

# LAMPS

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## LAMP SYSTEMS

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### DESCRIPTION AND OPERATION

#### LAMP SYSTEMS

Each vehicle is equipped with various lamp assemblies. A good ground is necessary for proper lighting operation. Grounding is provided through a separate ground wire.

When changing lamp bulbs check the socket for corrosion. If corrosion is present, clean it with a wire brush and coat the inside of the socket lightly with Mopar® Multi-Purpose Grease or equivalent.

#### HEADLAMPS

##### DESCRIPTION

Headlamps on the Cherokee are sealed beam units. Each module contains a low beam filament and a high beam filament.

##### OPERATION

The headlamps are controlled by the headlamp switch and the high beams by the multifunction switch. Each headlamp unit can be serviced individually.

#### HEADLAMP SWITCH

##### DESCRIPTION

The headlamp switch is located on the instrument panel. The headlamp switch controls the parking lamps, the headlamps, the interior lamps, and

instrument cluster illumination. The headlamp switch also contains a rheostat for controlling the illumination level of the instrument cluster lamps.

##### OPERATION

The headlamp switch has an off position, a parking lamp position, and a headlamp on position. High beams are controlled by the multifunction switch on the steering column. The headlamp switch cannot be repaired. It must be replaced. Refer to Group 8E for removal and installation procedures, and Group 8W for wiring.

#### SENTINEL HEADLAMP DELAY MODULE

##### DESCRIPTION

The Headlamp Module delays the de-activation of the headlamps for 45 ± 15 seconds after the ignition switch is turned OFF.

##### OPERATION

The driver engages the module by turning the ignition switch OFF, then turning the headlamps OFF. The module is mounted to a bracket attached to the inside of the instrument panel.

#### TAIL/TURN SIGNAL/STOP/BACK-UP LAMP

##### DESCRIPTION

The rear tail lamp modules contains three bulbs, a lens, and a housing. One bulb is a two filament bulb

## DESCRIPTION AND OPERATION (Continued)

used for tail light and stop lamp functions. One single filament bulb is for turn signal functions. The other bulb is a single filament bulb used for back-up light illumination.

## OPERATION

Each tail lamp module can be serviced separately. Each bulb can also be serviced separately. The headlamp switch controls tail lamp operation. The multifunction switch on the steering column controls turn signal operation, and the back-up light switch controls the back-up light operation. The brake lamp switch controls the stop lamp function.

## FRONT TURN SIGNAL/PARKING LAMP

## DESCRIPTION

The front turn signal and parking lamp module contains a housing, a lens, and two bulbs.

## OPERATION

The parking lamp function is controlled by the headlamp switch. The turn signal function is controlled by the multifunction switch on the steering column. Each bulb can be serviced separately.

## CHMSL (CENTER HIGH MOUNTED STOP LAMP)

## DESCRIPTION

The center high mounted stop lamp (CHMSL) is mounted on the liftgate. The module consists of a housing, a lens, and a single filament bulb.

## OPERATION

The CHMSL is controlled by the brake lamp switch.

## DAYTIME RUNNING LAMPS

## DESCRIPTION

The Daytime Running Lights (Headlamps) System is installed on vehicles manufactured for sale in Can-

ada only. A separate module, mounted on the cowl, controls the DRL.

## OPERATION

The headlamps are illuminated when the ignition switch is turned to the ON position. The DRL module receives a vehicle-moving signal from the vehicle speed sensor. This provides a constant **headlamps-on** condition as long as the vehicle is moving. The lamps are illuminated at less than 50 percent of normal intensity.

## SAFETY PRECAUTIONS

**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 and/or Daytime Running Lamp Module 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.

# LAMP DIAGNOSIS

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### DIAGNOSIS AND TESTING

#### DIAGNOSTIC PROCEDURES

When a vehicle experiences problems with the headlamp system, verify the condition of the battery connections, fuses, charging system, headlamp bulbs, wire connectors, relay, high beam switch, dimmer switch, and headlamp switch. Refer to Group 8W, Wiring Diagrams for component locations and circuit information.

### SYSTEM DIAGNOSIS

#### HEADLAMP

Always begin any diagnosis by testing all of the fuses and circuit breakers in the system. Refer to Group 8W, Wiring Diagrams.

Conventional and halogen headlamps are interchangeable. It is recommended that they not be intermixed on a given vehicle.

| CONDITION   | POSSIBLE CAUSES   | CORRECTION   |
|---|---|--|
| HEADLAMPS ARE DIM WITH ENGINE IDLING OR IGNITION TURNED OFF | <ol style="list-style-type: none"> <li>1. Loose or corroded battery cables.</li> <li>2. Loose or worn generator drive belt.</li> <li>3. Charging system output too low.</li> <li>4. Battery has insufficient charge.</li> <li>5. Battery is sulfated or shorted.</li> <li>6. Poor lighting circuit Z1-ground.</li> <li>7. Both headlamp bulbs defective.</li> </ol> | <ol style="list-style-type: none"> <li>1. Clean and secure battery cable clamps and posts.</li> <li>2. Adjust or replace generator drive belt.</li> <li>3. Test and repair charging system, refer to Group 8A,</li> <li>4. Test battery state-of-charge, refer to Group 8A.</li> <li>5. Load test battery, refer to Group 8A.</li> <li>6. Test for voltage drop across Z1-ground locations, refer to Group 8W.</li> <li>7. Replace both headlamp bulbs.</li> </ol> |
| HEADLAMP BULBS BURN OUT FREQUENTLY                          | <ol style="list-style-type: none"> <li>1. Charging system output too high.</li> <li>2. Loose or corroded terminals or splices in circuit.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Test and repair charging system, refer to Group 8A.</li> <li>2. Inspect and repair all connectors and splices, refer to Group 8W.</li> </ol>   |
| HEADLAMPS ARE DIM WITH ENGINE RUNNING ABOVE IDLE*           | <ol style="list-style-type: none"> <li>1. Charging system output too low.</li> <li>2. Poor lighting circuit Z1-ground.</li> <li>3. High resistance in headlamp circuit.</li> <li>4. Both headlamp bulbs defective.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Test and repair charging system, refer to Group 8A.</li> <li>2. Test for voltage drop across Z1-ground locations, refer to Group 8W.</li> <li>3. Test amperage draw of headlamp circuit.</li> <li>4. Replace both headlamp bulbs.</li> </ol>   |

## DIAGNOSIS AND TESTING (Continued)

| CONDITION                            | POSSIBLE CAUSES   | CORRECTION   |
|--------------------------------------|---|--|
| HEADLAMPS FLASH RANDOMLY             | <ol style="list-style-type: none"> <li>Poor lighting circuit Z1-ground.</li> <li>High resistance in headlamp circuit.</li> <li>Faulty headlamp switch.</li> <li>Loose or corroded terminals or splices in circuit.</li> </ol>   | <ol style="list-style-type: none"> <li>Test for voltage drop across Z1-ground locations, refer to Group 8W.</li> <li>Test amperage draw of headlamp circuit. Should not exceed 30 amps.</li> <li>Replace headlamp switch. Refer to Group 8E.</li> <li>Inspect and repair all connectors and splices, refer to Group 8W.</li> </ol> |
| HEADLAMPS DO NOT ILLUMINATE          | <ol style="list-style-type: none"> <li>No voltage to headlamps.</li> <li>No Z1-ground at headlamps.</li> <li>Faulty headlamp switch.</li> <li>Faulty headlamp dimmer (multi-function) switch.</li> <li>Broken connector terminal or wire splice in headlamp circuit.</li> </ol> | <ol style="list-style-type: none"> <li>Repair open headlamp circuit, refer to Group 8W.</li> <li>Repair circuit ground, refer to Group 8W.</li> <li>Replace headlamp switch. Refer to Group 8E.</li> <li>Replace multi-function switch.</li> <li>Repair connector terminal or wire splice.</li> </ol>                              |
| *Canada vehicles must have lamps ON. |   |  |

## FOG LAMP

| CONDITION  | POSSIBLE CAUSES  | CORRECTION   |
|--|--|--|
| FOG LAMPS ARE DIM WITH ENGINE IDLING OR IGNITION TURNED OFF. | <ol style="list-style-type: none"> <li>Loose or corroded battery cables.</li> <li>Loose or worn generator drive belt.</li> <li>Charging system output too low.</li> <li>Battery has insufficient charge.</li> <li>Battery is sulfated or shorted.</li> <li>Poor lighting circuit Z1-ground.</li> </ol> | <ol style="list-style-type: none"> <li>Clean and secure battery cable clamps and posts.</li> <li>Adjust or replace generator drive belt.</li> <li>Test and repair charging system. Refer to Group 8A,</li> <li>Test battery state-of -charge. Refer to Group 8A.</li> <li>Load test battery. Refer to Group 8A.</li> <li>Test for voltage drop across Z1-ground locations. Refer to Group 8W.</li> </ol> |
| FOG LAMP BULBS BURN OUT FREQUENTLY                           | <ol style="list-style-type: none"> <li>Charging system output too high.</li> <li>Loose or corroded terminals or splices in circuit.</li> </ol>   | <ol style="list-style-type: none"> <li>Test and repair charging system. Refer to Group 8A.</li> <li>Inspect and repair all connectors and splices. Refer to Group 8W.</li> </ol>   |
| FOG LAMPS ARE DIM WITH ENGINE RUNNING ABOVE IDLE             | <ol style="list-style-type: none"> <li>Charging system output too low.</li> <li>Poor lighting circuit Z1-ground.</li> <li>High resistance in fog lamp circuit.</li> </ol>  | <ol style="list-style-type: none"> <li>Test and repair charging system. Refer to Group 8A.</li> <li>Test for voltage drop across Z1-ground locations. Refer to Group 8W.</li> <li>Test amperage draw of fog lamp circuit.</li> </ol>   |

DIAGNOSIS AND TESTING (Continued)

| CONDITION                   | POSSIBLE CAUSES  | CORRECTION   |
|-----------------------------|--|--|
| FOG LAMPS FLASH RANDOMLY    | <ol style="list-style-type: none"> <li>1. Poor lighting circuit Z1-ground.</li> <li>2. High resistance in fog lamp circuit.</li> <li>3. Faulty fog lamp switch.</li> <li>4. Loose or corroded terminals or splices in circuit.</li> </ol>                                    | <ol style="list-style-type: none"> <li>1. Test for voltage drop across Z1-ground locations. Refer to Group 8W.</li> <li>2. Test amperage draw of fog lamp circuit.</li> <li>3. Replace fog lamp switch.</li> <li>4. Inspect and repair all connectors and splices. Refer to Group 8W.</li> </ol> |
| FOG LAMPS DO NOT ILLUMINATE | <ol style="list-style-type: none"> <li>1. Blown fuse for fog lamp.</li> <li>2. No Z1-ground at fog lamps.</li> <li>3. Faulty fog lamp switch.</li> <li>4. Broken connector terminal or wire splice in fog lamp circuit.</li> <li>5. Defective or burned out bulb.</li> </ol> | <ol style="list-style-type: none"> <li>1. Replace fuse. Refer to Group 8W.</li> <li>2. Repair circuit ground. Refer to Group 8W.</li> <li>3. Replace fog lamp switch.</li> <li>4. Repair connector terminal or wire splice.</li> <li>5. Replace bulb.</li> </ol>                                 |

**HEADLAMP DELAY MODULE**

**DELAY FUNCTION INOPERATIVE**

- (1) Ensure headlamps operate before proceeding.
- (2) Remove, inspect and test the HDLP delay 10 amp fuse in junction box. Replace if defective.
- (3) With the key off and the connector disconnected, measure the resistance from the delay module connector, terminal 4 to vehicle body ground. The ohmmeter should indicate zero ohms. If not, repair the open circuit in the wire harness to vehicle body ground.
- (4) With the key on measure the voltage between the delay module connector, terminal 8 and vehicle

body ground. The voltmeter should indicate battery voltage. If not, repair the open circuit in the wire harness from ignition switch to HDLP delay module.

(5) Turn headlamps on and measure voltage at delay module connector, terminal 6. The voltmeter should indicate battery voltage. If not repair open circuit between L2 and HDLP delay module.

(6) Measure the voltage between the delay module connector, terminal 2 and vehicle body ground. The voltmeter should indicate battery voltage. If not, repair the open circuit in the wire harness to the HDLP fuse in the PDC.

(7) If steps 1 through 6 prove out good, replace headlamp delay module.

# HEADLAMP ALIGNMENT

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## SERVICE PROCEDURES

### HEADLAMP ALIGNMENT

Headlamps can be aligned using the screen method provided in this section. Alignment Tool C-4466-A or equivalent can also be used. Refer to instructions provided with the tool for proper procedures.

### LAMP 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. 1).

(2) If necessary, tape a line on the floor 7.62 meters (25 ft) away from and parallel to the wall.

(3) Measure from the floor up 1.27 meters (5 ft) and tape a line on the wall at the centerline of the vehicle. Sight along the centerline 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 floor. Transfer measurement to the alignment screen (with tape). Use this line for up/down adjustment reference.

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

### VEHICLE PREPARATION FOR HEADLAMP ALIGNMENT

(1) Verify headlamp dimmer switch and high beam indicator operation.

(2) Correct defective components that could hinder proper headlamp alignment.

(3) Verify proper tire inflation.

(4) Clean headlamp lenses.

(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

Headlamps can be aligned using the screen method. The Headlamp Alignment Tool C-4466-A or equivalent can also be used. Refer to instructions provided with the tool for proper procedures.

A properly aimed low beam will project the top edge of the beam intensity pattern on the screen from 25 mm (1 in.) above to 75 mm (3 in.) below headlamp centerline. The side-to-side left edge of the beam intensity pattern should be from 50 mm (2 in.) left to 50 mm (2 in.) right of headlamp centerline (Fig. 2).

(1) Remove screws and both headlamp bezels.

(2) Clean front of the headlamps.

(3) Place headlamps on LOW beam.

(4) Cover front of the headlamp that is not being adjusted.

(5) Turn vertical adjustment screw (Fig. 3) until the headlamp beam pattern on screen/wall is similar to the pattern depicted in the alignment screen figure.

**NOTE: When using a headlamp aiming screen, adjust the headlamps so that:**

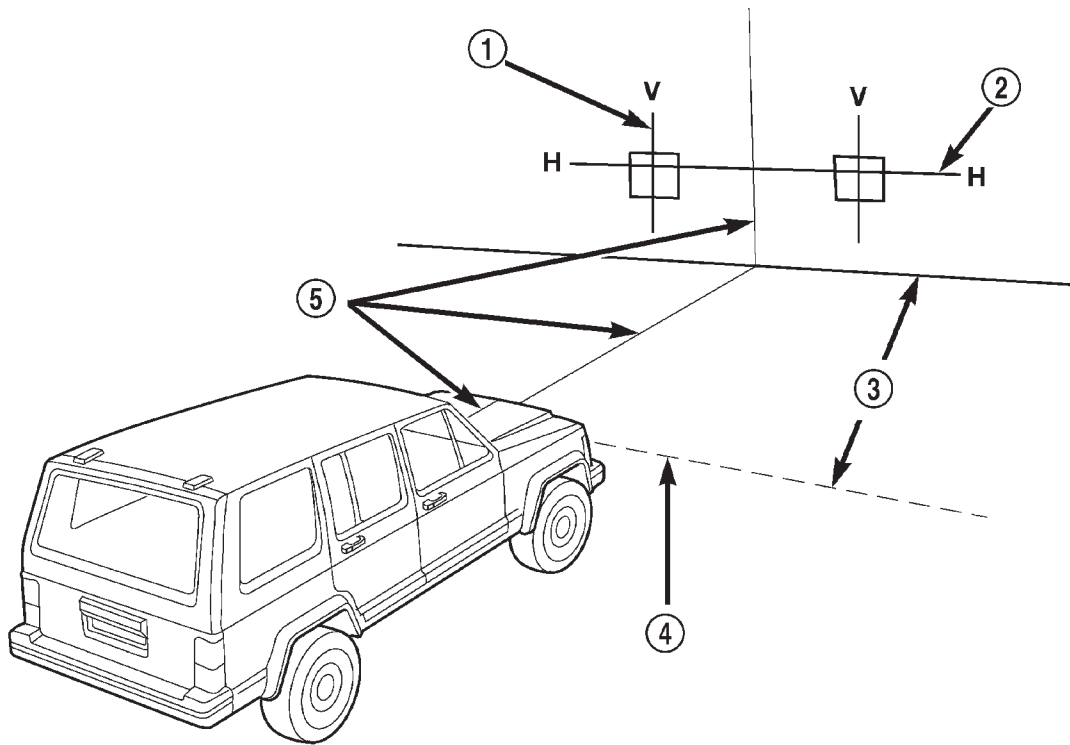
- The left edge of the beam intensity pattern is positioned within 50 mm (2 in.) left to 50 mm (2 in.) right of the vertical centerline (Fig. 2).

- The top edge of the beam intensity pattern is positioned within 25 mm (1 in.) above or 75 mm (3 in.) below the headlamp horizontal centerline (Fig. 2).

(6) Cover front of the headlamp and adjust the other headlamp beam as instructed below.

(7) Rotate the adjustment screws until the beam intensity pattern on the aiming screen/wall is aligned within the headlamp the alignment screen target (Fig. 2).

SERVICE PROCEDURES (Continued)



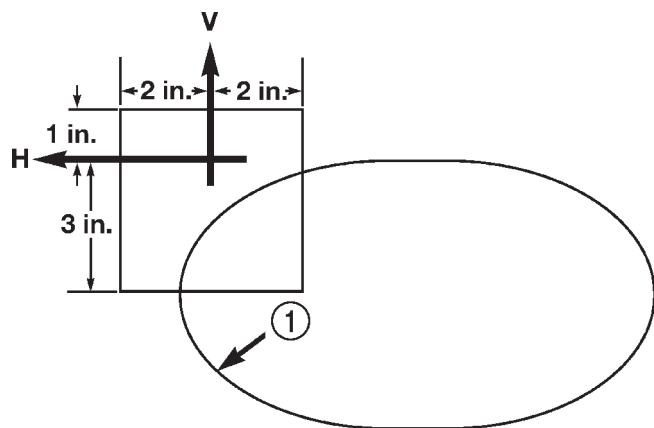
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**Fig. 1 Headlamp Alignment Screen—Typical**

- |  |                        |
|--|------------------------|
| 1 - CENTER OF VEHICLE TO CENTER OF HEADLAMP LENS | 4 - FRONT OF HEADLAMP  |
| 2 - FLOOR TO CENTER OF HEADLAMP LENS             | 5 - VEHICLE CENTERLINE |
| 3 - 7.62 METERS (25 FEET)                        |                        |

(8) Cover front of headlamp that has been adjusted and adjust the other headlamp beam as instructed above.

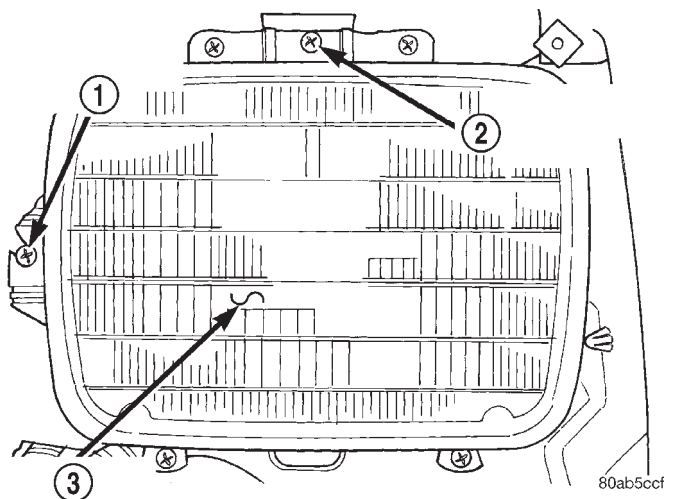
(9) Install headlamp bezels. Tighten the screws securely.



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**Fig. 2 Headlamp Alignment Screen Target**

- 1 - LOW BEAM INTENSITY PATTERN (ISO-CANDELA CURVE)



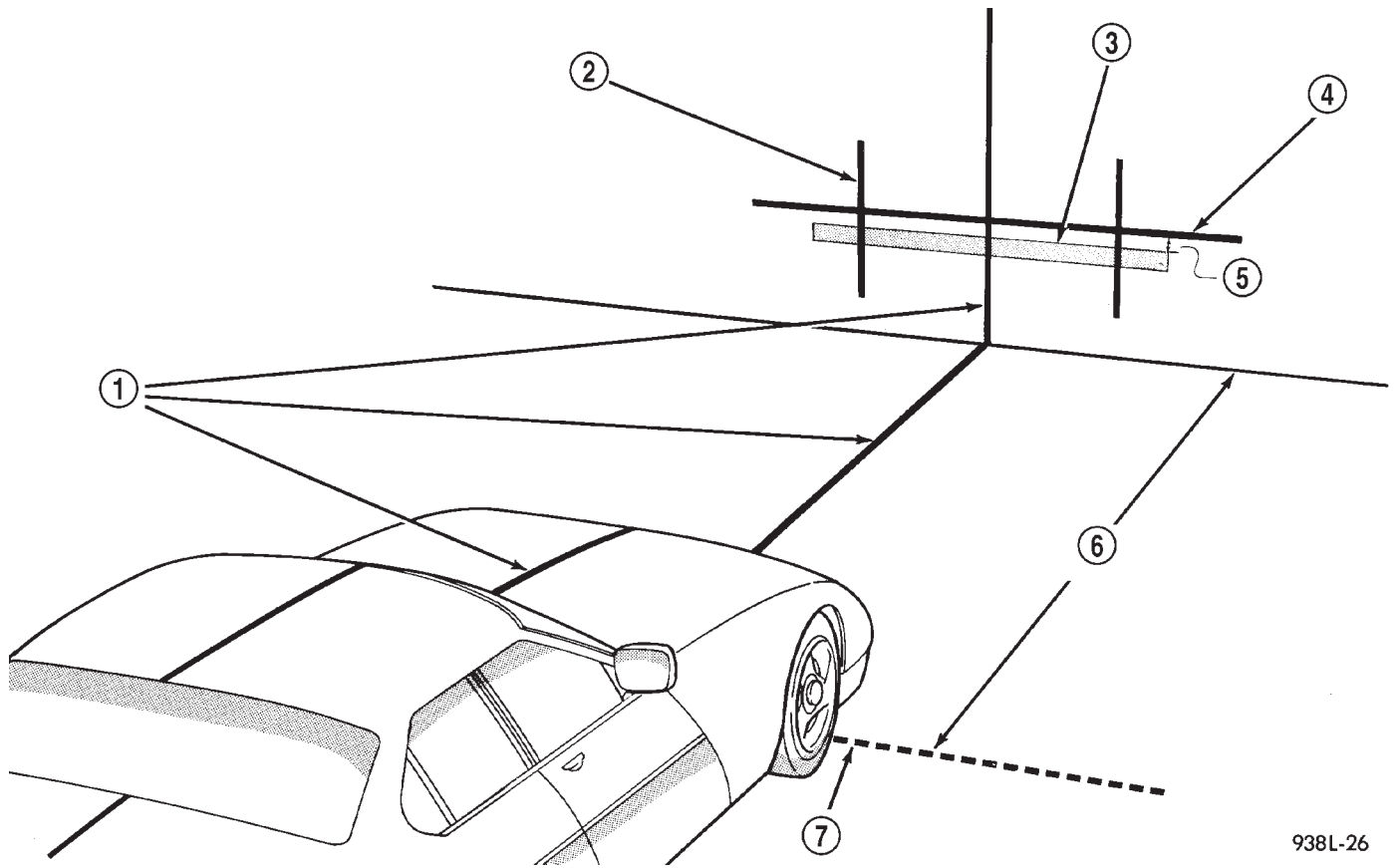
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**Fig. 3 Headlamp Beam Adjustment Screws**

- |                                 |
|---------------------------------|
| 1 - LEFT/RIGHT ADJUSTMENT SCREW |
| 2 - UP/DOWN ADJUSTMENT SCREW    |
| 3 - HEADLAMP                    |



SERVICE PROCEDURES (Continued)



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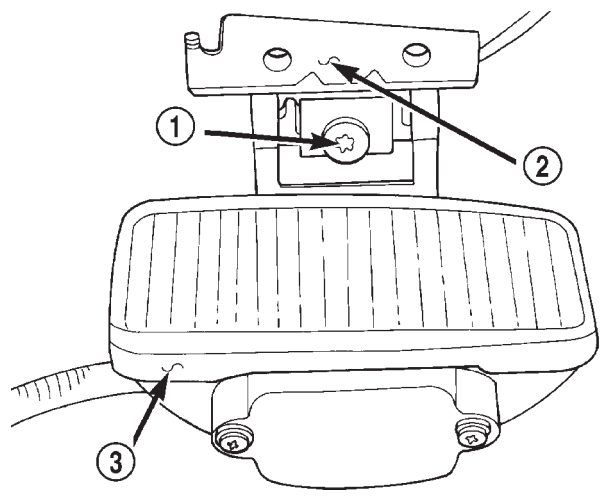
**Fig. 4 Fog Lamp Alignment —Typical**

- 1 - VEHICLE CENTERLINE
- 2 - CENTER OF VEHICLE TO CENTER OF FOG LAMP LENS
- 3 - HIGH-INTENSITY AREA
- 4 - FLOOR TO CENTER OF FOG LAMP LENS
- 5 - 100 mm (4 in.)
- 6 - 7.62 METERS (25 FEET)
- 7 - FRONT OF FOG LAMP

**FOG LAMP ADJUSTMENT**

Prepare an alignment screen. A properly aligned fog lamp will project a pattern on the alignment screen 100 mm (4 in.) below the fog lamp centerline and straight ahead (Fig. 4).

Rotate the adjustment screw to adjust beam height (Fig. 5).



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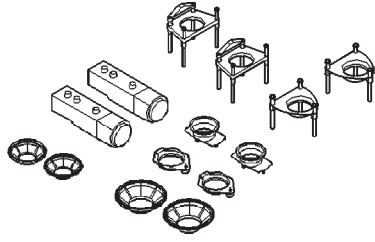
**Fig. 5 Fog Lamp Adjustment**

- 1 - ADJUSTMENT SCREW
- 2 - MOUNTING BRACKET
- 3 - FOG LAMP



SPECIAL TOOLS

HEADLAMP ALIGNMENT



*Headlamp Aiming Kit C-4466-A*

# LAMP BULB SERVICE

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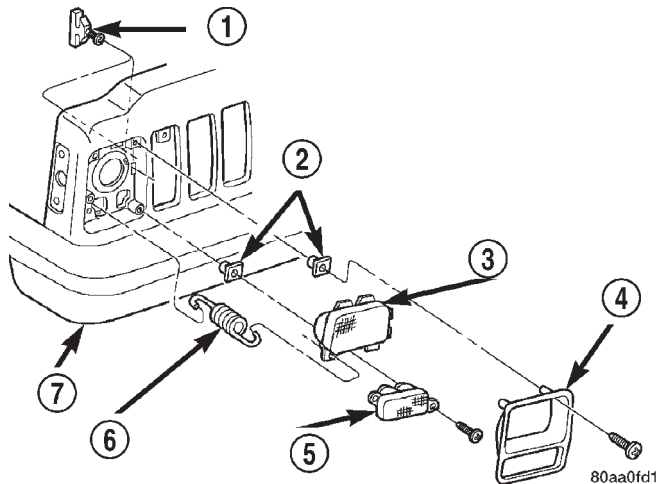
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## REMOVAL AND INSTALLATION

### HEADLAMP BULB

#### REMOVAL

- (1) Remove the screws attaching the bezel to the grille opening panel (Fig. 1).
- (2) Remove screws attaching the retaining ring to the headlamp canister.
- (3) Disconnect the headlamp bulb wire harness connector.
- (4) Separate the sealed beam from the vehicle.



**Fig. 1 Headlamp Bezel**

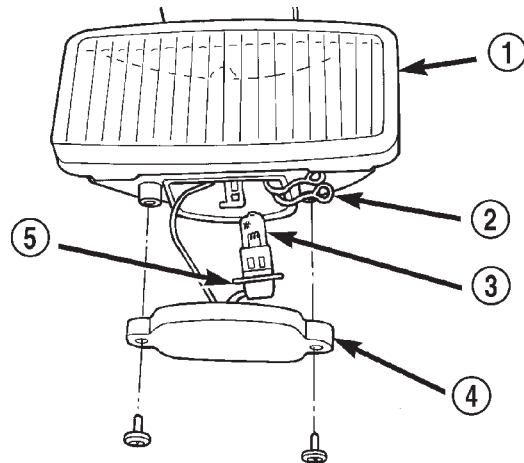
- 1 - HEADLAMP ADJUSTMENT
- 2 - NUT
- 3 - HEADLAMP
- 4 - BEZEL
- 5 - PARK/TURN LAMP
- 6 - SPRING
- 7 - BUMPER

- (3) Position retaining ring on sealed beam and install screws.
- (4) Install headlamp bezel.

### FOG LAMP BULB

#### REMOVAL

- (1) Remove the screws attaching the access cover to the bottom of the fog lamp (Fig. 2).
- (2) Remove spring clip securing bulb to fog lamp.
- (3) Disconnect bulb wire connector.
- (4) Remove bulb element from fog lamp.



**Fig. 2 Fog Lamp Components**

- 1 - FOG LAMP
- 2 - CLIP
- 3 - BULB
- 4 - ACCESS COVER
- 5 - BULB SOCKET

### INSTALLATION

- (1) Connect wire harness connector.
- (2) Position bulb in canister.

### INSTALLATION

- CAUTION: Do not touch the bulb glass with fingers or other oily surfaces. Reduced bulb life will result.**
- (1) Position bulb element in fog lamp.

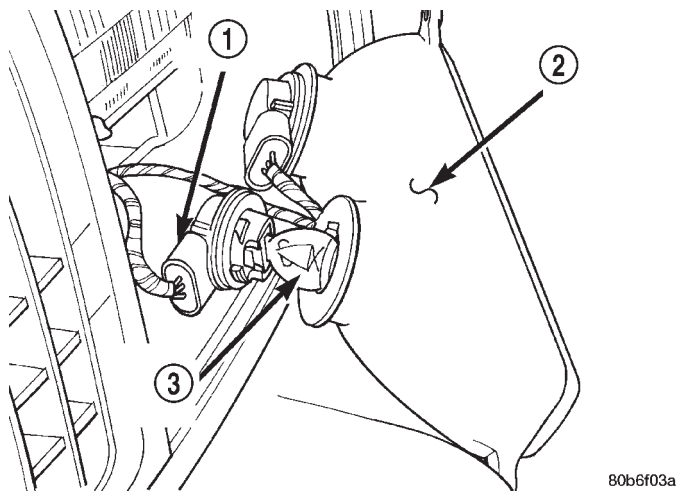
REMOVAL AND INSTALLATION (Continued)

- (2) Connect bulb wire connector.
- (3) Install spring clip securing bulb to fog lamp.
- (4) Install screws attaching the access cover to the bottom of the fog lamp.

**FRONT PARK/TURN SIGNAL LAMP BULB**

**REMOVAL**

- (1) Remove headlamp bezel.
- (2) Remove screws attaching park/turn signal lamp housing to grille opening panel.
- (3) Rotate bulb socket one-third turn counter-clockwise and remove it from lamp housing (Fig. 3).
- (4) Pull bulb from socket.



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

- 1 - BULB SOCKET
- 2 - PARK LAMP HOUSING
- 3 - PARK LAMP BULB

**INSTALLATION**

- (1) Install bulb in socket.
- (2) Install socket in lamp housing.
- (3) Install park/turn signal lamp housing.
- (4) Install headlamp bezel.

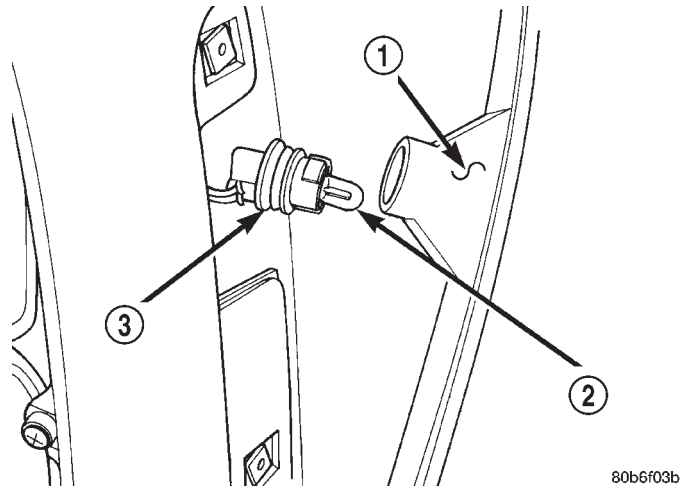
**SIDE MARKER LAMP BULB**

**REMOVAL**

- (1) Remove screws attaching side marker lamp housing.
- (2) Rotate bulb socket counter-clockwise and pull from back side of lamp housing (Fig. 4).
- (3) Pull bulb from socket.

**INSTALLATION**

- (1) Install bulb in socket.
- (2) Install bulb and socket in back of side marker lamp housing.
- (3) Install side marker lamp housing.



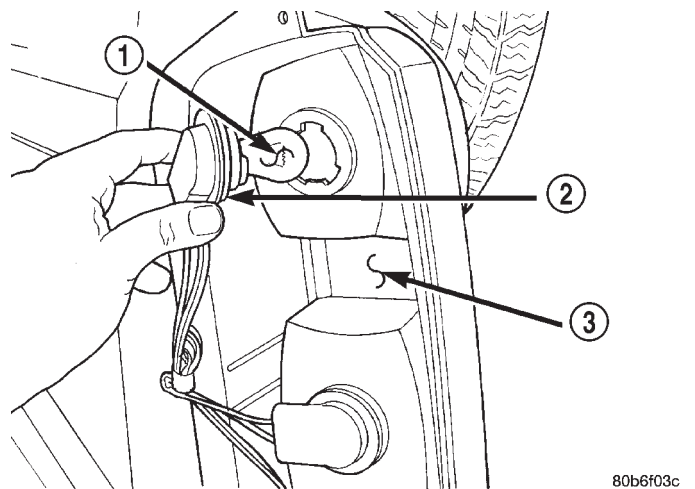
**Fig. 4 Side Marker Lamp**

- 1 - SIDE MARKER LAMP HOUSING
- 2 - SIDE MARKER LAMP BULB
- 3 - BULB SOCKET

**BACK-UP/BRAKE/REAR TURN SIGNAL/TAIL LAMP BULB**

**REMOVAL**

- (1) Remove tail lamp housing.
- (2) Rotate bulb socket one-third turn counter-clockwise and remove bulb socket from lamp housing (Fig. 5).
- (3) Pull bulb from socket.



**Fig. 5 Bulb Socket Removal**

- 1 - TAIL LAMP BULB
- 2 - BULB SOCKET
- 3 - TAIL LAMP HOUSING

**INSTALLATION**

- (1) Install bulb in socket.
- (2) Install bulb and socket in lamp housing.
- (3) Install lamp housing.

## REMOVAL AND INSTALLATION (Continued)

## LICENSE PLATE LAMP BULB

## REMOVAL

- (1) Remove screws attaching license plate lamp housing to liftgate.
- (2) Rotate bulb socket counter-clockwise and remove bulb socket from lamp housing.
- (3) Pull bulb from socket.

## INSTALLATION

- (1) Install bulb in lamp socket.
- (2) Install bulb socket in lamp housing.
- (3) Install screws attaching license plate lamp housing to liftgate.

CENTER HIGH MOUNTED STOP LAMP  
(CHMSL) BULB

## REMOVAL

- (1) Remove the screws attaching the lamp housing to the liftgate.
- (2) Rotate bulb socket 1/4 turn counter-clockwise and pull from housing (Fig. 6).
- (3) Pull bulb from socket.

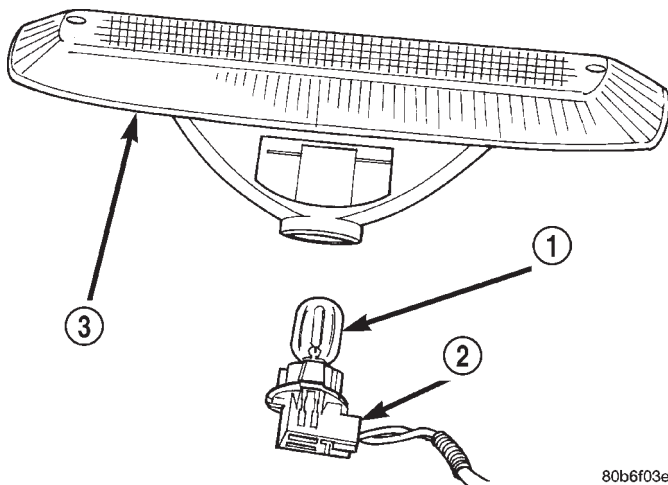


Fig. 6 CHMSL Bulb

- 1 - CHMSL BULB
- 2 - BULB SOCKET
- 3 - CHMSL LAMP HOUSING

## INSTALLATION

- (1) Push bulb into socket.
- (2) Position socket in lamp and rotate 1/4 turn clockwise.
- (3) Install screws attaching lamp housing to the liftgate.

## UNDERHOOD LAMP BULB

## REMOVAL

- (1) Insert a small flat blade in the access slot between the lamp base and lamp lens.
- (2) Pry the lamp lens upward and remove the lamp lens (Fig. 7).
- (3) Depress the bulb terminal inward (Fig. 8) to release the bulb.

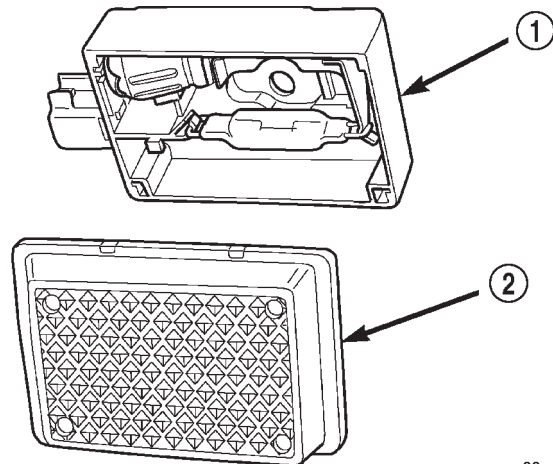


Fig. 7 Underhood Lamp Lens

- 1 - LAMP
- 2 - LAMP LENS

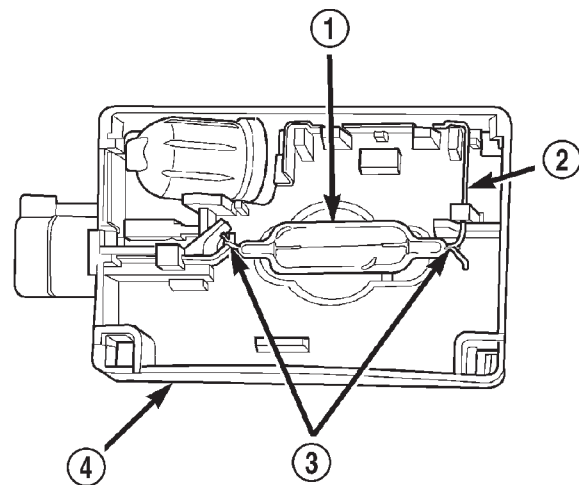


Fig. 8 Underhood Lamp Bulb

- 1 - BULB
- 2 - DEPRESS TERMINAL INWARD
- 3 - BULB WIRE LOOP
- 4 - LAMP BASE

## INSTALLATION

- (1) Engage the replacement bulb wire loop to the terminal closest to the lamp base wire connector.

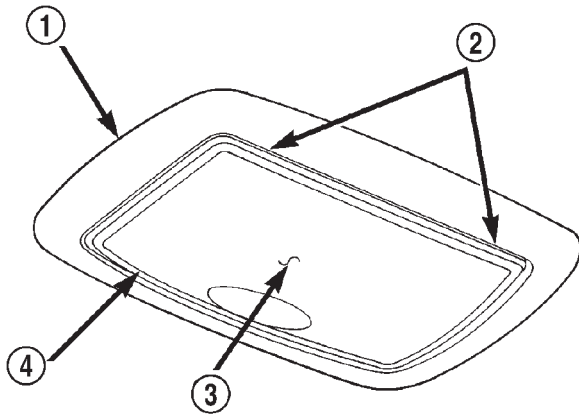
REMOVAL AND INSTALLATION (Continued)

- (2) Depress the opposite terminal inward and engage the remaining bulb wire loop.
- (3) Position the lamp lens on the lamp base and press into place.

**CARGO LAMP BULB**

**REMOVAL**

- (1) Insert a small flat blade into the access slots (Fig. 9).
- (2) Carefully pry the lens from the lamp.
- (3) Grasp bulb and pull from lamp.



**Fig. 9 Cargo Lamp Lens**

- 1 - HOUSING
- 2 - SCREWDRIVER SLOTS
- 3 - CARGO LAMP
- 4 - LENS

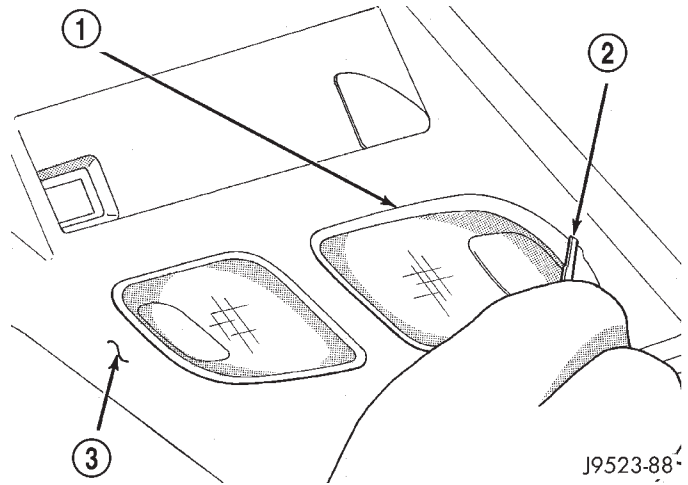
**INSTALLATION**

- (1) Position bulb in lamp and snap into place.
- (2) Position the lens at the lamp housing and force it upward into the housing until the mounting tabs are seated on the lamp mounting pins.

**MAP READING LAMP BULB**

**REMOVAL**

- (1) Insert a flat blade screwdriver in slot at front of lens (Fig. 10).
- (2) Rotate the screwdriver until lens snaps out of the housing.
- (3) Remove lens from housing.
- (4) Remove bulb from terminals.



**Fig. 10 Reading Lamp Bulb**

- 1 - LENS
- 2 - FLAT BLADE
- 3 - CONSOLE

**INSTALLATION**

- (1) Insert bulb into reading lamp terminals.
- (2) Replace lens by holding lens level and pushing rearward into housing.
- (3) Push lens up to snap into housing.

**VISOR VANITY LAMP BULB**

**REMOVAL**

- (1) Using a small flat blade, carefully pry each corner of lens outward from lamp.
- (2) Separate lens from lamp.
- (3) Grasp bulb and pull outward.

**INSTALLATION**

- (1) Position bulb in socket and push into place.
- (2) Position lens on lamp and snap into place.

# LAMP SERVICE

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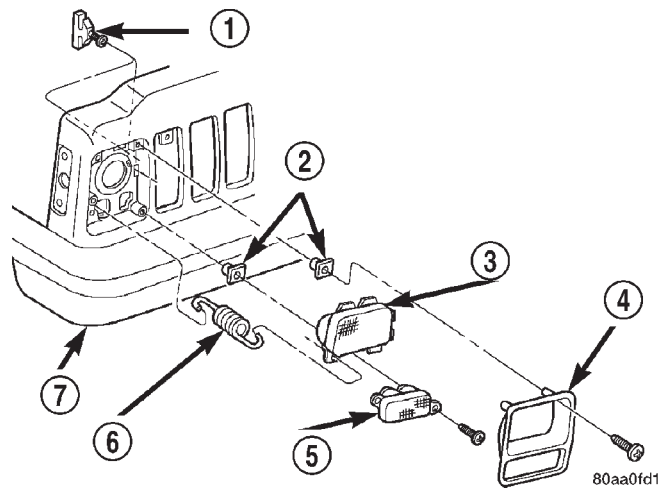
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## REMOVAL AND INSTALLATION

### HEADLAMP

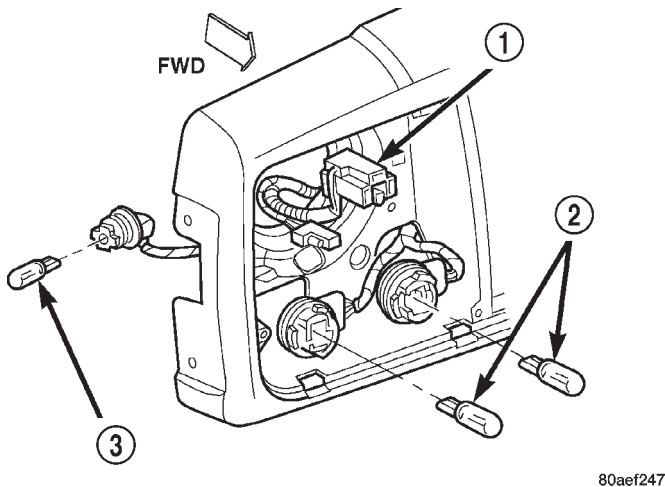
#### REMOVAL

- (1) Remove the screws attaching the bezel to the grille opening panel
- (2) Remove the screws attaching the retaining ring to the headlamp bucket.
- (3) Disconnect the headlamp bulb wire harness connector (Fig. 1).
- (4) Separate the bulb from the vehicle.
- (5) Remove the spring attaching the headlamp bucket to the grille opening panel (Fig. 2).
- (6) Slide the headlamp bucket downward to disengage it from the headlamp adjusting screws.



**Fig. 2 Headlamp**

- 1 - HEADLAMP ADJUSTMENT
- 2 - NUT
- 3 - HEADLAMP
- 4 - BEZEL
- 5 - PARK/TURN LAMP
- 6 - SPRING
- 7 - BUMPER



**Fig. 1 Headlamp Connector**

- 1 - HEADLAMP CONNECTOR
- 2 - PARK/TURN LAMP BULB
- 3 - SIDE MARKER LAMP BULB

#### INSTALLATION

- (1) Position the headlamp bucket in the grille opening panel and slide the headlamp bucket upward to engage it with the headlamp adjusting screws.
- (2) Install the spring attaching the headlamp bucket to the grille opening panel.
- (3) Connect the wire harness connector.
- (4) Position the bulb in the bucket.
- (5) Position retaining ring on the headlamp bulb and install screws.
- (6) Install the headlamp bezel.

## REMOVAL AND INSTALLATION (Continued)

## FOG LAMP

## REMOVAL

- (1) Disconnect the fog lamp wire harness connector.
- (2) Remove the screws attaching the fog lamp to the support (Fig. 3).
- (3) Separate the fog lamp from the vehicle.

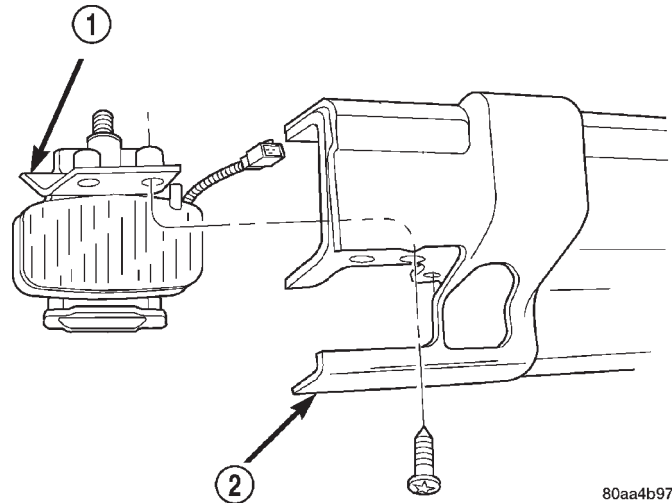


Fig. 3 Fog Lamp

- 1 - FOG LAMP  
2 - BUMPER

## INSTALLATION

- (1) Position the fog lamp in the support bracket and install the screws.
- (2) Connect the fog lamp wire harness connector.

## FRONT PARK/TURN SIGNAL LAMP

## REMOVAL

- (1) Remove the headlamp bezel.
- (2) Remove the screws attaching the park/turn signal lamp housing to the grille opening panel (Fig. 4).
- (3) Remove the bulb sockets and separate from the vehicle.

## INSTALLATION

- (1) Install bulbs and sockets in the lamp housing.
- (2) Position the park/turn signal lamp housing on the grille opening panel and install the screws.
- (3) Install the headlamp bezel.

## SIDE MARKER LAMP

## REMOVAL

- (1) Remove screws attaching side marker lamp lens to grille opening panel (Fig. 5).

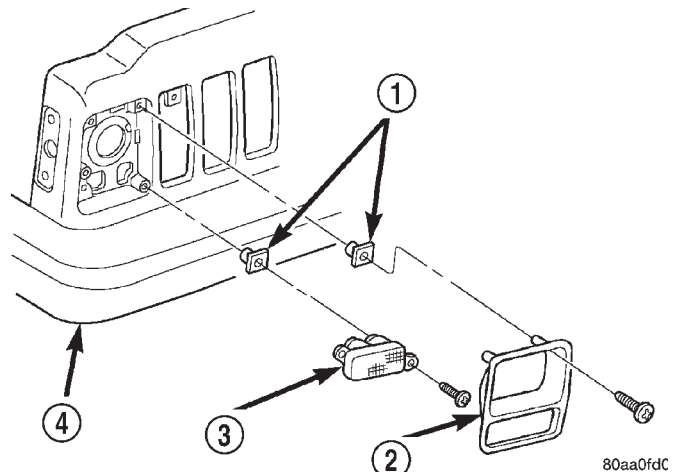


Fig. 4 Park/Turn Signal Lamp

- 1 - NUT  
2 - BEZEL  
3 - PARK/TURN LAMP  
4 - BUMPER

- (2) Remove bulb and socket from back side of lamp.

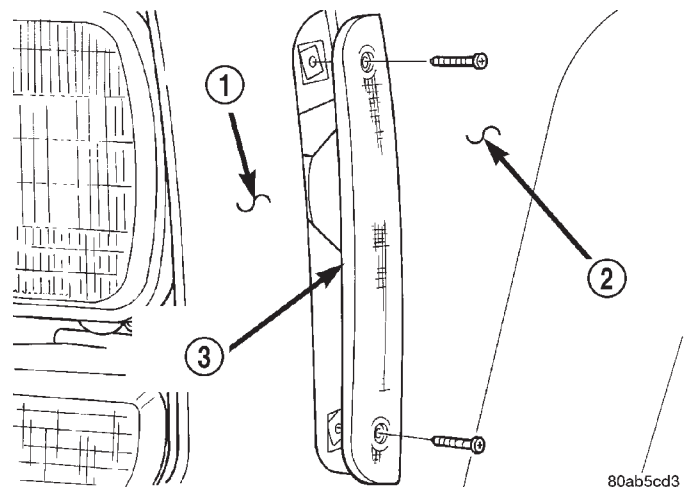


Fig. 5 Side Marker Lamp

- 1 - GRILLE OPENING PANEL  
2 - FENDER  
3 - SIDE MARKER LAMP

## INSTALLATION

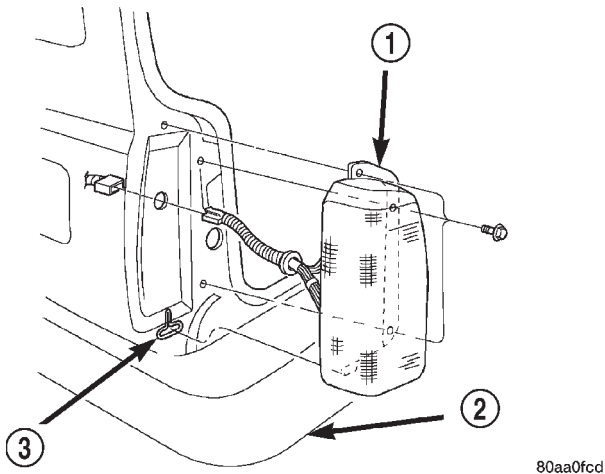
- (1) Install bulb and socket in back of side marker lamp.
- (2) Install side marker lamp in grille opening panel.



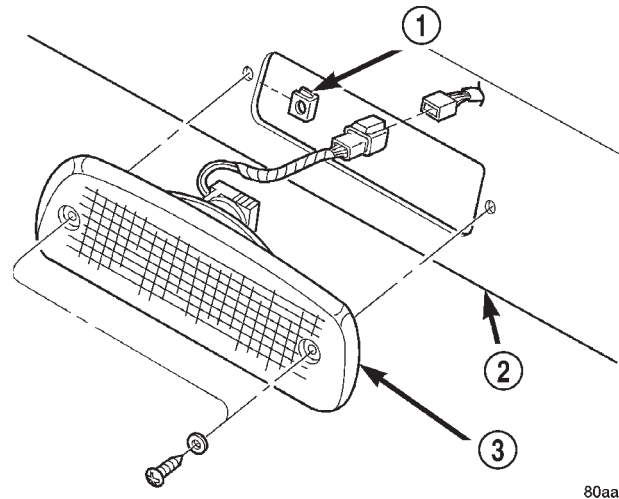
## REMOVAL AND INSTALLATION (Continued)

**BACK-UP/BRAKE/REAR TURN SIGNAL/TAIL LAMP****REMOVAL**

- (1) Open the liftgate.
- (2) Remove the bolts attaching the tail lamp housing to the quarter panel (Fig. 6).
- (3) Grasp the lamp and pull to disengage it from the grommet at the base of the lamp.
- (4) Rotate the bulb sockets one-third turn and remove the bulb sockets from the lamp housing.

**Fig. 6 Tail Lamp**

- 1 - TAIL LAMP  
2 - REAR BUMPER  
3 - GROMMET



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**Fig. 7 Center High Mounted Stop lamp**

- 1 - U-NUT  
2 - LIFTGATE  
3 - CHMSL

- (3) Install the screws attaching the CHMSL to the liftgate.

**LICENSE PLATE LAMP****REMOVAL**

- (1) Remove screws attaching the license plate lamp to the liftgate.
- (2) Remove the bulb from the lamp socket.

**INSTALLATION**

- (1) Install bulb in the lamp socket.
- (2) Position the license plate lamp on the liftgate and install screws.

**UNDERHOOD LAMP**

The underhood lamp is installed on the hood inner panel. The lamp illuminates when the hood is opened. A switch that is integral with the lamp base controls the operation. The switch provides automatic ON/OFF functions each time the hood is opened and closed.

**REMOVAL**

- (1) Disconnect the wire harness connector from the lamp.
- (2) Remove lamp lens.
- (3) Remove bulb.
- (4) Remove screw attaching underhood lamp to the inner hood panel.
- (5) Separate underhood lamp from vehicle.

**INSTALLATION**

- (1) Install the bulb and sockets in the lamp housing.
- (2) Position the lamp housing in the quarter panel and push to engage the grommet.
- (3) Install the lamp housing screws. Tighten the screws securely.
- (4) Install the bolts attaching the tail lamp housing to the quarter panel.
- (5) Close the liftgate.

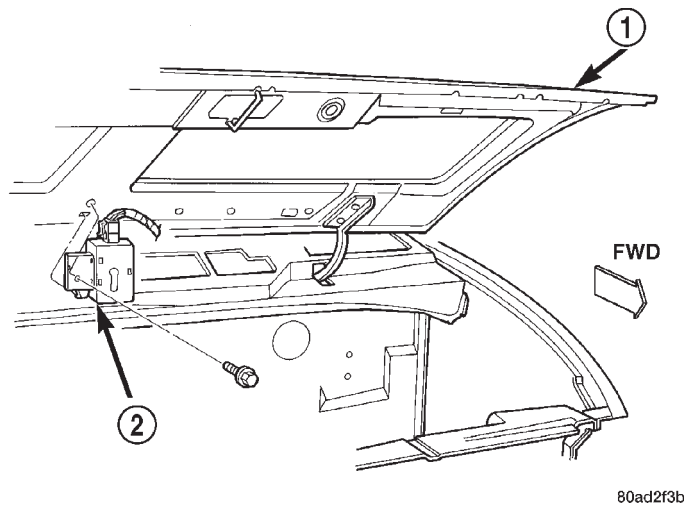
**CENTER HIGH MOUNTED STOP LAMP (CHMSL)****REMOVAL**

- (1) Remove the screws attaching the CHMSL to the liftgate (Fig. 7).
- (2) Disconnect the wire harness connector.
- (3) Separate the CHMSL from the vehicle.

**INSTALLATION**

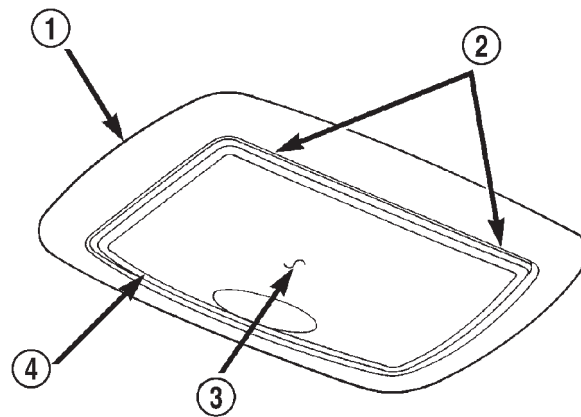
- (1) Connect the wire harness connector.
- (2) Position the CHMSL on the liftgate.

REMOVAL AND INSTALLATION (Continued)



**Fig. 8 Underhood Lamp**

- 1 - HOOD
- 2 - UNDERHOOD LAMP/SWITCH



**Fig. 9 Cargo Lamp**

- 1 - HOUSING
- 2 - SCREWDRIVER SLOTS
- 3 - CARGO LAMP
- 4 - LENS

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**INSTALLATION**

(1) Position underhood lamp on hood inner panel. Ensure anti-rotation tab is positioned in slot on hood inner panel.

(2) Install the attaching screw through the lamp and into the hood panel (Fig. 8). Tighten the screw securely.

(3) Fold lamp housing over and firmly press onto base to snap into place.

(4) Connect the wire harness connector to the lamp.

**CARGO LAMP**

**REMOVAL**

(1) Insert a small flat blade into the access slots (Fig. 9).

(2) Carefully pry the lens from the lamp.

(3) Disengage the lens mounting tabs from the lamp mounting pins (Fig. 10).

(4) Remove the fasteners attaching the lamp to the roof.

(5) Remove the lamp housing from the headliner cavity.

(6) Disconnect the wire harness connector.

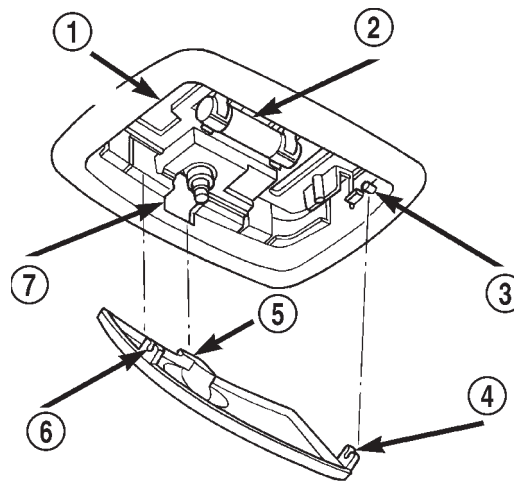
**INSTALLATION**

(1) Position the dome lamp housing at the headliner cavity.

(2) Connect the wire harness connector.

(3) Install the fasteners attaching the lamp to the roof.

(4) Position the lens at the lamp housing and force it upward into the housing until the mounting tabs are seated on the lamp mounting pins.



**Fig. 10 Cargo Lamp Lens**

- 1 - MOUNTING PIN ON UNDERSIDE
- 2 - BULB
- 3 - MOUNTING PIN
- 4 - MOUNTING TAB
- 5 - TAB "A"
- 6 - MOUNTING TAB
- 7 - SLOT "B"

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**MAP/READING LAMP**

The map/reading lamp can be serviced by removing the overhead console. Refer to Group 8C, Overhead Console for removal/installation procedures.

## REMOVAL AND INSTALLATION (Continued)

**VISOR VANITY LAMP****REMOVAL**

- (1) Fold down sunvisor.
- (2) Starting at the base of the lamp assembly and working right-to-left, use a small flat blade, carefully pry lamp from visor.
- (3) Disconnect visor lamp wire connector and remove from vehicle.

**INSTALLATION**

- (1) Position visor lamp at visor and connect visor lamp wire connector.
- (2) Position visor lamp in visor and press into place.

# LAMP SYSTEMS

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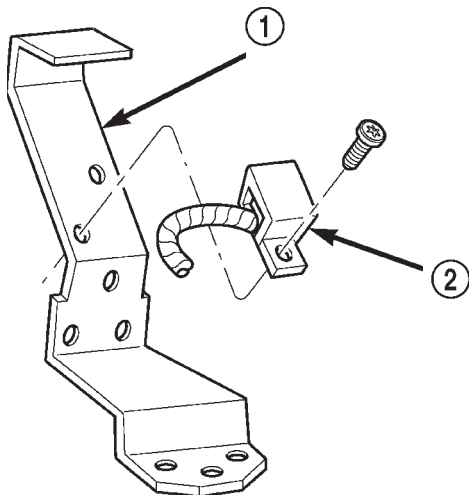
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### REMOVAL AND INSTALLATION

#### SENTINEL HEADLAMP DELAY MODULE

##### REMOVAL

- (1) Remove the knee blocker.
- (2) Remove the screw that attaches the module to the inside of the instrument panel (Fig. 1).
- (3) Disconnect the wire harness connector and remove the module from the instrument panel.



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**Fig. 1 Headlamp Delay Module**

- 1 - BRACKET
- 2 - HEADLAMP DELAY MODULE

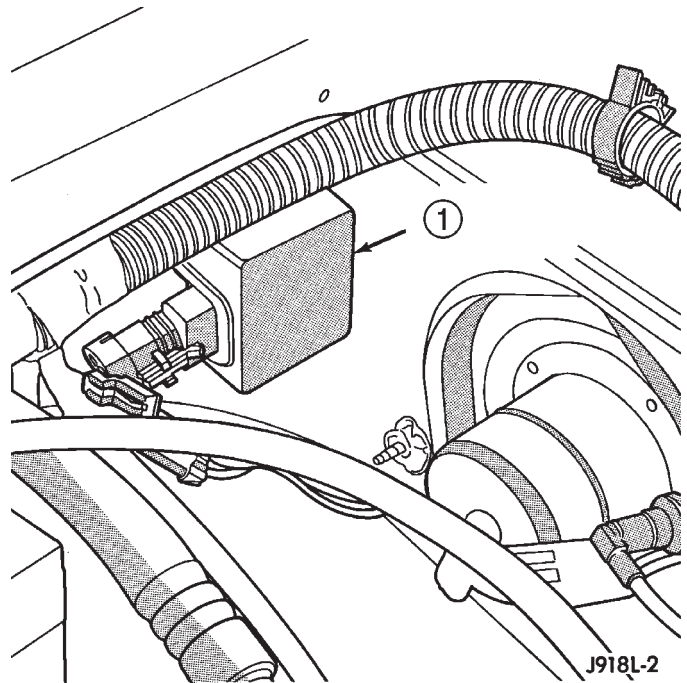
##### INSTALLATION

- (1) Position the module inside the I/P and connect the wire harness connector to the module.
- (2) Install the screw that attaches the module to the inside of the instrument panel.
- (3) Install the knee blocker.

### DAYTIME RUNNING LAMP MODULE

##### REMOVAL

The Daytime Running Lights (DRL) module is located on the right fender inner panel adjacent to the dash panel (Fig. 2).



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**Fig. 2 Daytime Running Lamp Module**

- 1 - DAYTIME RUNNING LIGHT MODULE

- (1) Disconnect the wire harness connector from the module.
- (2) Remove the screws that attach the module to the fender inner panel.
- (3) Remove the module from the fender inner panel.

##### INSTALLATION

- (1) Position the module on the right fender inner panel.
- (2) Install the attaching screws. Tighten the screws securely.
- (3) Connect the wire harness connector to the module.

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

The following Bulb Application Table lists the lamp title on the left side of the column and trade number or part number on the right.

| <b>LAMP</b>                            | <b>BULB</b> |
|--|-------------|
| Back-up . . . . .                      | 3157        |
| Center High Mounted Stoplamp . . . . . | 921         |
| Fog lamp . . . . .                     | H3          |
| Front Side Marker . . . . .            | 168         |
| Headlamp/Sealed Beam . . . . .         | 6054BLL     |
| License Plate . . . . .                | 168         |
| Park/Turn Signal . . . . .             | 3157        |
| Tail/Brake . . . . .                   | 3157        |
| Rear Turn Signal . . . . .             | 3157        |

#### 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.

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 an Authorized Service Center (ASC) after the component is removed from the vehicle.

The following Bulb Application Tables lists the lamp title on the left side of the column and trade number or part number on the right.

| <b>LAMP</b>                   | <b>BULB</b> |
|-------------------------------|-------------|
| Cargo . . . . .               | 561         |
| Dome . . . . .                | 561         |
| Dome/Reading . . . . .        | 906         |
| Overhead Console . . . . .    | 912         |
| Under Hood . . . . .          | 105         |
| Vanity Mirror . . . . .       | 74          |
| Underpanel Courtesy . . . . . | 168         |

#### INDICATOR LAMPS

| <b>LAMP</b>                        | <b>BULB</b> |
|------------------------------------|-------------|
| A/C Control . . . . .              | 74          |
| Airbag . . . . .                   | 74          |
| Anti-lock Brake . . . . .          | 74          |
| Brake Warning . . . . .            | 74          |
| Check Engine . . . . .             | 74          |
| Check Gauges . . . . .             | 74          |
| Cigar Lighter . . . . .            | 53          |
| Coolant Temp High . . . . .        | 194         |
| Cruise . . . . .                   | 74          |
| Fasten Seat Belts . . . . .        | 74          |
| Four Wheel Drive . . . . .         | 74          |
| Generator . . . . .                | 194         |
| Heater Control . . . . .           | 74          |
| High Beam . . . . .                | 74          |
| Illumination . . . . .             | 103         |
| Low Fuel . . . . .                 | 74          |
| Low Oil Pressure . . . . .         | 194         |
| Low Washer Fluid . . . . .         | 74          |
| Radio . . . . .                    | ASC         |
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