

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

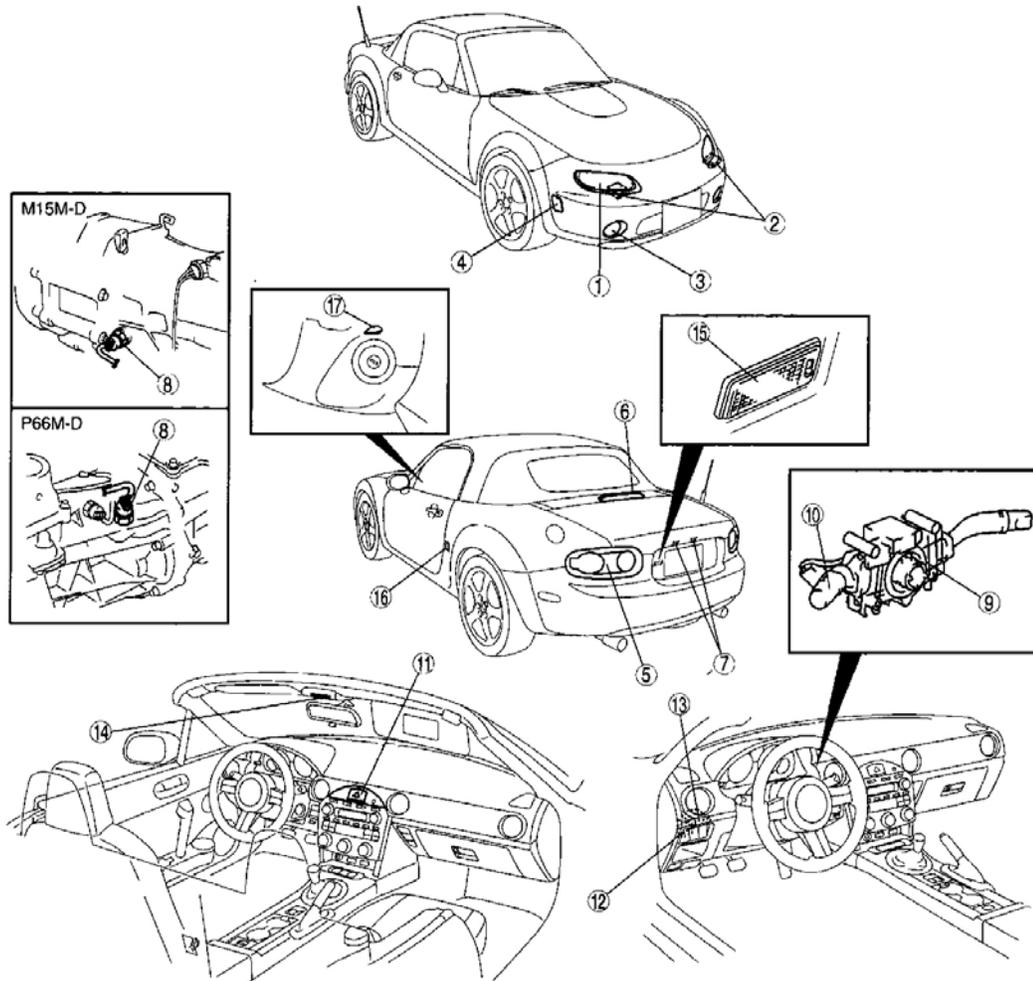
2007 ACCESSORIES & BODY, CAB

Lighting Systems - MX-5 Miata

LIGHTING SYSTEMS LOCATION INDEX

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata



E5U918ZW5202

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

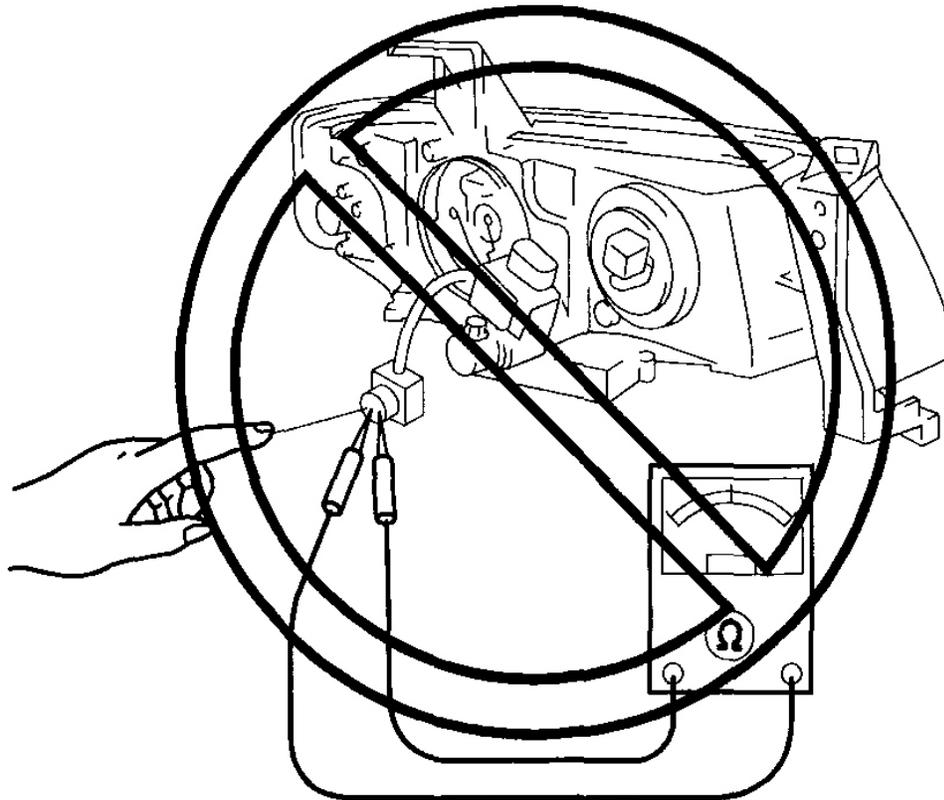
Fig. 1: Identifying Location Of Lighting Systems Components

Courtesy of MAZDA MOTORS CORP.

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.



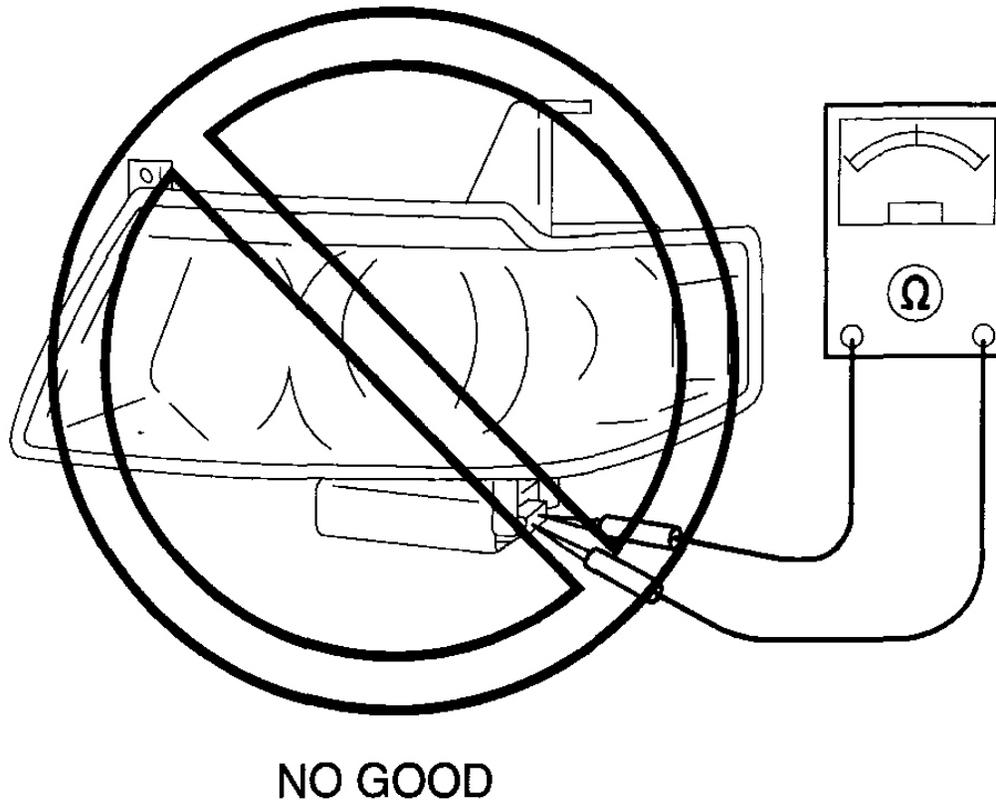
NO GOOD

BHE0918W172

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.



BHE0918W173

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.

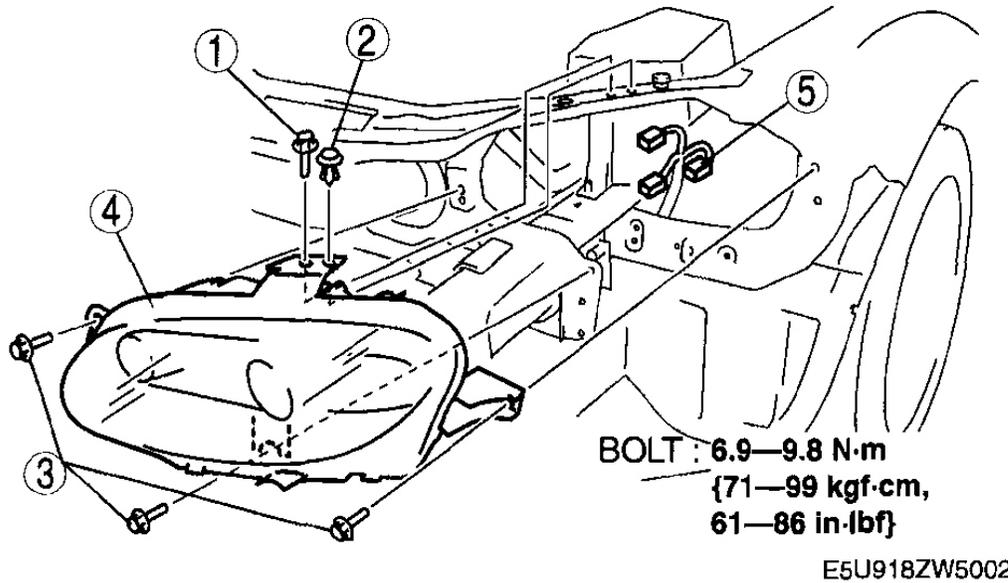
- **Inspect the headlight illumination in the period from directly after cold illumination until they are uniformly illuminated (approx. 5 min) and verify that there is no flickering or inconsistent brightness.**
- **Turn on the headlights for approx. 30 min with normal condition bulbs and verify that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



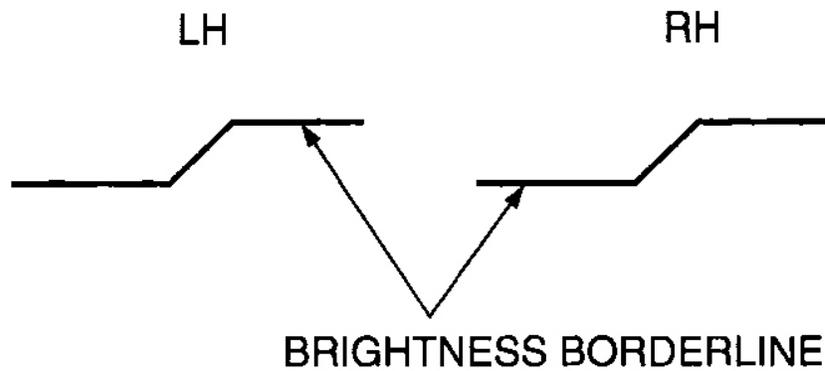
1	Bolt A
2	Fastener
3	Bolt B
4	Front combination light
5	Connector

Fig. 4: Identifying Front Combination Light (With Torque Specifications)
 Courtesy of MAZDA MOTORS CORP.

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

HEADLIGHT AIMING

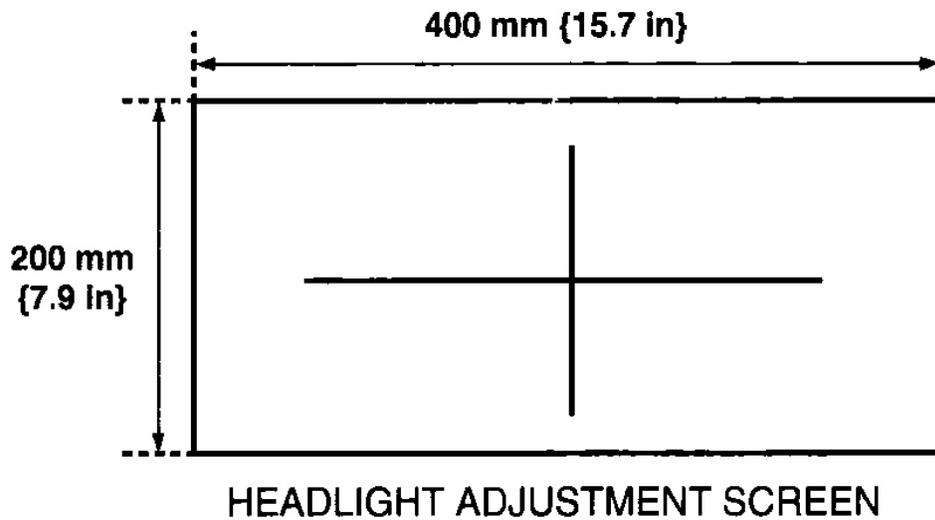
1. Point the headlight beams to a wall and verify that the headlight beams are as shown in **Fig. 5** .



E5U918ZW5154

Fig. 5: Identifying Headlight Aiming Adjustment
Courtesy of MAZDA MOTORS CORP.

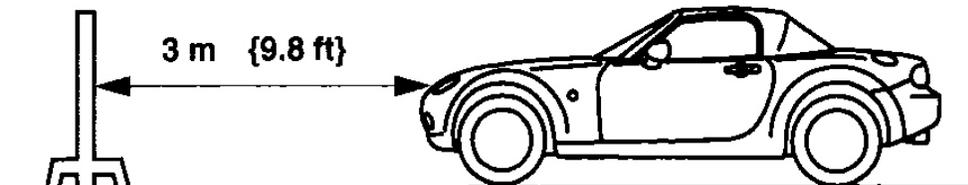
2. Make a headlight adjustment screen as shown in **Fig. 6** using double-weight, white paper.
3. Adjust the tire pressure to the specification.
4. Position the unloaded vehicle on a flat, level surface.
5. Seat one person in the driver's seat.
6. Position the vehicle straight ahead and perpendicular to the white screen.



E5U918ZW5053

Fig. 6: Identifying Headlight Adjustment Screen
Courtesy of MAZDA MOTORS CORP.

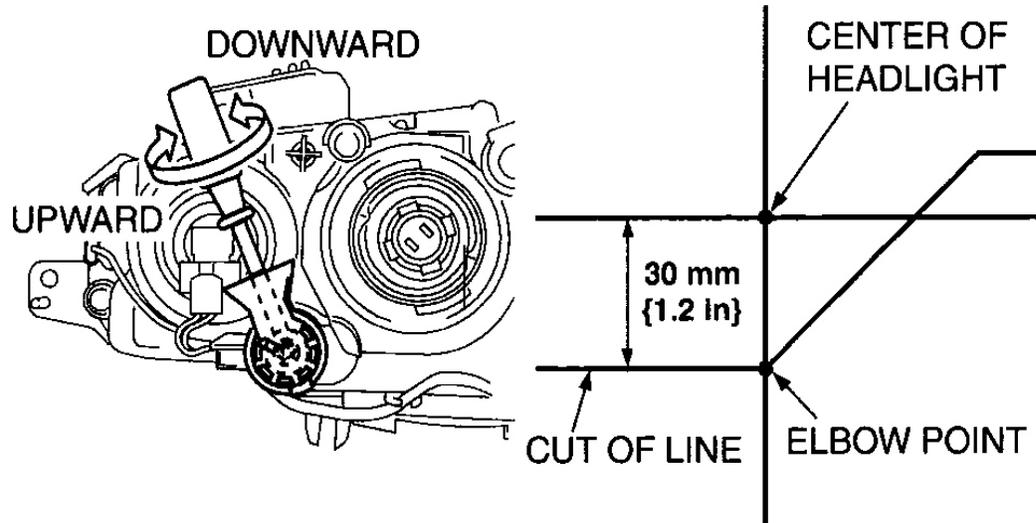
7. Set the headlights **3 m {9.8 ft}** from the white screen.
8. Place an object in front of the headlight not being adjusted to block its light beam.
9. Start the engine so that the battery remains charged.
10. Turn on the low-beam headlight.



E5U918ZW5038

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** .



E5U918ZW5303

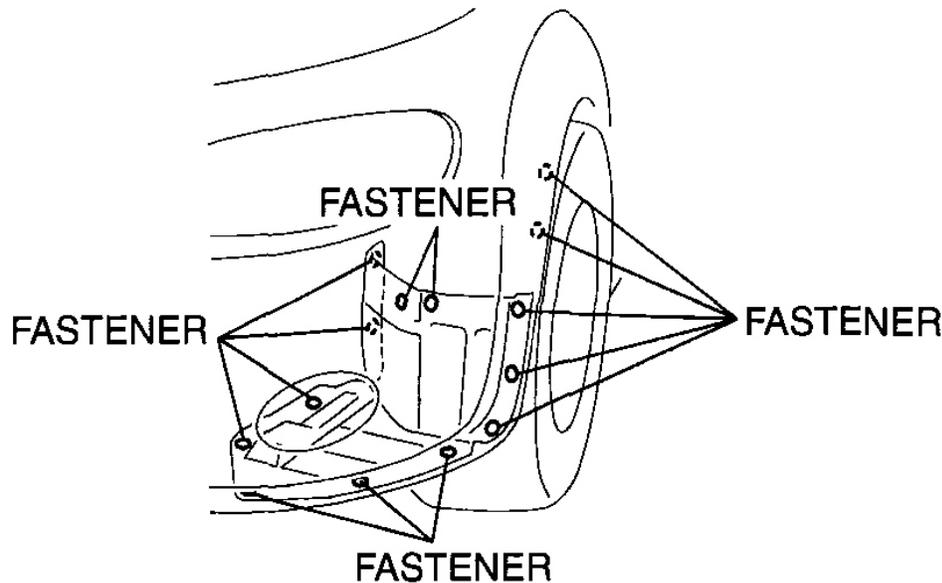
Fig. 8: Identifying Aiming Adjustment Screw
Courtesy of MAZDA MOTORS CORP.

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)



E5U918ZW5052

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.

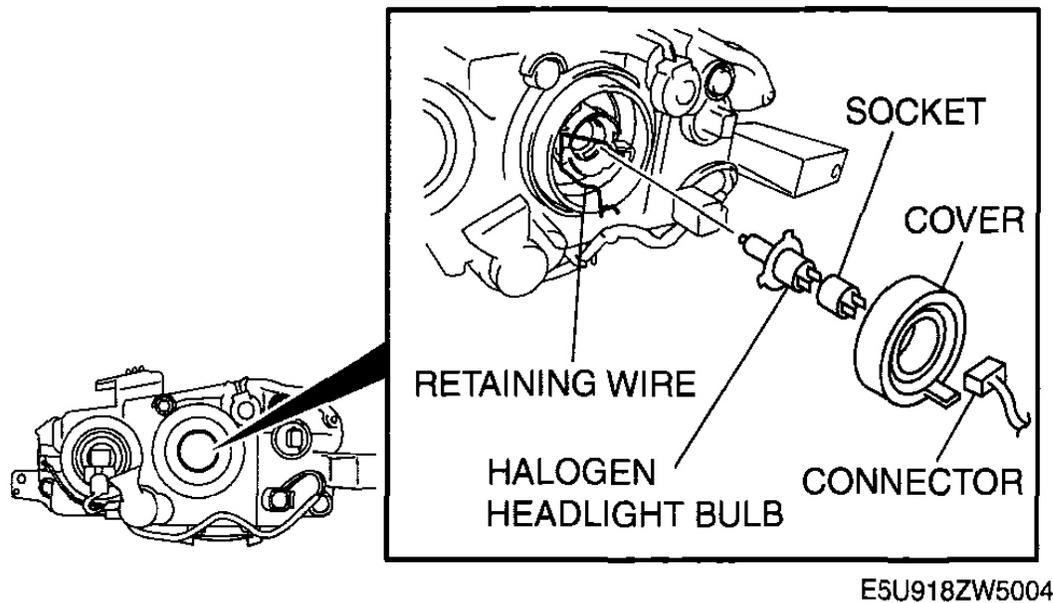


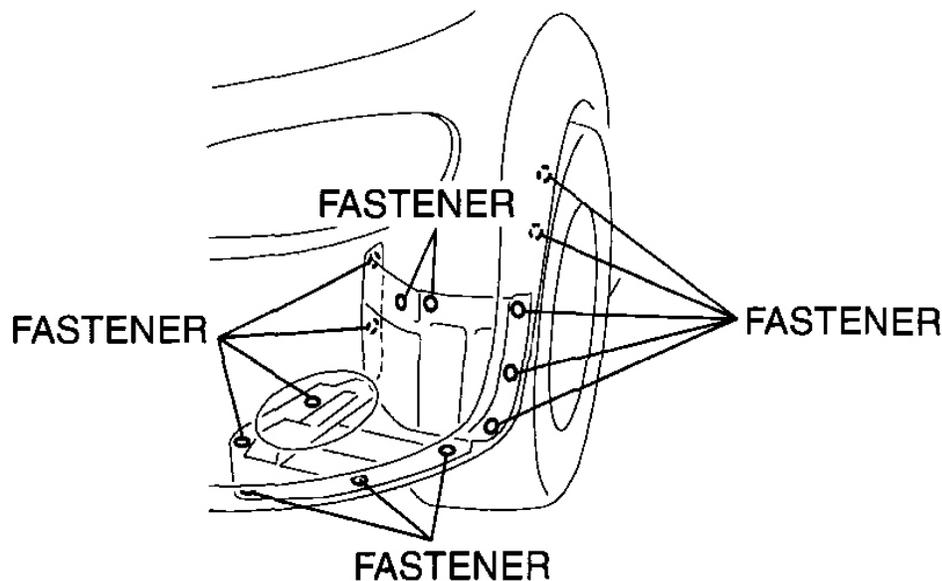
Fig. 10: Removing Halogen Headlight Bulb
Courtesy of MAZDA MOTORS CORP.

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)



E5U918ZW5052

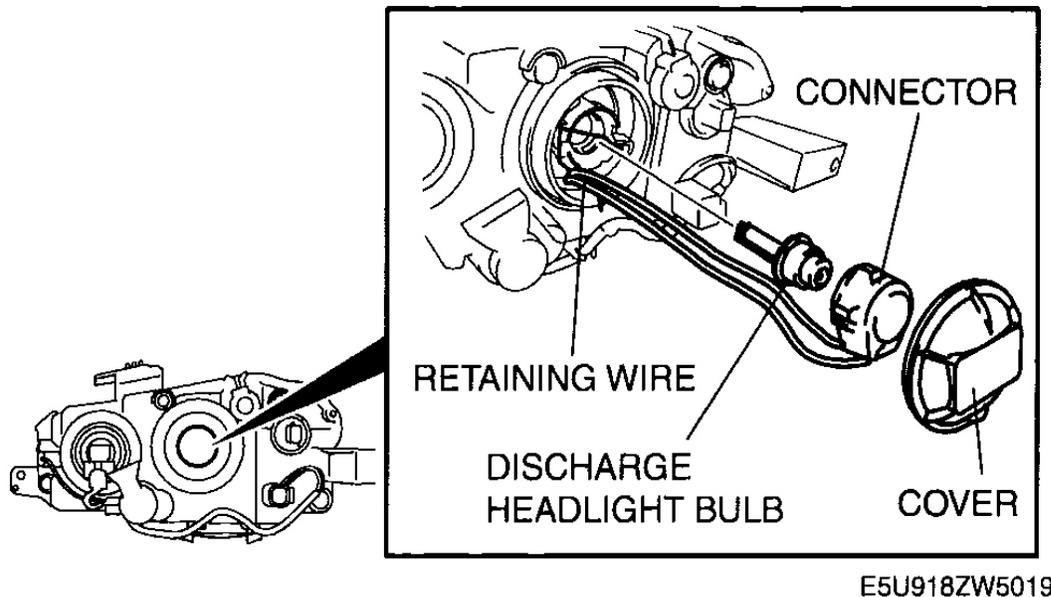
Fig. 11: Identifying Fasteners
Courtesy of MAZDA MOTORS CORP.

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.



E5U918ZW5019

Fig. 12: Identifying Discharge Headlight Bulb
Courtesy of MAZDA MOTORS CORP.

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.

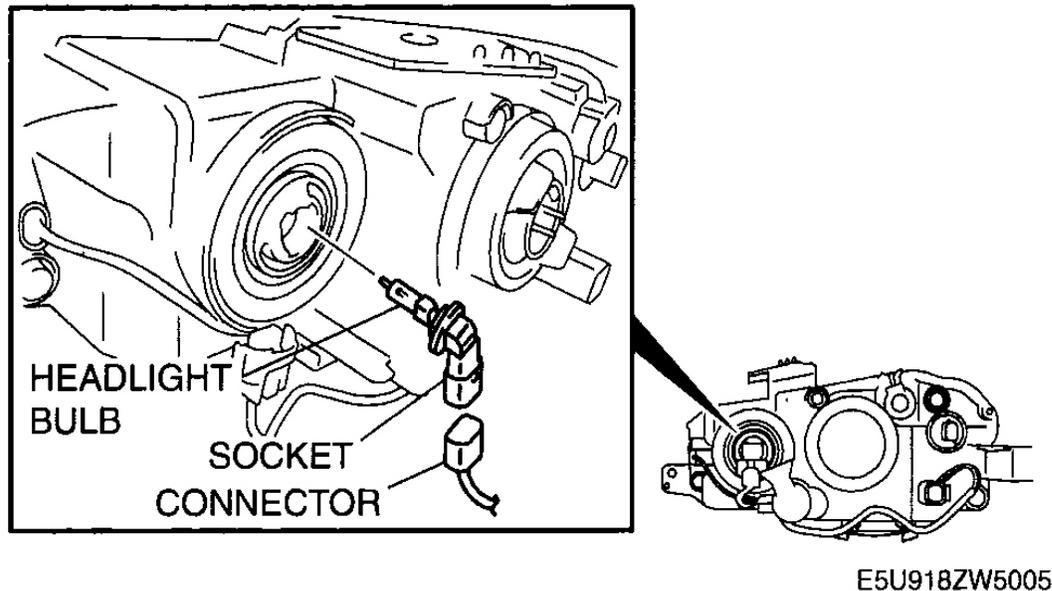


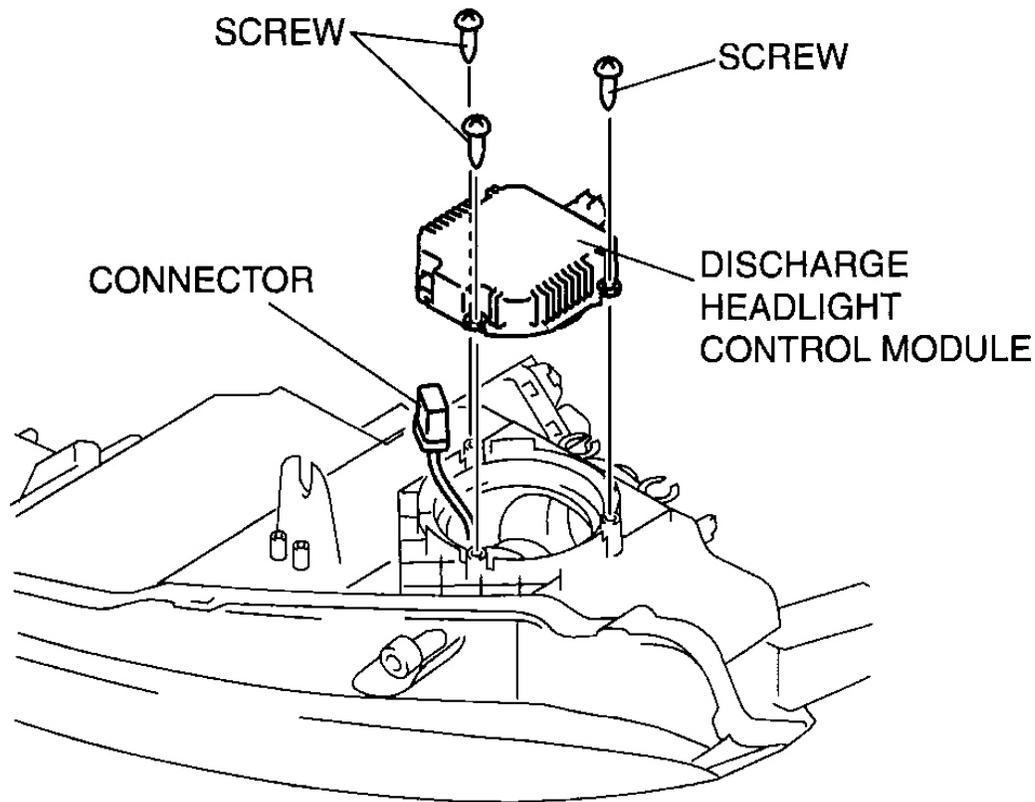
Fig. 13: Identifying Headlight Bulb
Courtesy of MAZDA MOTORS CORP.

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.



E5U918ZW5039

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 .)

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

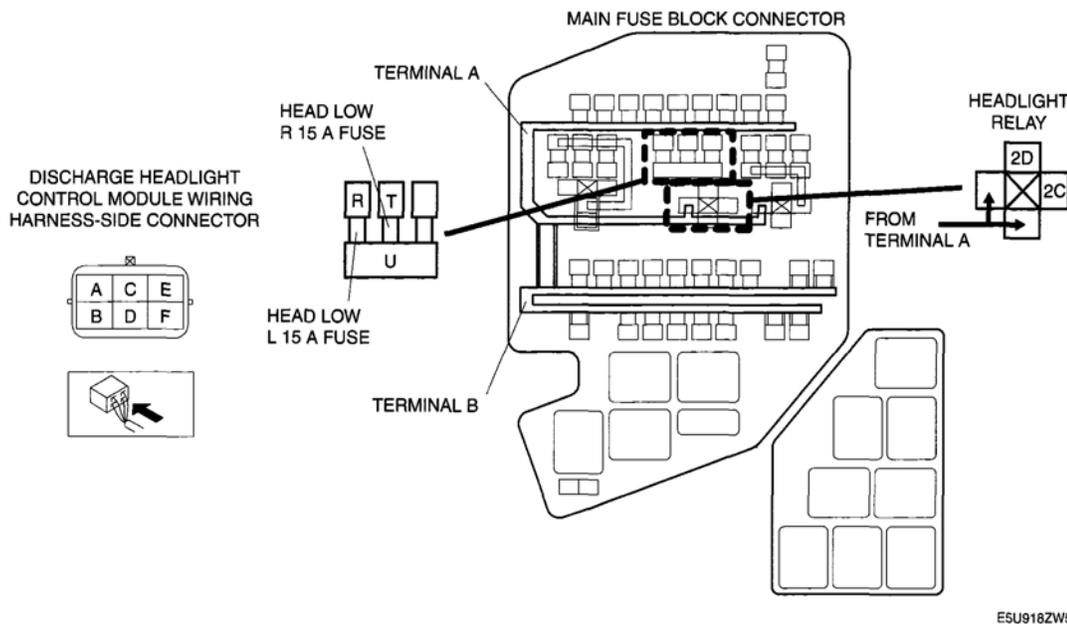


Fig. 15: Identifying Discharge Headlight System Terminal layout
 Courtesy of MAZDA MOTORS CORP.

INSPECTION PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT POWER SUPPLY CIRCUIT OF DISCHARGE HEADLIGHT CONTROL MODULE <ul style="list-style-type: none"> Disconnect the discharge headlight control module connector. Turn the headlight switch to the HEADLIGHT (LO) position. Measure the voltage at discharge headlight control module terminal C (wiring harness-side). Is the voltage approx. 12 V ? 	Yes Go to Step 6.
		No Go to the next step.
2	INSPECT FUSE <ul style="list-style-type: none"> Turn the headlight switch to the OFF position. Remove the HEAD LOW R 15 A fuse (RH) or HEAD LOW L 15 A fuse (LH). Inspect the fuses. Are the fuses normal? 	Yes Go to the next step.
		No Replace the fuse.

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

3	INSPECT HEADLIGHT RELAY <ul style="list-style-type: none"> • Remove the headlight relay. (See RELAY LOCATION .) • Inspect the headlight relay. (See RELAY INSPECTION .) • Is the headlight relay normal? 	Yes	Go to the next step.
		No	Replace the headlight relay. (See RELAY LOCATION .)
4	INSPECT LIGHT SWITCH <ul style="list-style-type: none"> • Inspect the light switch. (See LIGHT SWITCH INSPECTION .) • Is the light switch normal? 	Yes	Go to the next step.
		No	Replace the light switch. (See LIGHT SWITCH REMOVAL/INSTALLATION .)
5	INSPECT WIRING HARNESS BETWEEN BATTERY AND DISCHARGE HEADLIGHT CONTROL MODULE <ul style="list-style-type: none"> • Remove the battery cover. • Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF] .) • Inspect for continuity between the following terminals: <ul style="list-style-type: none"> ○ Battery (positive terminal) and headlight relay (main fuse block terminal A) ○ Headlight relay terminal 2C and HEAD LOW R 15 A fuse (RH) terminal U ○ Headlight relay terminal 2C and HEAD LOW L 15 A fuse (LH) terminal U ○ HEAD LOW R 15 A fuse (RH) terminal T and discharge headlight control module terminal C ○ HEAD LOW L 15 A fuse (LH) terminal R and discharge headlight control module terminal C • Are the wiring harnesses normal? 	Yes	Go to the next step.
		No	Replace the related wiring harness.
6	INSPECT WIRING HARNESS BETWEEN DISCHARGE HEADLIGHT CONTROL MODULE AND GROUND <ul style="list-style-type: none"> • Inspect wiring harness between discharge 	Yes	Go to the next step.

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

	<p>headlight control module terminal F and ground for following:</p> <ul style="list-style-type: none"> ○ Short to power supply ○ Open circuit ● Is the wiring harness normal? 	No	Replace the related wiring harness.
7	<p>VERIFY WHETHER MALFUNCTION IS IN DISCHARGE HEADLIGHT BULB OR DISCHARGE HEADLIGHT CONTROL MODULE</p>	Yes	System inspection completed.
	<ul style="list-style-type: none"> ● Install the discharge headlight low bulb (previously verified as illuminating normally). <p>(See <u>HEADLIGHT BULB REMOVAL/INSTALLATION</u> .)</p> <ul style="list-style-type: none"> ● Connect the discharge headlight control module connector. ● Turn the headlight switch to the HEADLIGHT (LO) position. ● Does the headlight (low-beam) illuminate? 	No	Replace the front combination light. (See <u>FRONT COMBINATION LIGHT REMOVAL/INSTALLATION</u> .)

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.

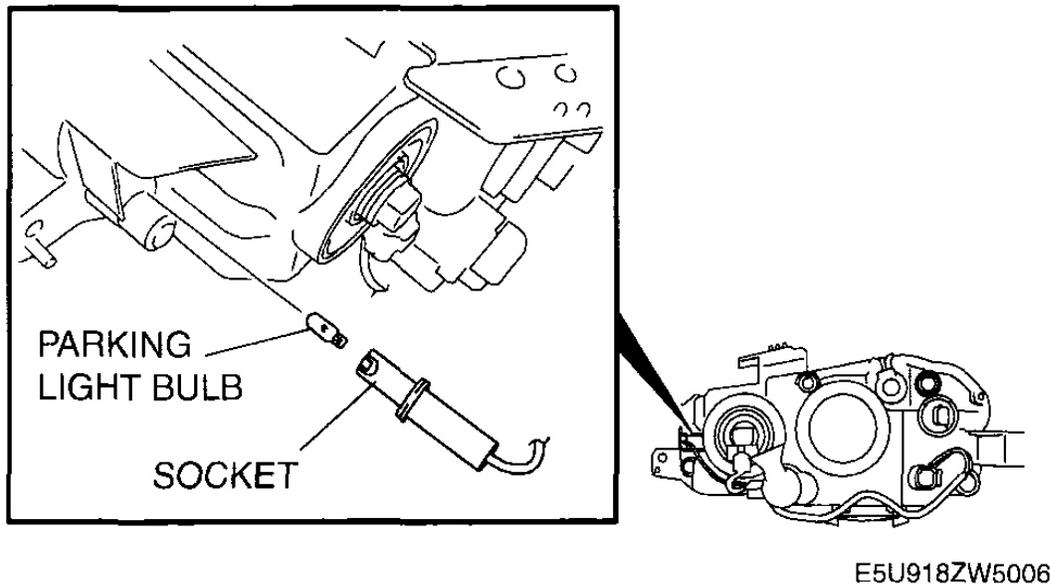
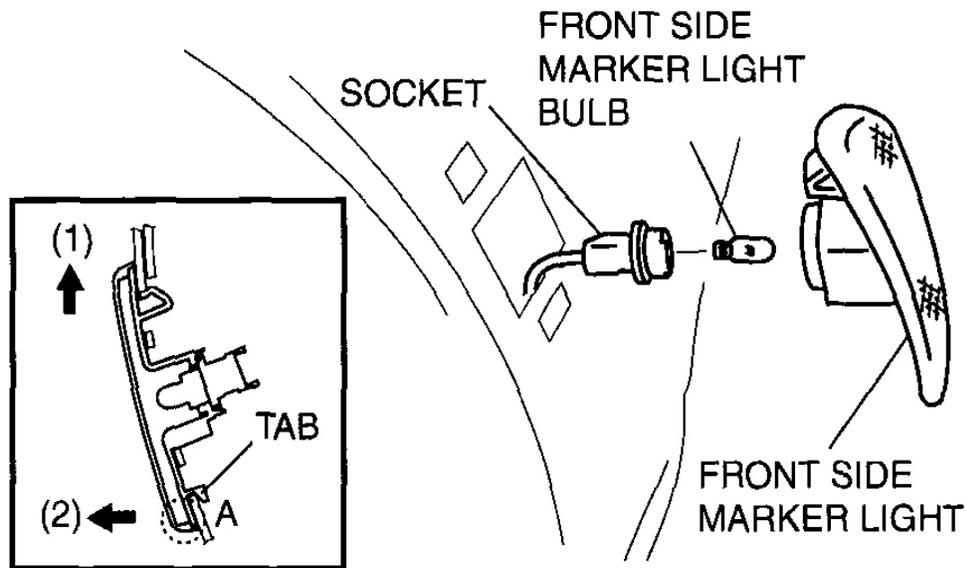


Fig. 16: Identifying Parking Light Bulb
Courtesy of MAZDA MOTORS CORP.

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 deflection 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.

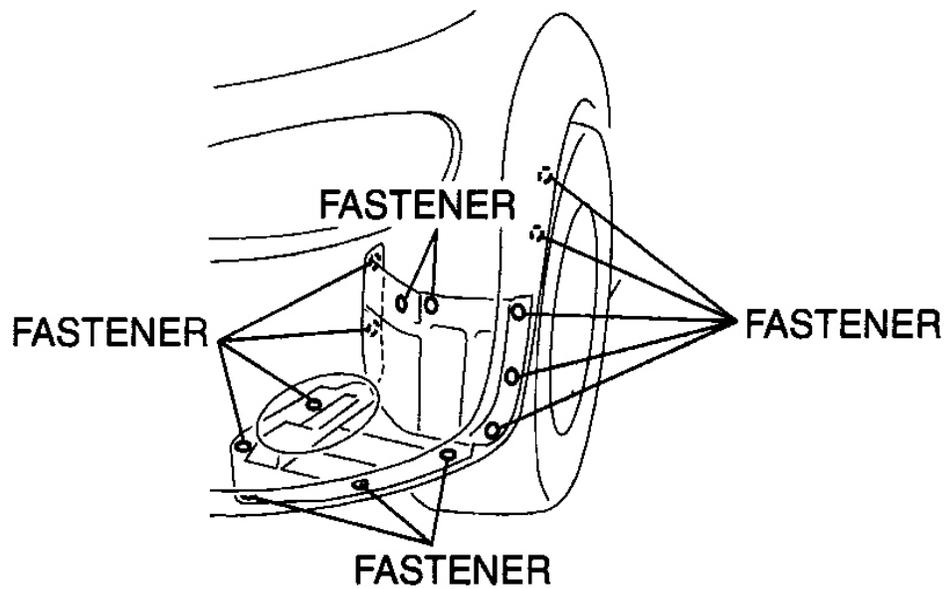


E5U918ZW5020

Fig. 17: Removing Front Side Marker Light Bulb
Courtesy of MAZDA MOTORS CORP.

FRONT TURN LIGHT BULB REMOVAL/INSTALLATION

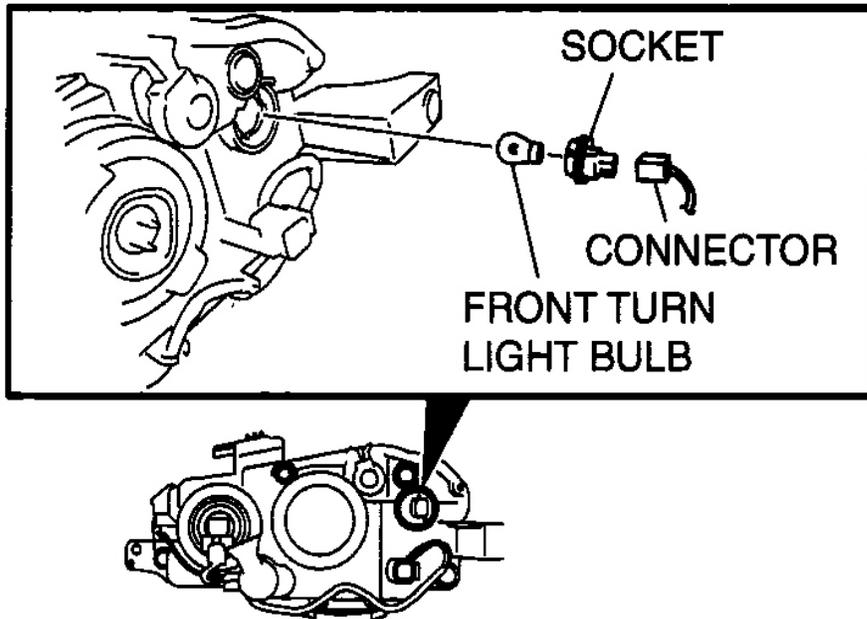
1. Remove the battery cover.
2. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]** .)
3. Remove the fasteners.
4. Slightly bent back the mudguard.



E5U918ZW5052

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.

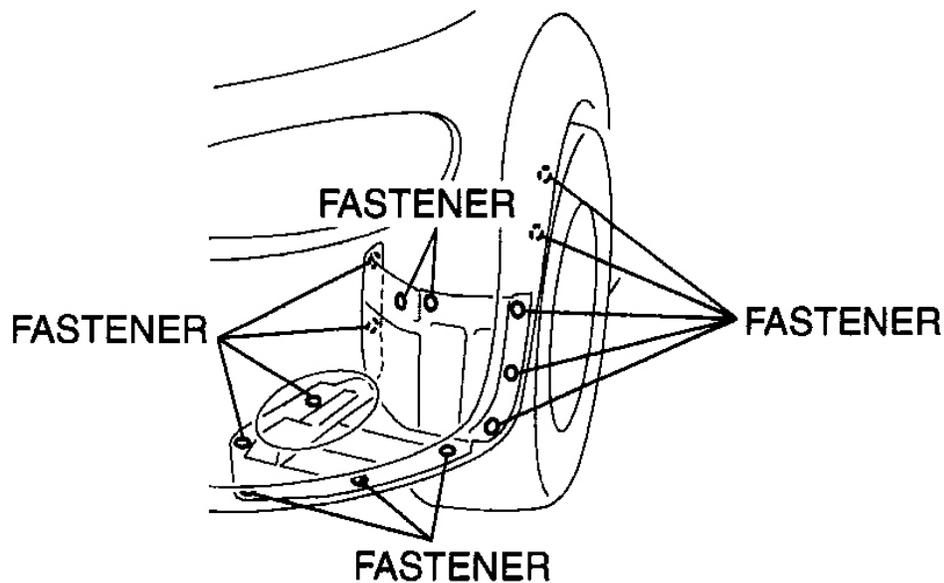


E5U918ZW5007

Fig. 19: Identifying Front Turn Light Bulb
Courtesy of MAZDA MOTORS CORP.

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.



E5U918ZW5052

Fig. 20: Identifying Fasteners
Courtesy of MAZDA MOTORS CORP.

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** .)

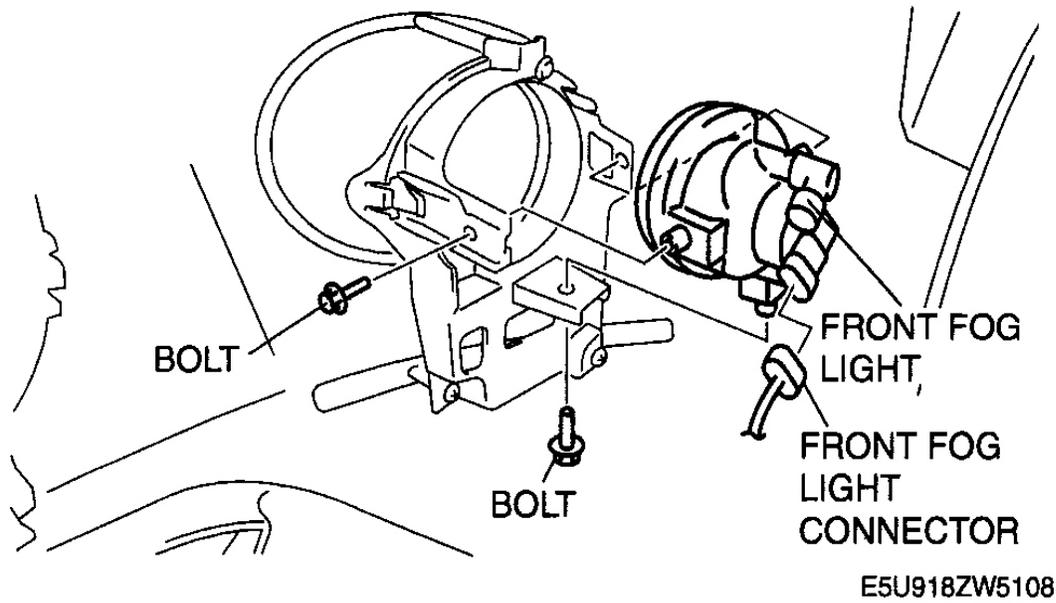
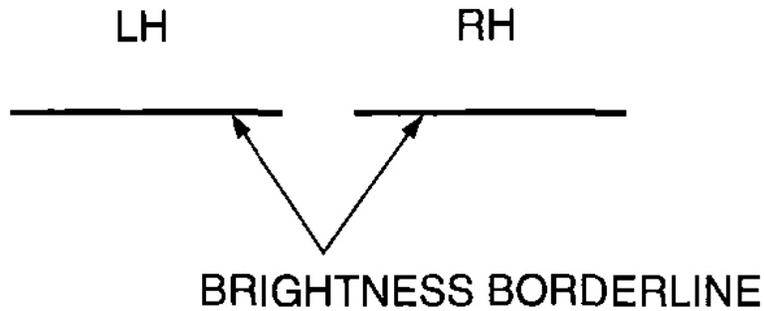


Fig. 21: Identifying Front Fog Light
Courtesy of MAZDA MOTORS CORP.

FRONT FOG LIGHT AIMING

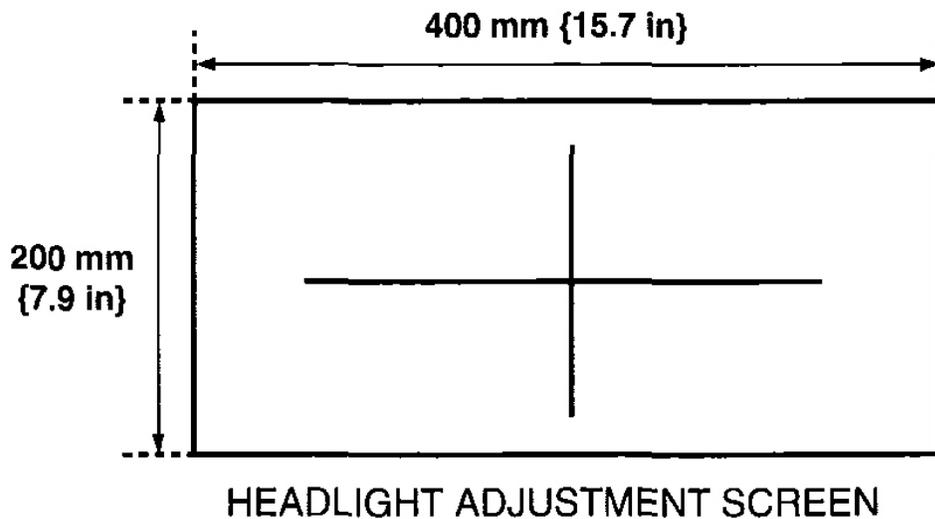
1. Point the headlight beams to a wall and verify that the headlight beams are as shown in **Fig. 22** .



E5U918ZW5155

Fig. 22: Identifying Front Fog Light Aiming Adjustment
Courtesy of MAZDA MOTORS CORP.

2. Make a headlight adjustment screen as shown in **Fig. 23** using double-weight, white paper.



E5U918ZW5053

Fig. 23: Identifying Headlight Adjustment Screen
Courtesy of MAZDA MOTORS CORP.

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.

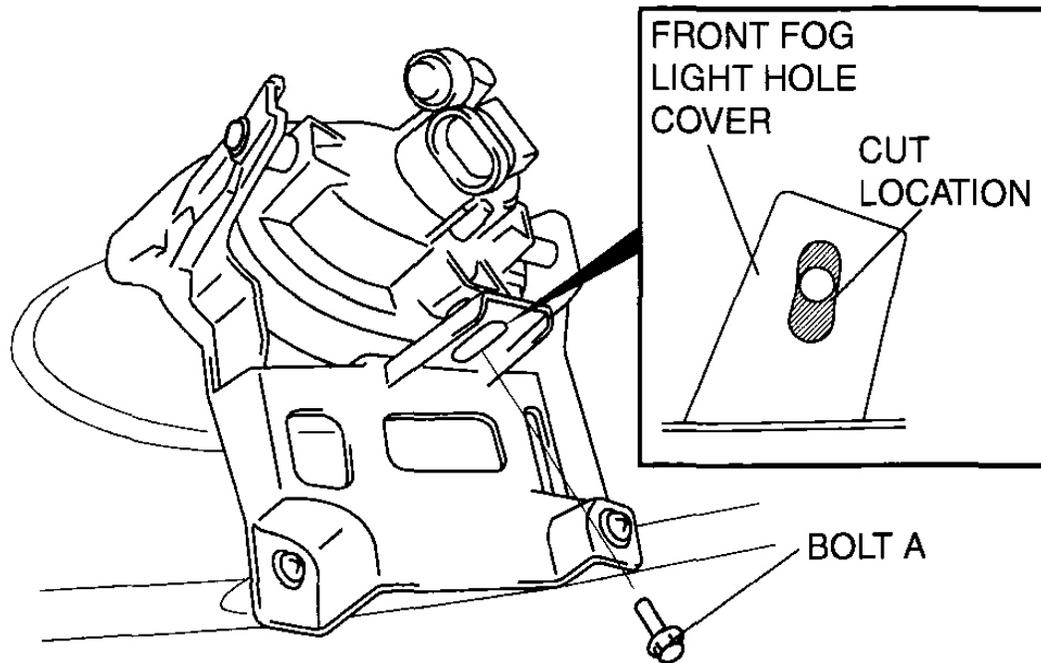
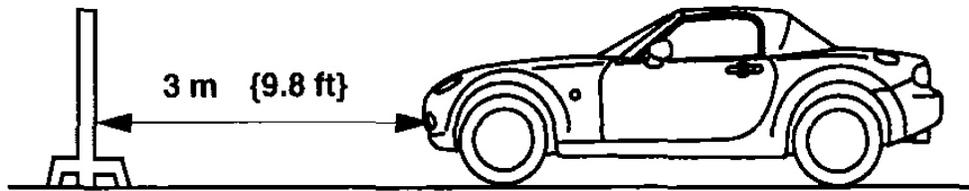


Fig. 24: Identifying Bolt "A" & Cutting Location For Front Fog Light Hole Cover
Courtesy of MAZDA MOTORS CORP.

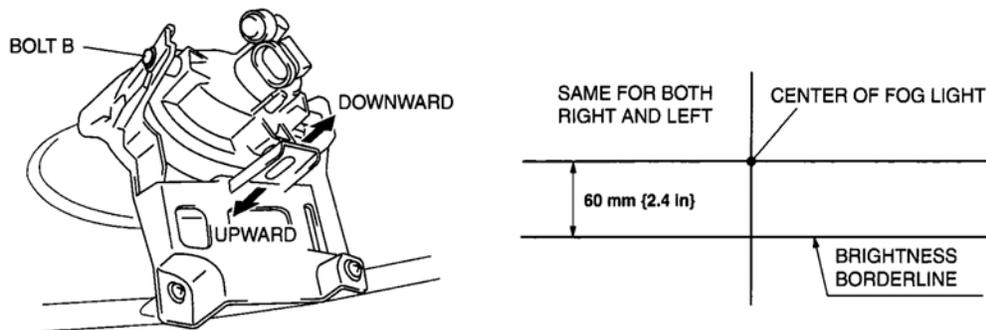
6. Seat one person in the driver's seat.
7. Line up the headlights with the white screen at a distance of **3 m {9.8 ft}** apart.
8. Place an object in front of the fog light not being adjusted to block its light beam.
9. Start the engine so that the battery remains charged.
10. Turn the front fog lights on.



E5U918ZW5040

Fig. 25: Identifying Distance Between Headlight Adjustment Screen & Vehicle
 Courtesy of MAZDA MOTORS CORP.

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** .



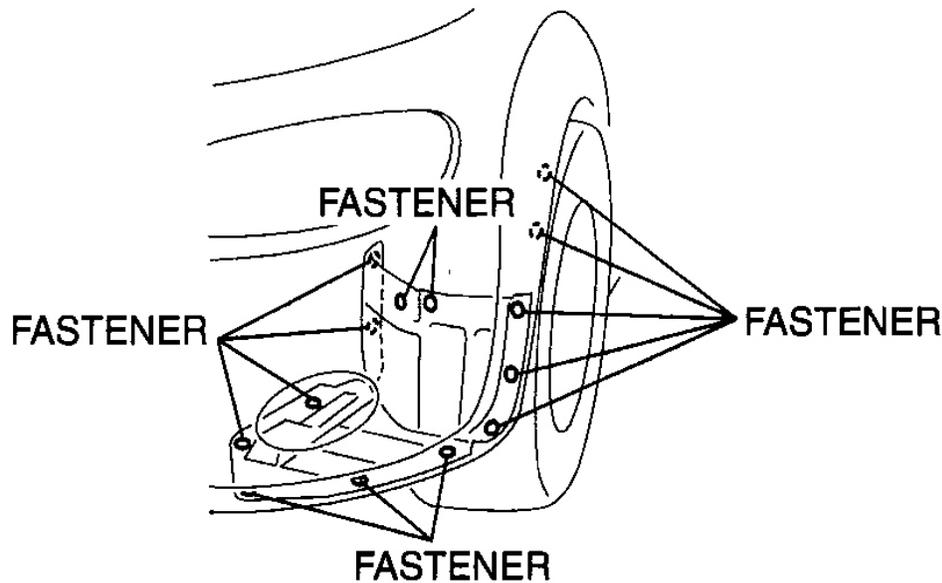
E5U918ZW5242

Fig. 26: Identifying Bolt B
 Courtesy of MAZDA MOTORS CORP.

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.



E5U918ZW5052

Fig. 27: Identifying Fasteners
Courtesy of MAZDA MOTORS CORP.

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.

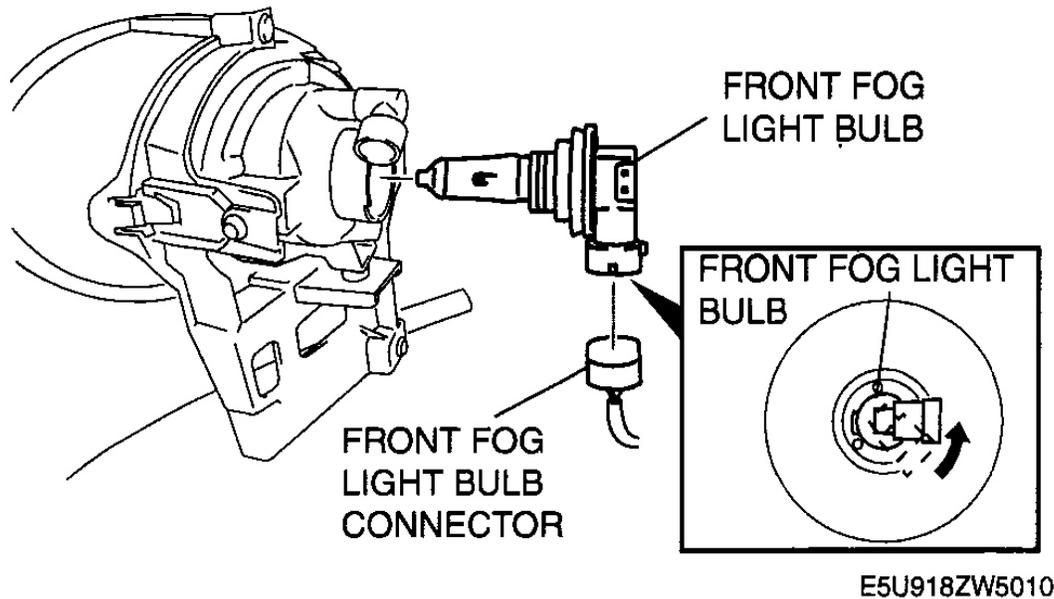
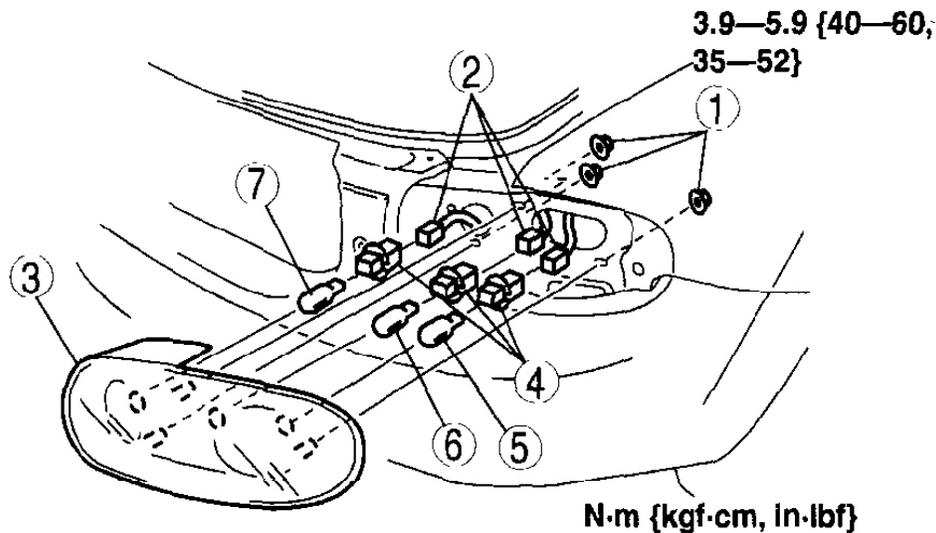


Fig. 28: Disconnecting Front Fog Light Bulb Connector & Removing Front Fog Light Bulb
Courtesy of MAZDA MOTORS CORP.

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** .



E5U918ZW5011

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

Fig. 29: Identifying Rear Combination Light (With Torque Specifications)
 Courtesy of MAZDA MOTORS CORP.

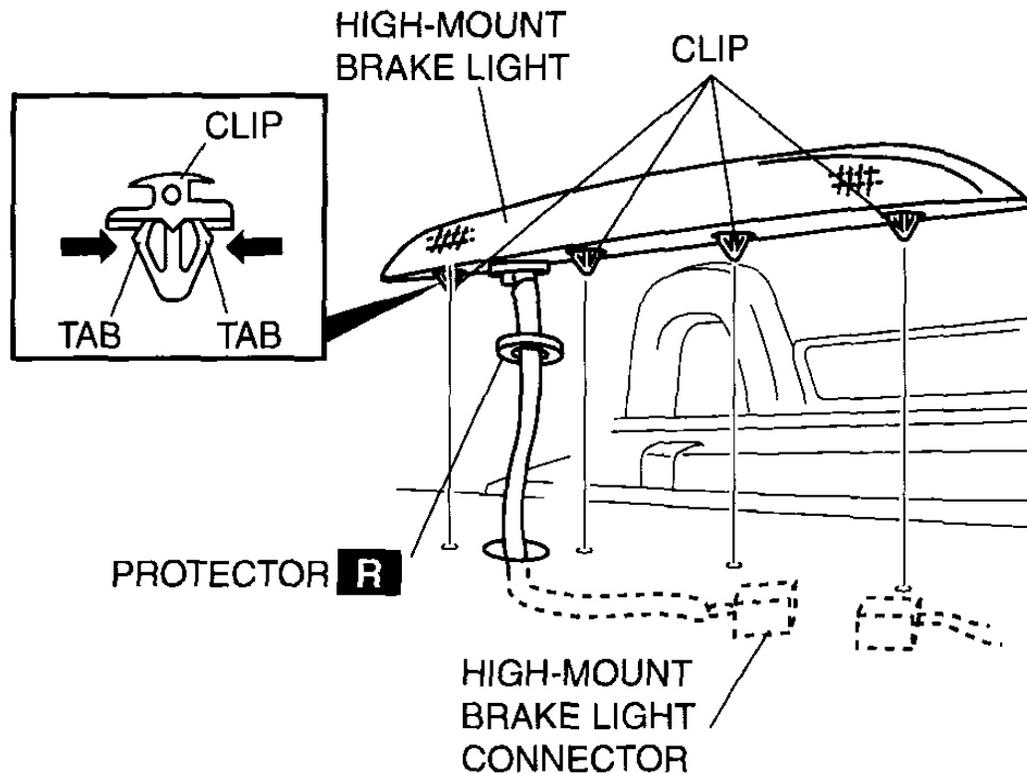
6. Install in the reverse order of removal.

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.



E5U918ZW5021

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.

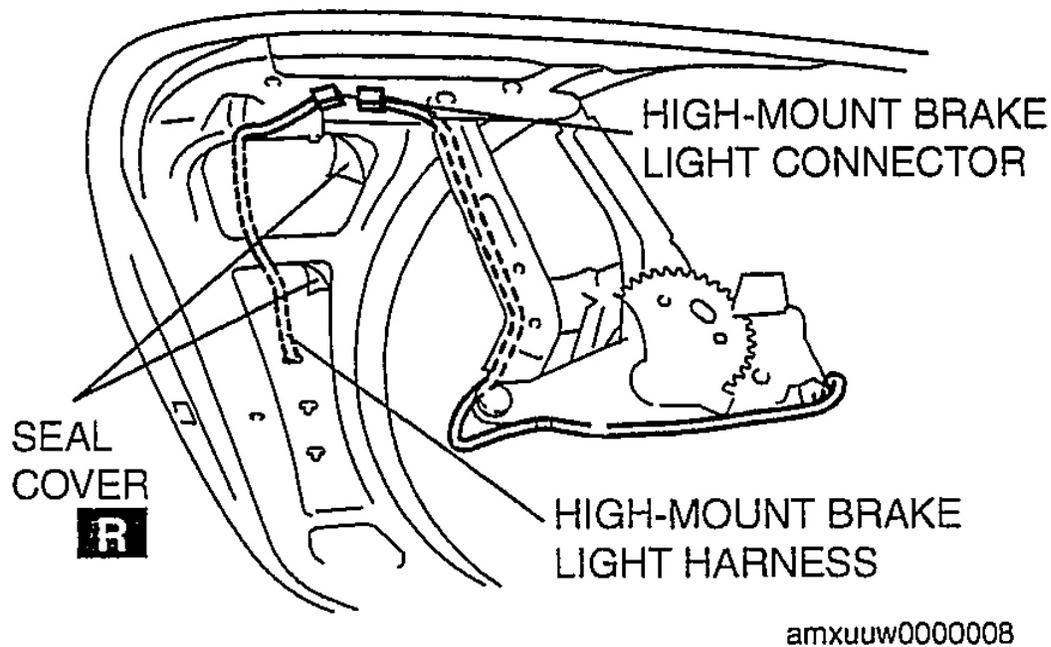


Fig. 31: Identifying High Mount Brake Light Connector And Harness
Courtesy of MAZDA MOTORS CORP.

5. remove the nuts.
6. Remove the high-mount brake light.

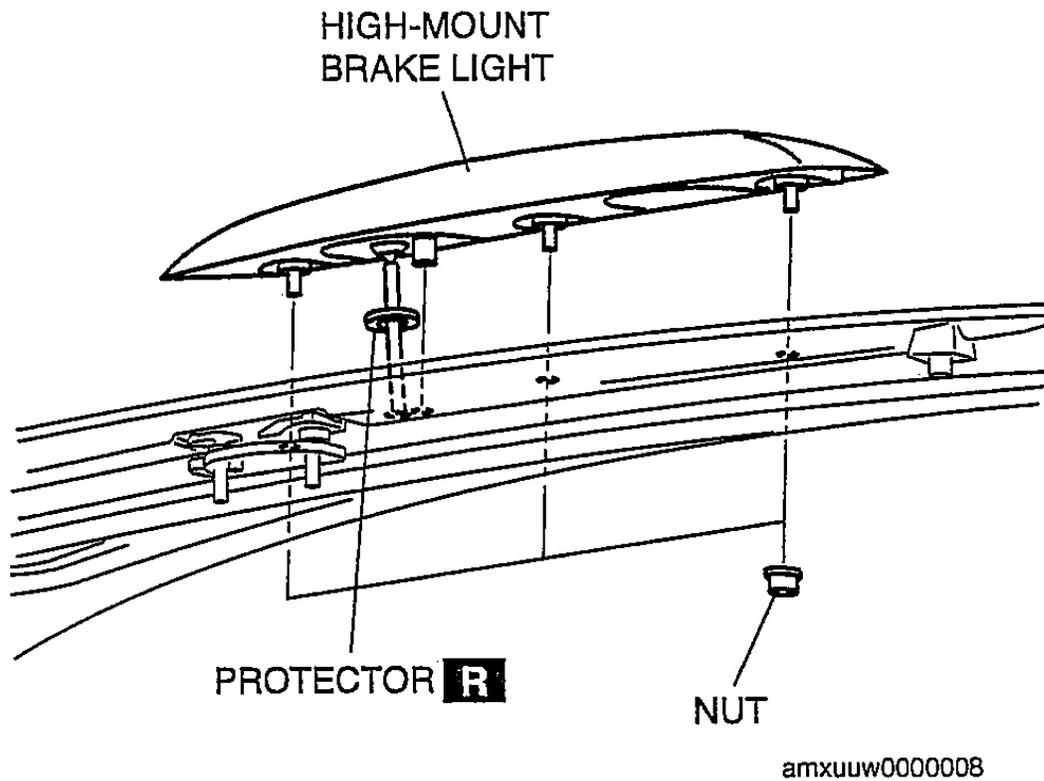
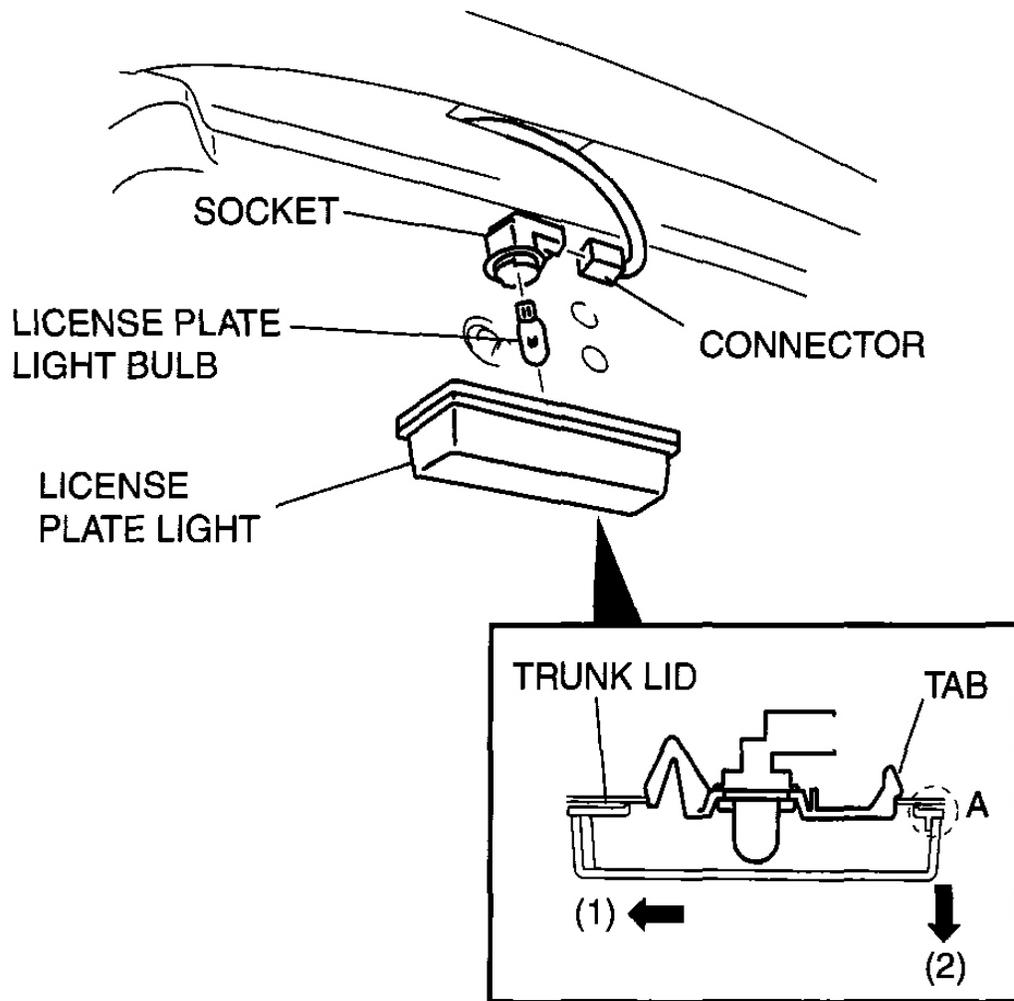


Fig. 32: Identifying High Mount Brake Light Assembly
Courtesy of MAZDA MOTORS CORP.

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.



E5U918ZW5012

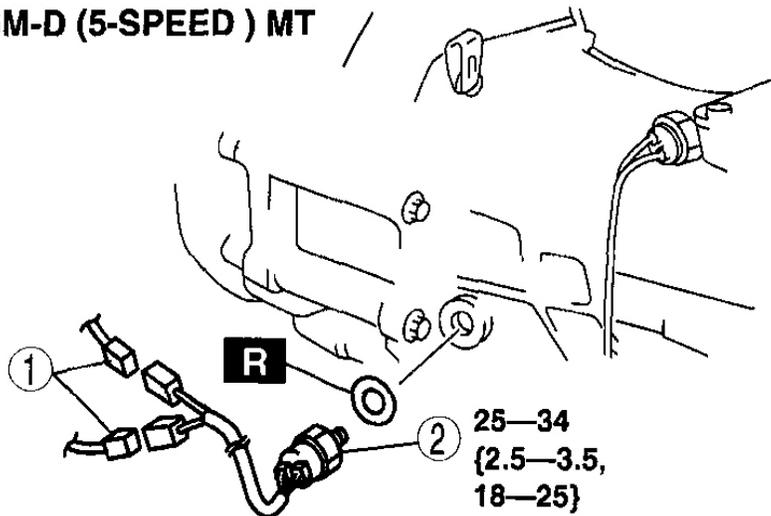
Fig. 33: Detaching Socket & Removing License Plate Light Bulb
 Courtesy of MAZDA MOTORS CORP.

BACK-UP LIGHT SWITCH REMOVAL/INSTALLATION

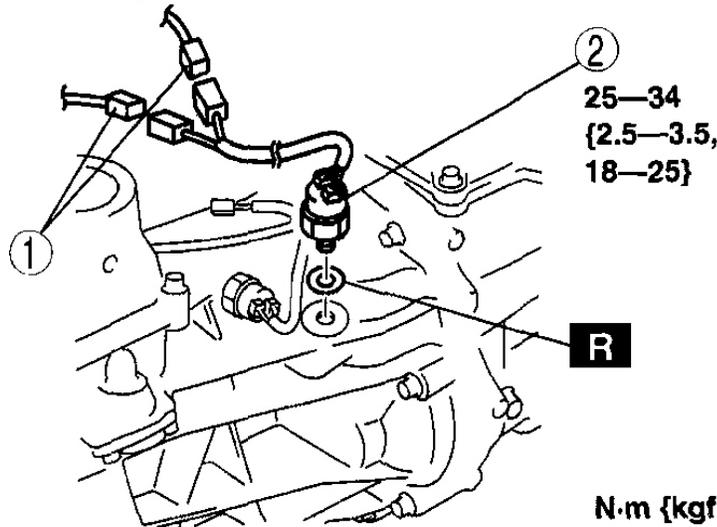
1. Remove the battery cover.
2. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]** .)
3. Loosen the starter installation bolts only enough that the starter is loose, but not removed. (P66M-D) (See **STARTER REMOVAL/INSTALLATION [LF]** .)
4. Remove the transmission.(P66M-D)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

5. Remove in the order indicated in **Fig. 34** .

M15M-D (5-SPEED) MT



P66M-D (6-SPEED) MT



N·m {kgf·m, ft·lbf}

E5U918ZW5222

1	Connector
2	Back-up light switch

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.

 : Continuity

Shift lever position	Terminal	
	A	B
Reverse		
Other		

E5U918ZW5014

Fig. 35: Back-Up Light Switch Continuity Table
 Courtesy of MAZDA MOTORS CORP.

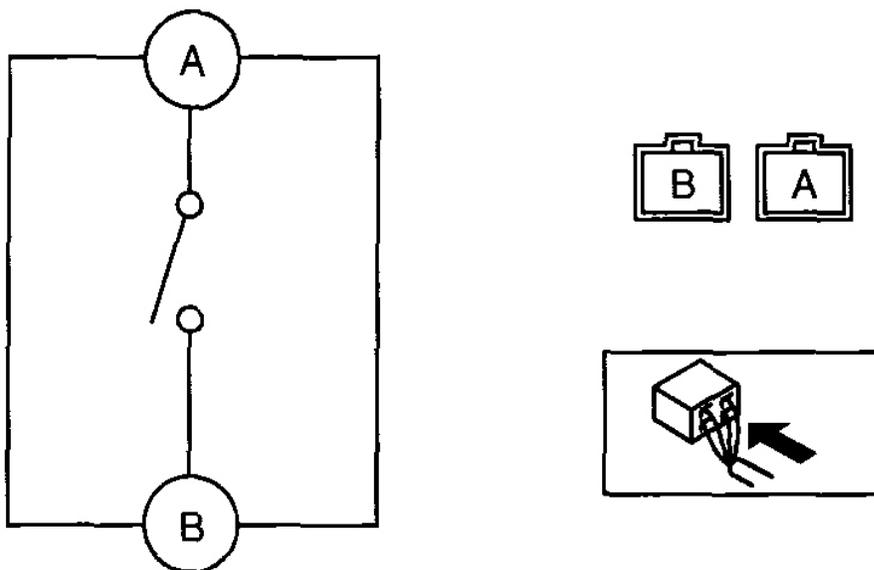


Fig. 36: Identifying Back-Up Light Switch Connector Terminals
Courtesy of MAZDA MOTORS CORP.

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** .)

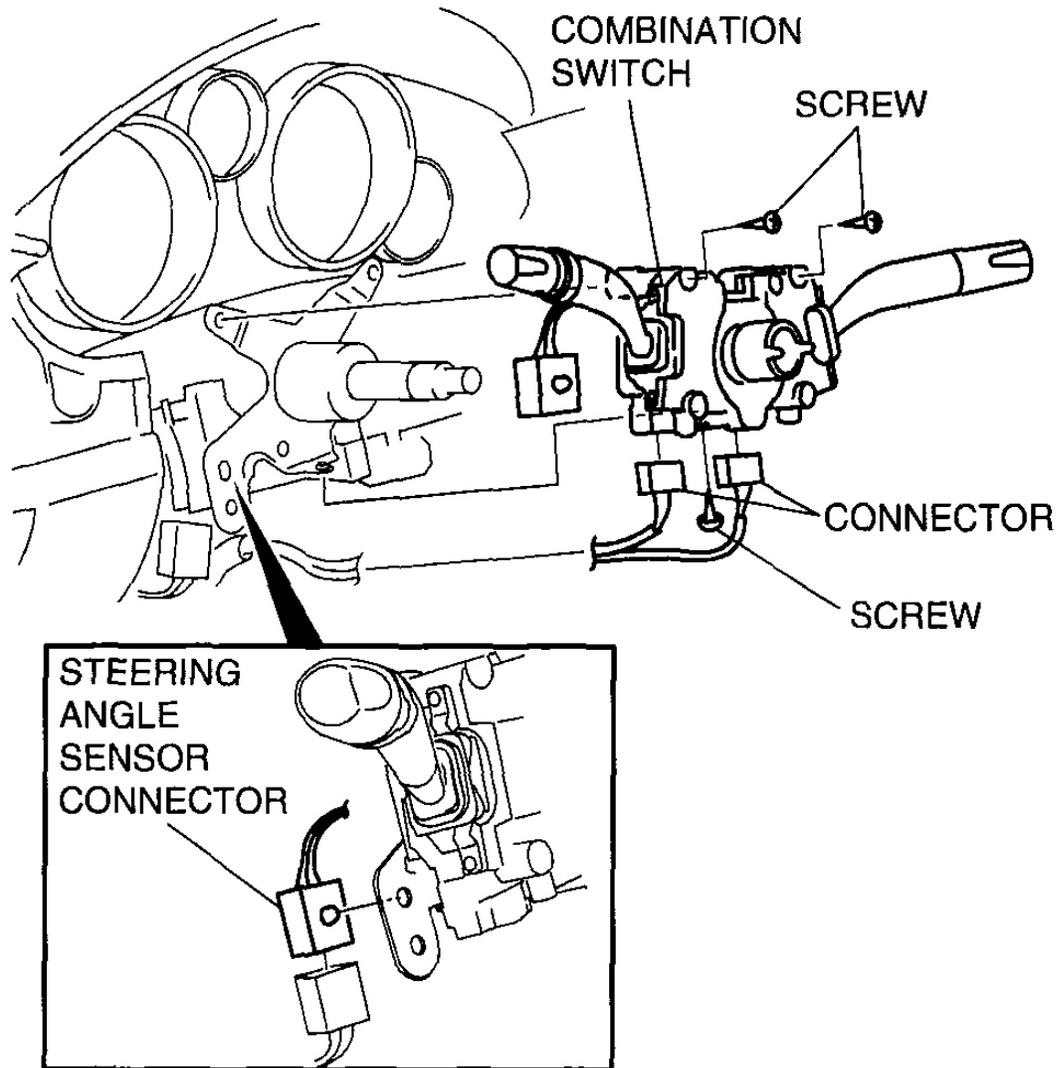


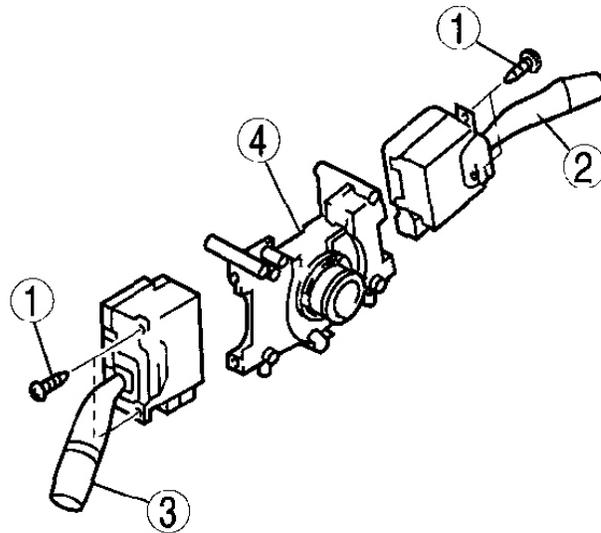
Fig. 37: Identifying Combination Switch
Courtesy of MAZDA MOTORS CORP.

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** .



CHU0918W124

1	Screw
2	Wiper and washer switch
3	Light switch
4	Body

Fig. 38: Identifying Combination Switch
 Courtesy of MAZDA MOTORS CORP.

2. 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.

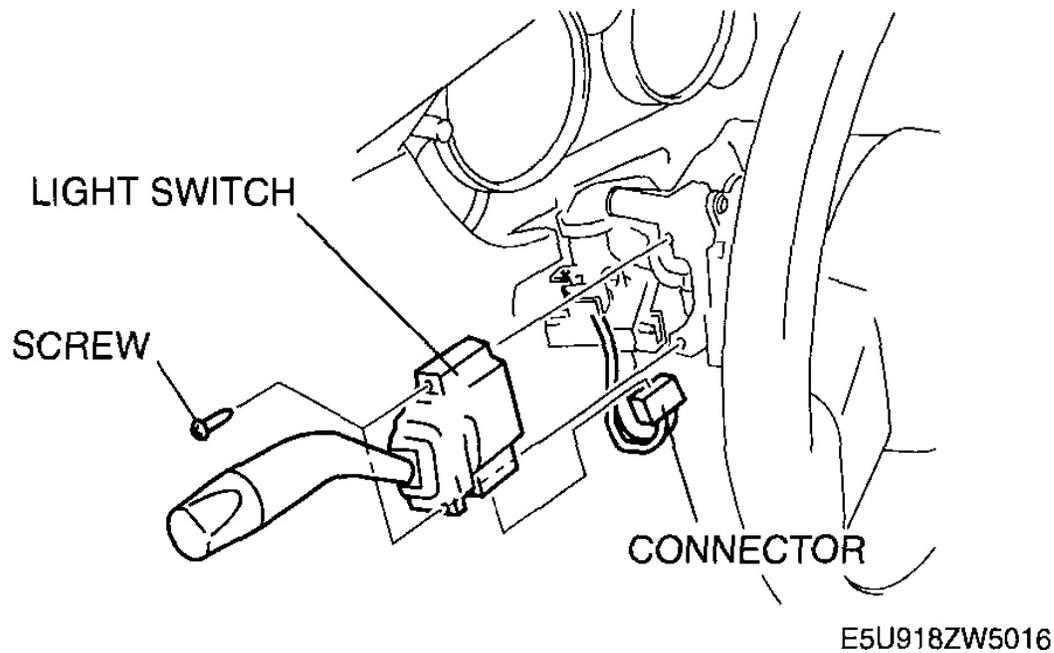


Fig. 39: Identifying Light Switch
Courtesy of MAZDA MOTORS CORP.

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

2007 Mazda MX-5 Miata Sport

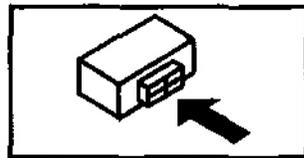
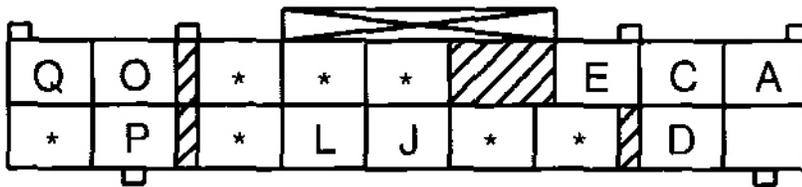
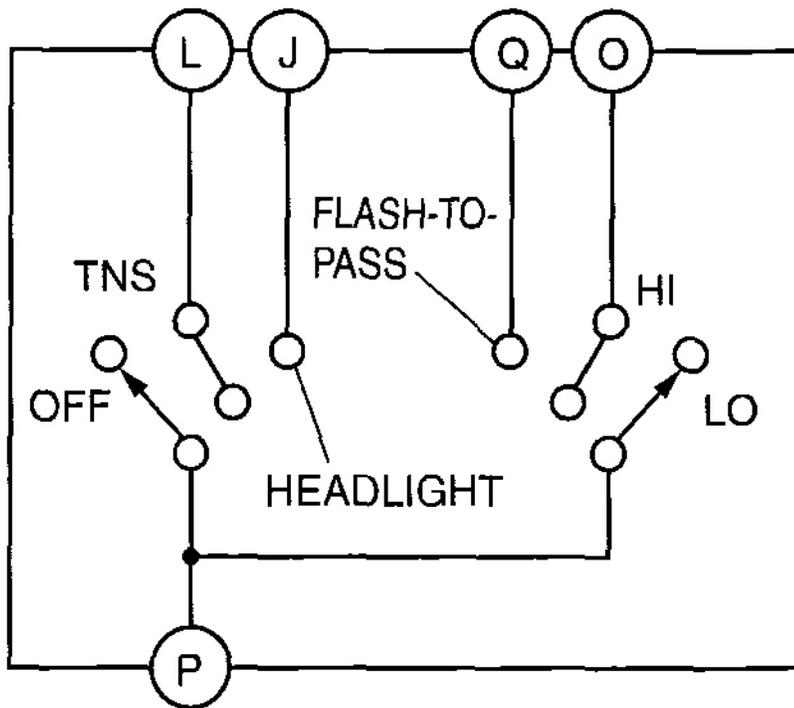
2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

○ — ○ : Continuity

Switch position			Terminal				
Light	Dimmer	Flash-to-pass	J	L	P	O	Q
OFF	-	OFF					
		ON			○ — ○	○ — ○	○
TNS	-	OFF		○ — ○	○		
		ON		○ — ○	○ — ○	○ — ○	○
Headlight	LO	OFF	○ — ○	○ — ○	○		
		ON	○ — ○	○ — ○	○ — ○	○ — ○	○
	HI	-	○ — ○	○ — ○	○ — ○	○	

E5U918ZW5044

Fig. 40: Headlight Switch Continuity Table
 Courtesy of MAZDA MOTORS CORP.



E5U918ZW5043

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

Turn Switch

2007 Mazda MX-5 Miata Sport

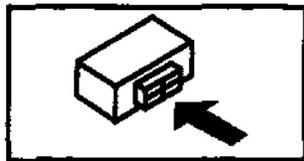
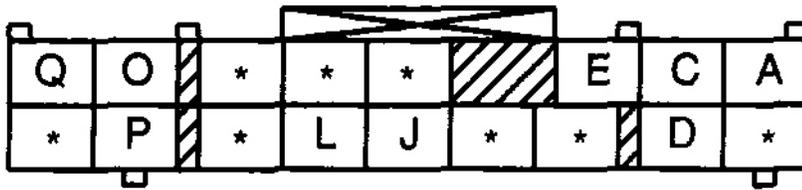
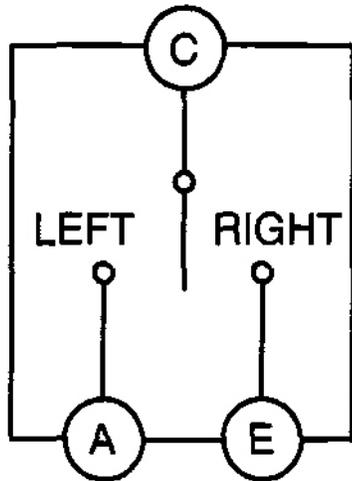
2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

○—○ : Continuity

Switch position	Terminal		
	A	C	E
Left	○—○	○	
OFF			
Right		○—○	○

E5U918ZW5046

Fig. 42: Turn Switch Continuity Table
Courtesy of MAZDA MOTORS CORP.



E5U918ZW5045

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

FRONT FOG LIGHT SWITCH INSPECTION

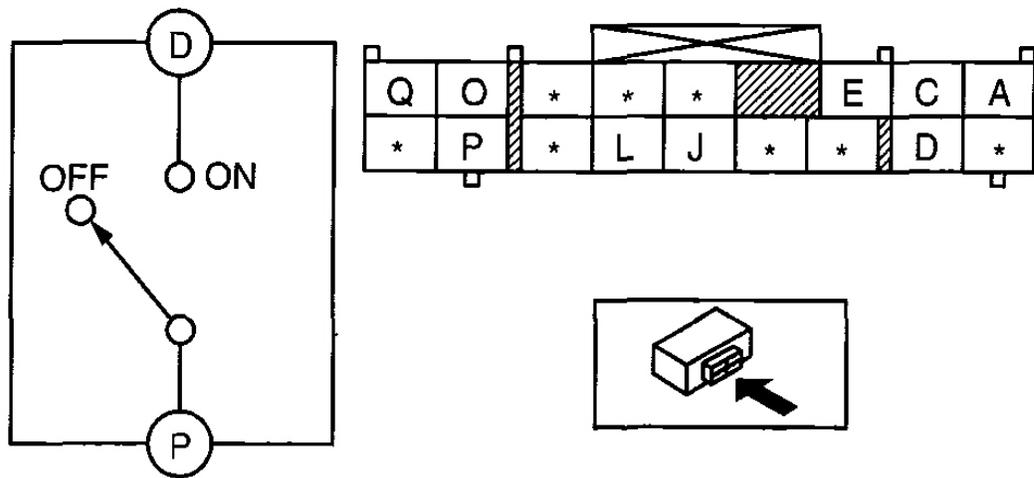
1. Verify that the continuity between the front fog light switch terminals is as indicated in **Fig. 44** .
 - If not as indicated in **Fig. 44** , replace the light switch.

○—○ : Continuity

Switch position		Terminal	
Light	Front fog light switch	D	P
OFF	OFF		
	ON	○—○	○—○
TNS	ON	○—○	○—○
Head light	ON	○—○	○—○

E5U918ZW5027

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

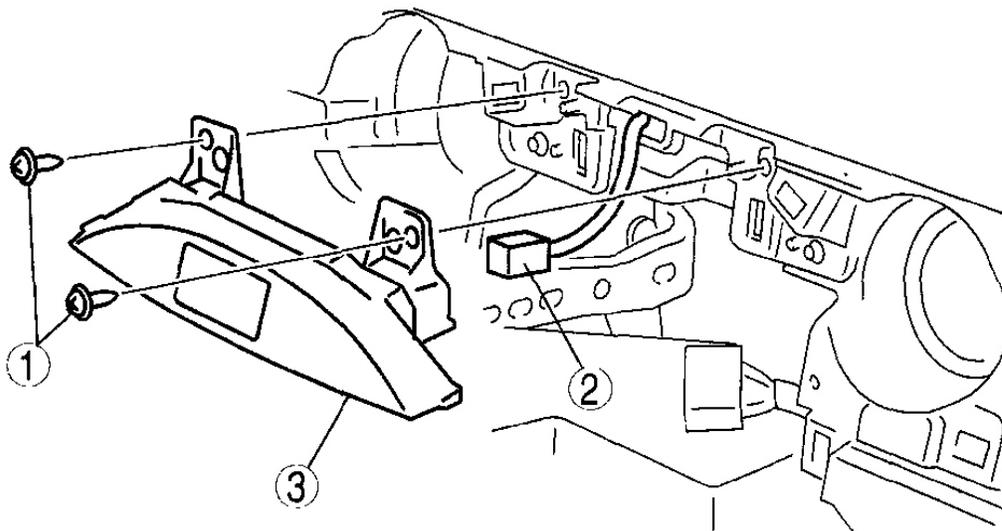


E5U918ZW5026

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**.



E5U918ZW5023

1	Screw
2	Hazard warning switch connector
3	Hazard warning switch

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

8. Install in the reverse order of removal.

HAZARD WARNING SWITCH INSPECTION

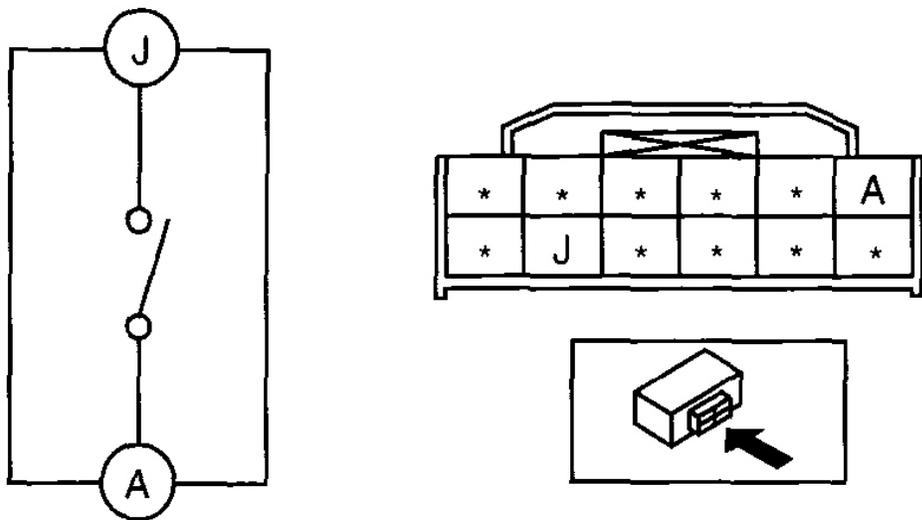
1. Verify that the continuity between the hazard switch terminals is as indicated in **Fig. 47** .
 - If not as indicated in **Fig. 47** , replace the hazard warning switch.

○ — ○ : Continuity

Switch position	Terminal	
	J	A
OFF		
ON	○ — ○	○ — ○

E5U918ZW5230

Fig. 47: Hazard Warning Switch Continuity Table
 Courtesy of MAZDA MOTORS CORP.

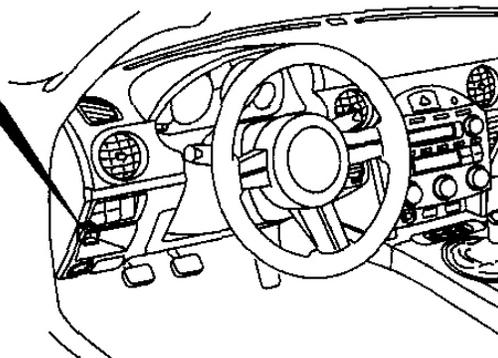
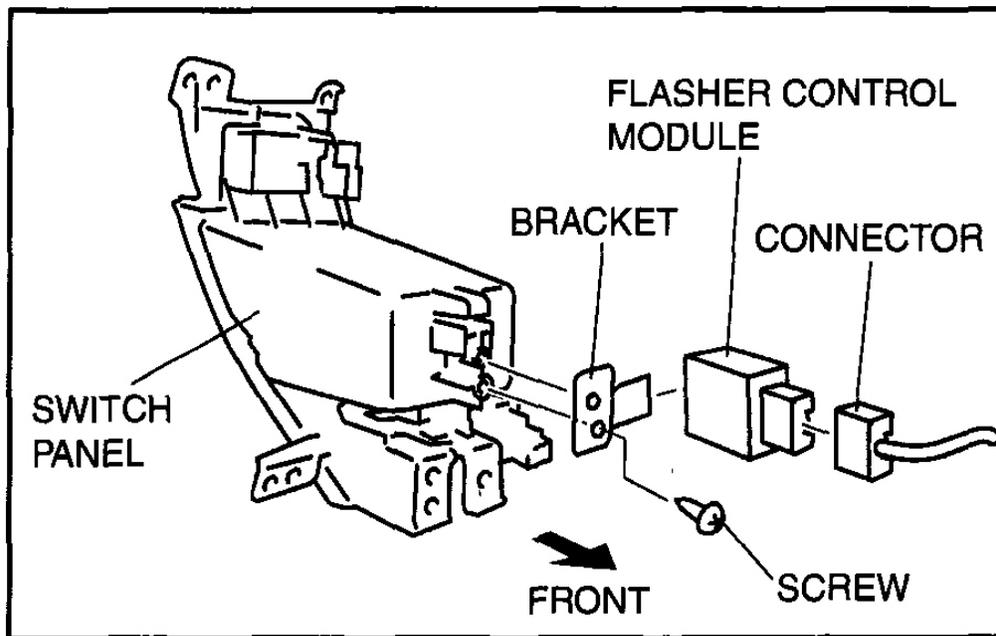


E5U918ZW5229

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.



E5U918ZW5234

Fig. 49: Identifying Flasher Control Module

Courtesy of MAZDA MOTORS CORP.

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)

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

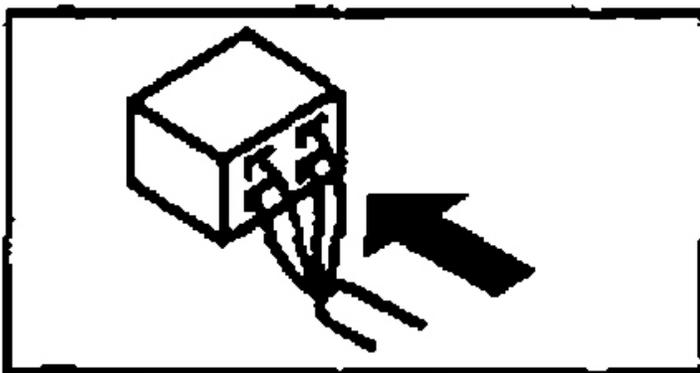
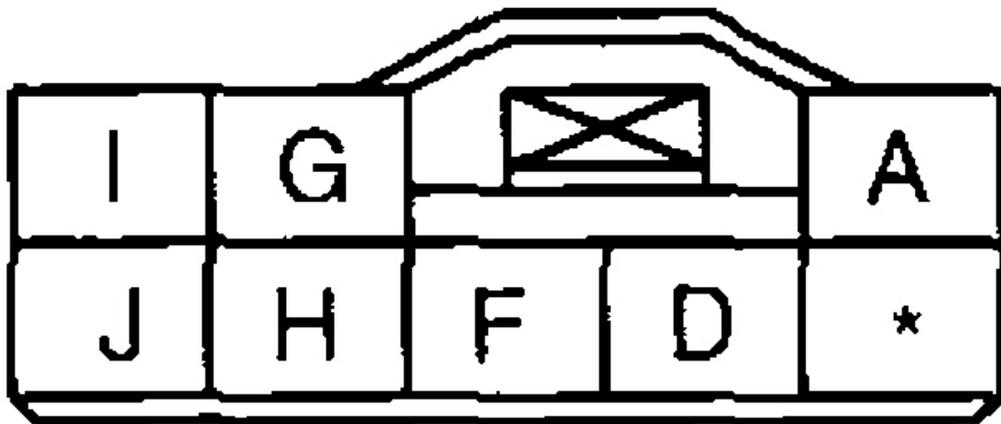


Fig. 50: Identifying Flasher Control Module Connector
 Courtesy of MAZDA MOTORS CORP.

TERMINAL VOLTAGE TABLE (REFERENCE)

Terminal	Signal name	Connected to	Measured condition		Voltage (V)/Continuity	Inspection item(s)
A	Power supply	HAZARD 10 A fuse	Under any condition		B+	<ul style="list-style-type: none"> HAZARD 10 A fuse Related wiring harnesses
D	Flasher control	Turn light	Turn light switch (LH) is on.	Turn light (LH)	Alternates between 1.0 or	<ul style="list-style-type: none"> Turn light (LH)
			Hazard			

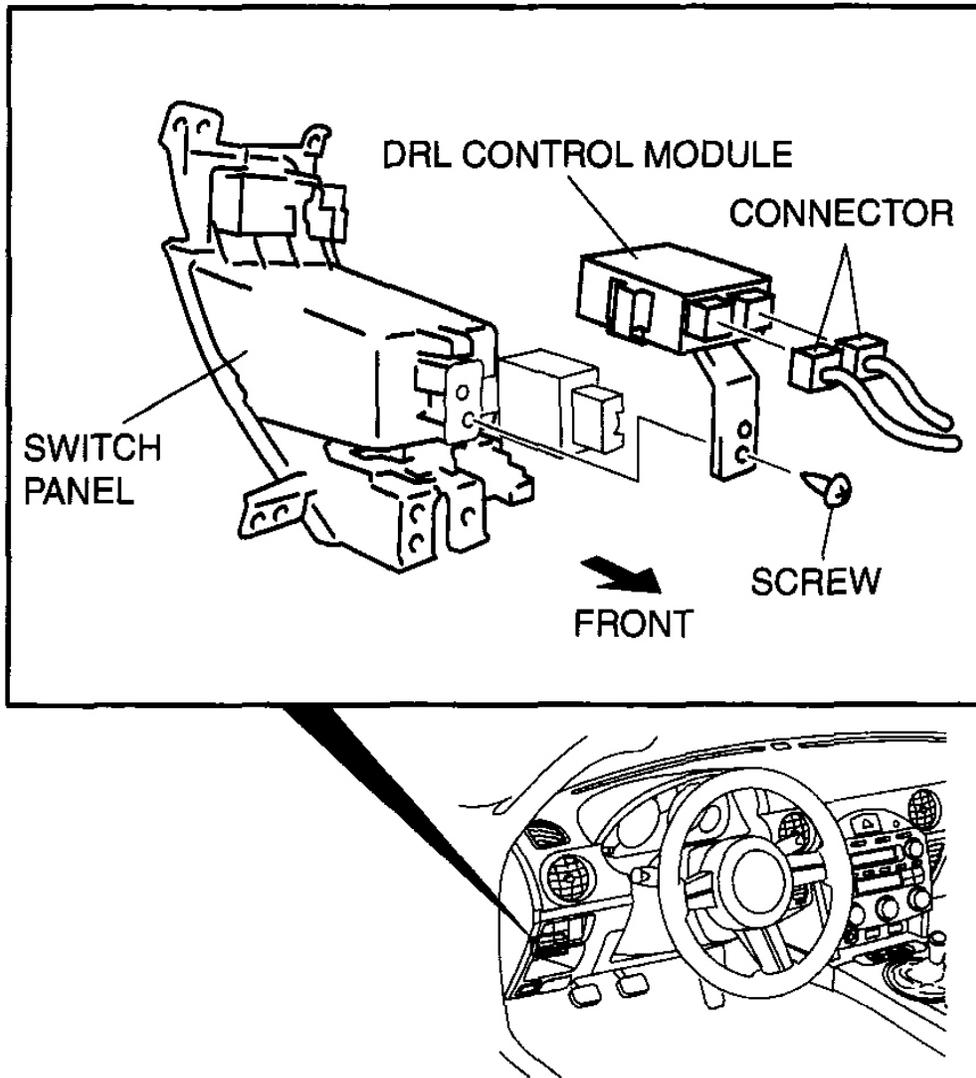
2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

	module output	(LH)	warning switch is on.	flashes.	less and B+	<ul style="list-style-type: none"> • Related wiring harnesses
			Except above		1.0 or less	
F	GND	Body ground	Under any condition: Inspect for continuity to ground.		Continuity detected	<ul style="list-style-type: none"> • GND
G	Flasher control module output	Turn light (RH)	Turn light switch (RH) is on.	Turn light (RH) flashes.	Alternates between 1.0 or less and B+	<ul style="list-style-type: none"> • Turn light (RH) • Related wiring harnesses
			Hazard warning switch is on.			
			Except above		1.0 or less	
H	Hazard warning switch input	Hazard warning switch	Hazard warning switch is on.		1.0 or less	<ul style="list-style-type: none"> • Hazard warning switch (See <u>HAZARD WARNING SWITCH INSPECTION</u> .) • Related wiring harnesses
			Hazard warning switch is off.		B+	
I	Turn switch (RH) input	Turn switch	Turn the ignition switch to the ON position.	Turn switch (RH) is on.	B+	<ul style="list-style-type: none"> • Turn switch <p>(See <u>LIGHT SWITCH INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Related wiring harnesses
			Except above		1.0 or less	
J	Turn switch (LH) input	Turn switch	Turn the ignition switch to the ON position.	Turn switch (LH) is on.	B+	<ul style="list-style-type: none"> • Turn switch <p>(See <u>LIGHT SWITCH INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Related wiring harnesses
			Except above		1.0 or less	

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.



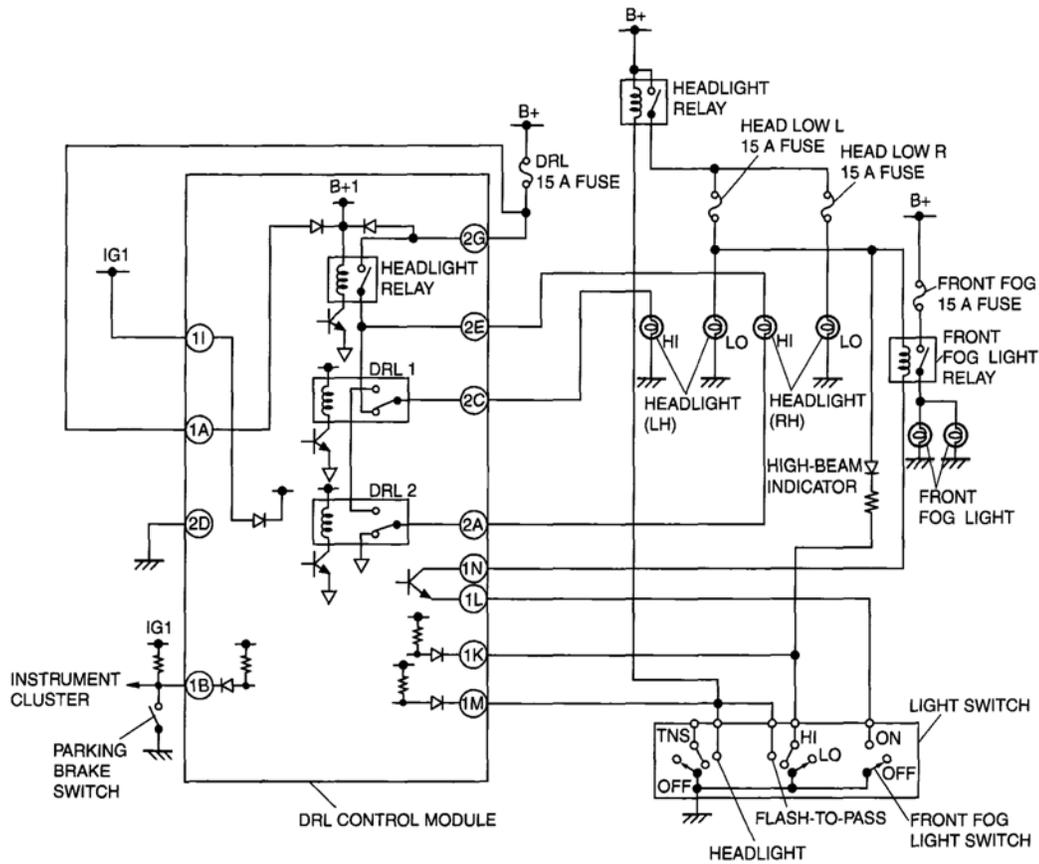
E5U918ZW5135

Fig. 51: Identifying DRL Control Module
Courtesy of MAZDA MOTORS CORP.

DRL SYSTEM WIRING DIAGRAM

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata



ESU918ZW5247

Fig. 52: DRL System Wiring Diagram
Courtesy of MAZDA MOTORS CORP.

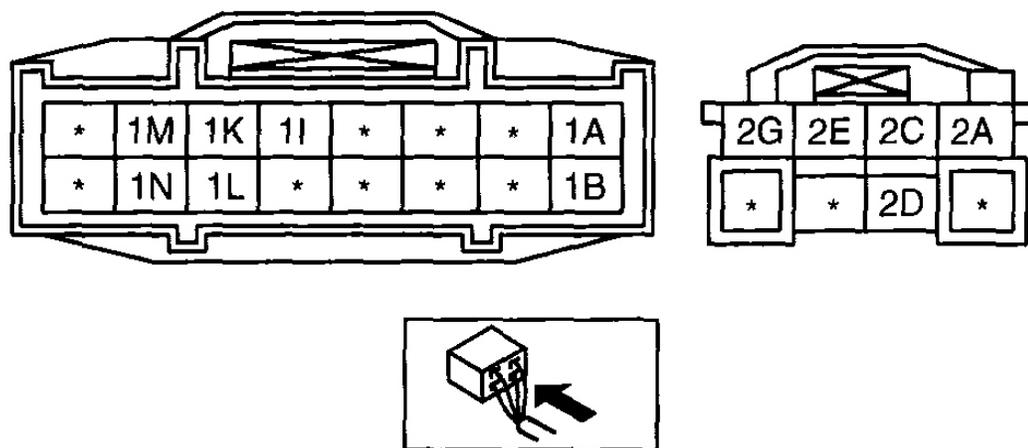
DRL CONTROL MODULE INSPECTION

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)

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata



E5U918ZW5051

Fig. 53: Identifying DRL Control Module Connector
 Courtesy of MAZDA MOTORS CORP.

TERMINAL VOLTAGE TABLE (REFERENCE)

Terminal	Signal name	Connected to	Test condition	Voltage (V)/Continuity	Inspection item(s)
1A	Power supply	ROOM 30 A fuse	Under any condition	B+	<ul style="list-style-type: none"> ROOM 30 A fuse Related wiring harness
1B	Parking brake lever pulled/released	Parking brake switch	Parking brake lever pulled: Check for continuity to ground.	Continuity	<ul style="list-style-type: none"> Parking brake switch (See <u>PARKING BRAKE SWITCH INSPECTION</u> .) Related wiring harness
			Parking brake lever released: Check for continuity to ground.	No	
1I	IG1	Ignition switch	Turn the ignition switch to the ON position.	B+	<ul style="list-style-type: none"> Ignition switch (See <u>IGNITION SWITCH INSPECTION</u> .) Related wiring harness
			Turn the ignition switch to the LOCK position.	1.0 or less	
	High-beam	Light	Turn the ignition	Dimmer switch at HI 1.0 or less	<ul style="list-style-type: none"> Light switch (See <u>LIGHT SWITCH</u> .)

2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

1K	on/off	switch	switch to the ON position.	Dimmer switch at LO	B+	INSPECTION .) <ul style="list-style-type: none"> • Related wiring harness
1L	Front fog light switch ON/OFF	Front fog light switch	Light switch at 2nd position	Front fog light switch is on.	1.0 or less	<ul style="list-style-type: none"> • Light switch (See LIGHT SWITCH INSPECTION .) • Related wiring harness
				Front fog light switch is off.	B+	
1M	Flash-to-pass	Light switch	Turn the ignition switch to the ON position.	Flash-to-pass activated.	1.0 or less	<ul style="list-style-type: none"> • Light switch (See LIGHT SWITCH INSPECTION .) • Related wiring harness
				Flash-to-pass not activated.	B+	
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	<ul style="list-style-type: none"> • FOG 15 A fuse • Front fog light relay (See RELAY INSPECTION .) • Related wiring harness
				Front fog light switch is off.	B+	
2A	Headlight (RH) operation (high-beam)	Headlight (high-beam)	Light switch at 2nd position	Dimmer switch at LO	1.0 or less	<ul style="list-style-type: none"> • Headlight (RH) • Related wiring harness
				Dimmer switch at HI	1.0 or less	
2C	Headlight (LH) operation (high-beam)	Headlight (high-beam)	Light switch at 2nd position	Dimmer switch at LO	1.0 or less	<ul style="list-style-type: none"> • Headlight (LH) • Related wiring harness
				Dimmer switch at HI	B+	
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	<ul style="list-style-type: none"> • Headlight (RH) • Related wiring harness
				Dimmer switch at	B+	

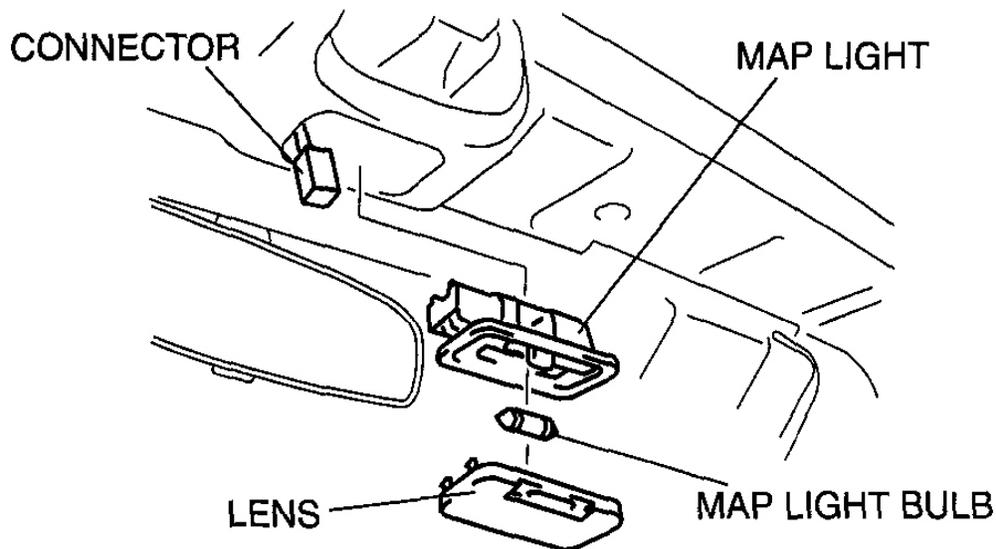
2007 Mazda MX-5 Miata Sport

2007 ACCESSORIES & BODY, CAB Lighting Systems - MX-5 Miata

			HI		
2G	Power supply	DRL 15A fuse	Under any condition	B+	<ul style="list-style-type: none">• Headlight 15 A fuse• 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



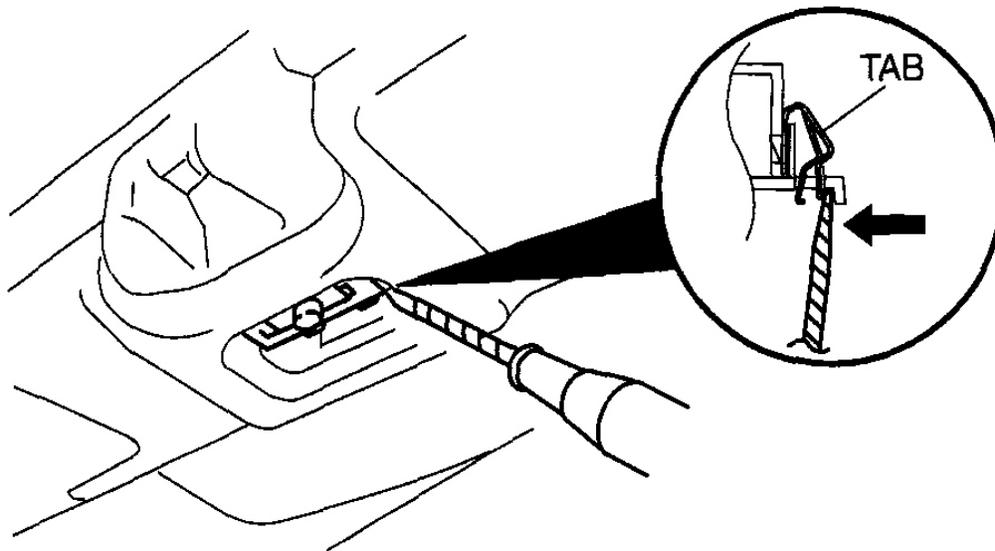
E5U918ZW5036

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.



E5U918ZW5037

Fig. 55: Inserting Tape-Wrapped Flathead Screwdriver Into Gap Between Headliner & Map Light
 Courtesy of MAZDA MOTORS CORP.

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.

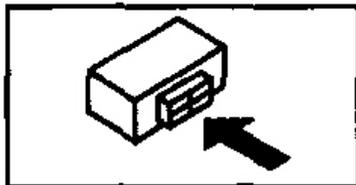
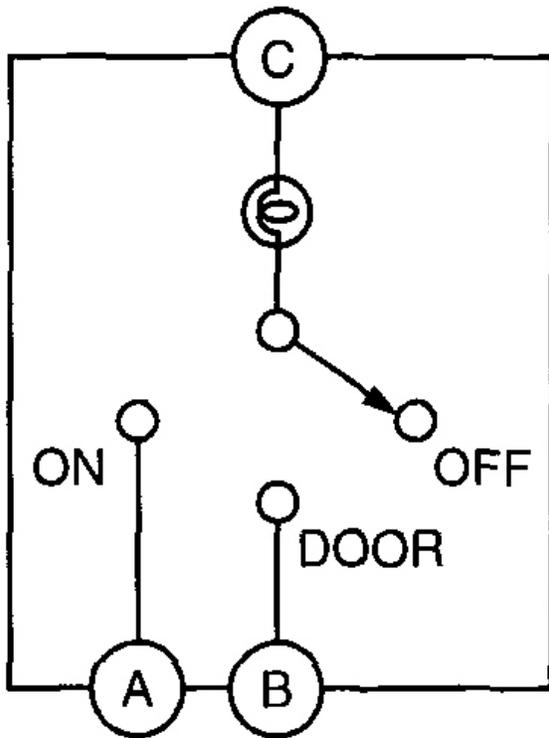
○—⊕—○ : Bulb

Switch position	Terminal		
	A	C	B
ON	○—⊕—○		
DOOR		○—⊕—○	
OFF			

E5U918ZW5032

Fig. 56: Map Light Continuity Table

Courtesy of MAZDA MOTORS CORP.



E5U918ZW5031

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

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.

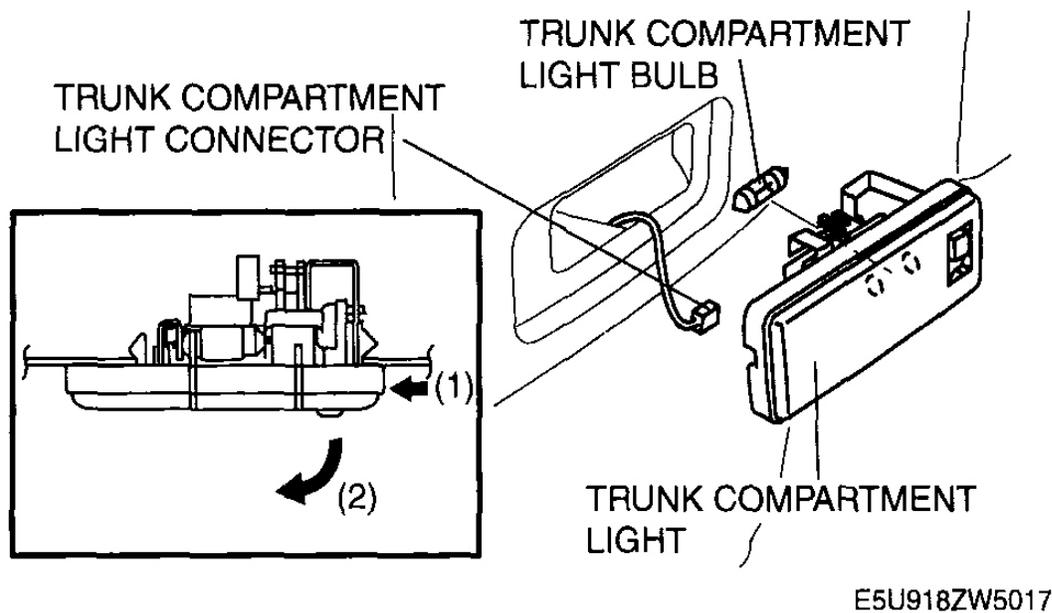


Fig. 58: Removing Trunk Compartment Light Bulb
Courtesy of MAZDA MOTORS CORP.

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.

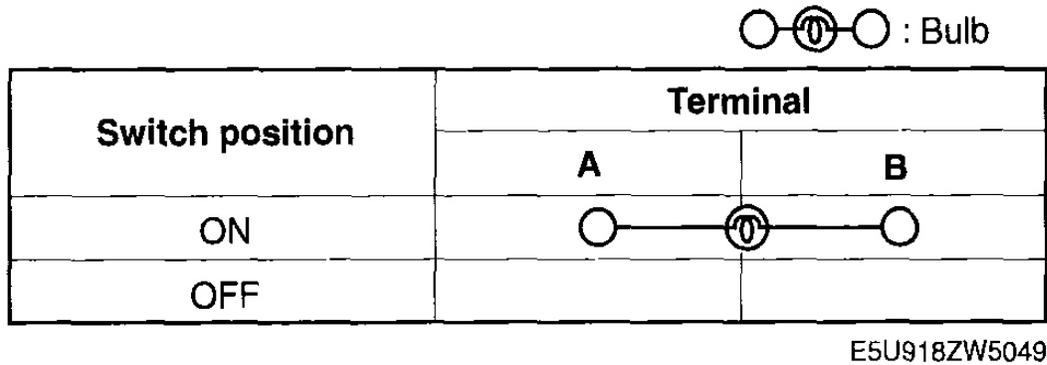


Fig. 59: Trunk Compartment Light Continuity Table
 Courtesy of MAZDA MOTORS CORP.

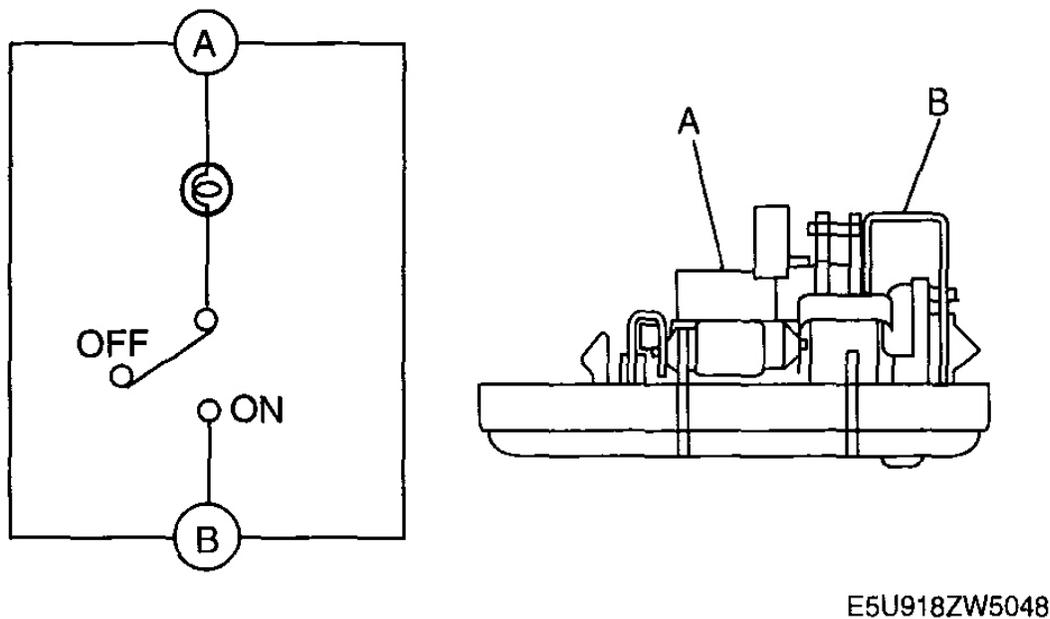
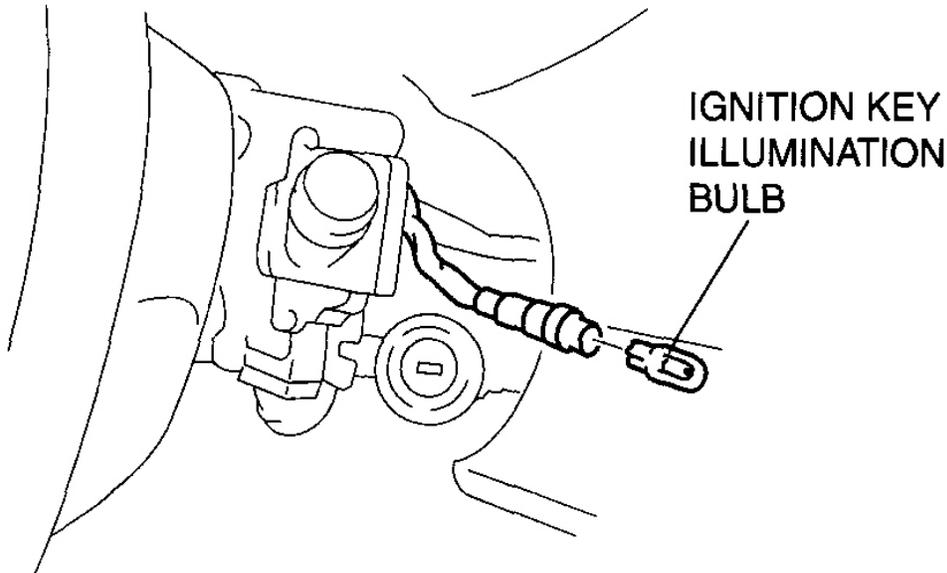


Fig. 60: Identifying Trunk Compartment Light Connector Terminals
 Courtesy of MAZDA MOTORS CORP.

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.

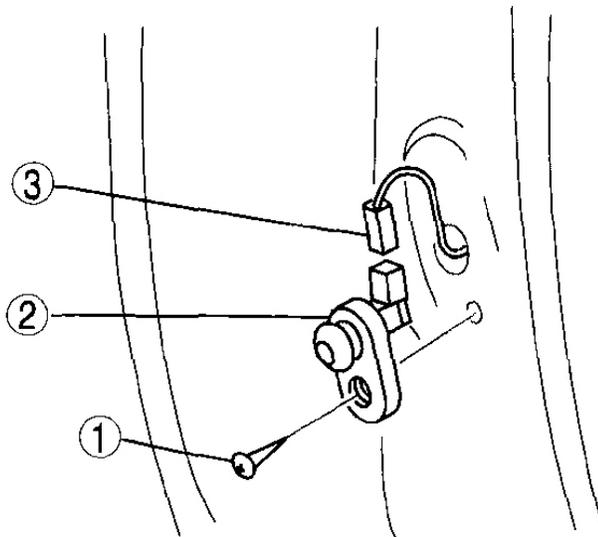


CHU0918W135

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** .



E5U918ZW5018

1	Screw
2	Door switch
3	connector

Fig. 62: Identifying Door Switch
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

DOOR SWITCH INSPECTION

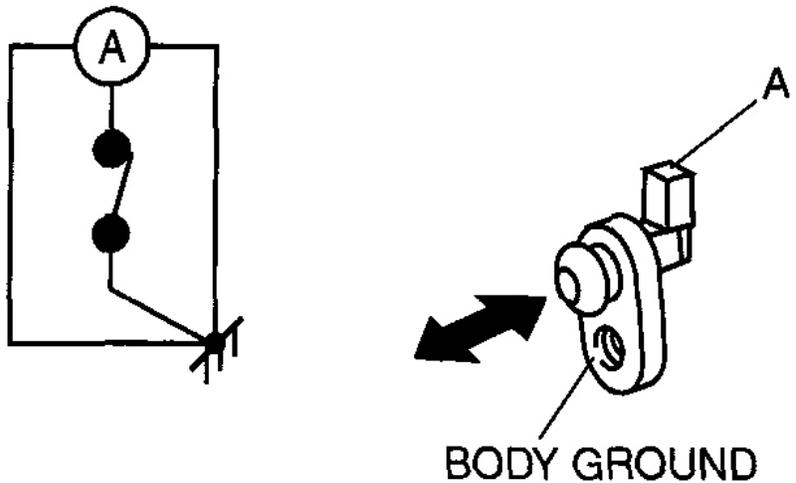
1. Remove the door switch. (See **DOOR SWITCH REMOVAL/INSTALLATION** .)
2. Verify that the continuity between door switch terminal and the body ground is as indicated in **Fig. 63** .
 - If not as indicated in **Fig. 63** , replace the door switch.

○—○ : Continuity

Switch position	Terminal	
	A	Body ground
Door switch pressed		
Door switch released	○—○	○—○

E5U918ZW5050

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



CHU0918W172

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