

**SECTION 7- 3**

**DO- IT- YOURSELF MAINTENANCE**

**Electrical components**

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**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.

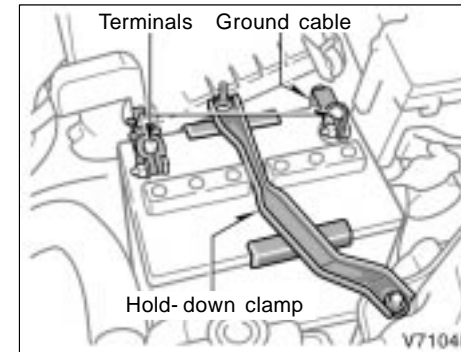
- Avoid contact with eyes, skin or clothes.
- Never ingest electrolyte.
- Wear protective safety glasses when working near the battery.
- Keep children away from the battery.

**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 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.

**—Checking battery exterior**



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

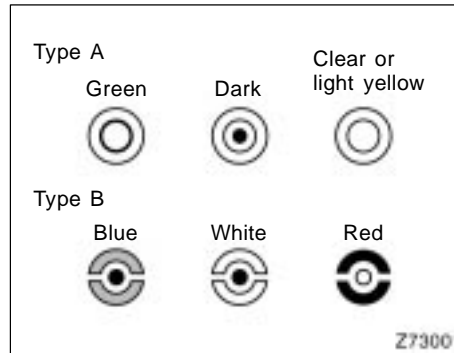
- a. If the battery is corroded, wash it off with a solution of warm water and baking soda. Coat the outside of the terminals with grease to prevent further corrosion.
- b. If the terminal connections are loose, tighten their clamp nuts—but do not overtighten.
- c. Tighten the hold-down clamp only enough 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.*

If the battery is disconnected or run down, the moon roof may not operate automatically and the jam protection function will not function correctly after you reconnect, replace or recharge the battery. In any of these cases, you should normalize the moon roof. To normalize the moon roof, see "Electric moon roof" on page 36 in Section 1-2.

**—Checking battery condition**



**CHECKING BY INDICATOR**

Check the battery condition by the indicator color.

| Indicator color       |        | Condition   |
|-----------------------|--------|---|
| Type A                | Type B |   |
| 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.
2. Be sure the power switch on the recharger is off when connecting the charger cables to the battery and when disconnecting them.

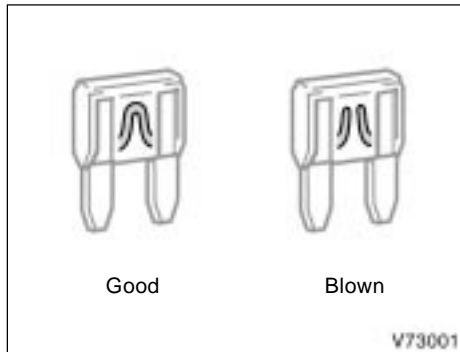
**CAUTION**

- **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 (5 A or less). Charging at a quicker rate is dangerous. The battery may explode, causing personal injuries.**

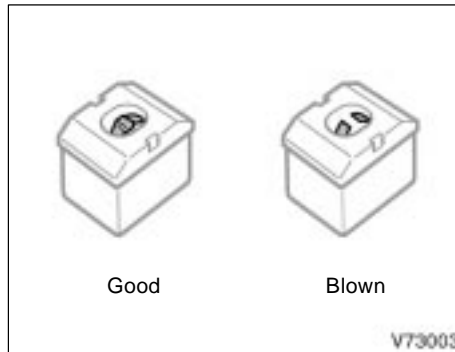
**NOTICE**

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

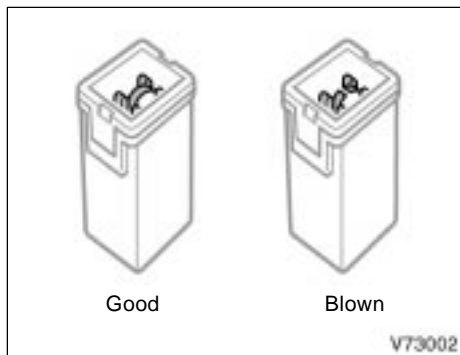
## Checking and replacing fuses



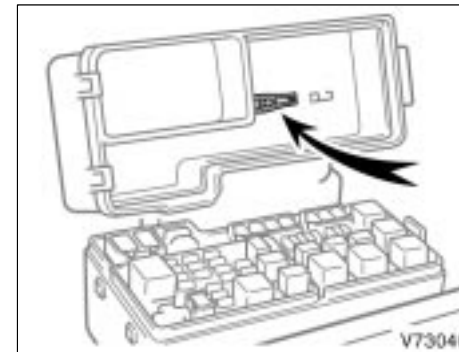
Type A



Type C



Type B



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" on page 374 in Section 7-1 for locations of the fuses.

**Turn the ignition switch and inoperative component off. Pull the 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 page 410 in Section 8 for the functions controlled by each circuit.

Type A fuses can be pulled out by using 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 "FR DEF" or "CIG" 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 to the rating as possible. 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.

You should normalize the moon roof if it does not operate automatically or the jam protection function does not operate correctly after replacing blown fuses. To normalize the moon roof, see "Electric moon roof" on page 36 in Section 1-2.



**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 the 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 the 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**

- **To prevent burning yourself, 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.***

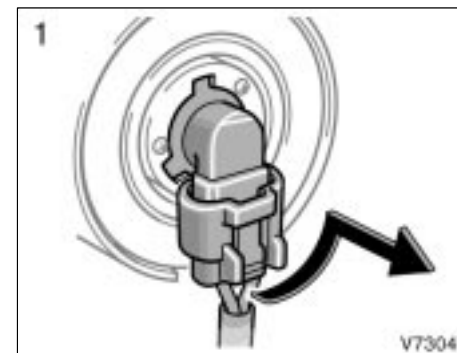
The inside of the lens of exterior lights such as headlights may temporarily fog up when the lens becomes wet in the rain or in a car wash. This is not a problem because the fogging is caused by the temperature difference between the outside and inside of the lens, just like the windshield fogs up in 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 Toyota dealer.

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| Light bulbs  | Bulb No. | W    | Type |
|--|----------|------|------|
| Headlights (low)   | 9006     | 51   | A    |
| Headlights (high)  | 9005     | 60   | B    |
| Front fog lights   | 9006     | 51   | A    |
| Front turn signals/<br>parking and front<br>side marker lights | —        | 21/5 | C    |
| Rear side marker<br>lights                                     | 168      | 5    | E    |
| Rear turn signal<br>lights                                     | —        | 21   | D    |
| Stop/tail lights   | 7443     | 21/5 | E    |
| Back- up lights  | 7440     | 21   | E    |
| High mounted stop<br>light                                     | 921      | 16   | E    |
| License plate<br>lights  | —        | 5    | E    |
| Interior lights  | —        | 8    | F    |
| Personal lights  | —        | 5    | E    |
| Vanity lights  | —        | 2    | F    |
| Door courtesy<br>lights  | —        | 5    | E    |
| Glove box light  | #74      | 1.2  | E    |

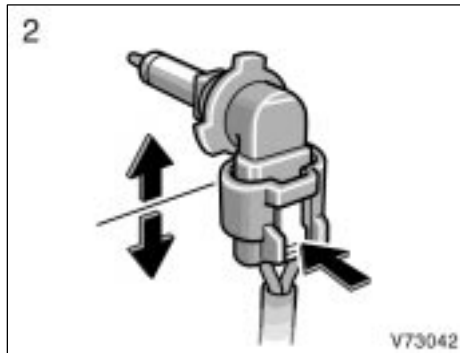
A: HB4 halogen bulbs  
 B: HB3 halogen bulbs  
 C: Single end bulbs  
 D: Wedge base bulbs (amber)  
 E: Wedge base bulbs (clear)  
 F: Double end bulbs

### —Headlights



1. Open the hood. Turn the bulb base counterclockwise to the front of the vehicle as shown.

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2. Pull the bulb out of the bulb base and install a new bulb.

If the connector is tight, wiggle it.



3. Insert the bulb base into the mounting hole by turning it clockwise.

Aiming is not necessary after replacing the bulb. When aiming adjustment is necessary, contact your Toyota dealer.

—Front fog, front turn signal/parking and front side marker, and rear side marker lights

If any of the following lights burns out, contact your Toyota dealer.

- Front fog lights
- Front turn signals/parking and front side marker lights
- Rear side marker lights

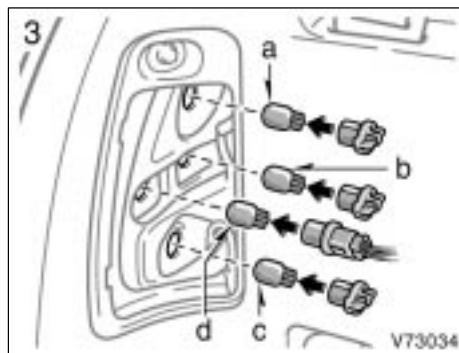
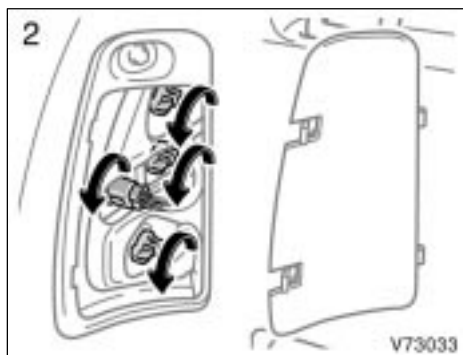
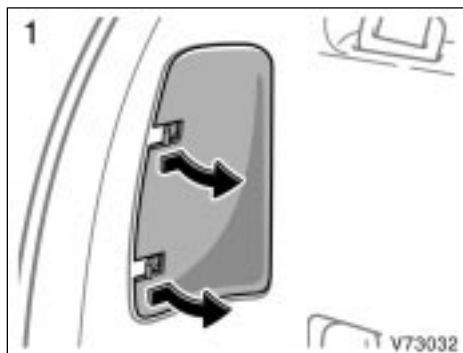
**NOTICE**

*Do not try to replace any of the light bulbs mentioned above by yourself. You may damage the vehicle.*



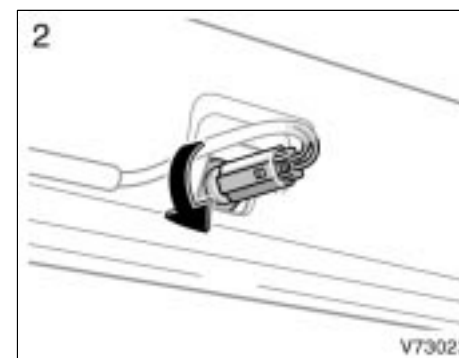
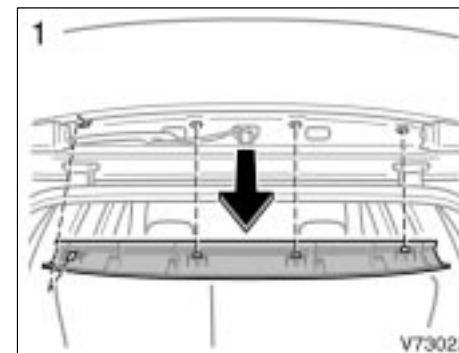
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—Rear turn signal, stop/tail and back-up lights



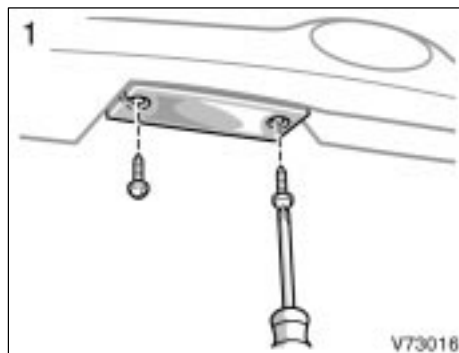
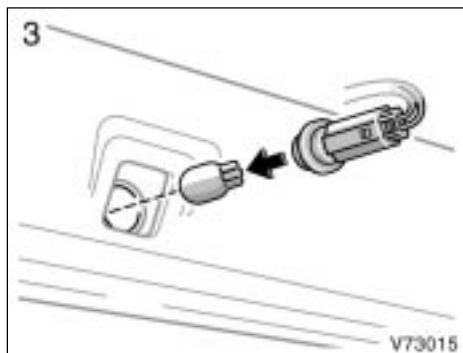
- a: Stop/tail light
- b: Rear turn signal light
- c: Stop/tail light
- d: Back-up light

—High mounted stoplight



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**—License plate light**



Use a Phillips-head screwdriver.

