

# ELECTRICAL SYSTEM

## SECTION **EL**

### CONTENTS

<b>PRECAUTIONS</b> .....	4	<b>BACK-UP LAMP</b> .....	52
Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER".....	4	Wiring Diagram - BACK/L - .....	52
Wiring Diagrams and Trouble Diagnosis.....	4	<b>FRONT FOG LAMP</b> .....	53
<b>HARNESS CONNECTOR</b> .....	5	System Description.....	53
Description.....	5	Wiring Diagram - F/FOG - .....	54
<b>STANDARDIZED RELAY</b> .....	7	Aiming Adjustment.....	55
Description.....	7	<b>TURN SIGNAL AND HAZARD WARNING LAMPS</b> .....	56
<b>POWER SUPPLY ROUTING</b> .....	9	System Description.....	56
Schematic.....	9	Wiring Diagram - TURN - .....	58
Wiring Diagram - POWER - .....	11	Trouble Diagnoses.....	60
Inspection.....	19	Electrical Components Inspection .....	60
<b>GROUND</b> .....	20	<b>ILLUMINATION</b> .....	61
Ground Distribution.....	20	System Description.....	61
<b>COMBINATION SWITCH</b> .....	32	Wiring Diagram - ILL - .....	62
Check.....	32	<b>INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS</b> .....	64
Replacement.....	33	System Description.....	64
<b>STEERING SWITCH</b> .....	34	Wiring Diagram - INT/L - .....	68
Check.....	34	CONSULT-II Inspection Procedure (With Multi-Remote Control System).....	73
<b>HEADLAMP (FOR USA)</b> .....	35	CONSULT-II Application Items (With Multi-Remote Control System) .....	74
System Description.....	35	Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System).....	75
Wiring Diagram - H/LAMP - .....	36	Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System) .....	80
Trouble Diagnoses.....	37	<b>METERS AND GAUGES</b> .....	85
Bulb Replacement .....	37	Component Parts and Harness Connector	85
Aiming Adjustment.....	38	Location .....	85
<b>HEADLAMP (FOR CANADA) - DAYTIME LIGHT SYSTEM</b> - .....	40	System Description.....	86
Component Parts and Harness Connector	40	Combination Meter .....	88
Location .....	40	Schematic .....	90
System Description.....	40	Construction.....	92
Schematic .....	43	Wiring Diagram - METER - .....	93
Wiring Diagram - DTRL - .....	44	Meter/Gauge Operation and Odo/Trip Meter	95
Trouble Diagnoses.....	47	Segment Check in Diagnosis Mode.....	95
Bulb Replacement .....	48	Trouble Diagnoses.....	96
Aiming Adjustment.....	48	Electrical Components Inspection .....	103
<b>PARKING, LICENSE AND TAIL LAMPS</b> .....	49		
Wiring Diagram - TAIL/L - .....	49		
<b>STOP LAMP</b> .....	51		
Wiring Diagram - STOP/L - .....	51		

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# CONTENTS (Cont'd)

<b>WARNING LAMPS</b> .....	105	System Description.....	167
Schematic .....	105	Wiring Diagram - SROOF - .....	168
Wiring Diagram - WARN - .....	107	<b>DOOR MIRROR</b> .....	169
Electrical Components Inspection .....	114	Wiring Diagram - MIRROR - .....	169
<b>WARNING CHIME</b> .....	115	<b>HEATED MIRROR</b> .....	170
Component Parts and Harness Connector		Wiring Diagram - H/MIRR - .....	170
Location .....	115	<b>TRUNK LID OPENER</b> .....	171
System Description.....	116	Wiring Diagram - TLID - .....	171
Wiring Diagram - CHIME - .....	118	<b>AUTOMATIC SPEED CONTROL DEVICE (ASCD)</b> ...	173
CONSULT-II Inspection Procedure (With Multi-		Component Parts and Harness Connector	
Remote Control System) .....	121	Location .....	173
CONSULT-II Application Items (With		System Description.....	175
Multi-Remote Control System) .....	122	Schematic .....	177
Trouble Diagnoses (Without Multi-Remote		Wiring Diagram - ASCD - .....	178
Control System) .....	123	Fail-safe System.....	182
Trouble Diagnoses (With Multi-Remote Control		Trouble Diagnoses.....	183
System).....	129	Electrical Component Inspection.....	191
<b>FRONT WIPER AND WASHER</b> .....	137	ASCD Wire Adjustment .....	192
System Description.....	137	<b>POWER WINDOW</b> .....	193
Wiring Diagram - WIPER - .....	139	System Description.....	193
Removal and Installation .....	141	Wiring Diagram - WINDOW - .....	195
Washer Nozzle Adjustment .....	142	Trouble Diagnoses.....	197
Washer Tube Layout .....	142	<b>POWER DOOR LOCK</b> .....	198
<b>HORN</b> .....	143	Component Parts and Harness Connector	
Wiring Diagram - HORN - .....	143	Location .....	198
<b>CIGARETTE LIGHTER</b> .....	144	System Description (Without Multi-Remote	
Wiring Diagram - CIGAR - .....	144	Control System) .....	199
<b>REAR WINDOW DEFOGGER</b> .....	145	System Description (With Multi-Remote Control	
Component Parts and Harness Connector		System).....	199
Location .....	145	Schematic .....	200
System Description.....	146	Wiring Diagram - D/LOCK - .....	202
Wiring Diagram - DEF - .....	148	CONSULT-II Inspection Procedure (With Multi-	
CONSULT-II Inspection Procedure (With Multi-		Remote Control System) .....	211
Remote Control System) .....	150	CONSULT-II Application Items (With	
CONSULT-II Application Items (With		Multi-Remote Control System) .....	212
Multi-Remote Control System) .....	151	Trouble Diagnoses (Without Multi-Remote	
Trouble Diagnoses (Without Multi-Remote		Control System).....	213
Control System) .....	151	Trouble Diagnoses (With Multi-Remote Control	
Trouble Diagnoses (With Multi-Remote Control		System).....	219
System).....	154	<b>MULTI-REMOTE CONTROL SYSTEM</b> .....	229
Electrical Components Inspection .....	158	Component Parts and Harness Connector	
Filament Check.....	158	Location .....	229
Filament Repair .....	159	System Description.....	230
<b>AUDIO</b> .....	161	Schematic .....	233
System Description.....	161	Wiring Diagram - MULTI - .....	234
Wiring Diagram - AUDIO - .....	162	CONSULT-II Inspection Procedure.....	237
Trouble Diagnoses.....	164	CONSULT-II Application Items .....	238
Inspection.....	164	Trouble Diagnoses.....	239
Audio Unit Removal and Installation .....	165	ID Code Entry Procedure .....	254
Location of Antenna.....	166	Remote Controller Battery Replacement.....	258
Removal and Installation of Antenna.....	166	<b>THEFT WARNING SYSTEM</b> .....	259
<b>POWER SUNROOF</b> .....	167		

# CONTENTS (Cont'd)

Component Parts and Harness Connector		
Location .....	259	
System Description.....	261	
Schematic .....	264	
Wiring Diagram - THEFT -.....	265	
CONSULT-II Inspection Procedure.....	269	
CONSULT-II Application Item .....	270	
Trouble Diagnoses.....	271	
Electrical Components Inspection .....	290	
<b>SMART ENTRANCE CONTROL UNIT</b> .....	291	
Description .....	291	
CONSULT-II .....	293	
Schematic .....	295	
Smart Entrance Control Unit Inspection Table .....	297	
<b>TIME CONTROL UNIT</b> .....	298	
Description (Without Power Door Locks) .....	298	
Schematic (Without Power Door Locks) .....	299	
Time Control Unit Inspection Table (Without Power Door Locks).....	300	
Description (With Power Door Locks) .....	301	
Schematic (With Power Door Locks) .....	302	
Time Control Unit Inspection Table (With Power Door Locks) .....	304	
<b>NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM - NATS)</b> .....	305	
Component Parts and Harness Connector		
Location .....	305	
System Description.....	306	GI
System Composition.....	306	
Wiring Diagram - NATS -.....	307	
CONSULT-II .....	308	MA
Trouble Diagnoses.....	311	
How to Replace NVIS (NATS) IMMU .....	324	EM
<b>ELECTRICAL UNITS LOCATION</b> .....	325	
Engine Compartment.....	325	
Passenger Compartment.....	326	LC
<b>HARNES LAYOUT</b> .....	328	
How to Read Harness Layout .....	328	
Outline.....	329	EC
Main Harness.....	330	
Engine Room Harness .....	332	
Engine Control Harness .....	335	FE
Body Harness .....	341	
Room Lamp Harness.....	343	CL
Front Door Harness .....	344	
Rear Door Harness.....	346	
<b>BULB SPECIFICATIONS</b> .....	348	MT
Headlamp.....	348	
Exterior Lamp .....	348	AT
Interior Lamp.....	348	
<b>WIRING DIAGRAM CODES (CELL CODES)</b> .....	349	AX

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## PRECAUTIONS

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

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### 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. Spiral cable and wiring harnesses covered with yellow insulation tape either just before the harness connectors or for the complete harness are related to the SRS.**

### Wiring Diagrams and Trouble Diagnosis

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-36**, "How to Follow Test Groups in Trouble Diagnoses"
- **GI-25**, "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)

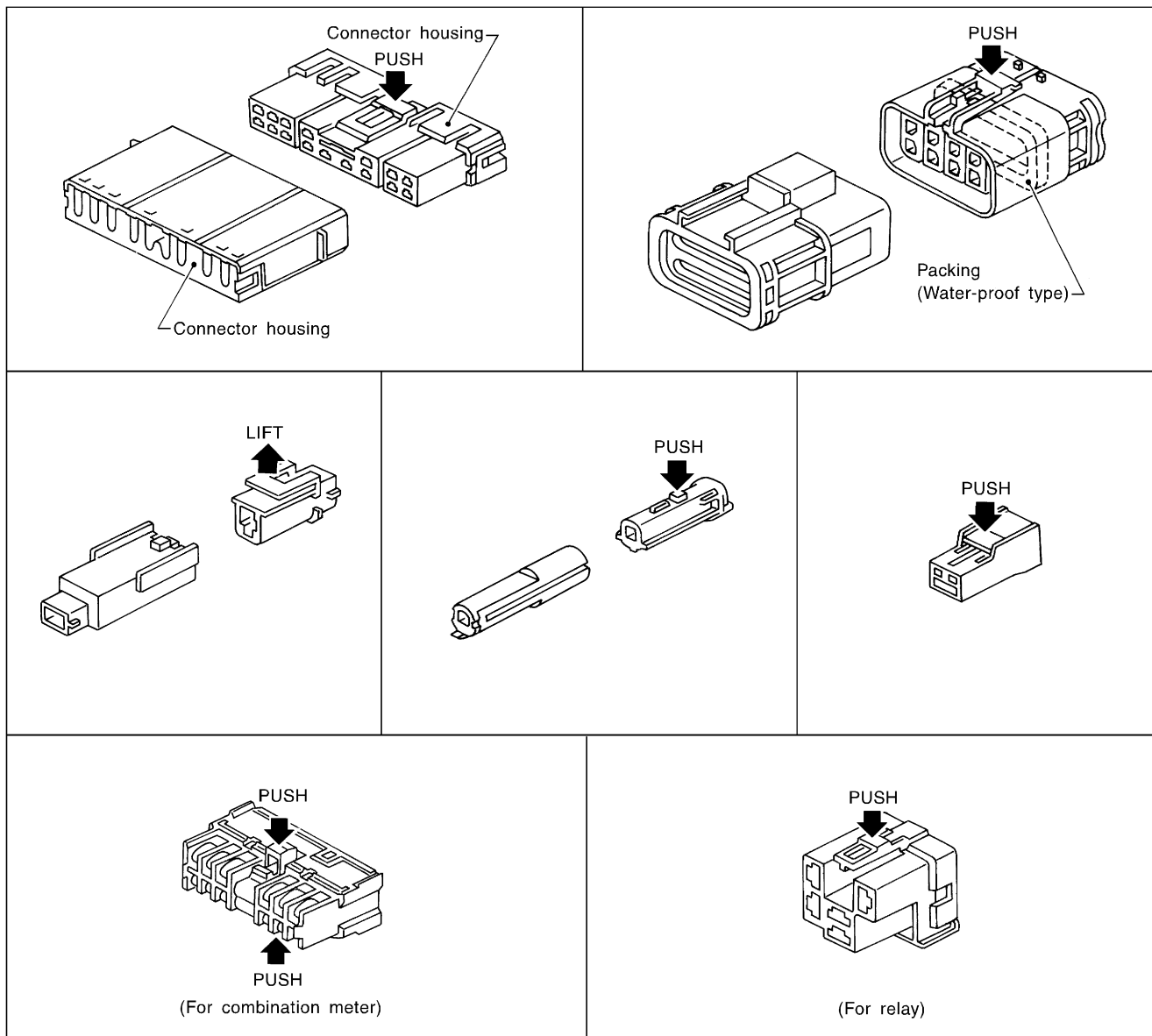
- The tab-locking type connectors help prevent accidental looseness or disconnection.
- The tab-locking type connectors are disconnected by pushing or lifting the locking tab(s). Refer to the illustration below.

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)

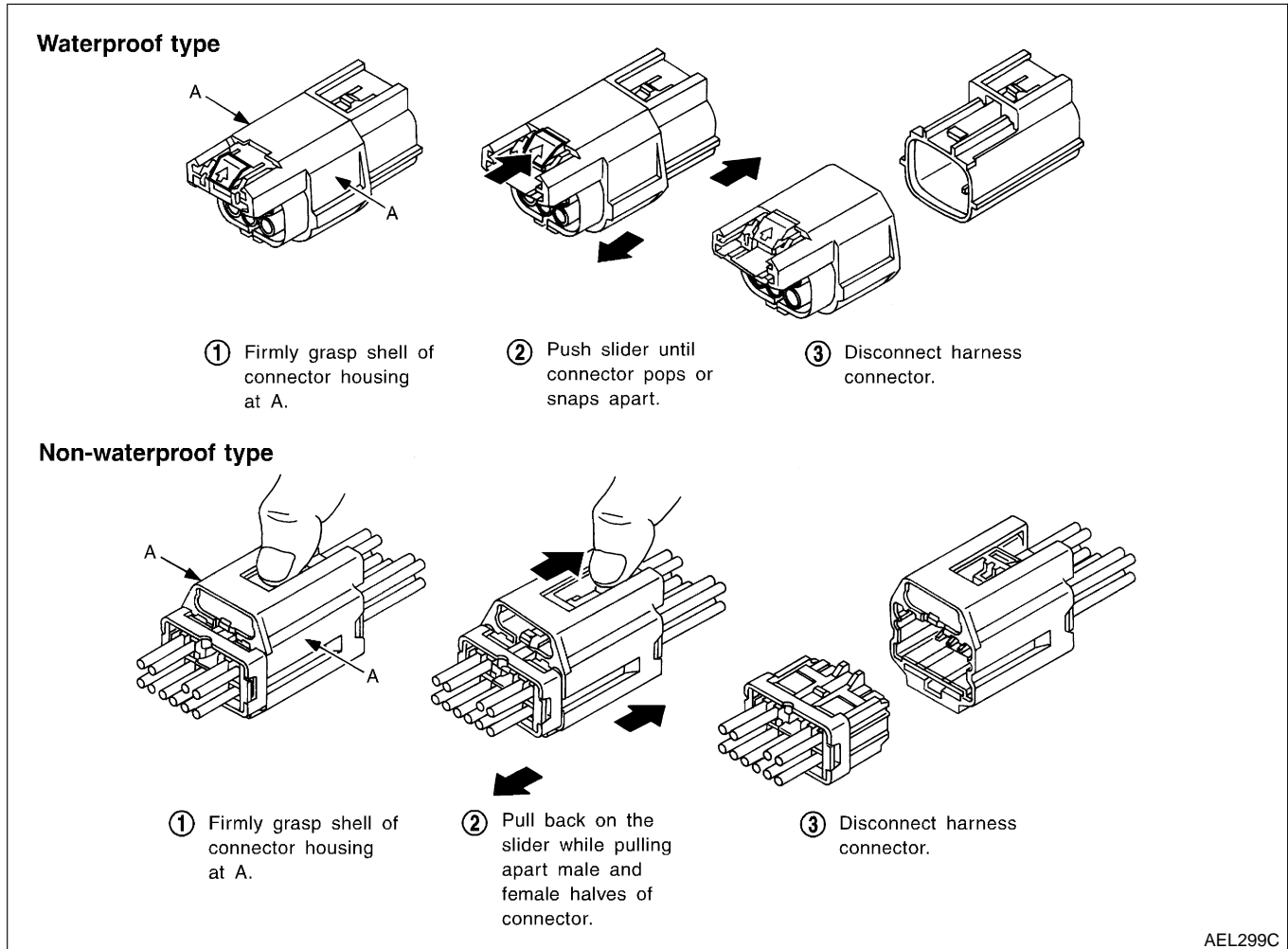
-NIEL0003S02

- 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

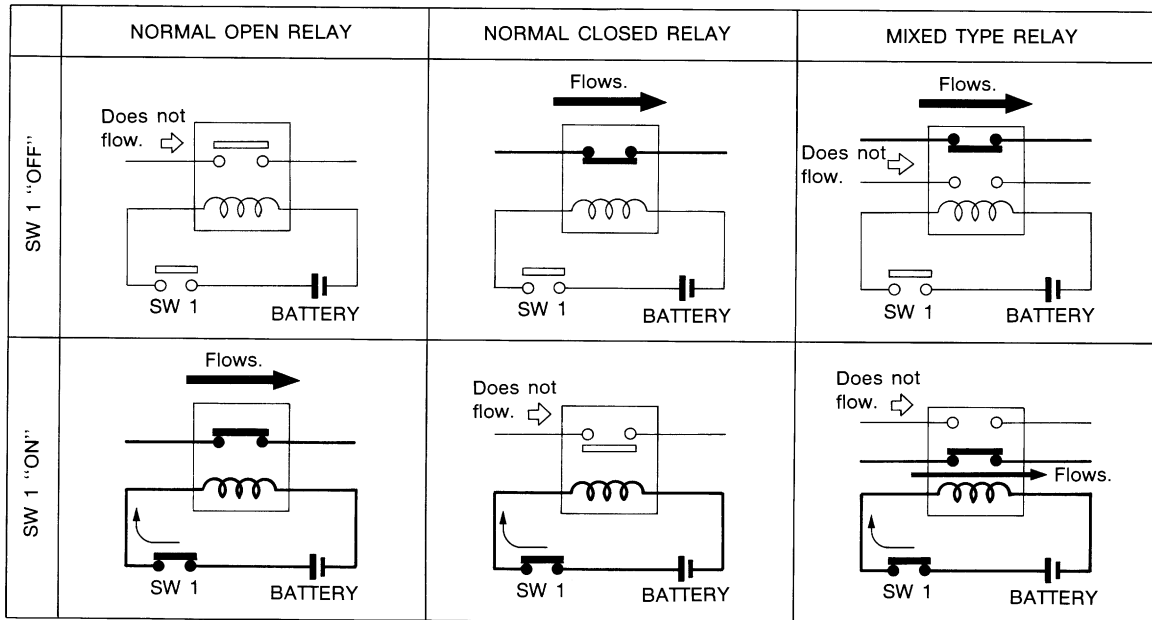
## Description

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

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

NIEL0004

NIEL0004S01

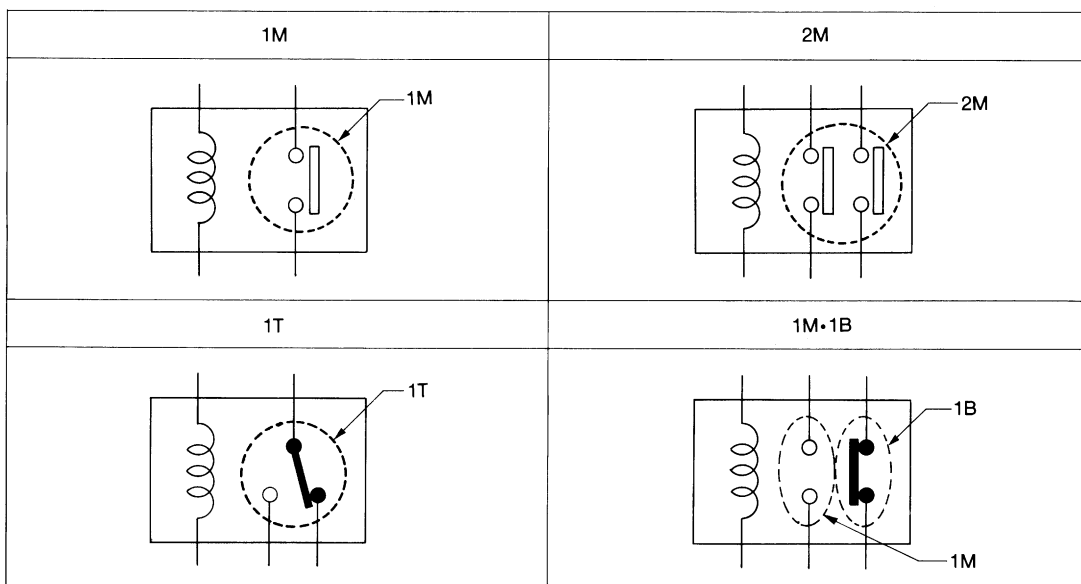


SEL881H

### TYPE OF STANDARDIZED RELAYS

NIEL0004S02

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



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MA

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EC

FE

CL

MT

AT

AX

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RS

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HA

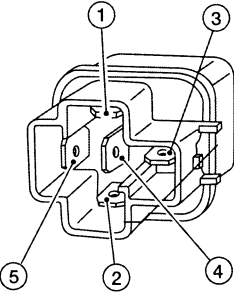
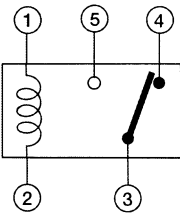
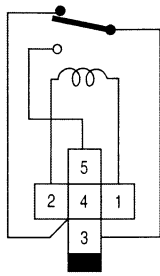
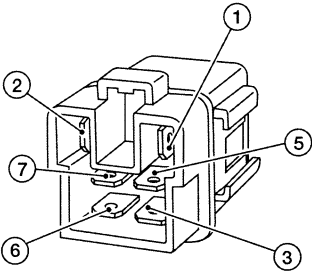
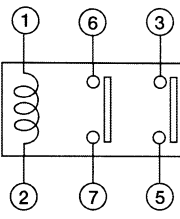
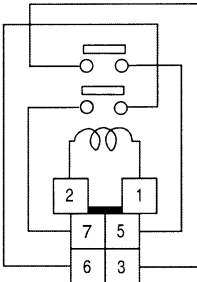
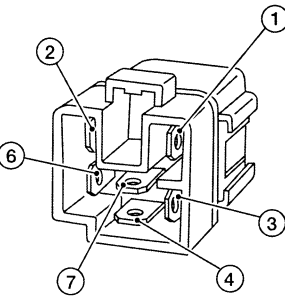
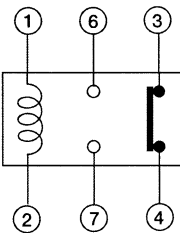
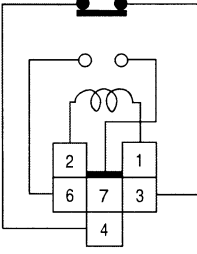
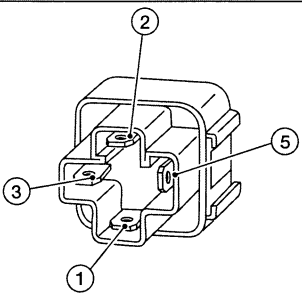
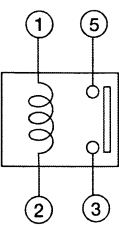
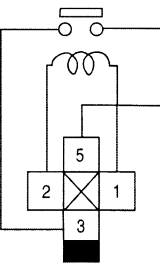
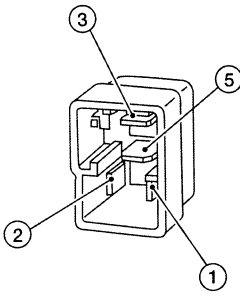
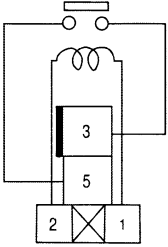
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# STANDARDIZED RELAY

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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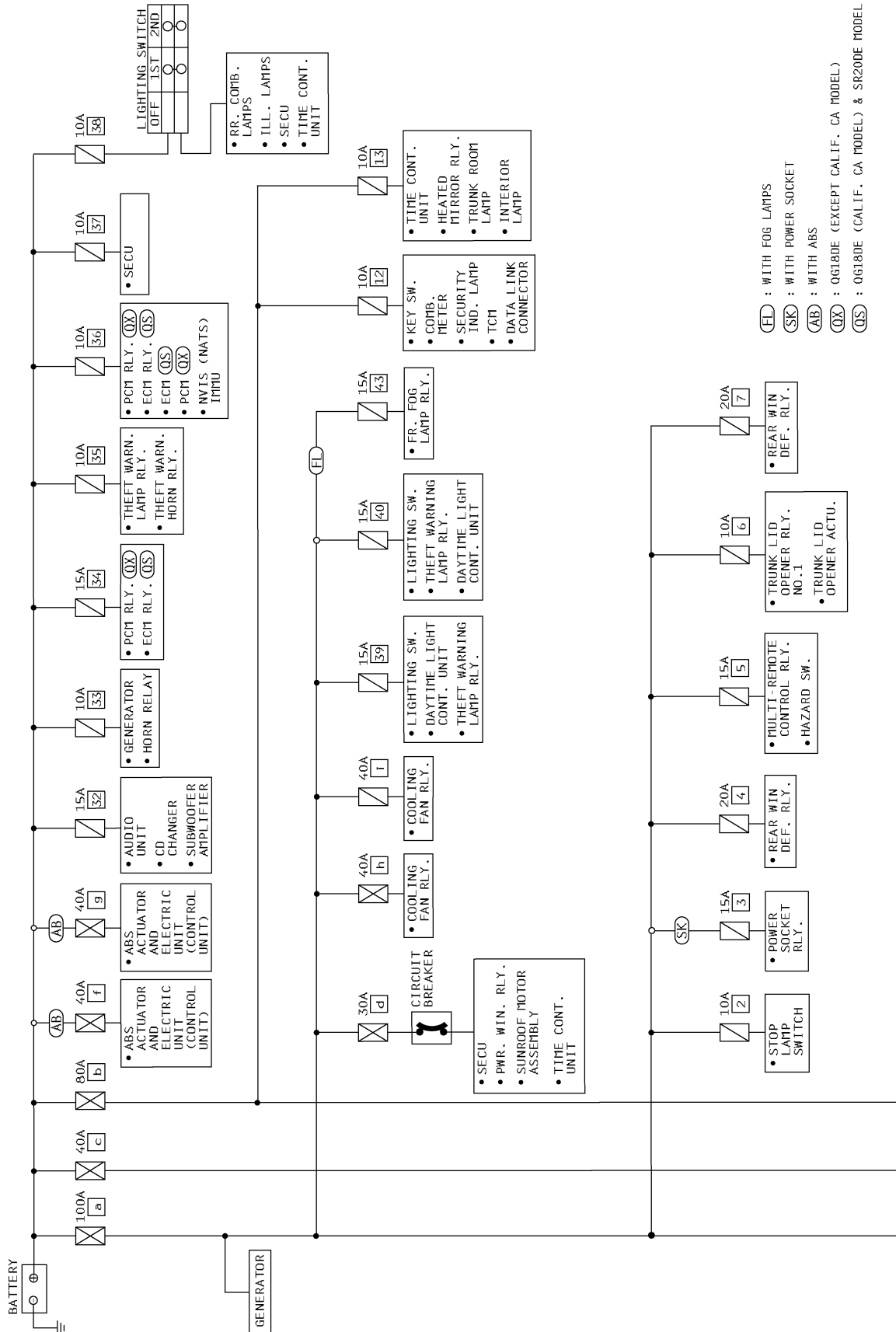
# POWER SUPPLY ROUTING

Schematic

## Schematic

NIEL0005

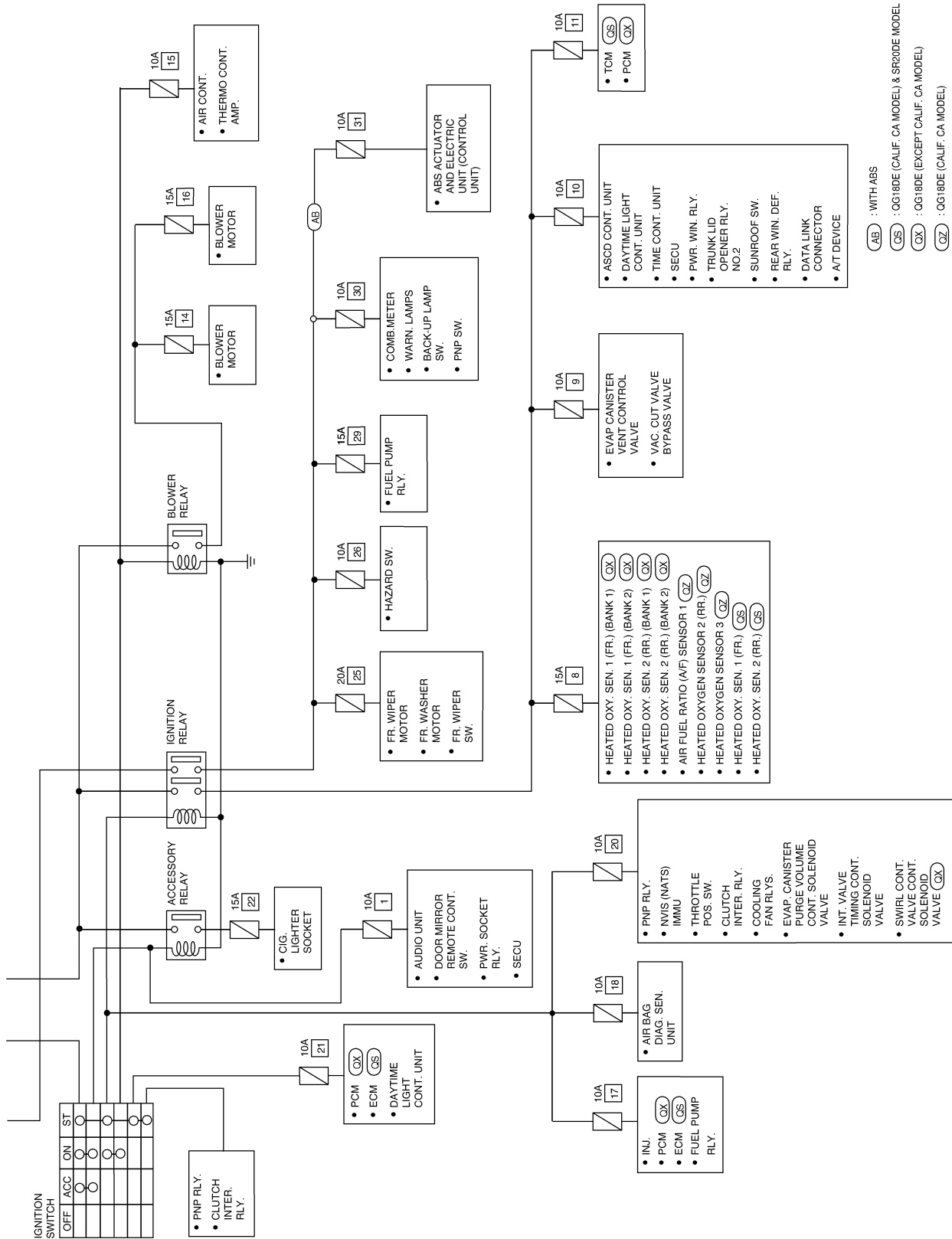
For detailed ground distribution information, refer to "Ground Distribution", EL-20.



LEL407

# POWER SUPPLY ROUTING

Schematic (Cont'd)



# POWER SUPPLY ROUTING

Wiring Diagram — POWER —

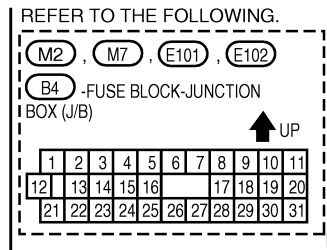
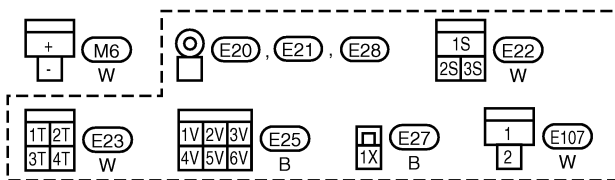
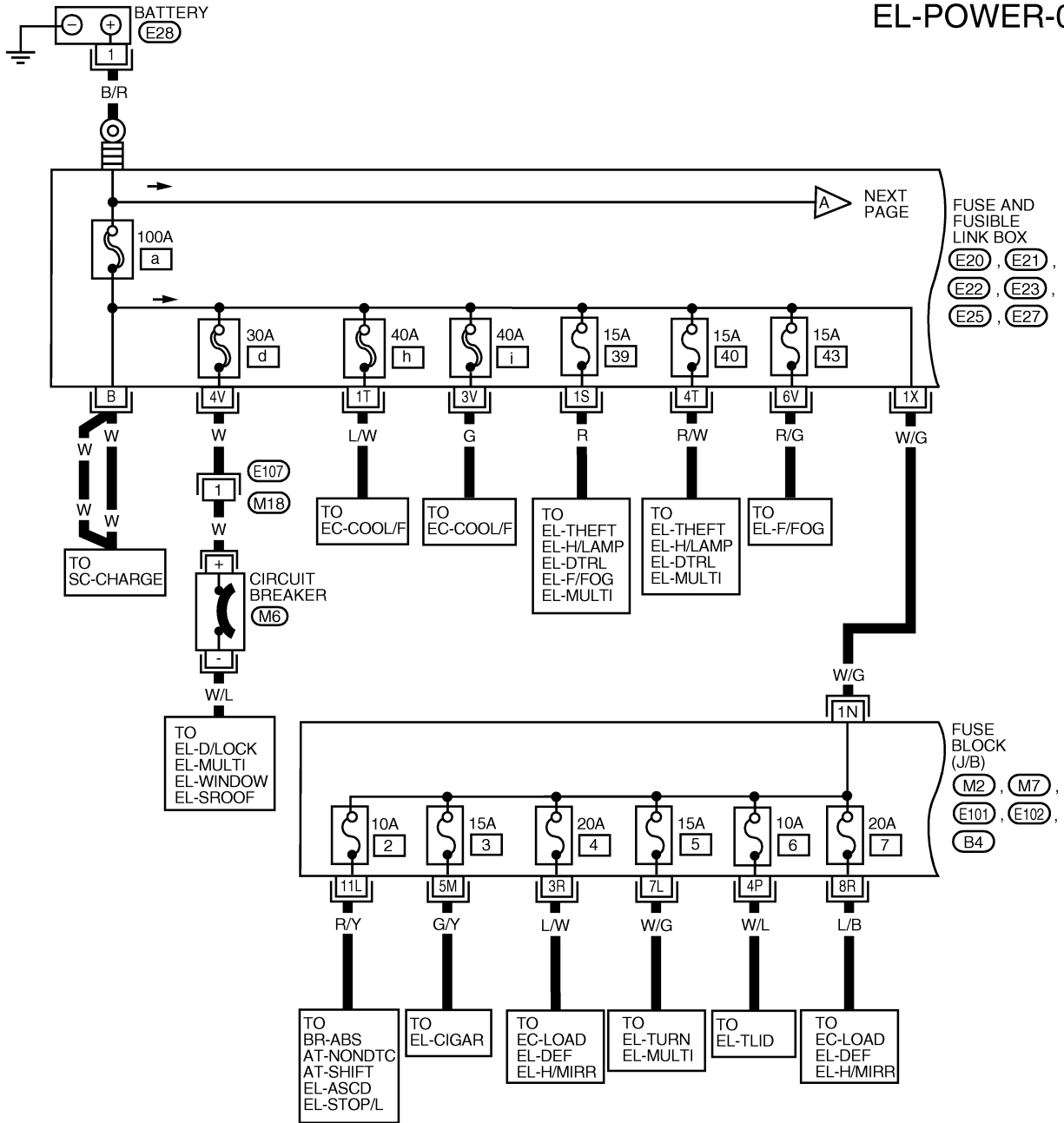
## Wiring Diagram — POWER —

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

NIEL0006

NIEL0006S01

### EL-POWER-01



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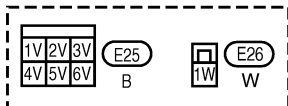
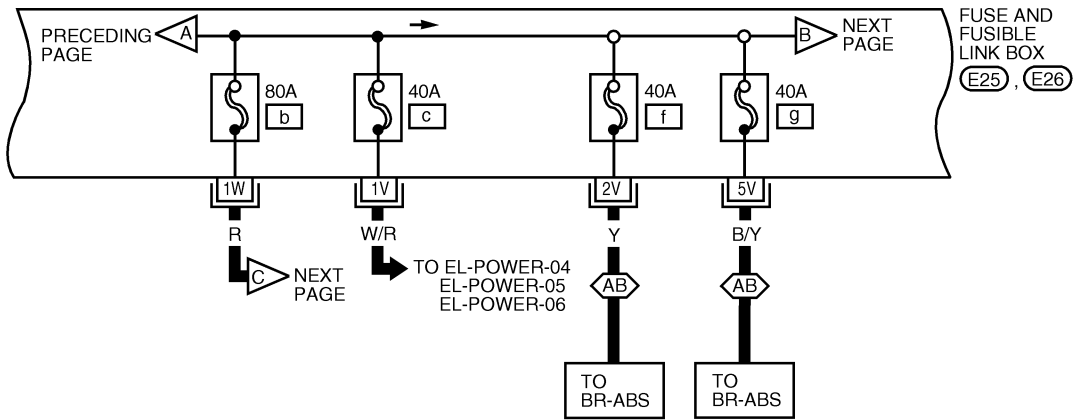
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# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

EL-POWER-02

⬡AB⬢ : WITH ABS

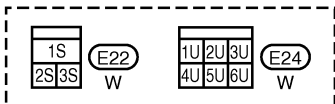
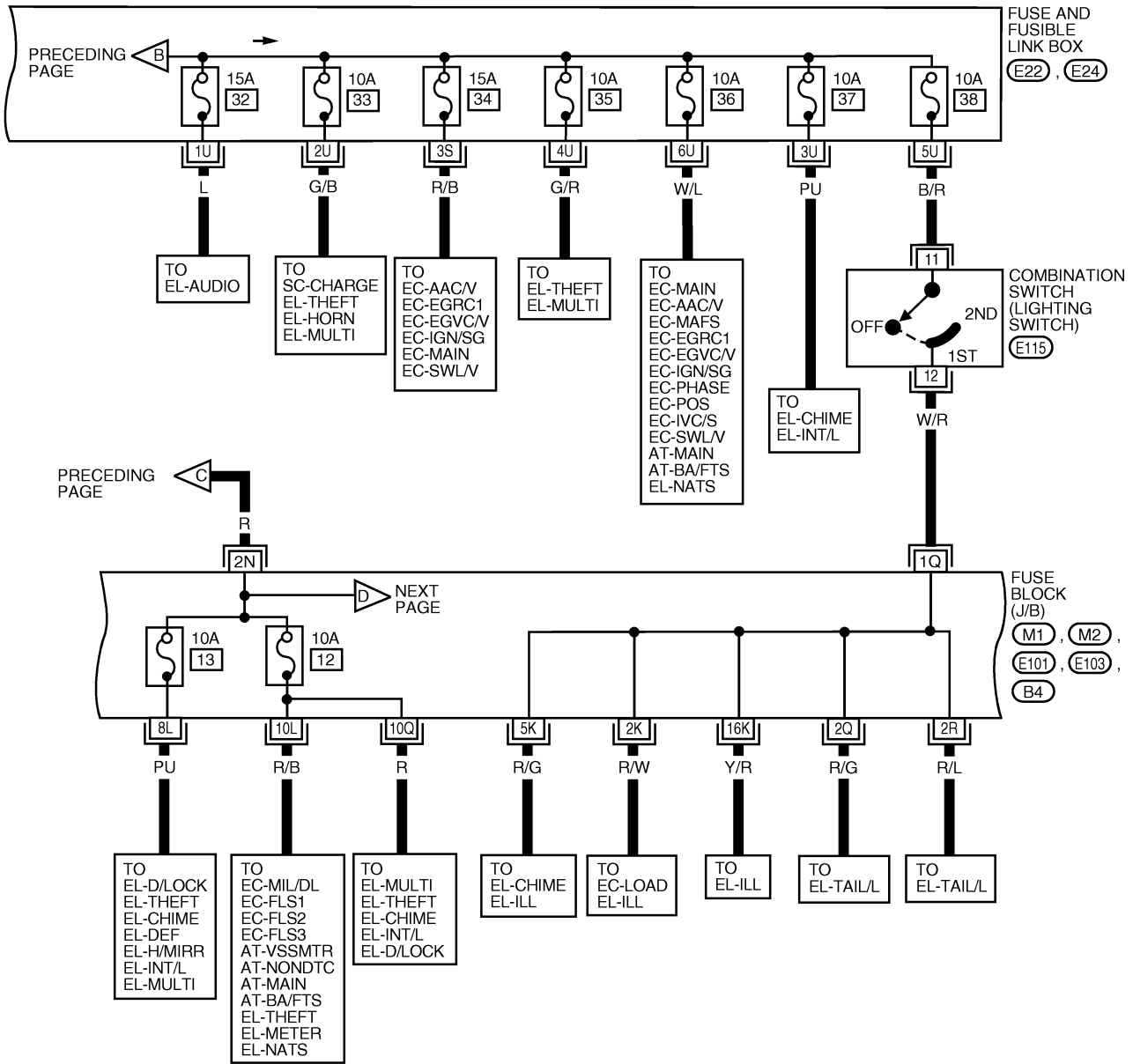


LEL410

# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

## EL-POWER-03



REFER TO THE FOLLOWING.

(M1), (M2), (E101), (E103),

(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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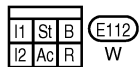
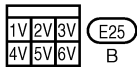
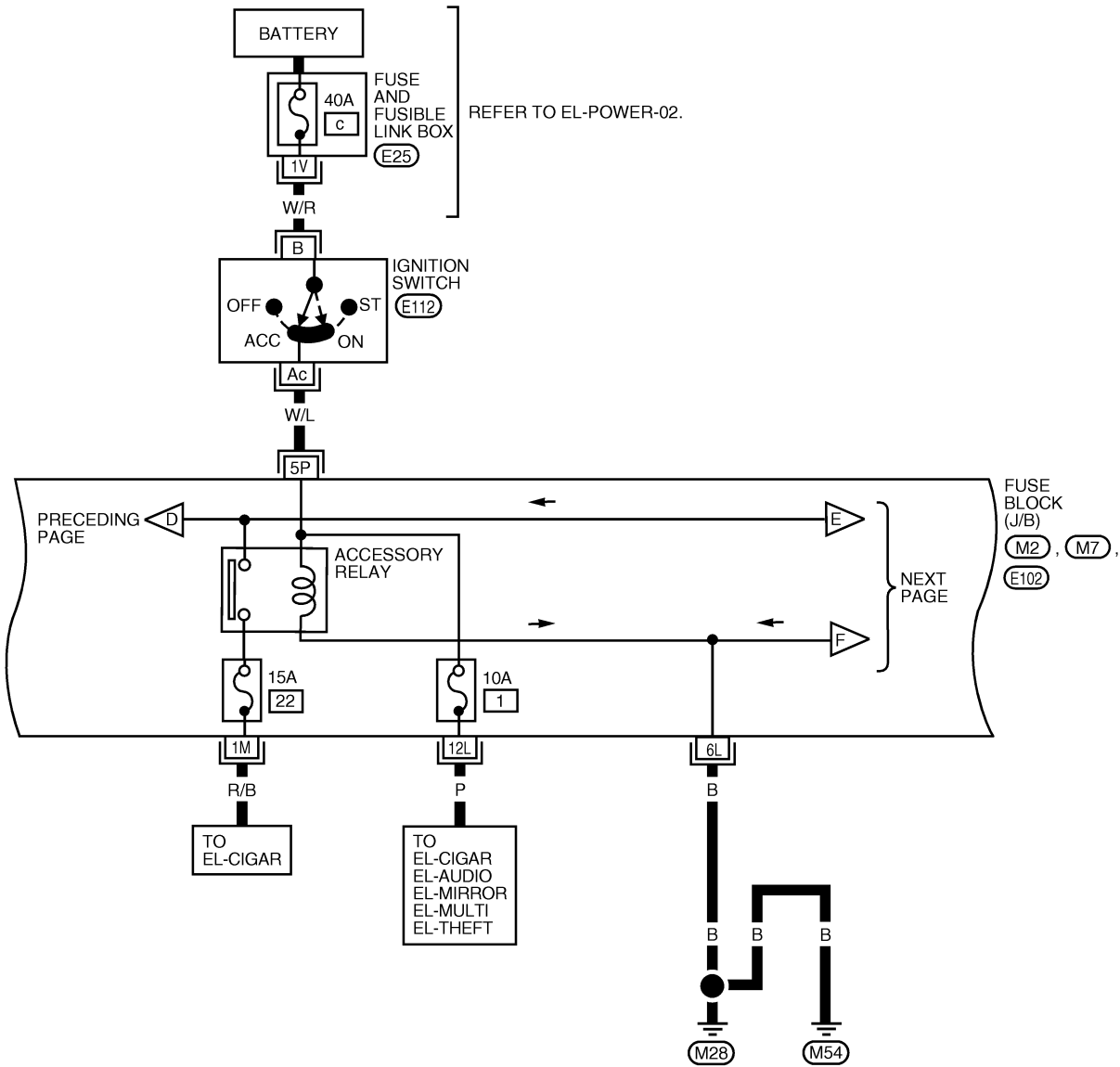
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

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

NIEL0006S02

### EL-POWER-04



REFER TO THE FOLLOWING.

(M2), (M7), (E102)

- 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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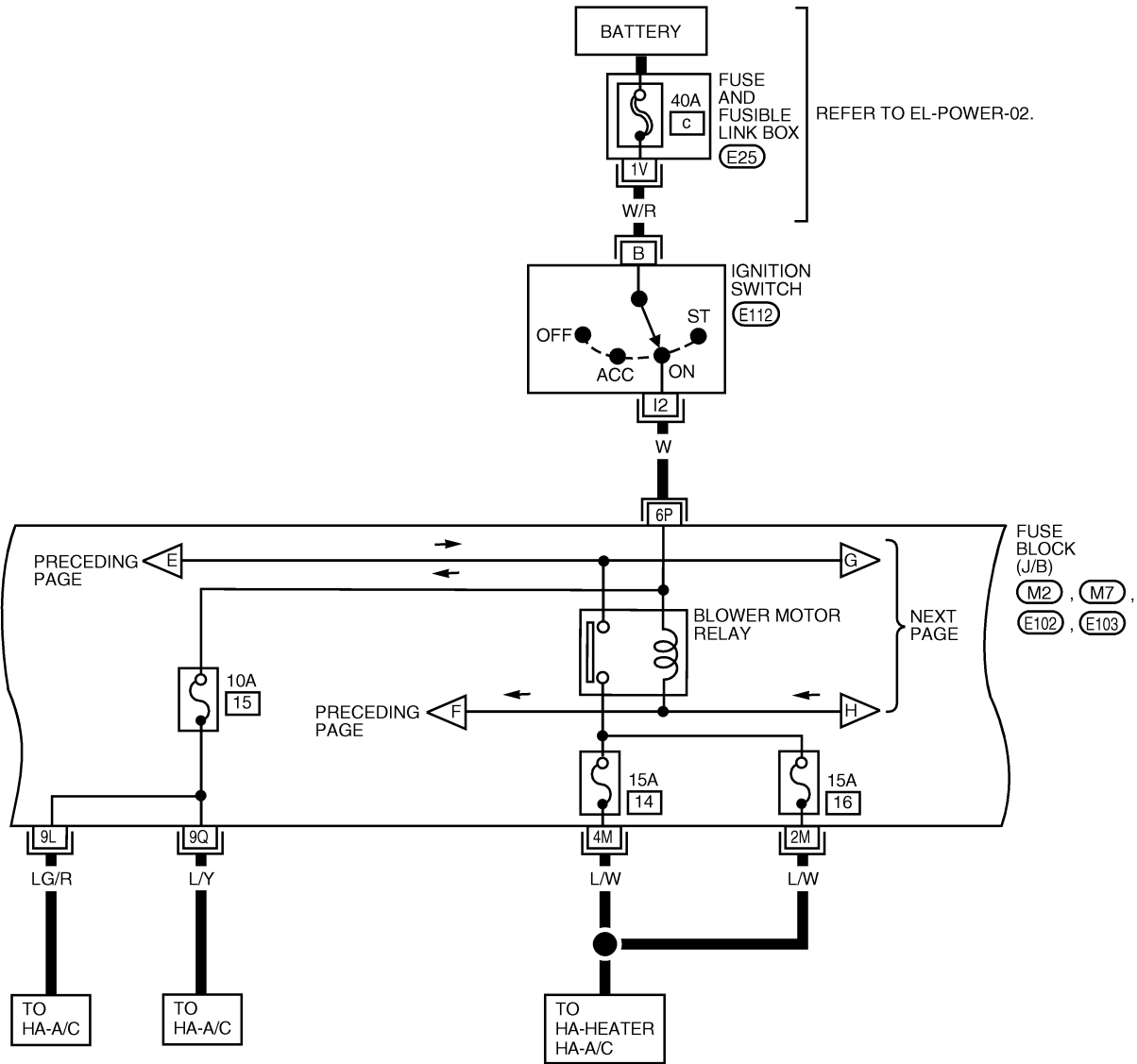
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

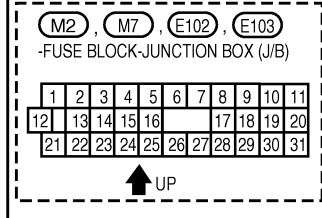
## IGNITION POWER SUPPLY — IGNITION SW. IN "ON"

NIEL0006S04

EL-POWER-05



REFER TO THE FOLLOWING.



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MA  
EM  
LC  
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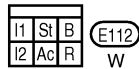
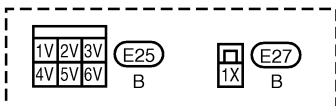
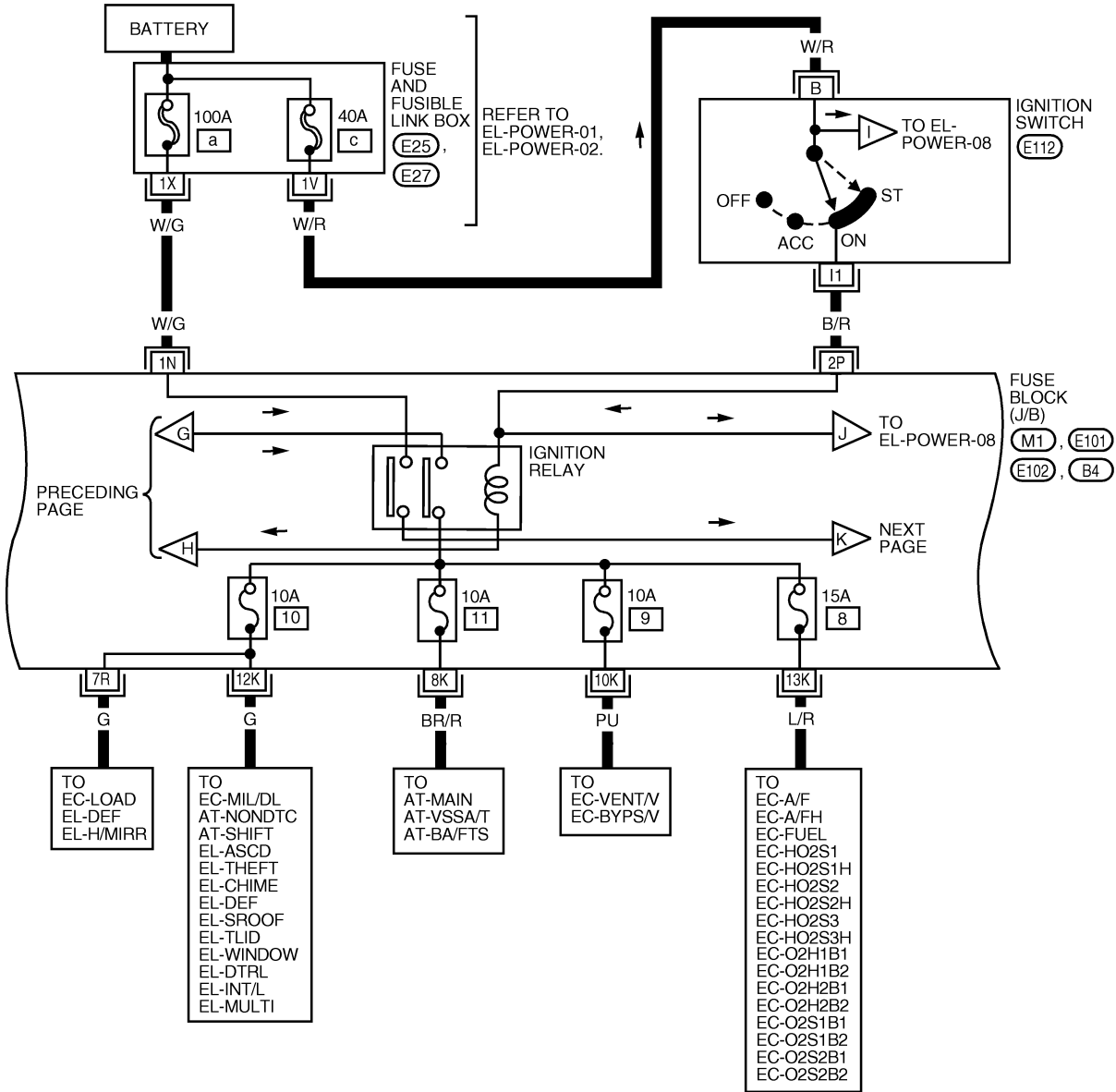
# POWER SUPPLY ROUTING

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

↑ UP

WEL813

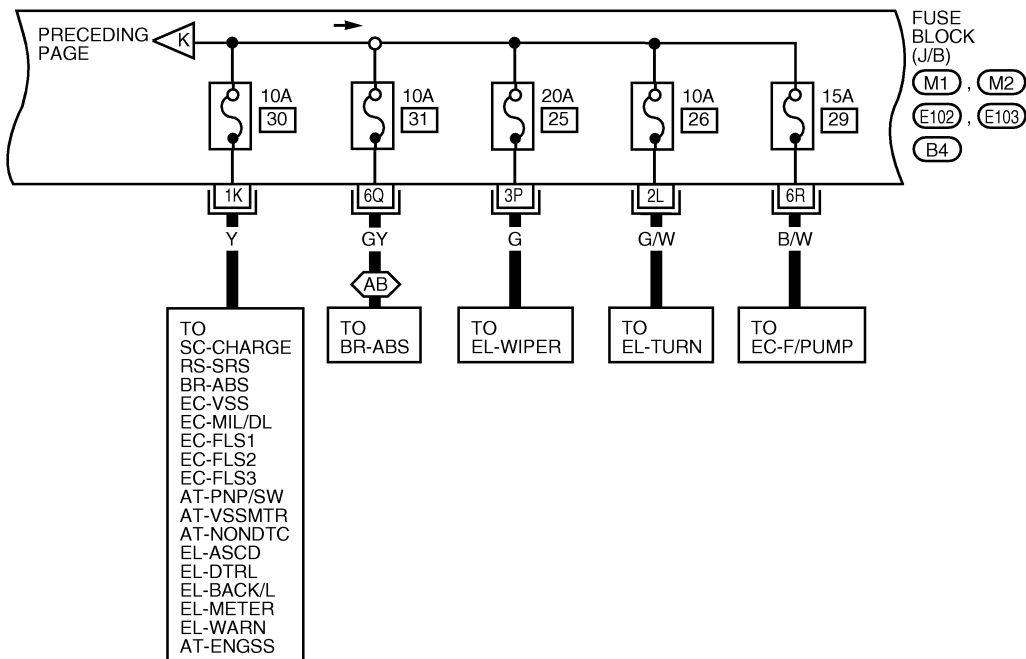


# POWER SUPPLY ROUTING

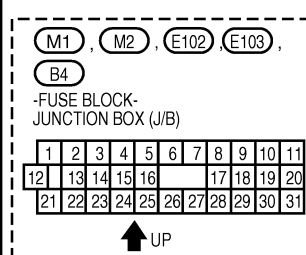
Wiring Diagram — POWER — (Cont'd)

## EL-POWER-07

◊AB◊ : With ABS



REFER TO THE FOLLOWING.



LEL415

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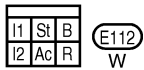
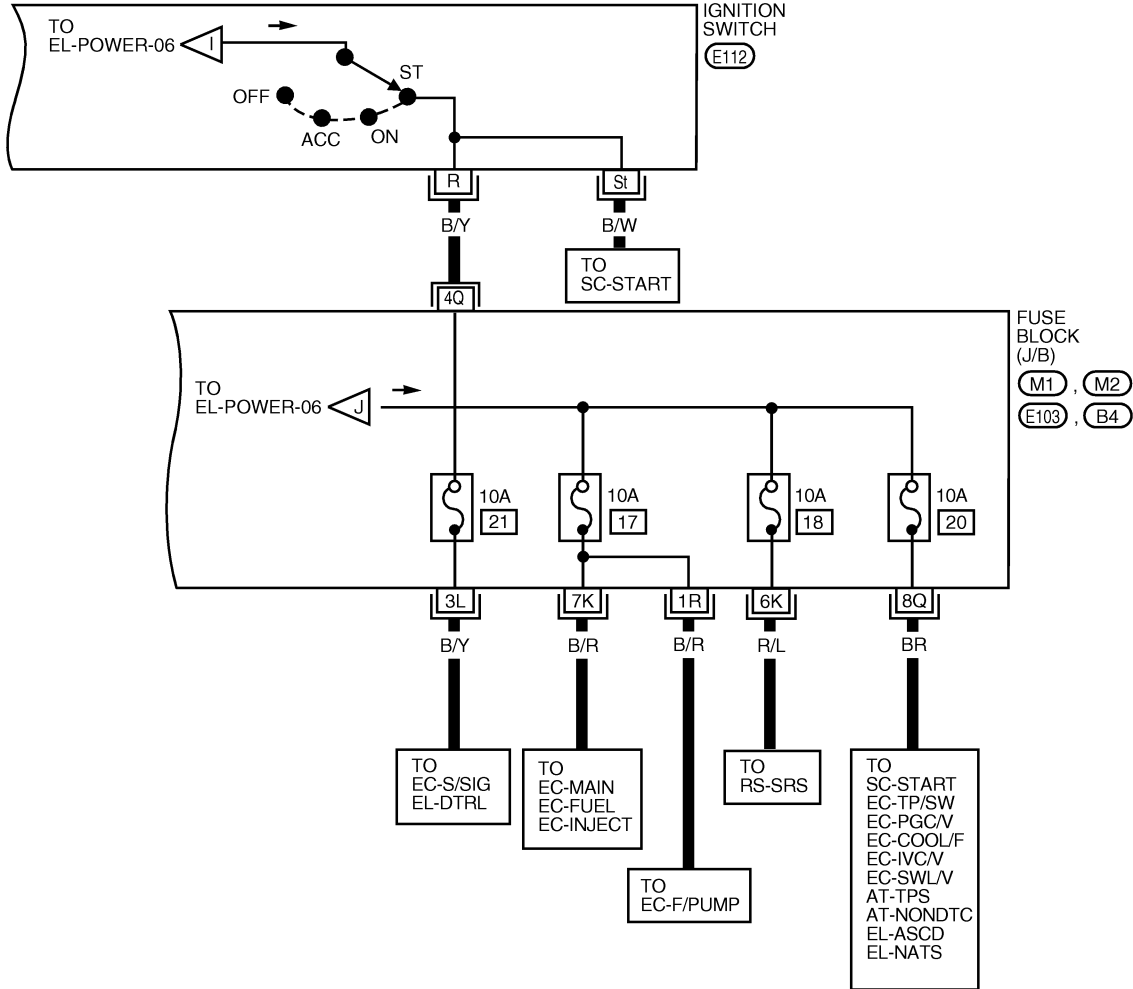
EL

IDX

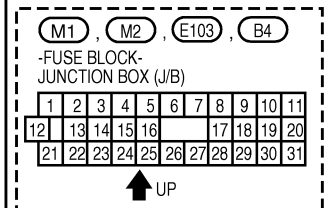
# POWER SUPPLY ROUTING

Wiring Diagram — POWER — (Cont'd)

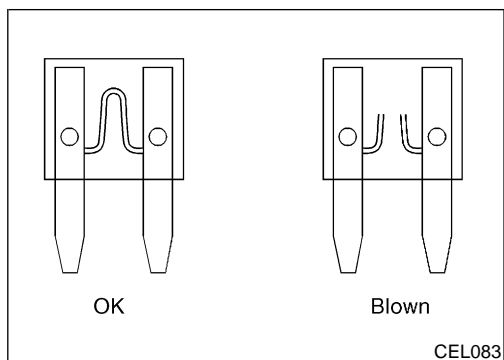
EL-POWER-08



REFER TO THE FOLLOWING.



LEL416



## Inspection

### FUSE

NIEL0007

NIEL0007S01

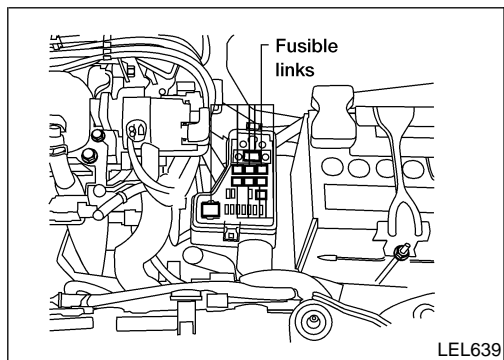
- If fuse is blown, be sure to eliminate cause of problem before installing new fuse.
- Use fuse of specified rating. Never use fuse of more than specified rating.
- Do not partially install fuse; always insert it into fuse holder properly.
- Remove fuse for “ELECTRICAL PARTS (BAT)” if vehicle is not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

GI

MA

EM

LC



### FUSIBLE LINK

NIEL0007S02

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.

EC

FE

CL

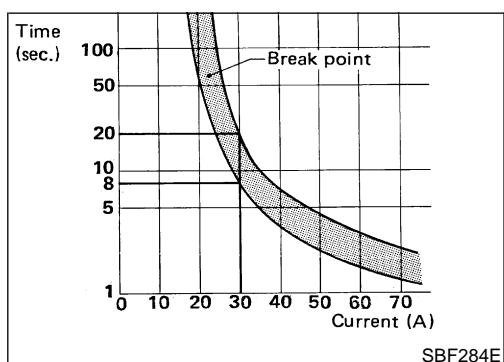
MT

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### CIRCUIT BREAKER

NIEL0007S03

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

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# GROUND

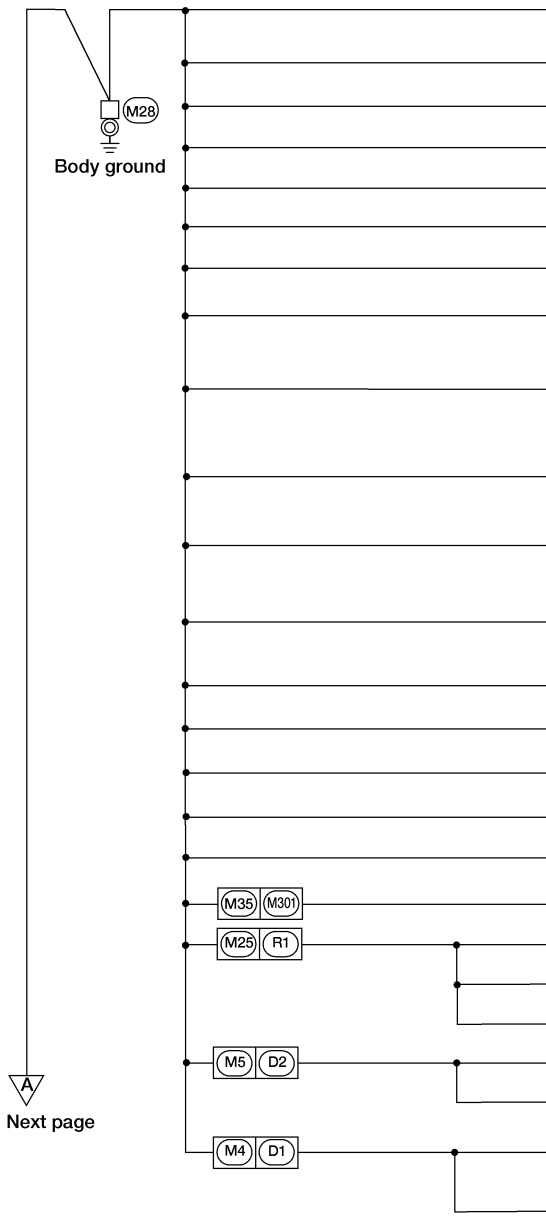
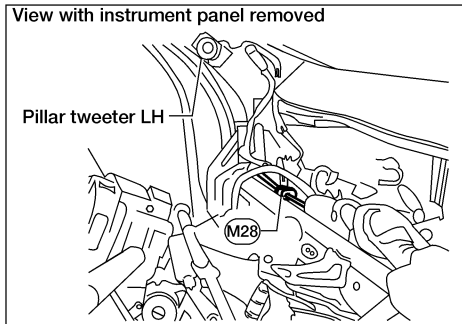
Ground Distribution

## Ground Distribution

NIEL0008

NIEL0008S01

### MAIN HARNESS



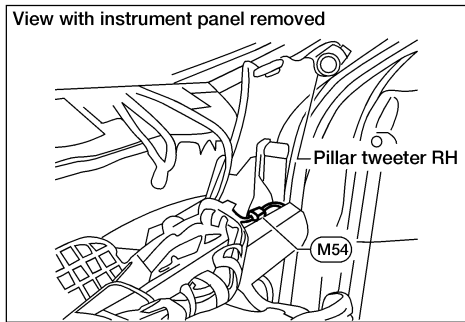
A  
Next page

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-1
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

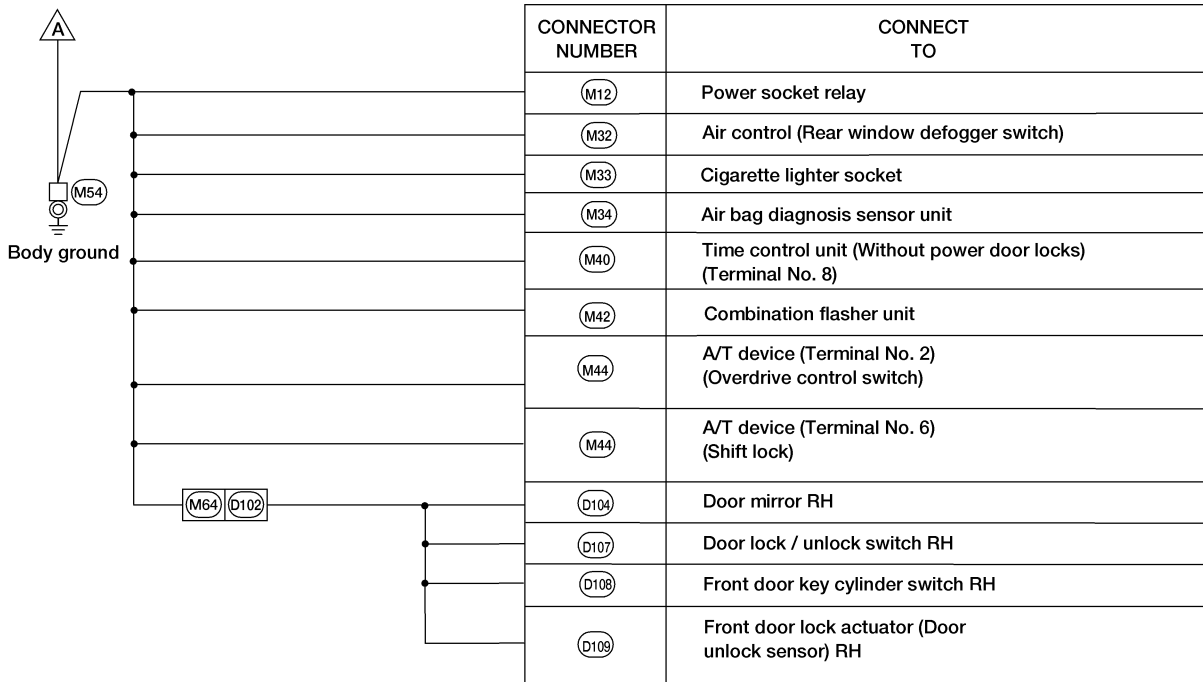
LEL424

# GROUND

Ground Distribution (Cont'd)



Preceding page



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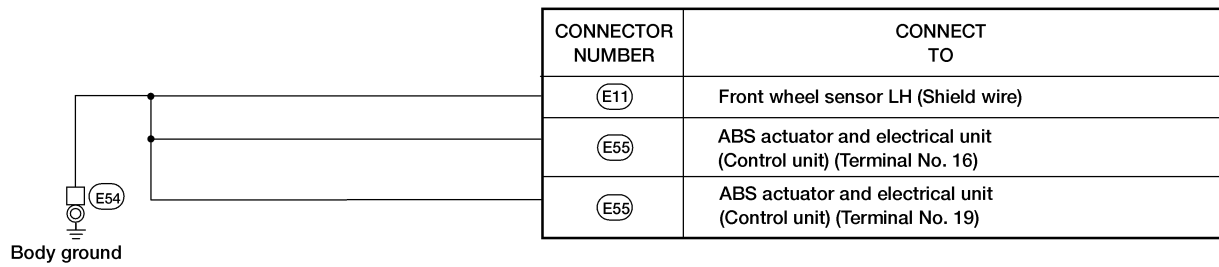
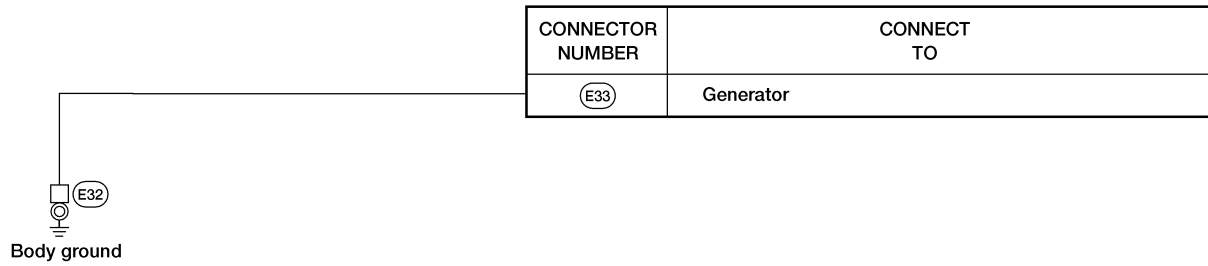
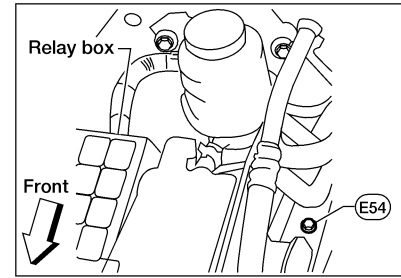
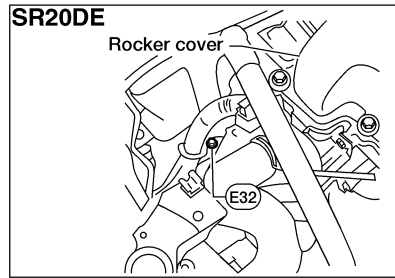
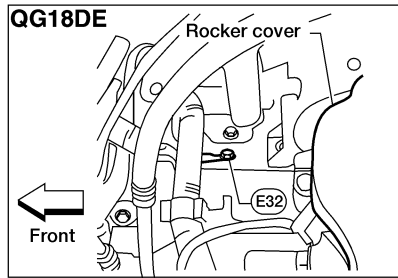
LEL423

# GROUND

Ground Distribution (Cont'd)

## ENGINE ROOM HARNESS

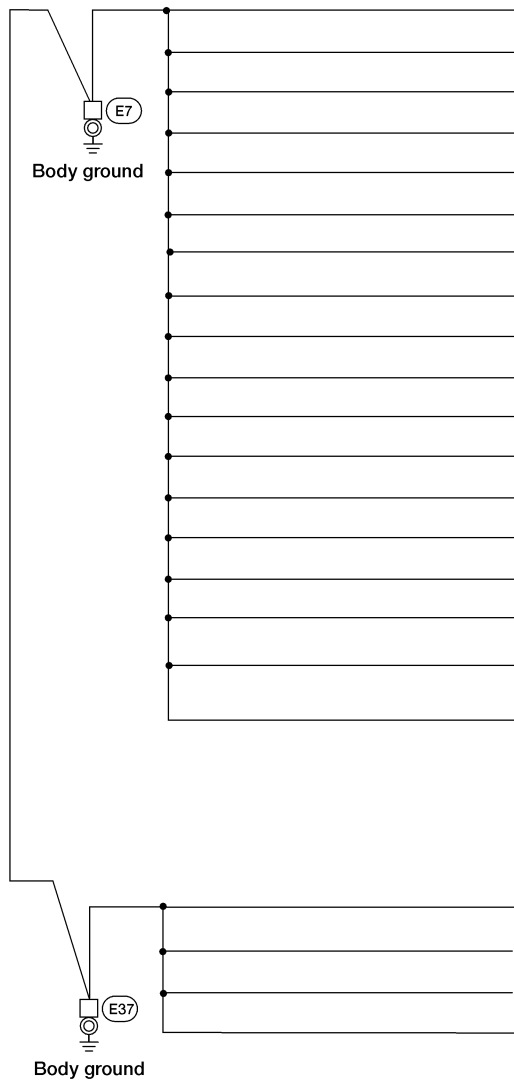
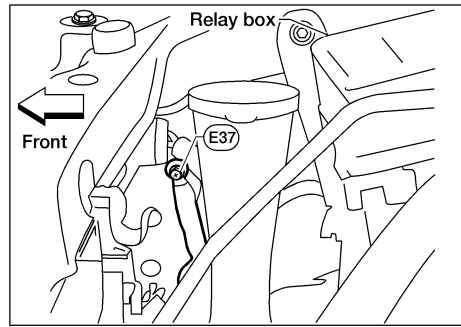
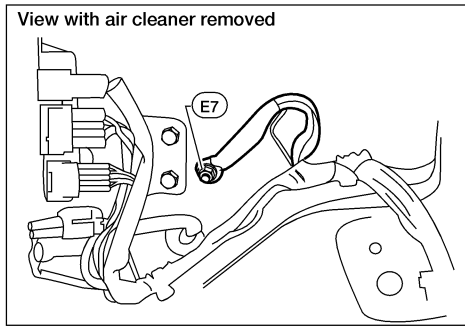
NIEL0008S02



LEL425

# GROUND

Ground Distribution (Cont'd)



CONNECTOR NUMBER	CONNECT TO
(E1)	Brake fluid level switch
(E2)	ASCD motor actuator
(E3)	Front wiper motor
(E4)	Front combination lamp (Parking) LH
(E14)	Hood switch
(E18)	Cooling fan motor-2
(E30)	Front fog lamp RH
(E31)	Headlamp RH
(E38)	Front combination lamp (Parking) RH
(E40)	Washer fluid level switch (For Canada)
(E44)	Cooling fan relay-3 (HI-relay)
(E45)	Theft warning horn relay
(E47)	Trunk lid opener relay-2 (Terminal No. 2) (With M/T)
(E47)	Trunk lid opener relay-2 (Terminal No. 4) (With M/T)
(E106)	Daytime light control unit (For Canada)
(E110)	Clutch interlock switch (With M/T)
(E116)	Combination switch (Front wiper switch)
(E117)	Combination switch (Front fog lamp switch)

CONNECTOR NUMBER	CONNECT TO
(E13)	Headlamp LH (For USA)
(E15)	Front fog lamp LH
(E17)	Cooling fan motor-1
(E52)	Cooling fan relay-2 (HI-relay)

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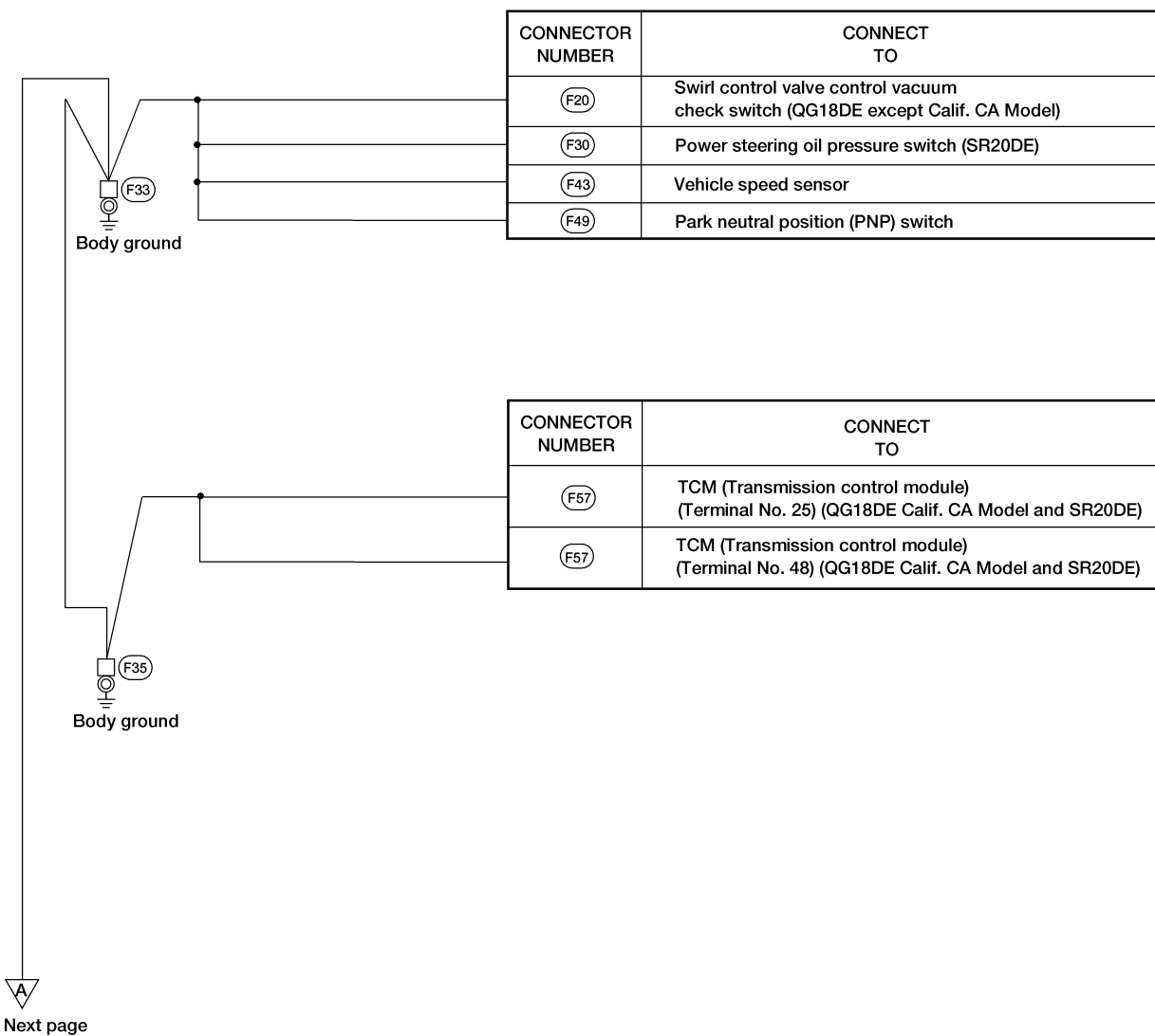
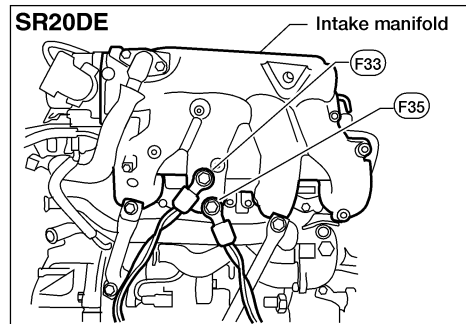
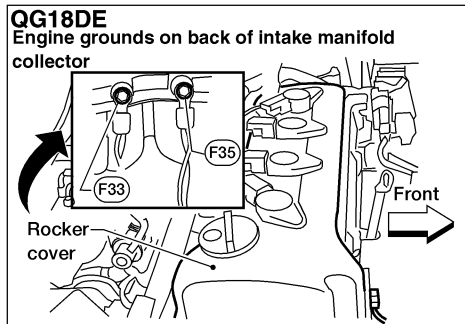
LEL426

# GROUND

Ground Distribution (Cont'd)

## ENGINE CONTROL HARNESS

NIEL0008S03

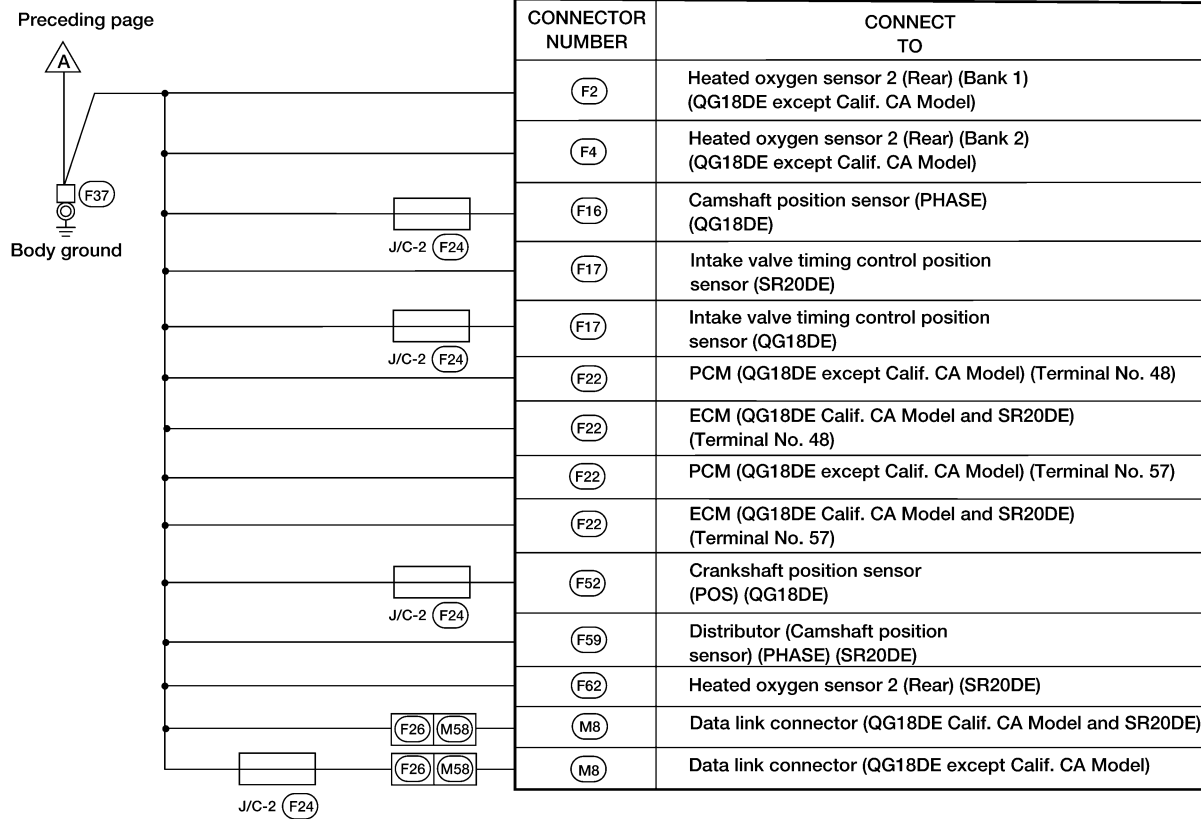
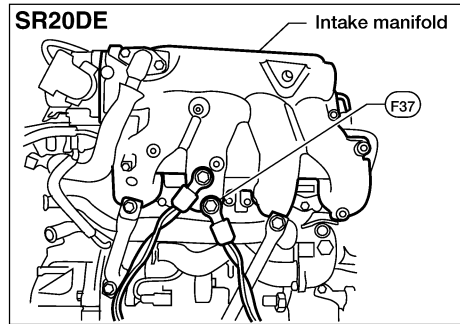
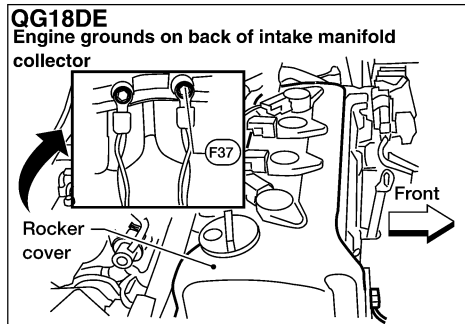


LEL429



# GROUND

Ground Distribution (Cont'd)



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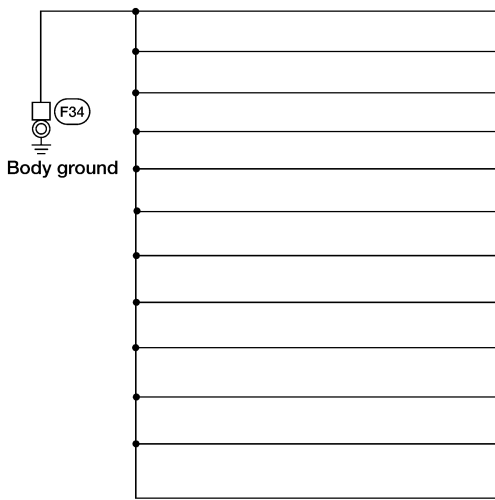
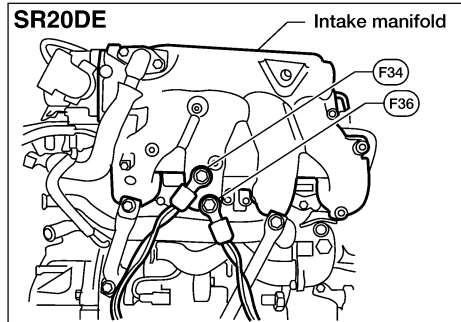
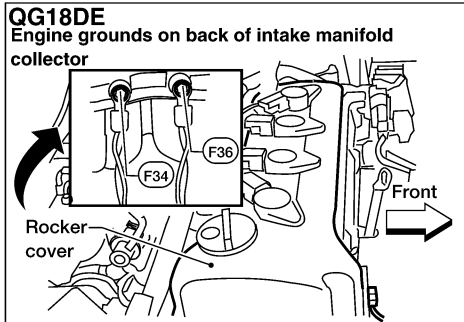
EL

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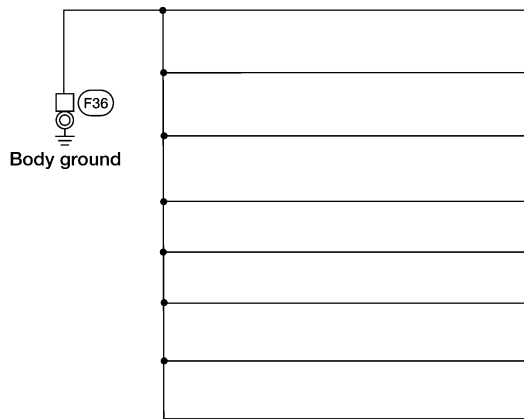
WEL555A

# 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)	PCM (QG18DE except Calif. CA Model) (Terminal No. 106)
(F22)	ECM (QG18DE Calif. CA Model and SR20DE) (Terminal No. 106)
(F22)	PCM (QG18DE except Calif. CA Model) (Terminal No.108)
(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)

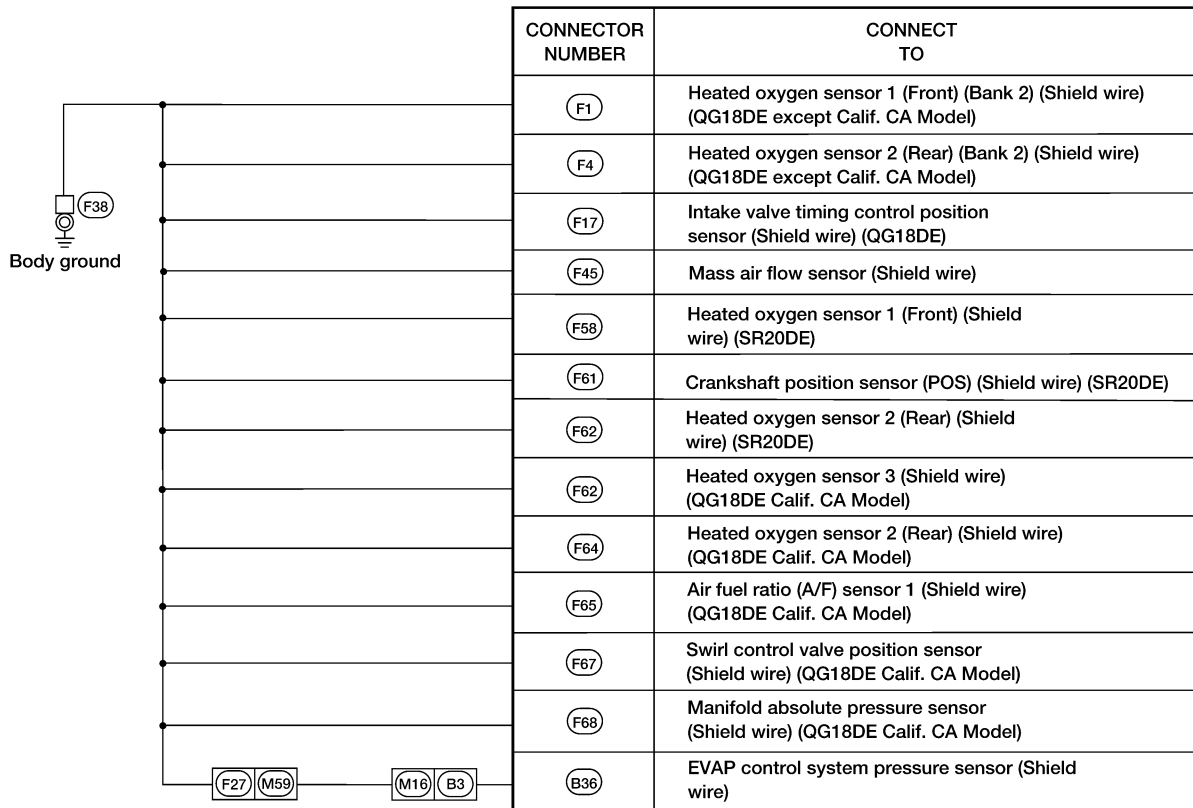
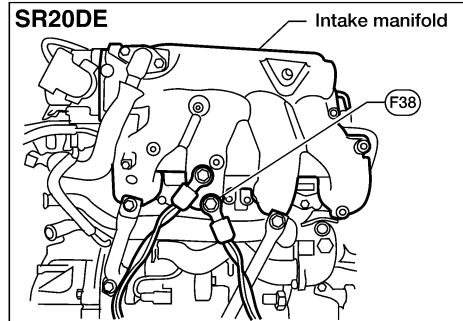
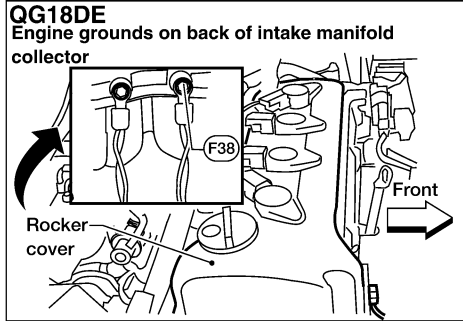


CONNECTOR NUMBER	CONNECT TO
(F2)	Heated oxygen sensor 2 (Rear) (Bank 1) (Shield wire) (QG18DE except Calif. CA Model)
(F3)	Heated oxygen sensor 1 (Front) (Bank 1) (Shield wire) (QG18DE except Calif. CA Model)
(F16)	Camshaft position sensor (PHASE) (Shield wire) (QG18DE)
(F21)	Absolute pressure sensor (Shield wire) (QG18DE except Calif. CA Model and SR20DE)
(F41)	Throttle position sensor (Shield wire)
(F52)	Crankshaft position sensor (POS) (Shield wire) (QG18DE)
(F59)	Distributor (Camshaft position sensor) (PHASE) (Shield wire) (SR20DE)
(F69)	Barometric pressure sensor (Shield wire) (QG18DE Calif. CA Model)

WEL556A

# GROUND

Ground Distribution (Cont'd)



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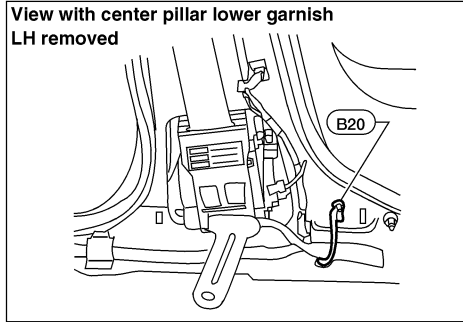
WEL557A

# GROUND

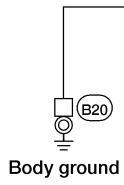
Ground Distribution (Cont'd)

## BODY HARNESS

NIEL0008S04



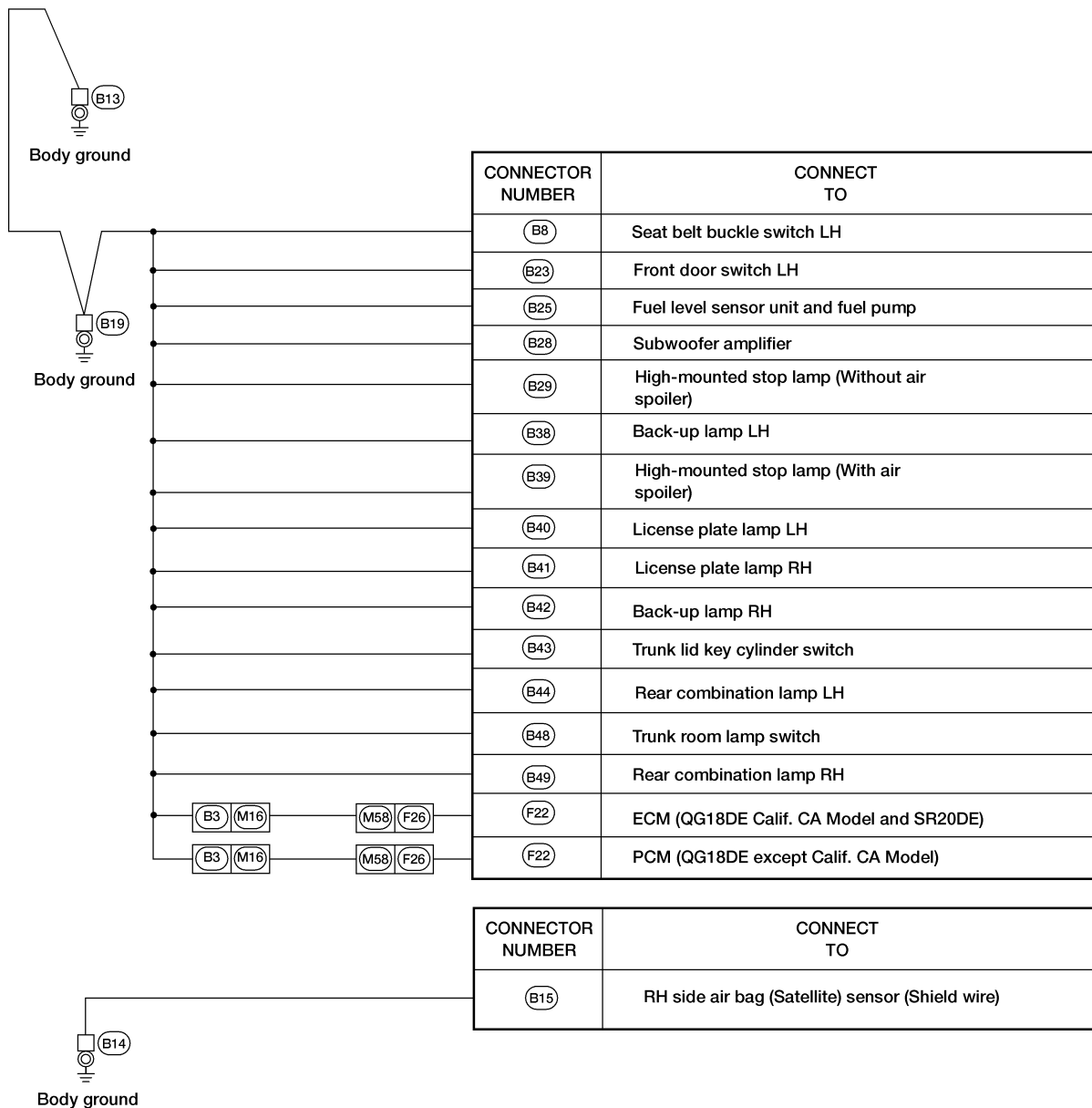
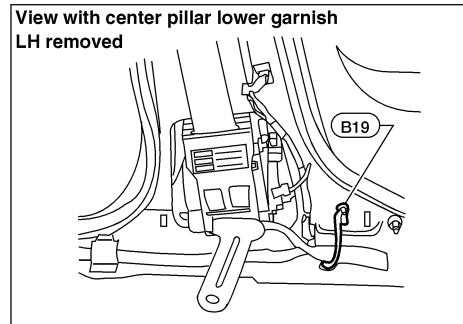
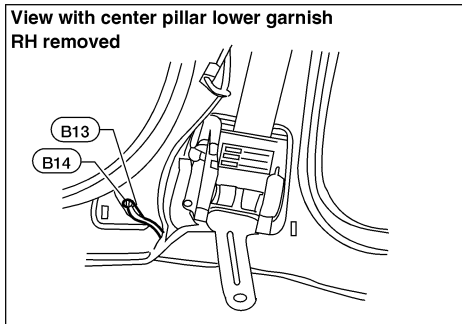
CONNECTOR NUMBER	CONNECT TO
(B21)	LH side air bag (Satellite) sensor (Shield wire)



LEL427

# GROUND

Ground Distribution (Cont'd)



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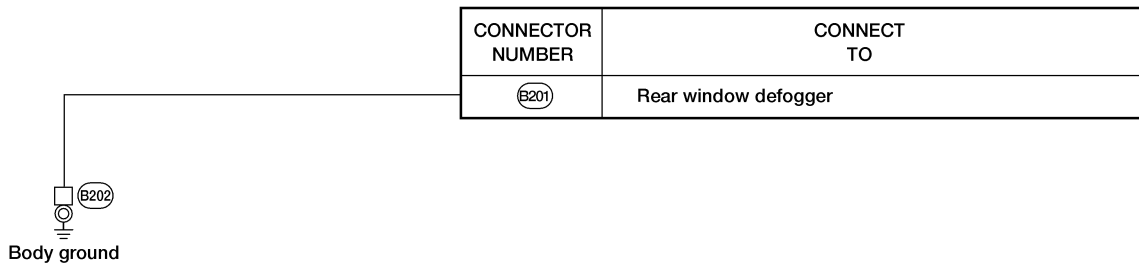
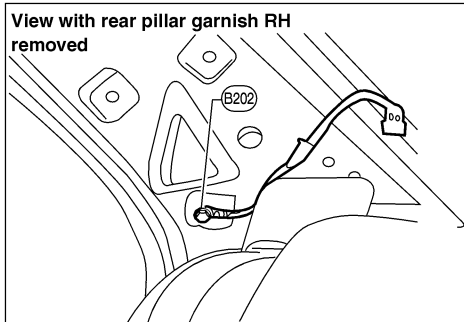
LEL428

# GROUND

Ground Distribution (Cont'd)

## BODY NO. 2 HARNESS

-NIEL0008S05



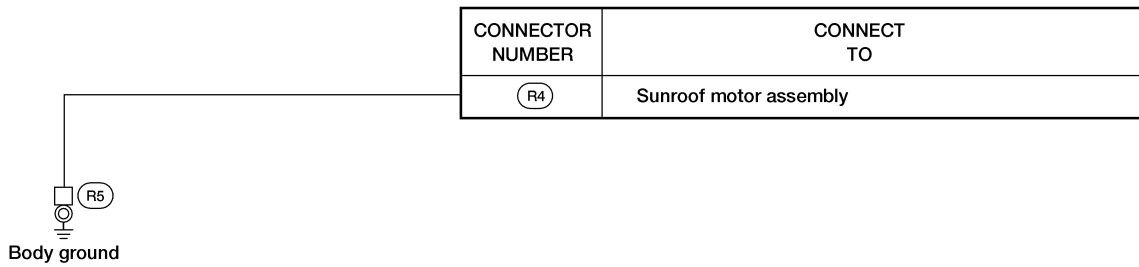
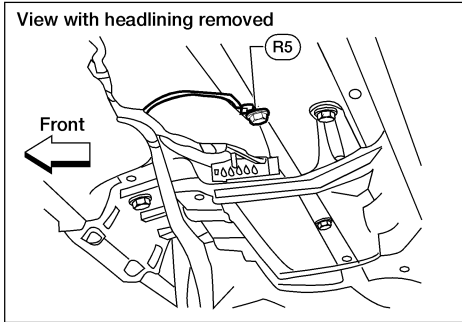
LEL434

# GROUND

Ground Distribution (Cont'd)

## ROOM HARNESS

NIEL0008S06



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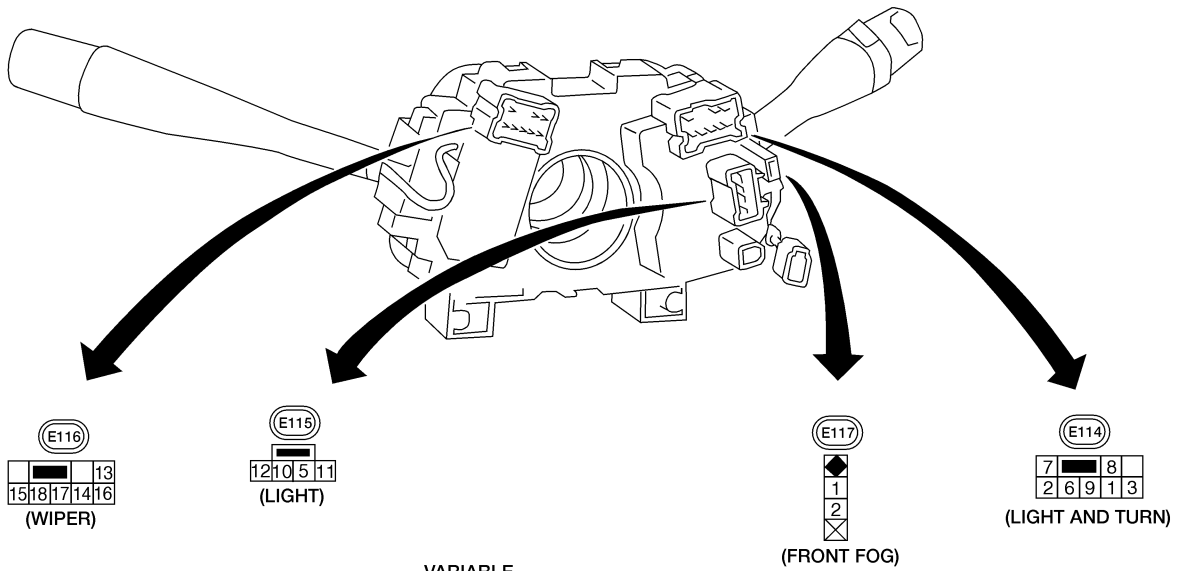
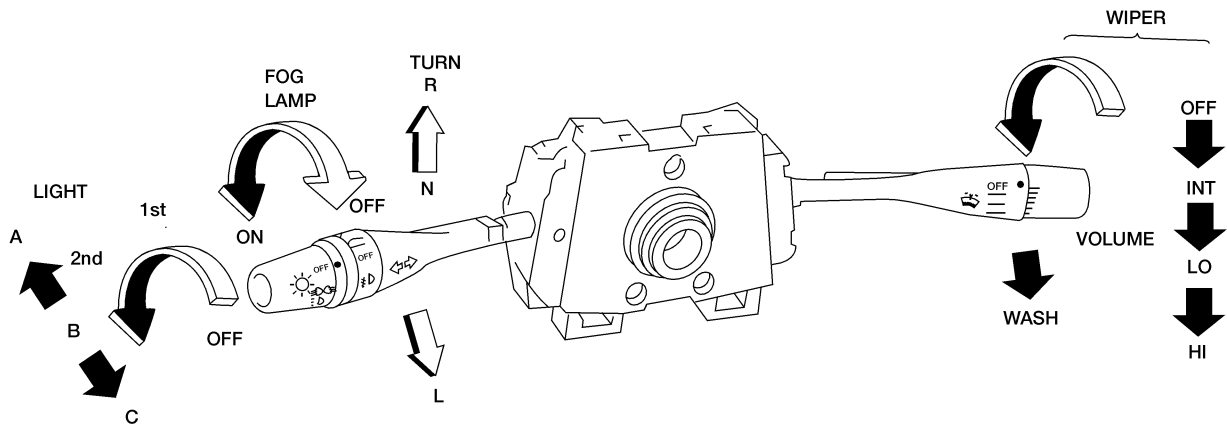
LEL433

# COMBINATION SWITCH

Check

Check

NIEL0009

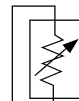


FRONT WIPER AND WASHER SWITCH (WITH INTERMITTENT OPERATION)

	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"/>
9		<input type="checkbox"/>			<input type="checkbox"/>	<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"/>
12			<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"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3			<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

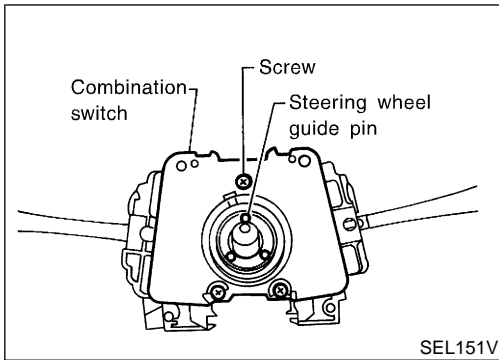
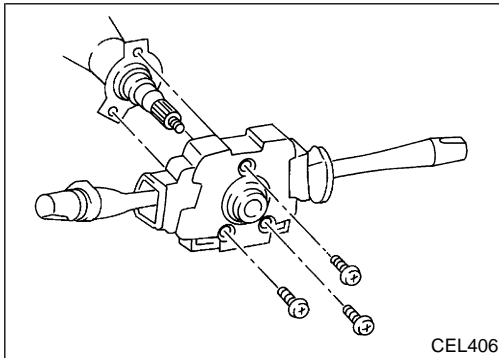
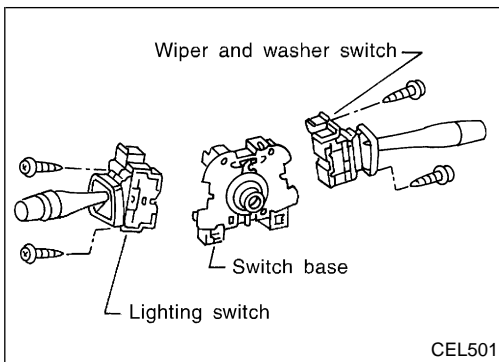
	OFF	ON
1		<input type="checkbox"/>
2		<input type="checkbox"/>

LEL576



# COMBINATION SWITCH

Replacement



## Replacement

For removal and installation of spiral cable, refer to <sup>NJEL0010</sup>RS-20 "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.

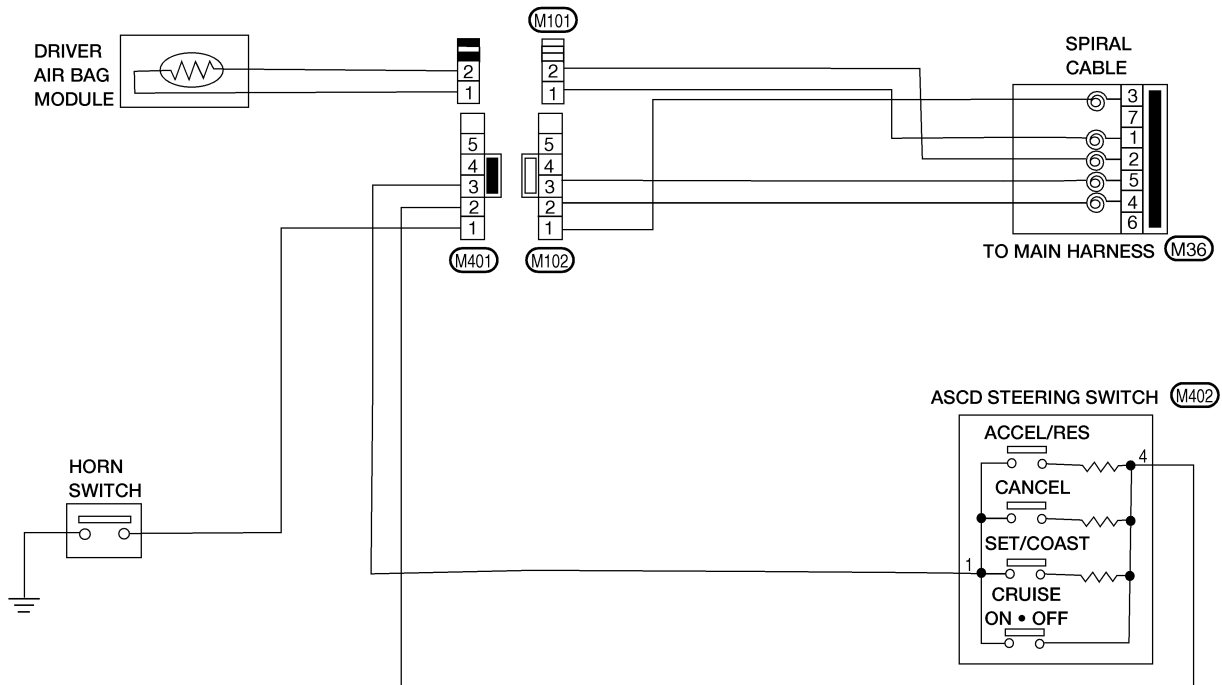
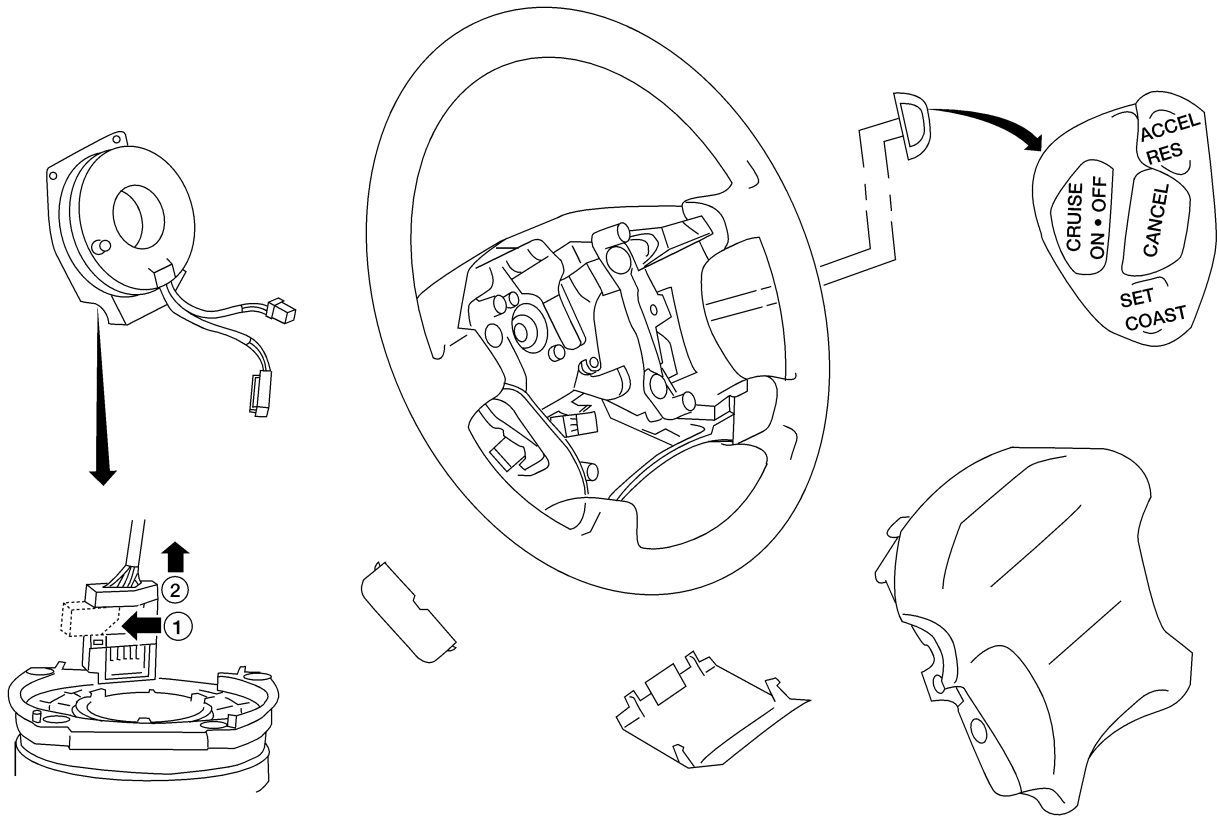
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# STEERING SWITCH

Check

Check

NIEL0011



LEL575

## System Description

NIEL0198

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

- 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

NIEL0198S02

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

- 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

NIEL0198S03

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

- 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.

### THEFT WARNING SYSTEM

NIEL0198S05

The theft warning system will flash the high beams if the system is triggered. Refer to "THEFT WARNING SYSTEM" (EL-261).

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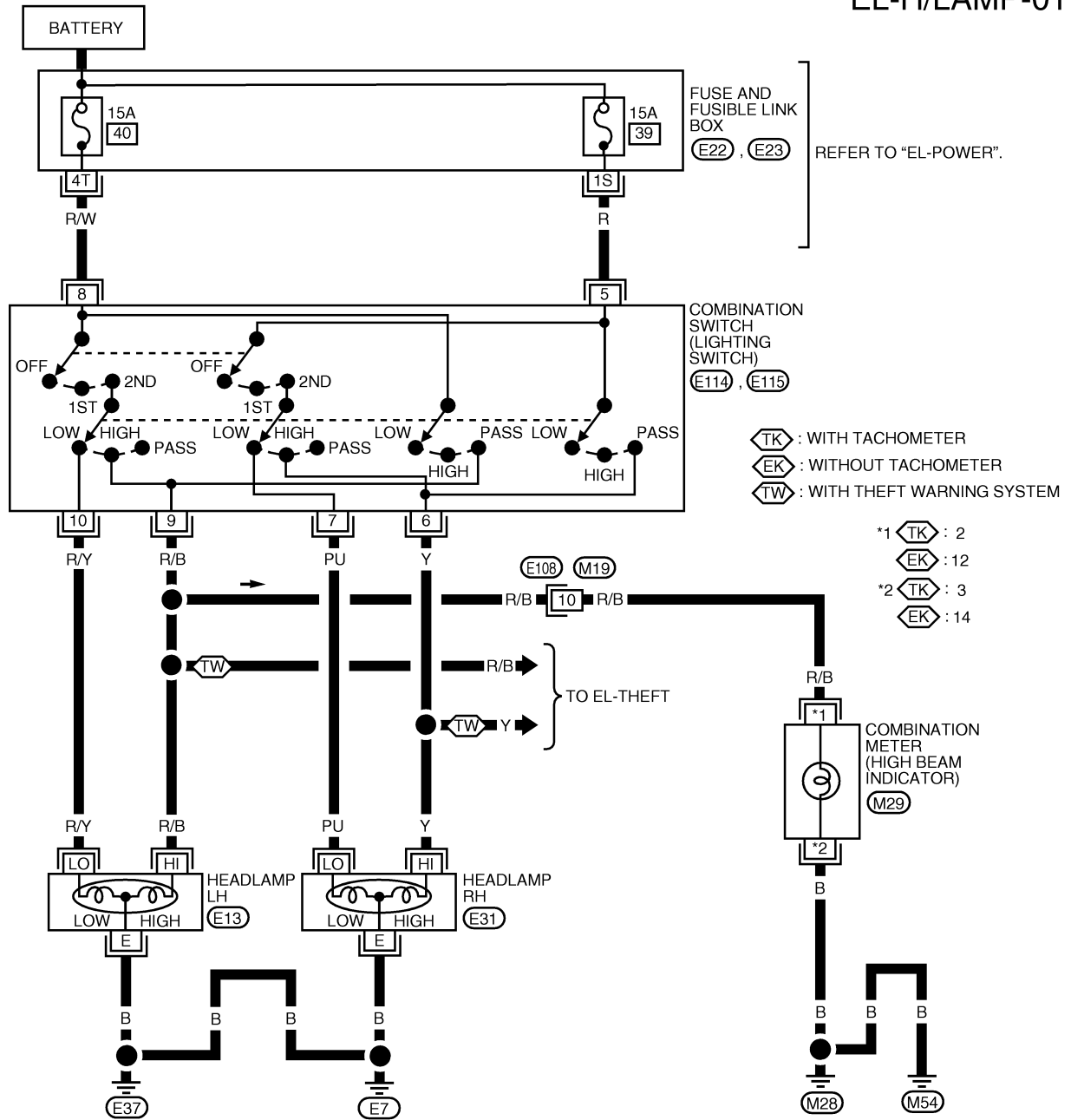
# HEADLAMP (FOR USA)

Wiring Diagram — H/LAMP —

## Wiring Diagram — H/LAMP —

NIEL0013

### EL-H/LAMP-01



1	2	3	4	5	6	7	8	9	10	11	TK	EK	M29		
12	13	14	15	16	17	18	19	20	21	22	23	24	BR	W	

HI	E	LO	E13	E31
			B	B

1S	E22	1T 2T	E23
2S 3S	W	3T 4T	W

1	2	3	4	5	6	7	E108
8	9	10	11	12	13	14	W

8	7	E114	11	10	12	E115
3	1	9	6	2	BR	BR

WEL323

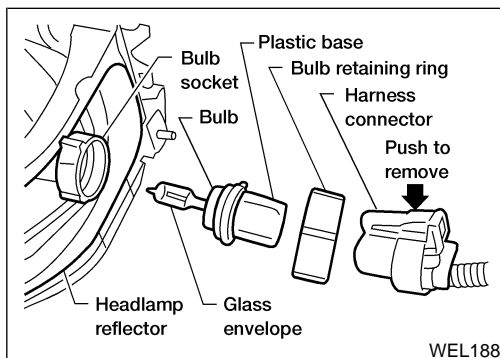
# HEADLAMP (FOR USA)

Trouble Diagnoses

## Trouble Diagnoses

NIEL0202

Symptom	Possible cause	Repair order
LH headlamp does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Grounds E7 and E37</li> <li>3. 15A fuse</li> <li>4. Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check grounds E7 and E37.</li> <li>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.</li> <li>4. Check lighting switch.</li> </ol>
RH headlamp does not operate.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Grounds E7 and E37</li> <li>3. 15A fuse</li> <li>4. Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check grounds E7 and E37</li> <li>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.</li> <li>4. Check lighting switch.</li> </ol>
LH high beam does not operate, but LH low beam operates.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in LH high beam circuit</li> <li>3. Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check R/B wire between lighting switch and LH headlamp for an open circuit.</li> <li>3. Check lighting switch.</li> </ol>
LH low beam does not operate, but LH high beam operates.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in LH low beam circuit</li> <li>3. Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check R/Y wire between lighting switch and LH headlamp for an open circuit.</li> <li>3. Check lighting switch.</li> </ol>
RH high beam does not operate, but RH low beam operates.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in RH high beam circuit</li> <li>3. Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check Y wire between lighting switch and RH headlamp for an open circuit.</li> <li>3. Check lighting switch.</li> </ol>
RH low beam does not operate, but RH high beam operates.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Open in RH low beam circuit</li> <li>3. Lighting switch</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb.</li> <li>2. Check PU wire between lighting switch and RH headlamp for an open circuit.</li> <li>3. Check lighting switch.</li> </ol>
High beam indicator does not work.	<ol style="list-style-type: none"> <li>1. Bulb</li> <li>2. Grounds M28 and M54</li> <li>3. Open in high beam circuit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check bulb in combination meter.</li> <li>2. Check grounds M28 and M54.</li> <li>3. Check R/B wire between lighting switch and combination meter for an open circuit.</li> </ol>



WEL188

## 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

EL-37

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# HEADLAMP (FOR USA)

Bulb Replacement (Cont'd)

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

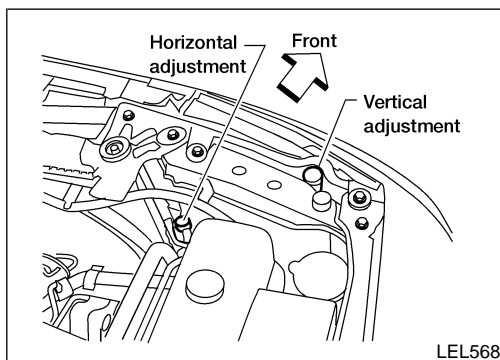
For details, refer to the regulations in your own country.

### 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

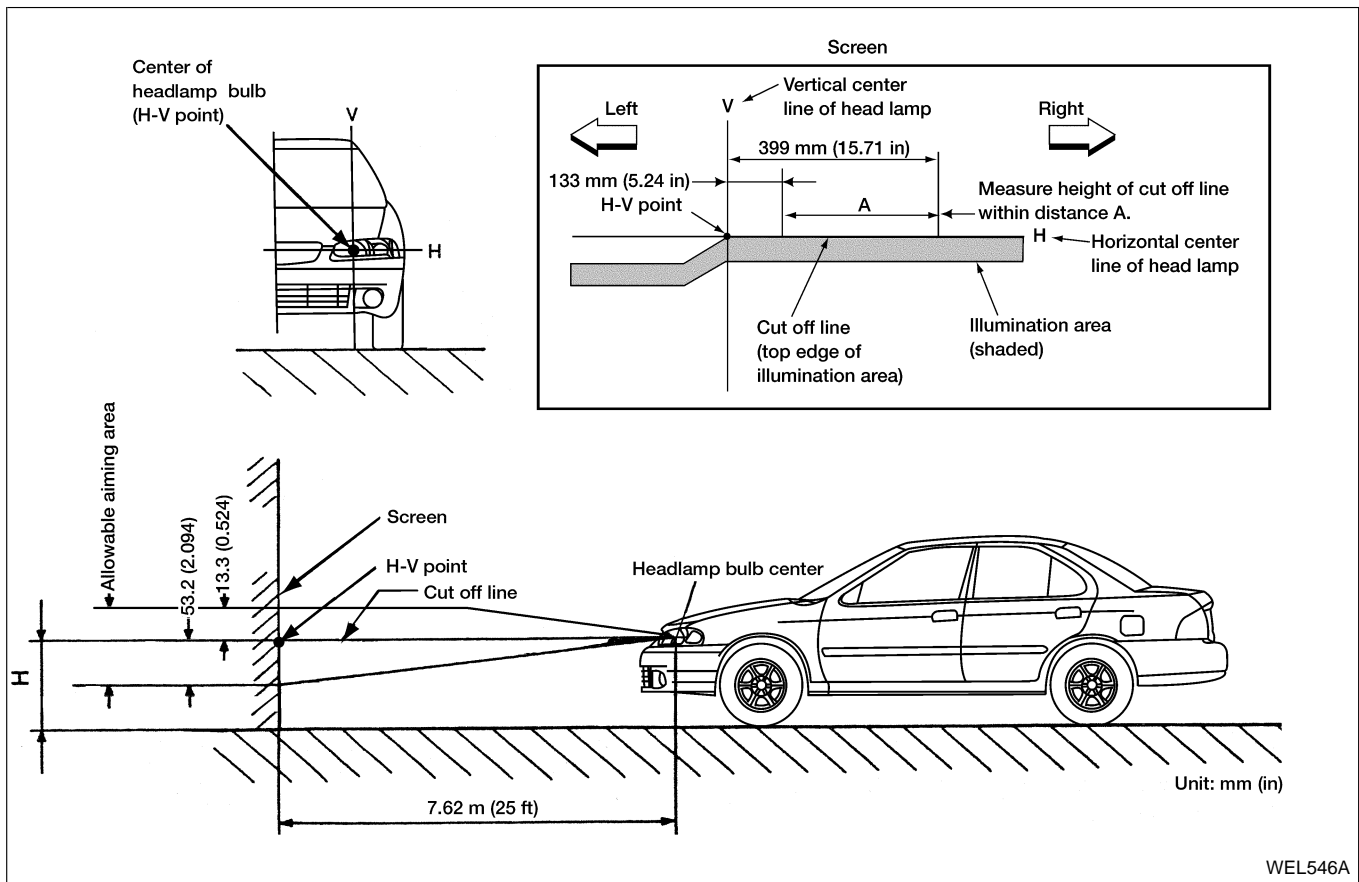
1. Turn headlamp low beam on.
2. Use adjusting screws to perform aiming adjustment.

### 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)



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.**

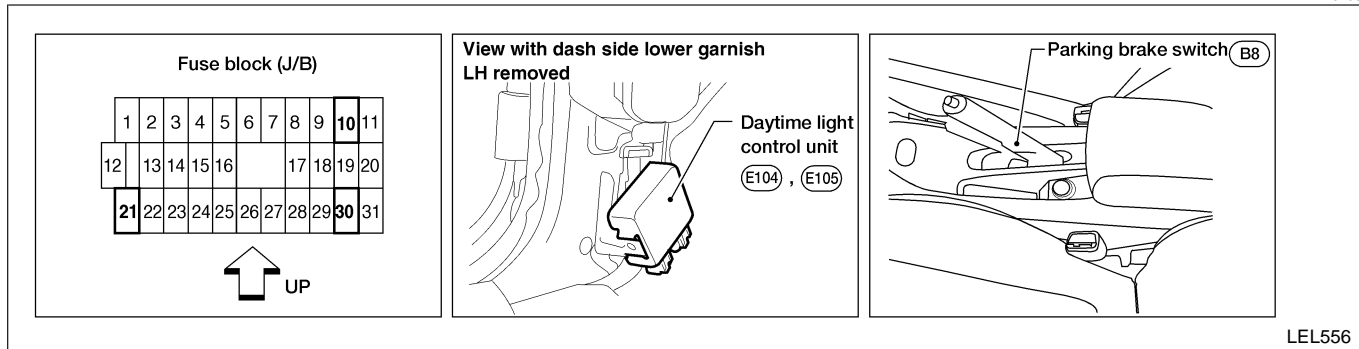
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# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

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.

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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.

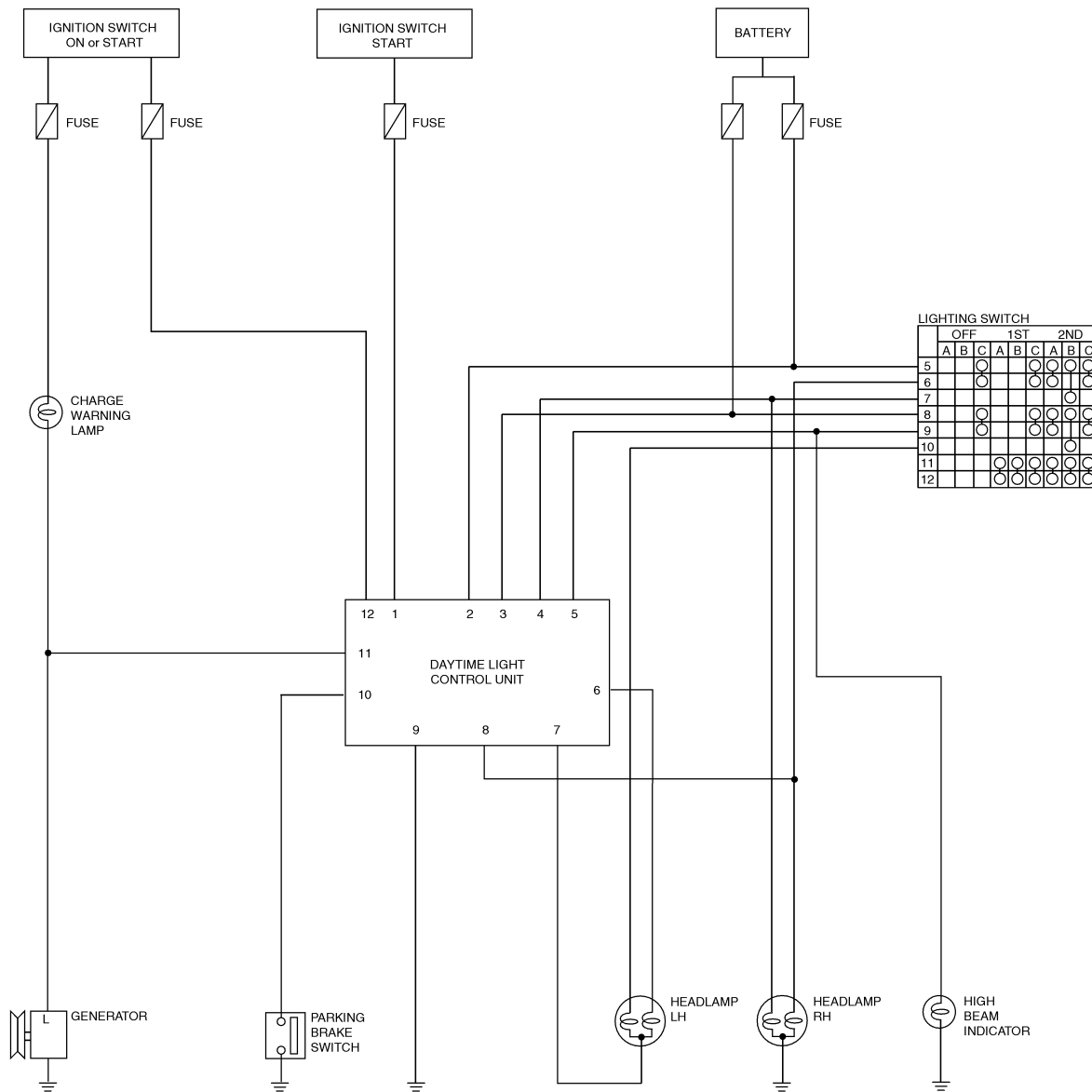
When starting the engine with the parking brake applied, the daytime light will not come ON. Once the parking brake is released, the daytime light will come ON. Thereafter, the daytime light will continue to operate when the parking brake is applied. If the daytime light control unit receives a ground 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

=NIEL0205



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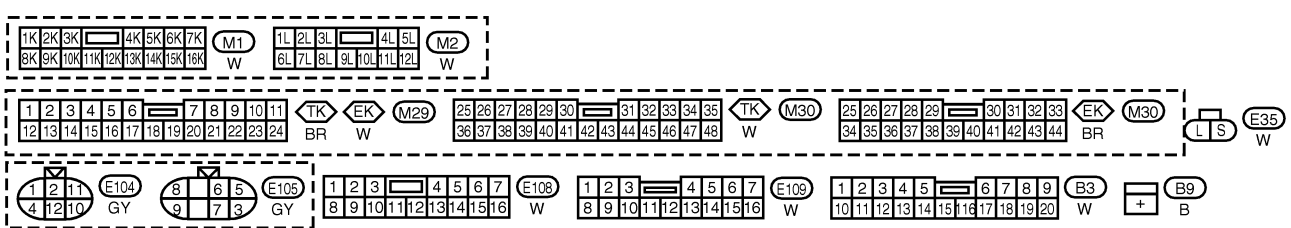
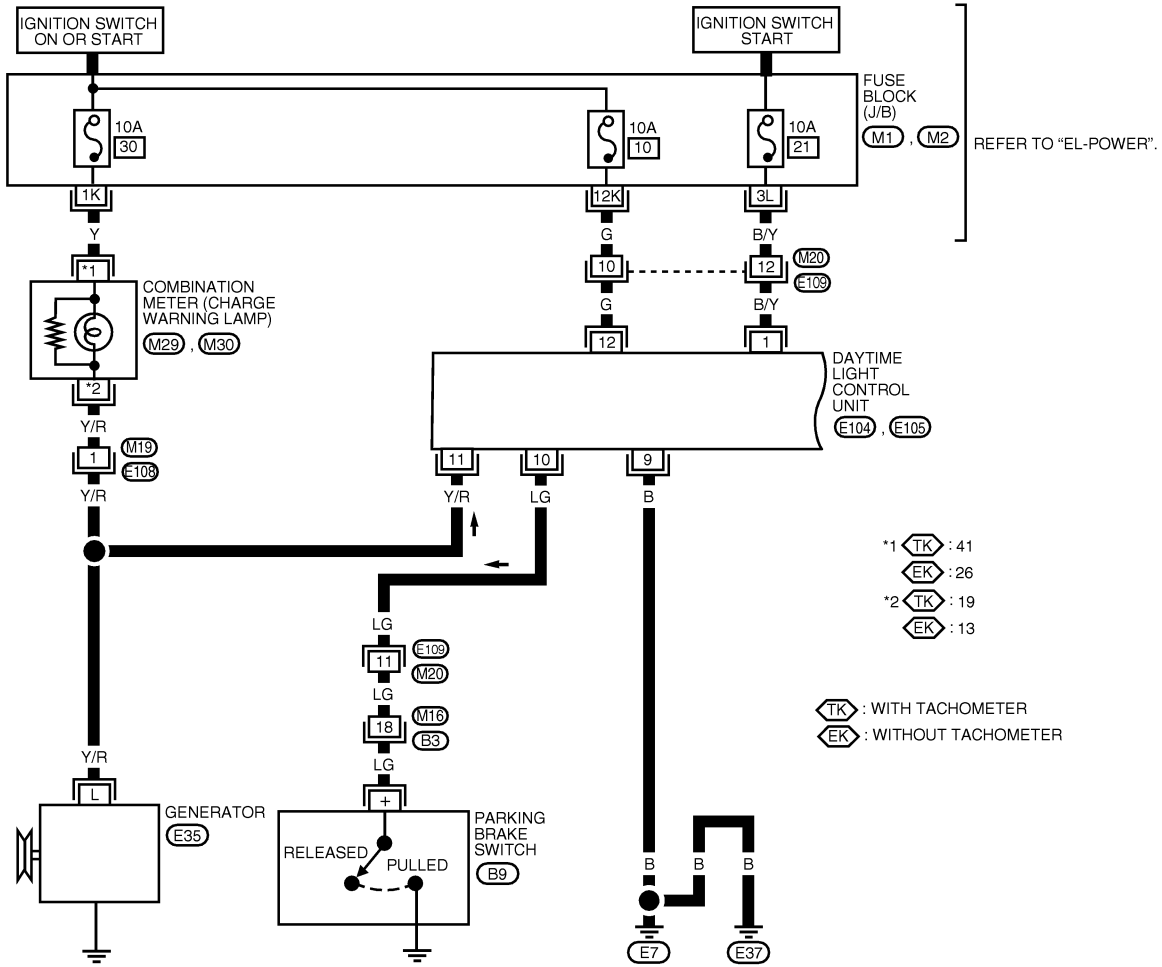
# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Wiring Diagram — DTRL —

## Wiring Diagram — DTRL —

NIEL0020

EL-DTRL-01



WEL325

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

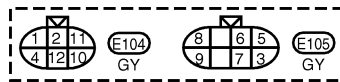
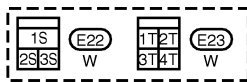
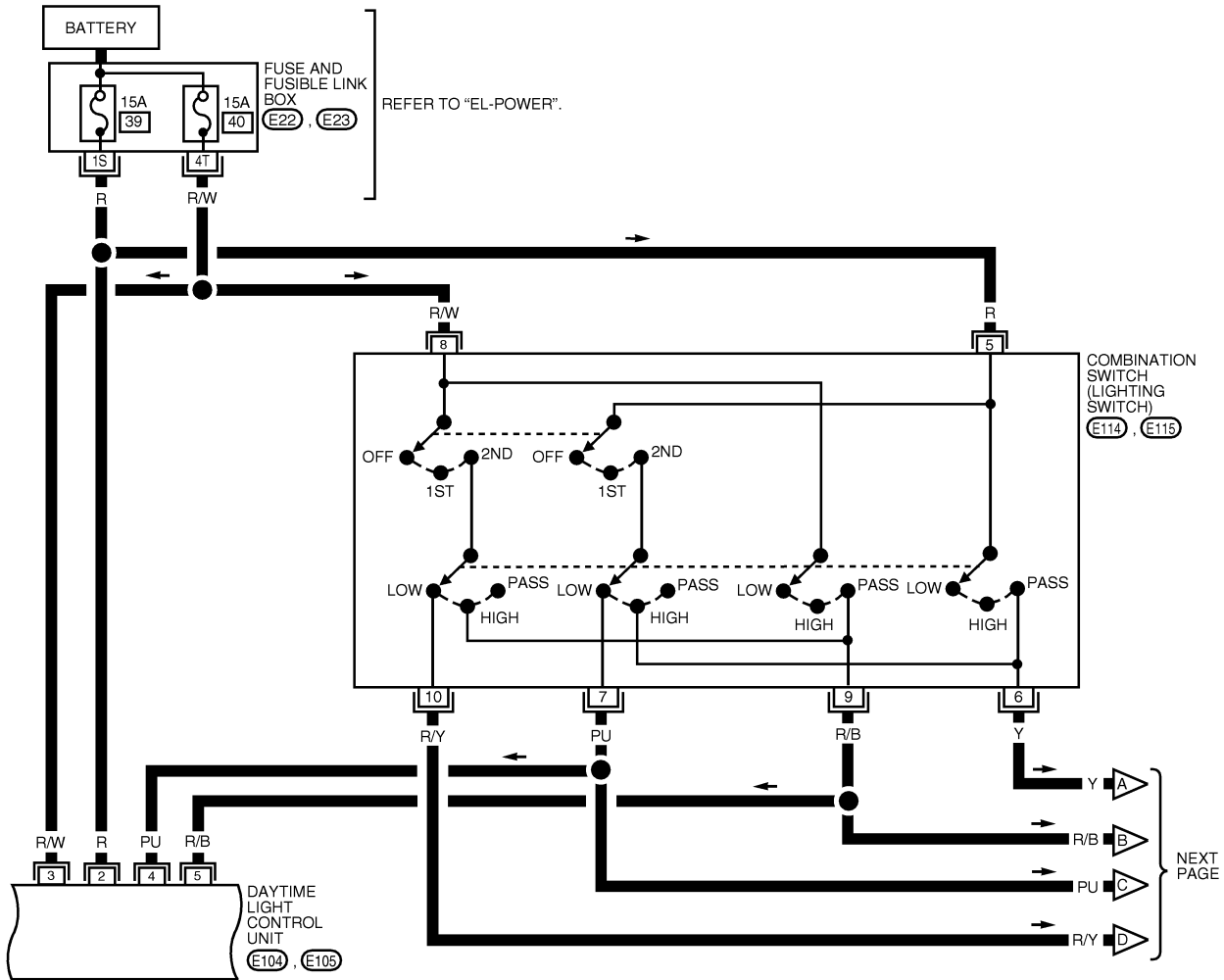
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	B/Y	IGNITION SWITCH (START)	WHEN TURNING IGNITION SWITCH TO START POSITION	BATTERY VOLTAGE
9	B	DAYTIME LIGHT CONTROL UNIT GROUND	—	—
10	LG	PARKING BRAKE SWITCH	WHEN PARKING BRAKE IS RELEASED WHEN PARKING BRAKE IS APPLIED	BATTERY VOLTAGE 1.5V OR LESS
11	Y/R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

LEL593

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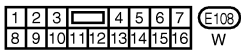
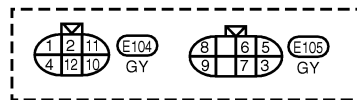
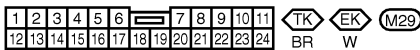
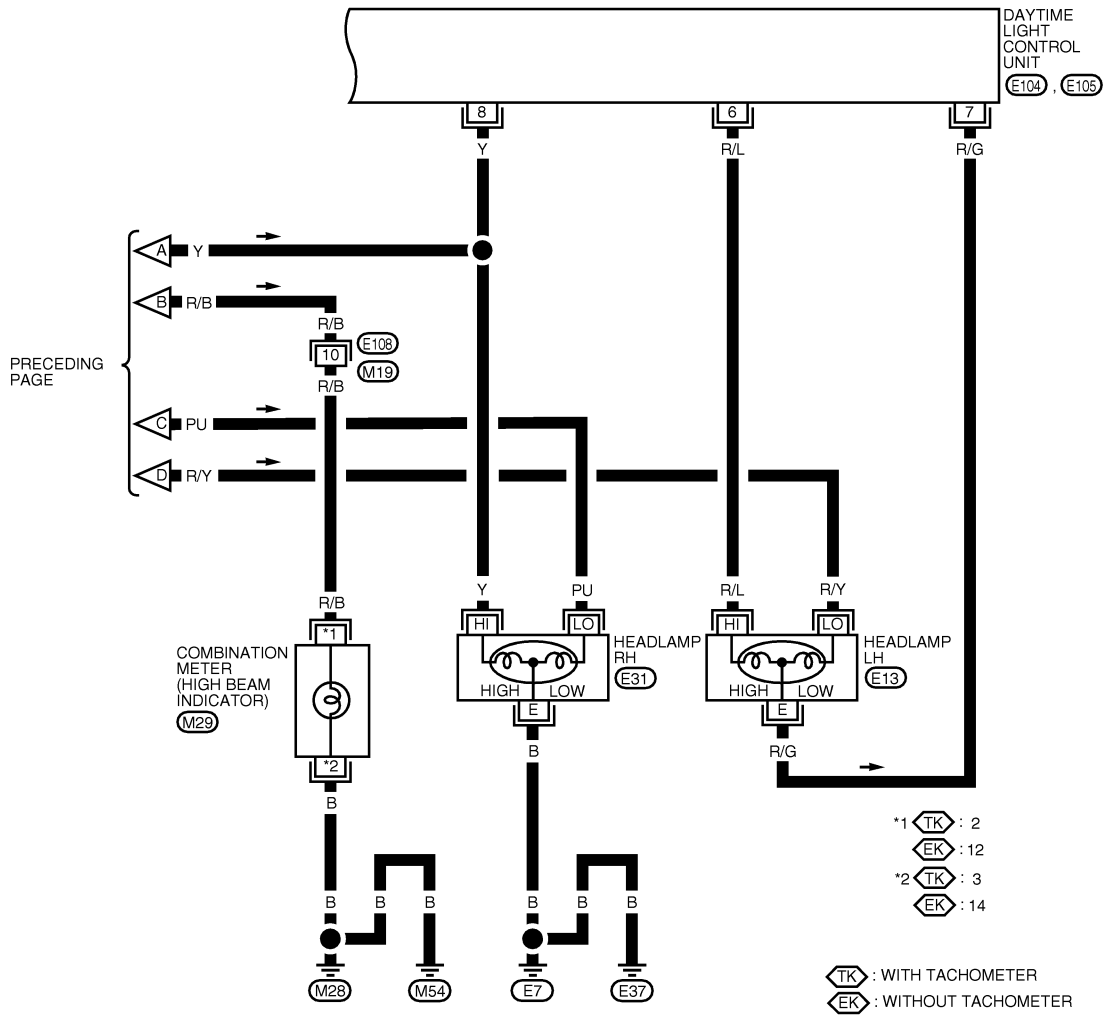
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# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

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 (Approximate 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) <b>CAUTION:</b> 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) <b>CAUTION:</b> Block wheels and ensure selector lever is in N or P position.	Approx. 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) <b>CAUTION:</b> Block wheels and ensure selector level is in N or P position.	Approx. half battery voltage
9	B	Ground	—	—

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# HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Trouble Diagnoses (Cont'd)

Terminal No.	Wire color	Item	Condition	Voltage (Approximate 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



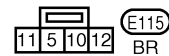
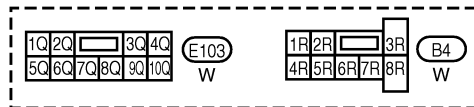
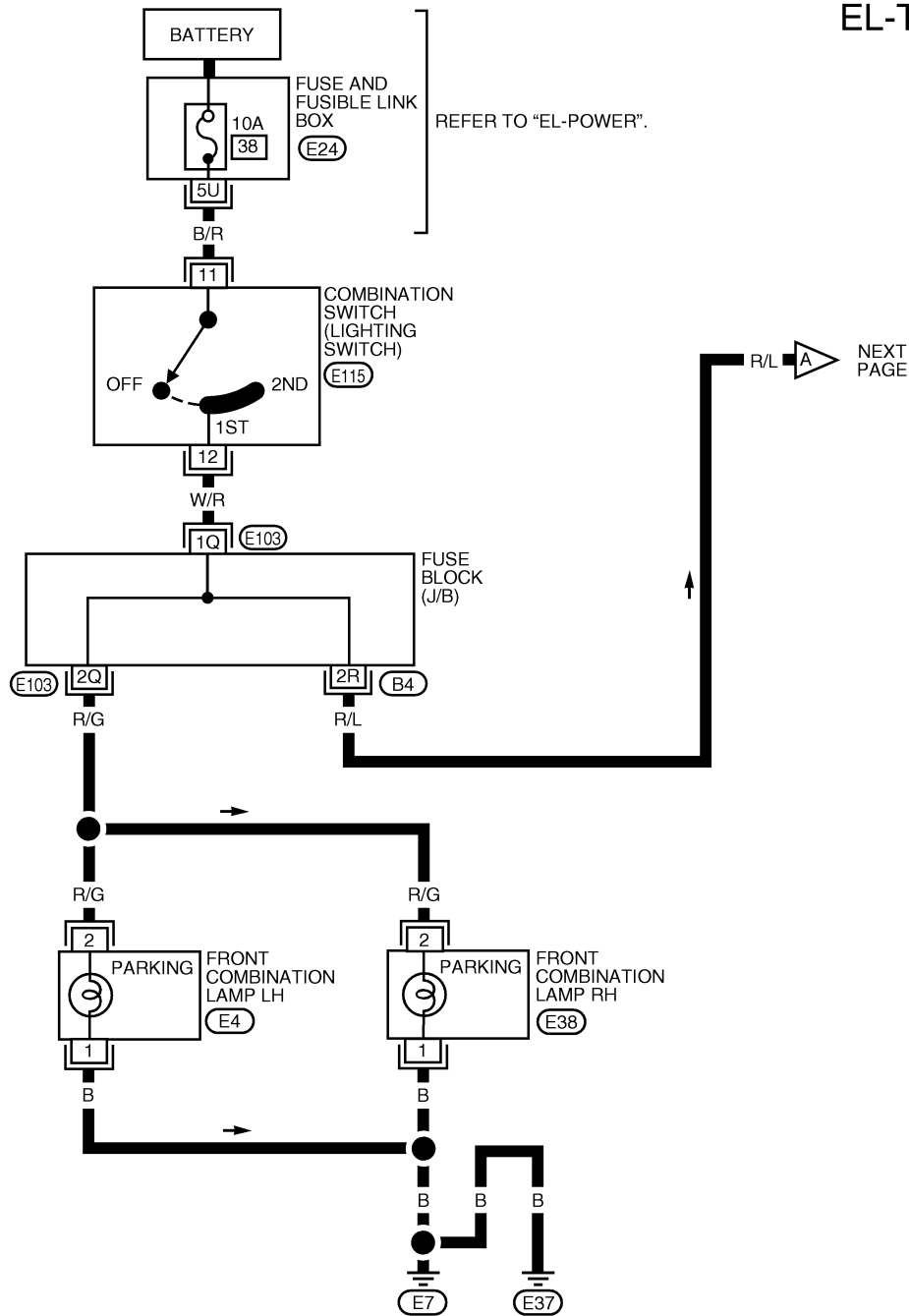
# PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L —

## Wiring Diagram — TAIL/L —

NIEL0024

EL-TAIL/L-01



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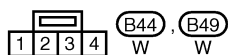
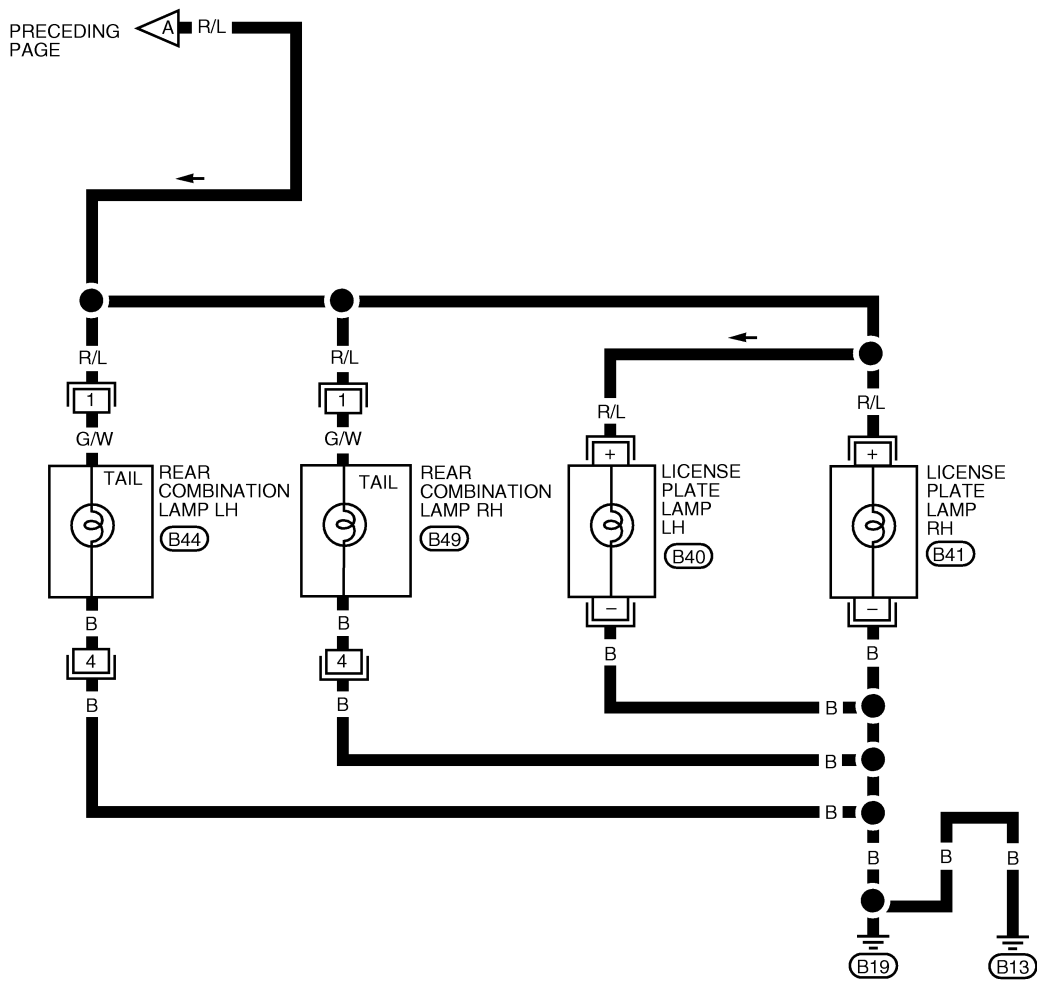
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# PARKING, LICENSE AND TAIL LAMPS

Wiring Diagram — TAIL/L — (Cont'd)

EL-TAIL/L-02



LEL329

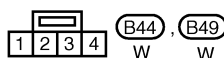
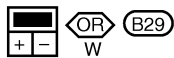
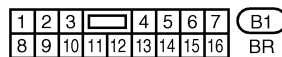
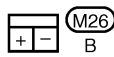
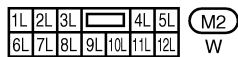
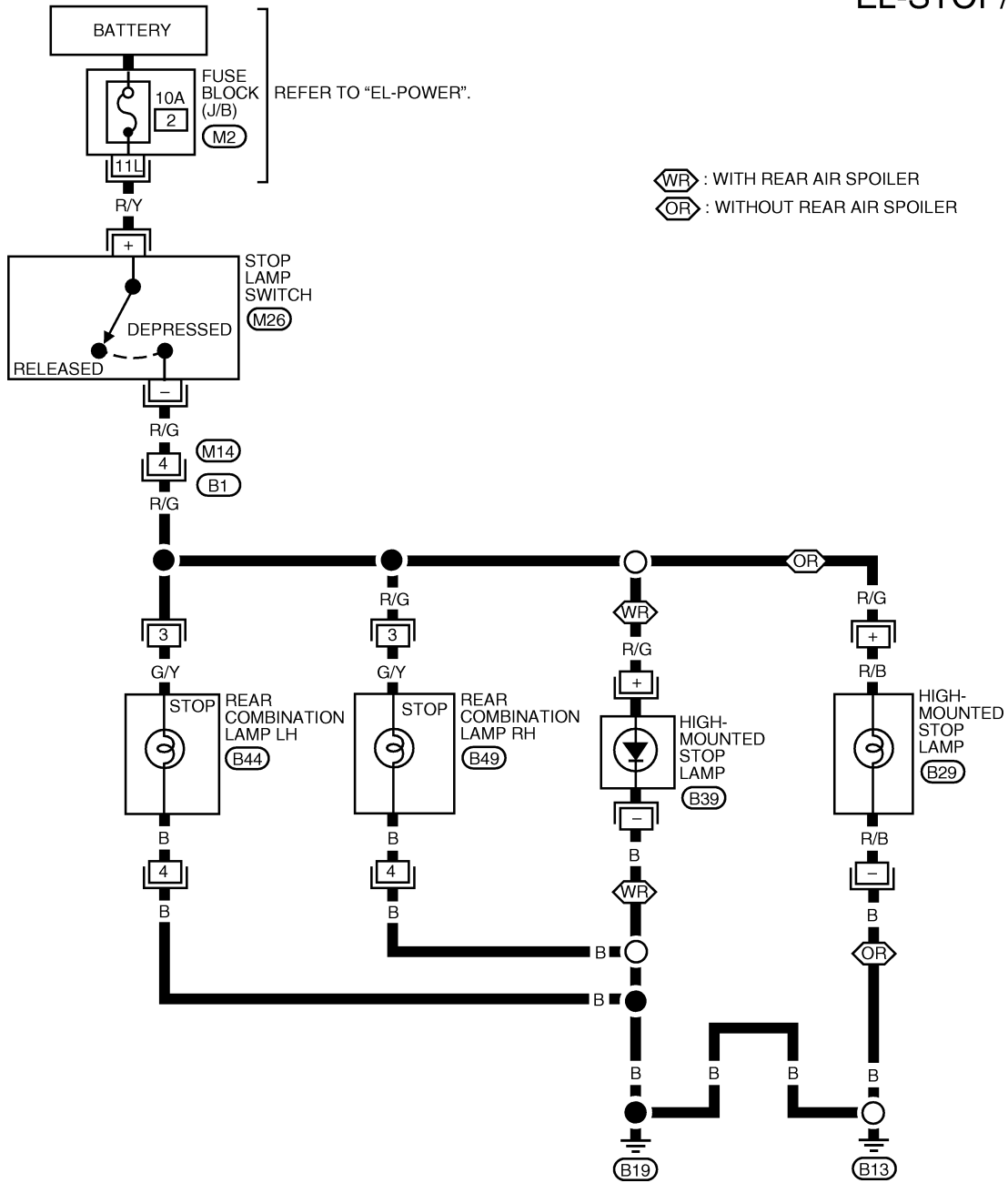
# STOP LAMP

Wiring Diagram — STOP/L —

## Wiring Diagram — STOP/L —

NIEL0272

### EL-STOP/L-01



GI  
MA  
EM  
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SC  
EL  
IDX

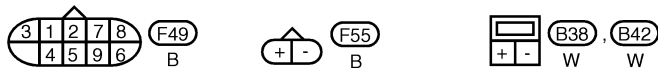
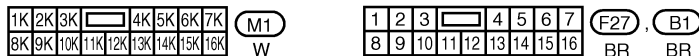
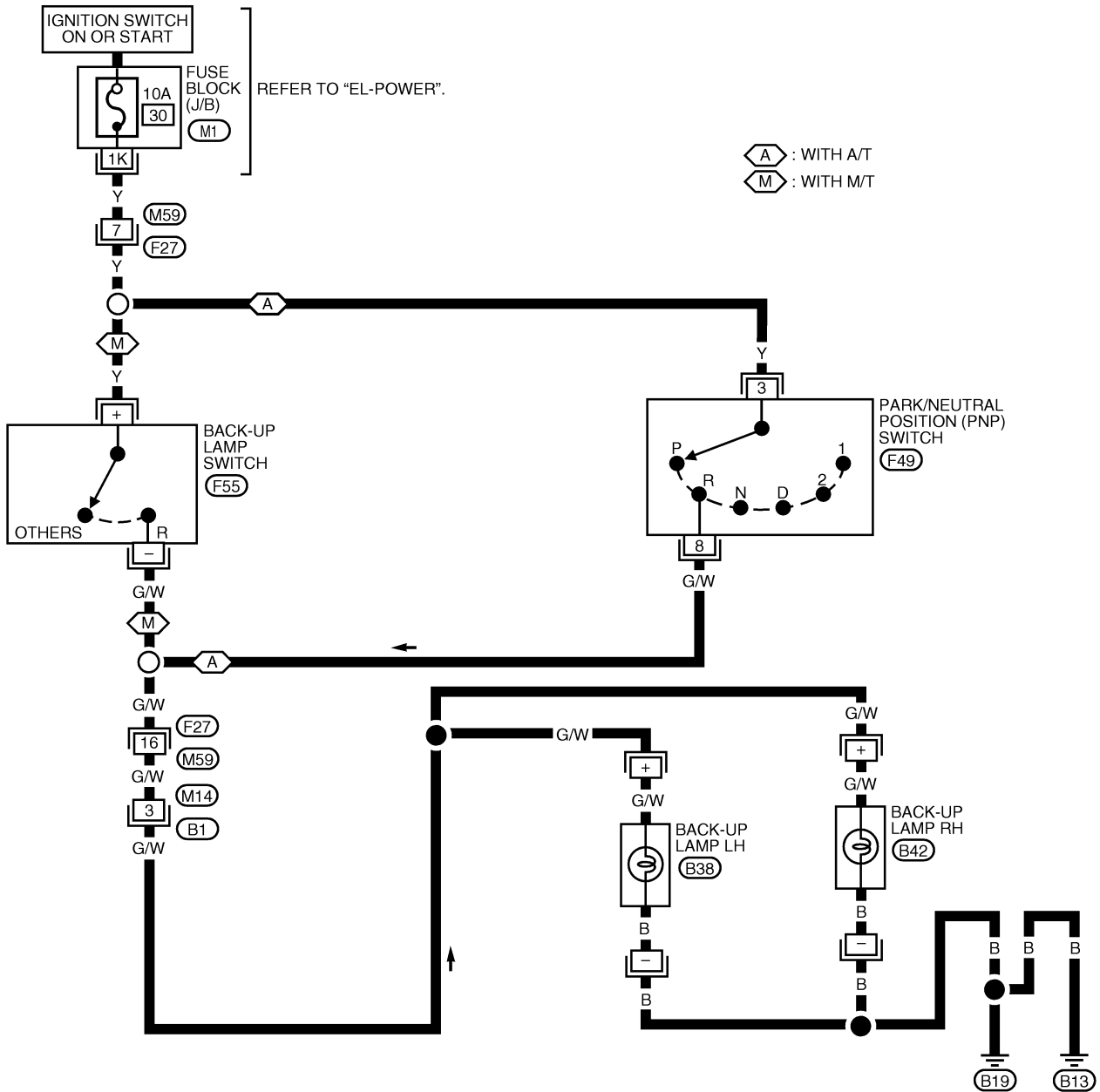
# BACK-UP LAMP

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.

GI

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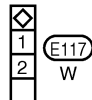
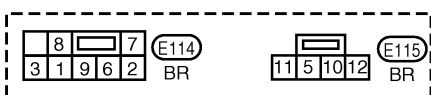
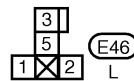
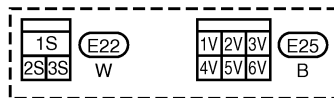
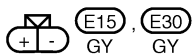
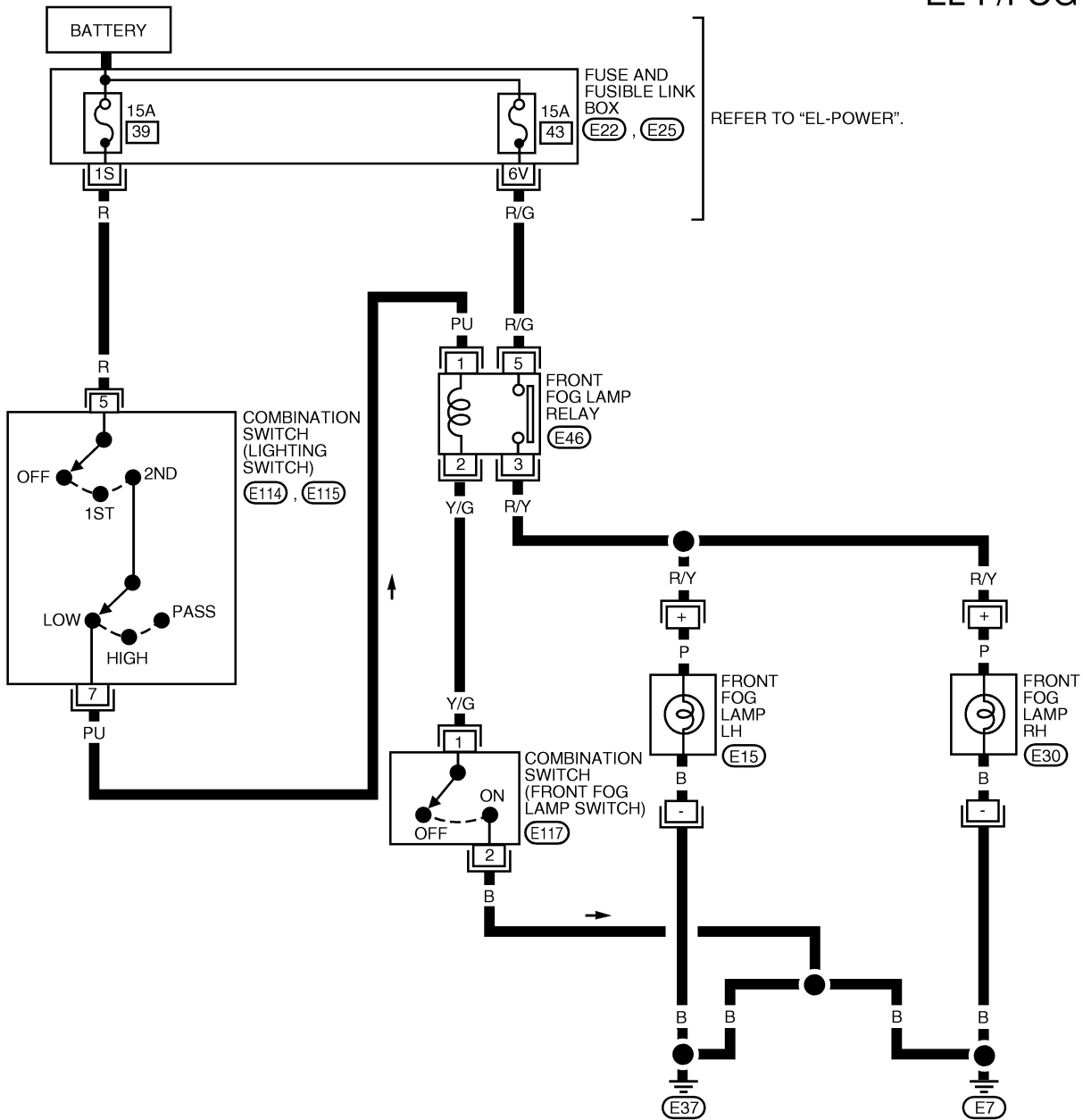
# FRONT FOG LAMP

Wiring Diagram — F/FOG —

## Wiring Diagram — F/FOG —

NIEL0028

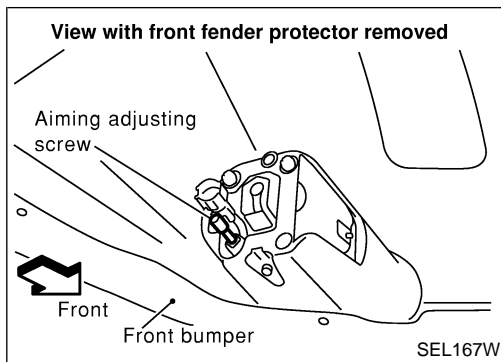
EL-F/FOG-01



WEL332

# FRONT FOG LAMP

Aiming Adjustment



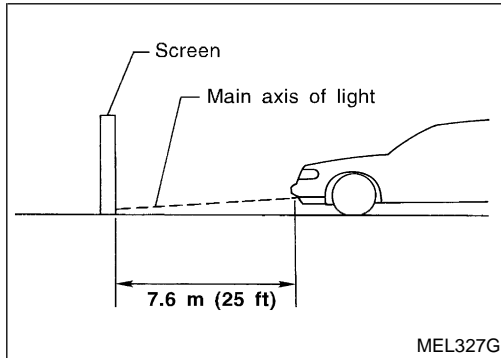
## Aiming Adjustment

=N/EL0029

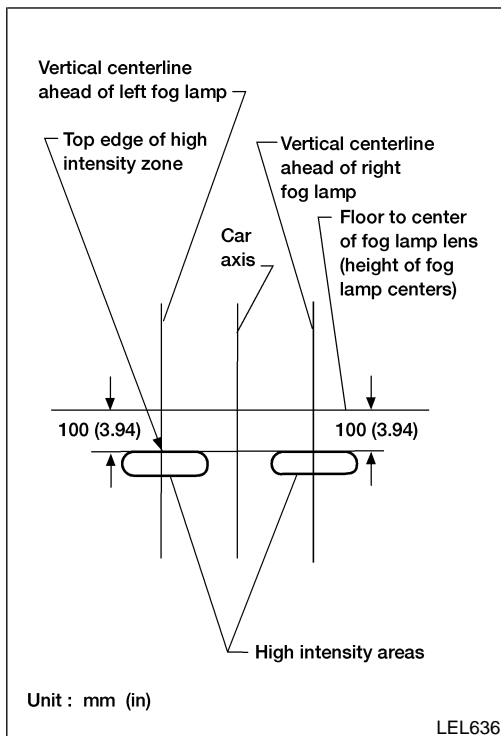
Before performing aiming adjustment, make sure of the following.

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

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



1. Set the distance between the screen and the center of the fog lamp lens as shown at left.
2. 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.

GI

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HA

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EL

IDX

# 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.

GI  
MA

## 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  
LC

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

Refer to "MULTI-REMOTE CONTROL SYSTEM", EL-229.

The multi-remote control relay is energized.

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.

EC  
FE  
CL

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.

MT

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 smart entrance control unit controls the flashing of the hazard warning lamps.

AT  
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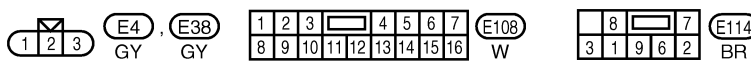
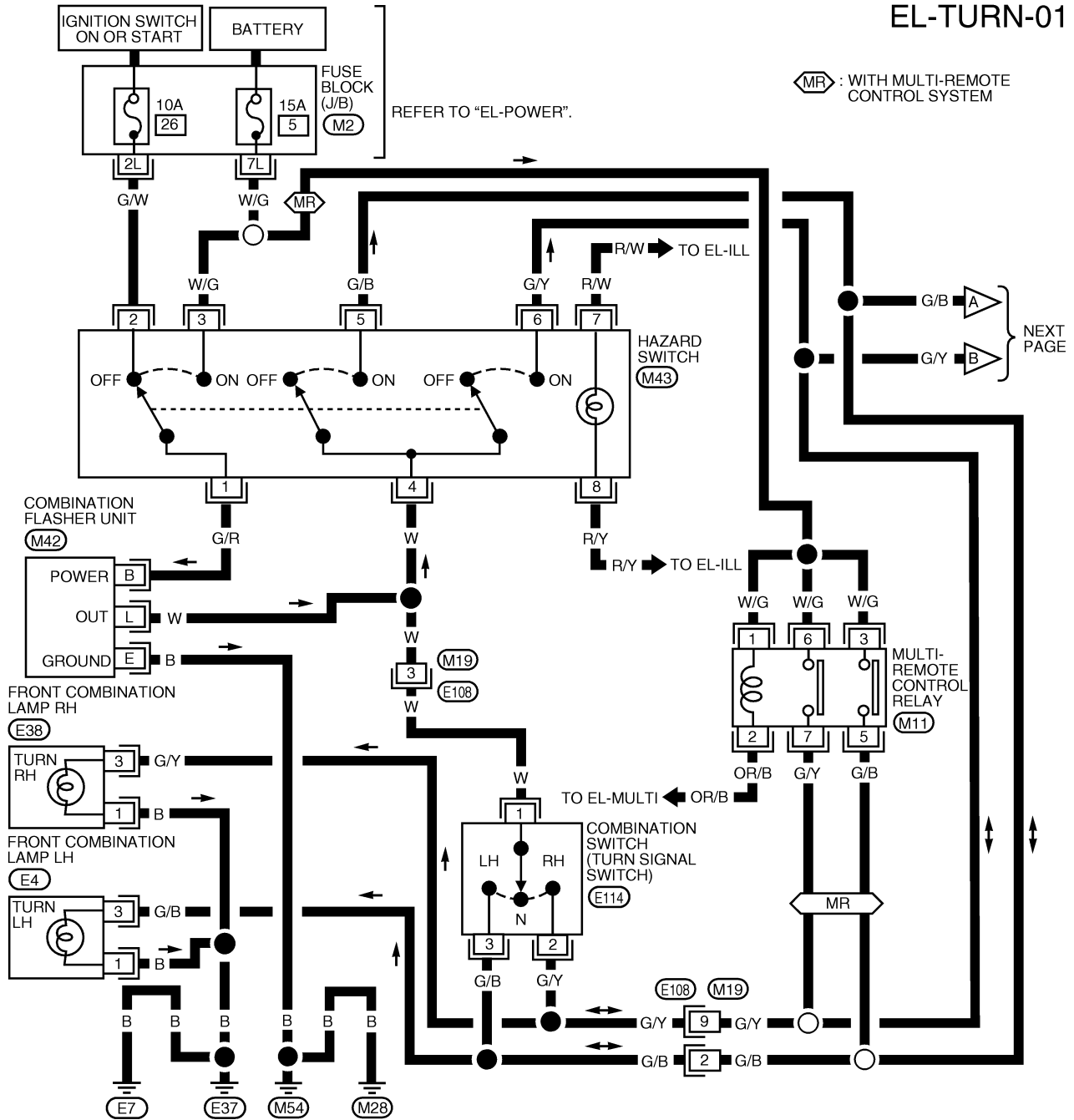
# TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN —

## Wiring Diagram — TURN —

NIEL0032

EL-TURN-01



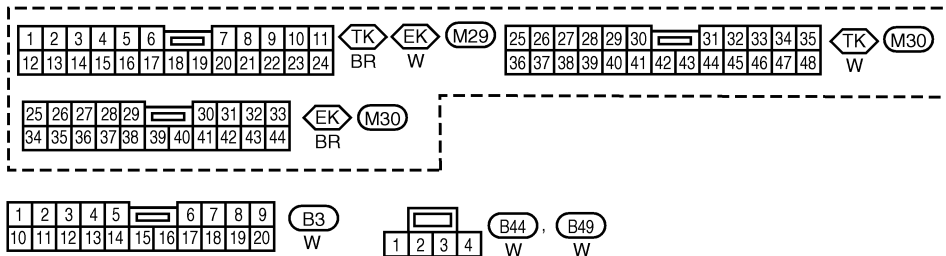
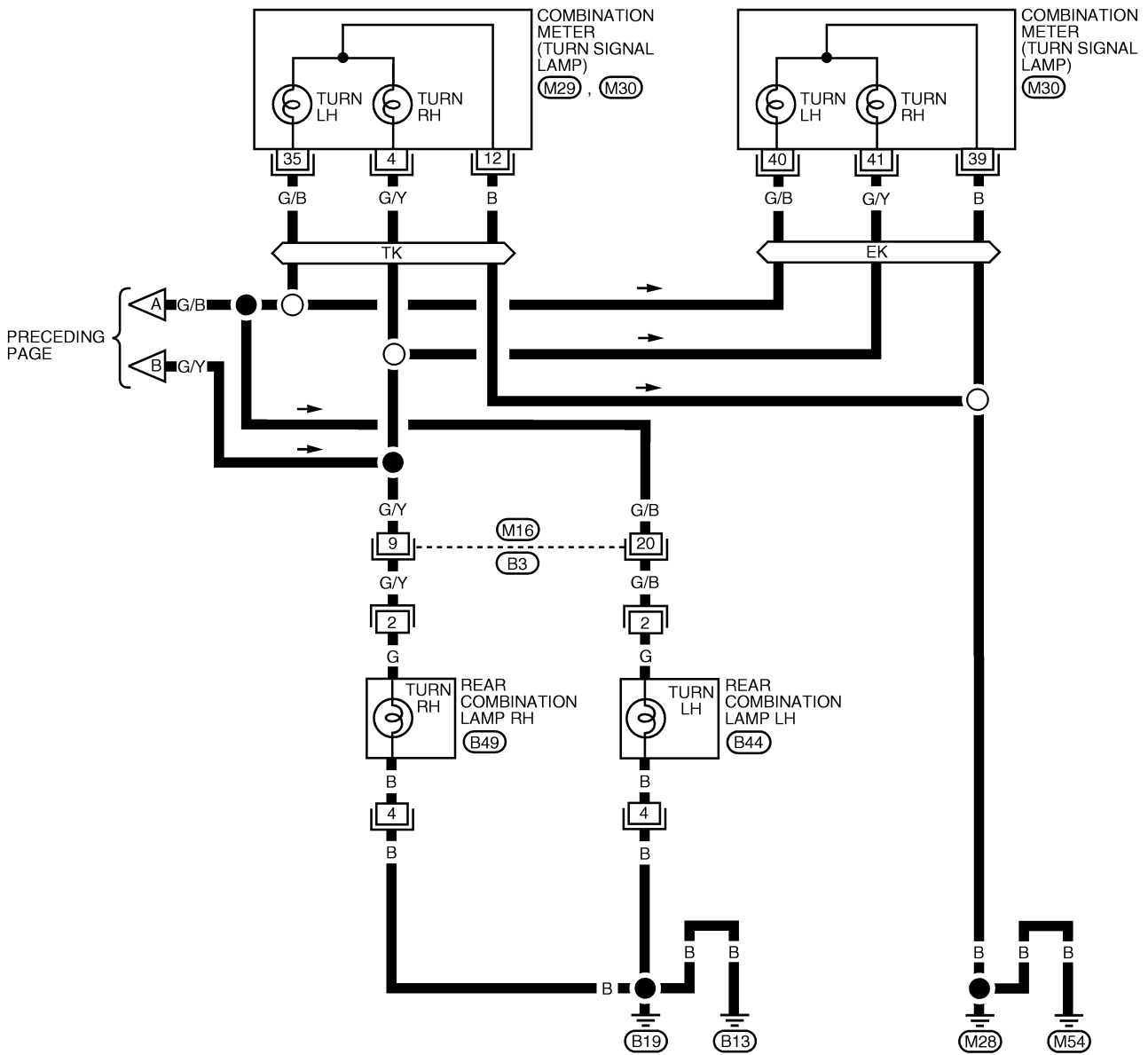
WEL333

# TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram — TURN — (Cont'd)

EL-TURN-02

TK : WITH TACHOMETER  
 EK : WITHOUT TACHOMETER



GI  
 MA  
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 BR  
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 SC  
 EL  
 IDX

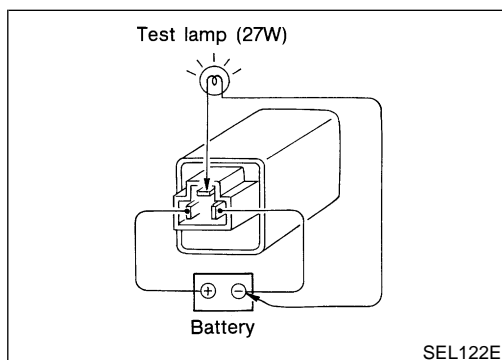
# TURN SIGNAL AND HAZARD WARNING LAMPS

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



## 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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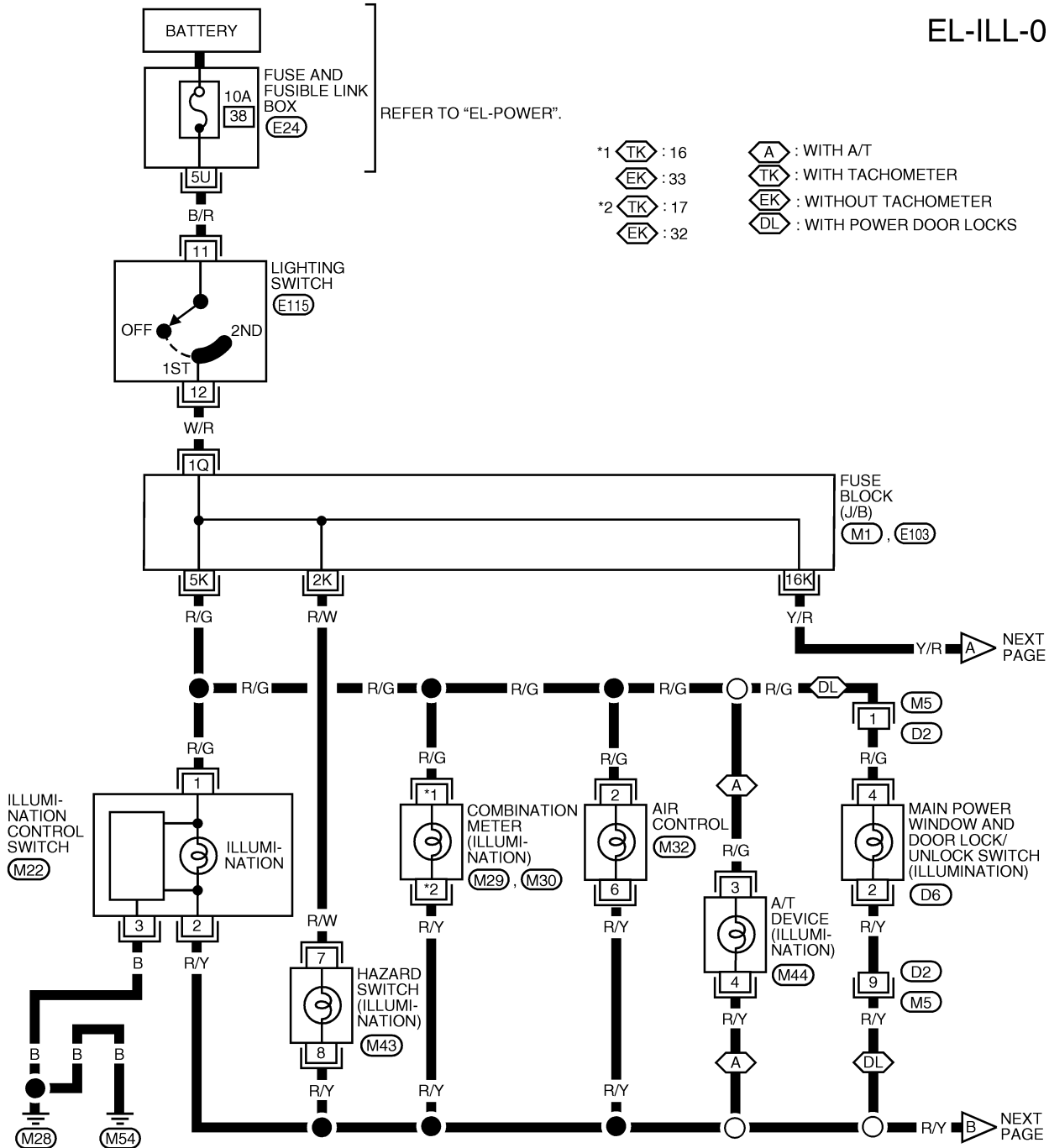
# ILLUMINATION

Wiring Diagram — ILL —

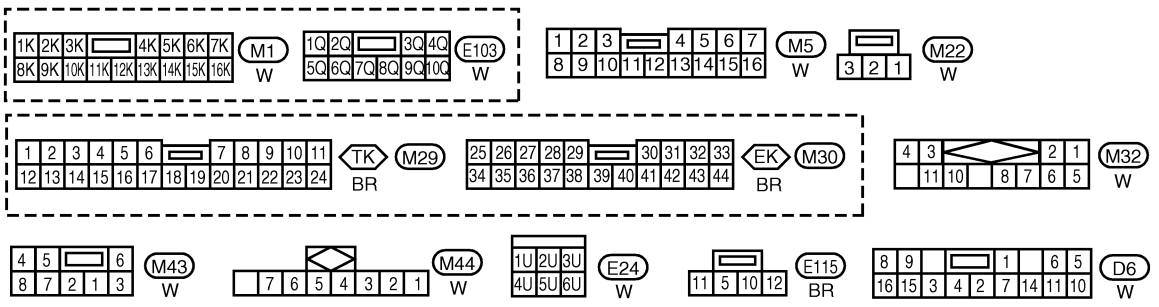
## Wiring Diagram — ILL —

NIEL0037

EL-ILL-01



- \*1 TK : 16
- EK : 33
- \*2 TK : 17
- EK : 32
- A : WITH A/T
- TK : WITH TACHOMETER
- EK : WITHOUT TACHOMETER
- DL : WITH POWER DOOR LOCKS



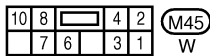
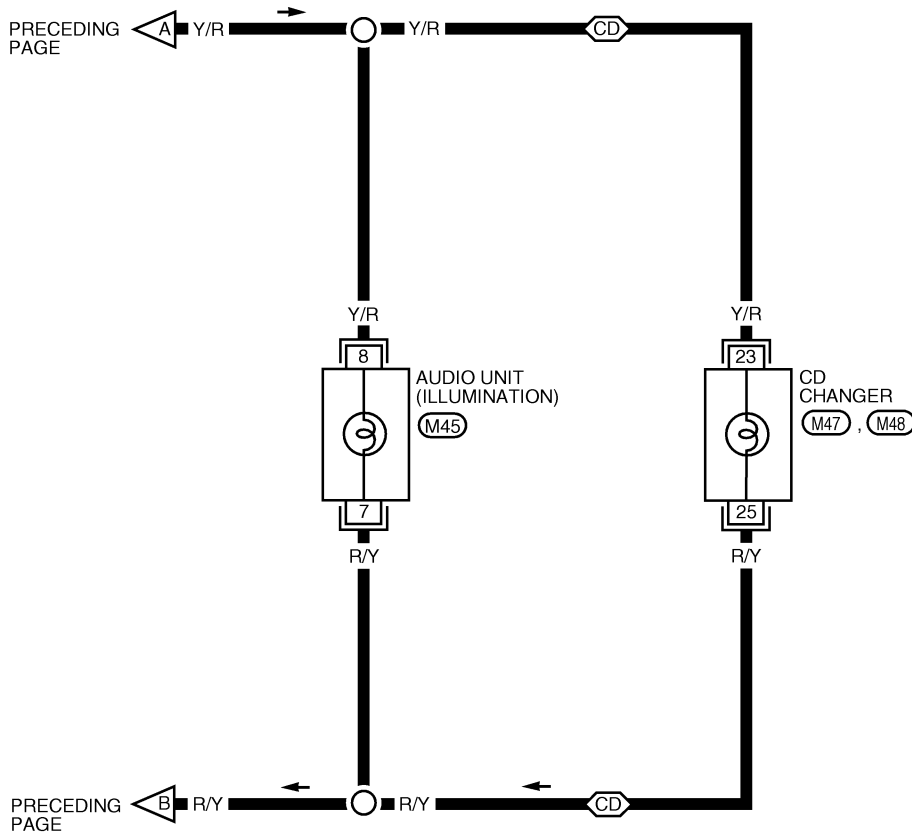
WEL335

# ILLUMINATION

Wiring Diagram — ILL — (Cont'd)

EL-ILL-02

 : WITH CD CHANGER



GI

MA

EM

LC

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MT

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AX

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BR

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RS

BT

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**EL**

IDX

LEL336

# 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 in the same manner as the front door switch LH.

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’s 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’s door is opened and then closed while key is out of the ignition key cylinder. (However, if the driver’s door is closed with the key inserted in the ignition key cylinder after the driver’s door is opened with the key removed, the timer is operated.)

The timer is canceled when:

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

## 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’s 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

GI

MA

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NIEL0165S1203

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NIEL0165S1204

RS

NIEL0165S1205

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HA

SC

NIEL0165S13

EL

NIEL0165S1301

IDX

# 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 in the same manner as the front door switch LH.

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's 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's door is opened and then closed while key is out of the ignition key cylinder. (However, if the driver's door is closed with the key inserted in the ignition key cylinder after the driver's door is opened with the key removed, the timer is operated.)

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's door is locked,
- driver's 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's 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 —

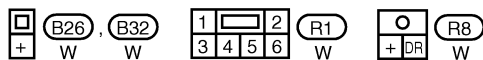
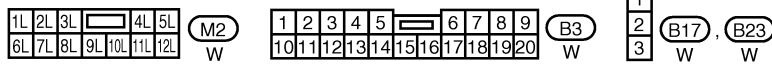
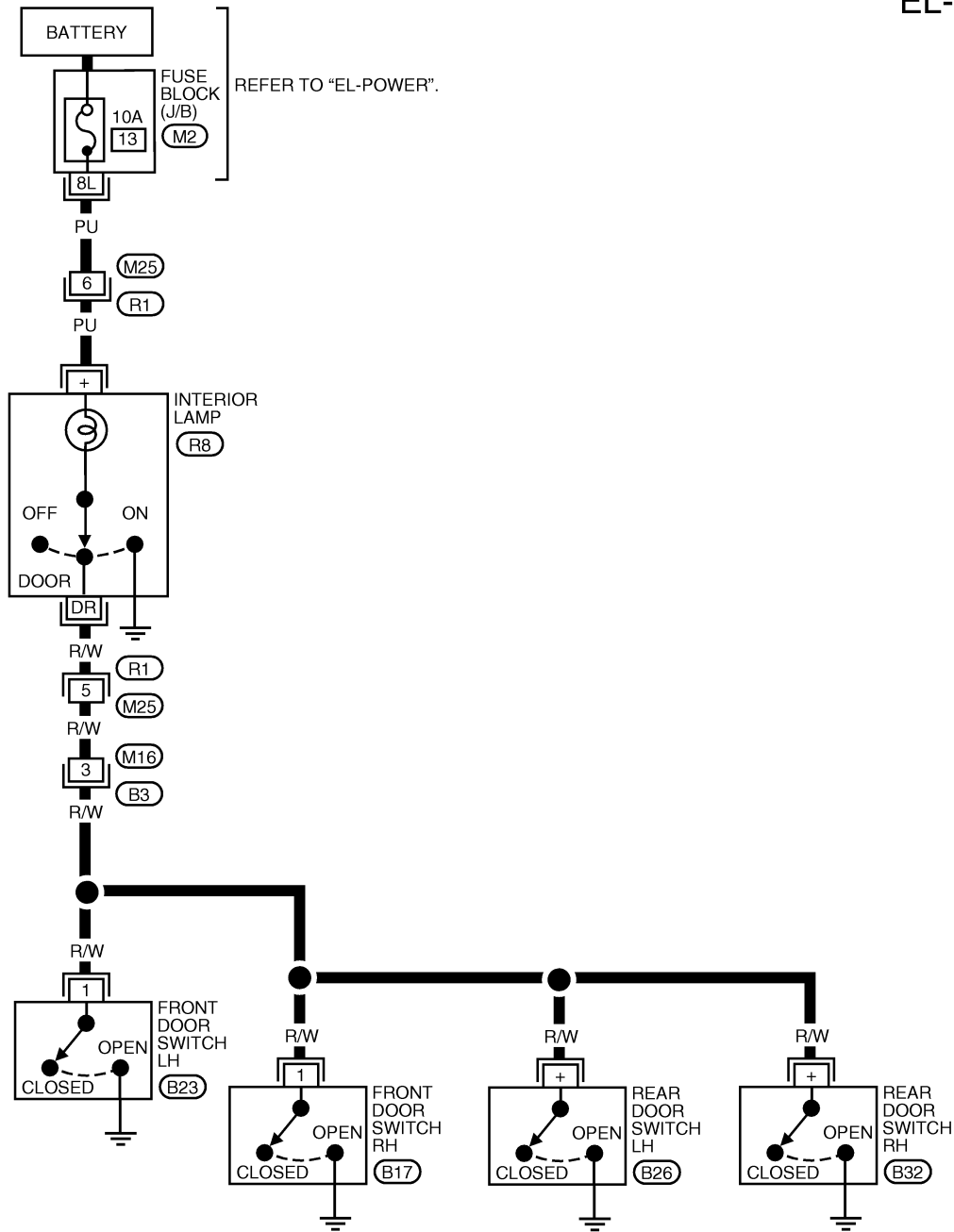
## Wiring Diagram — INT/L —

NIEL0163

NIEL0163S01

WITHOUT POWER DOOR LOCKS

EL-INT/L-01



LEL341

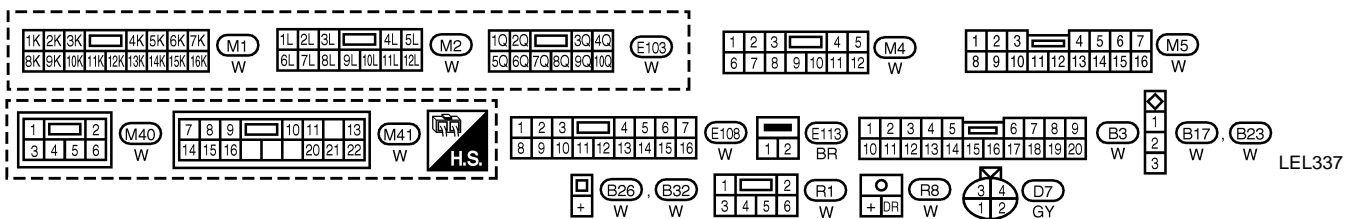
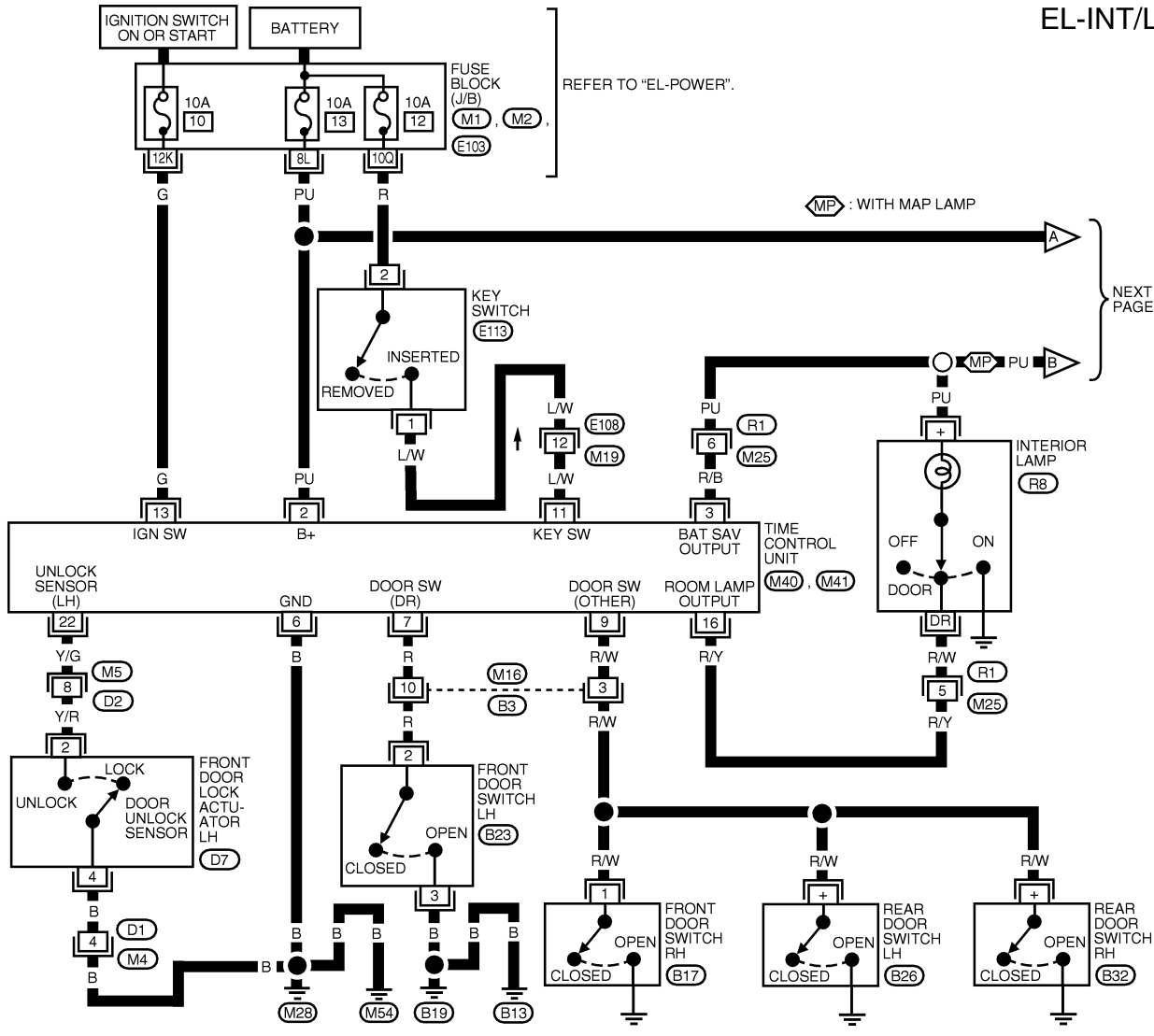
# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

## WITH POWER DOOR LOCKS AND WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0163S02

EL-INT/L-02



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	—	—
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	12V
22	Y/G	DOOR UNLOCK SENSOR LH	DRIVER DOOR: LOCKED DRIVER DOOR: UNLOCKED	5V 0V

LEL595

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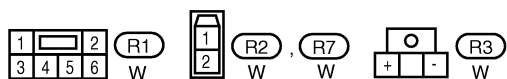
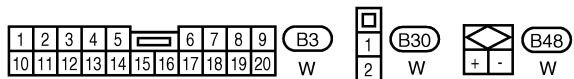
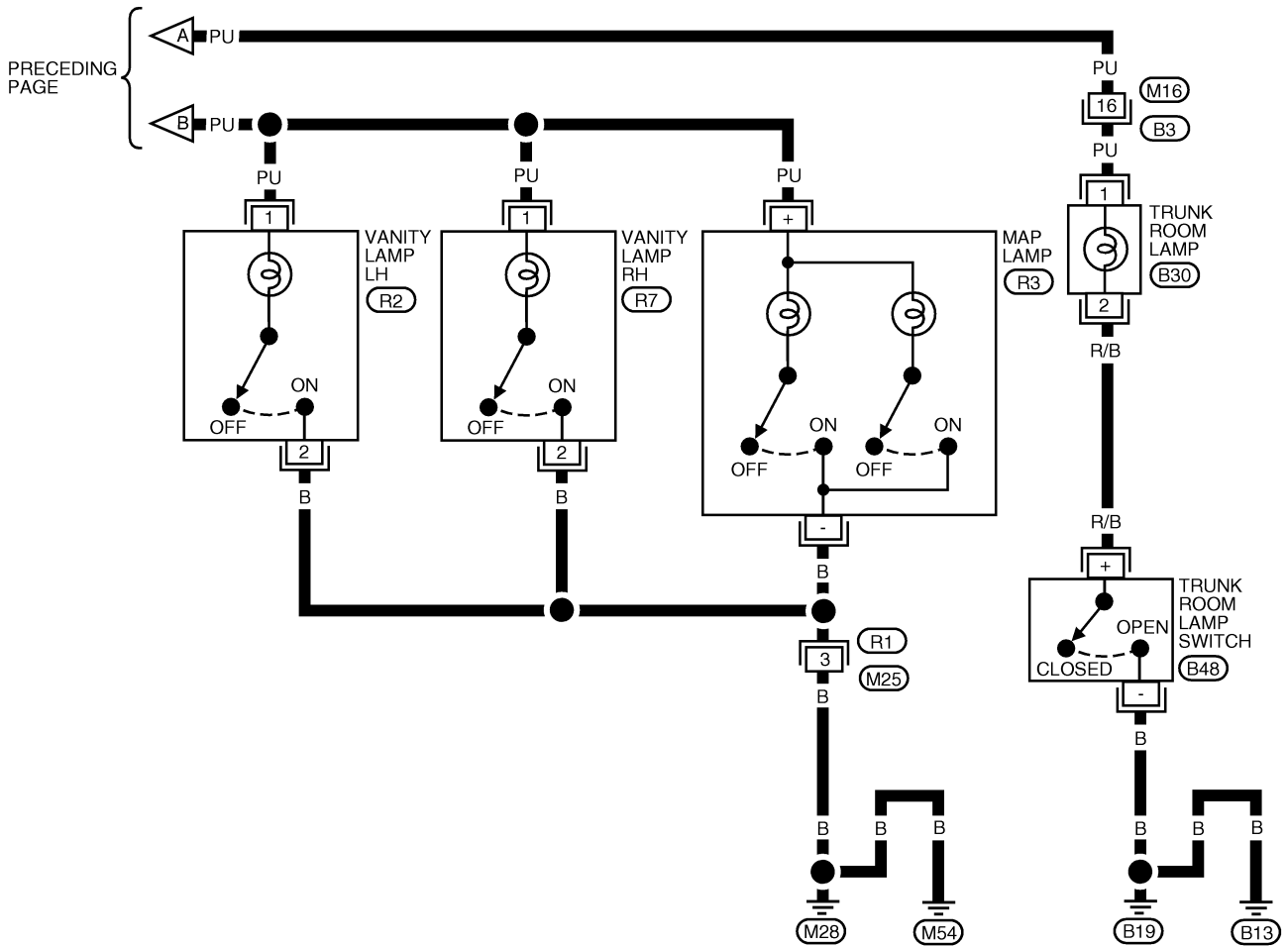
EL

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# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-03



LEL338

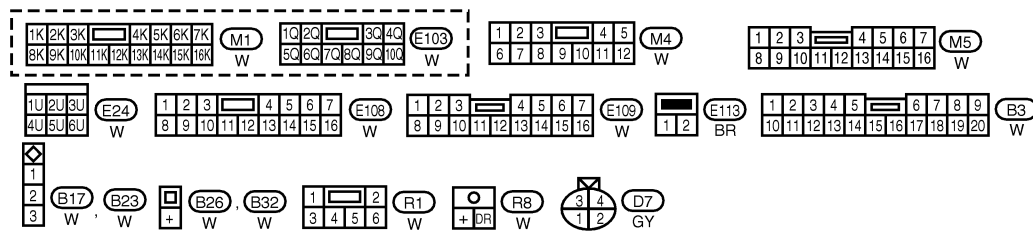
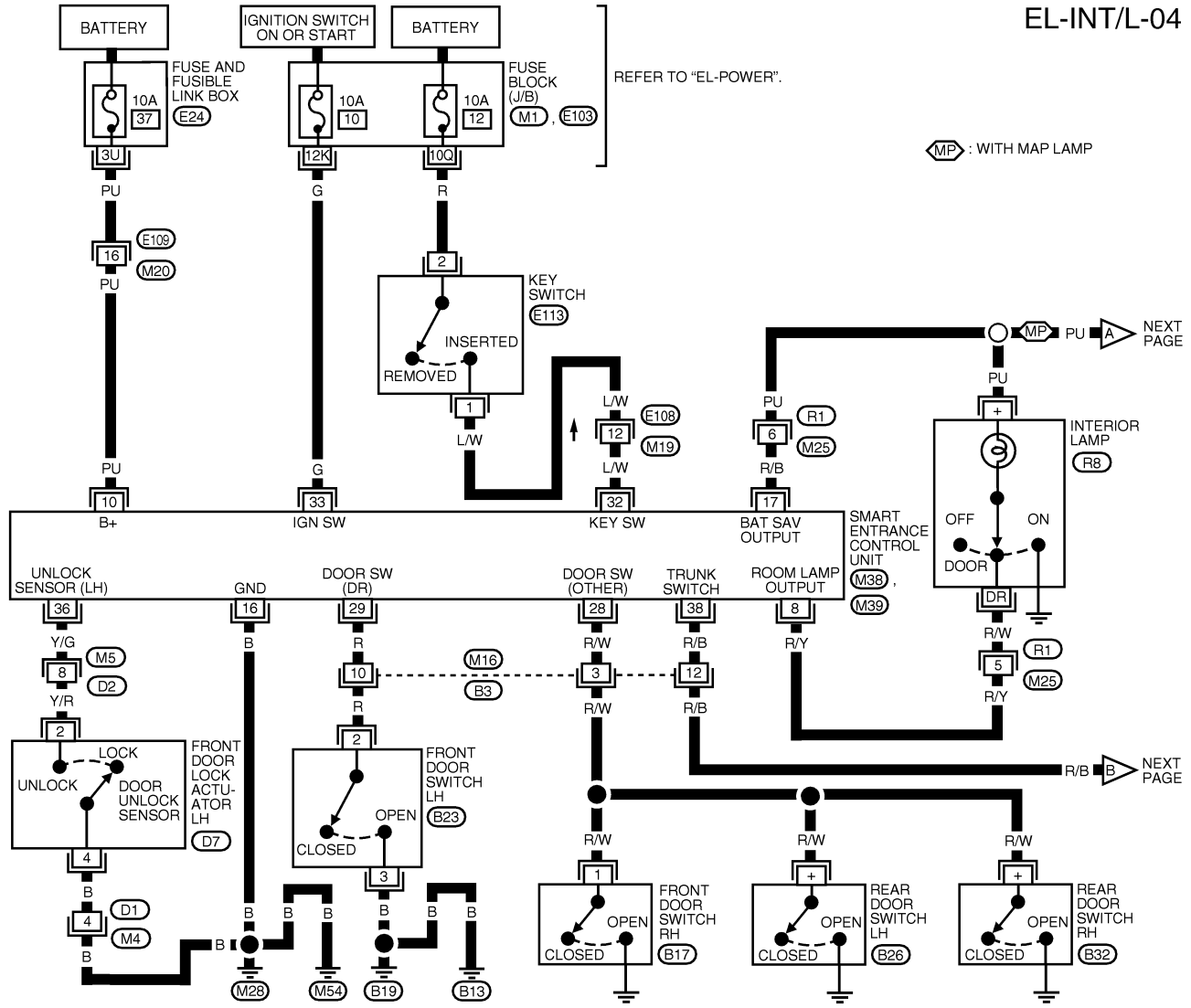
# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

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

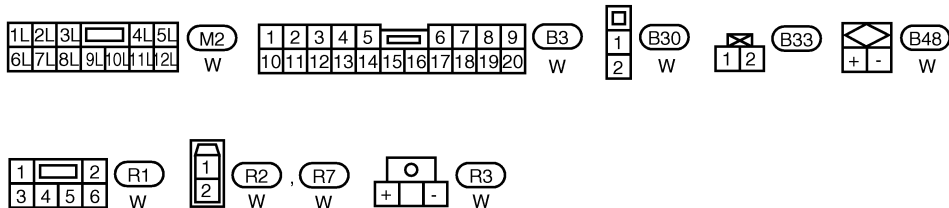
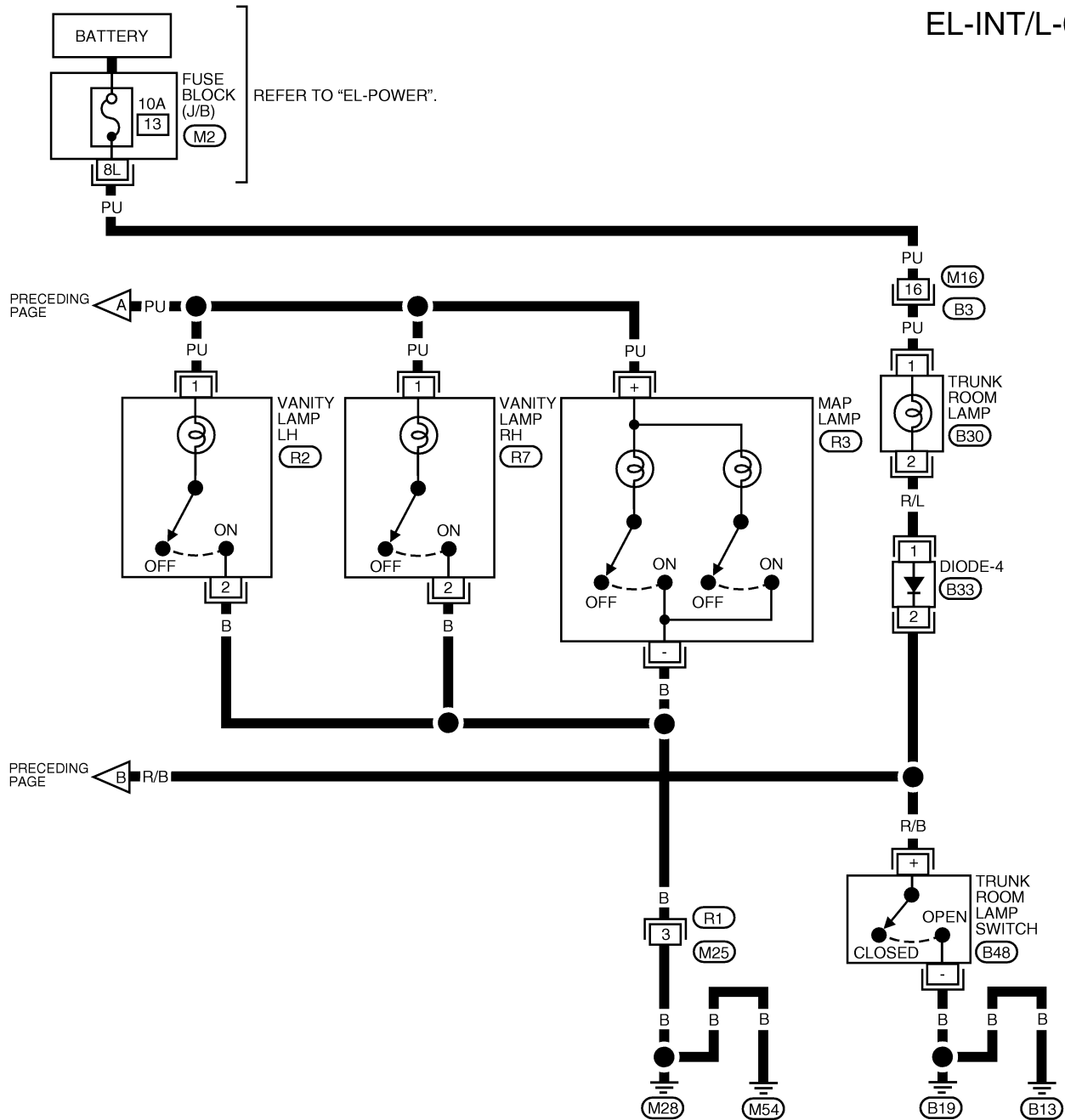
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
8	R/Y	INTERIOR LAMP	LAMP SWITCH IN DOOR POSITION	12V
10	PU	POWER SOURCE (FUSE)		12V
16	B	GROUND		
17	R/B	BATTERY SAVER (INTERIOR LAMP)	BATTERY SAVER DOES NOT OPERATE	12V
			BATTERY SAVER OPERATES	0V
28	R/W	OTHER DOOR SWITCHES	OFF (CLOSED)	5V
			ON (OPEN)	0V
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

# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

Wiring Diagram — INT/L — (Cont'd)

EL-INT/L-05

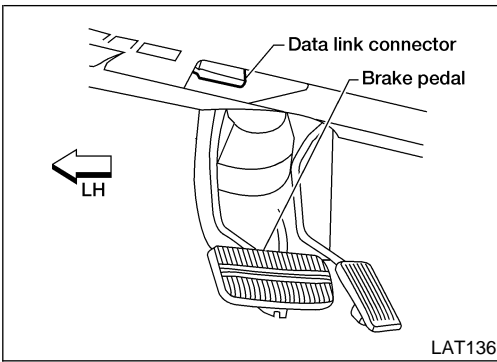


WEL340



# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

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



LAT136

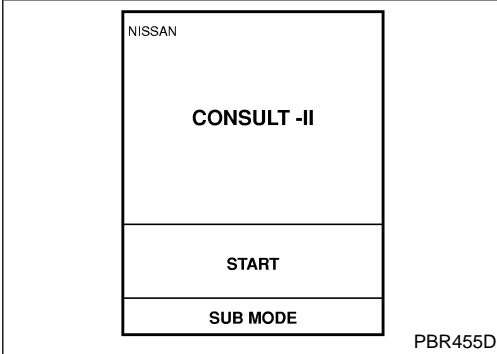
## CONSULT-II Inspection Procedure (With Multi-Remote Control System)

=NIEL0213

NIEL0213S01

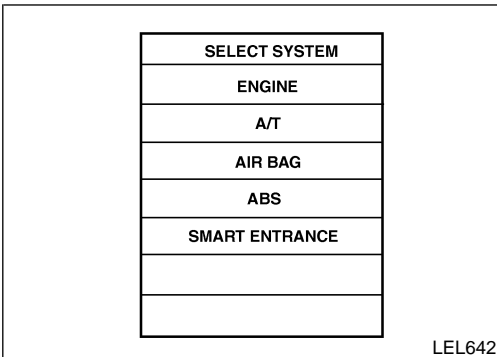
### “INT LAMP”/“BATTERY SAVER”

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



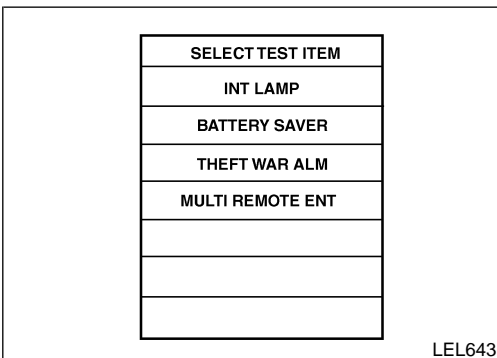
PBR455D

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



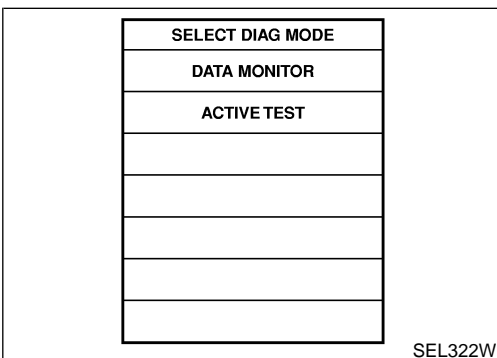
LEL642

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

### “INT LAMP”

NIEL0214S01

#### Data Monitor

NIEL0214S0101

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"><li>● Interior lamp turns on when the switch is in DOOR or ON. (Smart entrance control unit supplies power and ground to interior lamp.)</li><li>● 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.)</li></ul>

### “BATTERY SAVER”

NIEL0214S02

#### Data Monitor

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 lamps operations. When touch “ON” on CONSULT-II screen.</p> <ul style="list-style-type: none"><li>● Interior lamp turns on when the switch is in ON. (Smart entrance control unit supplies power to interior lamp.)</li><li>● 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.)</li></ul>

# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

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

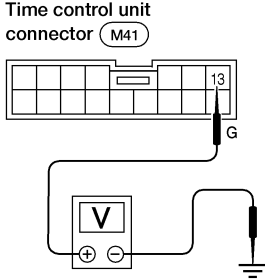


## Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks and Without Multi-Remote Control System)

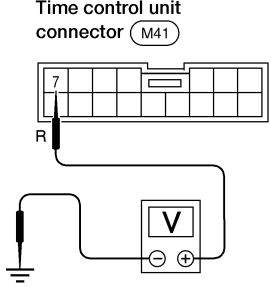



=NIEL0215

### DIAGNOSTIC PROCEDURE 1

NIEL0215S01

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

<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>																
<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="flex-grow: 1;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">Terminals</th> <th colspan="3">Ignition switch position</th> </tr> <tr> <th>(+)</th> <th>(-)</th> <th>OFF</th> <th>ACC</th> <th>ON</th> </tr> </thead> <tbody> <tr> <td>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>			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													
<b>OK or NG</b>																	
OK	▶	GO TO 2.															
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse</li> </ul>															

<b>2</b>	<b>CHECK FRONT DOOR SWITCH LH INPUT SIGNAL</b>	
<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="flex-grow: 1;"> <p><b>Voltage [V]:</b></p> <p style="padding-left: 20px;">Condition of driver's door: <b>CLOSED</b> Approx. 5</p> <p style="padding-left: 20px;">Condition of driver's door: <b>OPENED</b> 0</p> </div> </div> <p style="text-align: right;">LEL442</p>		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	GO TO 3.

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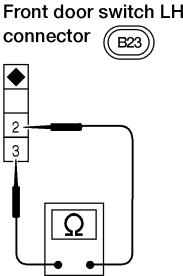


SC

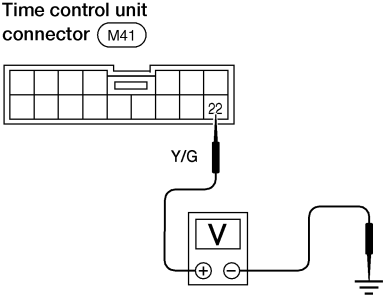



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# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

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

<b>3</b>	<b>CHECK FRONT DOOR SWITCH LH</b>	<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;">    </div> <div style="text-align: center;"> <p><b>Continuity:</b>                      Door switch is pushed. <b>No</b>                      Door switch is released. <b>Yes</b></p> </div> </div> <p style="text-align: right;">LEL443</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Front door switch LH ground circuit and condition</li> <li>● Harness for open or short between time control unit and front door switch LH</li> </ul>		
NG	▶	<p>Replace front door switch LH.</p>		

<b>4</b>	<b>CHECK DOOR UNLOCK SENSOR LH INPUT SIGNAL</b>	<p>Check voltage between time control unit harness connector terminal 22 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Time control unit connector (M41)</p>  </div> <div style="text-align: center;">      </div> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front 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> <p style="text-align: right;">LEL444</p> <p style="text-align: center;"><b>OK or NG</b></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><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door unlock sensor LH ground circuit</li> <li>● Harness for open or short between time control unit and door unlock sensor LH</li> </ul>
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**

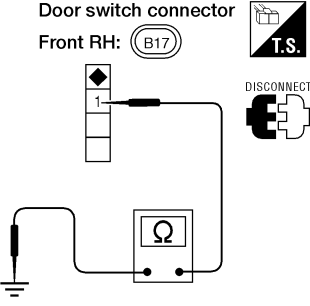
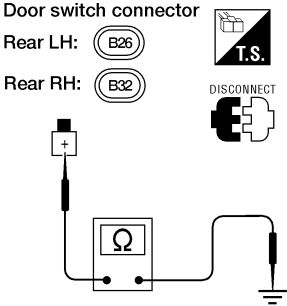
OK	▶	GO TO 8.
NG	▶	GO TO 7.

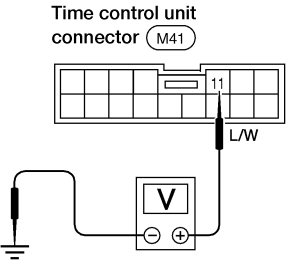
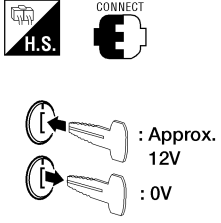
**EL**

IDX

# 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)

<b>7</b>	<b>CHECK DOOR SWITCHES</b>	<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																
<b>OK or NG</b>		LEL447																	
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door switch ground circuit or door switch ground condition</li> <li>● Harness for open or short between time control unit and door switch</li> </ul>																	
NG	▶	Replace door switch.																	

<b>8</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	<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><b>H.S.</b> <b>CONNECT</b></p>  <p>: Approx. 12V : 0V</p> </div> </div>			<p><b>Voltage [V]:</b>  <b>Condition of key switch: Key is inserted.</b>  <b>Approx. 12</b>  <b>Condition of key switch: Key is removed.</b>  <b>0</b></p>	
<b>OK or NG</b>		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	<b>CHECK KEY SWITCH</b>	
<p>Check continuity between terminals 1 and 2.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div> <p>Key switch connector (E113)</p> </div> <div> </div> <div> <p><b>Continuity:</b>          Condition of key switch: Key is inserted.          Yes          Condition of key switch: Key is removed.          No</p> </div> </div> <p style="text-align: right;">LEL449</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between time control unit and key switch</li> </ul>
NG	▶	Replace key switch.

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)





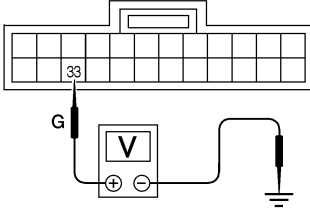
## Trouble Diagnoses for Interior Lamp Timer (With Multi-Remote Control System)

=NIEL0252

### DIAGNOSTIC PROCEDURE 1

NIEL0252S01

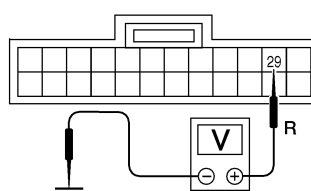



**SYMPTOM: Interior lamp timer does not operate properly.**

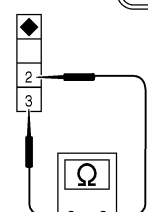


<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>																
<p> <b>With CONSULT-II</b> Check ignition switch ON signal ("IGN ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>																	
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th>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



# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

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

<b>2</b>	<b>CHECK DOOR SWITCH INPUT SIGNAL</b>	<p><b>With CONSULT-II</b>                  Check driver door switch signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">DATA MONITOR</th> </tr> <tr> <th style="text-align: center;">MONITOR</th> <th style="text-align: center;"> </th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">DOOR SW-DR</td> <td style="text-align: center;">OFF</td> </tr> </tbody> </table> <p style="margin-left: 200px;">When driver's door is open:  <b>DOOR SW-DR ON</b></p> <p style="margin-left: 200px;">When driver's door is closed:  <b>DOOR SW-DR OFF</b></p> <p style="text-align: right; font-size: small;">SEL319W</p>	DATA MONITOR		MONITOR		DOOR SW-DR	OFF	GI MA EM LC EC
DATA MONITOR									
MONITOR									
DOOR SW-DR	OFF								
		<p><b>Without CONSULT-II</b>                  Check voltage between smart entrance control unit harness connector terminal 29 and ground.</p> <div style="display: flex; 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;">                   CONNECT                    OFF   </div> <div style="text-align: center;"> <p><b>Voltage [V]:</b></p> <p>Condition of driver's door: <b>CLOSED</b>                      Approx. 5</p> <p>Condition of driver's door: <b>OPENED</b>                      0</p> <p style="font-size: small;">LEL451</p> </div> </div> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>	FE CL MT AT AX						
OK	▶	GO TO 4.							
NG	▶	GO TO 3.							

<b>3</b>	<b>CHECK FRONT DOOR SWITCH LH</b>	<p>Check continuity between front door switch LH terminals 2 and 3.</p> <div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;"> <p>Front door switch LH connector (E23)</p>  </div> <div style="text-align: center;">                   DISCONNECT   </div> <div style="text-align: center;"> <p><b>Continuity:</b></p> <p>Door switch is pushed.                      No</p> <p>Door switch is released.                      Yes</p> <p style="font-size: small;">LEL443</p> </div> </div> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>	ST RS BT HA SC
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Front door switch LH ground circuit and condition</li> <li>● Harness for open or short between smart entrance control unit and front door switch LH</li> </ul>	EL
NG	▶	Replace front door switch LH.	IDX

# INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS

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

<b>4</b>	<b>CHECK DOOR UNLOCK SENSOR LH INPUT SIGNAL</b>																
<p> <b>With CONSULT-II</b> 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: <b>LOCK SIG DR OFF</b></p> <p>When front LH door is unlocked: <b>LOCK SIG DR ON</b></p>									
DATA MONITOR																	
MONITOR																	
LOCK SIG DR	OFF																
SEL344W																	
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 36 and ground.</p>																	
<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																	
<b>OK or NG</b>																	
OK	▶	GO TO 6.															
NG	▶	GO TO 5.															

<b>5</b>	<b>CHECK DOOR UNLOCK SENSOR LH</b>		
<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><b>Continuity:</b> <b>Condition: Locked</b> <b>No</b> <b>Condition: Unlocked</b> <b>Yes</b></p>
WEL497			
<b>OK or NG</b>			
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door unlock sensor LH ground circuit</li> <li>● Harness for open or short between smart entrance control unit and door unlock sensor LH</li> </ul>	
NG	▶	Replace door unlock sensor LH.	

# 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

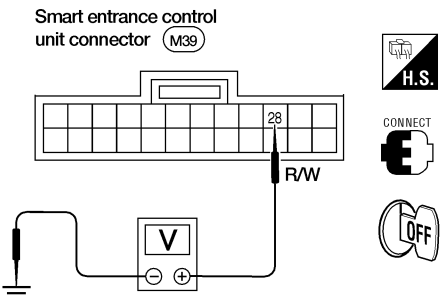
When any doors are open:  
**DOOR SW-ALL ON**

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

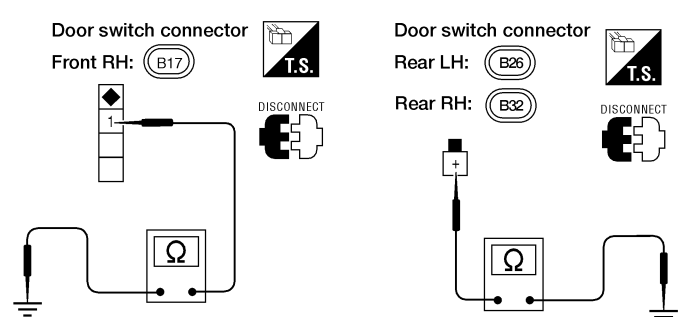
LEL453

**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

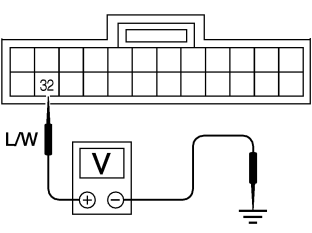

**OK or NG**

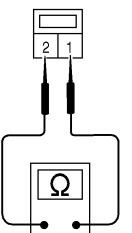
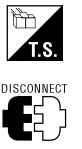
OK	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>Door switch ground circuit or door switch ground condition</li> <li>Harness for open or short between smart entrance control unit and door switch</li> </ul>
NG	▶	Replace door switch.

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)

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

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

# METERS AND GAUGES

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NIEL0041

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

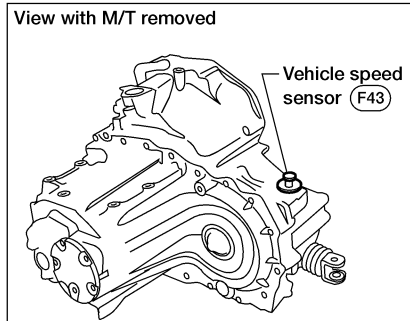
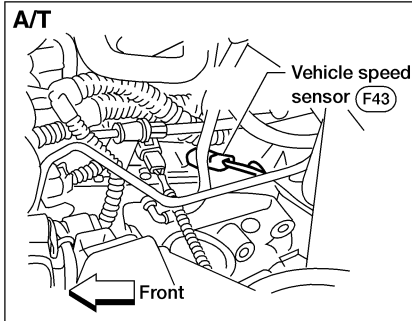
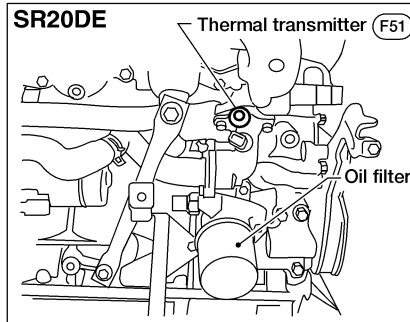
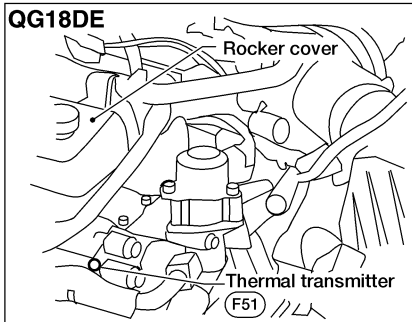
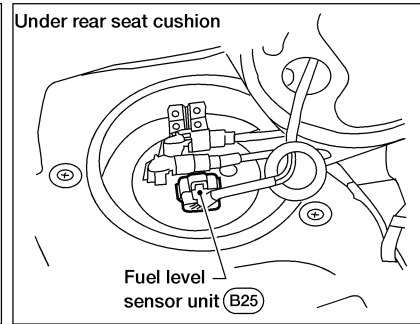
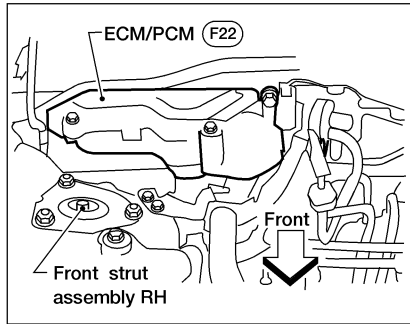
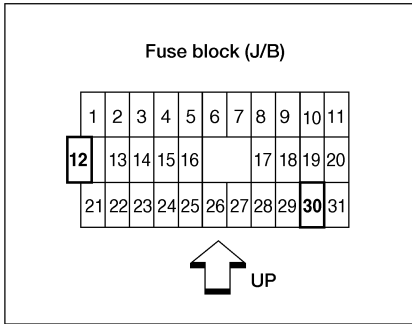
BT

HA

SC

EL

IDX



LEL557

# METERS AND GAUGES

System Description

## System Description

=NIEL0042

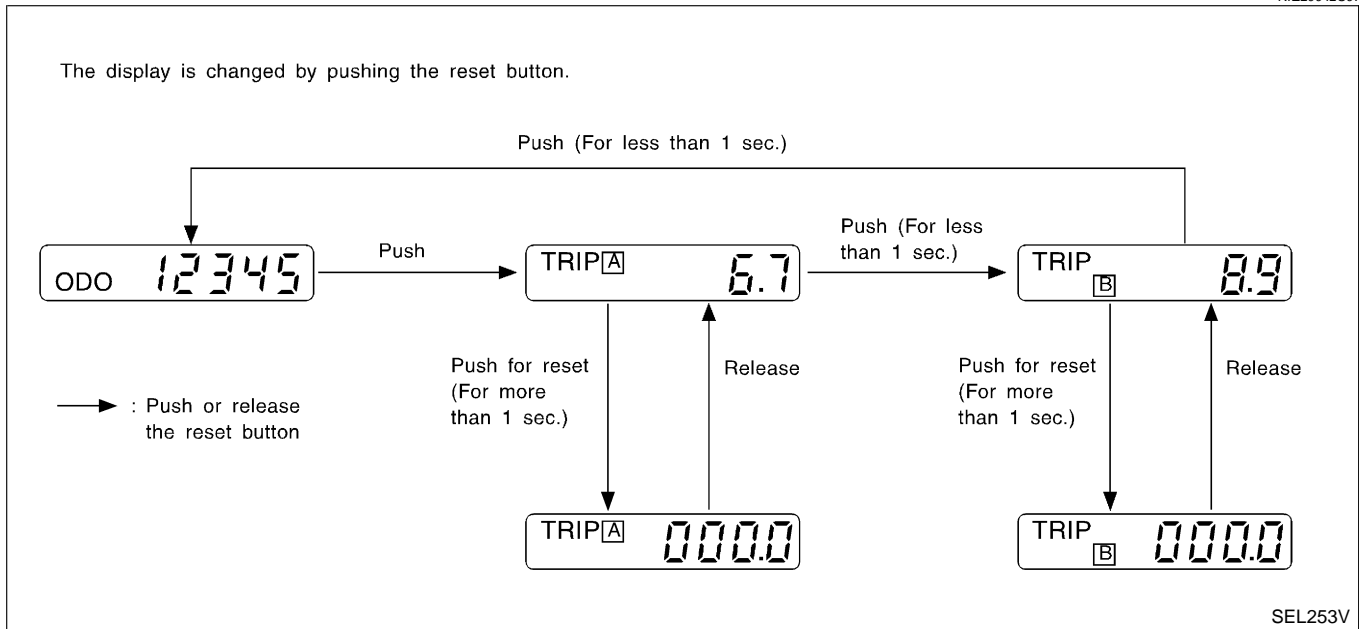
### UNIFIED CONTROL METER

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 [SR20DE and QG18DE (Calif. CA Model)] or PCM [QG18DE (except Calif. CA Model)]

# METERS AND GAUGES

System Description (Cont'd)

- to combination meter terminal 45 for the tachometer.

## FUEL GAUGE

NIEL0042S03

GI

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.

MA

EM

## SPEEDOMETER

NIEL0042S04

LC

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.

EC

The speedometer converts the voltage into the vehicle speed displayed.

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

# METERS AND GAUGES

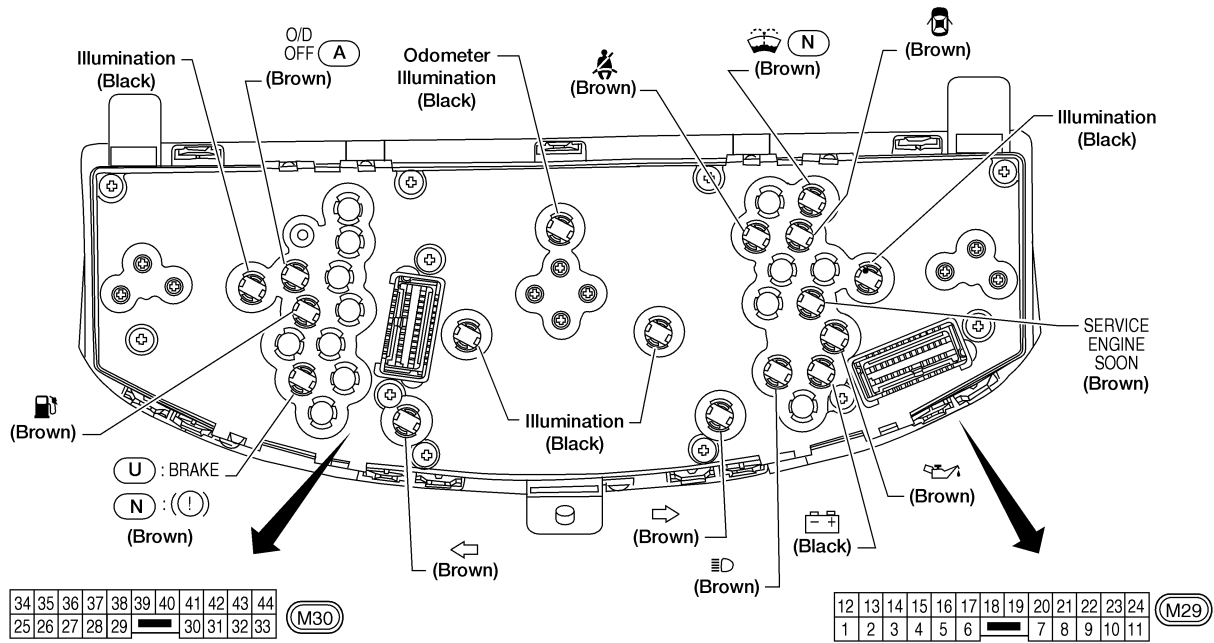
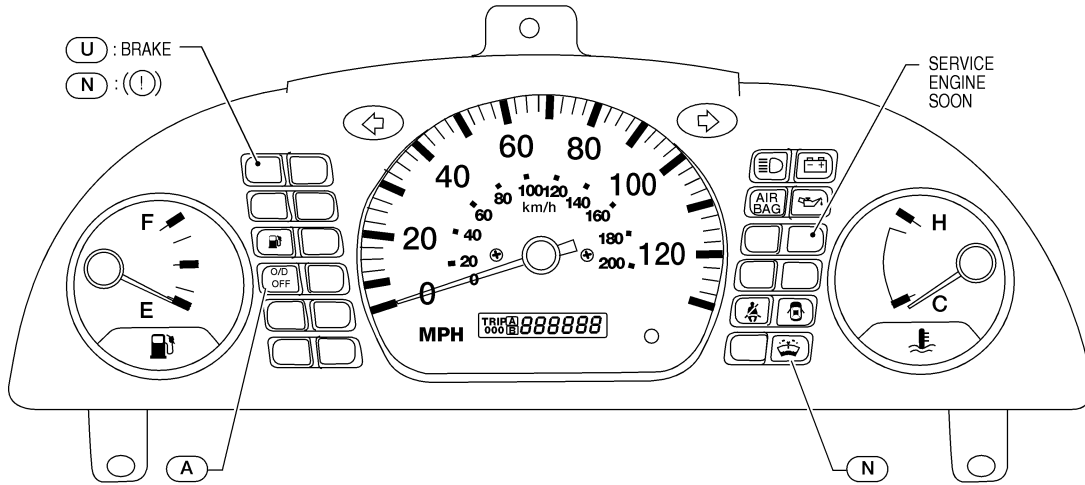
Combination Meter

## Combination Meter

NIEL0043

NIEL0043S05

WITHOUT TACHOMETER



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

12	13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	(M29)	

- (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

LEL581

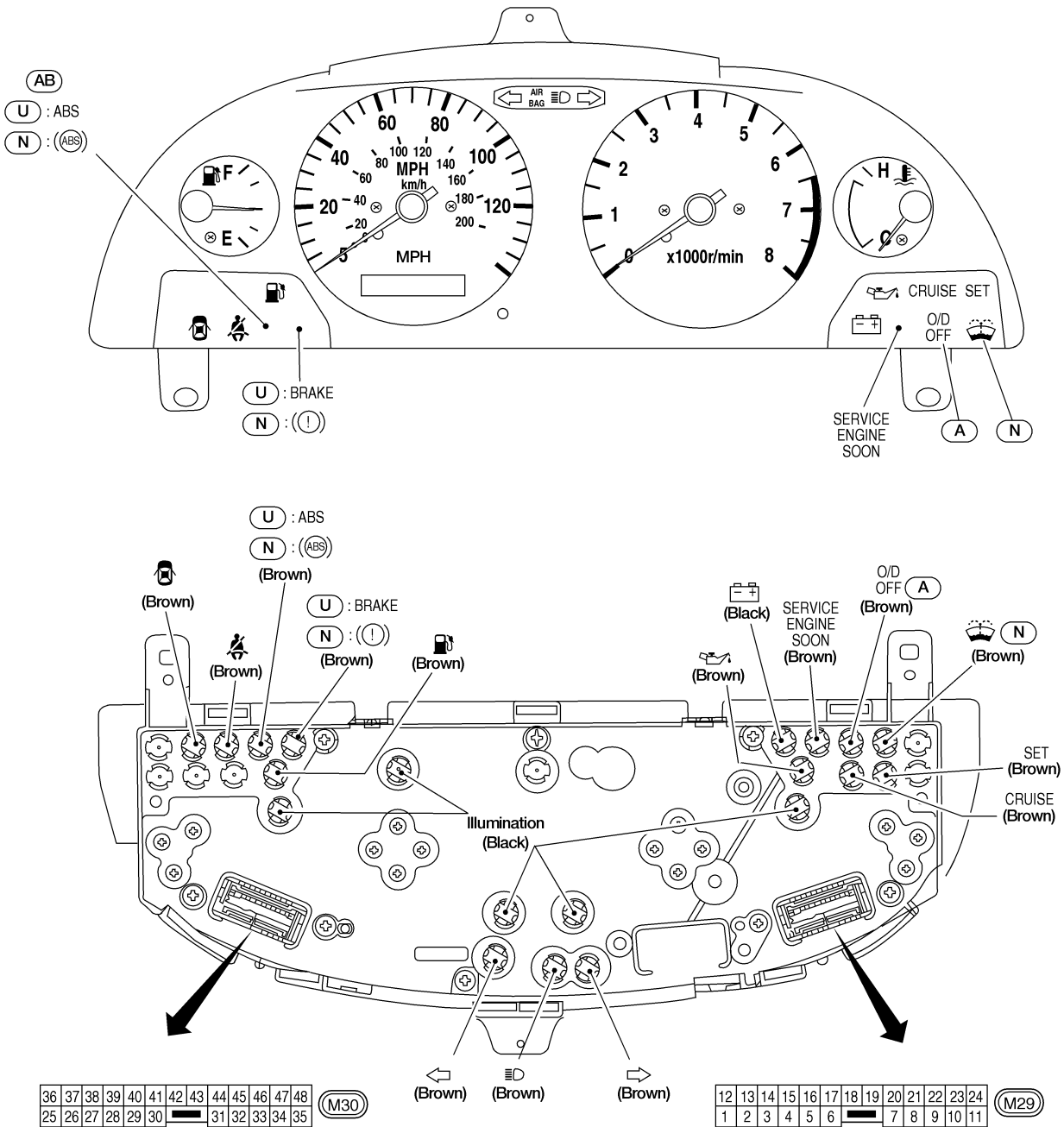


# METERS AND GAUGES

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  
CL  
MT  
AT  
AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

# METERS AND GAUGES

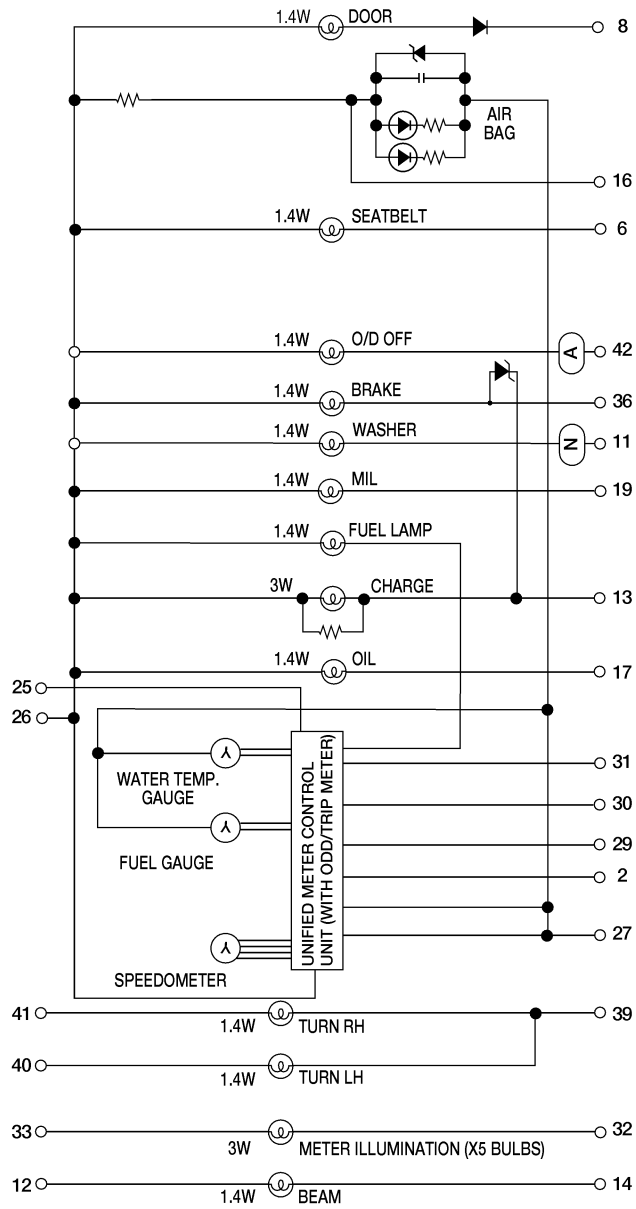
Schematic

## Schematic

WITHOUT TACHOMETER

NIEL0253

NIEL0253S02



(A) : With A/T

(N) : For Canada

LEL582

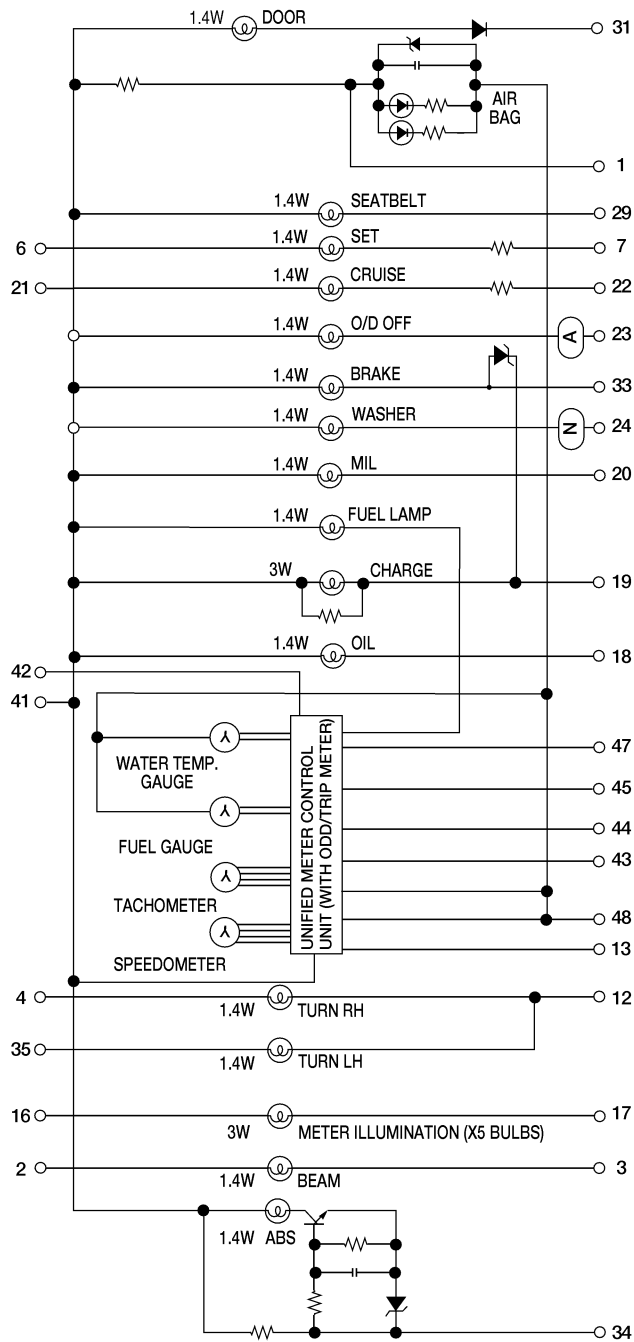
EL-90

# METERS AND GAUGES

Schematic (Cont'd)

## WITH TACHOMETER

NIEL0253S01



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

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

LEL580

# METERS AND GAUGES

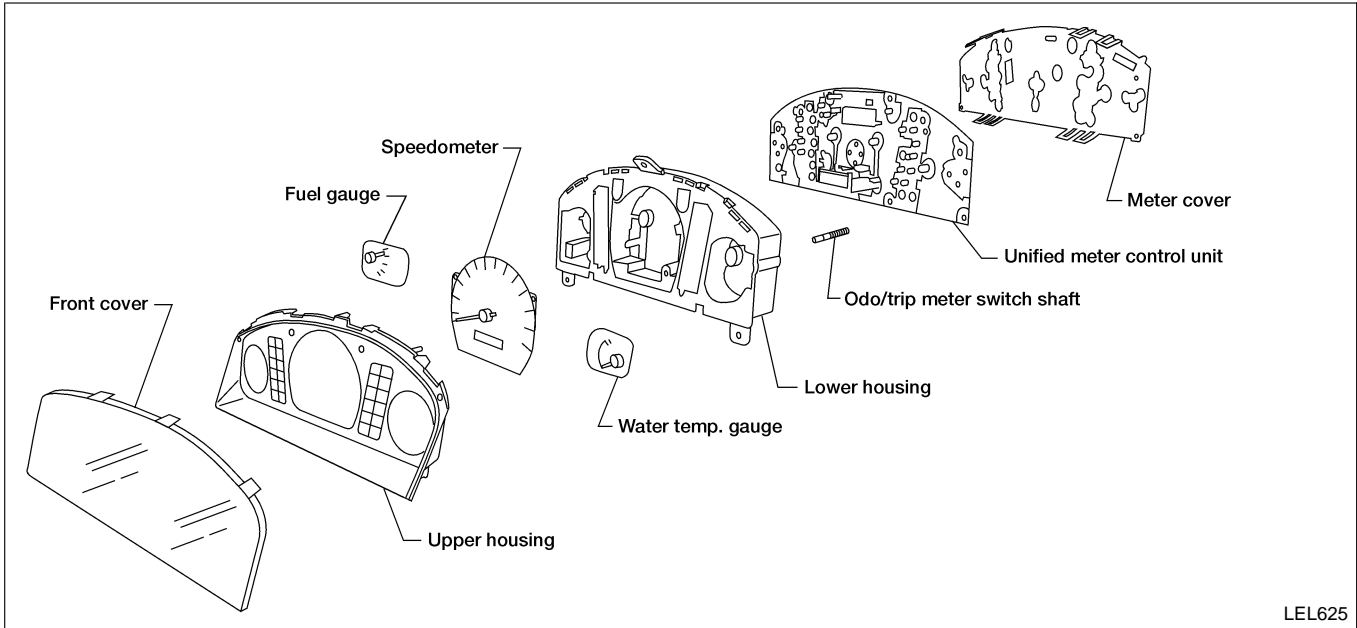
Construction

## Construction

NIEL0254

### WITHOUT TACHOMETER

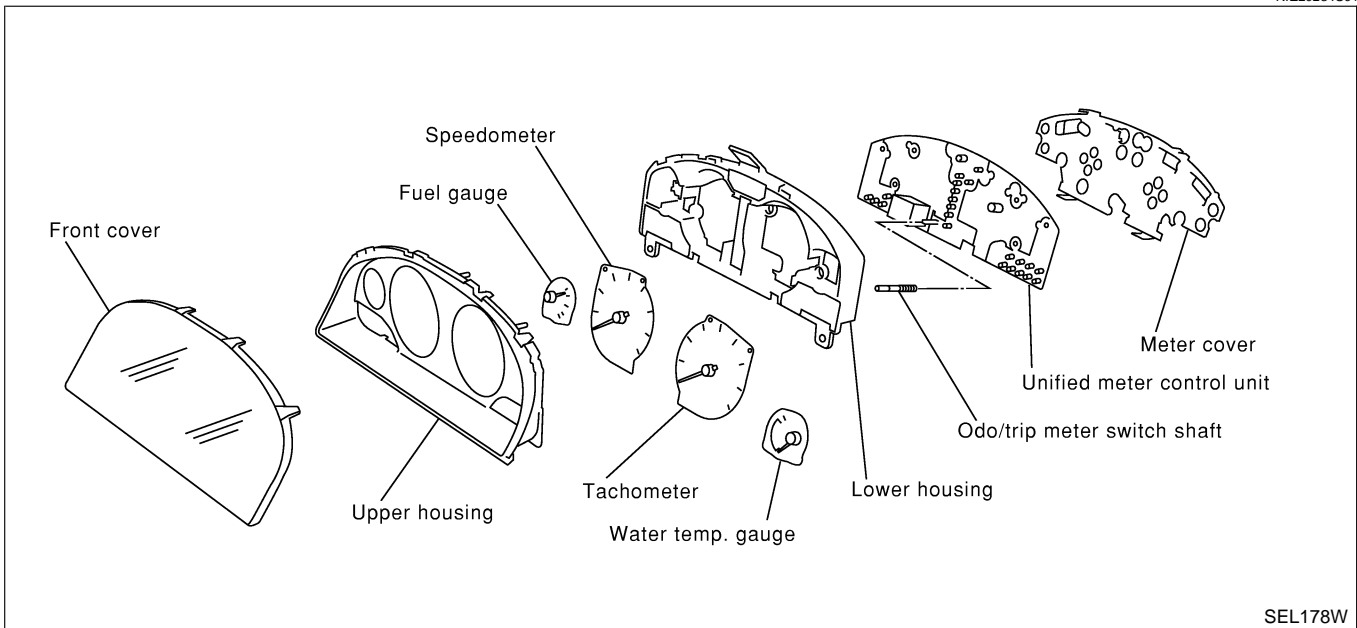
NIEL0254S02



LEL625

### WITH TACHOMETER

NIEL0254S01



SEL178W

# METERS AND GAUGES

Wiring Diagram — METER —

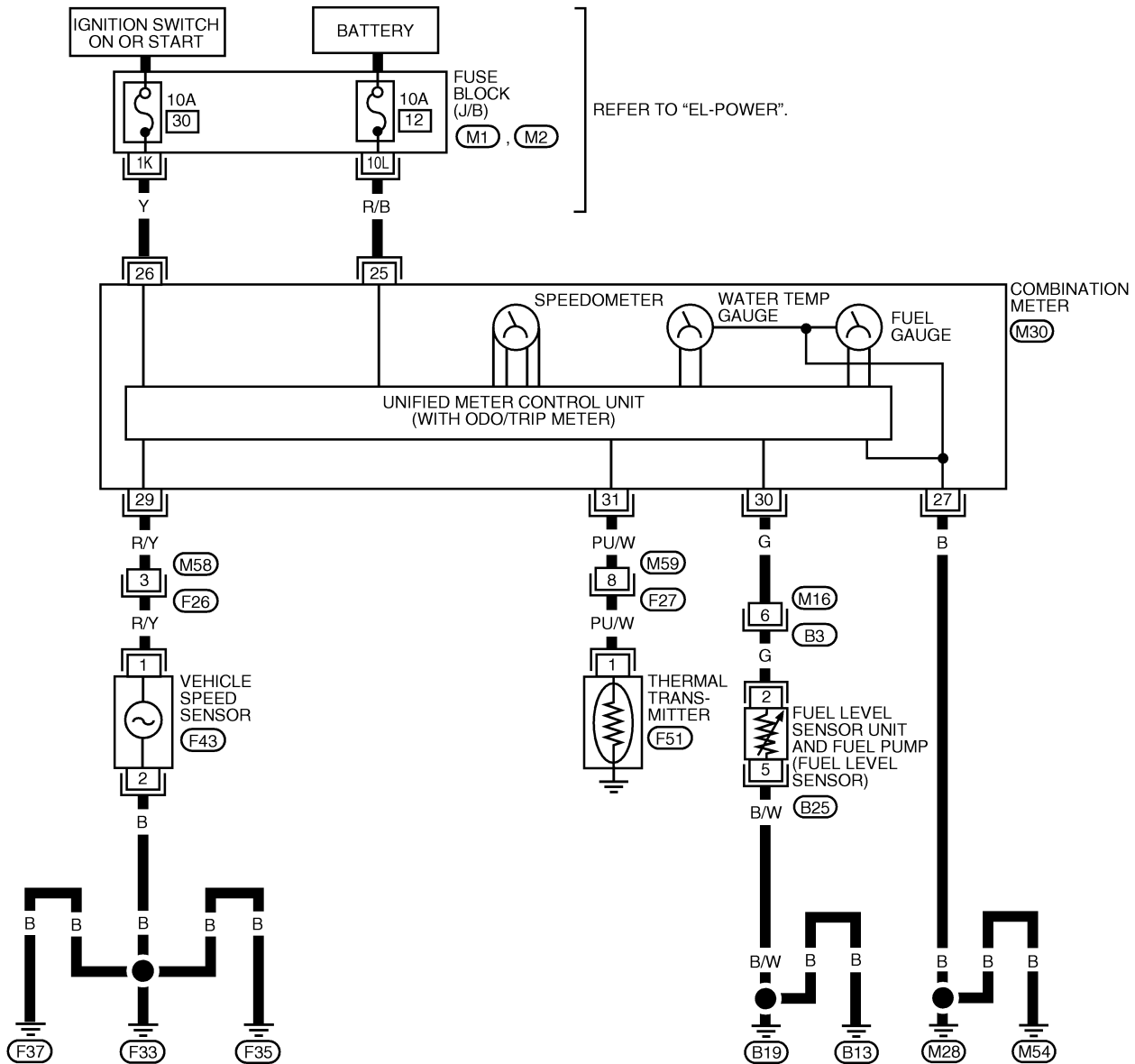
## Wiring Diagram — METER —

WITHOUT TACHOMETER

NIEL0045

NIEL0045S01

EL-METER-01



GI

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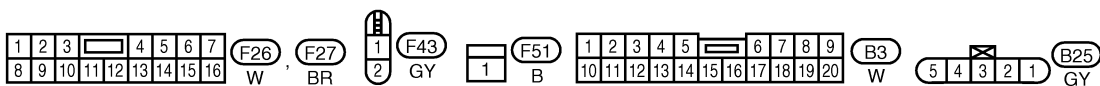
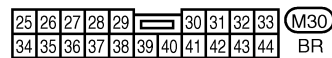
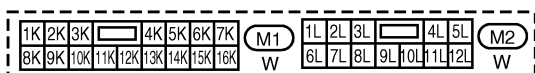
BT

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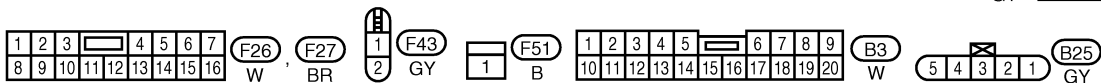
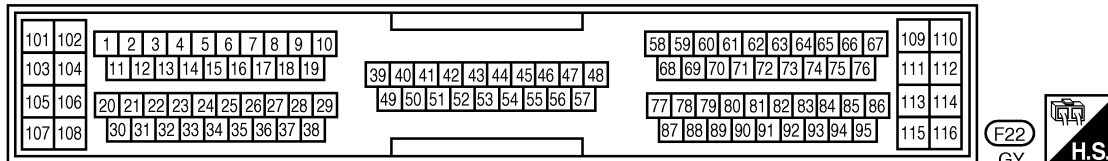
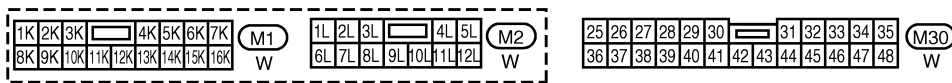
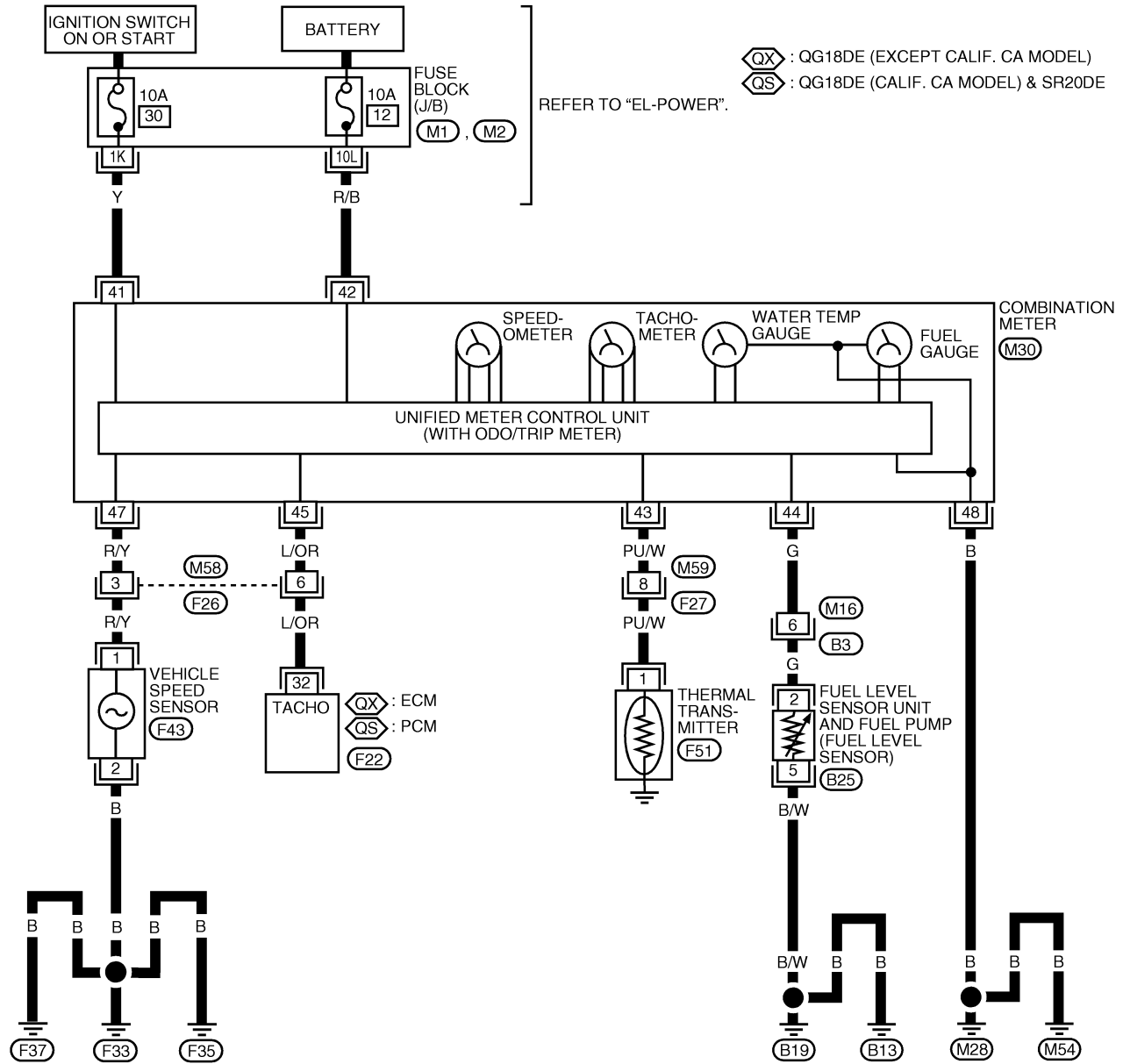
# METERS AND GAUGES

Wiring Diagram — METER — (Cont'd)

## WITH TACHOMETER

NIEL0045S02

### EL-METER-02



WEL347

# 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

GI

### DIAGNOSIS FUNCTION

NIEL0151S01

MA

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

### HOW TO ALTERNATE DIAGNOSIS MODE

NIEL0151S02

EM

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.

LC

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

#### NOTE:

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

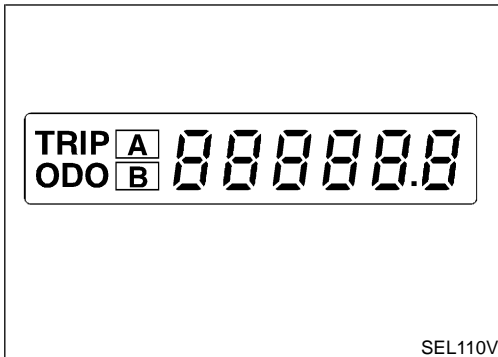
At this point, the unified control meter is turned to diagnosis mode.

AT

AX

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BR



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.

ST

#### NOTE:

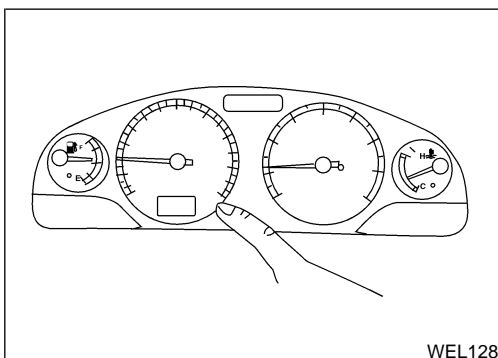
It takes a few seconds for indication of fuel gauge and water temperature gauge to become stable.

RS

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

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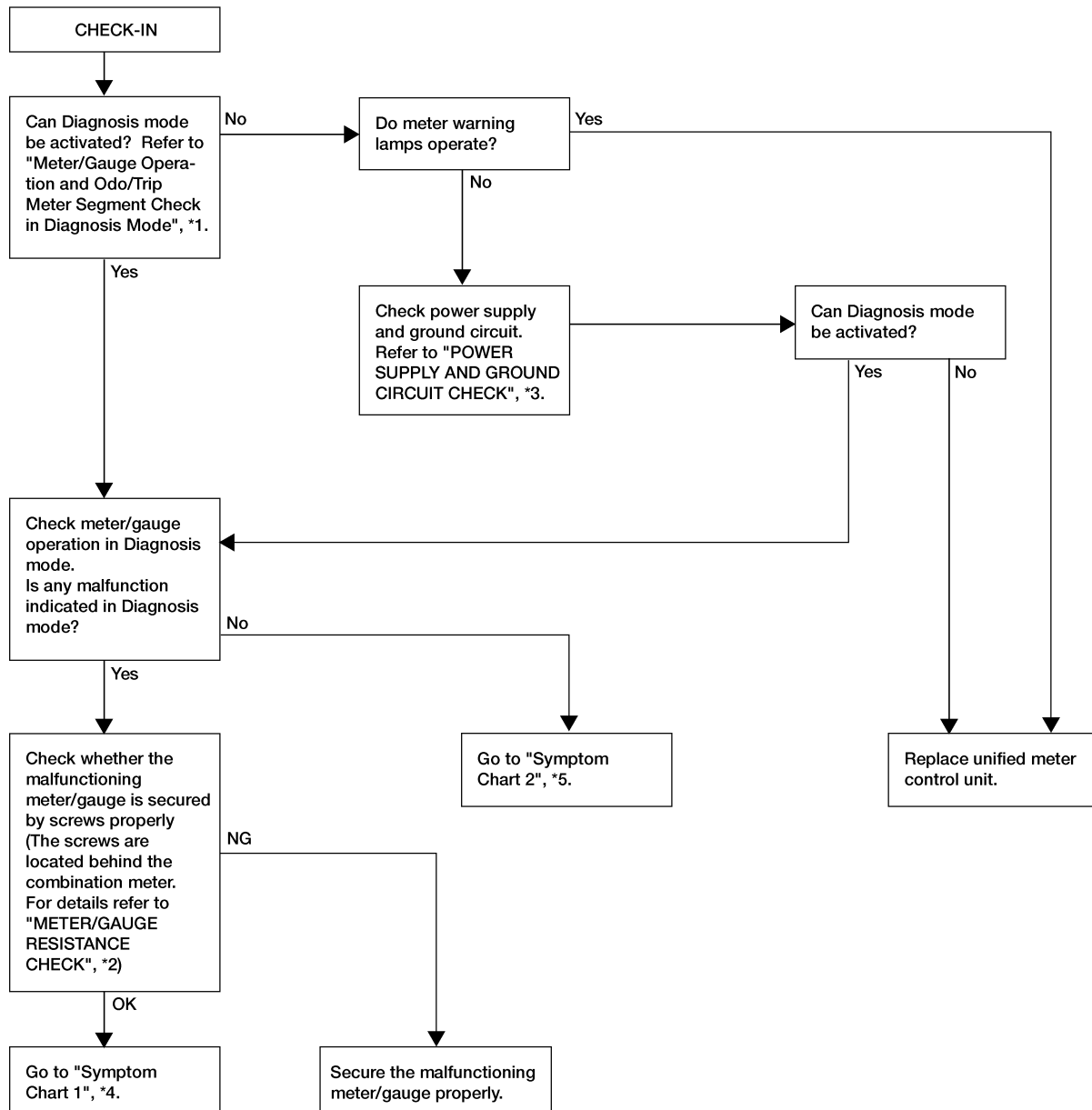
# METERS AND GAUGES

Trouble Diagnoses

## Trouble Diagnoses PRELIMINARY CHECK

NIEL0046

NIEL0046S04



WEL129

\*1: "Meter/Gauge Operation and Odo/Trip Meter Segment Check in Diagnosis Mode", (EL-95)

\*2: "METER/GAUGE RESISTANCE CHECK", (EL-103)

\*3: "POWER SUPPLY AND GROUND CIRCUIT CHECK", (EL-98)

\*4: "Symptom Chart 1", (EL-97)

\*5: "Symptom Chart 2", (EL-97)



# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## SYMPTOM CHART

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

NIEL0046S10

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.	1. Meter/Gauge 2. Unified meter control unit	1. Check resistance of meter/gauge indicating malfunction. If the resistance is NG, replace the meter/gauge. Refer to "METER/GAUGE RESISTANCE CHECK", EL-103. 2. If the resistance of meter/gauge is OK, replace unified meter control unit.

### 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.	1. Sensor signal - Vehicle speed signal - Engine revolution signal - Fuel gauge - Water temp. gauge 2. Unified meter control unit	1. Check the sensor for malfunctioning meter/gauge. "INSPECTION/VEHICLE SPEED SENSOR", EL-99. "INSPECTION/ENGINE REVOLUTION SIGNAL", EL-100. "INSPECTION/FUEL LEVEL SENSOR UNIT AND FUEL PUMP", EL-101. "INSPECTION/THERMAL TRANSMITTER", EL-102. 2. Replace unified meter control unit.
Multiple meter/gauge are malfunctioning. (except odo/trip meter)		

Before starting trouble diagnoses below, perform "PRELIMINARY CHECK", EL-96.

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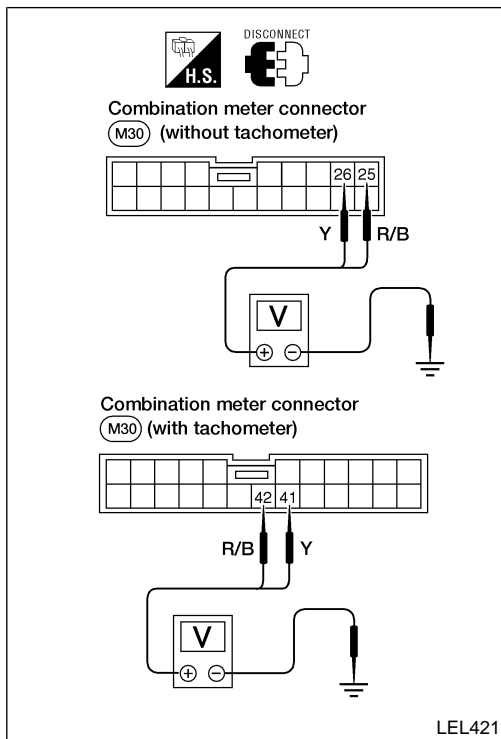
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# METERS AND GAUGES

Trouble Diagnoses (Cont'd)



## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NIEL0046S07

### Power Supply Circuit Check

NIEL0046S0701

#### Without tachometer

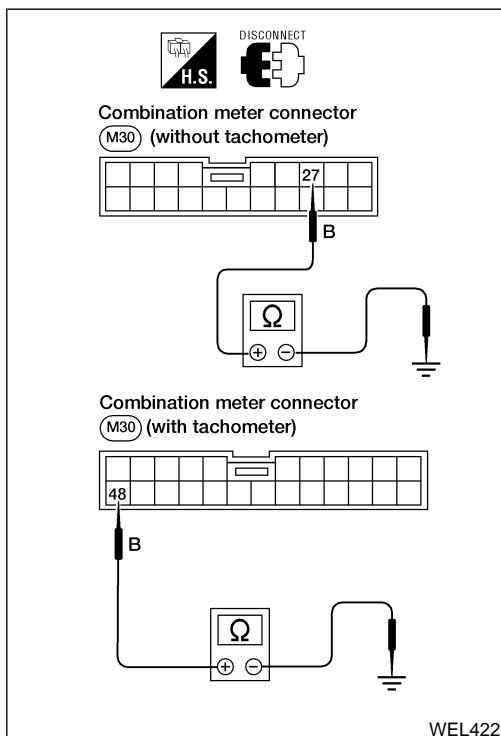
Terminals		Ignition switch position		
(+)	(-)	OFF	ACC	ON
25	Ground	Battery voltage	Battery voltage	Battery voltage
26	Ground	0V	0V	Battery voltage

#### 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

NIEL0046S0702

#### Without tachometer

Terminals	Continuity
27 - Ground	Yes

#### With tachometer

Terminals	Continuity
48 - Ground	Yes

# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/VEHICLE SPEED SENSOR

=NIEL0046S03

<b>1</b>	<b>CHECK VEHICLE SPEED SENSOR OUTPUT</b>	<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	
<b>OK or NG</b>			
OK	▶	Vehicle speed sensor is OK.	
NG	▶	GO TO 2.	

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

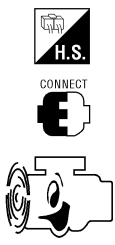
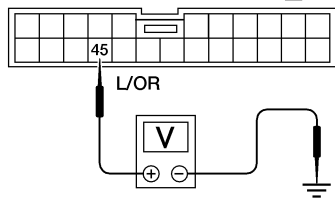
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IDX

# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/ENGINE REVOLUTION SIGNAL

NIEL0046S02

<b>1</b>	<b>CHECK ECM/PCM OUTPUT</b>
<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-between; align-items: center;"><div></div><div><p>Combination meter connector (M30)</p></div><div><p><b>Higher RPM = Higher voltage</b> <b>Lower RPM = Lower voltage</b> <b>Voltage should change with RPM</b></p></div></div>	
<b>OK or NG</b>	
OK	▶ Engine revolution signal is OK.
NG	▶ Harness for open or short between ECM/PCM and combination meter.

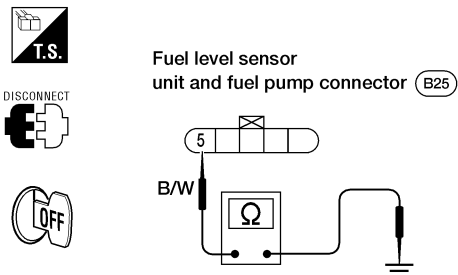
LEL436

# METERS AND GAUGES

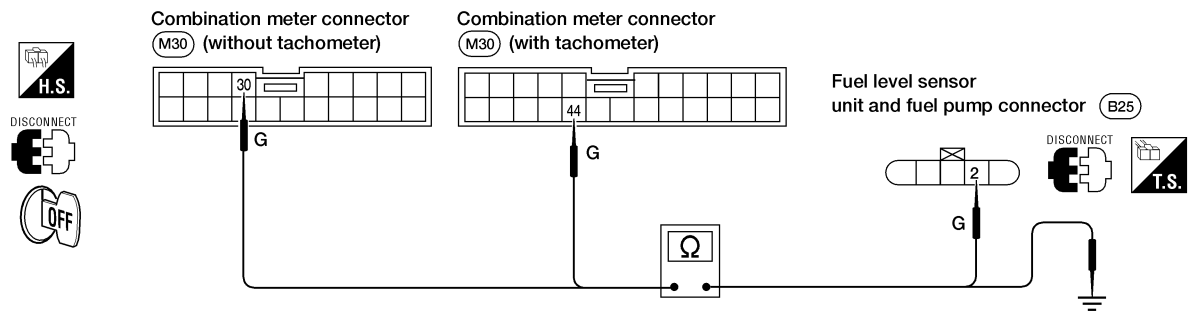
Trouble Diagnoses (Cont'd)

## INSPECTION/FUEL LEVEL SENSOR UNIT AND FUEL PUMP

=NIEL0046S08

<b>1</b>	<b>CHECK GROUND CIRCUIT FOR FUEL LEVEL SENSOR UNIT</b>	
Check harness continuity between fuel level sensor unit and fuel pump connector terminal 5 and ground.		
 <p style="text-align: right;"><b>Continuity should exist.</b></p>		
WEL437		
<b>OK or NG</b>		
OK	▶	GO TO 2.
NG	▶	Repair harness or connector.

<b>2</b>	<b>CHECK FUEL LEVEL SENSOR UNIT</b>	
Refer to "FUEL LEVEL SENSOR UNIT CHECK" (EL-103).		
<b>OK or NG</b>		
OK	▶	GO TO 3.
NG	▶	Replace fuel level sensor unit.

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

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# METERS AND GAUGES

Trouble Diagnoses (Cont'd)

## INSPECTION/THERMAL TRANSMITTER

=NIEL0046S09

<b>1</b>	<b>CHECK THERMAL TRANSMITTER</b>	
Refer to "THERMAL TRANSMITTER CHECK", EL-103.		
<b>OK or NG</b>		
OK	▶	GO TO 2.
NG	▶	Replace.

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

WEL439

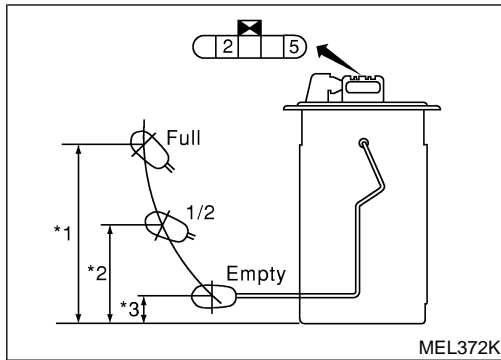
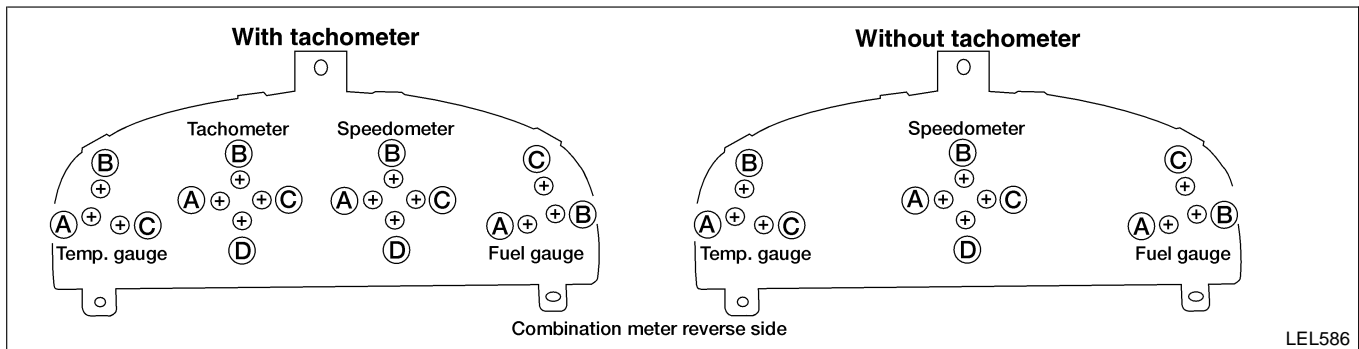
## Electrical Components Inspection METER/GAUGE RESISTANCE CHECK

=NIEL0047

NIEL0047S04

Check resistance between installation screws of meter/gauge.

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



## FUEL LEVEL SENSOR UNIT CHECK

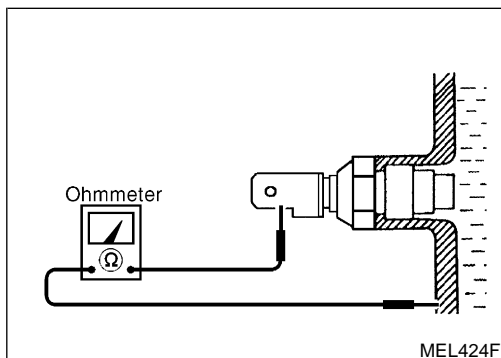
NIEL0047S01

- 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 value Ω
(+)	(-)				
2	5	*1	Full	136.1 (5.358)	4.5 - 5.5
		*2	1/2	89.8 (3.535)	31.5 - 33.5
		*3	Empty	31.3 (1.232)	80 - 83

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



## THERMAL TRANSMITTER CHECK

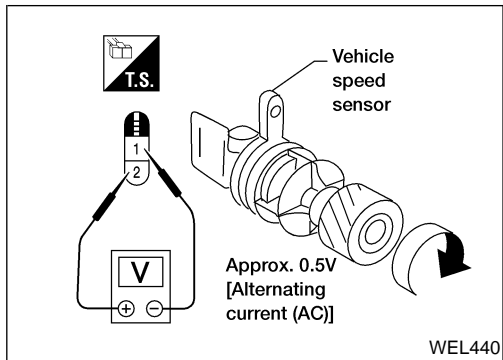
NIEL0047S02

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

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

## METERS AND GAUGES

Electrical Components Inspection (Cont'd)



### VEHICLE SPEED SENSOR SIGNAL CHECK

NIEL0047S03

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



# WARNING LAMPS

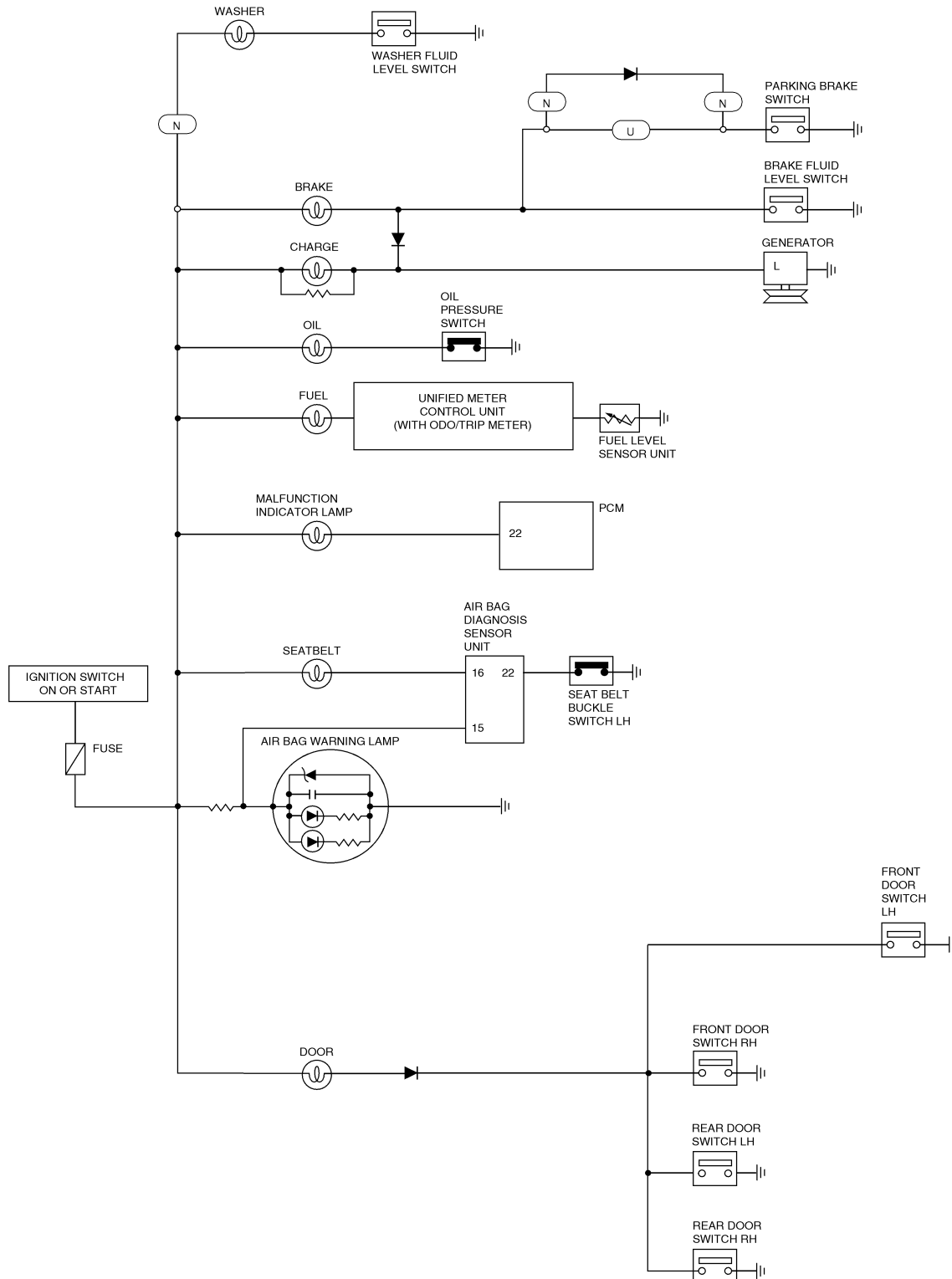
Schematic

## WITHOUT TACHOMETER

NIEL0049

NIEL0049S01

U : USA  
N : CANADA



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WEL349

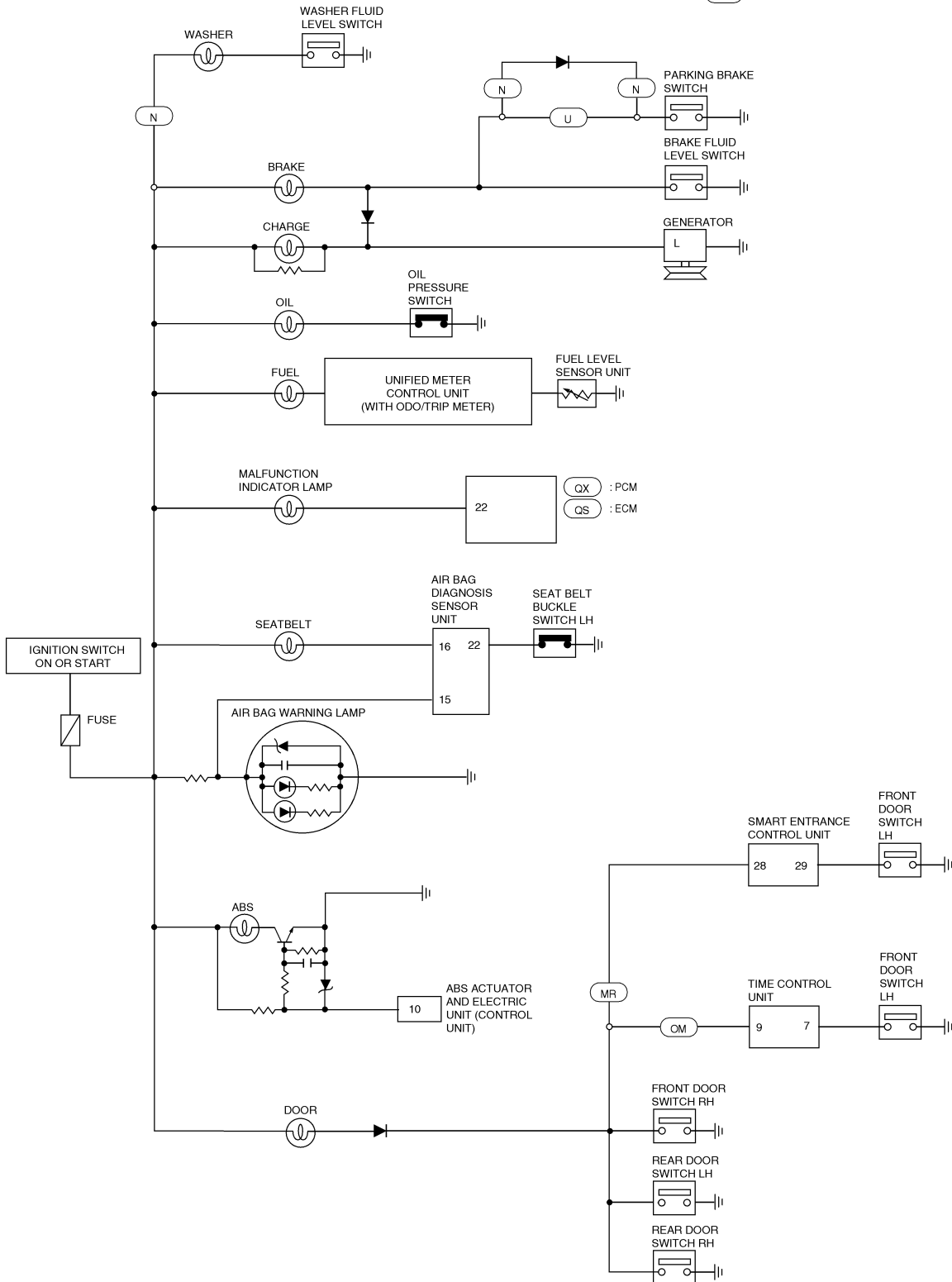
# WARNING LAMPS

Schematic (Cont'd)

## WITH TACHOMETER

NIEL0049S02

- (MR) : WITH MULTI-REMOTE CONTROL SYSTEM
- (OM) : WITHOUT MULTI-REMOTE CONTROL SYSTEM
- (U) : USA
- (N) : CANADA
- (QX) : QG18DE (EXCEPT CALIF. CA MODEL)
- (QS) : QG18DE (CALIF. CA MODEL) & SR20DE



LEL348

# WARNING LAMPS

Wiring Diagram — WARN —

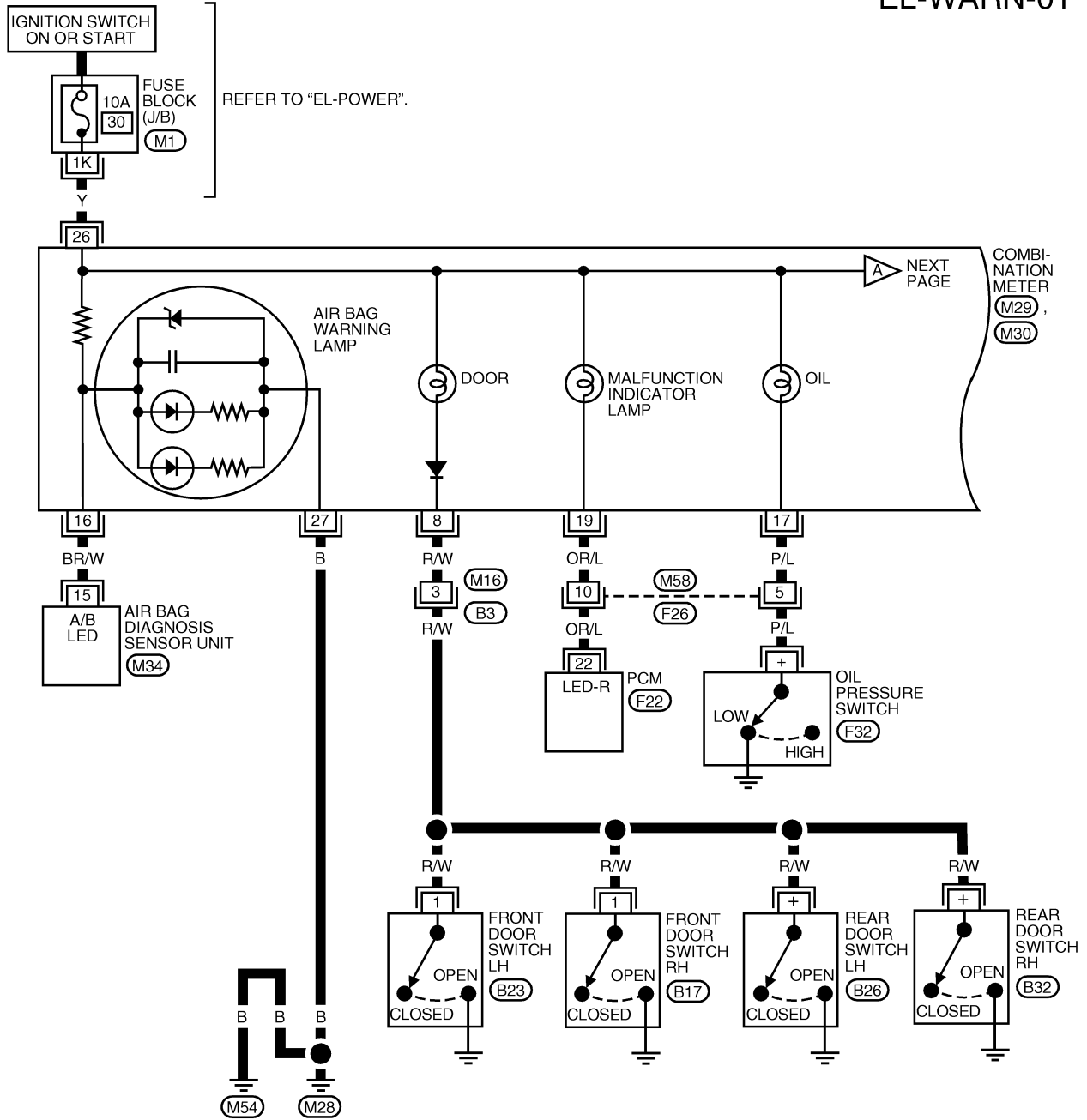
## Wiring Diagram — WARN —

WITHOUT TACHOMETER

NIEL0050

NIEL0050S01

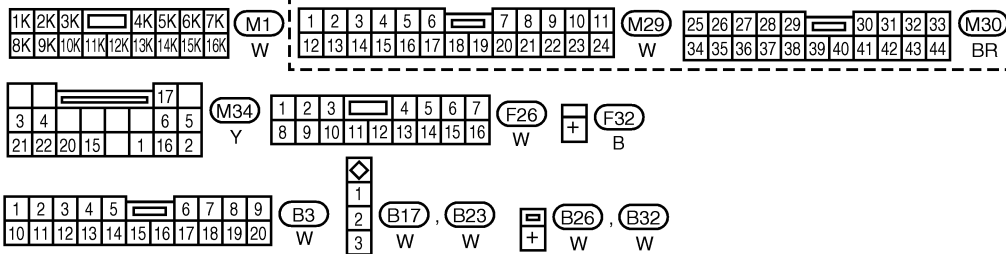
EL-WARN-01



COMBINATION METER  
M29  
M30

REFER TO THE FOLLOWING.

(F22) - ELECTRICAL UNITS



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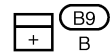
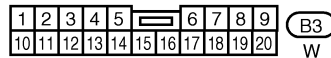
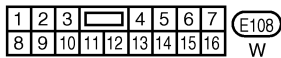
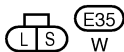
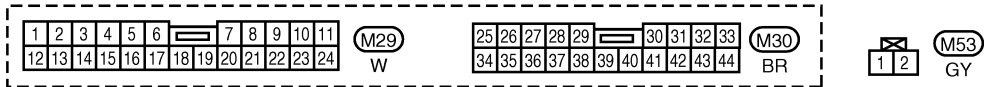
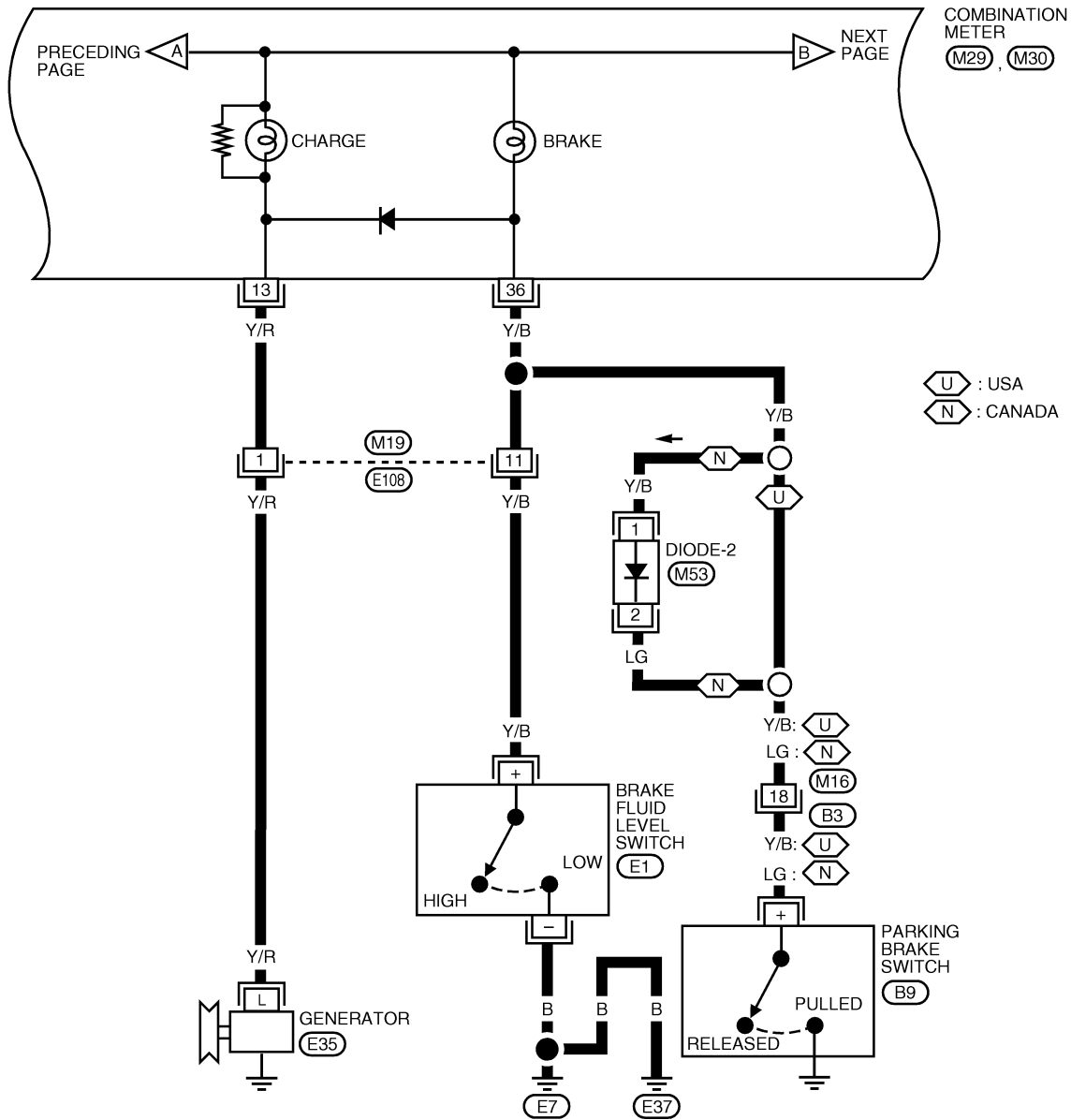
EL

IDX

# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-02

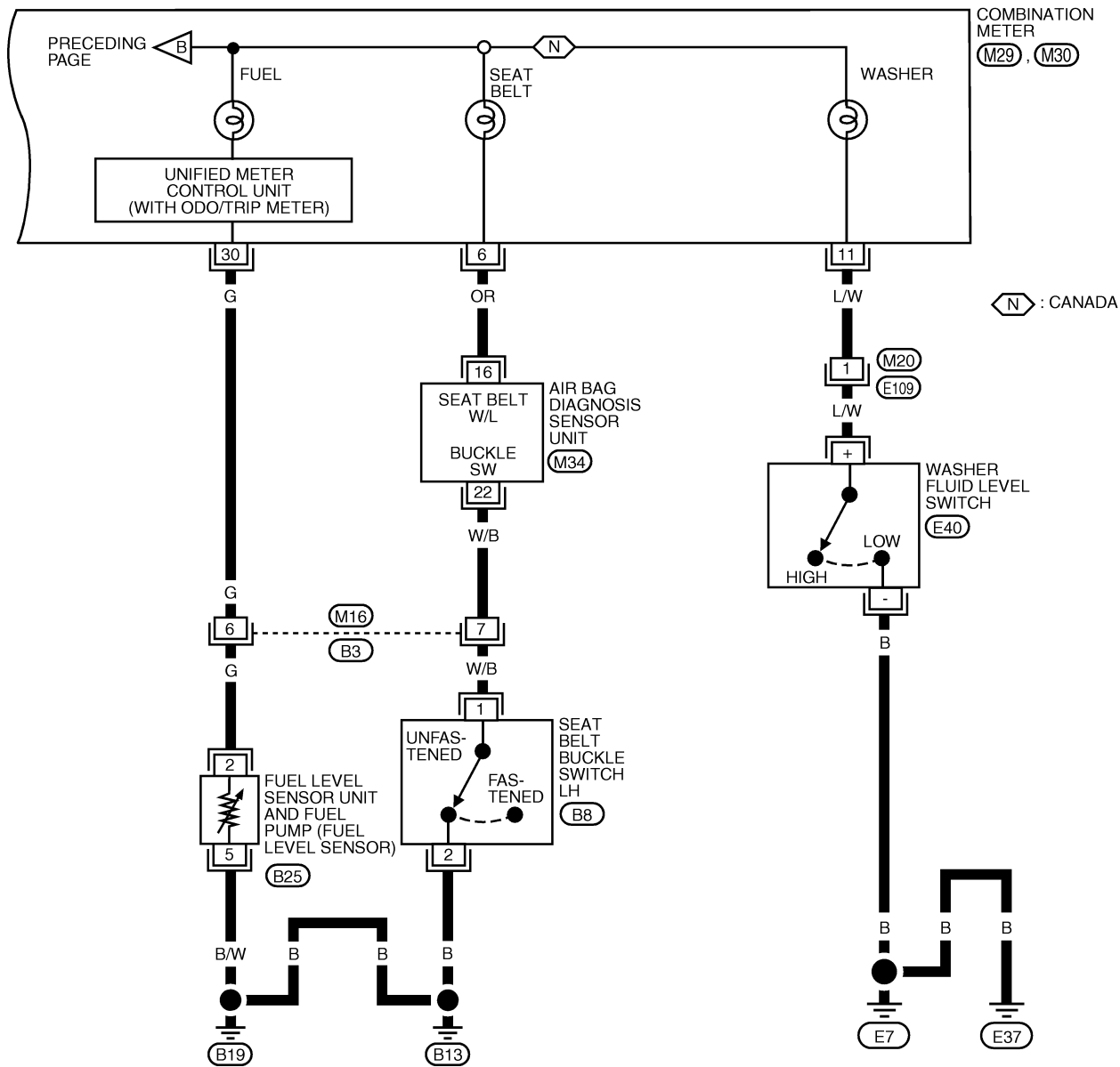


LEL351

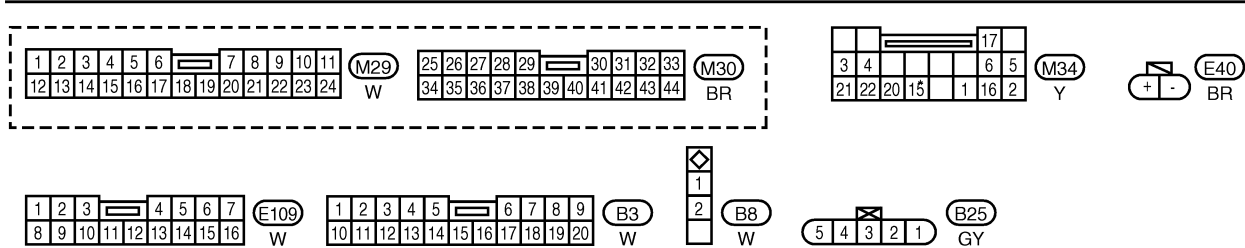
# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

## EL-WARN-03



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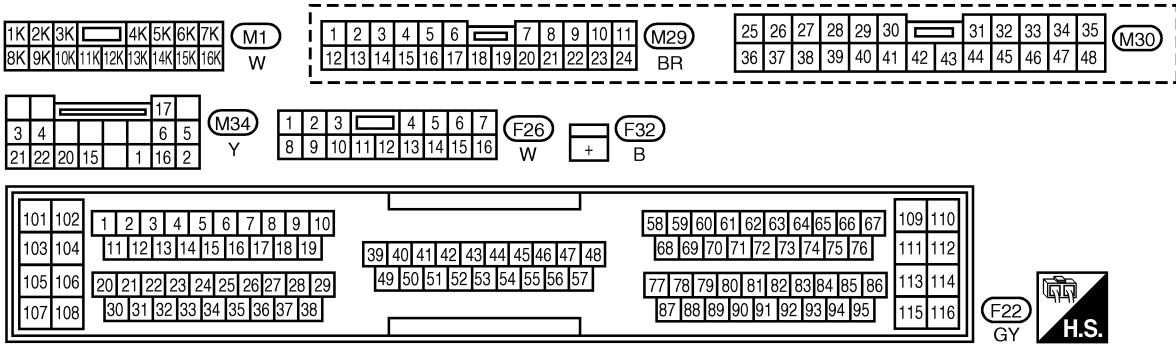
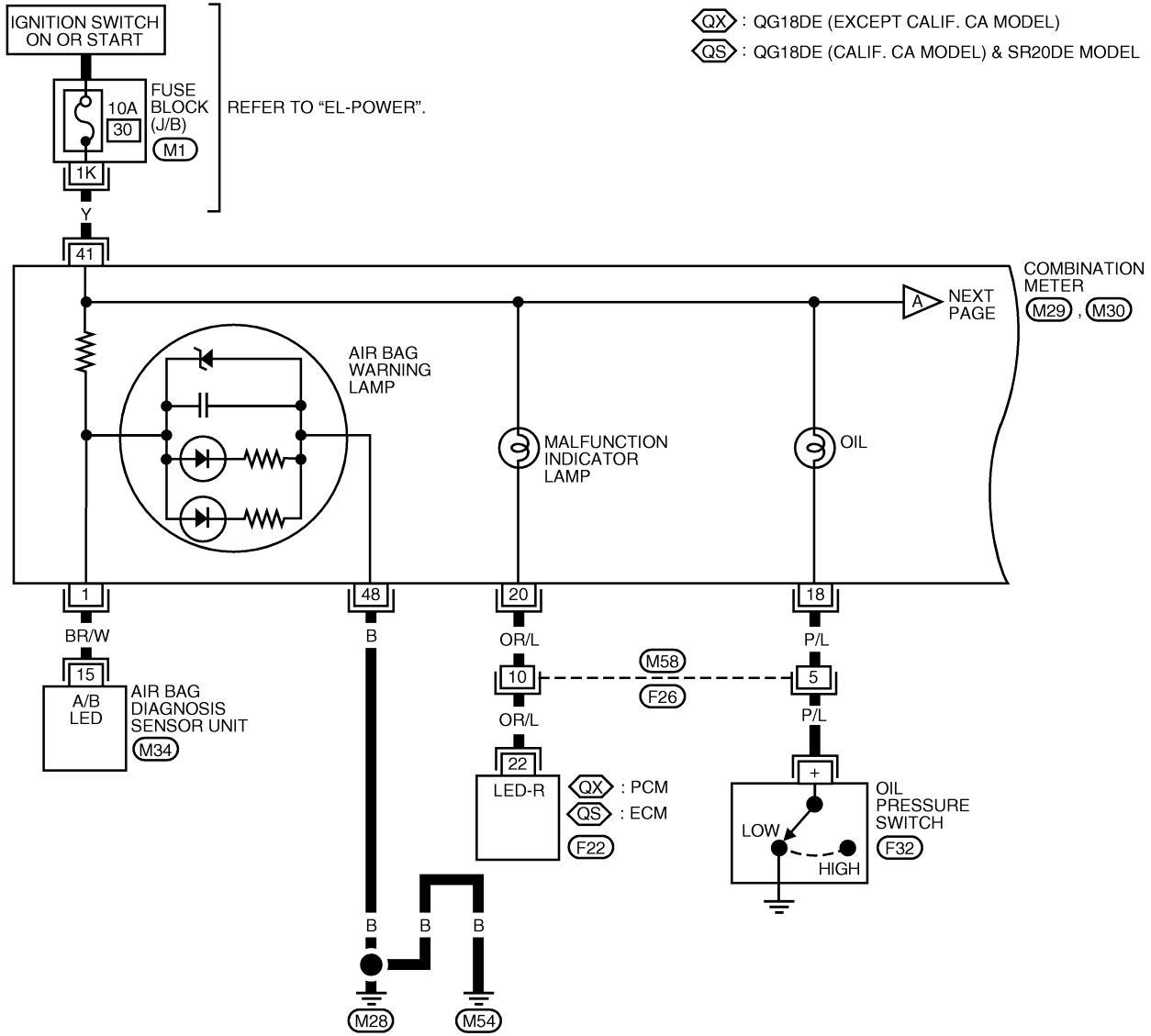
# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

## WITH TACHOMETER

NIEL0050S02

## EL-WARN-04

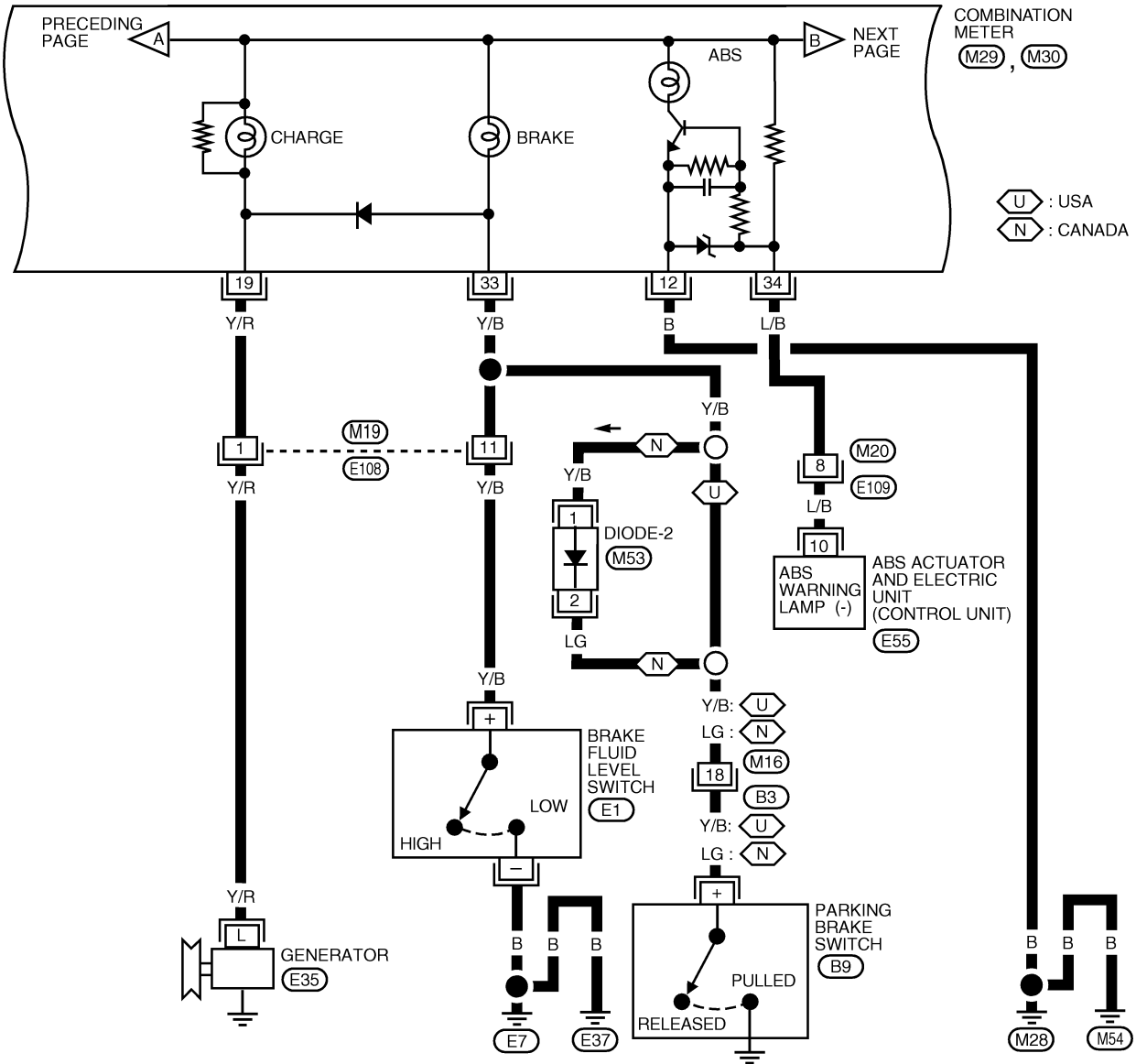


LLE353

# WARNING LAMPS

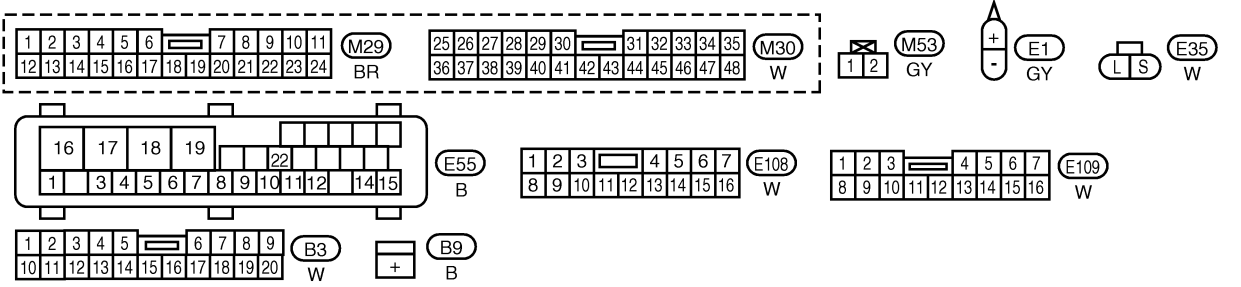
Wiring Diagram — WARN — (Cont'd)

## EL-WARN-05



COMBINATION METER (M29, M30)

U : USA  
N : CANADA



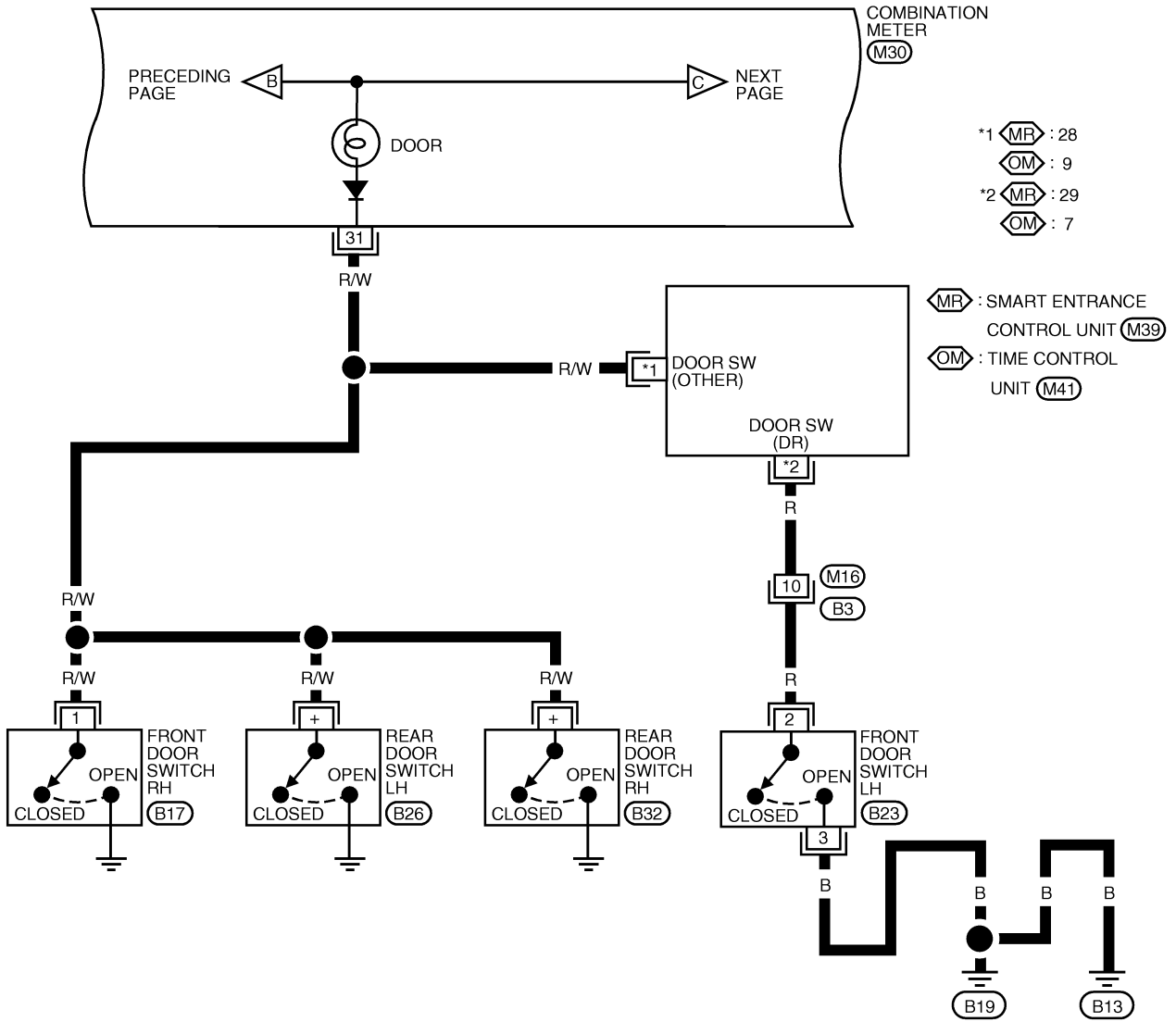
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# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

EL-WARN-06

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



\*1 MR : 28  
OM : 9  
 \*2 MR : 29  
OM : 7

MR : SMART ENTRANCE CONTROL UNIT (M39)  
OM : TIME CONTROL UNIT (M41)

25	26	27	28	29	30	31	32	33	34	35	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">M30</span> W	
36	37	38	39	40	41	42	43	44	45	46		47

1	2	3	4	5	6	7	8	9	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">B3</span> W	
10	11	12	13	14	15	16	17	18		19

1					
2	B17	B23	W	W	
3	+	B26	B32	W	W

REFER TO THE FOLLOWING.  
M39 , M41 - ELECTRICAL UNITS

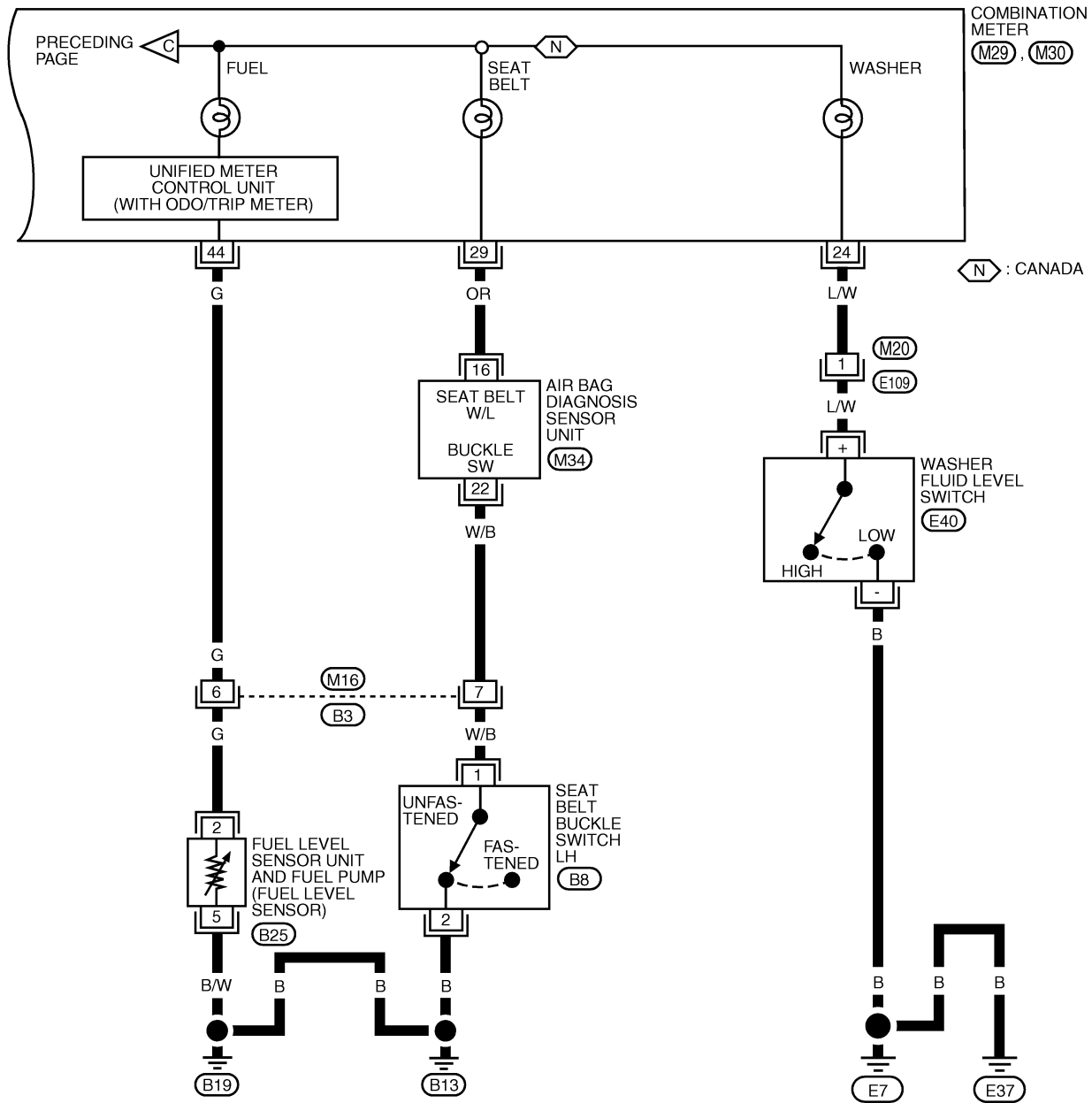
LEL355



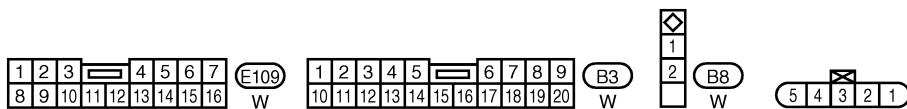
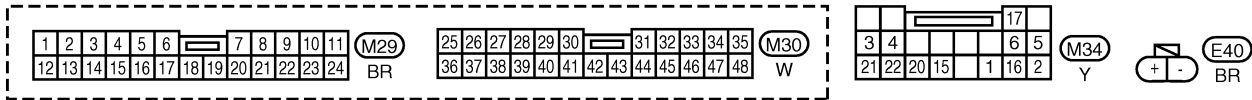
# WARNING LAMPS

Wiring Diagram — WARN — (Cont'd)

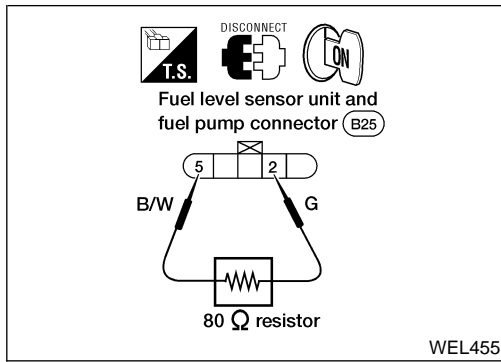
EL-WARN-07



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IDX



# 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".

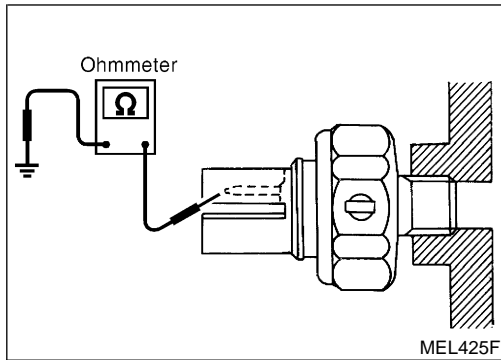
The fuel warning lamp should come on.

### NOTE:

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

If the DTC is stored in ECM/PCM 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-770**[QG18DE (Calif. CA Model)], or **EC-1438** (SR20DE), "HOW TO ERASE EMISSION-RELATED DIAGNOSTIC INFORMATION".

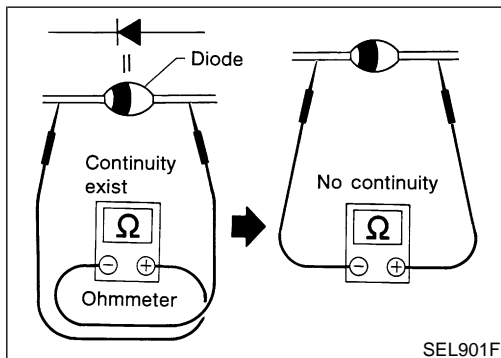


## OIL PRESSURE SWITCH CHECK

NIEL0051S02

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

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



## DIODE CHECK

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" wiring diagrams, EL-107.

### 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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AX

SU

BR

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RS

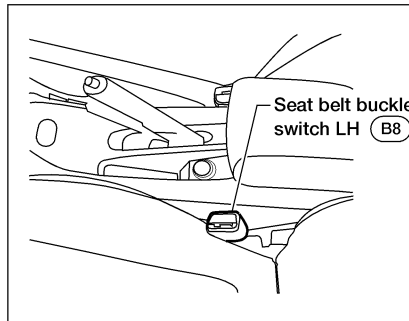
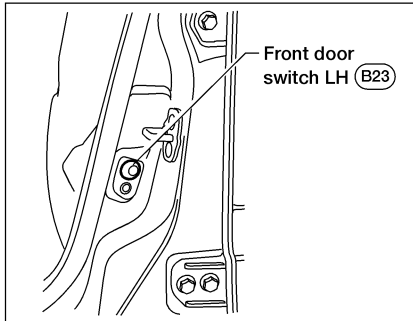
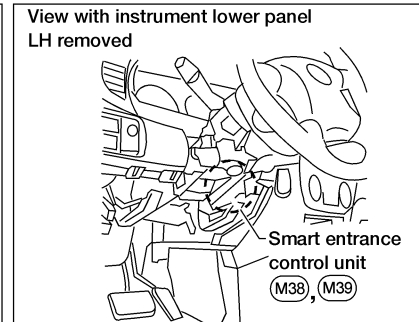
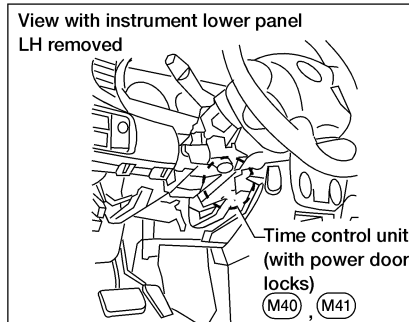
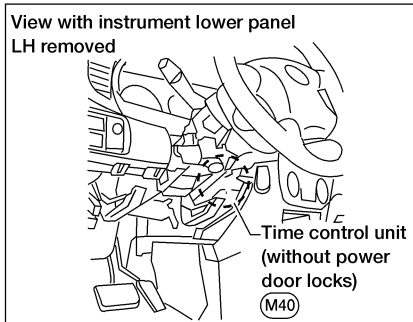
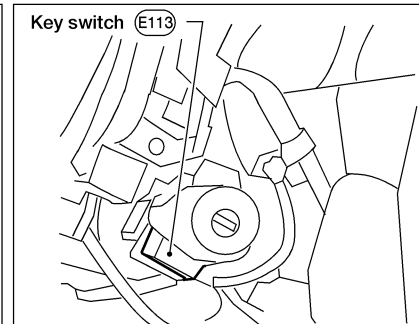
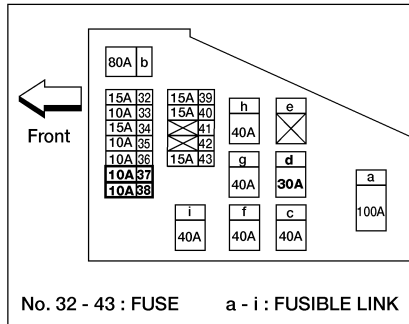
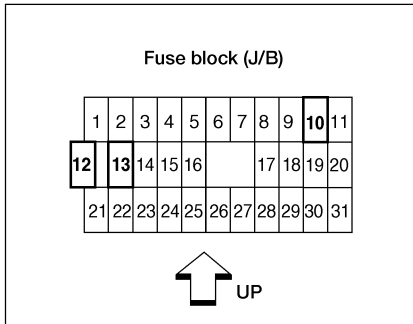
BT

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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

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

NIEL0053S0501

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

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

NIEL0053S0502

- 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

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

NIEL0053S0503

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

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)

NIEL0053S06

# 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's 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's 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.

GI

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# WARNING CHIME

Wiring Diagram — CHIME —

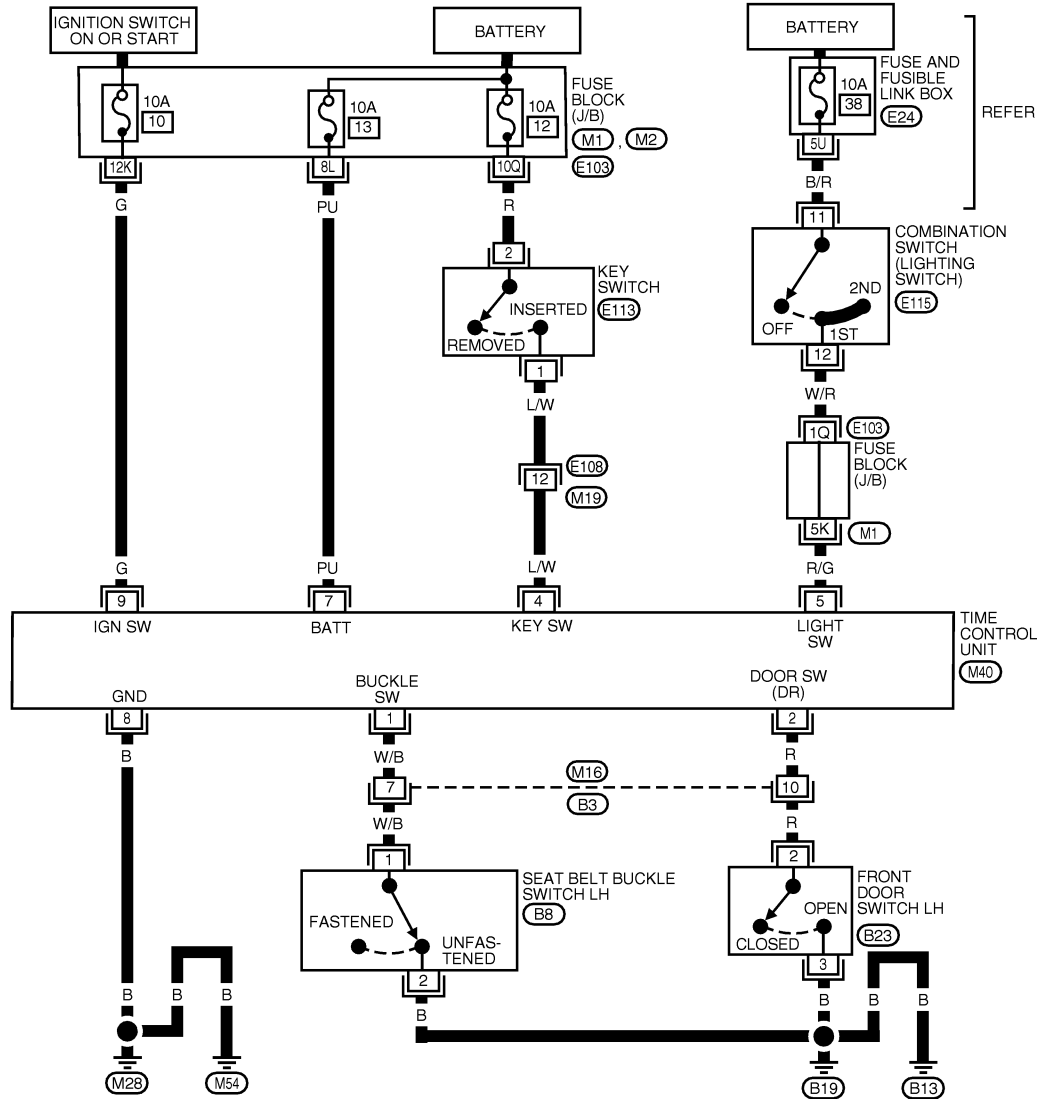
## Wiring Diagram — CHIME —

WITHOUT POWER DOOR LOCKS

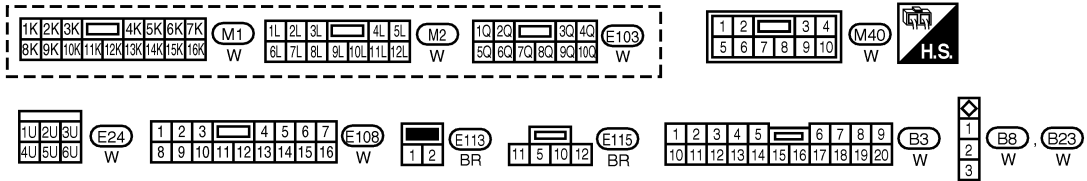
=NIEL0054

NIEL0054S01

EL-CHIME-01



REFER TO "EL-POWER".



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

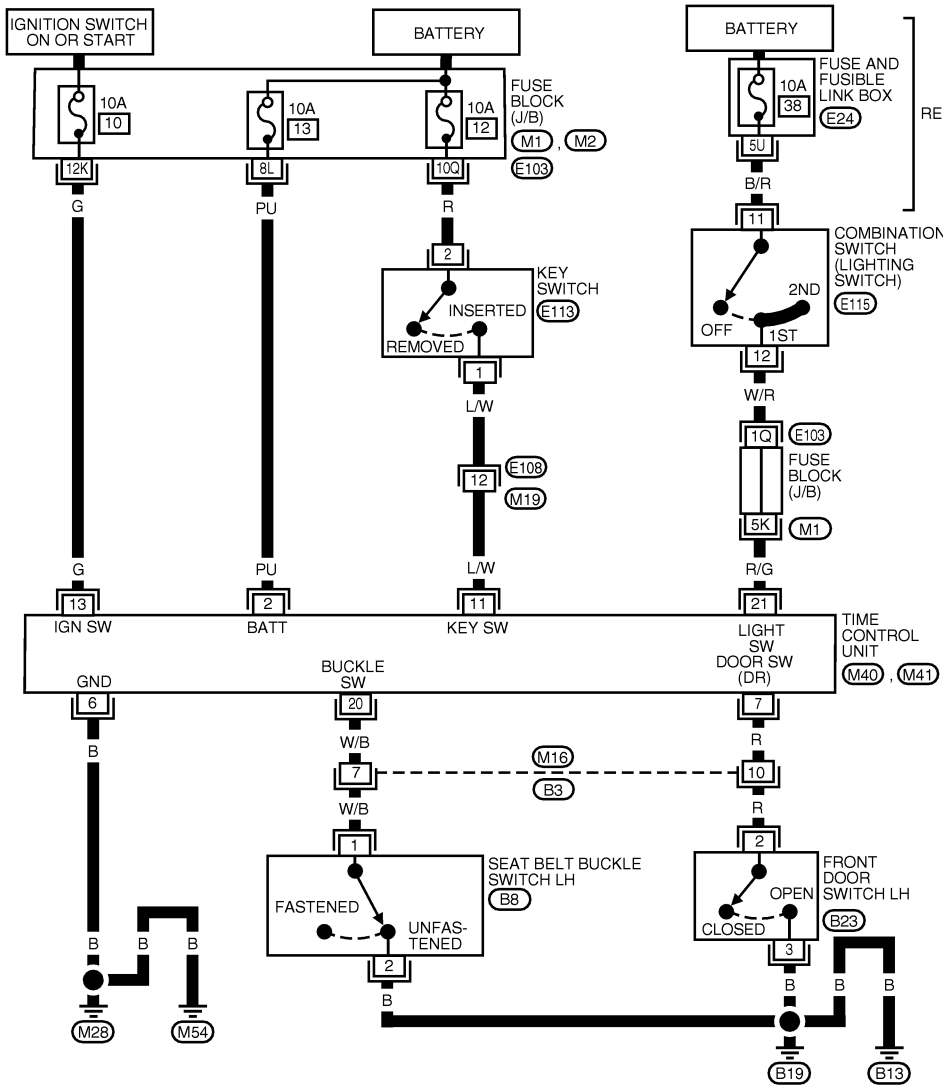
# WARNING CHIME

Wiring Diagram — CHIME — (Cont'd)

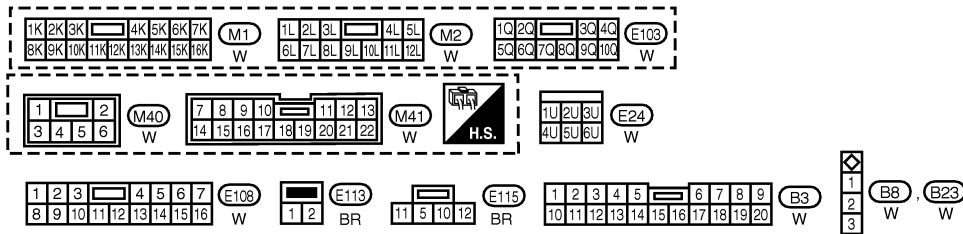
## WITH POWER DOOR LOCKS AND WITHOUT MULTI-REMOTE CONTROL SYSTEM

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

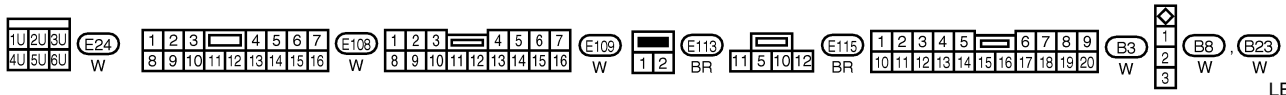
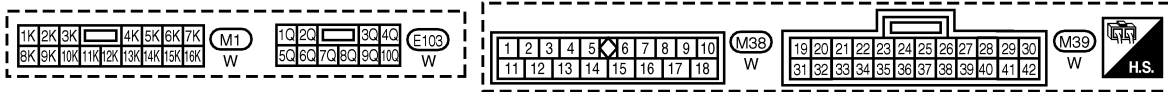
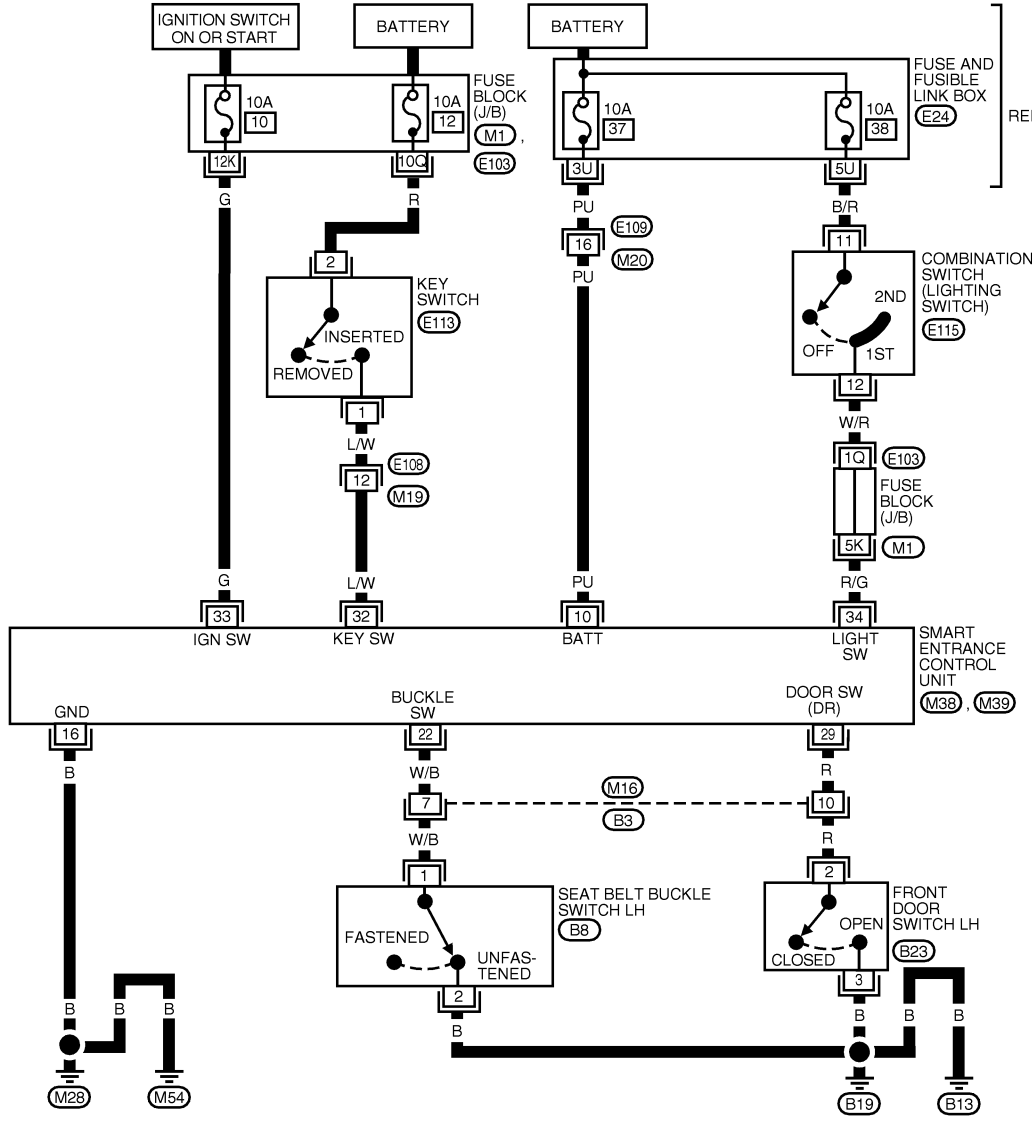
Wiring Diagram — CHIME — (Cont'd)

## 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

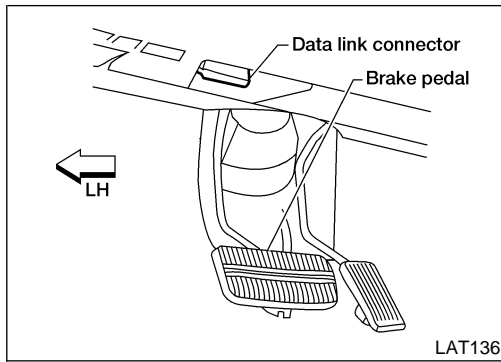
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	PU	POWER SOURCE (FUSE)	—	12V
16	B	GROUND	—	—
22	W/B	SEAT BELT BUCKLE SWITCH LH	UNFASTEN (IGNITION KEY IN ON POSITION) FASTEN (IGNITION KEY IN ON POSITION)	0V 5V
29	R	FRONT DOOR SWITCH LH	OFF (CLOSED) ON (OPEN)	5V 0V
32	L/W	IGNITION KEY SWITCH (INSERT)	IGNITION 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)

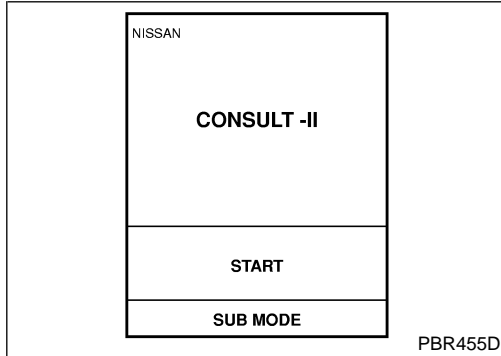


## CONSULT-II Inspection Procedure (With Multi-Remote Control System) “KEY WARN ALM”/“LIGHT WARN ALM”/“SEAT BELT ALM”

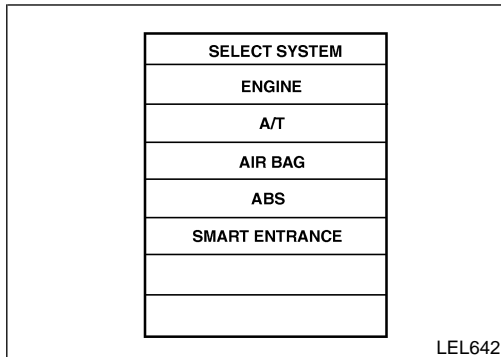
=NIEL0216

NIEL0216S01

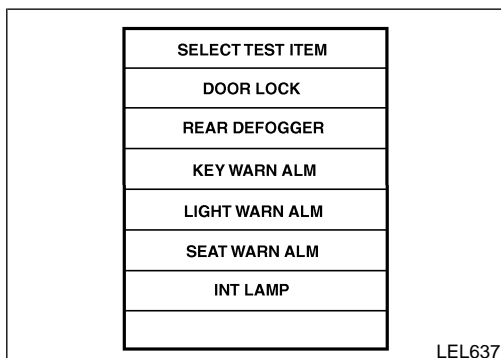
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



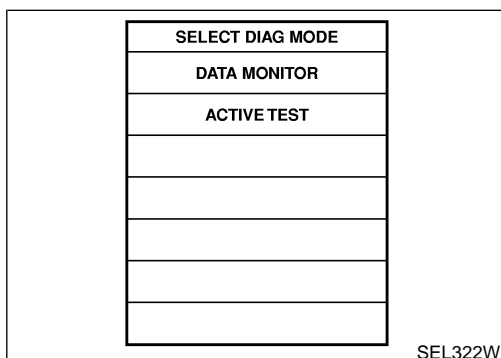
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



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



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 WARNING 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 BELT WARM 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 switch.

#### 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

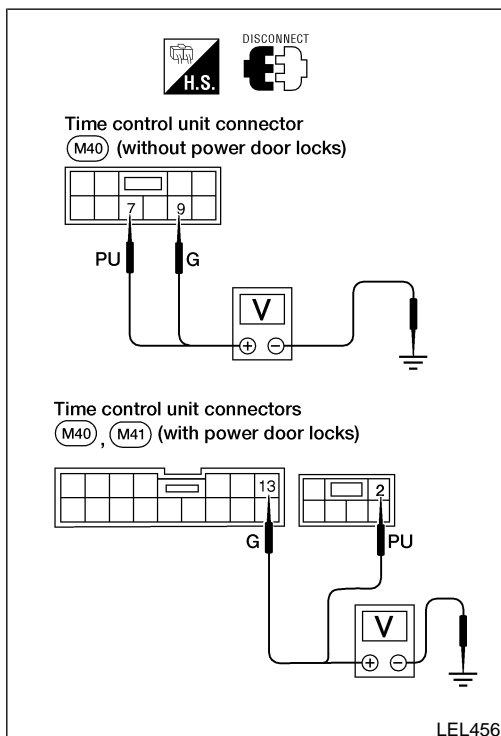
Trouble Diagnoses (Without Multi-Remote Control System)

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

NIEL0055

NIEL0055S01

REFERENCE PAGE (EL- )	123	125	126	127	128
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



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

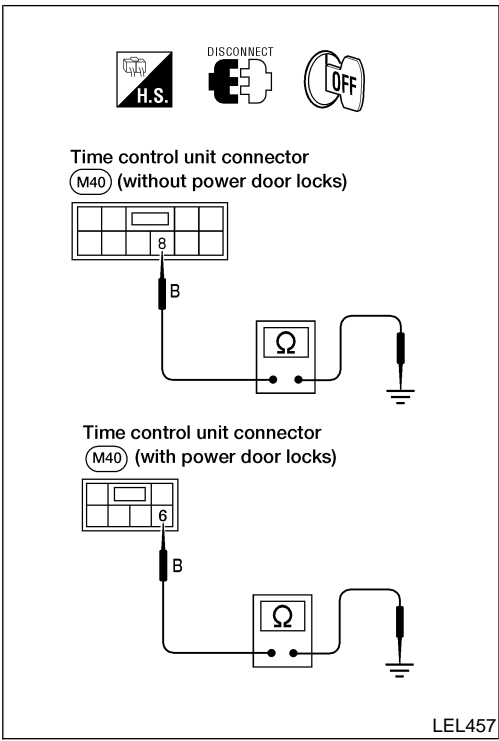
NIEL0055S02

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

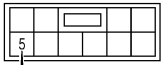
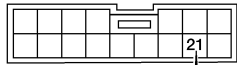



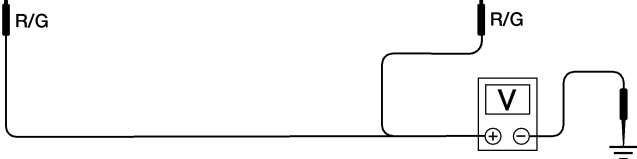
Terminals	Continuity
8 (without power door locks) - Ground	Yes
6 (with power door locks) - Ground	

# WARNING CHIME

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

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

=NIEL0055S03

<b>1</b>	<b>CHECK LIGHTING SWITCH INPUT SIGNAL</b>	
<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>  <p>5</p> </div> <div style="text-align: center;"> <p>Time control unit connector (M41) (with power door locks)</p>  <p>21</p> </div> <div style="text-align: center;">  <p>H.S. CONNECT</p>  <p>E</p>  <p>OFF</p> </div> <div style="text-align: left;"> <p><b>Voltage [V]:</b>  <b>Condition of lighting switch:</b>                      Parking lamp (1ST) or ON (2ND)                      Approx. 12  <b>Condition of lighting switch: OFF</b>                      0</p> </div> </div> 		
LEL458		
<b>OK or NG</b>		
OK	▶	Lighting switch is OK.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 38, located in the fuse and fusible link box)</li> <li>● Harness for open or short between control unit and lighting switch</li> </ul>

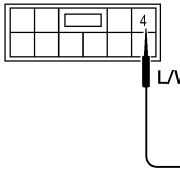
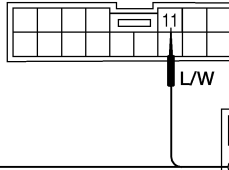
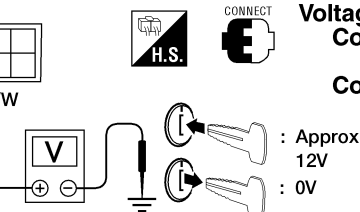
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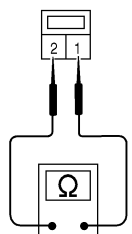
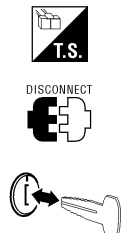
# WARNING CHIME

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

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

=NIEL0055S04

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	<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-between; align-items: flex-start;"> <div style="width: 45%;"> <p>Time control unit connector (M40) (without power door locks)</p>  <p>Time control unit connector (M41) (with power door locks)</p>  </div> <div style="width: 45%; text-align: center;"> <p><b>H.S.</b> <b>CONNECT</b></p>  <p><b>Voltage [V]:</b>  <b>Condition of key switch: Key is inserted.</b>                      Approx. 12  <b>Condition of key switch: Key is removed.</b>                      0</p> </div> </div> <p style="text-align: right;">LEL459</p>				
<b>OK or NG</b>				
OK	▶	Key switch is OK.		
NG	▶	GO TO 2.		

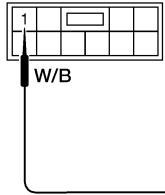
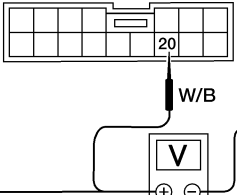


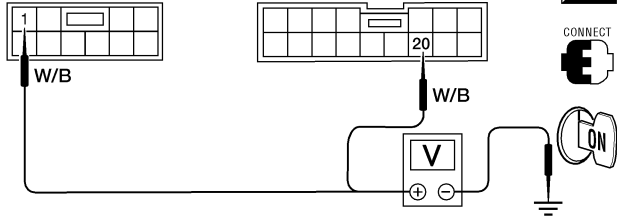
<b>2</b>	<b>CHECK KEY SWITCH</b>	<p>Check continuity between terminals 1 and 2.</p>		
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p>Key switch connector (E113)</p>  </div> <div style="width: 45%; text-align: center;"> <p><b>T.S.</b> <b>DISCONNECT</b></p>  </div> </div> <p style="text-align: right;">LEL449</p>				
<b>OK or NG</b>				
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between key switch and fuse</li> <li>● Harness for open or short between time control unit and key switch</li> </ul>		
NG	▶	Replace key switch.		

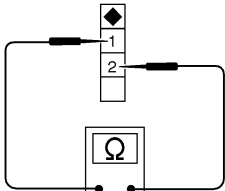


# WARNING CHIME

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

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

=NIEL0055S05

<b>1</b>	<b>CHECK SEAT BELT BUCKLE SWITCH LH INPUT SIGNAL</b>	<p>1. Turn ignition switch "ON".</p> <p>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><b>Voltage [V]:</b></p> <p>Condition of seat belt buckle switch LH: Fastened Approx. 5</p> <p>Condition of seat belt buckle switch LH: Unfastened 0</p> </div> <div style="text-align: right; margin-top: 10px;">LEL461</div>
<b>OK or NG</b>		
OK	▶	Seat belt buckle switch LH is OK.
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK SEAT BELT BUCKLE SWITCH LH</b>	<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><b>Continuity:</b></p> <p>Seat belt is fastened. No</p> <p>Seat belt is unfastened. Yes</p> </div> <div style="text-align: right; margin-top: 10px;">LEL462</div>
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Seat belt buckle switch LH ground circuit</li> <li>● Harness for open or short between time control unit and seat belt buckle switch LH</li> </ul>
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	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between time control unit and fuse</li> </ul>

**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

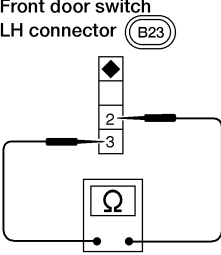

**OK or NG**

OK	▶	System is OK.
NG	▶	GO TO 3.



# WARNING CHIME

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

<b>3</b>	<b>CHECK FRONT DOOR SWITCH LH</b>
<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><b>Continuity:</b>  <b>Door switch is pushed.</b>  <b>No</b>  <b>Door switch is released.</b>  <b>Yes</b></p> </div> </div> <p style="text-align: right;">LEL465</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	<p>▶ <b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Front door switch LH ground circuit and condition</li> <li>● Harness for open or short between time control unit and front door switch LH</li> </ul>
NG	▶ Replace front door switch LH.

## Trouble Diagnoses (With Multi-Remote Control System)

### SYMPTOM CHART

NIEL0257

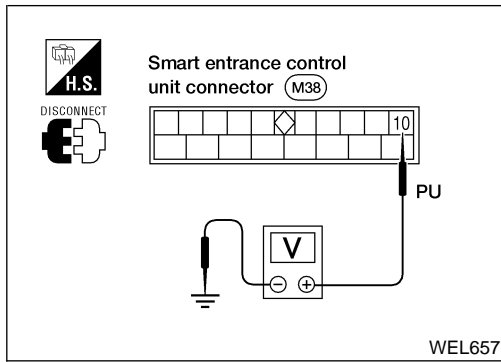
NIEL0257S01

REFERENCE PAGE (EL- )	130	131	132	133	134
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

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# WARNING CHIME

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



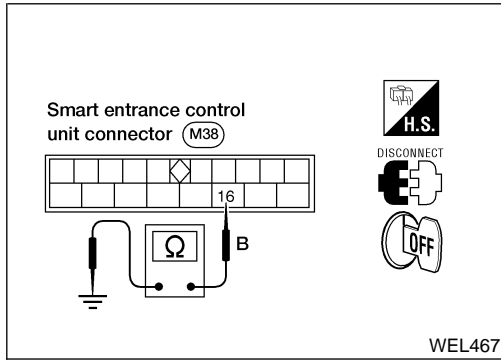
## POWER SUPPLY AND GROUND CIRCUIT CHECK

NIEL0257S02

### Power Supply Circuit Check

NIEL0257S0201

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



### Ground Circuit Check

NIEL0257S0202



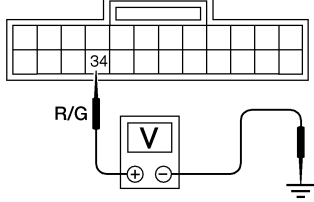



Terminals	Continuity
16 - Ground	Yes

# WARNING CHIME

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

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

=NIEL0257S03

<b>1</b>	<b>CHECK LIGHTING SWITCH INPUT SIGNAL</b>							
<p> <b>With CONSULT-II</b> Check lighting switch ("HD/LMP 1ST SW") in "DATA MONITOR" mode with CONSULT-II.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">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: <b>HD/LMP 1ST SW ON</b></p> <p style="margin-left: 200px;">When lighting switch is in OFF position: <b>HD/LMP 1ST SW OFF</b></p> <p style="text-align: right;">SEL316W</p>			DATA MONITOR		MONITOR		HD/LMP 1ST SW	OFF
DATA MONITOR								
MONITOR								
HD/LMP 1ST SW	OFF							
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit terminal 34 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="width: 15%;">  <p>CONNECT</p>   </div> <div style="width: 35%;"> <p><b>Voltage [V]:</b>  <b>Condition of lighting switch:</b>  <b>Parking lamp (1ST) or ON (2ND)</b>  <b>Approx. 12</b>  <b>Condition of lighting switch: OFF</b>  <b>0</b></p> </div> </div> <p style="text-align: right;">WEL468</p> <p style="text-align: center;"><b>OK or NG</b></p>								
OK	▶	Lighting switch is OK.						
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 38, located in the fuse and fusible link box)</li> <li>● Harness for open or short between smart entrance control unit and lighting switch</li> </ul>						



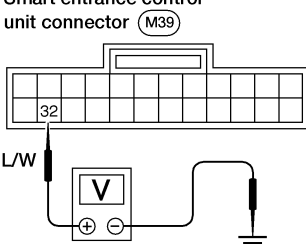


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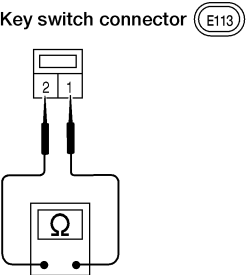


# WARNING CHIME

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

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

=NIEL0257S04

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



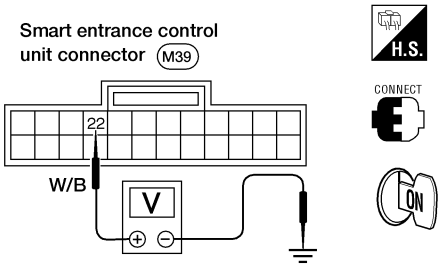
<b>2</b>	<b>CHECK KEY SWITCH</b>
<p>Check continuity between terminals 1 and 2.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Key switch connector (E113)</p>  </div> <div style="margin-right: 20px;"> <p> <b>DISCONNECT</b></p>  </div> <div> <p><b>Continuity: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

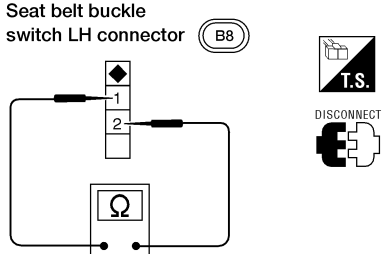
# WARNING CHIME

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

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

=NIEL0257S05

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

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



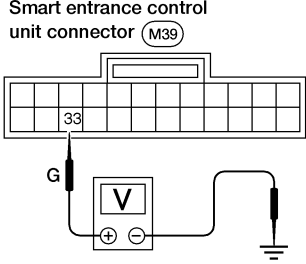


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# WARNING CHIME

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



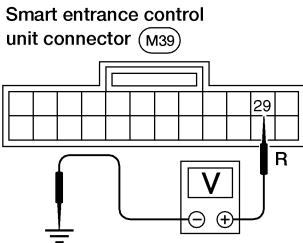


## DIAGNOSTIC PROCEDURE 4

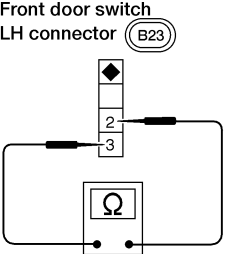


NIEL0257S06

<b>1</b>	<b>CHECK IGNITION ON SIGNAL</b>																		
<p> <b>With CONSULT-II</b> Check ignition switch ON signal ("IGN ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>																			
<table border="1" style="margin: auto;"> <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: <b>IGN ON SW ON</b></p> <p>When ignition switch is OFF: <b>IGN ON SW OFF</b></p>																			
SEL318W																			
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit 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;">     </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																			
<b>OK or NG</b>																			
OK	▶	GO TO 2.																	
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in fuse block (J/B)]</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>																	

# WARNING CHIME

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


<b>2</b>	<b>CHECK FRONT DOOR SWITCH LH INPUT SIGNAL</b>								
<p> <b>With CONSULT-II</b>                  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:  <b>DOOR SW-DR ON</b></p> <p>When driver's door is closed:  <b>DOOR SW-DR OFF</b></p>	
DATA MONITOR									
MONITOR									
DOOR SW-DR	OFF								
SEL319W									
<p> <b>Without CONSULT-II</b>                  Check voltage between smart entrance control unit terminal 29 and ground.</p>									
		 CONNECT 							
		<p><b>Voltage [V]:</b>                  Condition of driver's door: <b>CLOSED</b>                  Approx. 5                  Condition of driver's door: <b>OPENED</b>                  0</p>							
WEL472									
<b>OK or NG</b>									
OK	▶	GO TO 4.							
NG	▶	GO TO 3.							

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

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# WARNING CHIME

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

<b>4</b>	<b>CHECK WARNING CHIME</b>						
<p> <b>With CONSULT-II</b> Perform "CHIME" in "ACTIVE TEST" mode with CONSULT-II.</p> <table border="1"><thead><tr><th colspan="2">ACTIVE TEST</th></tr></thead><tbody><tr><td>CHIME</td><td>OFF</td></tr><tr><td><b>ON</b></td><td></td></tr></tbody></table> <p style="text-align: center;"><b>Warning chime should operate.</b></p> <p style="text-align: right;">SEL320W</p> <p style="text-align: center;"><b>OK or NG</b></p>		ACTIVE TEST		CHIME	OFF	<b>ON</b>	
ACTIVE TEST							
CHIME	OFF						
<b>ON</b>							
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 -

GI

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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 —

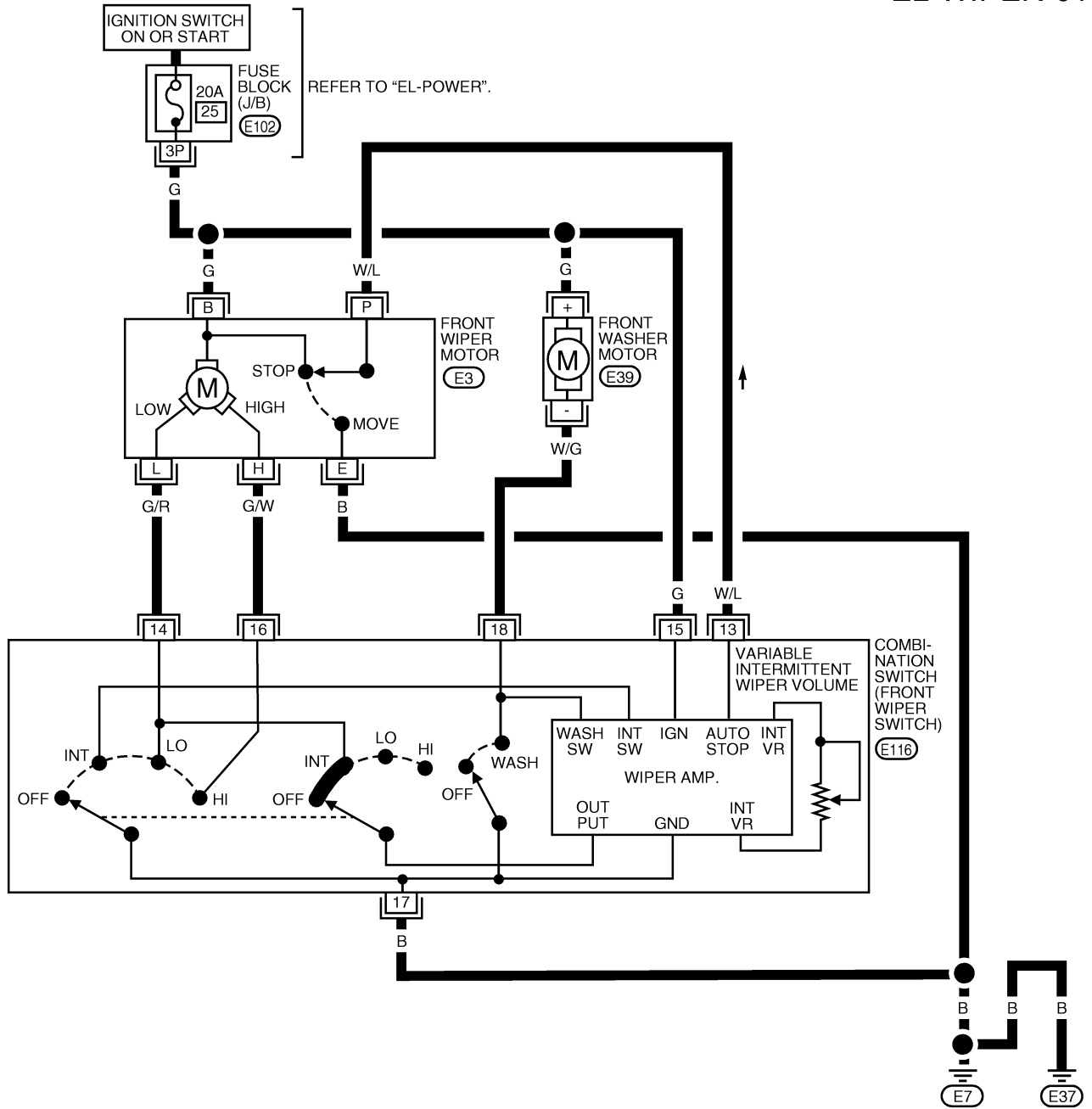
## Wiring Diagram — WIPER —

WITH INTERMITTENT WIPERS

NIEL0058

NIEL0058S01

EL-WIPER-01



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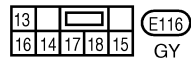
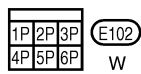
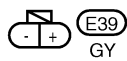
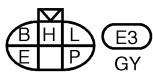
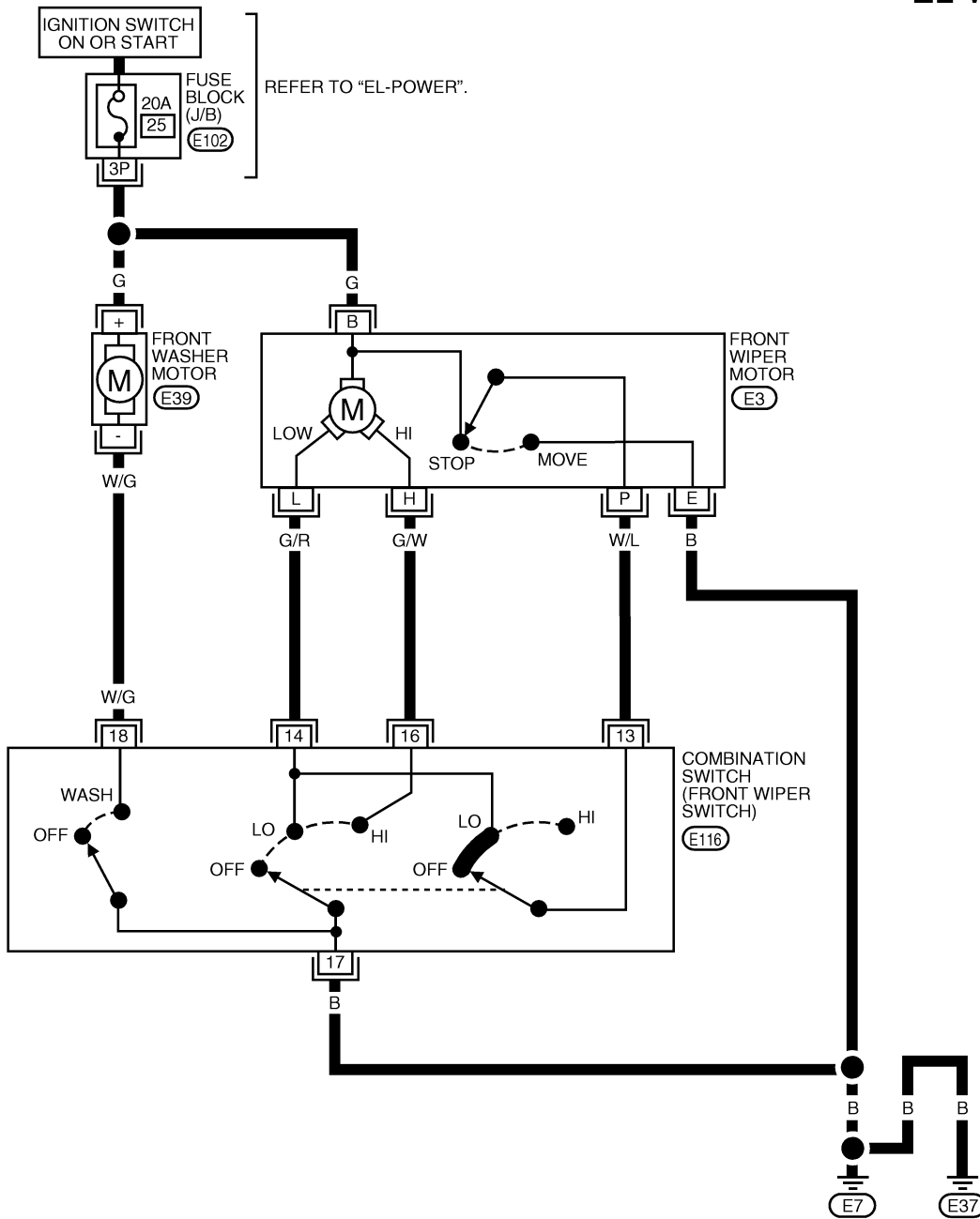
# FRONT WIPER AND WASHER

Wiring Diagram — WIPER — (Cont'd)

## WITHOUT INTERMITTENT WIPERS

NIEL0058S02

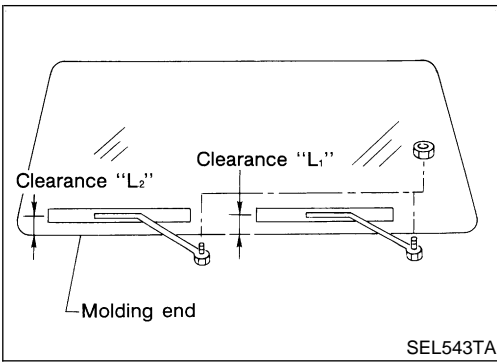
EL-WIPER-02



WEL361

# FRONT WIPER AND WASHER

Removal and Installation



## Removal and Installation

### WIPER ARMS

NIEL0060

NIEL0060S01

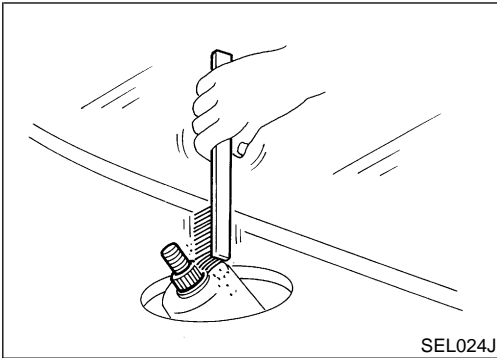
1. Prior to wiper arm installation, turn on wiper switch to operate wiper motor and then turn it "OFF" (Auto Stop).
2. Lift the blade up approximately 100 mm (3.94 in) and then set it down onto glass surface to set the blade center to clearance "L<sub>1</sub>" & "L<sub>2</sub>" immediately before tightening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

**Clearance "L<sub>1</sub>": 27.5 - 42.5 mm (1.08 - 1.67 in)**

**Clearance "L<sub>2</sub>": 34.5 - 49.5 mm (1.36 - 1.95 in)**

- Tighten wiper arm nuts to specified torque.

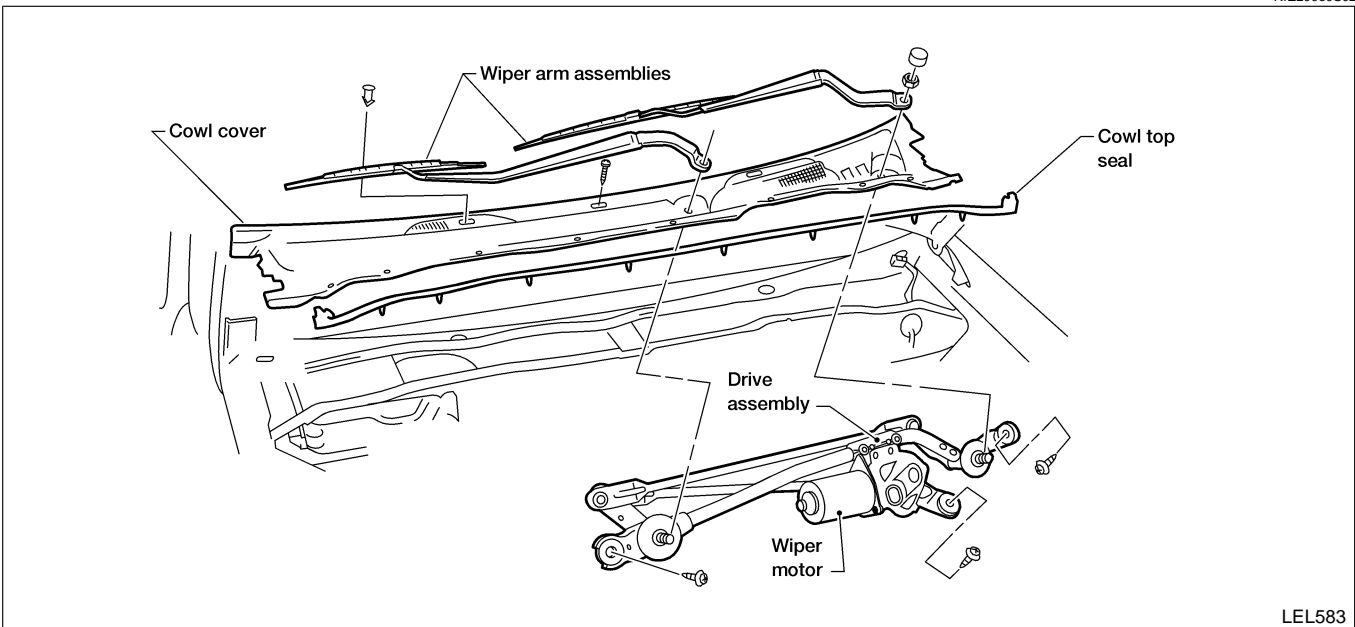
**Front wiper: 21 - 26 N·m (2.1 - 2.7 kg·m, 16 - 19 ft·lb)**



- Before reinstalling wiper arm, clean up 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

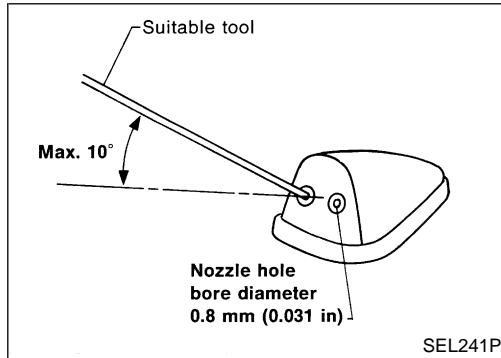
1. Remove 4 bolts that secure wiper motor.
2. Detach wiper motor from wiper linkage at ball joint.
3. Remove wiper linkage.

**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.

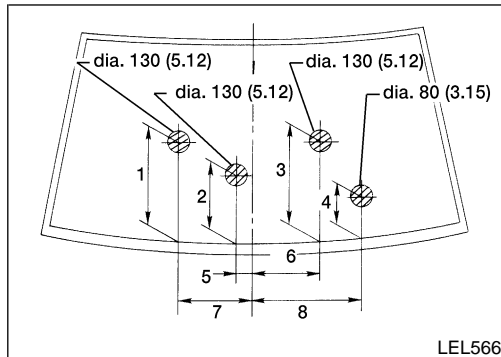


## Washer Nozzle Adjustment

NIEL0061

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

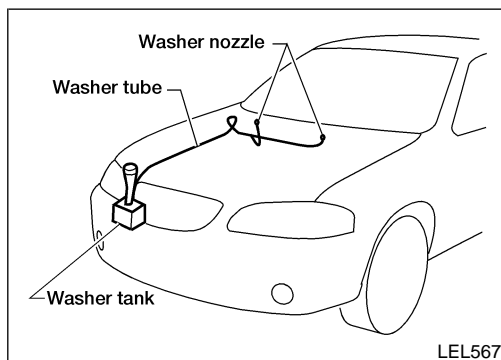
**Adjustable range: ±10°**



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

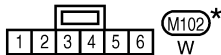
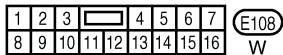
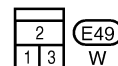
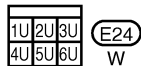
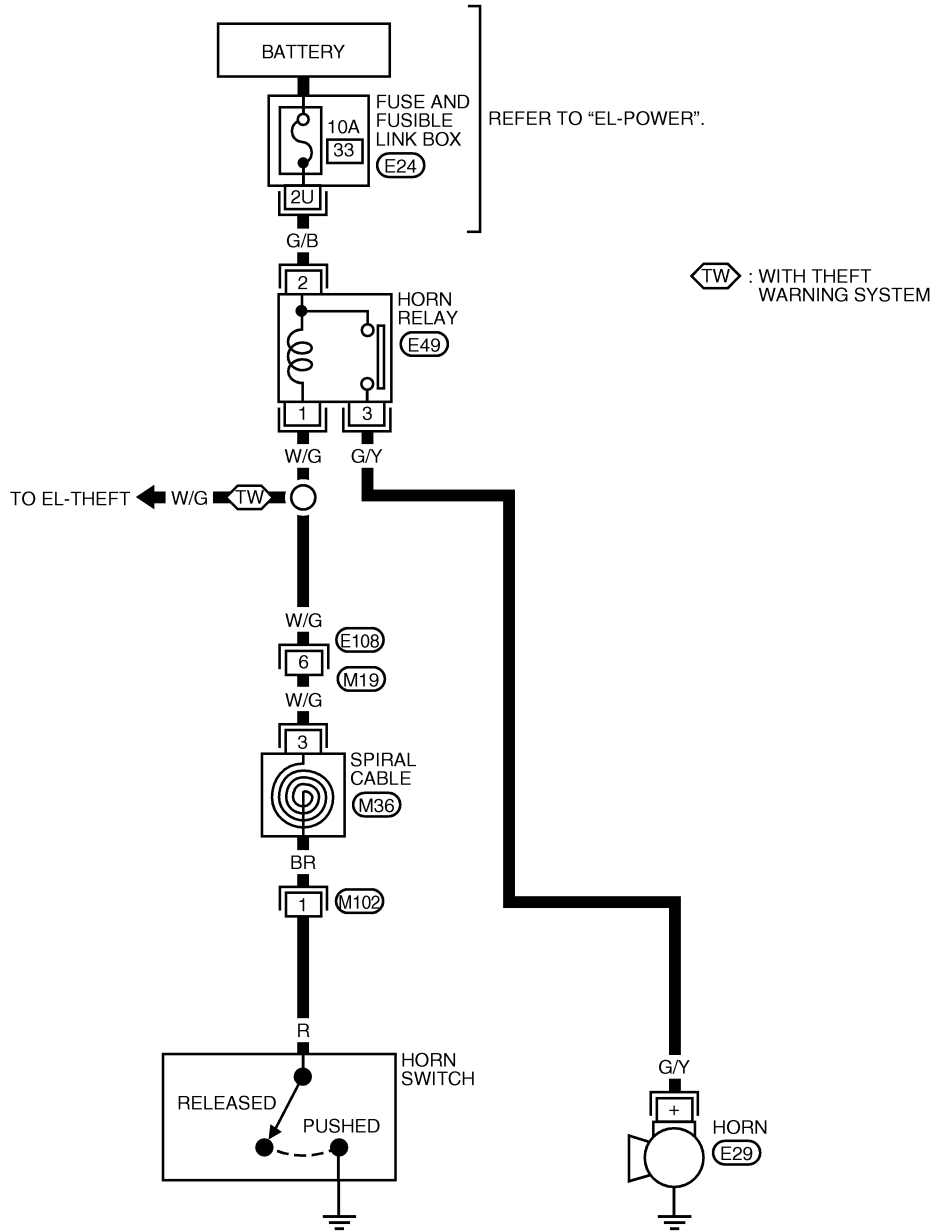
# HORN

Wiring Diagram — HORN —

## Wiring Diagram — HORN —

NIEL0071

EL-HORN-01



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

WEL362

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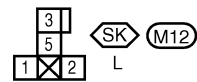
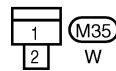
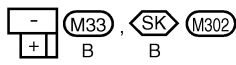
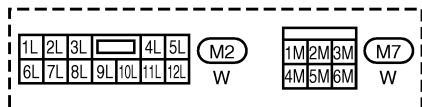
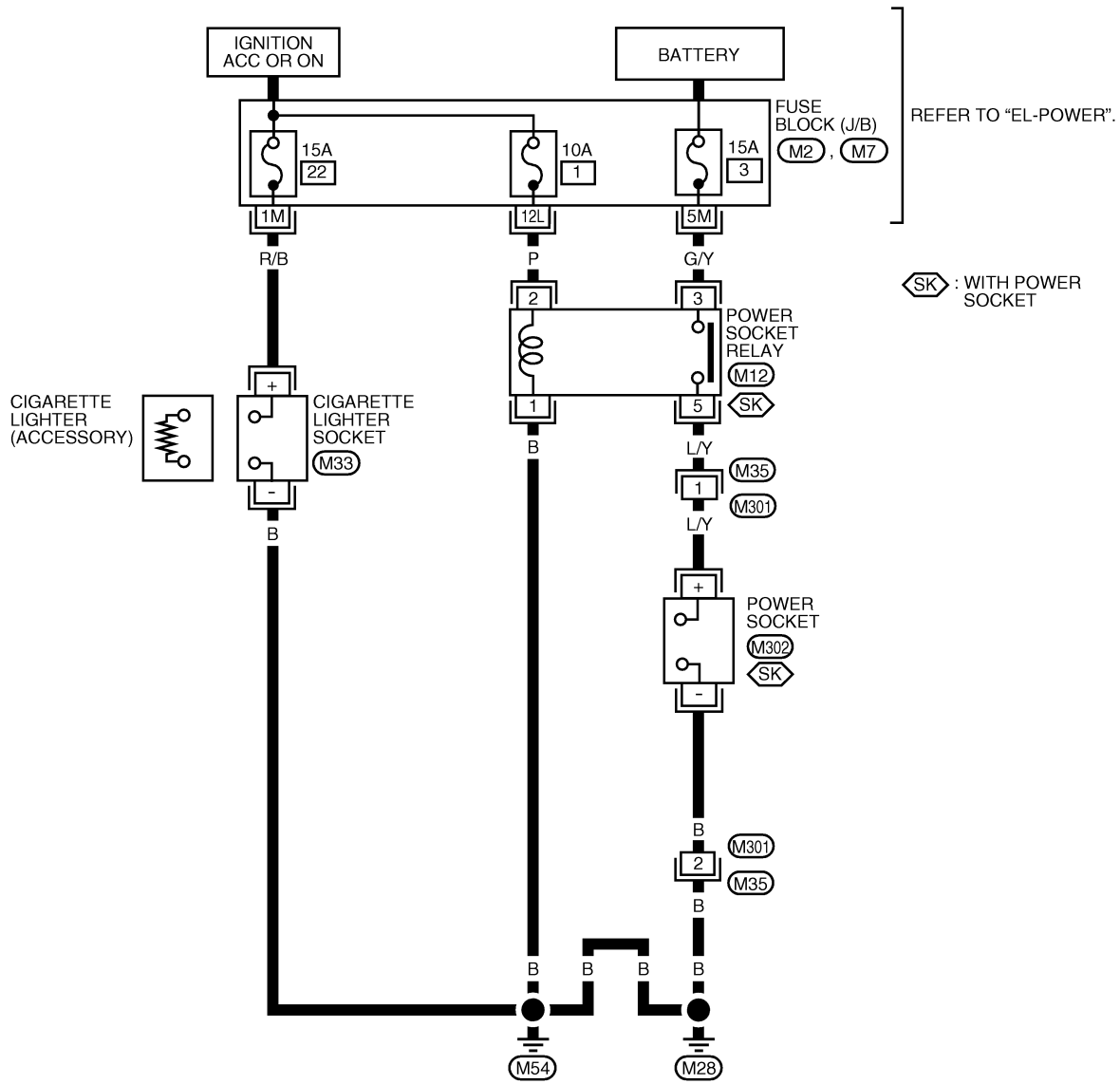
# CIGARETTE LIGHTER

Wiring Diagram — CIGAR —

## Wiring Diagram — CIGAR —

NIEL0156

EL-CIGAR-01



WEL363



# REAR WINDOW DEFOGGER

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NIEL0072

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MA

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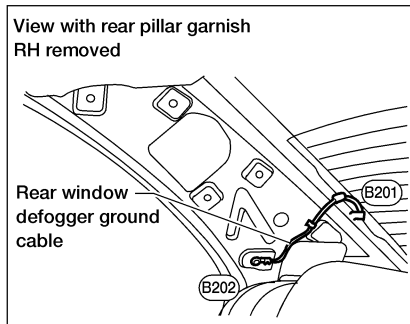
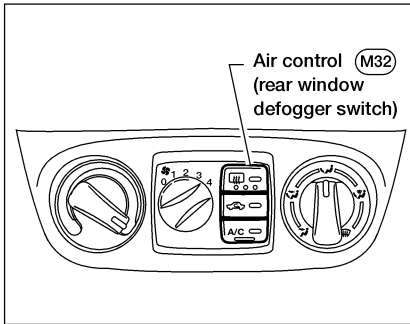
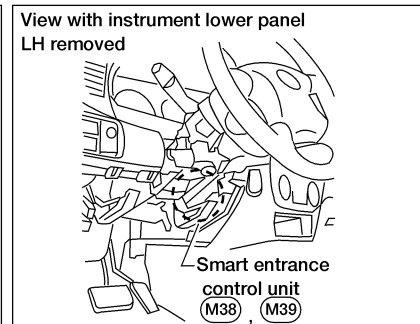
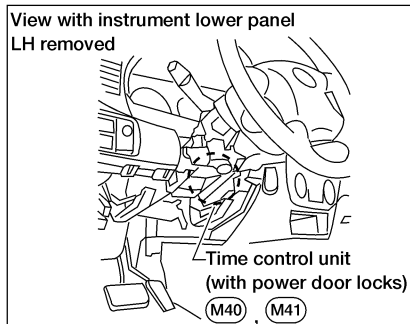
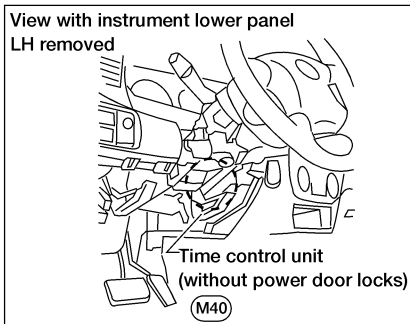
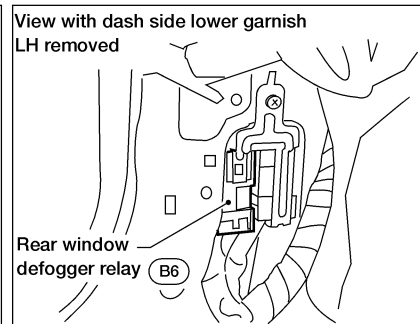
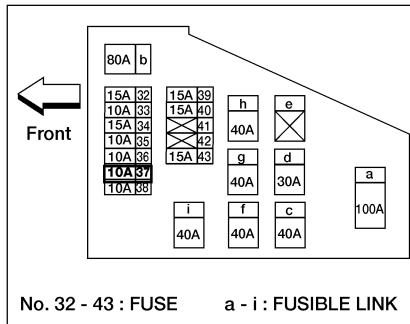
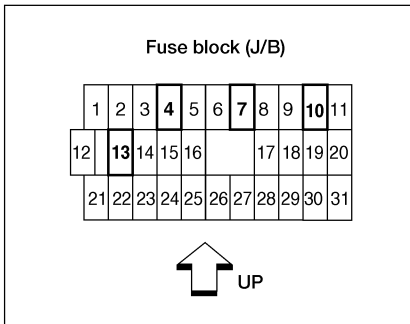
BT

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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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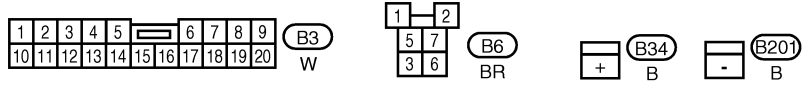
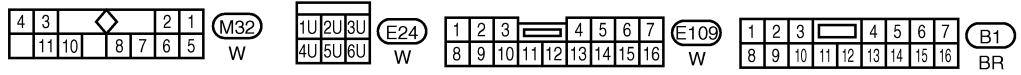
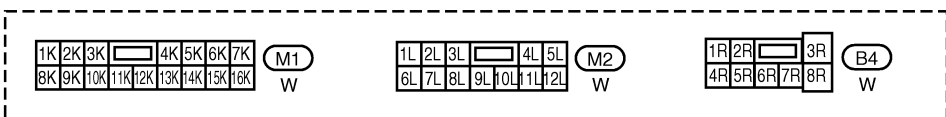
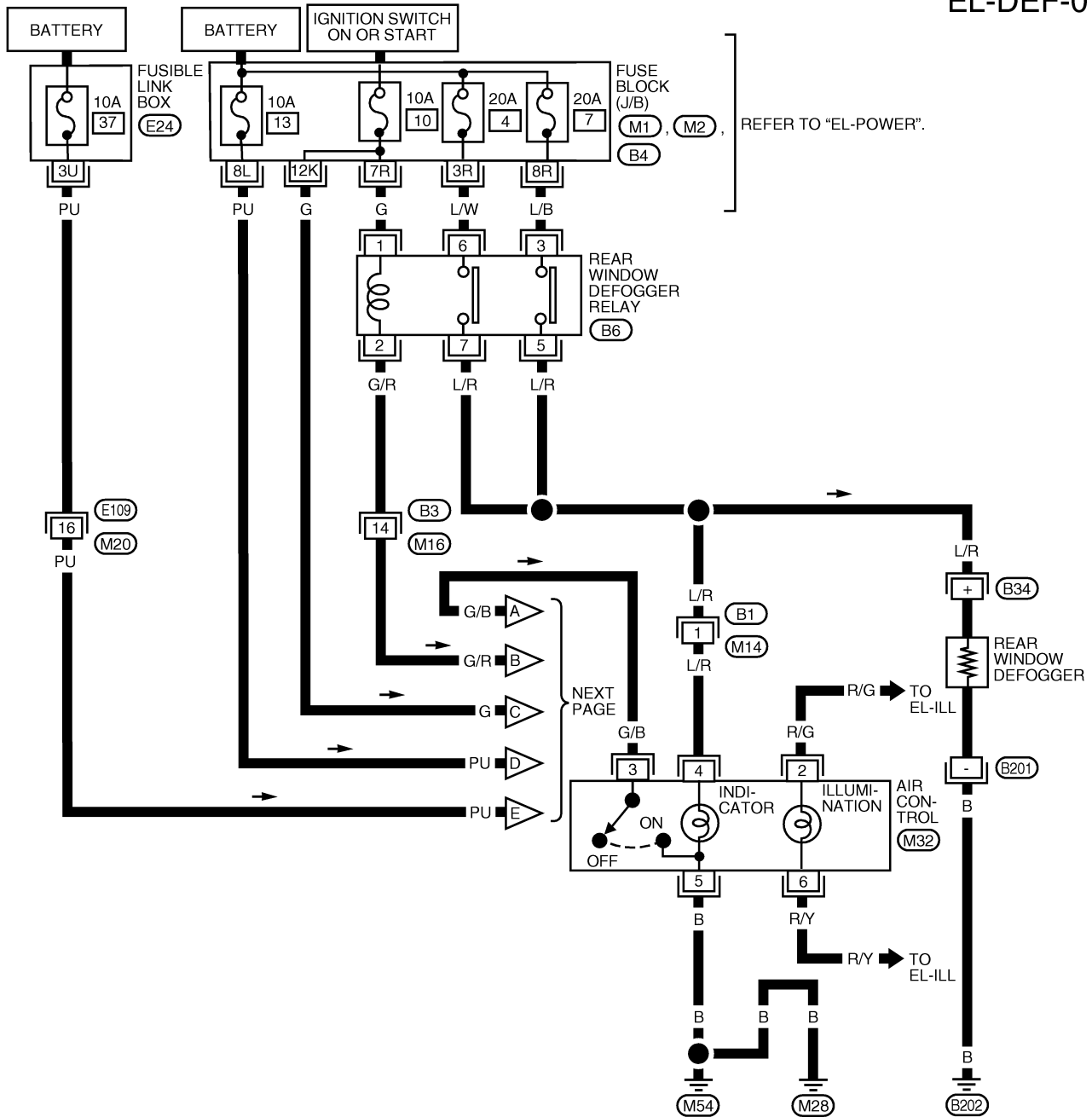
# REAR WINDOW DEFOGGER

Wiring Diagram — DEF —

## Wiring Diagram — DEF —

=NIEL0074

EL-DEF-01



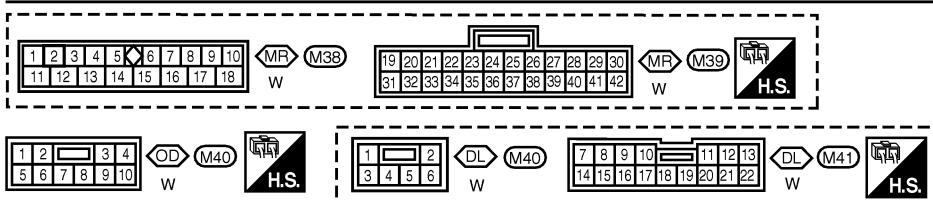
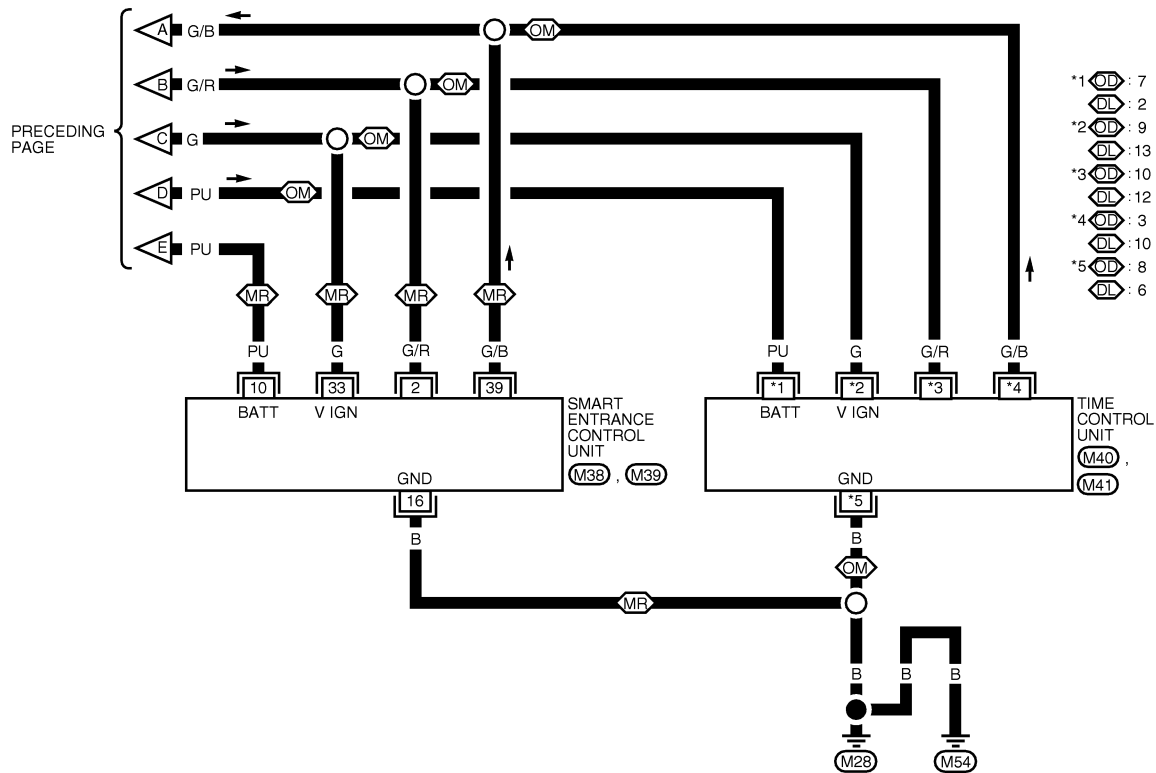
WEL364

# REAR WINDOW DEFOGGER

Wiring Diagram — DEF — (Cont'd)

EL-DEF-02

- ⊖: WITHOUT POWER DOOR LOCKS
- ⊖: WITH POWER DOOR LOCKS ONLY
- ⊖: WITH MULTI-REMOTE CONTROL SYSTEM
- ⊖: 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

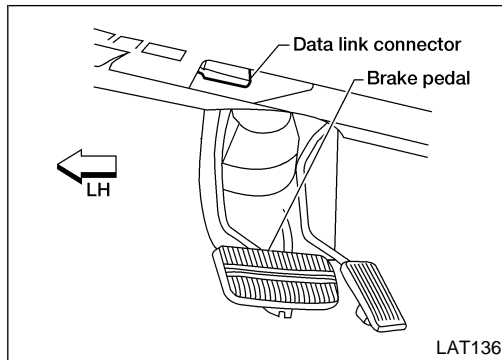
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
2	G/R	REAR WINDOW DEFOGGER RELAY	OFF	0V
10	PU	POWER SOURCE (FUSE)	ON (IGNITION KEY IN ON POSITION)	12V
			—	12V
16	B	GROUND	—	—
33	G	IGNITION SWITCH (ON)	IGNITION KEY IN ON POSITION	12V
			IGNITION KEY IN START POSITION	12V
39	G/B	AIR CONTROL (REAR WINDOW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

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

LEL600

# REAR WINDOW DEFOGGER

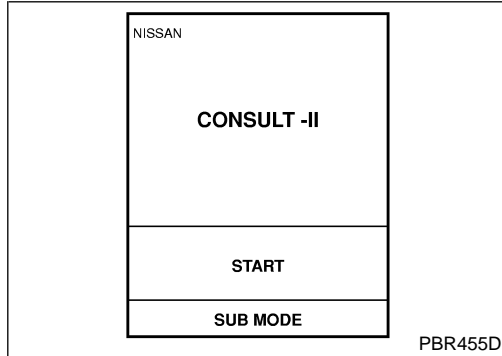
CONSULT-II Inspection Procedure (With Multi-Remote Control System)



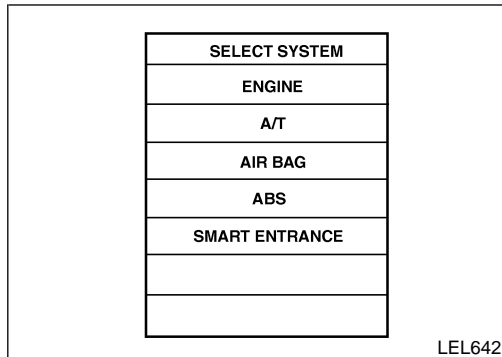
## CONSULT-II Inspection Procedure (With Multi-Remote Control System) "REAR DEFOGGER"

NIEL0218  
NIEL0218S01

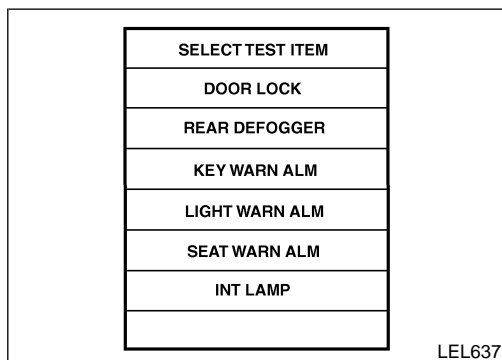
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



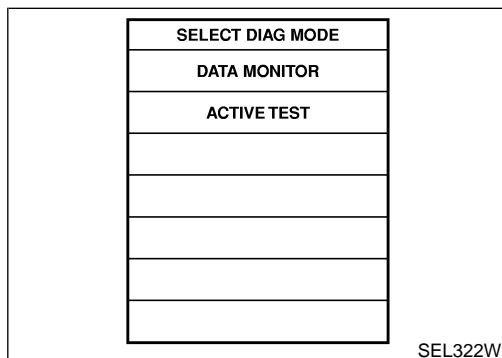
3. Turn ignition switch "ON".
4. Touch "START".



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><b>Voltage [V]:</b> Rear window defogger switch is "OFF". Approx. 12 Rear window defogger switch is "ON". 0</p>	
LEL477	
OK or NG	
OK	<p>▶ <b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Rear to “REAR WINDOW DEFOGGER RELAY”, EL-158.</li> <li>● Rear window defogger circuit</li> <li>● Refer to “Filament Check”, EL-158.</li> </ul>
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;"><b>Battery voltage should exist.</b></p> <p style="text-align: right;">LEL478</p>	
<b>OK or NG</b>	
OK	▶ GO TO 3.
NG	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in the fuse block (J/B)]</li> <li>● Rear window defogger relay</li> <li>● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay</li> <li>● Harness for open or short between rear window defogger relay and time control unit</li> </ul>

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;"><b>Continuity:</b>                      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>	
<b>OK or NG</b>	
OK	▶ GO TO 4.
NG	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>● Rear window defogger switch                              (Refer to "REAR WINDOW DEFOGGER SWITCH", EL-158.)</li> <li>● Harness for open or short between time control unit and rear window defogger switch</li> <li>● Rear window defogger switch ground circuit</li> </ul>



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

### 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.

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# REAR WINDOW DEFOGGER

Trouble Diagnoses (With Multi-Remote Control System)



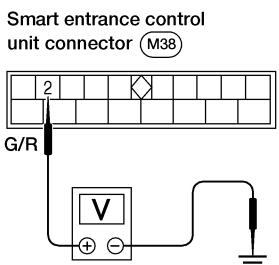



## Trouble Diagnoses (With Multi-Remote Control System)

### DIAGNOSTIC PROCEDURE

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

NIEL0260

NIEL0260S01

<b>1</b>	<b>CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL</b>
<p> <b>With CONSULT-II</b> Select "ACTIVE TEST" in "REAR DEFOGGER" with CONSULT-II.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>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> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>1. Turn ignition switch to ON position.</li> <li>2. Check voltage between smart entrance control unit harness terminal 2 and ground.</li> </ol> <div style="display: flex; justify-content: space-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><b>Voltage [V]:</b></p> <p>Rear window defogger switch is "OFF". Approx. 12</p> <p>Rear window defogger switch is "ON". 0</p> </div> </div> <p style="text-align: right;">LEL482</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Refer to "REAR WINDOW DEFOGGER RELAY", EL-158.</li> <li>● Rear window defogger circuit</li> <li>● Refer to "Filament Check", EL-158.</li> </ul>
NG	GO TO 2.

# REAR WINDOW DEFOGGER

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

2	<h2>CHECK DEFOGGER RELAY COIL SIDE CIRCUIT</h2>
<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> <p>Smart entrance control unit connector (M38)</p> </div> <div> </div> <div> <p><b>Battery voltage should exist.</b></p> </div> </div> <p style="text-align: right;">LEL483</p>	
<p><b>OK or NG</b></p>	
OK	<p>▶ GO TO 3.</p>
NG	<p>▶ <b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10, located in the fuse block (J/B)]</li> <li>● Rear window defogger relay</li> <li>● Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay</li> <li>● Harness for open or short between rear window defogger relay and smart entrance control unit</li> </ul>

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# REAR WINDOW DEFOGGER

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

<b>3</b>	<b>CHECK REAR WINDOW DEFOGGER SWITCH INPUT SIGNAL</b>						
<p> <b>With CONSULT-II</b>                  Select "REAR DEF SW" in "DATA MONITOR" mode with CONSULT-II.</p>							
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>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:  <b>REAR DEF SW should be ON.</b></p>							
SEL352W							
<p> <b>Without CONSULT-II</b>                  Check continuity between smart entrance control unit terminal 39 and ground.</p>							
<p><b>Continuity:</b>                  Rear window defogger switch is pushed.                  Continuity should exist.                  Rear window defogger switch is released.                  Continuity should not exist.</p>							
LEL484							
<b>OK or NG</b>							
OK	▶ GO TO 4.						
NG	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Refer to "REAR WINDOW DEFOGGER SWITCH", EL-158.</li> <li>● Harness for open or short between smart entrance control unit and rear window defogger switch</li> <li>● Rear window defogger switch ground circuit</li> </ul>						

<b>4</b>	<b>CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL</b>																				
<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																					
<b>OK or NG</b>																					
OK	▶ GO TO 5.																				
NG	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 10 or No. 37, located in the fuse block (J/B)]</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>																				

# REAR WINDOW DEFOGGER

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

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

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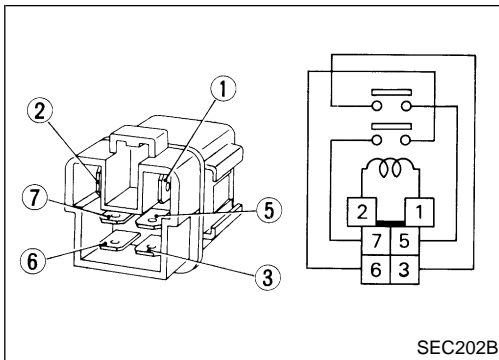
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# REAR WINDOW DEFOGGER

## Electrical Components Inspection



SEC202B

### Electrical Components Inspection

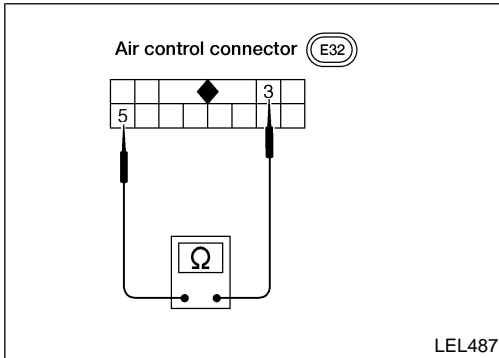
=NIEL0076

#### REAR WINDOW DEFOGGER RELAY

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



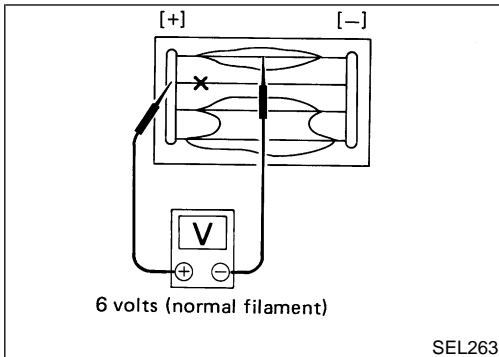
LEL487

#### 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

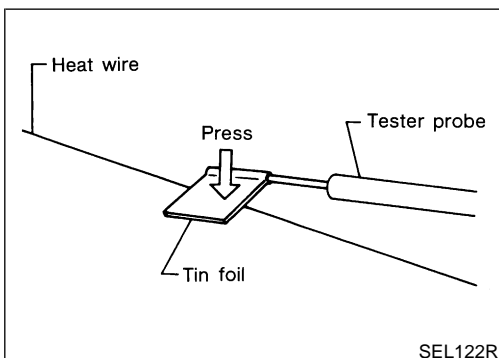


SEL263

#### Filament Check

NIEL0077

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

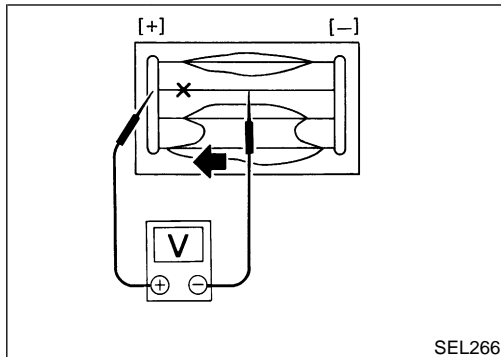
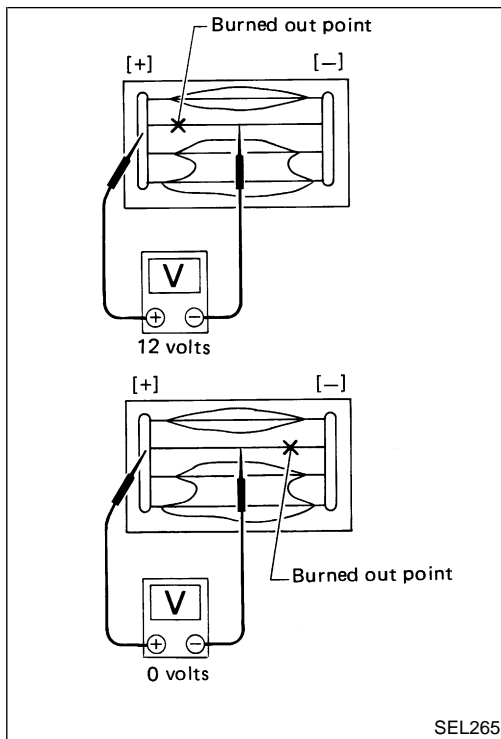


SEL122R

- 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)



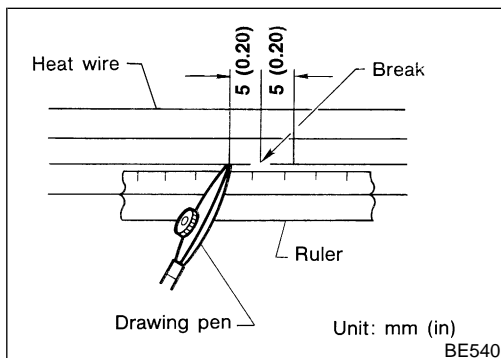
2. If a filament is burned out, circuit tester registers 0 or 12 volts.

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.

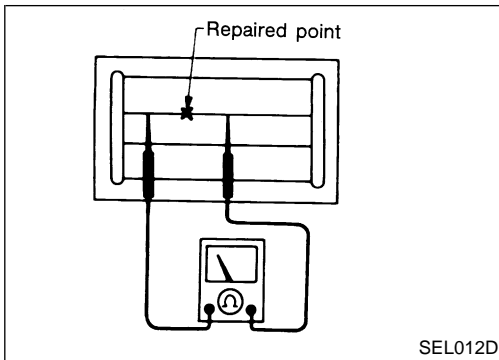
#### Shake silver composition container before use.

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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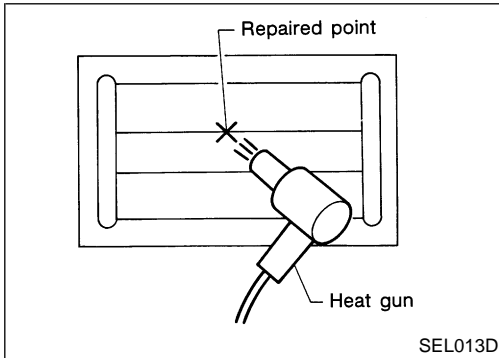
## REAR WINDOW DEFOGGER

### 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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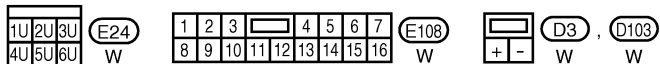
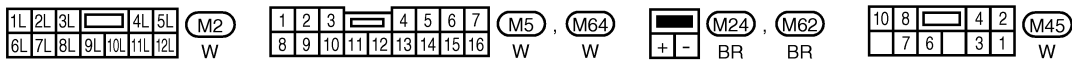
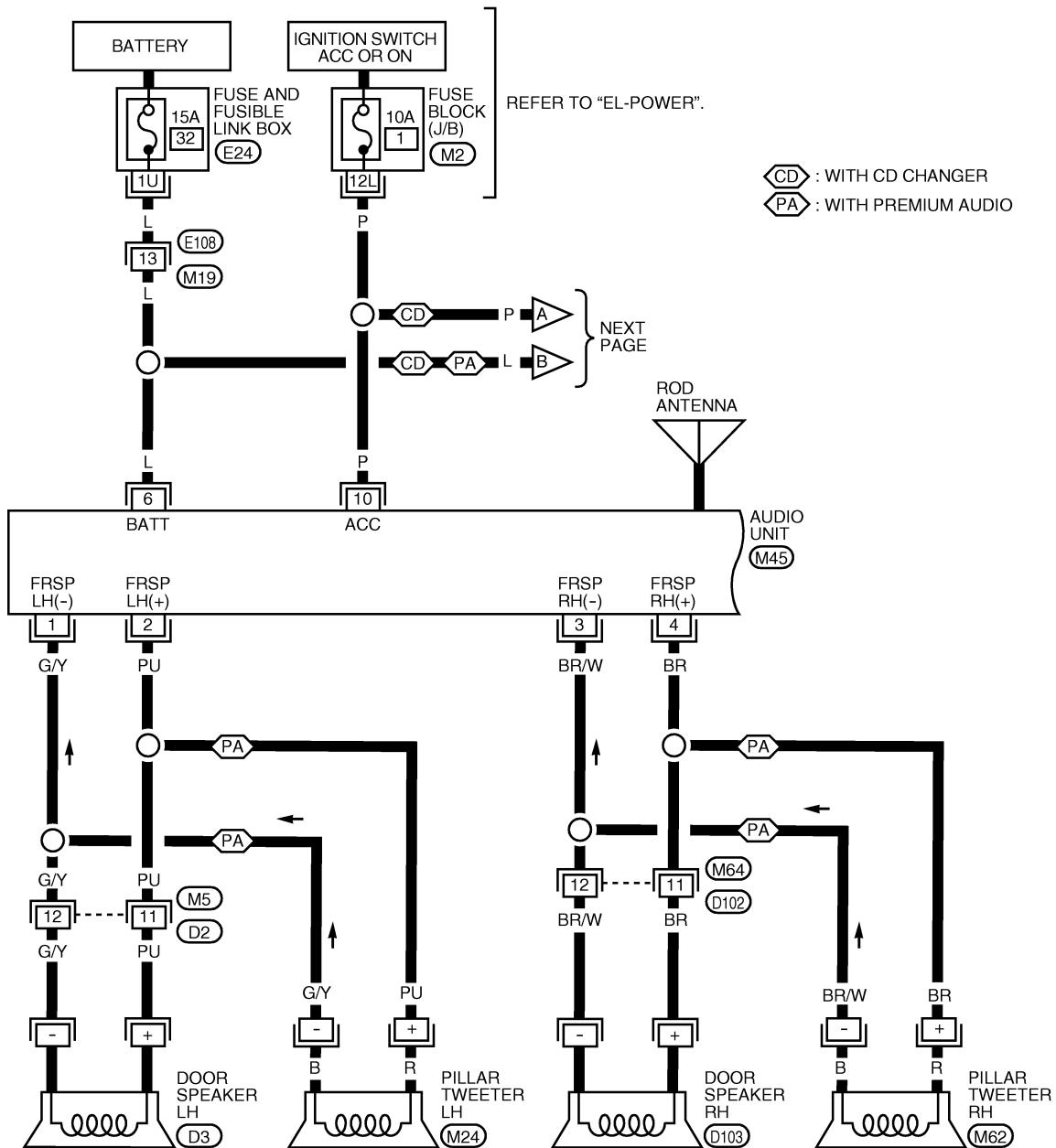
# AUDIO

Wiring Diagram — AUDIO —

## Wiring Diagram — AUDIO —

NIEL0081

EL-AUDIO-01

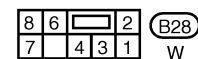
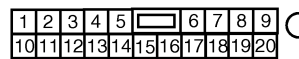
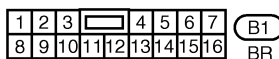
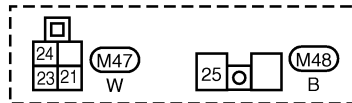
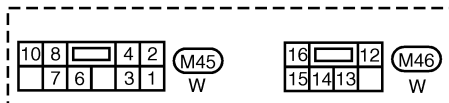
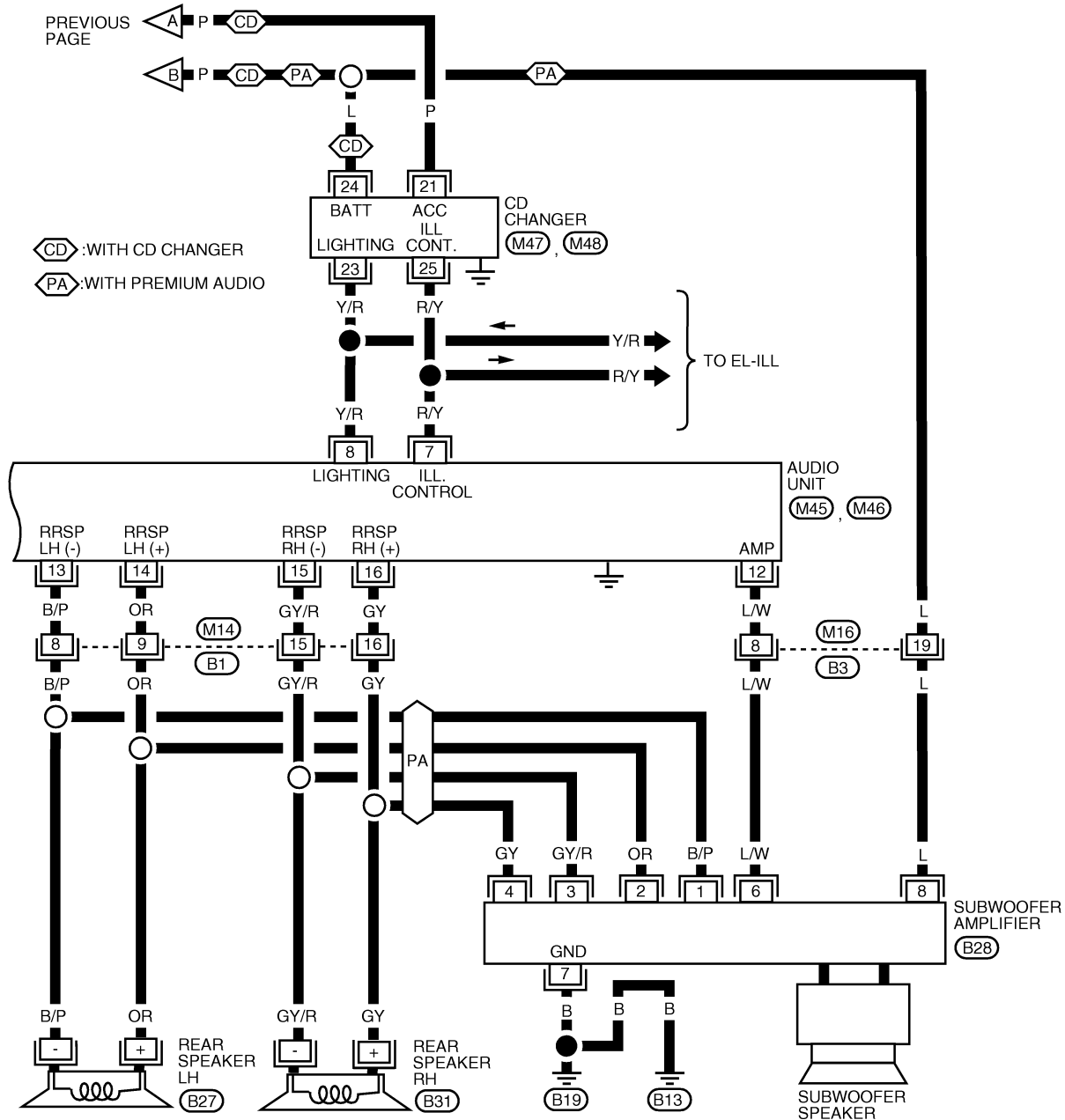


WEL366

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

## 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

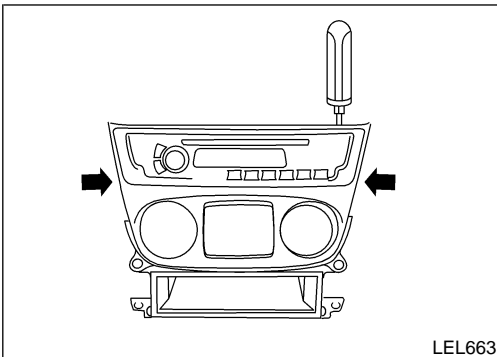
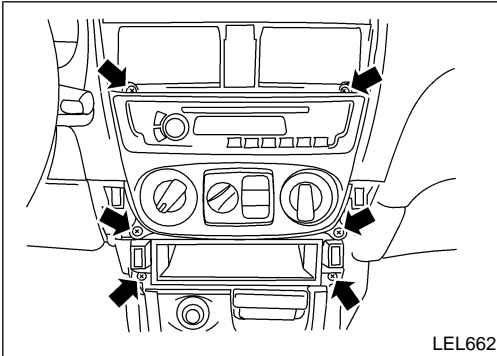
Using a jumper wire, clip an auxiliary ground between antenna and body.

- 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-165.
2. Remove upper cluster lid C by firmly grasping and carefully pulling rearward from instrument panel.
3. Disconnect hazard switch connector.
4. Remove lower cluster lid C by firmly grasping and carefully pulling rearward from instrument panel.
5. Remove six screws and remove audio unit and storage bin/CD changer as an assembly.
6. Disconnect audio unit connectors.



### CAUTION:

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

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

## 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.
- 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.

1. Eject and remove any CDs from the CD changer unit.
2. Turn ignition switch OFF. Wait until CD changer unit display is off and mechanism stops moving (mechanism sound stops).
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.
- The changer mechanism will lock itself within 10 seconds.
4. After mechanism stops moving (mechanism sound stops), disconnect the CD changer unit connectors.
5. Remove CD changer unit.

### NOTE:

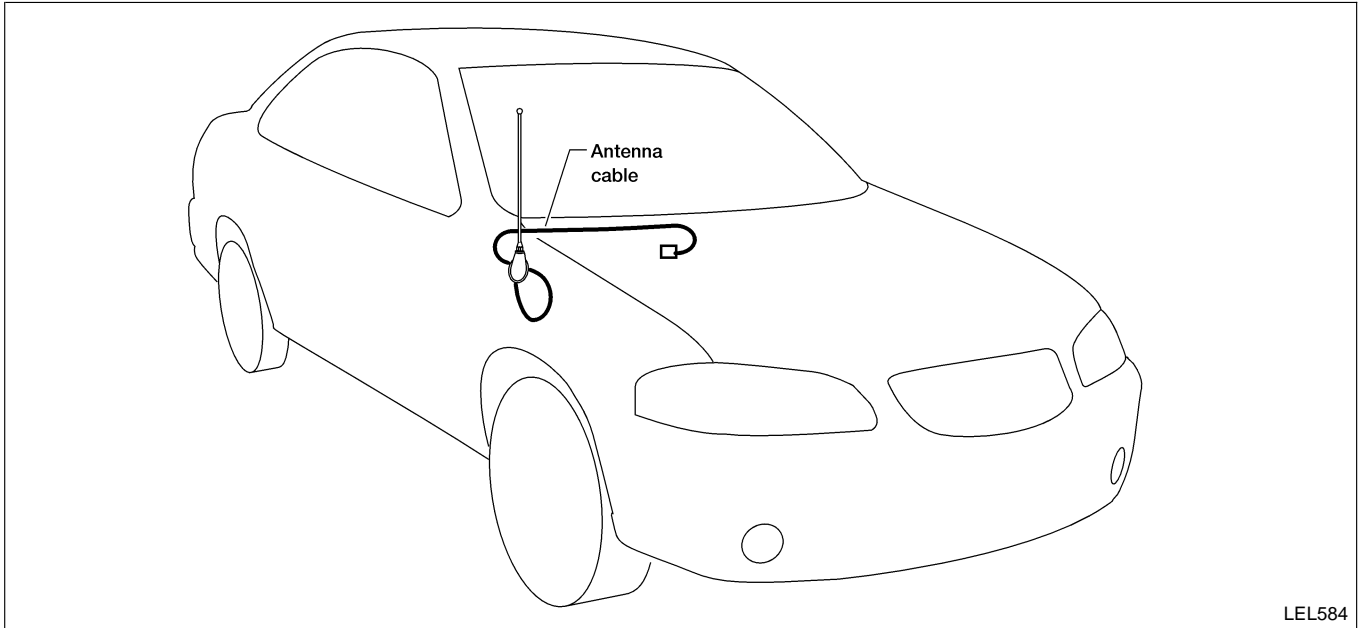
After installing a new or remanufactured CD changer unit, switching the CD changer unit ON will automatically unlock the mechanism. A special unlocking procedure is not required.

# AUDIO

Location of Antenna

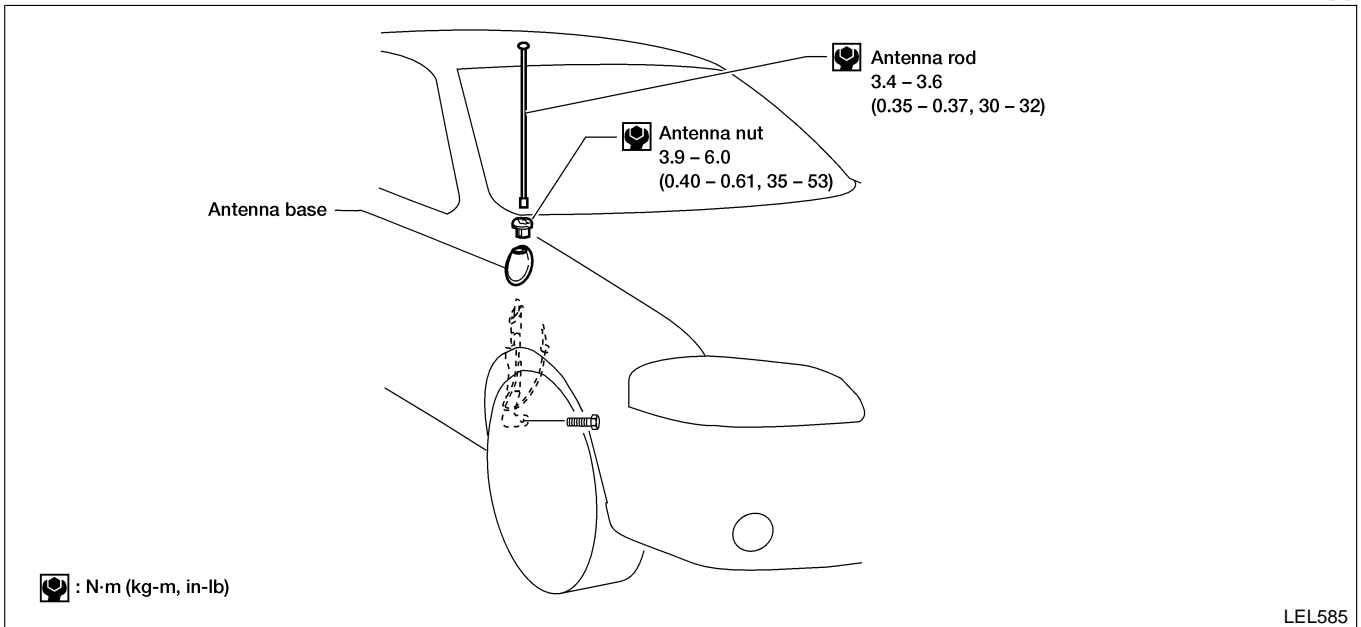
## Location of Antenna

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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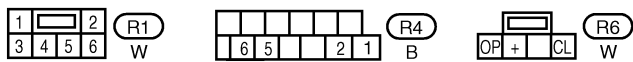
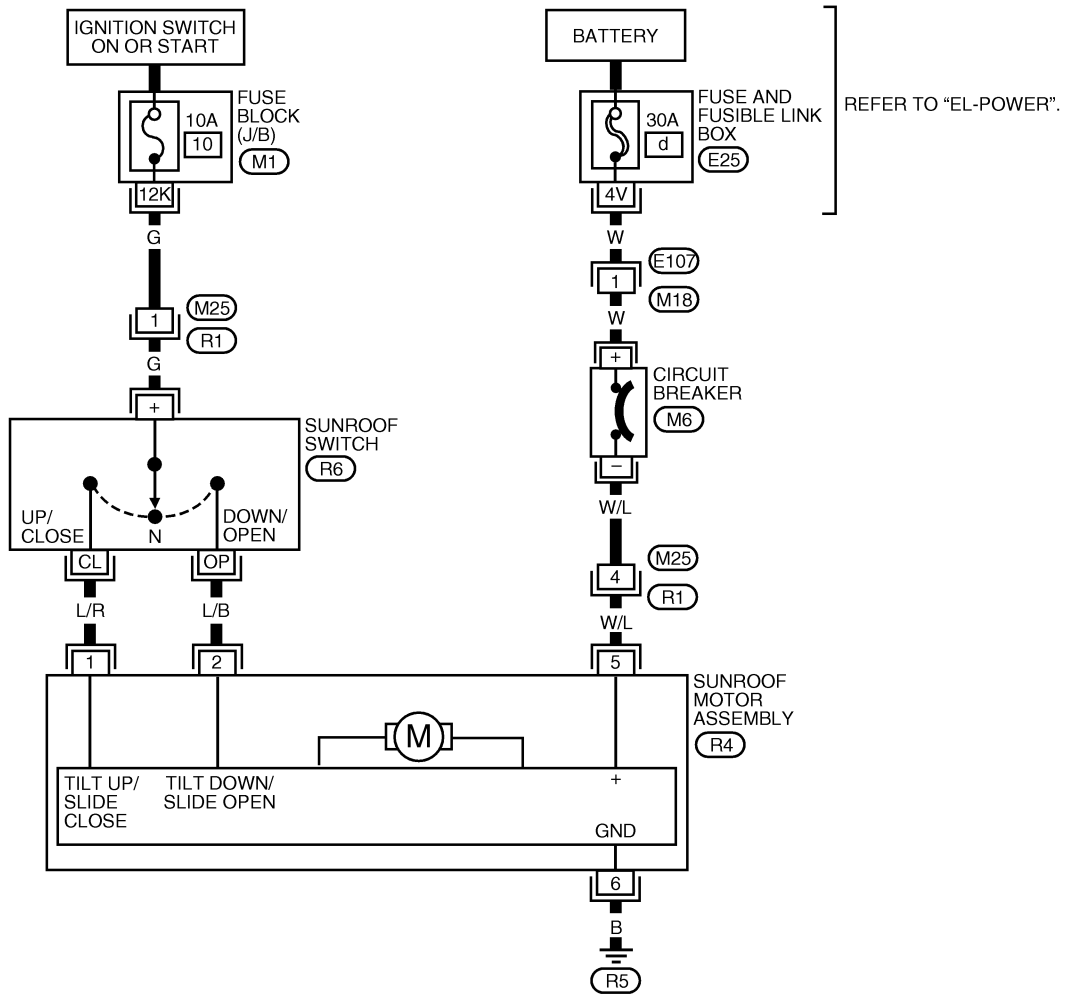
# POWER SUNROOF

Wiring Diagram — SROOF —

## Wiring Diagram — SROOF —

NIEL0089

EL-SROOF-01



WEL368



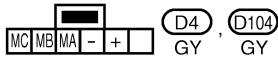
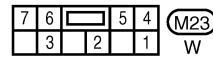
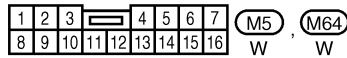
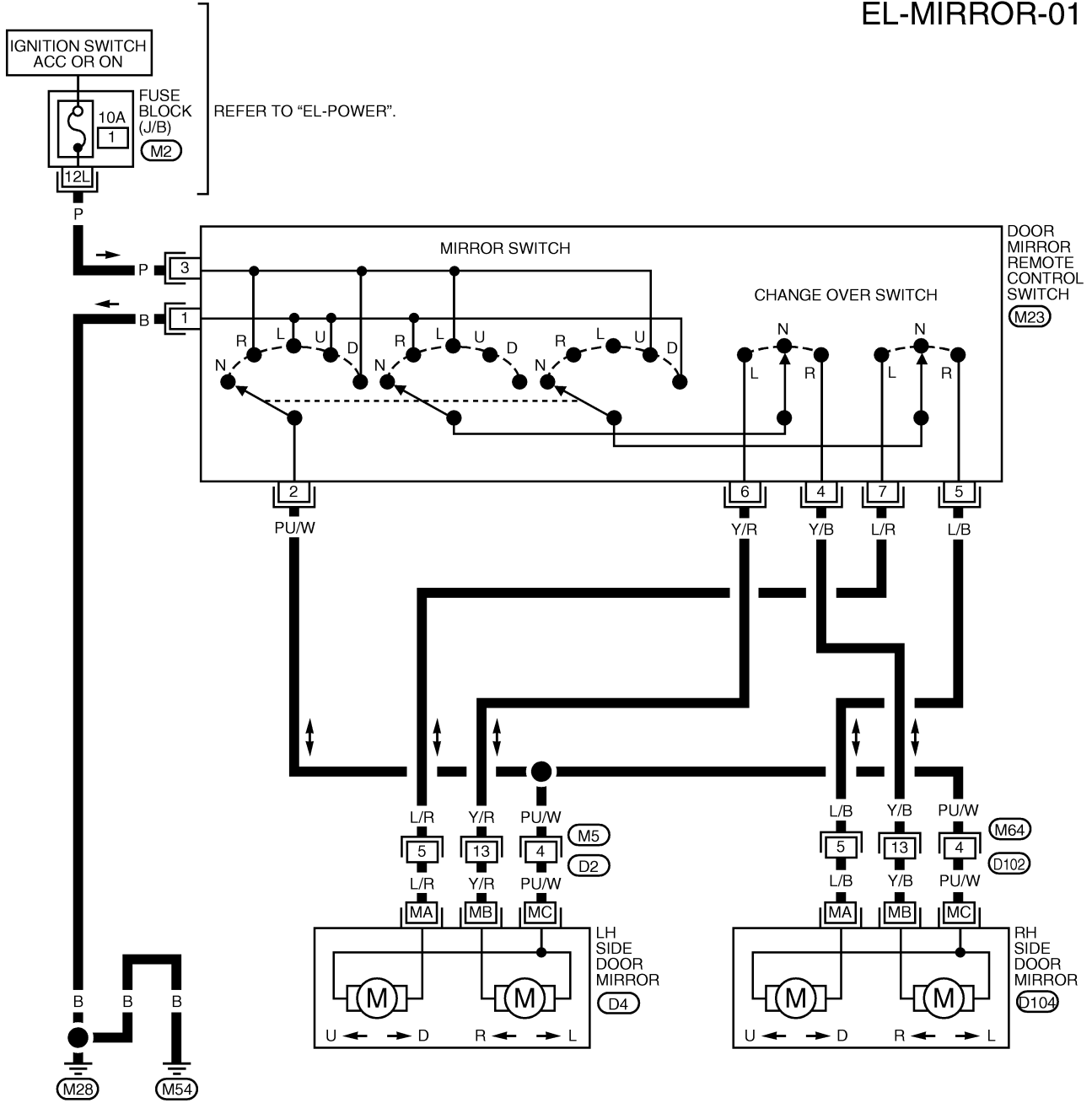
# DOOR MIRROR

Wiring Diagram — MIRROR —

## Wiring Diagram — MIRROR —

NIEL0090

### EL-MIRROR-01



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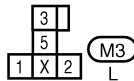
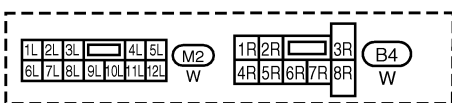
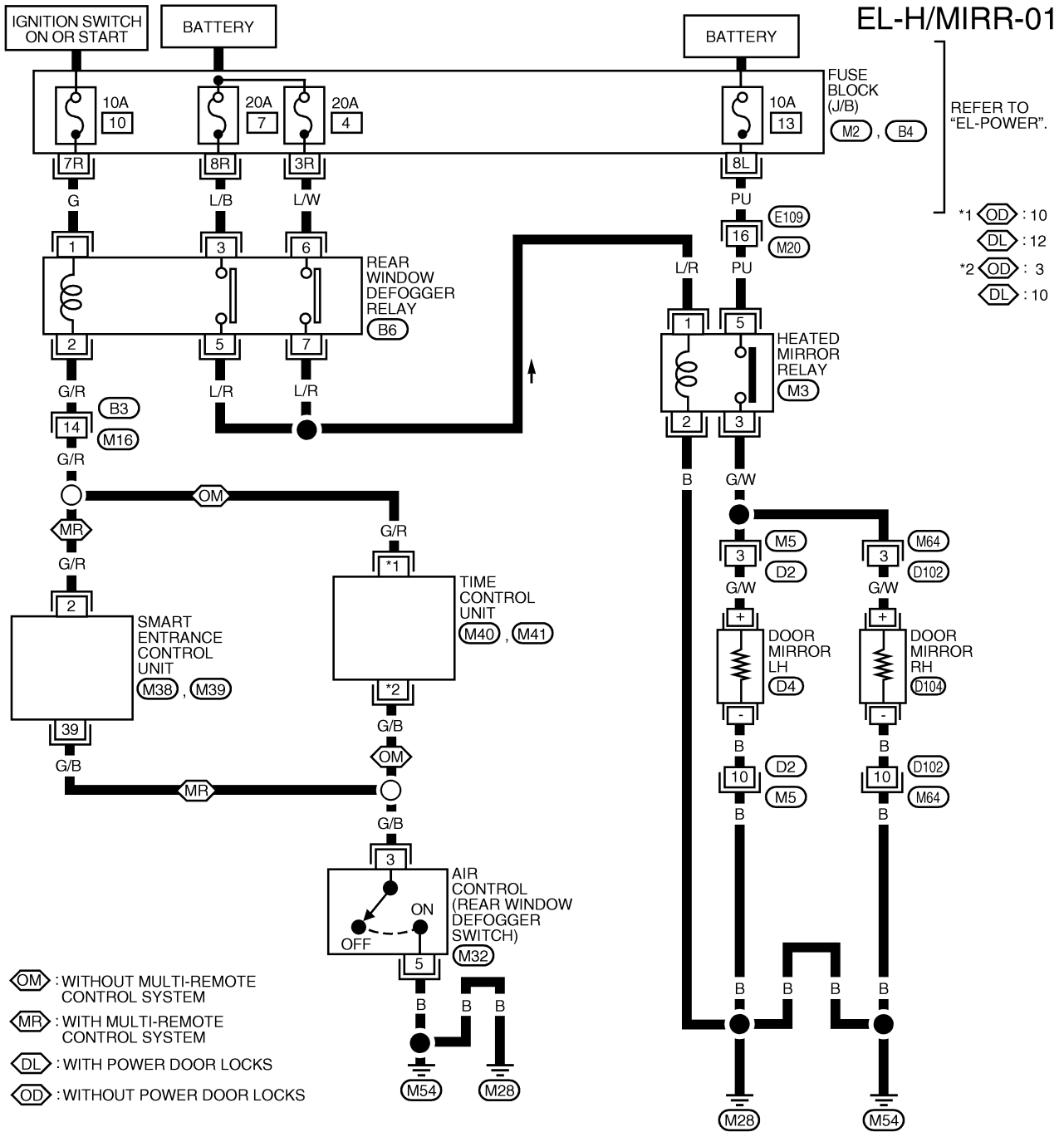
WEL371

# HEATED MIRROR

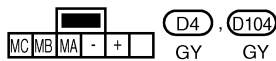
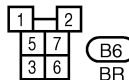
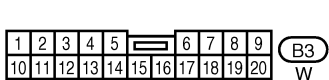
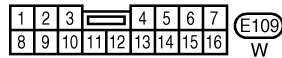
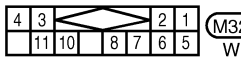
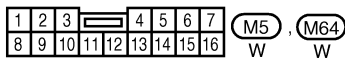
Wiring Diagram — H/MIRR —

## Wiring Diagram — H/MIRR —

NIEL0258



REFER TO THE FOLLOWING.  
 ,  
 - ELECTRICAL UNITS



LEL372

# TRUNK LID OPENER

Wiring Diagram — TLID —

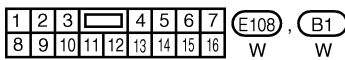
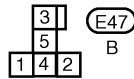
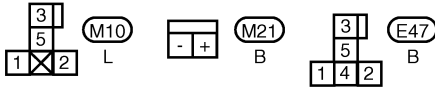
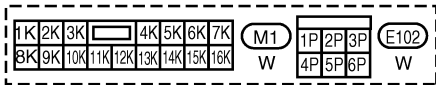
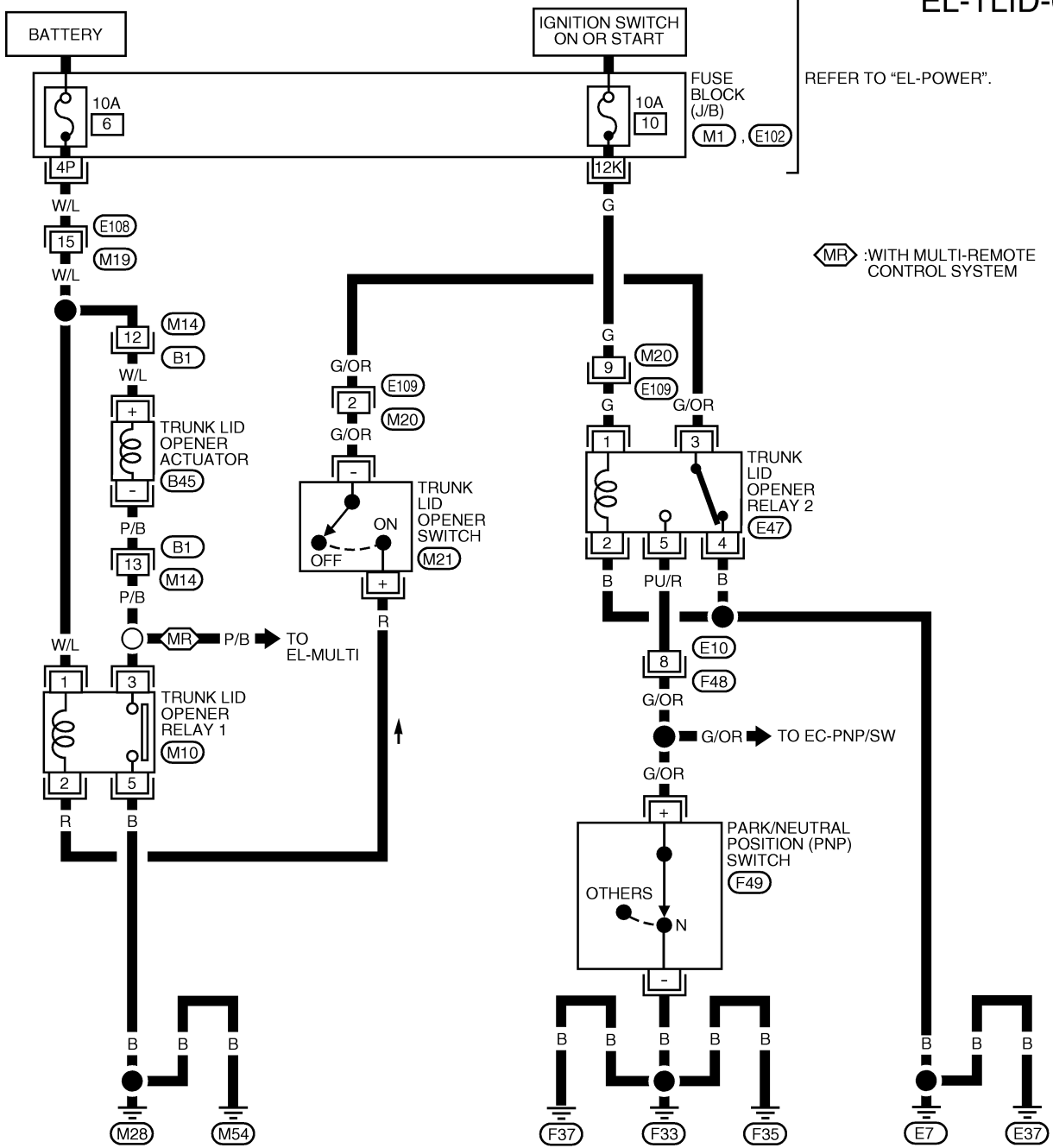
## Wiring Diagram — TLID —

WITH M/T

NIEL0168

NIEL0168S01

EL-TLID-01



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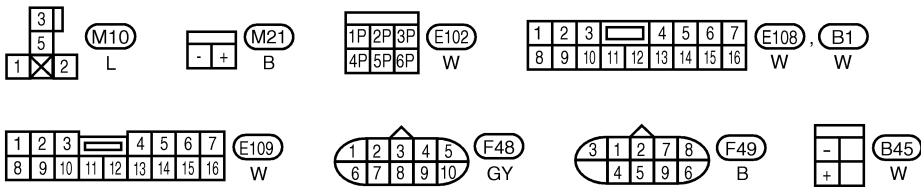
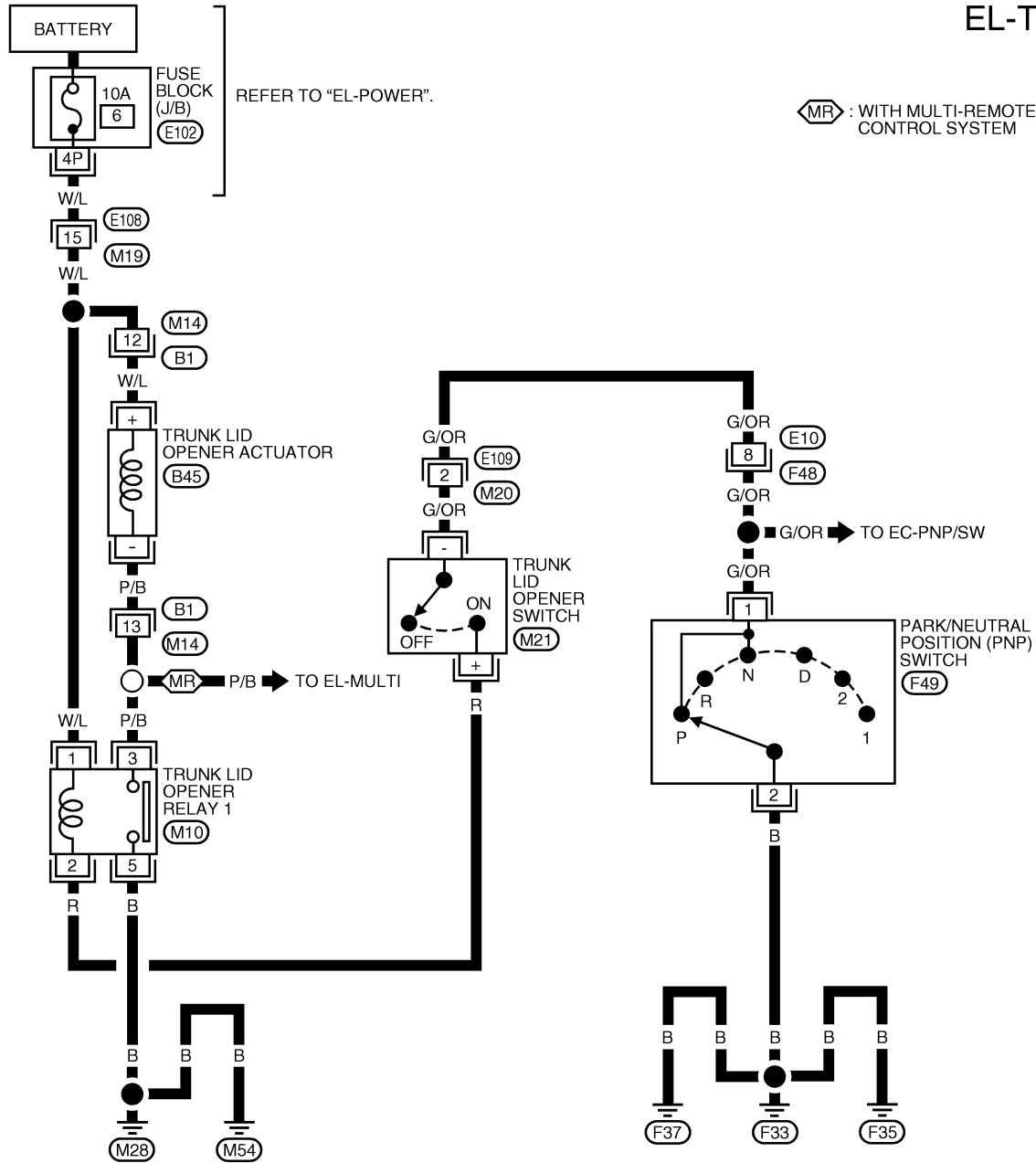
# TRUNK LID OPENER

Wiring Diagram — TLID — (Cont'd)

WITH A/T

NIEL0168S02

EL-TLID-02



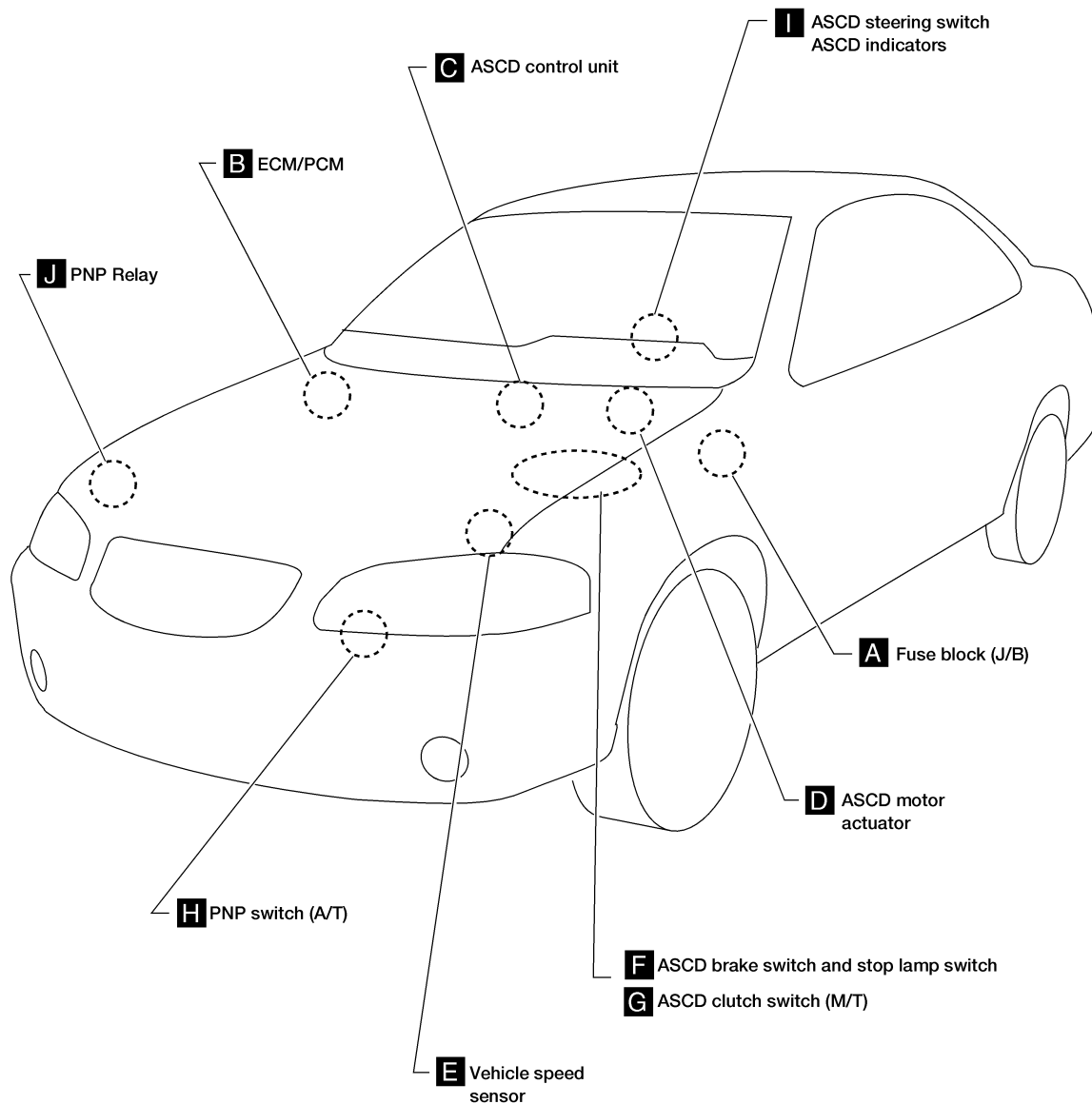
LEL370

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NIEL0094



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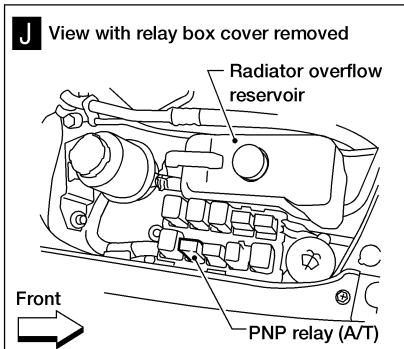
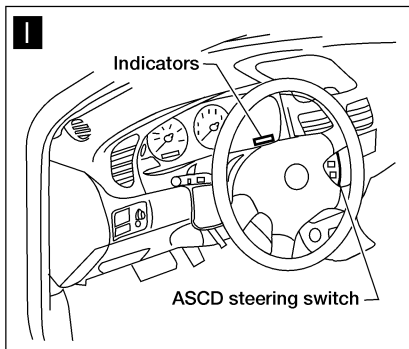
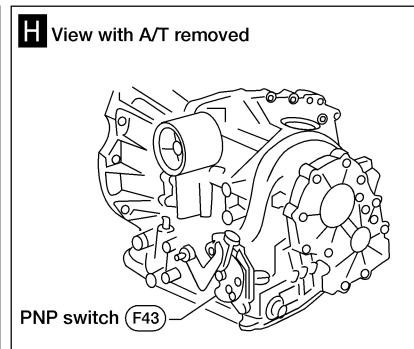
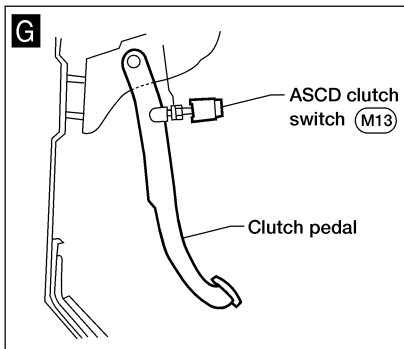
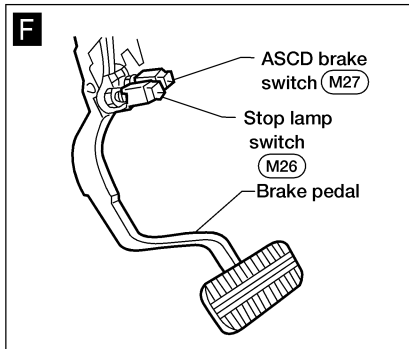
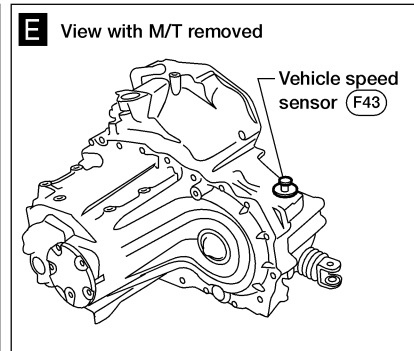
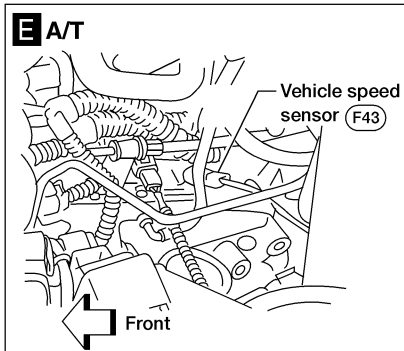
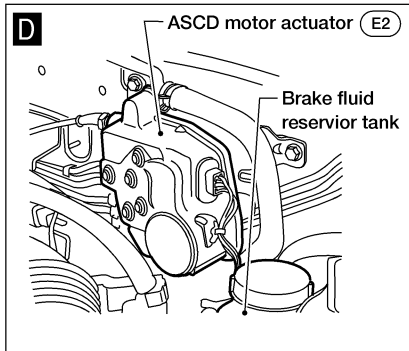
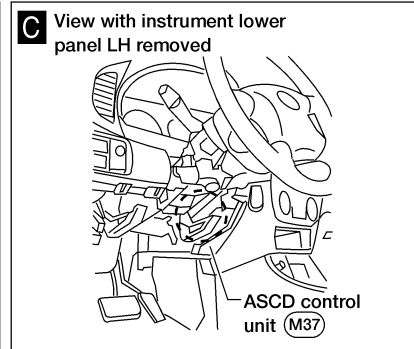
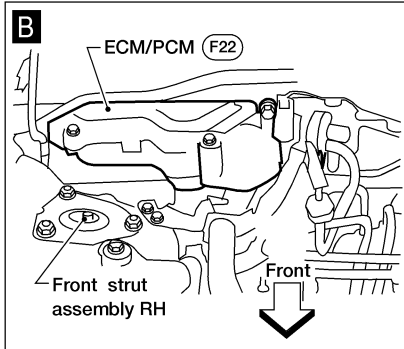
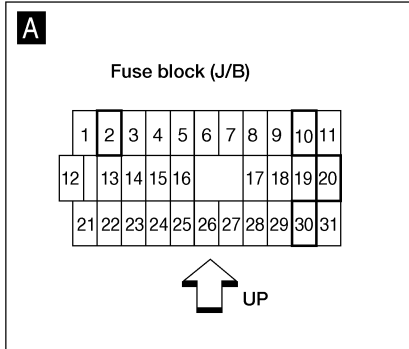
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LEL560

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Component Parts and Harness Connector Location (Cont'd)



## System Description

Refer to Owner's Manual for ASCD operating instructions.

NIEL0190

### POWER SUPPLY AND GROUND

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 terminals 6 and 21.

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

#### Set Operation

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)

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 (SR20DE) terminal 24 or PCM [QG18DE (except Calif. CA Model)] terminal 55.

When this occurs, the TCM or PCM cancels overdrive.

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

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# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

System Description (Cont'd)

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## 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.

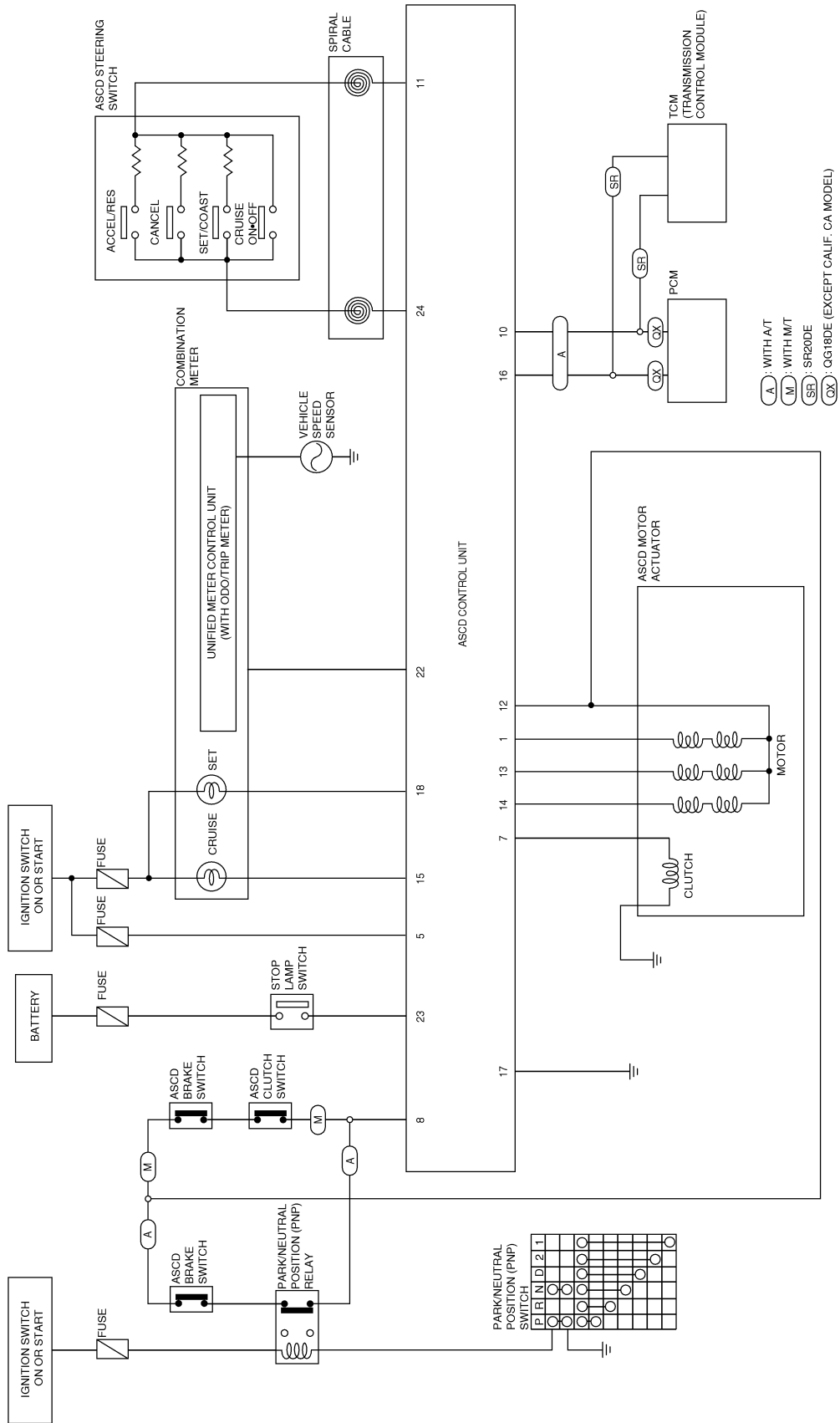


# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Schematic

NIEL0096

## Schematic



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# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD —

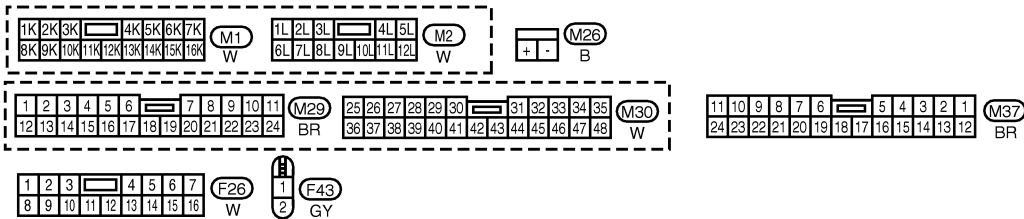
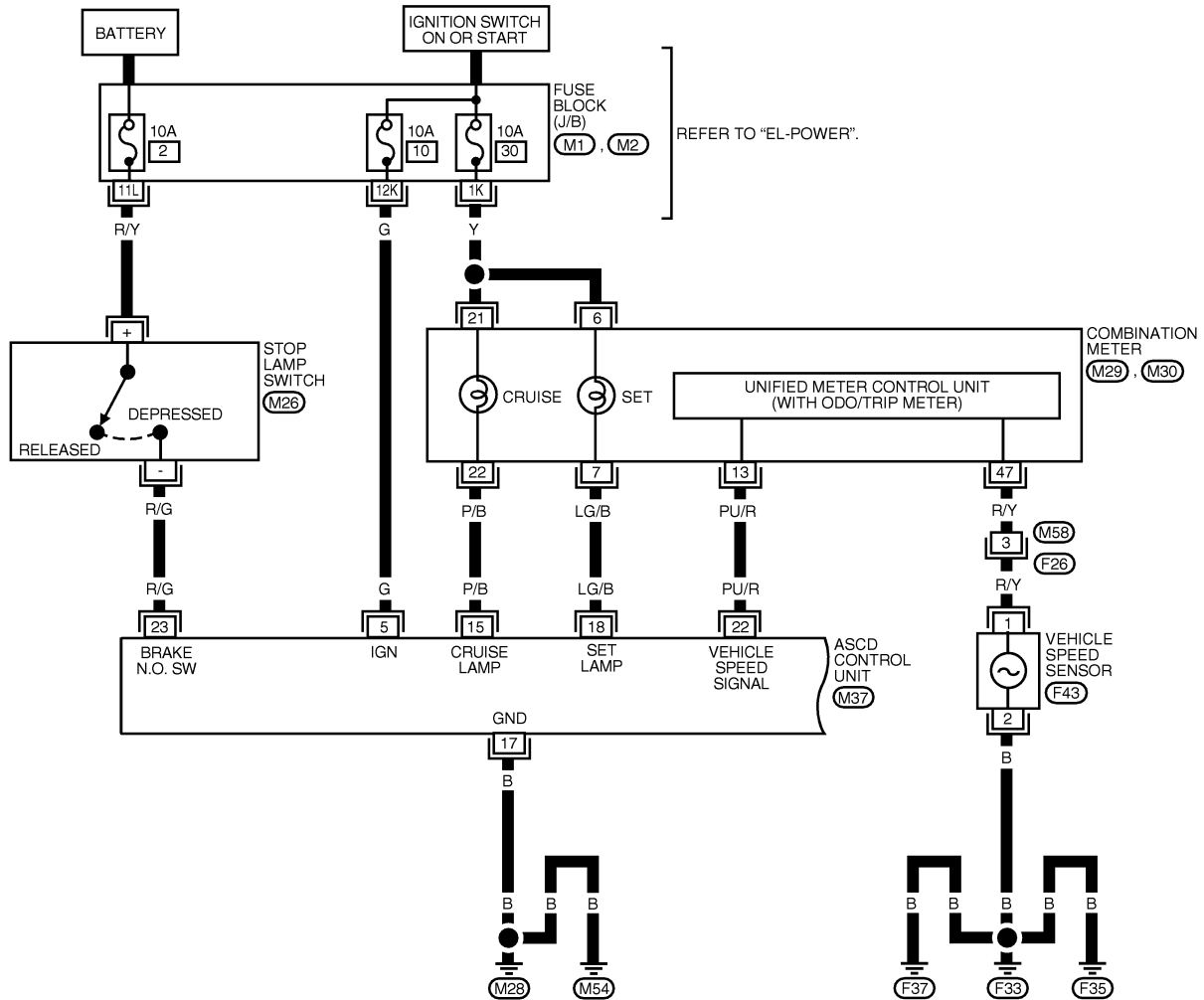
## Wiring Diagram — ASCD —

NIEL0097

NIEL0097S01

FIG. 1

EL-ASCD-01



LEL399

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

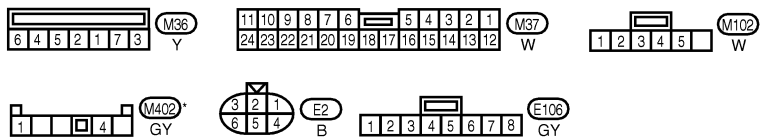
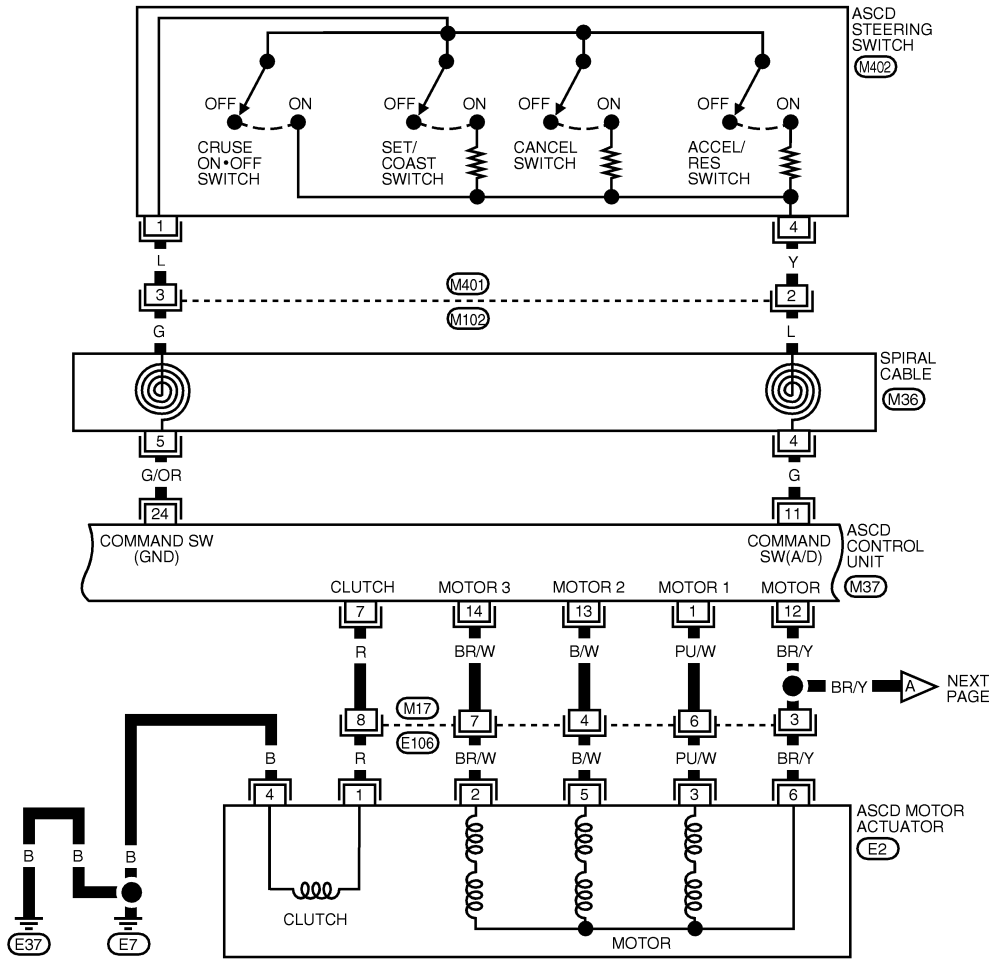
# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

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 PONTS AND PUT SAFETY STANDS TO FRONT SAFETY STAND POINTS.

LEL648

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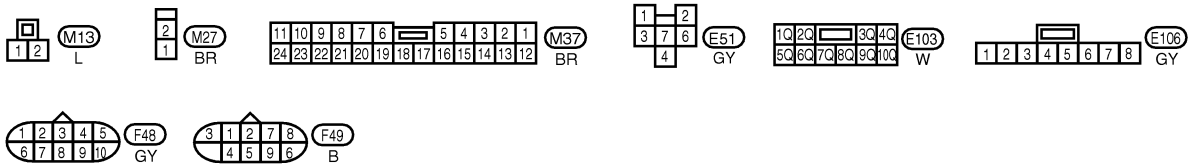
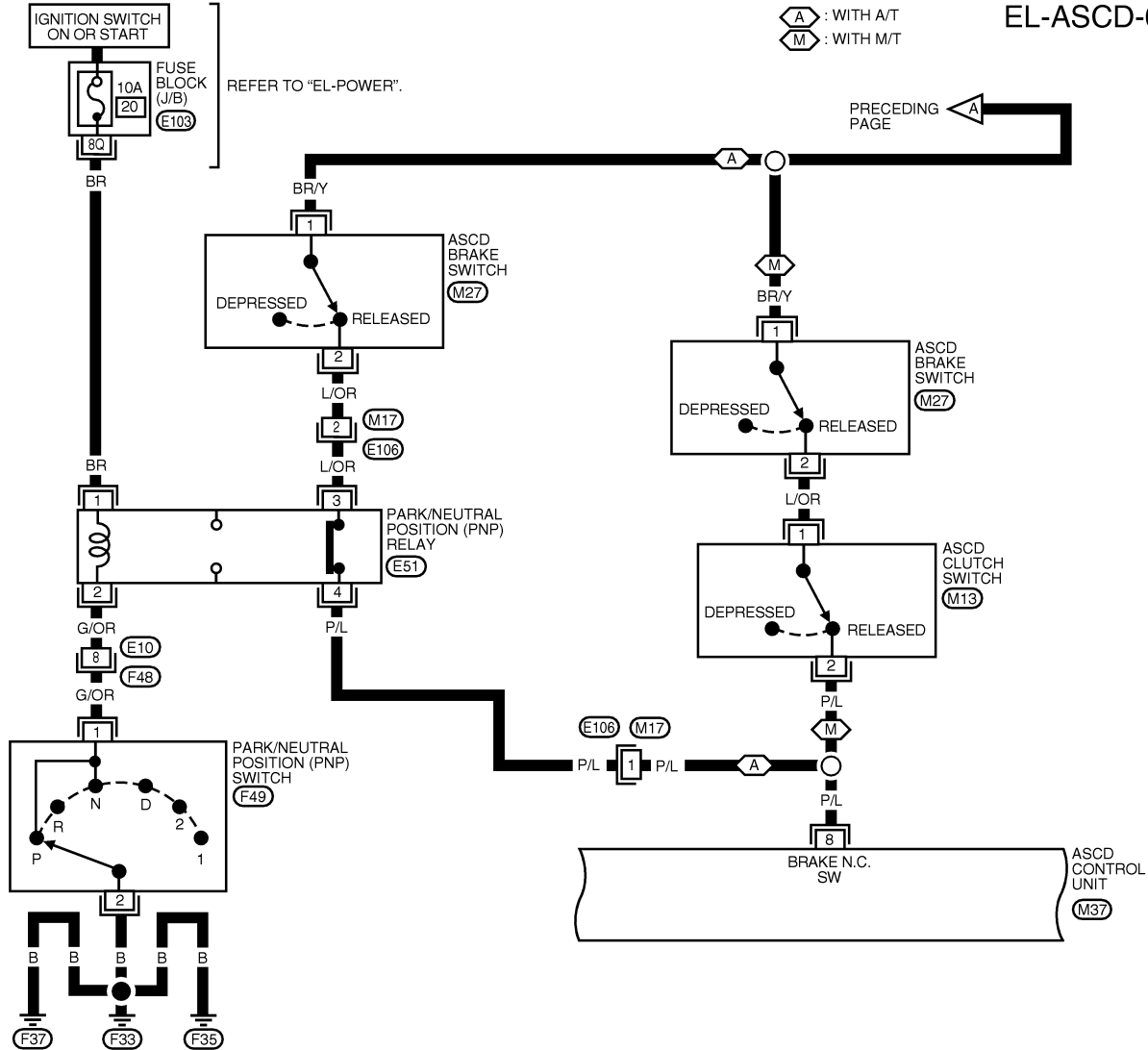
# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Wiring Diagram — ASCD — (Cont'd)

**FIG. 3**

NIEL0097S03

EL-ASCD-03



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)

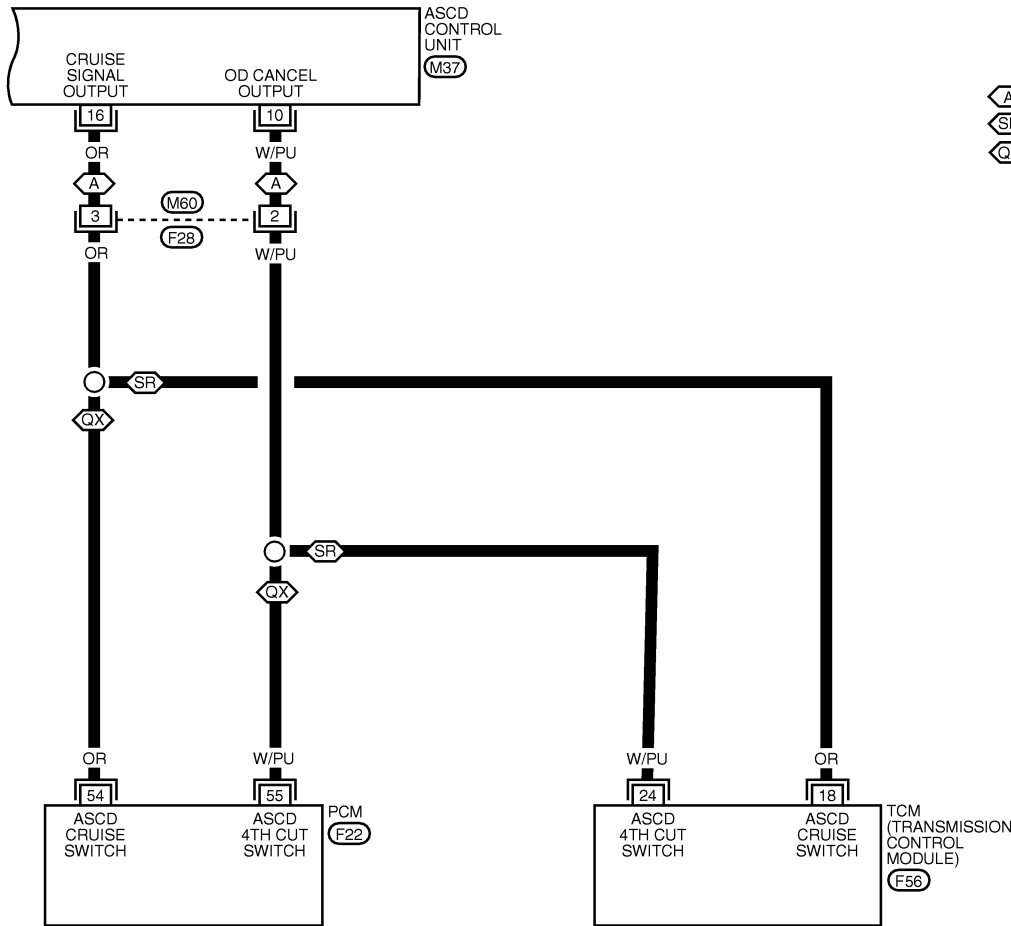
Wiring Diagram — ASCD — (Cont'd)

FIG. 4

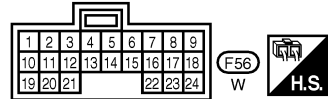
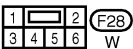
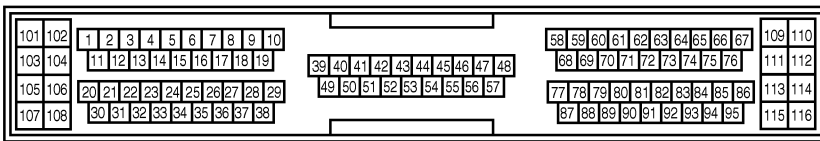
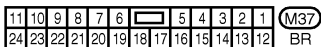
NIEL0097S04

EL-ASCD-04

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- (A) : WITH A/T
- (SR) : SR20DE
- (QX) : QG18DE (EXCEPT CALIF. CA MODEL)



LEL402

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

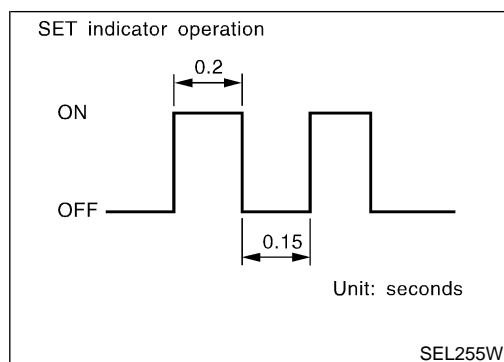
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
10	W/PU	OD CANCEL OUTPUT	OD CANCEL OUTPUT TO PCM OR TCM	APPROX. 1V
			OD RESUME OUTPUT TO PCM OR TCM	0V
16	OR	CRUISE SIGNAL OUTPUT	EXCEPT CRUISE CONTROL DRIVING	1V OR LESS
			DURING CRUISE CONTROL DRIVING	BATTERY VOLTAGE

LEL646

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# 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

### MALFUNCTION DETECTION CONDITIONS

NIEL0228S02

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

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses

## Trouble Diagnoses SYMPTOM CHART

=NIEL0232

NIEL0232S01

PROCEDURE	Diagnostic procedure						
REFERENCE PAGE (EL- )	184	185	186	187	188	188	190
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

★1: It indicates that system is in fail-safe. After completing diagnostic procedures, perform "FAIL-SAFE SYSTEM CHECK", (EL-184) 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.

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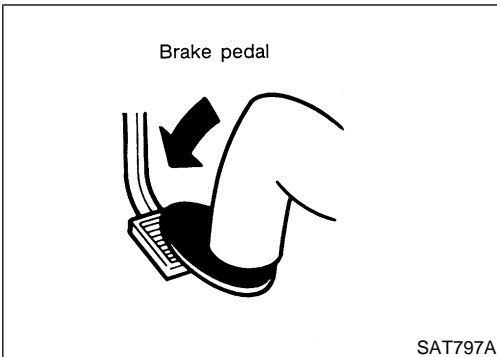
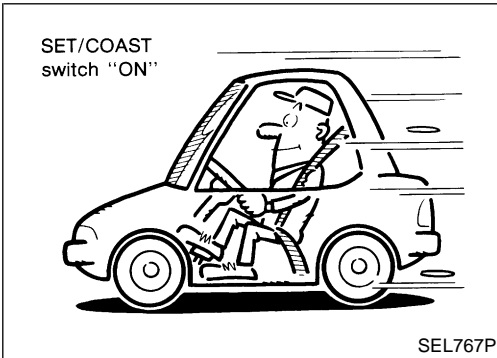
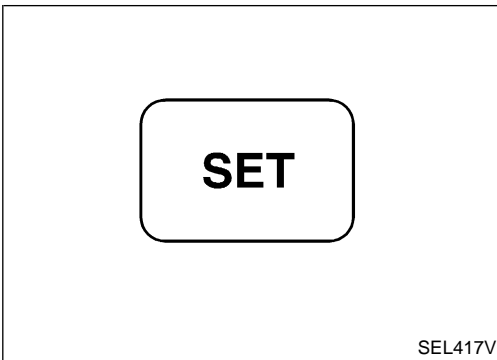
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# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

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-187.

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-188.
- ASCD motor actuator circuit. Refer to "ASCD MOTOR ACTUATOR CIRCUIT CHECK", EL-188.
- 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-186.

6. END. (System is OK.)



# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NIEL0232S03

<b>1</b>	<b>CHECK POWER SUPPLY CIRCUIT FOR ASCD CONTROL UNIT</b>	
<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>		
<p>Does battery voltage exist?</p>		
<p>Refer to wiring diagram in EL-178.</p>		
Yes	▶	GO TO 2.
No	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 10 located in the fuse block)</li> <li>● Harness for open or short</li> </ul>

LEL516

<b>2</b>	<b>CHECK GROUND CIRCUIT FOR ASCD CONTROL UNIT</b>	
<p>Check continuity between ASCD control unit harness connector terminal 17 and body ground.</p>		
<p>Does continuity exist?</p>		
<p>Refer to wiring diagram in EL-178.</p>		
Yes	▶	Power supply and ground circuit is OK.
No	▶	Repair harness.

LEL517

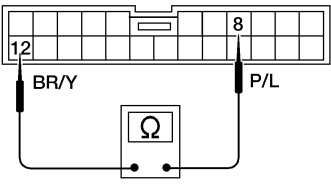



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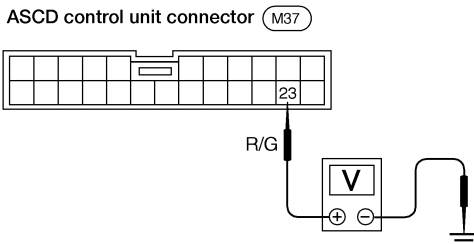


# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

## ASCD BRAKE/STOP LAMP SWITCH CHECK

=NIEL0232S06

<b>1</b>	<b>CHECK ASCD BRAKE SWITCH CIRCUIT</b>	<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; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p>ASCD control unit connector (M37)</p>  </div> <div style="width: 30%;">  <p><b>When brake or clutch pedal is depressed (M/T), or when brake pedal is depressed or A/T selector lever is in "N" or "P" range (A/T):</b> Continuity should not exist.</p>  <p><b>When brake and clutch pedal are released (M/T), or when both brake pedal is released and A/T selector lever is not in "N" or "P" range (A/T):</b> Continuity should exist.</p>  </div> <div style="width: 30%; font-size: small;"> <p>LEL518</p> </div> </div> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>
OK	▶	GO TO 2.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● ASCD brake switch Refer to "ASCD BRAKE SWITCH AND STOP LAMP SWITCH", EL-191.</li> <li>● Park/neutral position switch (A/T) Refer to "PARK/NEUTRAL POSITION SWITCH (A/T)", EL-191.</li> <li>● Park/neutral position relay (A/T) Refer to "PARK/NEUTRAL POSITION (PNP) RELAY", EL-191.</li> <li>● ASCD clutch switch (M/T) Refer to "ASCD CLUTCH SWITCH (M/T)", EL-191.</li> <li>● Harness for open or short</li> <li>● ASCD control unit</li> </ul>

<b>2</b>	<b>CHECK STOP LAMP SWITCH CIRCUIT</b>	<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; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p>ASCD control unit connector (M37)</p>  </div> <div style="width: 30%;">  <p><b>Voltage [V];</b> Stop lamp switch: Depressed Approx. 12 Stop lamp switch: Released 0</p>  </div> <div style="width: 30%; font-size: small;"> <p>LEL519</p> </div> </div> <p style="margin-top: 10px;">Refer to wiring diagram in EL-178.</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>
OK	▶	ASCD brake/stop lamp switch is OK.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 2, located in the fuse block (J/B)]</li> <li>● Harness for open or short between ASCD control unit and stop lamp switch</li> <li>● Harness for open or short between fuse and stop lamp switch</li> <li>● Stop lamp switch Refer to "ASCD BRAKE SWITCH AND STOP LAMP SWITCH", EL-191.</li> </ul>

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

## ASCD STEERING SWITCH CHECK

=NIEL0232S07

<b>1</b>	<b>CHECK ASCD STEERING SWITCH CIRCUIT FOR ASCD CONTROL UNIT</b>												
Check resistance between ASCD control unit harness connector terminals.													
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p>ASCD control unit connector (M37)</p> </div> <div style="width: 15%; text-align: center;"> <p>DISCONNECT</p> </div> <div style="width: 45%;"> <table border="1" style="width: 100%; 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>Approx. 0</td> </tr> <tr> <td>SET/COAST SW</td> <td>1.47 - 1.53</td> </tr> <tr> <td>ACCEL/RES SW</td> <td>3.24 - 3.36</td> </tr> <tr> <td>CANCEL SW</td> <td>5.00 - 5.20</td> </tr> </tbody> </table> </div> </div>			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 in EL-179. <span style="float: right;">LEL520</span>													
<b>OK or NG</b>													
OK	▶ ASCD steering switch is OK.												
NG	▶ GO TO 2.												

<b>2</b>	<b>CHECK CIRCUIT CONTINUITY</b>
<ol style="list-style-type: none"> <li>1. Disconnect ASCD steering switch and ASCD control unit connector.</li> <li>2. Check continuity between ASCD steering switch connector terminals 1 (4) and ASCD control unit connector terminal 24 (11).</li> </ol>	
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 40%;"> <p>ASCD control unit connector (M37)</p> <p>ASCD steering switch connector (M402)</p> </div> <div style="width: 15%; text-align: center;"> <p>DISCONNECT</p> </div> <div style="width: 35%; text-align: center;"> <p><b>Continuity should exist.</b></p> </div> </div>	
Refer to wiring diagram in EL-179. <span style="float: right;">LEL521</span>	
<b>OK or NG</b>	
OK	▶ Replace ASCD steering switch.
NG	▶ Repair or replace harness or connectors.

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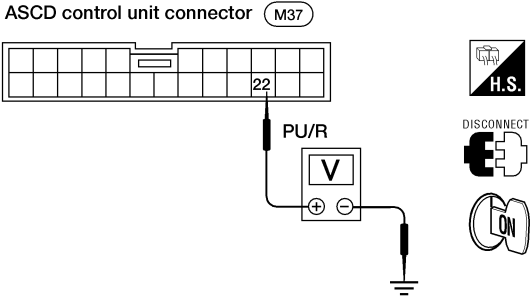
# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

## VEHICLE SPEED SENSOR CHECK

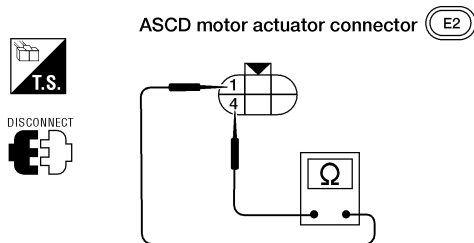
-NIEL0232S08

<b>1</b>	<b>CHECK SPEEDOMETER OPERATION</b>	
Refer to wiring diagram in EL-178.		
<b>Does speedometer operate normally?</b>		
Yes	▶	GO TO 2.
No	▶	Check speedometer and vehicle speed sensor circuit. Refer to "Trouble Diagnoses", EL-96.

<b>2</b>	<b>CHECK VEHICLE SPEED INPUT</b>	
<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>		
		
<b>Does voltage pointer deflect?</b>		
LEL522		
<b>Yes or No?</b>		
Yes	▶	Vehicle speed sensor is OK.
No	▶	Check harness for open or short between ASCD control unit terminal 22 and combination meter terminal 13.


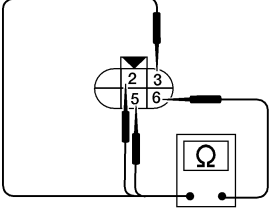
## ASCD MOTOR ACTUATOR CIRCUIT CHECK

NIEL0232S09

<b>1</b>	<b>CHECK ASCD MOTOR ACTUATOR (CLUTCH)</b>							
<p>1. Disconnect ASCD motor actuator connector.                  2. Measure resistance between ASCD motor actuator terminals 1 and 4.</p>								
								
<table border="1" style="margin-left: auto; margin-right: 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 in EL-179.								
<b>OK or NG</b>								
OK	▶	GO TO 2.						
NG	▶	Replace ASCD motor actuator.						

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

<b>2</b>	<b>CHECK ASCD MOTOR ACTUATOR (MOTOR)</b>									
<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 (E2)</p>										
		<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Terminals</th> <th>Resistance (Ω)</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="text-align: center; vertical-align: middle;">6</td> <td style="text-align: center;">2</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">Approx. 2.5</td> </tr> <tr> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">5</td> </tr> </tbody> </table>	Terminals		Resistance (Ω)	6	2	Approx. 2.5	3	5
Terminals		Resistance (Ω)								
6	2	Approx. 2.5								
	3									
	5									
LEL619										
<b>OK or NG</b>										
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Harness for open or short between ASCD motor actuator and ASCD control unit</li> <li>● ASCD motor actuator (clutch) ground circuit</li> </ul>								
NG	▶	Replace ASCD motor actuator.								

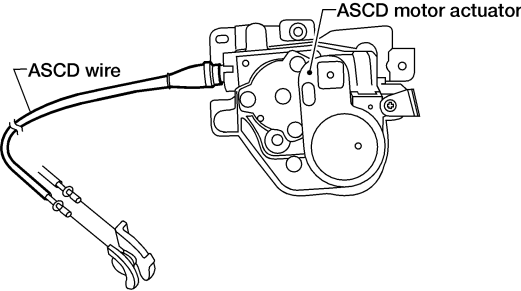
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# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Trouble Diagnoses (Cont'd)

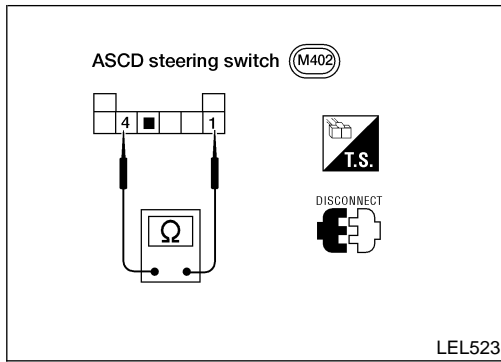
## ASCD MOTOR ACTUATOR CHECK

-NIEL0232S10

1	<b>CHECK ASCD WIRE</b>	
Check wire for improper installation, rust formation or breaks.		
 A technical line drawing showing the ASCD motor actuator assembly on the right and a cable labeled 'ASCD wire' extending to the left. The cable has a connector at its end. Labels 'ASCD wire' and 'ASCD motor actuator' are placed near their respective components.		
LEL620		
<b>OK or NG</b>		
OK	▶	Replace ASCD motor actuator.
NG	▶	Repair or replace wire. Refer to "ASCD Wire Adjustment", EL-192.

# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

Electrical Component Inspection



## Electrical Component Inspection

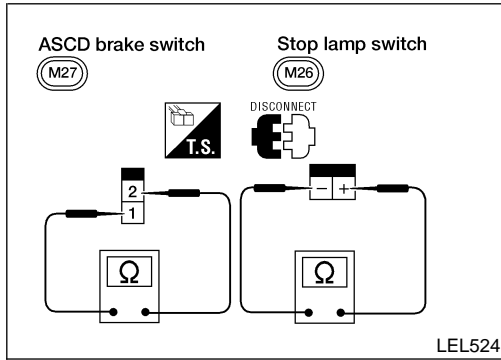
=NIEL0100

### ASCD STEERING SWITCH

NIEL0100S01

Check continuity between terminals by pushing each button.

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

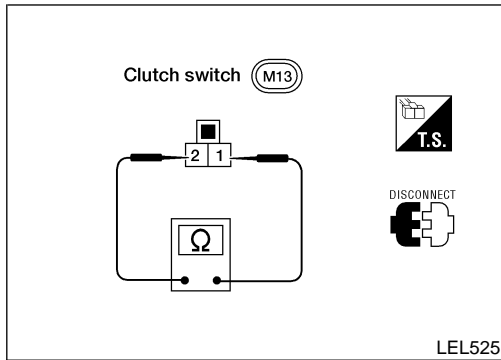


### ASCD BRAKE SWITCH AND STOP LAMP SWITCH

NIEL0100S02

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

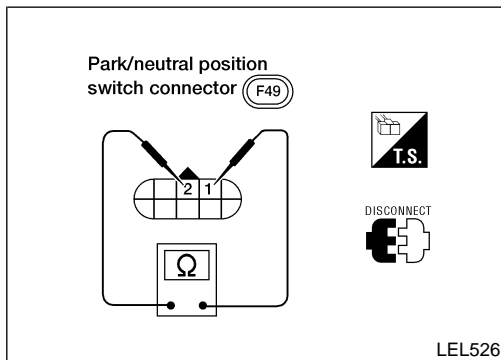
Check brake pedal adjustment after checking each switch. Refer to BR-12, "Adjustment".



### ASCD CLUTCH SWITCH (M/T)

NIEL0100S04

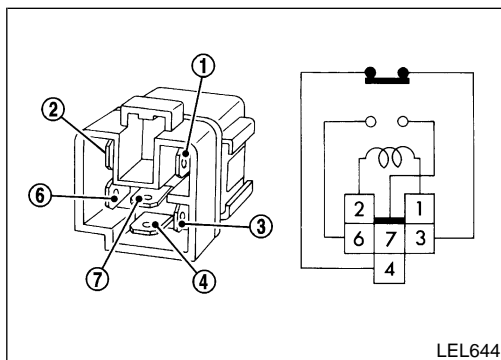
Condition	Continuity
When clutch pedal is depressed	No
When clutch pedal is released	Yes



### 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

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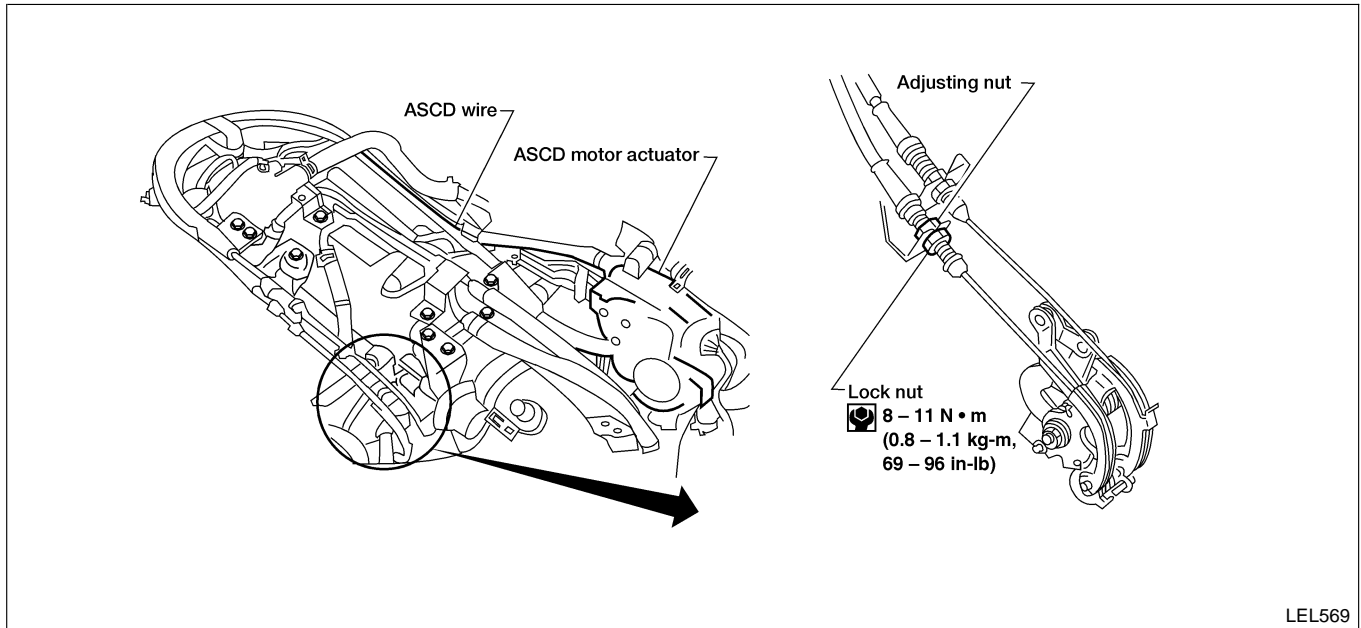
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# AUTOMATIC SPEED CONTROL DEVICE (ASCD)

ASCD Wire Adjustment

## 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.



## 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

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

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).

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### Front Door LH

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

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).

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# POWER WINDOW

*System Description (Cont'd)*

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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.

NIEL0191S0103

## 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.

NIEL0191S02

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.

NIEL0191S03

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.

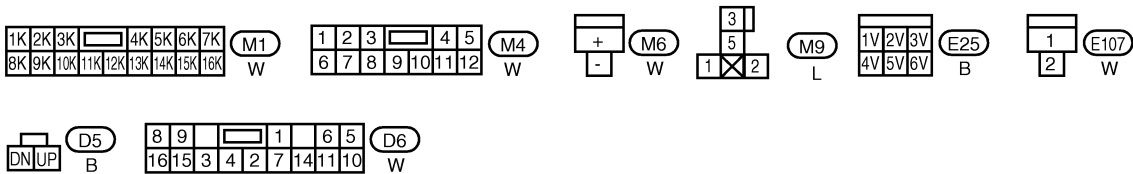
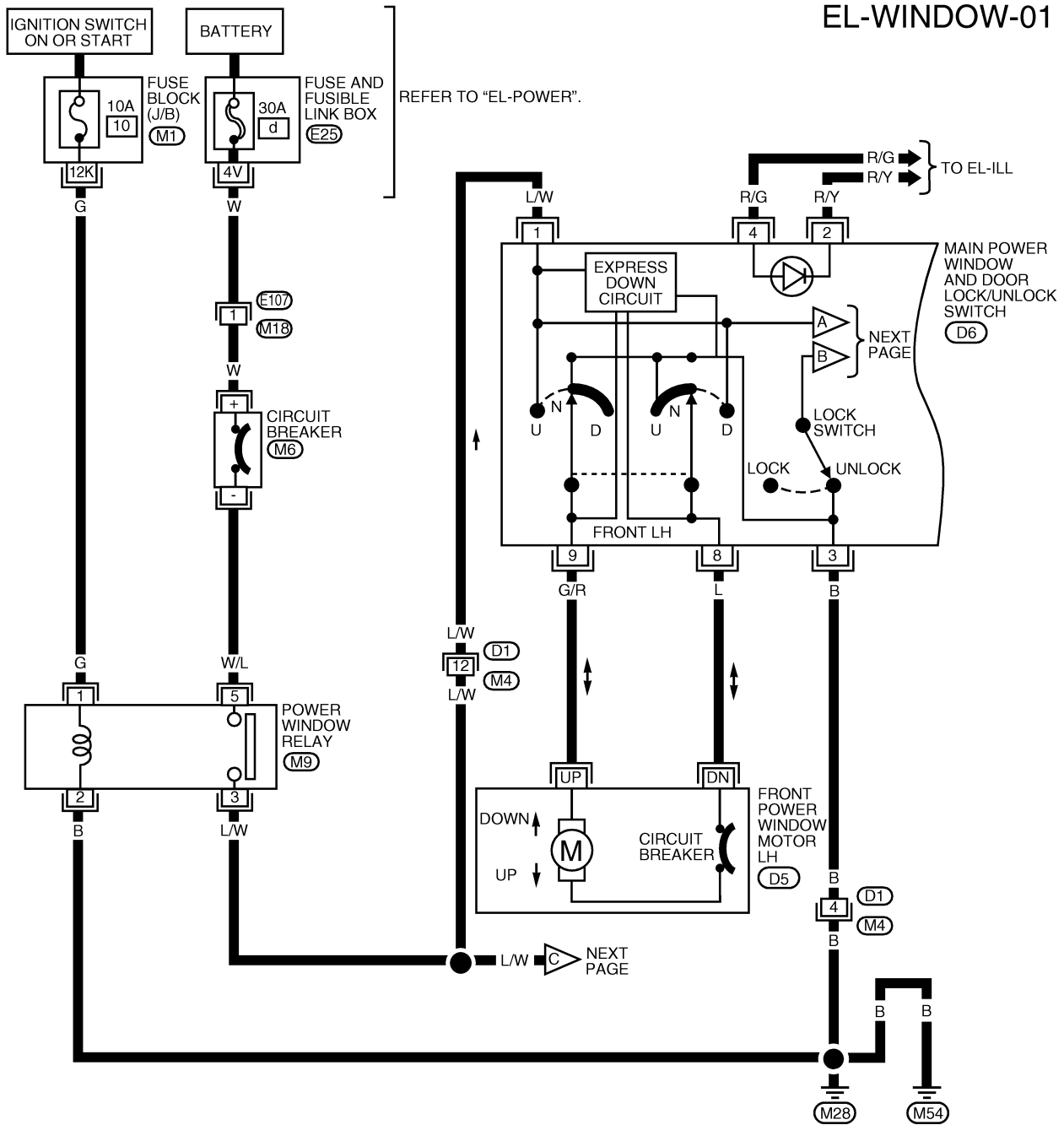
# POWER WINDOW

Wiring Diagram — WINDOW —

## Wiring Diagram — WINDOW —

NIEL0259

### EL-WINDOW-01

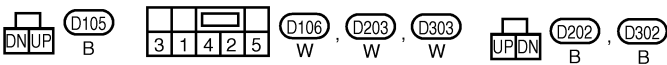
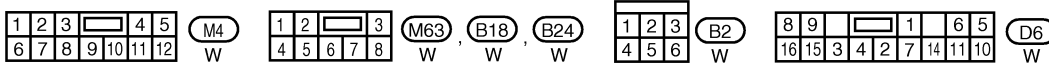
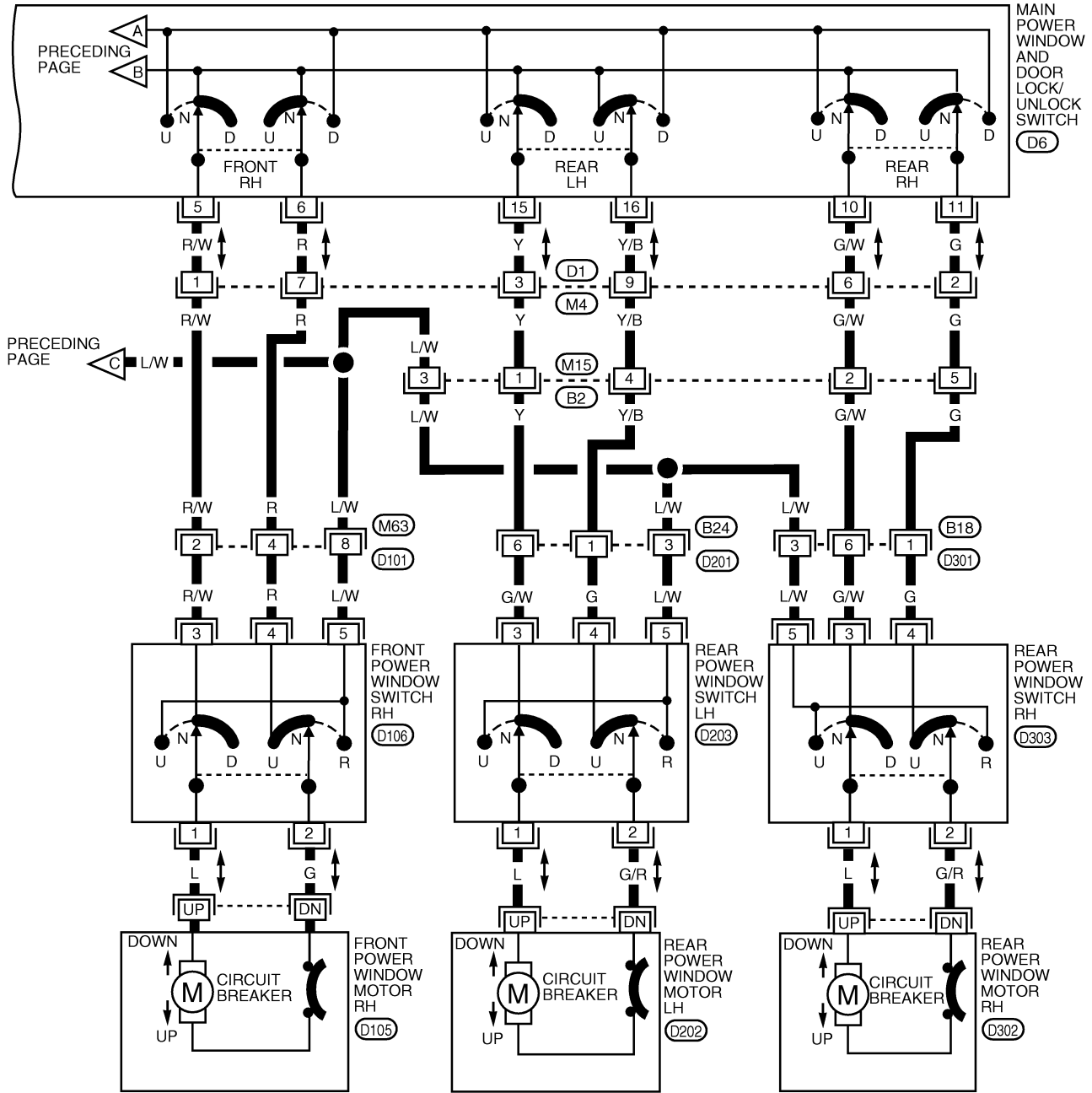


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# POWER WINDOW

Wiring Diagram — WINDOW — (Cont'd)

EL-WINDOW-02



WEL374

# POWER WINDOW

Trouble Diagnoses

## Trouble Diagnoses

NIEL0105

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

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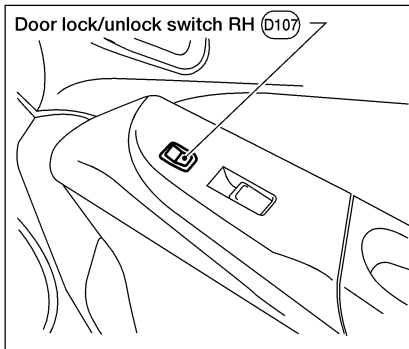
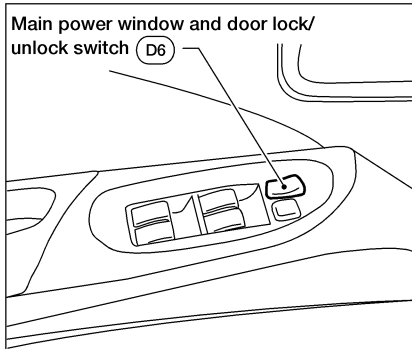
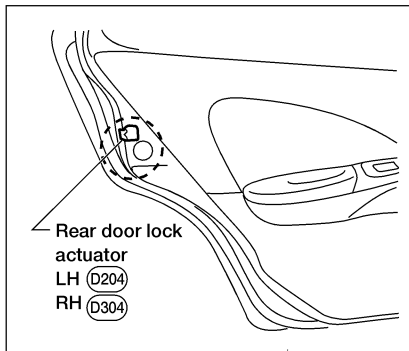
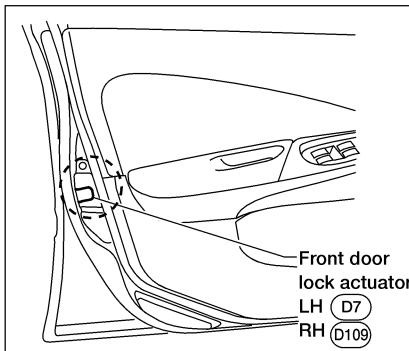
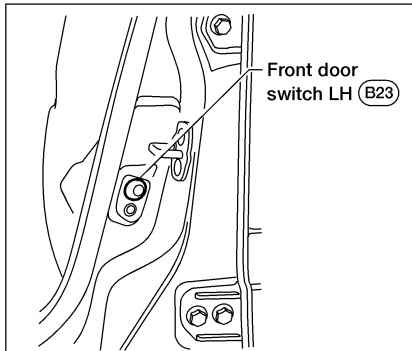
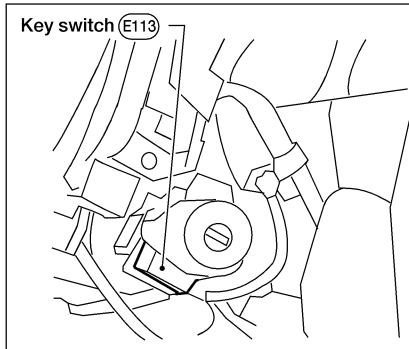
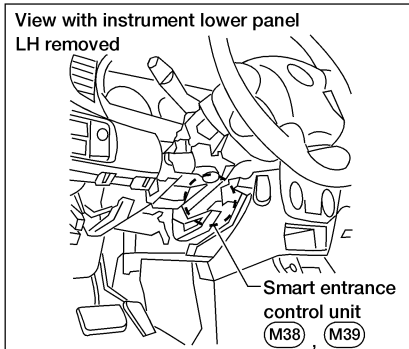
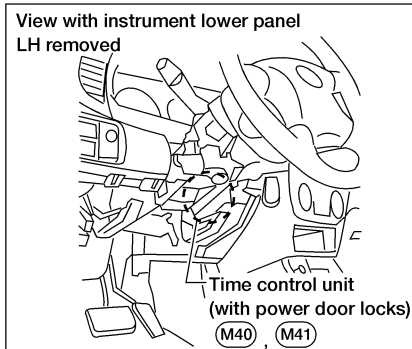
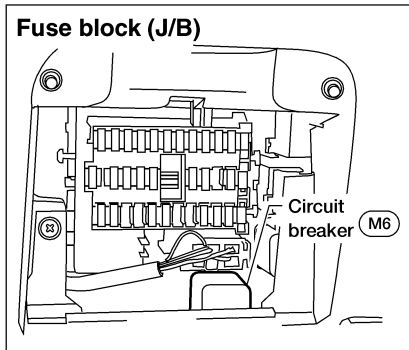
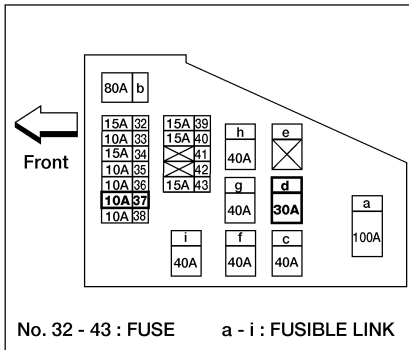
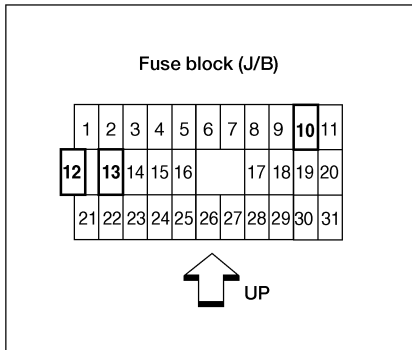
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# POWER DOOR LOCK

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NIEL0106



LEL562

# POWER DOOR LOCK

System Description (Without Multi-Remote Control System)

## System Description (Without Multi-Remote Control System)

=NIEL0107

GI

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).

MA

EM

## System Description (With Multi-Remote Control System)

NIEL0263

LC

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 and RH, 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).

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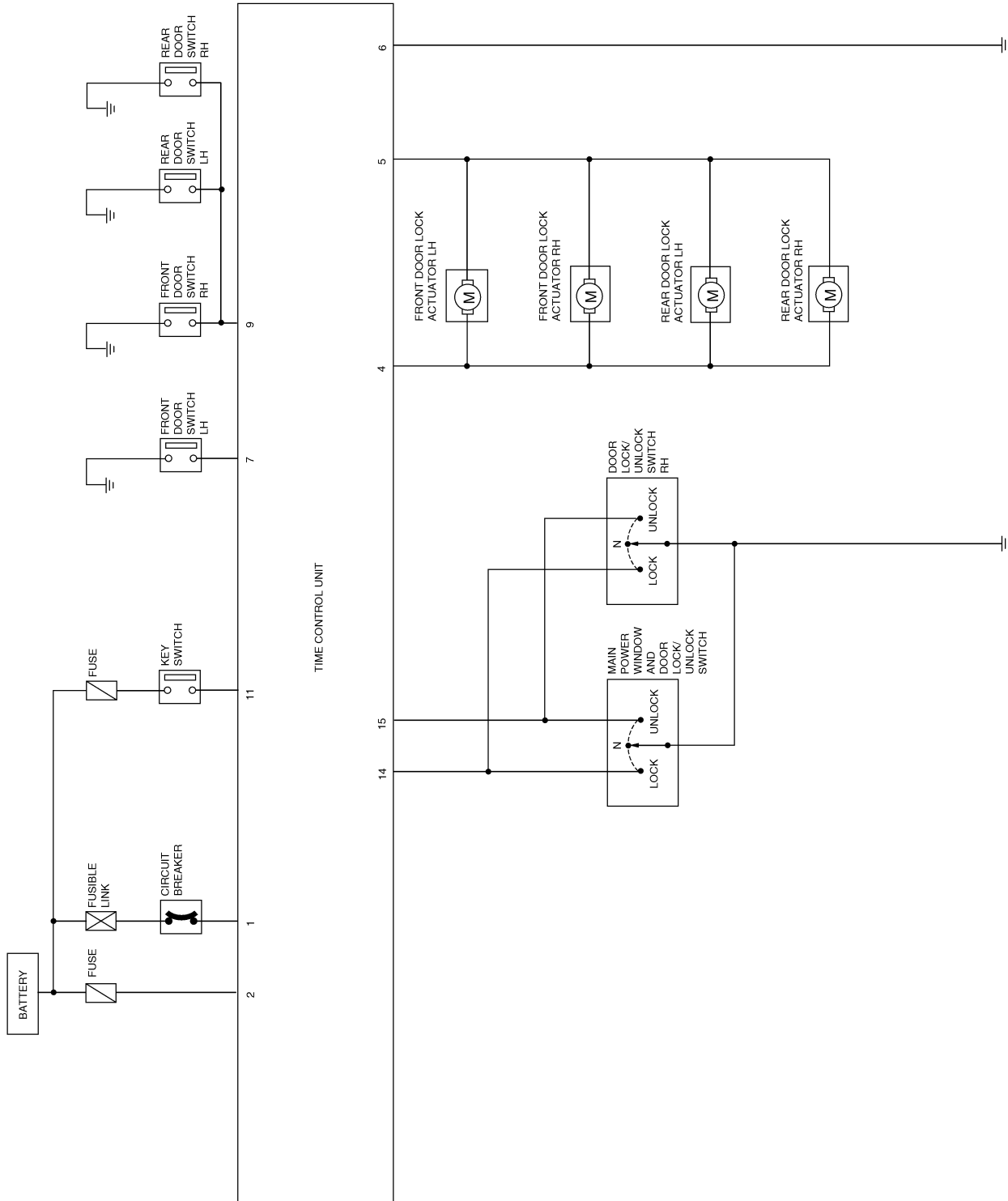
# POWER DOOR LOCK

Schematic

## Schematic WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0108

NIEL0108S01



WEL375

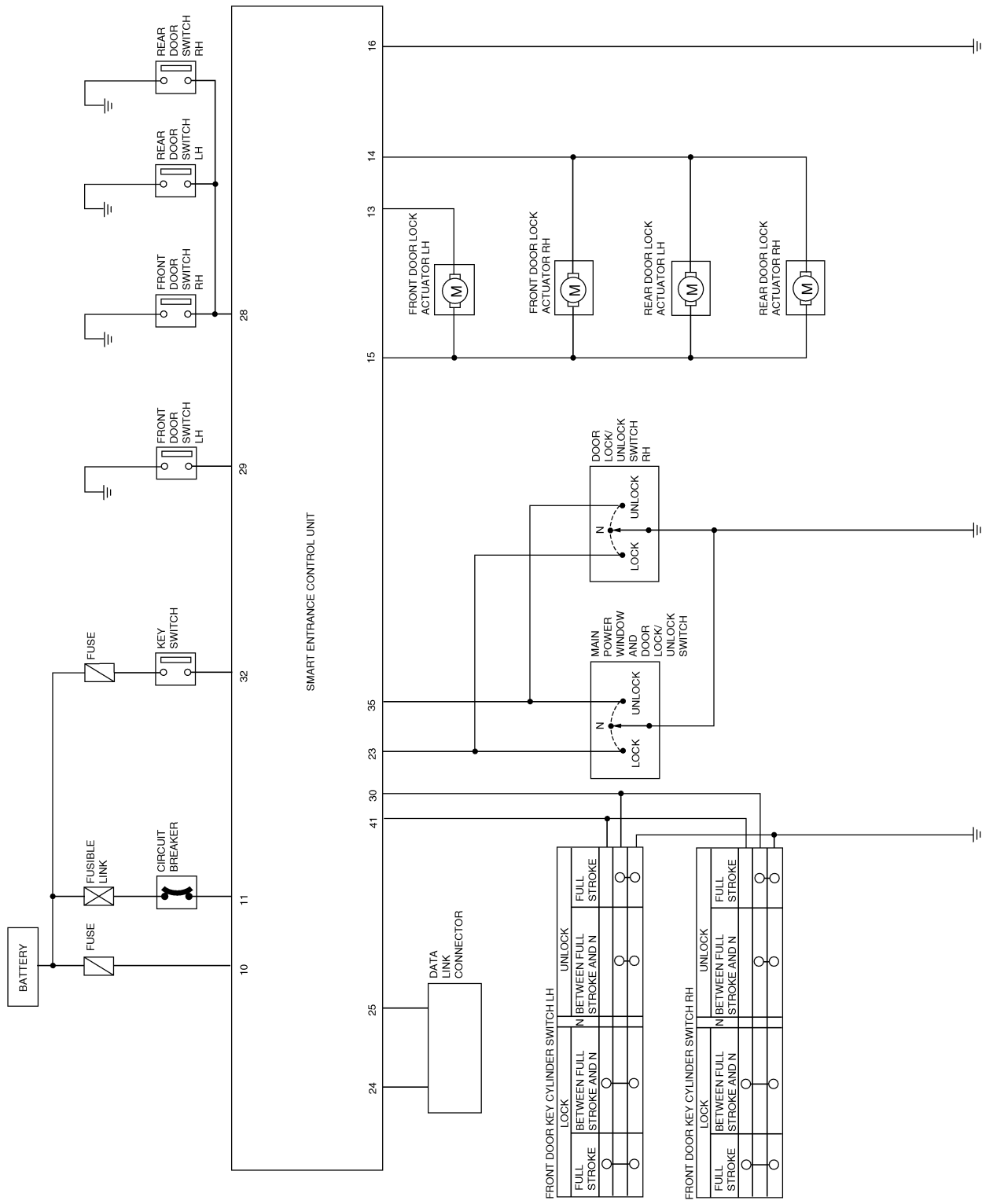


# POWER DOOR LOCK

Schematic (Cont'd)

## WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0108S02



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WEL380

# POWER DOOR LOCK

Wiring Diagram — D/LOCK —

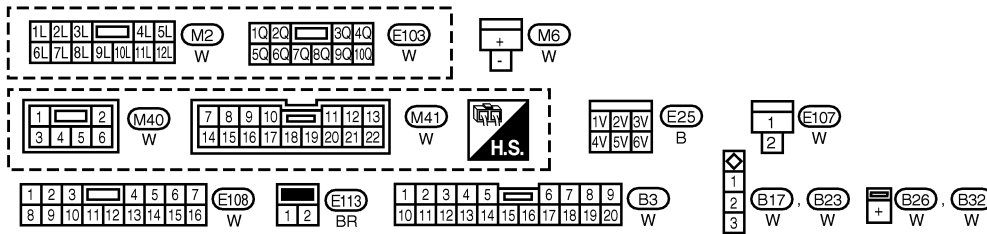
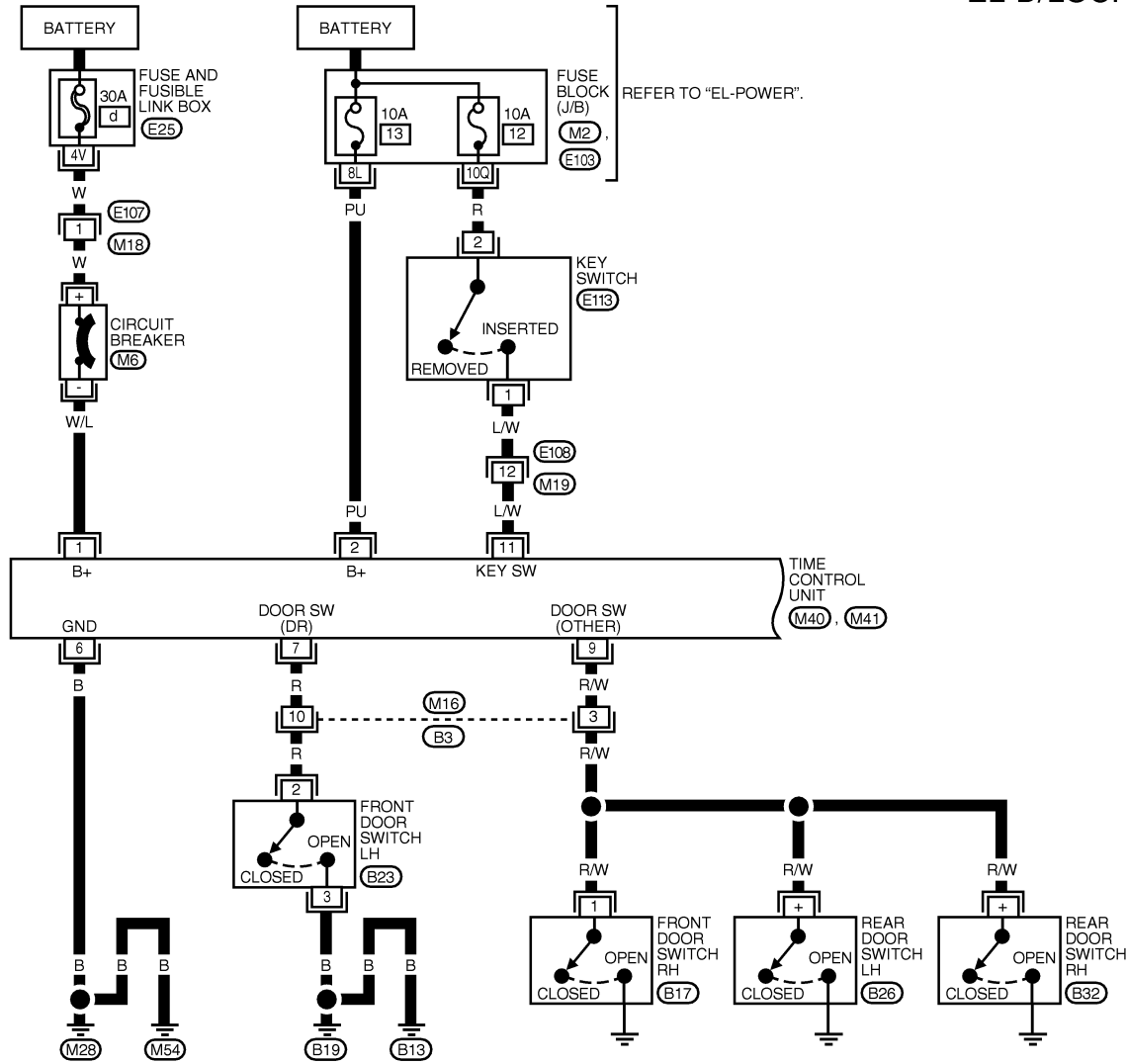
## Wiring Diagram — D/LOCK —

FIG. 1 WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0109

NIEL0109S01

EL-D/LOCK-01



LEL376

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 (ON)	12V
			IGNITION SWITCH (START)	12V

LEL603

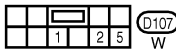
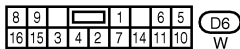
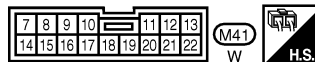
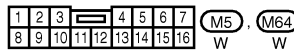
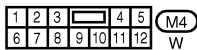
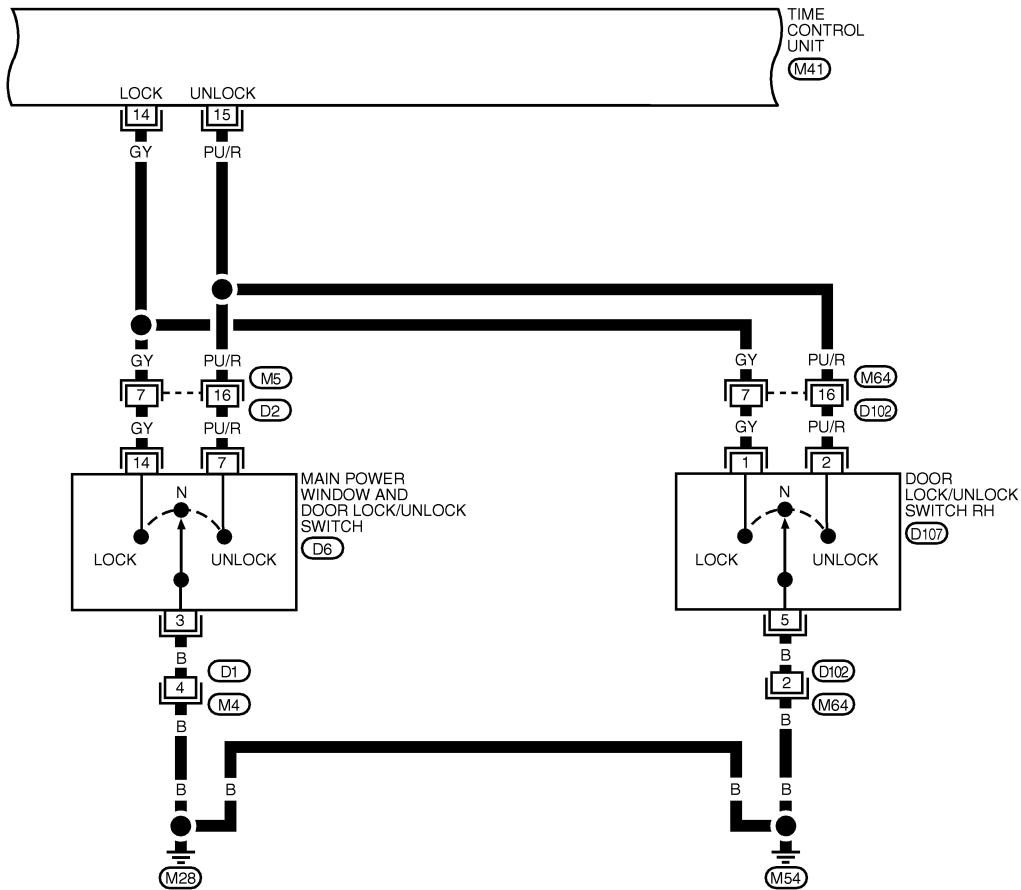
# POWER DOOR LOCK

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

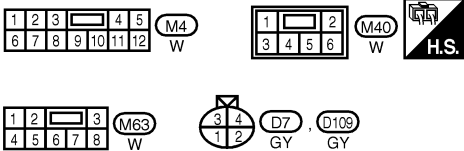
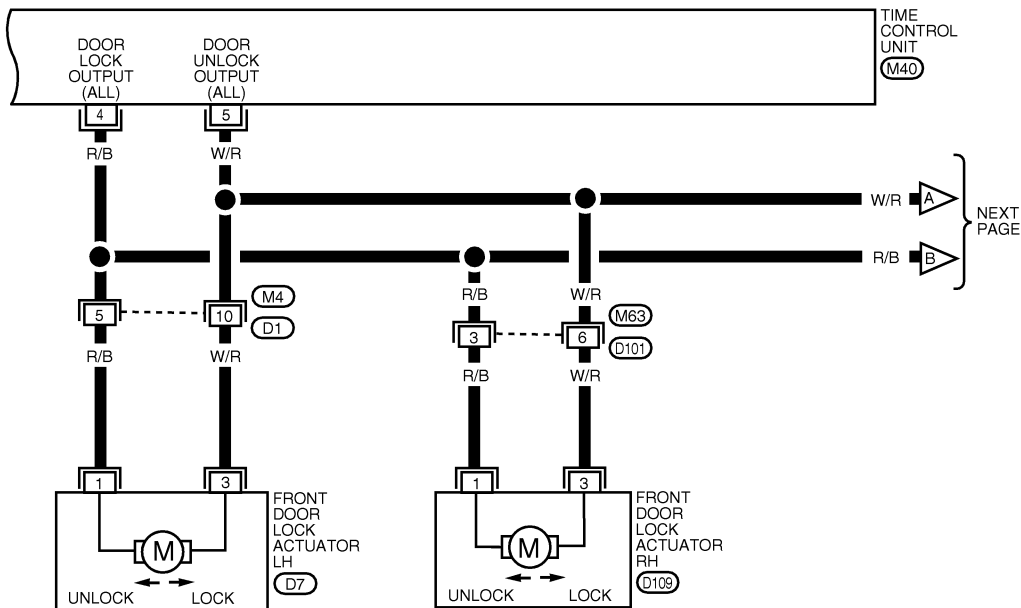
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

**FIG. 3 WITHOUT MULTI-REMOTE CONTROL SYSTEM**

NIEL0109S03

EL-D/LOCK-03



WEL378

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

TERMINAL	WIRE COLOR	ITEM	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

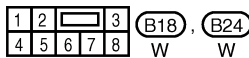
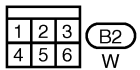
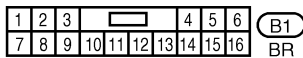
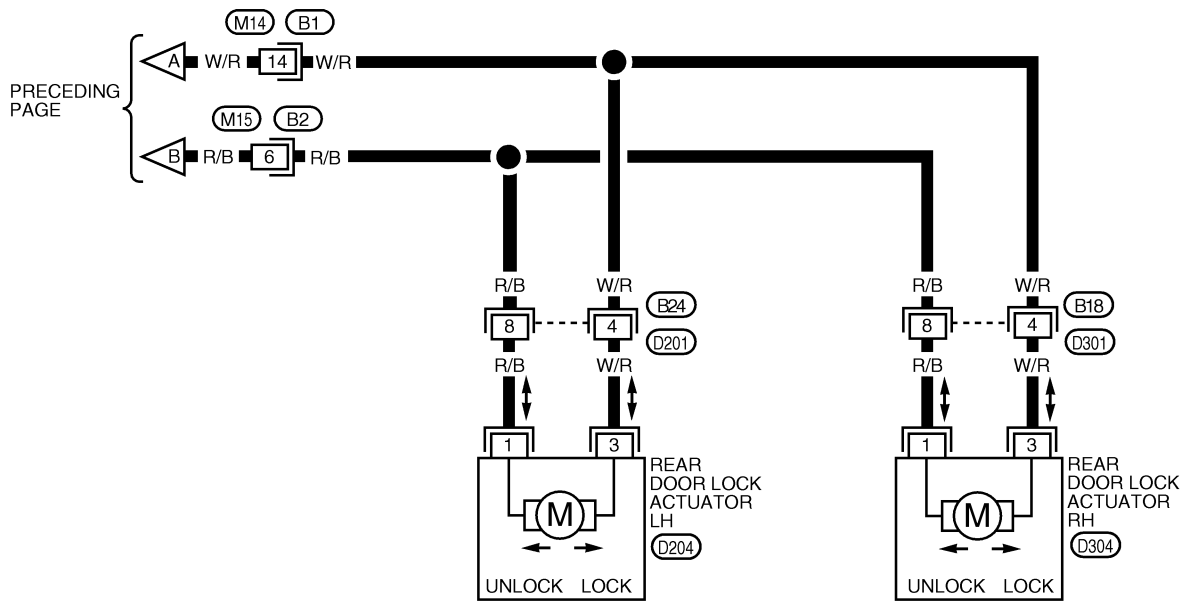
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 4 WITHOUT MULTI-REMOTE CONTROL SYSTEM

NIEL0109S05

EL-D/LOCK-04



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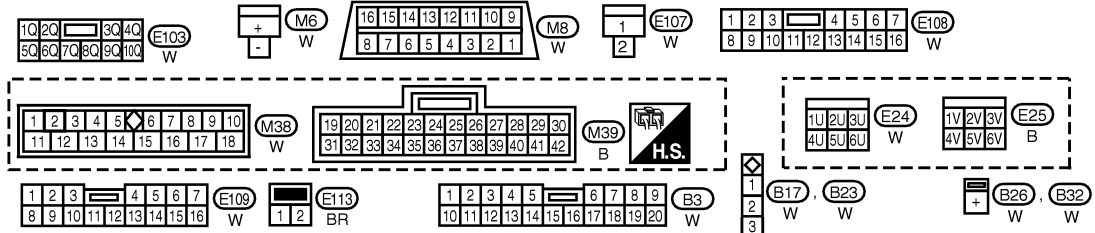
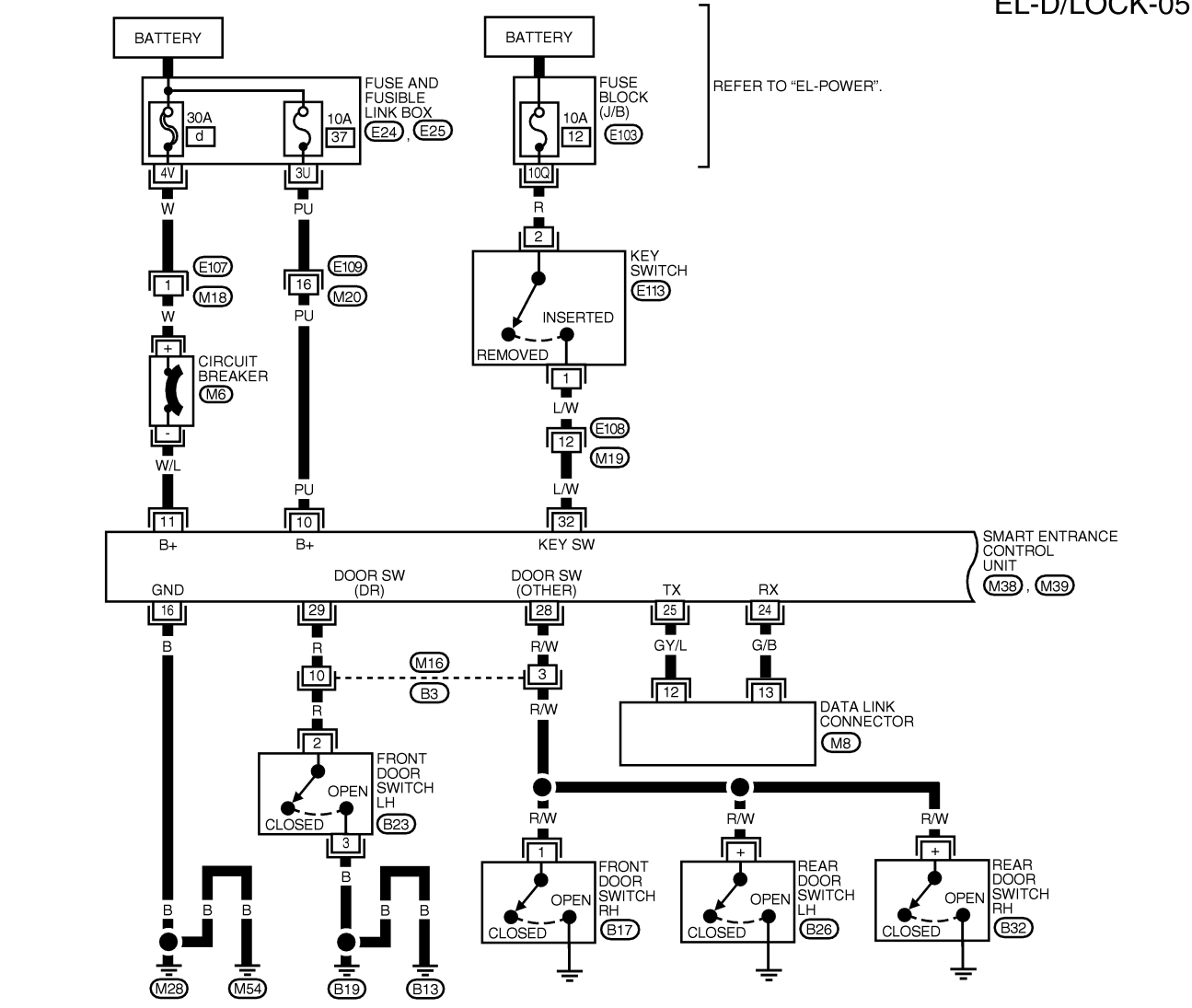
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 5 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S06

EL-D/LOCK-05



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

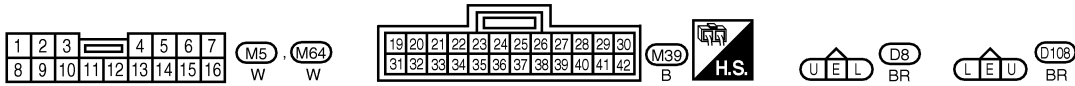
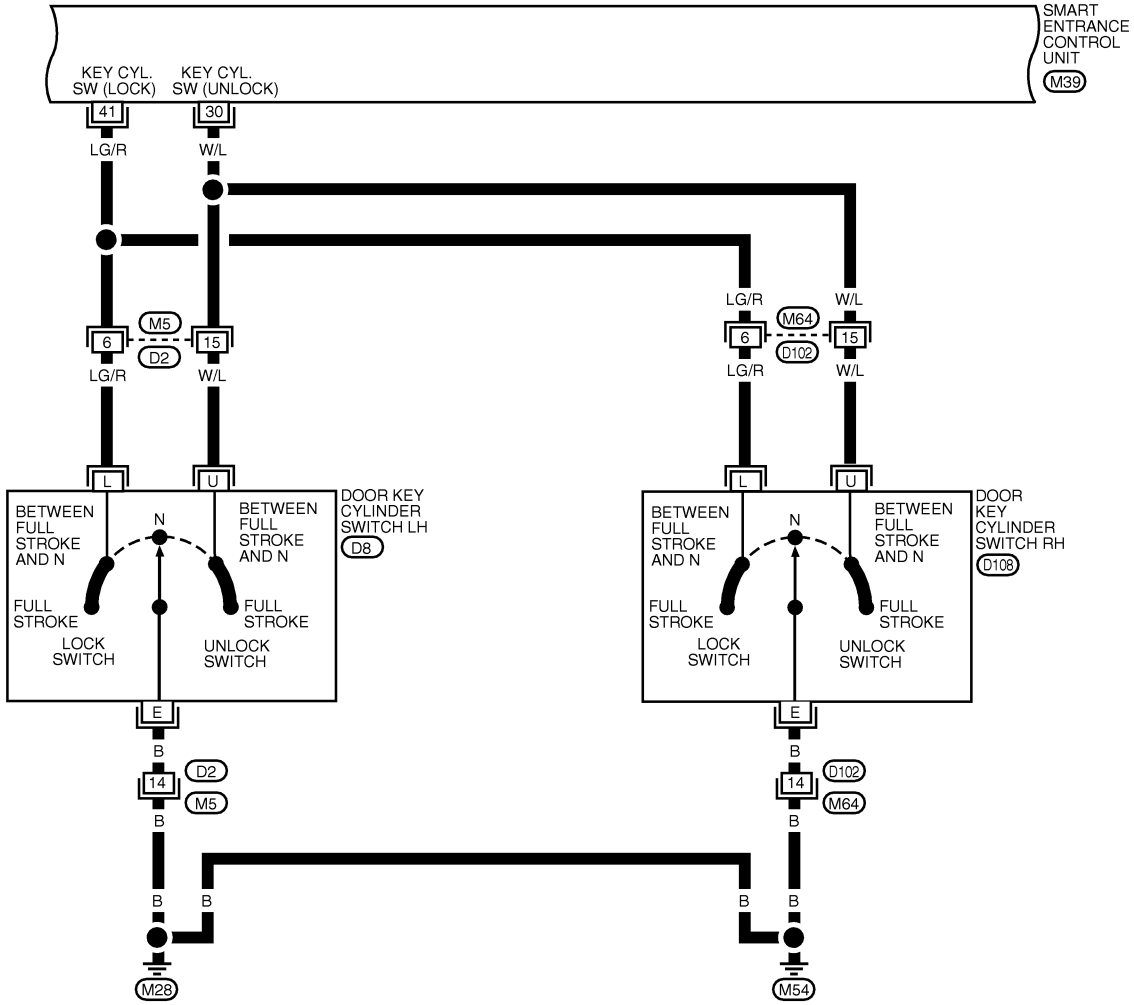
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 6 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S07

EL-D/LOCK-06



WEL382

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

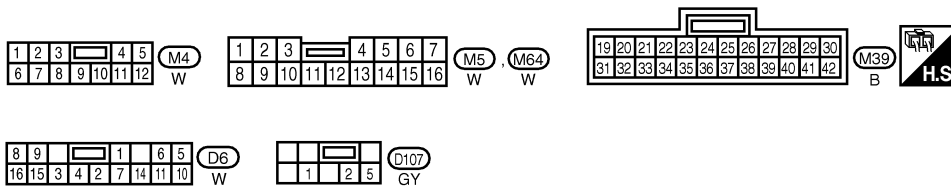
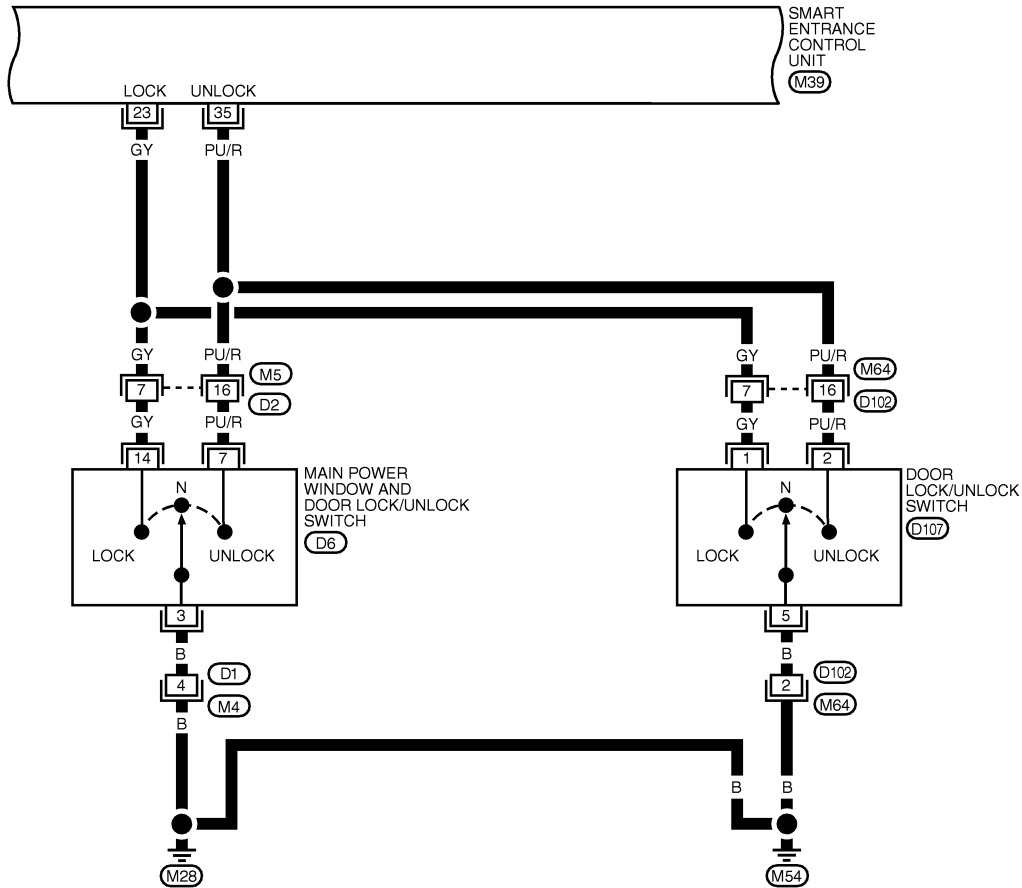
# POWER DOOR LOCK

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

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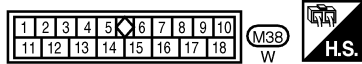
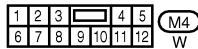
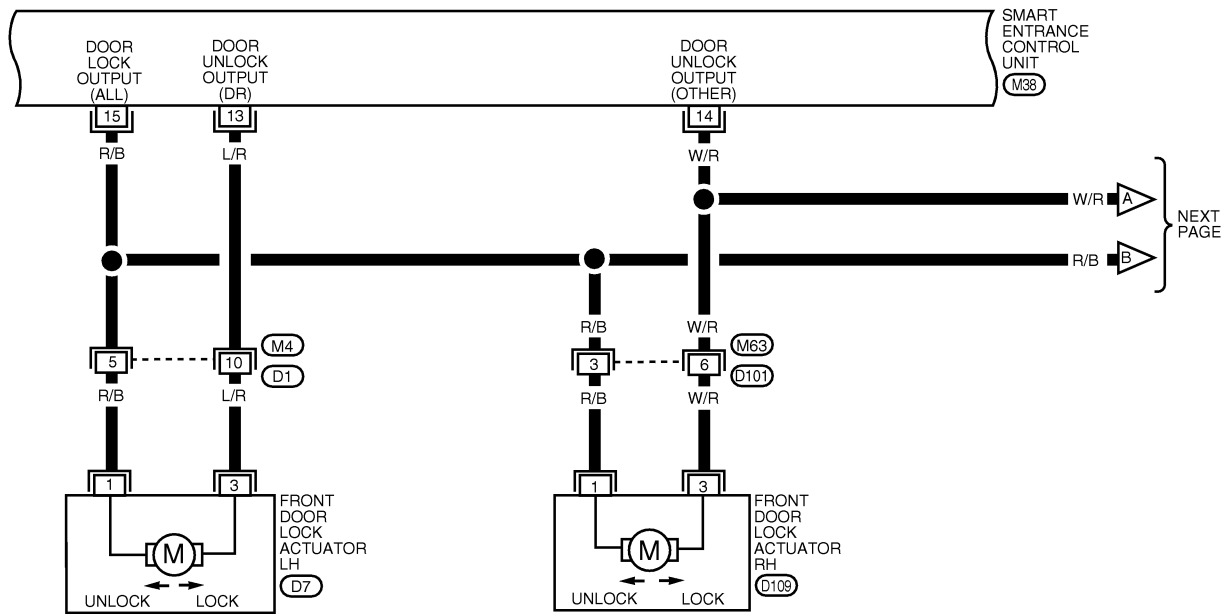
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 8 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S09

EL-D/LOCK-08



WEL384

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

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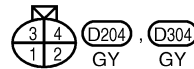
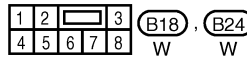
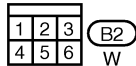
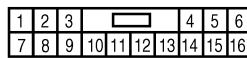
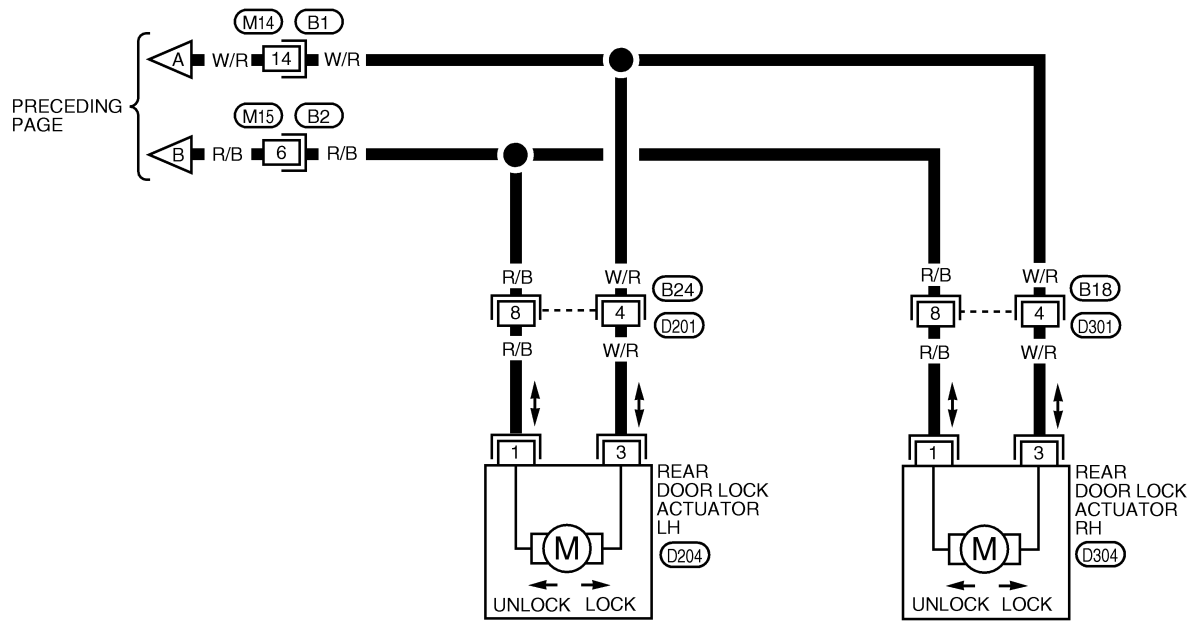
# POWER DOOR LOCK

Wiring Diagram — D/LOCK — (Cont'd)

FIG. 9 WITH MULTI-REMOTE CONTROL SYSTEM

NIEL0109S10

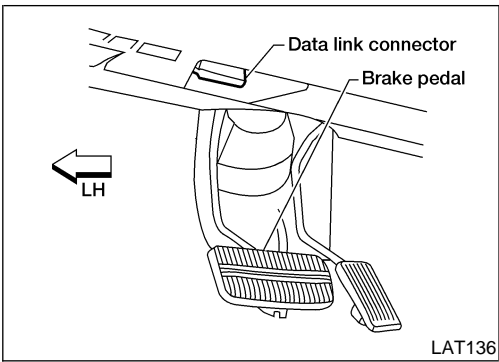
EL-D/LOCK-09



WEL385

# POWER DOOR LOCK

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



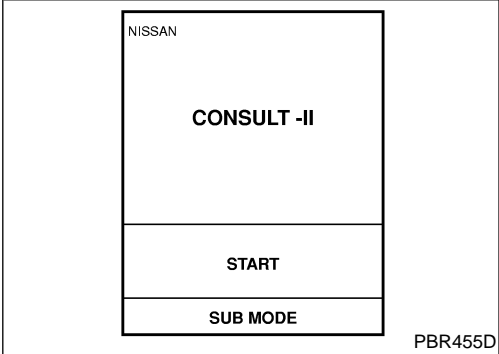
## CONSULT-II Inspection Procedure (With Multi-Remote Control System)

=NIEL0238

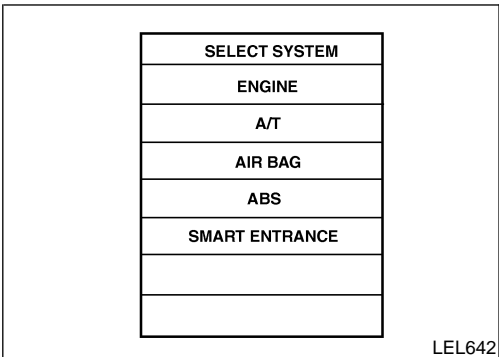
NIEL0238S01

### “DOOR LOCK”

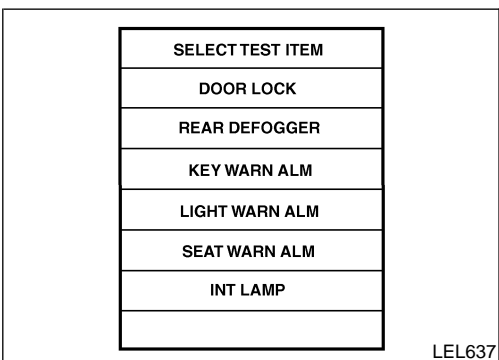
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



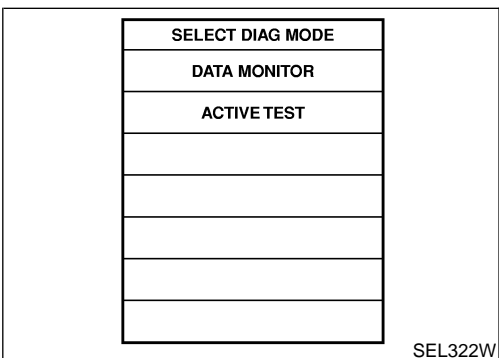
3. Turn ignition switch “ON”.
4. Turn “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “DOOR LOCK”.



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

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# POWER DOOR LOCK

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

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

NIEL0239

NIEL0239S01

NIEL0239S0101

### “DOOR LOCK”

#### Data Monitor

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.

# POWER DOOR LOCK

*Trouble Diagnoses (Without Multi-Remote Control System)*

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

=NIEL0193

NIEL0193S01

REFERENCE PAGE (EL- )	214	215	216	217	218
	MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR SWITCH CHECK	KEY SWITCH (INSERT) CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	DOOR LOCK ACTUATOR CHECK
SYMPTOM					
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	

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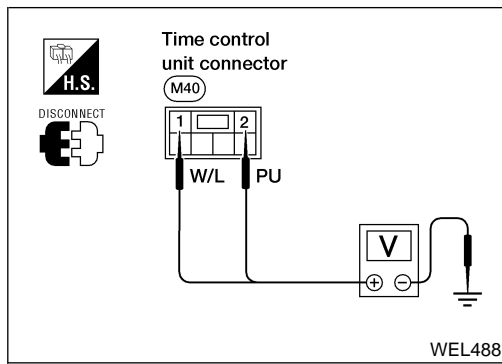
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# POWER DOOR LOCK

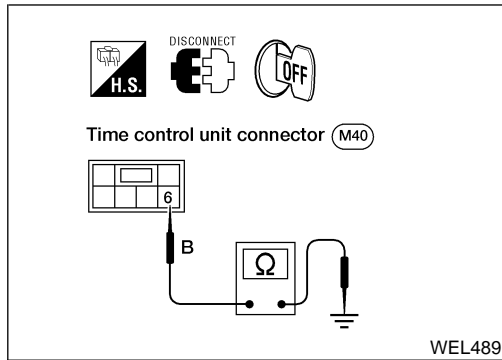
Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)



## 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

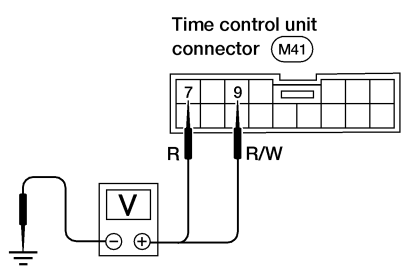



Terminals	Continuity
6 - Ground	Yes

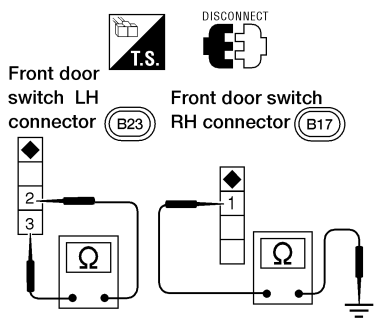
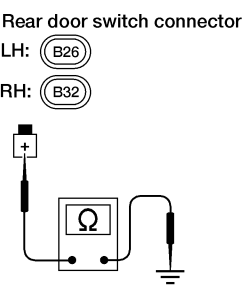
# POWER DOOR LOCK

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

## DOOR SWITCH CHECK

=NIEL0193S03

<b>1</b>	<b>CHECK DOOR SWITCHES INPUT SIGNAL</b>																							
Check voltage between time control unit harness connector terminals 7 or 9 and ground.																								
		  	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Terminals</th> <th rowspan="2">Condition</th> <th rowspan="2">Voltage [V]</th> </tr> <tr> <th>(+)</th> <th>(-)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Front 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																				
Refer to wiring diagram in EL-202. <span style="float: right;">WEL490</span>																								
<b>OK or NG</b>																								
OK	▶	Door switch is OK.																						
NG	▶	GO TO 2.																						

<b>2</b>	<b>CHECK DOOR SWITCHES</b>																								
<ol style="list-style-type: none"> <li>1. Disconnect door switch harness connectors.</li> <li>2. Check continuity between door switch connector terminals.</li> </ol>																									
			<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 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																						
<b>OK or NG</b>																									
OK	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door switch ground circuit or door switch ground condition</li> <li>● Harness for open or short between time control unit and door switch</li> </ul>																							
NG	▶	Replace door switch.																							

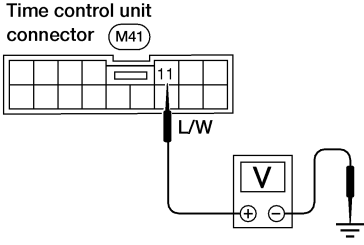

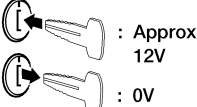
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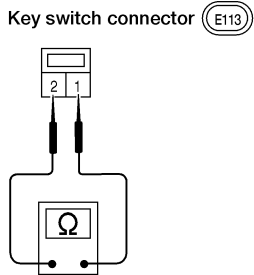

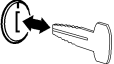
# POWER DOOR LOCK

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

## KEY SWITCH (INSERT) CHECK

-NIEL0193S04

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	
<p>Check voltage between time control unit harness connector terminal 11 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>H.S. CONNECT</p> </div> <div style="text-align: center;"> <p><b>Voltage [V]:</b>                      Condition of key switch: Key is inserted.                      Approx. 12                      Condition of key switch: Key is removed.                      0</p> </div> </div> <div style="margin-top: 20px; text-align: center;">  <p>: Approx. 12V : 0V</p> </div>		
<p>Refer to wiring diagram in EL-202.</p> <p style="text-align: right;">WEL492</p>		
<b>OK or NG</b>		
OK	▶	Key switch is OK.
NG	▶	GO TO 2.

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



# POWER DOOR LOCK

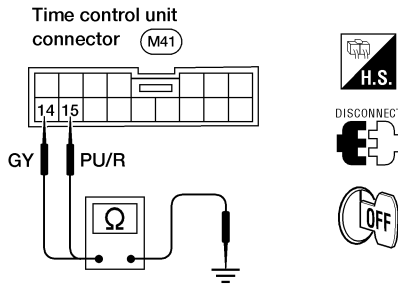
Trouble Diagnoses (Without Multi-Remote Control System) (Cont'd)

## 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 in EL-203.

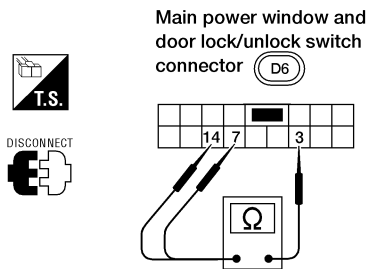
WEL493

OK or NG

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

### 2 CHECK DOOR LOCK/UNLOCK SWITCH

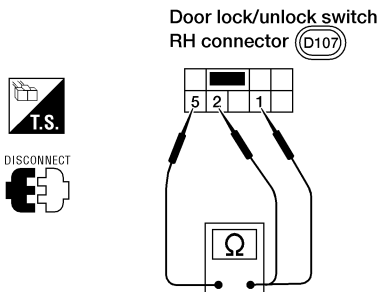
1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between each door lock/unlock switch terminals.
  - Main power window and door lock/unlock switch



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

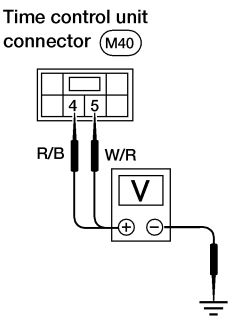



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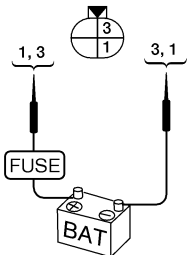
# POWER DOOR LOCK

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

## DOOR LOCK ACTUATOR CHECK

=NIEL0193S08

<b>1</b>	<b>CHECK DOOR LOCK ACTUATOR CIRCUIT</b>															
<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														
<p>Refer to wiring diagram in EL-204.</p> <p style="text-align: right;">WEL498</p>																
<b>OK or NG</b>																
OK	▶	GO TO 2.														
NG	▶	Replace time control unit. (Before replacing the control unit, perform "DOOR LOCK/ UNLOCK SWITCH CHECK".)														

<b>2</b>	<b>CHECK DOOR LOCK ACTUATOR</b>		
<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: right;"> <p><b>Door lock actuator operation:</b>  <b>Terminals between (+): 1 and (-): 3</b>  <b>Unlocked → Locked</b>  <b>Terminals between (+): 3 and (-): 1</b>  <b>Locked → Unlocked</b></p> </div> </div>			
WEL499			
<b>OK or NG</b>			
OK	▶	Check harness for open or short between time control unit connector and door lock actuator.	
NG	▶	Replace door lock actuator.	

# POWER DOOR LOCK

Trouble Diagnoses (With Multi-Remote Control System)

## Trouble Diagnoses (With Multi-Remote Control System)

### SYMPTOM CHART

=NIEL0264

NIEL0264S01

REFERENCE PAGE (EL- )	220	221	222	223	225	227
SYMPTOM	MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK	DOOR SWITCH CHECK	KEY SWITCH (INSERT) CHECK	DOOR LOCK/UNLOCK SWITCH CHECK	FRONT DOOR KEY CYLINDER SWITCH CHECK	DOOR LOCK ACTUATOR CHECK
Key reminder door system does not operate properly.	X	X	X			X
Specific door lock actuator does not operate.	X					X
Power door lock does not operate with door lock and unlock switch (LH and RH) on door trim.	X			X		
Power door lock does not operate with front door key cylinder operation.	X				X	

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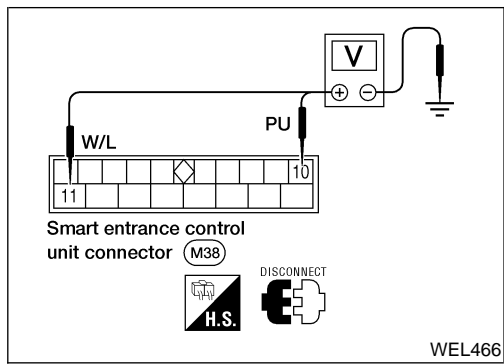
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# POWER DOOR LOCK

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



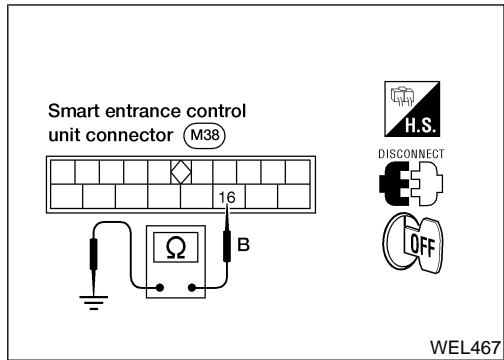
## MAIN POWER SUPPLY AND GROUND CIRCUIT CHECK

-NIEL0264S02

### Main Power Supply Circuit Check

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

# 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.

DATA MONITOR	
MONITOR	
DOOR SW-ALL	OFF

When any doors are open:

**DOOR SW-ALL ON**

When all doors are closed:

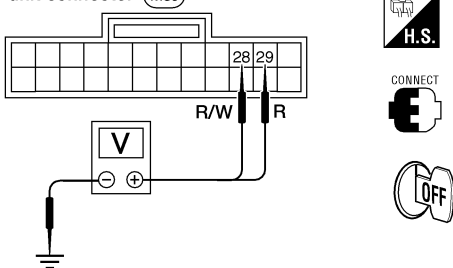
**DOOR SW-ALL OFF**

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 in EL-206.

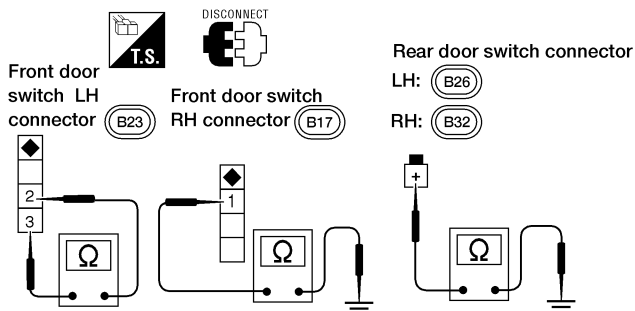
OK or NG

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.



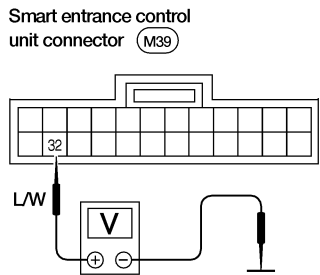


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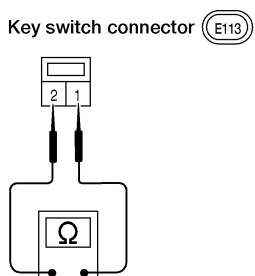

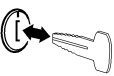
# POWER DOOR LOCK

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

## KEY SWITCH (INSERT) CHECK

-NIEL0264S04

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>								
<p> <b>With CONSULT-II</b> Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p>									
<table border="1" style="margin: auto;"> <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 style="text-align: center;">ON</td> </tr> </tbody> </table>		DATA MONITOR		MONITOR		KEY ON SW	ON	<p>When key is inserted to ignition key cylinder: <b>KEY ON SW ON</b></p> <p>When key is removed from ignition key cylinder: <b>KEY ON SW OFF</b></p>	
DATA MONITOR									
MONITOR									
KEY ON SW	ON								
SEL315W									
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 32 and ground.</p>									
			<p><b>Voltage [V]:</b> Condition of key switch: Key is inserted. Approx. 12 Condition of key switch: Key is removed. 0</p>						
		<p>: Approx. 12V : 0V</p>							
LEL454									
Refer to wiring diagram in EL-206.									
<b>OK or NG</b>									
OK	▶	Key switch is OK.							
NG	▶	GO TO 2.							

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

# 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**

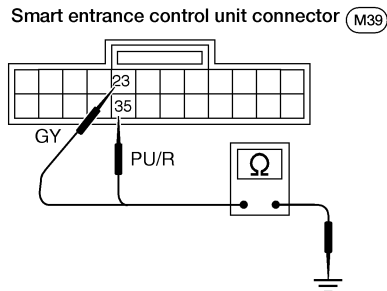
When lock/unlock switch is turned to UNLOCK:

**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.



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

Refer to wiring diagram in EL-208.

WEL501

OK or NG

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

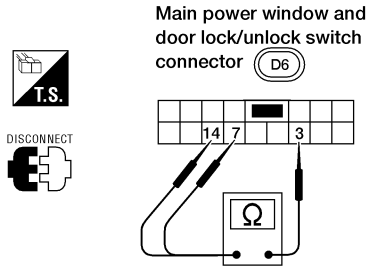
GI  
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AX  
SU  
BR  
ST  
RS  
BT  
HA  
SC  
EL  
IDX

# POWER DOOR LOCK

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

## 2 CHECK DOOR LOCK/UNLOCK SWITCH

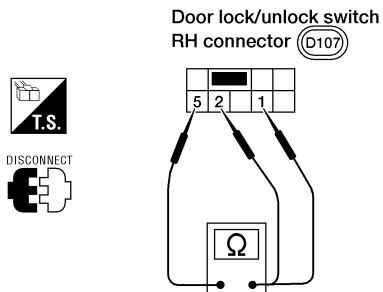
1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between each door lock/unlock switch terminals.
  - Main power window and door lock/unlock switch



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

WEL494

- Door lock/unlock switch RH



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

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.



# 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**

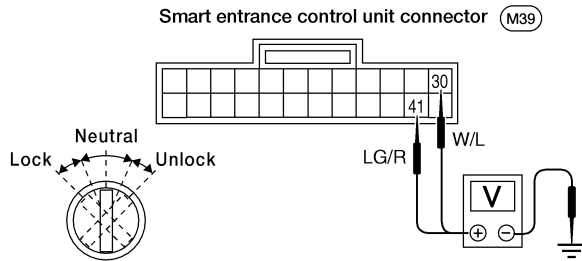
When key inserted in front key cylinder is turned to UNLOCK:

**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 in EL-207.

OK or NG

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

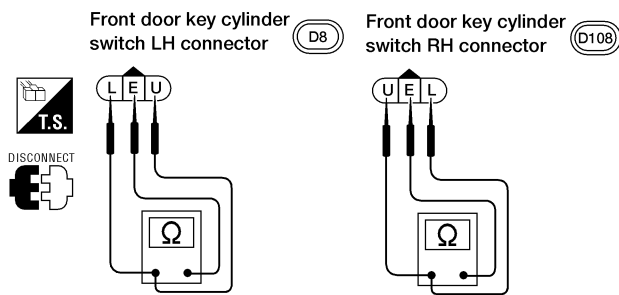
GI  
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AT  
AX  
SU  
BR  
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RS  
BT  
HA  
SC  
EL  
IDX

# POWER DOOR LOCK

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

## 2 CHECK DOOR KEY CYLINDER SWITCH

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



- Ⓔ : Ground terminal
- Ⓢ : Door unlock switch terminal
- Ⓛ : Door lock switch terminal

Terminals	Key position	Continuity
Ⓛ - Ⓔ	Neutral/Unlock	No
	Lock	Yes
Ⓢ - Ⓔ	Neutral/Lock	No
	Unlock	Yes

WEL503

OK or NG

OK



**Check the following.**

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

NG




Replace door key cylinder switch.

# POWER DOOR LOCK

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

## DOOR LOCK ACTUATOR CHECK

=NIEL0264S07

<b>1</b>	<b>CHECK DOOR LOCK ACTUATOR OPERATION</b>												
<p> <b>With CONSULT-II</b></p> <ol style="list-style-type: none"><li>1. Select "ACTIVE TEST" in "DOOR LOCK" with CONSULT-II.</li><li>2. Select "ALL D/LK MTR" and touch "ON".</li><li>3. Then, select "DR D/UN MTR" and touch "ON".</li><li>4. Select "NON DR D/UN" and touch "ON".</li></ol> <table border="1"><tr><th colspan="2">ACTIVE TEST</th></tr><tr><td>ALL D/LK MTR</td><td>OFF</td></tr><tr><td colspan="2" style="text-align: center;">or</td></tr><tr><td>(DR D/UN MTR</td><td>OFF)</td></tr><tr><td>(NON DR D/UN</td><td>OFF)</td></tr><tr><td colspan="2" style="text-align: center;">ON</td></tr></table> <p style="text-align: center;"><b>Door lock motor should operate.</b></p> <p style="text-align: right;">SEL343W</p> <p><b>NOTE:</b> If CONSULT-II is not available, skip this procedure and go to the next step.</p> <p style="text-align: center;"><b>OK or NG</b></p>		ACTIVE TEST		ALL D/LK MTR	OFF	or		(DR D/UN MTR	OFF)	(NON DR D/UN	OFF)	ON	
ACTIVE TEST													
ALL D/LK MTR	OFF												
or													
(DR D/UN MTR	OFF)												
(NON DR D/UN	OFF)												
ON													
OK	▶ Door lock actuator is OK.												
NG	▶ GO TO 2.												

GI  
MA  
EM  
LC  
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AT  
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BT  
HA  
SC  
EL  
IDX

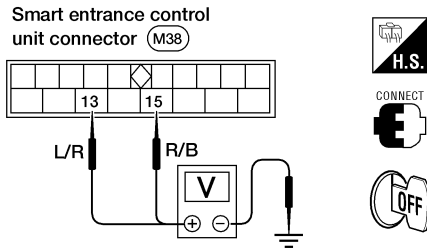
# POWER DOOR LOCK

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

## 2 CHECK DOOR LOCK ACTUATOR CIRCUIT

Check voltage for door lock actuator.

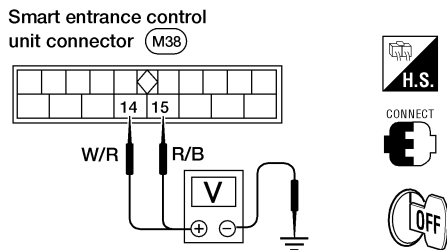
- Door lock actuator front LH



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

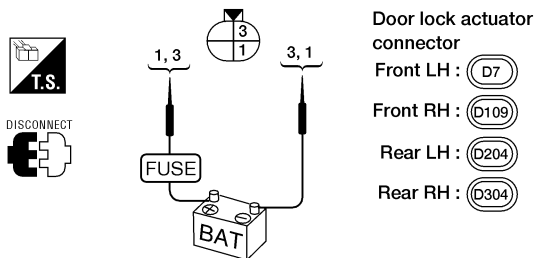
Refer to wiring diagram in EL-209.

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-223.)

## 3 CHECK DOOR LOCK ACTUATOR

1. Disconnect door lock actuator harness connector.
2. 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.

# MULTI-REMOTE CONTROL SYSTEM

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NIEL0111

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

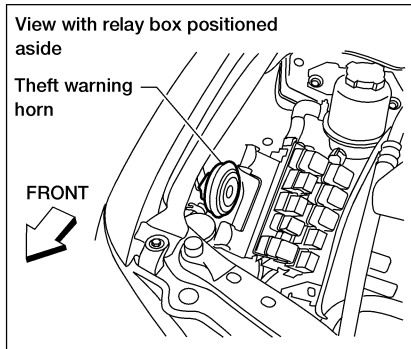
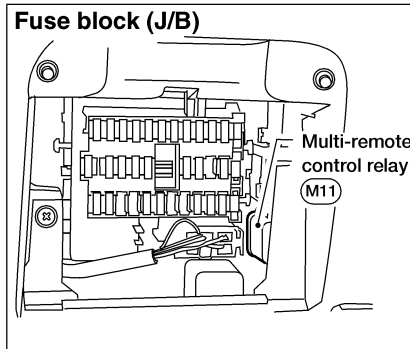
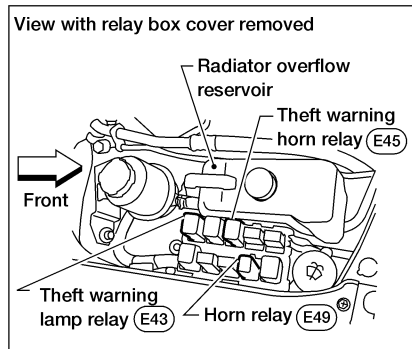
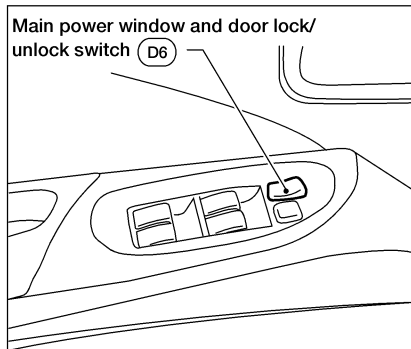
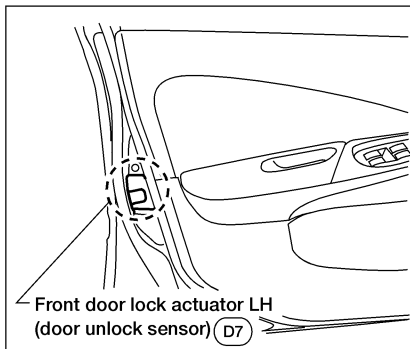
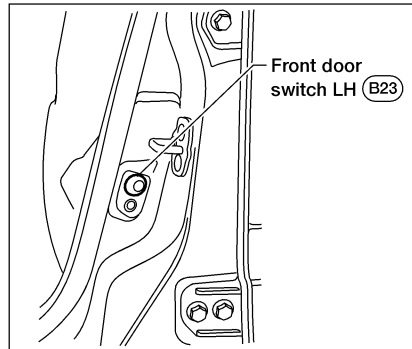
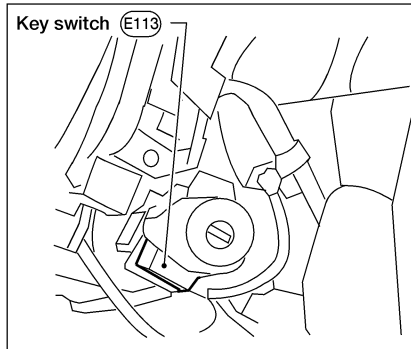
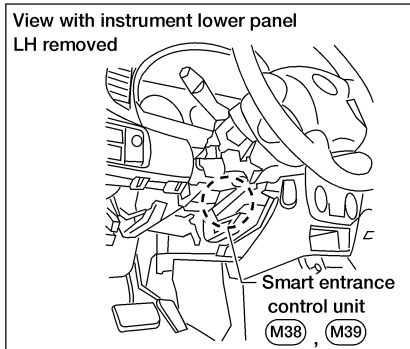
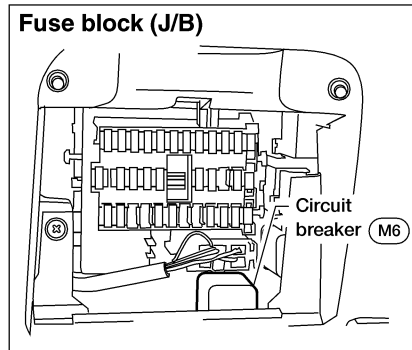
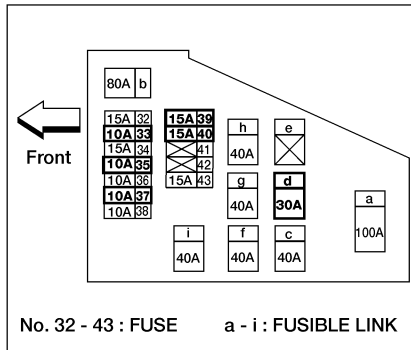
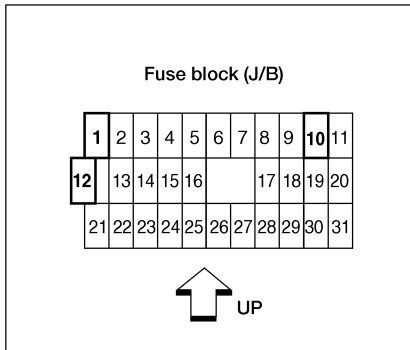
BT

HA

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# MULTI-REMOTE CONTROL SYSTEM

System Description

## 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

NIEL0194S02

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

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

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

#### Hazard and Horn Reminder

NIEL0194S0202

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 terminal 2
- through 10A fuse (No. 33, located in the fuse and fusible link box).

# MULTI-REMOTE CONTROL 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 1
- through smart entrance control unit terminal 19.

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

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

## Operating function of hazard and horn reminder

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

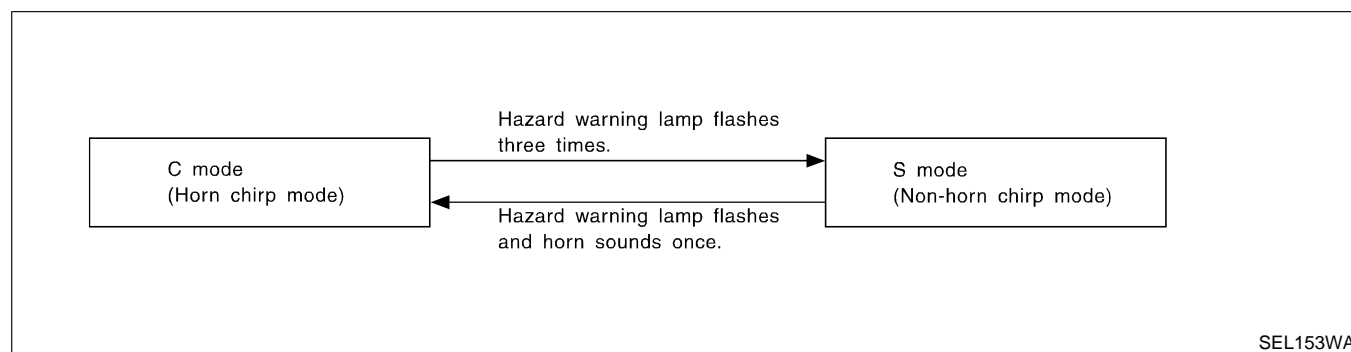
## How to change hazard and horn reminder mode

☐ With CONSULT-II

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

⊗ Without CONSULT-II

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



## Interior Lamp Operation

When the following input signals are both supplied:

- front door switch LH CLOSED (when driver's door is closed);
- driver's 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-263.

## 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:

## MULTI-REMOTE CONTROL 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.

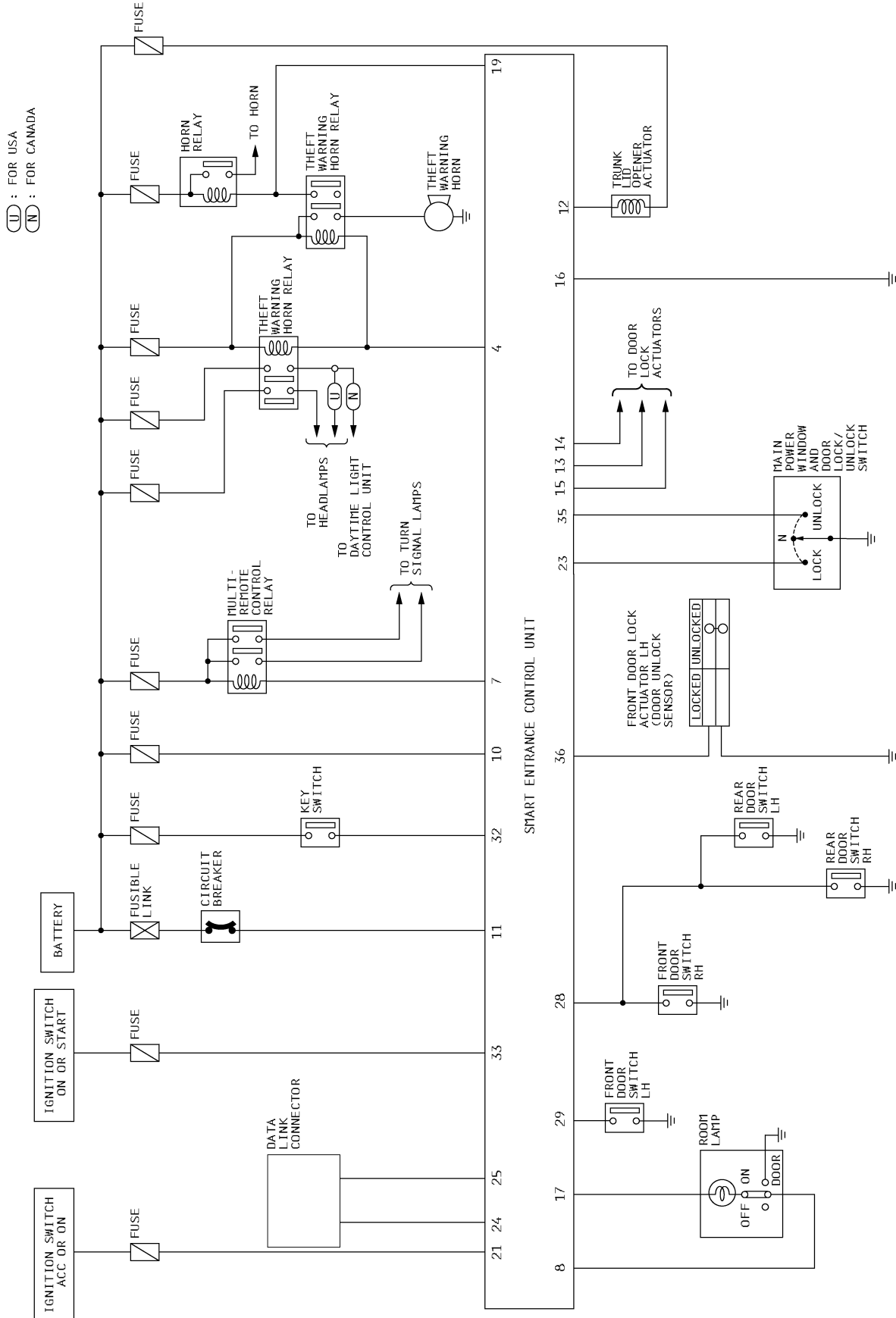


# MULTI-REMOTE CONTROL SYSTEM

Schematic

NIEL0171

## Schematic



GI  
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LEL403

# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI —

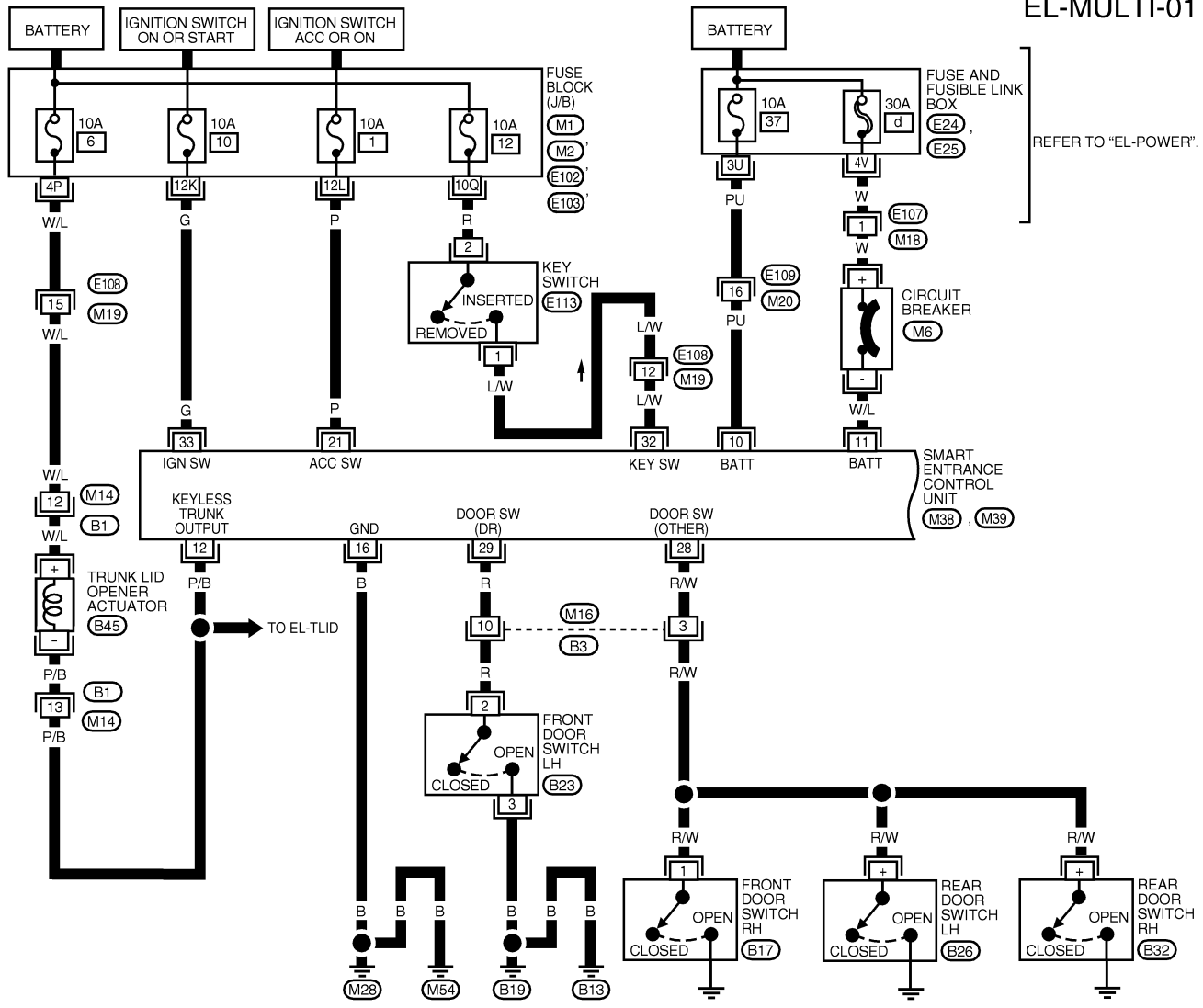
## Wiring Diagram — MULTI —

NIEL0114

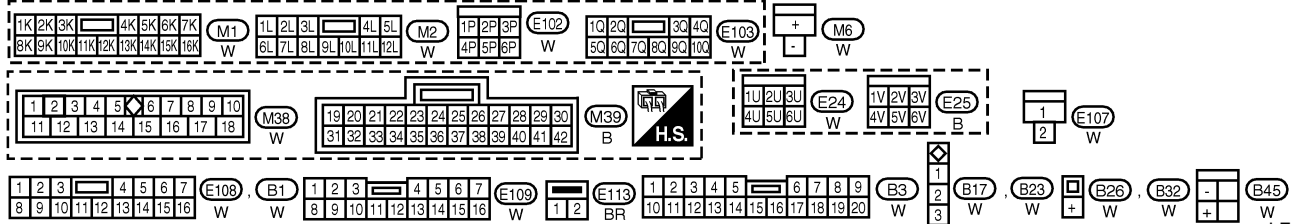
NIEL0114S01

FIG. 1

EL-MULTI-01



REFER TO "EL-POWER".



LEL404

SMART ENTRANCE CONTROL UNIT 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
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 KEY IS IN ON POSITION	12V
		IGNITION SWITCH (START)	IGNITION KEY IS IN START POSITION	12V

LEL610

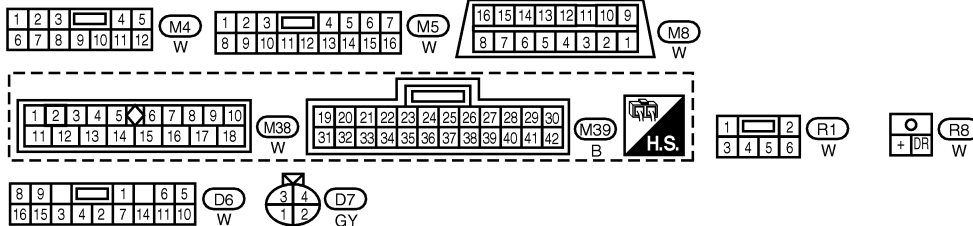
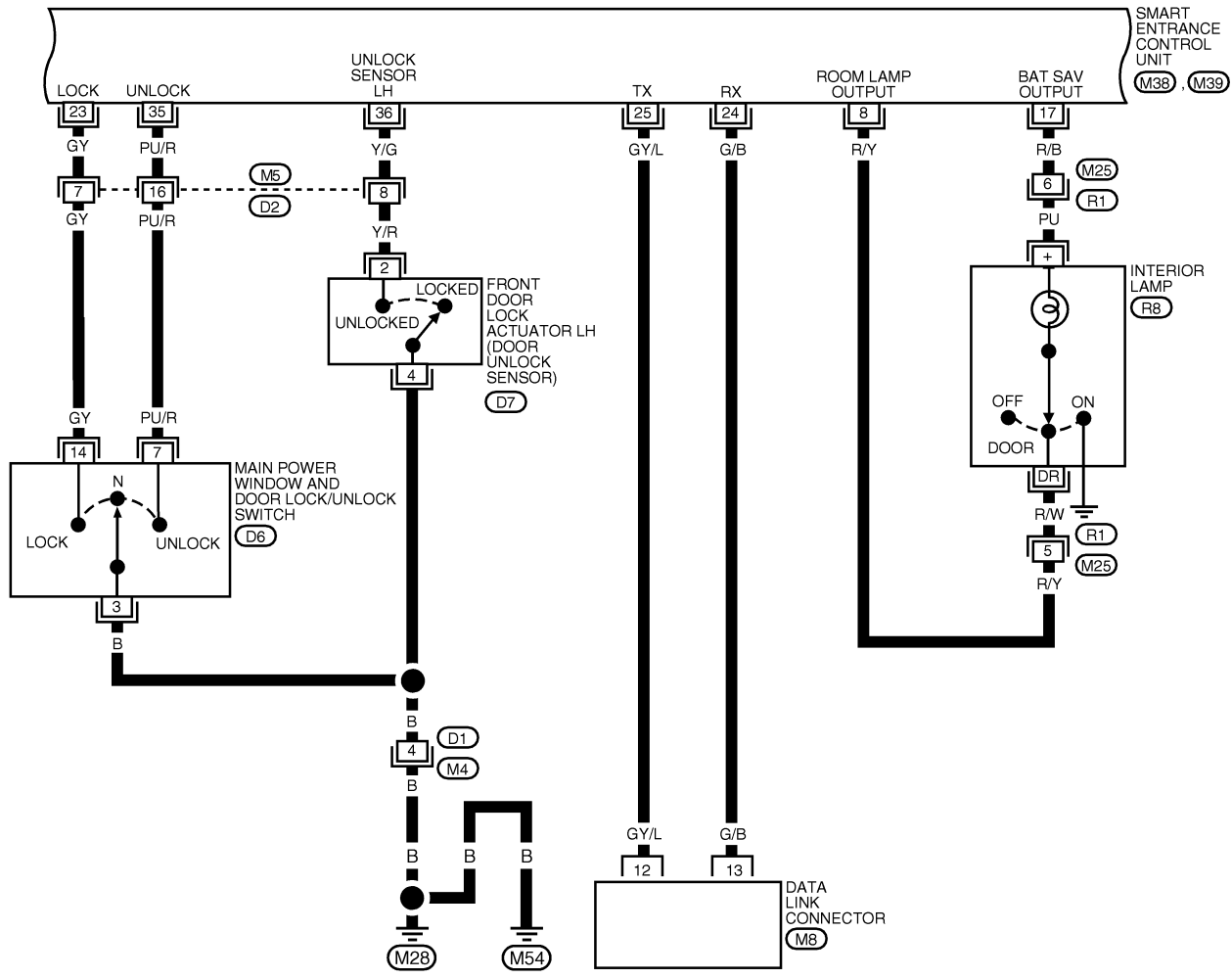
# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 2

NIEL0114S02

EL-MULTI-02



LEL405

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

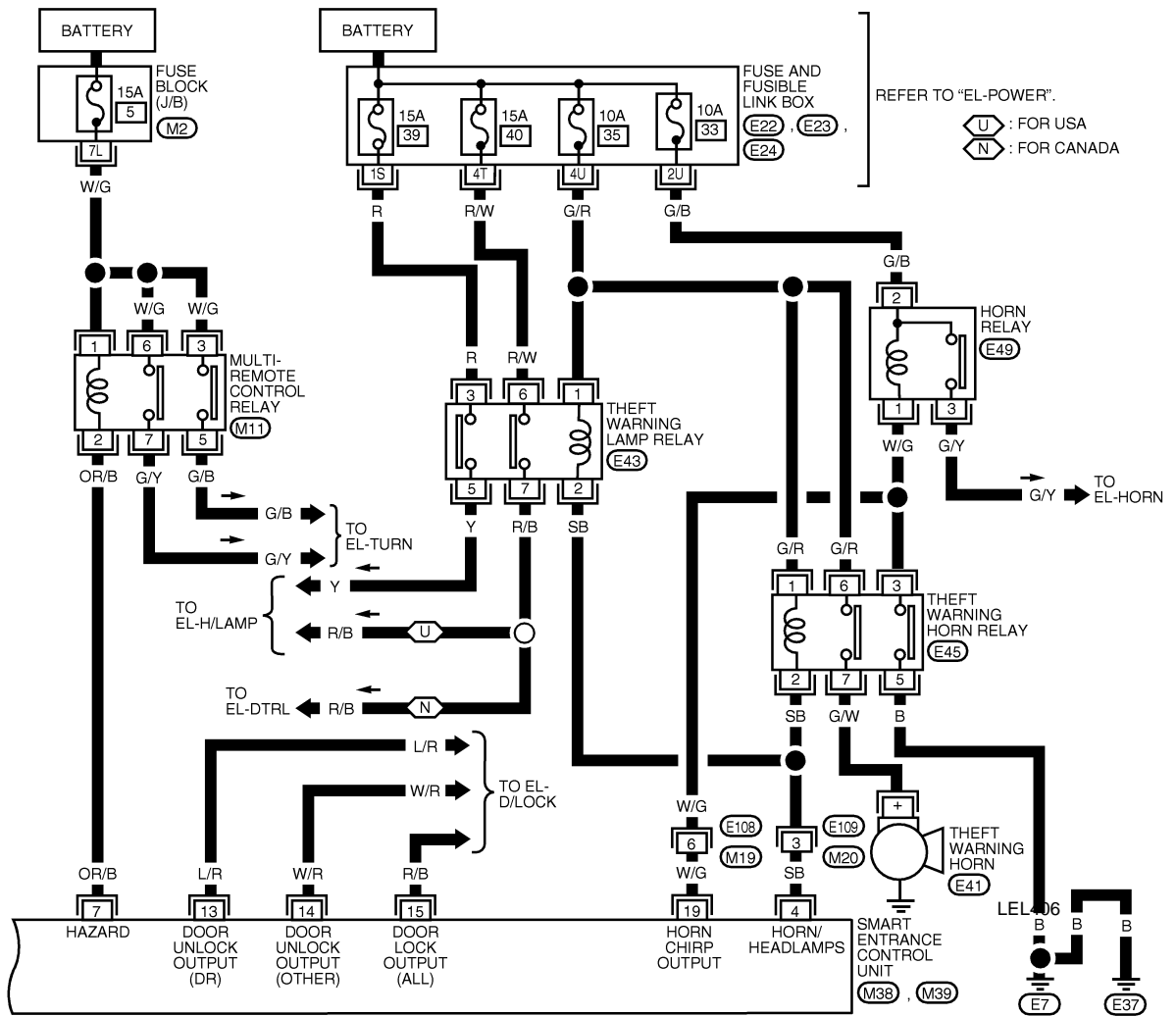
# MULTI-REMOTE CONTROL SYSTEM

Wiring Diagram — MULTI — (Cont'd)

FIG. 3

NIEL0114S05

EL-MULTI-03

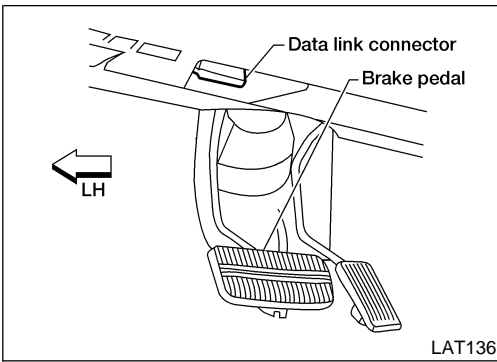


TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
4	SB	THEFT WARNING HORN RELAY (AND) THEFT WARNING LAMP RELAY	WHEN PANIC ALARMS OF PRATED DISINTEGRATION CONTROLLER OR WHEN ALARM IS ACTIVATED	12V TO 0V
7	OR/B	MULTI-REMOTE-CONTROL RELAY	WHEN DOORS ARE LOCKED USING REMOTE-CONTROLLER	12V TO 0V
19	W/G	HORN RELAY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

LEL612

# MULTI-REMOTE CONTROL SYSTEM

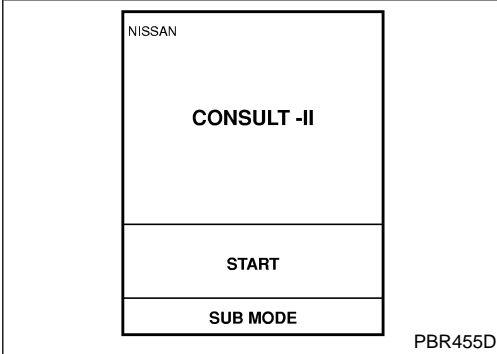
CONSULT-II Inspection Procedure



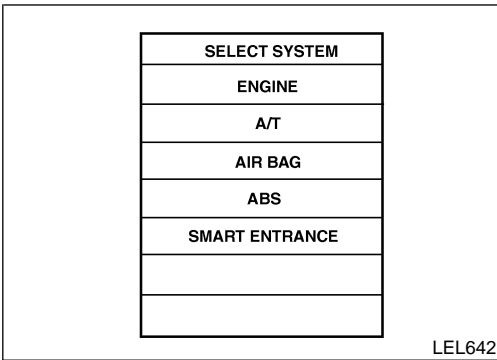
## CONSULT-II Inspection Procedure “MULTI REMOTE ENT”

NIEL0241  
NIEL0241S01

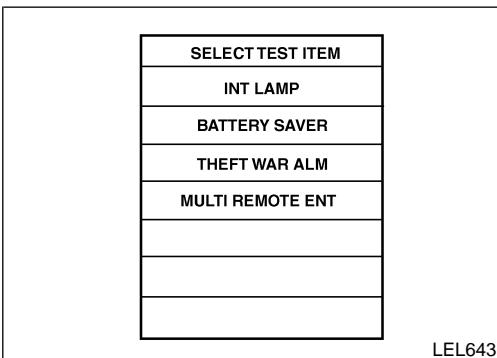
1. Turn ignition switch “OFF”.
2. Connect “CONSULT-II” to the data link connector.



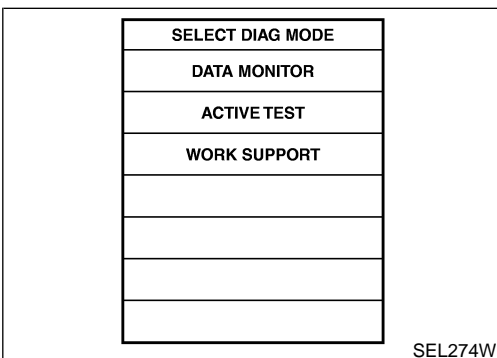
3. Turn ignition switch “ON”.
4. Touch “START”.



5. Touch “SMART ENTRANCE”.



6. Touch “MULTI REMOTE ENT”.



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

GI

MA

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# MULTI-REMOTE CONTROL 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.

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses

## 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	241
	2. Power supply and ground circuit for smart entrance control unit check	242
	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.	254
The new ID of remote controller cannot be entered.	1. Remote controller battery and function check	241
	2. Key switch (insert) check	245
	3. Door switch check	244
	4. Door lock/unlock switch LH check	246
	5. Power supply and ground circuit for smart entrance control unit check	242
	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.	254
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-219]	1. Remote controller battery and function check	241
	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.	254
Hazard and horn reminder does not activate properly when pressing lock or unlock button of remote controller.	1. Remote controller battery and function check	241
	2. Hazard reminder check	250
	3. Horn reminder check* *: Horn chirp can be activated or deactivated. First check the horn chirp setting. Refer to "Hazard and Horn Reminder", EL-230.	252
	4. Door switch check	244
	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.	254
Interior lamp illumination operations do not activate properly.	1. Interior lamp operation check	253
	2. Door switch check	244
	3. Front LH door unlock sensor check	248

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## MULTI-REMOTE CONTROL SYSTEM

### Trouble Diagnoses (Cont'd)

Symptom	Diagnoses/service procedure	Reference page (EL- )
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Remote controller battery and function check	241
	2. Theft warning operation check. Refer to "PRELIMINARY CHECK", EL-271.	271
	3. Key switch (insert) check	245
	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.	254
Trunk lid does not open when trunk opener button is continuously pressed.	1. Remote controller battery and function check	241
	2. Trunk lid opener actuator check	249
	3. Key switch (insert) check	245
	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.	254

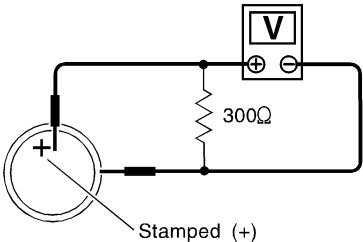


# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## REMOTE CONTROLLER BATTERY AND FUNCTION CHECK

=NIEL0195S02

<b>1</b>	<b>CHECK REMOTE CONTROLLER BATTERY</b>
<p>Remove battery (refer to "Remote Controller Battery Replacement", EL-258) and measure voltage across battery positive and negative terminals, (+) and (-).</p> <p><b>Voltage [V]:</b> <b>2.5 - 3.0</b></p> <p><b>NOTE:</b> Remote controller does not function if battery is not set correctly.</p> <div style="text-align: center;">  </div> <p style="text-align: right;">SEL237W</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶ GO TO 2.
NG	▶ Replace battery.

<b>2</b>	<b>CHECK REMOTE CONTROLLER FUNCTION</b>																																					
<p><b>With CONSULT-II</b></p> <p>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;"><b>When pushing each button of remote controller, the corresponding monitor item should be turned as follows.</b></p> <div style="display: flex; justify-content: space-around;"> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>LK BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>UN BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>TRUNK BTN/SIG</td> <td>ON</td> </tr> <tr> <td>PANIC BTN</td> <td>ON</td> </tr> <tr> <td>UN BUTTON ON</td> <td>ON</td> </tr> <tr> <td>LK/UN BTN ON</td> <td>ON</td> </tr> </tbody> </table> <table border="1" style="border-collapse: collapse;"> <thead> <tr> <th>Condition</th> <th colspan="2">Monitor item</th> </tr> </thead> <tbody> <tr> <td>Pushing LOCK</td> <td>LK BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing UNLOCK</td> <td>UN BUTTON/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing TRUNK</td> <td>TRUNK BTN/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing PANIC</td> <td>PANIC BTN/SIG</td> <td>ON</td> </tr> <tr> <td>Pushing UNLOCK within 5 seconds after first pushing UNLOCK</td> <td>UN BUTTON ON</td> <td>ON</td> </tr> <tr> <td>Pushing LOCK and UNLOCK at the same time</td> <td>LK/UN BTN ON</td> <td>ON</td> </tr> </tbody> </table> </div> <p style="text-align: right;">SEL346W</p> <p style="text-align: center;"><b>OK or NG</b></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
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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-239.																																					
NG	▶ Replace remote controller. Refer to "ID Code Entry Procedure", EL-254.																																					

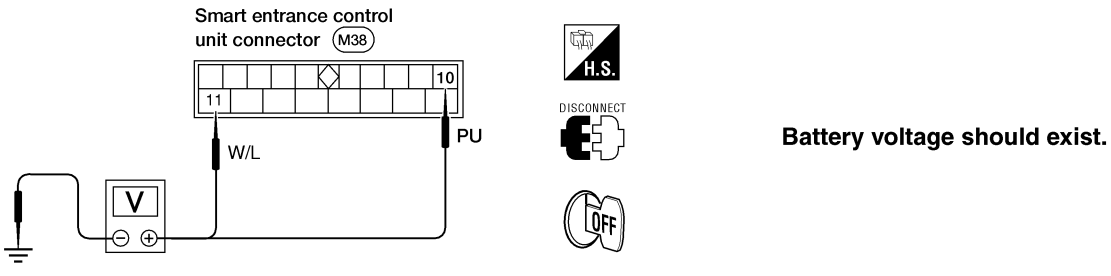
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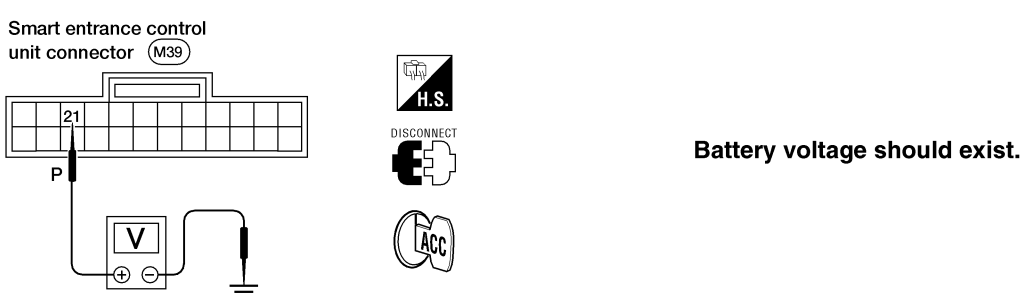
# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## POWER SUPPLY AND GROUND CIRCUIT CHECK

=NIEL0195S03

<b>1</b>	<b>CHECK MAIN POWER SUPPLY CIRCUIT FOR SMART ENTRANCE CONTROL UNIT</b>	
<p>1. Disconnect smart entrance control unit harness connector.                  2. Check voltage between smart entrance control unit harness connector terminals 10, 11 and ground.</p>		
		
LEL511		
Refer to wiring diagram in EL-234.		
<b>OK or NG</b>		
OK	▶	GO TO 2.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 30A fusible link (letter <b>d</b>, located in fuse and fusible link box)</li> <li>● 10A fuse (No. 37, located in fuse and fusible link box)</li> <li>● M6 circuit breaker</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>

<b>2</b>	<b>CHECK IGNITION SWITCH "ACC" CIRCUIT</b>	
<p>1. Disconnect smart entrance control unit harness connector.                  2. Check voltage between smart entrance control unit harness connector terminal 21 and ground while ignition switch is "ACC".</p>		
		
LEL512		
Refer to wiring diagram in EL-234.		
<b>OK or NG</b>		
OK	▶	GO TO 3.
NG	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 1, located in fuse block (J/B)]</li> <li>● Harness for open or short between smart entrance control unit and fuse</li> </ul>

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

3	<h3>CHECK GROUND CIRCUIT FOR SMART ENTRANCE CONTROL UNIT</h3> <p>Check continuity between smart entrance control unit harness connector terminal 16 and ground.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div> <p>Smart entrance control unit connector (M38)</p> </div> <div> </div> <div> <p><b>Continuity should exist.</b></p> </div> </div> <p>Refer to wiring diagram in EL-234.</p> <p style="text-align: right;">LEL510</p> <p style="text-align: center;"><b>OK or NG</b></p>
OK	▶ Power supply and ground circuits are OK.
NG	▶ Check ground harness.

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# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## DOOR SWITCH CHECK

=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:

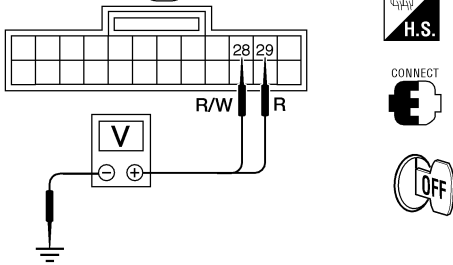
**DOOR SW-ALL OFF**

SEL323W

#### Without CONSULT-II

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

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 in EL-234.

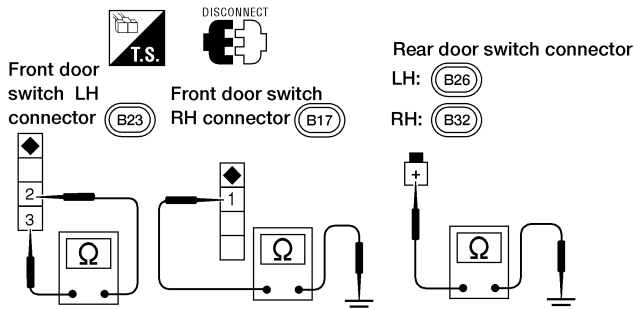
**OK or NG**

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.**

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



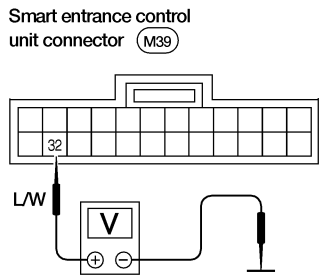




NG ► Replace door switch.

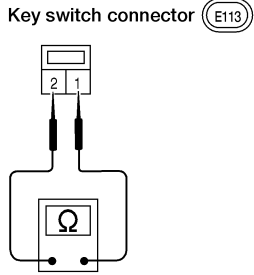


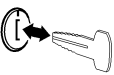
# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## KEY SWITCH (INSERT) CHECK

-NIEL0195S05

<b>1</b>	<b>CHECK KEY SWITCH INPUT SIGNAL</b>	<p> <b>With CONSULT-II</b> Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.</p> <div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px;"> <table border="1" style="width: 100%; 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 style="margin-top: 20px;"> <p>When key is inserted to ignition key cylinder: <b>KEY ON SW ON</b></p> <p>When key is removed from ignition key cylinder: <b>KEY ON SW OFF</b></p> </div> </div> <p style="text-align: right;">SEL315W</p>	DATA MONITOR		MONITOR		KEY ON SW	ON	GI MA EM LC EC FE CL MT AT AX SU
DATA MONITOR									
MONITOR									
KEY ON SW	ON								
		<p> <b>Without CONSULT-II</b> Check voltage between control unit terminal 32 and ground.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="margin-right: 20px;"> <p> <b>CONNECT</b> </p> <p> : Approx. 12V</p> <p> : 0V</p> </div> <div style="margin-top: 20px;"> <p><b>Voltage [V]:</b> Condition of key switch: Key is inserted. <b>Approx. 12</b> Condition of key switch: Key is removed. <b>0</b></p> </div> </div> <p style="text-align: right;">LEL454</p>	BR ST RS BT HA SC						
		Refer to wiring diagram in EL-234.							
		<b>OK or NG</b>							
	OK ▶	Key switch is OK.	BR						
	NG ▶	GO TO 2.							

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

# MULTI-REMOTE CONTROL 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**

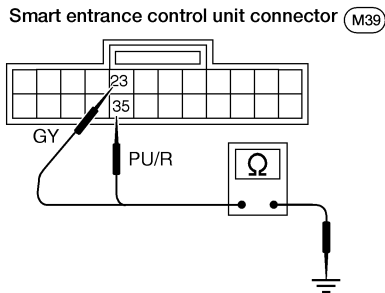
When lock/unlock switch is turned to UNLOCK:

**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 in EL-235.



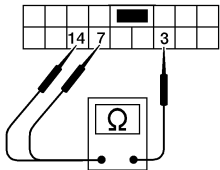
WEL501

**OK or NG**

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

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

<b>2</b>	<b>CHECK DOOR LOCK/UNLOCK SWITCH</b>																				
<p>1. Disconnect door lock/unlock switch harness connector.                  2. Check continuity between door lock/unlock switch LH terminals.</p>																					
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">    </div> <div style="text-align: center;"> <p>Main power window and door lock/unlock switch connector (D6)</p>  </div> <div style="text-align: center;"> <table border="1"> <thead> <tr> <th rowspan="2">Condition</th> <th colspan="3">Terminals</th> </tr> <tr> <th>3</th> <th>7</th> <th>14</th> </tr> </thead> <tbody> <tr> <td>Lock</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> <tr> <td>N</td> <td colspan="3" style="text-align: center;">No continuity</td> </tr> <tr> <td>Unlock</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> <td style="text-align: center;">○</td> </tr> </tbody> </table> </div> </div>			Condition	Terminals			3	7	14	Lock	○	○	○	N	No continuity			Unlock	○	○	○
Condition	Terminals																				
	3	7	14																		
Lock	○	○	○																		
N	No continuity																				
Unlock	○	○	○																		
WEL494																					
<b>OK or NG</b>																					
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Ground circuit for door lock/unlock switch</li> <li>● Harness for open or short between door lock/unlock switch and smart entrance control unit connector</li> </ul>																			
NG	▶	Replace door lock/unlock switch.																			

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# MULTI-REMOTE CONTROL 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:

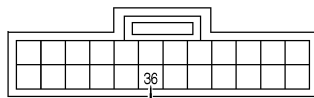
**LOCK SIG DR ON**

SEL344W

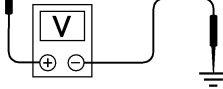
#### Without CONSULT-II

Check voltage between smart entrance control unit harness connector terminal 36 and ground.

Smart entrance control unit connector (M39)



Y/G



	Terminals		Condition	Voltage [V]
	(+)	(-)		
Front LH door	36	Ground	Locked	Approx. 5
			Unlocked	0

LEL452

Refer to wiring diagram in EL-235.

**OK or NG**

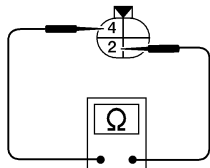
OK ► Door unlock sensor is OK.

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.**

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

NG ► Replace door unlock sensor.



# MULTI-REMOTE CONTROL SYSTEM

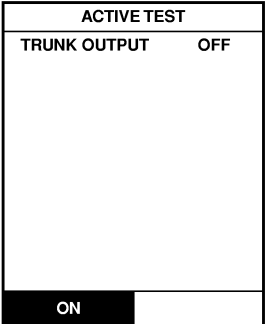
Trouble Diagnoses (Cont'd)

## TRUNK LID OPENER ACTUATOR CHECK

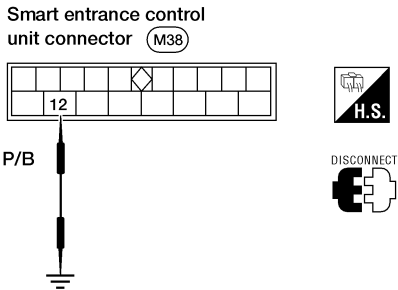
=NIEL0195S12

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

GI  
MA  
EM

<b>2</b>	<b>CHECK TRUNK LID OPENER ACTUATOR OPERATION</b>	
With CONSULT-II 1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "TRUNK OUTPUT" and touch "ON".		
		
<b>Trunk lid opener should operate.</b>		
SEL345W		
<b>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</b>		
<b>OK or NG</b>		
OK	▶	Trunk lid opener actuator circuit is OK.
NG	▶	GO TO 3.

LC  
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AX  
SU

<b>3</b>	<b>CHECK TRUNK LID OPENER ACTUATOR CIRCUIT</b>	
1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 12.		
		
<b>Trunk lid opener should operate.</b>		
LEL509		
Refer to wiring diagram in EL-234.		
<b>Does trunk lid open?</b>		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between smart entrance control unit and trunk lid opener actuator.

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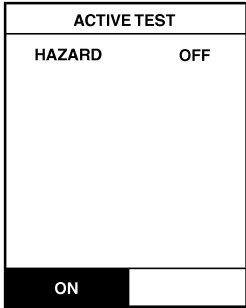
# MULTI-REMOTE CONTROL SYSTEM

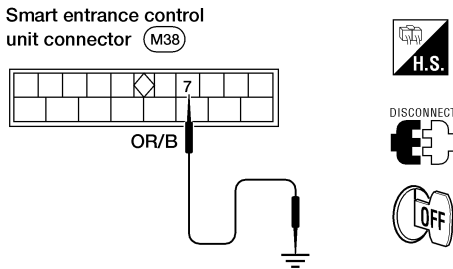
Trouble Diagnoses (Cont'd)

## HAZARD REMINDER CHECK

-NIEL0195S08

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

<b>2</b>	<b>CHECK HAZARD REMINDER OPERATION</b>	
<p> <b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II.</li> <li>Select "HAZARD" and touch "ON".</li> </ol>		
		
<b>Hazard lamps should illuminate.</b>		
LEL659		
<b>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</b>		
<b>OK or NG</b>		
OK	▶	Hazard reminder operation is OK.
NG	▶	GO TO 3.

<b>3</b>	<b>CHECK HAZARD REMINDER OPERATION</b>	
<ol style="list-style-type: none"> <li>Disconnect smart entrance control unit harness connector.</li> <li>Apply ground to smart entrance control unit harness connector terminal 7.</li> </ol>		
		
<b>Hazard lamps should illuminate.</b>		
LEL508		
Refer to wiring diagram in EL-236.		
<b>OK or NG</b>		
OK	▶	Replace smart entrance control unit.
NG	▶	GO TO 4.

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

<b>4</b>	<b>CHECK MULTI-REMOTE CONTROL RELAY</b>
Check multi-remote control relay.	
<b>OK or NG</b>	
OK	▶ GO TO 5.
NG	▶ Replace multi-remote control relay.

<b>5</b>	<b>CHECK POWER SUPPLY FOR MULTI-REMOTE CONTROL RELAY</b>
<ol style="list-style-type: none"> <li>1. Disconnect multi-remote control relay harness connector.</li> <li>2. Check voltage between terminal 1 and ground.</li> </ol>	
LEL513	
<b>OK or NG</b>	
OK	▶ GO TO 6.
NG	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>• 15A fuse [No. 5, located in fuse block (J/B)]</li> <li>• Harness for open or short between multi-remote control relay and fuse</li> </ul>

<b>6</b>	<b>CHECK MULTI-REMOTE CONTROL RELAY CIRCUIT</b>
<ol style="list-style-type: none"> <li>1. Disconnect multi-remote control relay harness connector.</li> <li>2. Check voltage between terminals 3 and 5.</li> <li>3. Check voltage between terminals 6 and 7.</li> </ol>	
LEL514	
<b>OK or NG</b>	
OK	▶ Check harness for open or short between smart entrance control unit and multi-remote control relay.
NG	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>• Harness for open or short between multi-remote control relay and fuse</li> <li>• Harness for open or short between multi-remote control relay and turn signal lamps</li> </ul>

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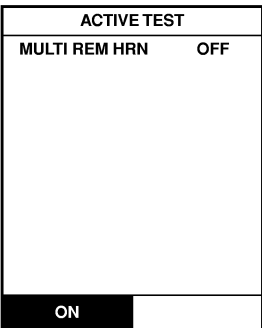
# MULTI-REMOTE CONTROL SYSTEM

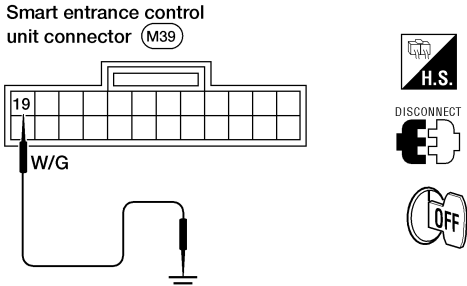
Trouble Diagnoses (Cont'd)

## HORN REMINDER CHECK

-NIEL0195S09

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

<b>2</b>	<b>CHECK HORN REMINDER OPERATION</b>	
<p> <b>With CONSULT-II</b></p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "MULTI REM HRN" and touch "ON".</p>		
		
<b>Horn should sound.</b>		
SEL348W		
<b>NOTE: If CONSULT-II is not available, skip this procedure and go to the next step.</b>		
<b>OK or NG</b>		
OK	▶	Horn reminder operation is OK.
NG	▶	GO TO 3.

<b>3</b>	<b>CHECK HORN REMINDER OPERATION</b>	
<p>1. Disconnect smart entrance control unit harness connector. 2. Apply ground to smart entrance control unit harness connector terminal 19.</p>		
		
LEL507		
Refer to wiring diagram in EL-236.		
<b>Does horn sound?</b>		
Yes	▶	Replace smart entrance control unit.
No	▶	Check harness for open or short between smart entrance control unit and horn relay.

# MULTI-REMOTE CONTROL SYSTEM

Trouble Diagnoses (Cont'd)

## INTERIOR LAMP OPERATION CHECK

-NIEL0195S10


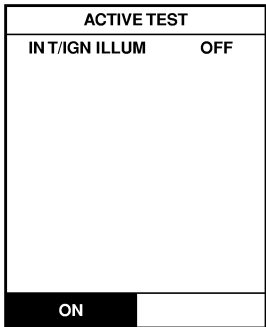
<b>1</b>	<b>CHECK INTERIOR LAMP</b>	
Check if the interior lamp switch is in the "ON" position and the lamp illuminates.		
<b>Does interior lamp illuminate?</b>		
Yes	▶	GO TO 2.
No	▶	<b>Check the following.</b> <ul style="list-style-type: none"> <li>● Harness for open or short between smart entrance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

GI

MA

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LC

<b>2</b>	<b>CHECK INTERIOR LAMP OPERATION</b>	
<p> <b>With CONSULT-II</b></p> <p>1. Select "ACTIVE TEST" in "MULTI REMOTE ENT" with CONSULT-II. 2. Select "INT/IGN ILLUM" and touch "ON".</p>		
		
<p><b>Interior lamp should illuminate.</b></p>		
SEL349W		

EC


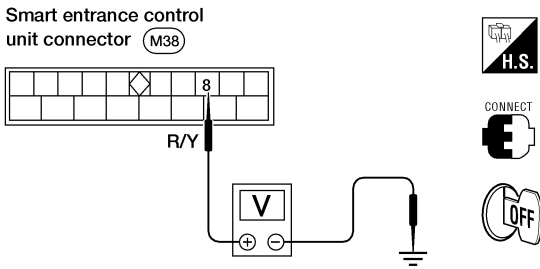
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<p> <b>Without CONSULT-II</b></p> <p>Push unlock button of remote controller with all doors closed, and check voltage between smart entrance control unit harness connector terminal 8 and ground.</p>		
		
<p><b>Voltage [V]:</b>  <b>Unlock button is pushed.</b>  <b>0 (For approx. 30 seconds.)</b>  <b>Unlock button is not pushed.</b>  <b>Battery voltage</b></p>		
LEL506		
<p>Refer to wiring diagram in EL-235.</p> <p><b>OK or NG</b></p>		
OK	▶	System is OK.
NG	▶	Check harness open or short between smart entrance control unit and interior lamp.

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# MULTI-REMOTE CONTROL SYSTEM

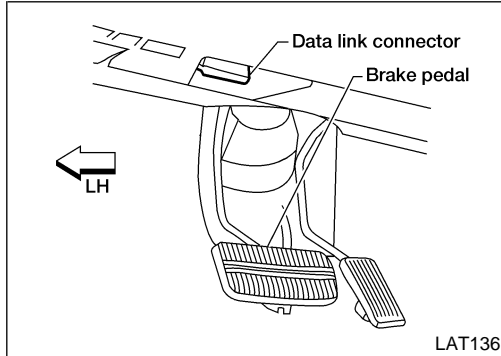
## ID Code Entry Procedure

### REMOTE CONTROLLER ID SET UP WITH CONSULT-II

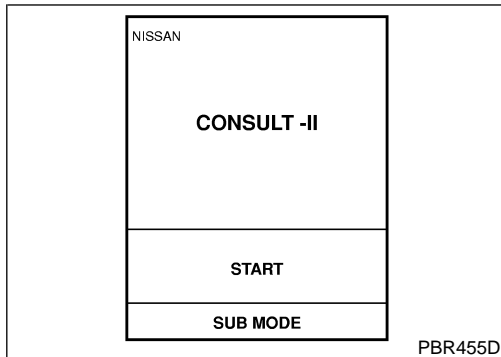
=NIEL0117  
NIEL0117S01

#### NOTE:

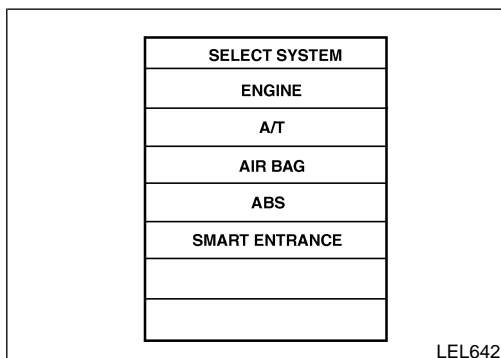
If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. When the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers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



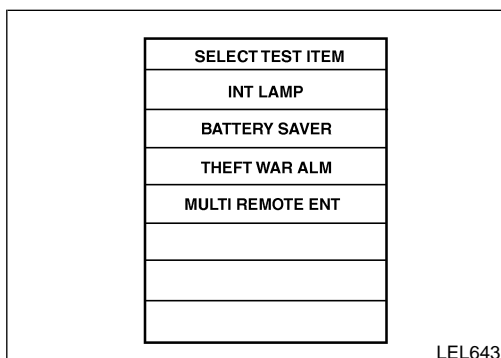
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



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



5. Touch "SMART ENTRANCE".



6. Touch "MULTI REMOTE ENT".

# MULTI-REMOTE CONTROL SYSTEM

ID Code Entry Procedure (Cont'd)

SELECT DIAG MODE
DATA MONITOR
ACTIVE TEST
WORK SUPPORT

SEL274W

7. Touch "WORK SUPPORT".

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

SEL277W

8. The items are shown on the figure at left can be set up.

- "REMO CONT ID CONFIR"  
Use this mode to confirm if a remote controller ID code is registered or not.
- "REMO CONT ID REGIST"  
Use this mode to register a remote controller ID code.

**NOTE:**

**Register the ID code when remote controller or smart entrance control unit is replaced, or when additional remote controller is required.**

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

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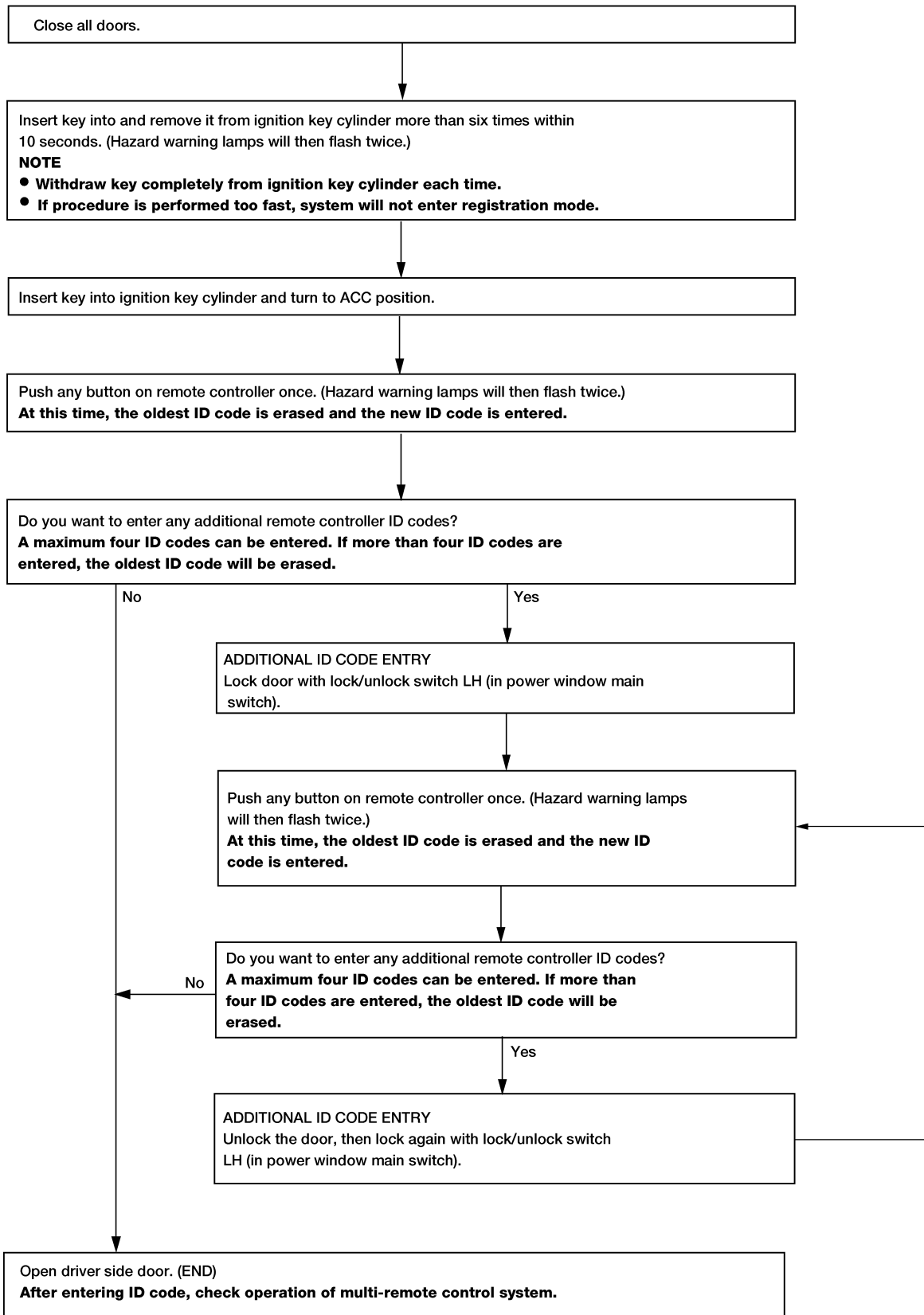
IDX

# MULTI-REMOTE CONTROL SYSTEM

ID Code Entry Procedure (Cont'd)

## REMOTE CONTROLLER ID SET UP WITHOUT CONSULT-II

NIEL0117S02



LEL640



# MULTI-REMOTE CONTROL SYSTEM

ID Code Entry Procedure (Cont'd)

## NOTE:

- If a remote controller is lost, the ID code of the lost remote controller must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-II. However, when the ID code of a lost remote controller is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.  
To erase all ID codes in memory, register one ID code (remote controller) four times. After all ID codes are erased, the ID codes of all remaining and/or new remote controllers must be re-registered.
- When registering an additional remote controller, the existing ID codes in memory may or may not be erased. If four ID codes are stored in memory, when an additional code is registered, only the oldest code is erased. If less than four ID codes are stored in memory, when an additional ID code is registered, the new ID code is added and no ID codes are erased.
- If you need to activate more than two additional new remote controllers, repeat the procedure "Additional ID code entry" for each new remote controller.
- Entry of maximum four ID codes is allowed. When more than four ID codes are entered, the oldest ID code will be erased.
- Even if same ID code that is already in the memory is input, the same ID code can be entered. The code is counted as an additional code.

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# MULTI-REMOTE CONTROL SYSTEM

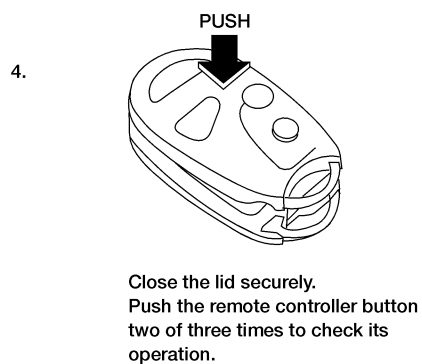
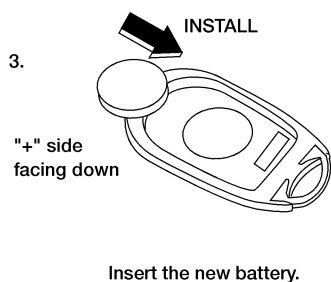
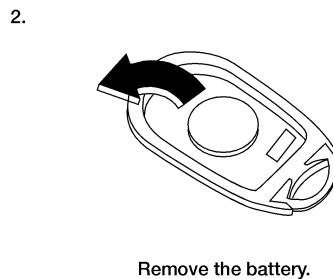
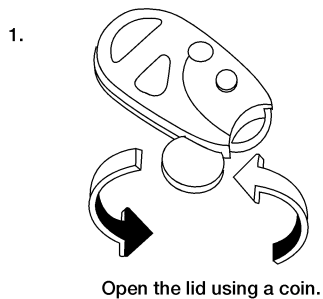
Remote Controller Battery Replacement

## 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.



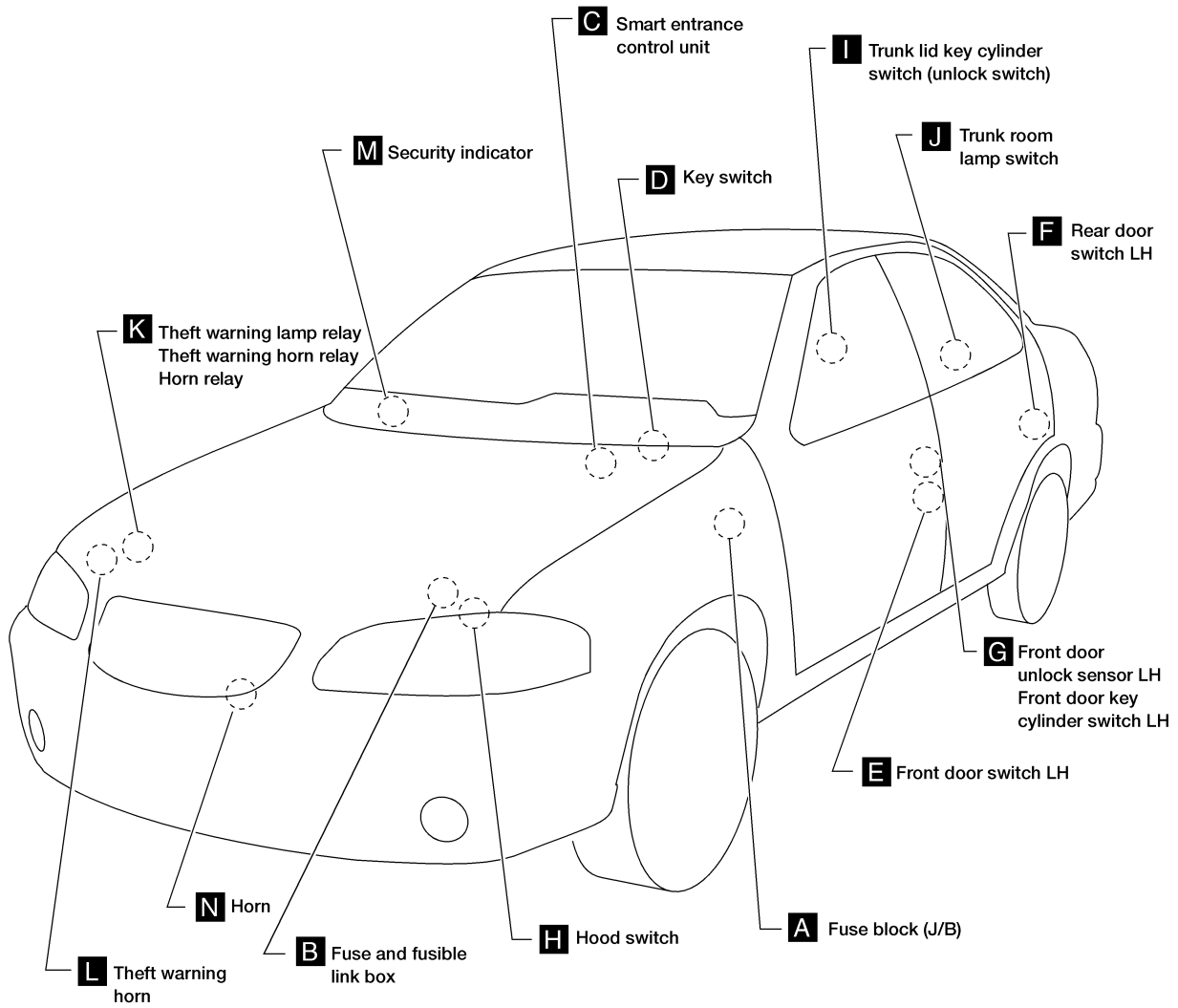
LEL577

# THEFT WARNING SYSTEM

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NIEL0119



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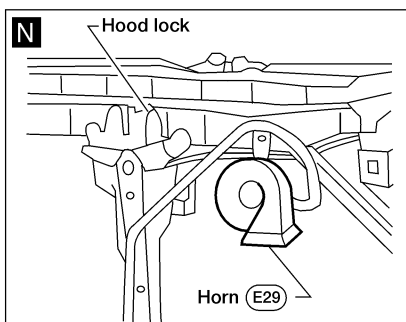
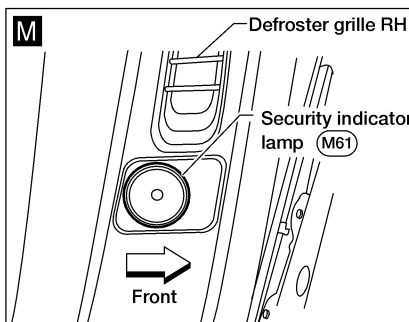
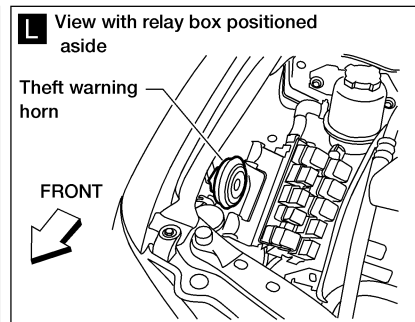
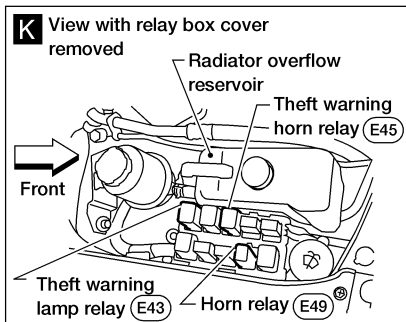
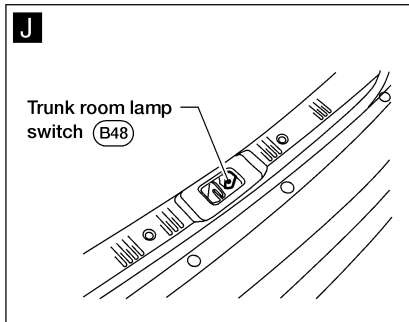
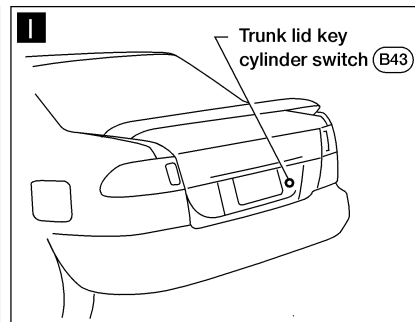
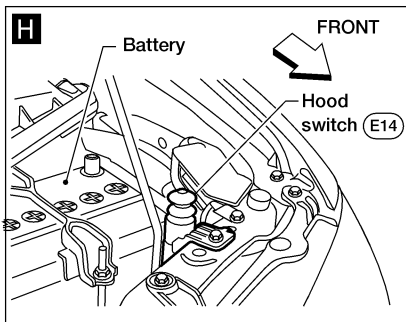
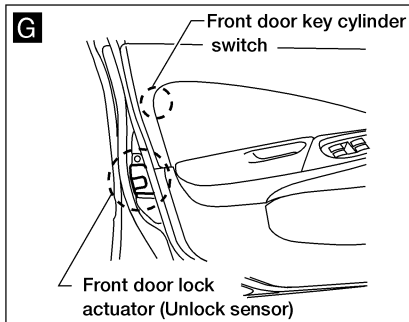
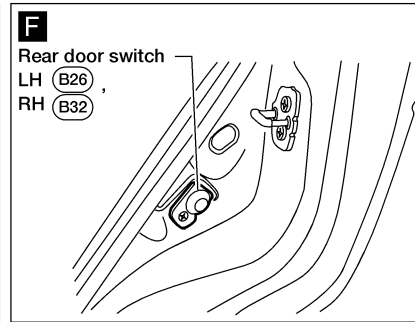
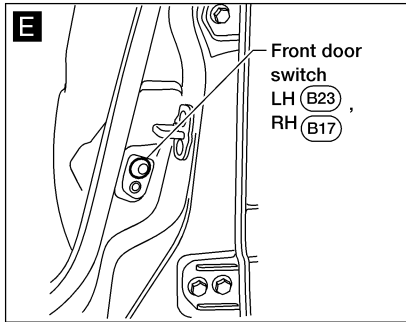
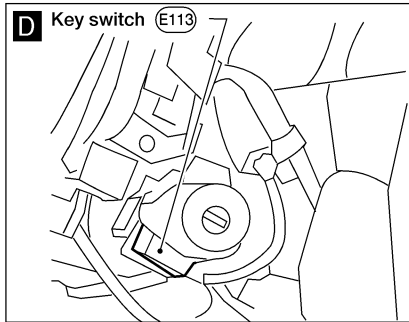
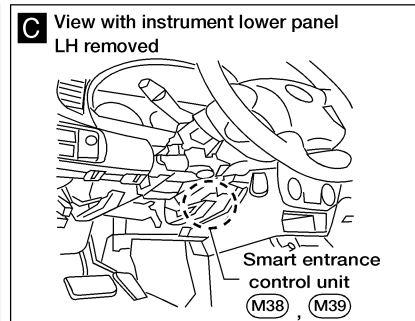
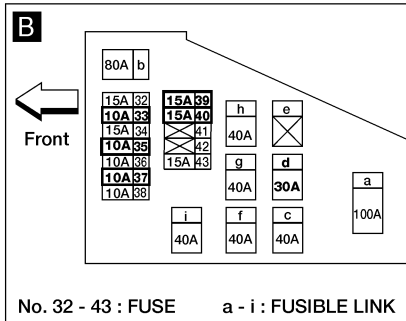
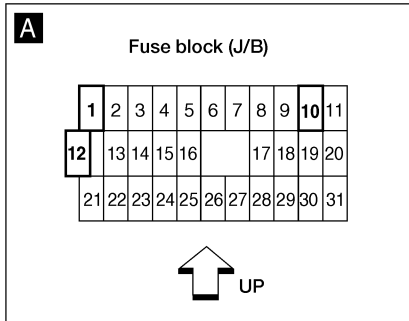
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LEL564

# THEFT WARNING SYSTEM

Component Parts and Harness Connector Location (Cont'd)



## System Description

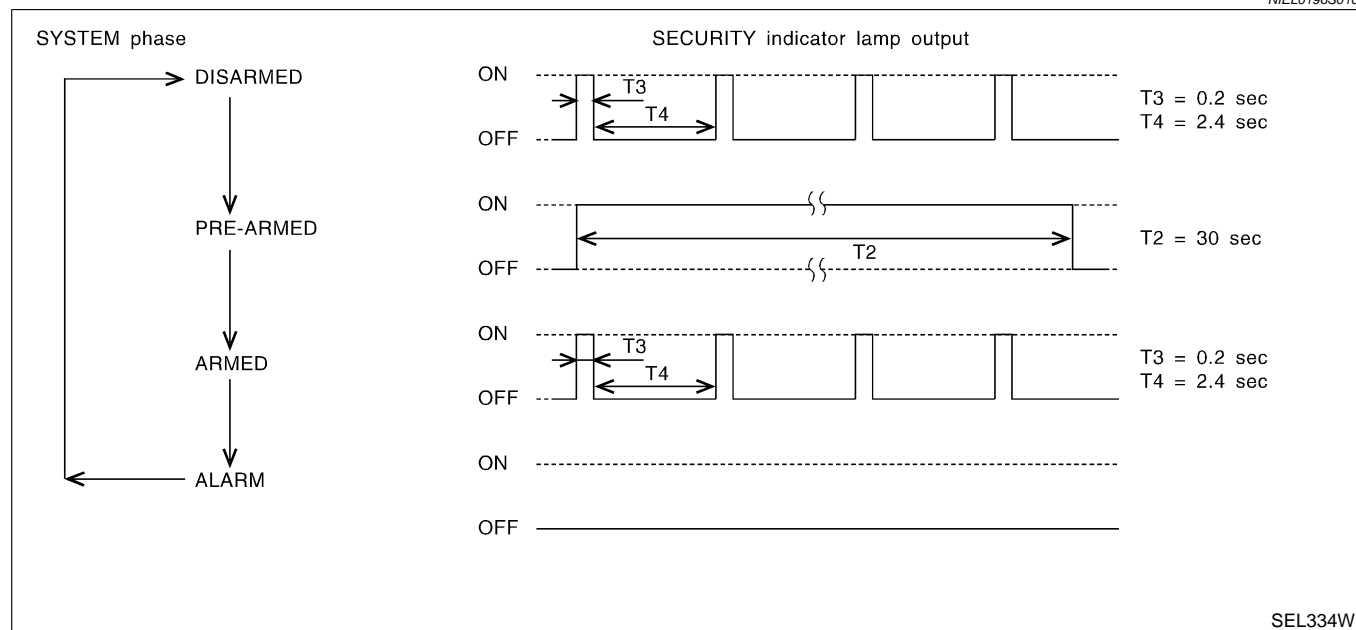
### DESCRIPTION

NIEL0196

#### 1. Operation Flow

NIEL0196S01

NIEL0196S0101



#### 2. Setting The Theft Warning System

##### Initial condition

- 1) Ignition switch is in OFF position.

##### Disarmed phase

When the theft warning system is in the disarmed phase, the security indicator lamp blinks every 2.6 seconds.

##### Pre-armed phase and armed phase

When the following operation 1) or 2) is performed, the theft warning system turns into the “pre-armed” phase. (The security indicator lamp illuminates.)

- 1) Smart entrance control unit receives LOCK signal from key cylinder switch or multi-remote controller after hood, trunk lid and all doors are closed.
- 2) Hood, trunk lid and all doors are closed after front doors are locked by key, lock/unlock switch or multi-remote controller.

After about 30 seconds, the system automatically shifts into the “armed” phase (the system is set). (The security indicator lamp blinks every 2.6 seconds.)

#### 3. Canceling The Set Theft Warning System

When the following 1) or 2) operation is performed, the armed phase is canceled.

- 1) Unlock the doors with the key or multi-remote controller.
- 2) Open the trunk lid with the key or multi-remote controller.

#### 4. Activating The Alarm Operation of The Theft Warning System

Make sure the system is in the armed phase. (The security indicator lamp blinks every 2.6 seconds.)

When the following operation 1) or 2) is performed, the system sounds the horns and flashes the headlamps for about 50 seconds.

- 1) Engine hood, trunk lid or any door is opened during armed phase.
- 2) Disconnecting and connecting the battery connector before canceling armed phase.

#### POWER SUPPLY AND GROUND

Power is supplied at all times:

- through 10A fuse [No. 12, located in the fuse block (J/B)]
- to security indicator lamp terminal 1 and
- to key switch terminal 2.

Power is supplied at all times:

NIEL0196S0102

NIEL0196S0103

NIEL0196S0104

NIEL0196S02

# THEFT WARNING SYSTEM

## System Description (Cont'd)

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

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

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

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

- through 10A fuse [No. 1, located in the fuse block (J/B)]
- to smart entrance control unit terminal 21.

Ground is supplied:

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

## INITIAL CONDITION TO ACTIVATE THE SYSTEM

The operation of the theft warning system is controlled by the doors, hood and trunk lid.

NIEL0196S03

### Pattern A

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

NIEL0196S0301

When a door is open, smart entrance control unit terminal 28 or 29 receives a ground signal from each door switch.

When the hood is open, smart entrance control unit terminal 27 receives a ground signal:

- from terminal + of the hood switch
- through body grounds E7 and E37.

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.

When smart entrance control unit receives LOCK signal from key cylinder switch or multi-remote controller and none of the described conditions exist, the theft warning system will automatically shift to armed mode.

### Pattern B

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

NIEL0196S0302

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

## THEFT WARNING SYSTEM ACTIVATION

### Pattern A

With all doors 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

NIEL0196S0401

- from terminal L of the key cylinder switch LH or key cylinder switch RH
- through body grounds M28 and M54.

If this signal, or lock signal from remote controller is received by the smart entrance control unit, the theft warning system will activate automatically.

### NOTE:

Theft warning system can be set even though all doors are not locked.

### Pattern B

With any door open, if lock/unlock switch is used to lock doors, smart entrance control unit terminal 23 receives a ground signal:

NIEL0196S0402

- 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

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 or key cylinder switch RH
- through body grounds M28 and M54.

# THEFT WARNING SYSTEM

System Description (Cont'd)

If these signals and lock signal from remote controller are received by the smart entrance control unit and ground signals of terminals 36 and 37 are interrupted (both front doors locked), the theft warning system will activate automatically.

## NOTE:

Theft warning system can be set even though the rear door is not locked.

Once the theft warning system has been activated, smart entrance control unit terminal 31 supplies ground to terminal 2 of the security indicator lamp.

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

Now the theft warning system is in armed phase.

## THEFT WARNING SYSTEM ALARM OPERATION

NIEL0196S05

The theft warning system is triggered by:

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

Once the theft warning system is in armed phase, if the smart entrance control unit receives a ground signal at terminal 28 or 29 (door switch), 38 (trunk room lamp switch) or 27 (hood switch), the theft warning system will be triggered. The headlamps flash and the horn sounds intermittently.

Power is supplied at all times:

- through 15A fuse (No. 39, located in fuse and fusible link box)
- to theft warning lamp relay terminal 3,
- through 15A fuse (No. 40, located in fuse and fusible link box)
- to theft warning lamp relay terminal 6
- through 10A fuse (No. 35 located in fuse and fusible link box)
- to theft warning lamp relay terminal 1 and
- to theft warning horn relay terminals 1 and 6
- through 10A fuse (No. 33, located in fuse and fusible link box)
- to horn relay terminal 2.

When the theft warning system is triggered, ground is supplied intermittently:

- from smart entrance control unit terminal 4
- to theft warning horn relay terminal 2 and
- to theft warning lamp relay terminal 2.

When theft warning horn relay is energized, ground is supplied intermittently:

- to horn relay terminal 1,
- through body grounds E7 and E37.

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.

## THEFT WARNING SYSTEM DEACTIVATION

NIEL0196S06

To deactivate the theft warning system, a door or trunk lid must be unlocked with the key or remote controller.

When the key is used to unlock the door, smart entrance control unit terminal 30 receives a ground signal:

- from terminal U of front door key cylinder switch LH or front door key cylinder switch RH

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 theft warning 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 theft warning lamp relay terminal 2 and
- to theft warning 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.

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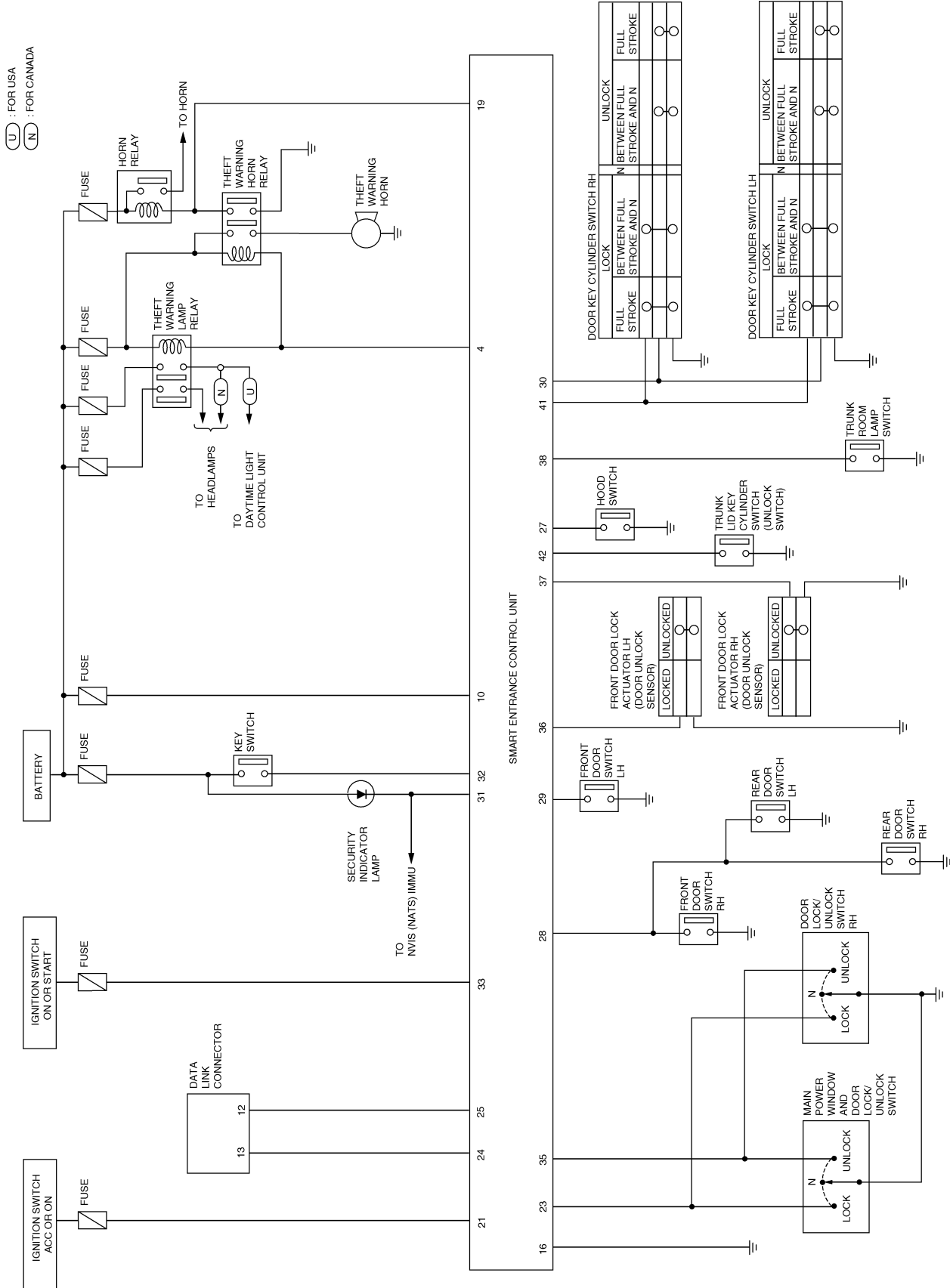
IDX

# THEFT WARNING SYSTEM

Schematic

## Schematic

NIEL0121



LEL390



# THEFT WARNING SYSTEM

Wiring Diagram — THEFT —

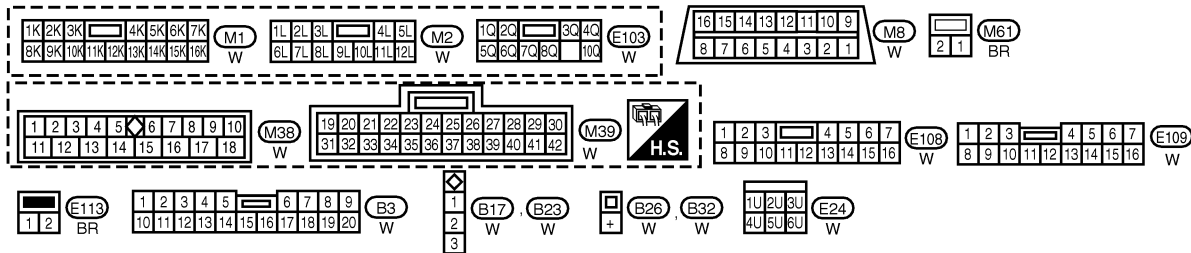
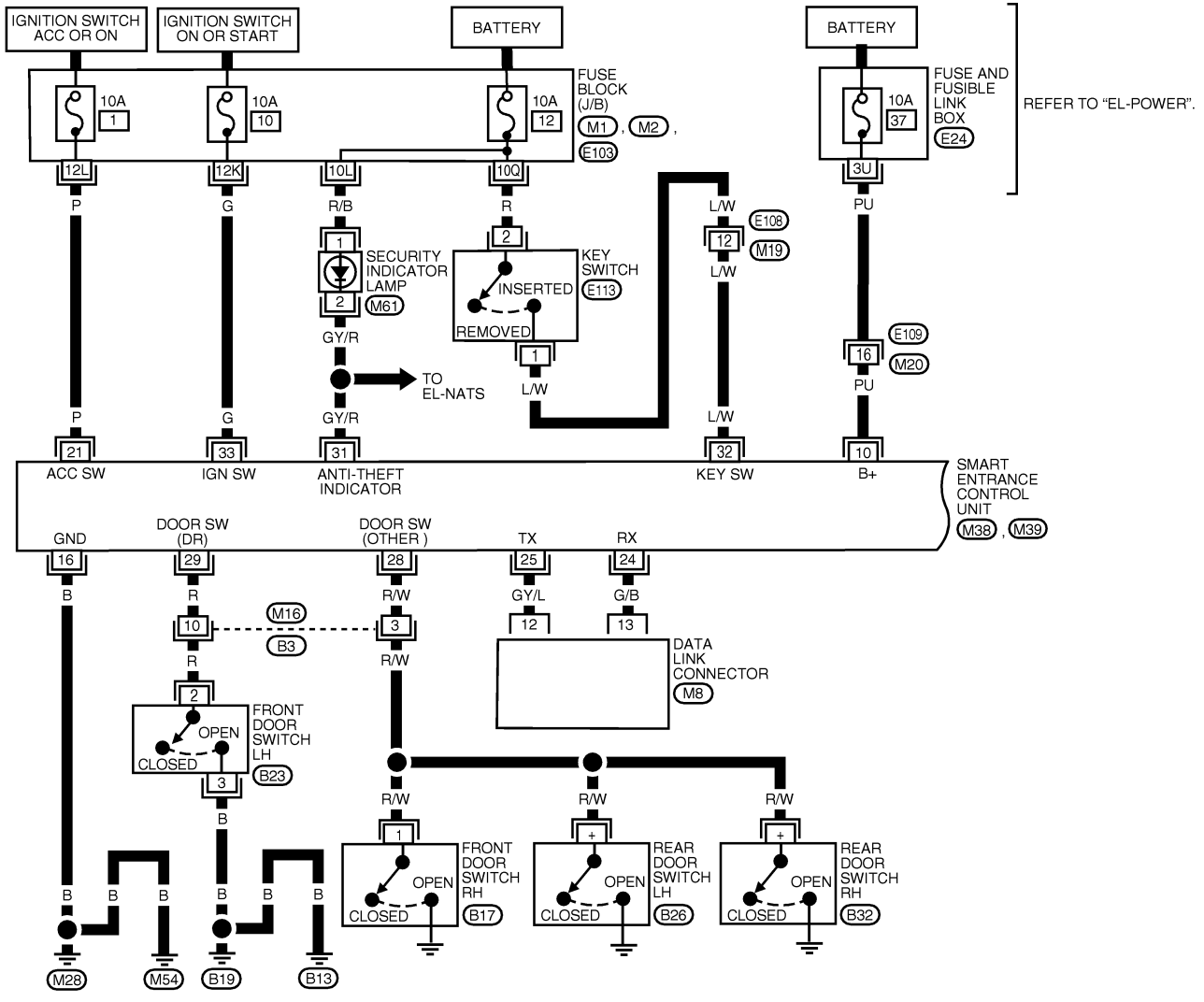
FIG. 1

## Wiring Diagram — THEFT —

NIEL0122

NIEL0122S01

EL-THEFT-01



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	THEFT WARNING 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

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LEL613

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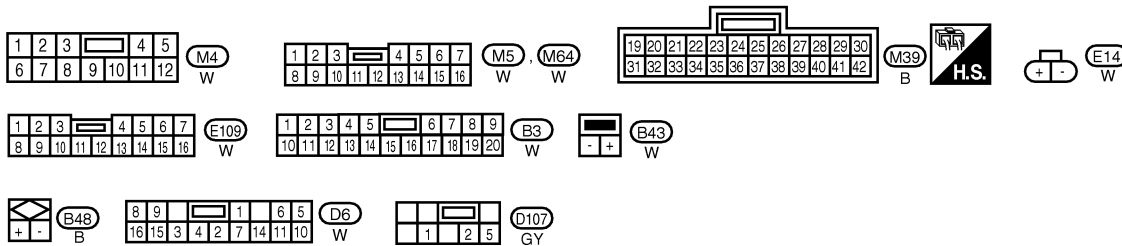
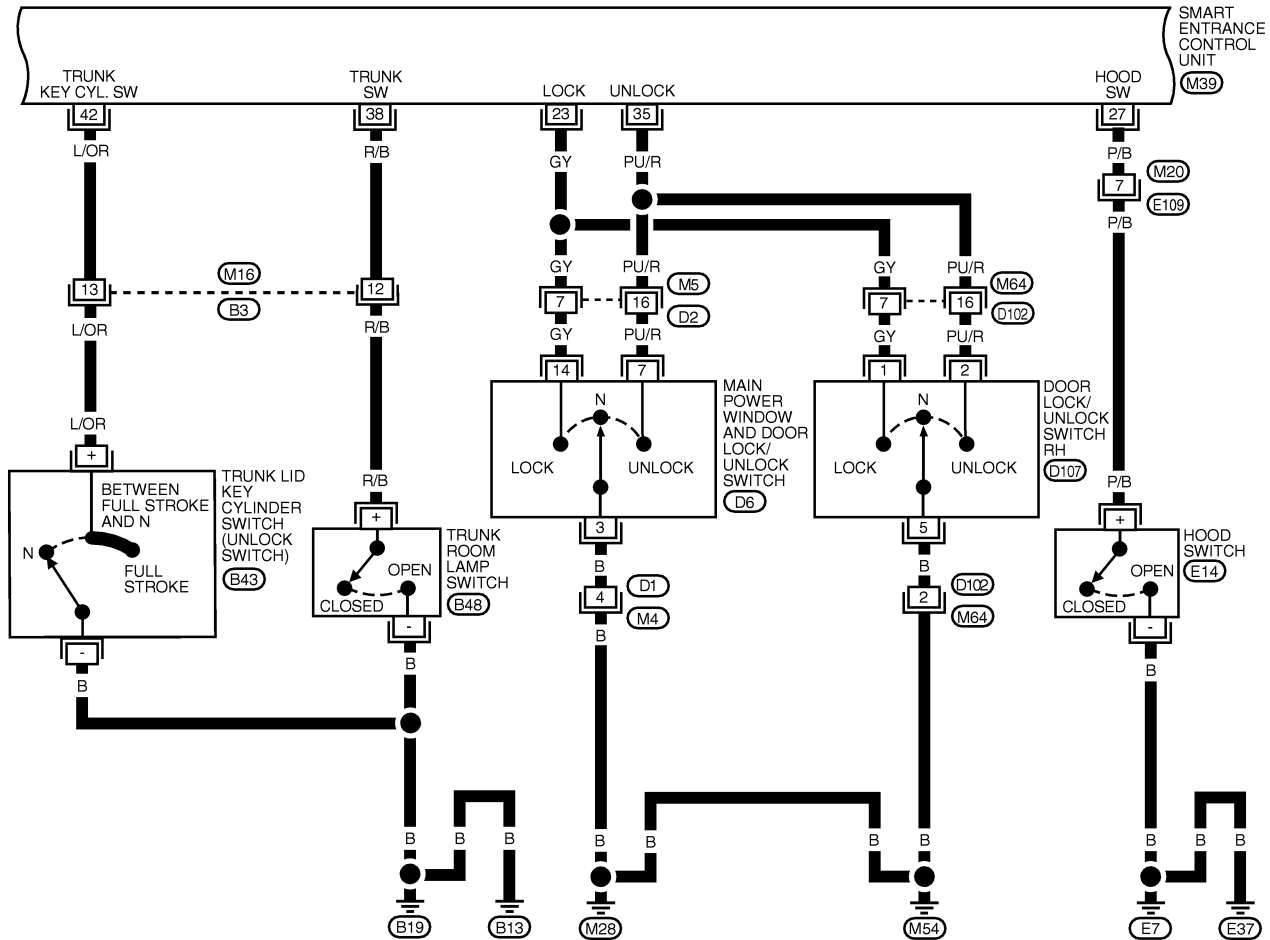
# THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

**FIG. 2**

NIEL0122S02

EL-THEFT-02



WEL387

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

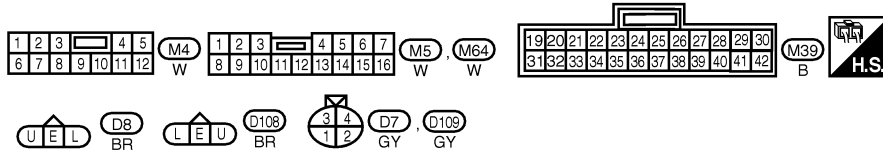
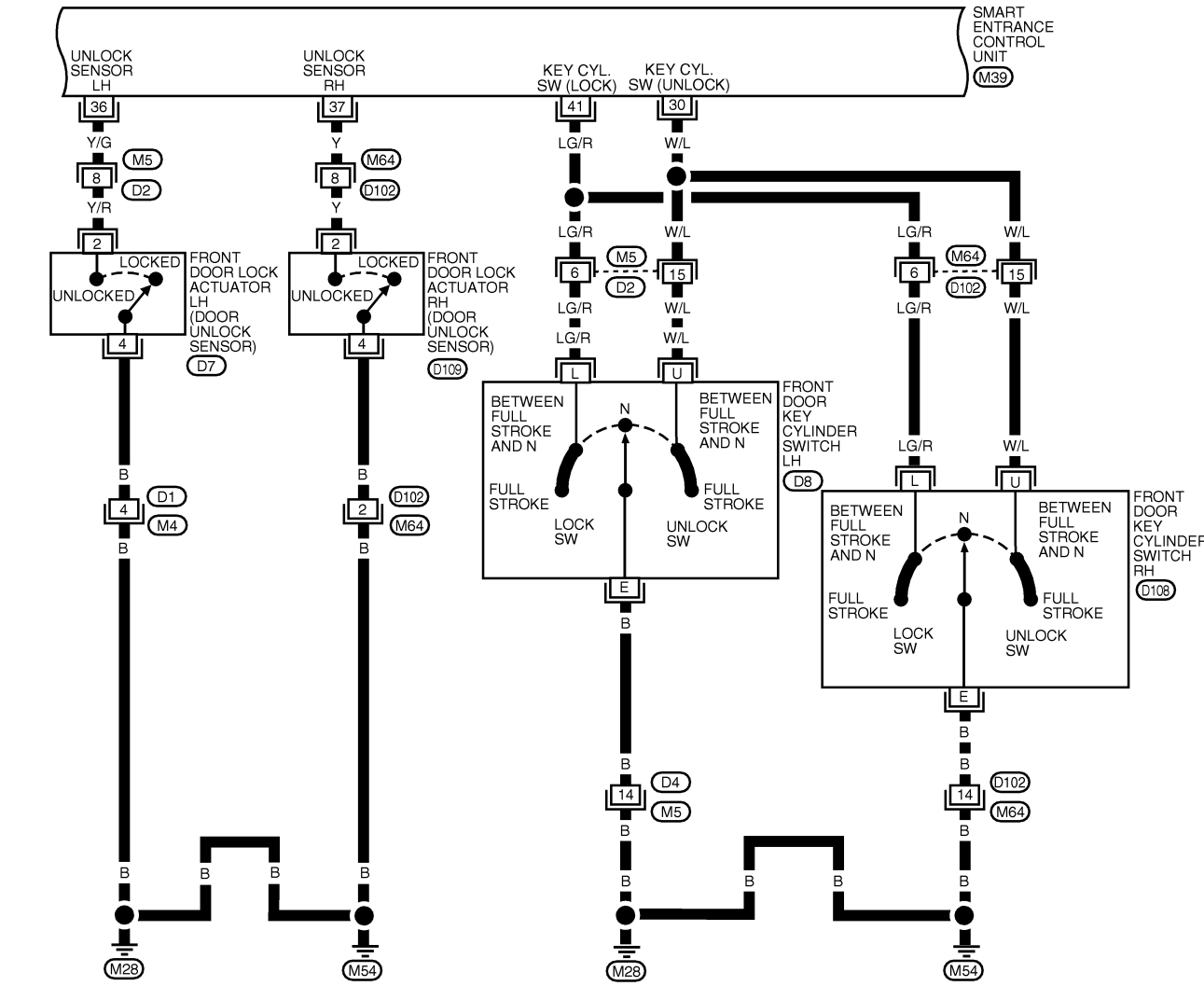
# THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

FIG. 3

NIEL0122S03

EL-THEFT- 03



WEL388

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

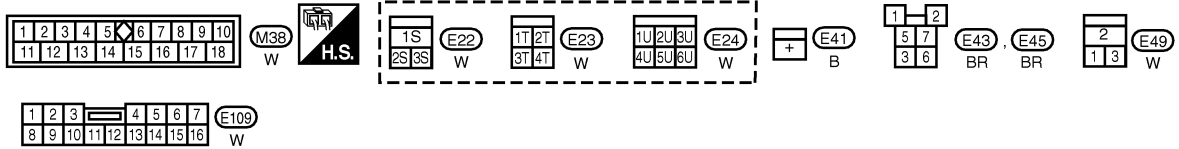
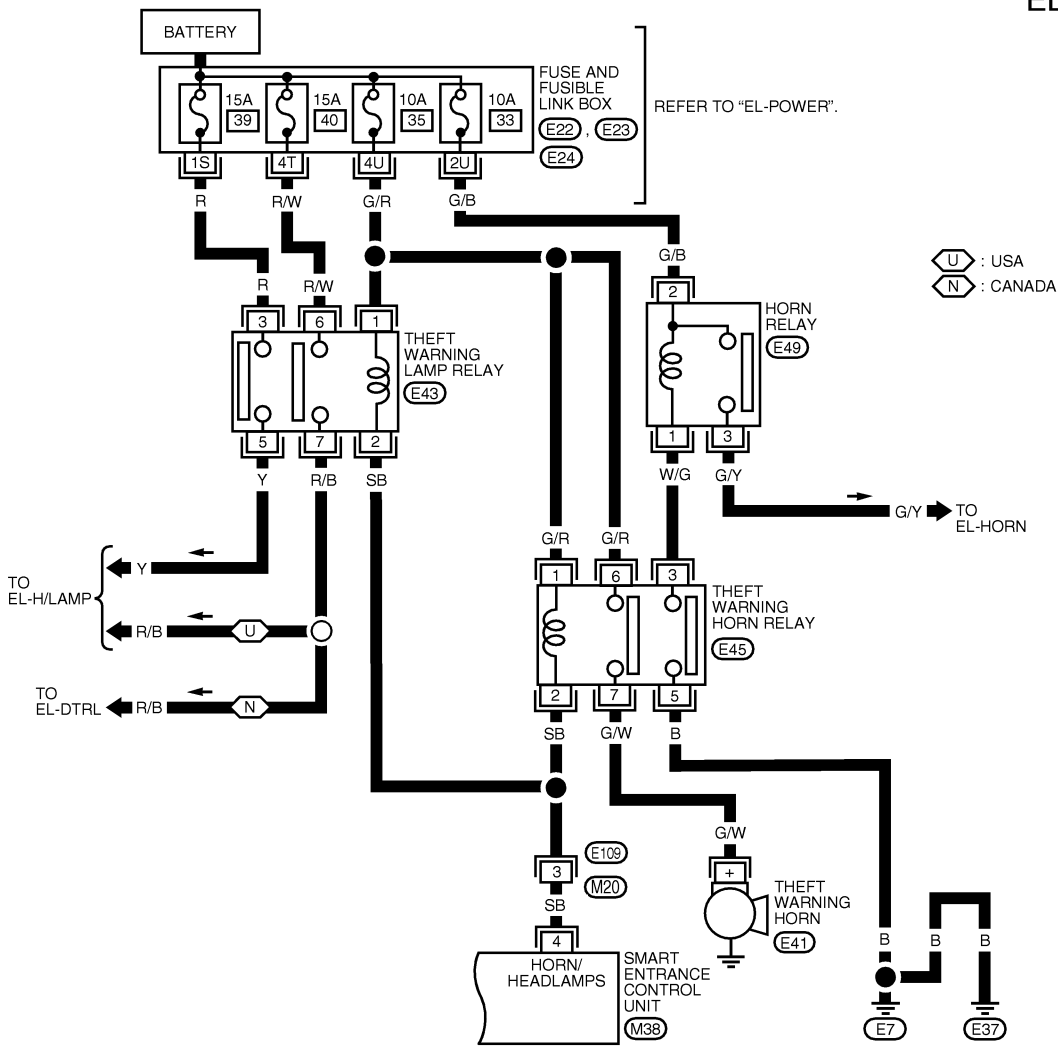
# THEFT WARNING SYSTEM

Wiring Diagram — THEFT — (Cont'd)

**FIG. 4**

NIEL0122S04

EL-THEFT-04



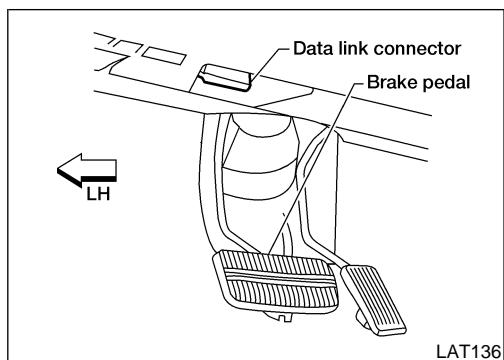
WEL389

SMART ENTRANCE CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND				
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
4	SB	THEFT WARNING HORN RELAY AND THEFT WARNING LAMP RELAY	WHEN PANIC ALARM IS OPERATED USING REMOTE CONTROLLER OR WHEN ALARM IS ACTIVATED	12V TO 0V

LEL616

# THEFT WARNING SYSTEM

CONSULT-II Inspection Procedure

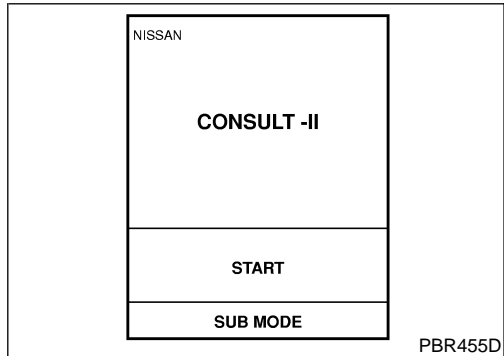


## CONSULT-II Inspection Procedure "THEFT WAR ALM"

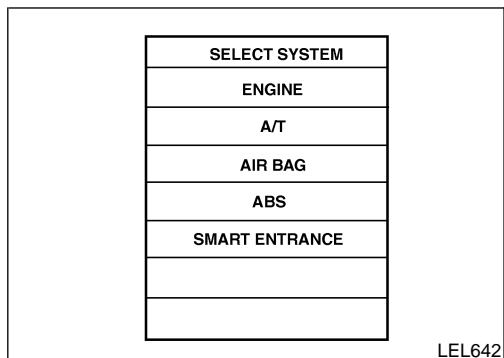
=NIEL0244

NIEL0244S01

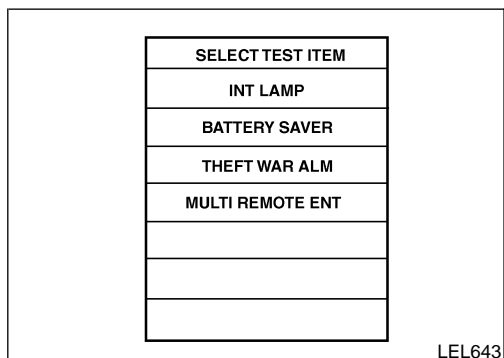
1. Turn ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



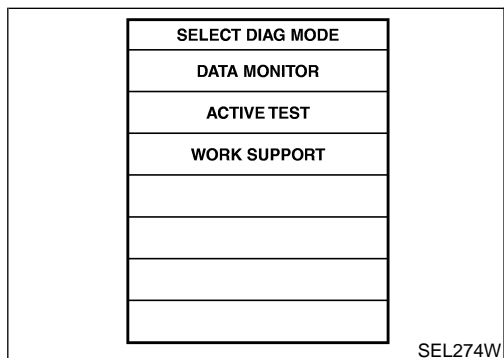
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "SMART ENTRANCE".



6. Touch "THEFT WAR ALM".



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

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# THEFT WARNING SYSTEM

CONSULT-II Application Item

## CONSULT-II Application Item

NIEL0245

NIEL0245S01

NIEL0245S0101

### “THEFT WAR ALM”

#### Data Monitor

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.

# THEFT WARNING SYSTEM

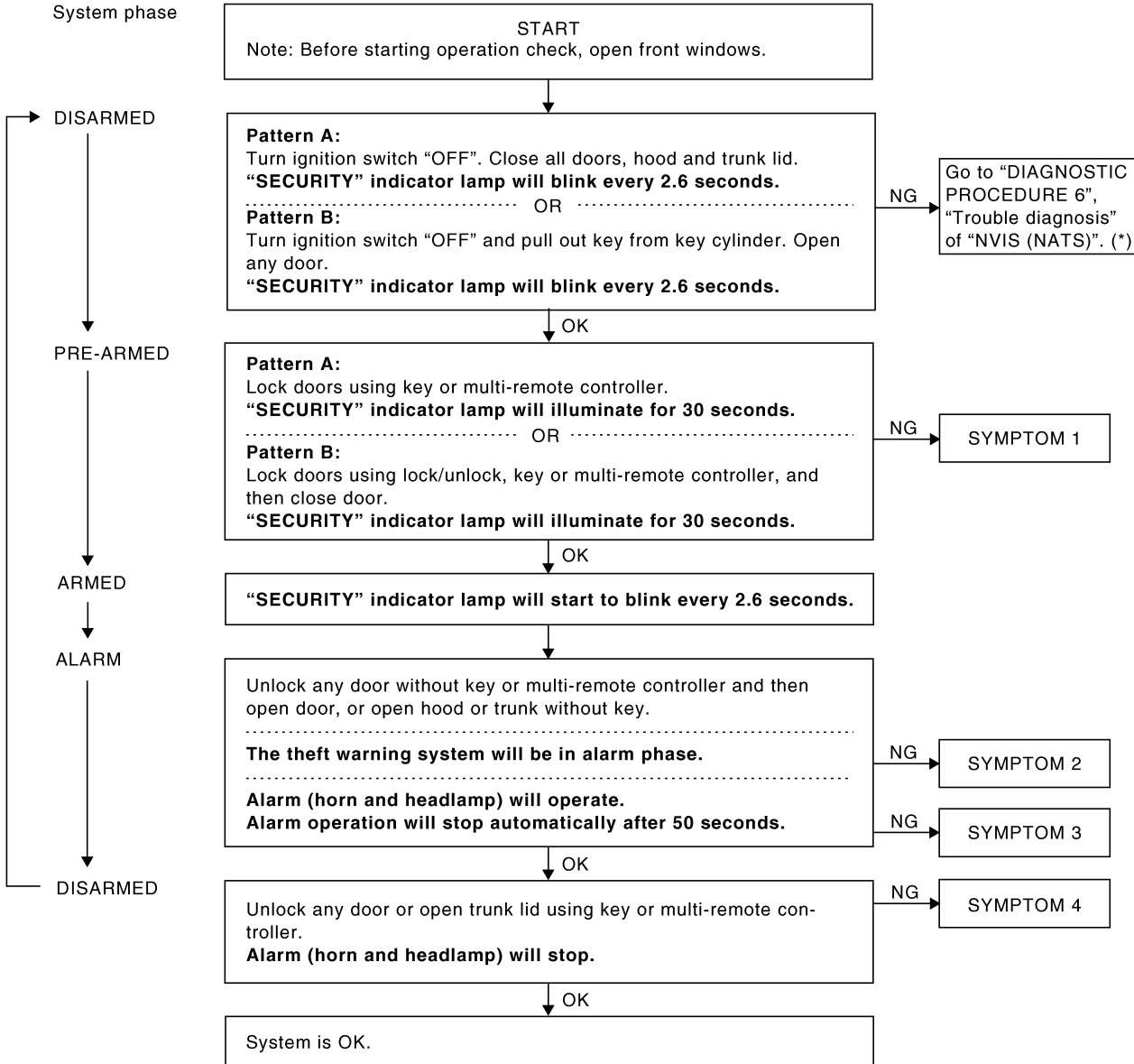
Trouble Diagnoses

## 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.



SEL254W

For details of "Pattern A" and "Pattern B" theft warning system settings, refer to "INITIAL CONDITION TO ACTIVATE THE SYSTEM", EL-262.

\*: Refer to EL-321.

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

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# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## SYMPTOM CHART

NIEL0123S02

REFERENCE PAGE (EL- )	271	273	274	279	281	282	284	285	287	239	
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	THEFT WARNING HORN AND HEADLAMP ALARM CHECK	Check "MULTI-REMOTE CONTROL" system.	
1	Security indicator lamp does not illuminate for 30 seconds.	X	X		X						
	Theft warning system cannot be set by ...	All items	X	X	X		X				
		Door outside key	X					X			
		Lock/unlock switch	X						X		
	Multi-remote control	X								X	
2	*1 Theft warning system does not alarm when ...	X		X							
3	Theft warning alarm does not activate.	X		X					X		
4	Theft warning system cannot be canceled by ...	Door outside key	X				X				
		Trunk lid key	X					X			
		Multi-remote control	X								X

X : Applicable

\*1: Make sure the system is in the armed phase.

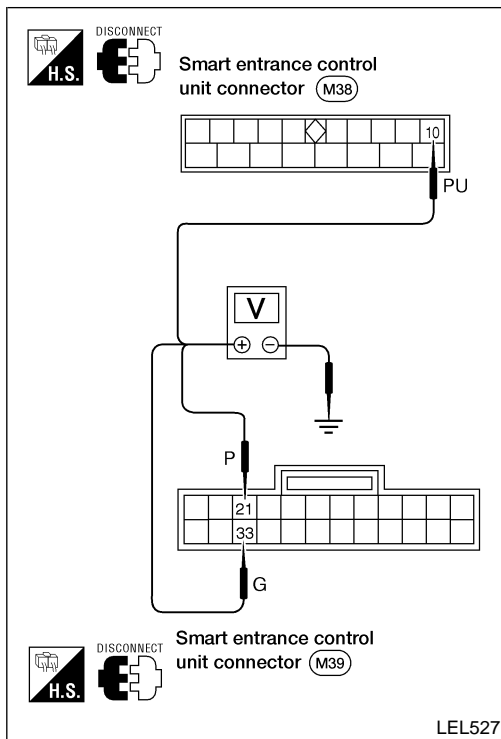
**Before starting trouble diagnoses above, perform "PRELIMINARY CHECK", EL-271.**

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



# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)



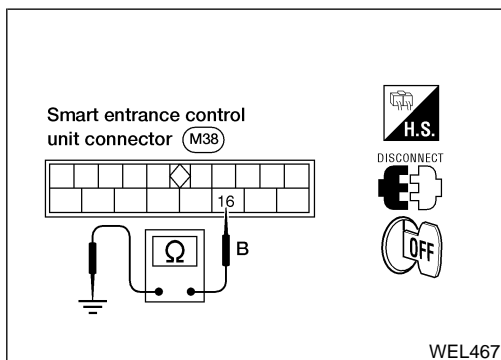
## POWER SUPPLY AND GROUND CIRCUIT CHECK

### Power Supply Circuit Check

NIEL0123S03

NIEL0123S0301

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



## Ground Circuit Check

NIEL0123S0302

Terminals	Continuity
16 - Ground	Yes

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# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## DOOR, HOOD AND TRUNK ROOM LAMP SWITCH CHECK

=NIEL0123S04

### Door Switch Check

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**

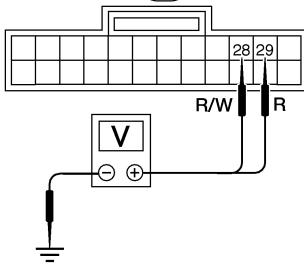
When all doors are closed:  
**DOOR SW-ALL OFF**

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 in EL-265.

#### OK or NG

OK	▶	Door switch is OK. Check hood switch. Refer to "Hood Switch Check", EL-276.
NG	▶	GO TO 2.

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

<b>2</b>	<b>CHECK DOOR SWITCH</b>																							
<p>1. Disconnect door switch connector.                  2. Check continuity between door switch terminals.</p>																								
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>Front door switch LH connector (B23)    Front door switch RH connector (B17)</p> <p>Rear door switch connector                  LH: (B26)    RH: (B32)</p> </div> <div style="width: 50%;"> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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> </div> </div>				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																					
WEL491																								
<b>OK or NG</b>																								
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door switch ground circuit (Front, rear door) or door switch ground condition</li> <li>● Harness for open or short between smart entrance control unit and door switch</li> </ul>																						
NG	▶	Replace door switch.																						

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# THEFT WARNING SYSTEM


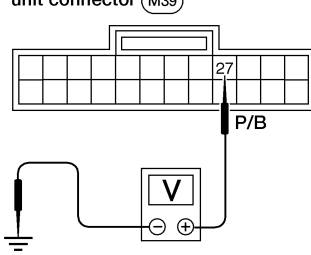
Trouble Diagnoses (Cont'd)

## Hood Switch Check

-NIEL0123S0402

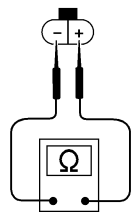

<b>1</b>	<b>CHECK HOOD SWITCH FITTING CONDITION</b>
Check condition and installation of hood switch.	
<b>OK or NG</b>	
OK	▶ GO TO 2.
NG	▶ Adjust installation of hood switch or hood.

<b>2</b>	<b>CHECK HOOD SWITCH INPUT SIGNAL</b>						
<p> <b>With CONSULT-II</b> Check hood switch ("HOOD SWITCH") in "DATA MONITOR" mode with CONSULT-II.</p>							
<table border="1" style="margin: auto;"> <tr><th colspan="2">DATA MONITOR</th></tr> <tr><th>MONITOR</th><th></th></tr> <tr><td>HOOD SWITCH</td><td>OFF</td></tr> </table>		DATA MONITOR		MONITOR		HOOD SWITCH	OFF
DATA MONITOR							
MONITOR							
HOOD SWITCH	OFF						
<p>When hood is open: <b>HOOD SWITCH ON</b></p> <p>When hood is closed: <b>HOOD SWITCH OFF</b></p>							
SEL354W							

<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 27 and ground.</p>	
<p>Smart entrance control unit connector (M39)</p> 	
<p><b>Voltage [V]:</b> Engine hood is open. 0 Engine hood is closed. Approx. 5</p>	
LEL528	
<b>OK or NG</b>	
OK	▶ Hood switch is OK, and go to trunk room lamp switch check.
NG	▶ GO TO 3.

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

3	<b>CHECK HOOD SWITCH</b>		GI
<p>1. Disconnect hood switch connector.                  2. Check continuity between hood switch terminals + and -.</p>			MA
<div style="display: flex; justify-content: space-around; align-items: center;"> <div> <p>Hood switch connector (E14)</p>  </div> <div>  </div> <div> <p><b>Continuity:</b>                      Condition: Pushed                      No                      Condition: Released                      Yes</p> </div> </div> <p style="text-align: right;">LEL529</p> <p style="text-align: center;"><b>OK or NG</b></p>			EM
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Hood switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and hood switch</li> </ul>	LC
NG	▶	Replace hood switch.	EC

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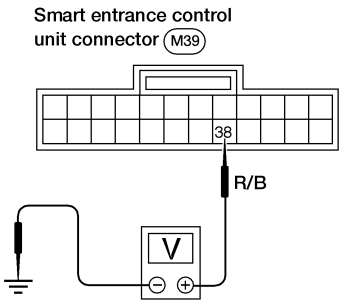



EL-277

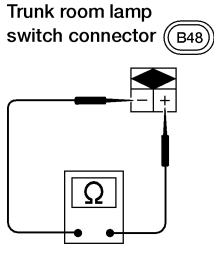


# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## Trunk Room Lamp Switch Check

-NIEL0123S0403

<b>1</b>	<b>CHECK TRUNK ROOM LAMP SWITCH INPUT SIGNAL</b>						
<p> <b>With CONSULT-II</b> Check trunk room lamp switch ("TRUNK SW"), in "DATA MONITOR" mode with CONSULT-II.</p> <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 SW</td><td>OFF</td></tr> </table> </div> <div style="margin-left: 20px;"> <p>When trunk lid is open: <b>TRUNK SW ON</b></p> <p>When trunk lid is closed: <b>TRUNK SW OFF</b></p> </div> </div> <p style="text-align: right; margin-top: 10px;">SEL355W</p>		DATA MONITOR		MONITOR		TRUNK SW	OFF
DATA MONITOR							
MONITOR							
TRUNK SW	OFF						
<p> <b>Without CONSULT-II</b> 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> <b>H.S.</b></p> <p> <b>CONNECT</b></p> <p> <b>OFF</b></p> </div> <div style="margin-left: 20px;"> <p><b>Voltage [V]:</b> Trunk lid is open. Approx. 0 Trunk lid is closed. Approx. 12</p> </div> </div> <p style="text-align: right; margin-top: 10px;">LEL530</p> <p>Refer to wiring diagram in EL-266.</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 20%; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">Trunk room lamp 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>		OK	▶	Trunk room lamp switch is OK.	NG	▶	GO TO 2.
OK	▶	Trunk room lamp switch is OK.					
NG	▶	GO TO 2.					


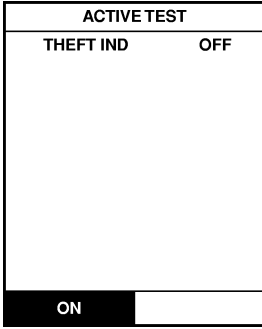

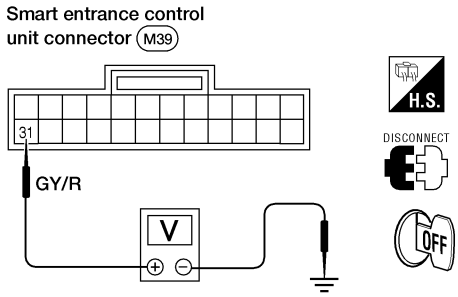
<b>2</b>	<b>CHECK TRUNK ROOM LAMP SWITCH</b>						
<p>1. Disconnect trunk room lamp switch connector. 2. Check continuity between trunk room lamp switch terminals + and -.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <p>Trunk room lamp switch connector (B48)</p>  </div> <div style="margin-left: 20px;"> <p> <b>T.S.</b></p> <p> <b>DISCONNECT</b></p> </div> <div style="margin-left: 20px;"> <p><b>Continuity:</b> Condition: Closed No Condition: Open Yes</p> </div> </div> <p style="text-align: right; margin-top: 10px;">LEL531</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 20%; padding: 5px;">OK</td> <td style="width: 5%; text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;"> <p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Trunk room lamp switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and trunk room lamp switch</li> </ul> </td> </tr> <tr> <td style="padding: 5px;">NG</td> <td style="text-align: center; padding: 5px;">▶</td> <td style="padding: 5px;">Replace trunk room lamp switch.</td> </tr> </table>		OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Trunk room lamp switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and trunk room lamp switch</li> </ul>	NG	▶	Replace trunk room lamp switch.
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Trunk room lamp switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and trunk room lamp switch</li> </ul>					
NG	▶	Replace trunk room lamp switch.					

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## SECURITY INDICATOR LAMP CHECK

=NIEL0123S05

<b>1</b>	<b>CHECK INDICATOR LAMP OPERATION</b>	
<p> <b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Select "ACTIVE TEST" in "THEFT WAR ALM" with CONSULT-II.</li> <li>Select "THEFT IND" and touch "ON".</li> </ol>		
		
<p><b>Security indicator lamp should illuminate.</b></p>		
SEL356W		
<p> <b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Disconnect smart entrance control unit harness connector.</li> <li>Check voltage between smart entrance control unit harness connector terminal 31 and ground.</li> </ol>		
		
<p><b>Battery voltage should exist.</b></p>		
LEL532		
<p>Refer to wiring diagram in EL-265.</p>		
<p><b>OK or NG</b></p>		
OK	▶	Security indicator lamp is OK.
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK SECURITY INDICATOR LAMP</b>	
<p>Refer to wiring diagram in EL-265.</p>		
<p><b>OK or NG</b></p>		
OK	▶	GO TO 3.
NG	▶	Replace security indicator lamp.

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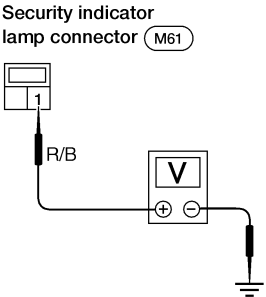



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# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK POWER SUPPLY CIRCUIT FOR SECURITY INDICATOR LAMP</b>	
<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;">      </div> </div> <p style="text-align: right;">LEL533</p> <p style="text-align: center;"><b>Does battery voltage exist?</b></p>		
Yes	▶	Check harness for open or short between security indicator lamp and smart entrance control unit.
No	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● 10A fuse [No. 12, located in fuse block (J/B)]</li> <li>● Harness for open or short between security indicator lamp and fuse</li> </ul>



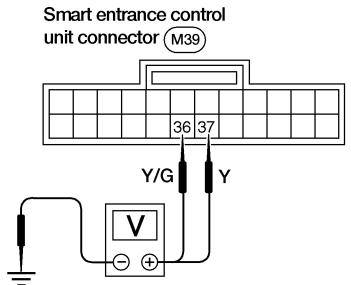







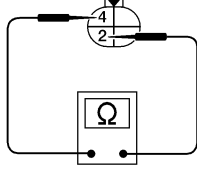



# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## FRONT DOOR UNLOCK SENSOR CHECK

-NIEL0123S06

<b>1</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR INPUT SIGNAL</b>																					
<p> <b>With CONSULT-II</b> Check front unlock sensor ("LOCK SIG DR", "LOCK SIG AS") in "DATA MONITOR" with CONSULT-II.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2">DATA MONITOR</th> </tr> <tr> <th>MONITOR</th> <th></th> </tr> </thead> <tbody> <tr> <td>LOCK SIG DR</td> <td>OFF</td> </tr> <tr> <td>LOCK SIG AS</td> <td>OFF</td> </tr> </tbody> </table> <div style="margin-left: 20px;"> <p>When door is locked: <b>LOCK SIG DR OFF</b> <b>LOCK SIG AS OFF</b></p> <p>When door is unlocked: <b>LOCK SIG DR ON</b> <b>LOCK SIG AS ON</b></p> </div> </div> <p style="text-align: right;">SEL357W</p>		DATA MONITOR		MONITOR		LOCK SIG DR	OFF	LOCK SIG AS	OFF													
DATA MONITOR																						
MONITOR																						
LOCK SIG DR	OFF																					
LOCK SIG AS	OFF																					
<p> <b>Without CONSULT-II</b> Check voltage between smart entrance control unit harness connector terminal 36 or 37 and ground.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p>Smart entrance control unit connector (M39)</p>  </div> <div style="width: 30%;">      </div> <div style="width: 35%;"> <table border="1" style="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 door LH</td> <td rowspan="2">36</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> <tr> <td rowspan="2">Front door RH</td> <td rowspan="2">37</td> <td rowspan="2">Ground</td> <td>Locked</td> <td>Approx. 5</td> </tr> <tr> <td>Unlocked</td> <td>0</td> </tr> </tbody> </table> </div> </div> <p style="text-align: right;">LEL534</p> <p>Refer to wiring diagram in EL-267.</p> <p style="text-align: center;"><b>OK or NG</b></p>			Terminals		Condition	Voltage [V]	(+)	(-)	Front door LH	36	Ground	Locked	Approx. 5	Unlocked	0	Front door RH	37	Ground	Locked	Approx. 5	Unlocked	0
	Terminals		Condition	Voltage [V]																		
	(+)	(-)																				
Front door LH	36	Ground	Locked	Approx. 5																		
			Unlocked	0																		
Front door RH	37	Ground	Locked	Approx. 5																		
			Unlocked	0																		
OK	▶ Door unlock sensor is OK.																					
NG	▶ GO TO 2.																					

<b>2</b>	<b>CHECK FRONT DOOR UNLOCK SENSOR</b>
<p>1. Disconnect door lock actuator connector. 2. Check continuity between door lock actuator terminals.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p>Front door lock actuator connector</p> <p>LH: </p> <p>RH: </p>  </div> <div style="width: 30%;">      </div> <div style="width: 35%;"> <p><b>Continuity:</b> Condition: Locked No Condition: Unlocked Yes</p> </div> </div> <p style="text-align: right;">LEL535</p> <p style="text-align: center;"><b>OK or NG</b></p>	
OK	▶ <b>Check the following.</b> <ul style="list-style-type: none"> <li>● Door unlock sensor ground circuit</li> <li>● Harness for open or short between smart entrance control unit and door unlock sensor</li> </ul>
NG	▶ Replace door lock actuator.

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# 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**

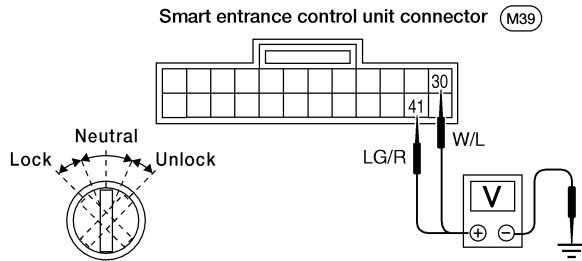
When key inserted in front key cylinder is turned to UNLOCK:

**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 in EL-267.

**OK or NG**

OK ► Door key cylinder switch is OK.

NG ► GO TO 2.

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

<b>2</b>	<b>CHECK DOOR KEY CYLINDER SWITCH</b>	
<p>1. Disconnect door key cylinder switch connector.                  2. Check continuity between door key cylinder switch connector terminals.</p>		
WEL503		
<b>OK or NG</b>		
OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Door key cylinder switch ground circuit</li> <li>● Harness for open or short between smart entrance control unit and door key cylinder switch</li> </ul>
NG	▶	Replace door key cylinder switch.

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# 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)**

**With CONSULT-II**  
 Check trunk lid key cylinder switch ("TRUNK KEY SW") in "DATA MONITOR" mode with CONSULT-II.

DATA MONITOR	
MONITOR	
TRUNK KEY SW	OFF

When key in key cylinder is at Neutral position:  
**TRUNK KEY SW OFF**

When key in key cylinder is at Unlock position:  
**TRUNK KEY SW ON**

SEL358W

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**Without CONSULT-II**  
 Check voltage between smart entrance control unit harness connector terminal 42 and ground.

Continuity exists

Smart entrance control unit connector (M39)

Terminals		Key position	Voltage [V]
(+)	(-)		
42	Ground	Neutral	Approx. 5
		Unlock	0

Refer to wiring diagram in EL-266.

**OK or NG**

OK	▶	Trunk lid key cylinder switch is OK.
NG	▶	GO TO 2.

**2 CHECK TRUNK LID KEY CYLINDER SWITCH**

- Disconnect trunk lid key cylinder switch connector.
- Check continuity between trunk lid key cylinder switch terminals.

Trunk lid key cylinder switch (B43)

Key position	Continuity
Neutral	No
Unlock	Yes

LEL537

**OK or NG**

OK	▶	<p><b>Check the following.</b></p> <ul style="list-style-type: none"> <li>Trunk lid key cylinder switch ground circuit</li> <li>Harness for open or short between smart entrance control unit and trunk lid key cylinder switch</li> </ul>
NG	▶	Replace trunk lid key cylinder switch.

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## DOOR LOCK/UNLOCK SWITCH CHECK

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

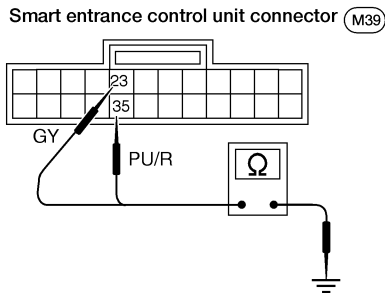
When lock/unlock switch is turned to LOCK:  
**LOCK SW DR/AS ON**

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 in EL-266.

WEL501

OK or NG

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

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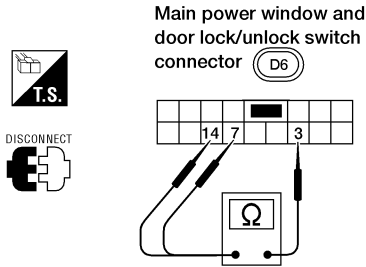
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# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## 2 CHECK DOOR LOCK/UNLOCK SWITCH

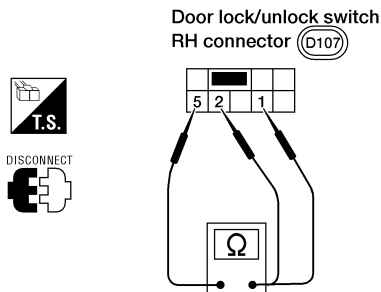
1. Disconnect door lock/unlock switch harness connector.
2. Check continuity between each door lock/unlock switch terminal.
  - Main power window and door lock/unlock switch



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

WEL494

- Door lock/unlock switch RH



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

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

NG



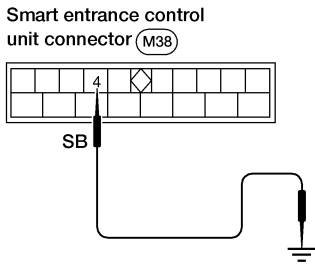


Replace door lock/unlock switch.

# THEFT WARNING SYSTEM

Trouble Diagnoses (Cont'd)

## THEFT WARNING HORN AND HEADLAMP ALARM CHECK

=NIEL0123S09

<b>1</b>	<b>CHECK THEFT WARNING HORN AND HEADLAMP ALARM OPERATION</b>	
<p><b>With CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Select "ACTIVE TEST" in "THEFT WAR ALM" with CONSULT-II.</li> <li>Select "THEFT WAR ALM" and touch "ON".</li> </ol>		
<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="border: 1px solid black; padding: 5px; width: 150px;"> <p style="text-align: center; margin: 0;">ACTIVE TEST</p> <p style="margin: 0;">THEFT WAR ALM    OFF</p> <hr/> <p style="text-align: center; margin: 0;">ON</p> </div> <div style="text-align: center; flex-grow: 1;"> <p><b>Theft warning horn and headlamp alarm should operate.</b></p> </div> <div style="text-align: right; font-size: small;">SEL359W</div> </div>		
<p><b>Without CONSULT-II</b></p> <ol style="list-style-type: none"> <li>Disconnect smart entrance control unit harness connector.</li> <li>Apply ground to smart entrance control unit harness connector terminal 4.</li> </ol>		
<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;"> <p>Smart entrance control unit connector (M38)</p>  <p>SB</p> </div> <div style="text-align: center;">   </div> <div style="text-align: center; flex-grow: 1;"> <p><b>Theft warning horn and headlamp alarm should operate.</b></p> </div> <div style="text-align: right; font-size: small;">LEL538</div> </div> <p style="margin-top: 10px;">Refer to wiring diagram in EL-268.</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>		
OK	▶	Horn and headlamp alarm is OK.
NG	▶	GO TO 2.

<b>2</b>	<b>CHECK THEFT WARNING HORN AND THEFT WARNING LAMP RELAYS</b>	
<p>Check theft warning horn and theft warning lamp relays. Refer to "Electrical Components Inspection", EL-290.</p> <p style="text-align: center;"><b>OK or NG</b></p>		
OK	▶	GO TO 3.
NG	▶	Replace.

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# THEFT WARNING SYSTEM

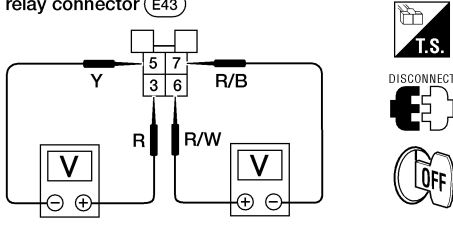
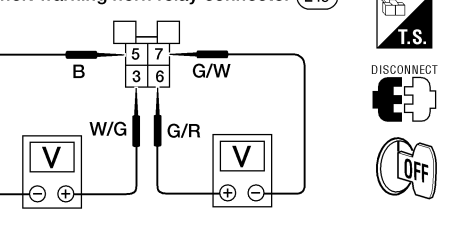
Trouble Diagnoses (Cont'd)

3	CHECK POWER SUPPLY FOR THEFT WARNING HORN AND THEFT WARNING LAMP RELAYS
<p>1. Disconnect theft warning horn and theft warning lamp relay connectors. 2. Check voltage between terminal 1 and ground.</p>	
<div></div>	
LEL539	
<b>Does battery voltage exist?</b>	
Yes	▶ GO TO 4.
No	▶ <b>Check the following.</b> <ul style="list-style-type: none"><li>● 10A fuse (No. 35 located in the fuse and fusible link box)</li><li>● Harness for open or short between relays and fuse</li></ul>



# THEFT WARNING SYSTEM

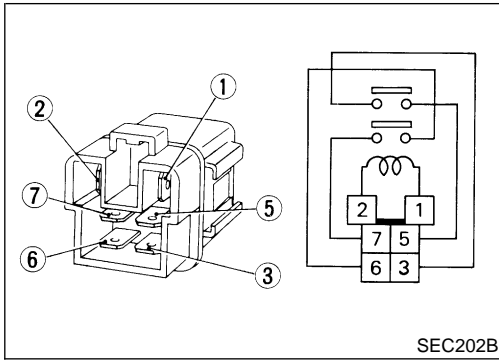
Trouble Diagnoses (Cont'd)

4	CHECK THEFT WARNING HORN AND THEFT WARNING LAMP RELAYS CIRCUIT
	<p>1. Disconnect theft warning horn relay and theft warning lamp relay connectors.</p> <p>2. Check voltage between terminals of each relay.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Theft warning lamp relay connector (E43)</p>  </div> <div style="text-align: center;"> <p><b>Battery voltage should exist.</b></p> </div> <div style="text-align: right;"> <p>LEL540</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Theft warning horn relay connector (E45)</p>  </div> <div style="text-align: center;"> <p><b>Battery voltage should exist.</b></p> </div> <div style="text-align: right;"> <p>LEL541</p> </div> </div> <p style="text-align: center;"><b>OK or NG</b></p>
OK	<p>▶ <b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Harness for open between smart entrance control unit terminal 4 and relays</li> <li>● Replace smart entrance control unit</li> </ul>
NG	<p>▶ <b>Check the following.</b></p> <ul style="list-style-type: none"> <li>● Harness for open or short between theft warning horn relay and fuse</li> <li>● Harness for open between theft warning horn relay and theft warning horn</li> <li>● Harness for open between theft warning horn relay and ground</li> <li>● Harness for open or short between theft warning lamp relay and fuse</li> <li>● Harness for open or short between theft warning lamp relay and head lamp system</li> </ul>

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# THEFT WARNING SYSTEM

## Electrical Components Inspection



## Electrical Components Inspection

### THEFT WARNING HORN AND THEFT WARNING LAMP =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

NIEL0124

NIEL0124S01

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
- Theft warning system
- Interior lamp
- Battery saver control

GI

MA

EM

LC

### BATTERY SAVER CONTROL

NIEL0124S02

#### Interior Lamp/Map Lamp/Vanity Lamps

NIEL0124S0202

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.

EC

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#### Rear Window Defogger/Door Mirror Defogger

NIEL0124S0203

Rear window defogger and door mirror defogger are turned off in approximately 15 minutes after the rear window defogger switch is turned on.

AT

### 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 switches	Door lock actuator
Multi-remote control	Key switch (Insert) Ignition switch (ACC) Door switches Front door unlock sensor LH Remote controller signal	Theft warning lamp relay Theft warning 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
Theft warning	Ignition switch (ACC, ON) Door switches Hood switch Door lock/unlock switches Door key cylinder switches (lock/unlock) Trunk lid key cylinder switch (unlock) Door unlock sensors	Theft warning lamp relay Theft warning 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	Theft warning system	X	X	X
RETAINED PWR	Retained power control	X	X	
MULTI REMOTE ENT	Multi-remote control system	X	X	X

X: Applicable

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

## DIAGNOSTIC ITEM DESCRIPTION

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 theft warning system was activated can be checked.
WORK SUPPORT for MULTI REMOTE ENT	ID code of multi-remote controller can be registered and erased.

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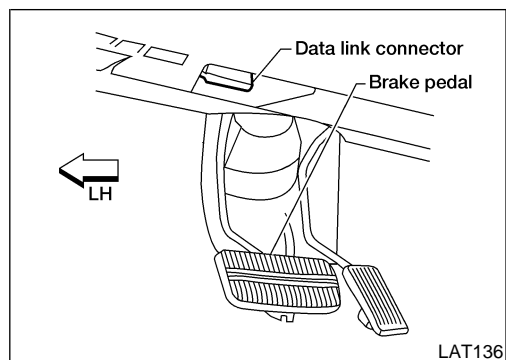
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# SMART ENTRANCE CONTROL UNIT

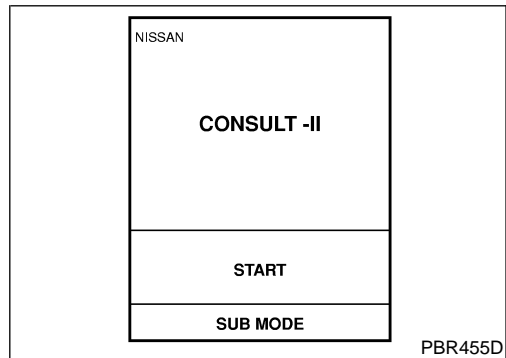
CONSULT-II (Cont'd)



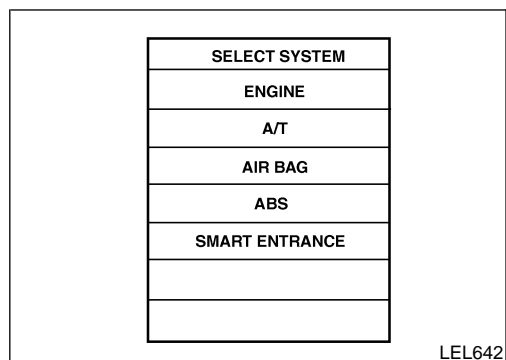
## CONSULT-II INSPECTION PROCEDURE

=NIEL0247S03

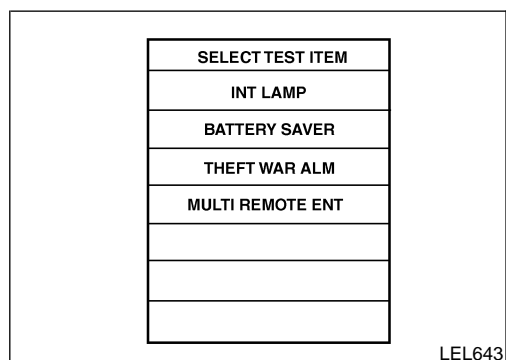
1. Turn the ignition switch "OFF".
2. Connect "CONSULT-II" to the data link connector.



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



5. Touch "SMART ENTRANCE".



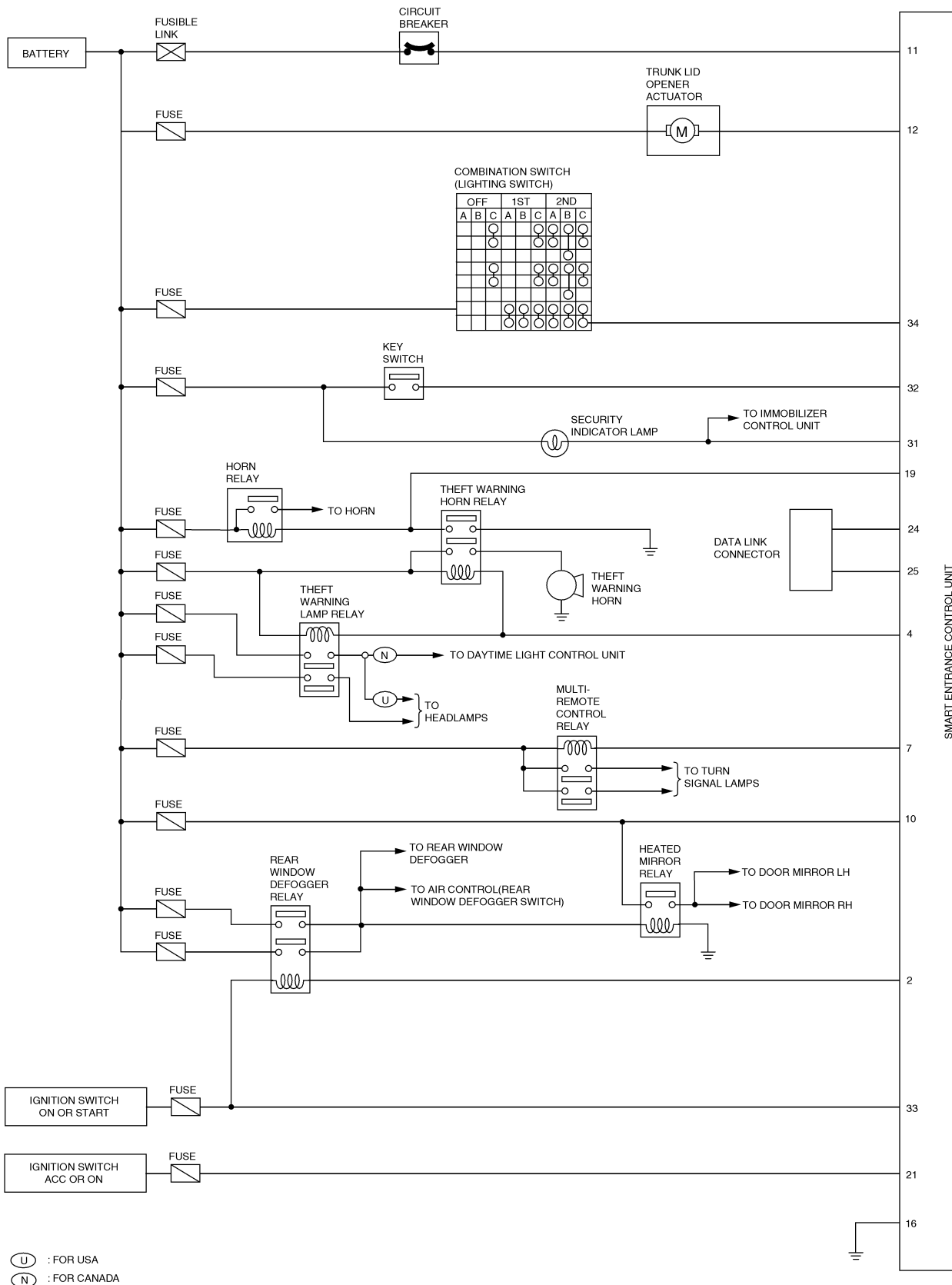
6. Perform each diagnostic item according to "DIAGNOSTIC ITEMS APPLICATION". Refer to "DIAGNOSTIC ITEMS APPLICATION", EL-293.

# SMART ENTRANCE CONTROL UNIT

Schematic

NIEL0125

## Schematic

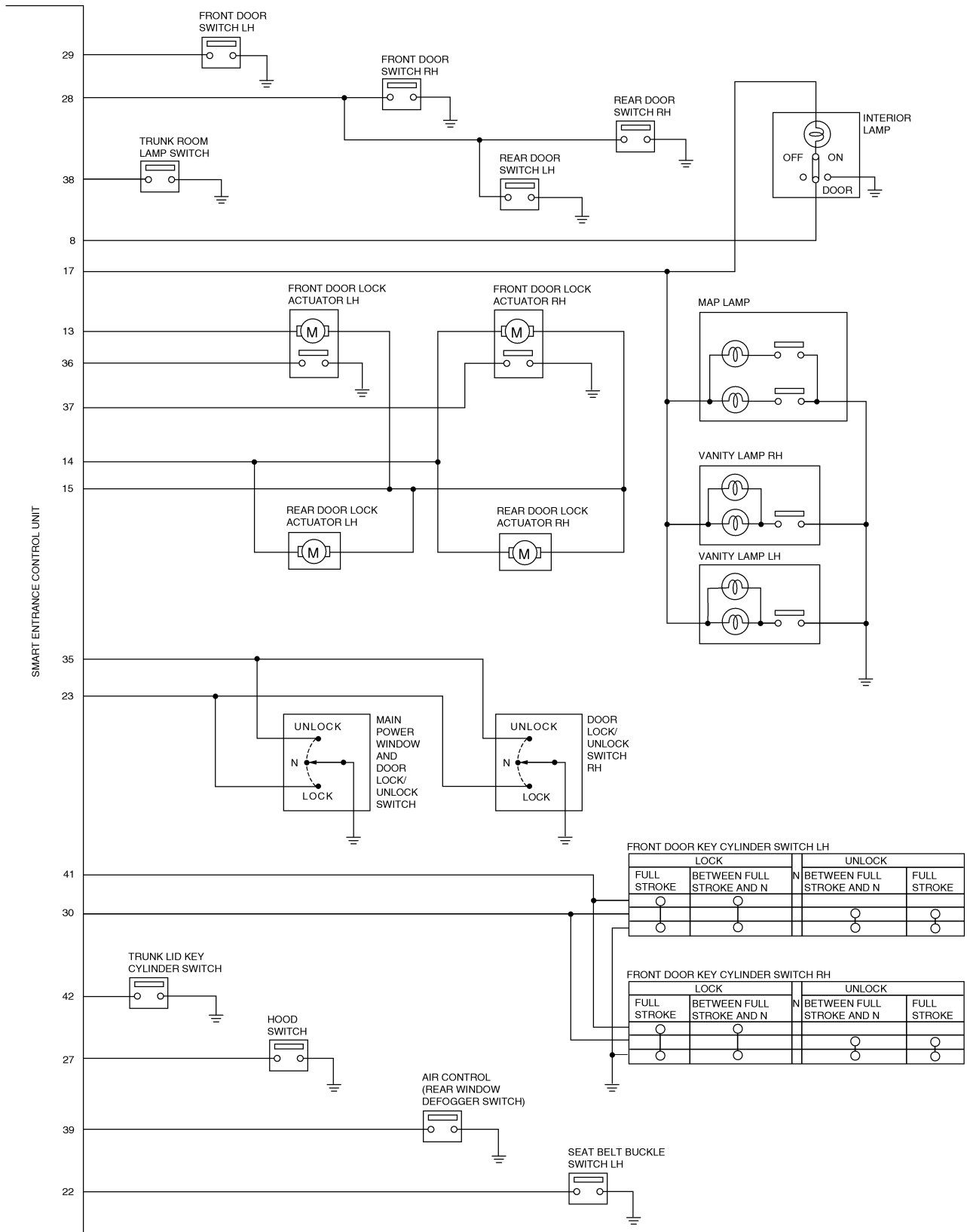


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SMART ENTRANCE CONTROL UNIT

# SMART ENTRANCE CONTROL UNIT

Schematic (Cont'd)



WEL392



# 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	Theft warning horn relay and theft warning 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	Theft warning 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

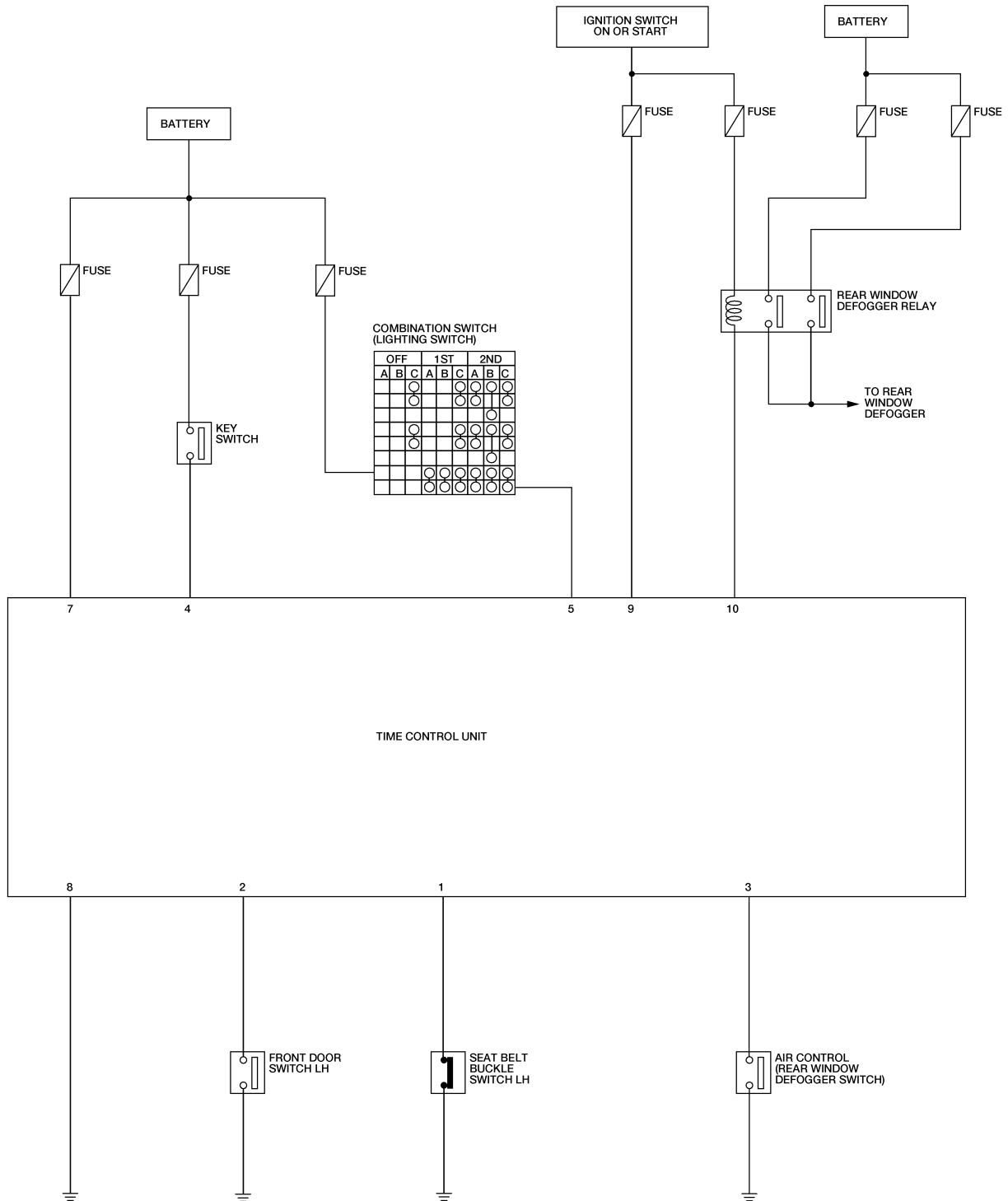
System	Input	Output
Warning chime	Key switch (Insert) Ignition switch (ON) Lighting switch (1st or 2nd) Seat belt buckle switch LH Front door switch LH	Warning chime (located in time control unit)
Rear window defogger	Ignition switch (ON) Rear window defogger switch	Rear window defogger relay

# TIME CONTROL UNIT

Schematic (Without Power Door Locks)

## Schematic (Without Power Door Locks)

NIEL0267



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LEL553

# 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

GI

MA

EM

### 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.

LC

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FE

CL

#### 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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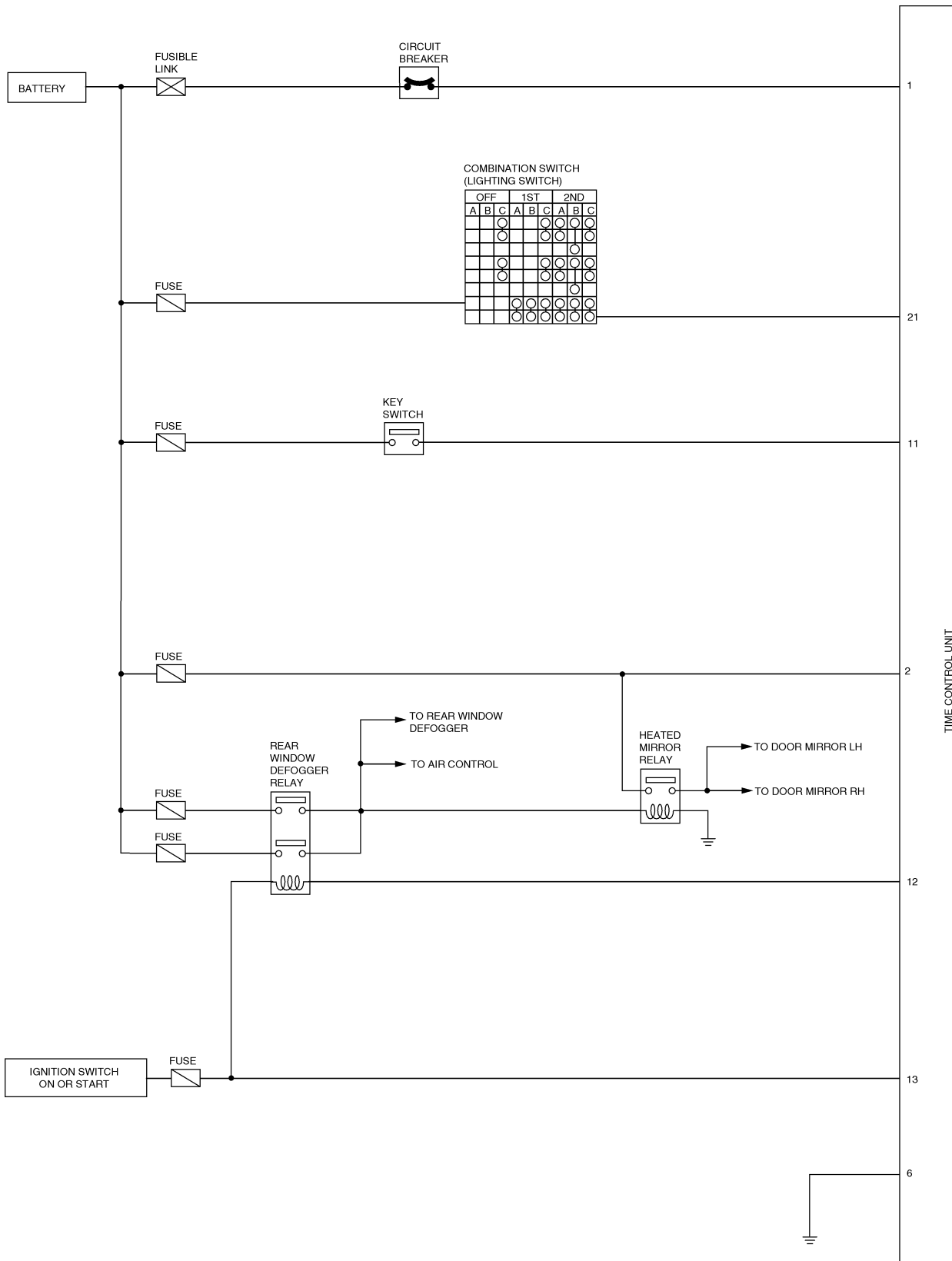
IDX

# TIME CONTROL UNIT

Schematic (With Power Door Locks)

## Schematic (With Power Door Locks)

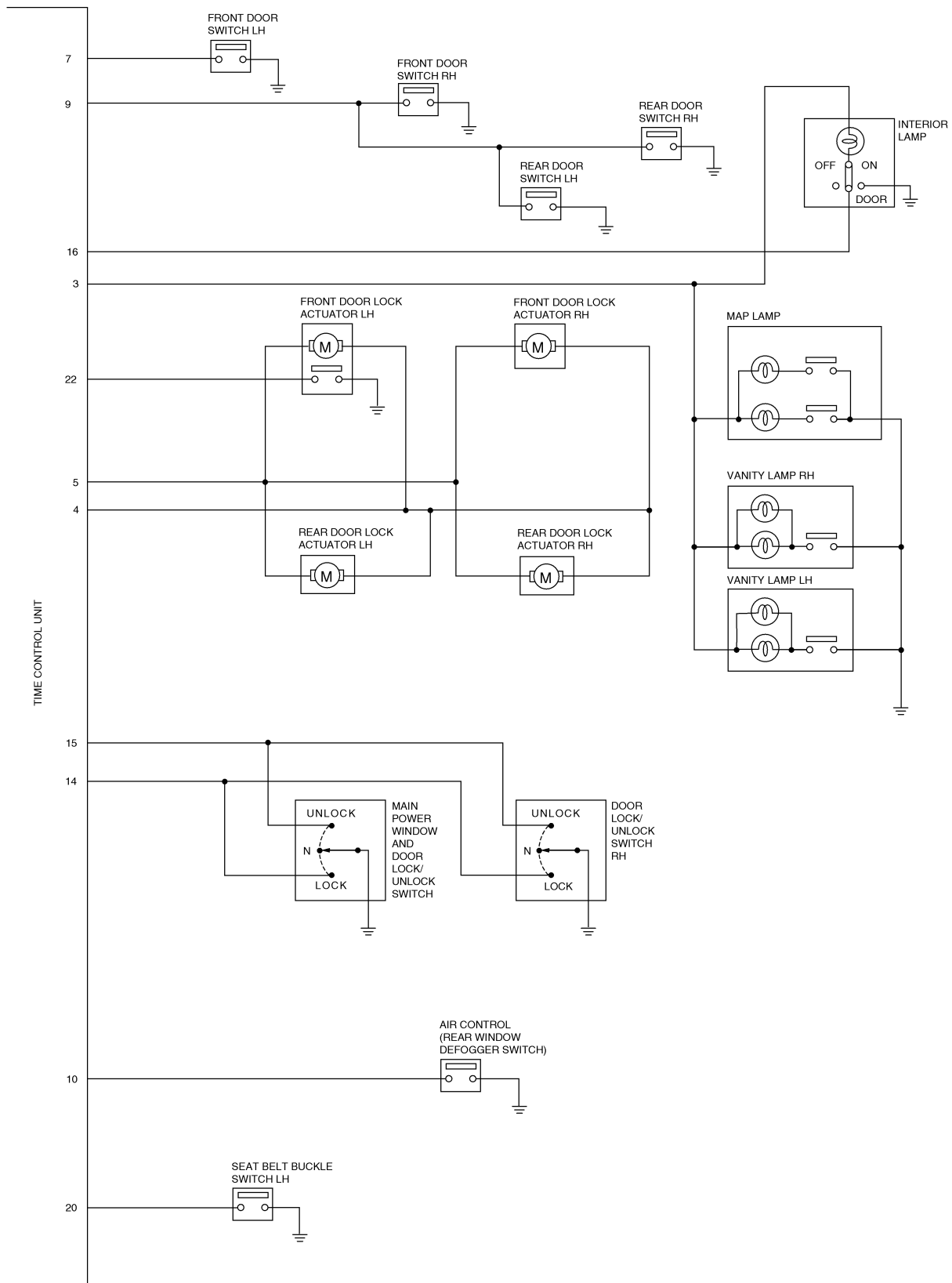
NIEL0270



WEL554

# TIME CONTROL UNIT

Schematic (With Power Door Locks) (Cont'd)



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WEL555

## 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

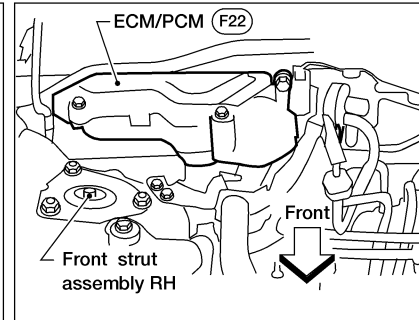
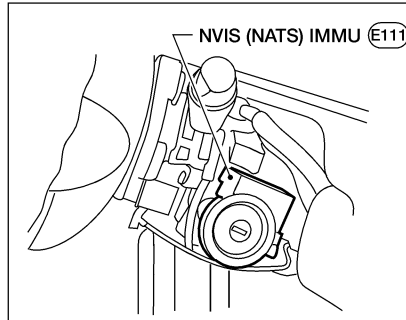
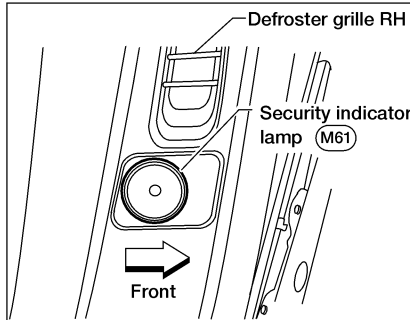
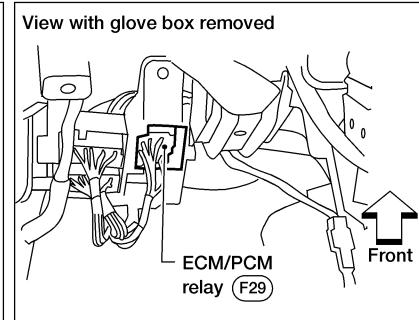
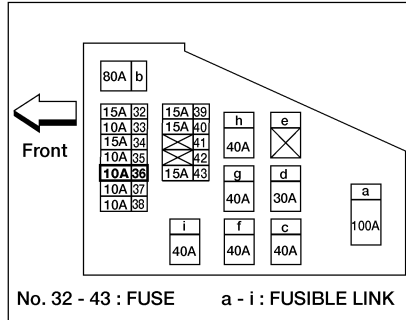
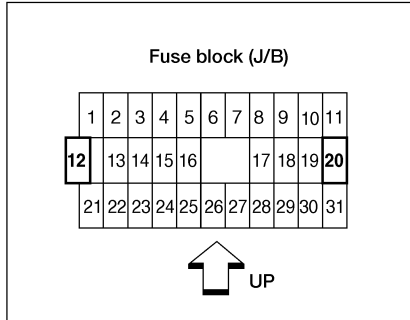


# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Component Parts and Harness Connector Location

## Component Parts and Harness Connector Location

NIEL0172



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**NOTE:**

If the customer reports a “No Start” condition, request ALL KEYS be brought to Dealer in case of NATS malfunction.

# 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 [QG18DE (Calif. CA Model) and SR20DE] or PCM [QG18DE (except Calif. CA Model)] 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.**

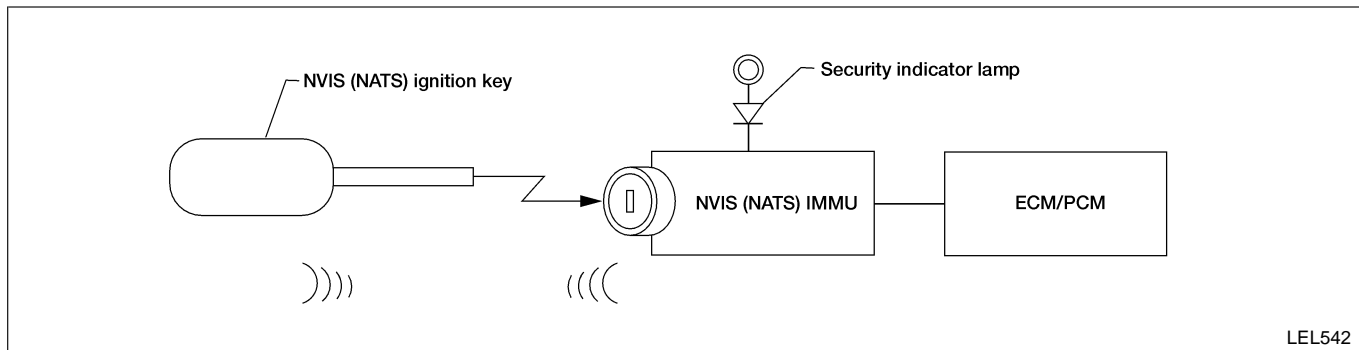
**Therefore, be sure to receive ALL KEYS from vehicle owner.**

## 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 [QG18DE (Calif. CA Model) and SR20DE] or PCM [QG18DE (except Calif. CA Model)]
- Security indicator lamp



LEL542

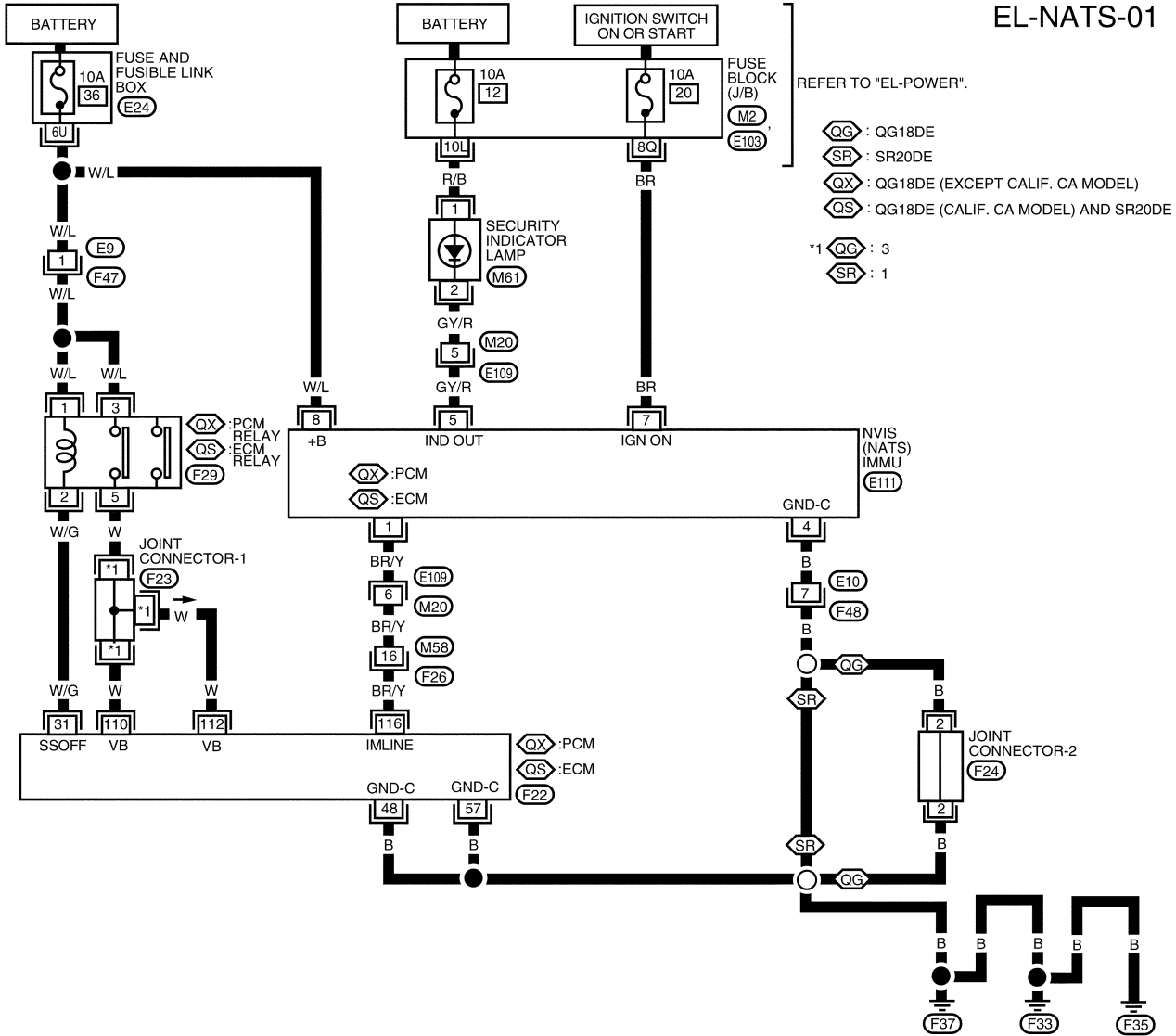
# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Wiring Diagram — NATS —

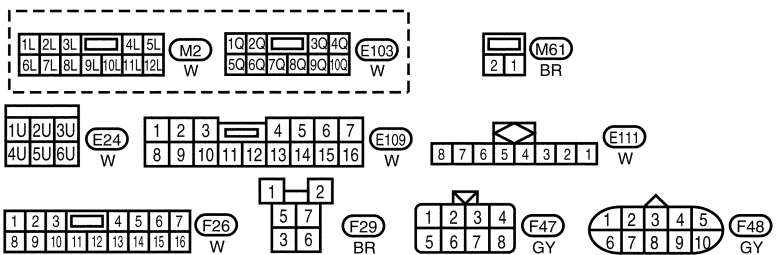
## Wiring Diagram — NATS —

NIEL0175

EL-NATS-01



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REFER TO THE FOLLOWING.  
F22 - ELECTRICAL UNITS  
F23, F24 - JOINT CONNECTOR

WEL816

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NVIS (NATS) IMMU CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND

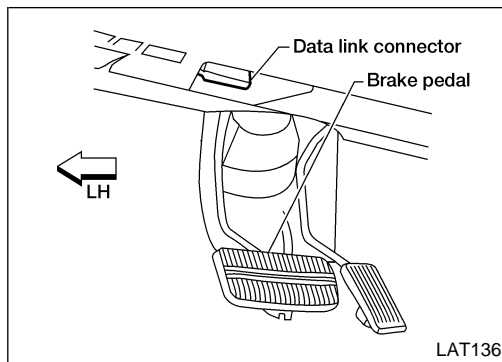
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
4	B	GROUND	—	—
5	GY/R	THEFT WARNING INDICATOR	GOES OFF ILLUMINATES	12V 0V
7	BR	IGNITION SWITCH (ON)	IGNITION KEY IS IN ON POSITION	12V
		IGNITION SWITCH (START)	IGNITION KEY IS IN START POSITION	12V
8	W/L	POWER SOURCE (FUSE)	—	12V

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# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

CONSULT-II



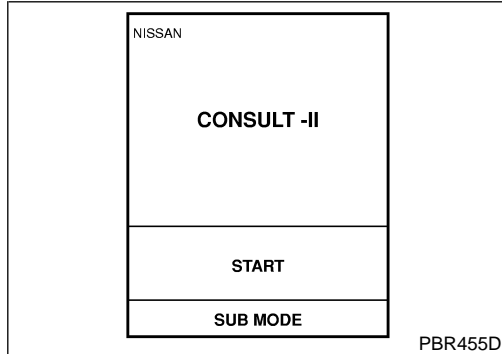
LAT136

## CONSULT-II

### CONSULT-II INSPECTION PROCEDURE

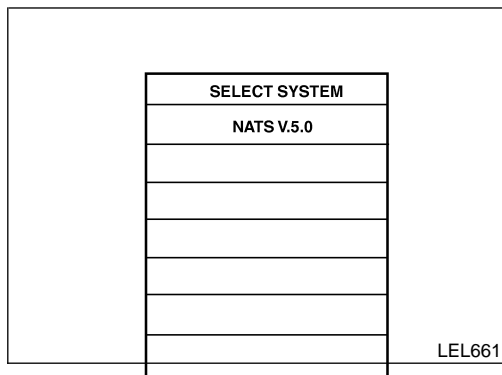
NIEL0176  
NIEL0176S01

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 (UEN99A)**
4. Turn ignition switch ON.
5. Touch "START".



PBR455D

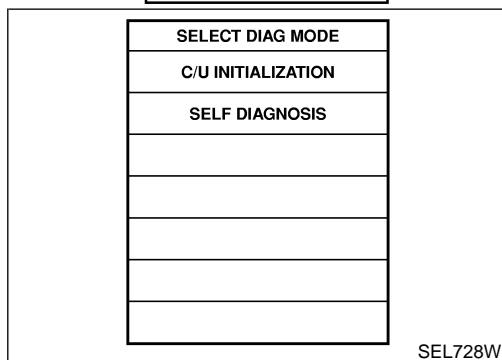
6. Select "NATS V.5.0".



LEL661

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

**For further information, see the "CONSULT-II OPERATION MANUAL IVIS/NVIS".**



SEL728W

### CONSULT-II DIAGNOSTIC TEST MODE FUNCTION

NIEL0176S02

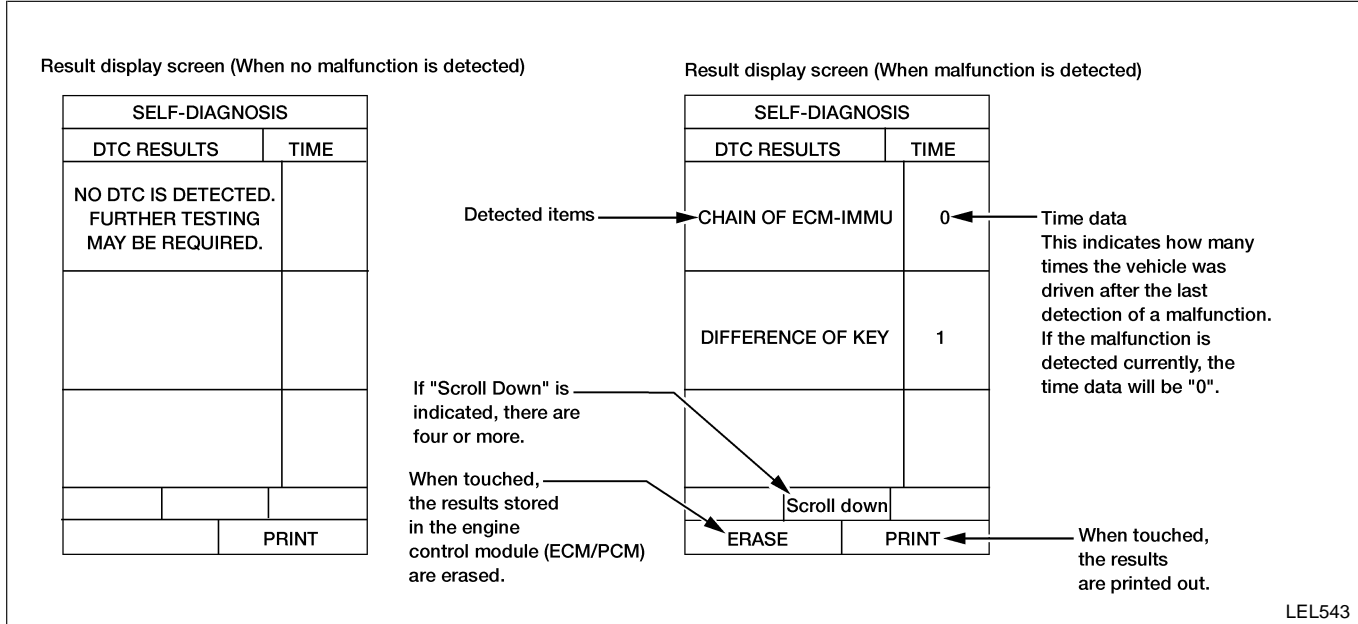
CONSULT-II DIAGNOSTIC TEST MODE	Description
C/U INITIALIZATION	When replacing any of the following three components, C/U initialization is necessary. [NVIS (NATS) ignition key/IMMU/ECM/PCM]
SELF DIAGNOSIS	Detected items (screen terms) are as shown in the chart below.

**NOTE:**

- When any initialization is performed, all IDs previously registered will be erased and all NVIS (NATS) ignition keys must be registered again.
- The engine cannot be started with an unregistered key. In this case, the system may show “DIFFERENCE OF KEY” or “LOCK MODE” as a self-diagnostic result on the CONSULT-II screen.
- In rare cases, “CHAIN OF ECM-IMMU” might be stored as a self-diagnostic result during key registration procedure, even if the system is not malfunctioning.

**HOW TO READ SELF-DIAGNOSTIC RESULTS**

NIEL0176S03


**NVIS (NATS) SELF-DIAGNOSTIC RESULTS ITEM CHART**

NIEL0176S04

Detected items (NATS program card screen terms)	P No. Code (Self-diagnostic result of "ENGINE")	Malfunction is detected when .....	Reference page
ECM INT CIRC-IMMU	NATS MAL-FUNCTION P1613	The malfunction of ECM/PCM internal circuit of IMMU communication line is detected.	EL-313
CHAIN OF ECM-IMMU	NATS MAL-FUNCTION P1612	Communication impossible between ECM/PCM and IMMU (In rare cases, "CHAIN OF ECM-IMMU" might be stored during key registration procedure, even if the system is not malfunctioning.)	EL-314
DIFFERENCE OF KEY	NATS MAL-FUNCTION P1615	IMMU can receive the key ID signal but the result of ID verification between key ID and IMMU is NG.	EL-318
CHAIN OF IMMU-KEY	NATS MAL-FUNCTION P1614	IMMU cannot receive the key ID signal.	EL-319
ID DISCORD, IMM-ECM	NATS MAL-FUNCTION P1611	The result of ID verification between IMMU and ECM/PCM is NG. System initialization is required.	EL-320

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## NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

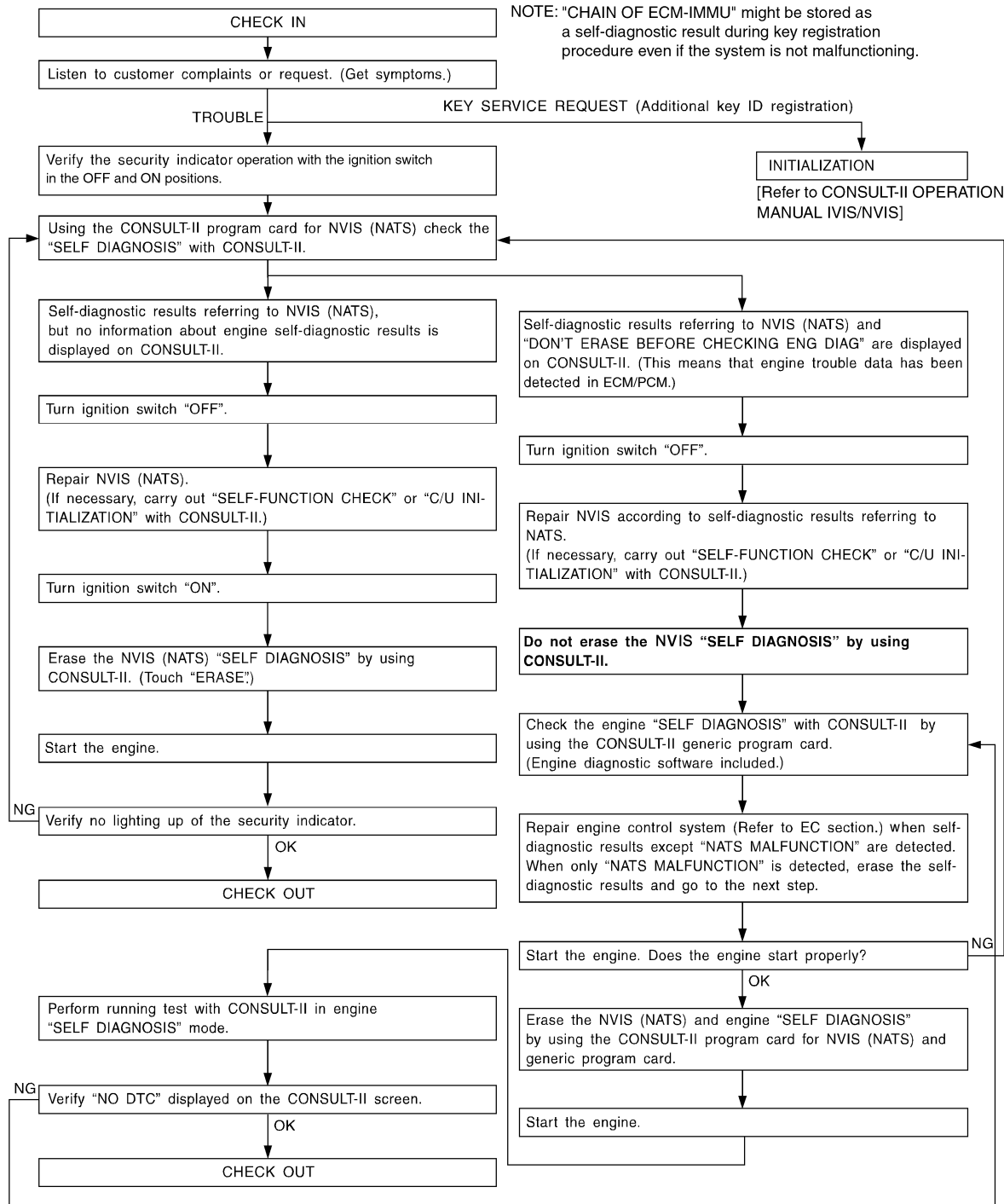
CONSULT-II (Cont'd)

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"><li>● Unregistered ignition key is used.</li><li>● IMMU or ECM/PCM is malfunctioning.</li></ul>	EL-323
DON'T ERASE BEFORE CHECKING ENG DIAG	—	Any engine trouble codes except NVIS (NATS) trouble codes have been detected in ECM/PCM.	EL-311

## Trouble Diagnoses WORK FLOW

NIEL0177

NIEL0177S01



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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-313)	ECM/PCM	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"> <li>● Security indicator lighting up*</li> <li>● Engine hard to start</li> </ul>	CHAIN OF ECM-IMMU	PROCEDURE 2 (EL-314)	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/PCM	C4
			Short circuit between IMMU and ECM/PCM communication line and battery voltage line	C4
			Short circuit between IMMU and ECM/PCM communication line and ground line	C4
			ECM/PCM	B
			IMMU	A
	DIFFERENCE OF KEY	PROCEDURE 3 (EL-318)	Unregistered key	D
			IMMU	A
	CHAIN OF IMMU-KEY	PROCEDURE 4 (EL-319)	Malfunction of key ID chip	E
			IMMU	A
ID DISCORD, IMM-ECM	PROCEDURE 5 (EL-320)	System initialization has not yet been completed.	F	
		ECM/PCM	F	
LOCK MODE	PROCEDURE 7 (EL-323)	LOCK MODE	D	
<ul style="list-style-type: none"> <li>● MIL staying ON</li> <li>● Security indicator lighting up*</li> </ul>	DON'T ERASE BEFORE CHECKING ENG DIAG	WORK FLOW (EL-311)	Engine trouble data and NVIS (NATS) trouble data have been detected in ECM/PCM	—

\*: 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)

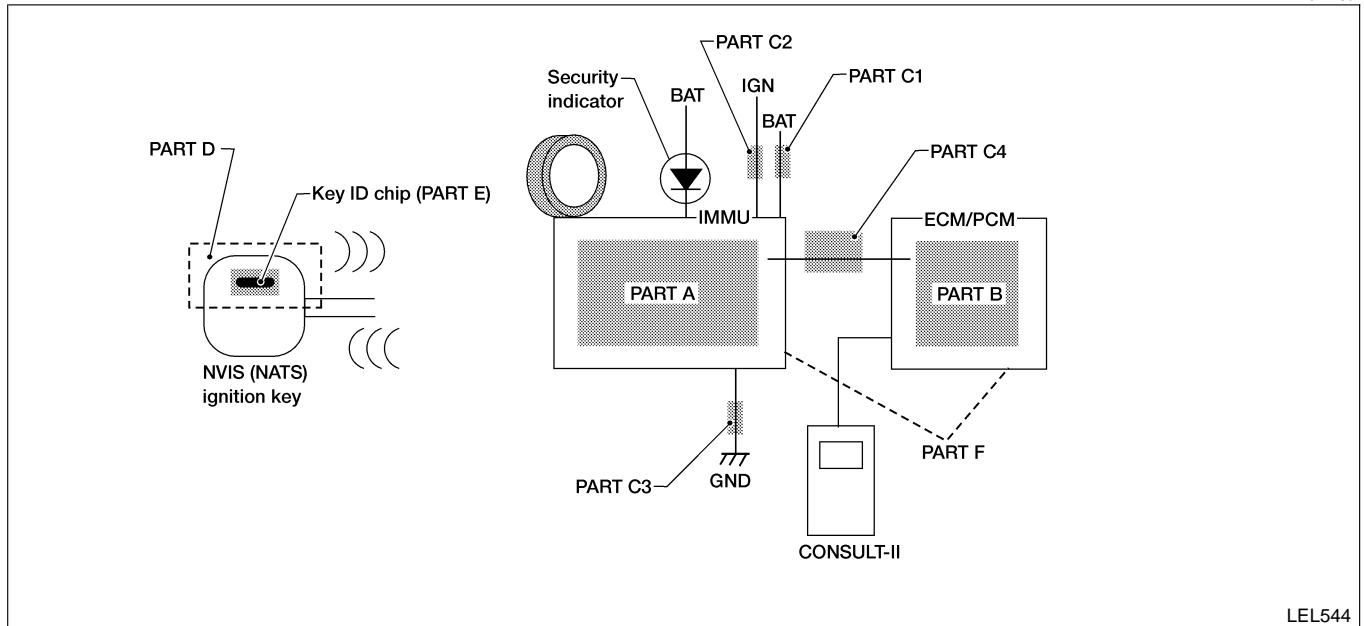
## SYMPTOM MATRIX CHART 2 (Non self-diagnosis related item)

NIEL0177S03

SYMPTOM	DIAGNOSTIC PROCEDURE (Reference page)	SYSTEM (Malfunctioning part or mode)
Security indicator lamp does not light up.	PROCEDURE 6 (EL-321)	Security indicator lamp
		Open circuit between fuse and IMMU
		Continuation of initialization mode
		IMMU

## DIAGNOSTIC SYSTEM DIAGRAM

NIEL0177S04



LEL544

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/PCM.
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)

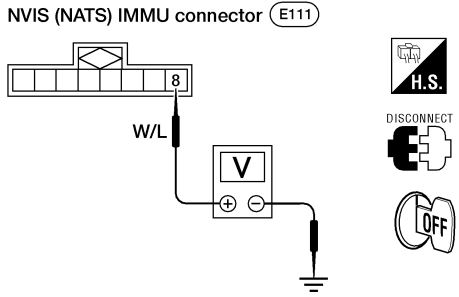
## DIAGNOSTIC PROCEDURE 2

—NIEL0177S07

Self-diagnostic results:

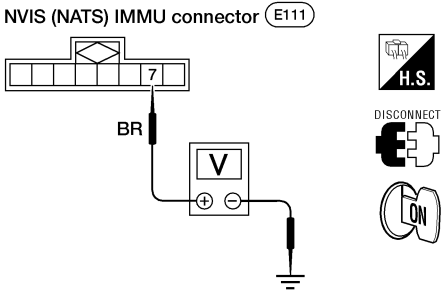
“CHAIN OF ECM-IMMU” displayed on CONSULT-II screen

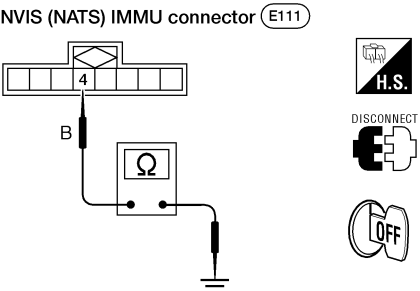
<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
<p>Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF ECM-IMMU” displayed on CONSULT-II screen.</p> <p><b>NOTE:</b> In rare cases, “CHAIN OF ECM-IMMU” might be stored during key registration procedure, even if the system is not malfunctioning.</p>												
<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 style="text-align: center;">CHAIN OF ECM-IMMU</td> <td style="text-align: center;">0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	CHAIN OF ECM-IMMU	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
CHAIN OF ECM-IMMU	0											
SEL292W												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>CHECK POWER SUPPLY CIRCUIT FOR NVIS (NATS) IMMU</b>	
<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;"><b>Battery voltage should exist.</b></p>		
LEL545		
<b>OK or NG</b>		
OK	▶	GO TO 3.
NG	▶	<p><b>Check the following</b></p> <ul style="list-style-type: none"> <li>● 10A fuse (No. 36, located in the fuse and fusible link box)</li> <li>● Harness for open or short between fuse and NVIS (NATS) IMMU connector</li> </ul> <p><b>Ref. Part No. C1</b></p>

# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

<b>3</b>	<b>CHECK IGN SW. ON SIGNAL</b>		
<ol style="list-style-type: none"> <li>Turn ignition switch ON.</li> <li>Check voltage between terminal 7 of NVIS (NATS) IMMU and ground with CONSULT-II or tester.</li> </ol>		 <p style="text-align: center;"><b>Battery voltage should exist.</b></p>	GI MA EM LC EC FE CL MT
<b>OK or NG</b>		LEL546	
OK	▶	GO TO 4.	
NG	▶	<b>Check the following</b> <ul style="list-style-type: none"> <li>10A fuse [No. 20, located in the fuse block (J/B)]</li> <li>Harness for open or short between fuse and NVIS (NATS) IMMU connector</li> </ul> <b>Ref. part No. C2</b>	AT AX SU BR ST RS BT HA SC

<b>4</b>	<b>CHECK GROUND CIRCUIT FOR NVIS (NATS) IMMU</b>		
<ol style="list-style-type: none"> <li>Turn ignition switch OFF.</li> <li>Check harness continuity between NVIS (NATS) IMMU terminal 4 and ground.</li> </ol>		 <p style="text-align: center;"><b>Continuity should exist.</b></p>	AT AX SU BR ST RS BT HA SC
<b>OK or NG</b>		LEL547	
OK	▶	GO TO 5.	
NG	▶	Repair harness. <b>Ref. part No. C3</b>	EL IDX

# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

<b>5</b>	<b>CHECK COMMUNICATION LINE OPEN CIRCUIT</b>	<p>1. Disconnect ECM/PCM connector. 2. Check harness continuity between ECM/PCM terminal 116 and NVIS (NATS) IMMU terminal 1.</p>	
		<b>Continuity should exist.</b>	LEL548
<b>OK or NG</b>			
OK	▶	GO TO 6.	
NG	▶	Repair harness or connector. <b>Ref. part No. C4</b>	

<b>6</b>	<b>CHECK COMMUNICATION LINE BATTERY SHORT CIRCUIT</b>	<p>1. Turn ignition switch ON. 2. Check voltage between ECM/PCM terminal 116 or NVIS (NATS) IMMU terminal 1 and ground.</p>	
		<b>Voltage: 0V</b>	LEL549
<b>OK or NG</b>			
OK	▶	GO TO 7.	
NG	▶	Communication line is short-circuited with battery voltage line or ignition switch ON line. Repair harness or connectors. <b>Ref. part No. C4</b>	

# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

<b>7</b>	<b>CHECK COMMUNICATION LINE GROUND SHORT CIRCUIT</b>	
<p>1. Turn ignition switch OFF.                  2. Check continuity between ECM/PCM terminal 116 or NVIS (NATS) IMMU terminal 1 and ground.</p>		
<p><b>Continuity should not exist.</b></p>		
<p>LEL550</p>		
<p><b>OK or NG</b></p>		
OK	▶	GO TO 8.
NG	▶	Communication line is short-circuited with ground line. Repair harness or connectors. <b>Ref. part No. C4</b>

<b>8</b>	<b>SIGNAL FROM ECM/PCM TO NVIS (NATS) IMMU CHECK</b>													
<p>1. Check the signal between ECM/PCM 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>&gt;&gt;</td> <td>[A] 5.0 V/Div</td> <td>10 mS/Div 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												
<p>LEL641</p>														
<p><b>OK or NG</b></p>														
OK	▶	NVIS (NATS) IMMU is malfunctioning. Replace NVIS (NATS) IMMU. <b>Ref. part No. A</b> Perform initialization with CONSULT-II. For the operation of initialization, refer to "CONSULT-II OPERATION MANUAL IVIS/NVIS".												
NG	▶	ECM/PCM is malfunctioning. Replace ECM/PCM. <b>Ref. part No. B</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

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
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>0</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>			SELF DIAGNOSIS		DTC RESULTS	TIME	DIFFERENCE OF KEY	0				
SELF DIAGNOSIS												
DTC RESULTS	TIME											
DIFFERENCE OF KEY	0											
SEL293W												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

<b>2</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>				
Perform initialization with CONSULT-II. Re-register all NVIS (NATS) ignition key IDs. For initialization, refer to “CONSULT-II OPERATION MANUAL IVIS/NVIS”.					
<table border="1"> <thead> <tr> <th>IMMU INITIALIZATION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">INITIALIZATION FAIL</td> </tr> <tr> <td>THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.</td> </tr> </tbody> </table>			IMMU INITIALIZATION	INITIALIZATION FAIL	THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.
IMMU INITIALIZATION					
INITIALIZATION FAIL					
THEN IGN KEY SW ‘OFF’ AND ‘ON’, AFTER CONFIRMING SELF-DIAG AND PASSWORD, PERFORM C/U INITIALIZATION AGAIN.					
SEL297W					
<b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows above message on the screen.					
<b>Can the system be initialized?</b>					
Yes	▶	Start engine. (END) (Ignition key ID was unregistered. <b>Ref. part No. D</b> )			
No	▶	NVIS (NATS) IMMU is malfunctioning. Replace NVIS (NATS) IMMU. <b>Ref. part No. A</b> 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

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
Confirm SELF-DIAGNOSTIC RESULTS “CHAIN OF IMMU-KEY” displayed on CONSULT-II screen.												
<table border="1" style="margin: auto;"> <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												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

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

<b>3</b>	<b>CHECK NVIS (NATS) IMMU INSTALLATION</b>	
Check NVIS (NATS) IMMU installation. Refer to “How to Replace NVIS (NATS) IMMU” in EL-324.		
<b>OK or NG</b>		
OK	▶	NVIS (NATS) IMMU is malfunctioning. Replace NVIS (NATS) IMMU. <b>Ref. part No. A</b> 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

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

<b>2</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>				
Perform initialization with CONSULT-II. Re-register all 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					
<b>NOTE:</b>					
If the initialization is not completed or fails, CONSULT-II shows above message on the screen.					
<b>Can the system be initialized?</b>					
Yes	▶	Start engine. (END) (System initialization had not been completed. <b>Ref. part No. F</b> )			
No	▶	ECM/PCM is malfunctioning. Replace ECM/PCM. <b>Ref. part No. F</b> 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)

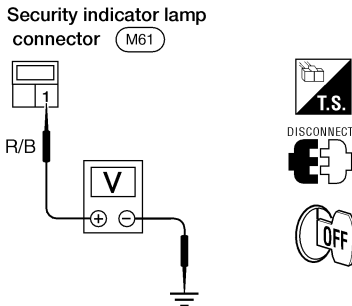
## DIAGNOSTIC PROCEDURE 6

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

=NIEL0177S12

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

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

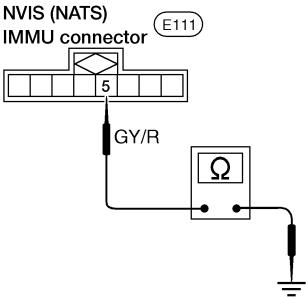


<b>3</b>	<b>CHECK SECURITY INDICATOR LAMP POWER SUPPLY CIRCUIT</b>	
1. Disconnect security indicator lamp connector. 2. Check voltage between security indicator lamp connector terminal 1 and ground.		
		
<b>Battery voltage should exist.</b>		
LEL551		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	Check harness for open or short between fuse and security indicator lamp.

<b>4</b>	<b>CHECK SECURITY INDICATOR LAMP</b>	
Check security indicator lamp.		
<b>Is security indicator lamp OK?</b>		
Yes	▶	GO TO 5.
No	▶	Replace security indicator lamp.

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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"> <li>1. Connect NVIS (NATS) IMMU connector.</li> <li>2. Disconnect security indicator lamp connector.</li> <li>3. Check continuity between NVIS (NATS) IMMU terminal 5 and ground.</li> </ol>		
<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="text-align: center;">  <p>NVIS (NATS) IMMU connector (E111)</p> <p>5</p> <p>GY/R</p> </div> <div style="text-align: center;">  <p>H.S.</p> <p>CONNECT</p>  </div> <div style="text-align: right;"> <p><b>Continuity should exist intermittently.</b></p> </div> </div> <p style="text-align: right; margin-top: 20px;">LEL552</p> <p style="text-align: center; margin-top: 10px;"><b>OK or NG</b></p>		
OK	▶	Check harness for open or short between security indicator lamp and 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

<b>1</b>	<b>CONFIRM SELF-DIAGNOSTIC RESULTS</b>											
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												
<b>Is CONSULT-II screen displayed as above?</b>												
Yes	▶	GO TO 2.										
No	▶	GO TO SYMPTOM MATRIX CHART 1.										

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

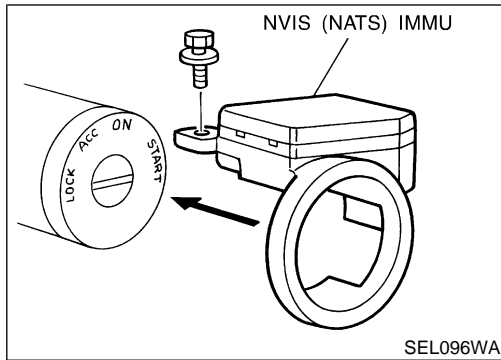
<b>3</b>	<b>CHECK NVIS (NATS) IMMU ILLUSTRATION</b>	
Check NVIS (NATS) IMMU installation. Refer to “How to Replace NVIS (NATS) IMMU” in EL-324.		
<b>OK or NG</b>		
OK	▶	GO TO 4.
NG	▶	Reinstall NVIS (NATS) IMMU correctly.

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# NVIS (NISSAN VEHICLE IMMOBILIZER SYSTEM — NATS)

Trouble Diagnoses (Cont'd)

<b>4</b>	<b>PERFORM INITIALIZATION WITH CONSULT-II</b>			
<p>Perform initialization with CONSULT-II. For initialization, refer to "CONSULT-II OPERATION MANUAL IVIS/NVIS".</p>				
<table border="1"> <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><b>NOTE:</b> If the initialization is not completed or fails, CONSULT-II shows the above message on the screen.</p>				
<b>Can the system be initialized?</b>				
Yes	▶ System is OK.			
No	▶ Check "CHAIN OF IMMU-KEY". Refer to "DIAGNOSTIC PROCEDURE 4", EL-319.			



## How to Replace NVIS (NATS) IMMU

NIEL0178

**NOTE:**

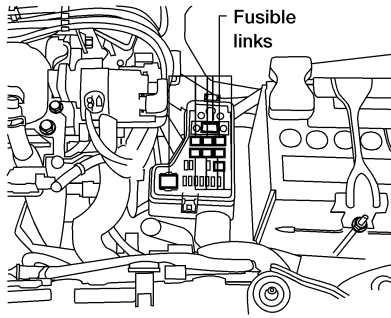
- If NVIS (NATS) IMMU is not installed correctly, NVIS (NATS) system will not operate properly and SELF-DIAG RESULTS on CONSULT-II screen will show "LOCK MODE" or "CHAIN OF IMMU-KEY".

# ELECTRICAL UNITS LOCATION

Engine Compartment

## Engine Compartment

NIEL0129



GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

**EL**

IDX

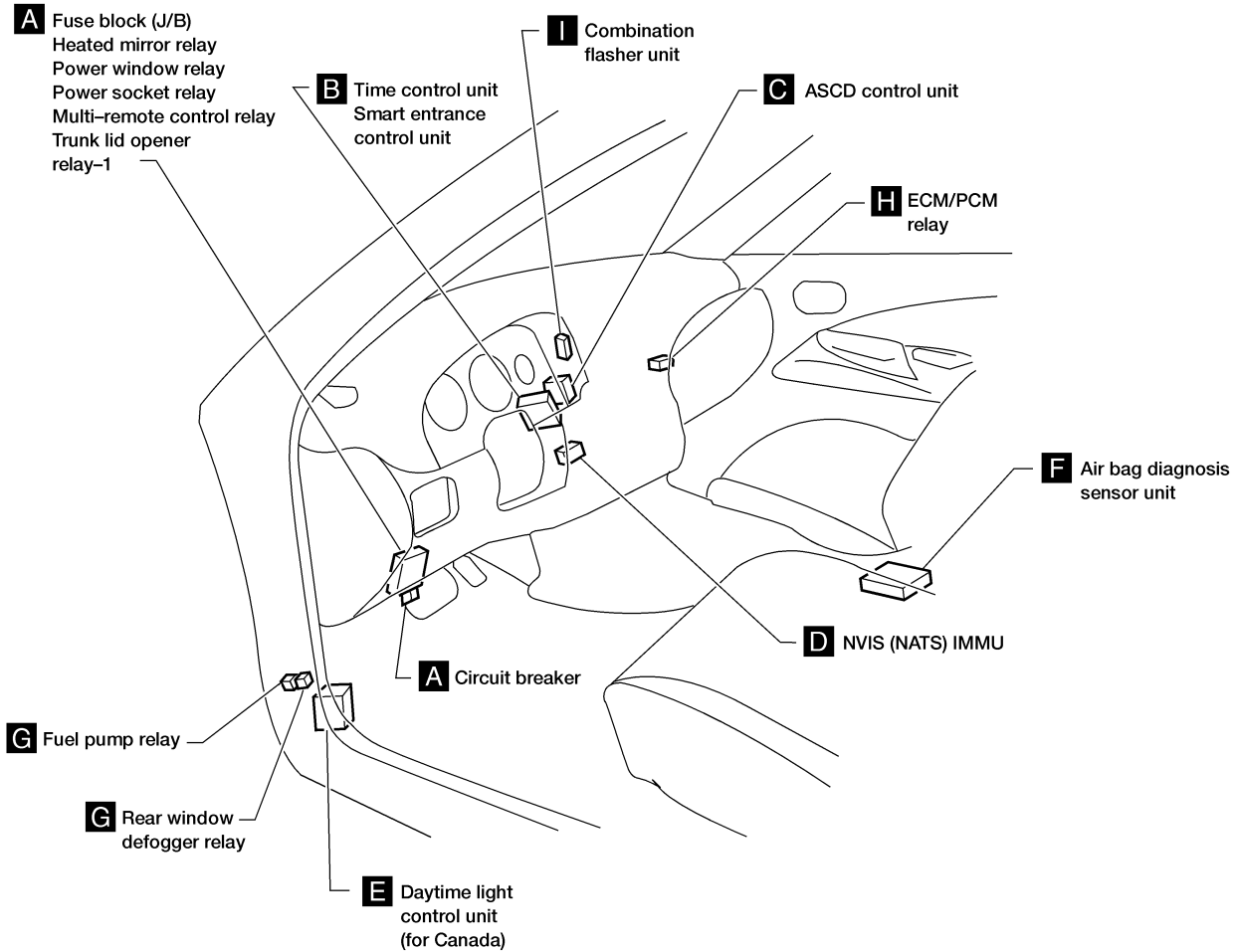
LEL571

# ELECTRICAL UNITS LOCATION

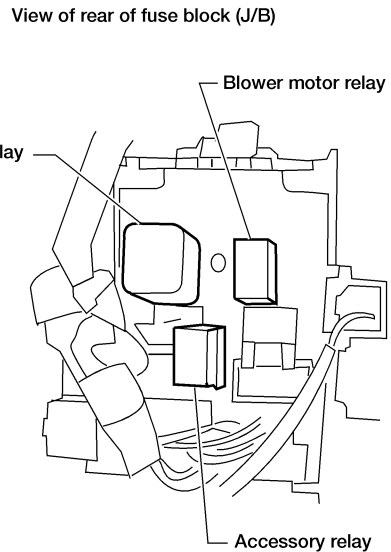
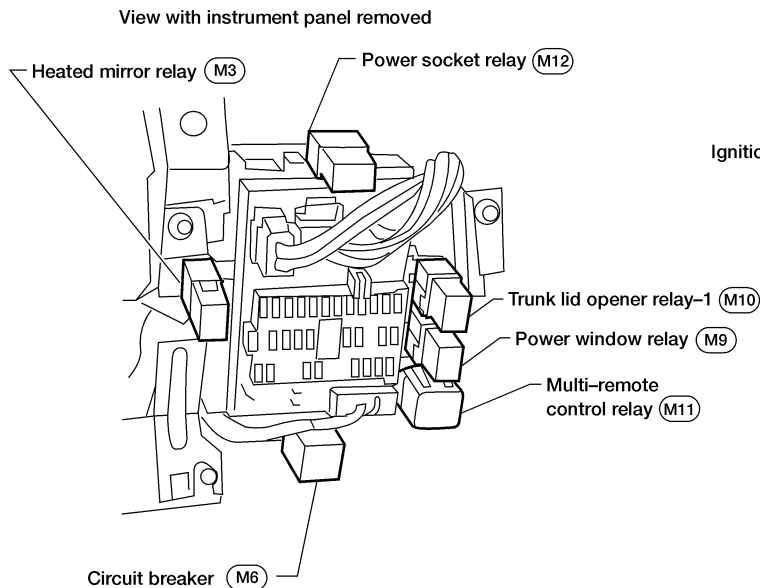
Passenger Compartment

## Passenger Compartment

NIEL0130



**A** Instrument panel LH side



LEL572

# ELECTRICAL UNITS LOCATION

Passenger Compartment (Cont'd)

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

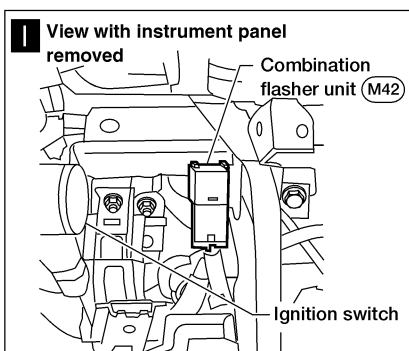
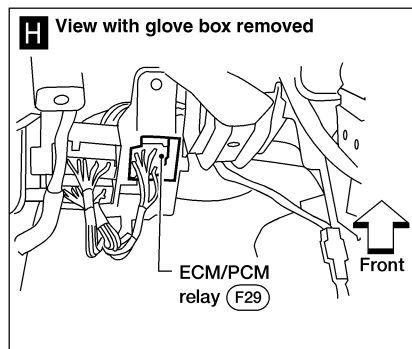
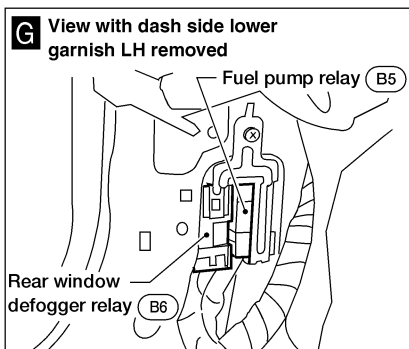
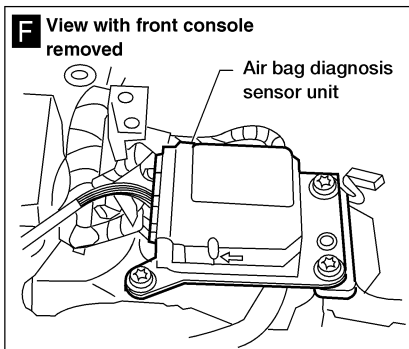
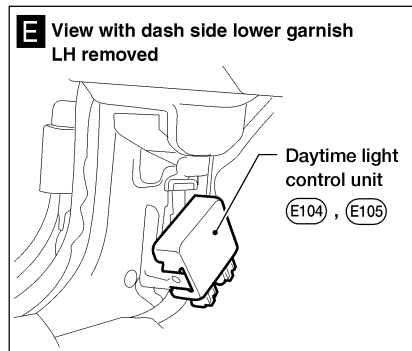
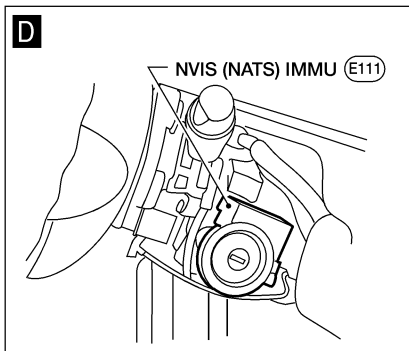
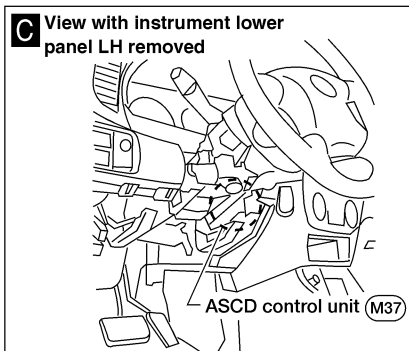
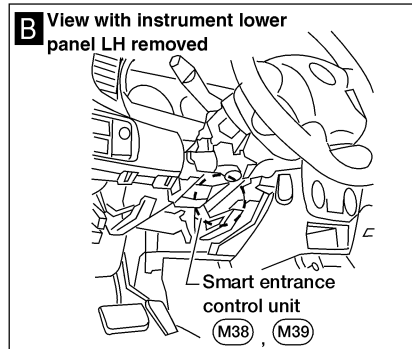
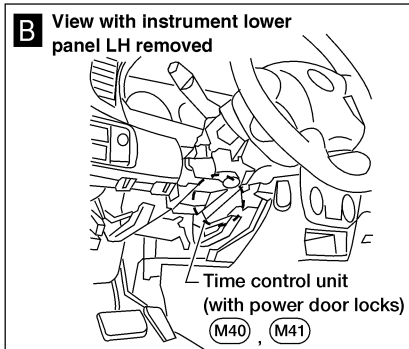
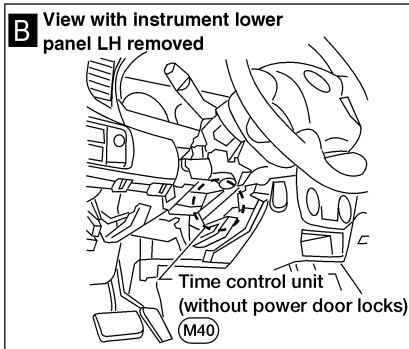
BT

HA

SC

EL

IDX



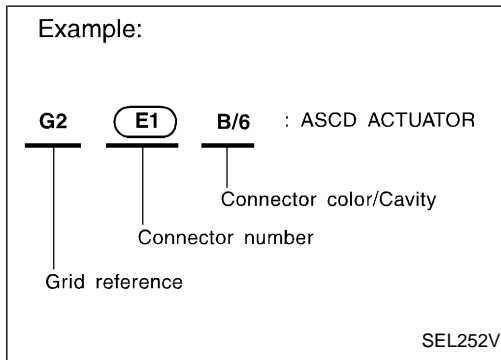
LEL573

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

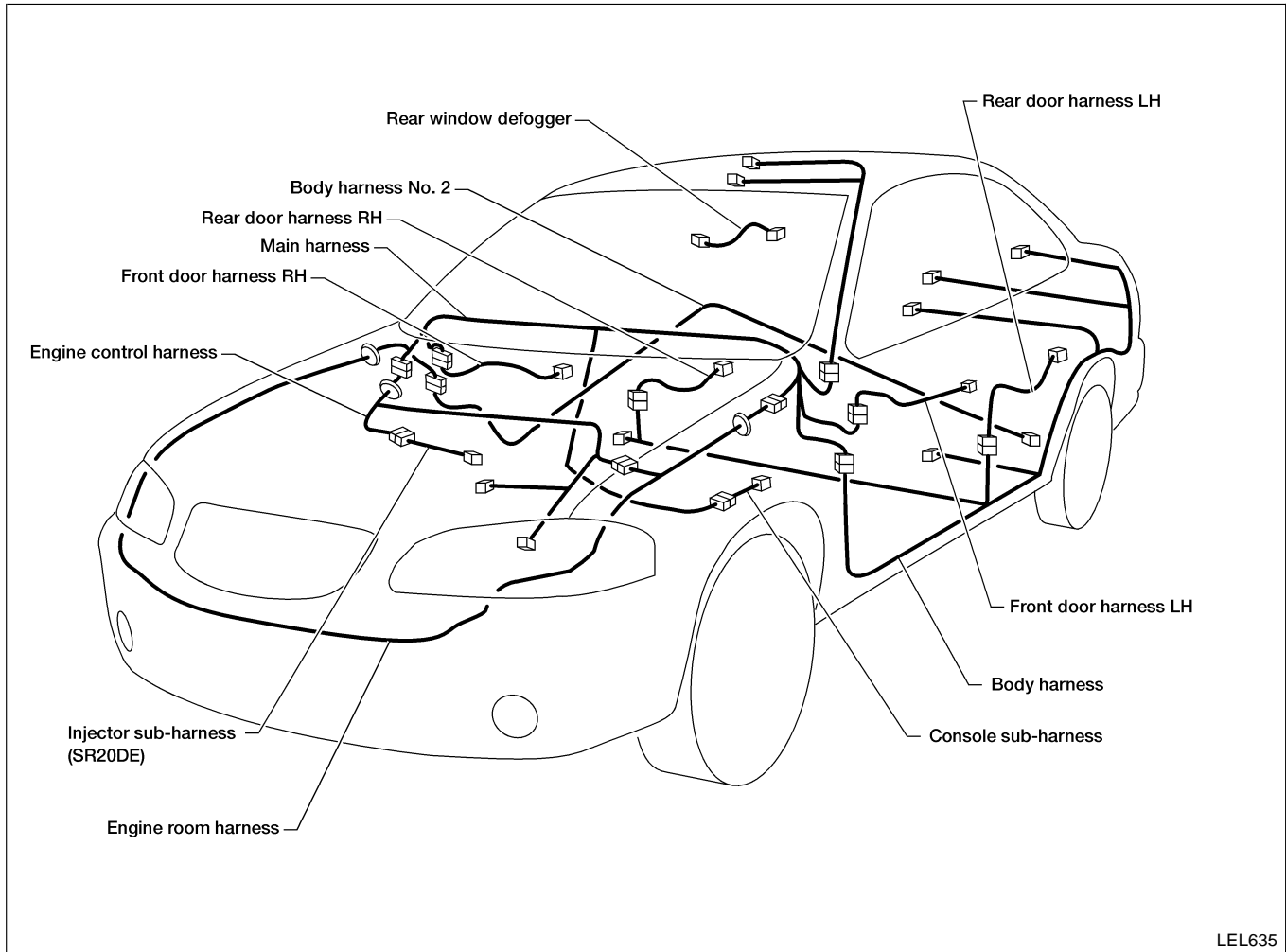


# HARNES LAYOUT

Outline

## Outline

NIEL0132



LEL635

### NOTE:

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

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

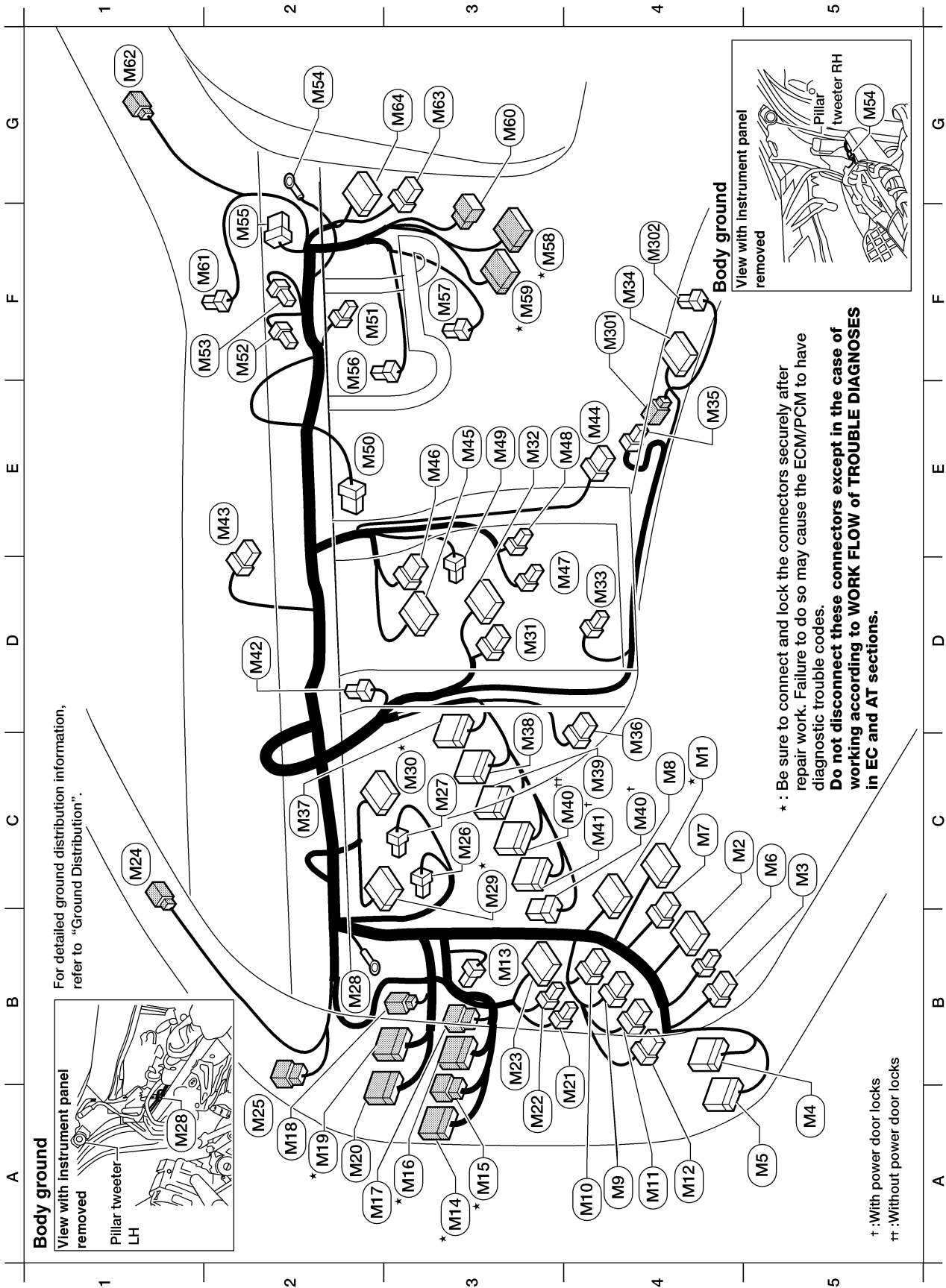
IDX

# HARNESS LAYOUT

Main Harness

## Main Harness

NIEL0133

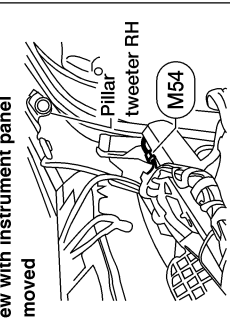


For detailed ground distribution information, refer to "Ground Distribution".

**Body ground**  
View with instrument panel removed

Pillar tweeter  
LH

**Body ground**  
View with instrument panel removed



\* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM/PCM 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.**

† :With power door locks  
†† :Without power door locks

LEL623

# HARNES LAYOUT

Main Harness (Cont'd)

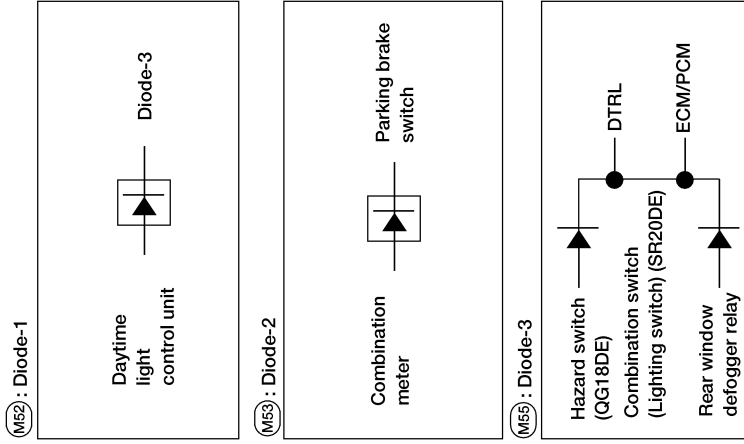
## Main harness

- 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-1
- 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

- 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)

## Console Sub-harness

- F4 (M301) W/2 : To (M35)
- F4 (M302) B/2 : Power socket



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

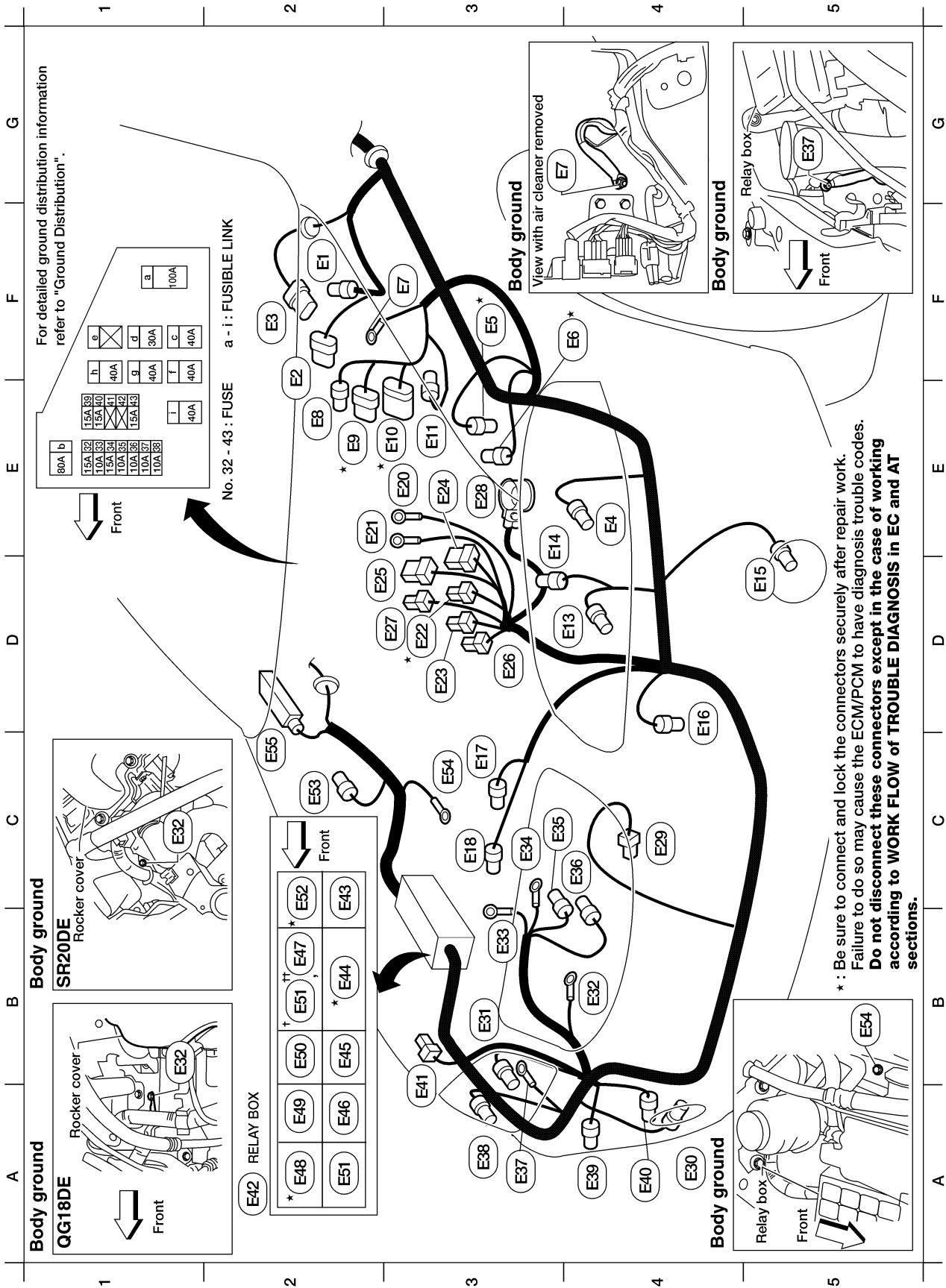
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 IDX  
 SC  
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 CL  
 FE  
 EC  
 LC  
 EM  
 MA  
 GI

# HARNESS LAYOUT

Engine Room Harness

## Engine Room Harness

NIEL0134



LEL632

# 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) GY/3	: Front combination lamp LH	C3	(E34)	: Generator
F3	* (E5) 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) 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	A3	(E41) B/1	: Theft warning horn
D4	(E13) B/3	: Headlamp LH	A2	(E42)	: Relay box
E3	(E14) W/2	: Hood switch	B2	(E43) BR/6	: Theft warning lamp relay
D5	(E15) GY/2	: Front fog lamp LH	B2	* (E44) BR/6	: Cooling fan relay-3
D4	(E16) B/3	: Refrigerant pressure sensor	A2	(E45) BR/6	: Theft warning horn relay
C3	(E17) GY/4	: Cooling fan motor 1	A2	(E46) L/5	: Front fog lamp relay
C3	(E18) GY/4	: Cooling fan motor 2	B2	†† (E47) B/5	: Trunk lid opener relay-2 (M/T)
E3	(E20)	: Fuse and fusible link box	A2	* (E48) BR/6	: Cooling fan relay-1
E3	(E21)	: Fuse and fusible link box	A2	(E49) W/3	: Horn relay
D3	(E22) W/3	: Fuse and fusible link box	A2	(E50) L/5	: A/C relay
D3	* (E23) W/4	: Fuse and fusible link box	A2	(E51) L/5	: Clutch interlock relay (M/T)
E3	(E24) W/6	: Fuse and fusible link box	B2	(E51) L/5	: Park/neutral position (PNP) relay (A/T, without ASCD)
D3	(E25) B/6	: Fuse and fusible link box	B2	† (E51) GY/6	: Park/neutral position (PNP) relay (A/T, with ASCD)
D3	(E26) W/1	: Fuse and fusible link box	B2	† (E52) BR/6	: Cooling fan relay-2
D3	(E27) B/1	: Fuse and fusible link box	C2	* (E53) GY/2	: Front wheel sensor RH
E3	(E28)	: Battery (positive)	C3	(E54)	: Body ground
C4	(E29) B/1	: Horn	C2	(E55) B/31	: ABS actuator and electric unit (control unit)
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/PCM 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.**

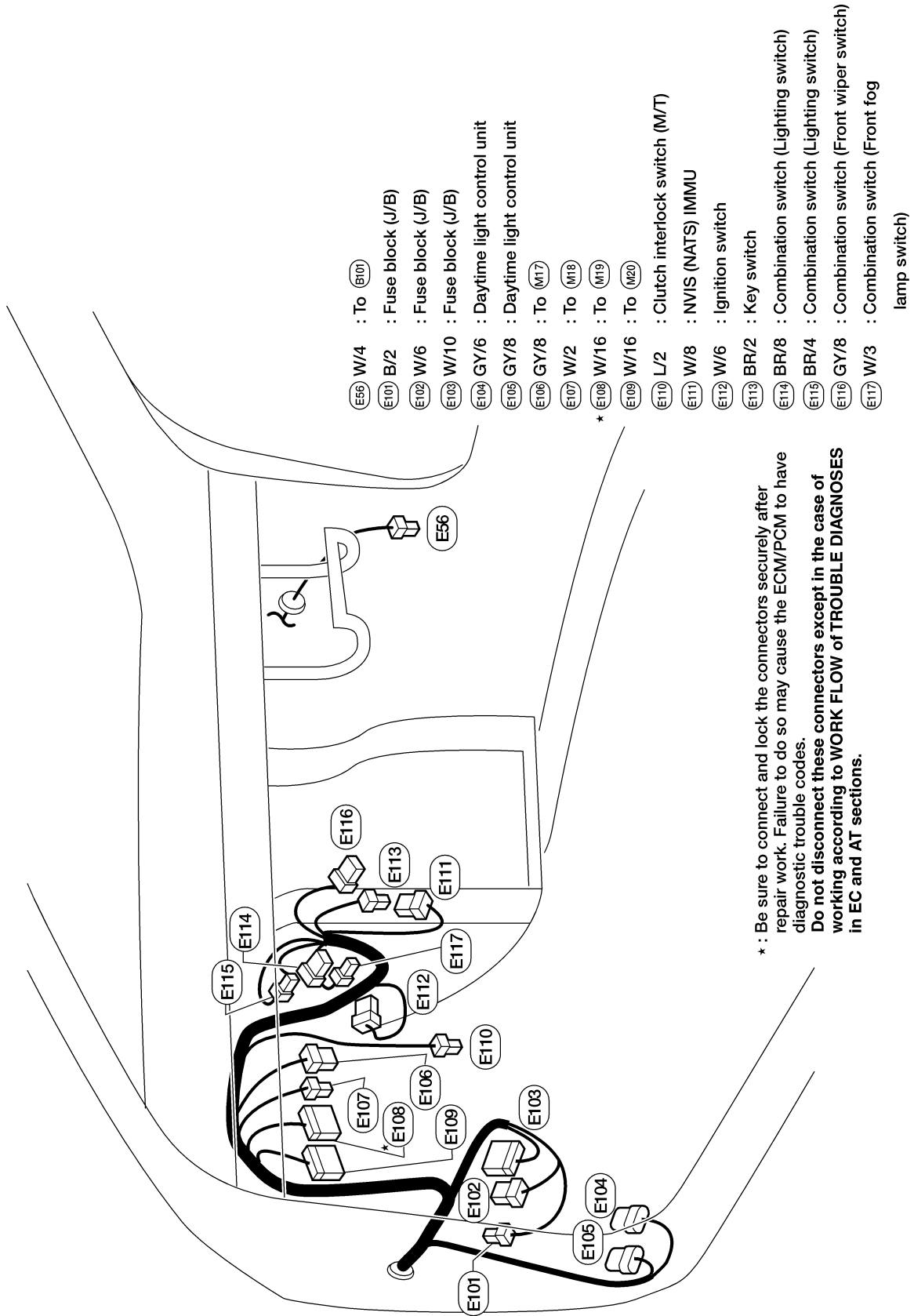
GI  
MA  
EM  
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HA  
SC

EL

IDX

# HARNES LAYOUT

Engine Room Harness (Cont'd)



# HARNES LAYOUT

Engine Control Harness

## Engine Control Harness

QG18DE (EXCEPT CALIF. CA MODEL)

NIEL0135

NIEL0135S01

GI

MA

EM

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EC

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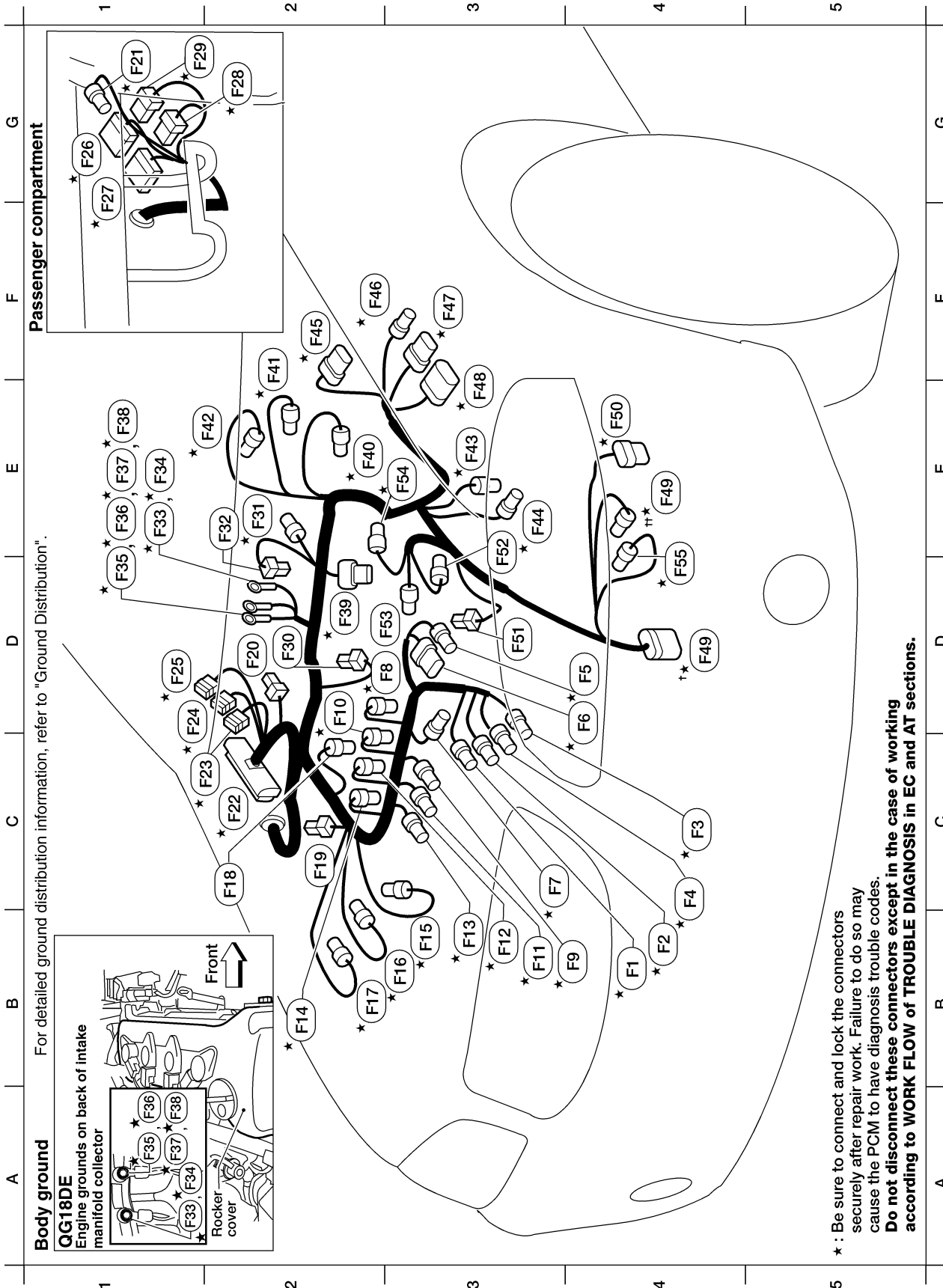
BT

HA

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EL

IDX



\* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the PCM 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.

LEL628

# HARNESS LAYOUT

Engine Control Harness (Cont'd)

## Engine control harness

B4	* (F1) GY/3 : Heated oxygen sensor 1 (Front) (Bank 2)	G1	* (F29) BR/6 : PCM Relay
B4	* (F2) B/4 : Heated oxygen sensor 2 (Rear) (Bank 1)	D2	(F30) : Power steering oil pressure switch
C4	* (F3) GY/3 : Heated oxygen sensor 1 (Front) (Bank 1)	E2	* (F31) GY/2 : Knock sensor
C4	* (F4) GY/4 : Heated oxygen sensor 2 (Rear) (Bank 2)	E2	(F32) B/1 : Oil pressure switch
D4	* (F5) L/2 : EVAP canister purge volume control solenoid valve	E1	* (F33) : Engine ground
D4	* (F6) G/6 : EGR volume control valve	E1	* (F34) : Engine ground
C3	* (F7) GY/3 : Ignition coil No. 4	D1	* (F35) : Engine ground
D3	* (F8) GY/2 : Injector No.4	E1	* (F36) : Engine ground
B4	* (F9) GY/3 : Ignition coil No. 3	E1	* (F37) : Engine ground
D2	* (F10) GY/2 : Injector No. 3	E1	* (F38) : Engine ground
B3	* (F11) GY/3 : Ignition coil No. 2	D2	* (F39) L/6 : IACV-ACC valve
B3	* (F12) GY/2 : Injector No. 2	E2	* (F40) GY/3 : Throttle position switch
B3	* (F13) GY/3 : Ignition coil No. 1	F2	* (F41) BR/3 : Throttle position sensor
B2	* (F14) GY/2 : Injector No. 1	E2	* (F42) L/2 : EGR temperature sensor
B3	* (F15) GY/2 : Engine coolant temperature sensor	E3	* (F43) GY/2 : Vehicle speed sensor
B3	* (F16) B/3 : Camshaft position sensor (PHASE)	E3	* (F44) BR/3 : Revolution sensor (A/T)
B2	* (F17) G/3 : Intake valve timing control position sensor	F2	* (F45) GY/5 : Mass air flow sensor
C2	* (F18) G/2 : Intake valve timing control solenoid valve	F2	* (F46) GY/1 : To (E8)
C2	(F19) GY/2 : Condenser	F3	* (F47) GY/8 : To (E8)
D2	(F20) GY/2 : Swirl control valve control vacuum check switch	E3	* (F48) GY/10 : To (E10)
G1	* (F21) GY/3 : Absolute pressure sensor	E4	<sup>††</sup> * (F49) B/2 : Park/neutral position (PNP) switch (M/T)
C2	* (F22) SMJ : PCM	D4	<sup>†</sup> * (F49) B/10 : Park/neutral position (PNP) switch (A/T)
C2	* (F23) G/12 : Joint connector-1 (GREEN)	E4	* (F50) B/8 : Terminal cord assembly (A/T)
D1	* (F24) L/12 : Joint connector-2 (BLUE)	D3	* (F51) B/1 : Terminal transmitter
D1	* (F25) GY/6 : Joint connector-3 (GRAY)	E3	* (F52) B/3 : Crankshaft position sensor (POS)
G1	* (F26) W/16 : To (M58)	D3	(F53) GY/1 : Starter motor
F1	* (F27) BR/16 : To (M59)	E3	* (F54) G/2 : Swirl control valve control solenoid valve
G2	* (F28) W/6 : To (M60)	E4	(F55) B/2 : Back-up lamp switch

\* : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the PCM 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.**

WEL558A

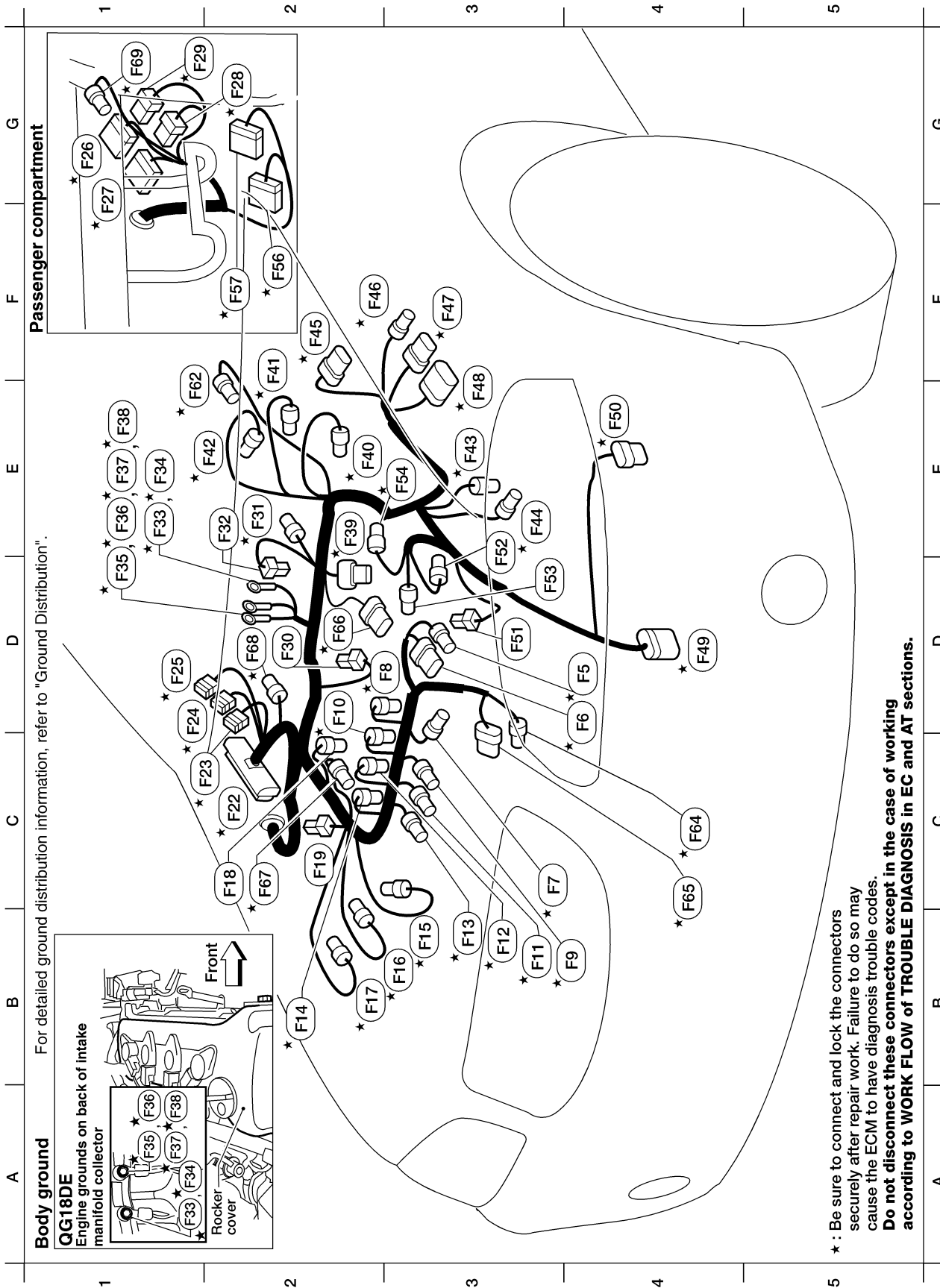


# HARNESS LAYOUT

Engine Control Harness (Cont'd)

QG18DE (CALIF. CA MODEL)

NIEL0135S02



\* : 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.**

GI  
 MA  
 EM  
 LC  
 EC  
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 SC  
**EL**  
 IDX

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

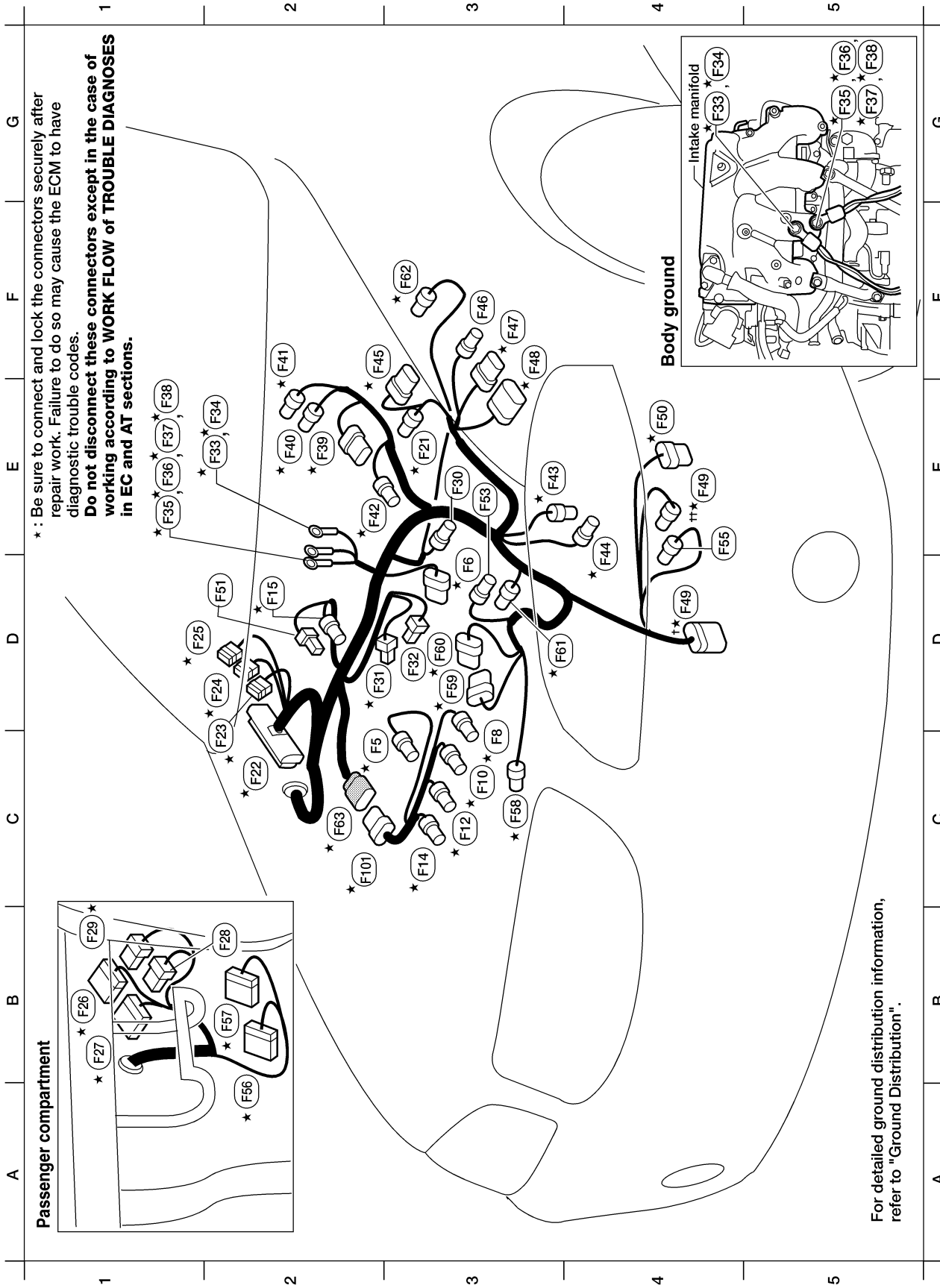
# HARNESS LAYOUT

Engine Control Harness (Cont'd)

SR20DE

NIEL0135S03

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



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

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

# HARNESS 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
E3	* (F21) GY/3	: Absolute pressure 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 (POS)
F3	* (F62) GY/4	: Heated oxygen sensor 2 (Rear)
C2	* (F63) G/8	: To (F10)

## Engine control sub-harness

C2	* (F5) L/2	: EVAP cannister 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	* (F10) G/8	: To (F63)

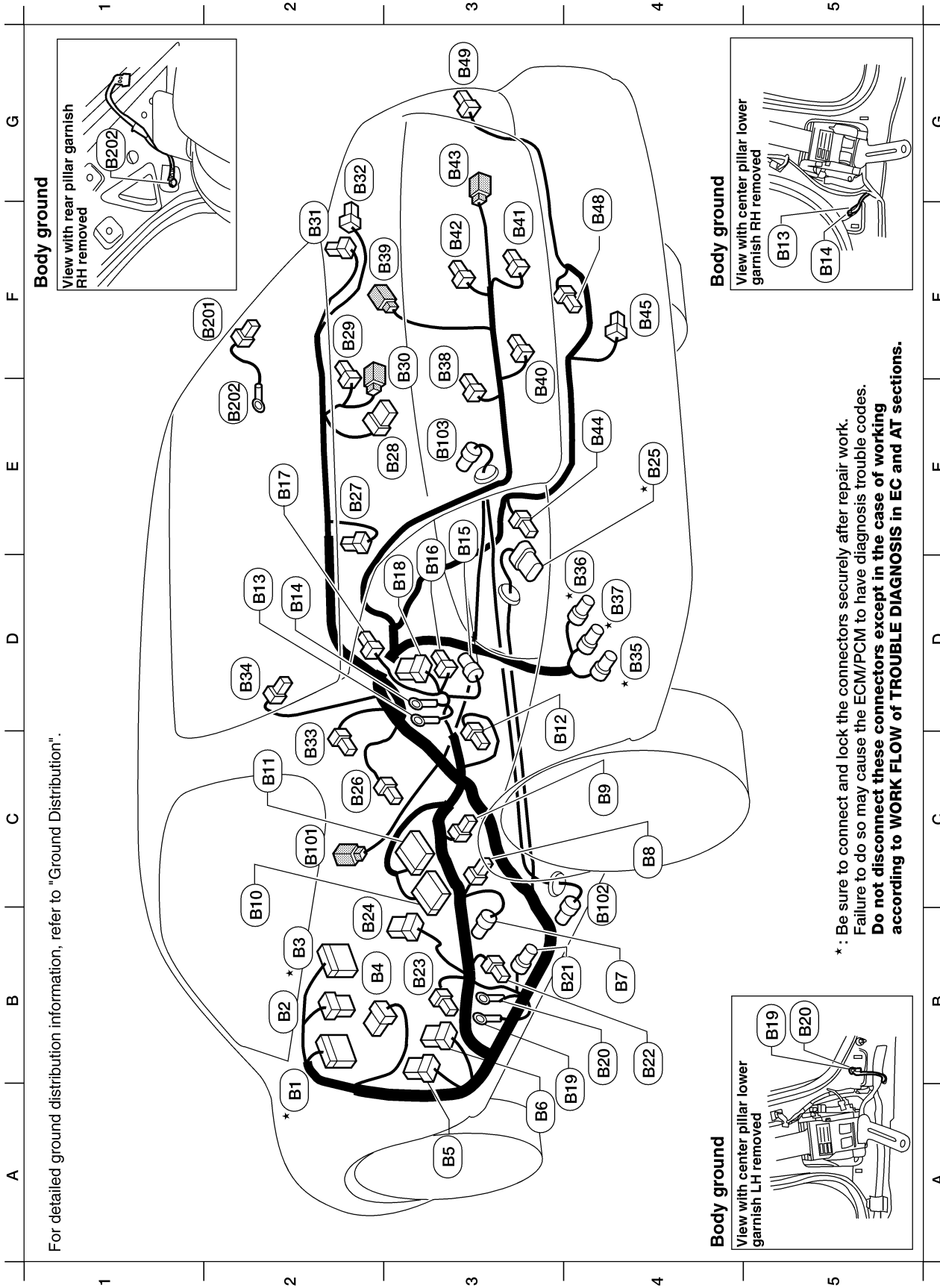
LEL627

# HARNESS LAYOUT

Body Harness

NIEL0136

## Body Harness



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

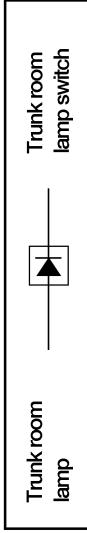
LEL621

# HARNESS LAYOUT

Body Harness (Cont'd)

## Body harness

A2	*	(E1)	BR/16	: TO	(M14)
B2		(E2)	W/6	: TO	(M15)
B2	*	(E3)	W/20	: TO	(M16)
B2		(E4)	W/8	: Fuse block (J/B)	
A3		(E5)	L/5	: Fuel pump relay	
A3		(E6)	BR/6	: Rear window defogger relay	
B4		(E7)	Y/2	: Front LH side air bag module	
C4		(E8)	W/3	: Seat belt buckle switch LH	
C4		(E9)	B/1	: Parking brake switch	
C2		(E10)	Y/12	: Air bag diagnosis sensor unit	
C2		(E11)	Y/12	: Air bag diagnosis sensor unit	
D4		(E12)	Y/2	: Front RH side air bag module	
D2		(E13)	-	: Body ground	
D2		(E14)	-	: Body ground	
E3		(E15)	Y/2	: RH side air bag (Satellite) sensor	
E3		(E16)	W/4	: Front RH seat belt pre-tensioner	
E2		(E17)	W/3	: Front door switch RH	
D3		(E18)	W/8	: To (G301)	
A4		(E19)	-	: Body ground	
B4		(E20)	-	: Body ground (With side air bags)	
B3		(E21)	Y/2	: LH side air bag (Satellite) sensor	
B4		(E22)	W/4	: Front LH seat belt pre-tensioner	
B3		(E23)	W/3	: Front door switch LH	
B2		(E24)	W/8	: To (G201)	
E4	*	(E25)	GY/5	: Fuel level sensor unit and fuel pump	
C2		(E26)	W/1	: Rear door switch LH	
E2		(E27)	BR/2	: Rear speaker LH	
E3		(E28)	W/8	: Sub woofer	
F2		(E29)	W/2	: High-mounted stop lamp (Without spoiler)	
F3		(E30)	W/2	: Trunk room lamp	
F2		(E31)	BR/2	: Rear speaker RH	
F2		(E32)	W/1	: Rear door speaker RH	
C2		(E33)	W/2	: Diode-4	
D2		(E34)	B/1	: Rear window defogger	
D4	*	(E35)	B/2	: EVAP canister vent control wave	
D4	*	(E36)	GY/3	: EVAP control system pressure sensor	
D4	*	(E37)	G/2	: Vacuum cut valve bypass valve	
F3		(E38)	W/2	: Back-up lamp LH	
F2		(E39)	BR/2	: High-mounted stop lamp (With spoiler)	
E3		(E40)	W/2	: License plate lamp LH	
F3		(E41)	W/2	: License plate lamp RH	
F3		(E42)	W/2	: Back-up lamp RH	
G3		(E43)	W/2	: Trunk lid key cylinder switch (Unlock switch) (With theft warning system)	
E4		(E44)	W/4	: Rear combination lamp LH	
F4		(E45)	W/4	: Trunk lid opener actuator	
F4		(E46)	W/2	: Trunk room lamp switch	
G3		(E49)	W/4	: Rear combination lamp RH	
			<b>Body harness No. 2</b>		
C2		(E101)	W/4	: To (E56)	
C4		(E102)	BR/2	: Rear wheel sensor LH	
E3		(E103)	GY/2	: Rear wheel sensor RH	
			<b>Rear window defogger ground sub-harness</b>		
F2		(E201)	B/1	: Rear window defogger	
F2		(E202)	-	: Body ground	
			(E33)	: Diode-4	



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

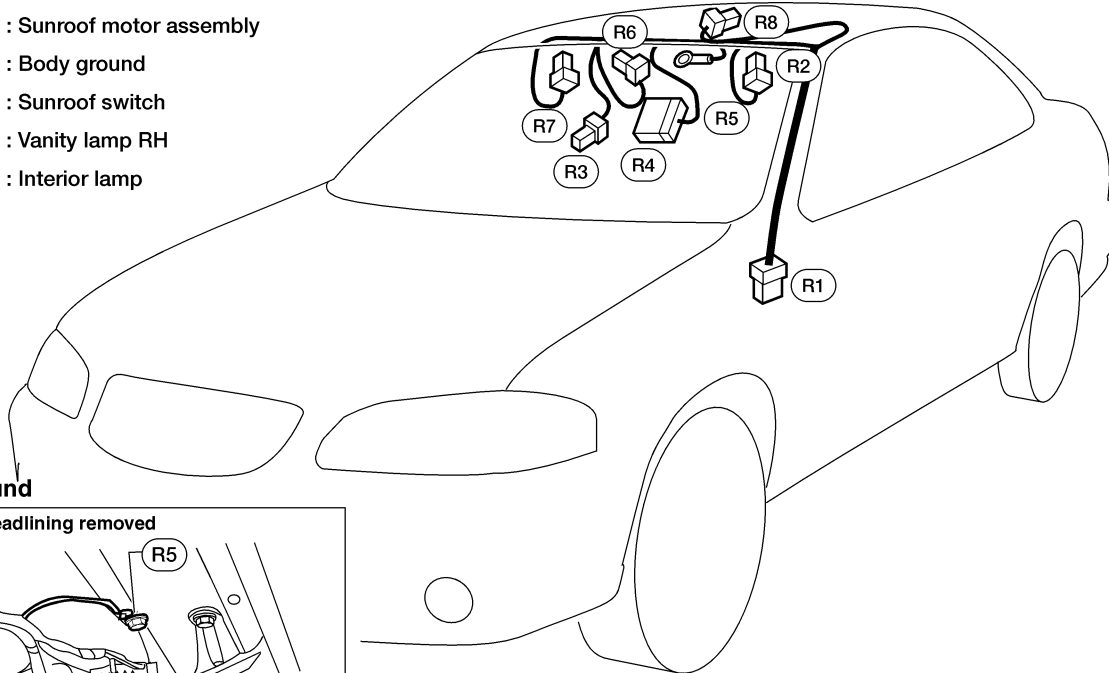
# HARNES LAYOUT

Room Lamp Harness

## Room Lamp Harness

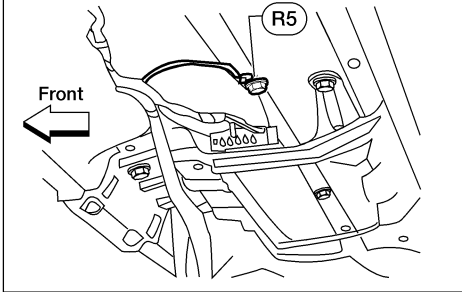
NIEL0140

- (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

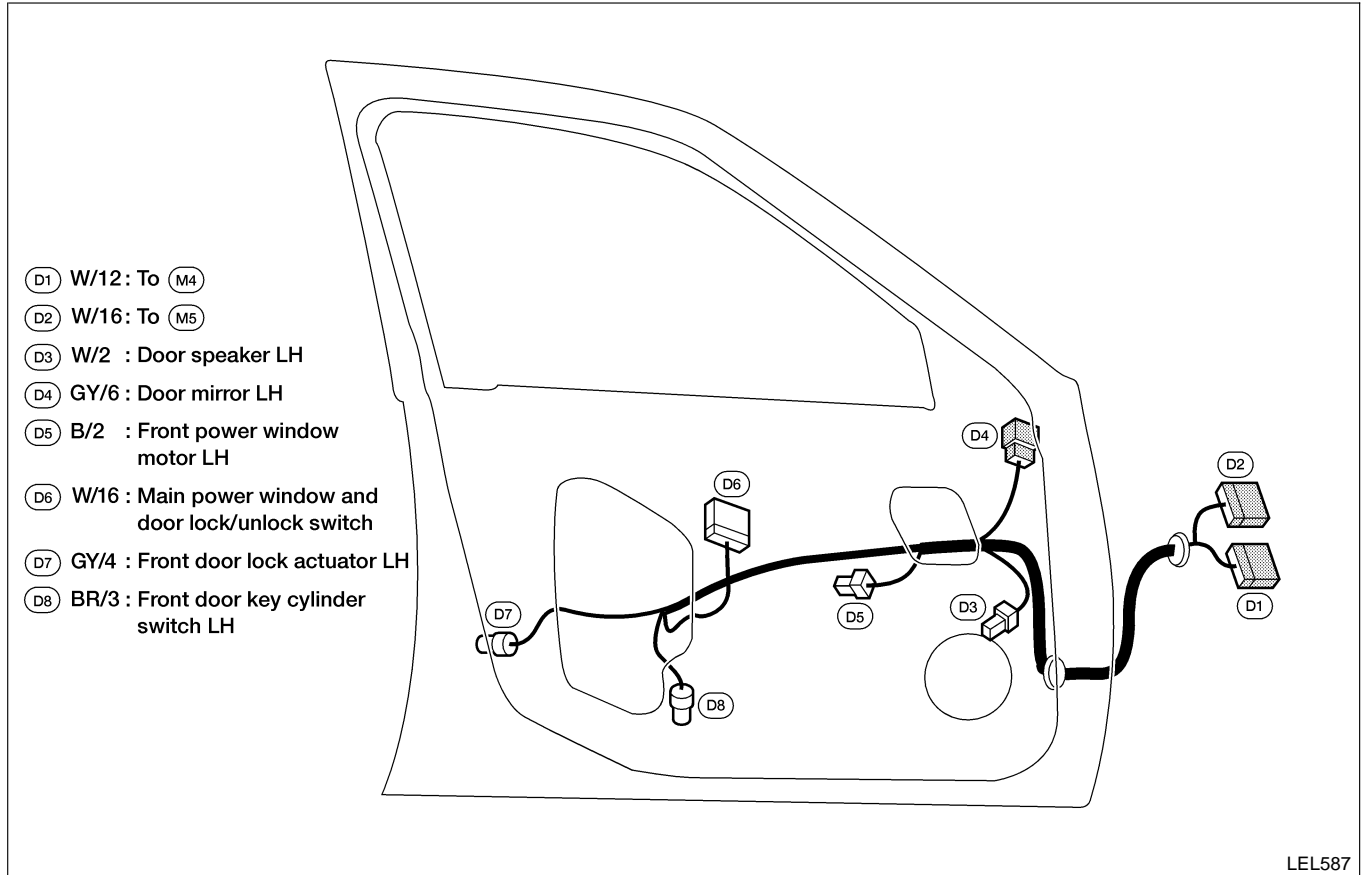
Front Door Harness

## Front Door Harness

NIEL0142

LH SIDE

NIEL0142S03



LEL587



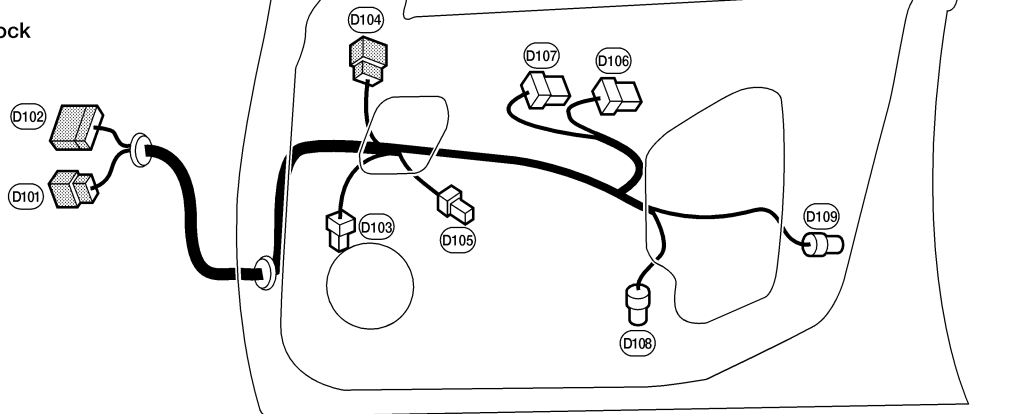
# HARNESS LAYOUT

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
- ⓓ108 BR/3 : Front door key cylinder switch RH
- ⓓ109 GY/4 : Front door lock acutator RH



LEL588

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# HARNESS LAYOUT

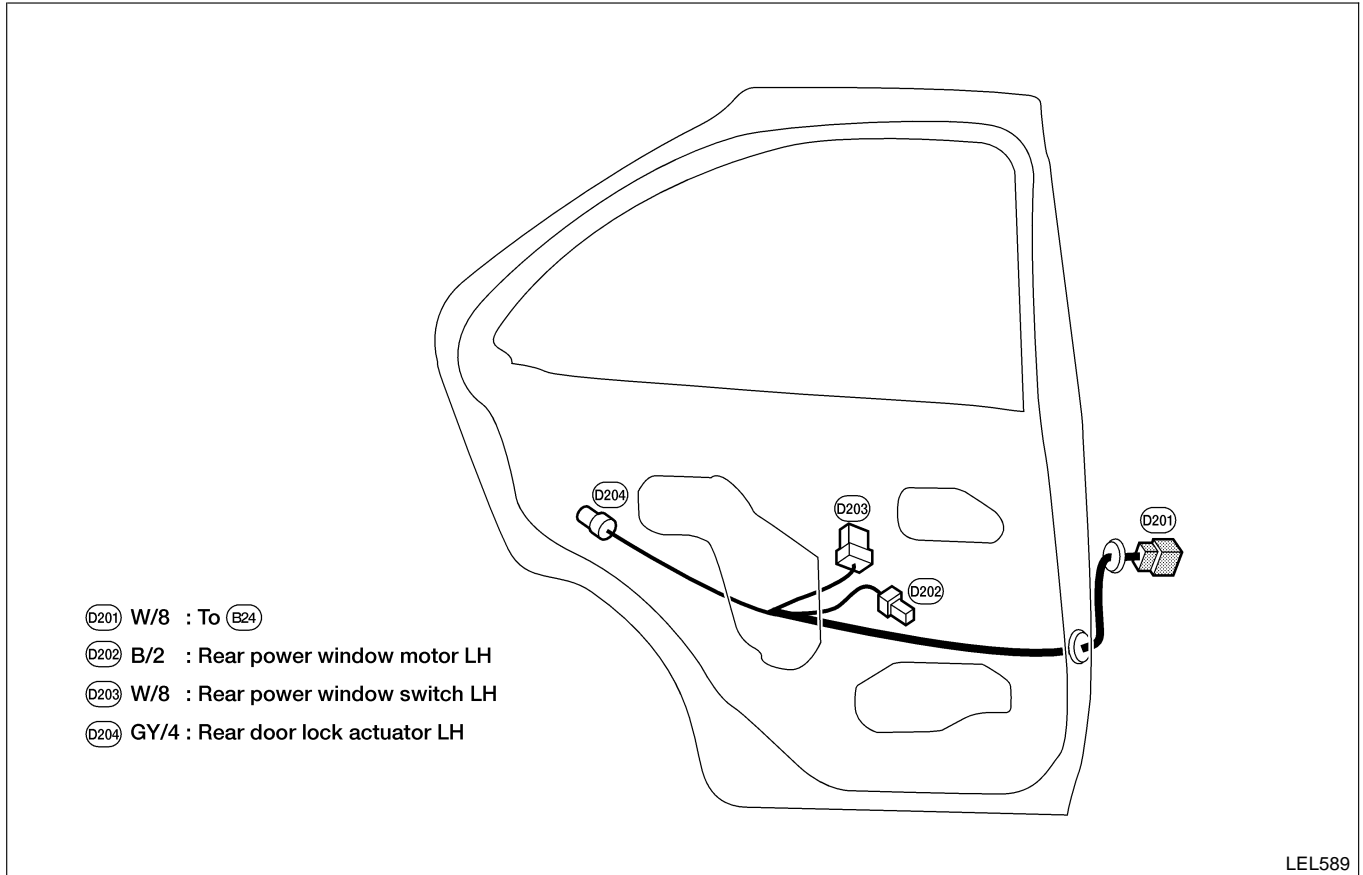
Rear Door Harness

## Rear Door Harness

NIEL0143

LH SIDE

NIEL0143S03



LEL589

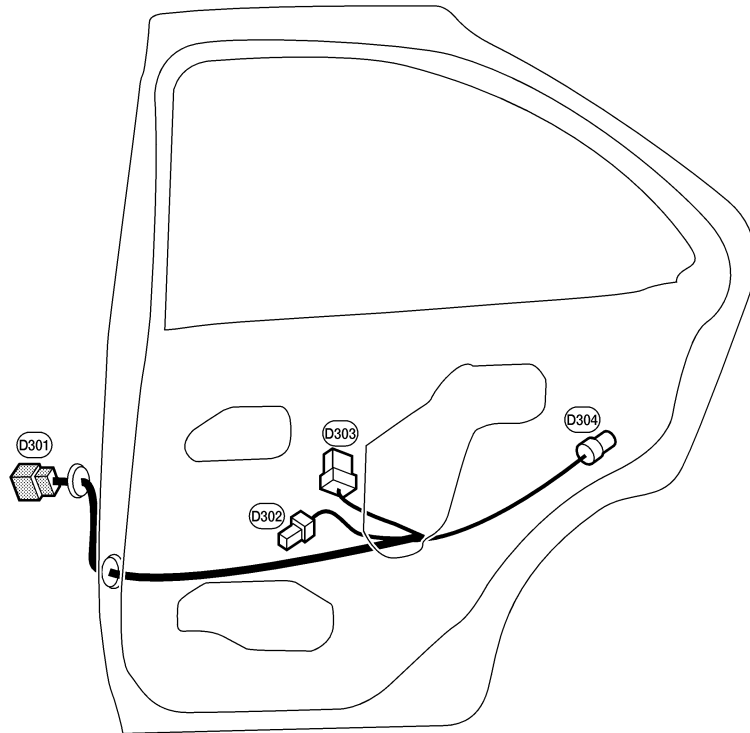
# HARNESS LAYOUT

Rear Door Harness (Cont'd)

RH SIDE

NIEL0143S04

- ⓓ301 W/8 : To ⓓ18
- ⓓ302 B/2 : Rear power window motor RH
- ⓓ303 W/8 : Rear power window switch RH
- ⓓ304 GY/4 : Rear door lock actuator RH



LEL590

GI  
MA  
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EL  
IDX

# BULB SPECIFICATIONS

## Headlamp

### Headlamp

NIEL0144S03

Item	Wattage (W)	Bulb No.*
High/Low	65/55	9007 (HB5)

\*Always check with the Parts Department at an authorized NISSAN dealer 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 at an authorized NISSAN dealer 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 at an authorized NISSAN dealer 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
BYP/SV	EC	Vacuum Cut Valve Bypass Valve
CHARGE	SC	Charging System
CHIME	EL	Warning Chime
CIGAR	EL	Cigarette Lighter
COOL/F	EC	Cooling Fan Control
DEF	EL	Rear Window Defogger
D/LOCK	EL	Power Door Lock
DTRL	EL	Headlamp - With Daytime Light System
ECTS	EC	Engine Coolant Temperature Sensor
EGRC1	EC	EGR Function
EGVC/V	EC	EGR Volume Control Valve
EGR/TS	EC	EGR Temperature Sensor
ENGSS	AT	Engine Speed Signal
F/FOG	EL	Front Fog Lamp

Code	Section	Wiring Diagram Name
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
LOAD	EC	Load Signal
LPSV	AT	Line Pressure Solenoid Valve
MAFS	EC	Mass Air Flow Sensor

GI

MA

EM

LC

EC

FE

CL

MT

AT

AX

SU

BR

ST

RS

BT

HA

SC

EL

IDX

## WIRING DIAGRAM CODES (CELL CODES)

Code	Section	Wiring Diagram Name	Code	Section	Wiring Diagram Name
MAIN	AT	Main Power Supply and Ground Circuit	PST/SW	EC	Power Steering Oil Pressure Switch
MAIN	EC	Main Power Supply and Ground Circuit	RP/SEN	EC	Refrigerant Pressure Sensor
METER	EL	Speedometer, Tachometer, Temp., Oil, and Fuel Gauges	SHIFT	AT	A/T Shift Lock System
MIL/DL	EC	MIL & Data Link Connector	SROOF	EL	Sunroof
MIRROR	EL	Power Door Mirror	SRS	RS	Supplemental Restraint System
MULTI	EL	Multi-remote Control System	S/SIG	EC	Start Signal
NATS	EL	NVIS (Nissan Vehicle Immobilizer System — NATS)	SSV/A	AT	Shift Solenoid Valve A
NONDTC	AT	Non-detectable Items	SSV/B	AT	Shift Solenoid Valve B
OVRCSV	AT	Overrun Clutch Solenoid Valve	START	SC	Starting System
O2H1B1	EC	Heated Oxygen Sensor 1 Heater (Front) (Bank1) [QG18DE (Except Calif. CA Model)]	STOP/L	EL	Stop Lamp
O2H1B2	EC	Heated Oxygen Sensor 1 Heater (Front) (Bank2) [QG18DE (Except Calif. CA Model)]	S/VCSW	EC	Swirl Control Valve Control Vacuum Check Switch
O2H2B1	EC	Heated Oxygen Sensor 2 Heater (Rear) (Bank1) [QG18DE (Except Calif. CA Model)]	SWL/S	EC	Swirl Control Valve Position Sensor
O2H2B2	EC	Heated Oxygen Sensor 2 Heater (Rear) (Bank2) [QG18DE (Except Calif. CA Model)]	SWL/V	EC	Swirl Control Valve
O2S1B1	EC	Heated Oxygen Sensor 1 (Front) (Bank1) [QG18DE (Except Calif. CA Model)]	TAIL/L	EL	Parking, License and Tail Lamps
O2S1B2	EC	Heated Oxygen Sensor 1 (Front) (Bank2) [QG18DE (Except Calif. CA Model)]	TCCSIG	AT	A/T TCC Signal (Lock Up)
O2S2B1	EC	Heated Oxygen Sensor 2 (Rear) (Bank1) [QG18DE (Except Calif. CA Model)]	TCV	AT	Torque Converter Clutch Solenoid Valve
O2S2B2	EC	Heated Oxygen Sensor 2 (Rear) (Bank2) [QG18DE (Except Calif. CA Model)]	TLID	EL	Trunk Lid Opener
PGC/V	EC	EVAP Canister Purge Volume Control Solenoid Valve	THEFT	EL	Theft Warning System
PHASE	EC	Camshaft Position Sensor (PHASE)	TPS	AT	Throttle Position Sensor
PNP/SW	AT	Park/Neutral Position Switch	TPS	EC	Throttle Position Sensor
PNP/SW	EC	Park/Neutral Position Switch	TP/SW	EC	Closed Throttle Position Switch
POS	EC	Crankshaft Position Sensor (POS)	TURN	EL	Turn Signal and Hazard Warning Lamps
POWER	EL	Power Supply Routing	VENT/V	EC	EVAP Canister Vent Control Valve
PRE/SE	EC	EVAP Control System Pressure Sensor	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