2007 ACCESSORIES & BODY, CAB

Lighting Systems - MX-5 Miata

LIGHTING SYSTEMS LOCATION INDEX
Fig. 1: Identifying Location Of Lighting Systems Components

1. Front combination light
2. Discharge headlight control module
3. Front fog light
4. Front side marker light
5. Rear combination light
6. High-mount brake light
7. License plate light
8. Back-up light switch
9. Combination switch
10. Light switch
11. Hazard warning switch
12. Flasher control module
13. DRL control module
14. Map light
15. Trunk compartment light
16. Door switch
17. Ignition key illumination
DISCHARGE HEADLIGHT SERVICE WARNINGS

DISCHARGE HEADLIGHT BULB SERVICE WARNINGS

- To prevent electrical shock when replacing the discharge headlight bulb, dry hands thoroughly, and perform the work in an area out of rain.
- When the light switch is on, approx. 25,000 V of high voltage passes through the discharge headlight bulb socket. Because of the danger of electrical shock, do not insert fingers or a tester.
- When the headlights are on, high voltage flows around the socket and bulb. When turning on the discharge headlights while working, always leave the headlights in the vehicle-installed condition to prevent electrical shock.

Fig. 2: Precaution For Discharge Headlight Bulb

Courtesy of MAZDA MOTORS CORP.
DISCHARGE HEADLIGHT CONTROL MODULE SERVICE WARNINGS

- Because of the danger of electrical shock, when inspecting with a tester, do not inspect the discharge headlight control module as a single unit or disassemble it.

Fig. 3: Precaution For Discharge Headlight Control Module
Courtesy of MAZDA MOTORS CORP.

DISCHARGE HEADLIGHT CONTROL MODULE REUSE

- If the discharge headlight control module is dented or damaged in any way, replace the module with a new one to prevent electrical shock and improper operation.
- Although the control module may temporarily operate normally even though it has received an impact, it is possible that the interior may have been damaged. When reusing the control module, inspect the following items regarding discharge headlight illumination to verify that there are no malfunctions.
  - Verify that the discharge headlights illuminate normally by testing them several times under
cold illumination (headlights off for approx. 10 min or more and then turned on) and hot illumination (headlights on for approx. 15 min or more, turned off for approx. 1 min, and then turned on again) conditions.

- Inspect the headlight illumination in the period from directly after cold illumination until they are uniformly illuminated (approx. 5 min) and verify that there is no flickering or inconsistent brightness.
- Turn on the headlights for approx. 30 min with normal condition bulbs and verify that there is no brightness difference between the right and left, and that illumination is consistent.

FRONT COMBINATION LIGHT REMOVAL/INSTALLATION

WARNING: Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See DISCHARGE HEADLIGHT SERVICE WARNINGS.)

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the front bumper. (See FRONT BUMPER REMOVAL/INSTALLATION.)
4. Remove in the order indicated in Fig. 4.
5. Install in the reverse order of removal.
6. Adjust the headlight aiming. (See HEADLIGHT AIMING)

**HEADLIGHT AIMING**

1. Point the headlight beams to a wall and verify that the headlight beams are as shown in Fig. 5.
2. Make a headlight adjustment screen as shown in Fig. 6 using double-weight, white paper.
3. Adjust the tire pressure to the specification.
4. Position the unloaded vehicle on a flat, level surface.
5. Seat one person in the driver's seat.
6. Position the vehicle straight ahead and perpendicular to the white screen.
7. Set the headlights 3 m {9.8 ft} from the white screen.
8. Place an object in front of the headlight not being adjusted to block its light beam.
9. Start the engine so that the battery remains charged.
10. Turn on the low-beam headlight.
Fig. 7: Identifying Distance Between Headlight Adjustment Screen & Vehicle  
Courtesy of MAZDA MOTORS CORP.

11. Adjust by turning the aiming adjustment screw so that elbow point is in the position shown in Fig. 8.

![Diagram of aiming adjustment screw](image)

Fig. 8: Identifying Aiming Adjustment Screw  
Courtesy of MAZDA MOTORS CORP.

HEADLIGHT BULB REMOVAL/INSTALLATION

LOW-BEAM

Halogen Type

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the washer tank. (RH) (See WASHER TANK REMOVAL/INSTALLATION.)
4. Remove the fasteners. (LH)
Fig. 9: Identifying Fasteners
Courtesy of MAZDA MOTORS CORP.

5. Slightly bent back the mudguard.
6. Disconnect the connector.

**CAUTION:**
- A halogen bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When replacing the bulb, hold the metal flange, not the glass. Wipe off any finger prints before installation.

7. Remove the cover.
8. Remove the socket, then remove the headlight bulb.
9. Install in the reverse order of removal.
Fig. 10: Removing Halogen Headlight Bulb
Courtesy of MAZDA MOTORS CORP.

Discharge Type

**WARNING:**
- Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See **DISCHARGE HEADLIGHT SERVICE WARNINGS**.)

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]**.)
3. Remove the washer tank. (RH) (See **WASHER TANK REMOVAL/INSTALLATION**.)
4. Remove the fasteners. (LH)
5. Slightly bent back the mudguard.
6. Remove the cover.

**CAUTION:**

- The bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When replacing the bulb, hold the metal flange, not the glass. Wipe off any finger prints before installation.

7. Remove the connector, then remove the discharge headlight bulb.
8. Install in the reverse order of removal.

**HIGH-BEAM**

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disconnect the connector.

**CAUTION:**

- A halogen bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When replacing the bulb, hold the metal flange, not the glass. Wipe off any finger prints before installation.

4. Remove the socket, then remove the headlight bulb.
5. Install in the reverse order of removal.
DISCHARGE HEADLIGHT CONTROL MODULE REMOVAL/INSTALLATION

WARNING:

- Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See DISCHARGE HEADLIGHT SERVICE WARNINGS.)

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the front combination light. (See FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.)
4. Remove screws.
5. Disconnect the connector.
6. Remove the discharge headlight control module.
7. Install in the reverse order of removal.
Fig. 14: Identifying Discharge Headlight Control Module
Courtesy of MAZDA MOTORS CORP.

DISCHARGE HEADLIGHT SYSTEM INSPECTION

DISCHARGE HEADLIGHT INOPERATIVE

WARNING:

- Incorrect servicing of the discharge headlights could result in electrical shock. Before servicing the discharge headlights, always refer to the discharge headlight service warnings. (See DISCHARGE HEADLIGHT SERVICE WARNINGS.)
**Fig. 15: Identifying Discharge Headlight System Terminal layout**
Courtesy of MAZDA MOTORS CORP.

**INSPECTION PROCEDURE**

<table>
<thead>
<tr>
<th>STEP</th>
<th>INSPECTION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INSPECT POWER SUPPLY CIRCUIT OF DISCHARGE HEADLIGHT CONTROL MODULE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Disconnect the discharge headlight control module connector.</td>
<td>Yes Go to Step 6.</td>
</tr>
<tr>
<td></td>
<td>• Turn the headlight switch to the HEADLIGHT (LO) position.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Measure the voltage at discharge headlight control module terminal C (wiring harness-side).</td>
<td>No Go to the next step.</td>
</tr>
<tr>
<td></td>
<td>• Is the voltage <strong>approx. 12 V</strong>?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>INSPECT FUSE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Turn the headlight switch to the OFF position.</td>
<td>Yes Go to the next step.</td>
</tr>
<tr>
<td></td>
<td>• Remove the HEAD LOW R 15 A fuse (RH) or HEAD LOW L 15 A fuse (LH).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inspect the fuses.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Are the fuses normal?</td>
<td>No Replace the fuse.</td>
</tr>
<tr>
<td>Step</td>
<td>Task</td>
<td>Decision</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>3</td>
<td><strong>INSPECT HEADLIGHT RELAY</strong></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>• Remove the headlight relay. (See RELAY LOCATION.)</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• Inspect the headlight relay. (See RELAY INSPECTION.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Is the headlight relay normal?</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><strong>INSPECT LIGHT SWITCH</strong></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>• Inspect the light switch. (See LIGHT SWITCH INSPECTION.)</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td><strong>INSPECT WIRING HARNESS BETWEEN BATTERY AND DISCHARGE HEADLIGHT CONTROL MODULE</strong></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>• Remove the battery cover.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Inspect for continuity between the following terminals:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Battery (positive terminal) and headlight relay (main fuse block terminal A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Headlight relay terminal 2C and HEAD LOW R 15 A fuse (RH) terminal U</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Headlight relay terminal 2C and HEAD LOW L 15 A fuse (LH) terminal U</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o HEAD LOW R 15 A fuse (RH) terminal T and discharge headlight control module terminal C</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>o HEAD LOW L 15 A fuse (LH) terminal R and discharge headlight control module terminal C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Are the wiring harnesses normal?</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><strong>INSPECT WIRING HARNESS BETWEEN DISCHARGE HEADLIGHT CONTROL MODULE AND GROUND</strong></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>• Inspect wiring harness between discharge</td>
<td></td>
</tr>
</tbody>
</table>
headlight control module terminal F and ground for following:
- Short to power supply
- Open circuit
- Is the wiring harness normal?

| No | Replace the related wiring harness. |

| Yes | System inspection completed. |

| Replace the front combination light. (See FRONT COMBINATION LIGHT REMOVAL/INSTALLATION .) |

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### PARKING LIGHT BULB REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF] .)
3. Disconnect the connector.
4. Remove the socket, then remove the parking light bulb.
5. Install in the reverse order of removal.
Fig. 16: Identifying Parking Light Bulb
Courtesy of MAZDA MOTORS CORP.

FRONT SIDE MARKER LIGHT REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Move the front side marker light in the direction of the arrow (1) and detach the tab.
4. Pull area A of the front side marker light in the direction of arrow (2) and remove the front side marker light.
5. Detach the socket and remove the front side marker light bulb.
6. Install in the reverse order of removal.
Fig. 17: Removing Front Side Marker Light Bulb
Courtesy of MAZDA MOTORS CORP.

FRONT TURN LIGHT BULB REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the fasteners.
4. Slightly bent back the mudguard.
Fig. 18: Identifying Fasteners  
Courtesy of MAZDA MOTORS CORP.

5. Disconnect the connector.
6. Remove the socket, then remove the front turn light bulb.
7. Install in the reverse order of removal.
FRONT FOG LIGHT REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the fasteners.
4. Slightly bent back the mudguard.
5. Disconnect the front fog light connector.
6. Remove the bolt, then remove the front fog light.
7. Install in the reverse order of removal.
8. Adjust the front fog light aiming. (See FRONT FOG LIGHT AIMING.)

Fig. 20: Identifying Fasteners
Courtesy of MAZDA MOTORS CORP.
Fig. 21: Identifying Front Fog Light
Courtesy of MAZDA MOTORS CORP.

FRONT FOG LIGHT AIMING

1. Point the headlight beams to a wall and verify that the headlight beams are as shown in Fig. 22.
2. Make a headlight adjustment screen as shown in Fig. 23 using double-weight, white paper.
3. Remove the bolt A and cut the front fog light hole cover at the position shown in Fig. 24.
4. Adjust the tire pressure to the specification.
5. Position the unloaded vehicle on a flat, level surface.

6. Seat one person in the driver's seat.
7. Line up the headlights with the white screen at a distance of 3 m {9.8 ft} apart.
8. Place an object in front of the fog light not being adjusted to block its light beam.
9. Start the engine so that the battery remains charged.
10. Turn the front fog lights on.
11. Loosen the bolt B, move the front fog light in the direction of the arrows, and adjust the center of the front fog light to the position shown in Fig. 26.

12. Install the bolt A and tighten the bolt B.

**FRONT FOG LIGHT BULB REMOVAL/INSTALLATION**

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the fasteners.
4. Slightly bend back the mudguard.
5. Disconnect the front fog light bulb connector and remove the front fog light bulb by turning it in the direction of the arrow.

**CAUTION:**
- A halogen bulb generates extremely high heat when it is illuminated. If the surface of the bulb is soiled, excessive heat will build up and the life of the bulb will be shortened. When handling the bulb, hold the flange, not the glass. Wipe off any finger prints before installation.

6. Install in the reverse order of removal.
REAR COMBINATION LIGHT REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the trunk end trim. (See TRUNK END TRIM REMOVAL/INSTALLATION.)
4. Remove the trunk side trim. (See TRUNK SIDE TRIM REMOVAL/INSTALLATION.)
5. Remove in the order indicated in Fig. 29.
6. Install in the reverse order of removal.

HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION

EXCEPT POWER RETRACTABLE TOP

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the partition board. (See PARTITION BOARD REMOVAL/INSTALLATION.)
4. Disconnect the high-mount brake light connector.
5. Press the tabs and remove the clips.
6. Install in the reverse order of removal.

Fig. 30: Disconnecting High-Mount Brake Light Connector
Courtesy of MAZDA MOTORS CORP.

POWER RETRACTABLE TOP

1. Fully open the deck panel.
2. Partially peel back the seal cover.
3. Disconnect the high-mount brake light connector.
4. Remove the wiring harness and connector of the high-mount brake light from the deck panel.
Fig. 31: Identifying High Mount Brake Light Connector And Harness
Courtesy of MAZDA MOTORS CORP.

5. remove the nuts.
6. Remove the high-mount brake light.
7. Install in the reverse order of removal

**LICENSE PLATE LIGHT REMOVAL/INSTALLATION**

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Move the license plate light in the direction of the arrow (1) and detach the tab.
4. Pull area A of the license plate light in the direction of the arrow (2) and remove the license plate light.
5. Disconnect the connector.
6. Detach the socket and remove the license plate light bulb.
7. Install in the reverse order of removal.
BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Loosen the starter installation bolts only enough that the starter is loose, but not removed. (P66M-D) (See STARTER REMOVAL/INSTALLATION [LF].)
4. Remove the transmission.(P66M-D) (See TRANSMISSION REMOVAL/INSTALLATION [P66M-D].)
5. Remove in the order indicated in Fig. 34.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connector</td>
</tr>
<tr>
<td>2</td>
<td>Back-up light switch</td>
</tr>
</tbody>
</table>

Fig. 34: Identifying Back-Up Light Switch (With Torque Specifications)
Courtesy of MAZDA MOTORS CORP.

6. Install in the reverse order of removal.
BACK-UP LIGHT SWITCH INSPECTION

1. Disconnect the back-up light switch connector.
2. Inspect for continuity between the back-up light switch terminals using an ohmmeter.
   - If there is any malfunction, replace the back-up light switch.

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If there is any malfunction, replace the back-up light switch.

---

Fig. 35: Back-Up Light Switch Continuity Table
Courtesy of MAZDA MOTORS CORP.
**COMBINATION SWITCH REMOVAL/INSTALLATION**

**WARNING:**
- For vehicles with DSC, if the negative battery cable or the steering angle sensor connector or ROOM 15 A fuse is disconnected, the stored initial position of the steering angle sensor will be cleared and the DSC will not operate properly, making the vehicle unsafe to drive. Perform the steering angle sensor initialization procedure after connecting the negative battery cable.

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]**.)
3. Remove the following parts:
   1. Driver-side air bag module (See **DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION**.)
   2. Steering wheel (See **STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION**.)
   3. Column cover (See **COLUMN COVER REMOVAL/INSTALLATION**.)
   4. Clock spring (See **CLOCK SPRING REMOVAL/INSTALLATION**.)
4. Disconnect the connector.
5. Disconnect the steering angle sensor connector. (Vehicles with DSC)
6. Remove the screws and then remove the combination switch.
7. Install in the reverse order of removal.
8. Perform the steering angle sensor initialization procedure. (Vehicles with DSC) (See **STEERING ANGLE SENSOR INITIALIZATION PROCEDURE**.)
9. If the steering angle sensor (combination switch body) is replaced, perform initialization of the DSC HU/CM steering angle signal. (See **STEERING ANGLE SIGNAL INITIALIZATION PROCEDURE**.)
Fig. 37: Identifying Combination Switch
Courtesy of MAZDA MOTORS CORP.

COMBINATION SWITCH DISASSEMBLY/ASSEMBLY

CAUTION:

- For vehicles with DSC: If the disc on the combination switch is deformed or has foreign material adhering to it, performance of the steering angle sensor may be reduced, causing abnormal operation. When handling the combination switch, be careful not to deform the disc and make sure there is no foreign material on it.

1. Disassemble in the order indicated in Fig. 38.
Assemble in the reverse order of disassembly.

**LIGHT SWITCH REMOVAL/INSTALLATION**

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the column cover. (See COLUMN COVER REMOVAL/INSTALLATION.)
4. Disconnect the connector.
5. Remove the screws and then remove the light switch.
6. Install in the reverse order of removal.
LIGHT SWITCH INSPECTION

1. Verify that the continuity between the light switch terminals is as indicated in Fig. 40.

   - If not as indicated in Fig. 40 replace the light switch.

Headlight Switch
Fig. 40: Headlight Switch Continuity Table
Courtesy of MAZDA MOTORS CORP.
Fig. 41: Identifying Headlight Switch Connector Terminals
Courtesy of MAZDA MOTORS CORP.

Turn Switch
### Fig. 42: Turn Switch Continuity Table

<table>
<thead>
<tr>
<th>Switch position</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Left</td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td>Right</td>
<td></td>
</tr>
</tbody>
</table>

- : Continuity

Courtesy of MAZDA MOTORS CORP.
FRONT FOG LIGHT SWITCH INSPECTION

1. Verify that the continuity between the front fog light switch terminals is as indicated in Fig. 44.
   - If not as indicated in Fig. 44, replace the light switch.

Fig. 43: Identifying Turn Switch Connector Terminals
Courtesy of MAZDA MOTORS CORP.
### Switch position

<table>
<thead>
<tr>
<th>Light</th>
<th>Front fog light switch</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>P</td>
</tr>
<tr>
<td>TNS</td>
<td>ON</td>
<td></td>
</tr>
<tr>
<td>Head light</td>
<td>ON</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 44: Front Fog Light Switch Continuity Table
Courtesy of MAZDA MOTORS CORP.

![Diagram](image1)

Fig. 45: Identifying Front Fog Light Switch Connector Terminals
Courtesy of MAZDA MOTORS CORP.

### HAZARD WARNING SWITCH REMOVAL/INSTALLATION
1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the side wall. (See SIDE WALL REMOVAL/INSTALLATION.)
4. Remove the center panel unit. (See CENTER PANEL UNIT REMOVAL/INSTALLATION.)
5. Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/INSTALLATION.)
6. Remove the decoration panel (passenger's side). (See DECORATION PANEL REMOVAL/INSTALLATION.)
7. Remove in the order indicated in Fig. 46.

Fig. 46: Identifying Hazard Warning Switch
Courtesy of MAZDA MOTORS CORP.

8. Install in the reverse order of removal.

HAZARD WARNING SWITCH INSPECTION

1. Verify that the continuity between the hazard switch terminals is as indicated in Fig. 47.
   - If not as indicated in Fig. 47, replace the hazard warning switch.
Fig. 47: Hazard Warning Switch Continuity Table
Courtesy of MAZDA MOTORS CORP.

Fig. 48: Identifying Hazard Warning Switch Connector Terminals
Courtesy of MAZDA MOTORS CORP.
FLASHER CONTROL MODULE REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF] .)
3. Disconnect the connector.
4. Remove the screw and then remove the flasher control module.
5. Install in the reverse order of removal.

Fig. 49: Identifying Flasher Control Module
FLASHER CONTROL MODULE INSPECTION

1. Remove the flasher control module with the connector still connected.
2. Measure the voltage at each terminal (other than terminal F).
   - If the voltage is not as specified in TERMINAL VOLTAGE TABLE inspect the parts under "Inspection item(s)".
3. Disconnect the flasher control module connector.
4. Verify that continuity at terminal F is as indicated in TERMINAL VOLTAGE TABLE.
   - If there is any malfunction, inspect the parts under "Inspection item(s)".
     - If the system does not work properly even though the parts or related wiring harnesses do not have any malfunction, replace the flasher control module.

TERMINAL VOLTAGE TABLE (REFERENCE)
**TERMINAL VOLTAGE TABLE (REFERENCE)**

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Signal name</th>
<th>Connected to</th>
<th>Measured condition</th>
<th>Voltage (V)/Continuity</th>
<th>Inspection item(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Power supply</td>
<td>HAZARD 10 A</td>
<td>fuse</td>
<td>B+</td>
<td>• HAZARD 10 A fuse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Under any condition</td>
<td></td>
<td>• Related wiring harnesses</td>
</tr>
<tr>
<td>D</td>
<td>Flasher control</td>
<td>Turn light</td>
<td>Turn light switch (LH) is on.</td>
<td>Alternates between 1.0 or</td>
<td>• Turn light (LH)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hazard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Turn light (LH)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fig. 50: Identifying Flasher Control Module Connector**

Courtesy of MAZDA MOTORS CORP.
### DRL CONTROL MODULE REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disconnect the connectors.
4. Remove the screw and then remove the DRL control module.
5. Install in the reverse order of removal.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>module</td>
<td>output</td>
<td>(LH)</td>
<td>warning</td>
<td>flashes.</td>
</tr>
<tr>
<td>GND</td>
<td>Body</td>
<td>Ground</td>
<td>switch is</td>
<td>on.</td>
</tr>
<tr>
<td>F</td>
<td>Under</td>
<td>any</td>
<td>condition:</td>
<td>Inspect for continuity to ground.</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Related wiring harnesses</td>
<td>1.0 or less</td>
<td>GND</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Flasher control module output</td>
<td>Turn light (RH)</td>
<td>Turn light switch (RH) is on.</td>
<td>Alternates between 1.0 or less and B+</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
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<tr>
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</thead>
<tbody>
<tr>
<td>Related wiring harnesses</td>
<td>1.0 or less</td>
<td></td>
<td></td>
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</tbody>
</table>

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</tr>
</thead>
<tbody>
<tr>
<td>Hazard warning switch input</td>
<td>Hazard warning switch</td>
<td>Hazard warning switch is on.</td>
<td>1.0 or less</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
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<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Hazard warning switch</td>
<td>Related wiring harnesses</td>
<td>(See HAZARD WARNING SWITCH INSPECTION.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Turn switch (RH) input</td>
<td>Turn switch</td>
<td>Turn the ignition switch to the ON position.</td>
<td>B+</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Related wiring harnesses</td>
<td>1.0 or less</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn switch (LH) input</td>
<td>Turn switch</td>
<td>Turn the ignition switch to the ON position.</td>
<td>B+</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Related wiring harnesses</td>
<td>1.0 or less</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**DRL CONTROL MODULE REMOVAL/INSTALLATION**

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disconnect the connectors.
4. Remove the screw and then remove the DRL control module.
5. Install in the reverse order of removal.
Fig. 51: Identifying DRL Control Module
Courtesy of MAZDA MOTORS CORP.

DRL SYSTEM WIRING DIAGRAM
DRL CONTROL MODULE INSPECTION

1. Connect the connector to the DRL control module.
2. Connect the negative battery cable.
3. Measure the voltage at the DRL control module using voltmeter.
   - When inspecting terminal 1B, 1D or 2D for continuity, disconnect the DRL control module connector.
4. If the value are not as specified in TERMINAL VOLTAGE TABLE (REFERENCE), inspect the parts under "Inspection item(s)" and related wiring harnesses.
5. If the system does not work properly even though the parts or related wiring harnesses do not have any malfunction, replace the DRL control module.

TERMINAL VOLTAGE TABLE (REFERENCE)
Fig. 53: Identifying DRL Control Module Connector
Courtesy of MAZDA MOTORS CORP.

TERMINAL VOLTAGE TABLE (REFERENCE)

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Signal name</th>
<th>Connected to</th>
<th>Test condition</th>
<th>Voltage (V)/Continuity</th>
<th>Inspection item(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>Power supply</td>
<td>ROOM 30 A fuse</td>
<td>Under any condition</td>
<td>B+</td>
<td>• ROOM 30 A fuse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Related wiring harness</td>
</tr>
<tr>
<td>1B</td>
<td>Parking brake</td>
<td>Parking brake switch</td>
<td>Parking brake lever pulled: Check for</td>
<td>Continuity</td>
<td>• Parking brake switch (See PARKING BRAKE SWITCH INSPECTION .)</td>
</tr>
<tr>
<td></td>
<td>lever pulled/</td>
<td></td>
<td>continuity to ground.</td>
<td></td>
<td>• Related wiring harness</td>
</tr>
<tr>
<td></td>
<td>released</td>
<td></td>
<td>Parking brake lever released: Check for</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>continuity to ground.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1I</td>
<td>IG1</td>
<td>Ignition switch</td>
<td>Turn the ignition switch to the ON</td>
<td>B+</td>
<td>• Ignition switch (See IGNITION SWITCH INSPECTION .)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>position.</td>
<td></td>
<td>• Related wiring harness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Turn the ignition switch to the LOCK</td>
<td>1.0 or less</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>position.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High-beam Light</td>
<td></td>
<td>Turn the ignition switch at HI</td>
<td>1.0 or less</td>
<td>• Light switch (See LIGHT SWITCH)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| **1K** | on/off switch | switch to the ON position. | Dimmer switch at LO | B+ | **INSPECTION**
|   |   |   |   |   | Related wiring harness |
| **1L** | Front fog light switch ON/OFF light switch at 2nd position | Front fog light switch is on. | 1.0 or less |   | Light switch (See **LIGHT SWITCH INSPECTION**)
|   |   |   |   |   | Related wiring harness |
| **1M** | Flash-to-pass Light switch | Turn the ignition switch to the ON position. | Flash-to-pass activated. | 1.0 or less | Light switch (See **LIGHT SWITCH INSPECTION**)
|   |   |   |   |   | Related wiring harness |
| **1N** | Front fog light relay operation Front fog light relay | Light switch at 2nd position and dimmer switch at LO | Front fog light switch is on. | 1.0 or less | FOG 15 A fuse
|   |   |   |   |   | Front fog light relay (See **RELAY INSPECTION**)
|   |   |   |   |   | Related wiring harness |
| **2A** | Headlight (RH) operation (high-beam) Headlight (high-beam) | Light switch at 2nd position | Dimmer switch at LO | 1.0 or less | Headlight (RH)
|   |   |   |   |   | Related wiring harness |
| **2C** | Headlight (LH) operation (high-beam) Headlight (high-beam) | Light switch at 2nd position | Dimmer switch at LO | 1.0 or less | Headlight (LH)
|   |   |   |   |   | Related wiring harness |
| **2D** | Ground GND | Under any condition: Check for continuity to ground. | Continuity | GND |   |
| **2E** | Headlight (RH) operation (high-beam) Headlight (high-beam) | Light switch at 2nd position | Dimmer switch at LO | 1.0 or less | Headlight (RH)
|   |   |   |   |   | Related wiring harness |
MAP LIGHT REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the lens.
4. Remove the map light bulb

Fig. 54: Identifying Map Light Bulb
Courtesy of MAZDA MOTORS CORP.

5. Remove the map light. (See MAP LIGHT REMOVAL NOTE.)
6. Disconnect the connector.
7. Install in the reverse order of removal.

MAP LIGHT REMOVAL NOTE

1. Insert a tape-wrapped flathead screwdriver into the gap between the headliner and the map light.
2. Press the tab, and remove the map light.
MAP LIGHT INSPECTION

1. Verify that the continuity between the map light terminals is as indicated in Fig. 56.
   - If not as indicated in Fig. 56, replace the map light.

   ![Map Light Continuity Table]

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Fig. 57: Identifying MAP Light Connector Terminals
Courtesy of MAZDA MOTORS CORP.

TRUNK COMPARTMENT LIGHT REMOVAL/INSTALLATION
1. Remove the battery cover.
2. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION** [LF] .)
3. Remove the trunk compartment light.
4. Disconnect the trunk compartment light connector.
5. Remove the trunk compartment light bulb.
6. Install in the reverse order of removal.

**Fig. 58: Removing Trunk Compartment Light Bulb**

*Courtesy of MAZDA MOTORS CORP.*

**TRUNK COMPARTMENT LIGHT INSPECTION**

1. Verify that the continuity between the trunk compartment light terminals is as indicated in **Fig. 59**.
   - If not as indicated in **Fig. 59**, replace the cargo compartment light.
IGNITION KEY ILLUMINATION BULB REMOVAL/INSTALLATION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the column cover. (See COLUMN COVER REMOVAL/INSTALLATION.)
4. Remove the ignition key illumination bulb.
5. Install in the reverse order of removal.

![Diagram of Ignition Key Illumination Bulb](CHU0918W135)

**Fig. 61: Identifying Ignition Key Illumination Bulb**
Courtesy of MAZDA MOTORS CORP.

**DOOR SWITCH REMOVAL/INSTALLATION**

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disassemble in the order indicated in Fig. 62.
4. Install in the reverse order of removal.

**DOOR SWITCH INSPECTION**

1. Remove the door switch. (See **DOOR SWITCH REMOVAL/INSTALLATION**.)
2. Verify that the continuity between door switch terminal and the body ground is as indicated in **Fig. 63**.
   - If not as indicated in **Fig. 63**, replace the door switch.
<table>
<thead>
<tr>
<th>Switch position</th>
<th>Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Door switch pressed</td>
<td></td>
</tr>
<tr>
<td>Door switch released</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 63: Door Switch Continuity Table
Courtesy of MAZDA MOTORS CORP.

Fig. 64: Identifying Door Switch Connector Terminals
Courtesy of MAZDA MOTORS CORP.