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LIGHTING SYSTEM

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### PRECAUTIONS

### PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SRS and SB 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 must be performed by an authorized NISSAN/INFINITI 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 SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

### Wiring Diagrams and Trouble Diagnosis

When you read wiring diagrams, refer to the following:

- GI-14, "How to Read Wiring Diagrams"
- <u>PG-3, "POWER SUPPLY ROUTING"</u> for power distribution circuit

When you perform trouble diagnosis, refer to the following:

- GI-10, "HOW TO FOLLOW TEST GROUPS IN TROUBLE DIAGNOSES"
- GI-26, "How to Perform Efficient Diagnosis for an Electrical Incident"

Check for any Service bulletins before servicing the vehicle.

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### **COMBINATION SWITCH**

### COMBINATION SWITCH Check

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### **COMBINATION SWITCH**

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#### Replacement

For removal and installation of spiral cable, refer to SRS-42, "Removal and Installation" .

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 figure.



- Switch base



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### **HEADLAMP (FOR USA)**

### **HEADLAMP (FOR USA)**

### System Description

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

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**

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 combination meter terminal 3 (with tachometer), 14 (without tachometer)
- through body grounds M28 and M54.

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

#### VEHICLE SECURITY SYSTEM

The vehicle security system will flash the high beams if the system is triggered. Refer to BL-65, "VEHICLE SECURITY (THEFT WARNING) SYSTEM" .

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### HEADLAMP (FOR USA)

#### **Trouble Diagnoses**

-		
Symptom	Possible cause	Repair order
LH headlamp does not operate.	1. Bulb	1. Check bulb.
	2. Grounds E7 and E37	2. Check grounds E7 and E37.
	3.15A fuse	3. Check 15A fuse (No. 40, located in fuse and fusible link
	4. Lighting switch	box.) Verify battery positive voltage is present at termi- nal 8 of lighting switch.
		4. Check lighting switch.
RH headlamp does not operate.	1. Bulb	1. Check bulb.
	2. Grounds E7 and E37	2. Check grounds E7 and E37.
	3.15A fuse	3. Check 15A fuse (No. 39, located in fuse and fusible link
	4. Lighting switch	box). Verify battery positive voltage is present at termi- nal 5 of lighting switch.
		4. Check lighting switch.
LH high beam does not operate, but	1. Bulb	1. Check bulb.
LH low beam operates.	2. Open in LH high beam circuit	2. Check R/B wire between lighting switch and LH head-
	3. Lighting switch	lamp for an open circuit.
		3. Check lighting switch.
LH low beam does not operate, but	1. Bulb	1. Check bulb.
LH high beam operates.	2. Open in LH low beam circuit	2. Check R/Y wire between lighting switch and LH head- lamp for an open circuit.
		3. Check lighting switch.
RH high beam does not operate,	1. Bulb	1. Check bulb.
but RH low beam operates.	2. Open in RH high beam circuit	2. Check Y wire between lighting switch and RH head- lamp for an open circuit.
		3. Check lighting switch.
RH low beam does not operate, but	1. Bulb	1. Check bulb.
RH high beam operates.	2. Open in RH low beam circuit	2. Check PU wire between lighting switch and RH head-
	3. Lighting switch	lamp for an open circuit.
		3. Check lighting switch.
High beam indicator does not work.	1. Bulb	1. Check bulb in combination meter.
	2. Grounds M28 and M54	2. Check grounds M28 and M54.
	3. Open in high beam circuit	3. Check R/B wire between lighting switch and combina- tion meter for an open circuit.

#### **Bulb Replacement**

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 negative battery cable.
- 2. Disconnect the harness connector from the back side of the headlamp bulb.
- 3. Turn the bulb counterclockwise and pull the bulb straight out of the headlamp assembly.

Installation is 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**

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



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#### 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. Inflate all tires 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

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

#### **CAUTION:**

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



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

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

### HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM — Component Parts and Harness Connector Location

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### **System Description**

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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
- 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

#### Low Beam Operation

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

### HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

to LH headlamp terminal E	
from daytime light control unit terminal 7	А
through daytime light control unit terminal 9	
<ul> <li>through body grounds E7 and E37.</li> </ul>	_
With power and ground supplied, the low beam headlamps illuminate.	В
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	С
from lighting switch terminal 6	
<ul> <li>to RH headlamp terminal HI, and</li> </ul>	D
from lighting switch terminal 9	
<ul> <li>to daytime light control unit terminal 5, and</li> </ul>	
• to combination meter terminal 2 (with tachometer), 12 (without tachometer) for the high beam indicator	E
<ul> <li>through daytime light control unit terminal 6</li> </ul>	
• to LH headlamp terminal HI.	_
Ground is supplied in the same manner as low beam operation. For the combination meter, ground is supplied	Г
<ul> <li>to terminal 3 (with tachometer), 14 (without tachometer)</li> </ul>	G
<ul> <li>through body grounds M28 and M54.</li> </ul>	0
With power and ground supplied, the high beam headlamps and high beam indicator illuminate.	
DAYTIME LIGHT OPERATION	Н
With the engine running and the lighting switch in the "OFF" or parking lamp (1ST) position and parking brake released, power is supplied	
to daytime light control unit terminal 3	
<ul> <li>through daytime light control unit terminal 6</li> </ul>	
to LH headlamp terminal HI	
through LH headlamp terminal E	J
to daytime light control unit terminal 7	
<ul> <li>through daytime light control unit terminal 8</li> </ul>	LT
• to RH headlamp terminal HI.	
Ground is supplied	
to RH headlamp terminal E	L
<ul> <li>through body grounds E7 and E37.</li> </ul>	
Because the high beam headlamps are wired in series during daytime light operation, they operate at half illu- mination.	M

#### **OPERATION (FOR CANADA)**

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

Engine			With engine stopped							With engine running									
Linhting outleb		OFF		1ST		2ND		OFF			1ST			2ND					
Lighting Switch		Α	В	С	Α	В	С	Α	В	С	A	В	С	А	В	С	А	В	С
High beam		Х	Х	0	Х	Х	0	0	Х	0	*	*	0	*	*	0	0	Х	0
neadiamp	Low beam	Х	Х	Х	Х	Х	Х	Х	0	Х	Х	Х	Х	Х	Х	Х	Х	0	Х
Front parking and tail lamp		Х	Х	Х	0	0	0	0	0	0	Х	Х	Х	0	0	0	0	0	0
License and instrument illumina- tion lamp		х	х	х	0	0	0	0	0	0	х	х	х	0	0	0	0	0	0

• 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).

#### **VEHICLE SECURITY SYSTEM**

The vehicle security system will flash the high beams if the system is triggered. Refer to <u>BL-65</u>, "VEHICLE <u>SECURITY (THEFT WARNING) SYSTEM</u>".

### HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —



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### Wiring Diagram — DTRL —

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### HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

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	В	DAYTIME LIGHT CONTROL UNIT GROUND	—	—				
				BATTERY				
10	LG	PARKING BRAKE SWITCH	WHEN PARKING BRAKE IS RELEASED	VOLTAGE				
			WHEN PARKING BRAKE IS APPLIED	1.5V OR LESS				
	Y/R		WHEN TURNING IGNITION SWITCH TO ON POSITION	4.6V OR LESS				
11		GENERATOR	WHEN ENGINE IS RUNNING	B+ VOLTAGE				
				WHEN TURNING IGNITION SWITCH TO OFF POSITION	1V OR LESS			
12	G	IGNITION SWITCH (ON OB START)	WHEN TURNING IGNITION SWITCH TO ON POSITION	BATTERY VOLTAGE				
	5		WHEN TURNING IGNITION SWITCH TO START POSITION	BATTERY VOLTAGE				

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### HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

DAYTIME LIGHT CONTROL UNIT TERMINALS AND REFERENCE VALUE MEASURED BETWEEN EACH TERMINAL AND GROUND									
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)					
2	P		WHEN TURNING IGNITION SWITCH TO ON POSITION	BATTERY VOLTAGE					
2	К	TOWENGOONDE	WHEN TURNING IGNITION SWITCH TO OFF POSITION	BATTERY VOLTAGE					
3	3 R/W PO	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	VOLTAGE					

![](_page_15_Figure_2.jpeg)

![](_page_15_Figure_3.jpeg)

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

#### Trouble Diagnoses DAYTIME LIGHT CONTROL UNIT INSPECTION TABLE

EKS006A4

Terminal No.	Wire color	Item		Condition	Voltage (Approx. values)	E
1	B/Y	Start signal	(CsT)	When turning ignition switch to ST	Battery voltage	F
			Con	When turning ignition switch to ON from ST	Less than 1V	G
			COFF	When turning ignition switch to OFF	Less than 1V	Н
2	R	Power source	Con	When turning ignition switch to ON	Battery voltage	
			COFF	When turning ignition switch to OFF	Battery voltage	-
3	R/W	Power source	Con	When turning ignition switch to ON	Battery voltage	J
			COFF	When turning ignition switch to OFF	Battery voltage	LT
4	PU	Lighting switch (Low beam)		When turning lighting switch to headlamp ON (2ND) position, LOW BEAM	Battery voltage	L
5	R/B	Lighting switch		When turning lighting switch to HIGH (A)	Battery voltage	-
		(High beam)		When turning lighting switch to FLASH TO PASS	Battery voltage	ь./
6	R/L	LH high beam		When turning lighting switch to HIGH (A)	Battery voltage	111
				When releasing parking brake with engine running and turn- ing lighting switch to OFF (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Battery voltage	
7	R/G	LH headlamp control (ground)		When lighting switch is turned to headlamp ON (2ND) position, LOW BEAM	1V or less	-
				When releasing parking brake with engine running and turn- ing lighting switch OFF (daytime light operation) CAUTION: Block wheels and ensure selector lever is in N or P position.	Half battery voltage	-

### HEADLAMP (FOR CANADA) — DAYTIME LIGHT SYSTEM —

Terminal No.	Wire color	Item		Condition	Voltage (Approx. values)			
8	Y	RH high beam		When turning lighting switch to HIGH (A)	Battery positive volt- age			
				When releasing parking brake with engine running and turn- ing lighting switch OFF (daytime light operation) CAUTION: Block wheels and ensure selector level is in N or P position.	Half battery voltage			
9	В	Ground		_	—			
10	LG	Parking brake		When parking brake is released	Battery voltage			
		SWITCH		When parking brake is applied	1.5V or less			
11	Y/R	Y/R	Y/R	Generator	Con	When turning ignition switch ON	4.6V or less	
					When engine is running	Battery voltage		
				COFF	When turning ignition switch OFF	1V or less		
12	G	G	G	G Powe	Power source	(Con)	When turning ignition switch ON	Battery voltage
						When turning ignition switch to ST	Battery voltage	
			COFF	When turning ignition switch OFF	1V or less			

### **Bulb Replacement**

Refer to LT-8, "Bulb Replacement" .

### **Aiming Adjustment**

Refer to LT-8, "Aiming Adjustment" .

EKS006A5

EKS006A6

![](_page_18_Figure_1.jpeg)

LT-TAIL/L-02

![](_page_19_Figure_2.jpeg)

![](_page_19_Figure_3.jpeg)

![](_page_19_Picture_4.jpeg)

WKWA1630E

![](_page_20_Figure_1.jpeg)

![](_page_20_Figure_2.jpeg)

#### **BACK-UP LAMP** PFP:26550 Wiring Diagram — BACK/L — QG18DE EKS006A7 LT-BACK/L-01 IGNITION SWITCH ON OR START FUSE BLOCK (J/B) REFER TO "PG-POWER". þ 10A 30 (M1) A : WITH A/T T : WITH M/T M59 (F27) A 3 BACK-UP LAMP SWITCH PARK/NEUTRAL POSITION (PNP) SWITCH (F49) (F55) OTHERS REVERSE 8 G/Y ∎ G/W F27 G/Y M59 + + (M14) G/W G/Y (B1) BACK-UP BACK-UP LAMP LH G/Y E ළ **B38 B**42 В ł В В Ē В **B**13 (B19)

![](_page_21_Figure_2.jpeg)

### **BACK-UP LAMP**

#### QR25DE

![](_page_22_Figure_2.jpeg)

WKWA1633E

2 7

4 5

18

9 6

(F29)

В

(F41 B

+ -

(<del>†</del>-

**B38**, **B42** 

W

W

### FRONT FOG LAMP

### FRONT FOG LAMP

### **System Description**

Power is supplied at all times

- through 15A fuse (No. 43, located in the fuse and fusible link box)
- to front fog lamp relay terminal 5.

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.

PFP:26150

![](_page_24_Figure_1.jpeg)

WKWA0024E

### **Aiming Adjustment**

Before performing aiming adjustment, make sure of the following.

- 1. Inflate all tires 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.

![](_page_25_Figure_6.jpeg)

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.

![](_page_25_Figure_9.jpeg)

- 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.
  - When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.

![](_page_25_Figure_13.jpeg)

TURN SIGNAL AND HAZARD WARNING LAMPS	'FP:26120
System Description	A EKS0038Q
With the hazard switch in the OFF position and the ignition switch in the ON or START position, powe plied	r is sup- B
<ul> <li>through 10A fuse [No. 26, located in the fuse block (J/B)]</li> </ul>	
<ul> <li>to hazard switch terminal 2</li> </ul>	С
<ul> <li>through terminal 1 of the hazard switch</li> </ul>	
<ul> <li>to combination flasher unit terminal B</li> </ul>	
<ul> <li>through terminal L of the combination flasher unit</li> </ul>	D
<ul> <li>to turn signal switch terminal 1.</li> </ul>	
Ground is supplied	_
<ul> <li>to combination flasher unit terminal E</li> </ul>	E
<ul> <li>through body grounds M28 and M54.</li> </ul>	
LH Turn	F
When the turn signal switch is moved to the LH position, power is supplied	
from turn signal switch terminal 3	
<ul> <li>to front combination lamp LH terminal 3</li> </ul>	G
<ul> <li>to combination meter terminal 35 (with tachometer) or 40 (without tachometer)</li> </ul>	
<ul> <li>to rear combination lamp LH terminal 2.</li> </ul>	
Ground is supplied	Н
<ul> <li>to the front combination lamp LH terminal 1</li> </ul>	
<ul> <li>through body grounds E7 and E37, and</li> </ul>	1
<ul> <li>to the rear combination lamp LH terminal 4</li> </ul>	
<ul> <li>through body grounds B13 and B19, and</li> </ul>	
<ul> <li>to combination meter terminal 12 (with tachometer) or 39 (without tachometer)</li> </ul>	J
<ul> <li>through body grounds M28 and M54.</li> </ul>	
With power and ground supplied, the combination flasher unit controls the flashing of the LH turn signa	l lamps.
RH Turn	L
When the turn signal switch is moved to the RH position, power is supplied	
<ul> <li>from turn signal switch terminal 2</li> </ul>	L
<ul> <li>to front combination lamp RH terminal 3</li> </ul>	
<ul> <li>to combination meter terminal 4 (with tachometer) or 41 (without tachometer)</li> </ul>	
<ul> <li>to rear combination lamp RH terminal 2.</li> </ul>	M
Ground is supplied	
<ul> <li>to the front combination lamp RH terminal 1</li> </ul>	
<ul> <li>through body grounds E7 and E37, and</li> </ul>	
<ul> <li>to the rear combination lamp RH terminal 4</li> </ul>	
<ul> <li>through body grounds B13 and B19, and</li> </ul>	
<ul> <li>to combination meter terminal 12 (with tachometer) or 39 (without tachometer)</li> </ul>	
through body grounds M28 and M54.	
With power and ground supplied, the combination flasher unit controls the flashing of the RH turn lamps.	n signal
HAZARD LAMP OPERATION	
Deverie eventied at all times	

Power is supplied at all times

- through 15A fuse [No. 5, located in the fuse block (J/B)]
- to hazard switch terminal 3.

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

Power is supplied

- through terminal 6 of the hazard switch
- 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.

Ground is supplied

- to each front combination lamp terminal 1
- through body grounds E7 and E37, and
- to each rear combination lamp terminal 4
- through body grounds B13 and B19, and
- 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.

#### **REMOTE KEYLESS ENTRY SYSTEM OPERATION**

Power is supplied at all times

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

When the remote keyless entry system is triggered through the smart entrance control unit, ground is supplied to remote keyless entry relay terminal 2.

Refer to **BL-34**, "REMOTE KEYLESS ENTRY SYSTEM" .

The remote keyless entry relay is energized.

Power is supplied

- through terminal 5 of the remote keyless entry 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.

Power is supplied

- through terminal 7 of the remote keyless entry 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.

Ground is supplied

- to each front combination lamp terminal 1
- through body grounds E7 and E37, and
- to each rear combination lamp terminal 4
- through body grounds B13 and B19, and

- to combination materian languith to chamater) or 20 (without to chamater)	
<ul> <li>to combination meter terminal 12 (with tachometer) or 39 (without tachometer)</li> <li>through body groupds M28 and M54</li> </ul>	А
• With power and ground supplied, the smart entrance control unit controls the flashing of the hazard warning	1
lamps.	В
	С
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![](_page_29_Figure_1.jpeg)

![](_page_29_Figure_2.jpeg)

WKWA1634E

LT-TURN-02 TK: WITH TACHOMETER А EK : WITHOUT TACHOMETER COMBINATION COMBINATION METER (TURN SIGNAL LAMP) METER (TURN SIGNAL LAMP) В M29 , M30 (M30) TURN RH ) TURN RH TURN LH TURN LH 6 (6) 6 (၉) С 41 39 4 35 12 40 G/B G/Y G/B G/Y B B D ΕK TK G/B **=**C Ε ()PRECEDING PAGE F B∎G, G/Y 9 G/Y 2 G/B M16 20 (B3) G/B Н 2 G G TURN REAR COMBINATION RH LAMP RH REAR COMBINATION LAMP LH TURN 3 g **B**49 (B44) В В 4 4 в B LT В В L В <u>(M54</u>) **B**13 <u>(M28</u>) (B19 Μ (M29) (M29) (M30) 4 56 7 8 9 10 11 25 26 27 28 29 30 31 32 33 34 35 ĒK 12 13 14 15 16 17 <u>18 19 20 21 22 23 24</u> (TK) 36 37 38 39 40 41 42 43 44 45 46 47 48 (TK) BR W (M30) 33 (EK) 43 44 41 BR

1 2 3 4 5 6 7 8 9 B3 B3 B44, B49 10 11 12 13 14 15 16 17 18 19 20 W 1 2 3 4 W W

WKWA1635E

### **Trouble Diagnoses**

EKS0038S

Symptom	Possible cause	Repair order	
Turn signal and hazard warning	1. Hazard switch	1. Check hazard switch.	
lamps do not operate.	2. Combination flasher unit	2. Refer to combination flasher unit check.	
	3. Open in combination flasher unit circuit	3. Check wiring to combination flasher unit for open circuit.	
Turn signal lamps do not operate but hazard warning lamps operate.	<ol> <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> <li>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>Check hazard switch.</li> <li>Check turn signal switch.</li> <li>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 oper- ate but turn signal lamps operate.	<ol> <li>1.15A fuse</li> <li>2. Hazard switch</li> <li>3. Open in hazard switch circuit</li> </ol>	<ol> <li>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>Check hazard switch.</li> <li>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	1. Bulb	1. Check bulb.	
does not operate.	2. Grounds E7 and E37	2. Check grounds E7 and E37.	
	3. Open in front combination lamp circuit	3. Check the wire between combination switch terminal 3 (LH) or terminal 2 (RH) and front combination lamp terminal 3.	
Rear turn signal lamp LH or RH	1. Bulb	1. Check bulb.	
does not operate.	2. Grounds B13 and B19	2. Check grounds B13 and B19.	
	3. Open in rear combination lamp circuit	3. Check the wire between combination switch terminal 3 (LH) or terminal 2 (RH) and rear combination lamp terminal 2.	
LH and RH turn indicators do not operate.	1. Ground	1. Check grounds M28 and M54.	
LH or RH turn indicator does not	1. Bulb	1. Check bulb in combination meter.	
operate.	2. Turn indicator circuit	2. Check the wire between combination switch and combi- nation meter.	

#### **Electrical Components Inspection** COMBINATION FLASHER UNIT CHECK

- 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.

![](_page_31_Figure_7.jpeg)

EKS0038T

### **ILLUMINATION**

ILLUMINATION
--------------

**System Description** 

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, 33 or 34	-
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 auto changer*	M71	6	5	_

\* 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**

![](_page_33_Figure_1.jpeg)

Revision: December 2006

### **ILLUMINATION**

![](_page_34_Figure_1.jpeg)

А

В

![](_page_34_Figure_2.jpeg)

![](_page_34_Figure_3.jpeg)

![](_page_34_Figure_4.jpeg)

### **INTERIOR, MAP, VANITY AND TRUNK ROOM LAMPS**

#### System Description 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 +.

#### **Switch Operation**

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.

#### WITH POWER DOOR LOCKS

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

#### **Switch Operation**

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 +

PFP:26410

EKS006A8

<ul> <li>to trunk room lamp terminal 2</li> </ul>	
With power and ground supplied, interior lamps turn ON.	А
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.	В
After lamps turn OFF by the battery saver system, the lamps illuminate again when	
driver door is locked or unlocked	С
door is opened or closed	
<ul> <li>key is inserted in or removed from ignition key cylinder.</li> </ul>	D
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![](_page_37_Figure_1.jpeg)

WKWA0529E

#### WITH POWER DOOR LOCKS

![](_page_38_Figure_2.jpeg)

WKWA0530E

![](_page_39_Figure_1.jpeg)

SMART ENT	RANCE CONTRO	DL UNIT TERMINALS AND REF	ERENCE VALUE MEASURED BE	TWEEN EACH TERMINAL AND
TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
8	R/Y	INTERIOR LAMP	LAMP SWITCH IN DOOR POSI- TION	12V
10	PU	POWER SOURCE (FUSE)	_	12V
16	В	GROUND	_	_
17	R/B	BATTERY SAVER (INTERIOR	BATTERY SAVER DOES NOT OPERATE	12V
			BATTERY SAVER OPERATES	0V
	DAM		OFF (CLOSED)	5V
28	R/W	OTHER DOOR SWITCHES	ON (OPEN)	0V
	P		OFF (CLOSED)	5V
29	ĸ		ON (OPEN)	0V
20	1.00/	IGNITION KEY SWITCH	IGNITION KEY IS INSERTED	12V
32	L/VV	(INSERT)	IGNITION KEY IS REMOVED	0V
	0	IGNITION SWITCH (ON)	IGNITION KEY IS IN ON POSI- TION	12V
33	G	IGNITION SWITCH (START)	IGNITION KEY IS IN START POSITION	12V
20	N/C		DRIVER DOOR: LOCKED	5V
30	ſ/G	DOOK UNLOCK SENSUR LH	DRIVER DOOR: UNLOCKED	0V
20	D/D		ON (OPEN)	0V
38	Γ/Β		OFF (CLOSED)	12V

### **CONSULT-II Function (SMART ENTRANCE)**

EKS006AA

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CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

SMART ENTRANCE diagnostic test item	Diagnostic mode	Description	
Inspection by part	DATA MONITOR	Displays BCM input/output data in real time.	
inspection by part	ACTIVE TEST	Operation of electrical loads can be checked by sending drive signal to them.	_

#### **CAUTION:**

## If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carries out CAN communication.

#### "INT LAMP"/"BATTERY SAVER"

1. With the ignition switch OFF, connect CONSULT-II and CON-SULT-II CONVERTER to the data link connector, then turn ignition switch ON.

![](_page_40_Figure_10.jpeg)

2. Touch "START (NISSAN BASED VHCL)".

3. Touch "SMART ENTRANCE".

4. Touch "INT LAMP" or "BATTERY SAVER".

,	CONS	ULT- II		
	ENC	SINE		
START	(NISSAI	N BASED	VHCL)	
STA	RT (X-B	ADGE VH	ICL)	
	SUBI	NODE		
		LIGHT	COPY	SAIA0450E

![](_page_41_Figure_3.jpeg)

SELECT TEST ITEM INT LAMP BATTERY SAVER THEFT WAR ALM MULTI REMOTE ENT

SELECT DIAG MODE	
DATA MONITOR	
ACTIVE TEST	
	SEL322W

#### CONSULT-II Application Items (With Power Door Locks) "INT LAMP" Data Monitor

"DATA MONITOR" and "ACTIVE TEST" are available for "INT

EKS006AB

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).

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5. Select diagnosis mode.

LAMP" and "BATTERY SAVER".

![](_page_41_Figure_10.jpeg)

Monitored Item	Description	
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		
Test Item	Description	
INT LAMP	This test enables to check interior lamp, map lamp, and vanity lamps operations. When touch "ON" on CONSULT-II screen.	
	<ul> <li>Interior lamp turns on when the switch is in DOOR or ON. (Smart entrance control unit supplies power and ground to interior lamp.)</li> </ul>	
	<ul> <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"		
Data Monitor		
Monitored Item	Description	
IGN ON SW	Indicates [ON/OFF] condition of ignition switch.	
KEY ON SW	Indicates [ON/OFF] condition of key switch.	
DOOR SW DR	Indicates [ON/OFF] condition of front door switch LH.	
DOOR SW-ALL	Indicates [ON/OFF] condition of door switch (ALL).	
LOCK SIG DR	Indicates [ON/OFF] condition of front door unlock sensor LH.	
TRUNK SW	Indicates [ON/OFF] condition of trunk room lamp switch.	
Active Test		
Test Item	Description	
BATTERY SAVER	This test enables to check interior lamp, map lamp, and vanity lamp operations. When touch "ON" on CONSULT-II screen.	
	<ul> <li>Interior lamp turns on when the switch is in ON. (Smart entrance control unit supplies power to interior lamp.)</li> </ul>	
	• Map lamp and vanity lamps turn on when the switch is in ON.	

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#### Trouble Diagnoses for Interior Lamp Timer (With Power Door Locks) DIAGNOSTIC PROCEDURE 1 (SYMPTOM: INTERIOR LAMP TIMER DOES NOT OPERATE PROPERLY)

### 1. CHECK IGNITION ON SIGNAL

#### With CONSULT-II

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

![](_page_43_Figure_5.jpeg)

#### **Without CONSULT-II**

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

![](_page_43_Figure_8.jpeg)

OK or NG

OK >> GO TO 2.

NG >> Check the following.

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

### 2. CHECK DOOR SWITCH INPUT SIGNAL

#### With CONSULT-II

Check driver door switch signal ("DOOR SW-DR") in "DATA MONITOR" mode with CONSULT-II.

DATA MON	ITOR	]
MONITOR		]
DOOR SW-DR	OFF	When driver's door is open: DOOR SW-DR ON When driver's door is closed: DOOR SW-DR OFF
		SEI 210M

#### **Without CONSULT-II**

Check voltage between smart entrance control unit harness connector terminal 29 and ground.

![](_page_44_Figure_7.jpeg)

NG >> GO TO 3.

### 3. CHECK FRONT DOOR SWITCH LH

Check continuity between front door switch LH terminals 2 and 3.

![](_page_44_Figure_11.jpeg)

#### OK or NG

OK >> Check the following.

- Front door switch LH ground circuit and condition
- Harness for open or short between smart entrance control unit and front door switch LH
- NG >> Replace front door switch LH.

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#### 4. CHECK DOOR UNLOCK SENSOR LH INPUT SIGNAL

#### With CONSULT-II

Perform "LOCK SIG DR" in "DATA MONITOR" mode with CONSULT-II.

![](_page_45_Figure_4.jpeg)

#### **Without CONSULT-II**

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

![](_page_45_Figure_7.jpeg)

OK or NG

OK >> GO TO 6. NG >> GO TO 5.

### 5. CHECK DOOR UNLOCK SENSOR LH

1. Disconnect door unlock sensor LH harness connector.

2. Check continuity between door unlock sensor LH terminals.

![](_page_45_Figure_13.jpeg)

#### OK or NG

OK >> Check the following.

- Door unlock sensor LH ground circuit
- Harness for open or short between smart entrance control unit and door unlock sensor LH
- NG >> Replace door unlock sensor LH.

#### 6. CHECK DOOR SWITCHES INPUT SIGNAL

#### With CONSULT-II

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

![](_page_46_Figure_4.jpeg)

#### **Without CONSULT-II**

Check voltage between smart entrance control unit harness connector terminal 28 and ground.

![](_page_46_Figure_7.jpeg)

OK >> GO TO 8. NG >> GO TO 7.

### 7. CHECK DOOR SWITCHES

1. Disconnect door switch harness connector.

2. Check continuity between door switch terminals 1, + and ground.

![](_page_46_Figure_12.jpeg)

#### 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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### 8. CHECK KEY SWITCH INPUT SIGNAL

#### With CONSULT-II

Check key switch ("KEY ON SW") in "DATA MONITOR" mode with CONSULT-II.

![](_page_47_Figure_4.jpeg)

#### **Without CONSULT-II**

Check voltage between smart entrance control unit harness connector terminal 32 and ground.

![](_page_47_Figure_7.jpeg)

#### OK or NG

OK >> Replace smart entrance control unit. NG >> GO TO 9.

### 9. CHECK KEY SWITCH

Check continuity between terminals 1 and 2.

![](_page_47_Figure_12.jpeg)

#### OK or NG

OK >> Check the following.

- 10A fuse [No. 12, located in fuse block (J/B)]
- Harness for open or short between key switch and fuse
- Harness for open or short between smart entrance control unit and key switch
- NG >> Replace key switch.

### **BULB SPECIFICATIONS**

### **BULB SPECIFICATIONS**

# Bulb Specifications HEADLAMP

Item	Wattage (W)	Bulb No.*
High/Low	65/55	9008 (H13)

\*Always check with the Parts Department for the latest parts information.

#### EXTERIOR LAMP

	Item	Wattage (W)	Bulb No.*	
Front parking and turn signa	l lamp	8/27	3157AK	[
Fog light		55	H11	
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 (pa	rcel shelf mount)	18	921	
High-mounted stop lamp (rea	ar air spoiler mount)	*	*	

\*Always check with the Parts Department for the latest parts information.

#### **INTERIOR LAMP**

Item	Wattage (W)	Bulb No.*	Н
Interior lamp	8	*	
Map lamp	8	*	
Trunk lamp	3.4	158	I

\*Always check with the Parts Department for the latest parts information.

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