Part 7 DO- IT- YOURSELF MAINTENANCE—

Chapter 7-3 Electrical components

- Checking battery condition
- Battery recharging precautions
- Checking and replacing fuses
- Adding washer fluid
- Replacing light bulbs

Checking battery condition— —Precautions

CAUTION

BATTERY PRECAUTIONS

The battery produces flammable and explosive hydrogen gas.

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

The electrolyte contains poisonous and corrosive sulfuric acid.

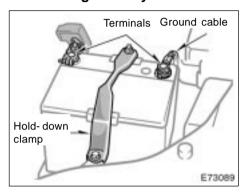
- Avoid contact with eyes, skin or clothes.
- Never ingest electrolyte.
- Wear protective safety glasses when working near the battery.
- Keep children away from the battery.

EMERGENCY MEASURES

 If electrolyte gets in your eyes, flush your eyes with clean water immediately 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 contact area. If you feel pain or burning, 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



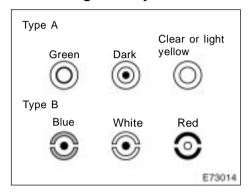
Check the battery for corroded or loose terminal connections, cracks, or loose hold-down clamp.

- a. If the battery is corroded, wash it off with a solution of warm water and baking soda. Coat the outside of the terminals with grease to prevent further corrosion.
- b. If the terminal connections are loose, tighten their clamp nuts—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 off before performing maintenance.
- ◆ When checking the battery, remove the ground cable from the negative terminal ("-" mark) 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



CHECKING BY THE HYDROMETER Check the battery condition by the hydrometer color.

Hydrometer color		Condition	
Type A	Type B	Condition	
GREEN	BLUE	Good	
DARK	WHITE	Charging necessary. Have battery checked by your Toyota dealer.	
CLEAR or LIGHT YELLOW	RED	Have battery checked by your Toyota dealer.	

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

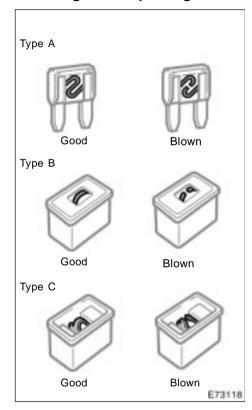
CAUTION

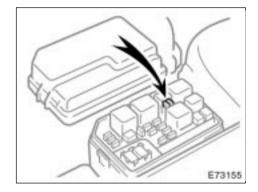
- Always charge the battery in an unconfined area. Do not charge the battery in a garage or closed room where there is not sufficient ventilation.
- Only do a slow charge (5A or less). Charging at a quicker rate is dangerous. The battery may explode, causing personal injuries.

NOTICE

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

Checking and replacing fuses





If the headlights or other electrical components do not work, check the fuses. If any of the fuses are blown, they must be replaced.

See "Fuse locations" in Chapter 7-1 for locations of the fuses.

Turn the ignition switch and inoperative component off. Pull a suspected fuse straight out and check it.

Determine which fuse may be causing the problem. The lid of the fuse box shows the name of the circuit for each fuse. See Part 8 of this manual for the functions controlled by each circuit.

Type A fuses can be pulled out by the pull-out tool. The location of the pull-out tool is shown in the illustration.

If you are not sure whether the fuse has blown, try replacing the suspected fuse with one that you know is good.

If the fuse has blown, push a new fuse into the clip.

Only install 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 "FOG" or "S-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 that is lower, but as close as possible to, the rating. 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 clip.

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 Toyota 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.

Adding washer fluid

If any washer does not work or low windshield washer fluid level warning light comes on, 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 freezing point, use washer fluid containing antifreeze. This product is available at your Toyota 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.

Replacing light bulbs-

The following illustrations show how to gain access to the bulbs. When replacing a bulb, make sure the ignition switch and light switch are off. Use bulbs with the 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.

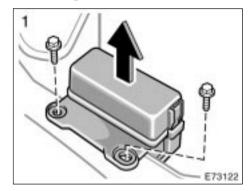
NOTICE

Only use a bulb of the listed type.

Light bulbs	Bulb No.	W	Туре
Headlights	HB2	60/5 5	Α
Parking, front side marker and front turn signal lights	3157N A	27/8	С
Rear side marker lights	194	3.8	O
Rear turn signal lights	3156	27	С
Stop and tail lights	3157	27/8	С
Back- up lights	921	18	С
License plate lights	194	3.8	С
High mounted stoplight	_	18	С
Personal light		10	В
Interior light	_	8	D
Trunk light	194	3.8	С

A: HB2 halogen bulbs B: Single end bulbs C: Wedge base bulbs D: Double end bulbs

-Headlights



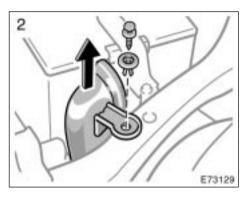
1. Open the hood.

RIGHT- HAND HEADLIGHT: Remove the bolts and take out the relay block.

Put the relay block in the appropriate place other than on the engine.

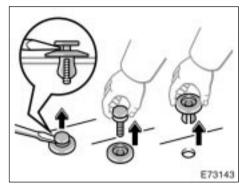
NOTICE

Do not place the relay block on the engine.

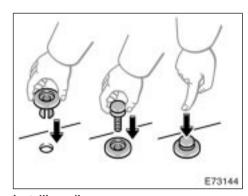


2. LEFT-HAND HEADLIGHT: Remove the clip and take out the air cleaner duct.

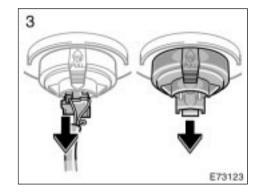
Remove and install the cover clip as shown in the following illustration.



Removing clip: Use a flat-bladed screwdriver or equivalent

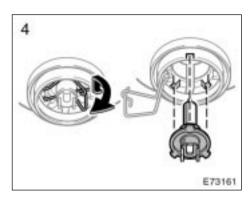


Installing clip



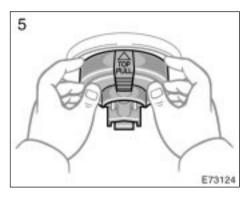
3. Unplug the connector. Remove the rubber cover.

If the connector is tight, wiggle it.



4. Release the bulb retaining spring and remove the bulb. Install a new bulb and the bulb retaining spring.

To install a bulb, align the tabs of the bulb with the cutouts of the mounting hole.

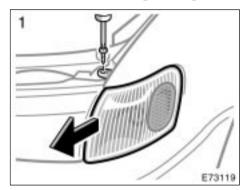


5. Install the rubber cover with the "TOP" mark upward, and snuggle on the boss. Insert the connector.

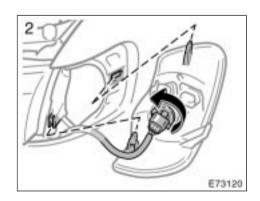
Make sure the rubber cover fits snugly on the connector and the headlight body. Aiming is not necessary after replacing the bulb. When aiming adjustment is nec-

essary, contact your Toyota dealer.

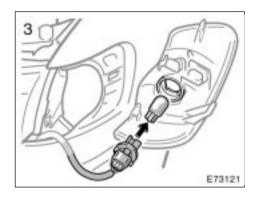
—Parking, front side marker and front turn signal lights

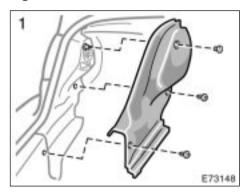


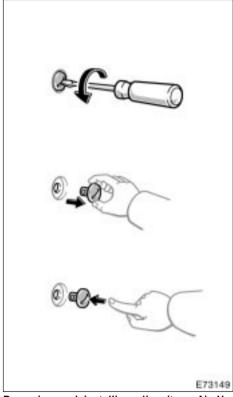
Use a Phillips-head screwdriver.



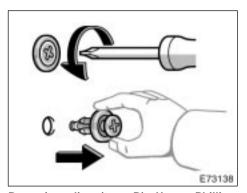
—Rear side maker, rear turn signal, and stop and tail lights



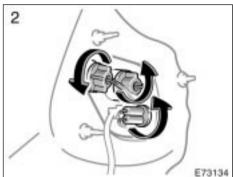




Removing and installing clips (type A): Use a flat-bladed screwdriver or equivalent.

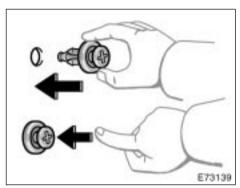


Removing clips (type B): Use a Phillipshead screwdriver.



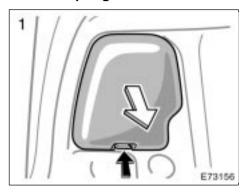
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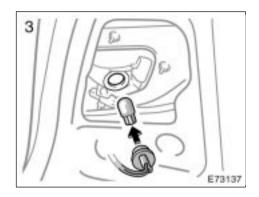
a: Stop and tail light b: Rear turn signal light c: Rear side marker light



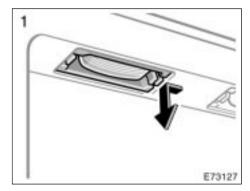
Installing clips (type B)

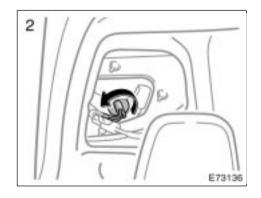
—Back-up lights

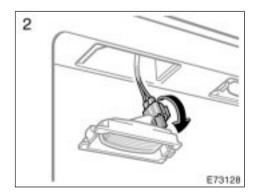




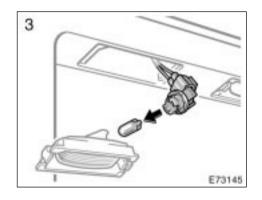
—License plate lights (left side)

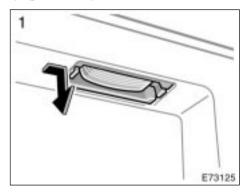


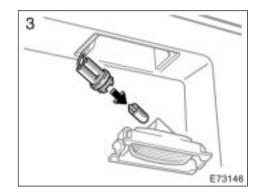


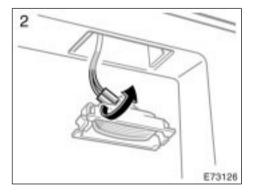


—License plate lights (right side)









—High mounted stoplight

