

LAMPS

CONTENTS

	page		page
BULB APPLICATION	19	LAMP DIAGNOSIS	1
HEADLAMP ALIGNMENT	7	LAMP SERVICE	13
LAMP BULB SERVICE	10	LAMP SYSTEMS	17

LAMP DIAGNOSIS

INDEX

	page		page
GENERAL INFORMATION		DIAGNOSTIC PROCEDURES	1
GENERAL INFORMATION	1	FOG LAMP DIAGNOSIS	3
SAFETY PRECAUTIONS	1	HEADLAMP DIAGNOSIS	2
DIAGNOSIS AND TESTING		LAMP OUTAGE MODULE DIAGNOSIS	5
DAYTIME RUNNING LAMP DIAGNOSIS	4		

GENERAL INFORMATION

GENERAL INFORMATION

Each vehicle is equipped with various lamp assemblies. A good ground is necessary for proper lighting operation. Grounding is provided by the lamp socket when it comes in contact with the metal body, or 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.

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 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.

DIAGNOSIS AND TESTING

DIAGNOSTIC PROCEDURES

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.

DIAGNOSIS AND TESTING (Continued)

HEADLAMP DIAGNOSIS

HEADLAMP DIAGNOSIS

CONDITION	POSSIBLE CAUSES	CORRECTION
HEADLAMPS ARE DIM WITH ENGINE IDLING OR IGNITION TURNED OFF	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Charging system output too high. 2. Loose or corroded terminals or splices in circuit. 	<ol style="list-style-type: none"> 1. Test and repair charging system, refer to Group 8A. 2. Inspect and repair all connectors and splices, refer to Group 8W.
HEADLAMPS ARE DIM WITH ENGINE RUNNING ABOVE IDLE	<ol style="list-style-type: none"> 1. Charging system output too low. 2. Poor lighting circuit Z1-ground. 3. High resistance in headlamp circuit. 4. Both headlamp bulbs defective. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Test for voltage drop across Z1-ground locations, refer to Group 8W. 2. Test amperage draw of headlamp circuit. Should not exceed 30 amps. 3. Replace headlamp switch. 4. Inspect and repair all connectors and splices, refer to Group 8W.
HEADLAMPS DO NOT ILLUMINATE	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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.

DIAGNOSIS AND TESTING (Continued)

FOG LAMP DIAGNOSIS

CONDITION	POSSIBLE CAUSES	CORRECTION
FOG LAMPS ARE DIM WITH ENGINE IDLING OR IGNITION TURNED OFF.	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 lamp bulbs.
FOG LAMP BULBS BURN OUT FREQUENTLY.	<ol style="list-style-type: none"> 1. Charging system output too high. 2. Loose or corroded terminals or splices in circuit. 	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 1. Charging system output too low. 2. Poor fog lamp circuit ground. 3. High resistance in fog lamp circuit. 4. Both fog lamp bulbs defective. 	<ol style="list-style-type: none"> 1. Test and repair charging system, refer to Group 8A. 2. Test voltage drop across Z-1 ground, refer to Group 8W. 3. Test amperage draw of fog lamp circuit. 4. Replace both fog lamp bulbs.
FOG LAMPS FLASH RANDOMLY.	<ol style="list-style-type: none"> 1. Poor fog lamp circuit ground. 2. High resistance in fog lamp circuit. 3. Faulty fog lamp switch circuit breaker. 4. Loose or corroded terminals or splices in circuit. 	<ol style="list-style-type: none"> 1. Repair circuit ground, refer to Group 8W. 2. Test amperage draw of fog lamp circuit. 3. Replace fog lamp switch. 4. Repair connector terminals or splices, refer to Group 8W.
FOG LAMPS DO NOT ILLUMINATE.	<ol style="list-style-type: none"> 1. Blown fuse for fog lamps. 2. No ground at fog lamps. 3. Faulty fog lamp switch. 4. Broken connector terminal or wire splice in fog lamp circuit. 	<ol style="list-style-type: none"> 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 splices.

DIAGNOSIS AND TESTING (Continued)

DAYTIME RUNNING LAMP DIAGNOSIS

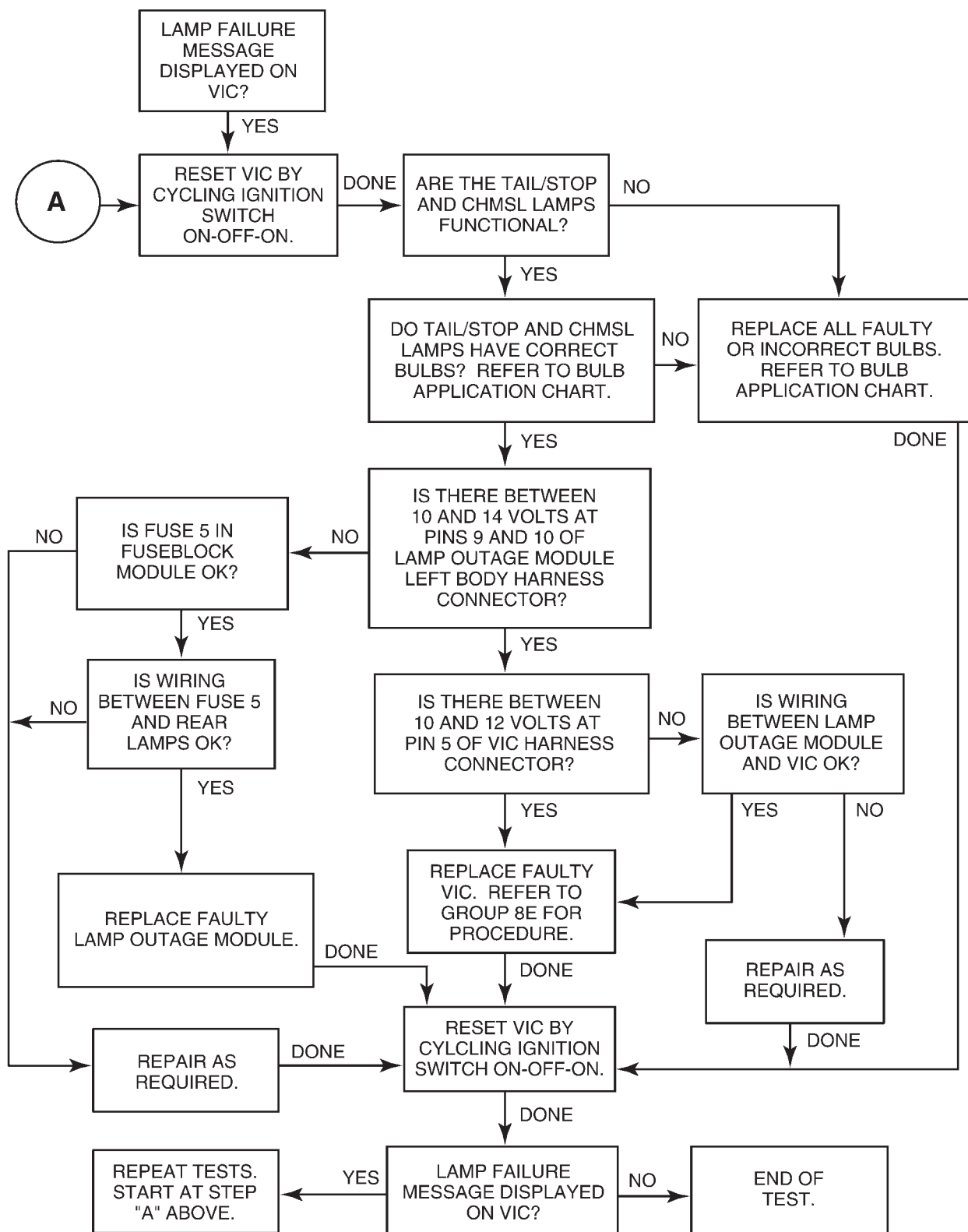
DAYTIME RUNNING LAMP DIAGNOSIS

CONDITION	POSSIBLE CAUSES	CORRECTION
DAYTIME RUNNING LAMPS DO NOT WORK	<ol style="list-style-type: none">1. Poor connection at DRL module.2. Parking brake engaged.3. Parking brake circuit shorted to ground.4. Headlamp circuit shorted to ground.5. Defective DRL module.	<ol style="list-style-type: none">1. Secure connector on DRL module.2. Disengage parking brake.3. Check voltage on pin 3 of module, refer to Group 8W.4. Check L3 circuit, refer to Group 8W.5. Replace DRL module.

DIAGNOSIS AND TESTING (Continued)

LAMP OUTAGE MODULE DIAGNOSIS

LAMP OUTAGE MODULE DIAGNOSIS



DIAGNOSIS AND TESTING (Continued)

NOTE: The Lamp Outage Module contains an internal circuit breaker. When the module senses an overload it will trip the circuit breaker and illuminate a failure in the Vehicle Information Center

(VIC). The circuit breaker will reset once the vehicle is turned off for approximately 60 seconds. Continuous tripping of the circuit breaker may indicate a circuit problem.

HEADLAMP ALIGNMENT

INDEX

	page		page
GENERAL INFORMATION		SCREEN	8
HEADLAMP ALIGNMENT	7	HEADLAMP ALIGNMENT PREPARATION	7
SERVICE PROCEDURES		SPECIAL TOOLS	
FOG LAMP ADJUSTMENT	9	SPECIAL TOOLS—HEADLAMP ALIGNMENT ...	9
HEADLAMP ADJUSTMENT USING ALIGNMENT			

GENERAL INFORMATION

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. **The preferred headlamp alignment setting is 0 for the left/right adjustment and 1" down for the up/down adjustment.**

SERVICE PROCEDURES

HEADLAMP ALIGNMENT PREPARATION

- (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.

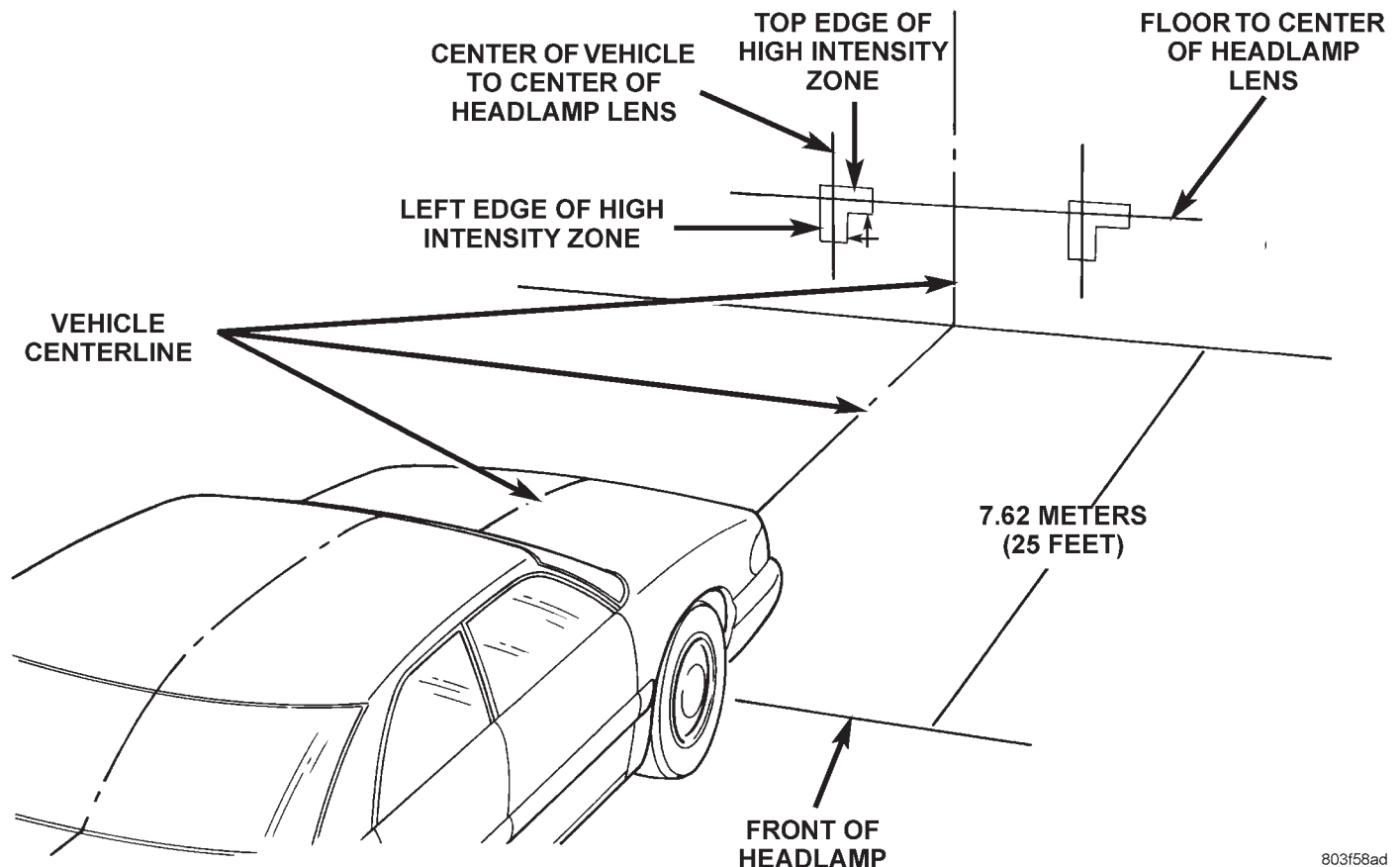


Fig. 1 Headlamp Alignment Screen—Typical

SERVICE PROCEDURES (Continued)

(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.

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.

HEADLAMP ADJUSTMENT USING ALIGNMENT SCREEN

A properly aimed low beam will project the top edge of high intensity pattern on the screen from 50

mm (2 in.) above to 50 mm (2 in.) below headlamp centerline. The side-to-side left edge of high intensity pattern should be from 50 mm (2 in.) left to 50 mm (2 in.) right of headlamp centerline (Fig. 1). **The preferred headlamp alignment is 0 for the left/right adjustment and 1" down for the up/down adjustment.** The high beams on a vehicle with aero headlamps cannot be aligned. The high beam pattern should be correct when the low beams are aligned properly.

To adjust headlamp aim, rotate alignment screws (Fig. 2).

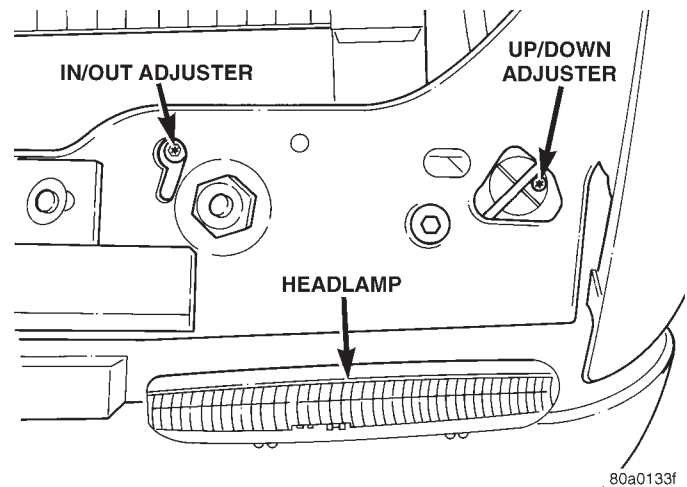


Fig. 2 Aero Headlamp Alignment Screws

SERVICE PROCEDURES (Continued)

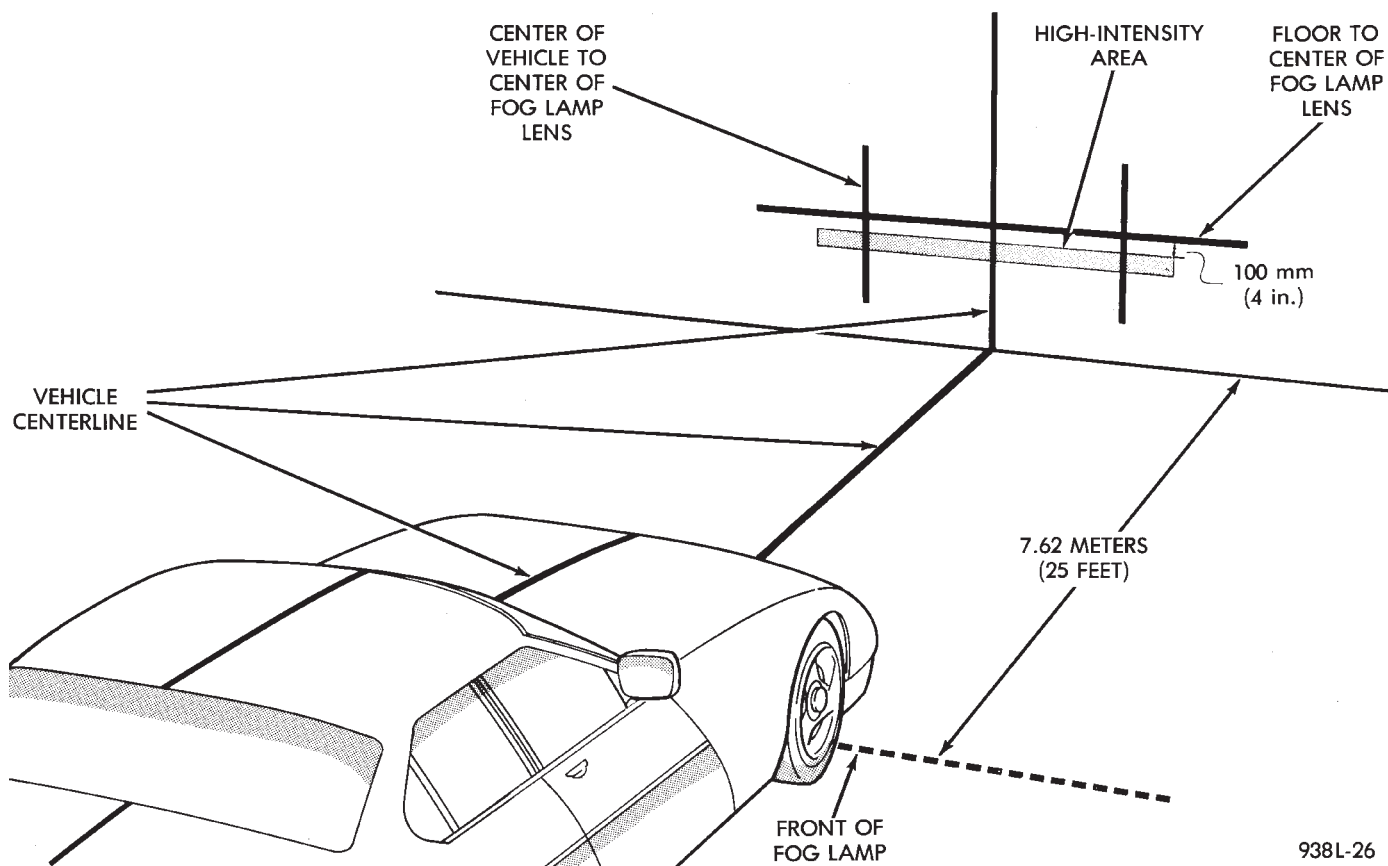


Fig. 3 Fog Lamp Alignment—Typical

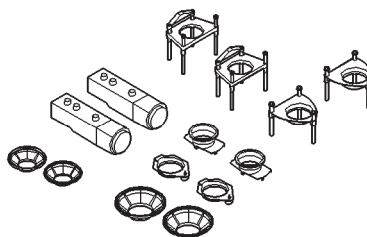
FOG LAMP ADJUSTMENT

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. 3).

Rotate the adjustment screw (Fig. 4) to obtain the correct pattern.

SPECIAL TOOLS

SPECIAL TOOLS—HEADLAMP ALIGNMENT



Headlamp Aiming Kit C-4466-A

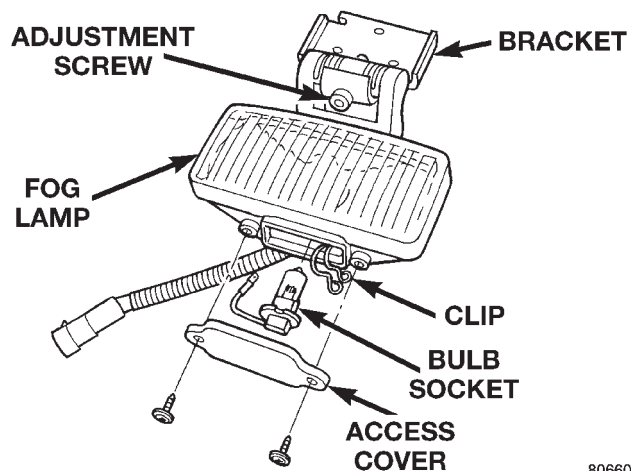


Fig. 4 Fog Lamp

LAMP BULB SERVICE

INDEX

	page		page
REMOVAL AND INSTALLATION		OVERHEAD CONSOLE READING LAMP BULB ..	12
CARGO LAMP BULB	12	PARKING LAMP BULB	11
CENTER HIGH MOUNTED STOP LAMP		READING LAMP BULB	12
(CHMSL) BULB	11	TAIL, STOP, TURN SIGNAL, BACK-UP AND	
DOVE LAMP BULB	12	SIDE MARKER LAMP BULBS	11
DOOR COURTESY LAMP BULB	12	TURN SIGNAL AND SIDE MARKER LAMP BULB .	11
FOG LAMP BULB	10	UNDERHOOD LAMP BULB	11
HEADLAMP BULB	10	VISOR VANITY LAMP BULB	12
LICENSE PLATE LAMP BULB	11		

REMOVAL AND INSTALLATION

HEADLAMP BULB

REMOVAL

- (1) Lift hood to access lamps.
- If clearance is minimal behind the headlamp assembly, refer to the Headlamp Removal/Installation procedure for bulb replacement.
- (2) Reach into engine compartment and locate lock ring supporting the headlamp bulb assembly.
- (3) Rotate the lock ring 1/8 turn counterclockwise (Fig. 1).
- (4) Pull the bulb straight out from the housing.

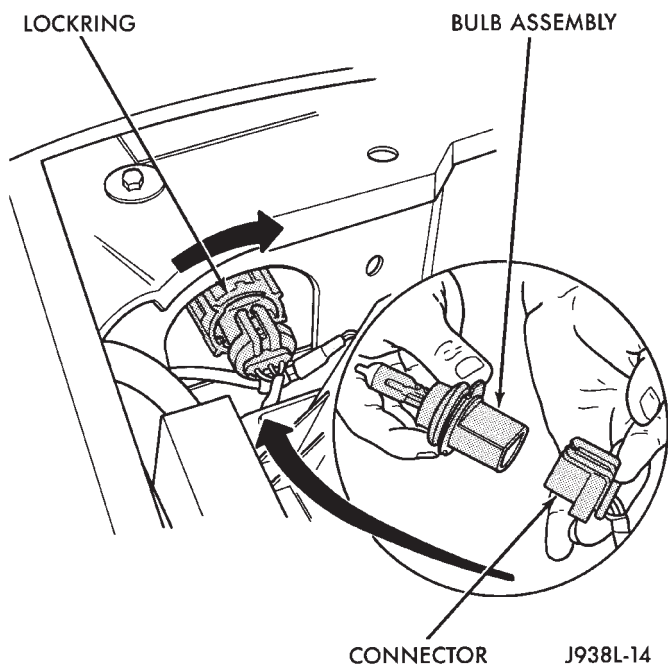


Fig. 1 Headlamp Bulb

INSTALLATION

CAUTION: Do not touch the bulb glass with fingers or other oily surfaces. Reduced bulb life will result.

- (1) Install new bulb.
- (2) Position bulb assembly in the lamp housing and turning the lock ring 1/8 turn clockwise to secure.

FOG LAMP BULB

REMOVE

- (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 wire connectors at bulb.
- (4) Remove bulb element from fog lamp.

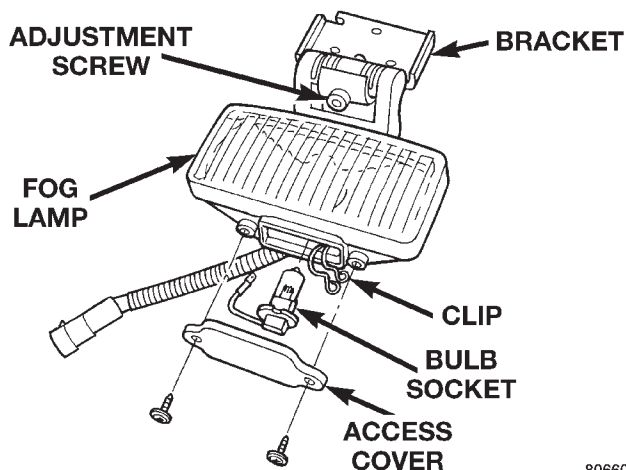


Fig. 2 Fog Lamp Bulb

REMOVAL AND INSTALLATION (Continued)

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

PARKING LAMP BULB

REMOVAL

- (1) Remove lamp from vehicle
- (2) Rotate socket counterclockwise and pull socket from lamp.
- (3) Pull bulb to from socket.

INSTALLATION

- (1) Position bulb in socket and push into place.
- (2) Position socket in lamp and rotate socket clockwise.
- (3) Install the lamp.

TURN SIGNAL AND SIDE MARKER LAMP BULB

REMOVAL

- (1) Remove parking lamp.
- (2) Remove turn signal/side marker lamp.
- (3) Rotate turn signal bulb socket counterclockwise, press in on bulb and rotate 1/4 turn to remove.
- (4) Rotate sidemarker bulb socket counterclockwise grasp and pull from lamp.

INSTALLATION

- (1) Install side marker lamp bulb.
- (2) Install turn signal lamp bulb.
- (3) Install turn signal/side marker lamp.
- (4) Install parking lamp.

TAIL, STOP, TURN SIGNAL, BACK-UP AND SIDE MARKER LAMP BULBS

The stop, turn signal, back-up and rear side marker lamp bulbs are incorporated into the tail lamp.

REMOVAL

- (1) Remove tail lamp.
- (2) Grasp bulb socket and rotate counterclockwise. Separate socket from lamp.
- (3) Pull bulb from socket (Fig. 3).

INSTALLATION

- (1) Position bulb in socket and push into place.
- (2) Position bulb socket in lamp and rotate clockwise.

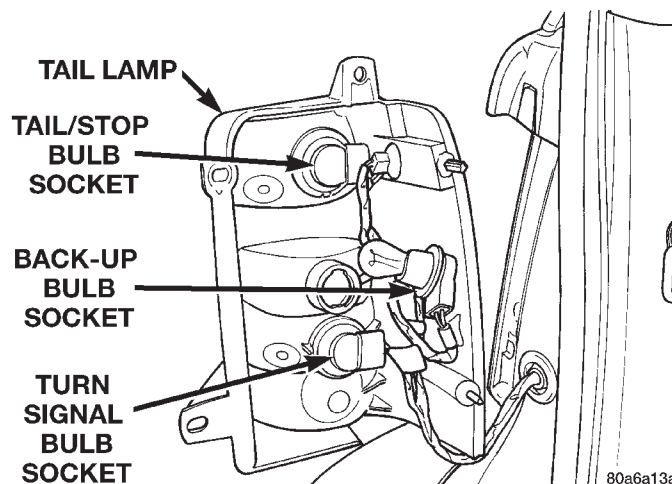


Fig. 3 Tail Lamp Bulbs

- (3) Install lamp.

LICENSE PLATE LAMP BULB

REMOVAL

- (1) Remove screws attaching license plate lamp to license plate housing.
- (2) Separate lamp from housing.
- (3) Grasp bulb and pull from bulb socket.

INSTALLATION

- (1) Position bulb in socket and press into place.
- (2) Position license plate lamp in license plate housing.
- (3) Install screws attaching license plate lamp to license plate housing.

CENTER HIGH MOUNTED STOP LAMP (CHMSL) BULB

REMOVAL

- (1) Remove CHMSL from liftgate.
- (2) Turn bulb socket 1/4 turn counterclockwise.
- (3) Separate socket from lamp.
- (4) Grasp bulb and pull from socket.

INSTALLATION

- (1) Position bulb in socket and press into place.
- (2) Position socket in lamp.
- (3) Turn bulb socket 1/4 turn clockwise.
- (4) Install CHMSL.

UNDERHOOD LAMP BULB

REMOVAL

- (1) Disconnect the wire harness connector from the underhood lamp.
- (2) Rotate the bulb counterclockwise. Remove it from the lamp socket.

REMOVAL AND INSTALLATION (Continued)

INSTALLATION

- (1) Insert the replacement bulb in the lamp base socket. Rotate it clockwise.
- (2) Connect the wire harness connector to the lamp.

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.

OVERHEAD CONSOLE READING LAMP BULB

REMOVAL

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

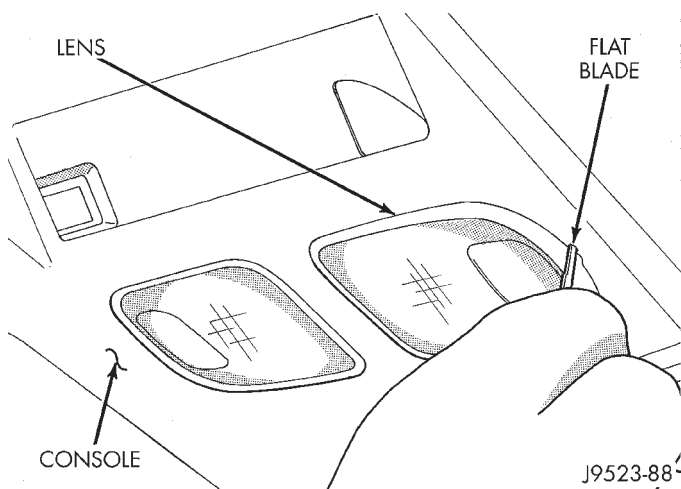


Fig. 4 Overhead Console Reading Lamp Bulb

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.

DOME LAMP BULB

REMOVAL

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

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.

READING LAMP BULB

REMOVAL

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

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.

DOOR COURTESY LAMP BULB

REMOVAL

- (1) Remove door trim panel. Refer to Group 23, Body Components for service procedure.
- (2) Remove bulb socket from lamp.
- (3) Pull bulb from socket.

INSTALLATION

- (1) Position bulb in socket and press into place.
- (2) Install bulb socket in lamp.
- (3) Install door trim panel.

CARGO LAMP BULB

REMOVAL

- (1) Insert a flat blade screwdriver in slots provided at lower portion of lens.
- (2) Rotate screwdriver upward until lens snaps out of housing.
- (3) Remove lens from housing.
- (4) Remove bulb from bulb socket.

INSTALLATION

- (1) Position bulb in socket and press into place.
- (2) Insert upper tabs of lens into lens housing.
- (3) Snap lower portion of lens into slots at lens housing.

LAMP SERVICE

INDEX

	page		page
REMOVAL AND INSTALLATION		LICENSE PLATE LAMP	14
CARGO LAMP	16	PARKING LAMP	13
CENTER HIGH MOUNTED STOP LAMP (CHMSL)	15	TAIL, STOP, TURN SIGNAL, BACK-UP AND SIDE MARKER LAMP	14
DOME/READING LAMP	15	TURN SIGNAL AND SIDE MARKER LAMP	13
DOOR COURTESY LAMP	16	UNDERHOOD LAMP	15
FOG LAMP	13	VISOR VANITY LAMP	15
HEADLAMP	13		

REMOVAL AND INSTALLATION

HEADLAMP

REMOVAL

(1) Grasp lower edge of headlamp lens and pull straight back (away) from grille opening reinforcement (GOR). Disengage lower adjuster pivots from lens assembly.

(2) Grasp upper edge of headlamp lens. Pull straight back (away) from grille opening reinforcement (GOR). Disengage upper adjuster pivot from lens assembly.

(3) Rotate bulb lock ring counterclockwise, and remove ring and bulb from lens.

INSTALLATION

(1) Replace by seating the assembly in the lamp housing and turning the lock ring 1/8 turn clockwise to secure.

(2) Align upper adjust pivot into headlamp opening and snap into place.

(3) Snap lower adjuster pivots into place.

FOG LAMP

REMOVAL

(1) Remove adjustment screw (Fig. 1).

(2) Disengage fog lamp electrical connector.

(3) Separate fog lamp from vehicle.

INSTALLATION

(1) Position fog lamp at vehicle.

(2) Engage fog lamp electrical connector.

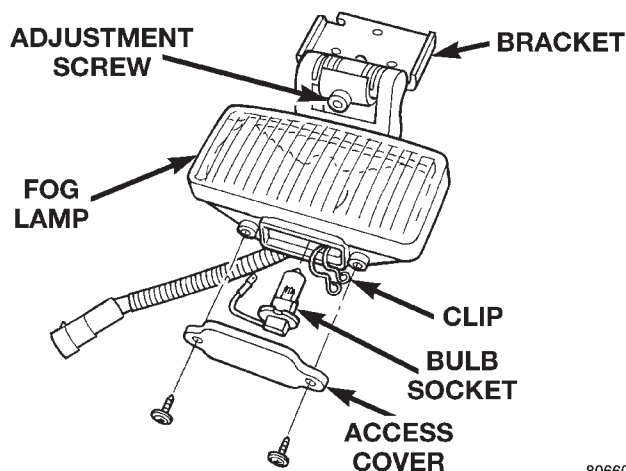
(3) Install adjustment screw (Fig. 1).

(4) Align fog lamp.

PARKING LAMP

REMOVAL

The parking lamp is mounted on the side of the GOR next to headlamp assembly.



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Fig. 1 Fog Lamp

(1) Open hood.

(2) Remove screws which hold the parking lamp in position (Fig. 2).

(3) Rotate lamp socket counterclockwise and pull socket from lamp.

INSTALLATION

(1) Position lamp socket in lamp and rotate clockwise.

(2) Position lamp in place and install the screws.

TURN SIGNAL AND SIDE MARKER LAMP

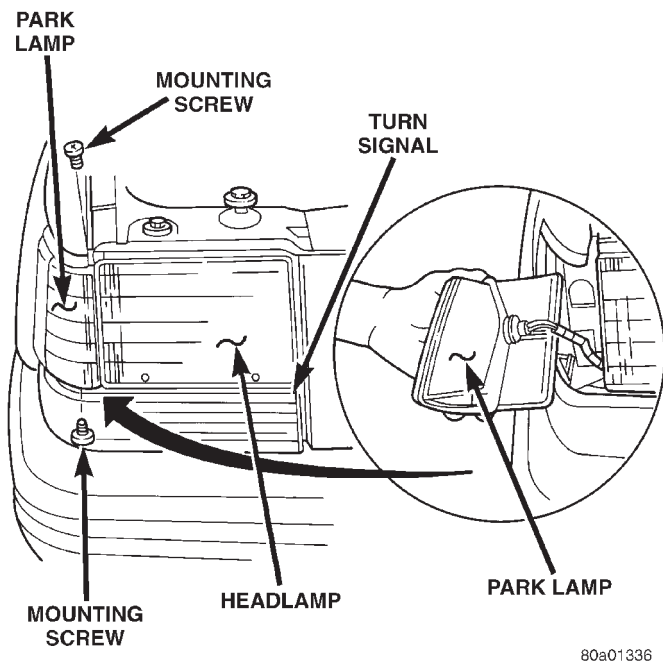
REMOVAL

(1) Remove parking lamp.

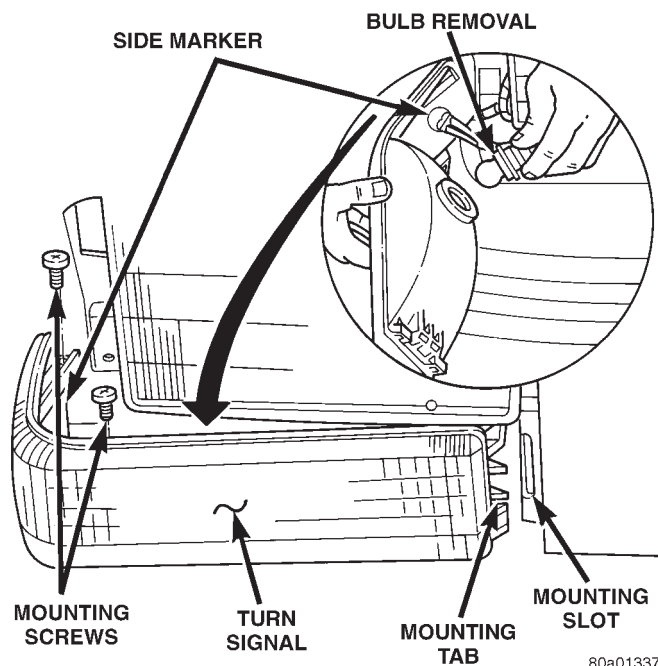
(2) Remove the screws and slide lamp outboard to expose the socket (Fig. 3).

(3) Remove turn signal socket from lamp.

REMOVAL AND INSTALLATION (Continued)

**Fig. 2 Park Lamp**

- (4) Remove sidemarker socket from lamp.
- (5) Separate lamp from vehicle.

**Fig. 3 Turn Signal And SideMarker Lamp****INSTALLATION**

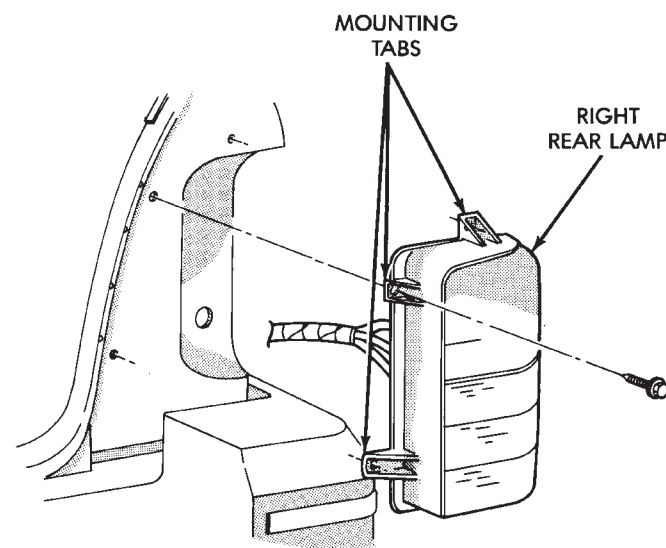
- (1) Install turn signal lamp socket.
- (2) Install side marker lamp socket.
- (3) Slide lamp into slot provided on inboard side of headlamp assembly.
- (4) Install screws.
- (5) Install parking lamp.

TAIL, STOP, TURN SIGNAL, BACK-UP AND SIDE MARKER LAMP

The stop, turn signal, back-up and rear side marker lamps are incorporated into the tail lamp.

REMOVAL

- (1) Remove screws attaching lamp to body (Fig. 4).
- (2) Remove bulb sockets from lamp.
- (3) Separate lamp from vehicle.



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Fig. 4 Tail Lamp**INSTALLATION**

- (1) Position lamp at vehicle and install bulb sockets.
- (2) Position lamp on vehicle and install screws.

LICENSE PLATE LAMP**REMOVAL**

- (1) Remove screws attaching license plate lamp to license plate housing.
- (2) Separate lamp from housing.
- (3) Grip bulb socket, rotate counterclockwise and separate bulb socket from license plate lamp.

INSTALLATION

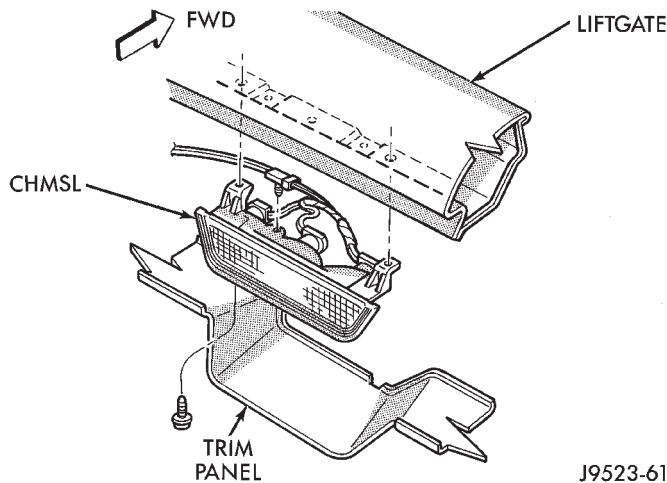
- (1) Position bulb socket in license plate lamp and turn clockwise.
- (2) Position license plate lamp in license plate housing.
- (3) Install screws attaching license plate lamp to license plate housing.

REMOVAL AND INSTALLATION (Continued)

CENTER HIGH MOUNTED STOP LAMP (CHMSL)

REMOVAL

- (1) Raise liftgate.
- (2) Remove upper liftgate trim panel.
- (3) Remove CHMSL lamp mounting screws (Fig. 5).
- (4) Remove CHMSL lamp.
- (5) Turn bulb socket 1/4 turn counterclockwise.
- (6) Separate socket from lamp.

**Fig. 5 Center High Mounted Stop Lamp**

INSTALLATION

- (1) Position socket in lamp.
- (2) Turn bulb socket 1/4 turn clockwise.
- (3) Position CHMSL lamp in place and install mounting screws.
- (4) Install upper liftgate trim panel.

UNDERHOOD LAMP

REMOVAL

When equipped, the underhood lamp is installed on the hood right, rear panel. The lamp is on when hood is opened by way of liquid ON/OFF switch that is integral with lamp base.

- (1) Open hood.
- (2) Remove screw attaching lamp support bracket to hood (Fig. 6).
- (3) Disengage connector for underhood lamp.
- (4) Separate lamp from vehicle.

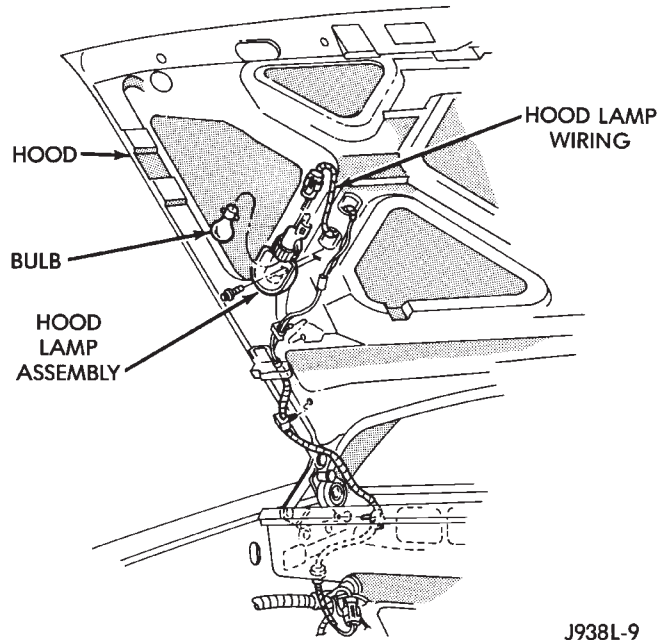
INSTALLATION

- (1) Engage connector for underhood lamp.
- (2) Position lamp on hood and install screw.

VISOR VANITY LAMP

REMOVAL

- (1) Fold down sunvisor.

**Fig. 6 Underhood Lamp**

- (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.

DOME/READING LAMP

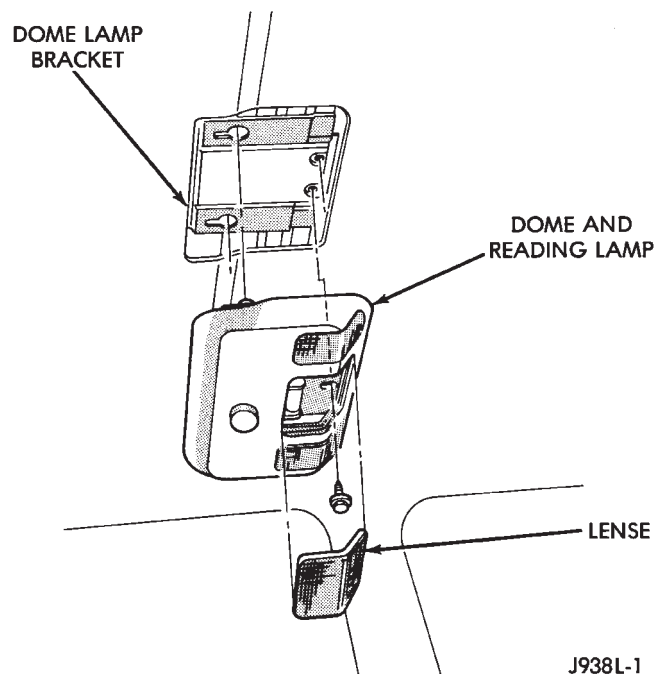
REMOVAL

- (1) Insert a flat blade screwdriver in slot at the center of the lamp housing. Rotate screwdriver upward and unsnap dome lamp lens.
- (2) Pull lens downward. Remove it from lamp housing.
- (3) Remove the lamp housing retaining screws (Fig. 7).
- (4) Push housing forward and release housing from bracket.
- (5) Disconnect wire harness connectors.
- (6) Remove lamp housing from headliner cavity.

INSTALLATION

- (1) Position dome/reading lamp housing at headliner cavity.
- (2) Connect wire harness connectors.
- (3) Locate rear pods of the lamp in the slots of the dome lamp bracket. Push lamp housing up and to rear.

REMOVAL AND INSTALLATION (Continued)

**Fig. 7 Dome/Reading Lamp**

- (4) Install the lamp housing screws.
- (5) Position dome lamp lens at lamp housing. Snap lens into housing.

DOOR COURTESY LAMP**REMOVAL**

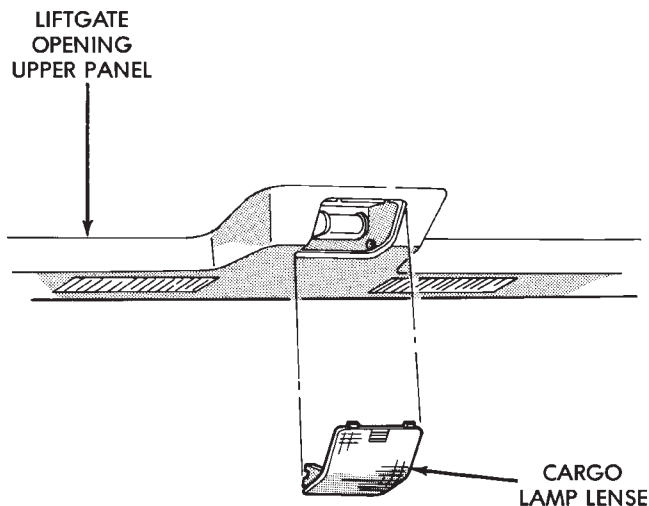
- (1) Remove door trim panel. Refer to Group 23, Body Components for service procedure.
- (2) Remove bulb socket from lamp.
- (3) Depress lamp locking tabs and separate lamp from trim panel.

INSTALLATION

- (1) Position lamp in trim panel and snap into place.
- (2) Install bulb socket in lamp.
- (3) Install door trim panel.

CARGO LAMP**REMOVAL**

- (1) Insert a flat blade screwdriver in slots provided at lower portion of lens.
- (2) Rotate screwdriver upward until lens snaps out of housing.
- (3) Remove lens from housing (Fig. 8).
- (4) Remove screws attaching liftgate opening upper trim panel/cargo lamp to liftgate opening roof panel.
- (5) Separate trim panel from roof panel.
- (6) Disengage electrical connector for cargo lamp.

**Fig. 8 Cargo Lamp****INSTALLATION**

- (1) Position trim panel/cargo lamp at liftgate opening.
- (2) Engage electrical connector for cargo lamp.
- (3) Install screws attaching liftgate opening upper trim panel/cargo lamp to liftgate opening roof panel.
- (4) Position lens on cargo lamp and snap into place.

LAMP SYSTEMS

INDEX

	page		page
GENERAL INFORMATION		REMOVAL AND INSTALLATION	
AUTO HEADLAMP SENSOR	17	AUTO HEADLAMP SENSOR	17
DAYTIME RUNNING LAMP SYSTEM	17	DAYTIME RUNNING LIGHT MODULE	17
LAMP OUTAGE MODULE	17	LAMP OUTAGE MODULE	18

GENERAL INFORMATION

DAYTIME RUNNING LAMP SYSTEM

ZJ vehicles built for use in Canada are equipped with a Daytime Running Lamp System (DRL). The DRL system operates the headlamp at 50% illumination with the headlamp switch OFF, park brake released and the ignition in the RUN position. The DRL system is controlled by the Daytime Running Lamp Module located in the engine compartment attached to the Power Distribution Center (PDC) bracket. The DRL module overrides the headlamp switch when the headlamps are turned OFF. The headlamps operate normally when the headlamps are turned ON.

LAMP OUTAGE MODULE

The Lamp Outage Module will indicate a tail lamp, stop lamp, or a CHMSL bulb failure. A display will illuminate in the Vehicle Information Center (VIC), displaying the failure.

Details for the VIC can be found in Group 8E, Vehicle Information Center. For circuit information, refer to Group 8W, Wiring Diagrams.

The Lamp Outage Module is located behind the left quarter trim panel.

Connecting trailer lights to the body harness at the rear of the vehicle can cause damage to the lamp outage module. The lamp outage module is designed to handle a 5 amp current load. This is adequate for the operation of the vehicles lighting system. When additional lights are added to the system such as trailer lights, the 5 amp limit can be exceeded. This can cause failure of the lamp outage module.

If trailer towing is required and the vehicle is not equipped with a trailer tow package, the MOPAR accessory trailer towing harnesses are the only approved method to provide additional trailer lights. These harnesses are designed to provide current to the trailer lights but bypass the lamp outage module.

AUTO HEADLAMP SENSOR

The auto headlamp sensor is the key sensor for the auto headlamp system. The sensor needs real sun-

light to properly register the light level. When auto headlamps are enabled indoors, the headlamps may be turned on. The sensor is located in the center of the defroster grille at the base of the windshield.

REMOVAL AND INSTALLATION

DAYTIME RUNNING LIGHT MODULE

REMOVAL

- (1) Open hood.
- (2) Disconnect electrical connector from module.
- (3) Remove screws holding module to PDC bracket (Fig. 1).
- (4) Separate module from bracket.

POWER DISTRIBUTION CENTER

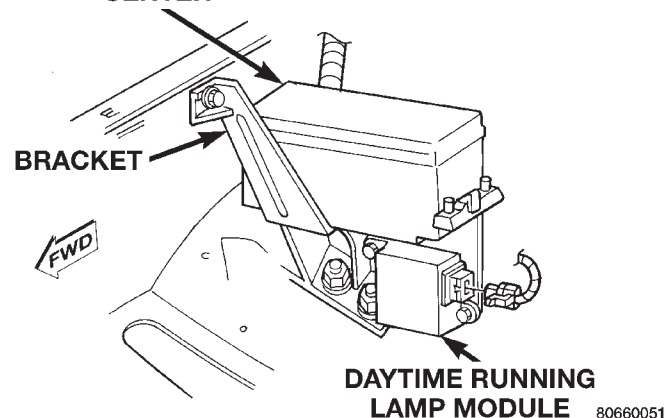


Fig. 1 Daytime Running Lamp Module

INSTALLATION

- (1) Reverse the removal procedures.

AUTO HEADLAMP SENSOR

REMOVAL

- (1) Using a trim stick, gently pry defroster bezel out of dash pad.
- (2) Unplug auto headlamp sensor connector.
- (3) Snap out sensor from bezel.

REMOVAL AND INSTALLATION (Continued)

INSTALLATION

- (1) Reverse the removal procedure.

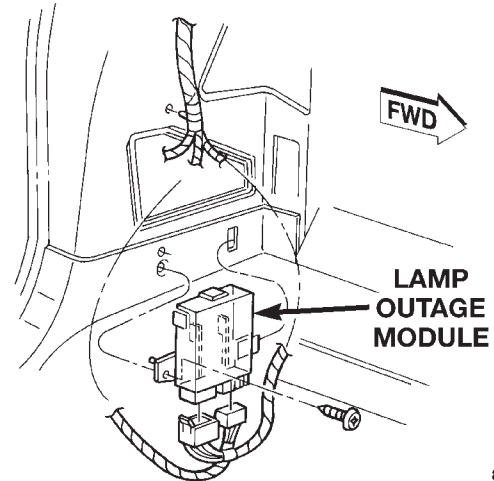
LAMP OUTAGE MODULE

REMOVAL

- (1) Disconnect battery negative cable.
- (2) Remove spare tire from carrier.
- (3) Remove access door.
- (4) Remove screw holding module to inner quarter panel (Fig. 2).
- (5) Disconnect wiring connectors at module.
- (6) Separate lamp outage module from vehicle.

INSTALLATION

- (1) Connect wiring connectors at module.
- (2) Install screw holding module to inner quarter panel.
- (3) Install access door.
- (4) Install spare tire.



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Fig. 2 Lamp Outage Module

- (5) Connect battery negative cable.

BULB APPLICATION

INDEX

	page		page
GENERAL INFORMATION		INTERIOR LAMPS	19
GENERAL INFORMATION	19		
SPECIFICATIONS			
EXTERIOR LAMPS	19		

GENERAL INFORMATION

GENERAL INFORMATION

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.

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.

SPECIFICATIONS

EXTERIOR LAMPS

LAMP	BULB
Back-up	3057
Center High Mounted Stoplamp	922
Fog lamp	H3
Front Turn Signal	1295NA
Front Side Marker	194NA
Headlamp	9004
License Plate	168
Tail/Stop	3057
Rear Turn Signal	3057
Underhood Lamp	105

INTERIOR LAMPS

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

LAMP	BULB
A/C Heater	4720843
Ash Receiver	37
Cigarette Lighter	53
Climate Control	74
Console Floor Shifter	194
Dome/Reading	561
Door Courtesy	168
Front Reading	906
Glove Compartment	194
Hazard Lamp	74
Heater	194
Overhead Console	212
Radio	ASC
Rear Cargo	212
Rocker Switch	37
Shift Lamp	74
Transfer Case Shifter	194
Theft Alarm	74
Under Panel Courtesy	89

LAMPS

CONTENTS

	page		page
BULB APPLICATION	9	LAMP SERVICE	6
LAMP BULB SERVICE	4	LAMP SYSTEMS	8
LAMP DIAGNOSIS	1	SERVICE PROCEDURES	2

LAMP DIAGNOSIS

INDEX

	page		page
GENERAL INFORMATION		DIAGNOSIS AND TESTING	
HEADLAMP LEVELING MOTOR	1	HEADLAMP MOTOR DIAGNOSIS	1

GENERAL INFORMATION

HEADLAMP LEVELING MOTOR

This vehicle is may be equipped with a manual headlamp leveling system. This system allows the driver to adjust the headlamp beam height depending on passenger or cargo load. The headlamp beam height is controlled by a motor attached to each headlamp and is adjusted by a switch located on the console.

DIAGNOSIS AND TESTING

HEADLAMP MOTOR DIAGNOSIS

CONDITION	POSSIBLE CAUSE	CORRECTION
ONE MOTOR DOES NOT OPERATE	1. Poor connection at motor. 2. No voltage at motor. 3. Defective motor.	1. Secure connector on motor. 2. Repair circuit. 3. Replace motor.
MOTORS DO NOT OPERATE	1. No voltage at switch. 2. No voltage at motors. 3. Poor connection at motors. 4. Both motors defective.	1. Repair circuit or replace fuse. Refer to Group 8W. 2. Repair circuit or replace switch. 3. Secure connector on motors. 4. Replace motors.

SERVICE PROCEDURES

INDEX

page

SERVICE PROCEDURES

HEADLAMP ALIGNMENT 2

SERVICE PROCEDURES

HEADLAMP ALIGNMENT

VEHICLE PREPARATION

- (1) Verify headlamp dimmer switch and high beam indicator operation.
- (2) If equipped with a motorized headlamp leveling system, ensure the headlamp leveling switch is in the 0 position.
- (3) Correct defective components that could hinder proper headlamp alignment.
- (4) Verify proper tire inflation.
- (5) Clean headlamp lenses.
- (6) Verify that luggage area is not heavily loaded.

- (7) 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.

ALIGNMENT SCREEN PREPARATION

- (1) Position vehicle on a level surface perpendicular to a flat wall 10 meters away from front of headlamp lens (Fig. 1).
- (2) If necessary, tape a line on the floor 10 meters away from and parallel to the wall.
- (3) Measure from the floor up 1.27 meters (5 feet) 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.

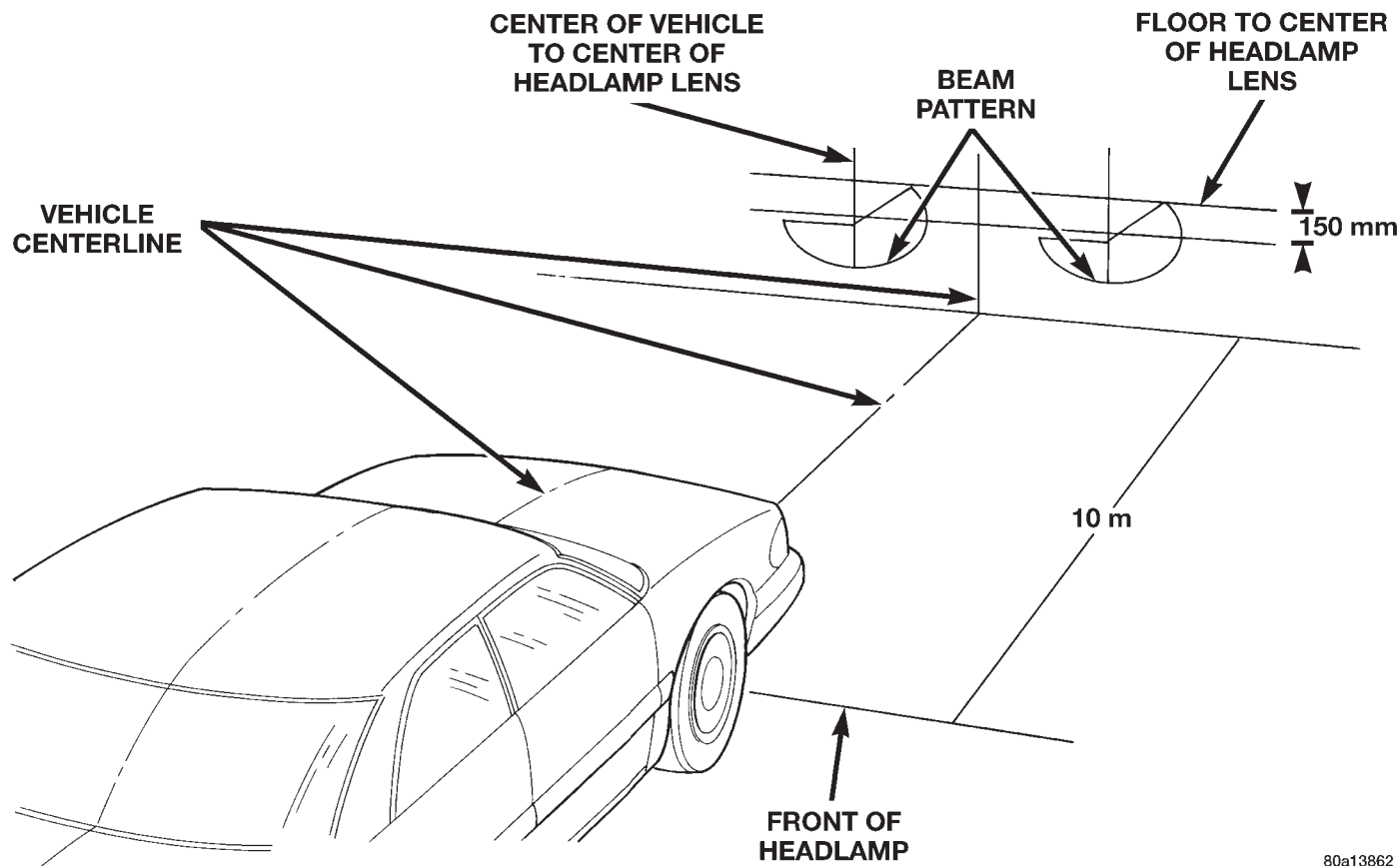


Fig. 1 Headlamp Alignment Screen—Left Hand Drive

SERVICE PROCEDURES (Continued)

(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).

(7) Place a tape line 150 mm below and parallel to the center of headlamp lens to the floor tape mark. Use this for up/down alignment reference.

(8) 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.

HEADLAMP ADJUSTMENT

A properly aimed low beam headlamp will project the top edge of high intensity pattern on screen from 150 mm below headlamp centerline (Fig. 1). The angle between the horizontal and the inclined part of the light-dark boundary may not vary more than 10 cm to the right or left of the vertical through the center mark.

To adjust headlamp aim, rotate the headlamp alignment screws to achieve the pattern specified on the alignment screen.

LAMP BULB SERVICE

INDEX

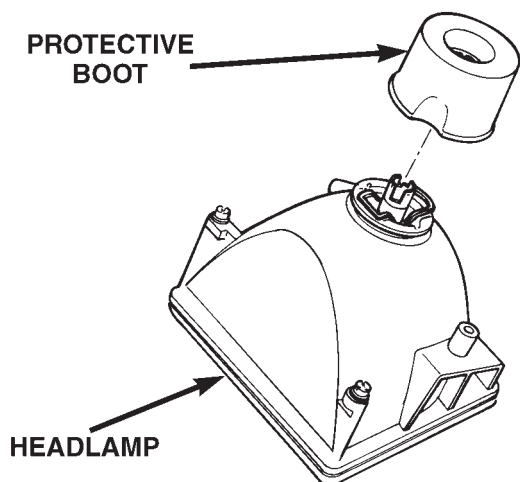
	page		page
REMOVAL AND INSTALLATION		REAR FOG LAMP BULB	5
HEADLAMP BULB	4	SIDE REPEATER LAMP BULB	4

REMOVAL AND INSTALLATION

HEADLAMP BULB

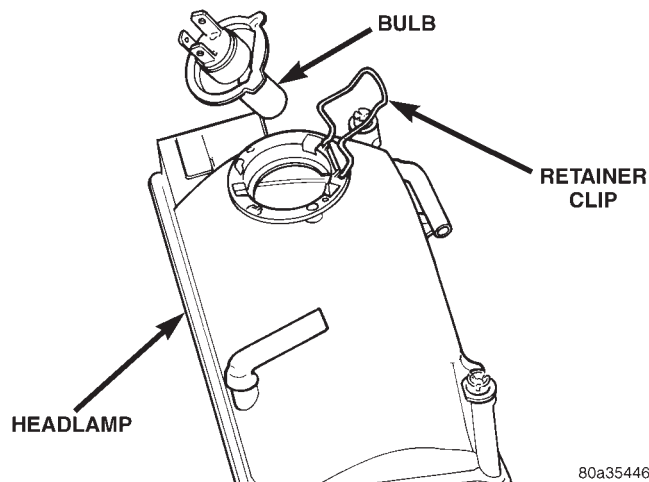
REMOVAL

- (1) Remove headlamp.
- (2) Disengage electrical connector.
- (3) Remove protective boot from rear of headlamp (Fig. 1).
- (4) Disengage bulb retaining clip (Fig. 2).
- (5) Pull the bulb straight out from the housing.



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Fig. 1 Protective Boot



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Fig. 2 Retaining Clip

INSTALLATION

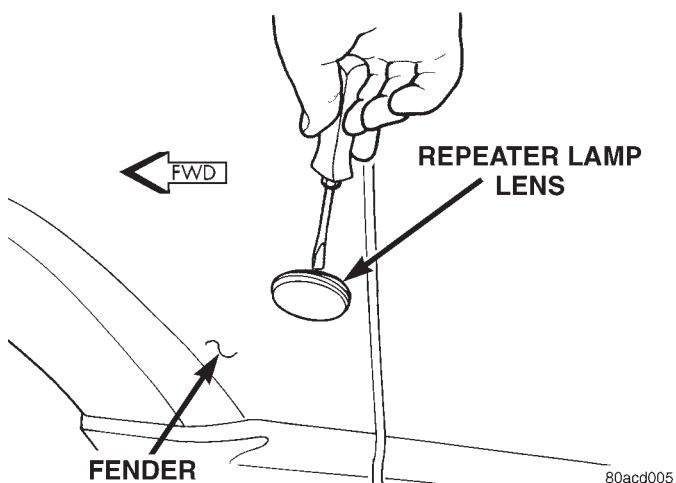
CAUTION: Do not touch the bulb glass with fingers or other oily surfaces. Reduced bulb life will result.

- (1) Position bulb assembly in the lamp housing.
- (2) Engage bulb retaining clip.
- (3) Install protective boot on rear of headlamp.
- (4) Engage electrical connector.
- (5) Install headlamp.

SIDE REPEATER LAMP BULB

REMOVAL

- (1) Insert a flat blade or similar tool between lamp and fender opening and pry the lamp away from the fender (Fig. 3). The retaining tabs are located at the top and bottom of the lamp.
- (2) Twist lamp 1/4 turn clockwise and pull lamp from socket (Fig. 3).
- (3) Twist bulb 1/4 turn and pull bulb from socket.



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Fig. 3 Repeater Lamp Lens

INSTALLATION

- (1) Position bulb in lamp socket and twist bulb 1/4 turn.
- (2) Push lamp on socket and turn 1/4 turn counter-clockwise.
- (3) Push lamp into fender opening.

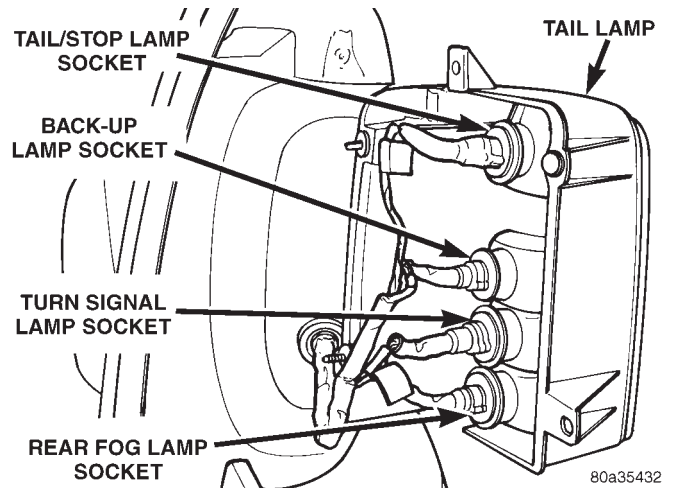
REMOVAL AND INSTALLATION (Continued)

REAR FOG LAMP BULB**REMOVAL**

- (1) Remove the tail lamp.
- (2) Grasp the fog lamp bulb socket and rotate counterclockwise (Fig. 4). Separate socket from lamp.
- (3) Rotate bulb in the socket counterclockwise and remove bulb from socket.

INSTALLATION

- (1) Position the bulb in the socket and rotate clockwise.
- (2) Position the bulb socket in the lamp and rotate clockwise.

**Fig. 4 Fog Lamp Bulb**

- (3) Install the tail lamp.

LAMP SERVICE

INDEX

	page		page
REMOVAL AND INSTALLATION		REAR FOG LAMP	6
HEADLAMP	6	SIDE REPEATER LAMP	6
REAR BUMPER REFLECTOR	6		

REMOVAL AND INSTALLATION

HEADLAMP

REMOVAL

- (1) Remove the park lamp.
- (2) Remove the metal clip retaining the upper pivot of the headlamp to the headlamp leveling motor.
- (3) Pull the headlamp from the grille opening reinforcement (GOR).
- (4) Disengage the electrical connector from the rear of the headlamp

INSTALLATION

- (1) Engage the electrical connector on the rear of the headlamp
- (2) Position the headlamp in the (GOR) and press into place.
- (3) Install the metal clip retaining the upper pivot of the headlamp to the headlamp leveling motor.
- (4) Install the park lamp.

SIDE REPEATER LAMP

REMOVAL

- (1) Insert a small flat blade between lamp and body panel. Disengage lamp retaining tabs (Fig. 1).
- (2) Twist bulb socket 1/4 turn and separate bulb socket from lamp (Fig. 2).

INSTALLATION

- (1) Position socket in lamp and twist socket 1/4 turn.
- (2) Position lamp into body opening and push into place.

REAR FOG LAMP

The rear fog lamp is integrated into the rear tail lamp. Refer to the Rear Tail Lamp Removal/Installation procedure.

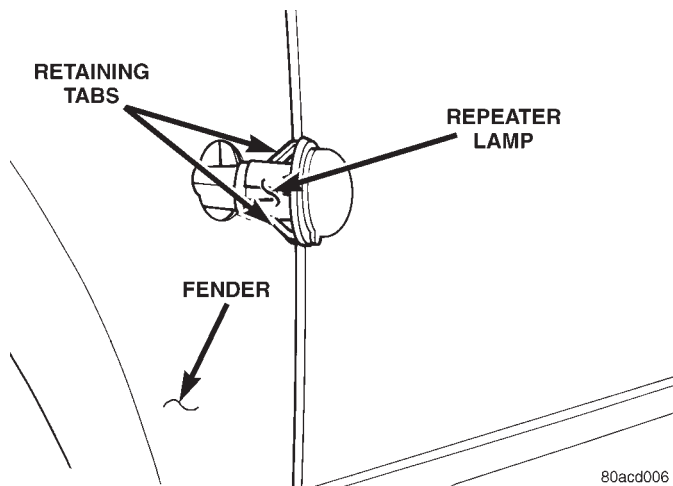


Fig. 1 Repeater Lamp Retaining Tabs

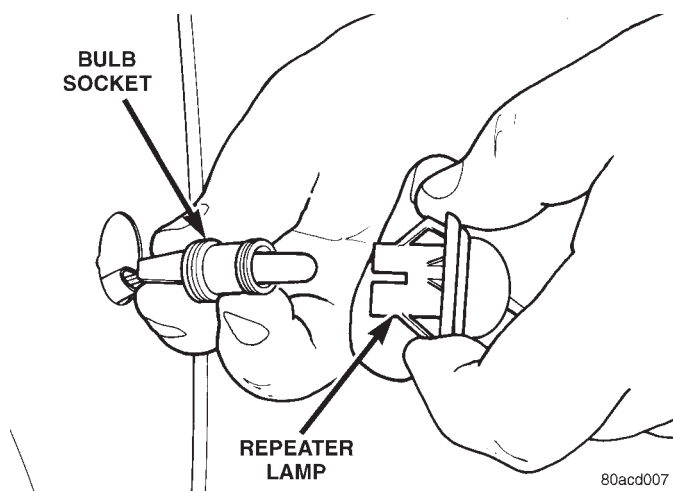


Fig. 2 Repeater Lamp

REAR BUMPER REFLECTOR

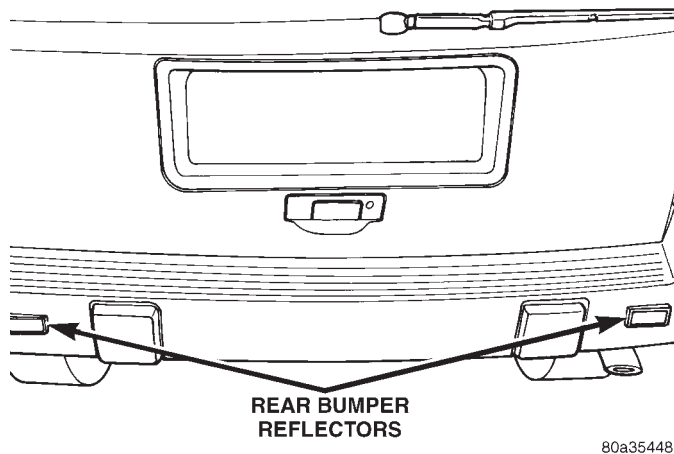
REMOVAL

- (1) From the underside of the vehicle, remove the nut attaching the reflector to the backside of the rear bumper.
- (2) Separate the reflector from the rear bumper.

REMOVAL AND INSTALLATION (Continued)

INSTALLATION

- (1) Position the reflector on the rear bumper (Fig. 3).
- (2) Install the nut attaching the reflector to the rear bumper.



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Fig. 3 Rear Bumper Reflector

LAMP SYSTEMS

INDEX

page

REMOVAL AND INSTALLATION

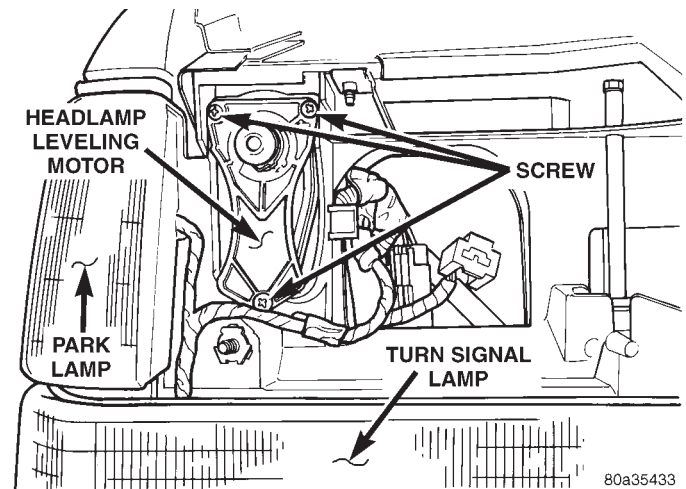
HEADLAMP LEVELING MOTOR 8

REMOVAL AND INSTALLATION**HEADLAMP LEVELING MOTOR****REMOVAL**

- (1) Remove headlamp.
- (2) Remove screws attaching leveling motor to grille opening reinforcement (GOR) (Fig. 1).
- (3) Gently push leveling motor downward and pull from GOR.
- (4) Squeeze electrical connector tabs inward and pull connector from leveling motor.
- (5) Separate leveling motor from vehicle.

INSTALLATION

- (1) Engage electrical connector to leveling motor.
- (2) Position leveling motor in GOR and install screws.
- (3) Install headlamp.



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Fig. 1 Headlamp Leveling Motor

BULB APPLICATION

INDEX

page

SPECIFICATIONS

EXTERIOR LAMPS 9

SPECIFICATIONS

EXTERIOR LAMPS

LAMP	BULB
Front Fog Lamp	H3
Front Turn Signal Lamp	P21W
Headlamp	H4
License Plate Lamp	W5W
Park Lamp	W3W
Park Lamp (Japan Only)	W3W
Rear Fog Lamp	P21W
Rear Turn Signal Lamp	P21W
Side Repeater Lamp	T4W
Stop Lamp	P21/5W
Tail Lamp	P21/5W

