

2008 Mazda CX-9 Grand Touring

2008 BODY & ACCESSORIES Lighting Systems - Mazda CX-9

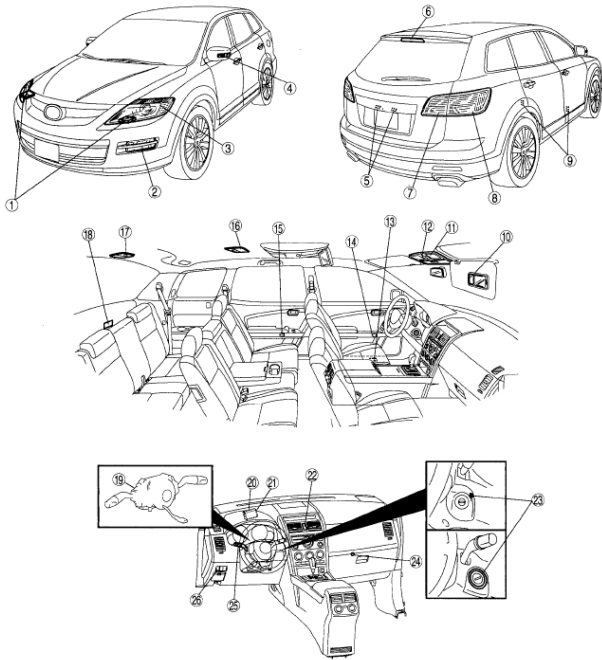
2008 BODY & ACCESSORIES

Lighting Systems - Mazda CX-9

LIGHTING SYSTEMS LOCATION INDEX

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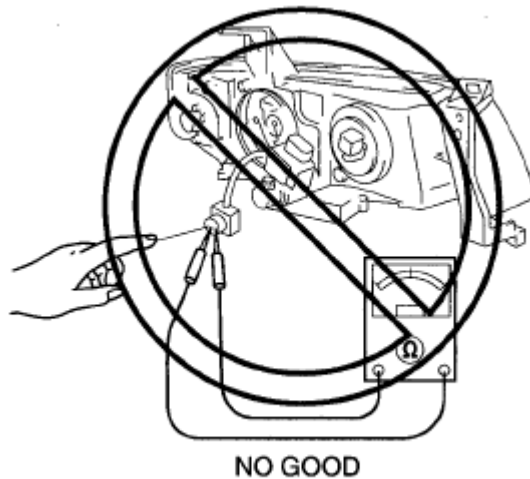
1	Discharge headlight control module (See 09-18-4 DISCHARGE HEADLIGHT SERVICE WARNINGS.) (See 09-18-7 DISCHARGE HEADLIGHT CONTROL MODULE REMOVAL/INSTALLATION.) (See 09-18-8 DISCHARGE HEADLIGHT SYSTEM INSPECTION.)	13	Courtesy light (See 09-18-31 COURTESY LIGHT BULB REMOVAL/INSTALLATION.)
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11	Front map light (See 09-18-27 FRONT MAP LIGHT REMOVAL/INSTALLATION.) (See 09-18-28 FRONT MAP LIGHT INSPECTION.)	23	Ignition key illumination (See 09-18-31 IGNITION KEY ILLUMINATION BULB REMOVAL/INSTALLATION.)
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		25	Light switch (See 09-18-16 LIGHT SWITCH REMOVAL/INSTALLATION.) (See 09-18-16 LIGHT SWITCH INSPECTION.) (See 09-18-17 FRONT FOG LIGHT SWITCH INSPECTION.)
		26	Headlight leveling switch (See 09-18-18 HEADLIGHT LEVELING SWITCH REMOVAL/INSTALLATION.) (See 09-18-19 HEADLIGHT LEVELING SWITCH INSPECTION.)

Fig. 1: Identifying Lighting Systems Location
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.



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Fig. 2: Precaution For - Discharge Headlight Bulb Service Warnings
Courtesy of MAZDA MOTORS CORP.

DISCHARGE HEADLIGHT CONTROL MODULE SERVICE WARNINGS

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

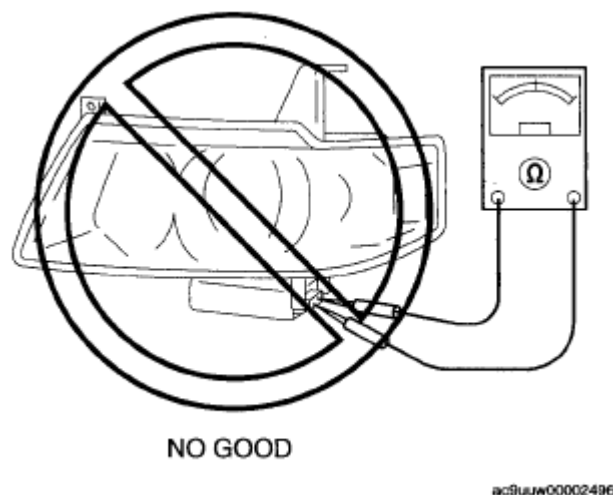


Fig. 3: Precaution For - Discharge Headlight Control Module Service Warnings
Courtesy of MAZDA MOTORS CORP.

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. Disconnect the negative battery cable.
2. Remove the front bumper. (See FRONT BUMPER REMOVAL/INSTALLATION.)

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3. Remove in the order indicated in the table.

1	Bolt
2	Fastener
3	Front combination light
4	Connector

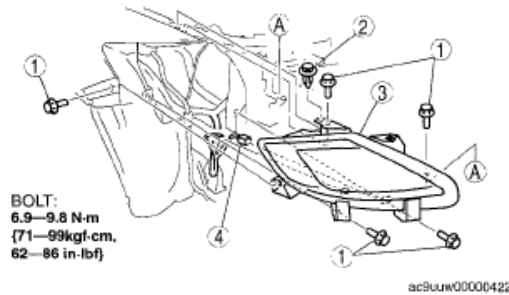
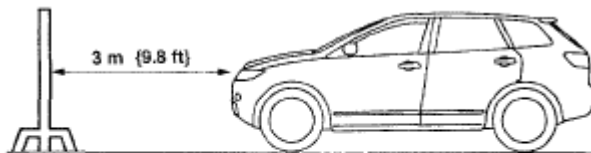


Fig. 4: Identifying Front Combination Light, Connector, Bolt & Torque Specifications
Courtesy of MAZDA MOTORS CORP.

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

HEADLIGHT AIMING

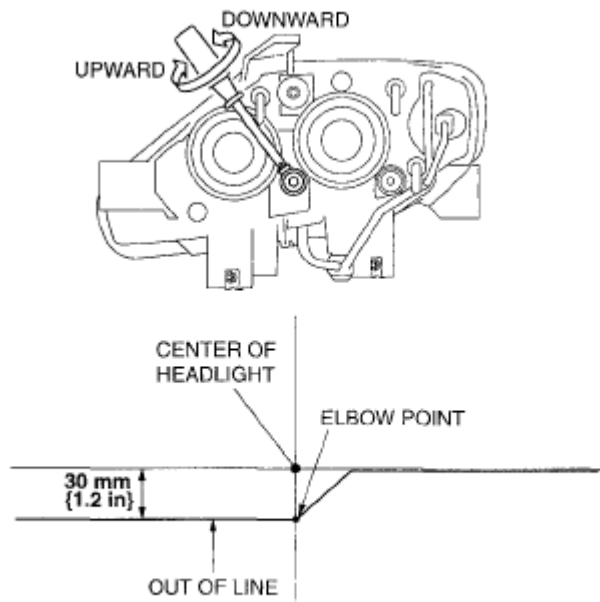
1. Adjust the tire pressure to the specification.
2. Position the unloaded vehicle on a flat, level surface.
3. Seat one person in the driver's seat.
4. Position the vehicle straight ahead and perpendicular to the white screen.
5. Set the headlights **3 m {9.8 ft}** from the white screen.
6. Place an object in front of the headlight not being adjusted to block its light beam.
7. Start the engine so that the battery remains charged.
8. Turn on the low-beam headlight.
9. Set the headlight leveling switch to the 0 position. (Vehicles with headlight leveling switch)



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Fig. 5: Adjusting Headlight Aiming
Courtesy of MAZDA MOTORS CORP.

10. Adjust by turning the aiming adjustment screw so that elbow point is in the position shown in the figure.



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Fig. 6: Turning Aiming Adjustment Screw
Courtesy of MAZDA MOTORS CORP.

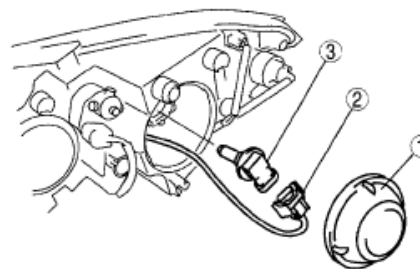
HEADLIGHT BULB REMOVAL/INSTALLATION

LOW-BEAM

Halogen type

1. Disconnect the negative battery cable.
2. Remove the coolant reserve tank. (RH only) (See **COOLANT RESERVE TANK REMOVAL/INSTALLATION [MZI-3.7]** .)
3. Remove in the order indicated in the table.

1	Cover
2	Connector
3	Halogen headlight bulb



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Fig. 7: Identifying Halogen Headlight Bulb, Connector & Cover
Courtesy of MAZDA MOTORS CORP.

CAUTION: • A halogen bulb generates extremely high heat when it is

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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.

4. Install in the reverse order of removal.

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. Disconnect the negative battery cable.
2. Remove the coolant reserve tank. (RH only) (See **COOLANT RESERVE TANK REMOVAL/INSTALLATION [MZI-3.7]** .)
3. Remove in the order indicated in the table.

1	Cover
2	Connector
3	Discharge headlight bulb (See 09-18-6 Discharge headlight bulb removal note.)

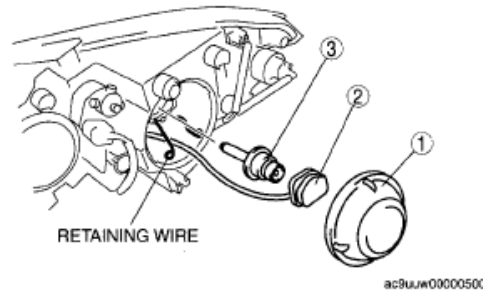


Fig. 8: Identifying Discharge Headlight Bulb, Connector & Cover
Courtesy of MAZDA MOTORS CORP.

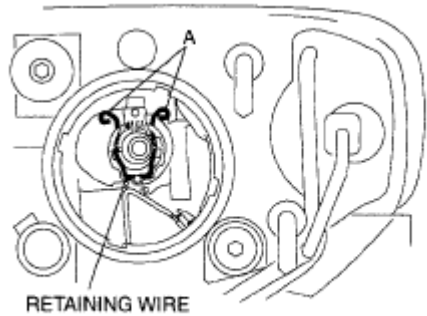
CAUTION:

- 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.

4. Install in the reverse order of removal.

Discharge headlight bulb removal note

1. Press sections A to release the bulb retaining wire and remove the discharge headlight bulb.



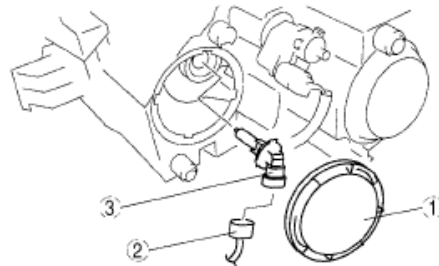
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Fig. 9: Identifying Discharge Headlight Bulb
Courtesy of MAZDA MOTORS CORP.

HIGH-BEAM

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

1	Cover
2	Connector
3	Halogen headlight bulb



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Fig. 10: Identifying Halogen Headlight Bulb, Connector & Cover
Courtesy of MAZDA MOTORS CORP.

- 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.

3. Install in the reverse order of removal.

DISCHARGE HEADLIGHT CONTROL MODULE REMOVAL/INSTALLATION

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

1. Disconnect the negative battery cable.

2. Remove the front bumper. (See **FRONT BUMPER REMOVAL/INSTALLATION** .)
3. Remove the front combination light. (See **FRONT COMBINATION LIGHT REMOVAL/INSTALLATION.**)
4. Remove in the order indicated in the table.

1	Screw
2	Discharge headlight control module
3	Connector

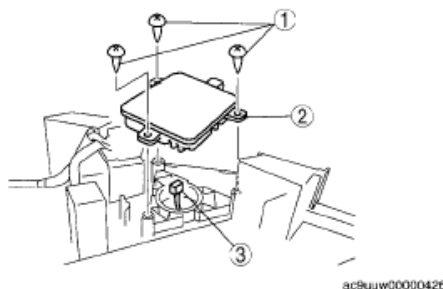


Fig. 11: Identifying Discharge Headlight Control Module, Connector & Screws
Courtesy of MAZDA MOTORS CORP.

5. Install in the reverse order of removal.

DISCHARGE HEADLIGHT SYSTEM INSPECTION

DISCHARGE HEADLIGHT INOPERATIVE

WARNING:

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

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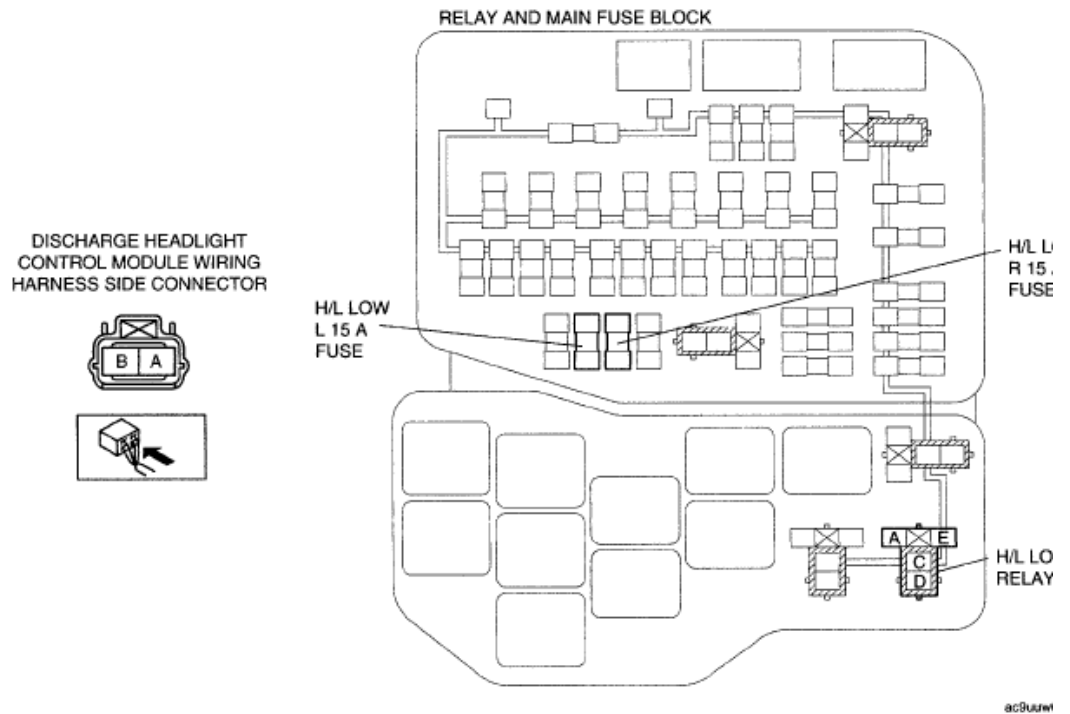


Fig. 12: Identifying Relay & Main Fuse Block
 Courtesy of MAZDA MOTORS CORP.

Inspection procedure

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 A (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 H/L LOW R 15 A fuse or H/L 	Yes	Go to the next step.

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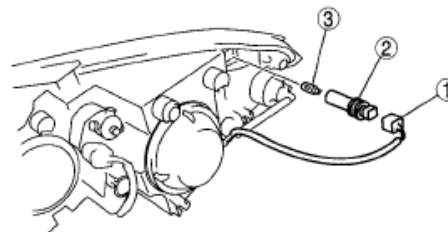
	<p>LOW L 15 A fuse.</p> <ul style="list-style-type: none"> • Inspect the fuses. • Are the fuses normal? 	No	Replace the fuse.
3	<p>INSPECT H/L LOW RELAY</p> <ul style="list-style-type: none"> • Inspect the H/L LOW relay. (See <u>RELAY INSPECTION</u> .) • Is the H/L LOW relay normal? 	Yes	Go to the next step.
		No	Replace the H/L LOW relay. (See <u>RELAY INSPECTION</u> .)
4	<p>INSPECT LIGHT SWITCH</p> <ul style="list-style-type: none"> • Inspect the light switch. (See <u>LIGHT SWITCH INSPECTION</u>.) • Is the light switch normal? 	Yes	Go to the next step.
		No	Replace the light switch. (See <u>LIGHT SWITCH REMOVAL/INSTALLATION</u> .)
5	<p>INSPECT WIRING HARNESS BETWEEN BATTERY AND DISCHARGE HEADLIGHT CONTROL MODULE</p> <ul style="list-style-type: none"> • Disconnect the negative battery cable. • Inspect for continuity between the following terminals: <ul style="list-style-type: none"> ○ Battery (positive terminal) and H/L LOW relay terminal E. ○ H/L LOW R 15 A fuse and discharge headlight control module terminal A ○ H/L LOW L 15 A fuse and discharge headlight control module terminal A • Are the wiring harnesses normal? 	Yes	Go to the next step.
		No	Replace the related wiring harness.
6	<p>INSPECT WIRING HARNESS BETWEEN DISCHARGE HEADLIGHT CONTROL MODULE AND GROUND</p> <ul style="list-style-type: none"> • Inspect the wiring harness between discharge headlight control module terminal B and ground for the following: <ul style="list-style-type: none"> ○ Short to power supply ○ Open circuit • Is the wiring harness normal? 	Yes	Go to the next step.
		No	Replace the related wiring harness.
	<p>VERIFY WHETHER MALFUNCTION IS IN DISCHARGE HEADLIGHT BULB OR DISCHARGE HEADLIGHT CONTROL MODULE</p> <ul style="list-style-type: none"> • Install the discharge headlight low bulb 	Yes	System inspection completed.

7	<p>(previously verified as illuminating normally). (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	<p>Replace the discharge headlight control module. (See <u>DISCHARGE HEADLIGHT CONTROL MODULE REMOVAL/INSTALLATION.</u>)</p>
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PARKING/FRONT SIDE MARKER LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the coolant reserve tank. (RH only) (See **COOLANT RESERVE TANK REMOVAL/INSTALLATION [MZI-3.7]** .)
3. Remove in the order indicated in the table.

1	Connector
2	Socket
3	Parking/front side marker light bulb



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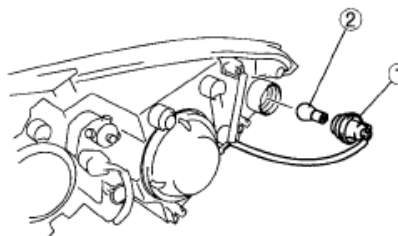
Fig. 13: Identifying Parking/Front Side Marker Light Bulb, Connector & Socket
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

FRONT TURN LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the coolant reserve tank. (RH only) (See **COOLANT RESERVE TANK REMOVAL/INSTALLATION [MZI-3.7]** .)
3. Remove in the order indicated in the table.

1	Socket
2	Front turn light bulb



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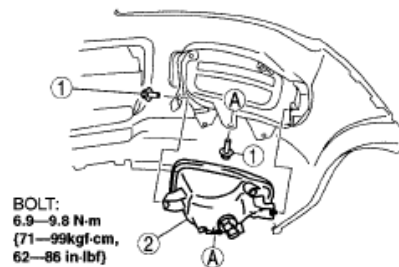
Fig. 14: Identifying Front Turn Light Bulb & Socket
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

FRONT FOG 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	Bolt
2	Front fog light



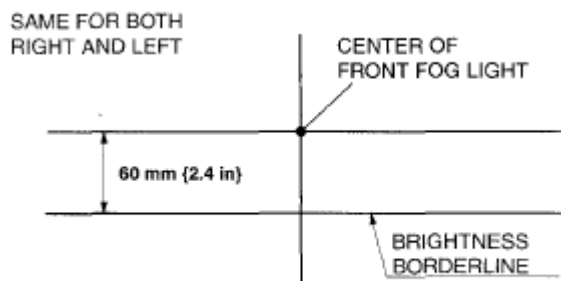
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Fig. 15: Identifying Front Fog Light, Bolt & Torque Specifications
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.
5. Adjust the front fog light aiming. (See **FRONT FOG LIGHT AIMING**.)

FRONT FOG LIGHT AIMING

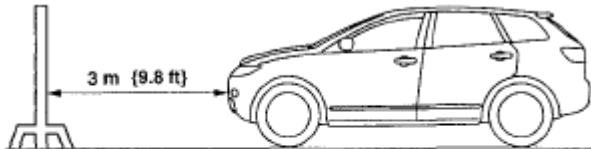
1. Make a front fog light adjustment screen as shown in the figure using double-weight, white paper.
2. Adjust the tire pressure to the specification.
3. Position the unloaded vehicle on a flat, level surface.
4. Seat one person in the driver's seat.



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Fig. 16: Identifying Front Fog Light Adjustment Screen
 Courtesy of MAZDA MOTORS CORP.

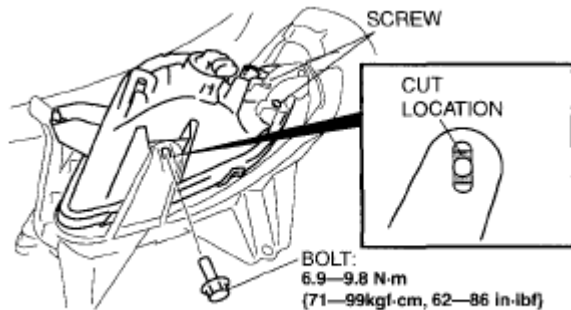
5. Line up the front fog lights with the white screen at a distance of **3 m {9.8 ft}** apart.
6. Place an object in front of the fog light not being adjusted to block its light beam.
7. Start the engine so that the battery remains charged.
8. Turn the front fog lights on.



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Fig. 17: Adjusting Front Fog Light Aiming
Courtesy of MAZDA MOTORS CORP.

9. Remove the adjusting bolt and cut the front fog light hole cover at the position shown in the figure.
10. Loosen the screw, 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 the figure.
11. Install the adjusting bolt and tighten the screw.



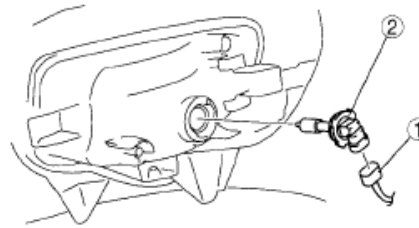
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Fig. 18: Identifying Adjusting Bolt & Torque Specifications
Courtesy of MAZDA MOTORS CORP.

FRONT FOG LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the front undercover B. (See **FRONT UNDER COVER REMOVAL/INSTALLATION** .)
3. Remove in the order indicated in the table.

1	Connector
2	Front fog light bulb (See 09-18-12 Front Fog Light Bulb Removal Note.)



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Fig. 19: Identifying Front Fog Light Bulb & Connector
Courtesy of MAZDA MOTORS CORP.

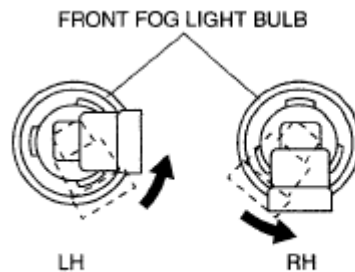
4. Install in the reverse order of removal.

FRONT FOG LIGHT BULB REMOVAL NOTE

1. Remove the front fog light bulb by turning it in the direction shown by 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.



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

FRONT SIDE TURN LIGHT REMOVAL/INSTALLATION

NOTE:

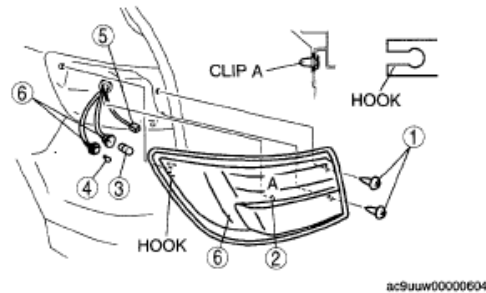
- Front side turn lights are integrated with the power outer mirror.

1. Disconnect the negative battery cable.
2. Remove the inner garnish. (See INNER GARNISH REMOVAL/INSTALLATION .)
3. Remove the front door trim. (See FRONT DOOR TRIM REMOVAL/INSTALLATION .)
4. Remove the power outer mirror. (See POWER OUTER MIRROR REMOVAL/INSTALLATION .)
5. Install in the reverse order of removal.

REAR COMBINATION LIGHT REMOVAL/INSTALLATION

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

1	Screw
2	Clip
3	Rear turn light bulb
4	Rear side marker light bulb
5	Connector
6	Socket
7	Rear combination light



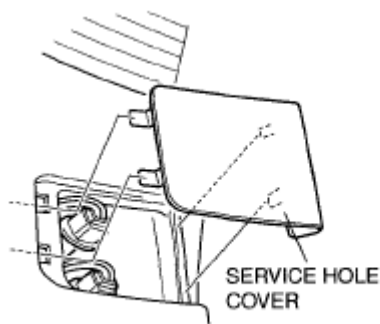
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Fig. 21: Identifying Rear Combination Light Components
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

INBOARD LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the service hole cover.



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Fig. 22: Identifying Service Hole Cover
 Courtesy of MAZDA MOTORS CORP.

3. Remove in the order indicated in the table.

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1	Connector
2	Nut
3	Bracket
4	Inboard light (See 09-18-13 Inboard Light Installation Note.)

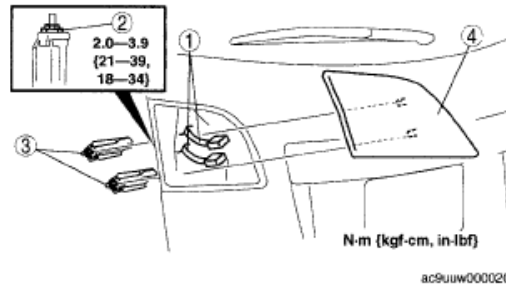


Fig. 23: Identifying Inboard Light, Connector, Bracket, Nut & Torque Specifications
Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

INBOARD LIGHT INSTALLATION NOTE

1. Insert the inboard light into the liftgate as shown in the figure, pivot it inward and then fix in place.

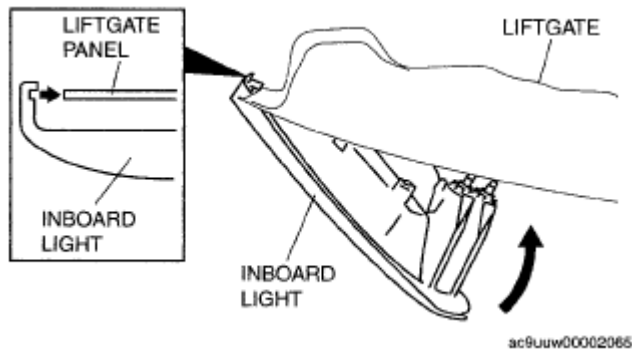


Fig. 24: Inserting Inboard Light Into Liftgate
Courtesy of MAZDA MOTORS CORP.

2. Push the bracket onto the liftgate as shown in the figure and install.

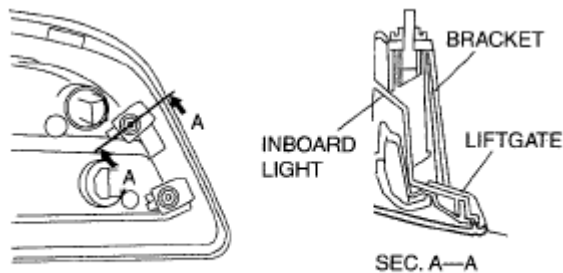


Fig. 25: Pushing Bracket Onto Liftgate
Courtesy of MAZDA MOTORS CORP.

HIGH-MOUNT BRAKE LIGHT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the liftgate upper trim. (See LIFTGATE UPPER TRIM REMOVAL/INSTALLATION .)
3. Remove the rear spoiler. (See REAR SPOILER REMOVAL/INSTALLATION .)
4. Remove in the order indicated in the table.

1	Screw
2	High-mount brake light

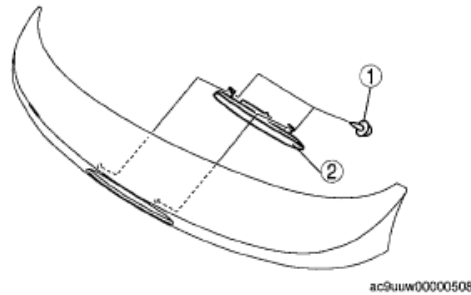


Fig. 26: Identifying High-Mount Brake Light & Screw
 Courtesy of MAZDA MOTORS CORP.

5. Install in the reverse order of removal.

INBOARD LIGHT BULB REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the service hole cover.

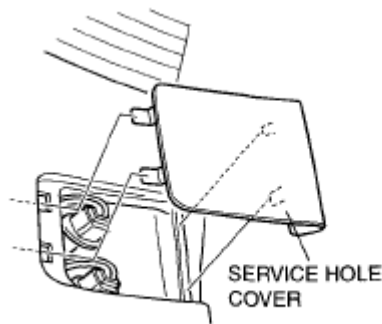


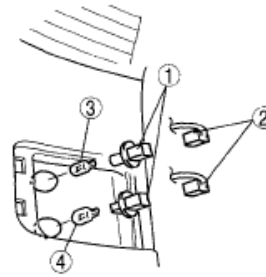
Fig. 27: Identifying Service Hole Cover
 Courtesy of MAZDA MOTORS CORP.

3. Remove in the order indicated in the table.

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1	Socket
2	Connector
3	Taillight bulb
4	Buck-up light bulb



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Fig. 28: Identifying Inboard Light Bulb, Taillight Bulb, Connector & Socket
Courtesy of MAZDA MOTORS CORP.

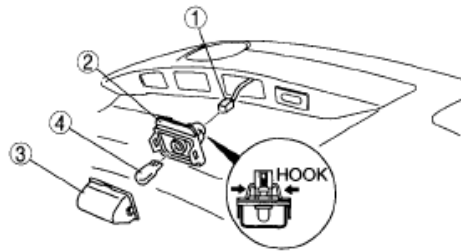
4. Install in the reverse order of removal.

LICENSE PLATE LIGHT REMOVAL/INSTALLATION

LICENSE PLATE LIGHT

1. Disconnect the negative battery cable.
2. Remove the liftgate upper trim.(See [LIFTGATE UPPER TRIM REMOVAL/INSTALLATION](#) .)
3. Remove the liftgate side trim.(See [LIFTGATE SIDE TRIM REMOVAL/INSTALLATION](#) .)
4. Remove the liftgate lower trim.(See [LIFTGATE LOWER TRIM REMOVAL/INSTALLATION](#) .)
5. Remove in the order indicated in the table.

1	Connector
2	License plate light
3	Lens
4	License plate light bulb



ac9lurw00000790

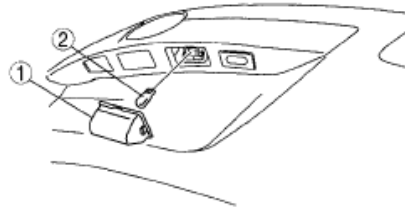
Fig. 29: Identifying License Plate Light, Connector & Lens
Courtesy of MAZDA MOTORS CORP.

6. Install in the reverse order of removal.

LICENSE PLATE LIGHT BULB

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

1	Lens (See 09-18-15 Lens removal note.)
2	License plate light bulb



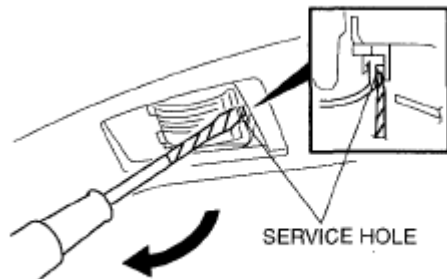
ac8uuw00000691

Fig. 30: Identifying License Plate Light Bulb & Lens
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 service hole and pry with the screwdriver in the direction shown by the arrow to remove the lens.



ac9uuw00000692

Fig. 31: Inserting Screwdriver Into Service Hole
Courtesy of MAZDA MOTORS CORP.

COMBINATION SWITCH REMOVAL/INSTALLATION

WARNING:

- If the negative battery cable or the steering angle sensor connector 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.

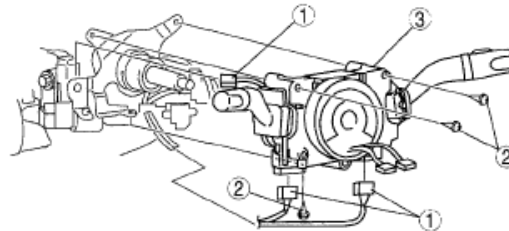
1. Turn the ignition switch to the LOCK position.
2. Disconnect the negative battery cable and wait for 1 min or more.
3. Remove the following parts:
 1. Driver-side air bag module (See **DRIVER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION** .)

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2. Steering wheel (See **STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION** .)
3. Lower column cover (See **COLUMN COVER REMOVAL/INSTALLATION** .)
4. Put aside the upper column cover.
5. Remove in the order indicated in the table.

1	Connector
2	Screw
3	Combination switch



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Fig. 32: Identifying Combination Switch, Connector & Screw
Courtesy of MAZDA MOTORS CORP.

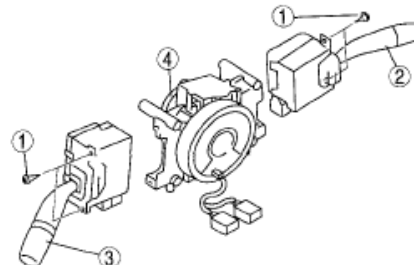
6. Disconnect the steering angle sensor connector.
7. Install in the reverse order of removal.

COMBINATION SWITCH DISASSEMBLY/ASSEMBLY

- CAUTION:**
- 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 the table.

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



acxuuw00001728

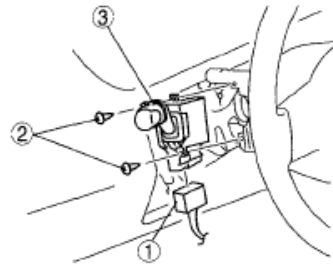
Fig. 33: Identifying Combination Switch Components
Courtesy of MAZDA MOTORS CORP.

2. Assemble in the reverse order of disassembly.

LIGHT SWITCH REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the lower column cover. (See **COLUMN COVER REMOVAL/INSTALLATION** .)
3. Put aside the upper column cover.
4. Remove in the order indicated in the table.

1	Connector
2	Screw
3	Light switch



ac9uuw0000655

Fig. 34: Identifying Light Switch, Connector & Screw
 Courtesy of MAZDA MOTORS CORP.

5. Install in the reverse order of removal.

LIGHT SWITCH INSPECTION

1. Verify that the continuity between the light switch terminals is as indicated in the table.
 - If not as indicated in the table, replace the light switch.

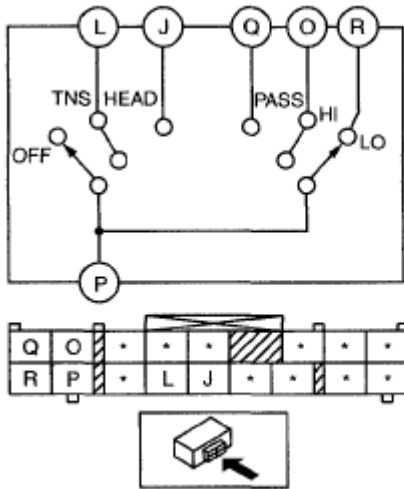
HEADLIGHT SWITCH (VEHICLE WITHOUT AUTO LIGHT)

○—○ : Continuity

Switch position			Terminal					
Light	Dimmer	Pass	J	L	P	O	Q	R
OFF	-	Off						
		On			○—○—○			
TNS	-	Off		○—○				
		On		○—○—○—○				
Head	LO	Off	○—○—○—○—○					
		On	○—○—○—○—○					
	HI	-	○—○—○—○					

ac9uuw0002411

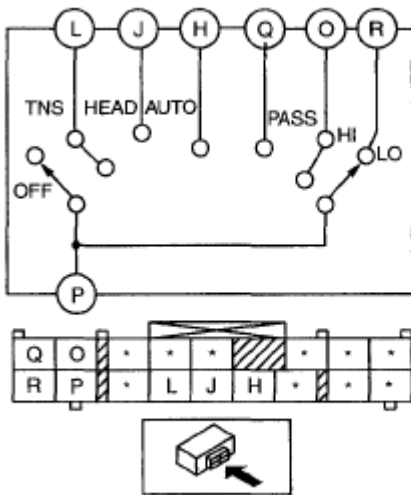
Fig. 35: Terminals Continuity Chart
 Courtesy of MAZDA MOTORS CORP.



ac9uuw0000906

Fig. 36: Checking Continuity Between Headlight Switch Terminals (Vehicle Without Auto Light)
 Courtesy of MAZDA MOTORS CORP.

HEADLIGHT SWITCH (VEHICLE WITH AUTO LIGHT)



ac9uuw0000907

Fig. 37: Checking Continuity Between Headlight Switch Terminals (Vehicle With Auto Light)
 Courtesy of MAZDA MOTORS CORP.

○—○ : Continuity

Switch position			Terminal						
Light	Dimmer	Pass	J	L	P	O	Q	R	H
OFF	-	Off							
		On				○—○			
TNS	-	Off		○—○					
		On		○—○	○—○	○—○			
Head	LO	Off	○—○	○—○	○—○	○—○			
		On	○—○	○—○	○—○	○—○			
	HI	-	○—○	○—○	○—○				
Auto	LO	Off				○—○	○—○	○—○	
		On				○—○	○—○	○—○	○—○
	HI	-				○—○	○—○	○—○	○—○

ac9uuw00002410

Fig. 38: Terminals Continuity Chart
 Courtesy of MAZDA MOTORS CORP.

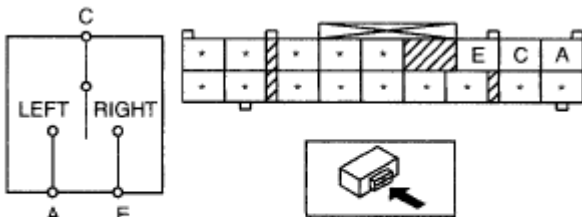
TURN SWITCH

○—○ : Continuity

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

ac9uuw00000909

Fig. 39: Terminals Continuity Chart
 Courtesy of MAZDA MOTORS CORP.



ac9uuw00000908

Fig. 40: Checking Continuity Between Turn Switch Terminals
 Courtesy of MAZDA MOTORS CORP.

FRONT FOG LIGHT SWITCH INSPECTION

1. Verify that continuity between the front fog light switch terminals is as indicated in the table.

○—○ : Continuity

Switch position	Terminal	
	D	P
OFF		
ON	○—○	

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Fig. 41: Terminals Continuity Chart
Courtesy of MAZDA MOTORS CORP.

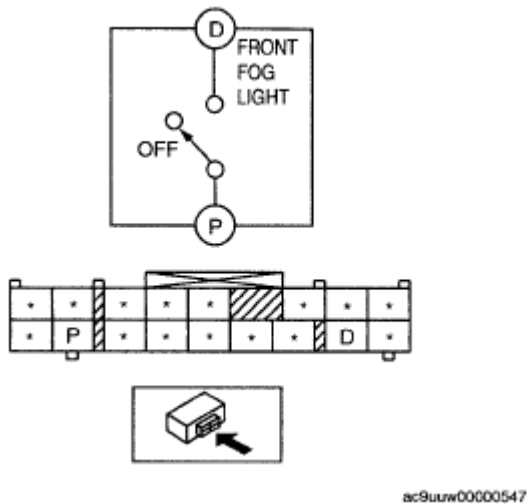


Fig. 42: Checking Continuity Between Front Fog Light Switch Terminals
Courtesy of MAZDA MOTORS CORP.

HAZARD WARNING SWITCH REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the following parts:
 1. Decoration panel (See [DECORATION PANEL REMOVAL/INSTALLATION](#) .)
 2. Front console box mat (See [FRONT CONSOLE BOX MAT REMOVAL/INSTALLATION](#) .)
 3. Indicator panel (See [INDICATOR PANEL REMOVAL/INSTALLATION](#) .)
 4. Front console box (See [FRONT CONSOLE BOX REMOVAL/INSTALLATION](#) .)
 5. Center panel (See [CENTER PANEL REMOVAL/INSTALLATION](#) .)
3. Remove in hazard warning switch.
4. Install in the reverse order of removal.

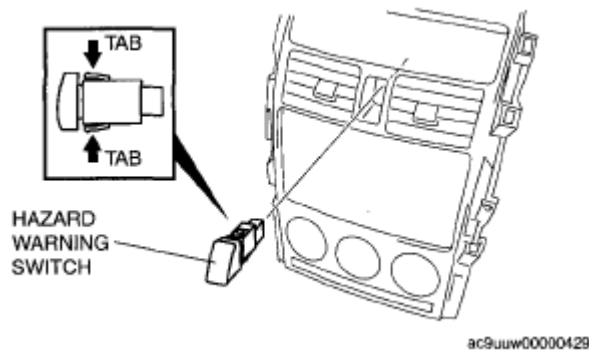


Fig. 43: Identifying Hazard Warning Switch
Courtesy of MAZDA MOTORS CORP.

HAZARD WARNING SWITCH INSPECTION

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

○—○ : Continuity ○⊕○ : Bulb

Switch position	Terminal			
	A	C	E	F
Off			○⊕○	○⊕○
On	○—○		○⊕○	○⊕○

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Fig. 44: Terminals Continuity Chart
Courtesy of MAZDA MOTORS CORP.

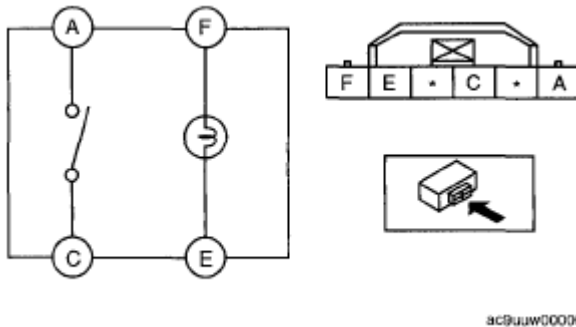


Fig. 45: Checking Continuity Between Hazard Switch Terminals
Courtesy of MAZDA MOTORS CORP.

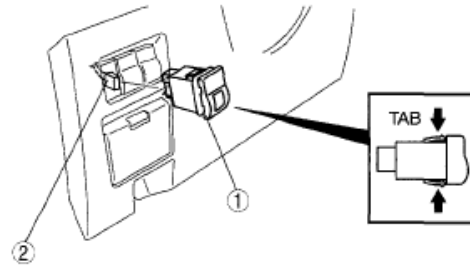
HEADLIGHT LEVELING SWITCH REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the dashboard under cover. (Driver side) (See **DASHBOARD UNDER COVER**)

REMOVAL/INSTALLATION .)

3. Remove the hood release lever. (See **HOOD LATCH AND RELEASE LEVER REMOVAL/INSTALLATION** .)
4. Remove in the order indicated in the table.

1	Headlight leveling switch
2	Connector



ac9uuw00000519

Fig. 46: Identifying Headlight Leveling Switch & Connector
Courtesy of MAZDA MOTORS CORP.

5. Install in the reverse order of removal.

HEADLIGHT LEVELING SWITCH INSPECTION

1. Verify that continuity between the headlight leveling switch terminals is as indicated in the table.
 - If not as indicated in the table, replace the headlight leveling switch.

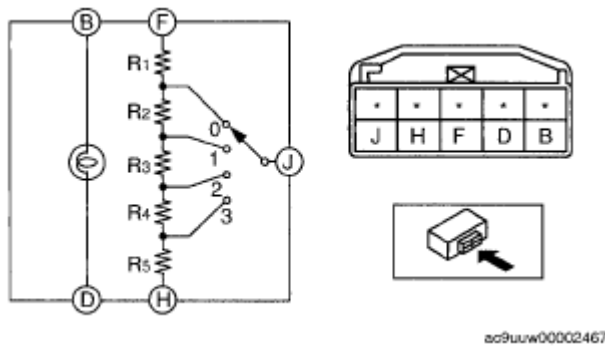
○-W-○ : Resistance ○--○ : Bulb

Switch position	Terminal				
	B	D	F	J	H
0	○--○		○-W-R ₁ -○	○-W-W-W-W-○	
1	○--○		○-W-R ₁ -○	○-W-R ₂ -○	○-W-W-W-○
2	○--○		○-W-W-R ₁ -○	○-W-R ₄ -○	○-W-R ₅ -○
3	○--○		○-W-W-W-W-○	○-W-R ₅ -○	

R₁ : 715 ohms R₂ : 510 ohms R₃ : 249 ohms
R₄ : 383 ohms R₅ : 1430 ohms

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Fig. 47: Terminals Continuity Chart
Courtesy of MAZDA MOTORS CORP.

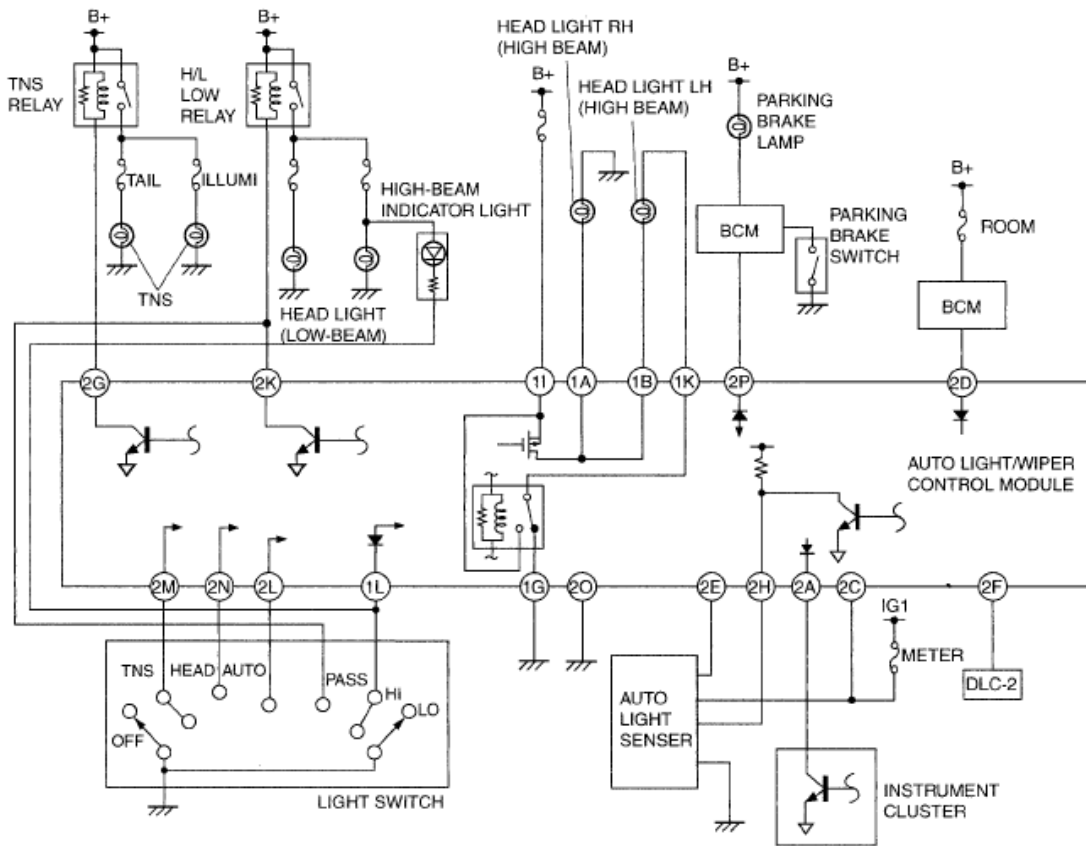


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Fig. 48: Checking Continuity Between Headlight Leveling Switch Terminals
 Courtesy of MAZDA MOTORS CORP.

DRL & AUTO LIGHT-OFF SYSTEM WIRING DIAGRAM

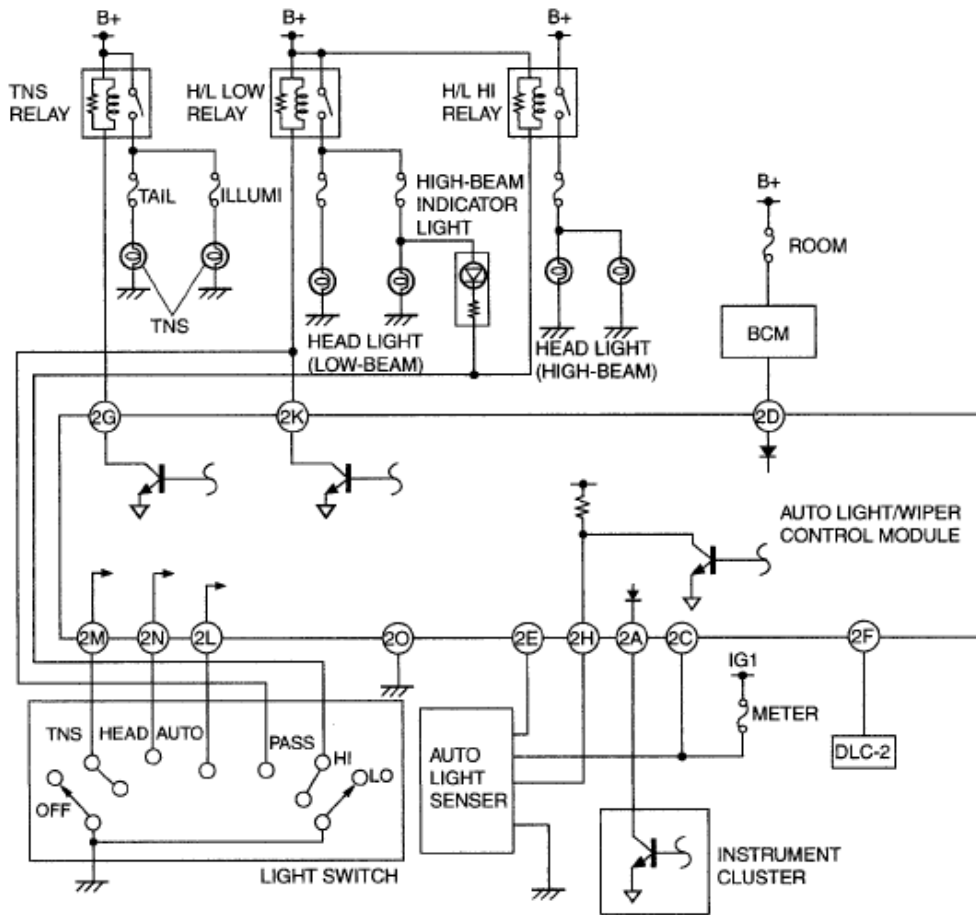
AUTO LIGHT/WIPER CONTROL MODULE VEHICLES WITH DRL



ac9uuw00001262

Fig. 49: DRL & Auto Light-Off System (Vehicles With DRL) - Wiring Diagram
 Courtesy of MAZDA MOTORS CORP.

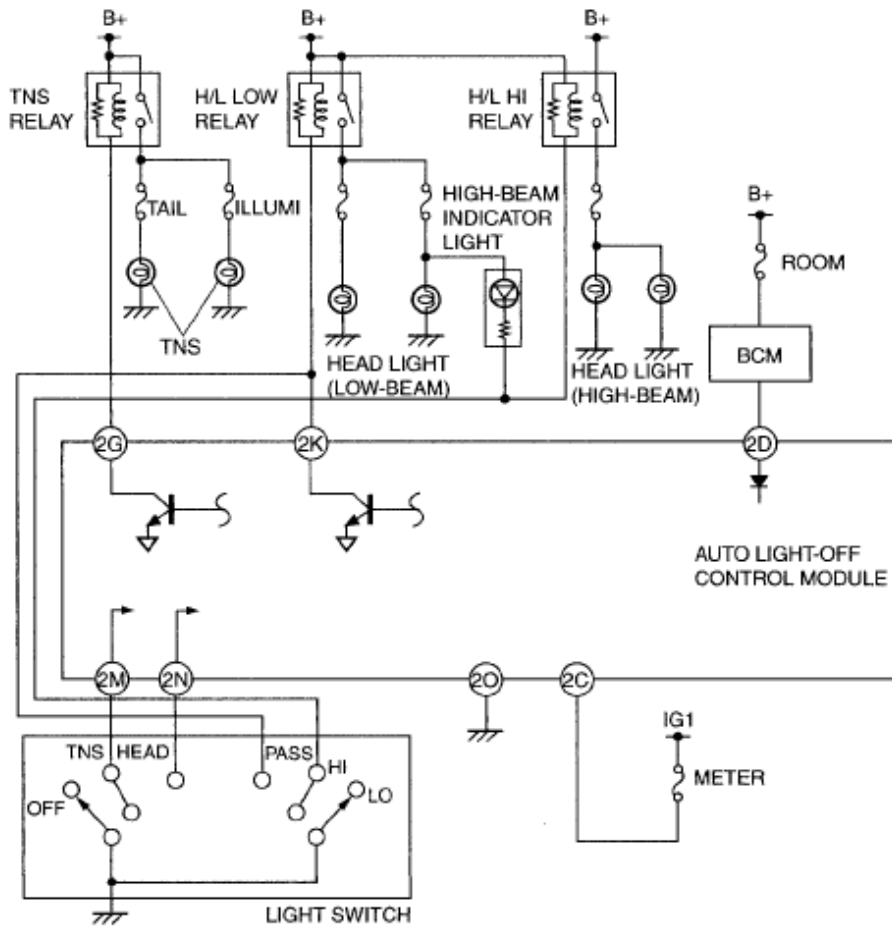
Vehicles without DRL



ac9uuw00001336

Fig. 50: DRL & Auto Light-Off System (Vehicles Without DRL) - Wiring Diagram
 Courtesy of MAZDA MOTORS CORP.

AUTO LIGHT-OFF CONTROL MODULE



ac9uuw00002304

Fig. 51: DRL & Auto Light-Off System (Auto Light-Off Control Module) - Wiring Diagram
 Courtesy of MAZDA MOTORS CORP.

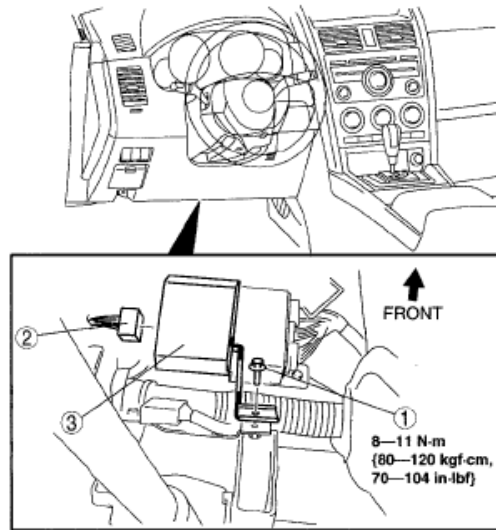
AUTO LIGHT-OFF CONTROL MODULE REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Remove the dashboard under cover (Driver side). (See **DASHBOARD UNDER COVER REMOVAL/INSTALLATION** .)
3. Remove in the order indicated in the table.

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1	Bolt
2	Connector
3	Auto light-off control module



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Fig. 52: Identifying Auto Light-Off Control Module, Connector, Bolt & Torque Specifications
Courtesy of MAZDA MOTORS CORP.

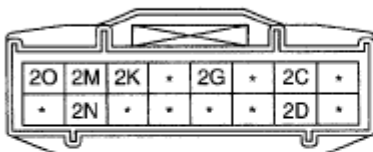
4. Install in the reverse order of removal.

AUTO LIGHT-OFF CONTROL MODULE INSPECTION

1. Measure the voltage at the auto light-off control module terminals as indicated below.

TERMINAL VOLTAGE LIST (REFERENCE)

AUTO LIGHT-OFF CONTROL MODULE
HARNESS SIDE CONNECTOR



ac9uuw00002302

Fig. 53: Identifying Auto Light-Off Control Module Connector Terminals
Courtesy of MAZDA MOTORS CORP.

CONNECTOR TERMINALS REFERENCE

Terminal	Signal	Connection	Test condition	Voltage	Action
----------	--------	------------	----------------	---------	--------

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				(V)		
2C	IG 1	METER 10 A fuse	Ignition switch at ON	B+	<ul style="list-style-type: none"> • METER 10 A fuse • Related wiring harnesses 	
			Ignition switch at LOCK or ACC	1.0 or less		
2D	Power supply	<ul style="list-style-type: none"> • BCM • ROOM 15 A fuse 	Constant	B+	<ul style="list-style-type: none"> • BCM (See <u>BODY CONTROL MODULE (BCM) INSPECTION</u> .) • Inspect ROOM 15 A fuse • Related wiring harnesses 	
2G	TNS relay operation	TNS relay	Light switch at low-beam or high-beam position	Below 1.5	<ul style="list-style-type: none"> • TAIL 10 A fuse • TNS relay (See <u>RELAY INSPECTION</u> .) • Related wiring harnesses 	
			Light switch at OFF	B+		
2K	H/L LOW relay operation	H/L LOW relay	Light switch at high-beam position	Below 1.5	<ul style="list-style-type: none"> • H/L LOW relay (See <u>RELAY INSPECTION</u> .) • Related wiring harnesses 	
			Light switch at OFF or low-beam position	B+		
2M	TNS switch on/off	Light switch	Ignition switch at ON	Light switch at low-beam or high-beam position	1.0 or less	<ul style="list-style-type: none"> • Light switch (See <u>LIGHT SWITCH INSPECTION</u>.) • Related wiring harnesses
				Light switch at OFF position	B+	
2N	Light switch on/off	Light switch	Ignition switch at ON	Light switch at low-beam or high-beam position	1.0 or less	<ul style="list-style-type: none"> • Light switch (See <u>LIGHT SWITCH INSPECTION</u>.) • Related wiring harnesses
				Light switch at OFF position	B+	
2O	GND	GND	Under any condition	1.0 or less	<ul style="list-style-type: none"> • Related wiring harnesses 	

AUTO LIGHT/WIPER CONTROL MODULE REMOVAL/INSTALLATION

NOTE:

- Auto light-off system are integrated with the auto light/wiper control module.

1. Disconnect the negative battery cable.
2. Remove the dashboard under cover (Driver side). (See **DASHBOARD UNDER COVER REMOVAL/INSTALLATION** .)

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Terminal	Signal	Connection	Test condition		Voltage (V)	Action
1A ⁽¹⁾	RH headlight operation (high-beam)	RH headlight (high-beam)	Light switch at HEAD position	Dimmer switch at the high-beam position	B+	<ul style="list-style-type: none"> • RH headlight • Related wiring harnesses
				Dimmer switch at the low-beam position	1.0 or less	
			DRL mode		Approx 6.0	
1B ⁽¹⁾	LH headlight operation (high-beam)	LH headlight (high-beam)	Light switch at HEAD position	Dimmer switch at the high-beam position	B+	<ul style="list-style-type: none"> • LH headlight • Related wiring harnesses
				Dimmer switch at the low-beam position	1.0 or less	
			DRL mode		Approx 6.0	
1C	Autostop switch signal	Autostop switch	Ignition switch at ON	Windshield wiper switch at LO position	B+	<ul style="list-style-type: none"> • Autostop switch (Windshield wiper motor) (See <u>WINDSHIELD WIPER MOTOR INSPECTION</u> .) • Related wiring harnesses
				Windshield wiper switch at OFF position	1.0 or less	
1D	Windshield wiper switch signal (OFF)	Windshield wiper and washer switch	Ignition switch at ON	Windshield wiper switch at LO position	B+	<ul style="list-style-type: none"> • Windshield wiper and washer switch (See <u>WINDSHIELD WIPER AND WASHER SWITCH INSPECTION</u> .) • Related wiring harnesses
				Windshield wiper switch at OFF position	1.0 or less	
1E	IG2	WIPER 30 A fuse	Ignition switch at ON		B+	<ul style="list-style-type: none"> • WIPER 30 A fuse • Related wiring harnesses
			Ignition switch at LOCK or ACC		1.0 or less	
				Windshield wiper switch at HI position	B+	<ul style="list-style-type: none"> • Windshield wiper and washer switch (See <u>WINDSHIELD</u>

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1F	Windshield wiper switch signal (HI)	Windshield wiper and washer switch	Ignition switch at ON	Windshield wiper switch at OFF position	1.0 or less	<p><u>WIPER AND WASHER SWITCH INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Related wiring harnesses
1G ⁽¹⁾	GND	GND	Under any condition		1.0 or less	<ul style="list-style-type: none"> • Related wiring harnesses
1H	Windshield wiper switch signal (AUTO)	Windshield wiper and washer switch	Ignition switch at ON	Windshield wiper switch at AUTO position	B+	<p>• Windshield wiper and washer switch (See <u>WINDSHIELD WIPER AND WASHER SWITCH INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Related wiring harnesses
				Windshield wiper switch at OFF position	1.0 or less	
1I ⁽¹⁾	Power supply	HEAD LIGHT 20 A fuse	Constant		B+	<ul style="list-style-type: none"> • HEAD LIGHT 20 A fuse • Related wiring harnesses
1J	Washer switch signal	Windshield wiper and washer switch	Ignition switch at ON	Washer switch at ON position	B+	<p>• Windshield wiper and washer switch (See <u>WINDSHIELD WIPER AND WASHER SWITCH INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Related wiring harnesses
				Washer switch at OFF position	1.0 or less	
1K ⁽¹⁾	LH headlight operation (high-beam)	LH headlight (high-beam)	Light switch at the OFF position	Ignition switch at ON position	B+	<ul style="list-style-type: none"> • LH headlight • Related wiring harnesses
				Ignition switch LOCK or ACC position	1.0 or less	
1L ⁽¹⁾	High-beam on/off	Light switch	Ignition switch at ON	Dimmer switch at high-beam position	1.0 or less	<p>• Light switch (See <u>LIGHT SWITCH INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Related wiring harnesses
				Dimmer switch at low-beam position	B+	
	Vehicle	Instrument	Because this terminal is for communication.			<ul style="list-style-type: none"> • Instrument cluster (See <u>INSTRUMENT CLUSTER</u> .)

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2A	speed signal input	cluster	good/no good judgment by terminal voltage is not possible.		-	<p><u>INPUT/OUTPUT CHECK MODE</u> .)</p> <ul style="list-style-type: none"> • Related wiring harnesses
2B	Sensitivity adjustment volume	Windshield wiper and washer switch	Ignition switch at ON	Sensitivity adjustment volume turned from + position to - position	0 --> 0.8 --> 1.5 --> 1.9 --> 2.2	<ul style="list-style-type: none"> • Windshield wiper and washer switch (See <u>WINDSHIELD WIPER AND WASHER SWITCH INSPECTION</u> .) • Related wiring harnesses
2C	IG 1	METER 10 A fuse	Ignition switch at ON		B+	<ul style="list-style-type: none"> • METER 10 A fuse • Related wiring harnesses
			Ignition switch at LOCK or ACC		1.0 or less	
2D	Power supply	<ul style="list-style-type: none"> • BCM • ROOM 15 A fuse 	Constant		B+	<ul style="list-style-type: none"> • BCM (See <u>BODY CONTROL MODULE (BCM) INSPECTION</u> .) • ROOM 15 A fuse • Related wiring harnesses
2E	Wiper or headlight operation request	Rain sensor	Because this terminal is for communication, good/no good judgment by terminal voltage is not possible.		-	<ul style="list-style-type: none"> • Rain sensor • Related wiring harnesses
2F	DLC-2 power supply	DLC-2	Under any condition		B+	<ul style="list-style-type: none"> • Related wiring harnesses
2G	TNS relay operation	TNS relay	Light switch at low-beam or high-beam position		Below 1.5	<ul style="list-style-type: none"> • TNS relay (See <u>RELAY INSPECTION</u> .) • Related wiring harnesses
			Light switch at OFF		B+	
2H	Rain sensor operation request	Rain sensor	Because this terminal is for communication, good/no good judgment by terminal voltage is not possible.		-	<ul style="list-style-type: none"> • Rain sensor • Related wiring harnesses
2K	H/L LOW relay	H/L LOW	Light switch at high-beam position		Below 1.5	<ul style="list-style-type: none"> • H/L LOW relay (See <u>RELAY INSPECTION</u> .)

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	operation	relay	Light switch at OFF or low-beam position	B+		
2L	Light switch signal	Light switch	Ignition switch at ON	Light switch at AUTO position	1.0 or less	<ul style="list-style-type: none"> • Related wiring harnesses • Light switch (See <u>LIGHT SWITCH INSPECTION.</u>) • Related wiring harnesses
				Other	B+	
2M	TNS switch on/off	Light switch	Ignition switch at ON	Light switch at low-beam or high-beam position	1.0 or less	<ul style="list-style-type: none"> • Light switch (See <u>LIGHT SWITCH INSPECTION.</u>) • Related wiring harnesses
				Light switch at OFF position	B+	
2N	Light switch on/off	Light switch	Ignition switch at ON	Light switch at low-beam or high-beam position	1.0 or less	<ul style="list-style-type: none"> • Light switch (See <u>LIGHT SWITCH INSPECTION.</u>) • Related wiring harnesses
				Light switch at OFF position	B+	
2O	GND	GND	Under any condition	1.0 or less	<ul style="list-style-type: none"> • Related wiring harnesses 	
2P ⁽¹⁾	Parking brake switch on/off	<ul style="list-style-type: none"> • BCM • Parking brake switch 	Ignition switch at ON	Parking brake switch on	1.0 or less	<ul style="list-style-type: none"> • BCM (See <u>BODY CONTROL MODULE (BCM) INSPECTION .</u>) • Parking brake switch • Related wiring harnesses
				Parking brake switch OFF	B+	

(1) For vehicles with DRL only.

AUTO LIGHT/WIPER CONTROL MODULE CONFIGURATION

NOTE:

- Use the IDS (laptop PC) because the PDS (Pocket PC) does not support the AUTO LIGHT/WIPER CONTROL MODULE CONFIGURATION.

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "Module Programming".

3. Then, select items from the screen menu in the following order.
 1. Select "Programmable Module Installation".
 2. Select "LCM".
4. Perform the configuration according to the directions on the screen.
5. Retrieve DTCs by the M-MDS, then verify that there is no DTC present.
 - If a DTC (s) is detected, perform the applicable DTC inspection. (See **DTC TABLE [AUTO LIGHT/WIPER CONTROL MODULE]** .)

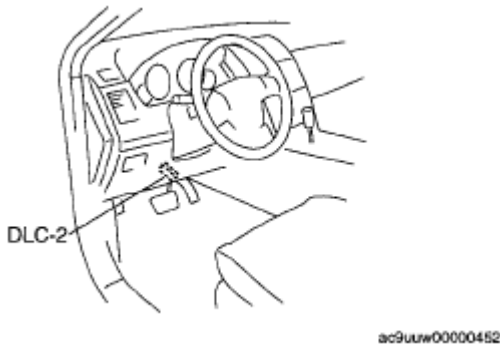


Fig. 56: Identifying DLC-2 Location
Courtesy of MAZDA MOTORS CORP.

AUTO LIGHT ILLUMINATION LEVEL SETTING

WITHOUT USING M-MDS

- CAUTION:**
- If any of the following occurs, the sensitivity cannot be set properly. Therefore, resume from Step 1.
 - Each procedure and operation interval exceeds 5 s.
 - Procedures are performed incorrectly.

- NOTE:**
- Perform the procedure in a condition that allows verification of the headlight illumination because it is necessary to verify the setting condition according to the number of times headlights turn on.

1. Turn the ignition switch to the ON position with the light switch in the OFF position and pulled back (Flash-to-pass ON).
2. Switch the light switch from the OFF to TNS position five times and return it to the OFF position.
3. Pull the light switch back once. (Flash-to-pass ON)
4. Turn the light switch to the TNS position.
5. Switch the light switch from the TNS to ON position five times and return it to the TNS position.
6. Turn the light switch to the ON position.

7. Switch the light switch from the ON to AUTO position five times and return it to the ON position.
8. Turn the light switch to the TNS position.

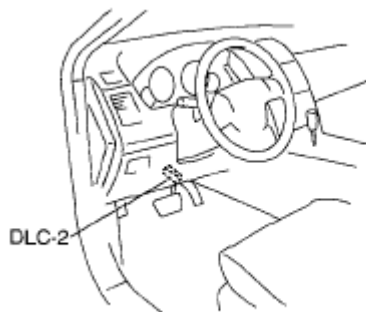
NOTE:

- **Switches to the sensitivity setting mode when the above operations are performed.**
- **The headlights turn on for the number of times according to the current setting conditions.**
 - **Illumination (Two times): Standard sensitivity**
 - **Illumination (Three times): Low sensitivity**

9. Switch the sensitivity by pulling the light switch back (Flash-to pass ON).
10. Verify the number of times the headlights turn on and that the sensitivity is set properly.
 - Illumination (Two times): Standard sensitivity
 - Illumination (Three times): Low sensitivity

USING M-MDS

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "Module Programming".
 - When using the PDS (Pocket PC)
 1. Select "Programming".
 2. Select "Module Programming".
3. Then, select items from the screen menu in the following order.
 1. Select "Programmable Parameters".
 2. Select "Exterior Lighting".
 3. Select "Autolamp On Setting- (GEM)".
4. Select "Standard (Other)" or "Low (Other)" on the M-MDS to set the illumination level.



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Fig. 57: Identifying DLC-2 Location

Courtesy of MAZDA MOTORS CORP.

NOTE:

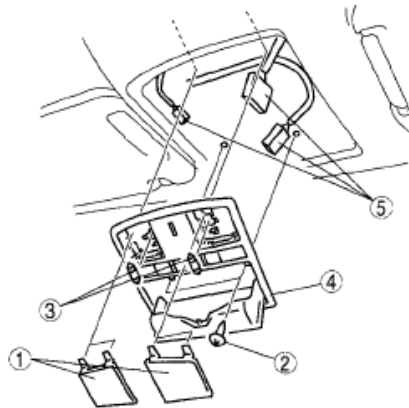
- When the M-MDS is set to Low (Other), the auto-light sensor sensitivity decreases, and the TNS and headlight illumination timing is slower.

5. Perform the procedure as indicated on the screen.

FRONT MAP LIGHT REMOVAL/INSTALLATION

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

1	Lens (See 09-18-28 Lens Removal Note.)
2	Screw
3	Front map light bulb
4	Front map light
5	Connector



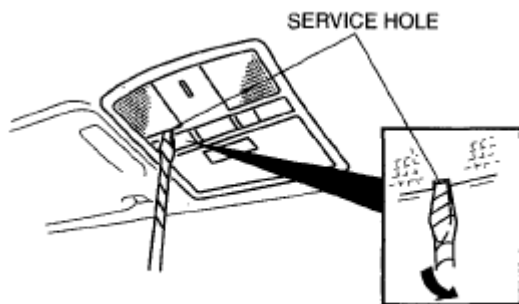
ac9uuw00002070

Fig. 58: Identifying Removal Sequence Of Front Map Light Components
 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 service hole and pry with the screwdriver in the direction shown by the arrow to remove the lens.



ac9uuw00000791

Fig. 59: Inserting Screwdriver Into Service Hole
 Courtesy of MAZDA MOTORS CORP.

FRONT MAP LIGHT INSPECTION

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

○—○ : Bulb

Switch position		Terminal		
Front map light switch	Interior light switch	C	F	H
ON	-	○	○	○
-	DOOR	○	○	
-	OFF			

ac9uuw00002389

Fig. 60: Terminals Continuity Chart
 Courtesy of MAZDA MOTORS CORP.

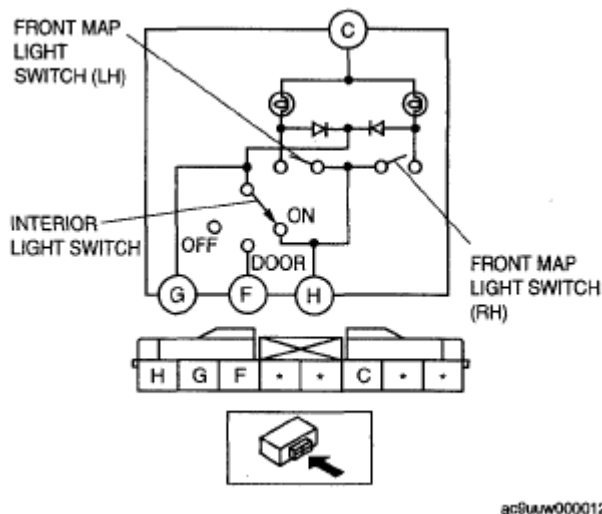


Fig. 61: Checking Continuity Between Front Map Light Terminals
 Courtesy of MAZDA MOTORS CORP.

INTERIOR LIGHT REMOVAL/INSTALLATION

INTERIOR LIGHT

1. Disconnect the negative battery cable.
2. Install in the reverse order of removal.
3. Remove the following parts:

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1. A-pillar trim (See **A-PILLAR TRIM REMOVAL/INSTALLATION** .)
 2. Front scuff plate inner (See **FRONT SCUFF PLATE REMOVAL/INSTALLATION** .)
 3. Rear scuff plate inner (See **REAR SCUFF PLATE REMOVAL/INSTALLATION** .)
 4. Front seat belt lower anchor installation bolt (Driver side) (See **FRONT SEAT BELT REMOVAL/INSTALLATION** .)
 5. B-pillar lower trim (See **B-PILLAR LOWER TRIM REMOVAL/INSTALLATION** .)
 6. Front seat belt upper anchor installation bolt (See **FRONT SEAT BELT REMOVAL/INSTALLATION** .)
 7. B-pillar upper trim (See **B-PILLAR UPPER TRIM REMOVAL/INSTALLATION** .)
 8. Trunk box (See **TRUNK BOX REMOVAL/INSTALLATION** .)
 9. Seat side box (See **SEAT SIDE BOX REMOVAL/INSTALLATION** .)
 10. Trunk end trim (See **TRUNK END TRIM REMOVAL/INSTALLATION** .)
 11. Third-row seat (See **THIRD-ROW SEAT REMOVAL/INSTALLATION** .)
 12. Third-row seat belt lower anchor installation bolt (See **THIRD-ROW SEAT BELT REMOVAL/INSTALLATION** .)
 13. Trunk side trim (See **TRUNK SIDE TRIM REMOVAL/INSTALLATION** .)
 14. Roof side trim (See **ROOF SIDE TRIM REMOVAL/INSTALLATION** .)
 15. Second-row seat belt upper anchor installation bolt (See **SECOND-ROW SEAT BELT REMOVAL/INSTALLATION** .)
 16. C-pillar trim (See **C-PILLAR TRIM REMOVAL/INSTALLATION** .)
 17. Third-row seat belt upper anchor installation bolt (See **THIRD-ROW SEAT BELT REMOVAL/INSTALLATION** .)
 18. D-pillar trim (See **D-PILLAR TRIM REMOVAL/INSTALLATION** .)
 19. Front map light (See **FRONT MAP LIGHT REMOVAL/INSTALLATION**.)
 20. Sunvisor (See **SUNVISOR REMOVAL/INSTALLATION** .)
 21. Assist handle (See **ASSIST HANDLE REMOVAL/INSTALLATION** .)
 22. RES unit cover (Vehicles with RES) (See **RES UNIT REMOVAL/INSTALLATION** .)
 23. Headliner (See **HEADLINER REMOVAL/INSTALLATION** .)
4. Detach the tab and remove the bulb housing.

NOTE:

- The valve housing and the wiring harness have been integrated and attached to the headliner. When replacing the valve housing, remove the wiring harness which passes under the urethane by cutting the urethane.

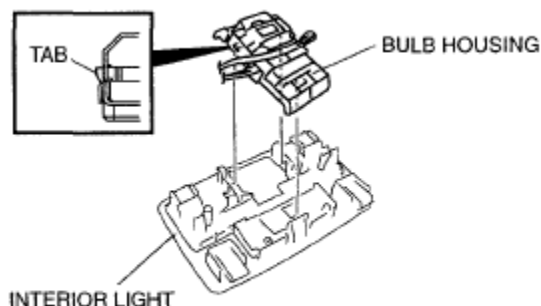


Fig. 62: Identifying Interior Light & Bulb Housing
Courtesy of MAZDA MOTORS CORP.

5. Pull in the direction of the arrows and detach the tabs.
6. Remove the interior light.
7. Install in the reverse order of removal.

NOTE:

- After installing the wiring harness, reinforce the urethane that was cut when removing the valve housing with vinyl tape.

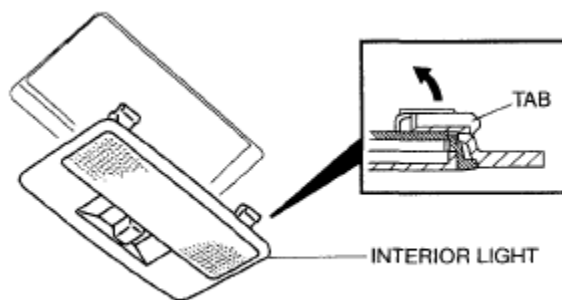


Fig. 63: Identifying Interior Light With Tab
Courtesy of MAZDA MOTORS CORP.

INTERIOR LIGHT BULB

1. Disconnect the negative battery cable.
2. Insert a tape-wrapped flathead screwdriver into the service hole and pry with the screwdriver in the direction shown by the arrow to remove the lens.

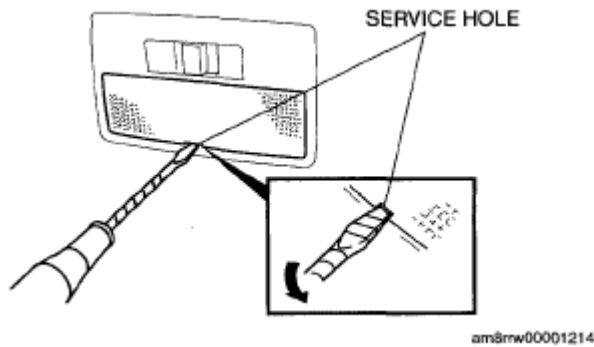


Fig. 64: Inserting Screwdriver Into Service Hole
 Courtesy of MAZDA MOTORS CORP.

3. Remove the rear interior light bulb.
4. Install in the reverse order of removal.

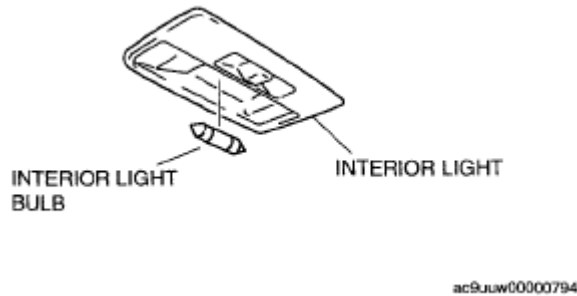


Fig. 65: Identifying Interior Light & Bulb
 Courtesy of MAZDA MOTORS CORP.

CARGO COMPARTMENT LIGHT REMOVAL/INSTALLATION

CARGO COMPARTMENT LIGHT

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

1	Cargo compartment light
2	Connector

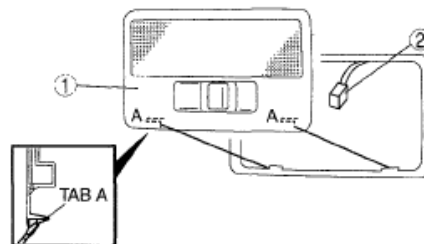
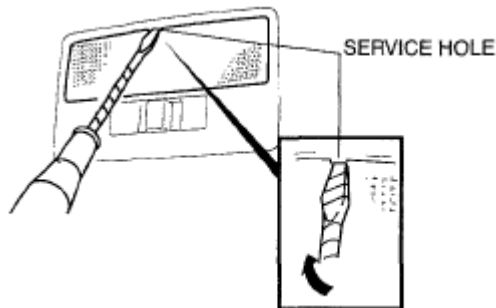


Fig. 66: Identifying Cargo Compartment Light & Connector
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

CARGO COMPARTMENT LIGHT BULB

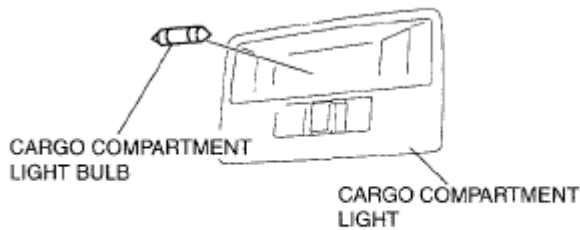
1. Disconnect the negative battery cable.
2. Insert a tape-wrapped flathead screwdriver into the service hole and pry with the screwdriver in the direction shown by the arrow to remove the lens.



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Fig. 67: Inserting Screwdriver Into Service Hole
Courtesy of MAZDA MOTORS CORP.

3. Remove the cargo compartment light bulb.
4. Install in the reverse order of removal.



ac9uuw00000797

Fig. 68: Identifying Cargo Compartment Light & Bulb
Courtesy of MAZDA MOTORS CORP.

CARGO COMPARTMENT LIGHT INSPECTION

1. Verify that the continuity between the cargo compartment light terminals is as indicated in the table.
 - If not as indicated in the table, replace the cargo compartment light.

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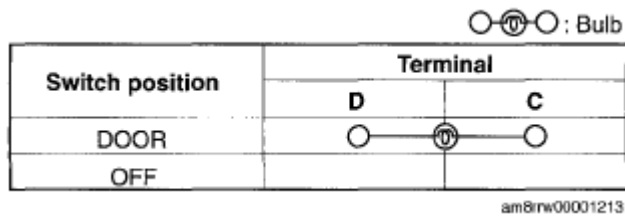


Fig. 69: Terminals Continuity Chart
Courtesy of MAZDA MOTORS CORP.

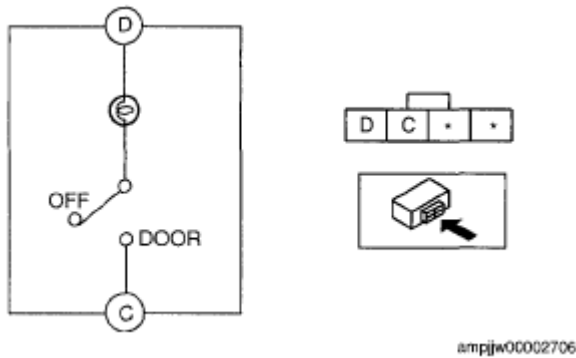


Fig. 70: Checking Continuity Between Cargo Compartment Light Terminals
Courtesy of MAZDA MOTORS CORP.

COURTESY LIGHT BULB REMOVAL/INSTALLATION

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

1	Lens (See 09-18-31 Lens Removal Note.)
2	Courtesy light bulb

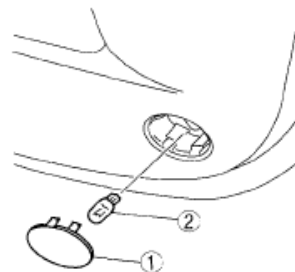


Fig. 71: Identifying Courtesy Light Bulb & Lens
Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

LENS REMOVAL NOTE

1. Insert a tape-wrapped flathead screwdriver into the service hole and pry with the screwdriver in the

direction shown by the arrow to remove the lens.

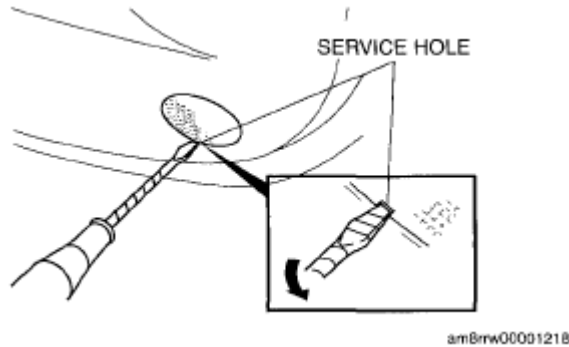


Fig. 72: Inserting Screwdriver Into Service Hole
Courtesy of MAZDA MOTORS CORP.

IGNITION KEY ILLUMINATION BULB REMOVAL/INSTALLATION

VEHICLES WITHOUT ADVANCED KEYLESS SYSTEM

1. Disconnect the negative battery cable.
2. Pull the upper column cover upward and detach the upper column cover from the lower column cover. (See **COLUMN COVER REMOVAL/INSTALLATION** .)
3. Put aside the upper column cover.
4. Remove the ignition key illumination bulb.
5. Install in the reverse order of removal.

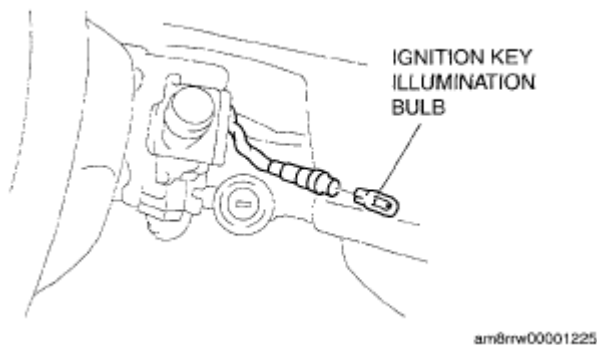


Fig. 73: Identifying Ignition Key Illumination Bulb
Courtesy of MAZDA MOTORS CORP.

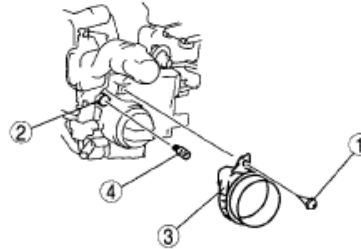
VEHICLES WITH ADVANCED KEYLESS SYSTEM

1. Disconnect the negative battery cable.
2. Remove the lower column cover. (See **COLUMN COVER REMOVAL/INSTALLATION** .)
3. Remove the coil antenna. (See **COIL ANTENNA REMOVAL/INSTALLATION [ADVANCED**

KEYLESS SYSTEM] .)

4. Remove in the order indicated in the table.

1	Screw
2	Socket (See 09-18-32 Socket Removal Note.)
3	Lens
4	Ignition key illumination bulb



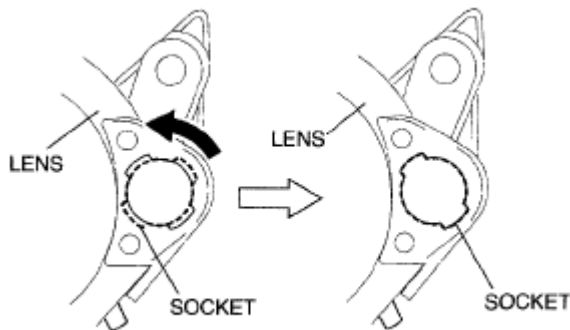
ac9uuw00000798

Fig. 74: Identifying Ignition Key Illumination Bulb, Socket, Lens & Screw
 Courtesy of MAZDA MOTORS CORP.

5. Install in the reverse order of removal.

SOCKET REMOVAL NOTE

1. Remove the socket by turning it in the direction shown by the arrow.



ac9uuw00000826

Fig. 75: Socket Removal
 Courtesy of MAZDA MOTORS CORP.

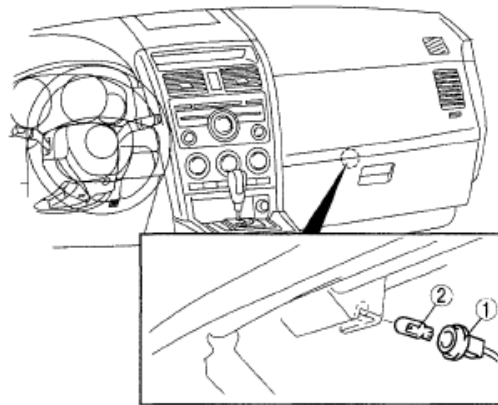
GLOVE COMPARTMENT LIGHT BULB REMOVAL/INSTALLATION

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

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1	Socket
2	Glove compartment light bulb



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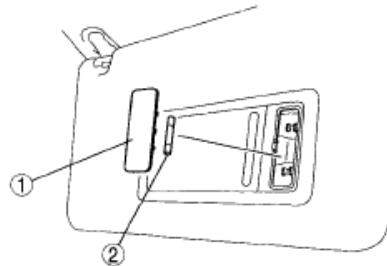
Fig. 76: Identifying Glove Compartment Light Bulb & Socket
Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

VANITY MIRROR ILLUMINATION BULB REMOVAL/INSTALLATION

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

1	Lens (See 09-18-33 Lens Removal Note.)
2	Vanity mirror illumination bulb



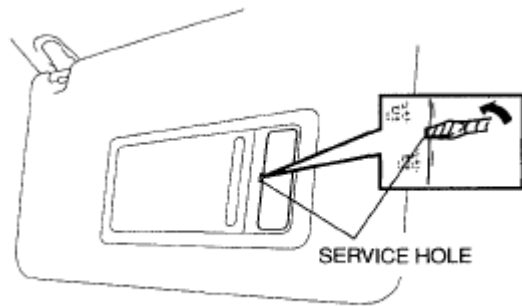
ampjw00002955

Fig. 77: Identifying Vanity Mirror Illumination Bulb & Lens
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 service hole, and pry it in the direction indicated by the arrow to remove the lens.



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Fig. 78: Inserting Screwdriver Into Service Hole
 Courtesy of MAZDA MOTORS CORP.

VANITY MIRROR ILLUMINATION INSPECTION

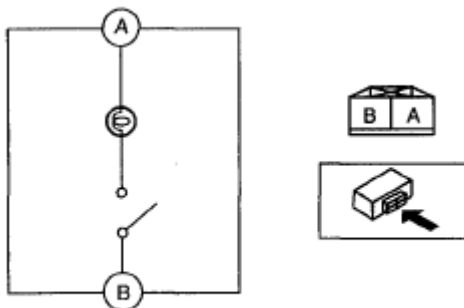
1. Remove the sunvisor. (See SUNVISOR REMOVAL/INSTALLATION .)
2. Verify that the continuity between the vanity mirror illumination terminals is as indicated in the table.
 - If not as indicated in the table, inspect the bulb. If there is no malfunction, replace the sunvisor.

○—⊕—○ : Bulb

Vanity mirror cover condition	Terminal	
	A	B
OPEN	○—⊕—○	
CLOSED		

am8rw00001374

Fig. 79: Terminals Continuity Chart
 Courtesy of MAZDA MOTORS CORP.



ampjw00002957

Fig. 80: Checking Continuity Between Vanity Mirror Illumination Terminals
 Courtesy of MAZDA MOTORS CORP.

INDIRECT ILLUMINATION REMOVAL/INSTALLATION

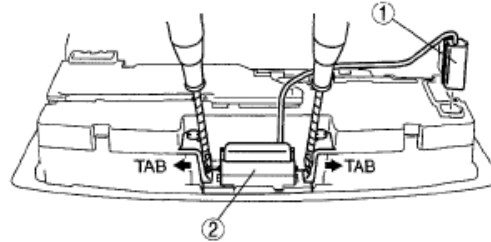
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CONSOLE

1. Disconnect the negative battery cable.
2. Remove the front map light. (See **FRONT MAP LIGHT REMOVAL/INSTALLATION.**)
3. Remove in the order indicated in the table.

1	Connector
2	Console indirect illumination



ac9uuw00002104

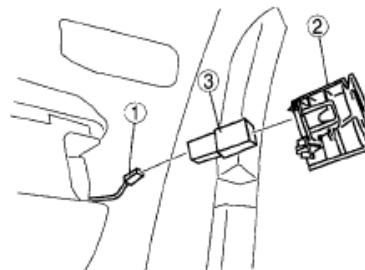
Fig. 81: Identifying Console Indirect Illumination & Connector
Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

FRONT DOOR POCKET

1. Disconnect the negative battery cable.
2. Remove the front door trim. (See **FRONT DOOR TRIM REMOVAL/INSTALLATION .**)
3. Remove the handle pull. (See **FRONT DOOR TRIM DISASSEMBLY/ASSEMBLY .**)
4. Remove in the order indicated in the table.

1	Connector
2	Cover
3	Front door pocket indirect illumination (See 09-18-34 Front door pocket indirect illumination removal note.)



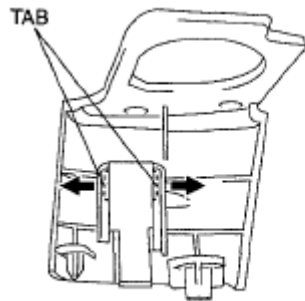
ac9uuw00001124

Fig. 82: Identifying Front Door Pocket Indirect Illumination, Cover & Connector
Courtesy of MAZDA MOTORS CORP.

5. Install in the reverse order of removal.

FRONT DOOR POCKET INDIRECT ILLUMINATION REMOVAL NOTE

1. Open the cover in the direction of the arrow and remove the front door pocket indirect illumination.



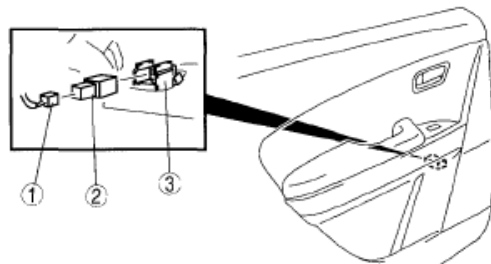
ac9uuw00001125

Fig. 83: Identifying Front Door Pocket Indirect Illumination Tabs
 Courtesy of MAZDA MOTORS CORP.

REAR DOOR POCKET

1. Disconnect the negative battery cable.
2. Remove the rear door trim. (See **REAR DOOR TRIM REMOVAL/INSTALLATION**)
3. Remove in the order indicated in the table.

1	Connector
2	Rear door pocket indirect illumination (See 09-18-35 Rear door pocket indirect illumination removal note.)
3	Cover



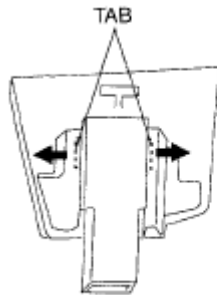
ac9uuw00000800

Fig. 84: Identifying Rear Door Pocket Indirect Illumination, Cover & Connector
 Courtesy of MAZDA MOTORS CORP.

4. Install in the reverse order of removal.

REAR DOOR POCKET INDIRECT ILLUMINATION REMOVAL NOTE

1. Open the cover in the direction of the arrow and remove the rear door pocket indirect illumination.



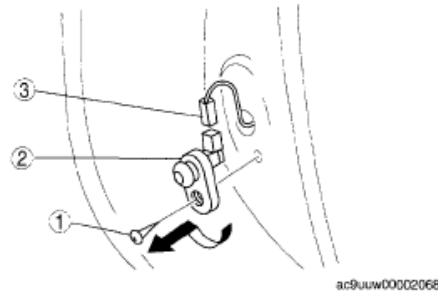
ac9uuw00001126

Fig. 85: Identifying Rear Door Pocket Indirect Illumination Tabs
 Courtesy of MAZDA MOTORS CORP.

DOOR SWITCH REMOVAL/INSTALLATION

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

1	Screw
2	Door switch
3	Connector



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Fig. 86: Identifying Door Switch, Connector & Screw
 Courtesy of MAZDA MOTORS CORP.

3. Install in the reverse order of removal.

DOOR SWITCH INSPECTION

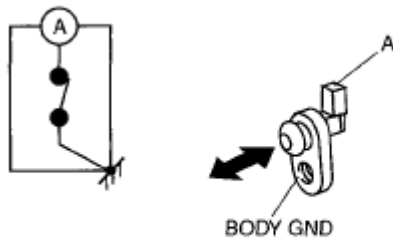
1. Verify that the continuity between door switch terminal and the body ground is as indicated in the table.
 - If not as indicated in the table, replace the door switch.

○—○ : Continuity

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

am8rrw00001217

Fig. 87: Terminals Continuity Chart
 Courtesy of MAZDA MOTORS CORP.



am8rw0001216

Fig. 88: Checking Continuity Between Door Switch Terminal & Body Ground
Courtesy of MAZDA MOTORS CORP.