

SECTION 6-4

SERVICE PROCEDURES AND SPECIFICATIONS

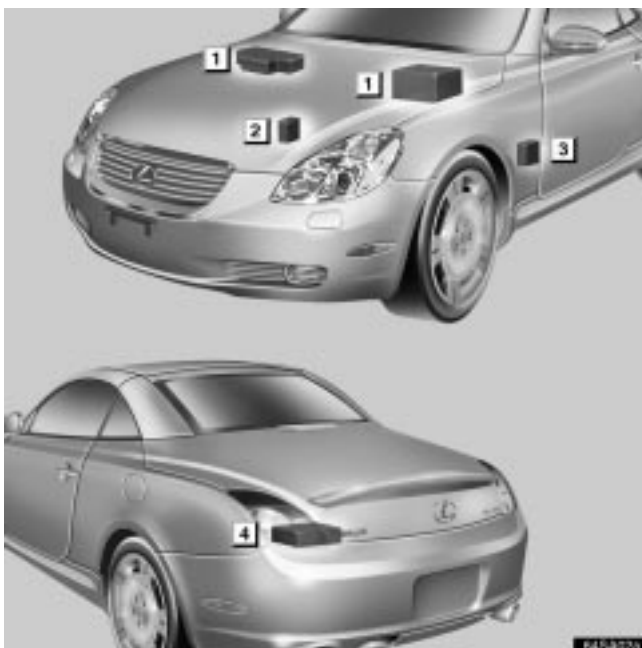
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ELECTRICAL COMPONENTS

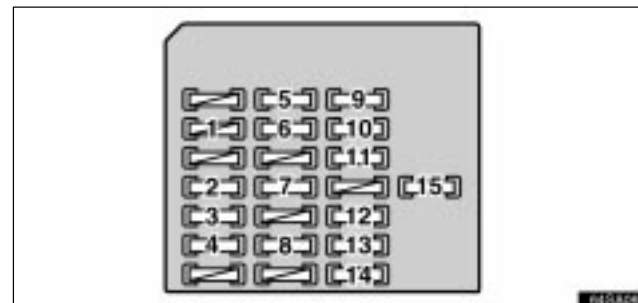
SPECIFICATIONS

-LOCATION OF FUSES

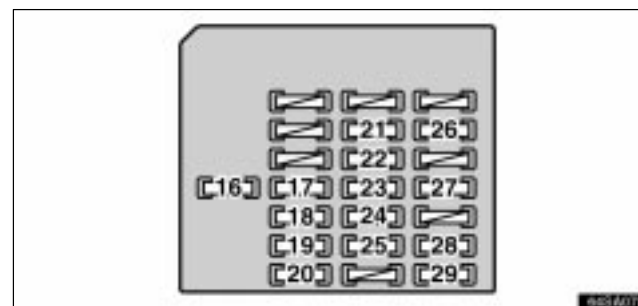


- ▶ **1** Engine compartment
- ▶ **2** Passenger's side kick panel
- ▶ **3** Driver's side kick panel
- ▶ **4** Trunk

- FUSES

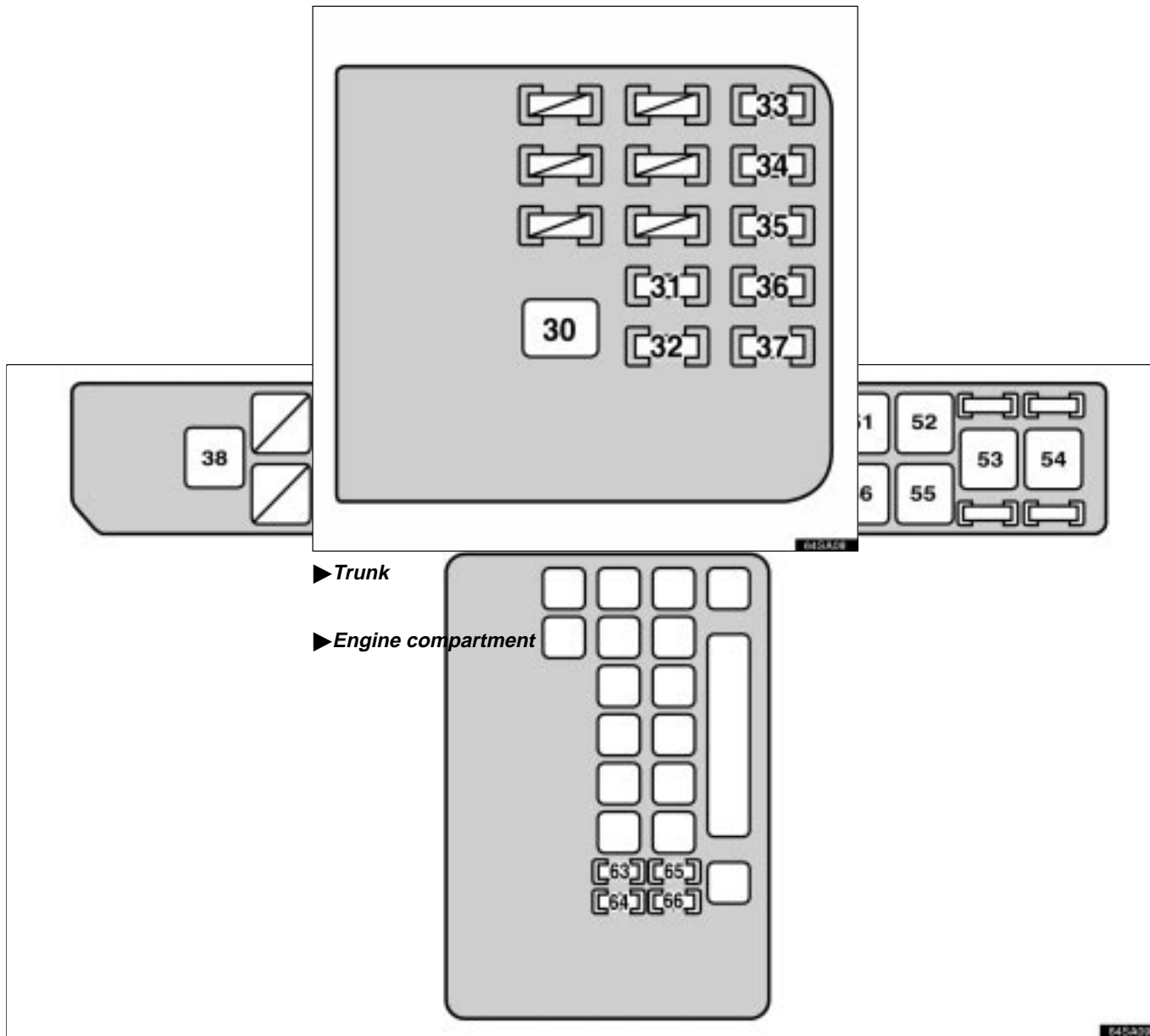


▶ Driver's side kick panel



▶ Passenger's side kick panel

ELECTRICAL COMPONENTS



ELECTRICAL COMPONENTS

No.	FUSE	AMPERE	CIRCUIT
1	TI & TE	15	Tilt and telescopic steering
2	PANEL	5	Air conditioning system, Audio system, Glove box light, Trip-information display, Cigarette lighter, Electronic throttle control system
3	FR FOG	15	Fog lights, Headlight switch
4	D P/SEAT	30	Power seat system
5	D-IG	10	Gauges and meters, Headlight cleaner, Charging system, Seat belt pretensioner system
6	MPX-IG	7.5	Tilt and telescopic steering, Power door lock system, SRS, Power seat system
7	WIPER	30	Windshield wiper
8	PWR OUTLET	15	Power outlet
9	OBD	7.5	On-board diagnosis system
10	AM1	5	Power source
11	ABS-IG	7.5	Vehicle skid control system
12	SECURITY	7.5	Theft deterrent system
13	TAIL	7.5	Tail lights, Side marker lights, Parking lights, Headlight switch
14	STOP	5	Stop lights
15	HEATER	10	Air conditioning system

No.	FUSE	AMPERE	CIRCUIT
16	IG2	7.5	SRS
17	MPX-B1	7.5	Power door lock, Steering lock, Engine immobiliser, Power seat system, Retractable hardtop
18	MPX-B3	7.5	Tilt and telescopic steering, Headlight switch, Windshield wiper and washer switch, Turn signal switch
19	DOME	7.5	Interior light, Personal lights, Vanity lights, Foot lights, Ignition switch light, Trunk light, Antenna, Garage door opener system, Audio system
20	MPX-B2	7.5	Gauges and meters, Vehicle skid control system, Tire pressure warning system
21	H-LP LVL	5	Headlight leveling system
22	P-IG	10	Shift lock system, Seat heater, Trip-information display, Antenna, Inside rear view mirror, Theft deterrent system
23	SEAT HTR	20	Seat heater
24	RADIO NO.2	10	Audio system, Trip-information display, Seat belt warning light, Shift lock system
25	CIG	15	Cigarette lighter
26	WASHER	20	Windshield washer
27	A/C	5	Air conditioning system

ELECTRICAL COMPONENTS

No.	FUSE	AMPERE	CIRCUIT
28	P P/SEAT	30	Power seat system
29	TV	5	TV, Navigation system
30	DEFOG	30	Rear window defogger
31	LCE LP	7.5	License plate lights
32	ROOF RH	20	Retractable hardtop lock system
33	FUEL OPN	10	Fuel filler door opener
34	ROOF LH	20	Retractable hardtop lock system
35	P-TRAY	20	Quarter window
36	LGG LH	20	Luggage lock system
37	LGG RH	20	Luggage lock system
38	IG2	20	Multiport fuel injection system/sequential multiport fuel injection system
39	MAIN	50	Headlights (low beam)
40	IG2 MAIN	20	Multiport fuel injection system/sequential multiport fuel injection system
41	P-DOOR	25	Power windows, Power door lock system, Power rear view mirror control system, Outside rear view mirror defogger, Door courtesy lights

No.	FUSE	AMPERE	CIRCUIT
42	D-DOOR	25	Power windows, Power door lock system, Power rear view mirror control system, Outside rear view mirror defogger, Door courtesy lights
43	D/C CUT	15	All components in "DOME", "MPX-B1", "MPX-B2" and "MPX-B3" fuses
44	TURN-HAZ	15	Turn signal lights, Emergency flashers
45	ETCS	15	Multiport fuel injection system/sequential multiport fuel injection system
46	HORN	10	Horn, Headlight switch
47	RADIO NO.1	30	Audio system
48	TEL	5	Telephone
49	ALT-S	5	Charging system
50	EFI	25	Multiport fuel injection system/sequential multiport fuel injection system
51	AM2	30	All components in "ST" and "IG2" fuses and starting system
52	ABS NO.2	40	Anti-lock brake system
53	ALT	140	Charging system
54	ABS NO.1	60	Anti-lock brake system
55	HEATER	50	Air conditioning system

ELECTRICAL COMPONENTS

No.	FUSE	AMPERE	CIRCUIT
56	RR J/B	50	All components in "DEFOG", "ROOF RH", "ROOF LH", "LGG RH", "LGG LH", "P-TRAY", "LCE LP", and "FUEL OPN" fuses
57	H-LP CLN	30	Headlight cleaner
58	FAN	40	Air conditioning system
59	FAN NO.2	40	Air conditioning system
60	H-LP R LWR	15	Right-hand headlight (low beam)
61	H-LP L LWR	15	Left-hand headlight (low beam)
62	H-LP UPR	20	Headlight (high beam), Headlight switch
63	STARTER	7.5	Starting system
64	EFI NO.2	10	Multiport fuel injection system/sequential multiport fuel injection system, Emission control system
65	IGN	5	Multiport fuel injection system/sequential multiport fuel injection system, Anti-lock brake system, Traction control system, Vehicle skid control system, Cruise control system
66	INJ	10	Multiport fuel injection system/sequential multiport fuel injection system

CHECKING BATTERY CONDITION

Precautions

CAUTION

BATTERY PRECAUTIONS

The battery produces flammable and explosive hydrogen gas.

- Do not cause a spark by contacting the battery terminals with tools.
- Do not smoke or light a match near the battery.

The electrolyte contains poisonous and corrosive sulfuric acid.

- Avoid contact with eyes, skin or clothes.
- Never inhale or swallow electrolyte.
- Wear protective safety glasses when working near the battery.
- Keep children away from the battery.

EMERGENCY MEASURES

- If electrolyte gets in your eyes, flush your eyes with clean water for at least 15 minutes and get immediate medical attention. If possible, continue to apply water with a sponge or cloth while traveling to the medical office.

- If electrolyte gets on your skin, thoroughly wash the contact area. If you feel a pain or burn, get medical attention immediately.
- If electrolyte gets on your clothes, there is a possibility of its soaking through to your skin, so immediately take off the exposed clothing and follow the procedure above, if necessary.
- If you accidentally swallow electrolyte, drink a large quantity of water or milk. Follow with milk of magnesia, beaten raw egg or vegetable oil. Then go immediately for emergency help.
- **Warning:** Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Checking battery exterior



► **1** *Terminals* **2** *Hold-down clamp*

Check the battery for corroded or loose connections, cracks, or loose hold-down clamps.

1. If the battery is corroded, wash it off with a solution of warm water and baking soda. Coat the terminals with grease to prevent further corrosion.
2. If the connections are loose, tighten the clamp bolts –but do not overtighten.
3. Tighten the hold-down clamp only enough to keep the battery firmly in place. Overtightening may damage the battery case.

ELECTRICAL COMPONENTS

NOTICE

- *Make sure the engine and all accessories are turned off before performing maintenance.*
- *When checking the battery, remove the ground cable first and reinstall it last.*
- *Be careful not to cause a short circuit with tools.*
- *Take care no solution gets into the battery when washing it.*

BATTERY RECHARGING PRECAUTIONS

During recharging, the battery is producing hydrogen gas.

Therefore, before recharging:

1. If recharging with the battery installed on the vehicle, be sure to disconnect the ground cable.
2. Make sure the power switch on the recharger is off when connecting the charger cables to the battery and when disconnecting them.



CAUTION

- **Always charge the battery in an unconfined area. Do not charge the battery in a garage or closed room where there is not sufficient ventilation.**
- **Only do a slow charge (5 A or less). Charging at a quicker rate is dangerous. The battery may explode causing personal injuries.**

NOTICE

Never recharge the battery while the engine is running. Also, make sure all accessories are turned off.

CHECKING AND REPLACING THE BLADE TYPE FUSES



► Engine compartment 1 Spare fuses 2 Pull-out tool



► Engine compartment



► Driver's side kick panel



► Passenger's side kick panel

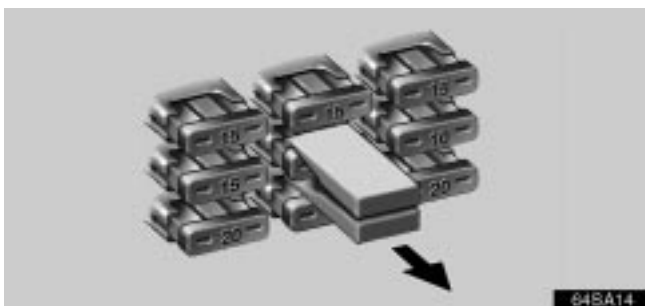
ELECTRICAL COMPONENTS



► Trunk

1. Turn the ignition switch off and open the fuse box lid.

Determine which fuse may be causing the problem. The lid of the fuse box shows the name of the circuit for each fuse.



2. Make sure the inoperative component is turned off. Pull the suspected fuse straight out with the pull-out tool and check it. If it has blown, push a new fuse into the clips.



► Good

► Blown

a. Look carefully at the fuse. If the thin wire is broken, the fuse has blown. If you are not sure or if it is too dark to see, try replacing the suspected fuse with one of the same value that you know is good.

b. Install only a fuse with the amperage rating designated on the fuse box lid.

If you do not have a spare fuse, in an emergency you can pull out the "CIG", "RADIO NO.1", "DOME" or "HTR" fuse, which may be dispensable for normal driving, and use it if its amperage rating is the same.

If you cannot use one of the same amperage, use one lower than, but as close as possible to, the amperage. If the amperage is lower than that specified, the fuse might blow out again but this does not indicate anything wrong. Be sure to get the correct fuse as soon as possible and return the substitute to its original clips.

It is a good idea to purchase a set of spare fuses and keep them in your vehicle for emergencies.

If the new fuse immediately blows out, there is a problem with the electrical system. Have your Lexus dealer correct it as soon as possible.

 **CAUTION**

Never use a fuse with a higher amperage rating, or any other object, in place of a fuse. This may cause extensive damage and possibly a fire.

CHECKING THE CARTRIDGE TYPE FUSES



► **1** *Good* **2** *Melted*



► **1** *Good* **2** *Melted*

ELECTRICAL COMPONENTS

If the headlights or other electrical components do not work and the blade type fuses are O.K., check the cartridge type fuses. If any of the cartridge type fuses are blown, they must be replaced.

If there is an overload in the circuits from the battery, the fuses are designed to blow before the entire wiring harness is damaged.

CAUTION

Always use a genuine Lexus fuse or equivalent for replacement. Never install an ordinary wire – even for a temporary fix. This may cause extensive damage and possibly a fire.

NOTICE

Before replacing the fuses, have the cause of electrical overload determined and repaired by your Lexus dealer.

ADDING WASHER FLUID



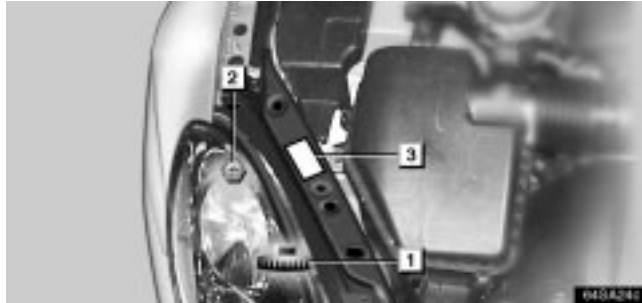
If the washer tank becomes nearly empty, add washer fluid.

You may use plain water as washer fluid. However, in cold areas where temperatures range below the freezing point, use washer fluid containing antifreeze. This product is available at your Lexus dealer and most auto parts stores. Follow the manufacturer's directions for how much to mix with water.

NOTICE

Do not use engine antifreeze or any other substitute because it may damage your vehicle's paint.

CHECKING THE HEADLIGHT AIM



- ▶ **1** Vertical movement adjusting bolt 1 (Inside screw)
- ▶ **2** Vertical movement adjusting bolt 2 (Outside screw)
- ▶ **3** Aiming caution label

Before checking the headlight aim:

1. Make sure the body around the headlight is not deformed.
2. Park the vehicle on a level spot.
3. Get into the driver's seat and put the vehicle in a state ready for driving (with a full tank).
4. Bounce the vehicle several times.

Adjusting the vertical aiming



- ▶ **1** For vertical movement adjusting bolt 1 (Inside screw)
- ▶ **2** For vertical movement adjusting bolt 2 (Outside screw)

ELECTRICAL COMPONENTS



1. Turn the Phillips-head screwdriver five turns or multiple-of-5 turns in either direction for turning the vertical movement adjusting bolt 1 (inside screw). At this time, keep the turning direction and number of turns in mind.

Every 5 turns adjust an aiming position to up or down by about 0.2° .



2. Turn the Phillips-head screwdriver one time for turning the vertical movement adjusting bolt 2 (outside screw) in the same way as step 1 in relation to the 5 turns of the Phillips-head screwdriver for turning the vertical movement adjusting bolt 1 (inside screw).

INFORMATION

- *If 3 turns of the Phillips-head screwdriver are appropriate for the vertical movement adjusting bolt 1 (inside screw) at step 1, turn the Phillips-head screwdriver three fifth turns in the same direction as step 1 for the vertical movement adjusting bolt 2 (outside screw).*
- *The turning confirmation mark is stamped at the tip of the vertical movement adjusting bolt 2 (outside screw). Turn the Phillips-head screwdriver for turning the vertical movement adjusting bolt 2 (outside screw) while checking this mark.*

REPLACING LIGHT BULBS

The illustrations on the following pages show the locations of light bulbs. If it is necessary to replace a bulb, take your vehicle to your Lexus dealer as soon as possible. Use bulbs with the bulb numbers and wattage ratings given in the table.

**CAUTION**

- Do not disassemble, repair or take apart the low beam headlight bulbs, connector, power supply circuits and rotated components. Or you may be injured by electric shocks. Call your dealer when the headlights fail to work or have to be replaced or disposed of.
- To prevent yourself from burning, do not replace the light bulbs while they are hot.
- Halogen bulbs have pressurized gas inside and require special handling. They can burst or shatter if scratched or dropped. Hold a bulb only by its plastic or metal case. Do not touch the glass part of a bulb with bare hands.

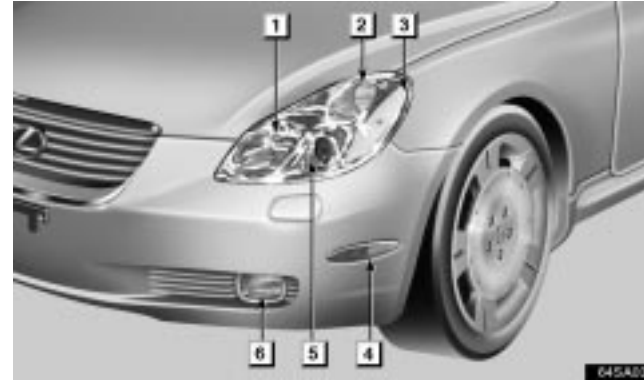
NOTICE

Only use a bulb of the listed type.

ELECTRICAL COMPONENTS

The inside of the lens of exterior lights such as headlights may temporarily fog up when the lens becomes wet in the rain or in a car wash. This is not a problem because the fogging is caused by the temperature difference between the outside and inside of the lens, just like the windshield fogged up in the rain. However, if there is a large drop of water on the inside of the lens, or if there is water pooled inside the light, contact your Lexus dealer.

LIGHT LOCATION

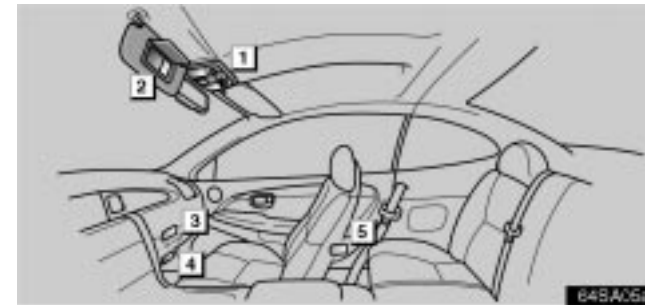


	Light Bulbs	Bulb No.	W	Type
1	Headlight (High beam)	9005	60	A
2	Front turn signal light	—	21	D
3	Parking light	168	5	D
4	Front side marker light	168	5	D
5	Headlight (Low beam)	—	35	B
6	Fog light	—	55	G

ELECTRICAL COMPONENTS



Light Bulbs	Bulb No.	W	Type
1 Rear side marker light	168	5	D
2 Rear turn signal light	7440	21	D
3 Tail/stop light	7443	5/21	D
4 Back-up lights	7440	21	D
5 License plate lights	194	3.8	D
6 Trunk lights	194	3.8	D



Light Bulbs	Bulb No.	W	Type
1 Front interior/personal light	—	8	F
2 Vanity light	—	1.5	E
3 Glove box light	—	1.2	D
4 Foot light	—	1.4	D
5 Door courtesy light	194	3.8	D

- A: HB3 halogen bulbs
- B: D2S discharge bulbs
- C: HB4 halogen bulbs
- D: Wedge base bulbs
- E: Double end bulbs
- F: Single end bulbs
- G: H3 halogen bulbs