

SECTION 6 – 4

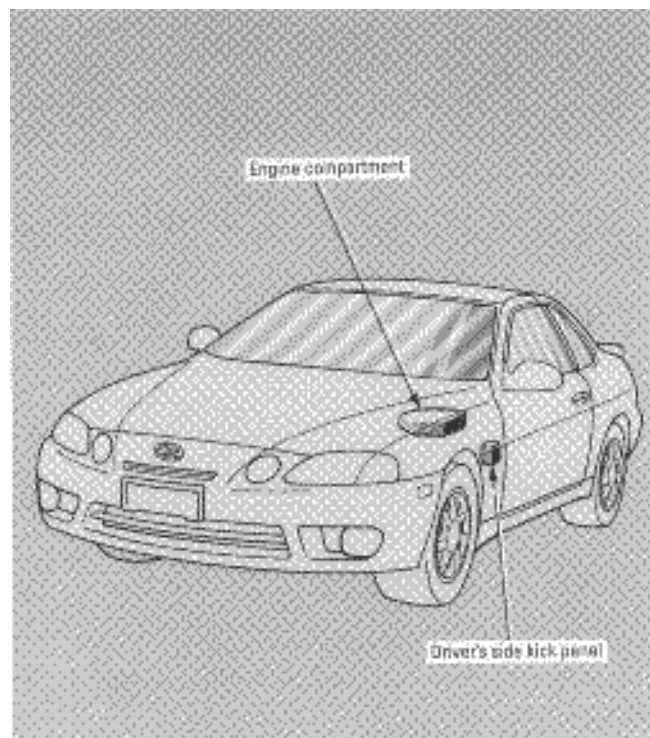
SERVICE PROCEDURES AND SPECIFICATIONS

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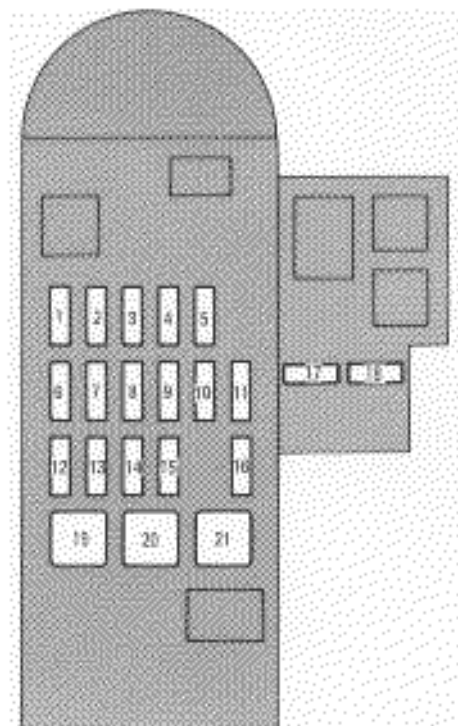
SPECIFICATIONS

– LOCATION OF FUSES

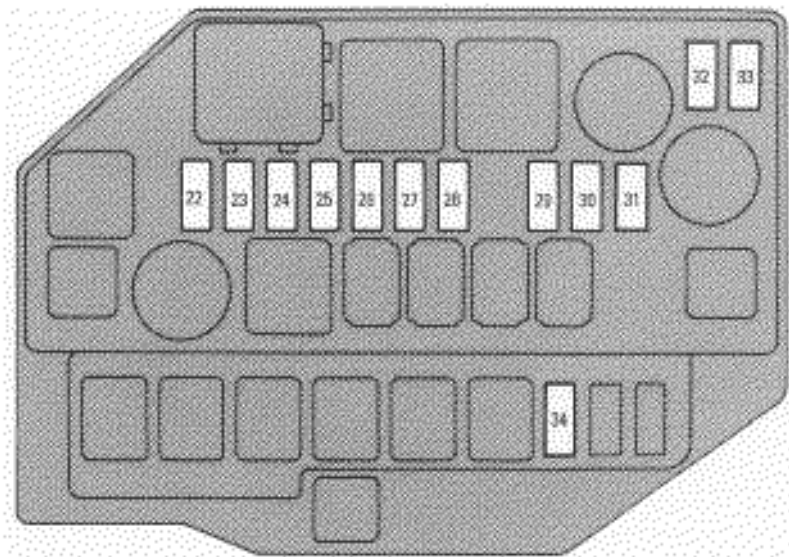


– FUSES

Driver's side kick panel



Engine compartment



ELECTRICAL COMPONENTS

No.	FUSE	AMPERE	CIRCUIT
1	ENGINE	7.5	Charging system
2	HTR	10	Air conditioning system, rear window defogger
3	WIPER	20	Windshield wipers and washer
4	ST	7.5	Starting system, cruise control system, multiport fuel injection system/sequential multiport fuel injection system, instrument panel lights
5	IGN	7.5	Discharge warning light, multiport fuel injection system/sequential multiport fuel injection system, SRS airbag system.
6	PANEL	7.5	Instrument panel lights, glovebox light
7	MIR-HTR	10	Outside rear view mirror defogger
8	TURN	7.5	Turn signal lights
9	STOP	15	Stop lights, cruise control system cancel device
10	CIG	15	Cigarette lighter, theft deterrent system, shift lock system, SRS airbag system, instrument panel lights

No.	FUSE	AMPERE	CIRCUIT
11	RADIO NO.2	7.5	Radio, cassette tape player, compact disc player, power antenna, power rear view mirrors
12	TAIL	7.5	Tail lights, parking lights, side marker lights, license plate lights
13	ECU-IG	15	Cruise control system, power steering control system, shift lock system, anti-lock brake system, SRS airbag system, power door lock system, preset steering system, traction control system, electronically controlled hydraulic-driven cooling system, passenger's seat control system
14	GAUGE	10	Gauges and meters, service reminder indicators and warning buzzers (except discharge and open door warning lights), back-up lights, electronically controlled automatic transmission system, automatic transmission overdrive system, headlight
15	ECU-B	15	SRS airbag system, power rear view mirrors
16	OBD-II	7.5	On-board diagnosis system
17	FOG	15	Fog lights
18	ST-HTR	15	Seat heater

No.	FUSE	AMPERE	CIRCUIT
19	PWR	30	Preset steering, electronic moon roof, power windows, theft deterrent system
20	IG SW	40	Starting system
21	DOOR	30	Theft deterrent system, seat control system, fuel opener control system, power door lock system
22	DOME	10	Interior light, personal lights, door courtesy lights, ignition switch light, open door warning light, trunk light, electronic moon roof system, preset steering system, seat belt reminder system, cruise control system, air conditioning system, inside rear view mirror, door lock and theft deterrent system, foot light, power rear view mirror, locking with wireless remote control system, passenger's seat control system.
23	EFI	30	Multiport fuel injection system/sequential multiport fuel injection system
24	HAZ-HORN	15	Emergency flashers, horns

No.	FUSE	AMPERE	CIRCUIT
25	RADIO NO.1	20	Radio, cassette tape player, compact disc player, power antenna
26	TEL	15	Telephone
27	ALT.S	7.5	Charging system
28	TRAC	7.5	Traction control system
29	HEAD.R	15	Right-hand headlight (low beam)
30	HEAD.L	15	Left-hand headlight (low beam)
31	DRL	7.5	Vehicles sold in Canada Daytime Running Light System
32	HEAD RH-UPR	15	Vehicles sold in Canada Right-hand headlight (high beam)
33	HEAD LH-UPR	15	Vehicles sold in Canada Left-hand headlight (high beam)
34	INJ	30	Vehicles sold in U.S.A. Starting 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.

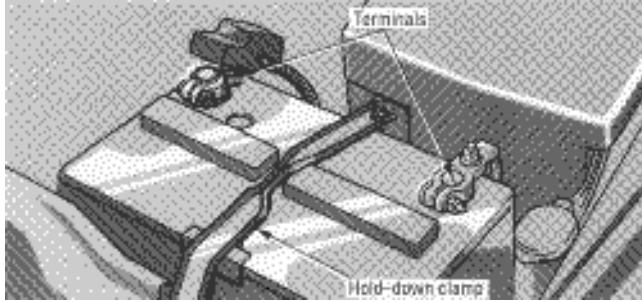
- Avoid contact with eyes, skin or clothes.
- Never inhale or swallow electrolyte.
- Wear protective safety glasses when working near the battery.
- Keep children away from the battery.

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 contacted 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 happen to 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.

Checking battery exterior



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.

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.*

Checking battery fluid

There are 2 types of batteries: maintenance type and non-maintenance type.

A non-maintenance battery has “MAINTENANCE FREE BATTERY” on its top. A maintenance type battery does not have such indication.

Maintenance type battery

Check the fluid condition by the fluid level lines on the side of the battery. Or if the battery has a hydrometer on its top, you can also check the hydrometer.

Non-maintenance battery

Check the battery condition by the hydrometer on top of the battery.

(a) Checking by the fluid level lines (Maintenance type battery only)

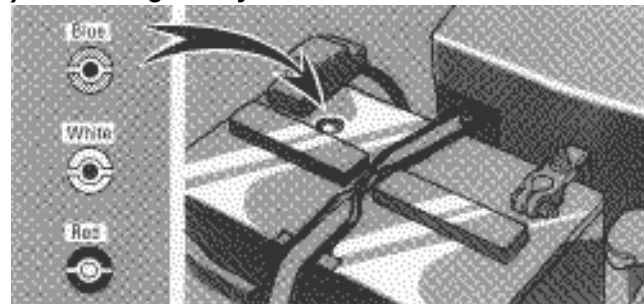


The fluid (electrolyte) level must be between the upper and lower lines.

When checking the fluid level, look at all six cells, not just one or two.

If the level is lower than the lower line, add distilled water. (See "Adding distilled water" on page 235.)

(b) Checking the hydrometer



Check the battery condition by the hydrometer color.

Maintenance type battery

BLUE – Good condition

WHITE – Charging necessary. Have the battery checked by your Lexus dealer.

RED – Add distilled water. (See "Adding distilled water" on page 235.)

Non-maintenance type battery

BLUE – Good condition.

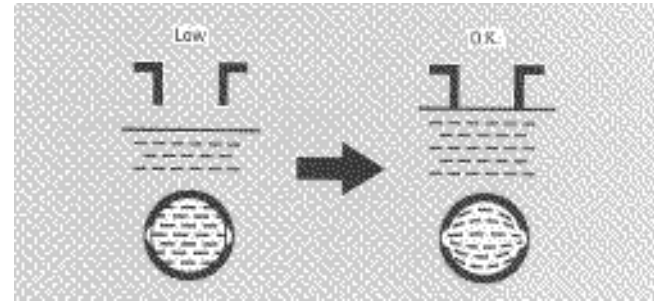
WHITE – Charging necessary. Have the battery checked by your Lexus dealer.

RED – Have the battery checked by your Lexus dealer.

NOTICE

*For non-maintenance battery:
Do not refill the battery with water.*

Adding distilled water (Maintenance type battery only)



1. Remove the vent plugs.
2. Add distilled water to cells needing fluid.

If the side of the battery is covered, check the water level by looking down directly above the cell as illustrated above.

3. Retighten the vent plugs securely.

NOTICE

- *Do not overfill the cells. Excess electrolyte could squirt out of the battery during heavy charging, causing corrosion or damage.*
- *Use a cover on the battery for longer life.*

BATTERY RECHARGING PRECAUTIONS

During recharging, the battery is producing hydrogen gas.

Therefore, before recharging:

1. Maintenance type batteries – Remove the vent plugs.
2. If recharging with the battery installed on the vehicle, be sure to disconnect the ground cable.
3. Make sure the power switch on the recharger is off when connecting the charger cables to the battery and when disconnecting them.



CAUTION

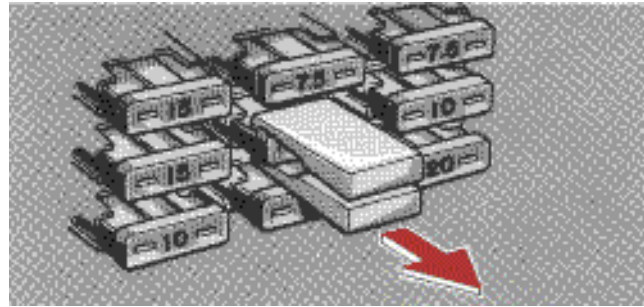
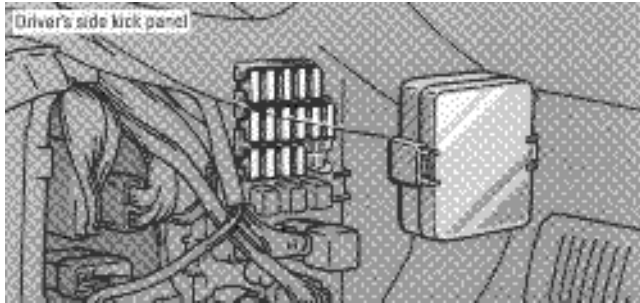
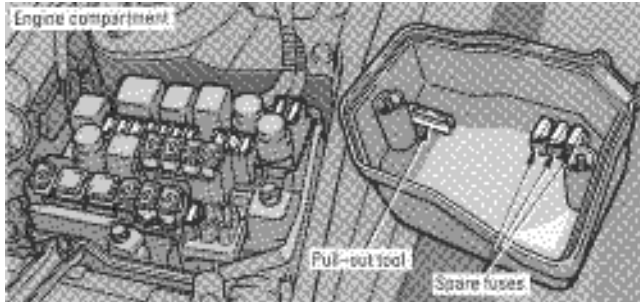
- Always charge the battery in an unconfined area. Do not charge the battery in a garage or closed room where there is not sufficient ventilation.
- Non-maintenance batteries: Only do a slow charge (5A or less). Charging at a quicker rate is dangerous. The battery may explode causing personal injuries.

Maintenance type batteries: Be sure to remove the vent plugs before recharging.

NOTICE

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

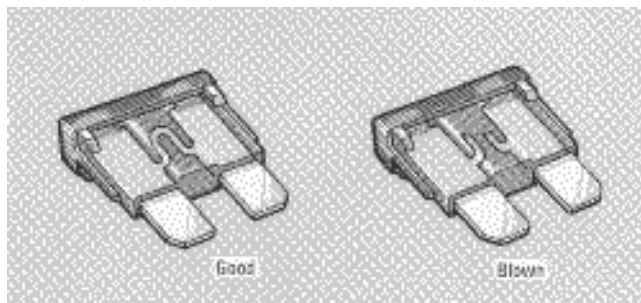
CHECKING AND REPLACING THE BLADE TYPE FUSES



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.

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.



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,” “RAD 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 the 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.

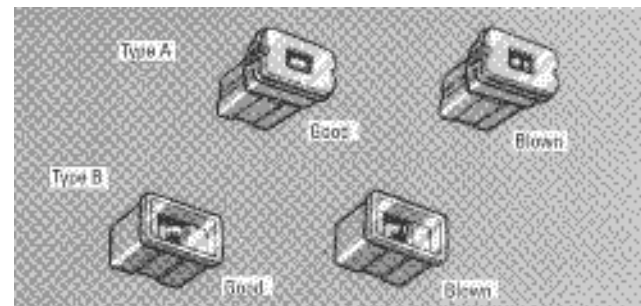
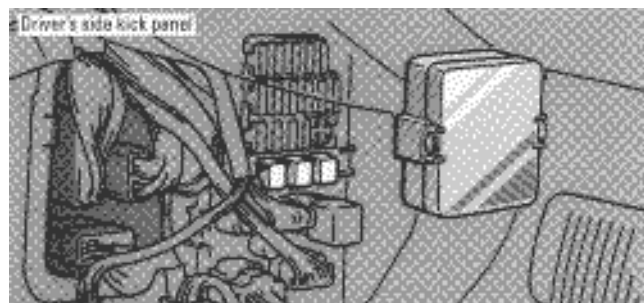
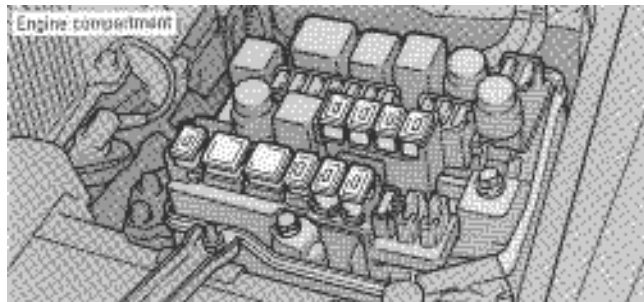
If the new fuse immediately blows out, there is a problem with the electrical system. Have your Lexus dealer correct it as soon as possible.



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



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

NOTICE

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



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.

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.

ADDING WASHER FLUID



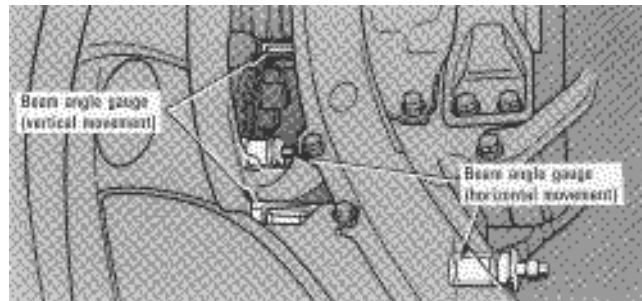
If the washer tank becomes nearly empty, add washer fluid.

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

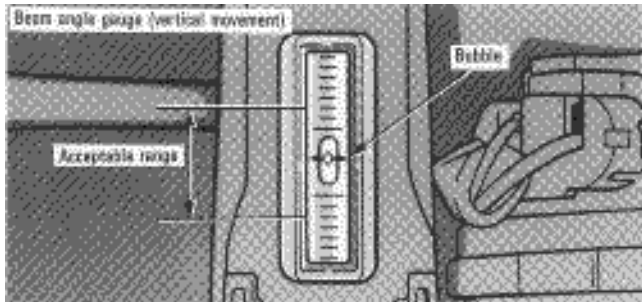
Do not use engine antifreeze or any other substitute because it may damage your vehicle's paint.

CHECKING THE HEADLIGHT AIM



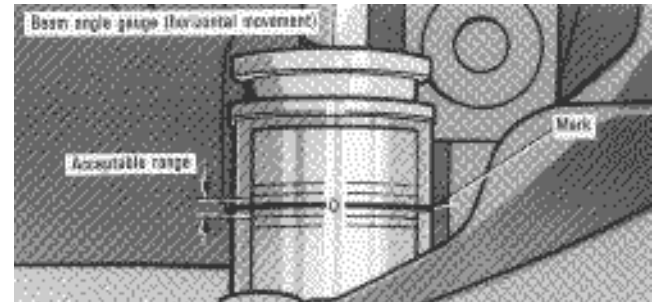
Before checking the headlight aim:

1. Be sure that the body around the headlights is not deformed.
2. Park the vehicle on a level spot.
3. The driver gets into the driver's seat so that the vehicle has its normal load (with the tank full).
4. Bounce the vehicle several times.



To check the headlight aim, check the vertical and horizontal gauges.

1. Look at the beam angle gauge (vertical movement). The bubble of the gauge should not deviate from the center of the gauge by more than two marks on either side of the gauge.



2. Look at the beam angle gauge (horizontal movement). The read mark should not deviate by more than one mark on either side of the gauge.

If the error is over the value specified above, take the vehicle to your Lexus dealer to adjust the headlight aim.

REPLACING LIGHT BULBS

The illustration 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

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.

Light Bulbs	Bulb No.	W	Type
Headlights (low beam)	9006	55	A
Headlights (high beam)	9005	65	B
Fog lights	—	55	C
Parking lights	—	5	E
Front side marker lights	194	3.8	E
Front turn signal lights	1157 NA	27/8	D
Rear turn signal lights	1156	27	D

Light Bulbs	Bulb No.	W	Type
Stop lights	1156	27	D
Tail lights	—	5	E
Back-up lights	1156	27	D
High mounted stoplight	921	18	E
License plate lights	—	5	E
Interior light	—	10	F
Personal lights	—	8	D
Glovebox light	—	1.2	E
Door courtesy lights	—	5	E
Footlights	—	1.2	E
Vanity lights	—	3	F
Trunk light	194	3.8	E

A: HB4 halogen bulbs

B: HB3 halogen bulbs

C: H3 halogen bulbs

D: Single end bulbs

E: Wedge base bulbs

F: Double end bulbs

LIGHT LOCATION

