DOOR SWITCH LH	ON (OPEN) OFF (CLOSED)	0V 5V
32	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED IGNITION KEY IS REMOVED	12V 0V
33	G	IGNITION SWITCH (ON)	IGNITION SWITCH IS IN ON POSITION	12V
		IGNITION SWITCH (START)	IGNITION KEY IS IN START POSITION	12V

LEL404

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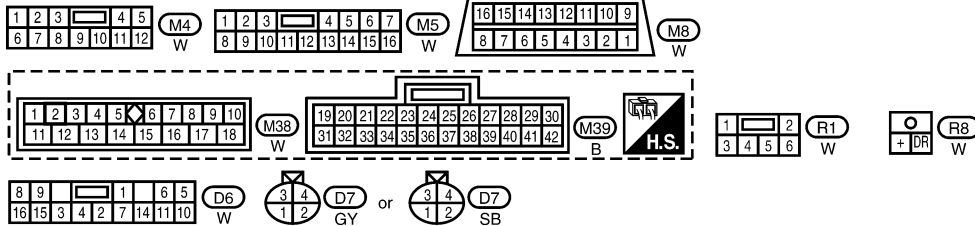
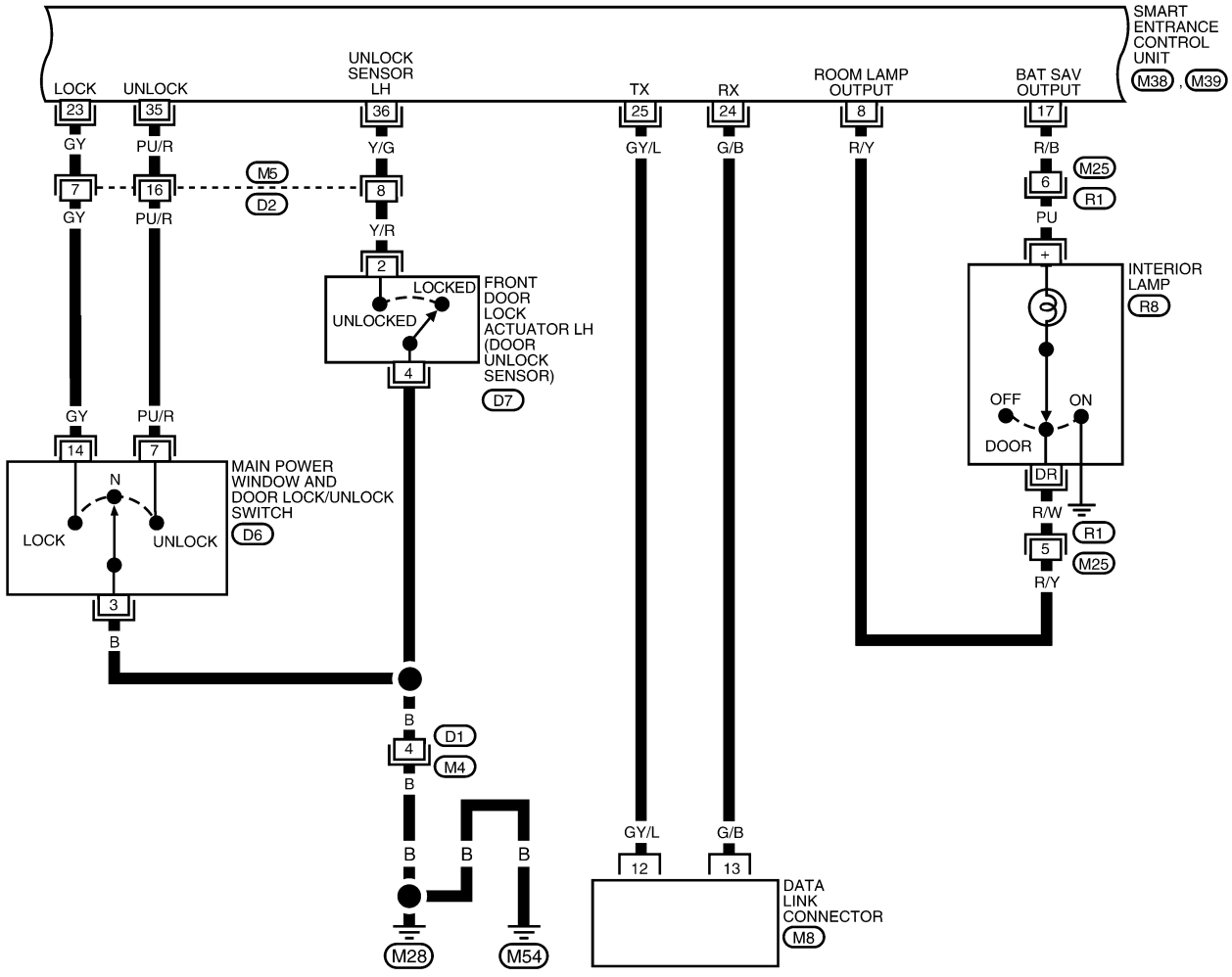
REMOTE KEYLESS ENTRY SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 2

NIEL0114S02

EL-MULTI-02



WEL625A

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
8	R/Y	INTERIOR LAMP	LAMP SWITCH IN DOOR POSITION	12V
17	R/B	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOES NOT OPERATE	12V
			BATTERY SAVER OPERATES	0V
23	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			LOCKS	0V
35	PU/R	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			UNLOCKS	0V
36	Y/G	DOOR UNLOCK SENSOR LH	DRIVER DOOR: LOCKED	5V
			DRIVER DOOR: UNLOCKED	0V

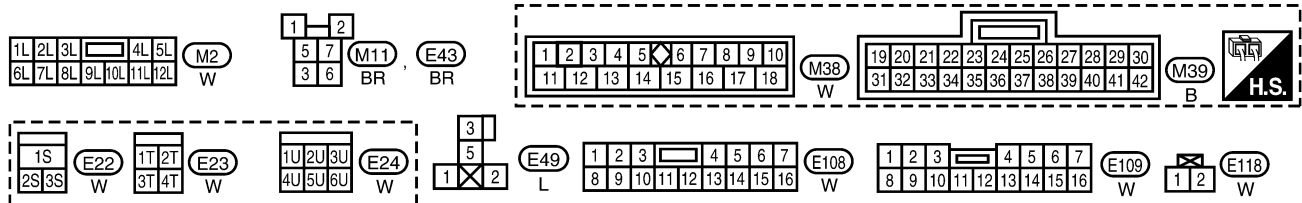
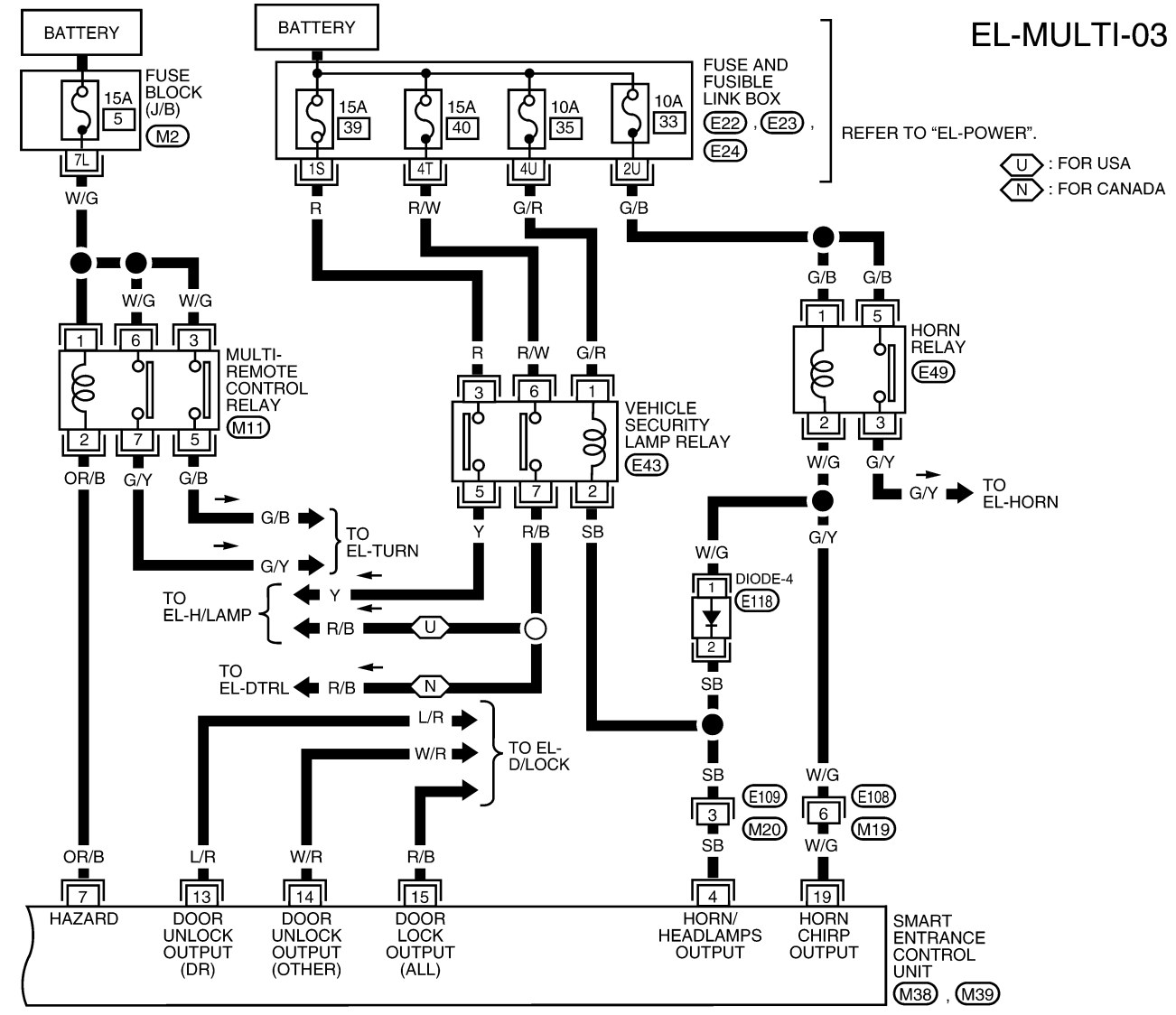
LEL611

REMOTE KEYLESS ENTRY SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 3

NIEL0114S05



WEL598A

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

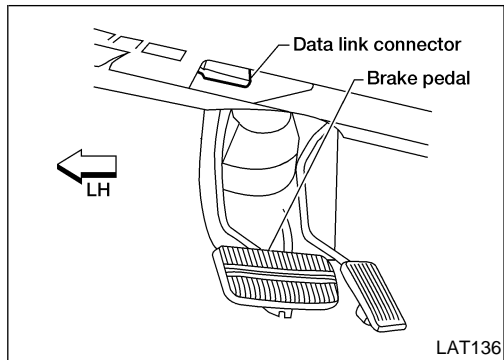
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
4	SB	VEHICLE SECURITY HORN RELAY AND VEHICLE SECURITY LAMP RELAY	WHEN PANIC ALARM IS OPERATED USING REMOTE CONTROLLER OR WHEN ALARM IS ACTIVATED	12V TO 0V
7	OR/B	MULTI-REMOTE CONTROL RELAY	WHEN DOORS ARE LOCKED USING REMOTE CONTROLLER	12V TO 0V
19	W/G	HORN RELAY	WHEN DOORS ARE LOCKED USING REMOTE CONTROLLER WITH HORN CHIRP MODE	12V TO 0V

WEL104A

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REMOTE KEYLESS ENTRY SYSTEM

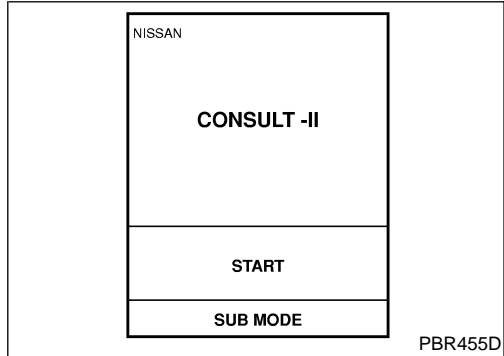
CONSULT-II Inspection Procedure



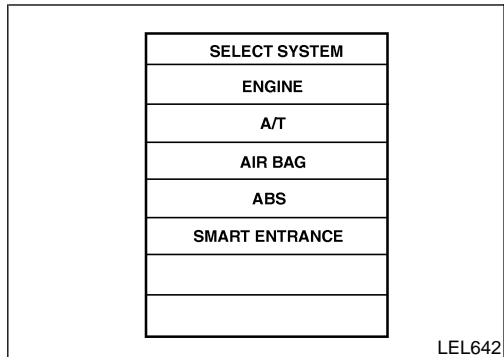
CONSULT-II Inspection Procedure “MULTI REMOTE ENT”

NIEL0241
NIEL0241S01

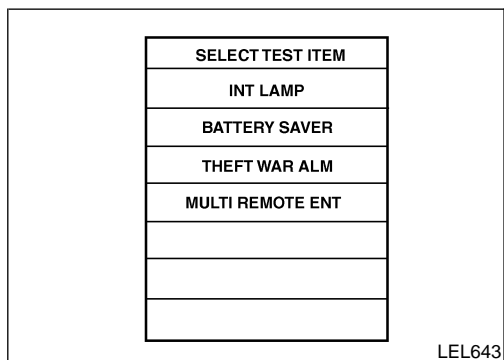
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



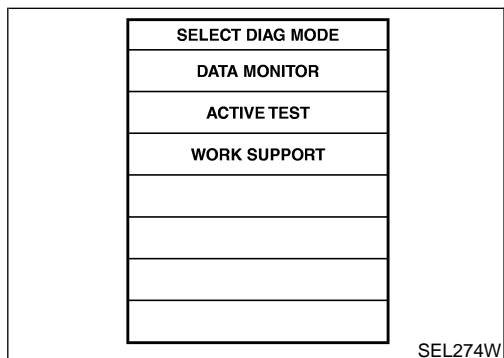
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “MULTI REMOTE ENT”.



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

REMOTE KEYLESS ENTRY SYSTEM

CONSULT-II Application Items

CONSULT-II Application Items

NIEL0242

NIEL0242S01

NIEL0242S0101

“MULTI REMOTE ENT”

Data Monitor

Monitored Item	Description
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (All).
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from lock/unlock switch LH and RH.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch LH and RH.
KEY CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder switch.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from remote controller.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.
TRUNK BTN/SIG	Indicates [ON/OFF] condition of trunk open signal from remote controller.
PANIC BTN	Indicates [ON/OFF] condition of panic signal from remote controller.
UN BUTTON ON	Indicates [ON/OFF] condition of second unlock signal from remote controller within 5 seconds after first unlock operation.
LK/UN BTN ON	Indicates [ON/OFF] condition of lock/unlock signal at the same time from remote controller.

Active Test

NIEL0242S0102

Test Item	Description
INT/IGN ILLUM	This test is able to check interior lamp and ignition key hole illumination operation. The interior lamp is turned on when “ON” on CONSULT-II screen is touched.
HAZARD	This test is able to check hazard reminder operation. The hazard lamps turn on when “ON” on CONSULT-II screen is touched.
ALARM	This test is able to check panic alarm operation. The alarm activates for 0.5 seconds after “ON” on CONSULT-II screen is touched.
MULTI REM HRN	This test is able to check horn reminder operation. The horn sounds for 0.02 seconds after “ON” on CONSULT-II screen is touched.
TRUNK OUTPUT	This test is able to check trunk lid opener actuator operation. The trunk is unlocked when “ON” on CONSULT-II screen is touched.

Work Support

NIEL0242S0103

Test Item	Description
REMO CONT ID CONFIR	It can be checked whether remote controller ID code is registered or not in this mode.
REMO CONT ID REGIST	Remote controller ID code can be registered.
REMO CONT ID ERASUR	Remote controller ID code can be erased.
HZRD REM SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when “MODE SET” on CONSULT-II screen is touched.

REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses

SYMPTOM CHART

NIEL0195

NIEL0195S01

NOTE:

- Always check remote controller battery before replacing remote controller.
- The panic alarm operation and trunk lid opener operation of multi-remote control system do not activate with the ignition key inserted in the ignition key cylinder.

Symptom	Diagnoses/service procedure	Reference page (EL-)
All functions of multi-remote control system do not operate.	1. Remote controller battery and function check	238
	2. Power supply and ground circuit for smart entrance control unit check	239
	3. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	251
The new ID of remote controller cannot be entered.	1. Remote controller battery and function check	238
	2. Key switch (insert) check	242
	3. Door switch check	241
	4. Door lock/unlock switch LH check	243
	5. Power supply and ground circuit for smart entrance control unit check	239
	6. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	251
Door lock or unlock does not function. [If the power door lock system does not operate manually, check power door lock system. Refer to "Trouble Diagnosis (With Multi-Remote Control System)", EL-216].	1. Remote controller battery and function check	238
	2. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	251
Hazard and horn reminder does not activate properly when pressing lock or unlock button of remote controller.	1. Remote controller battery and function check	238
	2. Hazard reminder check	247
	3. Horn reminder check* *: Horn chirp can be activated or deactivated. First check the horn chirp setting. Refer to "Hazard and Horn Reminder", EL-227.	249
	4. Door switch check	241
	5. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	251
Interior lamp illumination operations do not activate properly.	1. Interior lamp operation check	250
	2. Door switch check	241
	3. Front LH door unlock sensor check	245

REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

Symptom	Diagnoses/service procedure	Reference page (EL-)	
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Remote controller battery and function check	238	GI
	2. Vehicle security operation check. Refer to "PRELIMINARY CHECK", EL-268.	268	MA
	3. Key switch (insert) check	242	EM
	4. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	251	LC
Trunk lid does not open when trunk opener button is continuously pressed.	1. Remote controller battery and function check	238	EC
	2. Trunk lid opener actuator check	246	FE
	3. Key switch (insert) check	242	CL
	4. Replace remote controller. Refer to ID Code Entry Procedure. NOTE: If the result of remote controller function check with CONSULT-II is OK, remote controller is not malfunctioning.	251	

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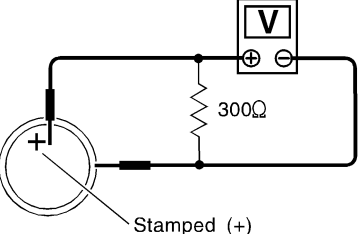
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REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

REMOTE CONTROLLER BATTERY AND FUNCTION CHECK

=NIEL0195S02

1	CHECK REMOTE CONTROLLER BATTERY
<p>Remove battery (refer to "Remote Controller Battery Replacement", EL-255) and measure voltage across battery positive and negative terminals, (+) and (-).</p> <p>Voltage [V]: 2.5 - 3.0</p> <p>NOTE: Remote controller does not function if battery is not set correctly.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">SEL237W</p> <p style="text-align: center;">OK or NG</p>	
OK	▶ GO TO 2.
NG	▶ Replace battery.

2	CHECK REMOTE CONTROLLER FUNCTION																														
<p> With CONSULT-II Check remote controller function ("LK BUTTON/SIG", "UN BUTTON/SIG", "TRUNK BTN/SIG", "PANIC BTN", "UN BUTTON ON" and "LK/UN BTN ON") in "DATA MONITOR" mode with CONSULT-II.</p> <p style="text-align: center;">When pushing each button of remote controller, the corresponding monitor item should be turned as follows.</p> <table border="1" style="width: 50%; margin-bottom: 10px;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>LK BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>UN BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>TRUNK BTN/SIG</td> <td>ON</td> </tr> <tr> <td>PANIC BTN</td> <td>ON</td> </tr> <tr> <td>UN BUTTON ON</td> <td>ON</td> </tr> <tr> <td>LK/UN BTN ON</td> <td>ON</td> </tr> </tbody> </table> <table border="1" style="width: 50%; margin-bottom: 10px;"> <thead> <tr> <th>Condition</th> <th>Monitor item</th> </tr> </thead> <tbody> <tr> <td>Pushing LOCK</td> <td>LK BUTTON/SIG ON</td> </tr> <tr> <td>Pushing UNLOCK</td> <td>UN BUTTON/SIG ON</td> </tr> <tr> <td>Pushing TRUNK</td> <td>TRUNK BTN/SIG ON</td> </tr> <tr> <td>Pushing PANIC</td> <td>PANIC BTN/SIG ON</td> </tr> <tr> <td>Pushing UNLOCK within 5 seconds after first pushing UNLOCK</td> <td>UN BUTTON ON ON</td> </tr> <tr> <td>Pushing LOCK and UNLOCK at the same time</td> <td>LK/UN BTN ON ON</td> </tr> </tbody> </table> <p style="text-align: right;">SEL346W</p> <p style="text-align: center;">OK or NG</p>		DATA MONITOR		MONITOR		LK BUTTON/SIG	ON	UN BUTTON/SIG	ON	TRUNK BTN/SIG	ON	PANIC BTN	ON	UN BUTTON ON	ON	LK/UN BTN ON	ON	Condition	Monitor item	Pushing LOCK	LK BUTTON/SIG ON	Pushing UNLOCK	UN BUTTON/SIG ON	Pushing TRUNK	TRUNK BTN/SIG ON	Pushing PANIC	PANIC BTN/SIG ON	Pushing UNLOCK within 5 seconds after first pushing UNLOCK	UN BUTTON ON ON	Pushing LOCK and UNLOCK at the same time	LK/UN BTN ON ON
DATA MONITOR																															
MONITOR																															
LK BUTTON/SIG	ON																														
UN BUTTON/SIG	ON																														
TRUNK BTN/SIG	ON																														
PANIC BTN	ON																														
UN BUTTON ON	ON																														
LK/UN BTN ON	ON																														
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Pushing TRUNK	TRUNK BTN/SIG ON																														
Pushing PANIC	PANIC BTN/SIG ON																														
Pushing UNLOCK within 5 seconds after first pushing UNLOCK	UN BUTTON ON ON																														
Pushing LOCK and UNLOCK at the same time	LK/UN BTN ON ON																														
OK	▶ Remote controller is OK. Further inspection is necessary. Refer to "SYMPTOM CHART", EL-236.																														
NG	▶ Replace remote controller. Refer to "ID Code Entry Procedure", EL-251.																														

REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

POWER SUPPLY AND GROUND CIRCUIT CHECK

—NIEL0195S03

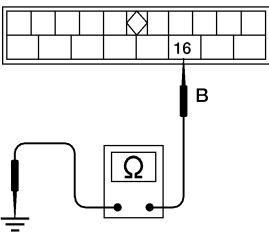



1	CHECK MAIN POWER SUPPLY CIRCUIT FOR SMART ENTRANCE CONTROL UNIT	
	<p>1. Disconnect smart entrance control unit harness connector. 2. Check voltage between smart entrance control unit harness connector terminals 10, 11 and ground.</p>	
	<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M38)</p> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>Battery voltage should exist.</p> </div> </div> <p style="text-align: right;">LEL511</p> <p>Refer to "Wiring Diagram —MULTI—", EL-231.</p> <p style="text-align: center;">OK or NG</p>	
OK	▶	GO TO 2.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 30A fusible link (letter d, located in fuse and fusible link box) ● 10A fuse (No. 37, located in fuse and fusible link box) ● M6 circuit breaker ● Harness for open or short between smart entrance control unit and fuse

2	CHECK IGNITION SWITCH "ACC" CIRCUIT	
	<p>1. Disconnect smart entrance control unit harness connector. 2. Check voltage between smart entrance control unit harness connector terminal 21 and ground while ignition switch is "ACC".</p>	
	<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M39)</p> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> <p>Battery voltage should exist.</p> </div> </div> <p style="text-align: right;">LEL512</p> <p>Refer to "Wiring Diagram —MULTI—", EL-231.</p> <p style="text-align: center;">OK or NG</p>	
OK	▶	GO TO 3.
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 1, located in fuse block (J/B)] ● Harness for open or short between smart entrance control unit and fuse

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REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

3	CHECK GROUND CIRCUIT FOR SMART ENTRANCE CONTROL UNIT	
Check continuity between smart entrance control unit harness connector terminal 16 and ground.		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M38)</p>  </div> <div style="text-align: center;">  <p>DISCONNECT</p>   </div> <div style="text-align: center;"> <p>Continuity should exist.</p> </div> </div> <p style="text-align: right;">LEL510</p> <p>Refer to "Wiring Diagram —MULTI—", EL-231.</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Power supply and ground circuits are OK.
NG	▶	Check ground harness.

REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

DOOR SWITCH CHECK

=NIEL0195S04

1 CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II
Check door switches ("DOOR SW-ALL") in "DATA MONITOR" mode with CONSULT-II.

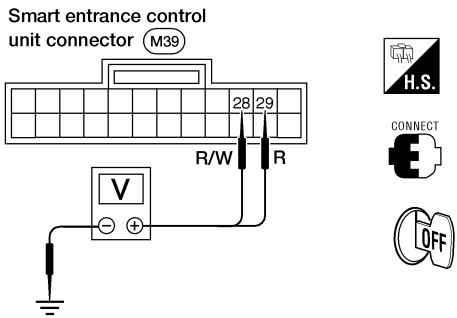
DATA MONITOR	
MONITOR	
DOOR SW-ALL	OFF

When any doors are open:
DOOR SW-ALL ON

When all doors are closed:
DOOR SW-ALL OFF

SEL323W

Without CONSULT-II
Check voltage between smart entrance control unit harness connector terminals 28 or 29 and ground.



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front door switch LH	29	Ground	Open	0
			Closed	Approx. 5
Other door switches	28	Ground	Open	0
			Closed	Approx. 5

WEL500

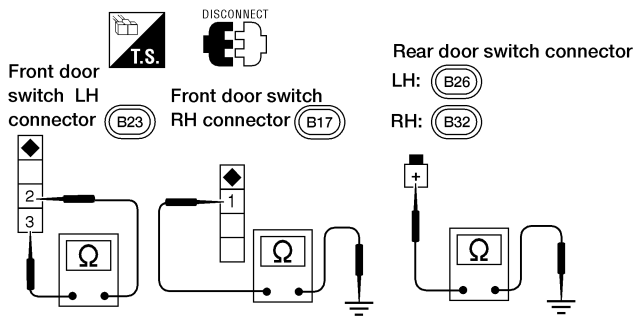
Refer to "Wiring Diagram —MULTI—", EL-231.

OK or NG

OK	▶	Door switch is OK.
NG	▶	GO TO 2.

2 CHECK DOOR SWITCH

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



	Terminals	Condition	Continuity
Front door switch LH	2 - 3	Closed	No
		Open	Yes
Front door switch RH	1 - Ground	Closed	No
		Open	Yes
Rear door switches	(+) - Ground	Closed	No
		Open	Yes

WEL491

OK or NG

OK	▶	Check the following. <ul style="list-style-type: none"> Door switch ground circuit or door switch ground condition Harness for open or short between smart entrance control unit and door switch
NG	▶	Replace door switch.



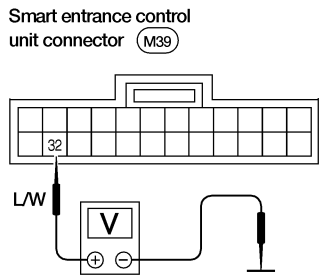




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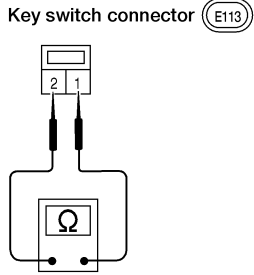


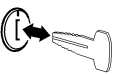
REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

KEY SWITCH (INSERT) CHECK

-NIEL0195S05

1	CHECK KEY SWITCH INPUT SIGNAL						
<p> With CONSULT-II Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th colspan="2">MONITOR</th></tr> </thead> <tbody> <tr> <td>KEY ON SW</td> <td>ON</td> </tr> </tbody> </table> </div> <div> <p>When key is inserted to ignition key cylinder: KEY ON SW ON</p> <p>When key is removed from ignition key cylinder: KEY ON SW OFF</p> </div> </div> <p style="text-align: right;">SEL315W</p>		DATA MONITOR		MONITOR		KEY ON SW	ON
DATA MONITOR							
MONITOR							
KEY ON SW	ON						
<p> Without CONSULT-II Check voltage between control unit terminal 32 and ground.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="margin-right: 20px;"> <p> CONNECT </p> <p> : Approx. 12V</p> <p> : 0V</p> </div> <div> <p>Voltage [V]: Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p> </div> </div> <p style="text-align: right;">LEL454</p> <p>Refer to "Wiring Diagram —MULTI—", EL-231.</p> <p style="text-align: center;">OK or NG</p>							
OK	▶ Key switch is OK.						
NG	▶ GO TO 2.						

2	CHECK KEY SWITCH
<p>Check continuity between key switch terminals 1 and 2.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Key switch connector (E113)</p>  </div> <div style="margin-right: 20px;"> <p> DISCONNECT </p> <p></p> </div> <div> <p>Continuity: Condition of key switch: Key is inserted. Yes Condition of key switch: Key is removed. No</p> </div> </div> <p style="text-align: right;">LEL449</p> <p style="text-align: center;">OK or NG</p>	
OK	▶ Check the following. <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between key switch and fuse ● Harness for open or short between smart entrance control unit and key switch
NG	▶ Replace key switch.

REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

DOOR LOCK/UNLOCK SWITCH LH CHECK

-NIEL0195S06

1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-II

Check door lock/unlock switch ("LOCK SW DR/AS"/"UNLK SW DR/AS") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
LOCK SW DR/AS	OFF
UNLK SW DR/AS	OFF

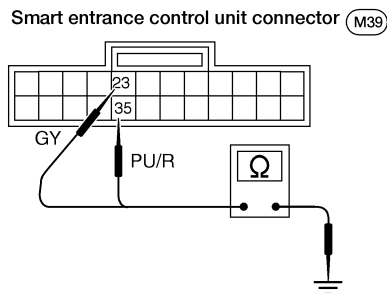
When lock/unlock switch is turned to LOCK:
LOCK SW DR/AS ON

When lock/unlock switch is turned to UNLOCK:
UNLK SW DR/AS ON

SEL341W

Without CONSULT-II

1. Disconnect smart entrance control unit harness connector.
2. Check continuity between smart entrance control unit harness connector terminal 23 or 35 and ground.



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

Refer to "Wiring Diagram —MULTI—", EL-232.

WEL501

OK or NG

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

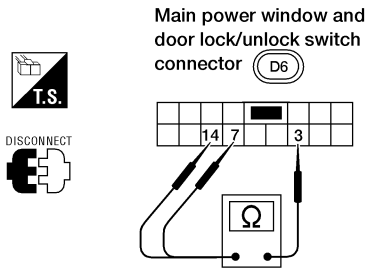
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REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

2 CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between door lock/unlock switch LH terminals.



Condition	Terminals		
	3	7	14
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

WEL494

OK or NG

OK



Check the following.

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

NG



Replace door lock/unlock switch.

REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

FRONT LH DOOR UNLOCK SENSOR CHECK

=NIEL0195S07

1 CHECK FRONT LH DOOR UNLOCK SENSOR INPUT SIGNAL

With CONSULT-II

1. Select "DATA MONITOR" mode in "INT LAMP" with CONSULT-II.
2. Check front LH door unlock sensor ("LOCK SIG DR") in "DATA MONITOR" mode.

DATA MONITOR	
MONITOR	
LOCK SIG DR	OFF

When front LH door is locked:

LOCK SIG DR OFF

When front LH door is unlocked:

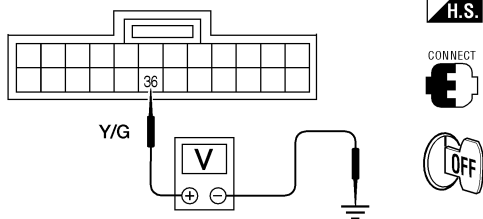
LOCK SIG DR ON

SEL344W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminal 36 and ground.

Smart entrance control unit connector (M39)



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door	36	Ground	Locked	Approx. 5
			Unlocked	0

LEL452

Refer to "Wiring Diagram —MULTI—", EL-232.

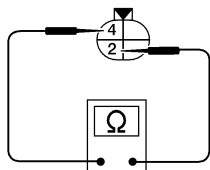
OK or NG

OK	▶	Door unlock sensor is OK.
NG	▶	GO TO 2.

2 CHECK FRONT LH DOOR UNLOCK SENSOR

1. Disconnect front LH door unlock sensor harness connector.
2. Check continuity between door unlock sensor terminals.

Front door lock actuator LH connector (D7)



Continuity:
Condition: Locked
 No
Condition: Unlocked
 Yes

WEL497

OK or NG

OK	▶	Check the following. <ul style="list-style-type: none"> • Door unlock sensor ground circuit • Harness for open or short between smart entrance control unit and door unlock sensor
NG	▶	Replace door unlock sensor.

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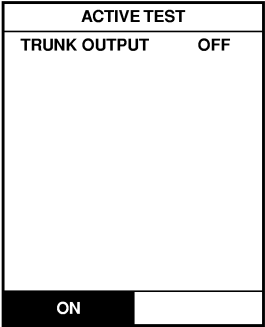
REMOTE KEYLESS ENTRY SYSTEM

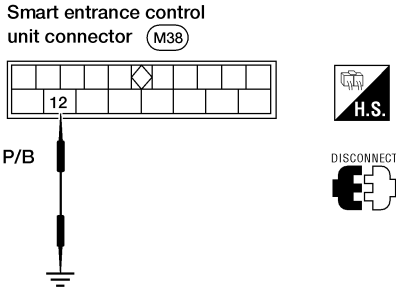
Trouble Diagnoses (Cont'd)

TRUNK LID OPENER ACTUATOR CHECK

=NIEL0195S12

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

2	CHECK TRUNK LID OPENER ACTUATOR OPERATION	
With CONSULT-II 1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "TRUNK OUTPUT" and touch "ON".		
		
Trunk lid opener should operate.		
SEL345W		
NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.		
OK or NG		
OK	▶	Trunk lid opener actuator circuit is OK.
NG	▶	GO TO 3.

3	CHECK TRUNK LID OPENER ACTUATOR CIRCUIT	
1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 12.		
		
Trunk lid opener should operate.		
LEL509		
Refer to "Wiring Diagram —MULTI—", EL-231.		
Does trunk lid open?		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between smart entrance control unit and trunk lid opener actuator.

REMOTE KEYLESS ENTRY SYSTEM


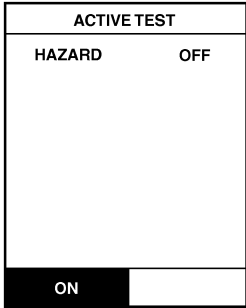
Trouble Diagnoses (Cont'd)

HAZARD REMINDER CHECK

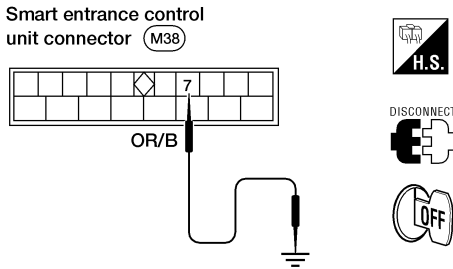
-NIEL0195S08

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

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2	CHECK HAZARD REMINDER OPERATION	
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "HAZARD" and touch "ON".</p>		
		
Hazard lamps should illuminate.		
LEL659		
NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.		
OK or NG		
OK	▶	Hazard reminder operation is OK.
NG	▶	GO TO 3.

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3	CHECK HAZARD REMINDER OPERATION	
<p>1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 7.</p>		
		
Hazard lamps should illuminate.		
LEL508		
Refer to "Wiring Diagram —MULTI—", EL-233.		
OK or NG		
OK	▶	Replace smart entrance control unit.
NG	▶	GO TO 4.

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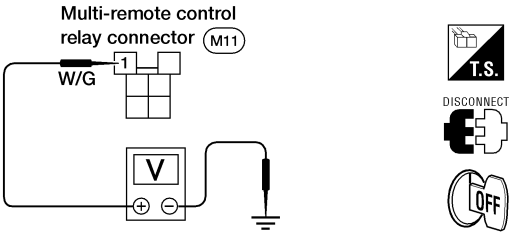
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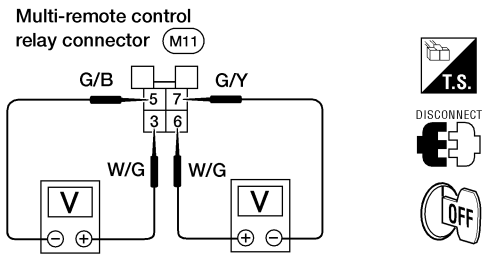
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REMOTE KEYLESS ENTRY SYSTEM

Trouble Diagnoses (Cont'd)

4	CHECK MULTI-REMOTE CONTROL RELAY	
Check multi-remote control relay.		
OK or NG		
OK	▶	GO TO 5.
NG	▶	Replace multi-remote control relay.

5	CHECK POWER SUPPLY FOR MULTI-REMOTE CONTROL RELAY	
<ol style="list-style-type: none"> 1. Disconnect multi-remote control relay harness connector. 2. Check voltage between terminal 1 and ground. 		
		
Battery voltage should exist.		
LEL513		
OK or NG		
OK	▶	GO TO 6.
NG	▶	Check the following. <ul style="list-style-type: none"> ● 15A fuse [No. 5, located in fuse block (J/B)] ● Harness for open or short between multi-remote control relay and fuse

6	CHECK MULTI-REMOTE CONTROL RELAY CIRCUIT	
<ol style="list-style-type: none"> 1. Disconnect multi-remote control relay harness connector. 2. Check voltage between terminals 3 and 5. 3. Check voltage between terminals 6 and 7. 		
		
Battery voltage should exist.		
LEL514		
OK or NG		
OK	▶	Check harness for open or short between smart entrance control unit and multi-remote control relay.
NG	▶	Check the following. <ul style="list-style-type: none"> ● Harness for open or short between multi-remote control relay and fuse ● Harness for open or short between multi-remote control relay and turn signal lamps

REMOTE KEYLESS ENTRY SYSTEM


Trouble Diagnoses (Cont'd)

HORN REMINDER CHECK

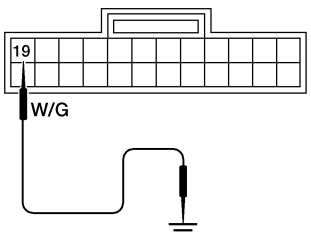



—NIEL0195S09

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

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2	CHECK HORN REMINDER OPERATION							
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "MULTI REM HRN" and touch "ON".</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <p style="text-align: center; margin: 0;">ACTIVE TEST</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">MULTI REM HRN</td> <td style="padding: 2px;">OFF</td> </tr> <tr> <td colspan="2" style="height: 100px;"></td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 2px;">ON</td> </tr> </table> </div> <div style="text-align: center;"> <p>Horn should sound.</p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL348W</p> <p>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</p> <p style="text-align: center;">OK or NG</p>			MULTI REM HRN	OFF			ON	
MULTI REM HRN	OFF							
ON								
OK	▶	Horn reminder operation is OK.						
NG	▶	GO TO 3.						

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3	CHECK HORN REMINDER OPERATION	
<p>1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 19.</p> <div style="display: flex; align-items: center; justify-content: center; margin: 10px 0;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="margin-left: 20px;">    </div> </div> <p style="text-align: right; margin-top: 10px;">LEL507</p> <p>Refer to "Wiring Diagram —MULTI—", EL-233.</p> <p style="text-align: center;">Does horn sound?</p>		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between smart entrance control unit and horn relay.

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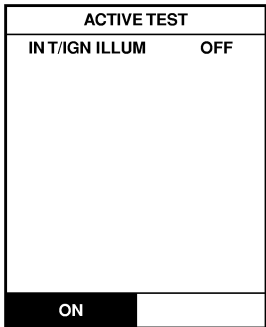
REMOTE KEYLESS ENTRY SYSTEM


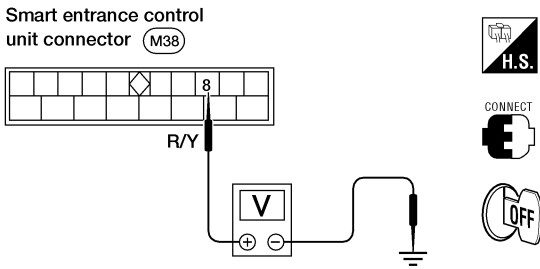
Trouble Diagnoses (Cont'd)

INTERIOR LAMP OPERATION CHECK

=NIEL0195S10

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

2	CHECK INTERIOR LAMP OPERATION	
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "INT/IGN ILLUM" and touch "ON".</p>		
		
Interior lamp should illuminate.		
SEL349W		

<p> Without CONSULT-II</p> <p>Push unlock button of remote controller with all doors closed, and check voltage between smart entrance control unit harness connector terminal 8 and ground.</p>		
		
<p>Voltage [V]: Unlock button is pushed. 0 (For approx. 30 seconds.) Unlock button is not pushed. Battery voltage</p>		
LEL506		
Refer to "Wiring Diagram —MULTI—", EL-232.		
OK or NG		
OK	▶	System is OK.
NG	▶	Check harness open or short between smart entrance control unit and interior lamp.

REMOTE KEYLESS ENTRY SYSTEM

ID Code Entry Procedure

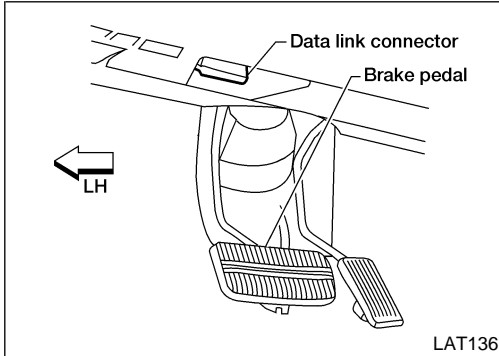
ID Code Entry Procedure

REMOTE CONTROLLER ID SET UP WITH CONSULT-II

=NIEL0117
NIEL0117S01

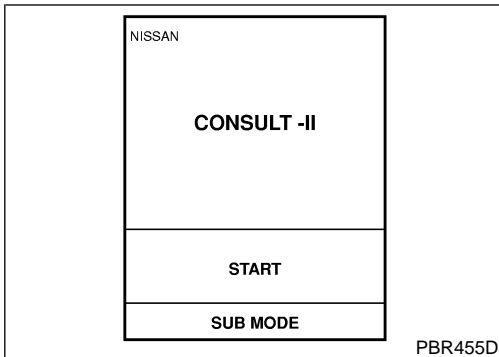
NOTE:

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



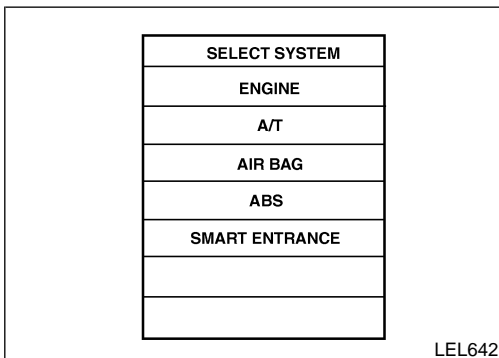
LAT136

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



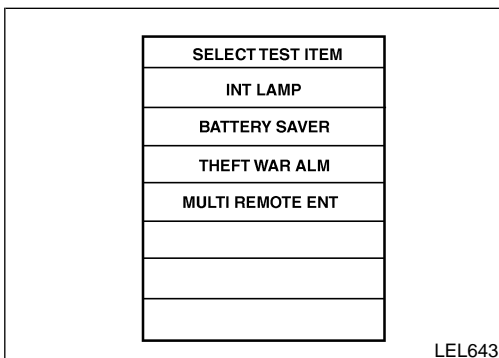
PBR455D

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



LEL642

5. Touch "SMART ENTRANCE".



LEL643

6. Touch "MULTI REMOTE ENT".

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

REMOTE KEYLESS ENTRY SYSTEM

ID Code Entry Procedure (Cont'd)

SELECT DIAG MODE
DATA MONITOR
ACTIVE TEST
WORK SUPPORT

SEL274W

7. Touch "WORK SUPPORT".

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

SEL277W

8. The items are shown on the figure at left can be set up.

- "REMO CONT ID CONFIR"
Use this mode to confirm if a remote controller ID code is registered or not.
- "REMO CONT ID REGIST"
Use this mode to register a remote controller ID code.

NOTE:

Register the ID code when remote controller or smart entrance control unit is replaced, or when additional remote controller is required.

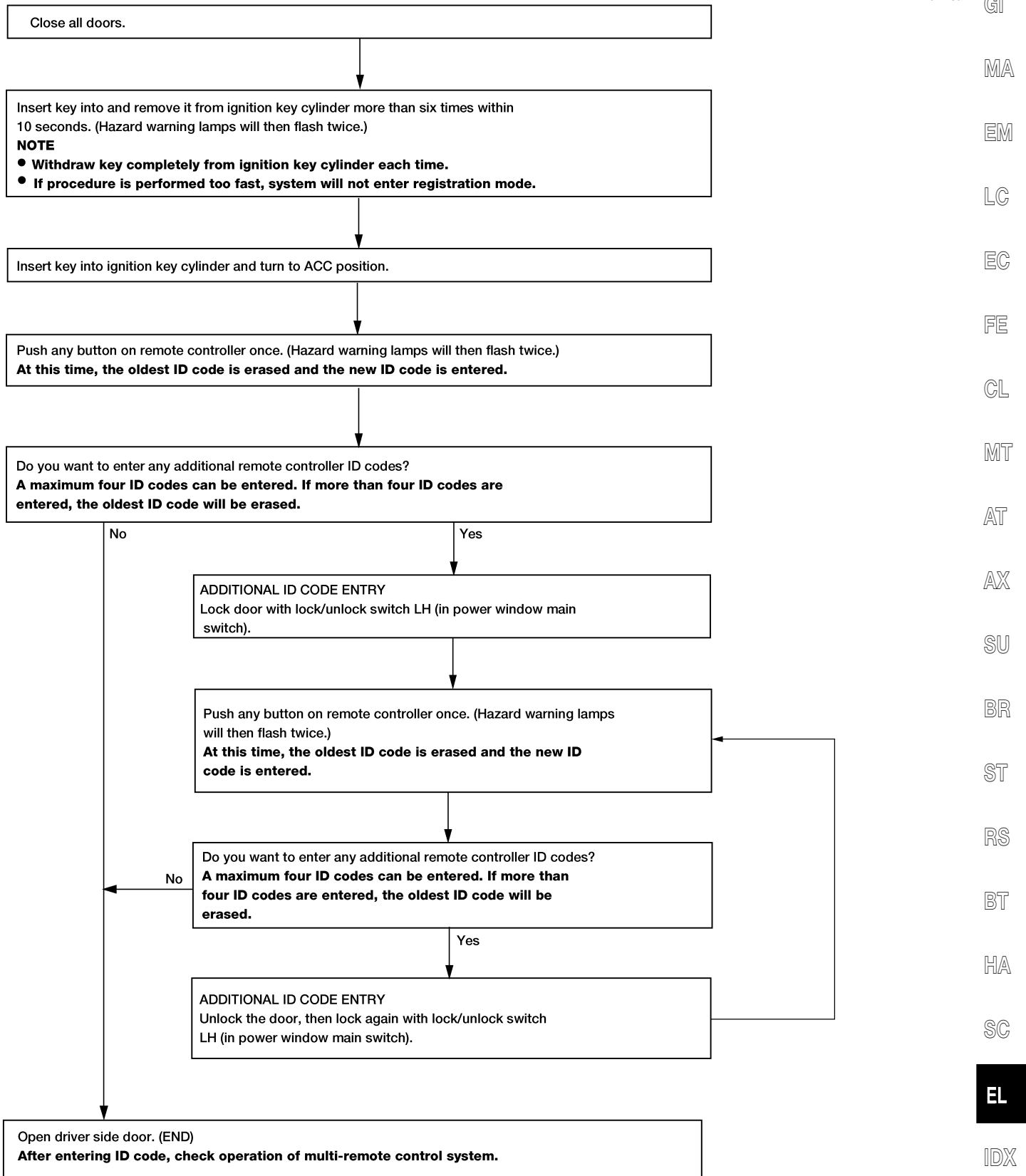
- "REMO CONT ID ERASUR"
Use this mode to erase a remote controller ID code.
- "HZRD REM SET"
Use this mode to activate or deactivate the hazard and horn reminder.

REMOTE KEYLESS ENTRY SYSTEM

ID Code Entry Procedure (Cont'd)

REMOTE CONTROLLER ID SET UP WITHOUT CONSULT-II

NIEL0117S02



GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

REMOTE KEYLESS ENTRY SYSTEM

ID Code Entry Procedure (Cont'd)

NOTE:

- If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-II. However, when the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.
To erase all ID codes in memory, register one ID code (remote controller) four times. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.
- When registering an additional remote controller, the existing ID codes in memory may or may not be erased. If four ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than four ID codes are stored in memory, when an additional ID code is registered, the new ID code is added and no ID codes are erased.
- If you need to activate more than two additional new remote controllers, repeat the procedure "Additional ID code entry" for each new remote controller.
- Entry of maximum four ID codes is allowed. When more than four ID codes are entered, the oldest ID code will be erased.
- Even if same ID code that is already in the memory is input, the same ID code can be entered. The code is counted as an additional code.

REMOTE KEYLESS ENTRY SYSTEM

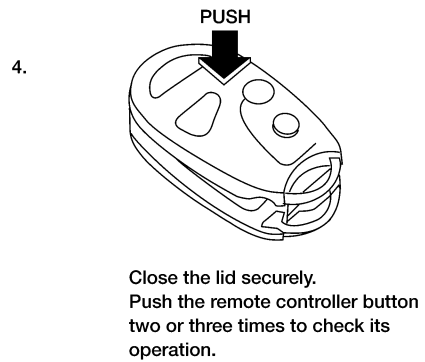
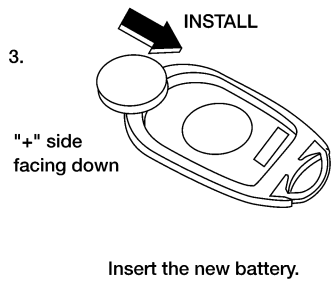
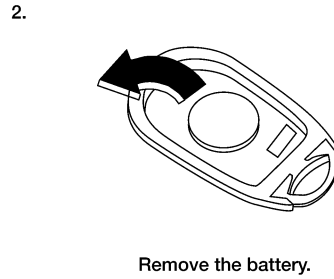
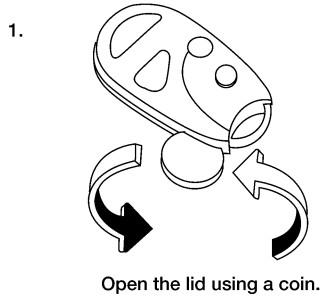
Remote Controller Battery Replacement

Remote Controller Battery Replacement

NIEL0118

NOTE:

- Be careful not to touch the circuit board or the battery terminal.
- The remote controller is water-resistant. However, if it does get wet, immediately wipe it dry.



LEL577

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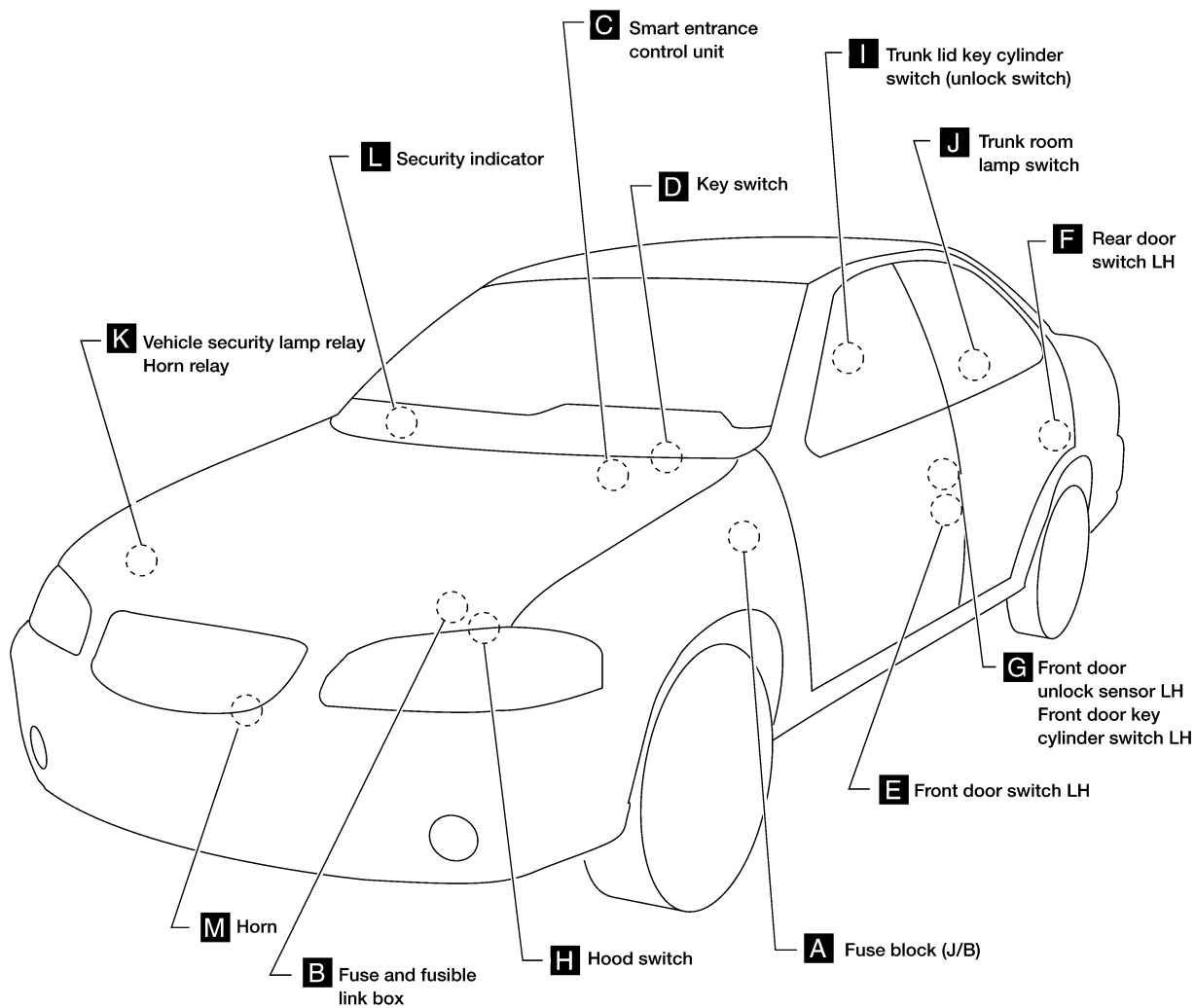
IDX

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

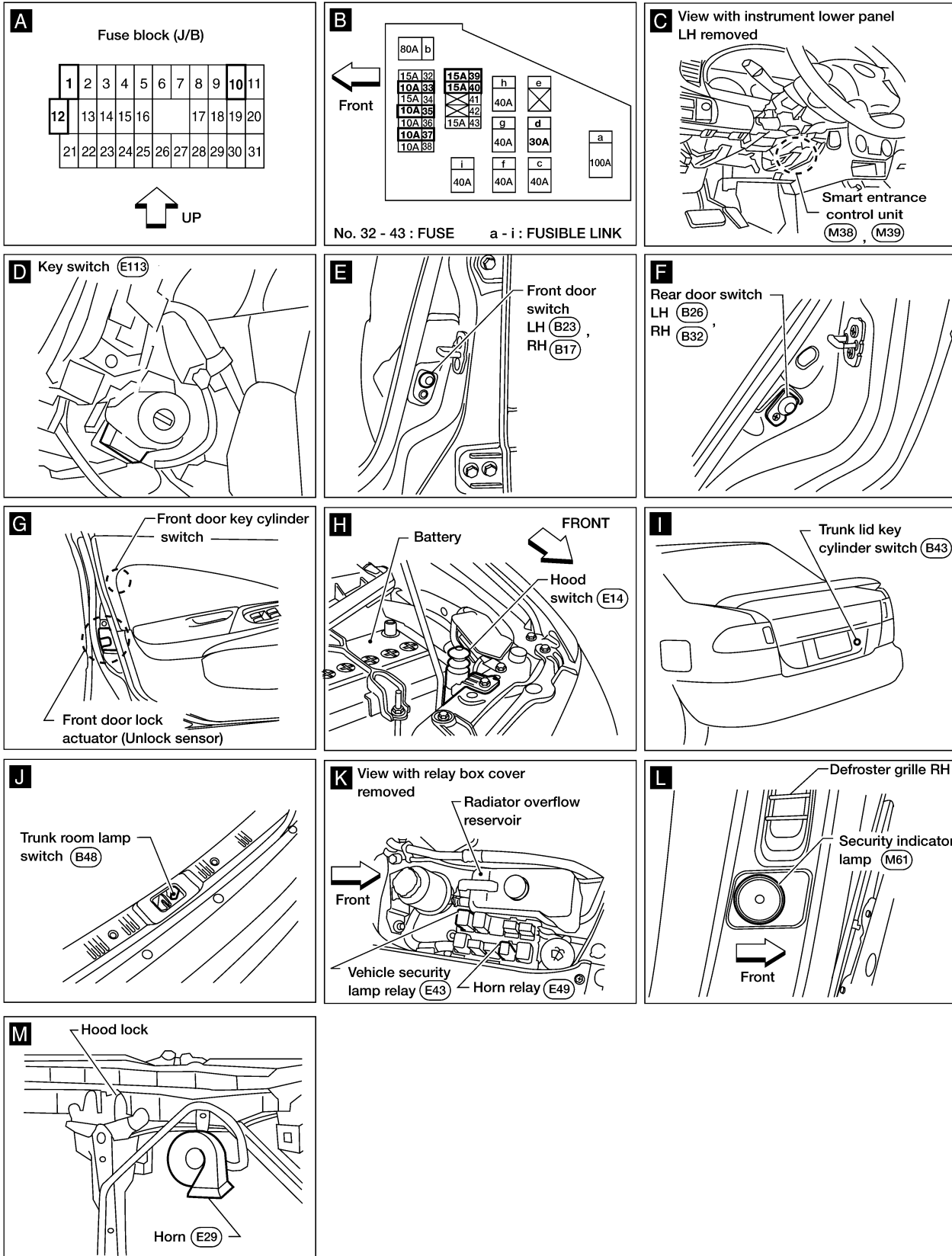
NIEL0119



WEL602A

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Component Parts and Harness Connector Location (Cont'd)



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EL
IDX

WEL603A

VEHICLE SECURITY (THEFT WARNING) SYSTEM

System Description

System Description

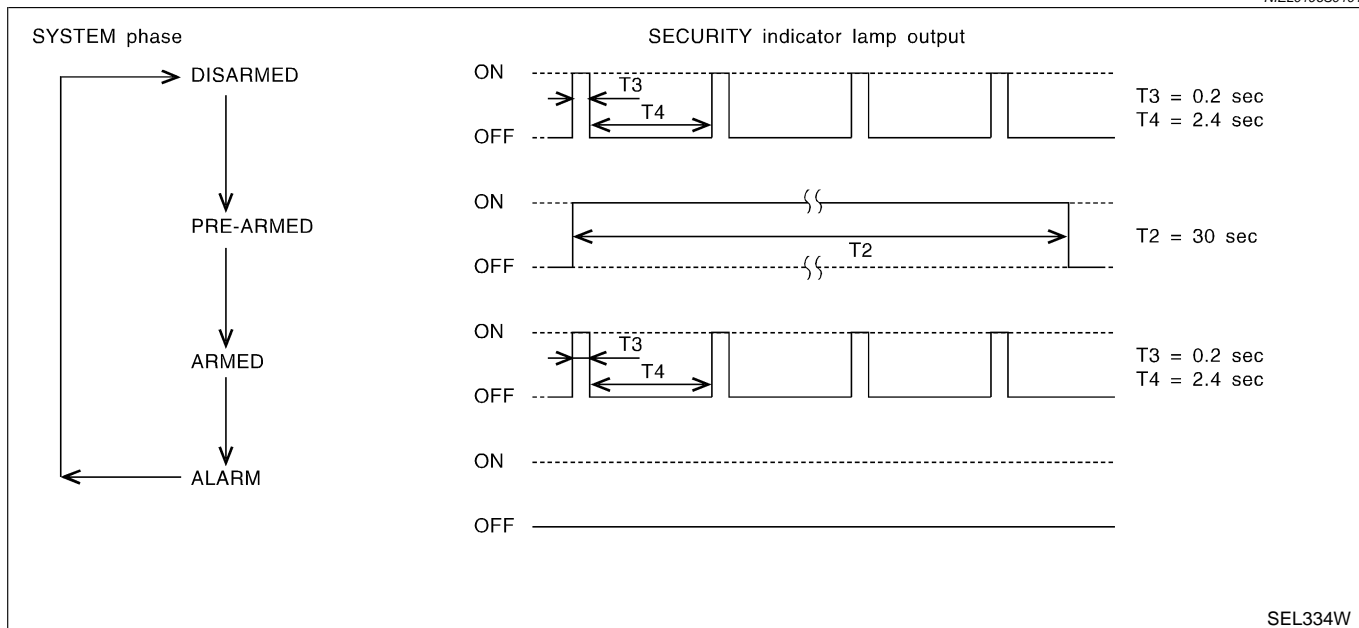
NIEL0196

NIEL0196S01

NIEL0196S0101

DESCRIPTION

1. Operation Flow



SEL334W

2. Setting The Vehicle Security System

NIEL0196S0102

Initial condition

- 1) Ignition switch is in OFF position.

Disarmed phase

When the vehicle security system is in the disarmed phase, the security indicator lamp blinks every 2.6 seconds.

Pre-armed phase and armed phase

When the following operation 1) or 2) is performed, the vehicle security system turns into the “pre-armed” phase. (The security indicator lamp illuminates.)

- 1) Smart entrance control unit receives LOCK signal from key cylinder switch or multi-remote controller after hood, trunk lid and all doors are closed.
- 2) Hood, trunk lid and all doors are closed after front doors are locked by key, lock/unlock switch or multi-remote controller.

After about 30 seconds, the system automatically shifts into the “armed” phase (the system is set). (The security indicator lamp blinks every 2.6 seconds.)

3. Canceling The Set Vehicle Security System

NIEL0196S0103

When the following 1) or 2) operation is performed, the armed phase is canceled.

- 1) Unlock the doors with the key or multi-remote controller.
- 2) Open the trunk lid with the key or multi-remote controller.

4. Activating The Alarm Operation of The Vehicle Security System

NIEL0196S0104

Make sure the system is in the armed phase. (The security indicator lamp blinks every 2.6 seconds.)

When the following operation 1) or 2) is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

- 1) Engine hood, trunk lid or any door is opened during armed phase.
- 2) Disconnecting and connecting the battery connector before canceling armed phase.

POWER SUPPLY AND GROUND

NIEL0196S02

Power is supplied at all times:

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to security indicator lamp terminal 1 and
- to key switch terminal 2.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

System Description (Cont'd)

Power is supplied at all times:

- through 10A fuse (No. 37, located in the fuse and fusible link box)
- to smart entrance control unit terminal 10.

GI

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

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

MA

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

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to smart entrance control unit terminal 21.

EM

Ground is supplied:

- to smart entrance control unit terminal 16
- through body grounds M28 and M54.

LC

EC

INITIAL CONDITION TO ACTIVATE THE SYSTEM

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

NIEL0196S03

Pattern A

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

NIEL0196S0301

When a door is open, smart entrance control unit terminal 28 or 29 receives a ground signal from each door switch.

FE

CL

When the hood is open, smart entrance control unit terminal 27 receives a ground signal:

- from terminal + of the hood switch
- through body grounds E7 and E37.

MT

AT

When the trunk lid is open, smart entrance control unit terminal 38 receives a ground signal:

- from terminal + of the trunk room lamp switch
- through body grounds B13 and B19.

AX

When smart entrance control unit receives LOCK signal from key cylinder switch or multi-remote controller and none of the described conditions exist, the vehicle security system will automatically shift to armed mode.

SU

Pattern B

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

NIEL0196S0302

BR

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

ST

VEHICLE SECURITY SYSTEM ACTIVATION

Pattern A

With all doors closed (including hood and trunk lid), if the key is used to lock doors, smart entrance control unit terminal 41 receives a ground signal:

NIEL0196S04

RS

- from terminal L of the key cylinder switch LH
- through body grounds M28 and M54.

BT

If this signal, or lock signal from remote controller is received by the smart entrance control unit, the vehicle security system will activate automatically.

HA

NOTE:

Vehicle security system can be set even though all doors are not locked.

SC

Pattern B

With any door open, if lock/unlock switch is used to lock doors, smart entrance control unit terminal 23 receives a ground signal:

NIEL0196S0402

EL

- from terminal 14 of main power window and door lock/unlock switch, or
- from terminal 1 of door lock/unlock switch RH
- through body grounds M28 and M54, or

IDX

With any door open, if the key is used to lock doors, smart entrance control unit terminal 41 receives a ground signal:

- from terminal L of the key cylinder switch LH

VEHICLE SECURITY (THEFT WARNING) SYSTEM

System Description (Cont'd)

- through body grounds M28 and M54.

If these signals and lock signal from remote controller are received by the smart entrance control unit and ground signals of terminals 36 and 37 are interrupted (both front doors locked), the vehicle security system will activate automatically.

NOTE:

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

Once the vehicle security system has been activated, smart entrance control unit terminal 31 supplies ground to terminal 2 of the security indicator lamp.

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

Now the vehicle security system is in armed phase.

VEHICLE SECURITY SYSTEM ALARM OPERATION

NIEL0196S05

The vehicle security system is triggered by:

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

Once the vehicle security system is in armed phase, if the smart entrance control unit receives a ground signal at terminal 28 or 29 (door switch), 38 (trunk room lamp switch) or 27 (hood switch), the vehicle security system will be triggered. The headlamps flash and the horn sounds intermittently.

Power is supplied at all times:

- through 15A fuse (No. 39, located in fuse and fusible link box)
- to vehicle security lamp relay terminal 3,
- through 15A fuse (No. 40, located in fuse and fusible link box)
- to vehicle security lamp relay terminal 6,
- through 10A fuse (No. 35 located in fuse and fusible link box)
- to vehicle security lamp relay terminal 1
- through 10A fuse (No. 33, located in fuse and fusible link box)
- to horn relay terminals 1 and 5.

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

- from smart entrance control unit terminal 4
- to horn relay terminal 2 and
- to vehicle security lamp relay terminal 2.

The headlamps flash and the horn sounds intermittently.

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

VEHICLE SECURITY SYSTEM DEACTIVATION

NIEL0196S06

To deactivate the vehicle security system, a door or trunk lid must be unlocked with the key or remote controller.

When the key is used to unlock the door, smart entrance control unit terminal 30 receives a ground signal:

- from terminal U of front door key cylinder switch LH.

When the key is used to open the trunk lid, smart entrance control unit terminal 42 receives a ground signal from terminal + of the trunk lid key cylinder switch (unlock switch).

When the smart entrance control unit receives either one of these signals or unlock signal from remote controller, the vehicle security system is deactivated. (Disarmed phase)

PANIC ALARM OPERATION

NIEL0196S07

When the multi-remote control system (panic alarm) is triggered, ground is supplied intermittently:

- from smart entrance control unit terminal 4
- to vehicle security lamp relay terminal 2 and
- to vehicle security horn relay terminal 2.

The headlamp flashes and the horn sounds intermittently.

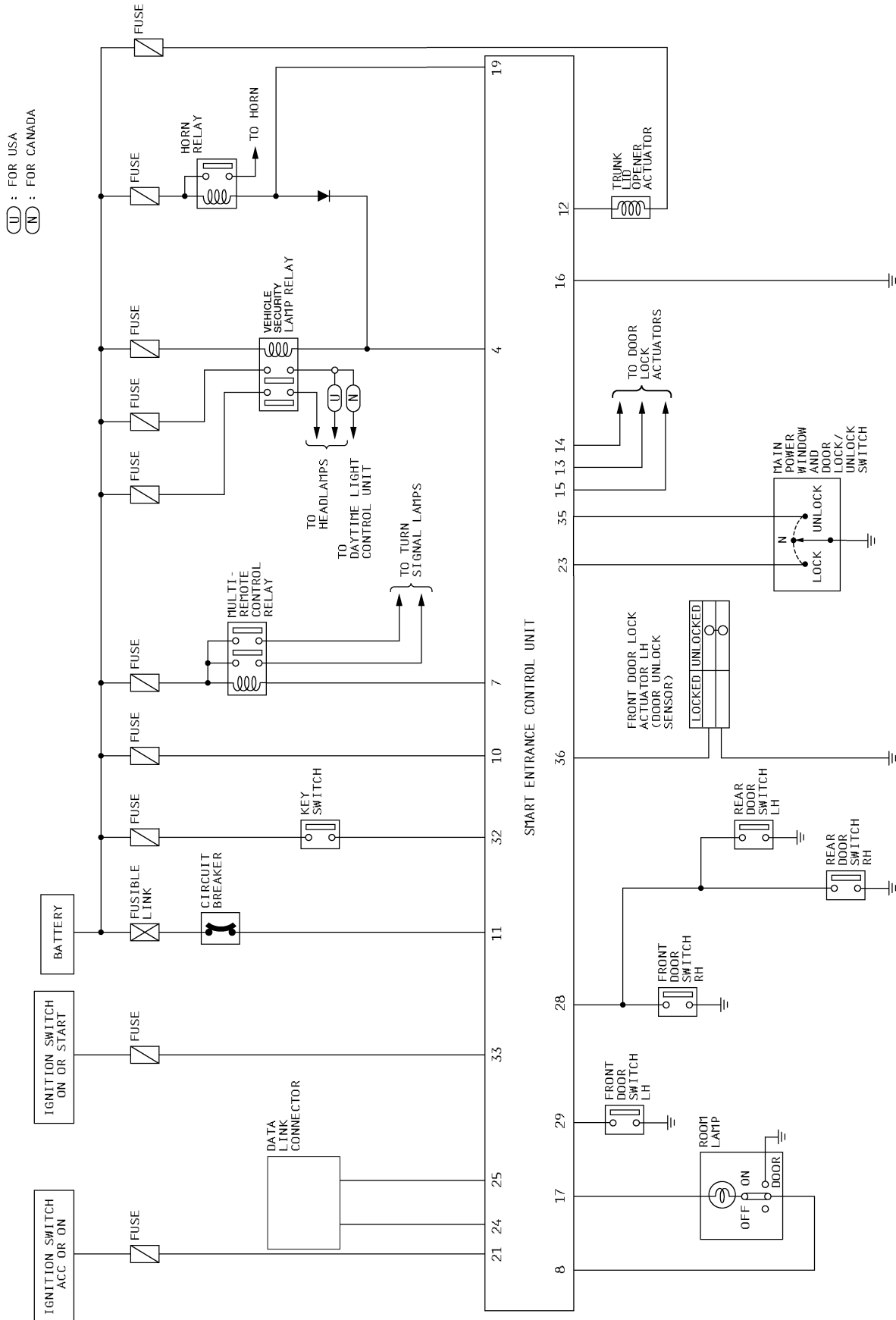
The alarm automatically turns off after 25 seconds or when smart entrance control unit receives any signal from multi-remote controller.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Schematic

Schematic

NIEL0121



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WEL604A

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Wiring Diagram — VEHSEC —

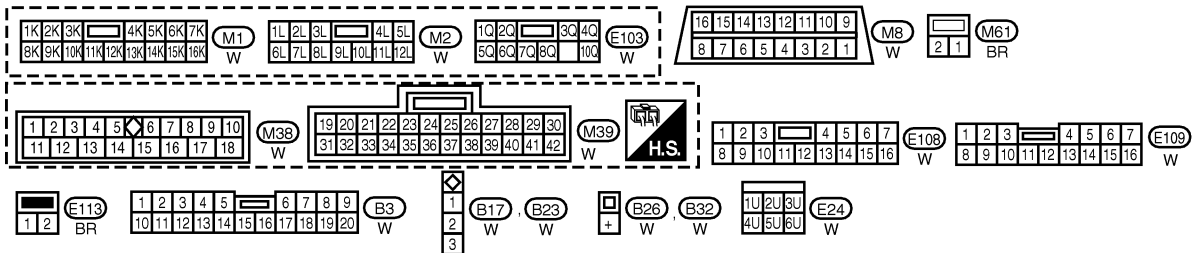
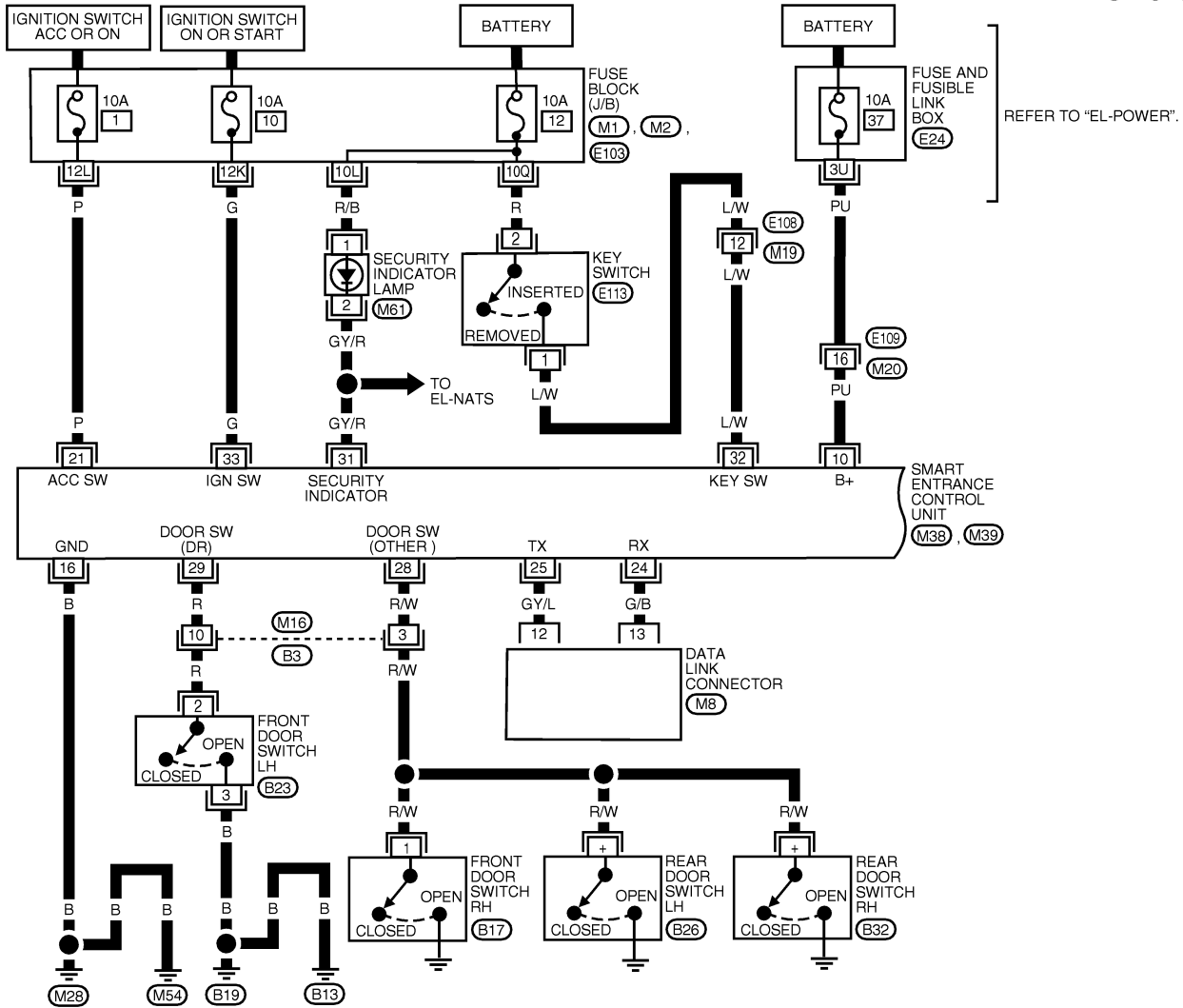
Wiring Diagram — VEHSEC —

NIEL0122

NIEL0122S01

FIG. 1

EL-VEHSEC-01



WEL108A

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	PU	POWER SOURCE (FUSE)	—	12V
16	B	GROUND	—	—
21	P	IGNITION SWITCH (ACC, ON)	ACC OK ON POSITION	12V
28	R/W	OTHER DOOR SWITCHES	OFF (CLOSED)	5V
			ON (OPEN)	0V
29	R	FRONT DOOR SWITCH LH	OFF (CLOSED)	5V
			ON (OPEN)	0V
32	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION KEY IS INSERTED	12V
			IGNITION KEY IS REMOVED	0V
31	GY/R	VEHICLE SECURITY INDICATOR	GOES OFF	12V
			ILLUMINATES	0V
33	G	IGNITION SWITCH (ON)	IGNITION KEY IS IN ON POSITION	12V
			IGNITION SWITCH (START)	IGNITION KEY IS IN START POSITION

WEL109A

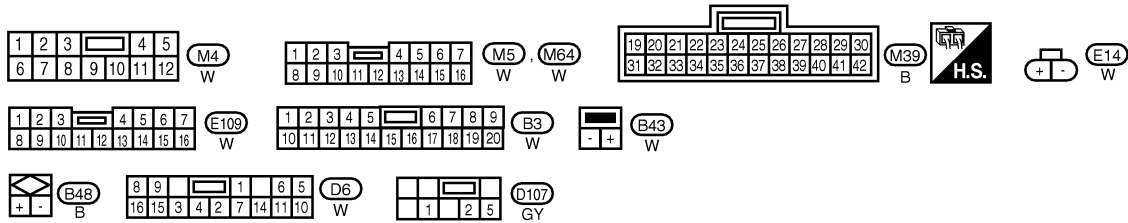
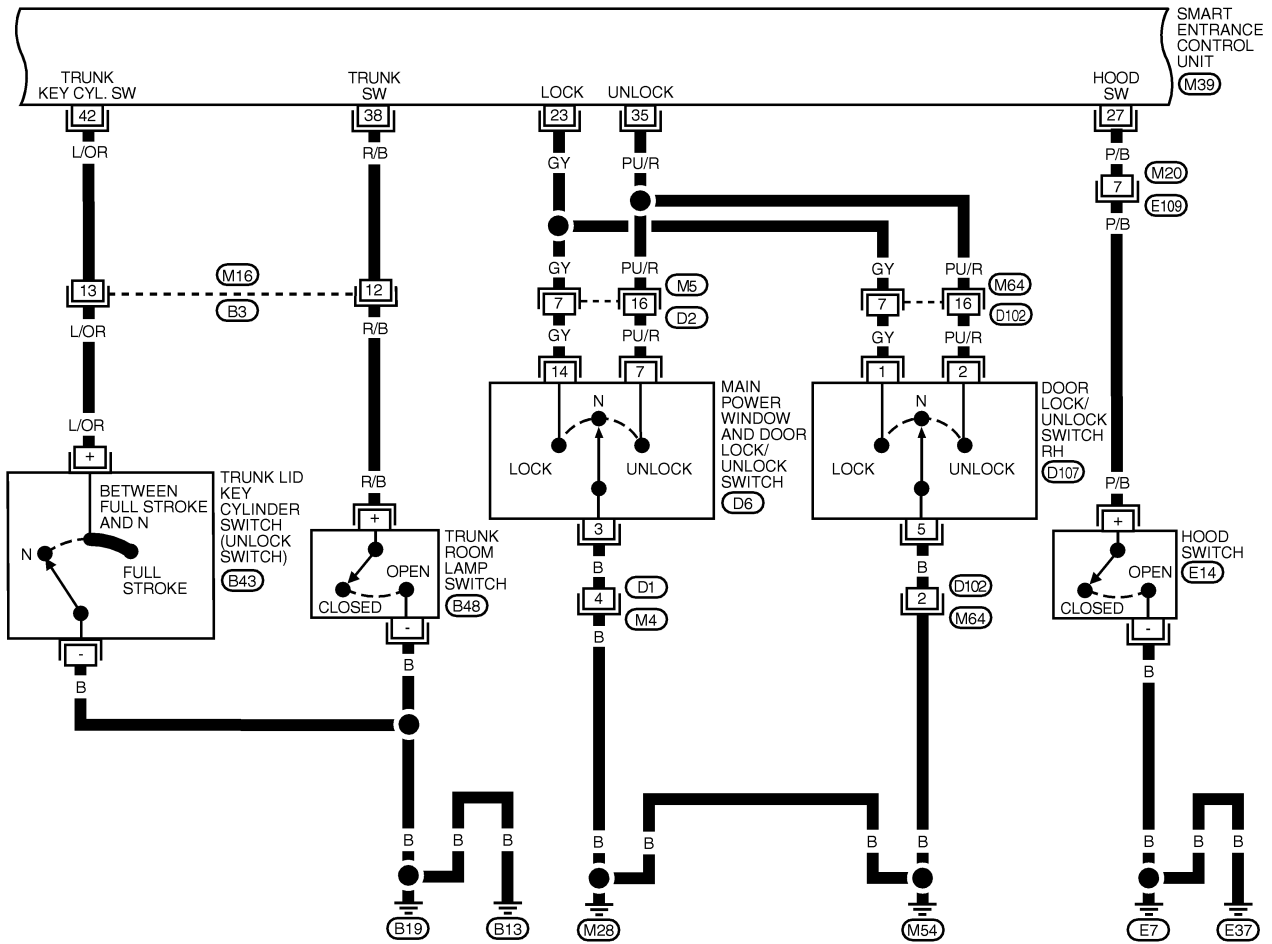
VEHICLE SECURITY (THEFT WARNING) SYSTEM

Wiring Diagram — VEHSEC — (Cont'd)

FIG. 2

NIEL0122S02

EL-VEHSEC-02



LEL110A

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
23	GY	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			LOCKS	0V
27	P/B	HOOD SWITCH	ON (OPEN)	0V
			OFF (CLOSED)	5V
35	PU/R	DOOR LOCK & UNLOCK SWITCHES	NEUTRAL	5V
			UNLOCKS	0V
38	R/B	TRUNK ROOM LAMP SWITCH	ON (OPEN)	0V
			OFF (CLOSED)	12V
42	L/OR	TRUNK LID KEY CYLINDER SWITCH	OFF (NEUTRAL)	5V
			ON (UNLOCK)	0V

LEL614

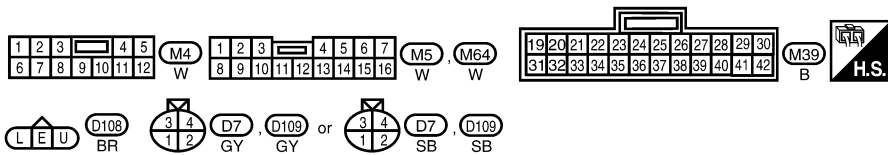
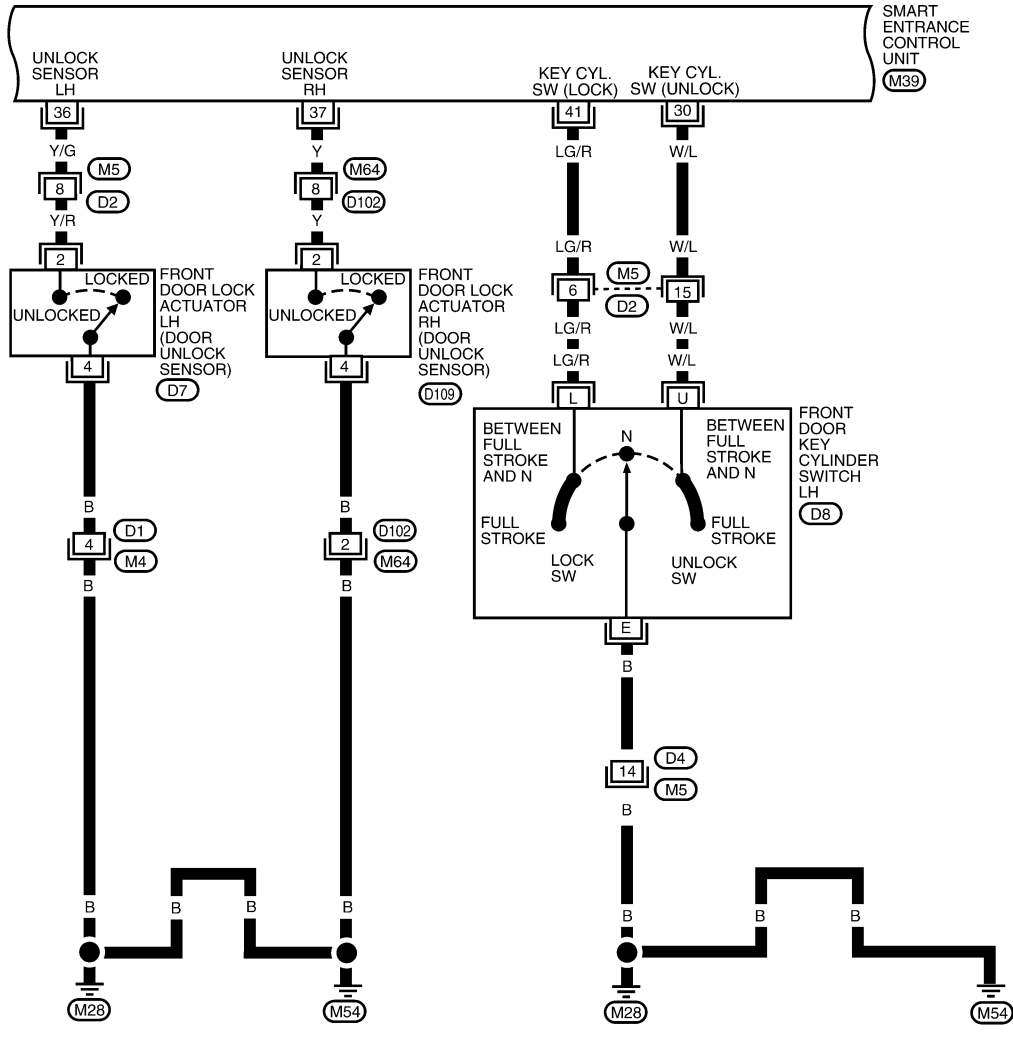
VEHICLE SECURITY (THEFT WARNING) SYSTEM

Wiring Diagram — VEHSEC — (Cont'd)

FIG. 3

NIEL0122S03

EL-VEHSEC- 03



WEL626A

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

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
30	W/L	DOOR KEY CYLINDER UNLOCK SWITCH	OFF (NEUTRAL)	5V
			ON (UNLOCKED)	0V
36	Y/G	DOOR UNLOCK SENSOR LH	DRIVER DOOR: LOCKED	5V
			DRIVER DOOR: UNLOCKED	0V
37	Y	DOOR UNLOCK SENSOR RH	PASSENGER DOOR: LOCKED	5V
			PASSENGER DOOR: UNLOCKED	0V
41	LG/R	DOOR KEY CYLINDER LOCK SWITCH	OFF (NEUTRAL)	5V
			ON (LOCKED)	0V

LEL615

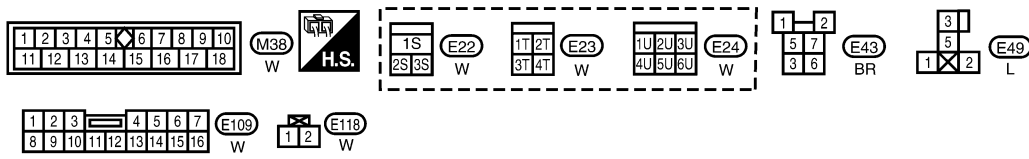
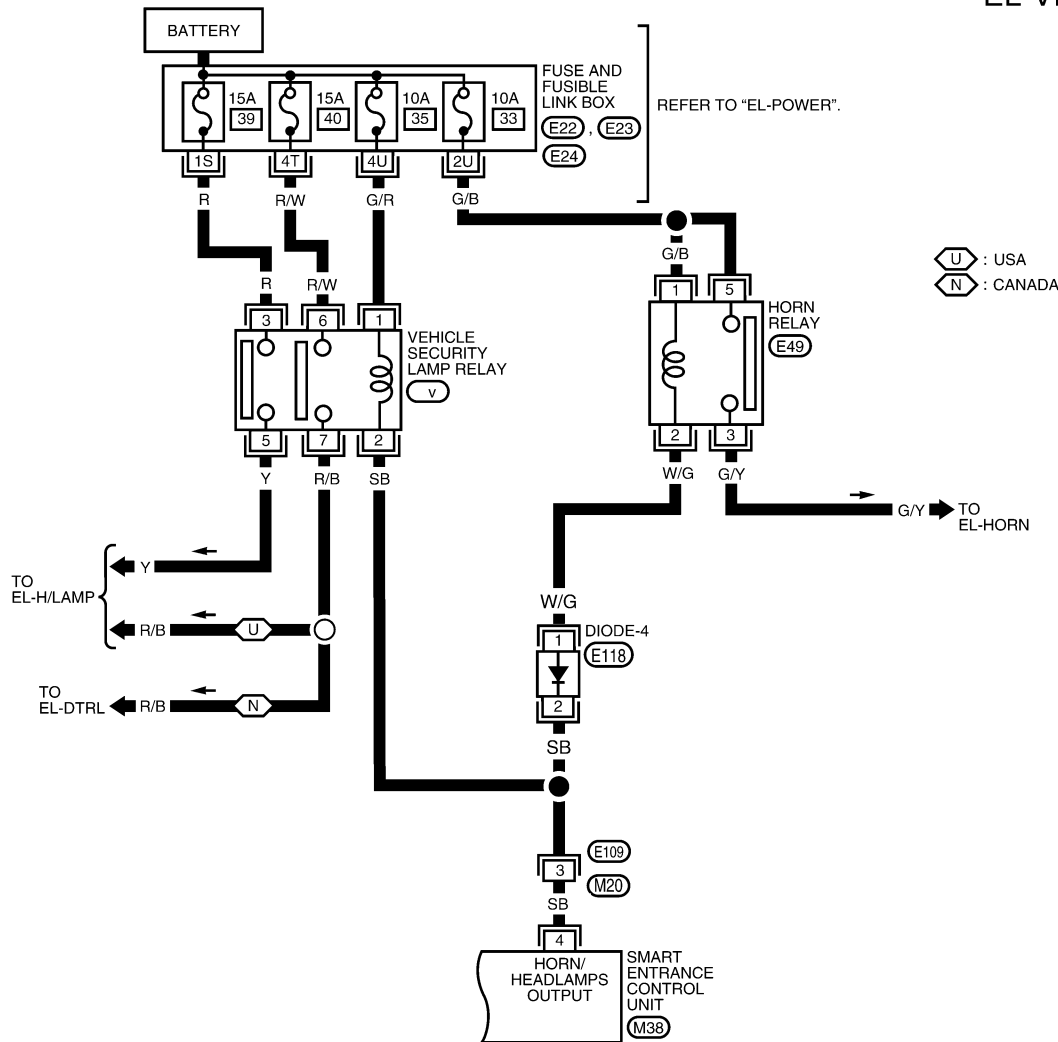
VEHICLE SECURITY (THEFT WARNING) SYSTEM

Wiring Diagram — VEHSEC — (Cont'd)

FIG. 4

NIEL0122S04

EL-VEHSEC-04



WEL605A

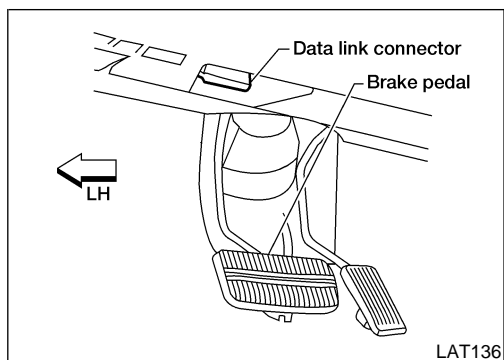
SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
4	SB	VEHICLE SECURITY HORN RELAY AND VEHICLE SECURITY WARNING LAMP RELAY	WHEN PANIC ALARM IS OPERATED USING REMOTE CONTROLLER OR WHEN ALARM IS ACTIVATED	12V TO 0V

WEL114A

VEHICLE SECURITY (THEFT WARNING) SYSTEM

CONSULT-II Inspection Procedure

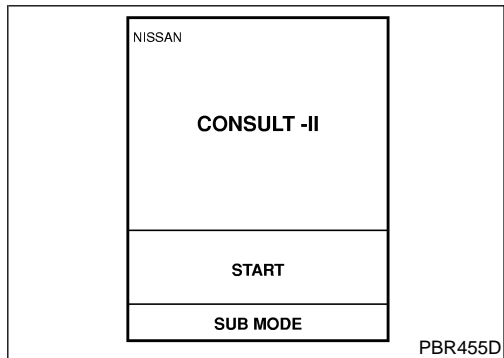


CONSULT-II Inspection Procedure “THEFT WAR ALM”

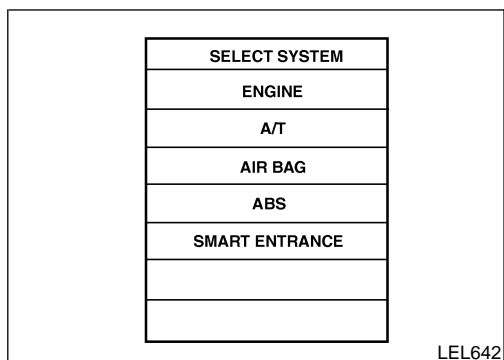
=NIEL0244

NIEL0244S01

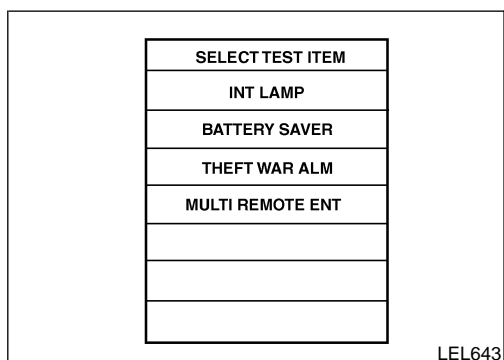
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



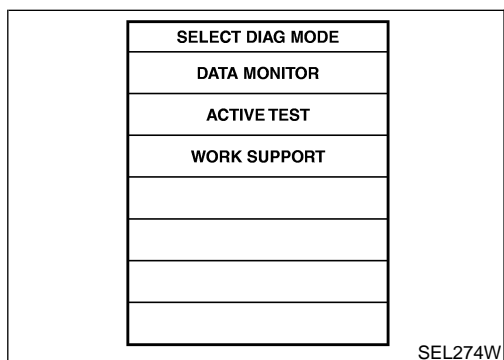
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “THEFT WAR ALM”.



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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

CONSULT-II Application Item

CONSULT-II Application Item

“THEFT WAR ALM”

Data Monitor

NIEL0245

NIEL0245S01

NIEL0245S0101

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
KEY CYL LK SW	Indicates [ON/OFF] condition of lock signal from key cylinder switch.
KEY CYL UN SW	Indicates [ON/OFF] condition of unlock signal from key cylinder switch.
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (All).
LOCK SIG DR	Indicates [ON/OFF] condition of front door unlock sensor LH.
LOCK SIG AS	Indicates [ON/OFF] condition of front door unlock sensor RH.
TRUNK SW	Indicates [ON/OFF] condition of trunk switch.
TRUNK KEY SW	Indicates [ON/OFF] condition of trunk key cylinder switch.
HOOD SWITCH	Indicates [ON/OFF] condition of hood switch.
LOCK SW DR/AS	Indicates [ON/OFF] condition of lock signal from door lock/unlock switch LH and RH.
UNLK SW DR/AS	Indicates [ON/OFF] condition of unlock signal from door lock/unlock switch LH and RH.
LK BUTTON/SIG	Indicates [ON/OFF] condition of lock signal from remote controller.
UN BUTTON/SIG	Indicates [ON/OFF] condition of unlock signal from remote controller.
TRUNK BTN/SIG	Indicates [ON/OFF] condition of trunk open signal from remote controller.

Active Test

NIEL0245S0102

Test Item	Description
THEFT IND	This test is able to check security indicator lamp operation. The lamp will be turned on when “ON” on CONSULT-II screen is touched.
THEFT WAR ALM	This test is able to check theft warning alarm operation. The alarm will be activated for 0.5 seconds after “ON” on CONSULT-II screen is touched.

Work Support

NIEL0245S0103

Test Item	Description
THEFT ALM TRG	The switch which triggered theft warning alarm is recorded. This mode is able to confirm and erase the record of theft warning alarm. The trigger data can be erased by touching “CLEAR” on CONSULT-II screen.

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VEHICLE SECURITY (THEFT WARNING) SYSTEM

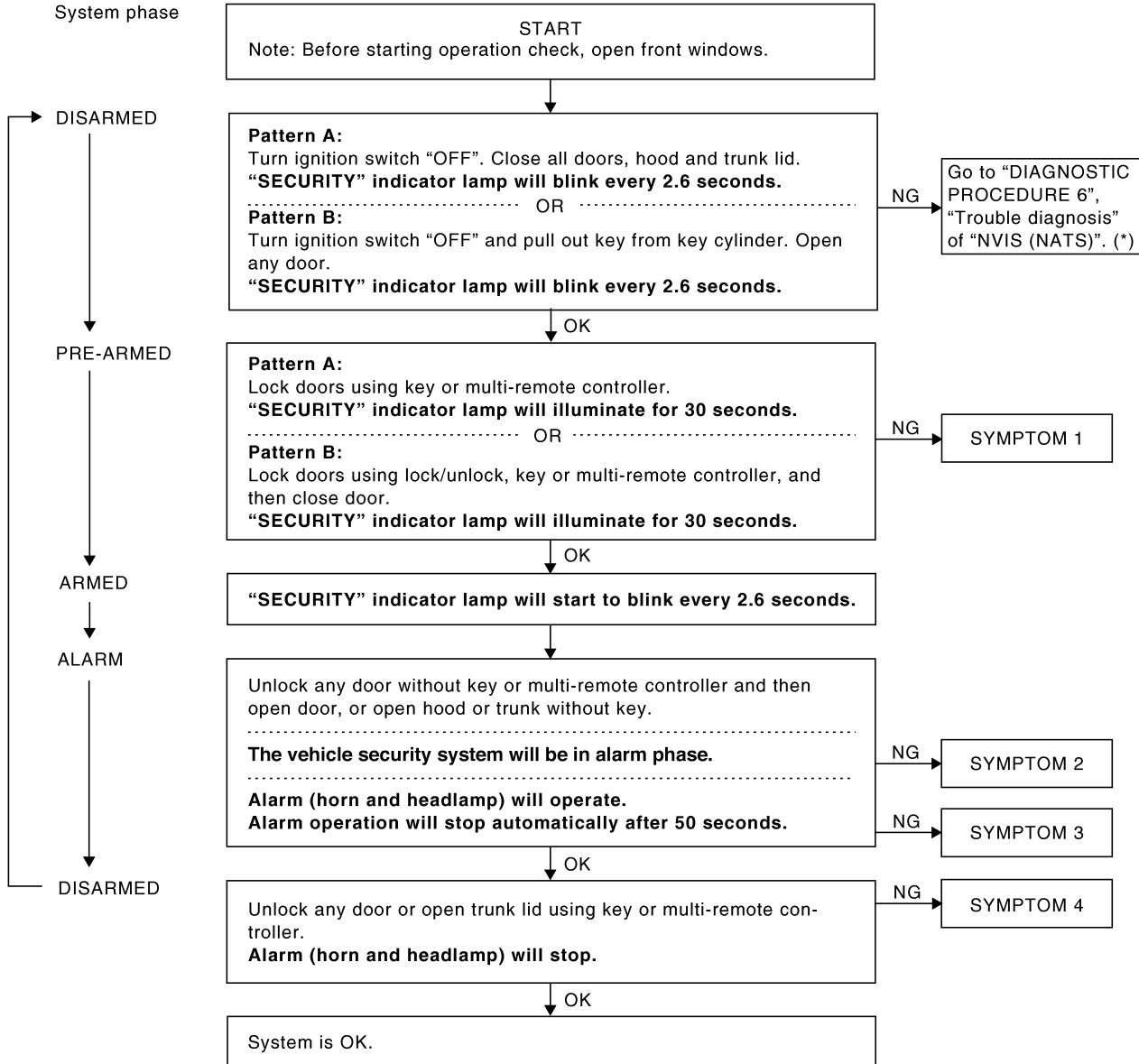
Trouble Diagnoses

Trouble Diagnoses PRELIMINARY CHECK

=NIEL0123

NIEL0123S01

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



WEL362A

For details of "Pattern A" and "Pattern B" vehicle security system settings, refer to "INITIAL CONDITION TO ACTIVATE THE SYSTEM", EL-259.

*: Refer to "NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)", EL-317.

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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

SYMPTOM CHART

NIEL0123S02

REFERENCE PAGE (EL-)	268	270	271	276	278	279	281	282	284	236		
SYMPTOM	PRELIMINARY CHECK	POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR, HOOD AND TRUNK ROOM LAMP SWITCH CHECK	SECURITY INDICATOR LAMP CHECK	FRONT DOOR UNLOCK SENSOR CHECK	DOOR KEY CYLINDER SWITCH CHECK	TRUNK LID KEY CYLINDER SWITCH CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	VEHICLE SECURITY HORN AND HEADLAMP ALARM CHECK	Check "MULTI-REMOTE CONTROL" system.		
1	Security indicator lamp does not illuminate for 30 seconds.	X	X		X						AT	
	Vehicle security system cannot be set by ...	All items	X	X	X		X				AX	
		Door outside key	X					X				SU
		Lock/unlock switch	X						X			SU
	Multi-remote control	X								X	SU	
2	*1 Vehicle security system does not alarm when ...	X		X							BR	
3	Vehicle security alarm does not activate.	X		X					X		ST	
4	Vehicle security system cannot be canceled by ...	Door outside key	X				X				RS	
		Trunk lid key	X					X			BT	
		Multi-remote control	X								X	HA

X : Applicable

*1: Make sure the system is in the armed phase.

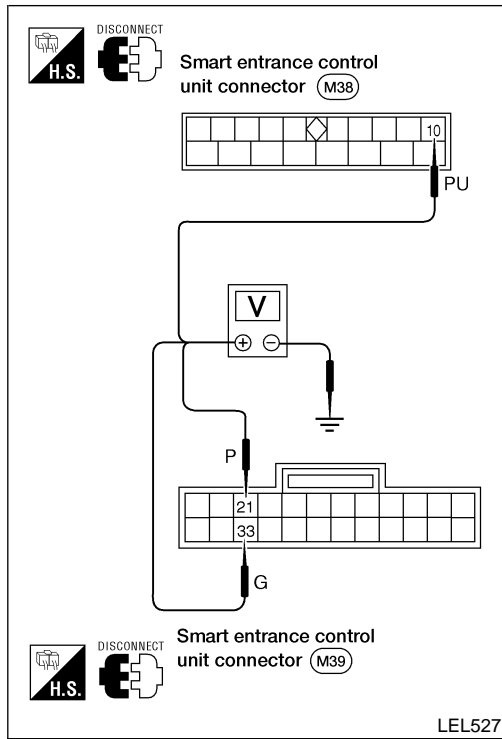
Before starting trouble diagnoses above, perform "PRELIMINARY CHECK", EL-268.

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

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

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)



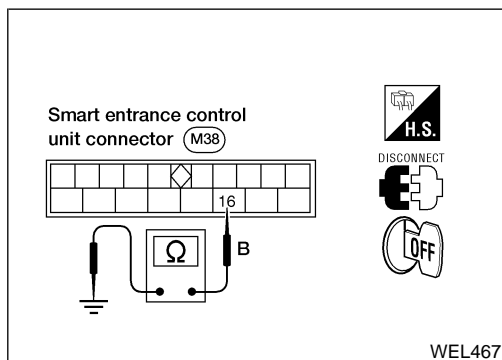
POWER SUPPLY AND GROUND CIRCUIT CHECK

NIEL0123S03

Power Supply Circuit Check

NIEL0123S0301

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



Ground Circuit Check

NIEL0123S0302

Terminals	Continuity
16 - Ground	Yes

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

DOOR, HOOD AND TRUNK ROOM LAMP SWITCH CHECK

Door Switch Check

=NIEL0123S04

NIEL0123S0401

1 CHECK DOOR SWITCH INPUT SIGNAL

With CONSULT-II

Check door switches ("DOOR SW-ALL") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
DOOR SW-ALL	OFF

When any doors are open:
DOOR SW-ALL ON

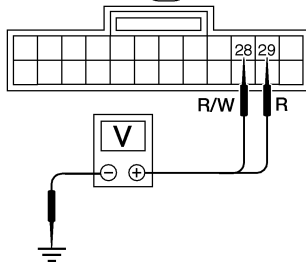
When all doors are closed:
DOOR SW-ALL OFF

SEL323W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminals 28 or 29 and ground.

Smart entrance control unit connector (M39)



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front door switch LH	29	Ground	Open	0
			Closed	Approx. 5
Other door switches	28	Ground	Open	0
			Closed	Approx. 5

WEL500

Refer to "Wiring Diagram —VEHSEC—", EL-262.

OK or NG

OK	▶	Door switch is OK. Check hood switch. Refer to "Hood Switch Check", EL-273.
NG	▶	GO TO 2.

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

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BR

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RS

BT

HA

SC

EL

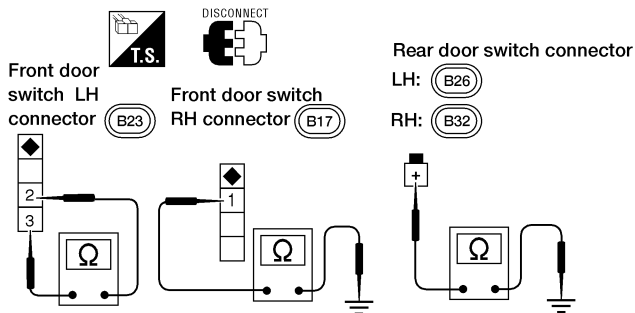
IDX

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

2 CHECK DOOR SWITCH

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



	Terminals	Condition	Continuity
Front door switch LH	2 - 3	Closed	No
		Open	Yes
Front door switch RH	1 - Ground	Closed	No
		Open	Yes
Rear door switches	(+)- Ground	Closed	No
		Open	Yes

WEL491

OK or NG

OK



Check the following.

- Door switch ground circuit (Front, rear door) or door switch ground condition
- Harness for open or short between smart entrance control unit and door switch

NG



Replace door switch.

VEHICLE SECURITY (THEFT WARNING) SYSTEM


Trouble Diagnoses (Cont'd)

Hood Switch Check


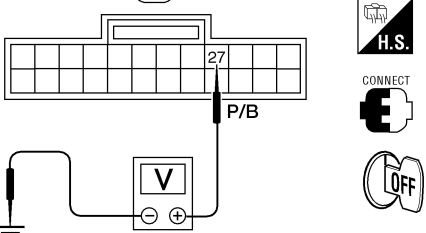
-NIEL0123S0402

1	CHECK HOOD SWITCH FITTING CONDITION	
Check condition and installation of hood switch.		
OK or NG		
OK	▶	GO TO 2.
NG	▶	Adjust installation of hood switch or hood.

GI
MA
EM

2	CHECK HOOD SWITCH INPUT SIGNAL							
<p> With CONSULT-II Check hood switch ("HOOD SWITCH") in "DATA MONITOR" mode with CONSULT-II.</p>								
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>HOOD SWITCH</td><td>OFF</td></tr> </table>			DATA MONITOR		MONITOR		HOOD SWITCH	OFF
DATA MONITOR								
MONITOR								
HOOD SWITCH	OFF							
<p>When hood is open: HOOD SWITCH ON</p> <p>When hood is closed: HOOD SWITCH OFF</p>								
SEL354W								

LC
EC
FE
CL
MT

<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 27 and ground.</p>		
<p>Smart entrance control unit connector (M39)</p> 		
<p>Voltage [V]: Engine hood is open. 0 Engine hood is closed. Approx. 5</p>		
LEL528		
Refer to "Wiring Diagram —VEHSEC—", EL-263.		
OK or NG		

AT
AX
SU
BR
ST
RS

OK	▶	Hood switch is OK, and go to trunk room lamp switch check.
NG	▶	GO TO 3.

BT

HA

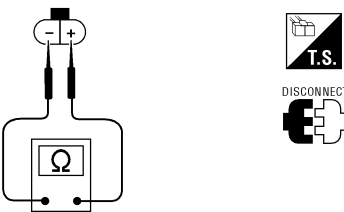
SC

EL

IDX

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)



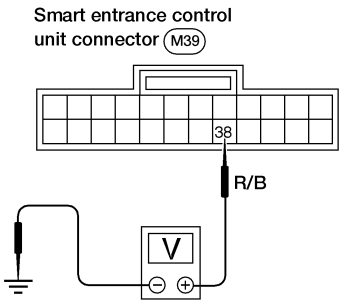



3	CHECK HOOD SWITCH
<p>1. Disconnect hood switch connector. 2. Check continuity between hood switch terminals + and -.</p> <p>Hood switch connector (E14)</p>  <p>The diagram shows a hood switch connector with two terminals labeled '+' and '-'. A continuity tester is connected across these terminals. The tester consists of a rectangular box with a resistor symbol (Ω) and two test leads. To the right of the diagram is a 'T.S. DISCONNECT' symbol, which is a square with a diagonal line and the letters 'T.S.' above it, and a 'DISCONNECT' symbol below it, which is a square with a cross inside.</p> <p>Continuity: Condition: Pushed No Condition: Released Yes</p> <p>LEL529</p> <p>OK or NG</p>	
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none">● Hood switch ground circuit● Harness for open or short between smart entrance control unit and hood switch
NG	<p>▶ Replace hood switch.</p>

VEHICLE SECURITY (THEFT WARNING) SYSTEM

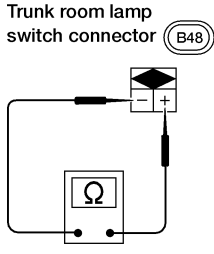


Trouble Diagnoses (Cont'd)

Trunk Room Lamp Switch Check

—NIEL0123S0403

1	CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL						
<p> With CONSULT-II Check trunk room lamp switch (“TRUNK SW”), in “DATA MONITOR” mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">DATA MONITOR</th> </tr> <tr> <th style="width: 50%;">MONITOR</th> <th style="width: 50%;"></th> </tr> </thead> <tbody> <tr> <td>TRUNK SW</td> <td style="text-align: center;">OFF</td> </tr> </tbody> </table> </div> <div style="margin-left: 20px;"> <p>When trunk lid is open: TRUNK SW ON</p> <p>When trunk lid is closed: TRUNK SW OFF</p> </div> </div> <p style="text-align: right;">SEL355W</p>		DATA MONITOR		MONITOR		TRUNK SW	OFF
DATA MONITOR							
MONITOR							
TRUNK SW	OFF						
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 38 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="margin-left: 20px;"> <p> H.S.</p> <p> CONNECT</p> <p> OFF</p> </div> <div style="margin-left: 20px;"> <p>Voltage [V]: Trunk lid is open. Approx. 0 Trunk lid is closed. Approx. 12</p> </div> </div> <p>Refer to “Wiring Diagram —VEHSEC—”, EL-263.</p> <p style="text-align: center;">LEL530</p> <p style="text-align: center;">OK or NG</p>							
OK	▶ Trunk room lamp switch is OK.						
NG	▶ GO TO 2.						

GI
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2	CHECK TRUNK ROOM LAMP SWITCH
<p>1. Disconnect trunk room lamp switch connector. 2. Check continuity between trunk room lamp switch terminals + and –.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Trunk room lamp switch connector (B48)</p>  </div> <div style="margin-left: 20px;"> <p> T.S.</p> <p> DISCONNECT</p> </div> <div style="margin-left: 20px;"> <p>Continuity: Condition: Closed No Condition: Open Yes</p> </div> </div> <p style="text-align: right;">LEL531</p> <p style="text-align: center;">OK or NG</p>	
OK	▶ Check the following. <ul style="list-style-type: none"> ● Trunk room lamp switch ground circuit ● Harness for open or short between smart entrance control unit and trunk room lamp switch
NG	▶ Replace trunk room lamp switch.


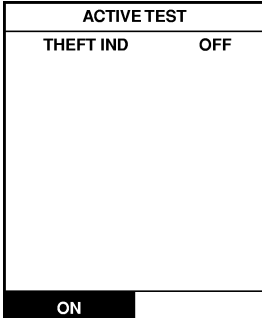

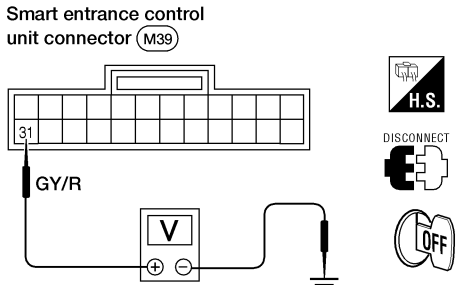
IDX

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

SECURITY INDICATOR LAMP CHECK

=NIEL0123S05

1	CHECK INDICATOR LAMP OPERATION	
<p> With CONSULT-II</p> <ol style="list-style-type: none"> 1. Select "ACTIVE TEST" in "THEFT WAR ALM" with CONSULT-II. 2. Select "THEFT IND" and touch "ON". 		
		
<p>Security indicator lamp should illuminate.</p>		
SEL356W		
<p> Without CONSULT-II</p> <ol style="list-style-type: none"> 1. Disconnect smart entrance control unit harness connector. 2. Check voltage between smart entrance control unit harness connector terminal 31 and ground. 		
		
<p>Battery voltage should exist.</p>		
LEL532		
<p>Refer to "Wiring Diagram —VEHSEC—", EL-262.</p>		
<p>OK or NG</p>		
OK	▶	Security indicator lamp is OK.
NG	▶	GO TO 2.

2	CHECK SECURITY INDICATOR LAMP	
<p>Refer to wiring diagram in EL-262.</p>		
<p>OK or NG</p>		
OK	▶	GO TO 3.
NG	▶	Replace security indicator lamp.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

3	CHECK POWER SUPPLY CIRCUIT FOR SECURITY INDICATOR LAMP	
<p>1. Disconnect security indicator lamp connector. 2. Check voltage between security indicator lamp terminal 1 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Security indicator lamp connector (M61)</p> </div> <div style="text-align: center;"> <p>DISCONNECT</p> </div> </div> <p style="text-align: right;">LEL533</p> <p style="text-align: center;">Does battery voltage exist?</p>		
Yes	▶	Check harness for open or short between security indicator lamp and smart entrance control unit.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse [No. 12, located in fuse block (J/B)] ● Harness for open or short between security indicator lamp and fuse

GI

MA

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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

FRONT DOOR UNLOCK SENSOR CHECK

-NIEL0123S06

1 CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL

With CONSULT-II

Check front unlock sensor ("LOCK SIG DR", "LOCK SIG AS") in "DATA MONITOR" with CONSULT-II.

DATA MONITOR	
MONITOR	
LOCK SIG DR	OFF
LOCK SIG AS	OFF

When door is locked:

LOCK SIG DR OFF
LOCK SIG AS OFF

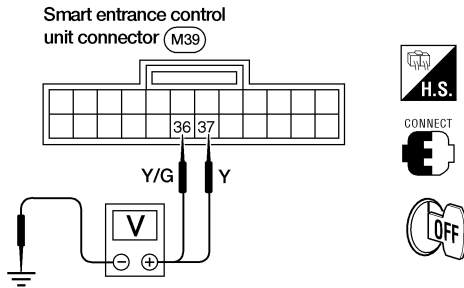
When door is unlocked:

LOCK SIG DR ON
LOCK SIG AS ON

SEL357W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminal 36 or 37 and ground.



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front door LH	36	Ground	Locked	Approx. 5
			Unlocked	0
Front door RH	37	Ground	Locked	Approx. 5
			Unlocked	0

LEL534

Refer to "Wiring Diagram —VEHSEC—", EL-264.

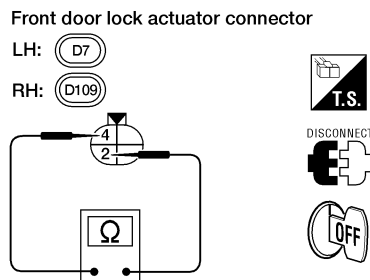
OK or NG

OK ► Door unlock sensor is OK.

NG ► GO TO 2.

2 CHECK FRONT DOOR UNLOCK SENSOR

1. Disconnect door lock actuator connector.
2. Check continuity between door lock actuator terminals.



Continuity:
Condition: Locked
No
Condition: Unlocked
Yes

LEL535

OK or NG

OK ► **Check the following.**

- Door unlock sensor ground circuit
- Harness for open or short between smart entrance control unit and door unlock sensor

NG ► Replace door lock actuator.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

DOOR KEY CYLINDER SWITCH CHECK

-NIEL0123S07

1 CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL (LOCK/UNLOCK SIGNAL)

With CONSULT-II

Check front door key cylinder switch ("KEY CYL LK-SW"/"KEY CYL UN-SW") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
KEY CYL LK-SW	OFF
KEY CYL UN-SW	OFF

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

KEY CYL LK-SW ON

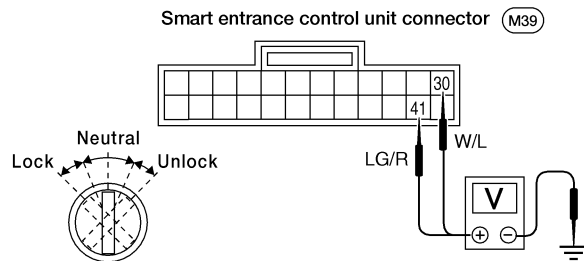
When key inserted in front key cylinder is turned to UNLOCK:

KEY CYL UN-SW ON

SEL342W

Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminal 30 or 41 and ground.



Terminals		Key position	Voltage [V]
(+)	(-)		
41	Ground	Neutral/Unlock	Approx. 5
		Lock	0
30	Ground	Neutral/Lock	Approx. 5
		Unlock	0

WEL502

Refer to "Wiring Diagram —VEHSEC—", EL-264.

OK or NG

OK ► Door key cylinder switch is OK.

NG ► GO TO 2.

GI

MA

EM

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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)



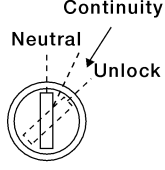
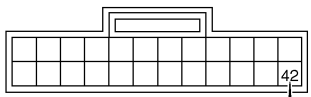
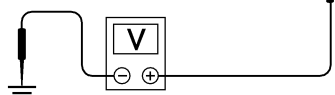
2	CHECK DOOR KEY CYLINDER SWITCH														
1. Disconnect door key cylinder switch connector. 2. Check continuity between door key cylinder switch connector D8 terminals.															
<div style="display: flex; justify-content: space-between;"> <div data-bbox="386 310 649 598"> <p>Front door key cylinder switch LH connector</p> </div> <div data-bbox="941 310 1250 409"> <p>ⓔ : Ground terminal ⓤ : Door unlock switch terminal Ⓛ : Door lock switch terminal</p> </div> <div data-bbox="876 409 1347 577"> <table border="1"> <thead> <tr> <th>Terminals</th> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Ⓛ - ⓔ</td> <td>Neutral/Unlock</td> <td>No</td> </tr> <tr> <td>Lock</td> <td>Yes</td> </tr> <tr> <td rowspan="2">ⓤ - ⓔ</td> <td>Neutral/Lock</td> <td>No</td> </tr> <tr> <td>Unlock</td> <td>Yes</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">LEL101A</p> <p style="text-align: center;">OK or NG</p>			Terminals	Key position	Continuity	Ⓛ - ⓔ	Neutral/Unlock	No	Lock	Yes	ⓤ - ⓔ	Neutral/Lock	No	Unlock	Yes
Terminals	Key position	Continuity													
Ⓛ - ⓔ	Neutral/Unlock	No													
	Lock	Yes													
ⓤ - ⓔ	Neutral/Lock	No													
	Unlock	Yes													
OK	<p>▶ Check the following.</p> <ul style="list-style-type: none"> ● Door key cylinder switch ground circuit ● Harness for open or short between smart entrance control unit and door key cylinder switch 														
NG	<p>▶ Replace door key cylinder switch.</p>														

VEHICLE SECURITY (THEFT WARNING) SYSTEM

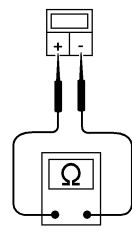

Trouble Diagnoses (Cont'd)

TRUNK LID KEY CYLINDER SWITCH CHECK

=NIEL0123S08

1	CHECK TRUNK LID KEY CYLINDER SWITCH INPUT SIGNAL (UNLOCK SIGNAL)																				
<p> With CONSULT-II Check trunk lid key cylinder switch ("TRUNK KEY SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>TRUNK KEY SW</td><td>OFF</td></tr> </table> </div> <div style="margin-left: 20px;"> <p>When key in key cylinder is at Neutral position: TRUNK KEY SW OFF</p> <p>When key in key cylinder is at Unlock position: TRUNK KEY SW ON</p> </div> </div> <p style="text-align: right; font-size: small;">SEL358W</p>		DATA MONITOR		MONITOR		TRUNK KEY SW	OFF														
DATA MONITOR																					
MONITOR																					
TRUNK KEY SW	OFF																				
<p> Without CONSULT-II Check voltage between smart entrance control unit harness connector terminal 42 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Continuity exists</p>  </div> <div style="text-align: center;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="text-align: center;"> <p>H.S.</p> <p>CONNECT</p>  </div> <div style="margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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>42</td> <td>Ground</td> <td>Neutral</td> <td>Approx. 5</td> </tr> <tr> <td></td> <td></td> <td>Unlock</td> <td>0</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right; font-size: small;">LEL536</p> <p>Refer to "Wiring Diagram —VEHSEC—", EL-263.</p> <p style="text-align: center; font-weight: bold;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">Trunk lid key cylinder switch is OK.</td> </tr> <tr> <td style="padding: 5px;">NG</td> <td style="text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">GO TO 2.</td> </tr> </table>		Terminals		Key position	Voltage [V]	(+)	(-)	42	Ground	Neutral	Approx. 5			Unlock	0	OK	▶	Trunk lid key cylinder switch is OK.	NG	▶	GO TO 2.
Terminals		Key position	Voltage [V]																		
(+)	(-)																				
42	Ground	Neutral	Approx. 5																		
		Unlock	0																		
OK	▶	Trunk lid key cylinder switch is OK.																			
NG	▶	GO TO 2.																			

GI
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2	CHECK TRUNK LID KEY CYLINDER SWITCH												
<p>1. Disconnect trunk lid key cylinder switch connector. 2. Check continuity between trunk lid key cylinder switch terminals.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Trunk lid key cylinder switch (B43)</p>  </div> <div style="text-align: center;"> <p>T.S.</p> <p>DISCONNECT</p>  </div> <div style="margin-left: 20px;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Key position</th> <th>Continuity</th> </tr> </thead> <tbody> <tr> <td>Neutral</td> <td>No</td> </tr> <tr> <td>Unlock</td> <td>Yes</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right; font-size: small;">LEL537</p> <p style="text-align: center; font-weight: bold;">OK or NG</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;"> <p>Check the following.</p> <ul style="list-style-type: none"> ● Trunk lid key cylinder switch ground circuit ● Harness for open or short between smart entrance control unit and trunk lid key cylinder switch </td> </tr> <tr> <td style="padding: 5px;">NG</td> <td style="text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">Replace trunk lid key cylinder switch.</td> </tr> </table>		Key position	Continuity	Neutral	No	Unlock	Yes	OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Trunk lid key cylinder switch ground circuit ● Harness for open or short between smart entrance control unit and trunk lid key cylinder switch 	NG	▶	Replace trunk lid key cylinder switch.
Key position	Continuity												
Neutral	No												
Unlock	Yes												
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Trunk lid key cylinder switch ground circuit ● Harness for open or short between smart entrance control unit and trunk lid key cylinder switch 											
NG	▶	Replace trunk lid key cylinder switch.											

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

DOOR LOCK/UNLOCK SWITCH CHECK

NIEL0123S13

1 CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-II

Check door lock/unlock switch ("LOCK SW DR/AS"/"UNLK SW DR/AS") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
LOCK SW DR/AS	OFF
UNLK SW DR/AS	OFF

When lock/unlock switch is turned to LOCK:

LOCK SW DR/AS ON

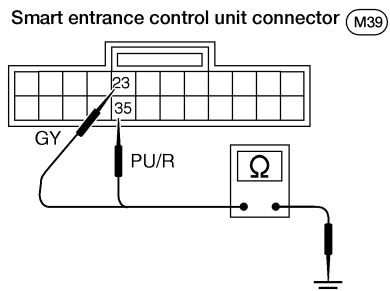
When lock/unlock switch is turned to UNLOCK:

UNLK SW DR/AS ON

SEL341W

Without CONSULT-II

1. Disconnect smart entrance control unit harness connector .
2. Check continuity between smart entrance control unit harness connector terminal 23 or 35 and ground.



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

Refer to "Wiring Diagram —VEHSEC—", EL-263.

WEL501

OK or NG

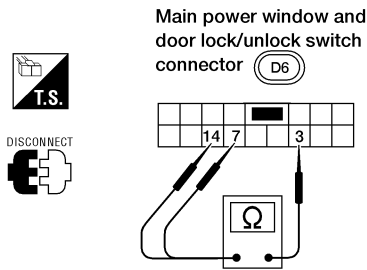
OK	▶	Door lock/unlock switch is OK.
NG	▶	GO TO 2.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

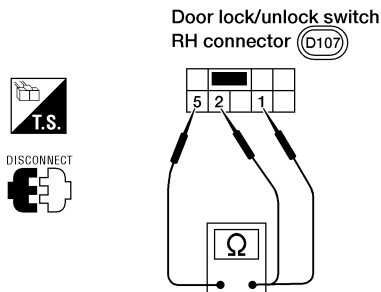
2 CHECK DOOR LOCK/UNLOCK SWITCH

1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between each door lock/unlock switch terminal.
 - Main power window and door lock/unlock switch



Condition	Terminals		
	3	7	14
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

- Door lock/unlock switch RH



Condition	Terminals		
	1	2	5
Lock	○	○	○
N	No continuity		
Unlock	○	○	○

WEL494

WEL495

OK or NG

OK	▶	Check the following. <ul style="list-style-type: none"> ● Ground circuit for door lock/unlock switch ● Harness for open or short between door lock/unlock switch and smart entrance control unit
NG	▶	Replace door lock/unlock switch.

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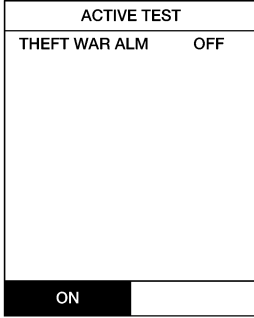
VEHICLE SECURITY (THEFT WARNING) SYSTEM


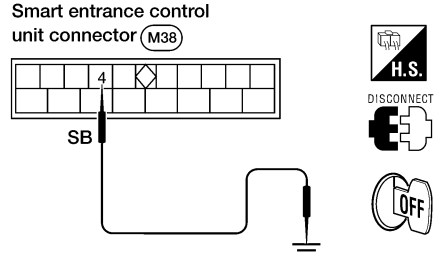
Trouble Diagnoses (Cont'd)

HORN AND HEADLAMP ALARM CHECK

-NIEL0123S09

1	CHECK BASE HORN SYSTEM OPERATION
Operate vehicle horn.	
OK or NG	
OK	▶ GO TO 2.
NG	▶ Check base horn system. Refer to "Wiring Diagram —HORN—", EL-141.

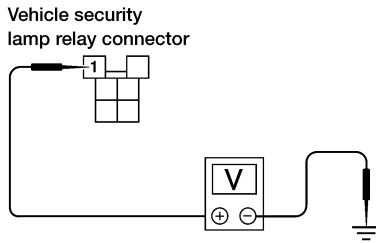

2	CHECK HORN AND HEADLAMP ALARM OPERATION
<p> With CONSULT-II</p> <p>1. Select "ACTIVE TEST" in "THEFT WAR ALM" with CONSULT-II. 2. Select "THEFT WAR ALM" and touch "ON".</p>	
	
Horn and headlamp alarm should operate.	
WEL610A	

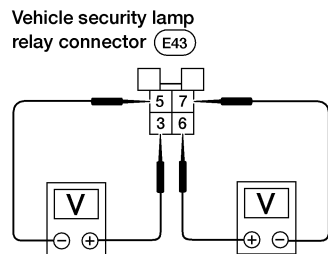

<p> Without CONSULT-II</p> <p>1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 4.</p>	
	
Horn and headlamp alarm should operate.	
WEL611A	
Refer to "Wiring Diagram —VEHSEC—", EL-265.	
OK or NG	
OK	▶ Horn and headlamp alarm is OK.
NG	▶ GO TO 3.

3	CHECK VEHICLE SECURITY LAMP RELAY
Check vehicle security lamp relay. Refer to "Electrical Components Inspection", EL-286.	
OK or NG	
OK	▶ GO TO 4.
NG	▶ Replace relay.

VEHICLE SECURITY (THEFT WARNING) SYSTEM

Trouble Diagnoses (Cont'd)

4	CHECK POWER SUPPLY FOR VEHICLE SECURITY LAMP RELAY	
<p>1. Disconnect vehicle security lamp relay connector. 2. Check voltage between vehicle security lamp relay connector E43 terminal 1 (G/R) and ground.</p>		
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>Battery voltage should exist.</p> </div> </div> <p style="text-align: right; margin-right: 50px;">WEL609A</p>		
Does battery voltage exist?		
Yes	▶	GO TO 5.
No	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● 10A fuse (No. 35 located in the fuse and fusible link box) ● Harness for open or short between relay and fuse

5	CHECK VEHICLE SECURITY LAMP RELAY CIRCUIT	
<p>1. Check voltage between terminals of vehicle security lamp relay connector E43.</p>		
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>Battery voltage should exist.</p> </div> </div> <p style="text-align: right; margin-right: 50px;">WEL117A</p>		
OK or NG		
OK	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Harness for open between smart entrance control unit terminal 4 and relay ● Harness for open or short between smart entrance control unit terminal 4 and horn relay ● Diode-4 for open ● Replace smart entrance control unit
NG	▶	<p>Check the following.</p> <ul style="list-style-type: none"> ● Harness for open or short between vehicle security lamp relay and fuses ● Harness for open or short between vehicle security lamp relay and headlamp system

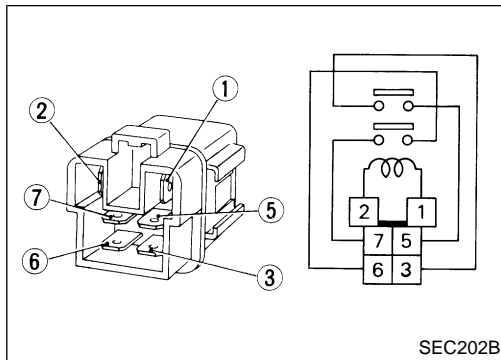
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VEHICLE SECURITY (THEFT WARNING) SYSTEM

Electrical Components Inspection



Electrical Components Inspection

VEHICLE SECURITY LAMP RELAY

=NIEL0265

NIEL0265S01

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

SMART ENTRANCE CONTROL UNIT

Description

Description

OUTLINE

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

- Warning chime
- Rear window defogger and door mirror defogger
- Power door locks
- Multi-remote control system
- Vehicle security system
- Interior lamp
- Battery saver control

NIEL0124

NIEL0124S01

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BATTERY SAVER CONTROL

Interior Lamp/Map Lamp/Vanity Lamps

The lamps turn off automatically when the interior lamp, map lamp or/and vanity lamps are illuminated with the ignition key in the OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in the ON position for approximately 10 minutes.

After lamps are turned off by the battery saver system, the lamps illuminate again when:

- Driver's door is locked or unlocked,
- Door is opened or closed,
- Key is inserted into or removed from the ignition key cylinder.

NIEL0124S02

NIEL0124S0202

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Rear Window Defogger/Door Mirror Defogger

Rear window defogger and door mirror defogger are turned off in approximately 15 minutes after the rear window defogger switch is turned on.

NIEL0124S0203

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INPUT/OUTPUT

NIEL0124S04

System	Input	Output
Power door lock	Door lock and unlock switch LH and RH Key switch (Insert) Door switches Door key cylinder switch	Door lock actuator
Multi-remote control	Key switch (Insert) Ignition switch (ACC) Door switches Front door unlock sensor LH Remote controller signal	Vehicle security lamp relay Horn relay Interior lamp Multi-remote control relay Door lock actuator Trunk lid opener actuator
Warning chime	Key switch (Insert) Ignition switch (ON) Lighting switch (1st or 2nd) Seat belt buckle switch LH Front door switch LH	Warning chime (located in smart entrance control unit)
Rear window defogger and door mirror defogger	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay
Vehicle security	Ignition switch (ACC, ON) Door switches Hood switch Door lock/unlock switches Door key cylinder switch (lock/unlock) Trunk lid key cylinder switch (unlock) Door unlock sensors	Vehicle security lamp relay Horn relay Security indicator lamp
Interior lamp	Door switches Front door unlock sensor LH Ignition switch (ON) Key switch (Insert)	Interior lamp

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SMART ENTRANCE CONTROL UNIT

Description (Cont'd)

System	Input	Output
Battery saver control for interior lamp/map lamp/vanity lamps	Ignition switch (ON) Door switches Lamp switches Main power window and door lock/unlock switch	Interior lamp Map lamp Vanity lamps

SMART ENTRANCE CONTROL UNIT

CONSULT-II

CONSULT-II DIAGNOSTIC ITEMS APPLICATION

=NIEL0247

NIEL0247S01

Item (CONSULT-II screen terms)	Diagnosed system	DATA MONITOR	ACTIVE TEST	WORK SUPPORT
DOOR LOCK	Power door lock	X	X	
REAR DEFOGGER	Rear window defogger	X	X	
KEY WARN ALM	Warning chime	X	X	
LIGHT WARN ALM	Warning chime	X	X	
SEAT BELT ALM	Warning chime	X	X	
INT LAMP	Interior lamps	X	X	
BATTERY SAVER	Battery saver control for interior lamp	X	X	
THEFT WAR ALM	Vehicle security system	X	X	X
RETAINED PWR	Retained power control	X	X	
MULTI REMOTE ENT	Multi-remote control system	X	X	X

X: Applicable

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

DIAGNOSTIC ITEM DESCRIPTION

NIEL0247S02

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

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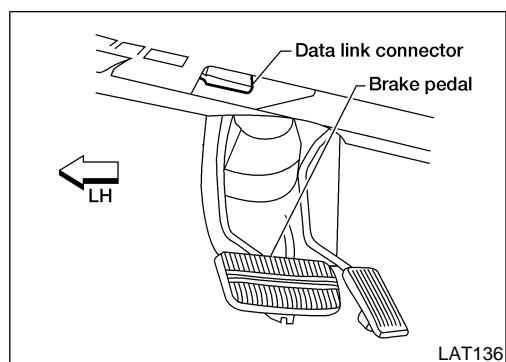
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SMART ENTRANCE CONTROL UNIT

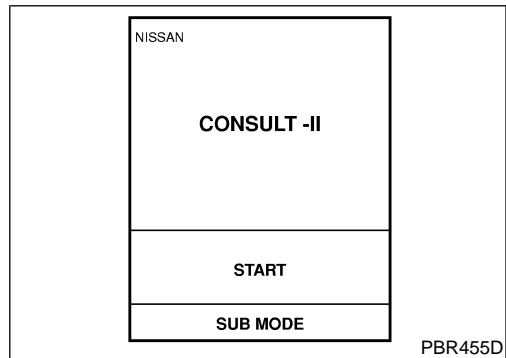
CONSULT-II (Cont'd)



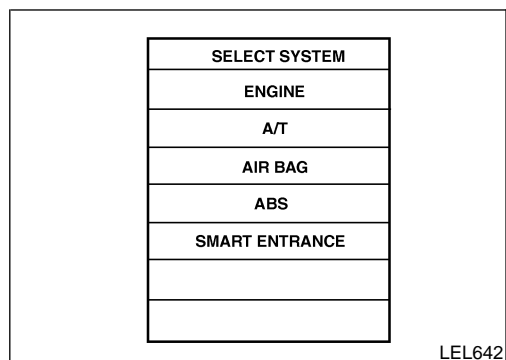
CONSULT-II INSPECTION PROCEDURE

=NIEL0247S03

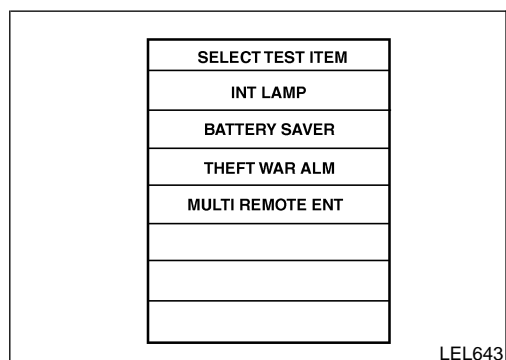
1. Turn the ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



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



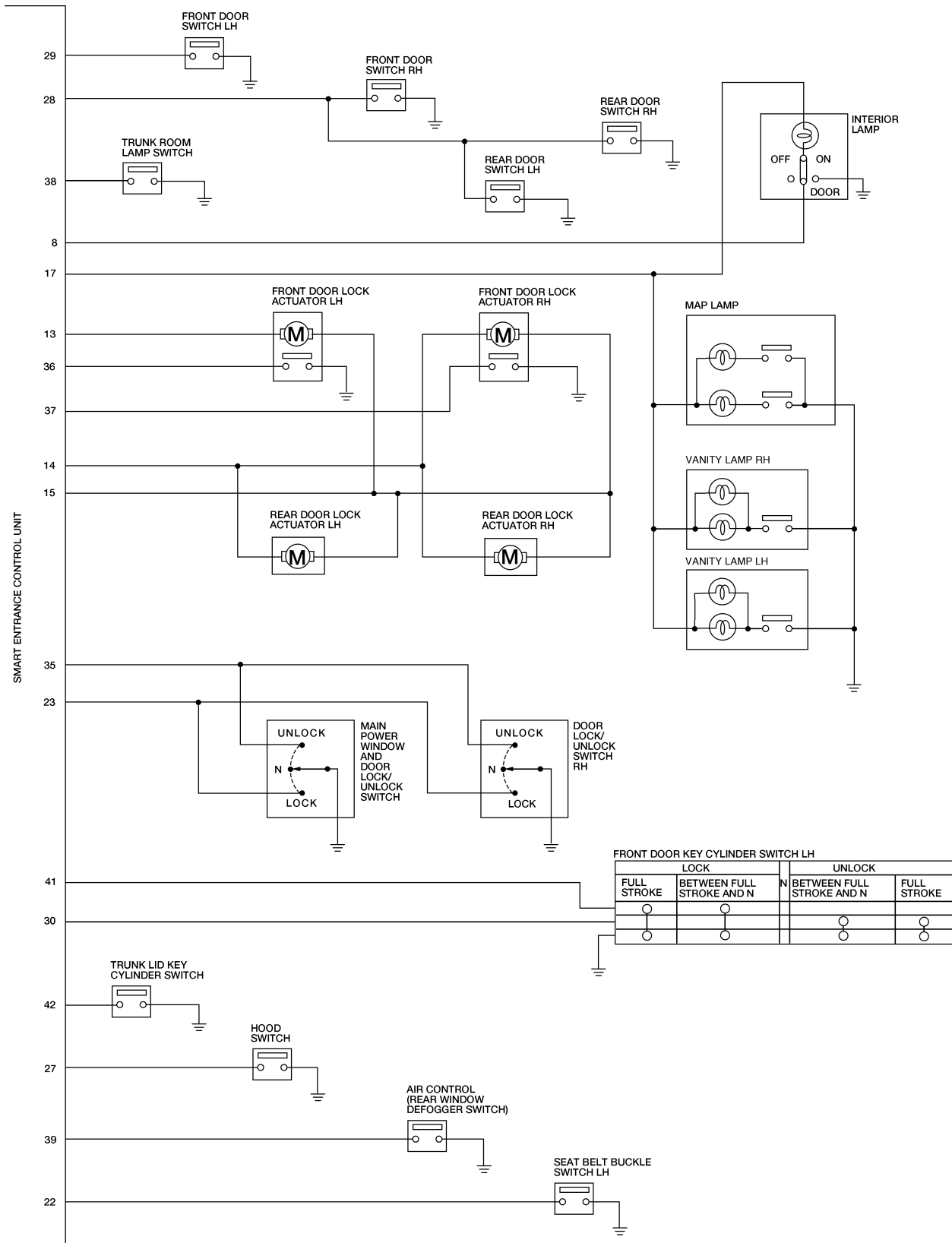
5. Touch "SMART ENTRANCE".



6. Perform each diagnostic item according to "DIAGNOSTIC ITEMS APPLICATION". Refer to "DIAGNOSTIC ITEMS APPLICATION", EL-289.

SMART ENTRANCE CONTROL UNIT

Schematic (Cont'd)



LEL120A

SMART ENTRANCE CONTROL UNIT

Smart Entrance Control Unit Inspection Table

Smart Entrance Control Unit Inspection Table

NIEL0126

Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)	
2	G/R	Rear window defogger relay	OFF → ON (Ignition key is in "ON" position)	0V → 12V	
4	SB	Horn relay and vehicle security lamp relay	When panic alarm is operated using remote controller or when alarm is activated	12V → 0V	
7	OR/B	Multi-remote control relay	When doors are locked using remote controller	12V → 0V	
8	R/Y	Interior lamp	When interior lamp is operated using remote controller (Lamp switch in "DOOR" position)	0V → 12V	
10	PU	Power source (Fuse)	—	12V	
11	W/L	Power source (C/B)	—	12V	
12	P/B	Trunk lid opener actuator	ON (Open) → OFF (Closed)	0V → 12V	
13	L/R	Driver door lock actuator	Door lock & unlock switch	Free	0V
14	W/R	Passenger and rear doors lock actuators		Unlocked	12V
15	R/B	Door lock actuators	Door lock & unlock switch	Free	0V
				Locked	12V
16	B	Ground	—	—	
17	R/B	Battery saver (Interior lamp)	Battery saver does not operate → Operate	12V → 0V	
19	W/G	Horn relay	When doors are locked using remote controller with horn chirp mode	12V → 0V	
21	P	Ignition switch (ACC, ON)	"ACC" or "ON" position	12V	
22	W/B	Seat belt buckle switch LH	Unfasten → Fasten (Ignition key is in "ON" position)	0V → 5V	
23	GY	Door lock & unlock switches	Neutral → Locks	5V → 0V	
27	P/B	Hood switch	ON (Open) → OFF (Closed)	0V → 5V	
28	R/W	Other door switches	OFF (Closed) → ON (Open)	5V → 0V	
29	R	Front door switch LH	OFF (Closed) → ON (Open)	5V → 0V	
30	W/L	Door key cylinder unlock switch	OFF (Neutral) → ON (Unlocked)	5V → 0V	
31	GY/R	Vehicle security indicator	Goes off → Illuminates	12V → 0V	
32	L/W	Ignition key switch (Insert)	Key inserted → Key removed from IGN key cylinder	12V → 0V	
33	G	Ignition switch (ON)	Ignition key is in "ON" position	12V	
34	R/G	Combination switch (Lighting switch)	1ST, 2ND positions: ON → OFF	12V → 0V	
35	PU/R	Door lock & unlock switches	Neutral → Unlocks	5V → 0V	
36	Y/G	Door unlock sensor LH	Driver door: Locked → Unlocked	5V → 0V	
37	Y	Door unlock sensor RH	Passenger door: Locked → Unlocked	5V → 0V	
38	R/B	Trunk room lamp switch	ON (Open) → OFF (Closed)	0V → 12V	
39	G/B	Air control (Rear window defogger switch)	OFF → ON	5V → 0V	
41	LG/R	Door key cylinder lock switch	OFF (Neutral) → ON (Locked)	5V → 0V	
42	L/OR	Trunk lid key cylinder switch	OFF (Neutral) → ON (Unlock)	5V → 0V	

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TIME CONTROL UNIT

Description (Without Power Door Locks)

Description (Without Power Door Locks)

NIEL0266

NIEL0266S01

OUTLINE

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

- Warning chime
- Rear window defogger

INPUT/OUTPUT

NIEL0266S03

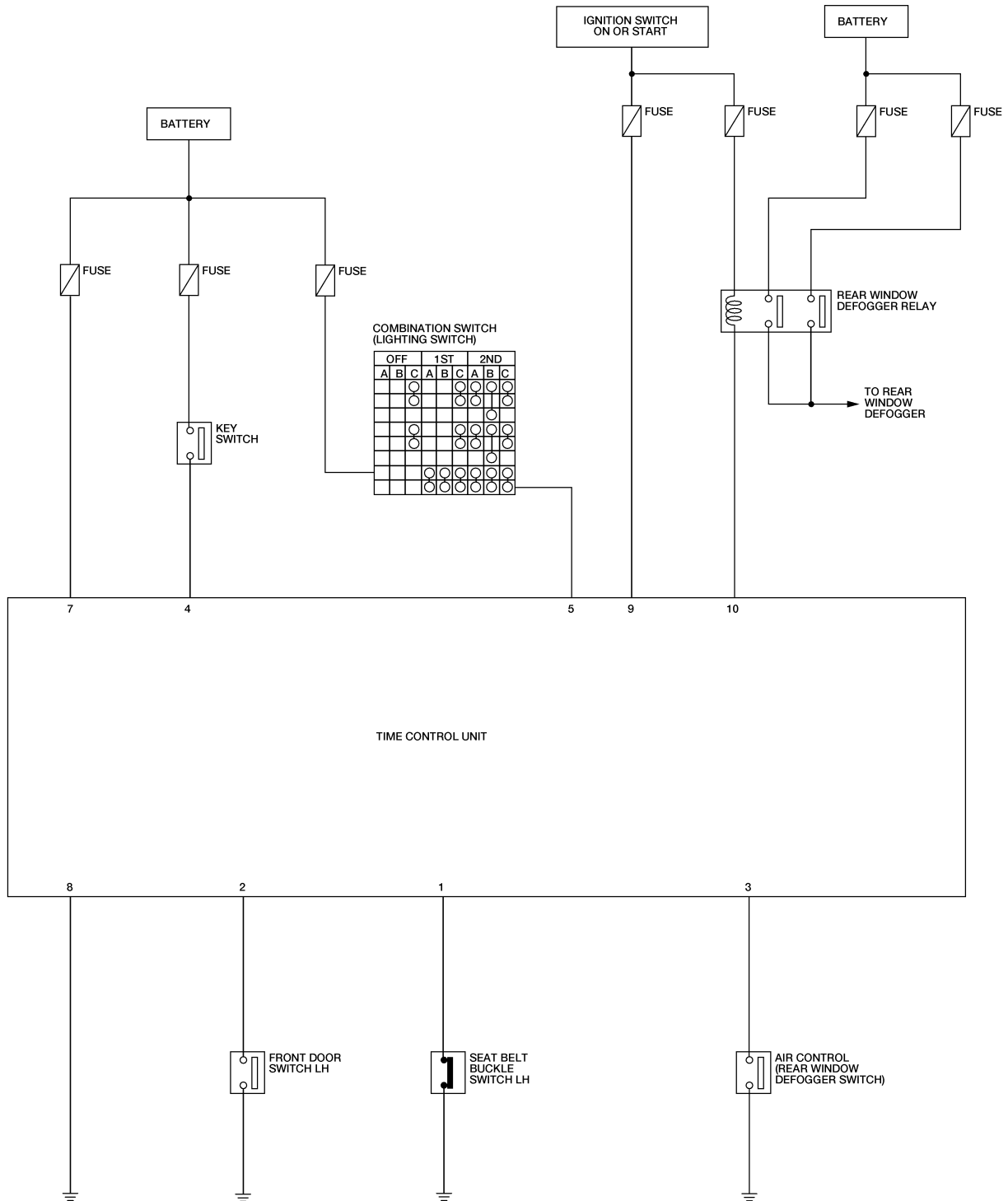
System	Input	Output
Warning chime	Key switch (Insert) Ignition switch (ON) Lighting switch (1st or 2nd) Seat belt buckle switch LH Front door switch LH	Warning chime (located in time control unit)
Rear window defogger	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay

TIME CONTROL UNIT

Schematic (Without Power Door Locks)

Schematic (Without Power Door Locks)

NIEL0267



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TIME CONTROL UNIT

Time Control Unit Inspection Table (Without Power Door Locks)

Time Control Unit Inspection Table (Without Power Door Locks)

NIEL0268

Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)
1	W/B	Seat belt buckle switch LH	Unfasten → Fasten (Ignition key is in "ON" position)	0V → 5V
2	R	Front door switch LH	OFF (Closed) → ON (Open)	5V → 0V
3	G/B	Air control (Rear window defogger switch)	OFF → ON	5V → 0V
4	L/W	Ignition key switch (Insert)	Key inserted → Key removed from IGN key cylinder	12V → 0V
5	R/G	Combination switch (Lighting switch)	1ST, 2ND positions: ON → OFF	12V → 0V
7	PU	Power source (Fuse)	—	12V
8	B	Ground	—	—
9	G	Ignition switch (ON)	Ignition key is in "ON" position	12V
10	G/R	Rear window defogger relay	OFF → ON (Ignition key is in "ON" position)	0V → 12V

TIME CONTROL UNIT

Description (With Power Door Locks)

Description (With Power Door Locks)

=NIEL0269

NIEL0269S01

OUTLINE

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

- Warning chime
- Rear window defogger and door mirror defogger
- Power door locks
- Interior lamp
- Battery saver control

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BATTERY SAVER CONTROL

NIEL0269S02

Interior Lamp/Map Lamp/Vanity Lamps

NIEL0269S0201

The lamps turn off automatically when the interior lamp, map lamp or/and vanity lamps are illuminated with the ignition key in the OFF position, if the lamp remains lit by the door switch open signal or if the lamp switch is in the ON position for approximately 10 minutes.

After lamps are turned off by the battery saver system, the lamps illuminate again when:

- Driver's door is locked or unlocked,
- Door is opened or closed,
- Key is inserted into or removed from the ignition key cylinder.

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Rear Window Defogger/Door Mirror Defogger

NIEL0269S0202

Rear window defogger and door mirror defogger are turned off in approximately 15 minutes after the rear window defogger switch is turned on.

MT

INPUT/OUTPUT

NIEL0269S03

System	Input	Output
Power door lock	Door lock and unlock switch LH and RH Key switch (Insert) Door switches	Door lock actuator
Warning chime	Key switch (Insert) Ignition switch (ON) Lighting switch (1st or 2nd) Seat belt buckle switch LH Front door switch LH	Warning chime (located in time control unit)
Rear window defogger and door mirror defogger	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay
Interior lamp	Door switches Front door unlock sensor LH Ignition switch (ON) Key switch (Insert)	Interior lamp
Battery saver control for interior lamp/map lamp/vanity lamps	Ignition switch (ON) Door switches Lamp switches Main power window and door lock/unlock switch	Interior lamp Map lamp Vanity lamps

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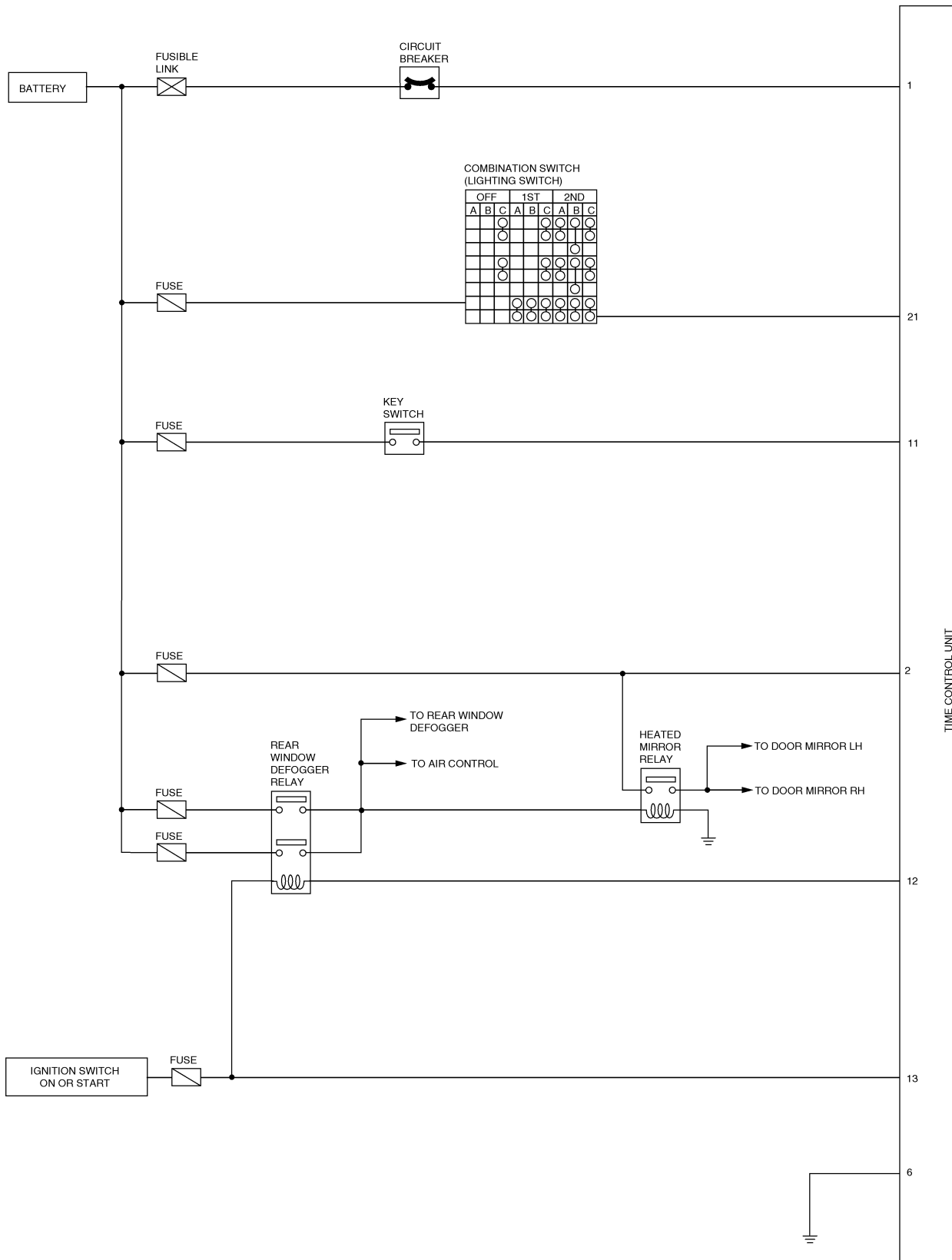
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TIME CONTROL UNIT

Schematic (With Power Door Locks)

Schematic (With Power Door Locks)

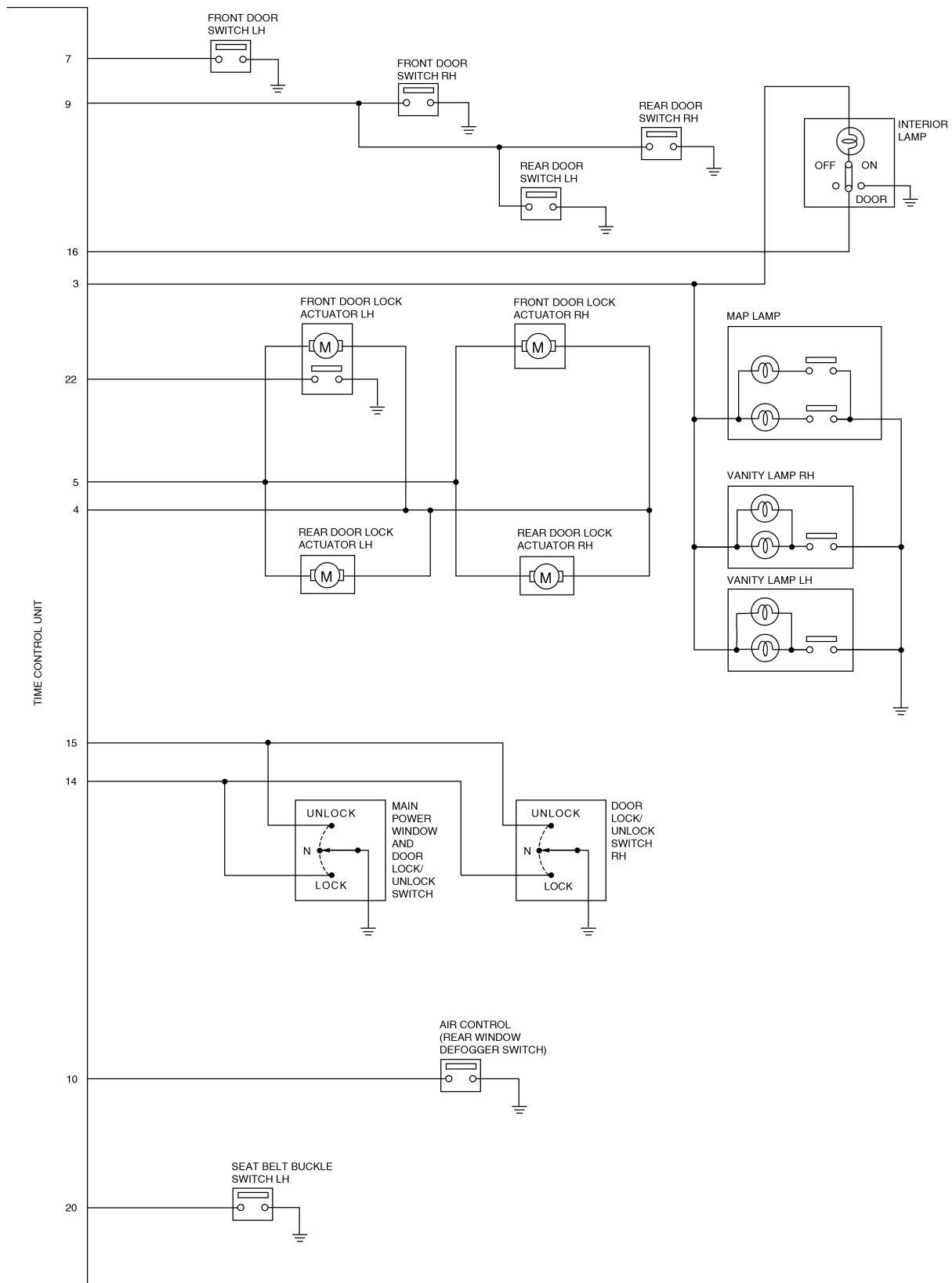
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TIME CONTROL UNIT

Schematic (With Power Door Locks) (Cont'd)



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TIME CONTROL UNIT

Time Control Unit Inspection Table (With Power Door Locks)

Time Control Unit Inspection Table (With Power Door Locks)

NIEL0271

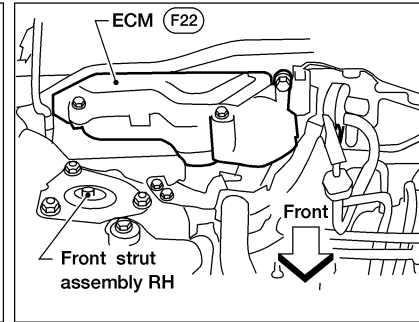
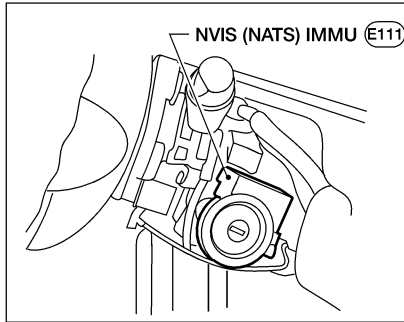
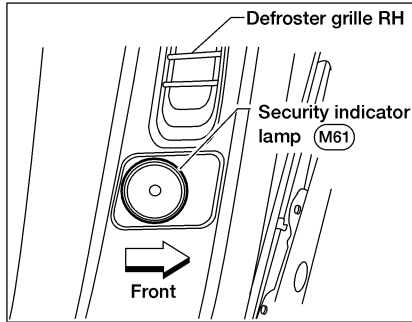
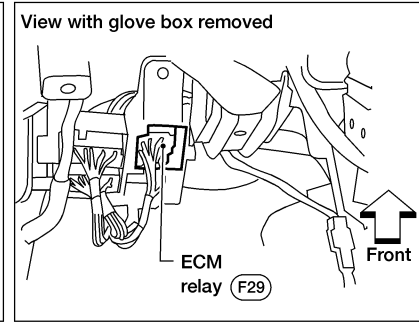
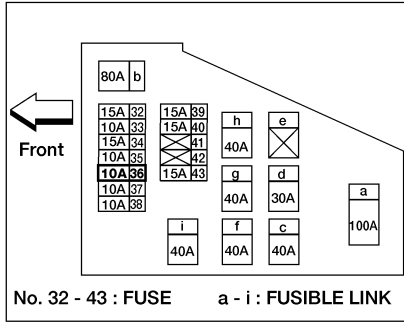
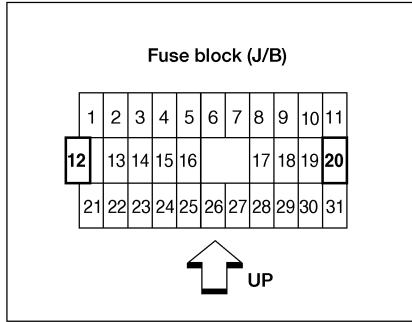
Terminal No.	Wire color	Connections	Operated condition	Voltage (Approximate values)
1	W/L	Power source (C/B)	—	12V
2	PU	Power source (Fuse)	—	12V
3	R/B	Battery saver (Interior lamp)	Battery saver does not operate → Operate	12V → 0V
4	R/B	Door lock actuators	Door lock & unlock switch	Free 0V
				Locked 12V
5	W/R	Door lock actuators	Door lock & unlock switch	Free 0V
				Unlocked 12V
6	B	Ground	—	—
7	R	Front door switch LH	OFF (Closed) → ON (Open)	5V → 0V
9	R/W	Other door switches	OFF (Closed) → ON (Open)	5V → 0V
10	G/B	Air control (Rear window defogger switch)	OFF → ON	5V → 0V
11	L/W	Ignition key switch (Insert)	Key inserted → Key removed from IGN key cylinder	12V → 0V
12	G/R	Rear window defogger relay	OFF → ON (Ignition key is in "ON" position)	0V → 12V
13	G	Ignition switch (ON)	Ignition key is in "ON" or "START" position	12V
14	GY	Door lock & unlock switches	Neutral → Locks	5V → 0V
15	PU/R	Door lock & unlock switches	Neutral → Unlocks	5V → 0V
16	R/Y	Interior lamp	Lamp switch in "DOOR" position	0V → 12V
20	W/B	Seat belt buckle switch LH	Unfasten → Fasten (Ignition key is in "ON" position)	0V → 5V
21	R/G	Combination switch (Lighting switch)	1ST, 2ND positions: ON → OFF	12V → 0V
22	Y/G	Door unlock sensor LH	Driver door: Locked → Unlocked	5V → 0V

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Component Parts and Harness Connector Location

Component Parts and Harness Connector Location

NIEL0172



GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

WEL121A

SU

NOTE:

If the customer reports a “No Start” condition, request ALL KEYS be brought to Dealer in case of NATS malfunction.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

System Description

System Description

=NIEL0173

NVIS (Nissan Vehicle Immobilizer System—NATS) has the following immobilizer functions:

- Since only NVIS (NATS) ignition keys, whose ID nos. have been registered into the ECM and IMMU of NVIS (NATS), allow the engine to run, operation of a stolen vehicle without a NVIS (NATS) registered key is prevented by NVIS (NATS).
That is to say, NVIS (NATS) will immobilize the engine if someone tries to start it without the registered key of NVIS (NATS).
- All of the originally supplied ignition key IDs have been NVIS (NATS) registered.
If requested by the vehicle owner, a maximum of five key IDs can be registered into the NVIS (NATS) components.
- The security indicator lamp blinks when the ignition switch is in “OFF” or “ACC” position. Therefore, NVIS (NATS) warns outsiders that the vehicle is equipped with the system.
- When NVIS (NATS) detects trouble, the security indicator lamp lights up while ignition key is in the “ON” position.
- NVIS (NATS) trouble diagnoses, system initialization and additional registration for other NVIS (NATS) ignition key IDs must be carried out using CONSULT-II hardware and CONSULT-II NVIS (NATS) software. Regarding the procedures for NVIS (NATS) initialization and NVIS (NATS) ignition key ID registration, refer to CONSULT-II OPERATION MANUAL IVIS/NVIS.
- **When servicing a malfunction of the NVIS (indicated by lighting up of Security Indicator Lamp) or registering another NVIS ignition key ID no., it is necessary to re-register original key identification.**

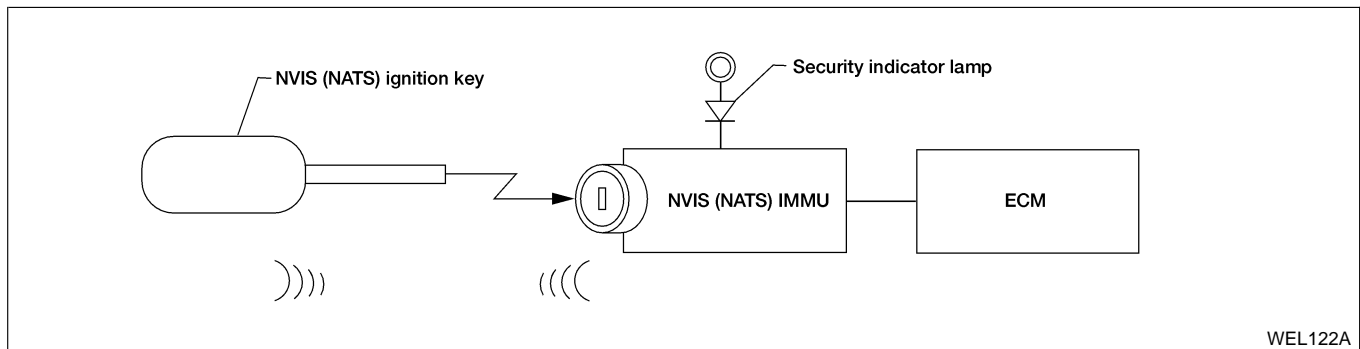
Therefore, be sure to receive ALL KEYS from vehicle owner.

System Composition

NIEL0174

The immobilizer function of the NVIS (NATS) consists of the following:

- NVIS (NATS) ignition key
- NVIS (NATS) immobilizer control unit (IMMU) located in the ignition key cylinder
- ECM
- Security indicator lamp



WEL122A

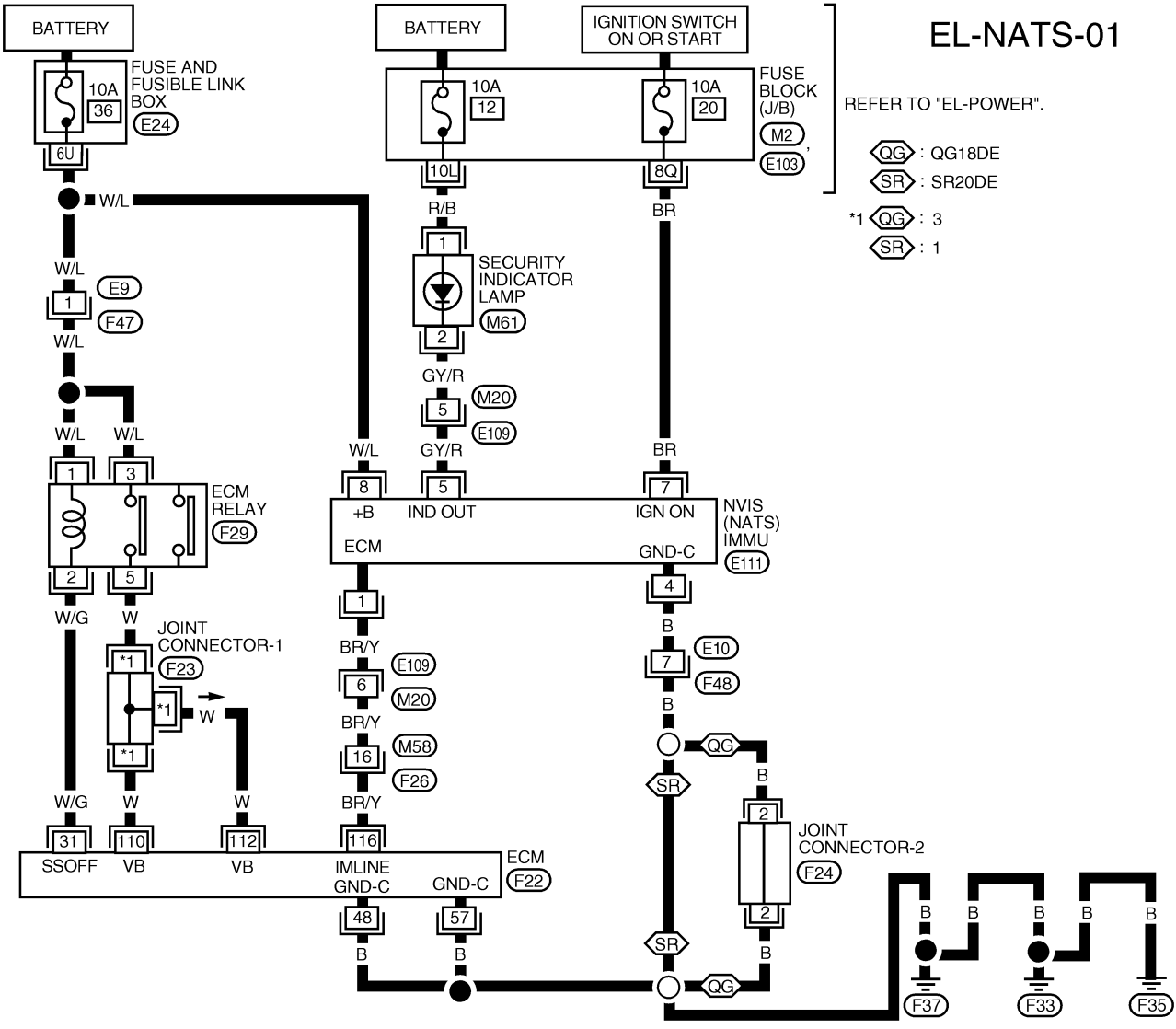
NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Wiring Diagram — NATS —

Wiring Diagram — NATS —

NIEL0175

EL-NATS-01



REFER TO "EL-POWER".

QG : QG18DE

SR : SR20DE

*1 QG : 3

SR : 1

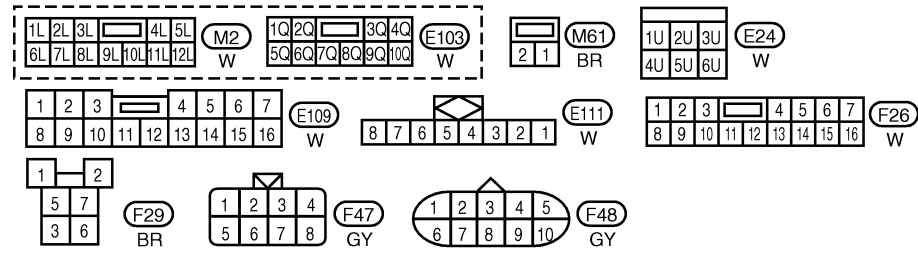
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WEL124A



REFER TO THE FOLLOWING.

F22 - ELECTRICAL UNITS

F23, F24 - JOINT CONNECTOR

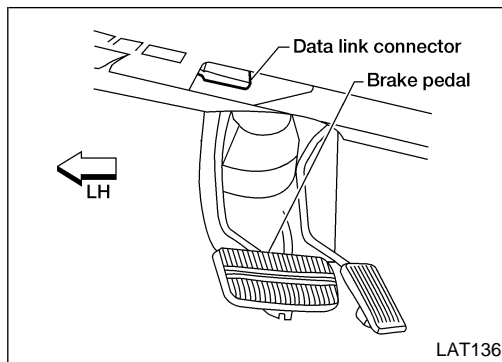
LEL123A

NVIS (NATS) IMMU CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
4	B	GROUND	—	—
5	GY/R	VEHICLE SECURITY INDICATOR	GOES OFF ILLUMINATES	12V 0V
7	BR	IGNITION SWITCH (ON) IGNITION SWITCH (START)	IGNITION KEY IS IN ON POSITION IGNITION KEY IS IN START POSITION	12V 12V
8	W/L	POWER SOURCE (FUSE)	—	12V

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

CONSULT-II

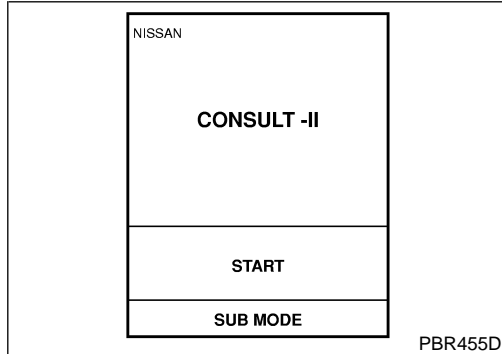


CONSULT-II

CONSULT-II INSPECTION PROCEDURE

NIEL0176
NIEL0176S01

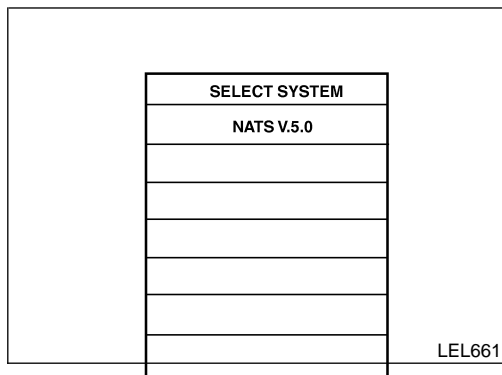
1. Turn ignition switch OFF.
2. Connect "CONSULT-II" to data link connector.



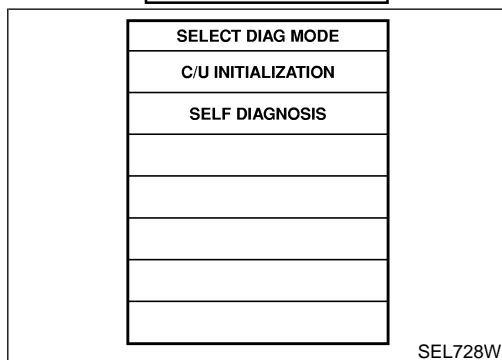
3. Insert NVIS (NATS) program card into CONSULT-II.

◀ : Program card
NATS (AEN00A)

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



6. 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 IVIS/NVIS".

CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

NIEL0176S02

CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following three components, C/U initialization is necessary. [NVIS (NATS) ignition key/IMMU/ECM]
SELF DIAGNOSIS	Detected items (screen terms) are as shown in the chart below.

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

CONSULT-II (Cont'd)

Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of "ENGINE")	Malfunction is detected when	Reference page
LOCK MODE	NATS MAL-FUNCTION P1610	When the starting operation is carried out five or more times consecutively under the following conditions, NVIS (NATS) will shift the mode to one which prevents the engine from being started. <ul style="list-style-type: none">● Unregistered ignition key is used.● IMMU or ECM is malfunctioning.	EL-319
DON'T ERASE BEFORE CHECKING ENG DIAG	—	Any engine trouble codes except NVIS (NATS) trouble codes have been detected in ECM.	EL-307

Trouble Diagnoses WORK FLOW

NIEL0177

NIEL0177S01

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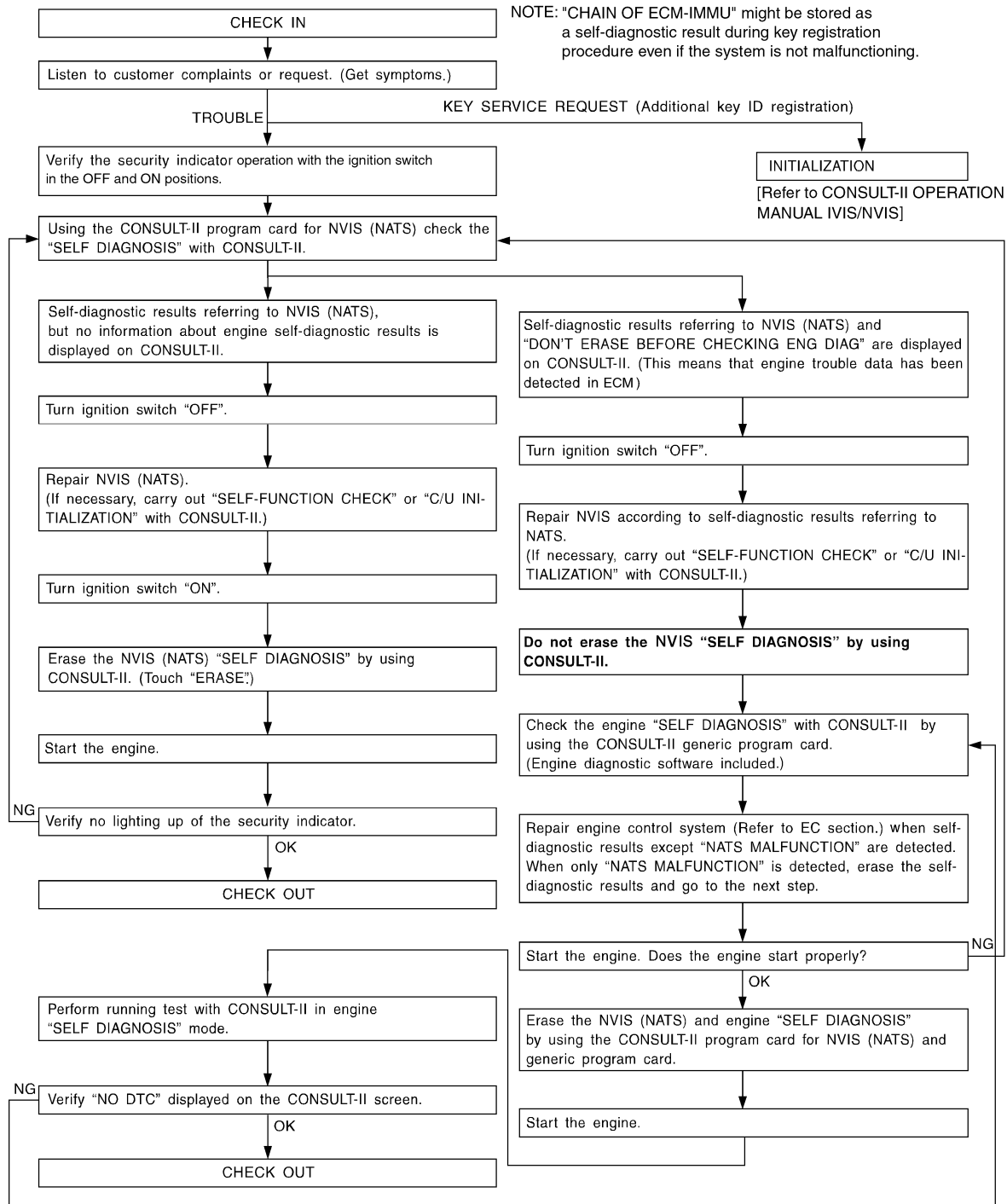
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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

SYMPTOM MATRIX CHART 1 (Self-diagnosis related item)

NIEL0177S02

SYMPTOM	Displayed "SELF-DIAG RESULTS" on CONSULT-II screen.	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)	REFERENCE PART NO. OF ILLUSTRATION ON NEXT PAGE
	ECM INT CIRC-IMMU	PROCEDURE 1 (EL-309)	ECM	B
			In rare cases, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.	—
<ul style="list-style-type: none"> ● Security indicator lighting up* ● Engine hard to start 	CHAIN OF ECM-IMMU	PROCEDURE 2 (EL-310)	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-314)	Unregistered key	D
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 4 (EL-315)	Malfunction of key ID chip	E
			IMMU	A
	ID DISCORD, IMM-ECM	PROCEDURE 5 (EL-316)	System initialization has not yet been completed.	F
			ECM	F
LOCK MODE	PROCEDURE 7 (EL-319)	LOCK MODE	D	
<ul style="list-style-type: none"> ● MIL staying ON ● Security indicator lighting up* 	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (EL-307)	Engine trouble data and NVIS (NATS) trouble data have been detected in ECM	—

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

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

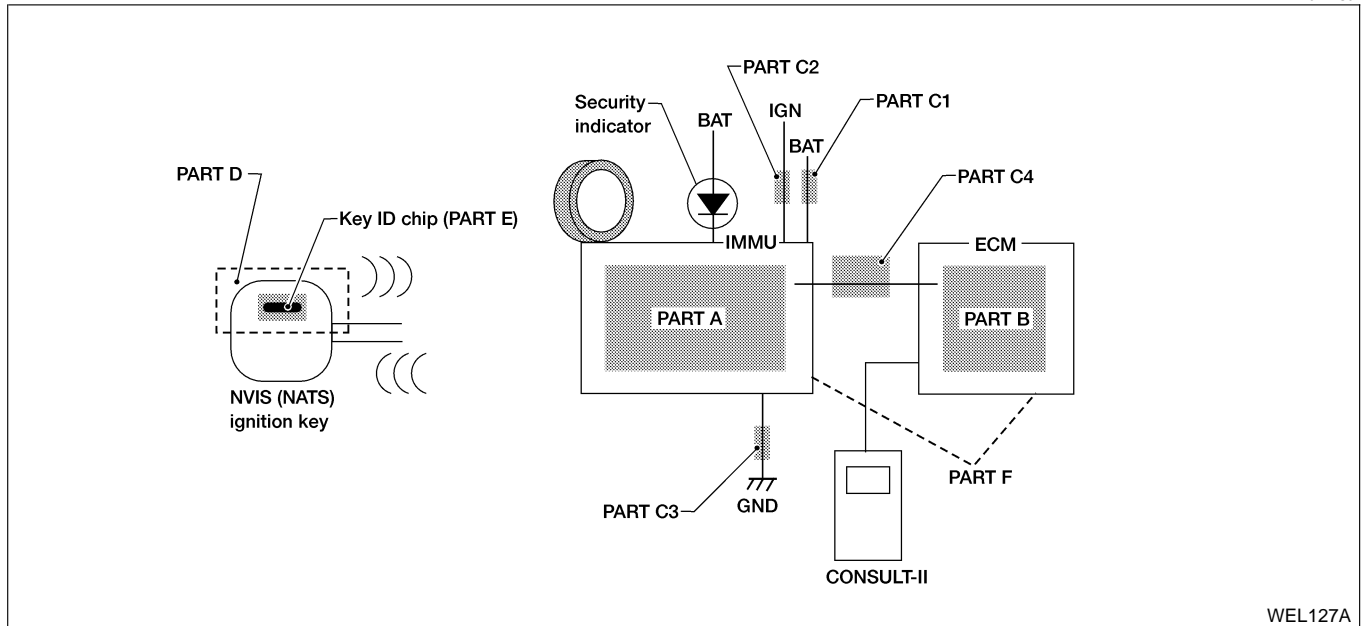
SYMPTOM MATRIX CHART 2 (Non self-diagnosis related item)

NIEL0177S03

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)
Security indicator lamp does not light up.	PROCEDURE 6 (EL-317)	Security indicator lamp
		Open circuit between fuse and IMMU
		Continuation of initialization mode
		IMMU

DIAGNOSTIC SYSTEM DIAGRAM

NIEL0177S04



WEL127A

SELF DIAGNOSIS	
DTC RESULTS	TIME
ECM INT CIRC-IMMU	0

SEL314W

DIAGNOSTIC PROCEDURE 1

NIEL0177S06

Self-diagnostic results:

“ECM INT CIRC-IMMU” displayed on CONSULT-II screen

1. Confirm SELF-DIAGNOSTIC RESULTS “ECM INT CIRC-IMMU” displayed on CONSULT-II screen. Ref. part No. B.
2. Replace ECM.
3. Perform initialization with CONSULT-II.
For initialization, refer to “CONSULT-II OPERATION MANUAL IVIS/NVIS”.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

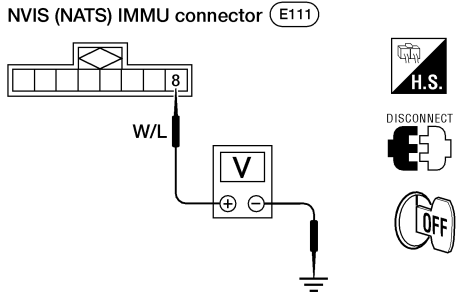
DIAGNOSTIC PROCEDURE 2

—NIEL0177S07

Self-diagnostic results:

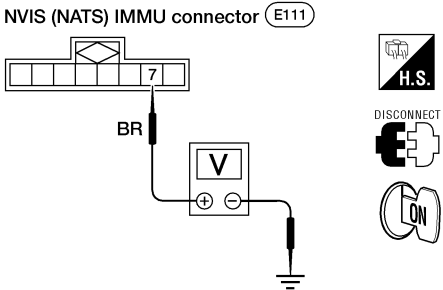
“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
<p>Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF ECM-IMMU” displayed on CONSULT-II screen.</p> <p>NOTE: In rare cases, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.</p>												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>CHAIN OF ECM-IMMU</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	CHAIN OF ECM-IMMU	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
CHAIN OF ECM-IMMU	0											
SEL292W												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

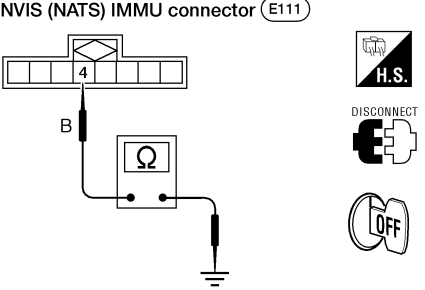
2	CHECK POWER SUPPLY CIRCUIT FOR NVIS (NATS) IMMU	
<p>1. Disconnect NVIS (NATS) IMMU connector.</p> <p>2. Check voltage between terminal 8 of NVIS (NATS) IMMU and ground with CONSULT-II or tester.</p>		
<p>NVIS (NATS) IMMU connector (E111)</p>  <p style="text-align: right;">Battery voltage should exist.</p>		
LEL545		
OK or NG		
OK	▶	GO TO 3.
NG	▶	<p>Check the following</p> <ul style="list-style-type: none"> ● 10A fuse (No. 36, located in the fuse and fusible link box) ● Harness for open or short between fuse and NVIS (NATS) IMMU connector <p>Ref. Part No. C1</p>

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

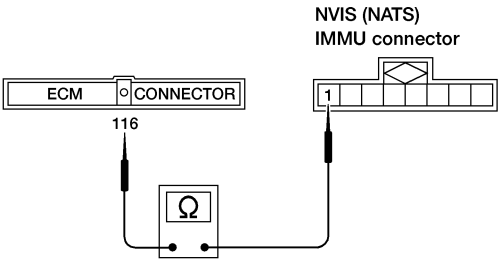

3	CHECK IGN SW. ON SIGNAL		
<ol style="list-style-type: none"> Turn ignition switch ON. Check voltage between terminal 7 of NVIS (NATS) IMMU and ground with CONSULT-II or tester. 			LEL546
OK or NG			
OK	▶	GO TO 4.	
NG	▶	Check the following <ul style="list-style-type: none"> 10A fuse [No. 20, located in the fuse block (J/B)] Harness for open or short between fuse and NVIS (NATS) IMMU connector Ref. part No. C2	

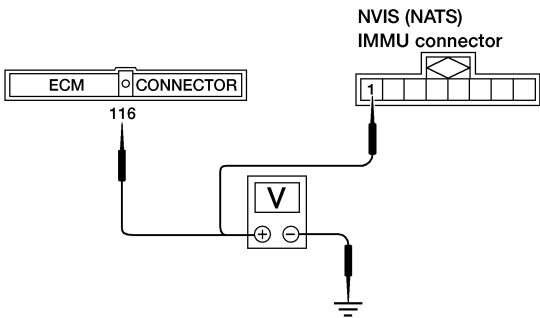
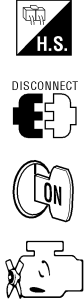
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4	CHECK GROUND CIRCUIT FOR NVIS (NATS) IMMU		
<ol style="list-style-type: none"> Turn ignition switch OFF. Check harness continuity between NVIS (NATS) IMMU terminal 4 and ground. 			LEL547
OK or NG			
OK	▶	GO TO 5.	
NG	▶	Repair harness. Ref. part No. C3	

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

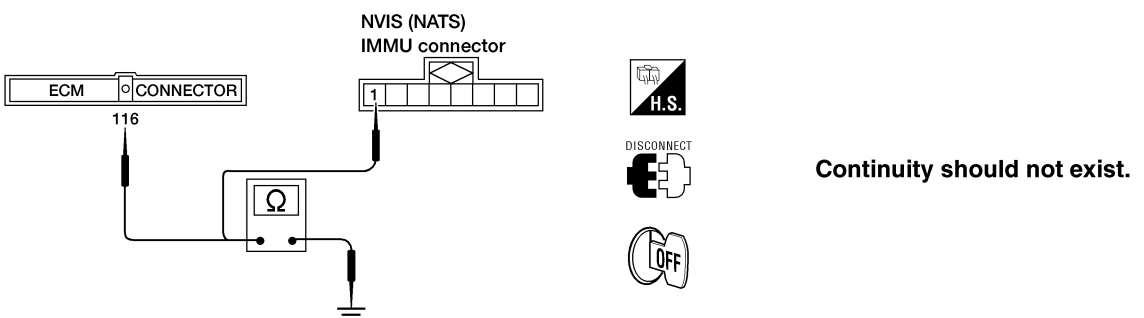
Trouble Diagnoses (Cont'd)

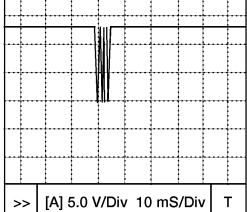
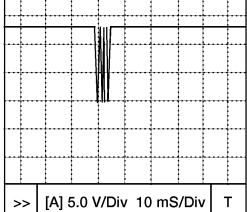
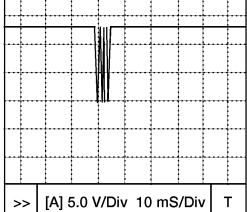
5	CHECK COMMUNICATION LINE OPEN CIRCUIT	<p>1. Disconnect ECM connector.</p> <p>2. Check harness continuity between ECM connector F22 terminal 116 (BR/Y) and NVIS (NATS) IMMU connector E111 terminal 1 (BR/Y).</p>	
			<p>Continuity should exist.</p>
WEL128A			
OK or NG			
OK	▶	GO TO 6.	
NG	▶	Repair harness or connector. Ref. part No. C4	

6	CHECK COMMUNICATION LINE BATTERY SHORT CIRCUIT	<p>1. Turn ignition switch ON.</p> <p>2. Check voltage between ECM connector F22 terminal 116 (BR/Y) or NVIS (NATS) IMMU connector E111 terminal 1 (BR/Y) and ground.</p>	
			<p>Voltage: 0V</p>
WEL129A			
OK or NG			
OK	▶	GO TO 7.	
NG	▶	Communication line is short-circuited with battery voltage line or ignition switch ON line. Repair harness or connectors. Ref. part No. C4	

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

7	CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT	
<p>1. Turn ignition switch OFF. 2. Check continuity between ECM connector F22 terminal 116 (BR/Y) or NVIS (NATS) IMMU connector E111 terminal 1 (BR/Y) and ground.</p>		
		
WEL130A		
OK or NG		
OK	▶	GO TO 8.
NG	▶	Communication line is short-circuited with ground line. Repair harness or connectors. Ref. part No. C4

8	SIGNAL FROM ECM TO NVIS (NATS) IMMU CHECK													
<p>1. Check the signal between ECM terminal 116 and ground with CONSULT-II or oscilloscope when ignition switch is turned "ON". 2. Make sure signals which are shown in the figure below can be detected during 750 msec. just after ignition switch is turned "ON".</p>														
<table border="1" style="margin: auto;"> <tr> <td colspan="2">Triggering Menu</td> <td>Stop Triggering</td> </tr> <tr> <td>Set</td> <td colspan="2">Auto Trigger</td> </tr> <tr> <td colspan="3" style="text-align: center;">  </td> </tr> <tr> <td>>></td> <td>[A] 5.0 V/Div 10 mS/Div</td> <td>T</td> </tr> </table>			Triggering Menu		Stop Triggering	Set	Auto Trigger					>>	[A] 5.0 V/Div 10 mS/Div	T
Triggering Menu		Stop Triggering												
Set	Auto Trigger													
														
>>	[A] 5.0 V/Div 10 mS/Div	T												
LEL641														
OK or NG														
OK	▶	NVIS (NATS) IMMU is malfunctioning. Replace NVIS (NATS) IMMU. Ref. part No. A Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II OPERATION MANUAL IVIS/ NVIS".												
NG	▶	ECM is malfunctioning. Replace ECM. Ref. part No. B Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II OPERATION MANUAL IVIS/ NVIS".												

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 3

—NIEL0177S08

Self-diagnostic results:

“DIFFERENCE OF KEY” displayed on CONSULT-II screen

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS “DIFFERENCE OF KEY” displayed on CONSULT-II screen.												
<table border="1"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>DIFFERENCE OF KEY</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	DIFFERENCE OF KEY	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
DIFFERENCE OF KEY	0											
SEL293W												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

2	PERFORM INITIALIZATION WITH CONSULT-II				
Perform initialization with CONSULT-II. Re-register all NVIS (NATS) ignition key IDs. For initialization, refer to “CONSULT-II OPERATION MANUAL IVIS/NVIS”.					
<table border="1"> <thead> <tr> <th>IMMU INITIALIZATION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td>THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </tbody> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
NOTE: If the initialization is not completed or fails, CONSULT-II shows above message on the screen.					
Can the system be initialized?					
Yes	▶	Start engine. (END) (Ignition key ID was unregistered. Ref. part No. D)			
No	▶	NVIS (NATS) IMMU is malfunctioning. Replace NVIS (NATS) IMMU. Ref. part No. A Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II OPERATION MANUAL IVIS/NVIS”.			

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 4

—NIEL0177S09

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.												
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>CHAIN OF IMMU-KEY</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	CHAIN OF IMMU-KEY	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
CHAIN OF IMMU-KEY	0											
SEL294W												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

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

3	CHECK NVIS (NATS) IMMU INSTALLATION	
Check NVIS (NATS) IMMU installation. Refer to “How to Replace NVIS (NATS) IMMU” in EL-320.		
OK or NG		
OK	▶	NVIS (NATS) IMMU is malfunctioning. Replace NVIS (NATS) IMMU. Ref. part No. A Perform initialization with CONSULT-II. For initialization, refer to “CONSULT-II OPERATION MANUAL IVIS/NVIS”.
NG	▶	Reinstall NVIS (NATS) IMMU correctly.

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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 5

—NIEL0177S10

Self-diagnostic results:

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS “ID DISCORD, IMM-ECM” displayed on CONSULT-II screen.												
<table border="1"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>ID DISCORD, IMM-ECM</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	ID DISCORD, IMM-ECM	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
ID DISCORD, IMM-ECM	0											
SEL298W												
NOTE:												
“ID DISCORD IMM-ECM”: Registered ID of NVIS (NATS) IMMU is in discord with that of ECM.												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

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

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

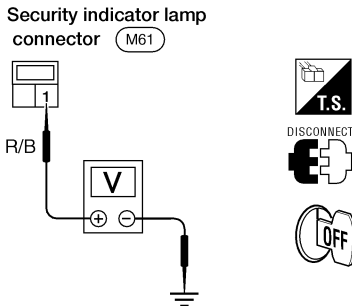
DIAGNOSTIC PROCEDURE 6

“SECURITY INDICATOR LAMP DOES NOT LIGHT UP”

=NIEL0177S12

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

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

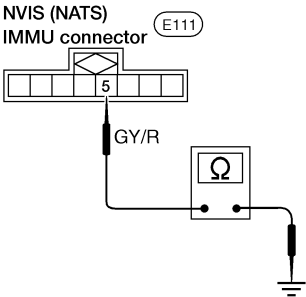

3	CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT	
1. Disconnect security indicator lamp connector. 2. Check voltage between security indicator lamp connector terminal 1 and ground.		
		
Battery voltage should exist.		
LEL551		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Check harness for open or short between fuse and security indicator lamp.

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

GI
MA
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NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

5	CHECK NVIS (NATS) IMMU FUNCTION	
<ol style="list-style-type: none"> 1. Connect NVIS (NATS) IMMU connector. 2. Disconnect security indicator lamp connector. 3. Check continuity between NVIS (NATS) IMMU terminal 5 and ground. 		
<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;">  <p>NVIS (NATS) IMMU connector (E111)</p> <p>GY/R</p> </div> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>Continuity should exist intermittently.</p> </div> </div> <p style="text-align: right;">LEL552</p> <p style="text-align: center;">OK or NG</p>		
OK	▶	Check harness for open or short between security indicator lamp and NVIS (NATS) IMMU.
NG	▶	NVIS (NATS) IMMU is malfunctioning. Replace NVIS (NATS) IMMU. Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II OPERATION MANUAL IVIS/NVIS".

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

DIAGNOSTIC PROCEDURE 7

—NIEL0177S13

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

1	CONFIRM SELF-DIAGNOSTIC RESULTS											
Confirm SELF-DIAGNOSTIC RESULTS “LOCK MODE” is displayed on CONSULT-II screen.												
<table border="1"> <thead> <tr> <th colspan="2">SELF DIAGNOSIS</th> </tr> <tr> <th>DTC RESULTS</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">LOCK MODE</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	LOCK MODE	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
LOCK MODE	0											
SEL295W												
Is CONSULT-II screen displayed as above?												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

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

3	CHECK NVIS (NATS) IMMU ILLUSTRATION	
Check NVIS (NATS) IMMU installation. Refer to “How to Replace NVIS (NATS) IMMU” in EL-320.		
OK or NG		
OK	▶	GO TO 4.
NG	▶	Reinstall NVIS (NATS) IMMU correctly.

GI

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HA

SC

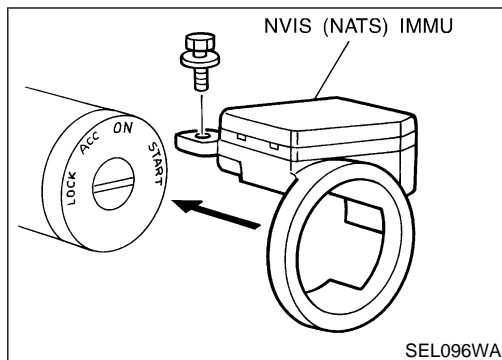
EL

IDX

NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

4	PERFORM INITIALIZATION WITH CONSULT-II			
<p>Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II OPERATION MANUAL IVIS/NVIS".</p>				
<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;">IMMU INITIALIZATION</td> </tr> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td style="text-align: center;">THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </table>		IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION				
INITIALIZATION FAIL				
THEN IGN KEY SW 'OFF' AND 'ON', AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.				
SEL297W				
<p>NOTE: If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.</p>				
Can the system be initialized?				
Yes	▶ System is OK.			
No	▶ Check "CHAIN OF IMMU-KEY". Refer to "DIAGNOSTIC PROCEDURE 4", EL-315.			



How to Replace NVIS (NATS) IMMU

NIEL0178

NOTE:

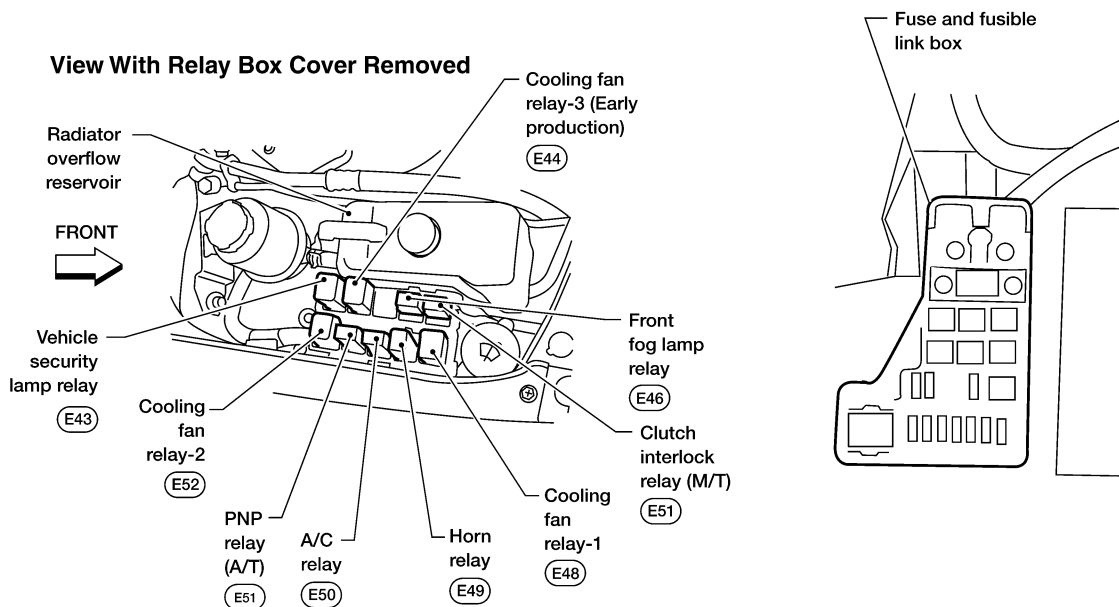
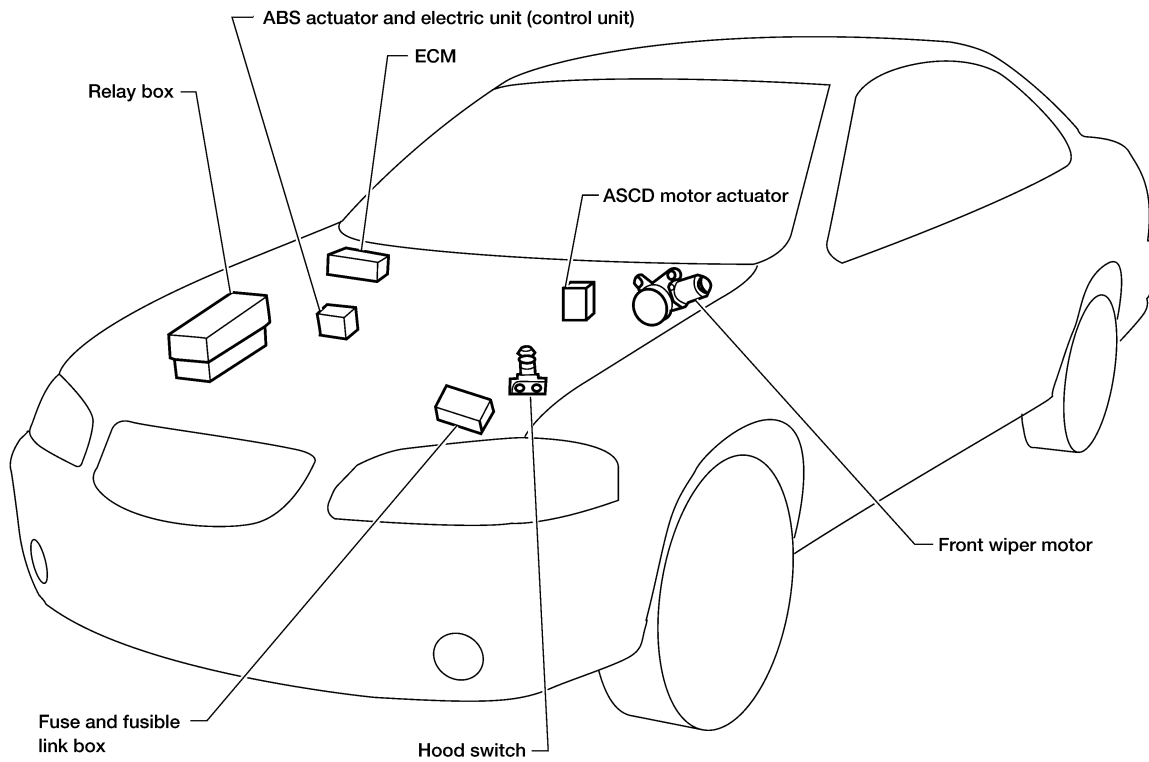
- If NVIS (NATS) IMMU is not installed correctly, NVIS (NATS) system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show "LOCK MODE" or "CHAIN OF IMMU-KEY".

ELECTRICAL UNITS LOCATION

Engine Compartment

Engine Compartment

NIEL0129



GI

MA

EM

LC

EC

FE

CL

MT

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AX

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BR

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RS

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HA

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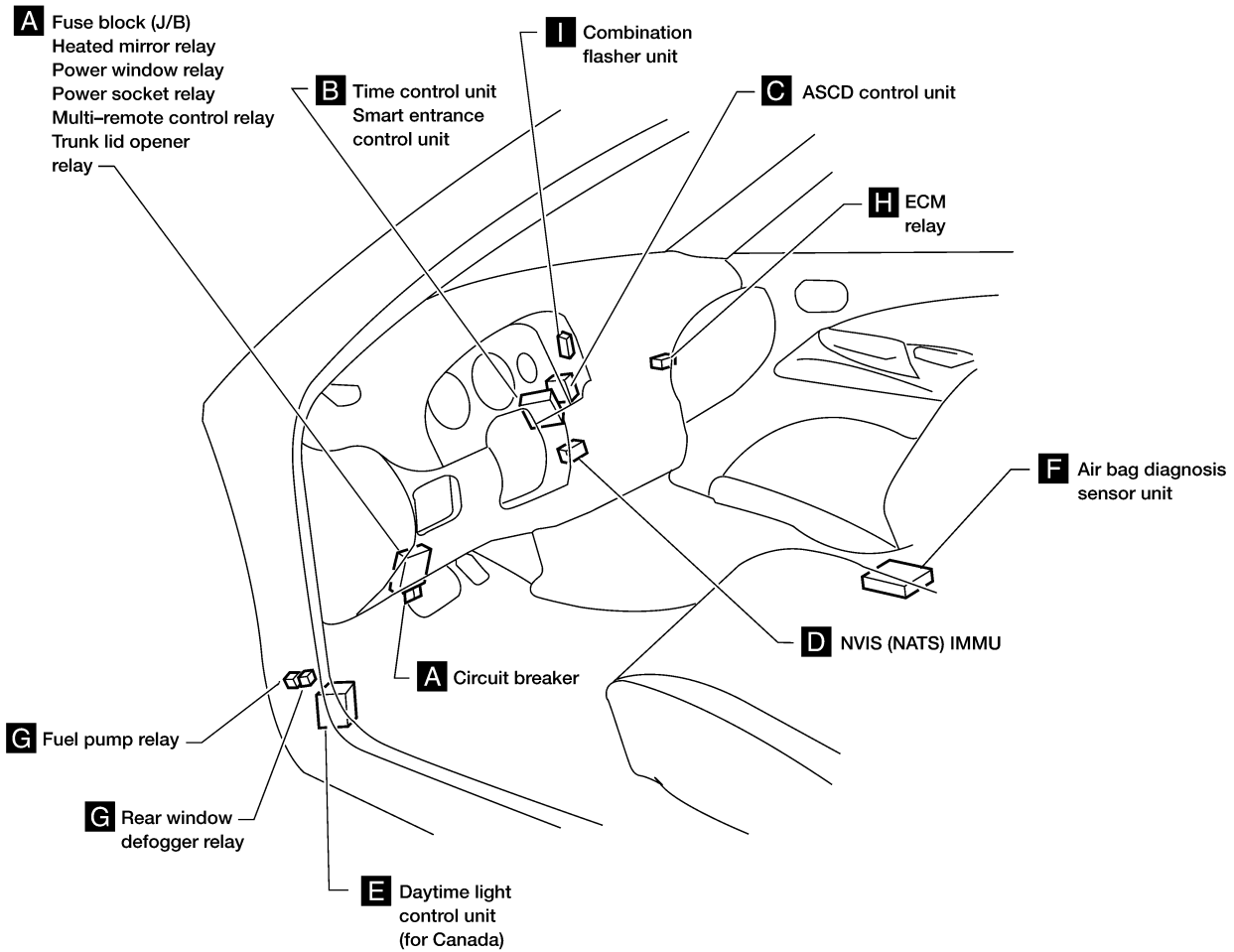
WEL039B

ELECTRICAL UNITS LOCATION

Passenger Compartment

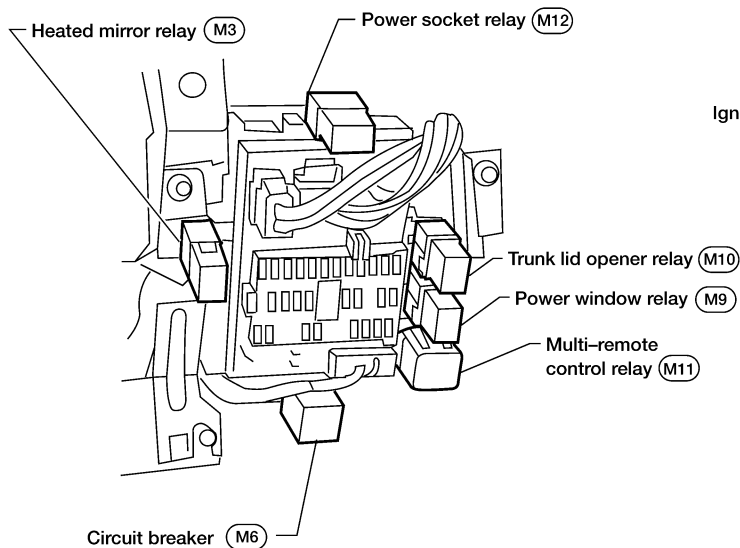
Passenger Compartment

NIEL0130

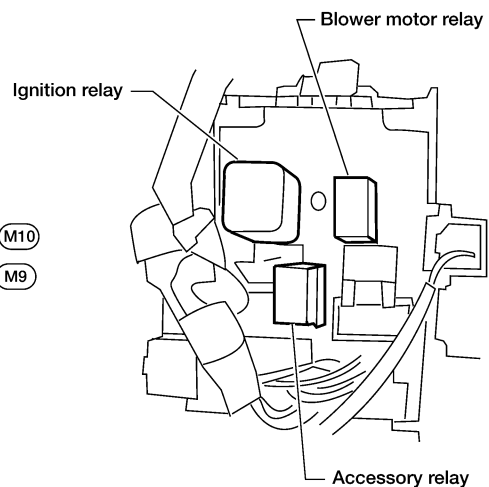


A Instrument panel LH side

View with instrument panel removed



View of rear of fuse block (J/B)



WEL608A

ELECTRICAL UNITS LOCATION

Passenger Compartment (Cont'd)

GI

MA

EM

LC

EC

FE

CL

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AT

AX

SU

BR

ST

RS

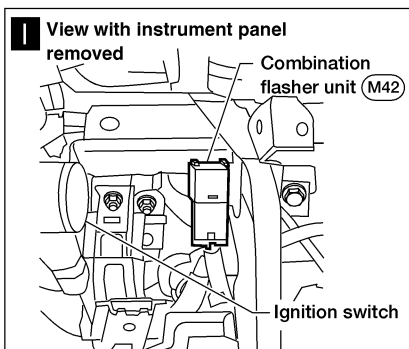
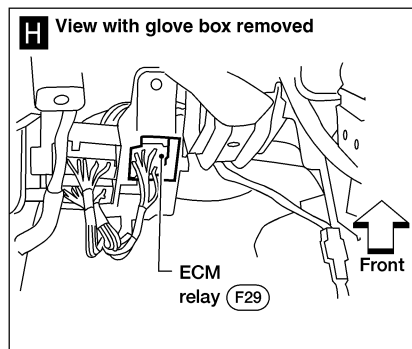
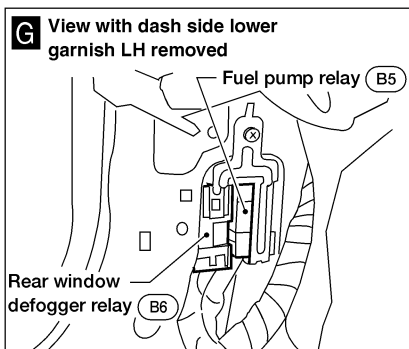
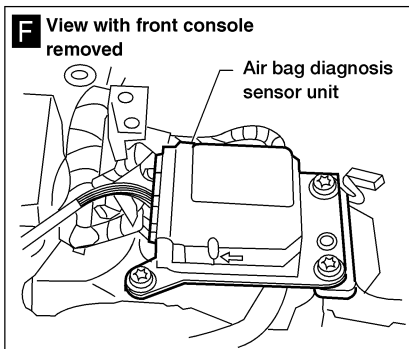
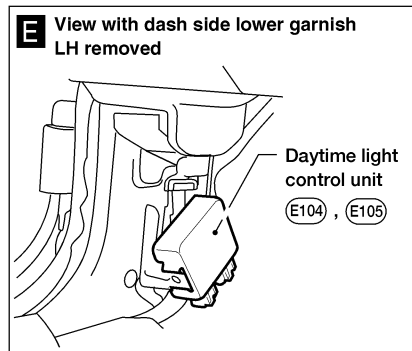
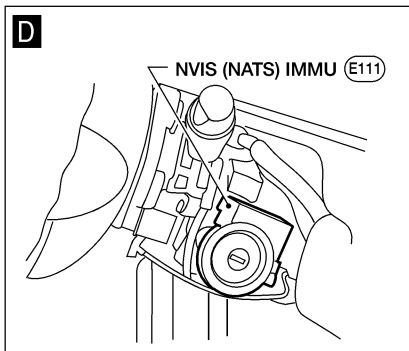
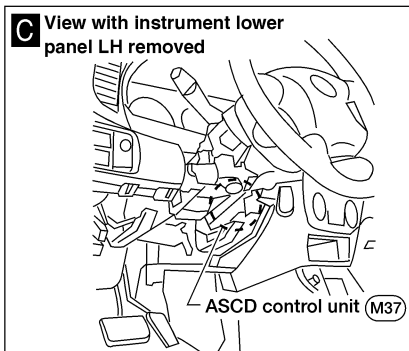
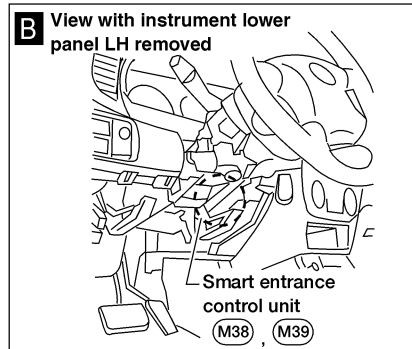
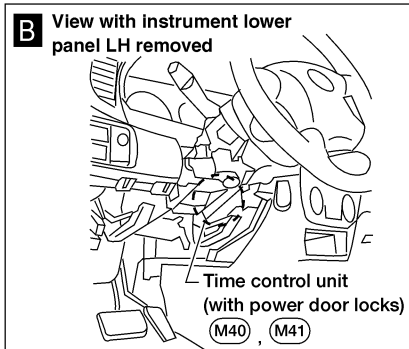
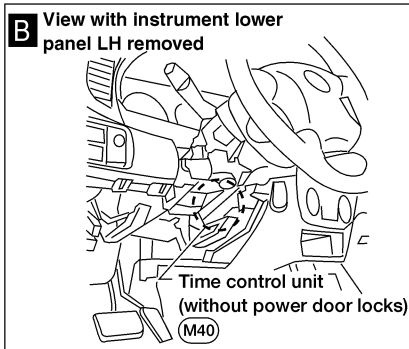
BT

HA

SC

EL

IDX



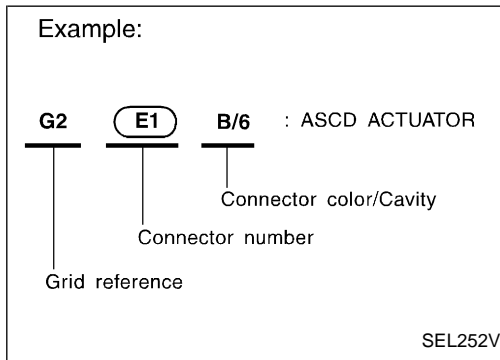
WEL133A

HARNESS LAYOUT

How to Read Harness Layout

How to Read Harness Layout

NIEL0131



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

- Main Harness
- Engine Room Harness
- 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.

NIEL0131S01

CONNECTOR SYMBOL

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

NIEL0131S02

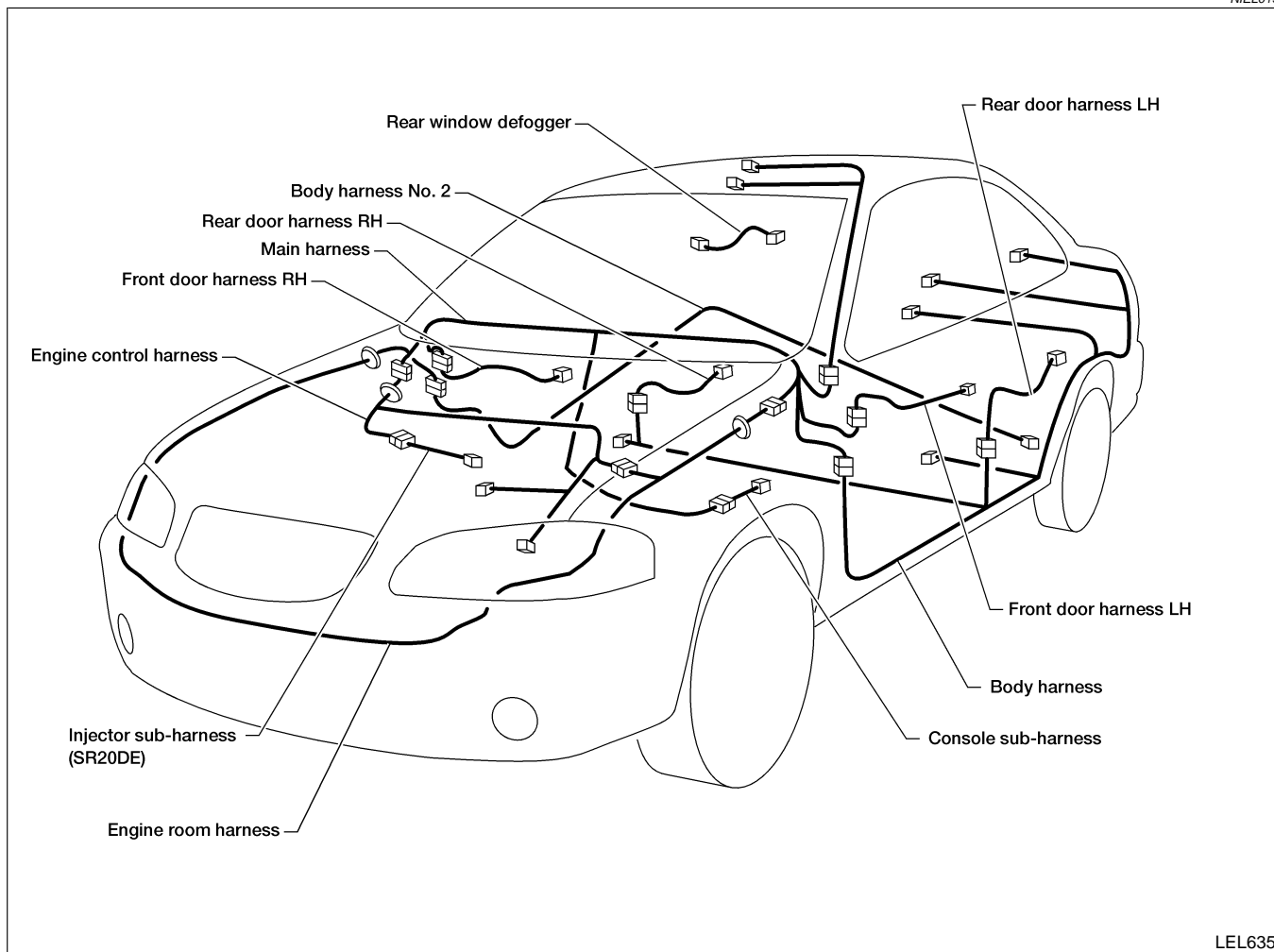
Connector type	Water proof type		Standard type	
	Male	Female	Male	Female
<ul style="list-style-type: none"> • Cavity: Less than 4 • Relay connector 				
<ul style="list-style-type: none"> • Cavity: From 5 to 8 				
<ul style="list-style-type: none"> • Cavity: More than 9 				
<ul style="list-style-type: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

HARNES LAYOUT

Outline

Outline

NIEL0132



LEL635

NOTE:

For detailed ground distribution information, refer to "Ground Distribution", EL-20.

GI

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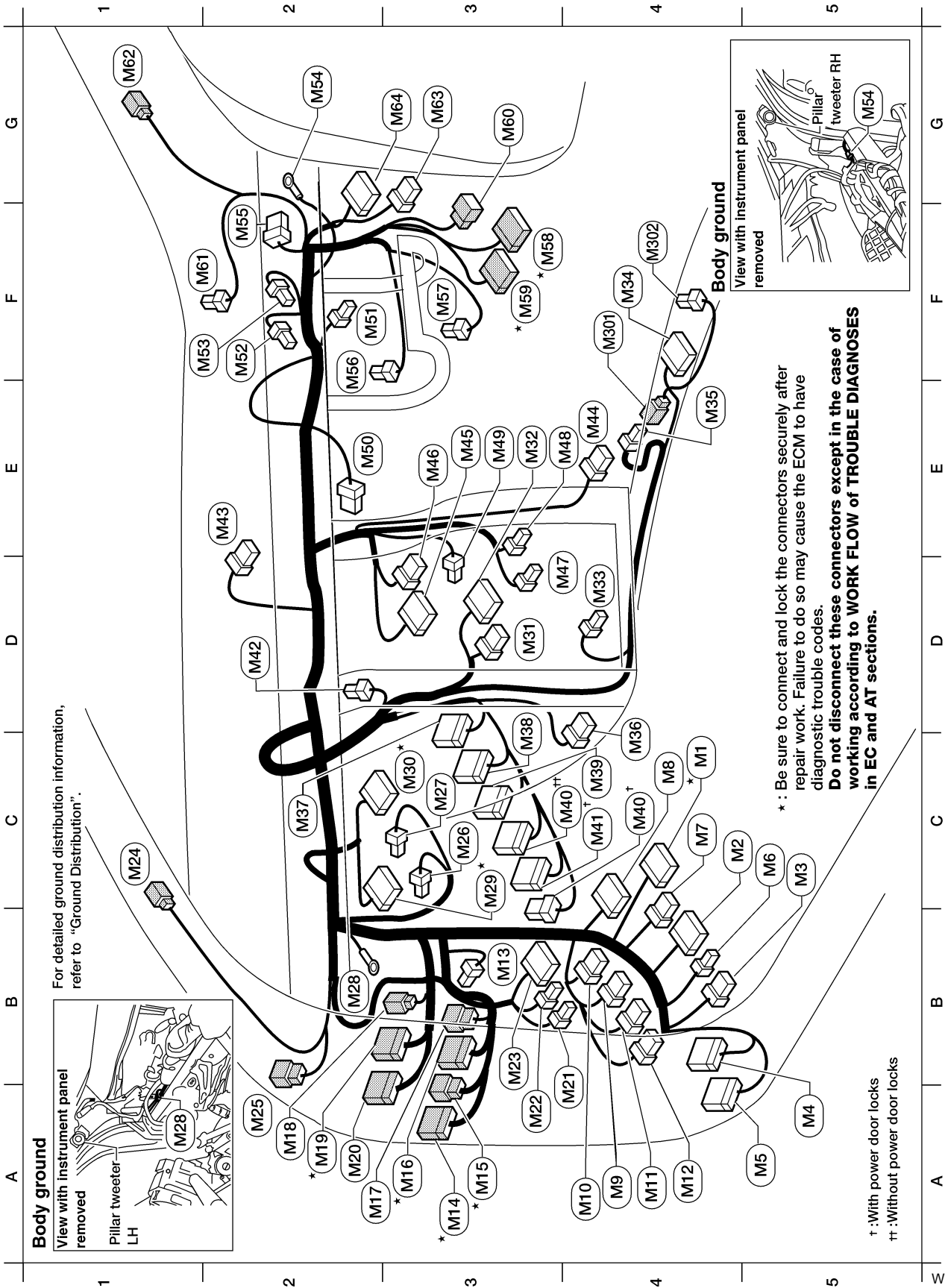
IDX

HARNESS LAYOUT

Main Harness

Main Harness

NIEL0133



HARNESS LAYOUT

Main Harness (Cont'd)

Console Sub-harness

- F4 (M301) W/2 : To (M35)
 F4 (M302) B/2 : Power socket
 or
 3

- | | | |
|--|---|--|
| <p>C4 (M1) W/16 : Fuse block (J/B)
 C4 (M2) W/12 : Fuse block (J/B)
 C5 (M3) L/5 : Heated mirror relay
 A5 (M4) W/12 : To (D1)
 A5 (M5) W/16 : To (D2)
 C5 (M6) W/2 : Circuit breaker
 C4 (M7) W/6 : Fuse block (J/B)
 C4 (M8) W/16 : Data link connector
 A4 (M9) L/5 : Power window relay
 A4 (M10) L/5 : Trunk lid opener relay
 A4 (M11) BR/6 : Multi-remote control relay
 A4 (M12) L/5 : Power socket relay
 B3 (M13) L/2 : ASCD clutch switch (M/T with ASCD)
 A3 (M14) BR/16: To (B1)
 A3 (M15) W/6 : To (B2)
 A3 (M16) W/20 : To (B3)
 A3 (M17) GY/8 : To (E106)
 A2 (M18) W/2 : To (E107)
 A2 (M19) W/16 : To (E108)
 A2 (M20) W/16 : To (E109)
 A4 (M21) B/2 : Trunk lid opener switch
 A3 (M22) W/3 : Illumination control switch
 B3 (M23) W/10 : Door mirror remote control switch
 C1 (M24) BR/2 : Pillar tweeter LH
 A2 (M25) W/6 : To (R1)
 C3 (M26) B/2 : Stop lamp switch
 C3 (M27) BR/2 : ASCD brake switch
 B2 (M28) - : Body ground
 C3 (M29) W/24 : Combination meter (Without tachometer)
 C3 (M29) BR/24: Combination meter (With tachometer)
 C3 (M30) BR/20: Combination meter (Without tachometer)
 C3 (M30) W/24 : Combination meter (With tachometer)
 D3 (M31) W/6 : Fan control switch
 E3 (M32) W/12 : Air control
 D4 (M33) B/2 : Cigarette lighter socket</p> | <p>F4 (M34) Y/20 : Air bag diagnosis sensor unit
 E4 (M35) W/2 : To (M301)
 C4 (M36) Y/7 : Spiral cable
 C4 (M37) BR/24: ASCD control unit
 C3 (M38) W/18 : Smart entrance control unit
 C4 (M39) B/24 : Smart entrance control unit
 C4 (M40) W/10 : Time control unit (Without power door locks)
 C4 (M40) W/6 : Time control unit (With power door locks)
 C4 (M41) W/16 : Time control unit (With power door locks)
 D2 (M42) B/3 : Combination flasher unit
 E2 (M43) W/8 : Hazard switch
 E4 (M44) W/8 : A/T device
 E3 (M45) W/10 : Audio unit
 E3 (M46) W/6 : Audio unit
 D3 (M47) W/4 : C/D changer
 E3 (M48) B/2 : C/D changer
 E3 (M49) W/3 : Thermo control amplifier
 E3 (M50) B/6 : Intake door motor
 F3 (M51) Y/2 : Front passenger air bag module
 F2 (M52) W/2 : Diode-1
 F2 (M53) W/2 : Diode-2
 G2 (M54) - : Body ground
 F2 (M55) L/6 : Diode-3
 F2 (M56) BR/4 : Fan resistor
 F3 (M57) W/2 : Blower motor
 F3 (M58) W/16 : To (F26)
 F3 (M59) BR/16: To (F27)
 G3 (M60) W/6 : To (F26)
 F2 (M61) BR/2 : Security indicator lamp
 G1 (M62) BR/2 : Pillar tweeter RH
 G3 (M63) W/8 : To (D101)
 G3 (M64) W/16 : To (D102)</p> | <p>(M52) : Diode-1
 Daytime light control unit
 Diode-3
 (M53) : Diode-2
 Combination meter
 Parking brake switch
 (M55) : Diode-3
 Hazard switch (QG18DE)
 Combination switch (Lighting switch) (SR20DE)
 Rear window defogger relay
 DTRL
 ECM</p> |
|--|---|--|

* : 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.

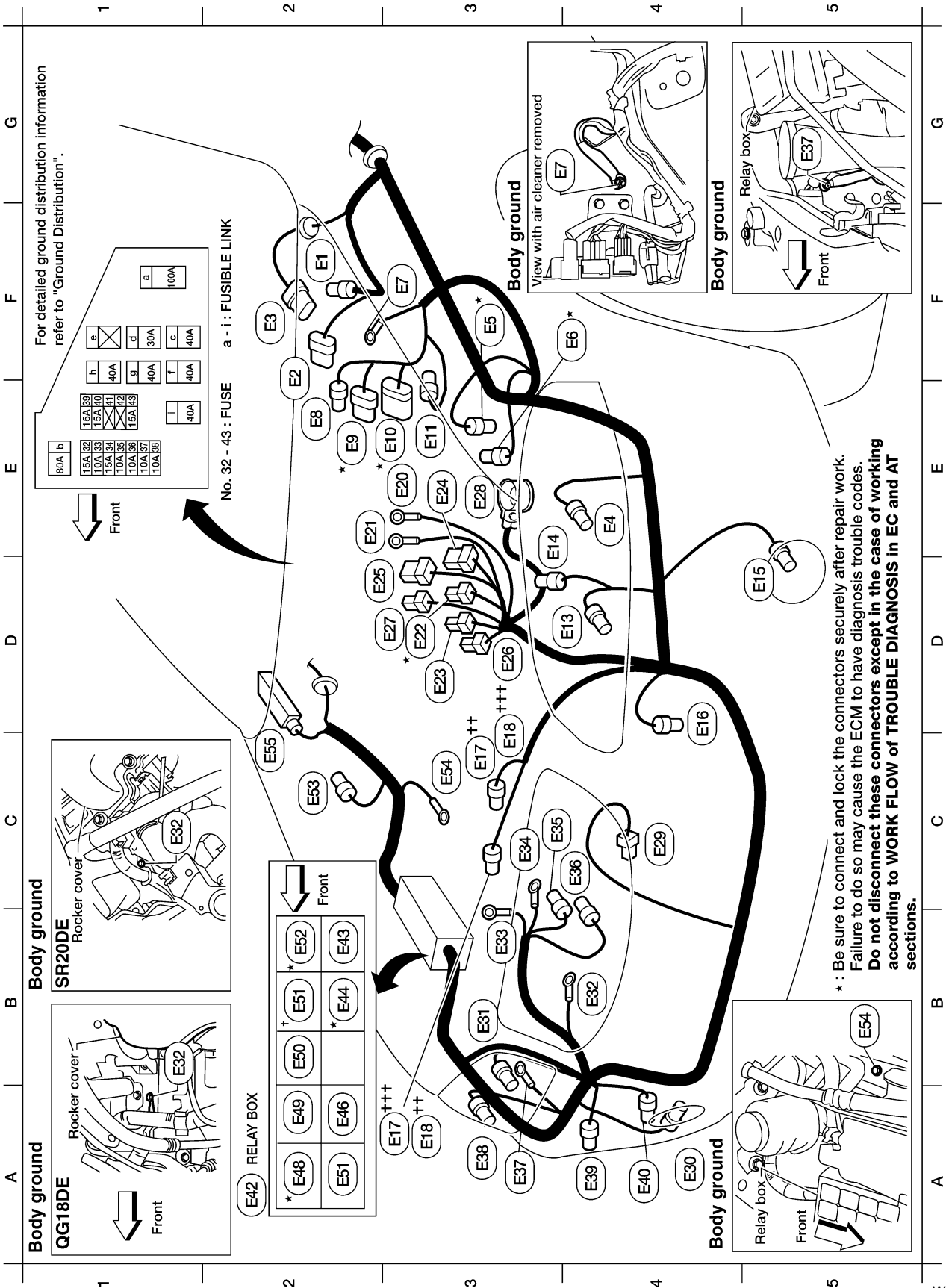
GI MA EM LC EC FE CL MT AT AX SU BR ST RS BT HA SC EL IDX

HARNESS LAYOUT

Engine Room Harness

Engine Room Harness

NIEL0134



WEL040B

HARNES LAYOUT

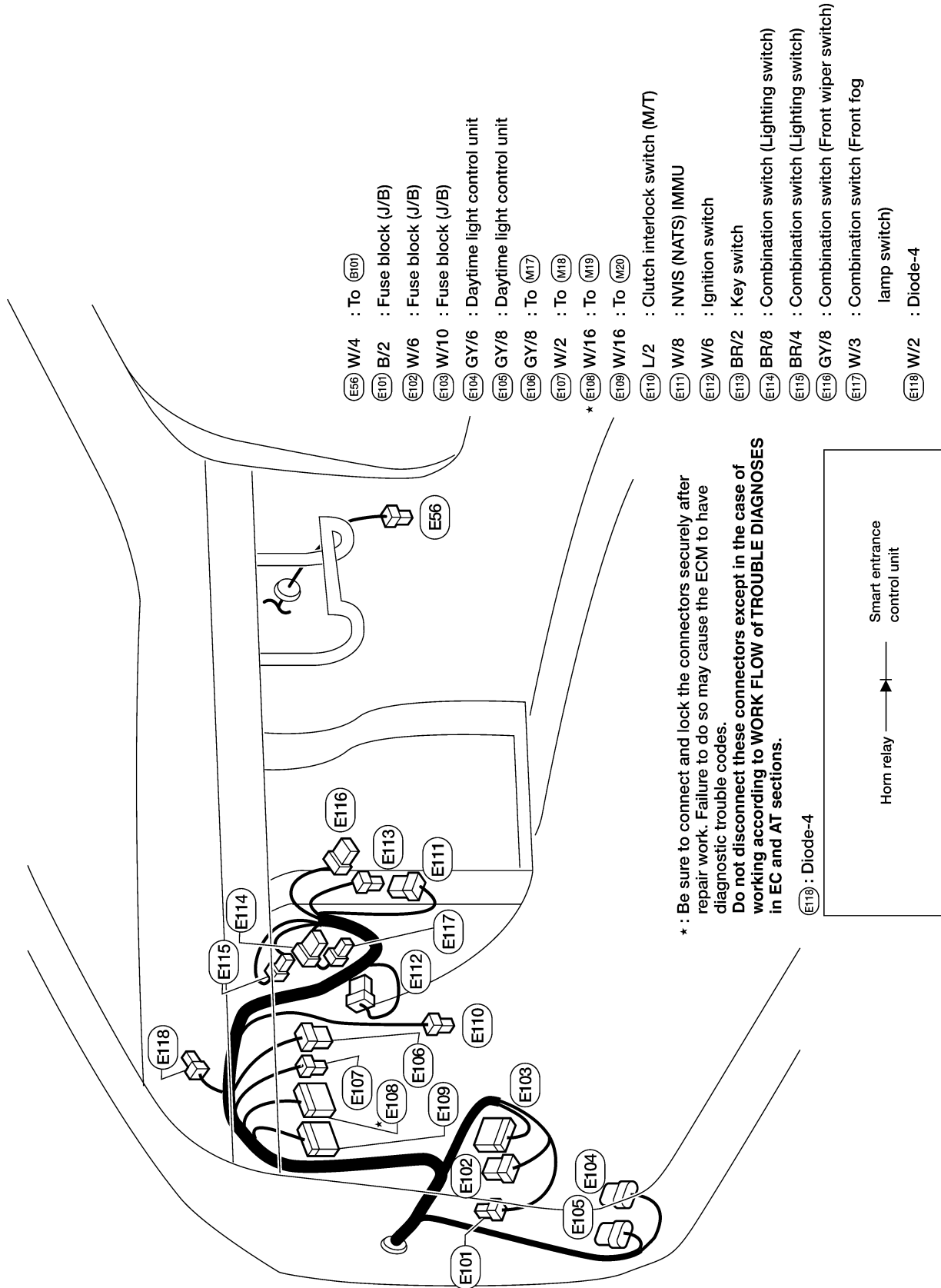
Engine Room Harness (Cont'd)

F2	(E1) GY/2	: Brake fluid level switch	B3	(E31) B/3	: Headlamp RH
F2	(E2) B/6	: ASCD motor actuator	B4	(E32)	: Body ground
F2	(E3) GY/6	: Front wiper motor	B3	(E33)	: Generator
E4	(E4) B/3 or GY/3	: Front combination lamp LH	C3	(E34)	: Generator
F3	(E5) B/2 or GY/2	: Intake air temperature sensor	C3	(E35) W/2	: Generator
F4	(E6) GY/2	: Dropping resistor	C4	(E36) B/1	: A/C compressor
F3	(E7)	: Body ground	A3	(E37)	: Body ground
E3	(E8) GY/1	: To (F46)	A3	(E38) B/3 or GY/3	: Front combination lamp RH
E3	(E9) GY/8	: To (F47)	A4	(E39) GY/2	: Front washer motor
E4	(E10) GY/10	: To (F48)	A4	(E40) BR/2	: Washer fluid level switch (for Canada)
E4	(E11) BR/2	: Front wheel sensor LH	A2	(E42)	: Relay box
D4	(E13) B/3	: Headlamp LH	B2	(E43) BR/6	: Vehicle security lamp relay
E3	(E14) W/2	: Hood switch	B2	(E44) BR/6	: Cooling fan relay-3 (Early production)
D5	(E19) GY/2	: Front fog lamp LH	A2	(E46) L/4	: Front fog lamp relay
D4	(E16) B/3	: Refrigerant pressure sensor	A2	(E48) BR/6	: Cooling fan relay-1
C3+++	(E17) GY/4	: Cooling fan motor 1 (Early production)	A2	(E49) L/4	: Horn relay
C3+++	(E17) GY/4	: Cooling fan motor 1 (Late production)	A2	(E50) L/4	: A/C relay
C3+++	(E18) GY/4	: Cooling fan motor 2 (Early production)	A2	(E51) L/4	: Clutch interlock relay (M/T)
C3+++	(E18) GY/4	: Cooling fan motor 2 (Late production)	B2	(E51) L/4	: Park/neutral position (PNP) relay (A/T, without ASCD)
E3	(E20)	: Fuse and fusible link box	B2	(E51) GY/6	: Park/neutral position (PNP) relay (A/T, with ASCD)
E3	(E21)	: Fuse and fusible link box	B2	(E52) BR/6	: Cooling fan relay-2
D3	(E22) W/3	: Fuse and fusible link box	C2	(E53) GY/2	: Front wheel sensor RH
D3	(E23) W/4	: Fuse and fusible link box	C3	(E54)	: Body ground
E3	(E24) W/6	: Fuse and fusible link box	C2	(E55) B/31	: ABS actuator and electric unit (control unit)
D3	(E25) B/6	: Fuse and fusible link box			
D3	(E26) W/1	: Fuse and fusible link box			
D3	(E27) B/1	: Fuse and fusible link box			
E3	(E28)	: Battery (positive)			
C4	(E29) B/1	: Horn			
A4	(E30) GY/2	: Front fog lamp 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.

HARNESS LAYOUT

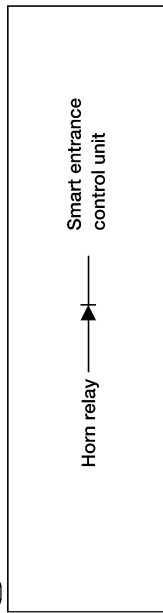
Engine Room Harness (Cont'd)



- E56 W/4 : To E101
- E101 B/2 : Fuse block (J/B)
- E102 W/6 : Fuse block (J/B)
- E103 W/10 : Fuse block (J/B)
- E104 GY/6 : Daytime light control unit
- E105 GY/8 : Daytime light control unit
- E106 GY/8 : To MT7
- E107 W/2 : To MT9
- E108 W/16 : To MT9
- E109 W/16 : To M20
- E110 L/2 : Clutch interlock switch (M/T)
- E111 W/8 : NVIS (NATS) IMMU
- E112 W/6 : Ignition switch
- E113 BR/2 : Key switch
- E114 BR/8 : Combination switch (Lighting switch)
- E115 BR/4 : Combination switch (Lighting switch)
- E116 GY/8 : Combination switch (Front wiper switch)
- E117 W/3 : Combination switch (Front fog lamp switch)
- E118 W/2 : Diode-4

* : 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.

E119 : Diode-4



HARNESS LAYOUT

Engine Control Harness

Engine Control Harness QG18DE (EXCEPT CALIF. CA MODEL)

NIEL0135

NIEL0135S01

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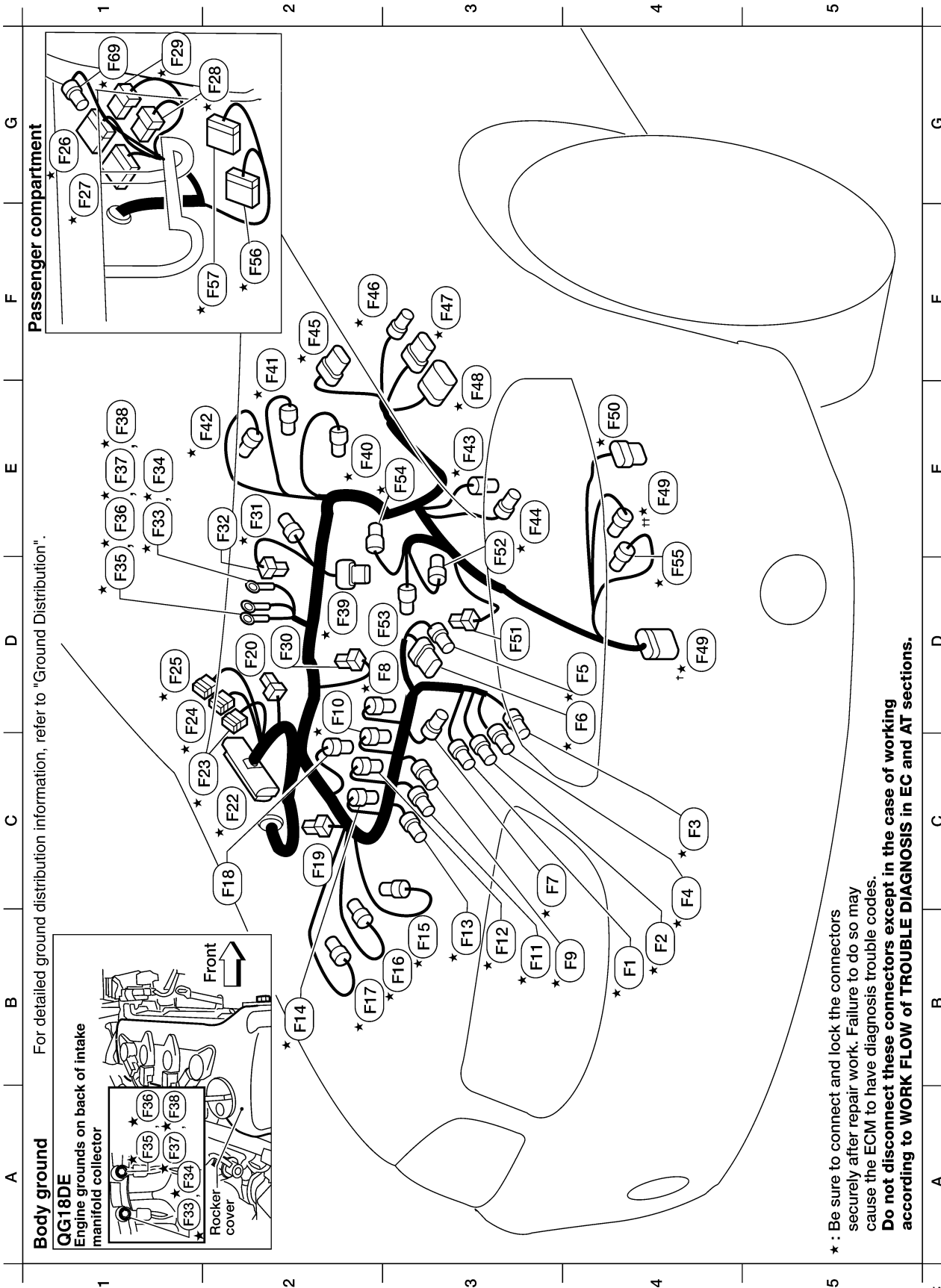
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For detailed ground distribution information, refer to "Ground Distribution".

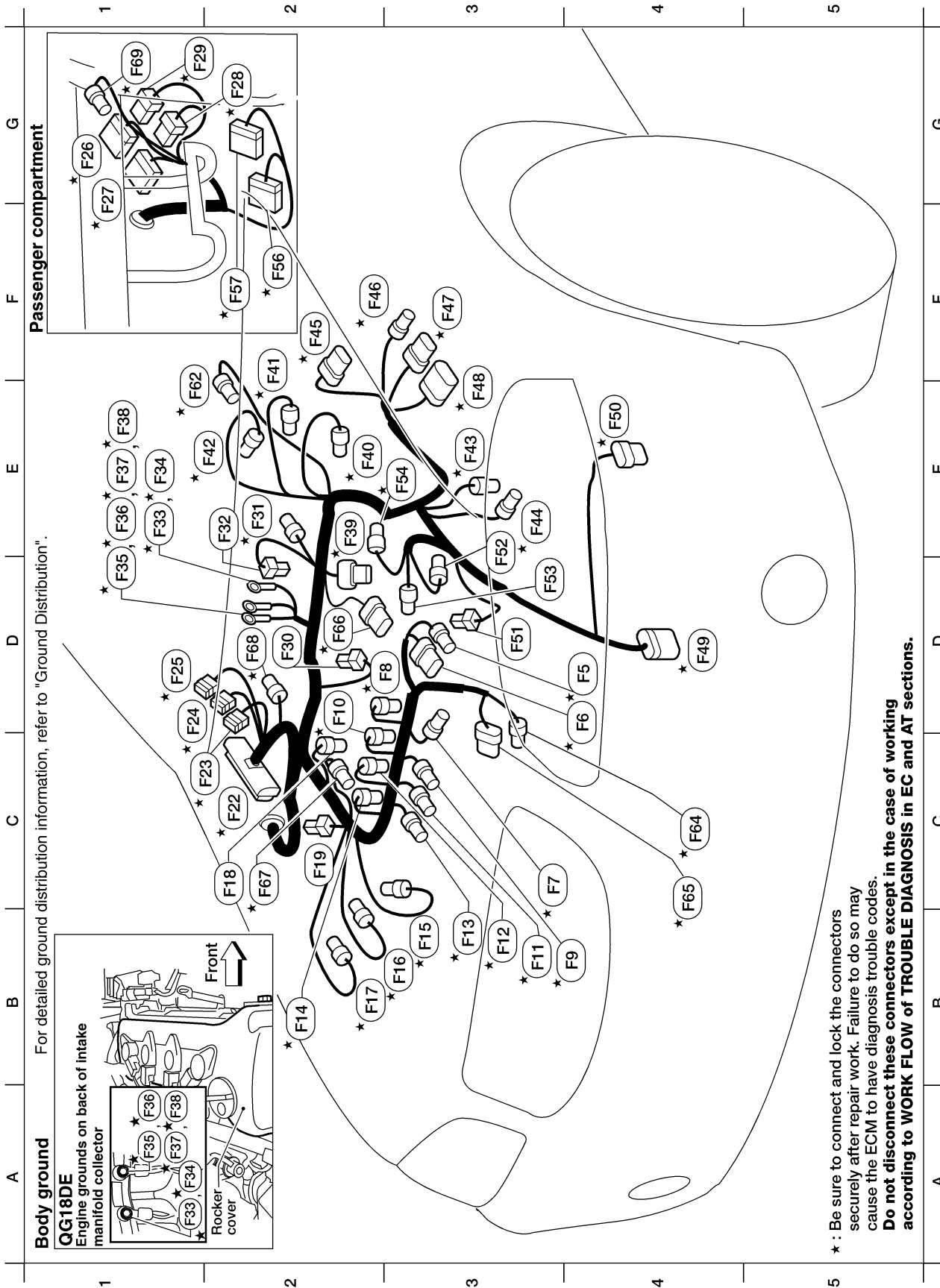
* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnosis trouble codes. Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

HARNESS LAYOUT

Engine Control Harness (Cont'd)

QG18DE (CALIF. CA MODEL)

NIEL0135S02



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LEL630

HARNESS LAYOUT

Engine Control Harness (Cont'd)

Engine control harness

D4	* F5	L/2	: EVAP canister purge volume control solenoid valve	D1	* F36		: Engine ground
D4	* F6	G/6	: EGR volume control valve	E1	* F36		: Engine ground
C3	* F7	GY/3	: Ignition coil No. 4	E1	* F37		: Engine ground
D3	* F8	GY/2	: Injector No.4	E1	* F38		: Engine ground
B4	* F9	GY/3	: Ignition coil No. 3	E2	* F39	L/6	: IACV-ACC valve
D2	* F10	GY/2	: Injector No. 3	E2	* F40	GY/3	: Throttle position switch
B3	* F11	GY/3	: Ignition coil No. 2	F2	* F41	BR/3	: Throttle position sensor
B3	* F12	GY/2	: Injector No. 2	E2	* F42	L/2	: EGR temperature sensor
B3	* F13	GY/3	: Ignition coil No. 1	E3	* F43	GY/2	: Vehicle speed sensor
B2	* F14	GY/2	: Injector No. 1	E3	* F44	BR/3	: Revolution sensor
B3	* F15	GY/2	: Engine coolant temperature sensor	F2	* F45	GY/5	: Mass air flow sensor
B3	* F16	B/3	: Camshaft position sensor (PHASE)	F2	* F46	GY/1	: To E8
B2	* F17	G/3	: Intake valve timing control position sensor	F3	* F47	GY/8	: To E9
C2	* F18	G/2	: Intake valve timing control solenoid valve	E3	* F48	GY/10	: To E10
C2	F19	GY/2	: Condenser	D4	* F49	B/10	: Park/neutral position (PNP) switch
C2	* F22	SMJ	: ECM	E4	* F50	B/8	: Terminal cord assembly
C2	* F23	GY/12	: Joint connector-1 (GREEN)	D3	* F51	B/1	: Terminal transmitter
D1	* F24	L/12	: Joint connector-2 (BLUE)	E3	* F52	B/3	: Crankshaft position sensor (POS)
D1	* F25	GY/6	: Joint connector-3 (GRAY)	D3	F53	GY/1	: Starter motor
G1	* F26	W/16	: To M59	F2	* F56	W/24	: TCM (Transmission control module)
F1	* F27	BR/16	: To M59	F2	* F57	GY/24	: TCM (Transmission control module)
G2	* F28	W/6	: To M60	E1	* F58	GY/4	: Heated oxygen sensor 3
G1	* F29	BR/6	: ECM Relay	C4	* F64	GY/4	: Heated oxygen sensor 2 (Rear)
D2	F30		: Power steering oil pressure switch	C4	* F65	B/6	: Air fuel ratio (A/F) sensor 1
E2	* F31	GY/2	: Knock sensor	D2	* F66	GY/6	: Swirl control valve
E2	F32	B/1	: Oil pressure switch	C2	* F67	BR/3	: Swirl control valve position sensor
E1	* F33		: Engine ground	D2	* F68	GY/3	: Manifold absolute pressure sensor
E1	* F34		: Engine ground	G1	* F69	GY/3	: Barometric pressure sensor

* : 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.

WEL811

HARNES LAYOUT

Engine Control Harness (Cont'd)

Engine control harness

D3	* (F6) G/6	: EGR volume control valve
D2	* (F15) GY/2	: Engine coolant temperature sensor
C2	* (F22) SMJ	: ECM
C2	* (F23) GY/6	: Joint connector - 1 (Gray)
D2	* (F24) G/12	: Joint connector - 2 (Green)
D1	* (F25) GY/6	: Joint connector - 3 (Gray)
B1	* (F26) W/16	: To (M58)
B1	* (F27) BR/16	: To (M59)
B2	* (F28) W/6	: To (M60)
B1	* (F29) BR/6	: ECM relay
E3	(F30) GY/2	: Power steering oil pressure switch
D2	* (F31) B/2	: Knock sensor
D3	(F32) B/1	: Oil pressure switch
E2	* (F33)	: Engine ground
E2	* (F34) -	: Engine ground
E1	* (F35) -	: Engine ground
E1	* (F36) -	: Engine ground
E1	* (F37) -	: Engine ground
E1	* (F38) -	: Engine ground
E2	* (F39) L/6	: IACV-AAC valve
E2	* (F40) GY/3	: Throttle position switch
F2	* (F41) BR/3	: Throttle position sensor
E2	* (F42) GY/2	: EGR temperature sensor
E3	* (F43) GY/2	: Vehicle speed sensor

E4	* (F44) BR/3	: Revolution sensor (A/T)
F2	* (F45) GY/5	: Mass air flow sensor
F3	(F46) GY/1	: To (E8)
F3	* (F47) GY/8	: To (E9)
F3	* (F48) GY/10	: To (E10)
E4	** (F49) B/2	: Park/ neutral position (PNP) switch (M/T)
D4	* (F49) B/10	: Park/ neutral position (PNP) switch (A/T)
E4	* (F50) B/8	: Terminal cord assembly (A/T)
D2	(F51) B/1	: Thermal transmitter
E3	(F53) GY/1	: Starter motor
E4	(F55) B/2	: Back-up lamp switch (M/T)
A2	* (F56) W/24	: TCM (transmission control module)
B2	* (F57) GY/24	: TCM (transmission control module)
C3	* (F58) GY/3	: Heated oxygen sensor 1 (Front)
D3	* (F59) GY/6	: Distributor
D3	* (F60) GY/2	: Distributor
D4	* (F61) GY/2	: Crankshaft position sensor (OBD)
F3	* (F62) GY/4	: Heated oxygen sensor 2 (Rear)
C2	* (F63) G/8	: To (F101)
Engine control sub-harness		
C2	* (F5) L/2	: EVAP canister purge volume control solenoid valve
C3	* (F8) GY/2	: Injector No. 4
C3	* (F10) GY/2	: Injector No. 3
C3	* (F12) GY/2	: Injector No. 2
C3	* (F14) GY/2	: Injector No. 1
C2	* (F101) G/8	: To (F63)

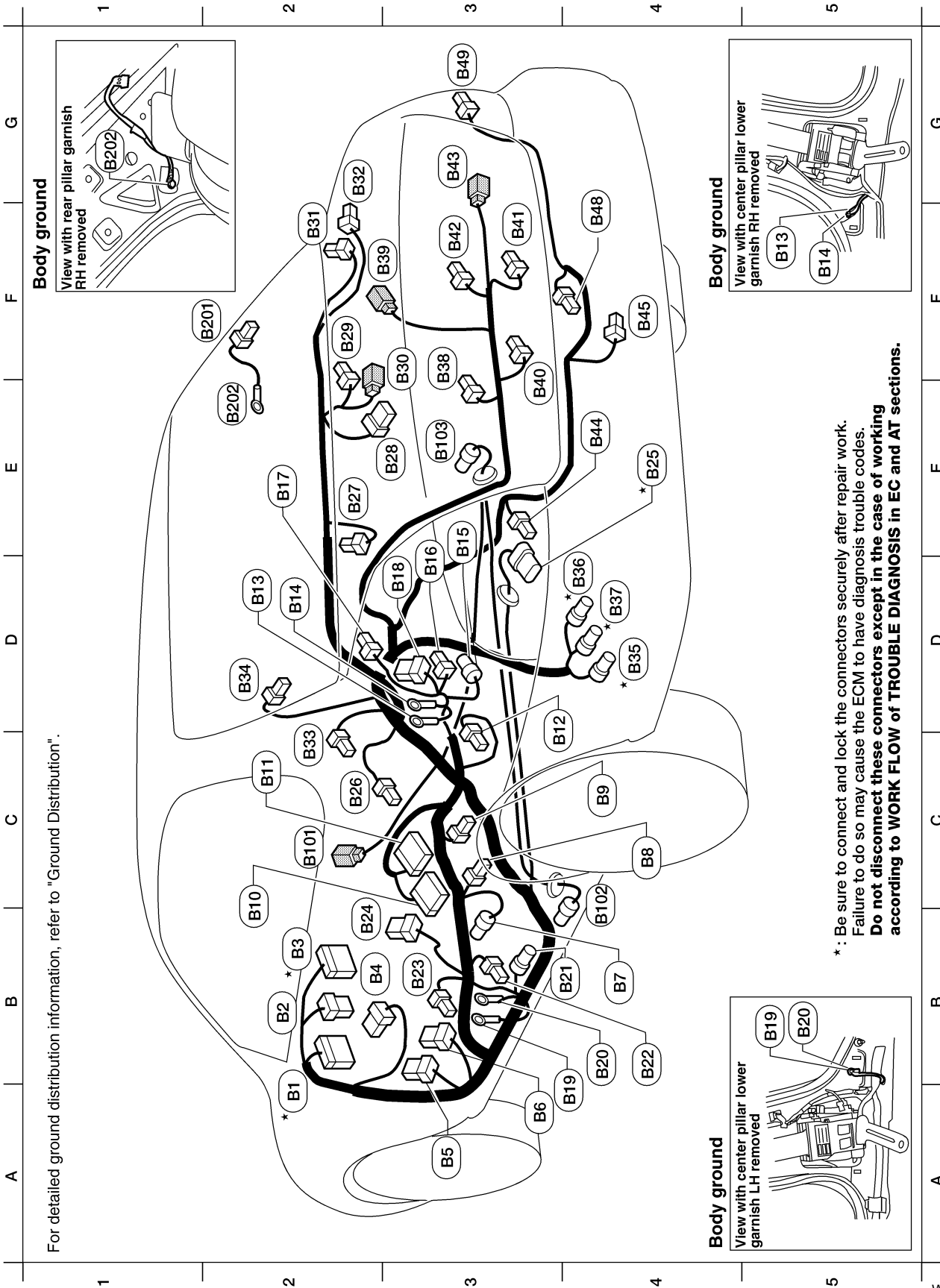
WEL652A

HARNESS LAYOUT

Body Harness

NIEL0136

Body Harness



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 diagnosis trouble codes.
Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSIS in EC and AT sections.

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HARNES LAYOUT

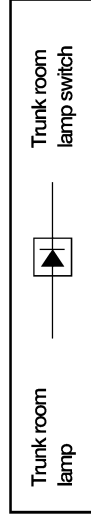
Body Harness (Cont'd)

Body harness

A2	* (B1)	BR/16	: TO (M14)	F3	(E30)	W/2	: Trunk room lamp
B2	(B2)	W/6	: TO (M15)	F2	(B31)	BR/2	: Rear speaker RH
B2	* (B3)	W/20	: TO (M16)	F2	(B32)	W/1	: Rear door speaker RH
B2	(B4)	W/8	: Fuse block (J/B)	C2	(B33)	W/2	: Diode-4
A3	(B5)	L/5	: Fuel pump relay	D2	(B34)	B/1	: Rear window defogger
A3	(B6)	BR/6	: Rear window defogger relay	D4	* (B35)	B/2	: EVAP canister vent control wave
B4	(B7)	Y/2	: Front LH side air bag module	D4	* (B36)	GY/3	: EVAP control system pressure sensor
C4	(B8)	W/3	: Seat belt buckle switch LH	D4	* (B37)	G/2	: Vacuum cut valve bypass valve
C4	(B9)	B/1	: Parking brake switch	F3	(B38)	W/2	: Back-up lamp LH
C2	(B10)	Y/12	: Air bag diagnosis sensor unit	F2	(B39)	BR/2	: High-mounted stop lamp (With spoiler)
C2	(B11)	Y/12	: Air bag diagnosis sensor unit	E3	(B40)	W/2	: License plate lamp LH
D4	(B12)	Y/2	: Front RH side air bag module	F3	(B41)	W/2	: License plate lamp RH
D2	(B13)	-	: Body ground	F3	(B42)	W/2	: Back-up lamp RH
D2	(B14)	-	: Body ground (With side air bags) (Early production)	G3	(B43)	W/2	: Trunk lid key cylinder switch (Unlock switch)
E3	(B15)	Y/2	: RH side air bag (Satellite) sensor	E4			(With vehicle security system)
E3	(B16)	W/4 or Y2	: Front RH seat belt pre-tensioner	F4	(B44)	W/4	: Rear combination lamp LH
E2	(B17)	W/3	: Front door switch RH	F4	(B45)	W/4	: Trunk lid opener actuator
D3	(B18)	W/8	: To (G301)	G3	(B48)	W/2	: Trunk room lamp switch
A4	(B19)	-	: Body ground	(B49)	W/4	: Rear combination lamp RH	
B4	(B20)	-	: Body ground (With side air bags) (Early production)				Body harness No. 2
B3	(B21)	Y/2	: LH side air bag (Satellite) sensor	C2	(B10)	W/4	: To (E56)
B4	(B22)	W/4 or Y/2	: Front LH seat belt pre-tensioner	C4	(B109)	BR/2	: Rear wheel sensor LH
B3	(B23)	W/3	: Front door switch LH	E3	(B103)	GY/2	: Rear wheel sensor RH
B2	(B24)	W/8	: To (G201)				Rear window defogger ground sub-harness
E4	* (B25)	GY/5	: Fuel level sensor unit and fuel pump	F2	(B20)	B/1	: Rear window defogger
C2	(B26)	W/1	: Rear door switch LH	F2	(B202)	-	: Body ground
E2	(B27)	BR/2	: Rear speaker LH				(E33) : Diode-4
E3	(B28)	W/8	: Sub woofer				
F2	(B29)	W/2	: High-mounted stop lamp (Without spoiler)				

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

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



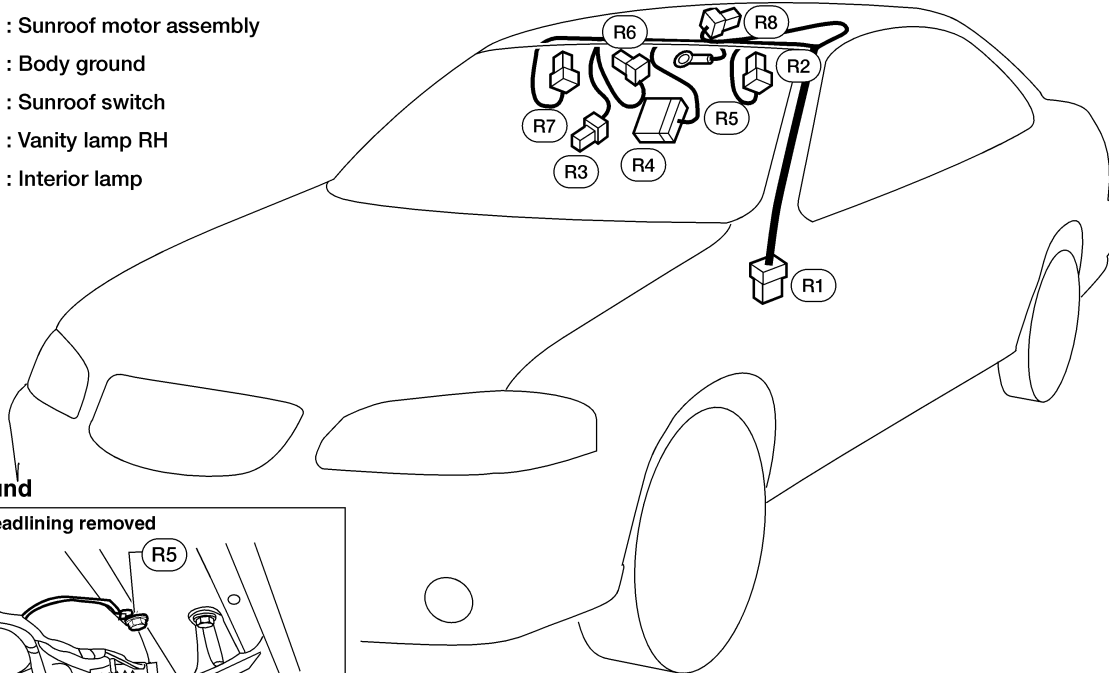
HARNESS LAYOUT

Room Lamp Harness

Room Lamp Harness

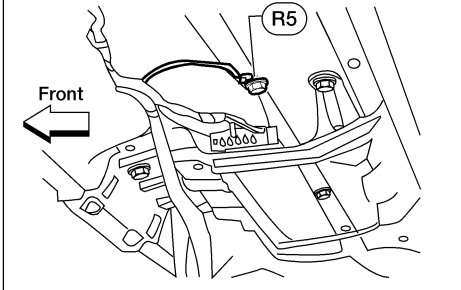
NIEL0140

- (R1) W/6 : To (M25)
- (R2) W/2 : Vanity lamp LH
- (R3) W/3 : Map lamp
- (R4) B/12 : Sunroof motor assembly
- (R5) - : Body ground
- (R6) W/4 : Sunroof switch
- (R7) W/2 : Vanity lamp RH
- (R8) W/2 : Interior lamp



Body ground

View with headlining removed



For detailed ground distribution information, refer to "Ground Distribution".

LEL591

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HARNESS LAYOUT

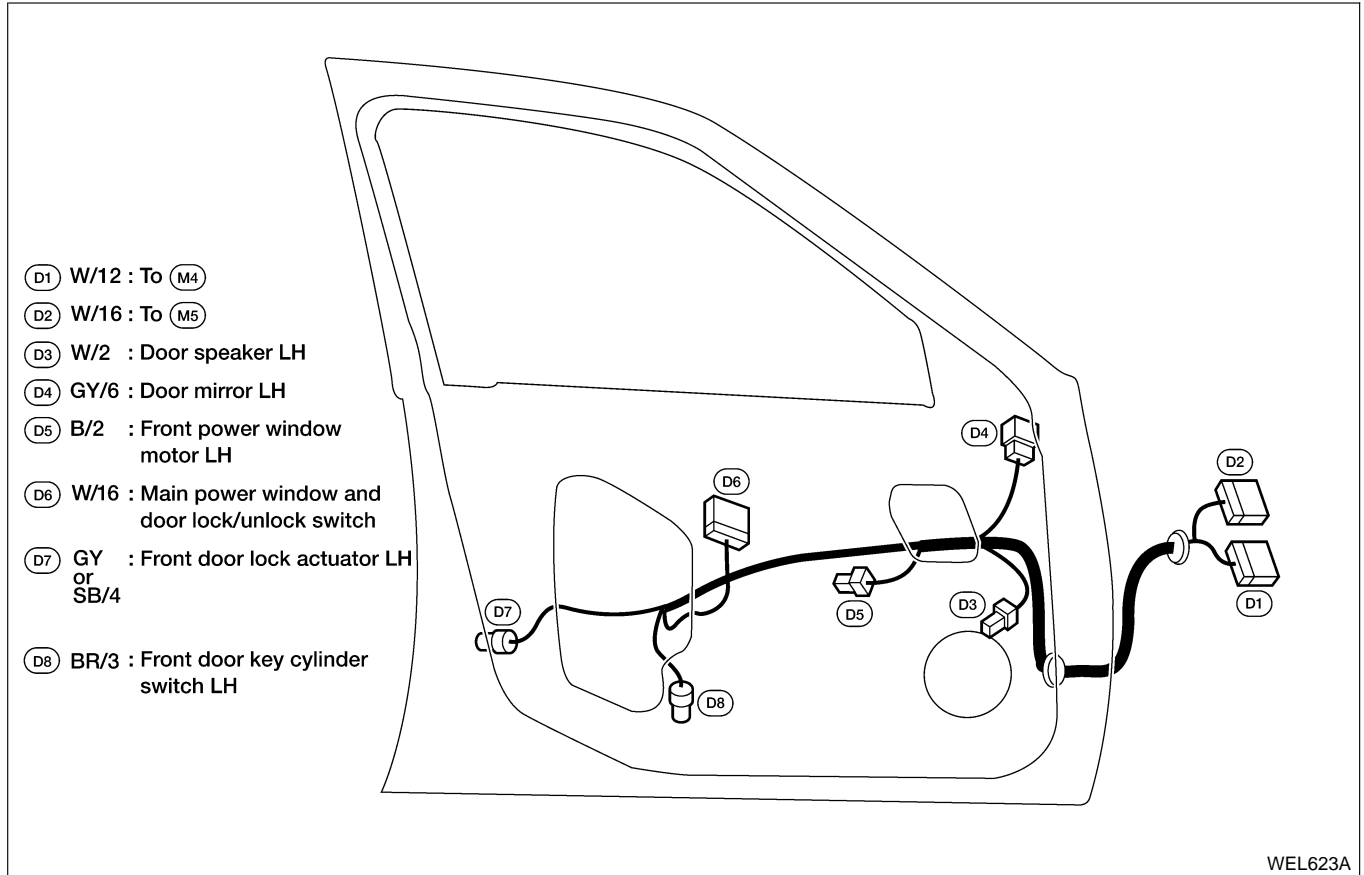
Front Door Harness

Front Door Harness

NIEL0142

LH SIDE

NIEL0142S03



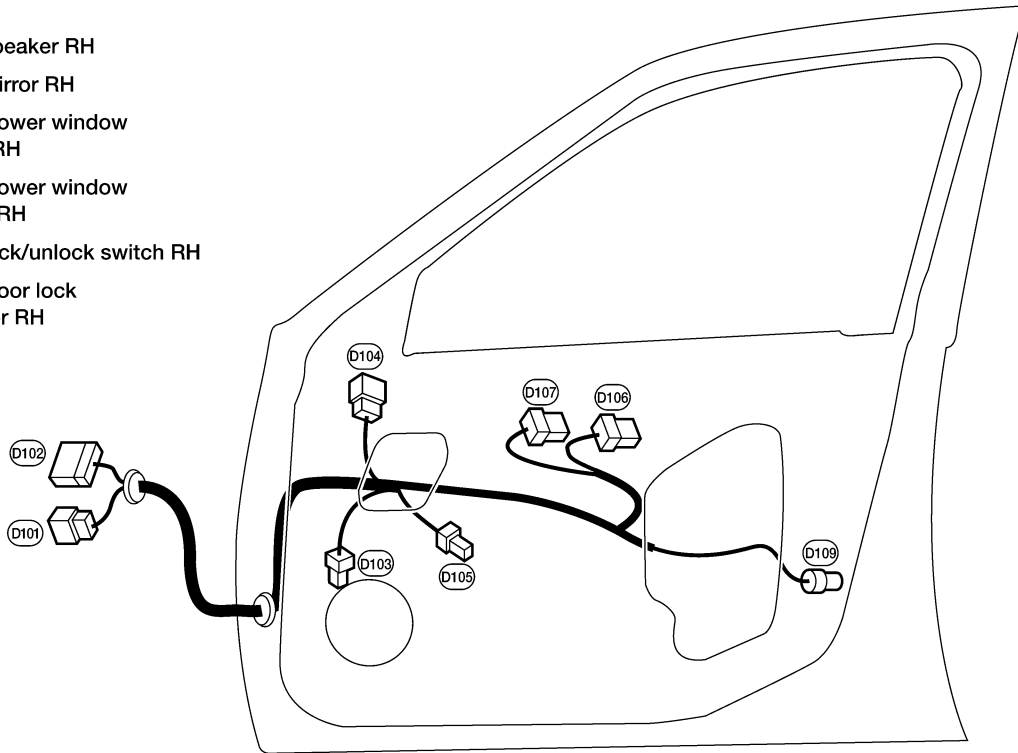
HARNESS LAYOUT

Front Door Harness (Cont'd)

RH SIDE

NIEL0142S04

- Ⓛ101 W/8 : To Ⓜ63
- Ⓛ102 W/16 : To Ⓜ64
- Ⓛ103 W/2 : Door speaker RH
- Ⓛ104 GY/6 : Door mirror RH
- Ⓛ105 B/2 : Front power window motor RH
- Ⓛ106 W/8 : Front power window switch RH
- Ⓛ107 GY/8 : Door lock/unlock switch RH
- Ⓛ109 GY/4 : Front door lock acuator RH
or SB



WEL624A

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HARNESS LAYOUT

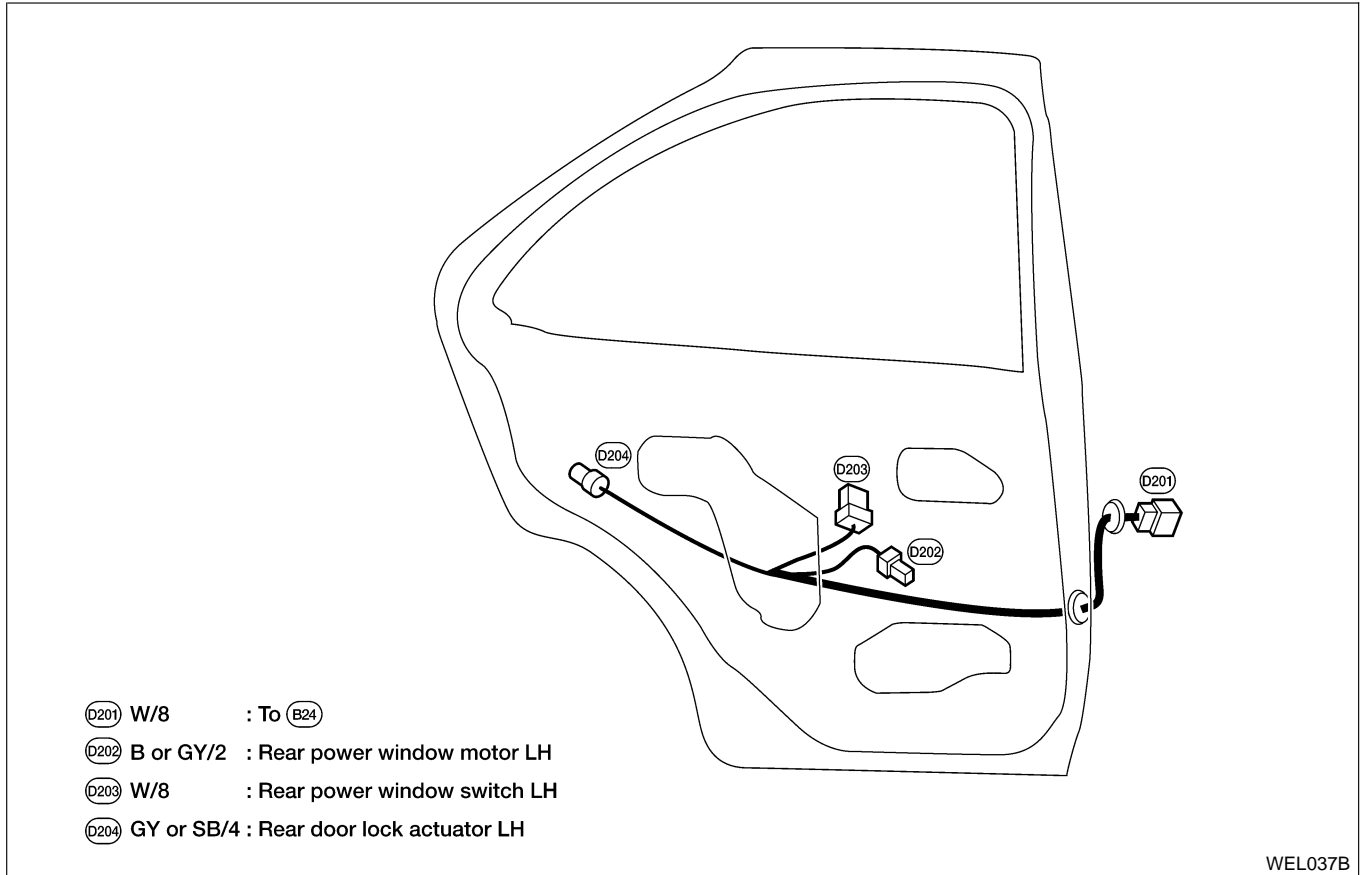
Rear Door Harness

Rear Door Harness

NIEL0143

LH SIDE

NIEL0143S03



WEL037B

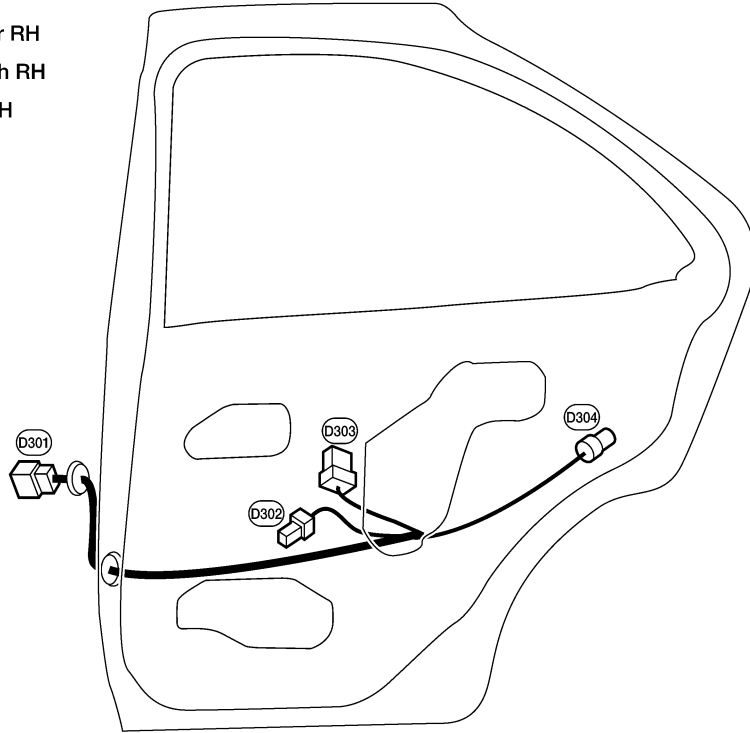
HARNESS LAYOUT

Rear Door Harness (Cont'd)

RH SIDE

NIEL0143S04

- ⓓ301 W/8 : To ⓓ18
- ⓓ302 B or GY/2 : Rear power window motor RH
- ⓓ303 W/8 : Rear power window switch RH
- ⓓ304 GY or SB/4 : Rear door lock actuator RH



WEL573A

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IDX

BULB SPECIFICATIONS*Headlamp***Headlamp**

NIEL0144S03

Item	Wattage (W)	Bulb No.*
High/Low	65/55	9007 (HB5)

*Always check with the Parts Department for the latest parts information.

Exterior Lamp

NIEL0144S01

Item	Wattage (W)	Bulb No.*	
Front parking and turn signal lamp	8/27	3157NA	
Fog light	55	H3	
Rear combination lamp	Turn signal	27	1156A
	Stop/Tail	27/8	1157
Back-up	18	921	
License plate lamp	5	194	
High-mounted stop lamp (parcel shelf mount)	18	921	
High-mounted stop lamp (rear air spoiler mount)	*	*	

*Always check with the Parts Department for the latest parts information.

Interior Lamp

NIEL0144S02

Item	Wattage (W)	Bulb No.*
Interior lamp	8	*
Map lamp	8	*
Trunk lamp	3.4	158

*Always check with the Parts Department for the latest parts information.

WIRING DIAGRAM CODES (CELL CODES)

Use the chart below to find out what each wiring diagram code stands for.

Refer to the wiring diagram code in the alphabetical index to find the location (page number) of each wiring diagram.

Code	Section	Wiring Diagram Name
1STSIG	AT	A/T 1ST Signal
2NDSIG	AT	A/T 2ND Signal
3RDSIG	AT	A/T 3RD Signal
4THSIG	AT	A/T 4TH Signal
AAC/V	EC	IACV-AAC Valve
ABS	BR	Anti-lock Brake System
A/C	HA	Air Conditioner
A/F	EC	Air Fuel Ratio (A/F) Sensor 1 [QG18DE (Calif. CA Model)]
A/FH	EC	Air Fuel Ratio (A/F) Sensor 1 Heater [QG18DE (Calif. CA Model)]
AP/SEN	EC	Absolute Pressure Sensor
ASCD	EL	Automatic Speed Control Device (ASCD)
AT/C	EC	A/T Control
ATDIAG	EC	A/T Diagnosis Communication Line
AUDIO	EL	Audio
BACK/L	EL	Back-up Lamp
BA/FTS	AT	A/T Fluid Temperature Sensor and TCM Power Supply
BYPS/V	EC	Vacuum Cut Valve Bypass Valve
CHARGE	SC	Charging System
CHIME	EL	Warning Chime
CIGAR	EL	Cigarette Lighter
COOL/F	EC	Cooling Fan Control
CKPS	EC	Crankshaft Position Sensor (OBD) (With SR20DE)
CMPS	EC	Camshaft Position Sensor (With SR20DE)
DEF	EL	Rear Window Defogger
D/LOCK	EL	Power Door Lock
DTRL	EL	Headlamp - With Daytime Light System
ECTS	EC	Engine Coolant Temperature Sensor
EGRC1	EC	EGR Function
EGVC/V	EC	EGR Volume Control Valve

Code	Section	Wiring Diagram Name
EGR/TS	EC	EGR Temperature Sensor
ENGSS	AT	Engine Speed Signal
F/FOG	EL	Front Fog Lamp
FLS1	EC	Fuel Gauge
FLS2	EC	Fuel Gauge
FLS3	EC	Fuel Gauge
F/PUMP	EC	Fuel Pump Control
FTS	AT	A/T Fluid Temperature Sensor
FTTS	EC	Fuel Tank Temperature Sensor
FUEL	EC	Fuel Injection System Function
FUELB1	EC	Fuel Injection System Function Bank1
FUELB2	EC	Fuel Injection System Function Bank2
HEATER	HA	Heater System
H/LAMP	EL	Headlamp
H/MIRR	EL	Heated Mirror
HO2S1	EC	Heated Oxygen Sensor 1 (Front) (SR20DE)
HO2S1H	EC	Heated Oxygen Sensor 1 Heater (Front) (SR20DE)
HO2S2	EC	Heated Oxygen Sensor 2 (Rear) [QG18DE (Calif. CA Model) and SR20DE]
HO2S2H	EC	Heated Oxygen Sensor 2 Heater (Rear) [QG18DE (Calif. CA Model) and SR20DE]
HO2S3	EC	Heated Oxygen Sensor 3 [QG18DE (Calif. CA Model)]
HO2S3H	EC	Heated Oxygen Sensor 3 Heater [QG18DE (Calif. CA Model)]
HORN	EL	Horn
IATS	EC	Intake Air Temperature Sensor
IGN/SG	EC	Ignition Signal
ILL	EL	Illumination
INJECT	EC	Injector
INT/L	EL	Interior, Step, Spot, Vanity Mirror and Trunk Room Lamps
IVC	EC	Intake Valve Timing Control Solenoid Valve
IVCS	EC	Intake Valve Timing Control Position Sensor
KS	EC	Knock Sensor

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WIRING DIAGRAM CODES (CELL CODES)

Code	Section	Wiring Diagram Name
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., Oil, and Fuel Gauges
MIL/DL	EC	MIL & Data Link Connector
MIRROR	EL	Power Door Mirror
MULTI	EL	Multi-remote Control System
NATS	EL	NVIS (Nissan Vehicle Immobilizer System — NATS)
NONDTC	AT	Non-detectable Items
OVRCSV	AT	Overrun Clutch Solenoid Valve
O2H1B1	EC	Heated Oxygen Sensor 1 Heater (Front) (Bank1) [QG18DE (Except Calif. CA Model)]
O2H1B2	EC	Heated Oxygen Sensor 1 Heater (Front) (Bank2) [QG18DE (Except Calif. CA Model)]
O2H2B1	EC	Heated Oxygen Sensor 2 Heater (Rear) (Bank1) [QG18DE (Except Calif. CA Model)]
O2H2B2	EC	Heated Oxygen Sensor 2 Heater (Rear) (Bank2) [QG18DE (Except Calif. CA Model)]
O2S1B1	EC	Heated Oxygen Sensor 1 (Front) (Bank1) [QG18DE (Except Calif. CA Model)]
O2S1B2	EC	Heated Oxygen Sensor 1 (Front) (Bank2) [QG18DE (Except Calif. CA Model)]
O2S2B1	EC	Heated Oxygen Sensor 2 (Rear) (Bank1) [QG18DE (Except Calif. CA Model)]
O2S2B2	EC	Heated Oxygen Sensor 2 (Rear) (Bank2) [QG18DE (Except Calif. CA Model)]
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve
PHASE	EC	Camshaft Position Sensor (PHASE) (With QG18DE)
PNP/SW	AT	Park/Neutral Position Switch
PNP/SW	EC	Park/Neutral Position Switch

Code	Section	Wiring Diagram Name
POS	EC	Crankshaft Position Sensor (POS) (With QG18DE)
POWER	EL	Power Supply Routing
PRE/SE	EC	EVAP Control System Pressure Sensor
PST/SW	EC	Power Steering Oil Pressure Switch
RP/SEN	EC	Refrigerant Pressure Sensor
SHIFT	AT	A/T Shift Lock System
SROOF	EL	Sunroof
SRS	RS	Supplemental Restraint System
S/SIG	EC	Start Signal
SSV/A	AT	Shift Solenoid Valve A
SSV/B	AT	Shift Solenoid Valve B
START	SC	Starting System
STOP/L	EL	Stop Lamp
S/VCSW	EC	Swirl Control Valve Control Vacuum Check Switch
SWL/S	EC	Swirl Control Valve Position Sensor
SWL/V	EC	Swirl Control Valve
TAIL/L	EL	Parking, License and Tail Lamps
TCCSIG	AT	A/T TCC Signal (Lock Up)
TCV	AT	Torque Converter Clutch Solenoid Valve
TLID	EL	Trunk Lid Opener
TPS	AT	Throttle Position Sensor
TPS	EC	Throttle Position Sensor
TP/SW	EC	Closed Throttle Position Switch
TURN	EL	Turn Signal and Hazard Warning Lamps
VEHSEC	EL	Vehicle Security System
VENT/V	EC	EVAP Canister Vent Control Valve
VSS	EC	Vehicle Speed Sensor
VSSA/T	AT	Vehicle Speed Sensor A/T (Revolution Sensor)
VSSMTR	AT	Vehicle Speed Sensor MTR
WARN	EL	Warning Lamps
WINDOW	EL	Power Window
WIPER	EL	Front Wiper and Washer