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ELECTRICAL COMPONENTS

SPECIFICATIONS

- FUSES AND CIRCUIT BREAKER LOCATIONS

- FUSES AND CIRCUIT BREAKERS

Driver’s side kick panel
Engine compartment
<table>
<thead>
<tr>
<th>NO.</th>
<th>FUSE</th>
<th>AMPERE</th>
<th>CIRCUIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STOP</td>
<td>25</td>
<td>Stop lights, cruise control system cancel device</td>
</tr>
<tr>
<td>2</td>
<td>FOG</td>
<td>15</td>
<td>Fog lights</td>
</tr>
<tr>
<td>3</td>
<td>ECU-B</td>
<td>15</td>
<td>SRS airbag system, Lexus ride control system, anti-lock brake system</td>
</tr>
<tr>
<td>4</td>
<td>RADIO</td>
<td>7.5</td>
<td>Radio, cassette tape player, compact disc player, power antenna, power rear view mirrors, air conditioner system</td>
</tr>
<tr>
<td>5</td>
<td>CIG</td>
<td>15</td>
<td>Cigarette lighter, theft deterrent system, shift lock system, SRS airbag system</td>
</tr>
<tr>
<td>6</td>
<td>MIR-HTR</td>
<td>10</td>
<td>Outside rear view mirror defogger</td>
</tr>
<tr>
<td>7</td>
<td>GAUGE</td>
<td>10</td>
<td>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, power windows, automatic light control system, seat belt warning lights</td>
</tr>
<tr>
<td>8</td>
<td>ENGINE</td>
<td>7.5</td>
<td>Charging system</td>
</tr>
<tr>
<td>9</td>
<td>ECU-IG</td>
<td>15</td>
<td>Cruise control system, power steering control system, shift lock system, anti-lock brake system, SRS airbag system, power door lock system, Lexus ride control system</td>
</tr>
<tr>
<td>10</td>
<td>TURN</td>
<td>7.5</td>
<td>Turn signal lights</td>
</tr>
<tr>
<td>11</td>
<td>HEATER</td>
<td>15</td>
<td>Air conditioner system, rear window defogger</td>
</tr>
<tr>
<td>12</td>
<td>WIP</td>
<td>20</td>
<td>Windshield wipers and washer, headlight cleaner</td>
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<tr>
<td>13</td>
<td>TAIL</td>
<td>15</td>
<td>Tail lights, parking lights, side marker lights, license plate lights</td>
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<tr>
<td>14</td>
<td>PANEL</td>
<td>7.5</td>
<td>Instrument panel lights, air conditioner control system, clock, instrument panel lights, glovebox light for light system</td>
</tr>
<tr>
<td>15</td>
<td>IGN</td>
<td>7.5</td>
<td>Discharge warning light, electronic fuel injection system, electronic cooling fan system, SRS airbag system</td>
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<td>16</td>
<td>ST</td>
<td>7.5</td>
<td>Starting system, cruise control system, electronic fuel injection system, instrument panel lights</td>
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<tr>
<td>17</td>
<td>TRC</td>
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<td>Traction control system</td>
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<td>FUSE</td>
<td>AMPERE</td>
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<tr>
<td>-----</td>
<td>---------</td>
<td>------</td>
<td>--------</td>
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<tr>
<td>18</td>
<td>RADIO NO. 1</td>
<td>20</td>
<td>Radio, cassette tape player compact disc player, power antenna</td>
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<tr>
<td>19</td>
<td>HAZ-HORN</td>
<td>15</td>
<td>Emergency flashers, horns</td>
</tr>
<tr>
<td>20</td>
<td>DOME</td>
<td>10</td>
<td>Interior light, personal lights, door courtesy lights, ignition switch light, open door warning light, trunk room light, electric moon roof system, radio cassette tape player, compact disc player, 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</td>
</tr>
<tr>
<td>21</td>
<td>TEL</td>
<td>15</td>
<td>Telephone</td>
</tr>
<tr>
<td>22</td>
<td>EFI</td>
<td>20</td>
<td>Electronic fuel injection system</td>
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<tr>
<td>23</td>
<td>SEAT HTR</td>
<td>20</td>
<td>Seat heater</td>
</tr>
<tr>
<td>24</td>
<td>AIRSUS</td>
<td>20</td>
<td>Lexus ride control system, height control system</td>
</tr>
<tr>
<td>25</td>
<td>HEAD LH</td>
<td>15</td>
<td>Left-hand headlight</td>
</tr>
<tr>
<td>26</td>
<td>HEAD RH</td>
<td>15</td>
<td>Right-hand headlight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NO.</th>
<th>CIRCUIT</th>
<th>BREAKER</th>
<th>AMPERE</th>
<th>CIRCUIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>P/W</td>
<td>30</td>
<td>Preset steering, power shoulder anchor, electric moon roof, power windows</td>
<td></td>
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<tr>
<td>28</td>
<td>DOOR</td>
<td>30</td>
<td>Theft deterrent system, seat control system, fuel opener control system</td>
<td></td>
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<tr>
<td>29</td>
<td>DEFOG</td>
<td>40</td>
<td>Rear window defogger</td>
<td></td>
</tr>
</tbody>
</table>
ELECTRICAL COMPONENTS

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 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.

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

CHECKING AND REPLACING THE BLADE TYPE FUSES
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. It may cause extensive damage and possibly cause a fire.
In the event the defogger, air conditioner, power windows, power door locks, or moon roof does not operate, check its circuit breaker (C.B).

To reset the circuit breaker, first turn the ignition switch off and carefully insert a thin object, such as a toothpick, needle or safety pin, into the hole in the circuit breaker and push until you hear a click. The component should now operate. This may be done without removing the circuit breaker.

If the circuit breaker immediately goes off again or the component does not operate, turn off the component switch and have the electrical system checked by your Lexus dealer as soon as possible.

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 is melted, it 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. It may cause extensive damage and possibly cause a fire.
REPLACING THE WINDSHIELD WIPER BLADES

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

Replacing driver’s side wiper blade

1. Turn the ignition switch on. Turn the wiper switch to the “LO” position.
2. Quickly turn the ignition switch to the “ACC” position as soon as the wiper on the driver’s side comes to the edge of the windshield on the driver’s side.
3. Use a screwdriver to release the lock joining the wiper arm and blade.
4. Slide the wiper blade downward to separate it from the wiper arm.
5. Remove the wiper blade.
6. Install a new wiper blade to the wiper arm.
7. Slide the wiper blade upward fully to the wiper arm.
8. Firmly close the lock joining the wiper arm and blade.

9. Lower the wiper blade down with your hand. Return the wiper blades to set position.

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

**Replacing passenger side wiper blade**
1. Turn the ignition switch on. Turn the wiper switch to the “LO” position.

2. Quickly turn the ignition switch to the “ACC” position as soon as the wiper on the driver’s side comes to the edge of the windshield on the driver’s side.

3. Press on the lock pin at the rear side where the wiper arm and blade connect, and slide the wiper blade downward to disconnect it.

4. Place the wiper blade square to the wiper arm and then pull the wiper blade straight off.

5. Place the new wiper blade square to the wiper arm and push it onto the wiper arm.
6. Slide the wiper blade back up until the lock clicks in place.

**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.
REPLACING SEMI-SEALED BEAM HEADLIGHT BULBS

1. Open the hood and remove the parking light with the screw.

Before replacement, make sure the headlight switch is off.

2. Remove the headlight and fog light unit with three bolts and a nut.

3. Unplug the connector while depressing the lock release.

4. Turn the bulb retaining ring counterclockwise and take out the bulb.
5. Install a new bulb and the bulb retaining ring. Insert the connector.

To install a bulb, align the cutouts of the bulb socket with the protrusions of the headlight body.

6. Install the headlight and fog light unit and parking light.

**Bulb selection**

Use a bulb with the bulb number 9004 and wattage rating of 65/45.

After replacement, have the headlight aim checked by your Lexus dealer.

**NOTICE:**

- Use only a bulb of the type above.
- Do not touch the glass part of the bulb with bare hands. Natural oils from your skin can damage the bulb and shorten its life. If you do, clean the glass with alcohol and a clean cloth.

**REPLACING FRONT FOG LIGHT BULBS**

1. Remove three screws of the fog light. Unplug the connector while depressing the lock release, and remove the fog light.

Before replacement, make sure the front fog light switch is off. If the connector is tight, wiggle it.
2. Remove the rubber cover.

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

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

**Bulb selection**

Use a bulb with a wattage rating of 55 (H3).

**NOTICE:**

- Use only a bulb of the type above.
- Do not touch the glass part of the bulb with bare hands. Natural oils from your skin can damage the bulb and shorten its life. If you do, clean the glass with alcohol and clean cloth.

4. Install the rubber cover with the tab upward and snug on the boss.

Make sure the rubber cover fits snugly.

5. Install the fog light, connect the connector and install three screws.
REPLACING LIGHT BULBS

The illustrations on the following pages show how to gain access to the bulbs. When replacing a bulb, make sure the light switch is off. 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.

<table>
<thead>
<tr>
<th>No.</th>
<th>Light Bulbs</th>
<th>Bulb No.</th>
<th>Wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parking lights**</td>
<td>168</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Front side marker lights**</td>
<td>159</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Front turn signal lights</td>
<td>1156</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>Rear turn signal lights</td>
<td>1156</td>
<td>27</td>
</tr>
<tr>
<td>5</td>
<td>Stop and tail lights</td>
<td>1157</td>
<td>27/8</td>
</tr>
<tr>
<td>6</td>
<td>Back-up lights</td>
<td>1156</td>
<td>27</td>
</tr>
<tr>
<td>7</td>
<td>High mounted stoplight**</td>
<td>921</td>
<td>18</td>
</tr>
<tr>
<td>8</td>
<td>License plate lights**</td>
<td>168</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Interior lights *</td>
<td>–</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Personal lights</td>
<td>–</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>Glovebox light**</td>
<td>–</td>
<td>1.2</td>
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<td>12</td>
<td>Door courtesy lights**</td>
<td>194</td>
<td>3.8</td>
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<tr>
<td>13</td>
<td>Footlights**</td>
<td>–</td>
<td>1.4</td>
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<tr>
<td>14</td>
<td>Vanity lights*</td>
<td>–</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>Trunk room light**</td>
<td>194</td>
<td>3.8</td>
</tr>
</tbody>
</table>
ELECTRICAL COMPONENTS

LIGHT LOCATION

- Parking lights
- Front turn signal lights
- Front side marker lights
- High mounted stoplight
- License plate lights
- Rear turn signal, stop and tail, and back-up lights
ELECTRICAL COMPONENTS

**LIGHT BULBS**

- Parking lights
- Front side marker lights

**LIGHTS**

- Front personal light
- Interior light
- Vanity light
- Rear personal light
- Door courtesy lights
- Glovebox light
- Footlight
- Trunk room light
- Glovebox light

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ELECTRICAL COMPONENTS

Front turn signal lights

Stop, tail and back-up light

License plate lights
Rear turn signal, stop and tail lights
ELECTRICAL COMPONENTS

High mounted stoplight

Interior light

Front personal lights
Rear personal and door courtesy lights

Glovebox light

Door courtesy lights
ELECTRICAL COMPONENTS

Driver footlight

Passenger footlight

Vanity light

Trunk room light