

LAMPS

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LIGHTING DIAGNOSIS

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DESCRIPTION AND OPERATION

DIAGNOSTIC PROCEDURES

DESCRIPTION

JX vehicles use lighting on the interior and exterior of the vehicle for illuminating and indicating purposes. Lighting circuits are protected by fuses or circuit breakers. Lighting circuits require an overload protected power source, on/off device, lamps and body ground to operate properly. Plastic lamps require a wire in the harness to supply body ground to the lamp socket. Lamp sockets that are exposed to moisture should be coated with Mopar® Multi-purpose Grease, or equivalent, to avoid corrosion. If a socket has become corroded, clean socket and bulb base with abrasive fiber sanding pad or metallic bristle brush. Replace sockets and bulbs that are deformed from corrosion that could prevent continuous body ground.

Wire connectors can make intermittent contact or become corroded. Before coupling wire connectors, inspect the terminals inside the connector. Male terminals should not be bent or disengaged from the insulator. Female terminals should not be sprung open or disengaged from the insulator. Bent and sprung terminals can be repaired using needle nose pliers and pick tool. Corroded terminals appear chalky or green. Corroded terminals should be replaced to avoid recurrence of the problem symptoms. Wire connector terminals should be coated with Mopar® Multi-purpose Grease, or equivalent, to avoid corrosion.

Begin electrical system failure diagnosis by testing related fuses and circuit breakers in the fuse block and engine compartment. Verify that bulbs are in good condition and test continuity of the circuit ground. Refer to Group 8W, Wiring Diagrams, for component location and circuit information.

SAFETY PRECAUTIONS

DESCRIPTION

WARNING: EYE PROTECTION SHOULD BE USED WHEN SERVICING GLASS COMPONENTS. PERSONAL INJURY CAN RESULT.

CAUTION: Do not touch the glass of halogen bulbs with fingers or other possibly oily surface, reduced bulb life will result. Do not use bulbs with higher candle power than indicated in the Bulb Application table at the end of this group. Damage to lamp can result. Do not use fuses, circuit breakers or relays having greater amperage value than indicated on the fuse panel or in the Owners Manual.

When it is necessary to remove components to service another, it should not be necessary to apply excessive force or bend a component to remove it. Before damaging a trim component, verify hidden fasteners or captured edges are not holding the component in place.

DESCRIPTION AND OPERATION (Continued)

SYSTEM DIAGNOSTIC PROCEDURES

DESCRIPTION

When a vehicle experiences problems with the headlamp system, verify the condition of the battery

connections, charging system, headlamp bulbs, wire connectors, relay, high beam dimmer switch and headlamp switch. Refer to Group 8W, Wiring Diagrams for component locations and circuit information.

HEADLAMP DIAGNOSIS

CONDITION	POSSIBLE CAUSES	CORRECTION
HEADLAMPS ARE DIM WITH ENGINE IDLING OR IGNITION TURNED OFF	1. Loose or corroded battery cables. 2. Loose or worn generator drive belt. 3. Charging system output too low. 4. Battery has insufficient charge. 5. Battery is sulfated or shorted. 6. Poor lighting circuit Z1-ground. 7. Both headlamp bulbs defective.	1. Clean and secure battery cable clamps and posts. 2. Adjust or replace generator drive belt. 3. Test and repair charging system, refer to Group 8A, 4. Test battery state-of -charge , refer to Group 8A. 5. Load test battery, refer to Group 8A. 6. Test for voltage drop across Z1-ground locations, refer to Group 8W. 7. Replace both headlamp bulbs.
HEADLAMP BULBS BURN OUT FREQUENTLY	1. Charging system output too high. 2. Missing or burned out fuse. 3. Loose or corroded terminals or splices in circuit.	1. Test and repair charging system, refer to Group 8A. 2. Add or replace fuse. 3. Inspect and repair all connectors and splices, refer to Group 8W.
HEADLAMPS ARE DIM WITH ENGINE RUNNING ABOVE IDLE	1. Charging system output too low. 2. Poor lighting circuit Z1-ground. 3. High resistance in headlamp circuit. 4. Both headlamp bulbs defective.	1. Test and repair charging system, refer to Group 8A. 2. Test for voltage drop across Z1-ground locations, refer to Group 8W. 3. Test amperage draw of headlamp circuit. 4. Replace both headlamp bulbs.
HEADLAMPS FLASH RANDOMLY	1. Poor lighting circuit Z1-ground. 2. High resistance in headlamp circuit. 3. Faulty headlamps switch circuit breaker. 4. Loose or corroded terminals or splices in circuit.	1. Test for voltage drop across Z1-ground locations, refer to Group 8W. 2. Test amperage draw of headlamp circuit. 3. Replace headlamp switch. 4. Inspect and repair all connectors and splices, refer to Group 8W.
HEADLAMPS DO NOT ILLUMINATE	1. No voltage to headlamps. 2. No Z1-ground at headlamps. 3. Faulty headlamp switch. 4. Faulty headlamp dimmer (multi-function) switch. 5. Broken connector terminal or wire splice in headlamp circuit.	1. Repair open headlamp circuit, refer to Group 8W. 2. Repair circuit ground, refer to Group 8W. 3. Replace headlamp switch. 4. Replace multi-function switch. 5. Repair connector terminal or wire splice.

DESCRIPTION AND OPERATION (Continued)

FOG LAMP DIAGNOSIS

CONDITION	POSSIBLE CAUSES	CORRECTION
FOG LAMPS ARE DIM WITH ENGINE IDLING OR IGNITION TURNED OFF.	1. Loose or corroded battery cables. 2. Loose or worn generator drive belt. 3. Charging system output too low. 4. Battery has insufficient charge. 5. Battery is sulfated or shorted. 6. Poor lighting circuit Z1-ground. 7. Both fog lamp bulbs defective.	1. Clean and secure battery cable clamps and posts. 2. Adjust or replace generator drive belt. 3. Test and repair charging system, refer to Group 8A, 4. Test battery state-of -charge, refer to Group 8A. 5. Load test battery, refer to Group 8A. 6. Test for voltage drop across Z1-ground locations, refer to Group 8W. 7. Replace both fog lamp bulbs.
FOG LAMP BULBS BURN OUT FREQUENTLY	1. Charging system output too high. 2. Loose or corroded terminals or splices in circuit.	1. Test and repair charging system, refer to Group 8A. 2. Inspect and repair all connectors and splices, refer to Group 8W.
FOG LAMPS ARE DIM WITH ENGINE RUNNING ABOVE IDLE	1. Charging system output too low. 2. Poor lighting circuit Z1-ground. 3. High resistance in fog lamp circuit. 4. Both fog lamp bulbs defective.	1. Test and repair charging system, refer to Group 8A. 2. Test for voltage drop across Z1-ground locations, refer to Group 8W. 3. Test amperage draw of fog lamp circuit. 4. Replace both fog lamp bulbs.
FOG LAMPS FLASH RANDOMLY	1. Poor lighting circuit Z1-ground. 2. High resistance in fog lamp circuit. 3. Faulty fog lamp switch. 4. Loose or corroded terminals or splices in circuit.	1. Test for voltage drop across Z1-ground locations, refer to Group 8W. 2. Test amperage draw of fog lamp circuit. 3. Replace fog lamp switch. 4. Inspect and repair all connectors and splices, refer to Group 8W.
FOG LAMPS DO NOT ILLUMINATE	1. Blown fuse for fog lamps. 2. No Z1-ground at fog lamps. 3. Faulty fog lamp switch. 4. Broken connector terminal or wire splice in fog lamp circuit.	1. Replace fuse, refer to Group 8W. 2. Repair circuit ground, refer to Group 8W. 3. Replace fog lamp switch. 4. Repair connector terminal or wire splice.

HEADLAMP AND FOG LAMP ALIGNMENT

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GENERAL INFORMATION

HEADLAMP ALIGNMENT

DESCRIPTION

JX vehicle headlamps are equipped with a bubble level to aid up/down headlamp alignment (Fig. 1). The bubble level is used to assist headlamp alignment when compensating for vehicle ride height changes due to heavy luggage compartment loads. The bubble level cannot be calibrated, the headlamp must be replaced if bubble level vial is faulty. A gauge wheel is located on the top of the headlamp module to assist left/right alignment (Fig. 2).

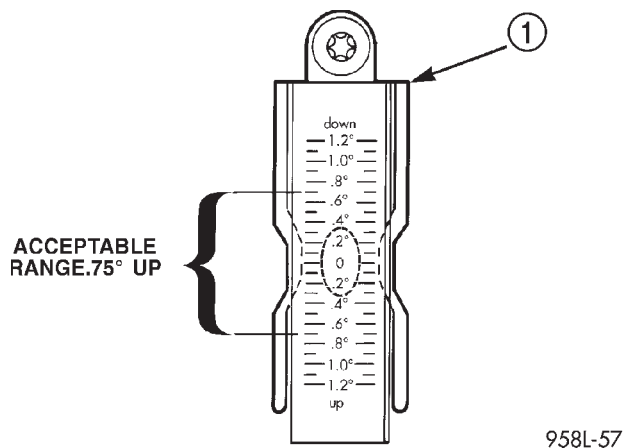


Fig. 1 Bubble Level

1 – BUBBLE LEVEL

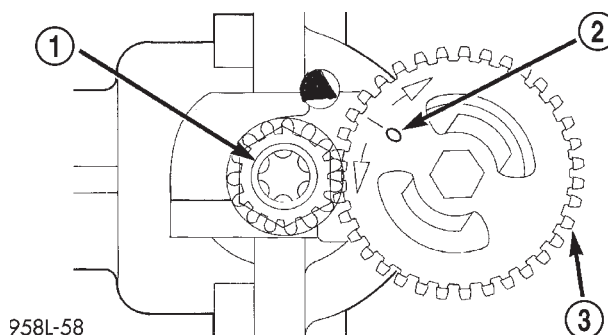


Fig. 2 Gauge Wheel – Typical

- 1 – ADJUSTER
- 2 – ZERO MARK
- 3 – GAUGE WHEEL

- (5) Verify that luggage area is not heavily loaded.
- (6) Fuel tank should be FULL. Add 2.94 kg (6.5 lbs.) of weight over the fuel tank for each estimated gallon of missing fuel.

HEADLAMP ADJUSTMENT USING ALIGNMENT SCREEN

ALIGNMENT SCREEN PREPARATION

- (1) Position vehicle on a level surface perpendicular to a flat wall 7.62 meters (25 ft.) away from front of headlamp lens (Fig. 3).
- (2) If necessary, tape a line on the floor 7.62 meters (25 ft.) away from and parallel to the wall.
- (3) From the ground up 1.27 meters (5 ft.), tape a line on the wall at the center line of the vehicle. Sight along the center line of the vehicle (from rear of vehicle forward) to verify accuracy of the line placement.
- (4) Rock vehicle side-to-side three times to allow suspension to stabilize.
- (5) Jounce front suspension three times by pushing downward on front bumper and releasing.
- (6) Measure the distance from the center of headlamp lens to the ground. Transfer measurement to the alignment screen (with tape). Use this line for up/down adjustment reference.

ADJUSTMENTS (Continued)

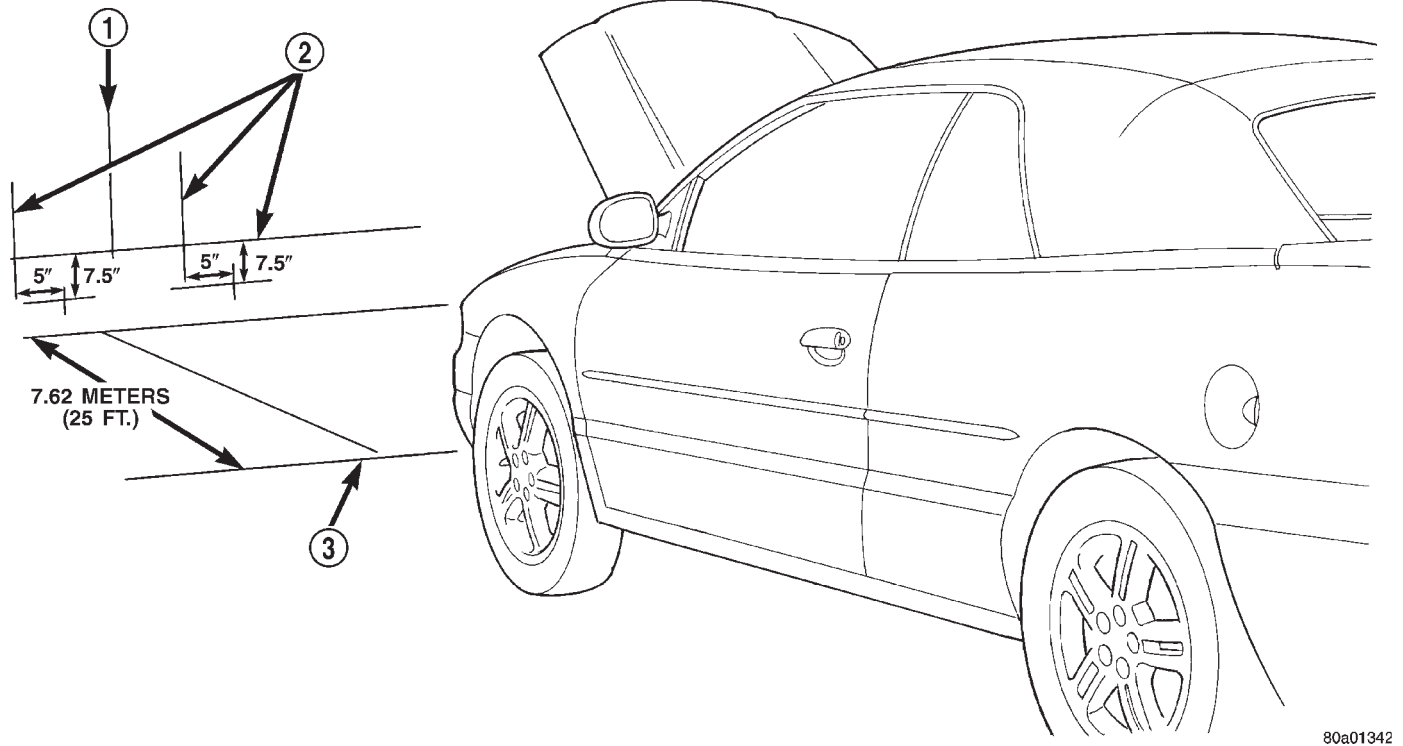


Fig. 3 Headlamp Alignment Screen

- 1 – CENTER OF VEHICLE
2 – CENTER OF HEADLAMPS

- 3 – FRONT OF HEADLAMP

(7) Measure distance from the center line of the vehicle to the center of each headlamp being aligned. Transfer measurements to screen (with tape) to each side of vehicle center line. Use these lines for left/right adjustment reference.

HEADLAMP ADJUSTMENT

A properly aimed low beam headlamp will project the center of the low beam hot spot on the alignment screen 190 mm (7.5 in.) below the headlamp center line. The side-to-side low beam hot spot should be 127 mm (5 in.) right of headlamp center line (Fig. 3). **The preferred headlamp alignment is 0 ($\pm 0.76^\circ$) for the up/down adjustment as indicated on bubble level. Preferred left/right alignment is 0 ($\pm 0.76^\circ$) as indicated on the gauge wheel.** The high beam headlamps cannot be aligned. The high beam pattern should be correct when the low beams are aligned properly.

NOTE: The bubble level and gauge wheel is calibrated before the headlamp is installed in the vehicle. The bubble level cannot be calibrated without damaging the headlamp module. If bubble level is faulty, replace headlamp module.

To adjust headlamp alignment, rotate alignment screws to achieve the specified low beam hot spot pattern (Fig. 4).

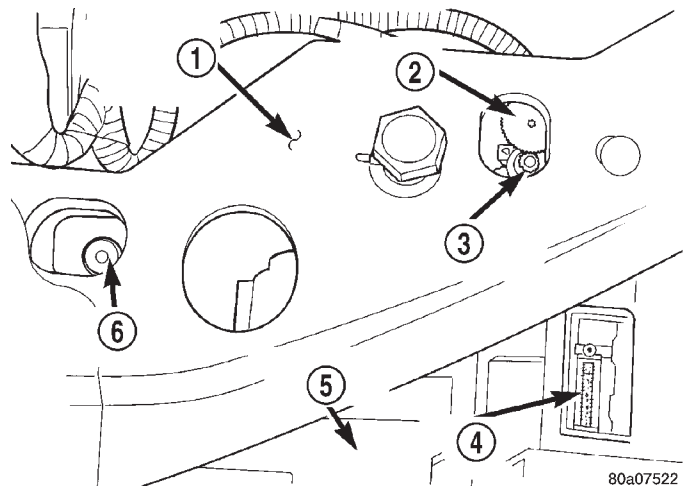
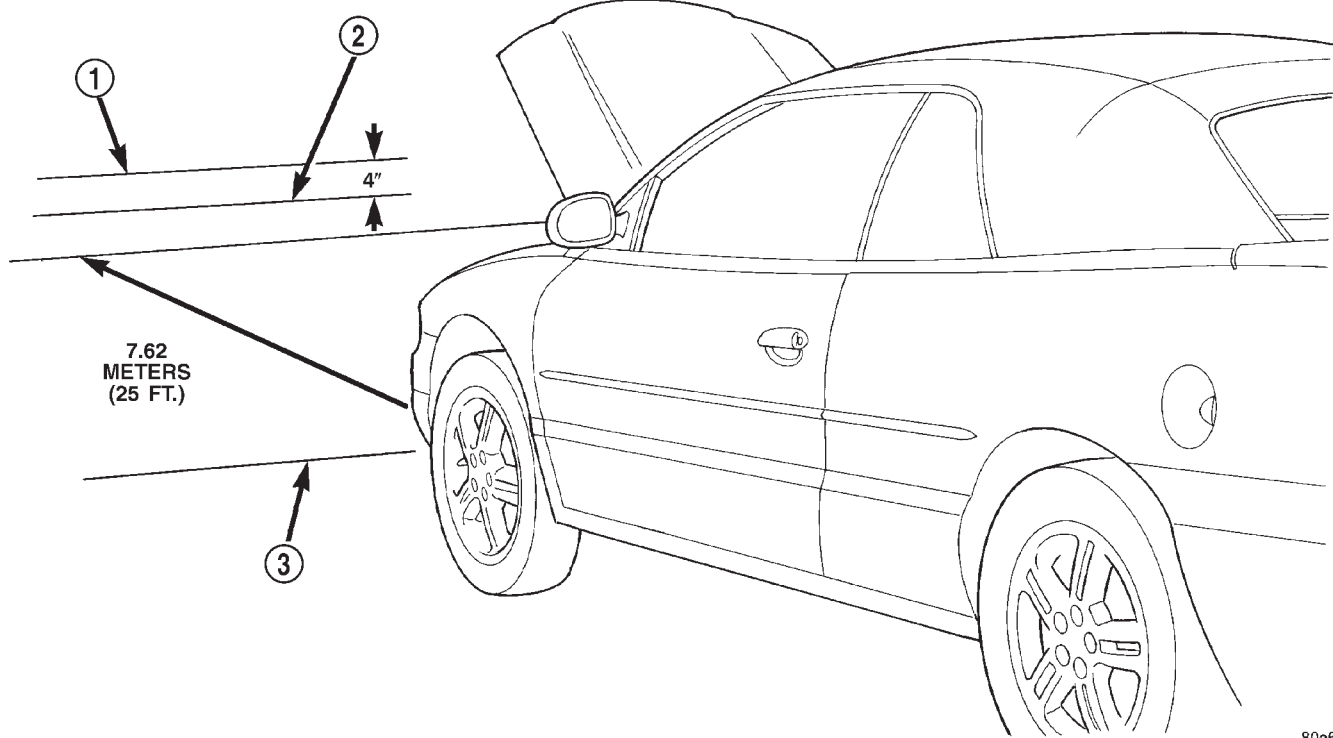


Fig. 4 Headlamp Alignment Screws

- 1 – RADIATOR CLOSURE PANEL
2 – GAUGE WHEEL
3 – LEFT/RIGHT ADJUSTER
4 – BUBBLE VIAL
5 – HEADLAMP MODULE
6 – UP/DOWN ADJUSTER

ADJUSTMENTS (Continued)



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Fig. 5 Fog Lamp Alignment

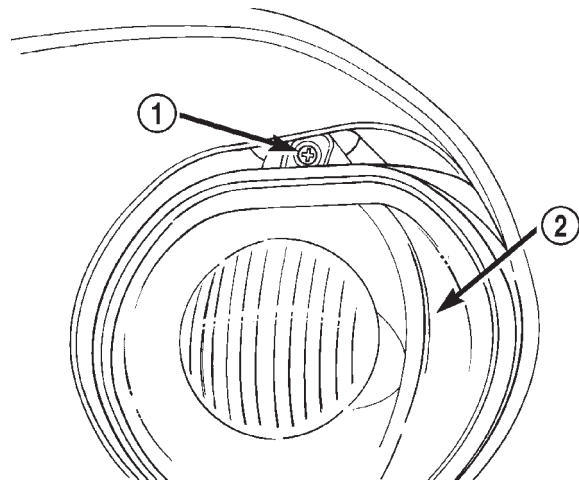
- 1 – CENTER OF FOGLAMP
2 – TOP OF BEAM PATTERN

- 3 – FRONT OF FOGLAMP

FOG LAMP ALIGNMENT

Prepare a alignment screen (Fig. 5). Refer to Alignment Screen Preparation paragraph in this section. A properly aligned fog lamp will project a pattern on the alignment screen 100 mm (4 in.) below the fog lamp center line and straight ahead.

To adjust fog lamp alignment, rotate alignment screw to achieve the specified hot spot pattern (Fig. 6).



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Fig. 6 Fog Lamp Adjuster

- 1 – UP/DOWN ADJUSTER
2 – FOGLAMP

EXTERIOR LAMP SWITCHES

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REMOVAL AND INSTALLATION

HEADLAMP SWITCH

Service procedures for the headlamp switch can be found in Group 8E, Instrument Panel and Gauges. More information can be found in Group 8W, Wiring Diagrams.

HEADLAMP DIMMER SWITCH

The headlamp dimmer switch is incorporated into the turn signal switch. Proper procedures can be found in Group 8J, Turn Signal and Flashers. More information can be found in Group 8W, Wiring Diagrams.

LAMP BULB SERVICE

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REMOVAL AND INSTALLATION

HEADLAMP BULB

REMOVAL

CAUTION: Do not touch the glass of halogen bulbs with fingers or other possibly oily surface, reduced bulb life will result.

- (1) Release hood latch and open hood.
- (2) Remove screws attaching headlamp module to radiator closure panel.
- (3) Remove headlamp module from radiator closure panel.
- (4) Rotate retaining ring counterclockwise one quarter turn.
- (5) Disconnect wire connector from back of headlamp bulb.
- (6) Remove retaining ring from headlamp module.
- (7) Pull bulb from headlamp module (Fig. 1).

INSTALLATION

- (1) Insert bulb into headlamp module.
- (2) Position retaining ring to headlamp module.
- (3) Rotate retaining ring clockwise one quarter turn.
- (4) Connect wire connector from back of headlamp bulb.
- (5) Position headlamp module to radiator closure panel.
- (6) Install screws attaching headlamp module to radiator closure panel.
- (7) Verify proper headlamp alignment. Adjust as necessary.

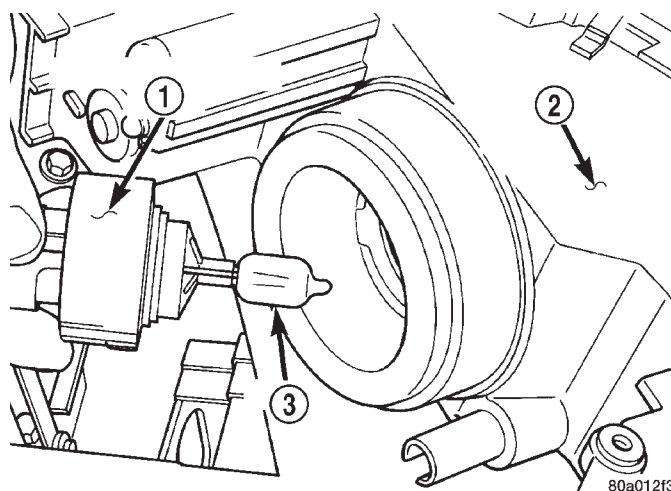


Fig. 1 Headlamp Bulb

- 1 - BULB RETAINING RING
2 - HEADLAMP MODULE
3 - BULB

FOG LAMP BULB

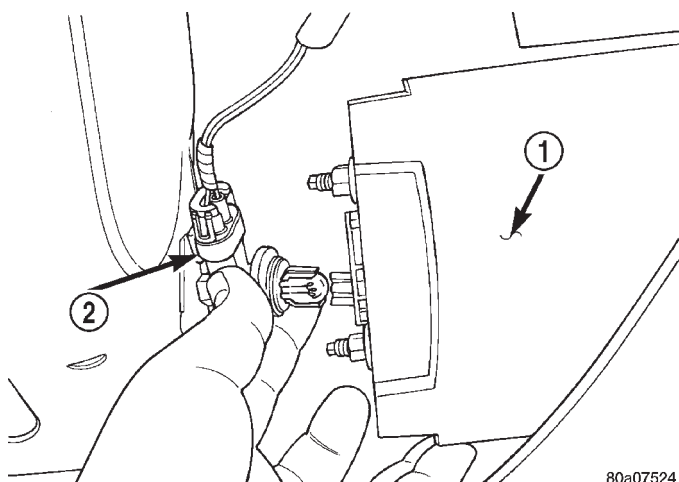
REMOVAL

- (1) Raise vehicle with suitable lifting device. Refer to Group 0, Lubrication and Maintenance, for proper procedures.
- (2) Rotate bulb one quarter turn counterclockwise.
- (3) Pull bulb from back of fog lamp (Fig. 2).
- (4) Disconnect wire connector from bulb.

INSTALLATION

- (1) Connect wire connector to fog lamp bulb.
- (2) Push bulb into back of fog lamp.
- (3) Rotate bulb one quarter turn clockwise.
- (4) Lower vehicle.

REMOVAL AND INSTALLATION (Continued)

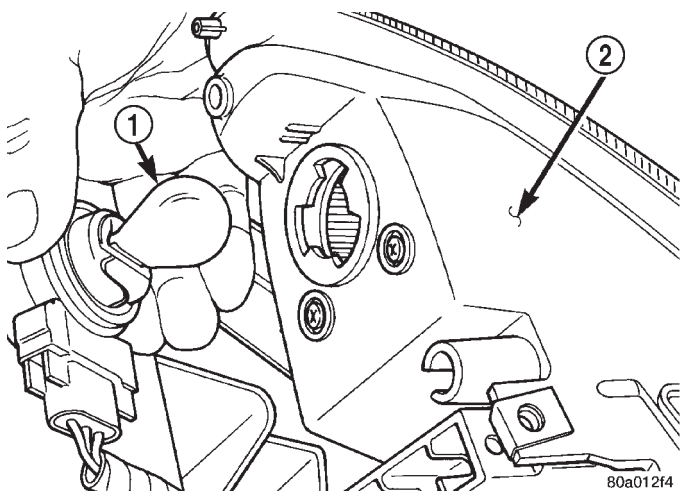
**Fig. 2 Fog Lamp Bulb**

- 1 – FASCIA FOGLAMP HOUSING
2 – FOGLAMP BULB

PARK AND TURN SIGNAL LAMP BULB

REMOVAL

- (1) Release hood latch and open hood.
- (2) Remove screws attaching headlamp module to radiator closure panel.
- (3) Remove headlamp module from radiator closure panel.
- (4) Rotate socket counterclockwise one quarter turn.
- (5) Pull socket from back of lamp (Fig. 3).
- (6) Pull bulb from socket.

**Fig. 3 Park and Turn Signal Lamp Bulb**

- 1 – BULB
2 – HEADLAMP MODULE

INSTALLATION

- (1) Push bulb into socket.
- (2) Position socket into back of lamp.
- (3) Rotate socket clockwise one quarter turn.

- (4) Position headlamp module to radiator closure panel.
- (5) Install screws attaching headlamp module to radiator closure panel.
- (6) Verify proper headlamp alignment.

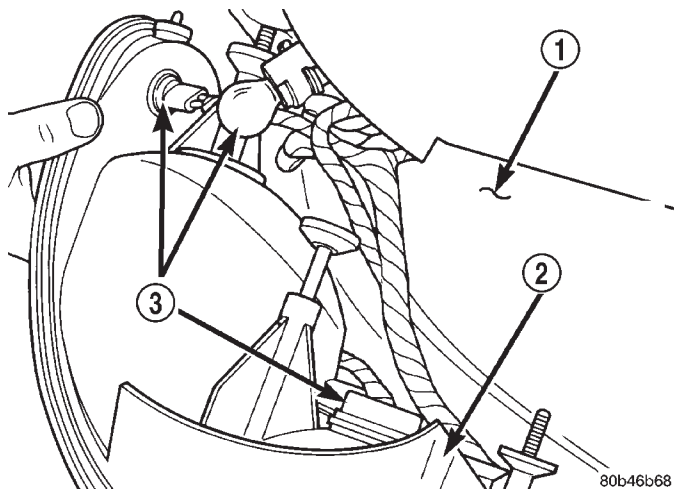
CENTER HIGH MOUNTED STOP LAMP (CHMSL) BULB

The center high mounted stop lamp (CHMSL) has no serviceable bulb. If the lamp does not function properly, the CHMSL assembly must be replaced.

TAIL, BRAKE AND TURN SIGNAL LAMP BULBS

REMOVAL

- (1) Release decklid latch and open decklid.
- (2) Remove trunk lining as necessary to gain access to tail lamp nuts.
- (3) Remove plastic nuts attaching tail lamp to rear closure panel.
- (4) Remove lamp from opening in quarter panel.
- (5) Rotate socket counterclockwise one quarter turn.
- (6) Pull socket from back of lamp (Fig. 4).
- (7) Pull bulb from socket.

**Fig. 4 Tail, Brake, and Turn Signal Lamp Bulb**

- 1 – REAR CLOSURE PANEL
2 – TAIL, STOP, TURN SIGNAL LAMP HOUSING
3 – BULBS

INSTALLATION

- (1) Push bulb into socket.
- (2) Push socket into back of lamp.
- (3) Rotate socket clockwise one quarter turn.
- (4) Position lamp to opening in quarter panel.
- (5) Install plastic nuts attaching tail lamp to rear closure panel.
- (6) Install trunk lining.
- (7) Close decklid.

REMOVAL AND INSTALLATION (Continued)

BACK-UP LAMP BULB**REMOVAL**

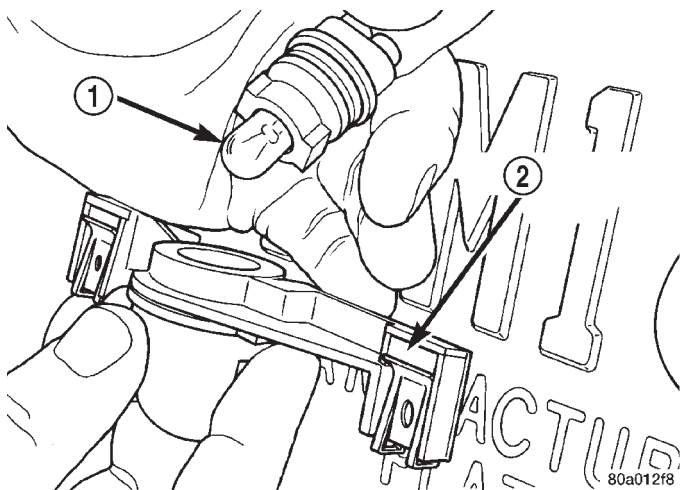
- (1) Release decklid latch and open decklid.
- (2) Remove trunk lining as necessary to gain access to tail lamp nuts.
- (3) Remove plastic nuts attaching tail lamp to rear closure panel.
- (4) Remove lamp from opening in quarter panel.
- (5) Rotate socket counterclockwise one quarter turn.
- (6) Pull socket from back of lamp.
- (7) Pull bulb from socket.

INSTALLATION

- (1) Push bulb into socket.
- (2) Push socket into back of lamp.
- (3) Rotate socket clockwise one quarter turn.
- (4) Position tail lamp to opening in quarter panel.
- (5) Install plastic nuts attaching tail lamp to rear closure panel.
- (6) Install trunk lining.

LICENSE PLATE LAMP BULB**REMOVAL**

- (1) Remove screws attaching license plate lamp to rear bumper fascia.
- (2) Remove license plate lamp from rear fascia.
- (3) Rotate socket counterclockwise one quarter turn.
- (4) Pull socket from back of lamp (Fig. 5).
- (5) Pull bulb from socket.

**Fig. 5 License Plate Lamp Bulb**

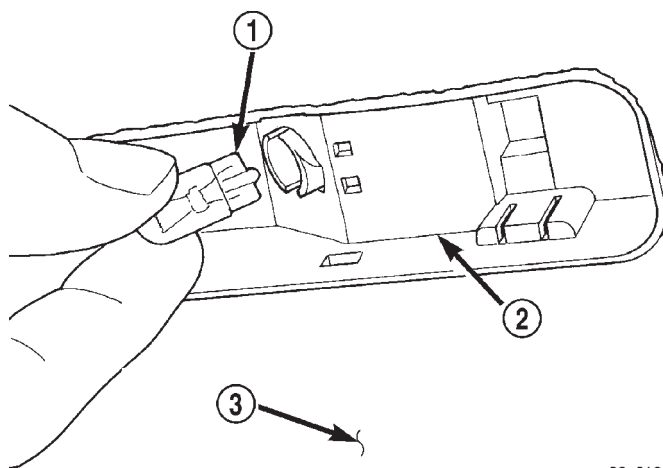
- 1 - BULB
2 - LICENSE PLATE LAMP

INSTALLATION

- (1) Push bulb into socket.
- (2) Push socket into back of lamp.
- (3) Rotate socket clockwise one quarter turn.
- (4) Position license plate lamp to rear fascia.
- (5) Install screws attaching license plate lamp to rear bumper fascia.

DOOR COURTESY LAMP BULB**REMOVAL**

- (1) Using a small, flat bladed tool inserted into rear edge of door courtesy lamp lens, remove lens.
- (2) Pull courtesy lamp bulb from bulb socket (Fig. 6).



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Fig. 6 Door Courtesy Lamp Bulb

- 1 - BULB
2 - COURTESY LAMP HOUSING
3 - DOOR TRIM PANEL

INSTALLATION

- (1) Push courtesy lamp bulb into bulb socket.
- (2) Insert front edge of courtesy lamp lens to lamp housing.
- (3) Snap lamp lens into lamp housing.

FRONT MAP LAMP BULB**REMOVAL**

- (1) Using a small, flat bladed tool inserted into slot in lamp lens, remove map lamp lens.
- (2) Pull bulb from map lamp.

INSTALLATION

- (1) Push bulb into map lamp.
- (2) Install map lamp lens.

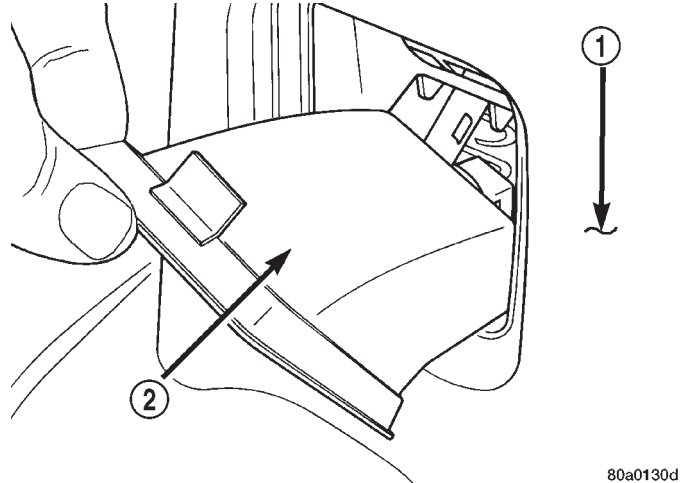
REMOVAL AND INSTALLATION (Continued)

ASH RECEIVER/CUP HOLDER LAMP BULB**REMOVAL**

- (1) Use a small, flat bladed pry tool, insert into the slot in lamp bezel, and push inward to release from cubby bin.
- (2) Pull lamp assembly from cubby bin.
- (3) Remove lamp cover.
- (4) Remove bulb.

INSTALLATION

- (1) Install bulb.
- (2) Install lamp cover.
- (3) Position lamp assembly into cubby bin connector end first, and snap lamp into cubby bin.

**Fig. 7 Floor Console Courtesy Lamp**

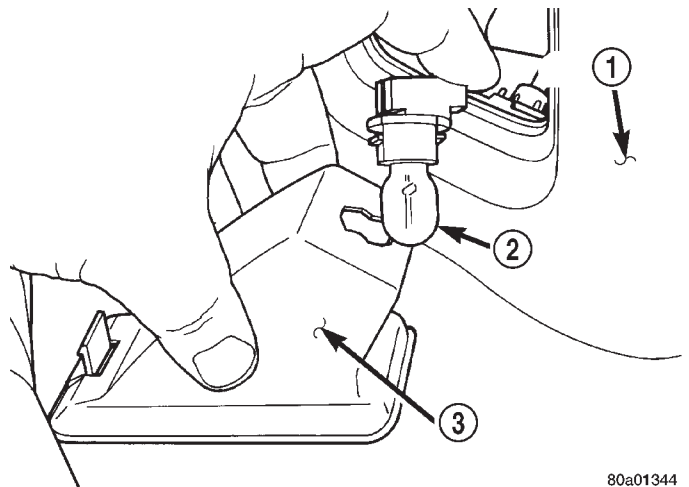
- 1 – FLOOR CONSOLE
2 – FLOOR CONSOLE COURTESY LAMP

REMOVAL

- (1) Using a small, flat bladed tool inserted into top edge of courtesy lamp, remove courtesy lamp from floor console (Fig. 7).
- (2) Rotate bulb socket counterclockwise one quarter turn.
- (3) Pull bulb socket from courtesy lamp.
- (4) Pull bulb from bulb socket (Fig. 8).

INSTALLATION

- (1) Push bulb into bulb socket.
- (2) Push bulb socket into courtesy lamp.
- (3) Rotate bulb socket clockwise one quarter turn.
- (4) Position lower edge of courtesy lamp to floor console.
- (5) Snap courtesy lamp into floor console.

**Fig. 8 Floor Console Courtesy Lamp Bulb**

- 1 – FLOOR CONSOLE
2 – BULB
3 – FLOOR CONSOLE COURTESY LAMP

LIGHTED TRANSMISSION RANGE INDICATOR LETTER BEZEL LAMP

The Lighted Transmission Range Indicator Letter Bezel Lamp, is not a serviceable lamp. If the lamp does not function properly, the Lighted Transmission Range Indicator Letter Bezel assembly must be replaced.

LAMP HOUSING

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REMOVAL AND INSTALLATION

HEADLAMP MODULE

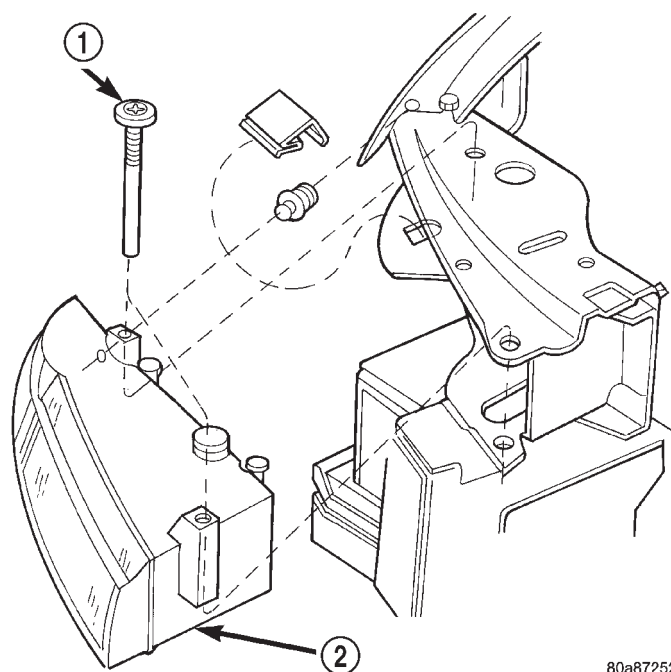
The headlamp module contains the park and turn signal lamps and is serviced as an assembly.

REMOVAL

- (1) Release hood latch and open hood.
- (2) Remove screws attaching headlamp module to radiator closure panel and headlamp adapter (Fig. 1).
- (3) Remove headlamp module from radiator closure panel (Fig. 2).
- (4) Disconnect wire connector from headlamp bulb socket.
- (5) Rotate park/turn signal lamp socket one quarter turn counterclockwise.
- (6) Pull park/turn signal socket from headlamp module.
- (7) Remove headlamp module from vehicle.

INSTALLATION

- (1) Position headlamp module to vehicle.
- (2) Push park/turn signal socket into headlamp module.
- (3) Rotate park/turn signal lamp socket one quarter turn clockwise.
- (4) Connect wire connector to headlamp bulb socket.
- (5) Position headlamp module to radiator closure panel.
- (6) Install screws attaching headlamp module to radiator closure panel.
- (7) Verify proper headlamp alignment.



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Fig. 1 Headlamp Module Screws

- 1 - MODULE SCREWS
2 - HEADLAMP MODULE

FOG LAMP

REMOVAL

- (1) Raise vehicle with suitable lifting device. Refer to Group 0, Lubrication and Maintenance, for proper procedures.
- (2) Disconnect wire connector from fog lamp bulb.
- (3) Remove nuts attaching fog lamp to front fascia.
- (4) Remove fog lamp from front fascia.

REMOVAL AND INSTALLATION (Continued)

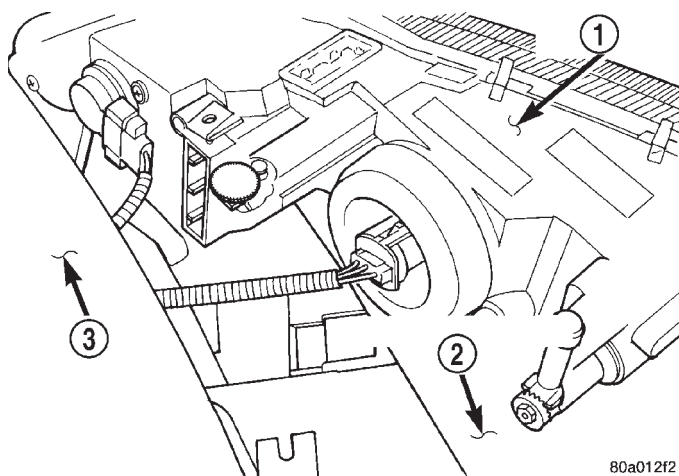


Fig. 2 Headlamp Module

- 1 - HEADLAMP MODULE
- 2 - FRONT BUMPER FASCIA
- 3 - RADIATOR CLOSURE PANEL

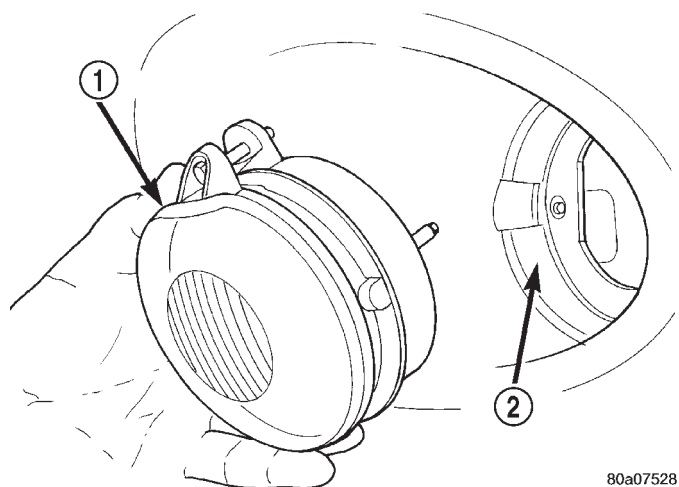


Fig. 3 Fog Lamp

- 1 - FOG LAMP
- 2 - FASCIA FOG LAMP HOUSING

INSTALLATION

- (1) Position fog lamp in front fascia.
- (2) Install nuts attaching fog lamp to front fascia.
- (3) Connect wire connector to fog lamp bulb.

CENTER HIGH MOUNTED STOP LAMP (CHMSL)

REMOVAL

- (1) Remove upper deck molding. Refer to Group 23, Body, for proper procedure.
- (2) Remove screws attaching CHMSL assembly to upper deck molding (Fig. 4).
- (3) Remove trunk trim panel as necessary to connect CHMSL wire connector.

- (4) Remove CHMSL from upper deck molding.

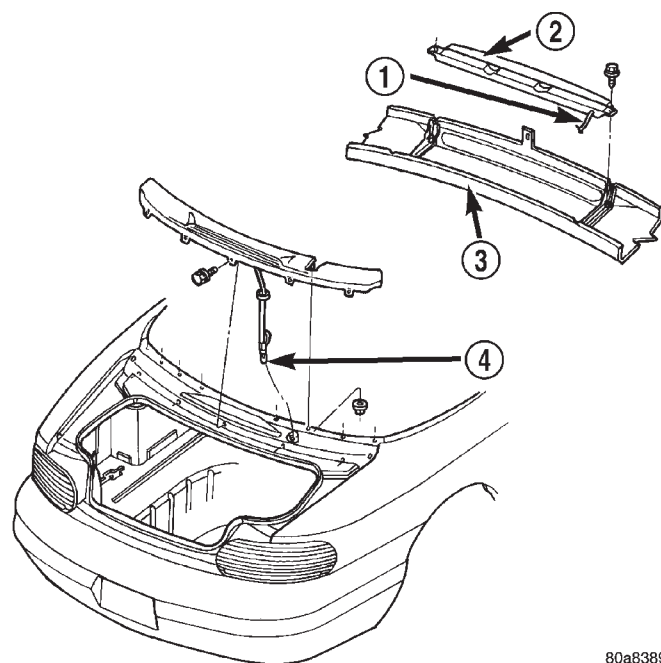


Fig. 4 Center High Mount Stop Lamp

- 1 - WIRE HARNESS
- 2 - CHMSL
- 3 - UPPER DECK MOLDING
- 4 - WIRE CONNECTOR

INSTALLATION

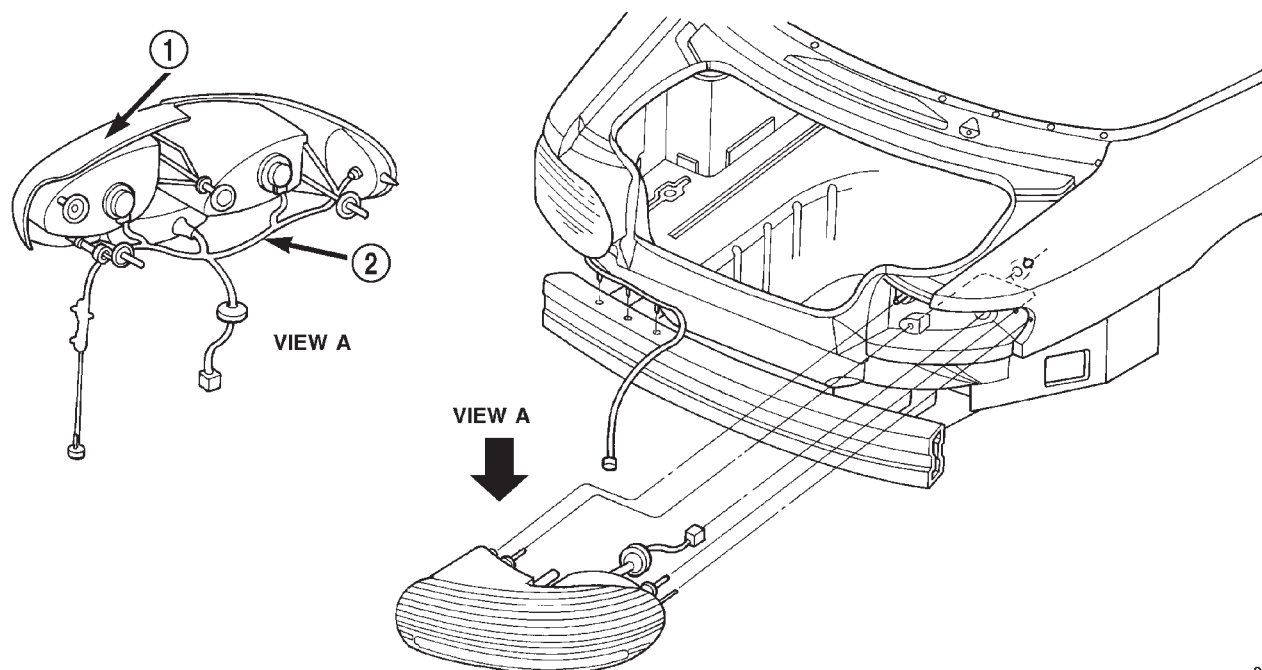
- (1) Position CHMSL to upper deck molding.
- (2) Connect CHMSL wire connector and reposition trunk trim panel.
- (3) Install screws attaching CHMSL assembly to upper deck molding.
- (4) Install upper deck molding. Refer to Group 23, Body, for proper procedure.

TAIL, BRAKE, TURN SIGNAL, BACKUP AND SIDE MARKER LAMPS

REMOVAL

- (1) Release decklid latch and open decklid.
- (2) Remove trunk lining as necessary to gain access to tail lamp nuts.
- (3) Remove plastic nuts attaching tail lamp to rear closure panel.
- (4) Remove lamp from opening in quarter panel (Fig. 5).
- (5) Rotate bulb sockets counterclockwise one quarter turn.
- (6) Pull bulb sockets from back of lamp.
- (7) Remove tail, brake, turn signal, backup and side marker lamps from vehicle.

REMOVAL AND INSTALLATION (Continued)



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Fig. 5 Tail, Brake, Turn Signal, Backup and Side Marker Lamp

1 - TAIL, STOP, TURN SIGNAL, BACKUP AND SIDEMARKER LAMP

2 - WIRE HARNESS

INSTALLATION

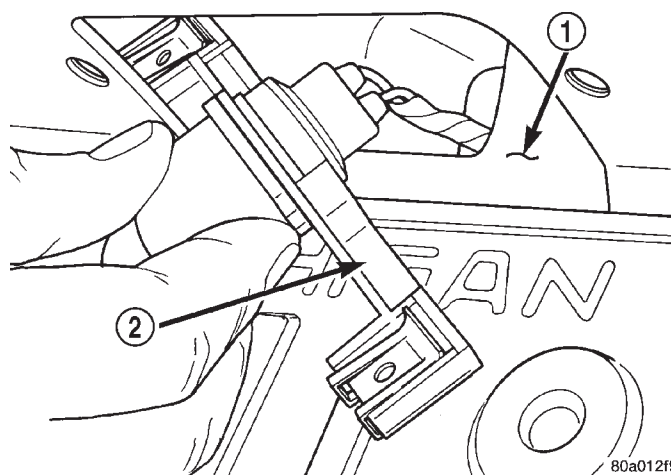
- (1) Position tail, brake, turn signal, backup and side marker lamp to vehicle.
- (2) Push bulb sockets into back of lamp.
- (3) Rotate bulb sockets clockwise one quarter turn.
- (4) Position lamp to opening in quarter panel.
- (5) Install plastic nuts to attach tail lamp to rear closure panel in the following sequence: outboard, center, inboard.
- (6) Install trunk lining.

LICENSE PLATE LAMP**REMOVAL**

- (1) Remove screws attaching license plate lamp to rear bumper fascia.
- (2) Remove license plate lamp from rear fascia (Fig. 6).
- (3) Rotate socket counterclockwise one quarter turn.
- (4) Pull socket from back of lamp.
- (5) Remove license plate lamp from vehicle.

INSTALLATION

- (1) Position license plate lamp to vehicle.
- (2) Push socket into back of lamp.
- (3) Rotate socket clockwise one quarter turn.
- (4) Position license plate lamp to rear fascia.
- (5) Install screws attaching license plate lamp to rear bumper fascia.



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Fig. 6 License Plate Lamp

1 - REAR BUMPER FASCIA

2 - LICENSE PLATE LAMP

DOOR COURTESY LAMP**REMOVAL**

- (1) Using a small, flat bladed tool inserted into rear edge of door courtesy lamp lens, remove lens (Fig. 7).
- (2) Pull courtesy lamp from door trim panel (Fig. 8).
- (3) Disengage wire connector from courtesy lamp bulb socket.

REMOVAL AND INSTALLATION (Continued)

- (4) Remove courtesy lamp from vehicle.

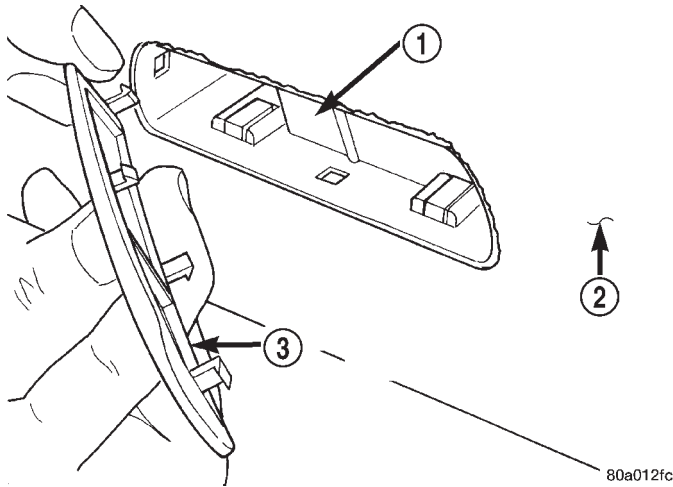


Fig. 7 Courtesy Lamp Lens

- 1 - COURTESY LAMP HOUSING
2 - DOOR TRIM PANEL
3 - COURTESY LAMP LENS

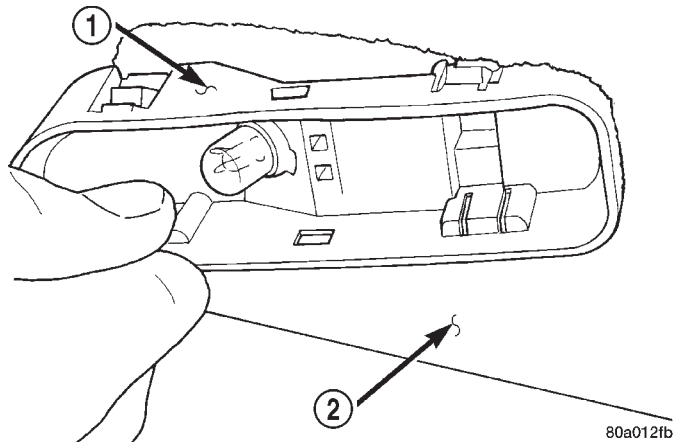


Fig. 8 Courtesy Lamp

- 1 - COURTESY LAMP HOUSING
2 - DOOR TRIM PANEL

INSTALLATION

- (1) Position courtesy lamp from vehicle.
- (2) Connect wire connector to courtesy lamp bulb socket.
- (3) Push courtesy lamp into door trim panel (Fig. 8).
- (4) Insert front edge of courtesy lamp lens to lamp housing.
- (5) Snap lamp lens into lamp housing.

FRONT MAP LAMP

The front map lamp is not a serviceable component. If the front map lamp does not operate properly, the rear view mirror assembly must be replaced.

ASH RECEIVER/CUP HOLDER LAMP

REMOVAL

- (1) Using a small, flat bladed pry tool inserted into slot in lamp bezel, release tab holding lamp to cubby bin.
- (2) Pull bezel and lamp assembly from cubby bin.
- (3) Disconnect wire connector from lamp assembly.
- (4) Remove lamp assembly from vehicle.

INSTALLATION

- (1) Position lamp assembly to vehicle.
- (2) Connect wire connector to lamp assembly.
- (3) Push bezel and lamp assembly into cubby bin to engage tabs.

FLOOR CONSOLE COURTESY LAMP

REMOVAL

- (1) Using a small, flat bladed tool inserted into slot in top edge of courtesy lamp, remove courtesy lamp from floor console (Fig. 9).
- (2) Rotate bulb socket counterclockwise one quarter turn.
- (3) Pull bulb socket from courtesy lamp (Fig. 10).
- (4) Remove console courtesy lamp from vehicle.

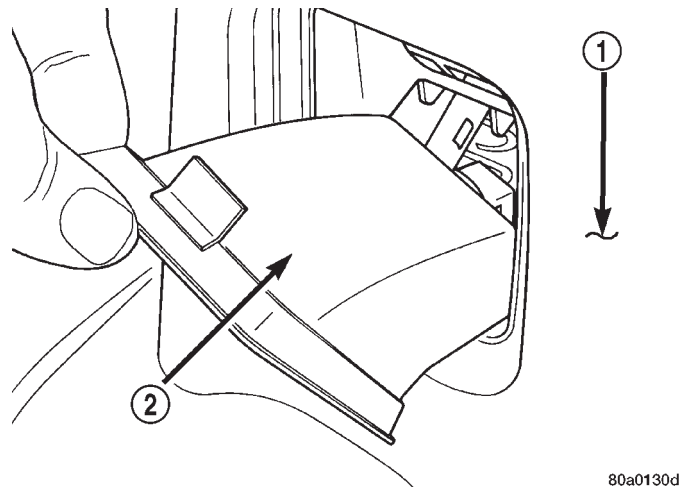


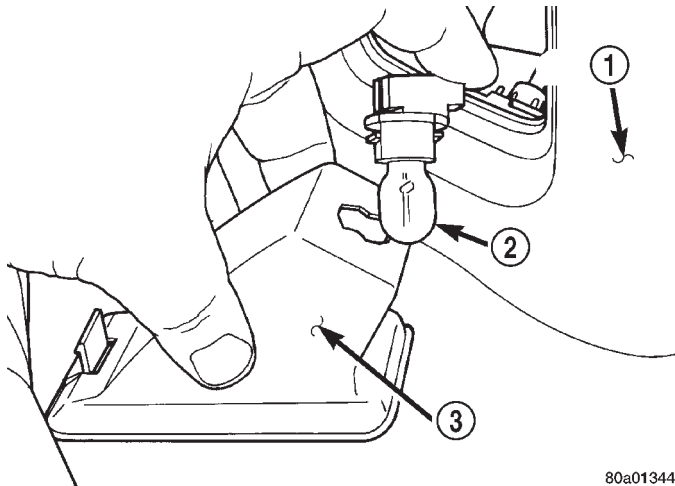
Fig. 9 Floor Console Courtesy Lamp

- 1 - FLOOR CONSOLE
2 - FLOOR CONSOLE COURTESY LAMP

INSTALLATION

- (1) Place console courtesy lamp in position.
- (2) Push bulb socket into courtesy lamp.
- (3) Rotate bulb socket clockwise one quarter turn.
- (4) Position lower edge of courtesy lamp to floor console.
- (5) Snap courtesy lamp into floor console.

REMOVAL AND INSTALLATION (Continued)



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Fig. 10 Floor Console Courtesy Lamp Bulb

- 1 - FLOOR CONSOLE
 2 - BULB
 3 - FLOOR CONSOLE COURTESY LAMP

LIGHTED TRANSMISSION RANGE INDICATOR LETTER BEZEL**REMOVAL**

- (1) Remove floor console. Refer to Group 23, Body, for proper procedure.
- (2) Disconnect the wire harness connector on bottom-side of floor console.
- (3) Disconnect the inverter for lighted Transmission Range Indicator letter bezel from shifter cover.

(4) Pull bezel downward through access hole in floor console.

(5) Remove lighted transmission range indicator letter bezel from vehicle.

INSTALLATION

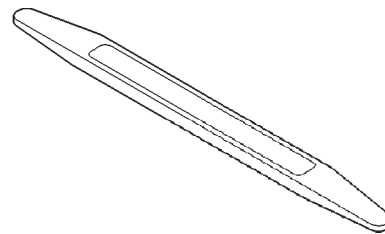
(1) Position lighted transmission range indicator letter bezel to vehicle.

(2) Push bezel upward through access hole in floor console.

(3) Connect inverter for lighted transmission range indicator letter bezel to shifter cover.

(4) Connect the wire harness connector on bottom-side of floor console.

(5) Install floor console. Refer to Group 23, Body, for proper procedure.

SPECIAL TOOLS**LAMP SERVICE****Trim Stick C-4755**

LAMP SYSTEMS

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ILLUMINATED ENTRY DIAGNOSTIC PROCEDURES	18	

DESCRIPTION AND OPERATION

DAYTIME RUNNING LAMP (CANADA)

DESCRIPTION

JX vehicles built for use in Canada are equipped with a Daytime Running Lamp (DRL) system. The DRL system operates the headlamps at 50% illumination with the headlamp switch OFF, park brake released and the ignition ON. The DRL system is controlled by the Daytime Running Lamp Module located on the back of the multi-function module behind the instrument panel (Fig. 1). The DRL module overrides the headlamp switch when the headlamps are turned OFF. The headlamps operate normally when the headlamps are turned ON. Refer to Group 8W, Wiring Diagrams, for component locations and circuit information.

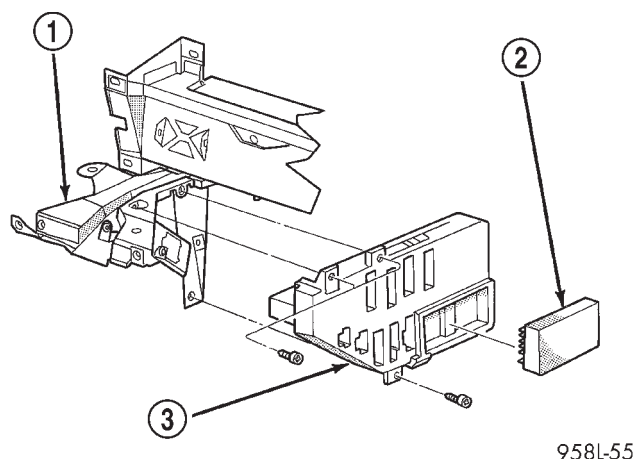


Fig. 1 Daytime Running Lamp Module

- 1 - FUSE BLOCK BRACKET
- 2 - DAYTIME RUNNING LAMP MODULE
- 3 - MULTI FUNCTION MODULE

HEADLAMP TIME DELAY SYSTEM

DESCRIPTION

The optional Headlamp Time Delay system is controlled by the Body Controller (BC) and a relay located in the junction block. The headlamp time delay system can be activated by turning ON the headlamps when the engine is running, turn OFF the ignition switch, then turn OFF the headlamp switch. The BC will allow the headlamps to remain ON for 90 seconds before they automatically turn off. Refer to the Owner's Manual for more information.

ILLUMINATED ENTRY

DESCRIPTION

The Illuminated Entry System is available on vehicles equipped with the Remote Keyless Entry system. The Illuminated Entry System turns ON the courtesy lamps when the remote keyless entry system is activated. The Remote Keyless Entry Module and the Body Controller are used to control the system. Courtesy lamps will turn on for 30 seconds (± 1 second) and fade to OFF over a five second period.

The Illuminated Entry System also turns ON the courtesy lamps (and ignition switch lamp) when door is opened. The courtesy lamps will remain ON while the door is open, then fade to OFF 30 seconds (± 1 second) after the last door is closed.

The courtesy and ignition switch lamps will fade to OFF immediately when the ignition is switched to ON.

The Illuminated Entry System cannot be activated during the 30 second (± 1 second) period after the ignition switch is turned OFF. After a door is opened and closed during this 30 second period, the system will function as previously described.

When the battery voltage has been interrupted to the Illuminated Entry System, the system will not function until the remote keyless entry UNLOCK is actuated.

DIAGNOSIS AND TESTING

LAMP SYSTEM DIAGNOSTIC PROCEDURES

Refer to Group 8W, Wiring Diagrams for component location and circuit information. Refer to the Body Systems Diagnostic Procedures Manual for more information.

ILLUMINATED ENTRY DIAGNOSTIC PROCEDURES

When testing the system, all doors must be closed to prevent courtesy lamps from lighting. Verify that

remote keyless entry system is operating properly before testing illuminated entry circuits. The body controller uses input from the remote keyless entry system to switch ON the courtesy lamps.

Refer to Group 8W, Wiring Diagrams for component location and circuit information. Refer to Body Systems Diagnostic Procedures Manual for more information.

BULB APPLICATION

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SPECIFICATIONS

EXTERIOR LAMPS

CAUTION: Do not use bulbs that have a higher candle power than the bulb listed in the Bulb Application Table. Damage to lamp can result.

CAUTION: Do not touch halogen bulbs with fingers or other oily surfaces. Bulb life will be reduced.

Headlamp	9007QL or 9007
Fog lamp	9006
Park/Turn Signal	3157K or 3157
Center High Mounted Stop	921 (W16W)
Tail/Brake/Turn Signal	3457K (3357LL)
Back up	921 (W16W)
Side Marker	168
License Plate	168

INTERIOR LAMPS

CAUTION: Do not use bulbs that have a higher candle power than the bulb listed in the Bulb Application Table. Damage to lamp can result.

CAUTION: Do not touch halogen bulbs with fingers or other oily surfaces. Bulb life will be reduced.

DIMMER CONTROLLED LAMPS

Service procedures for most of the lamps in the instrument panel, instrument cluster and switches are located in Group 8E, Instrument Panel and Gauges. Some components have lamps that can only be serviced by a Authorized Service Center (ASC) after the component is removed from the vehicle. Contact local dealer for location of nearest ASC.

A/C Heater Control	37
A/C Heater ISO Symbols	LED
Ash Receiver	37
Instrument Cluster	PC194
Radio	ASC

INDICATOR LAMPS

Service procedures for most of the lamps in the instrument panel, instrument cluster and switches are located in Group 8E, Instrument Panel and Gauges.

A/C Compressor	LED
Air Bag	PC194
Anti-lock Brake	PC194
Brake Warning	PC194
Check Engine	PC194
Console Shift Indicator	LED
Engine Oil Pressure	PC194
Engine Temperature	PC194
Fog Lamp	PC161
Generator	PC194
High Beam	PC194
Low Fuel	PC194
Rear Window Defogger	LED
Seat Belt	PC194
Security Alarm	LED
Shift Indicator	VF Display
Speed Control	PC194
Turn Signal	PC194

NON-DIMMING LAMPS

Service procedures for most of the lamps in the following list can be found in Group 8L, Lamps. Some components have lamps that can only be serviced by a Authorized Service Center (ASC) after the component is removed from the vehicle. Contact local dealer for location of nearest ASC.

Door Courtesy Lamp	168
Floor Console Courtesy Lamp	906
Glove Box Lamp	194
Ignition Lock	4856321
Map Lamp	212-2
Trunk	912
Visor Vanity	6501966

