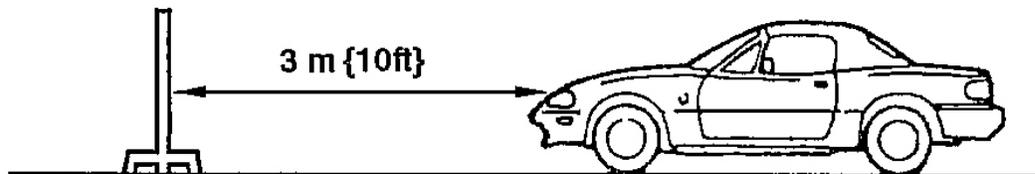


## 2005 ACCESSORIES & EQUIPMENT

### Lighting Systems - MX-5 Miata

## HEADLIGHT ADJUSTMENT

1. Adjust the tire air pressure to the specification.
2. Position the unloaded vehicle on a flat, level surface.
3. Seat one person in the driver's seat.
4. Position the vehicle straight ahead and perpendicularly to a wall.
5. Set the headlights **3 m {10 ft}** from the white screen.



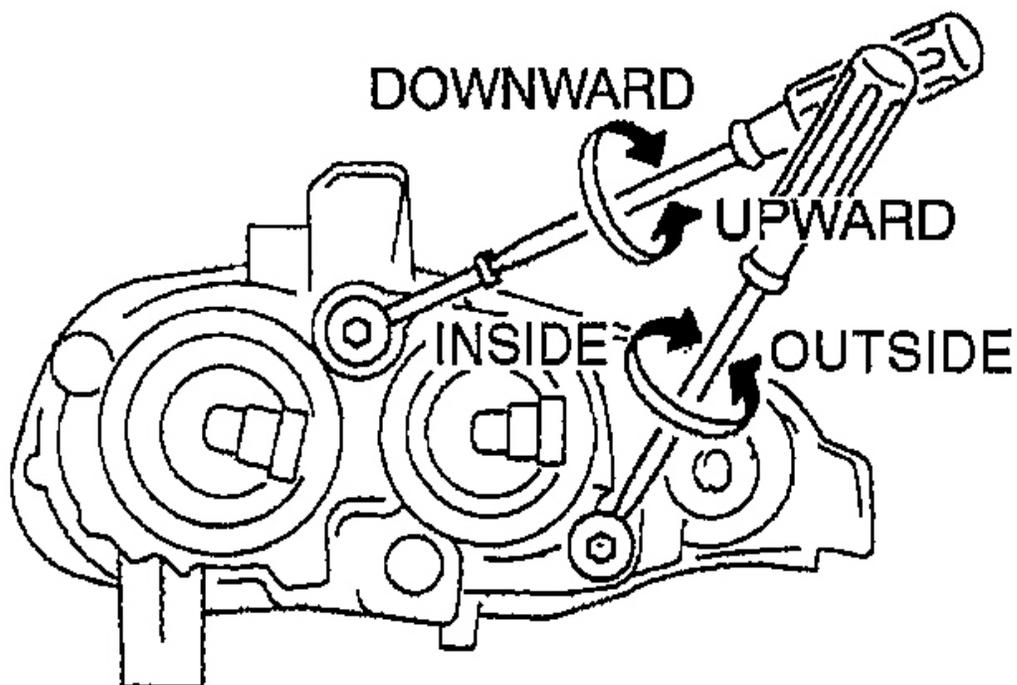
G03638915

**Fig. 1: Setting Headlights 3m From White Screen**  
Courtesy of MAZDA MOTORS CORP.

6. While adjusting one headlight, disconnect the connector of the other.
7. Start the engine to charge the battery.
8. Turn over the mud guard.
9. Adjust the headlights by turning the adjusting screws as shown in the figure. Loosen the screws first, then tighten them.

**NOTE:**

- If the adjusting screws are tightened first, then loosened, they will continue to loosen when the vehicle is in motion and may cause the headlights to become misaligned.

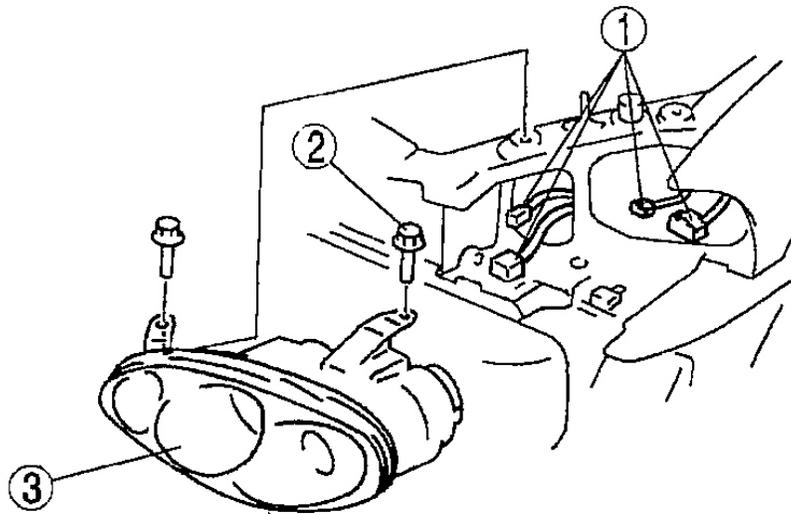


G03638916

**Fig. 2: Adjusting Headlights By Turning Adjusting Screws**  
Courtesy of MAZDA MOTORS CORP.

## FRONT COMBINATION LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the front bumper. (See **FRONT BUMPER REMOVAL/INSTALLATION** .)
3. Remove in the order indicated in the table.



1	Connector
2	Bolt
3	Front combination light

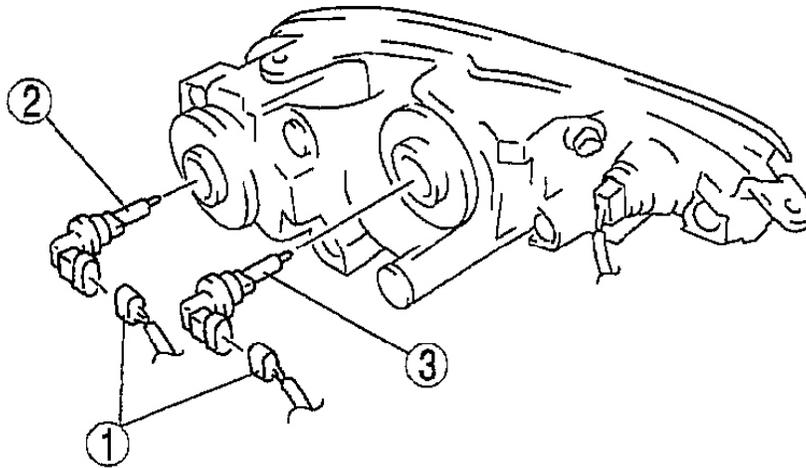
G03638917

**Fig. 3: Removing Front Combination Light**  
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.
5. Adjust the headlight aiming. (See **HEADLIGHT ADJUSTMENT**.)

## HEADLIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Connector
2	Headlight bulb (Low)
3	Headlight bulb (High)

G03638918

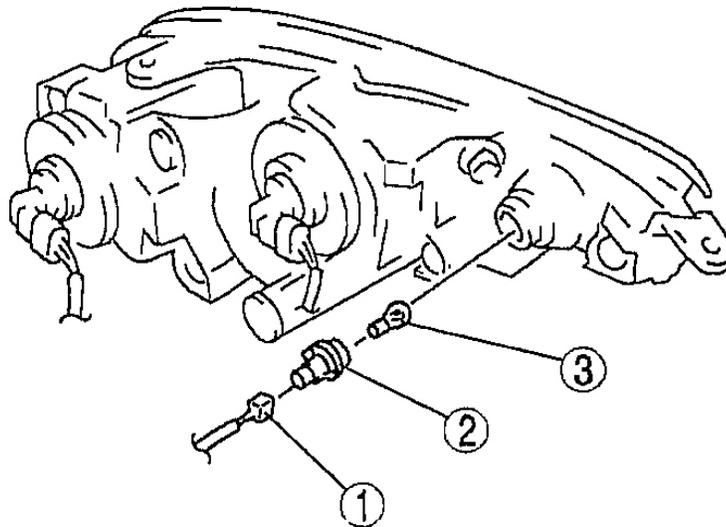
**Fig. 4: Removing Headlight Bulb**  
Courtesy of MAZDA MOTORS CORP.

- CAUTION:**
- A halogen bulb generates extremely high heat when it is used. If the surface of the bulb is soiled, excessive heat will build up and the light's life will be shortened. When replacing the bulb, hold the metal flange, not the glass.

3. Install in the reverse order of removal.

## FRONT TURN LIGHT/PARKING LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Connector
2	Socket
3	Front turn light/parking light bulb

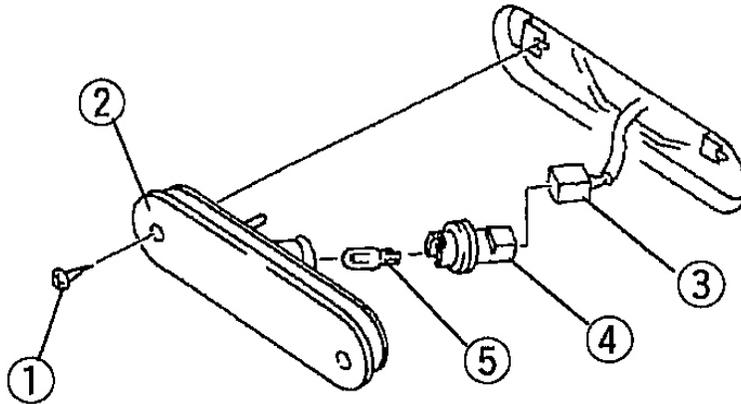
G03638919

**Fig. 5: Removing Front Turn Light/Parking Light Bulb**  
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

## FRONT SIDE MARKER LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Screw
2	Front side marker light
3	Connector
4	Socket
5	Front side marker light bulb

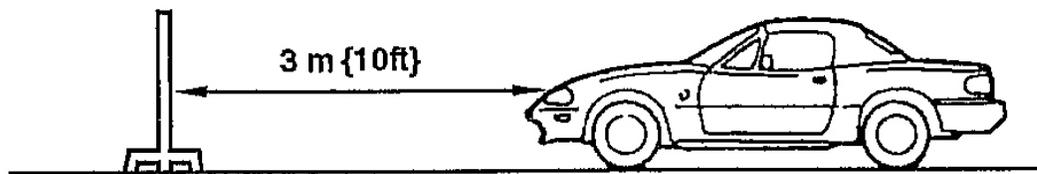
G03638920

**Fig. 6: Removing Front Side Marker Light**  
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

## FRONT FOG LIGHT ADJUSTMENT [EXCEPT BP WITH TC]

1. Adjust the tire air pressure to the specification.
2. Position the unloaded vehicle on a flat, level surface.
3. Seat one person in the driver's seat.
4. Position the vehicle straight ahead and perpendicularly to a wall.
5. Set the front fog light **3 m {10 ft}** from the white screen.
6. While adjusting one front fog light, disconnect the connector of the other.
7. Start the engine to charge the battery.
8. Turn over the mud guard.



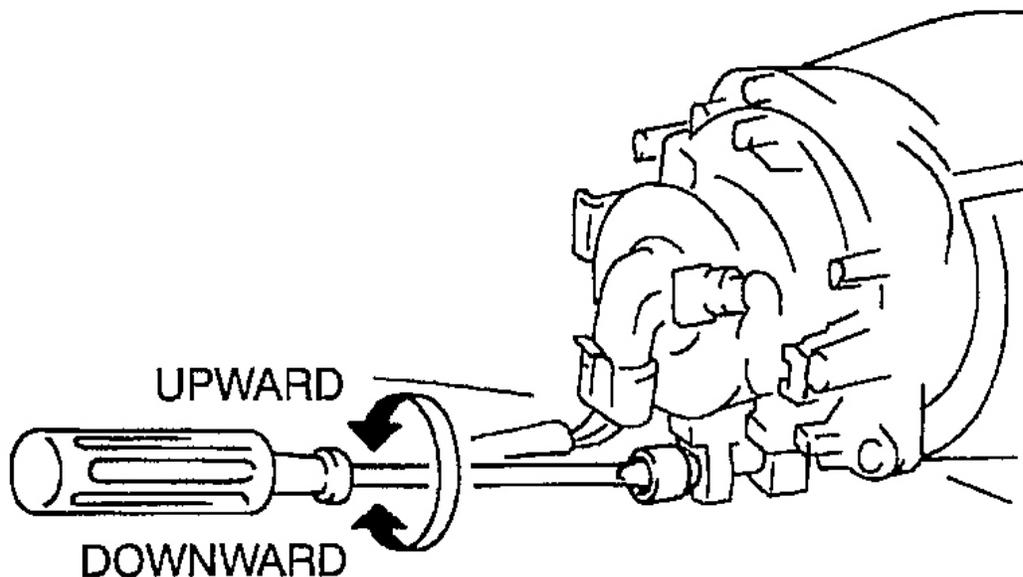
G03638921

**Fig. 7: Setting Front Fog Light 3m From White Screen**  
Courtesy of MAZDA MOTORS CORP.

9. Adjust the front fog light by turning the adjusting screws as shown in the figure. Loosen the screws first, then tighten them.

**NOTE:**

- If the adjusting screws are tightened first, then loosened, they will continue to loosen when the vehicle is in motion and may cause the front fog light to become misaligned.

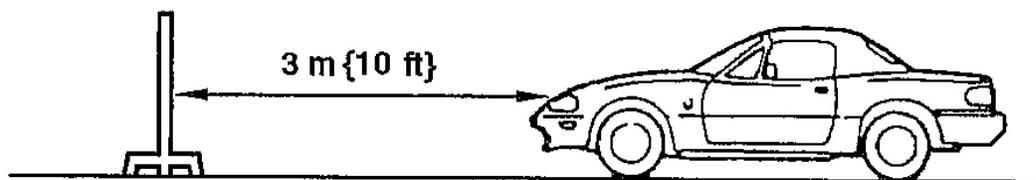


G03638922

**Fig. 8: Adjusting Front Fog Light By Turning Adjusting Screws**  
Courtesy of MAZDA MOTORS CORP.

## FRONT FOG LIGHT ADJUSTMENT [BP WITH TC]

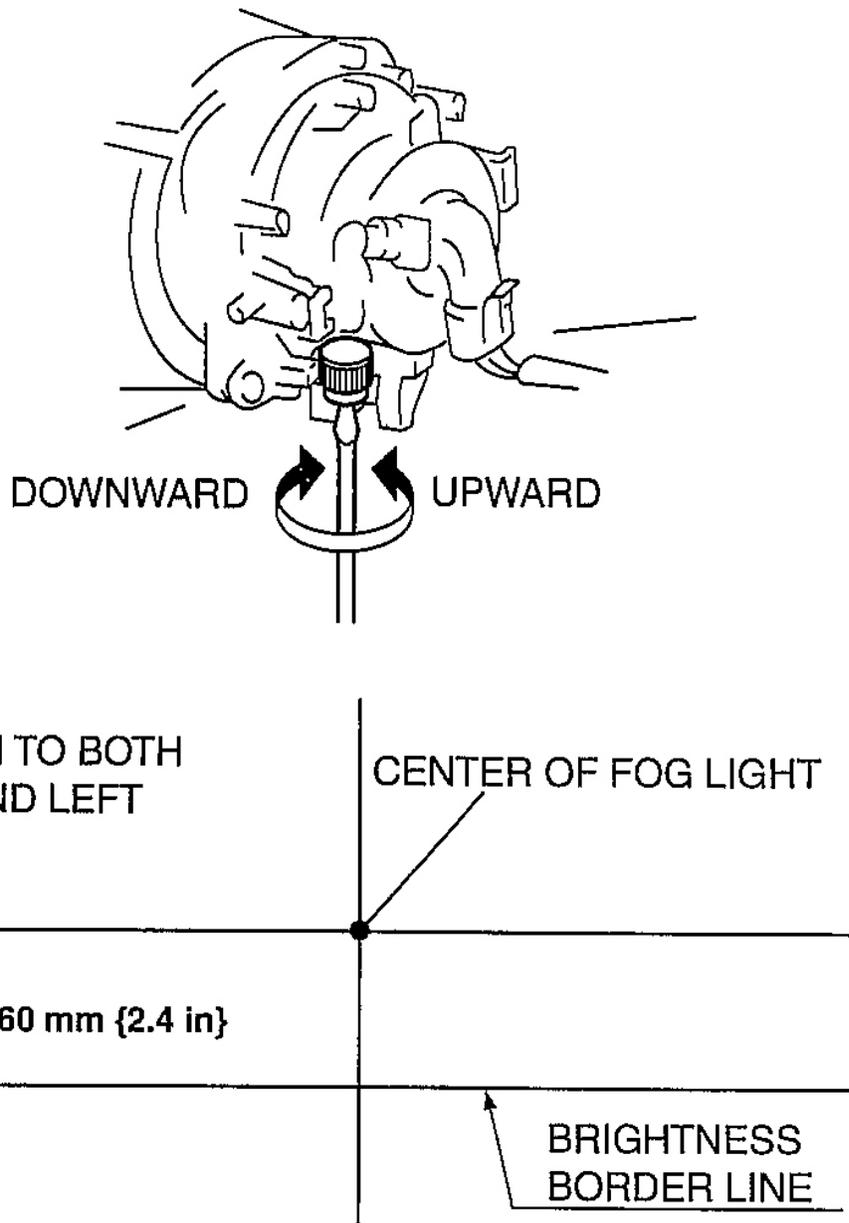
1. Adjust the tire air pressure to the specification.
2. Position the unloaded vehicle on a flat, level surface.
3. Seat one person in the driver's seat.
4. Position the vehicle straight ahead and perpendicularly to a wall.
5. Set the front fog light **3 m {10 ft}** from the wall.
6. While adjusting one front fog light, disconnect the connector of the other.
7. Start the engine to charge the battery.
8. Turn the front fog light on.



G03638923

**Fig. 9: Setting Front Fog Light 3m From Wall**  
Courtesy of MAZDA MOTORS CORP.

9. Adjust the front fog light as shown in **Fig. 10**.



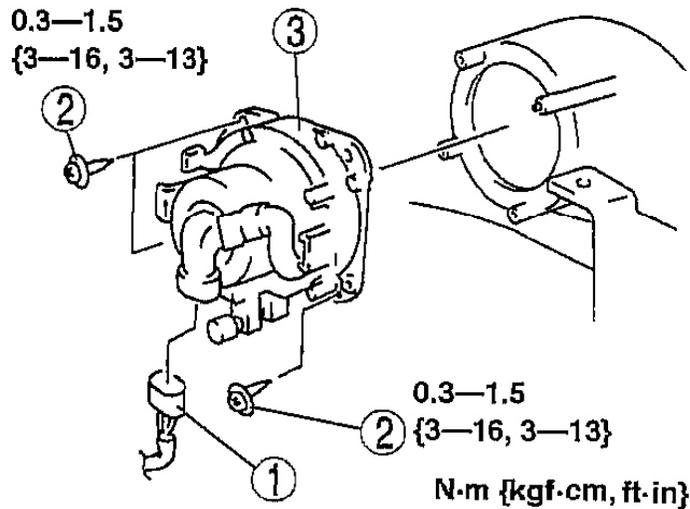
G03638924

**Fig. 10: Adjusting Front Fog Light**  
Courtesy of MAZDA MOTORS CORP.

## FRONT FOG LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.

2. Turn over the mud guard.
3. Remove in the order indicated in the table.



1	Connector
2	Screw
3	Front fog light

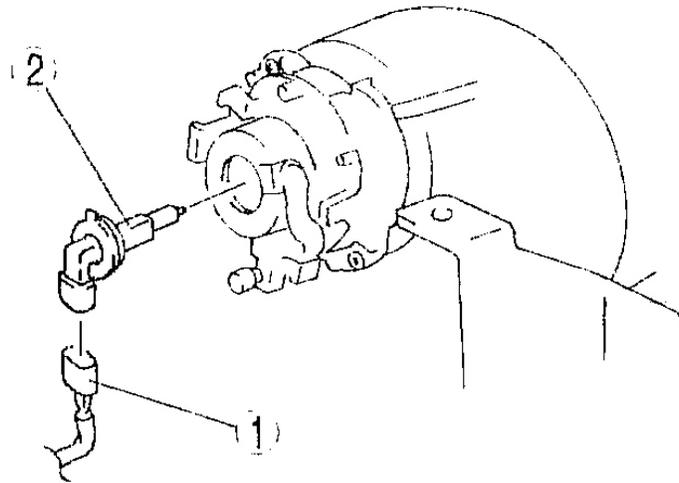
G03638925

**Fig. 11: Removing Front Fog Light - With Torque Specifications**  
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.
5. Adjust the front fog light. (See **FRONT FOG LIGHT ADJUSTMENT [EXCEPT BP WITH TC].**)  
 (See **FRONT FOG LIGHT ADJUSTMENT [BP WITH TC].**)

## FRONT FOG LIGHT BULB REMOVAL/INSTALLATION [EXCEPT BP WITH TC]

1. Disconnect the negative battery cable.
2. Turn over the mud guard.
3. Remove in the order indicated in the table.



1	Connector
2	Front fog light bulb

G03638926

**Fig. 12: Removing Front Fog Light Bulb (Except BP With TC)**  
 Courtesy of MAZDA MOTORS CORP.

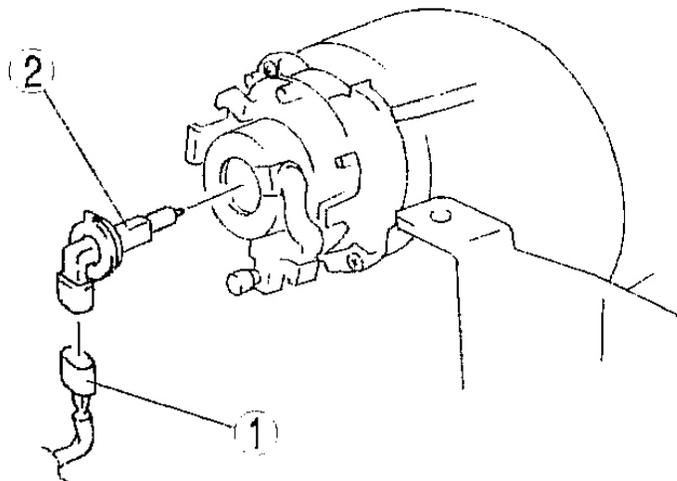
**CAUTION:**

- A halogen bulb generates extremely high heat when it is used. If the surface of the bulb is soiled, excessive heat will build up and the light's life will be shortened. When replacing the bulb, hold the metal flange, not the glass.

4. Install in the reverse order of removal.

## FRONT FOG LIGHT BULB REMOVAL/INSTALLATION [BP WITH TC]

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Connector
2	Front fog light bulb

G03638927

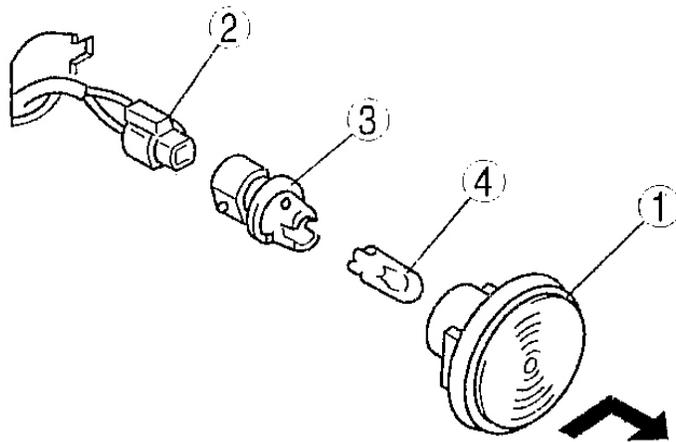
**Fig. 13: Removing Front Fog Light Bulb (BP With TC)**  
 Courtesy of MAZDA MOTORS CORP.

- CAUTION:**
- A halogen bulb generates extremely high heat when it is used. If the surface of the bulb is soiled, excessive heat will build up and the light's life will be shortened. When replacing the bulb, hold the metal flange, not the glass.

3. Install in the reverse order of removal.

## FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Front side turn light
2	Connector
3	Socket
4	Bulb

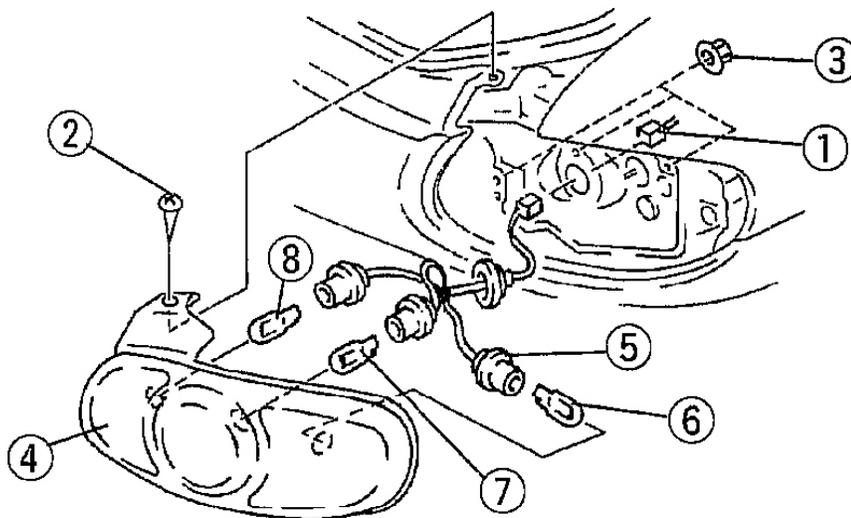
G03638928

**Fig. 14: Removing Front Side Turn Light**  
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

## REAR COMBINATION LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the trunk end trim. (See **TRUNK END TRIM REMOVAL/INSTALLATION** .)
3. Remove in the order indicated in the table.



1	Connector
2	Screw
3	Nut
4	Rear combination light
5	Socket
6	Brake light/taillight bulb
7	Rear turn light bulb
8	Back-up light bulb

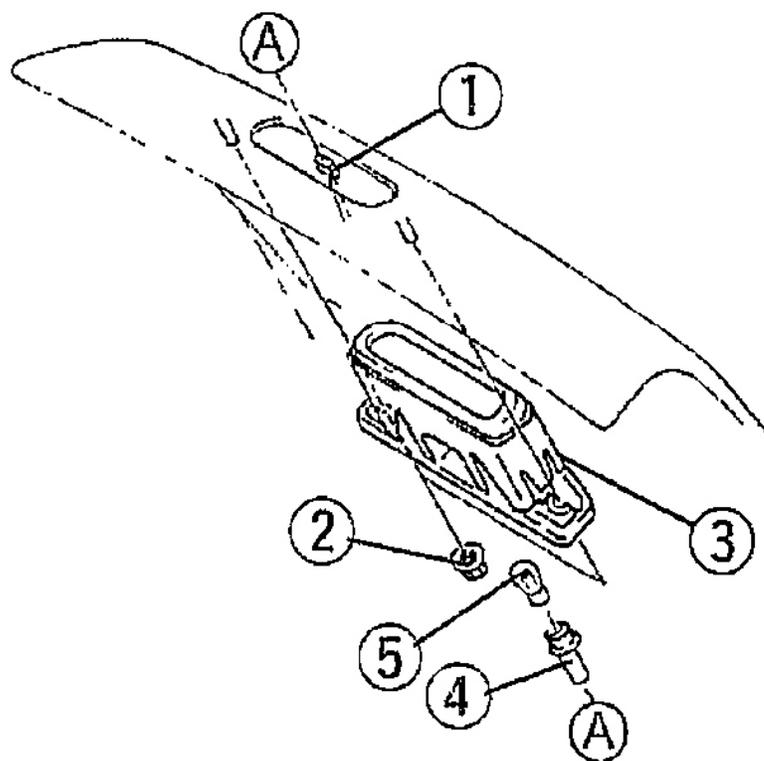
G03638929

**Fig. 15: Removing Rear Combination Light**  
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

## HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Connector
2	Nut
3	High-mount brake light (See High-mount Brake Light Removal Note)
4	Socket
5	High-mount brake light bulb

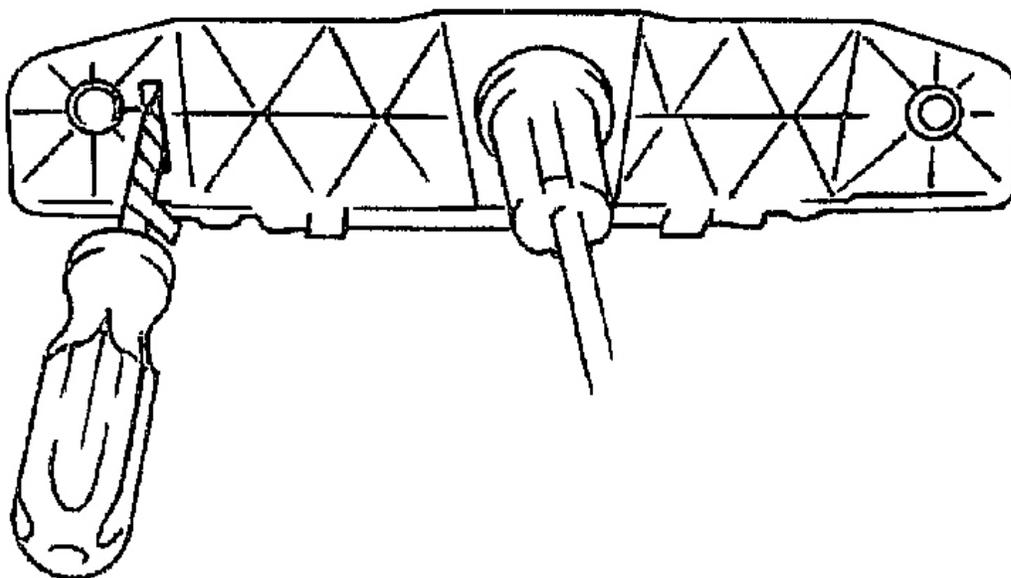
G03638930

**Fig. 16: Removing High-Mount Brake Light**  
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

## HIGH-MOUNT BRAKE LIGHT REMOVAL NOTE

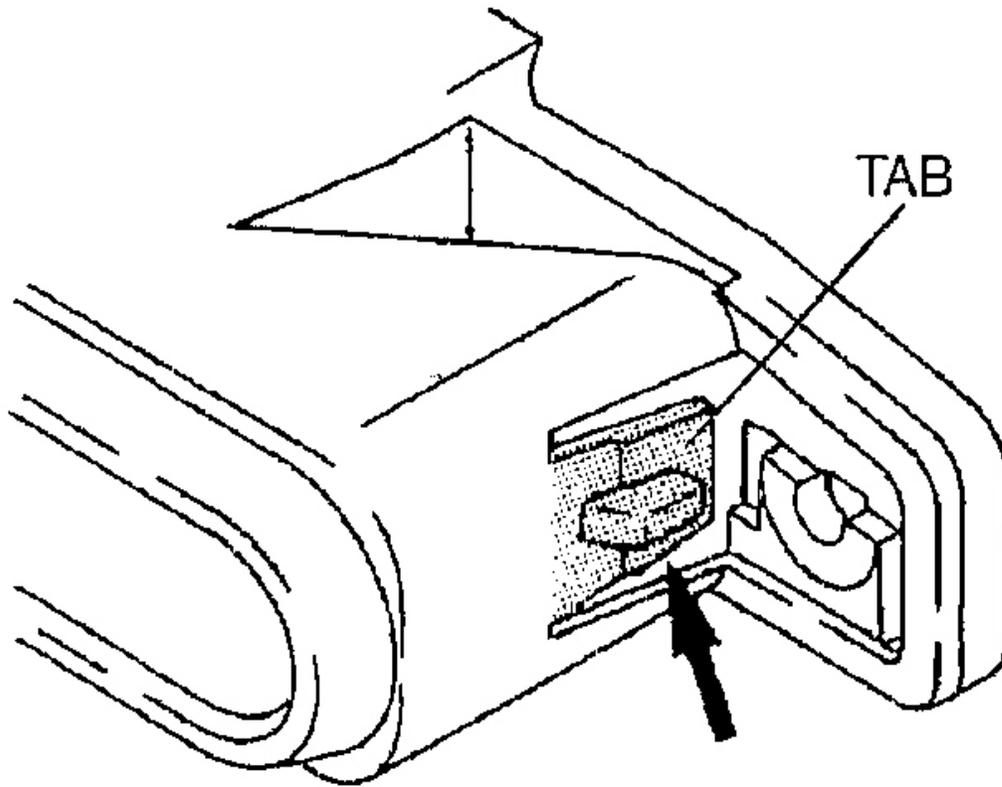
1. Insert a tape-wrapped flathead screwdriver into the left side opening.



G03638931

**Fig. 17: Inserting Tape-Wrapped Flathead Screwdriver Into Left Side Opening**  
Courtesy of MAZDA MOTORS CORP.

2. Press the tab of the high-mount brake light with a tape-wrapped flathead screwdriver.
3. Pull the high-mount brake light out from the body.



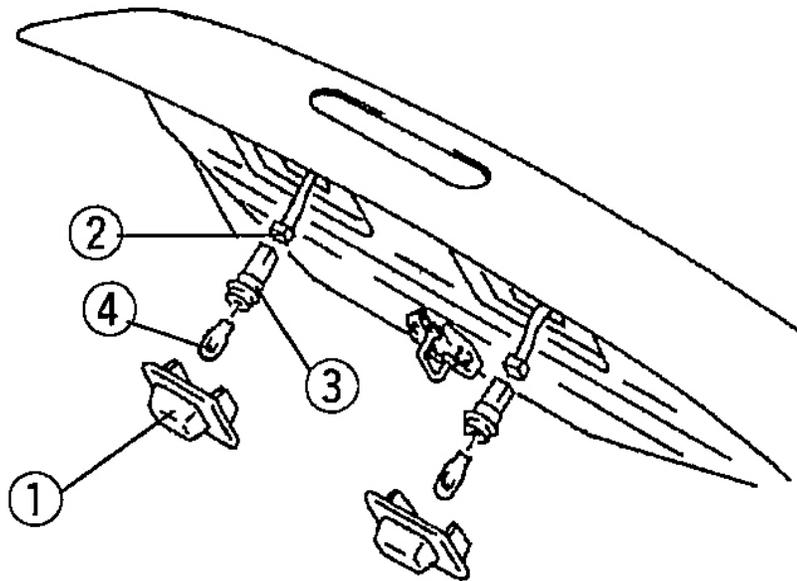
G03638932

**Fig. 18: Pressing Tab**

Courtesy of MAZDA MOTORS CORP.

## LICENSE PLATE LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	License plate light (See License Plate Light Removal Note)
2	License plate light connector
3	Socket
4	License plate light bulb

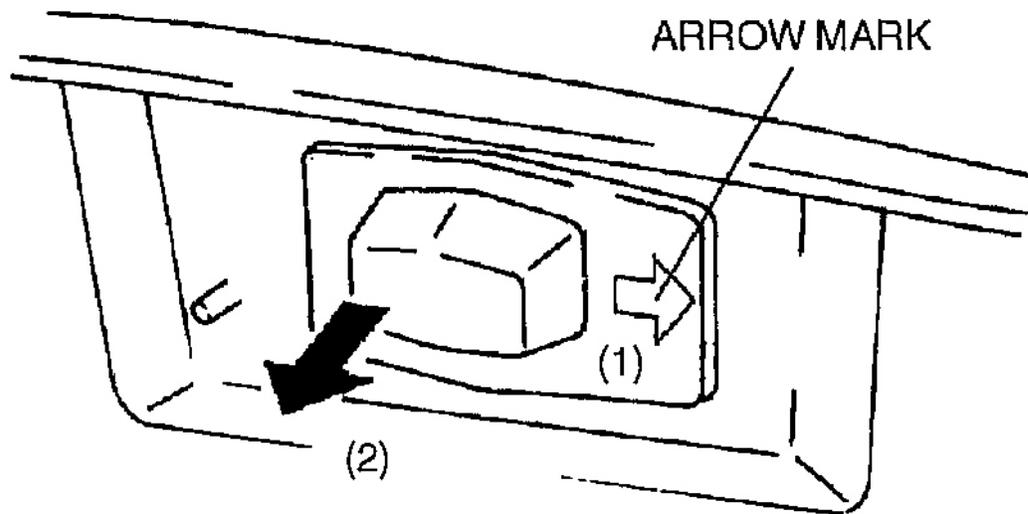
G03638933

**Fig. 19: Removing License Plate Light**  
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

#### LICENSE PLATE LIGHT REMOVAL NOTE

1. Slide the license plate light to the arrow mark and (2) remove it.

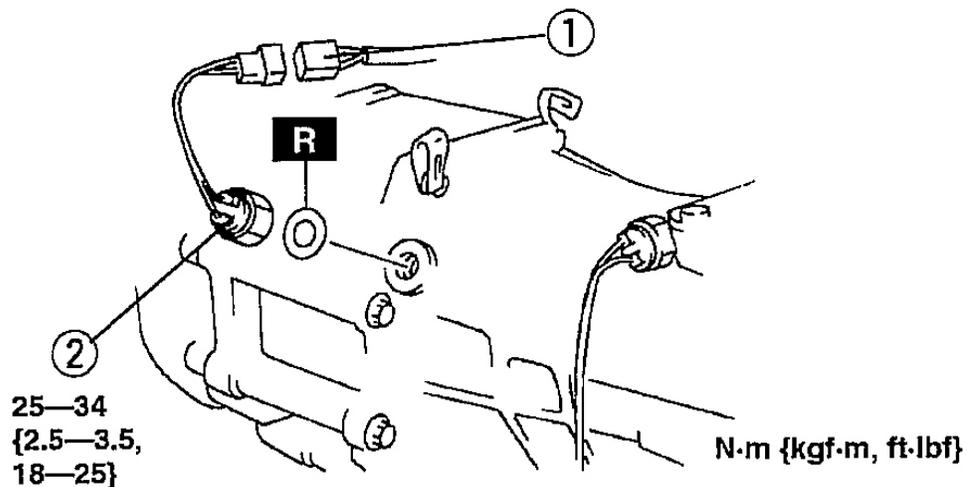


G03638934

**Fig. 20: Removing License Plate Light**  
Courtesy of MAZDA MOTORS CORP.

## BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Connector
2	Back-up light switch

G03638935

**Fig. 21: Removing Back-Up Light Switch**  
Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

## BACK-UP LIGHT SWITCH INSPECTION

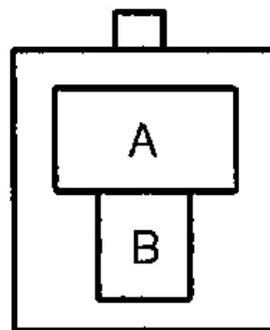
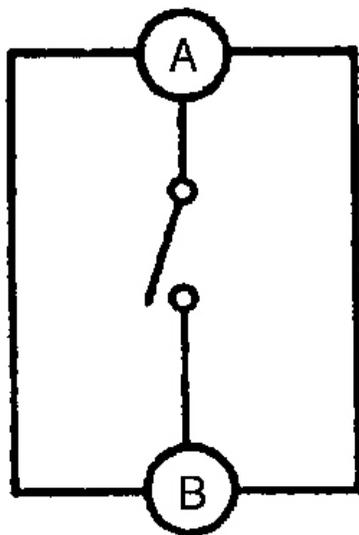
1. Disconnect the back-up light switch connector.
2. Inspect for continuity between the back-up light switch terminals using an ohmmeter.
  - If not as specified, replace the back-up light switch.

○—○ : Continuity

Shift lever position	Terminal	
	A	B
Reverse	○—○	○—○
Other		

G03638936

**Fig. 22: Back-Up Light Switch Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.

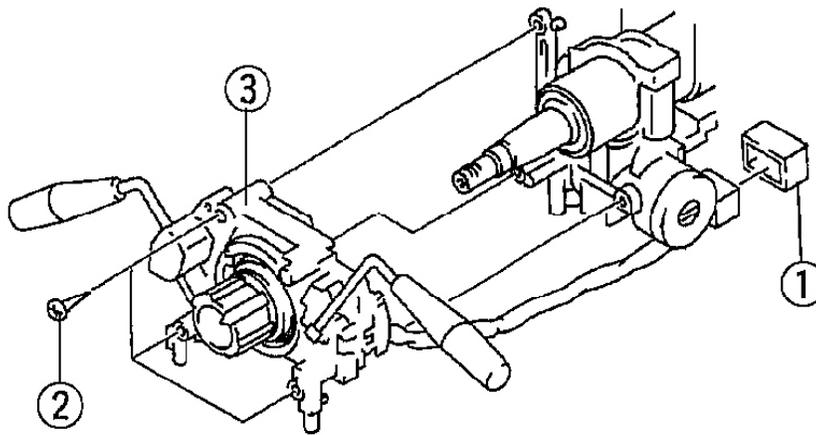


**PART SIDE CONNECTOR**  
**(VIEW FROM HARNESS SIDE)**

G03638937

**Fig. 23: Inspecting Back-Up Light Switch Connector Terminals**  
 Courtesy of MAZDA MOTORS CORP.

1. Disconnect the negative battery cable.
2. Remove the driver-side air bag module. (See **DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION** .)
3. Remove the steering wheel. (See **STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION** .)
4. Remove the column cover.
5. Remove the clock spring. (See **CLOCK SPRING REMOVAL/INSTALLATION** .)
6. Remove in the order indicated in the table.



1	Connector
2	Screw
3	Combination switch

G03638938

**Fig. 24: Removing Combination Switch**  
 Courtesy of MAZDA MOTORS CORP.

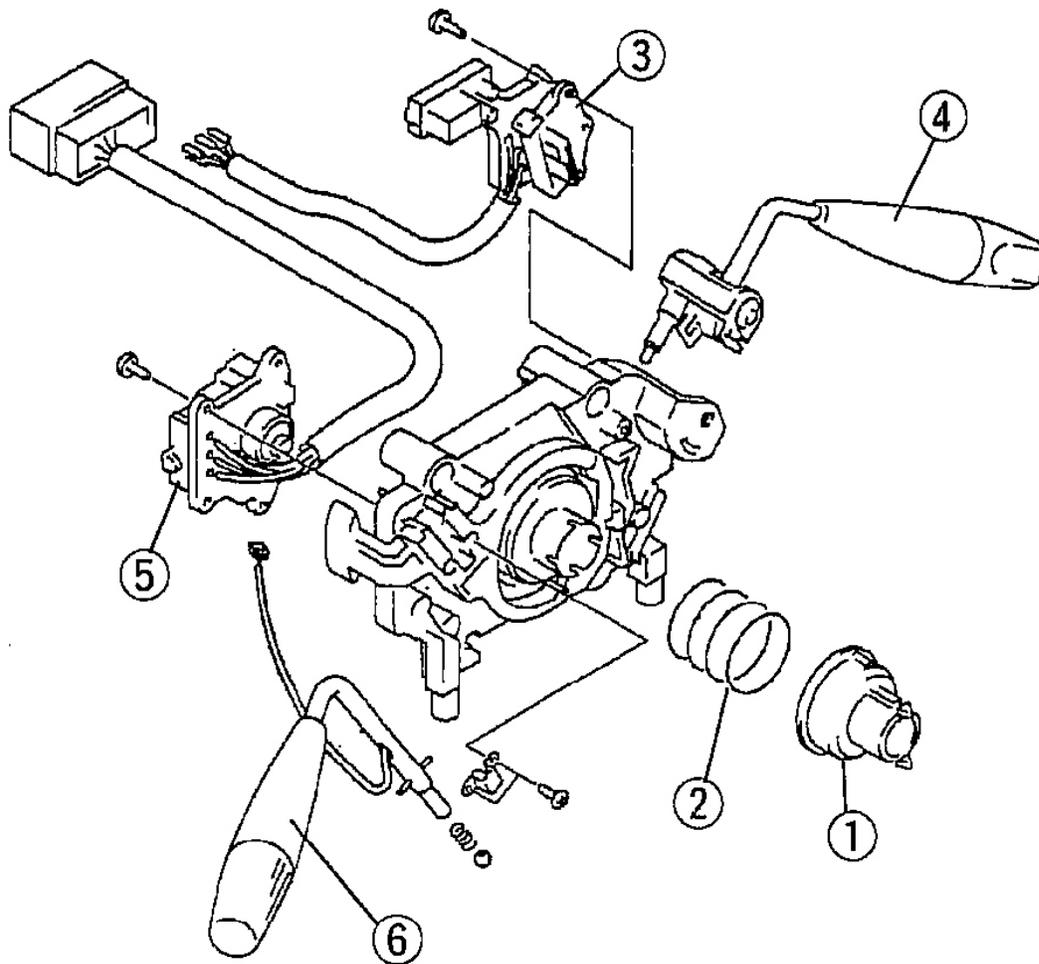
7. Install in the reverse order of removal.

## COMBINATION SWITCH DISASSEMBLY/ASSEMBLY

1. Disassemble in the order indicated in the table.

## 2005 Mazda MX-5 Miata

2005 ACCESSORIES & EQUIPMENT Lighting Systems - MX-5 Miata



1	Cancel cam
2	Spring
3	Wiper unit (See Wiper Unit Assembly Note)
4	Wiper lever
5	Light unit
6	Light lever

G03638939

**Fig. 25: Disassembling Combination Switch**  
Courtesy of MAZDA MOTORS CORP.

## 2005 Mazda MX-5 Miata

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2. Assemble in the reverse order of disassembly.

### WIPER UNIT ASSEMBLY NOTE

1. Make sure the terminals of the harness assembly are connected to the terminals of the connector as shown in the table.

### COMBINATION SWITCH CONNECTOR TERMINALS REFERENCE

The color of assembly harness	Terminal of connector
LG	AJ
LG/R	J
G/R	F
Y/R	N
R	E
B	B
G/Y	H
G/W	L
G/B	P

### COMBINATION SWITCH INSPECTION

#### HEADLIGHT SWITCH

1. Remove the combination switch. (See COMBINATION SWITCH REMOVAL/INSTALLATION.)
2. Inspect for continuity between the combination switch terminals using an ohmmeter.
  - If not as specified, replace the light unit or light lever.

2005 Mazda MX-5 Miata

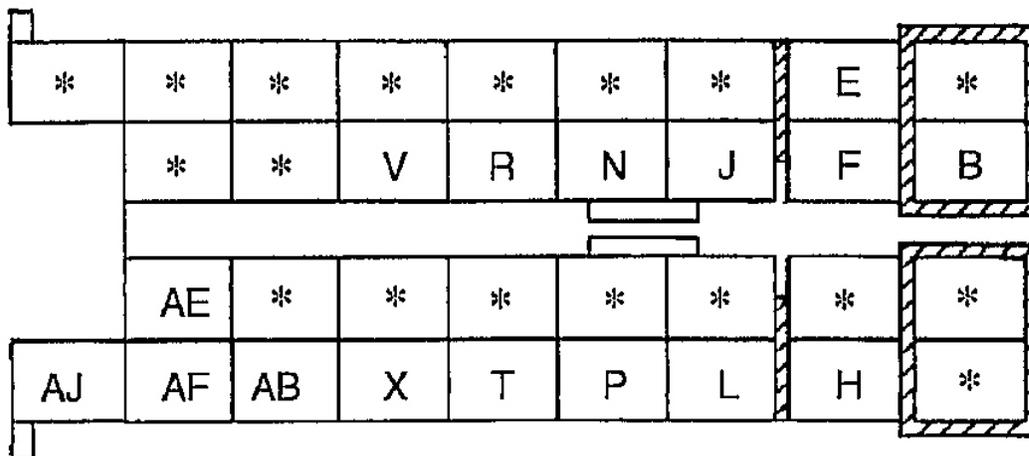
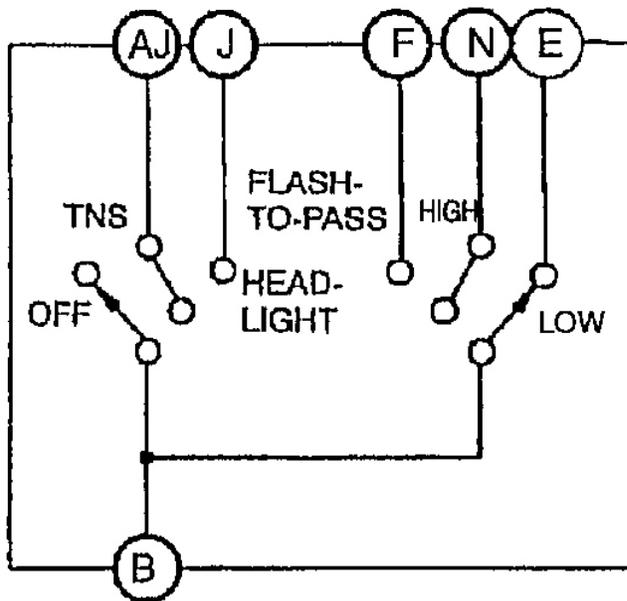
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○—○ : Continuity

Switch position			Terminal					
Light	Dimmer	Flash-to-pass	B	E	N	AJ	J	F
OFF	—	Off						
		On	○—		○—			○—
TNS	—	Off	○—			○—		
		On	○—		○—	○—		○—
Head-light	Low	Off	○—	○—		○—	○—	
		On	○—		○—	○—	○—	○—
	High	—	○—		○—	○—	○—	

G03638940

**Fig. 26: Headlight Switch Terminal Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.



PART SIDE CONNECTOR  
(VIEW FROM HARNESS SIDE)

G03638941

**Fig. 27: Inspecting Headlight Switch Connector Terminals**  
Courtesy of MAZDA MOTORS CORP.

**TURN SWITCH**

1. Remove the combination switch. (See **COMBINATION SWITCH REMOVAL/INSTALLATION.**)
2. Inspect for continuity between the combination switch terminals using an ohmmeter.

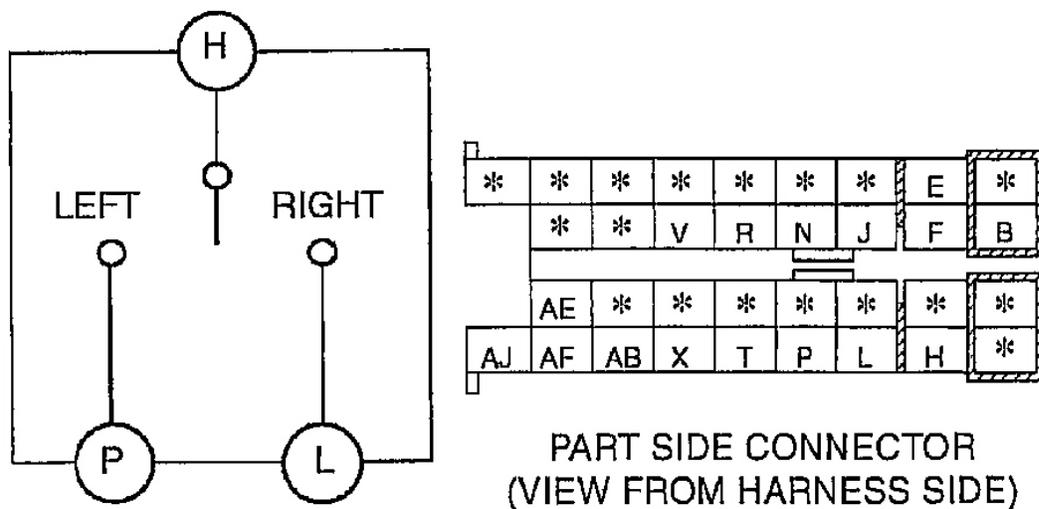
- If not as specified, replace the light unit or light lever.

○ — ○ : Continuity

Switch position	Terminal		
	H	P	L
Right	○ — ○		○ — ○
Off			
Left	○ — ○	○ — ○	

G03638942

**Fig. 28: Turn Switch Terminal Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.



G03638943

**Fig. 29: Inspecting Turn Switch Connector Terminals**  
 Courtesy of MAZDA MOTORS CORP.

**2005 Mazda MX-5 Miata**

2005 ACCESSORIES & EQUIPMENT Lighting Systems - MX-5 Miata

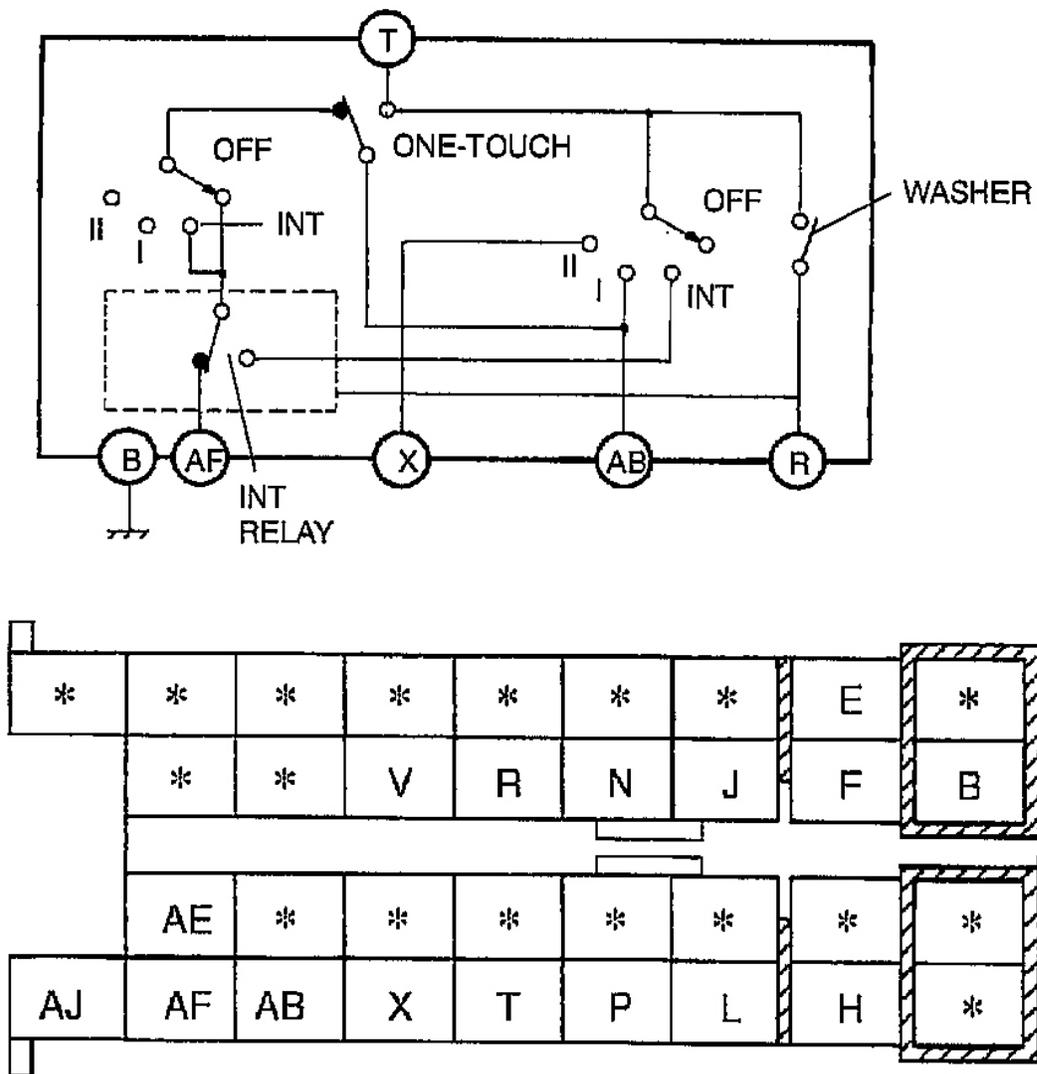
1. Remove the combination switch. (See **COMBINATION SWITCH REMOVAL/INSTALLATION**.)
2. Inspect for continuity between the combination switch terminals using an ohmmeter.
  - If not as specified, replace the wiper unit or the wiper lever.

○—○ : Continuity

Switch position		One-touch	Terminal				
			R	AF	T	AB	X
Wiper switch	OFF	OFF		○—○		○	
		ON			○—○		
	INT			○—○		○	
	I				○—○		
	II				○—○		○
Washer switch	ON		○—○		○		

G03638944

**Fig. 30: Windshield Wiper And Washer Switch Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.



PART SIDE CONNECTOR  
(VIEW FROM HARNESS SIDE)

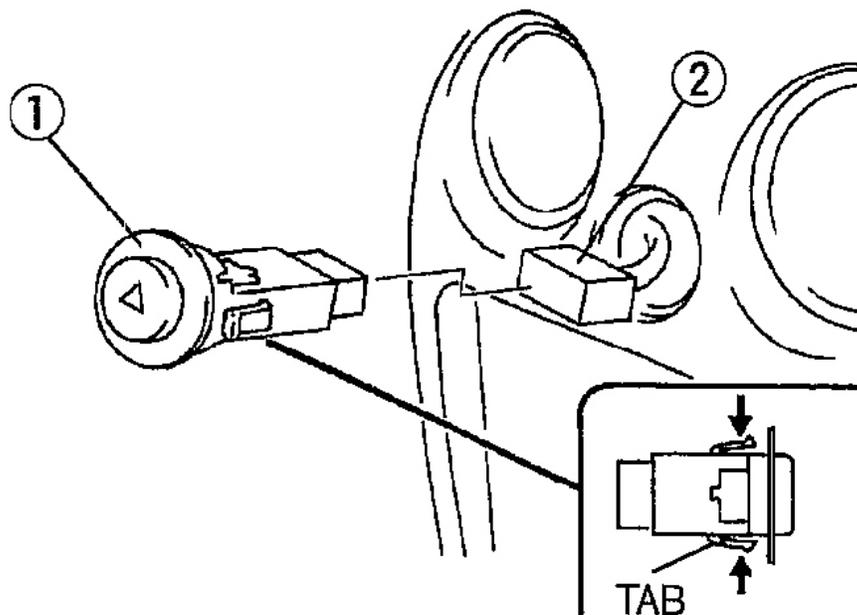
G03638945

**Fig. 31: Inspecting Windshield Wiper And Washer Switch Connector Terminals**  
Courtesy of MAZDA MOTORS CORP.

## HAZARD WARNING SWITCH REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the audio unit. (See **AUDIO UNIT REMOVAL** .) (See **AUDIO UNIT INSTALLATION** .)

3. Remove in the order indicated in the table.



1	Hazard warning switch (See Hazard Warning Switch Removal Note)
2	Connector

G03638946

**Fig. 32: Removing Hazard Warning Switch**  
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

**HAZARD WARNING SWITCH REMOVAL NOTE**

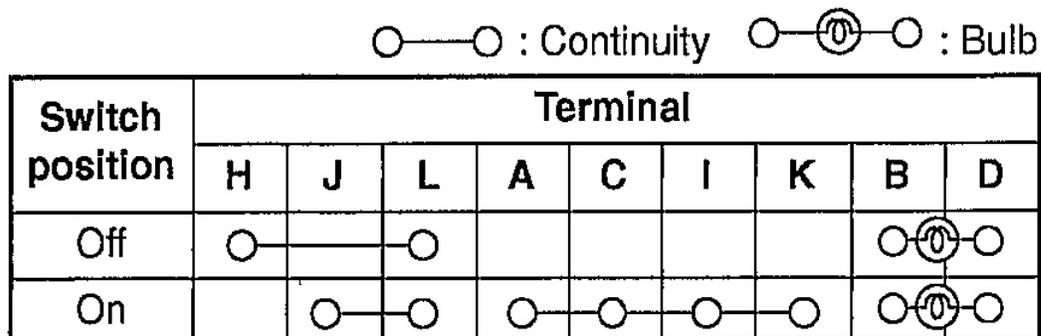
1. Insert your hand into the center panel opening.
2. Press the tabs of the hazard warning switch.
3. Pull the hazard warning switch out from the center panel.

**HAZARD WARNING SWITCH INSPECTION**

2005 Mazda MX-5 Miata

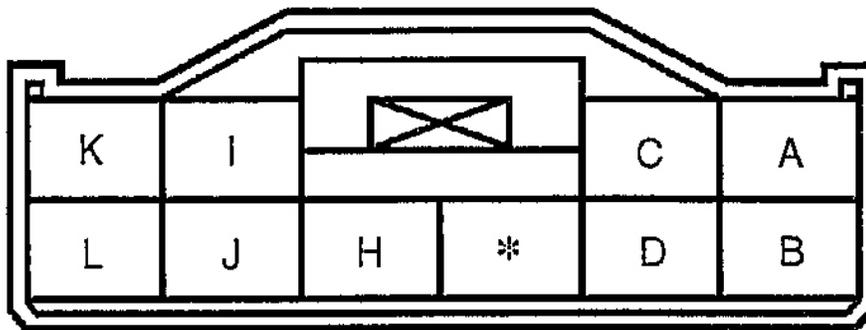
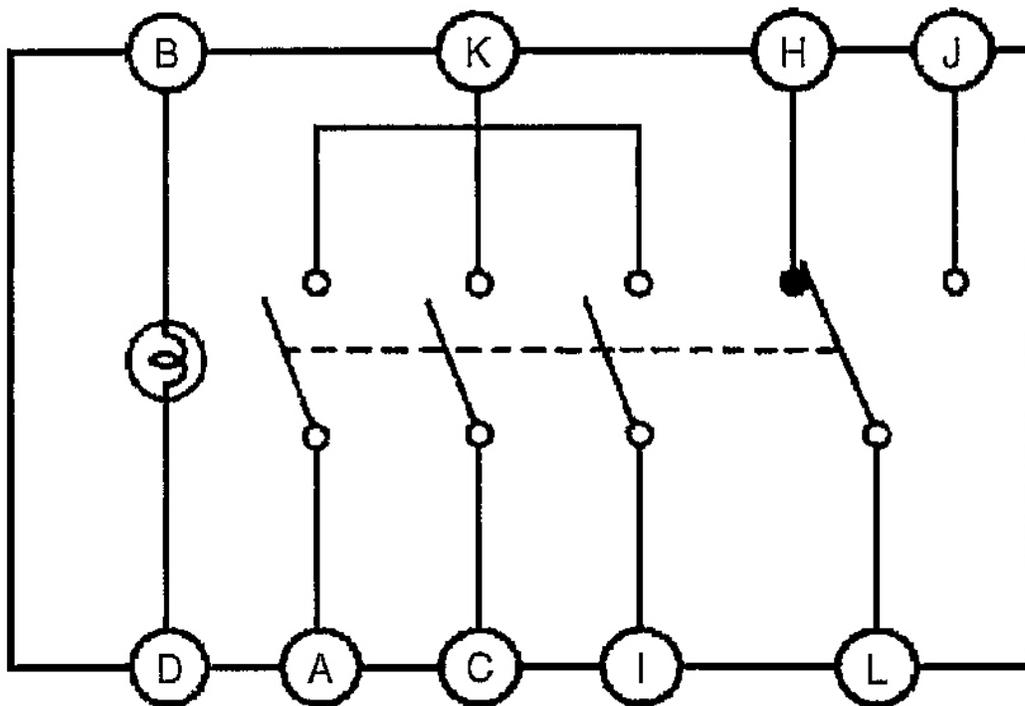
2005 ACCESSORIES & EQUIPMENT Lighting Systems - MX-5 Miata

1. Remove the hazard warning switch. (See **HAZARD WARNING SWITCH REMOVAL/INSTALLATION.**)
2. Inspect for continuity between the hazard warning switch terminals using an ohmmeter.
  - If not as specified, replace the hazard warning switch.



G03638947

**Fig. 33: Hazard Warning Switch Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.



PART SIDE CONNECTOR  
(VIEW FROM HARNESS SIDE)

G03638948

**Fig. 34: Inspecting Hazard Warning Switch Connector Terminals**  
Courtesy of MAZDA MOTORS CORP.

## FRONT FOG LIGHT SWITCH REMOVAL/INSTALLATION

WITH CRUISE CONTROL SYSTEM

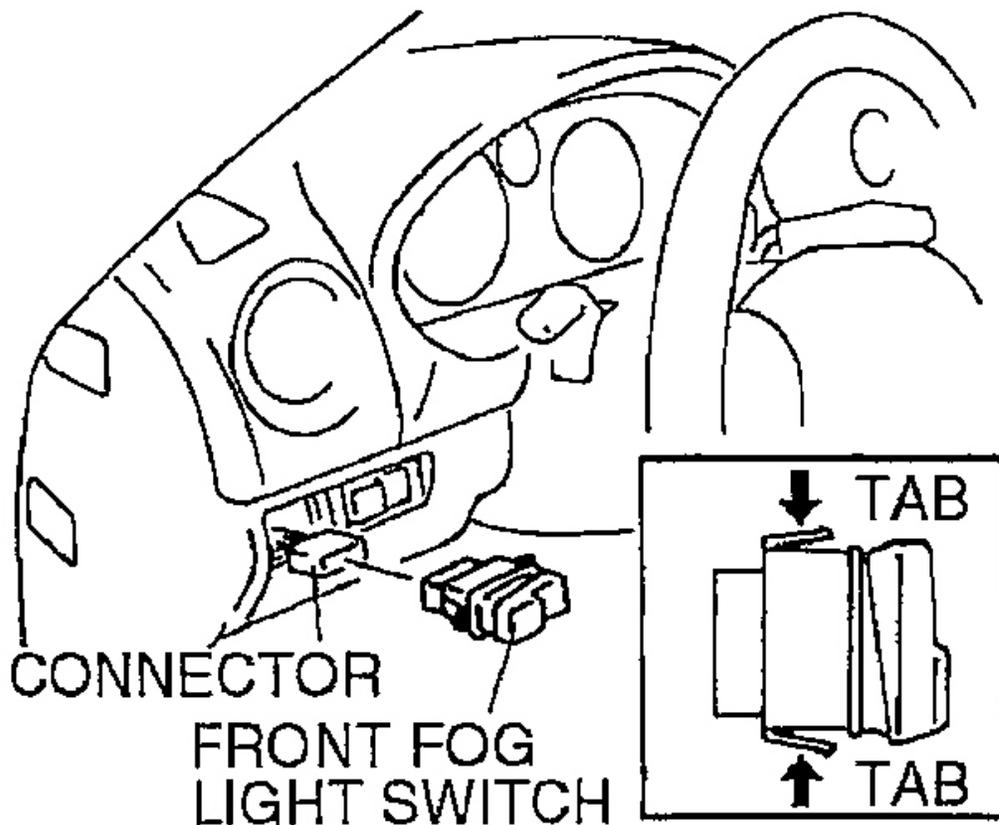
**NOTE:**

- The front fog light switch and the cruise control main switch are integrated.

- See CRUISE CONTROL MAIN SWITCH REMOVAL/INSTALLATION .

**WITHOUT CRUISE CONTROL SYSTEM**

1. Disconnect the negative battery cable.
2. Remove the fuse block cover.
3. Remove the panel light control switch. (See PANEL LIGHT CONTROL SWITCH REMOVAL/INSTALLATION.)
4. Push the tabs of the cruise control main switch and pull the switch out from inside of the dashboard.
5. Disconnect the cruise control main switch connector to remove the cruise control main switch.



G03638949

**Fig. 35: Removing Front Fog Light Switch**  
 Courtesy of MAZDA MOTORS CORP.

6. Install in the reverse order of removal.

## FRONT FOG LIGHT SWITCH INSPECTION

### WITH CRUISE CONTROL SYSTEM

**NOTE:**

- The front fog light switch and the cruise control main switch are integrated.

- See CRUISE CONTROL MAIN SWITCH INSPECTION .

### WITHOUT CRUISE CONTROL SYSTEM

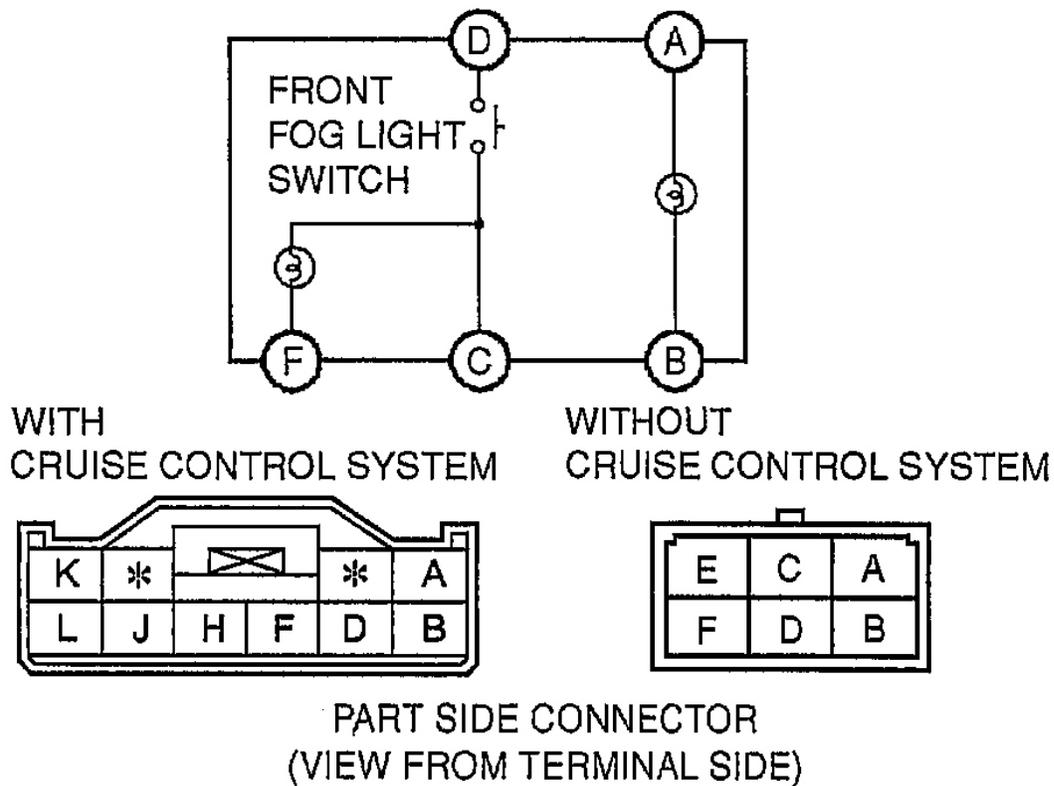
1. Remove the front fog light switch. (See FRONT FOG LIGHT SWITCH REMOVAL/INSTALLATION.)
2. Inspect for continuity between the front fog light switch terminals using an ohmmeter.
  - If not as specified, replace the front fog light switch.

○—○ : Continuity    ○—⊗—○ : Bulb

Switch position	Terminal				
	A	B	D	C	F
On	○—⊗—○		○—○	○—⊗—○	
Off	○—⊗—○			○—⊗—○	

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**Fig. 36: Front Fog Light Switch Terminals Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.



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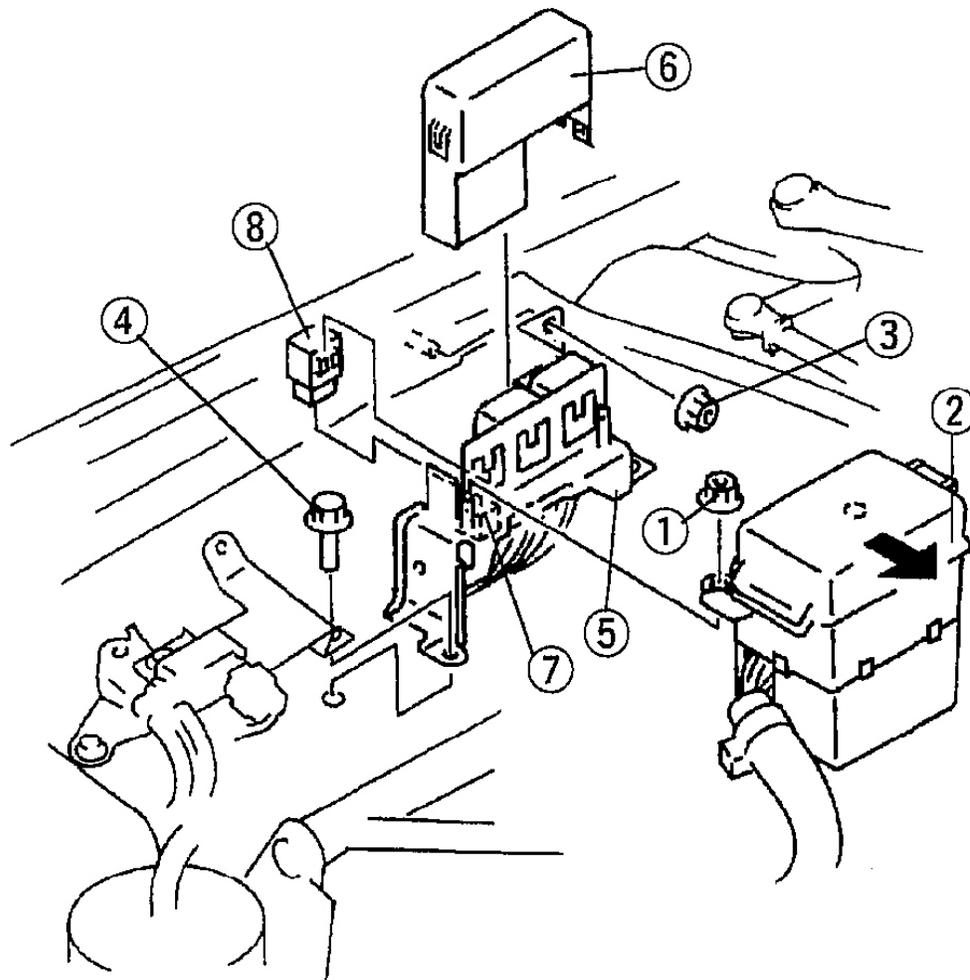
**Fig. 37: Inspecting Front Fog Light Switch Connector Terminals**  
Courtesy of MAZDA MOTORS CORP.

## HEADLIGHT RELAY REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.

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1	Nut
2	Main fuse block
3	Nut
4	Bolt
5	Bracket
6	Cover
7	Connector
8	Headlight relay

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**Fig. 38: Removing Headlight Relay**

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**Courtesy of MAZDA MOTORS CORP.**

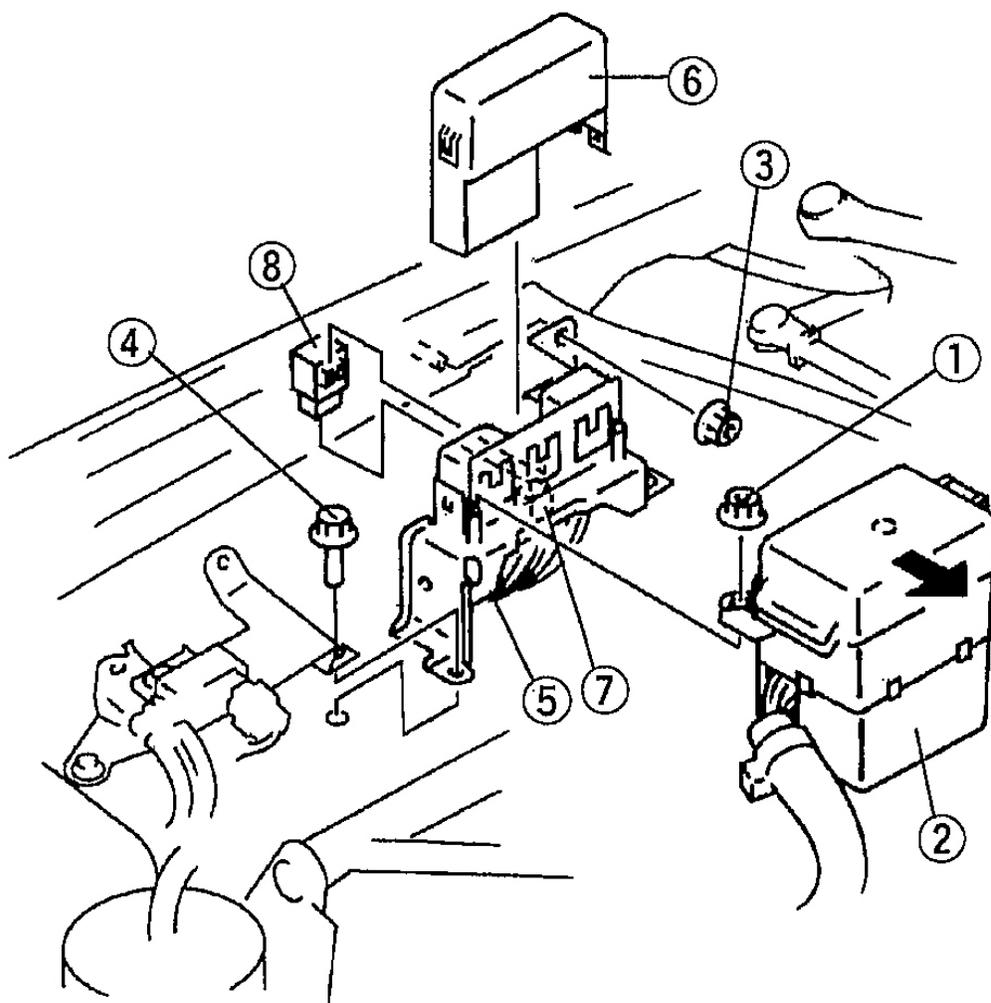
3. Install in the reverse order of removal.

### **TNS RELAY REMOVAL/INSTALLATION**

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.

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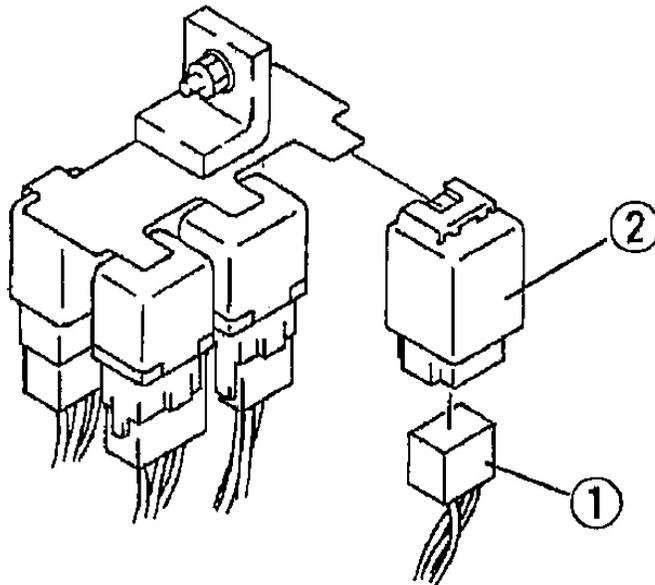
1	Nut
2	Main fuse block
3	Nut
4	Bolt
5	Bracket
6	Cover
7	Connector
8	TNS relay

**Fig. 39: Removing TNS Relay**  
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

## FLASHER CONTROL MODULE REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the lower panel.
3. Remove in the order indicated in the table.



1	Connector
2	Flasher control module

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**Fig. 40: Removing Flasher Control Module**  
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

## FLASHER CONTROL MODULE INSPECTION

1. Measure the voltage at the flasher control module terminals as indicated below.

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2. Disconnect the flasher control module connector before inspecting for continuity at terminal F.
  - If not as specified, inspect the parts listed under "Action".
  - If the parts and wiring harnesses are okay but the system still does not work properly, replace the flasher control module.

#### TERMINAL VOLTAGE LIST (REFERENCE)



HARNES SIDE CONNECTOR  
(VIEW FROM HARNES SIDE)

Terminal	Signal	Connected to	Test condition	Voltage (V)/ Continuity	Action
A	Power supply	HAZARD 10 A fuse	Under any condition	B+	<ul style="list-style-type: none"> <li>• Inspect HAZARD 10 A fuse</li> <li>• Inspect related harness</li> </ul>
B	—	—	—	—	—
D	Turn signal flasher (LH)	Turn signal light (LH)	Turn signal light (LH) flashes.	Alternates between 0 and B+	<ul style="list-style-type: none"> <li>• Inspect turn signal light (LH)</li> <li>• Inspect related harness</li> </ul>
			Hazard warning switch at on position.		
			Other	0	
F	Flasher control module ground	GND	Under any condition: inspect for continuity to ground.	Yes	<ul style="list-style-type: none"> <li>• Inspect GND</li> </ul>
			Turn signal light (RH) flashes.	Alternates between 0 and B+	<ul style="list-style-type: none"> <li>• Inspect turn signal light (RH)</li> <li>• Inspect related harness</li> </ul>
			Hazard warning switch at on position.		
Other	0				
H	Hazard warning on	Hazard warning switch	Hazard warning switch at on position.	0	<ul style="list-style-type: none"> <li>• Inspect hazard warning switch</li> <li>See HAZARD WARNING SWITCH INSPECTION</li> <li>• Inspect related harness</li> </ul>
			Hazard warning switch at off position.	B+	
I	Turn switch on/off (RH)	Combination switch	Ignition switch is at ON and turn switch (RH) on.	B+	<ul style="list-style-type: none"> <li>• Inspect combination switch</li> <li>See COMBINATION SWITCH INSPECTION</li> <li>• Inspect TURN 7.5 A fuse</li> <li>• Inspect related harness</li> </ul>
			Other	0	
J	Turn switch on/off (LH)	Combination switch	Ignition switch is at ON and turn switch (LH) on.	B+	<ul style="list-style-type: none"> <li>• Inspect combination switch</li> <li>See COMBINATION SWITCH INSPECTION</li> <li>• Inspect TURN 7.5 A fuse</li> <li>• Inspect related harness</li> </ul>
			Other	0	

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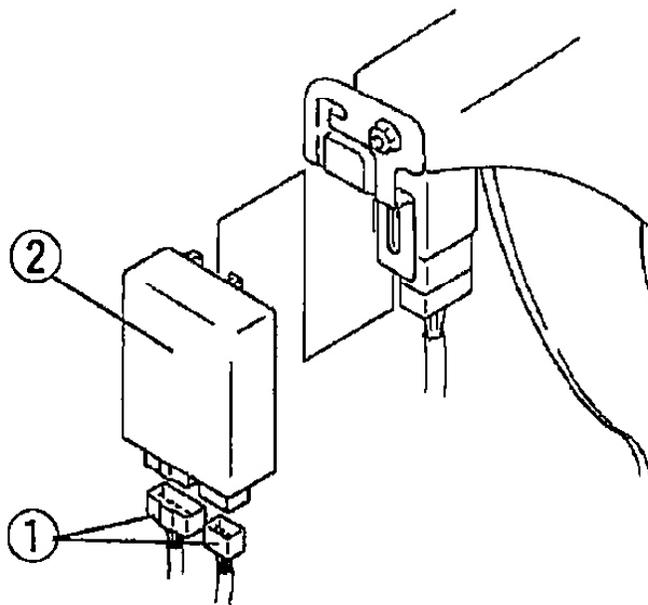
**Fig. 41: Flasher Control Module Terminal Voltage Reference List**  
Courtesy of MAZDA MOTORS CORP.

## DRL SYSTEM WIRING DIAGRAM

See HEADLIGHTS .

## DRL CONTROL MODULE REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the lower panel.
3. Remove in the order indicated in the table.



1	Connector
2	DRL control module

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**Fig. 42: Removing DRL Control Module**  
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

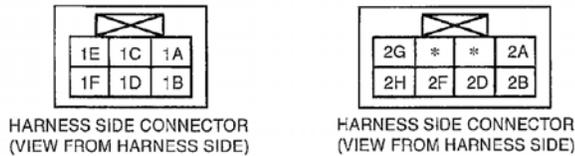
## DRL CONTROL MODULE INSPECTION

1. Measure the voltage at the DRL control module terminals as indicated below.
2. Disconnect the DRL control module connector before inspecting for continuity at terminal 1E.
  - If not as specified, inspect the parts listed under "Action."
  - If the parts and wiring harnesses are okay but the system still does not work properly, replace the DRL control module.

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#### TERMINAL VOLTAGE LIST (REFERENCE)



Terminal	Signal	Connection	Test condition		Voltage (V)/ Continuity	Action
1A	RH headlight operation (low beam)	RH headlight (low beam)	Headlight switch at 2nd position	Dimmer switch at the high beam position	B+	<ul style="list-style-type: none"> <li>Inspect H/L-R 15 A fuse</li> <li>Inspect RH headlight</li> <li>Inspect related harness</li> </ul>
				Dimmer switch at the low beam position	0	
			Headlight switch at OFF or 1st position	0		
1B	IG1	ENGINE 15 A fuse	Ignition switch at ON position	B+	<ul style="list-style-type: none"> <li>Inspect ENGINE 15 A fuse</li> <li>Inspect related harness</li> </ul>	
			Ignition switch at LOCK or ACC position	0		
1C	LH headlight operation (low beam)	LH headlight (low beam)	Headlight switch at 2nd position	Dimmer switch at the high beam position	B+	<ul style="list-style-type: none"> <li>Inspect H/L-L 15 A fuse</li> <li>Inspect LH headlight</li> <li>Inspect related harness</li> </ul>
				Dimmer switch at the low beam position	0	
			Headlight switch at OFF or 1st position	0		
1D	Power supply	HEAD 40 A fuse	Under any condition		B+	<ul style="list-style-type: none"> <li>Inspect HEAD 40 A fuse</li> <li>Inspect related harness</li> </ul>
1E	DRL control module ground	GND	Under any condition: inspect for continuity to ground		Yes	<ul style="list-style-type: none"> <li>Inspect GND</li> </ul>
1F	Headlight operation (high beam)	Headlight (high beam)	Headlight switch at 2nd position	Dimmer switch at the high beam position	0	<ul style="list-style-type: none"> <li>Inspect headlight</li> <li>Inspect related harness</li> </ul>
				Dimmer switch at the low beam position	B+	
			Headlight switch at OFF or 1st position	0		
2A	Headlight relay operation	Headlight relay	Headlight switch at 2nd position	0	<ul style="list-style-type: none"> <li>Inspect HEAD 40 A fuse</li> <li>Inspect headlight relay</li> <li>Inspect related harness</li> </ul>	
			Headlight switch at OFF or 1st position	B+		

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**Fig. 43: DRL Control Module Terminal Voltage Reference List (1 Of 2)**  
 Courtesy of MAZDA MOTORS CORP.

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### 2005 ACCESSORIES & EQUIPMENT Lighting Systems - MX-5 Miata

Terminal	Signal	Connection	Test condition	Voltage (V)/ Continuity	Action	
2B	Flash-to-pass	Headlight switch	Flash-to-pass activated	0	<ul style="list-style-type: none"> <li>Inspect combination switch (See COMBINATION SWITCH INSPECTION)</li> <li>Inspect related harness</li> </ul>	
			Flash-to-pass not activated	B+		
2C	—	—	—	—	—	
2D	Brake system warning light operation	<ul style="list-style-type: none"> <li>Brake system warning light</li> <li>Brake fluid level sensor</li> </ul>	Ignition switch at ON position and parking brake lever released	Brake fluid level is below MIN. Brake fluid level is above MIN.	0 B+	<ul style="list-style-type: none"> <li>Inspect METER 15 A fuse</li> <li>Inspect instrument cluster</li> <li>Inspect brake fluid level sensor (See FLUID LEVEL SENSOR INSPECTION)</li> <li>Inspect related harness</li> </ul>
			Ignition switch at LOCK or ACC position	0		
2E	—	—	—	—	—	
2F	Parking brake lever pulled/released	Parking brake switch	Parking brake lever pulled	0	<ul style="list-style-type: none"> <li>Inspect parking brake switch (See PARKING BRAKE INSPECTION)</li> <li>Inspect related harness</li> </ul>	
			Parking brake lever released	B+		
2G	High beam on/off	Headlight switch	Dimmer switch at the high position	0	<ul style="list-style-type: none"> <li>Inspect combination switch (See COMBINATION SWITCH INSPECTION)</li> <li>Inspect related harness</li> </ul>	
			Dimmer switch at the low position	B+		
2H	Headlight switch on/off	Headlight switch	Headlight switch at 2nd position	0	<ul style="list-style-type: none"> <li>Inspect combination switch (See COMBINATION SWITCH INSPECTION)</li> <li>Inspect related harness</li> </ul>	
			Headlight switch at OFF or 1st position	B+		

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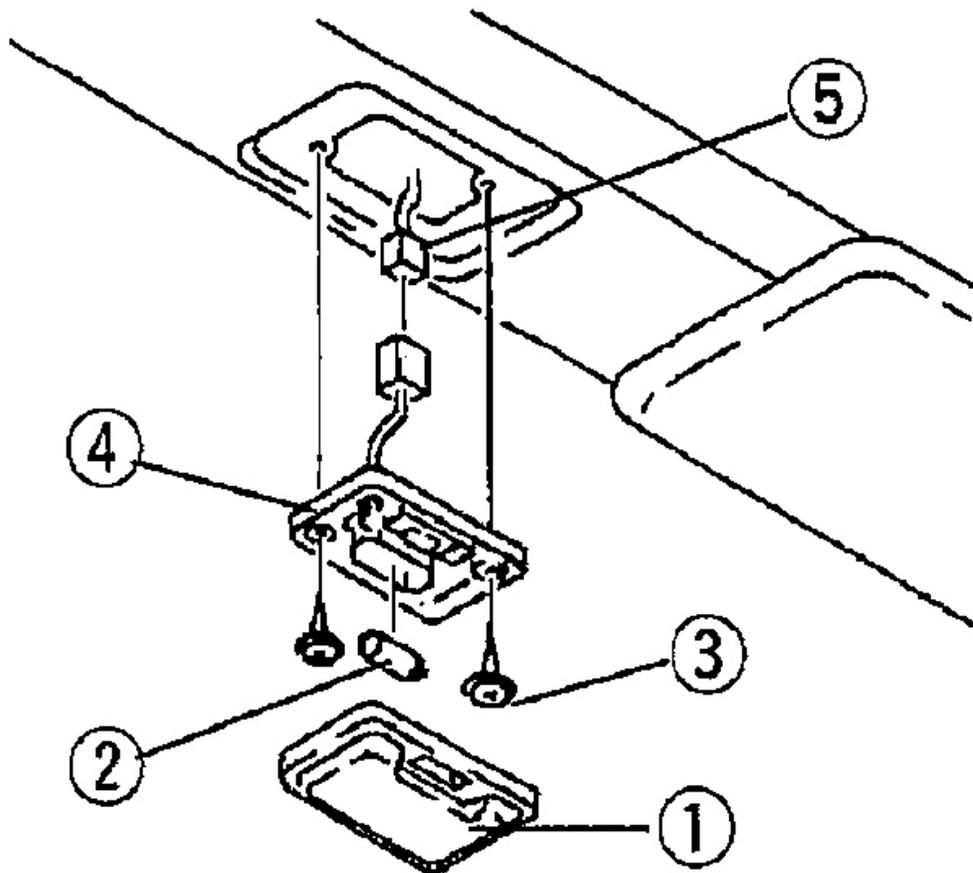
**Fig. 44: DRL Control Module Terminal Voltage Reference List (2 Of 2)**  
 Courtesy of MAZDA MOTORS CORP.

## INTERIOR LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.

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1	Lens (See Lens Removal Note)
2	Interior light bulb
3	Screw
4	Interior light
5	Connector

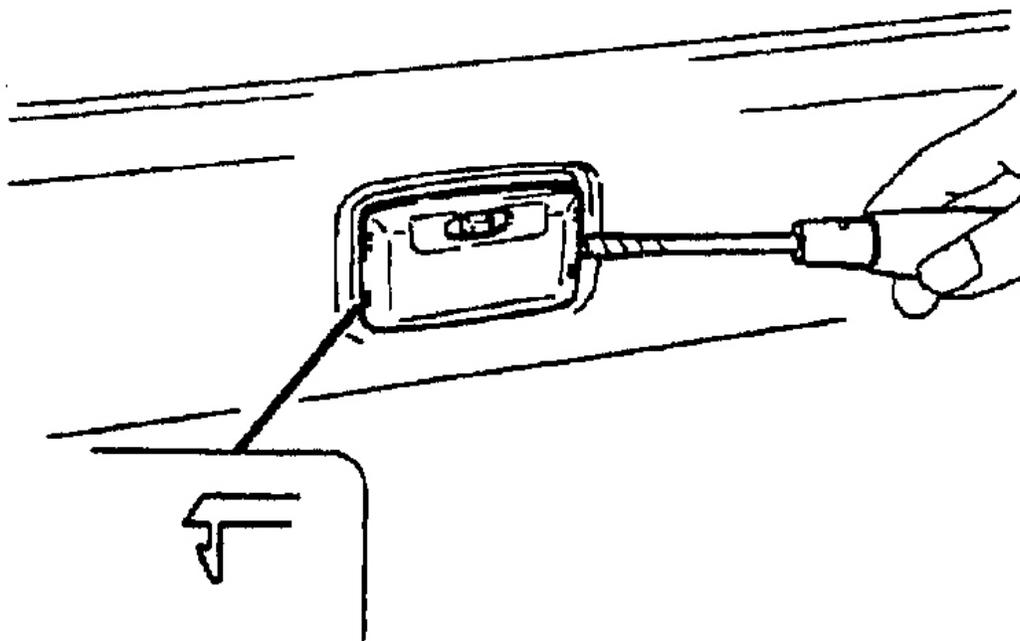
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**Fig. 45: Removing Interior Light**  
Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

### LENS REMOVAL NOTE

1. Insert a tape-wrapped flathead screwdriver into the lens.



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**Fig. 46: Inserting Tape-Wrapped Flathead Screwdriver Into Lens**  
Courtesy of MAZDA MOTORS CORP.

2. Twist the screwdriver and remove the lens.

### INTERIOR LIGHT INSPECTION

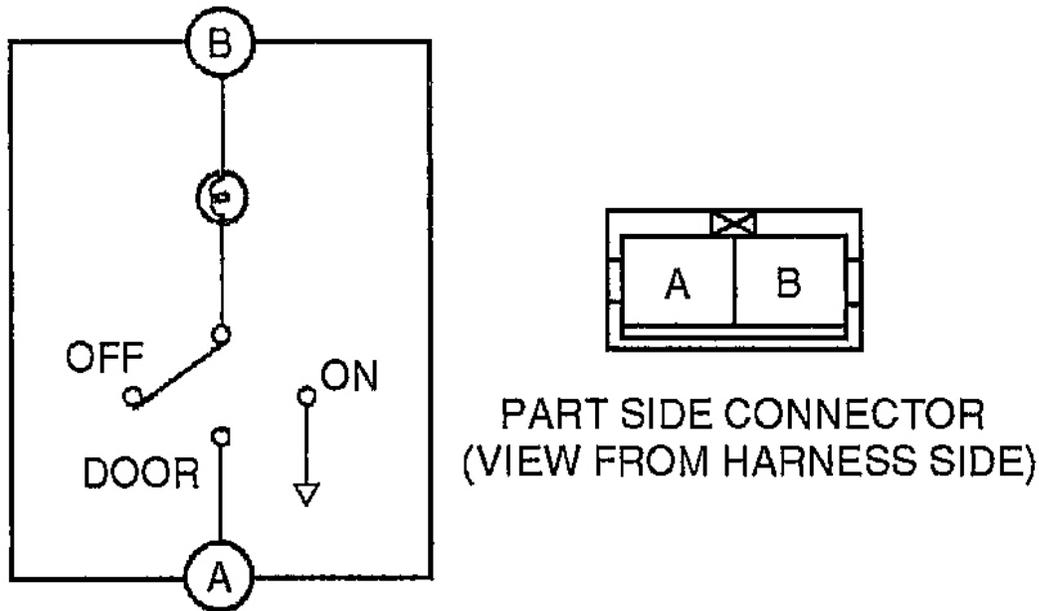
1. Remove the interior light. (See **INTERIOR LIGHT REMOVAL/INSTALLATION.**)
2. Inspect for continuity between the interior light terminals using an ohmmeter.
  - If not as specified, replace the interior light.

○ — ⊕ — ○ : Bulb

Switch position	Terminal		
	A	B	Body GND
ON		○ — ⊕ — ○	
DOOR	○ — ⊕ — ○		
OFF			

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**Fig. 47: Interior Light Terminals Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.



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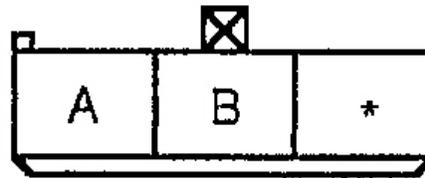
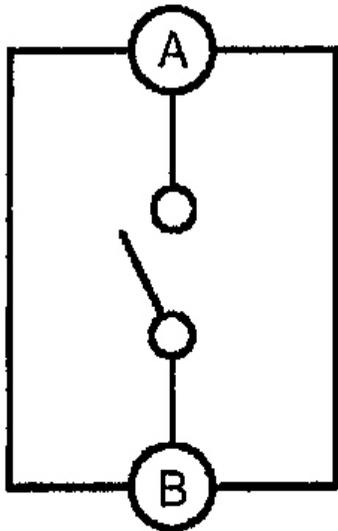
**Fig. 48: Inspecting Interior Light Connector Terminals**  
 Courtesy of MAZDA MOTORS CORP.

## **TRUNK COMPARTMENT LIGHT SWITCH INSPECTION**

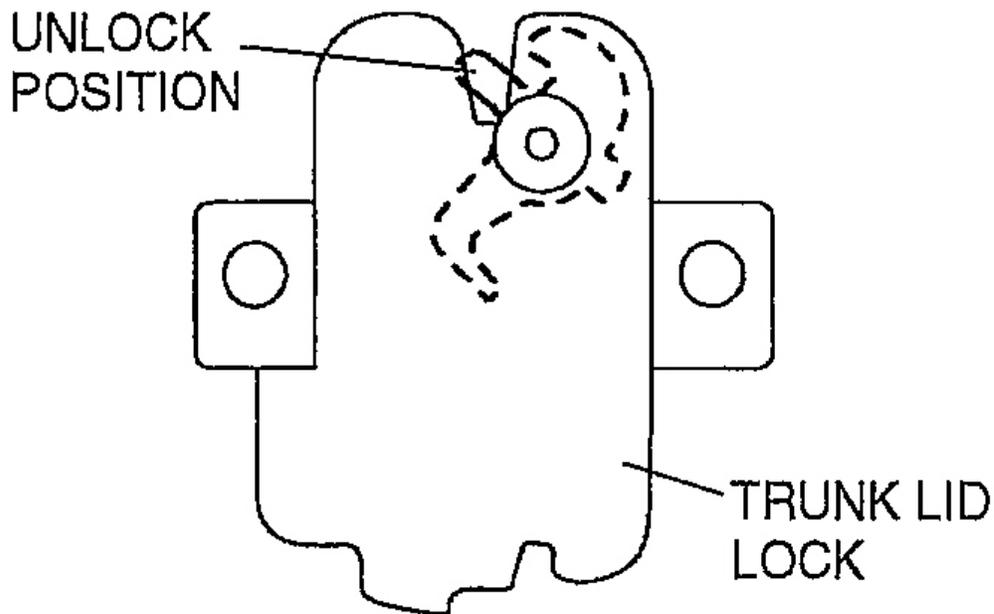
**NOTE:**

- **Trunk compartment light switch has a built-in trunk lid lock.**

1. Disconnect the negative battery cable.
2. Open the trunk lid.
3. Remove the trunk lid trim.
4. Disconnect the trunk compartment light switch connector.
5. Check the continuity between the trunk compartment light switch terminal A and B.
  - If there is on continuity, replace the trunk lid lock.



PART SIDE  
CONNECTOR  
(VIEW FROM  
TERMINAL SIDE)



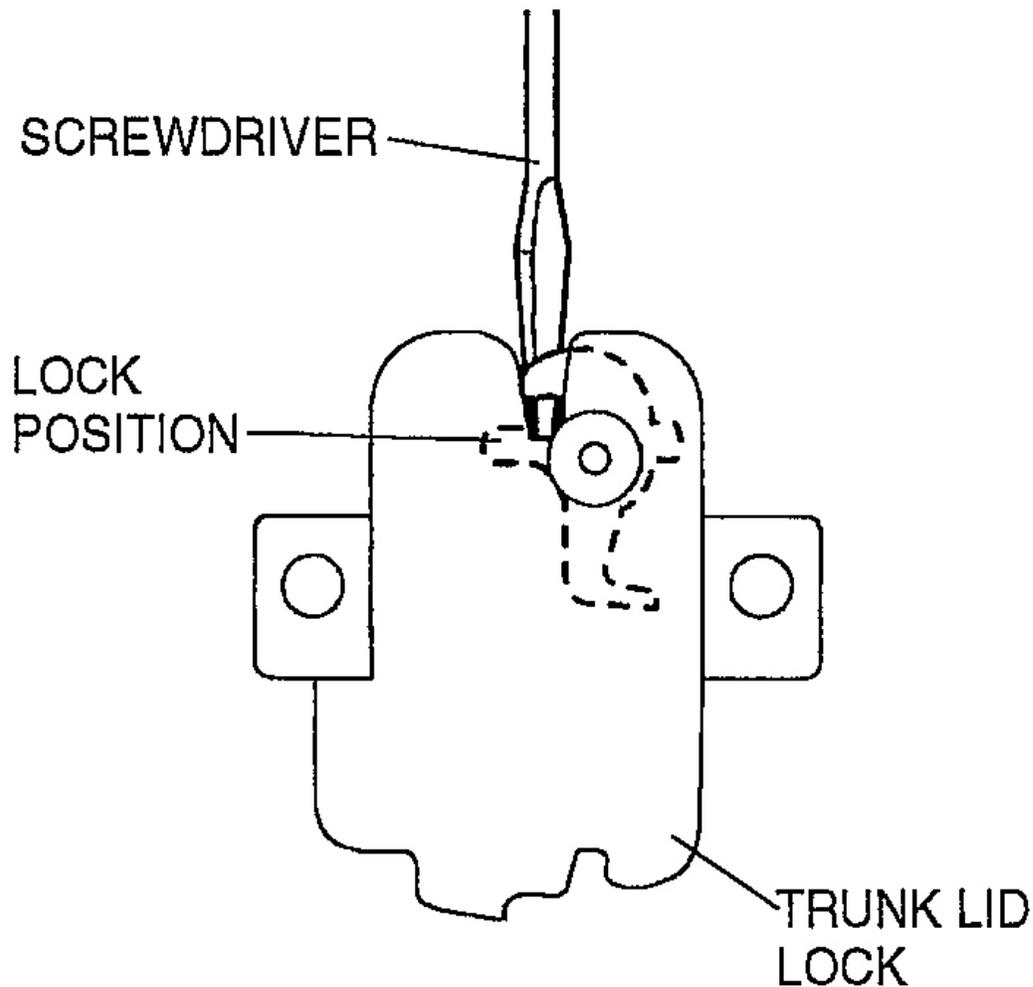
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**Fig. 49: Inspecting Trunk Compartment Light Switch**  
Courtesy of MAZDA MOTORS CORP.

6. Lock the trunk lid lock using a flat-head screwdriver or equivalent as shown.
7. Check the continuity between the compartment light switch terminal A and B.
  - If there is continuity, replace the trunk lid lock.

**CAUTION:**

- After the inspection, unlock the trunk lid lock. If closing the trunk lid with the trunk lid lock locked, the trunk lid lock and/or striker may be broken.

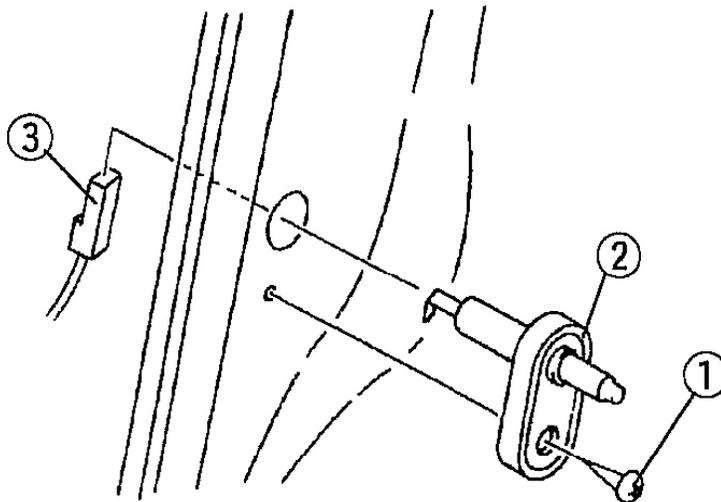


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**Fig. 50: Locking Trunk Lid Lock Using Flat-Head Screwdriver**  
Courtesy of MAZDA MOTORS CORP.

## DOOR SWITCH REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove in the order indicated in the table.



1	Screw
2	Door switch
3	Connector

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**Fig. 51: Removing Door Switch**  
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

## DOOR SWITCH INSPECTION

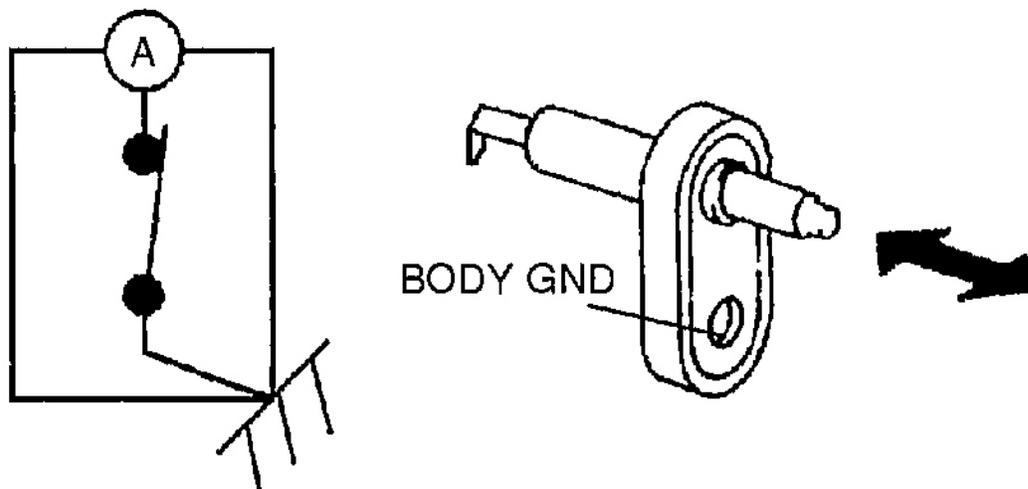
1. Remove the door switch.
2. Inspect for continuity between the door switch terminals using an ohmmeter.
  - If not as specified, replace the door-switch.

○—○ : Continuity

Switch condition	Terminal	
	A	Body GND
Pressed		
Released	○—○	○—○

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**Fig. 52: Door Switch Terminals Continuity Table**  
 Courtesy of MAZDA MOTORS CORP.

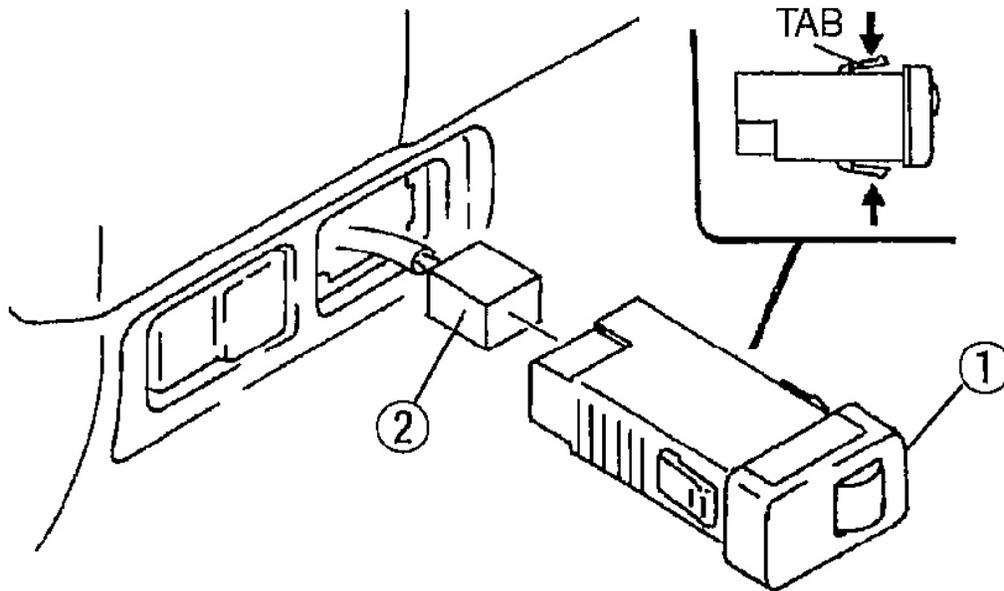


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**Fig. 53: Inspecting Door Switch Connector Terminals**  
 Courtesy of MAZDA MOTORS CORP.

## PANEL LIGHT CONTROL SWITCH REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the lower panel.
3. Remove in the order indicated in the table.



1	Panel light control switch (See Panel Light Control Switch Removal Note)
2	Connector

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**Fig. 54: Removing Panel Light Control Switch**  
Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

#### PANEL LIGHT CONTROL SWITCH REMOVAL NOTE

1. Insert your hand inside the dashboard.
2. Press the tabs of the panel light control switch.
3. Pull the panel light control switch out from the dashboard.

#### PANEL LIGHT CONTROL SWITCH INSPECTION

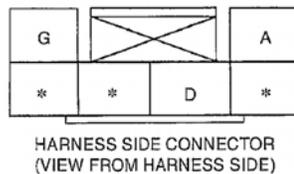
1. Remove the panel light control switch without disconnecting the connector. (See **PANEL LIGHT CONTROL SWITCH REMOVAL/INSTALLATION.**)
2. Measure the voltage at the panel light control switch terminals as indicated below.

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3. Disconnect the panel light control switch connector and inspect for continuity at terminal G.
  - If not as specified, inspect the parts listed under "Action."
  - If the parts and wiring harnesses are okay but the system still does not work properly, replace the panel light control switch.

#### TERMINAL VOLTAGE LIST (REFERENCE)



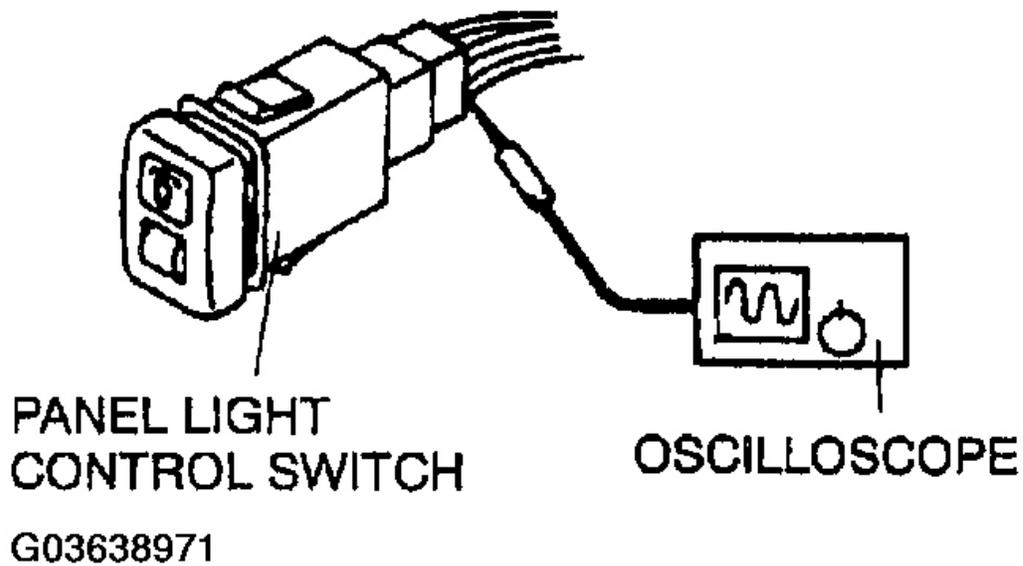
Terminal	Signal	Connection	Test condition	Voltage (V)/ Continuity	Action
A	Panel light control output	Each illumination	Inspect using an oscilloscope (See A terminal inspection)	—	<ul style="list-style-type: none"> <li>• Inspect each illumination</li> <li>• Inspect related harness</li> </ul>
B	—	—	—	—	—
D	Power supply	TNS relay	Headlight switch at 1st or 2nd position	B+	<ul style="list-style-type: none"> <li>• Inspect combination switch (See COMBINATION SWITCH INSPECTION)</li> <li>• Inspect TAIL 15 A fuse</li> <li>• Inspect related harness</li> </ul>
			Headlight switch at OFF	0	
F	—	—	—	—	—
G	Panel light control switch ground	GND	Under any condition: inspect for continuity to ground	Yes	<ul style="list-style-type: none"> <li>• Inspect GND</li> </ul>
H	—	—	—	—	—

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**Fig. 55: Panel Light Control Switch Terminal Voltage Reference List**  
Courtesy of MAZDA MOTORS CORP.

#### A TERMINAL INSPECTION

1. Measure the wave pattern of the A terminal on the panel light control switch using an oscilloscope.
2. Set the headlight switch to either the first or second position.
3. Set the panel light control switch to the brightest position.



**Fig. 56: Measuring Wave Pattern On Panel Light Control Switch Using An Oscilloscope**  
Courtesy of MAZDA MOTORS CORP.

4. Verify that the pattern on the screen is as shown in the figure.



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