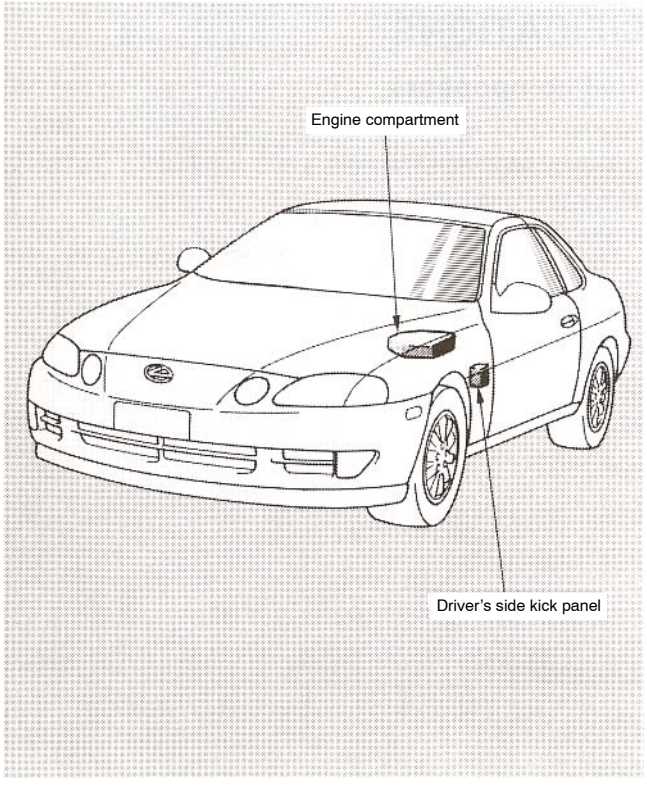
SERVICE PROCEDURES AND SPECIFICATIONS

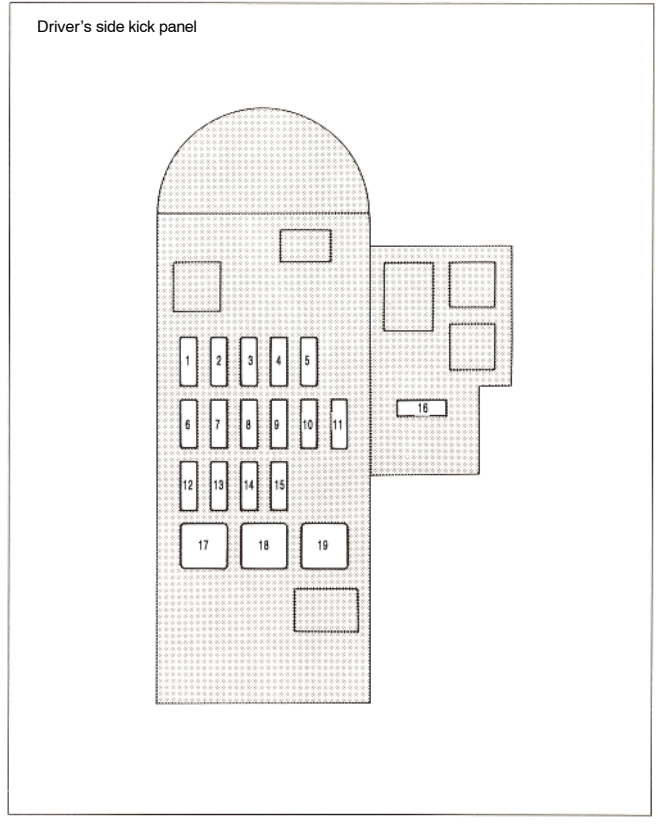
Electrical components

SPECIFICATIONS

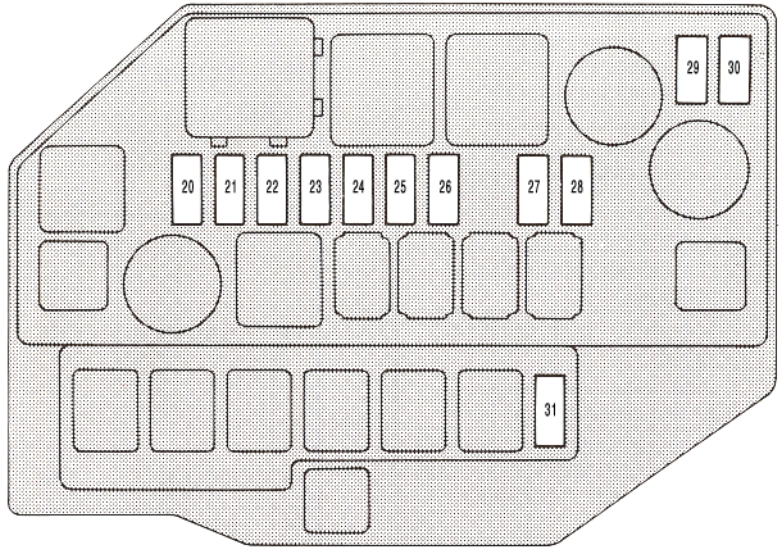
– FUSES LOCATIONS



– FUSES



Engine compartment



NO.	FUSE	AMPERE	CIRCUIT
1	ENGINE	7.5	Charging system
2	HTR	10	Air conditioner system, rear window defogger
3	WIPER	20	Windshield wipers and washer
4	ST	7.5	Starting system, cruise control system, electronic fuel injection system, instrument panel lights
5	IGN	7.5	Discharge warning light, electronic 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	20	Turn signal lights, cornering 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, intrument panel lights
11	RADIO NO. 2	7.5	Radio, cassette tape player, compact disc player, power antenna, power rear view mirrors

NO.	FUSE	AMPERE	CIRCUIT
12	TAIL	15	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 warning lights and buzzers (except discharge and open door warning lights) back-up lights, electronically controlled automatic transmission system, automatic transmission overdrive system, headlights
15	ECU-B	15	SRS airbag system, power rear view mirrors
16	ST-HTR	15	Seat heater
17	PWR	30	Preset steering, electronic moon roof, power windows, theft deterrent system.
18	IG SW	40	Starting system

NO.	FUSE	AMPERE	CIRCUIT
19	DOOR	30	Theft deterrent system, seat control system, fuel opener control system, power door lock system.
20	DOME	10	Interior light, personal lights, door courtesy lights, ignition switch light, open door warning light, trunk room light, electronic moon roof system, preset steering system, seat belt warning system, cruise control system, air conditioner 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.
21	EFI	30	Electronic fuel injection system
22	HAZ-HORN	25	Emergency flashers, horns
23	RADIO NO. 1	20	Radio, cassette tape player compact disc player, power antenna
24	TEL	15	Telephone
25	ALT-S	7.5	Charging system
26	TRAC	7.5	Traction control system
27	HEAD. R	15	Right-hand headlight (low beam)
28	HEAD. L	15	Left-hand headlight (low beam)
29	HEAD R. UP	15	Right-hand headlight (high beam)
30	HEAD L. UP	15	Left-hand headlight (high beam)
31	INJ	30	Starting system

CHECKING BATTERY CONDITION AND FLUID LEVEL

CAUTION:

BATTERY PRECAUTIONS

The battery produces a flammable and explosive hydrogen gas.

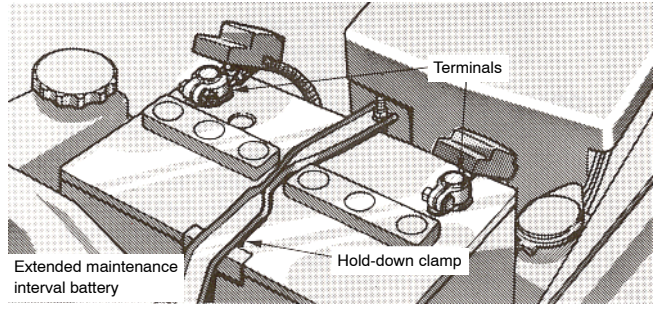
- **Do not cause a spark by contacting the battery terminals with tools.**
- **Do not smoke or light a match near the battery.**

The electrolyte contains poisonous and corrosive sulfuric acid.

- **Avoid contact with eyes, skin or clothes.**
- **Never ingest 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 en route 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.**



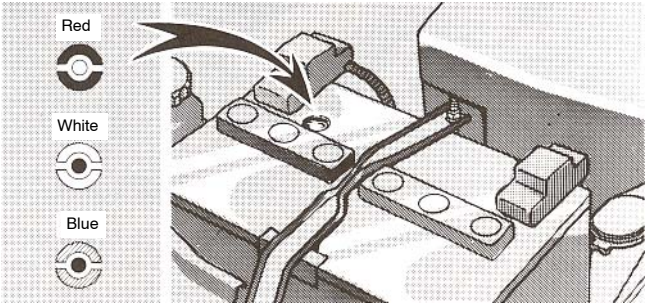
1. Check the battery for corroded or loose connections, cracks, or loose hold-down clamps.

a. 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.

b. If the connections are loose, tighten the clamp bolts – but do not overtighten

c. Tighten the hold-down clamp only enough to keep the battery firmly in place. Overtightening may damage the battery case.

NOTICE:
- **Be sure the engine and all accessories are turned off before performing maintenance.**
- **Remove the ground cable first and reinstall it last.**
- **Be careful not to cause a short circuit with tools.**



2. Check the indicator as shown.

BLUE – Good condition.
RED – Add distilled water.
WHITE – Charging necessary.

If the indicator is red, check the electrolyte level as shown.

a. When checking the electrolyte level, remove the filler caps and look at all six cells, not just one or two.

b. Replenish the battery with distilled water.

c. After replenishing, be sure to securely retighten the filler caps.

NOTICE:
- **Do not overfill the battery or the electrolyte may squirt out of the battery during periods of heavy charging, causing corrosion or damage.**
- **In order to maintain full engine performance and to make sure the cover fits the battery, when replacing the battery use an Exide Group 27F CCA580A battery or equivalent performance battery.**
- **Use a cover on the battery for longer life.**

BATTERY RECHARGING PRECAUTIONS

During recharging, the battery is producing hydrogen gas.

Therefore, before recharging:

1. Remove the filler caps if performing a quick charge (6A or above but max 15A). Removing the filler caps is not necessary when performing a slow charge (under 5A).

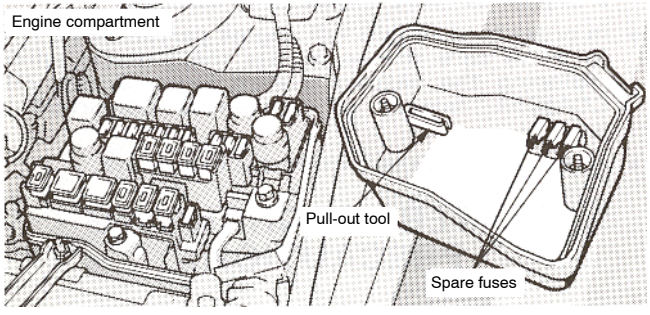
2. Be sure the power switch on the recharger is off when connecting the charger cables to the battery and when disconnecting them.

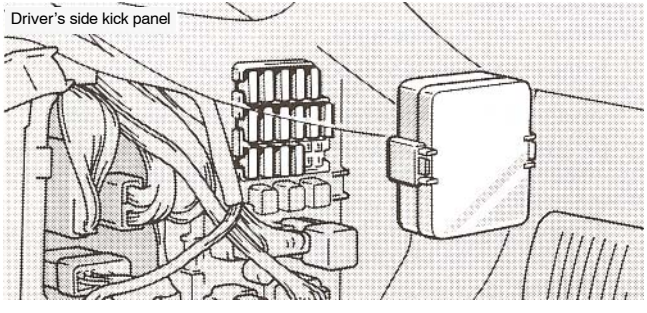
3. If recharging with the battery installed on the vehicle, be sure to disconnect the ground cable.

CAUTION:
Always charge the battery in an unconfined area. Do not charge the battery in a garage or closed room where there is insufficient ventilation.

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

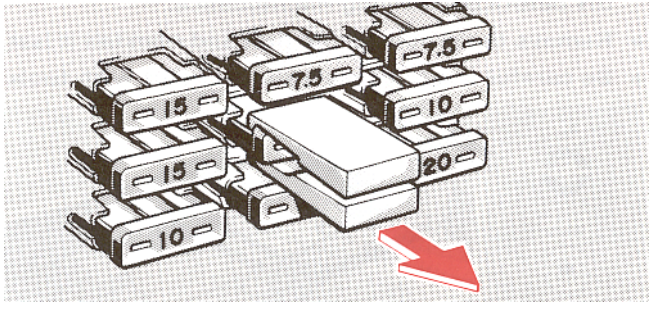
CHECKING AND REPLACING THE BLADE TYPE FUSES





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

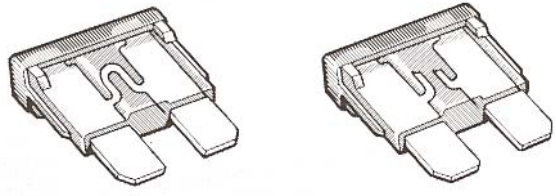
Determine which fuse may be causing the problem. The lid of the fuse box shows the name of the circuit for each fuse.



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

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”, “DOME” or “HEATER” fuse, which may be dispensable for normal driving, and use it if its amperage rating is the same.

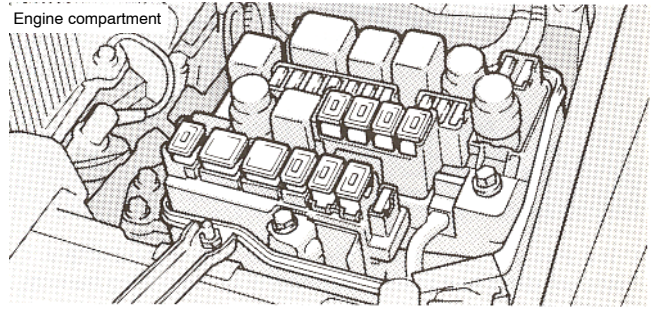
If you cannot use one of the same amperage, use one lower than, but as close as possible to, the amperage. If the amperage is lower than that specified, the fuse might blow out again but this does not indicate anything wrong. Be sure to get the correct fuse as soon as possible and return the substitute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

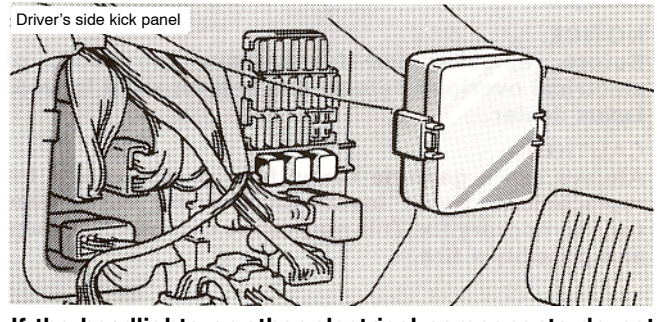
It is a good idea to purchase a set of spare fuses and keep them in your vehicle for emergencies.

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.

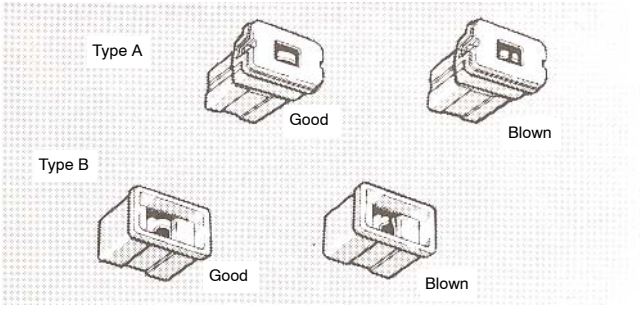
CAUTION:
Never use a fuse with a higher amperage rating, or another object, in place of a fuse. This may cause extensive damage and possibly a fire.

CHECKING THE CARTRIDGE TYPE FUSES





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 melted, they must be replaced.



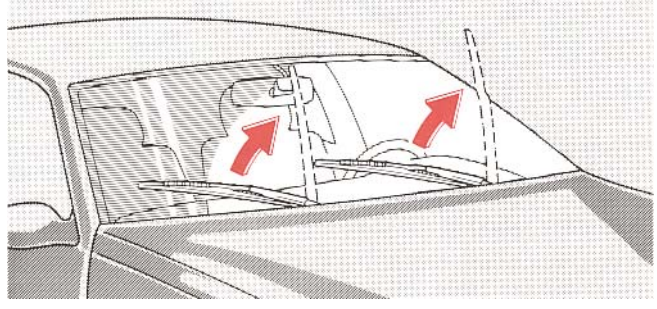
If there is an overload in the circuits from the battery, the fuses are designed to melt before the entire wiring harness is damaged.

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

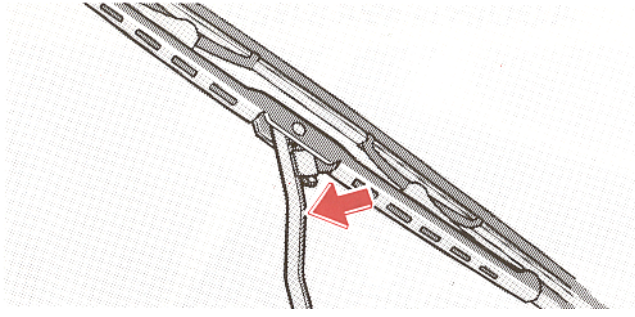
CAUTION:
Always use a genuine Lexus fuse or equivalent for replacement. Never install an ordinary wire – even for a temporary fix. This may cause extensive damage and possibly a fire.

REPLACING THE WINDSHIELD WIPER BLADES

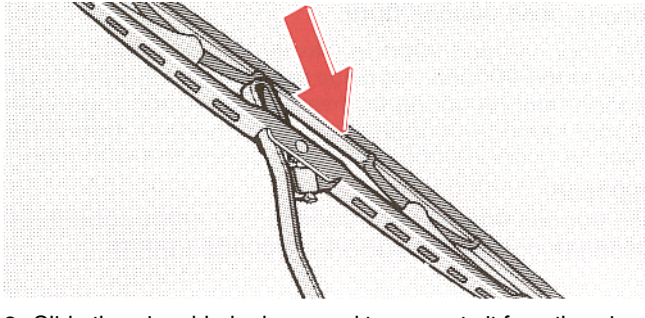
When the wiper no longer cleans adequately, the wiper blades may be worn or cracked requiring replacement.



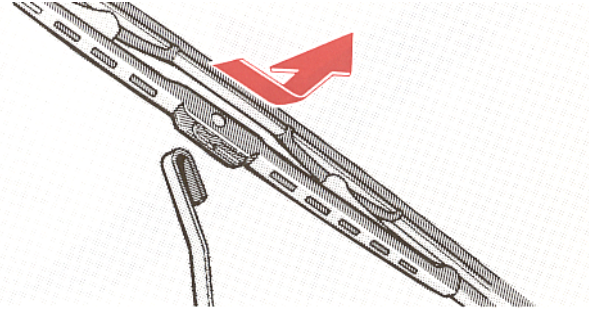
1. Set up the wiper arm and blade.



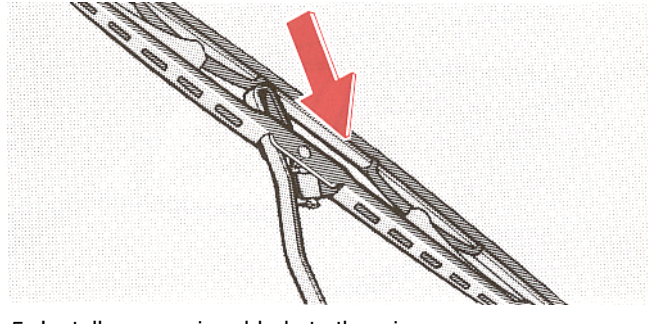
2. Push a click to release the lock joining the wiper arm and blade.



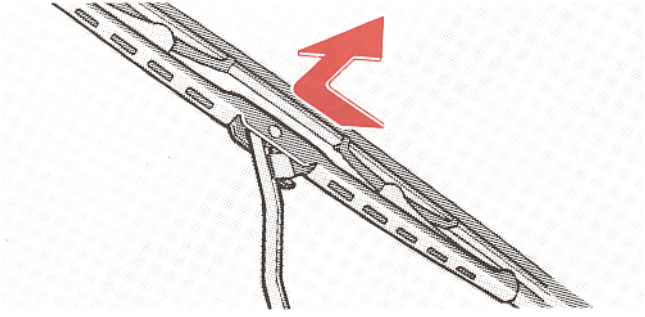
3. Slide the wiper blade downward to separate it from the wiper arm.



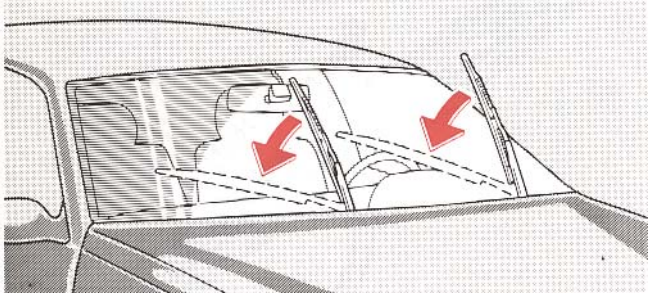
4. Remove the wiper blade.



5. Install a new wiper blade to the wiper arm.



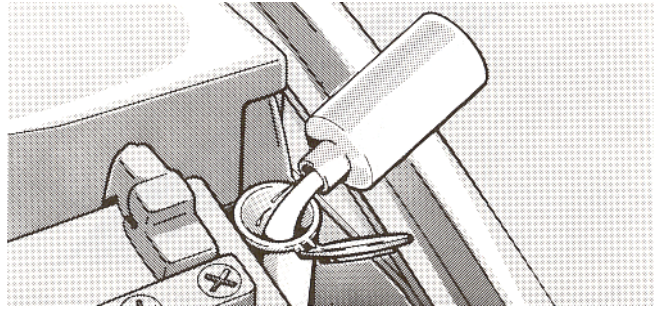
6. Slide the wiper blade upward fully until it locks.



7. Return the wiper blade and arm.

NOTICE:
Be careful not to scratch the glass surface with the wiper frame.

ADDING WASHER FLUID

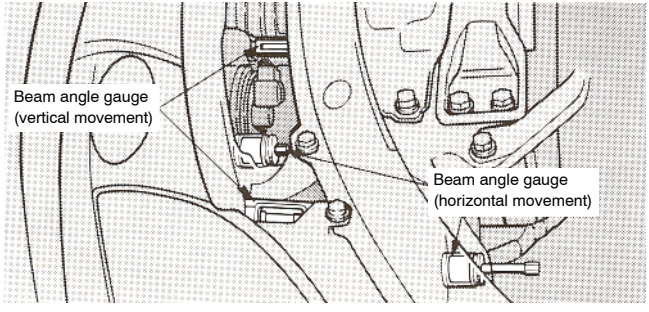


If any washer does not work, the washer tank may be empty. Add washer fluid.

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.

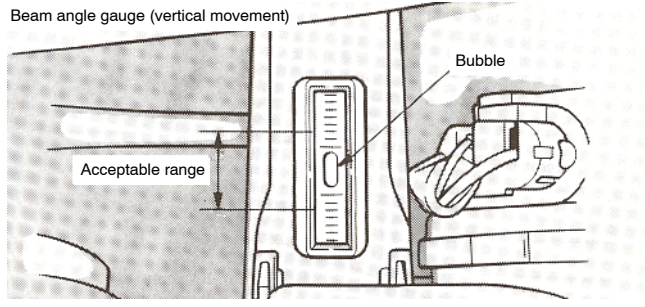
NOTICE:
Do not use engine antifreeze or any other substitute because it may damage your vehicle's paint.

CHECKING THE HEADLIGHT AIM



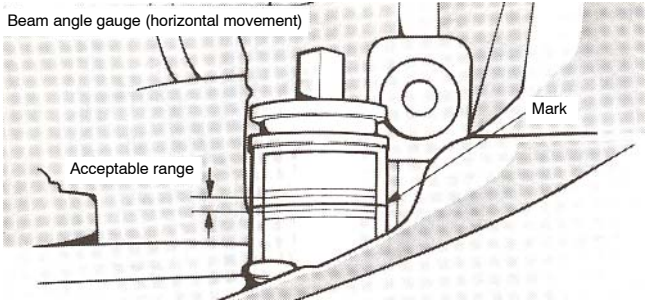
Before checking the headlight aim:

1. Be sure that the body around the headlight is not deformed.
2. Park the vehicle on a level spot.
3. The driver gets into the driver's seat and puts the vehicle in a state readying for a driving (with a full tank).
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 blue 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

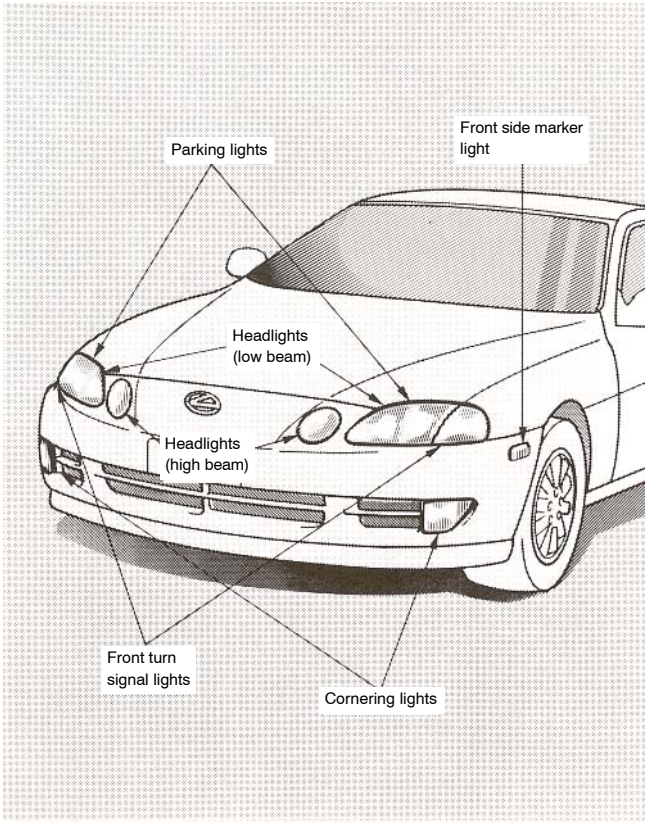
The illustration on the following pages show the locations of light bulbs. If it is necessary to replace a bulb, take your vehicle to Lexus dealer as soon as possible. Use bulbs with the bulb numbers and wattage ratings given in the table.

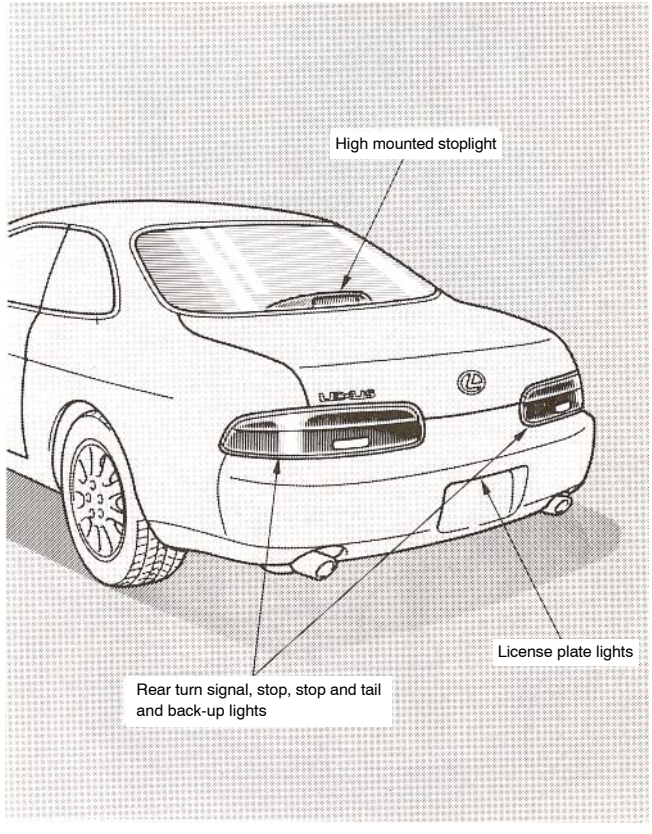
The single end bulbs are removed by pressing them in and turning counterclockwise. Double-end bulbs (*) or wedge base bulbs (**) pull straight out of the holder clips.

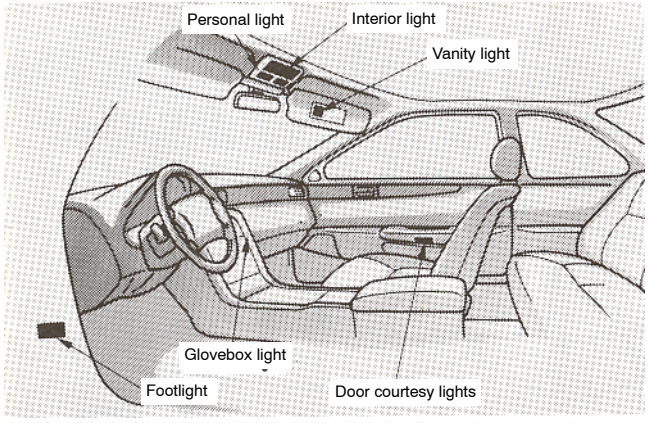
NOTICE:
Only use a bulb of the listed type.

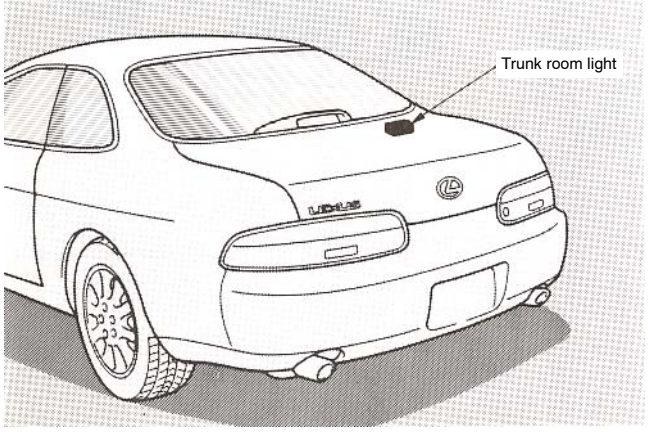
Light Bulbs	Bulb No.	Wattage
Headlights (low beam)	9006	55
Headlights (high beam)	9005	65
Cornering lights	1156	27
Parking lights**	—	5
Front side marker lights**	194	3.8
Front turn signal lights	1157 NA	27/8
Rear turn signal lights	1156	27
Stop lights	1156	27
Stop and tail lights	1157	27/8
Back-up lights	1156	27
High mounted stoplight**	921	18
Licence plate lights**	—	5
Interior light*	—	10
Personal lights	—	8
Glovebox light**	—	1.2
Door courtesy lights**	—	5
Footlights**	—	1.2
Vanity lights*	—	3
Trunk room light**	194	3.8

LIGHT LOCATION






Personal light
Interior light
Vanity light
Glovebox light
Footlight
Door courtesy lights


Trunk room light