

HEADLAMP UNIT (Continued)

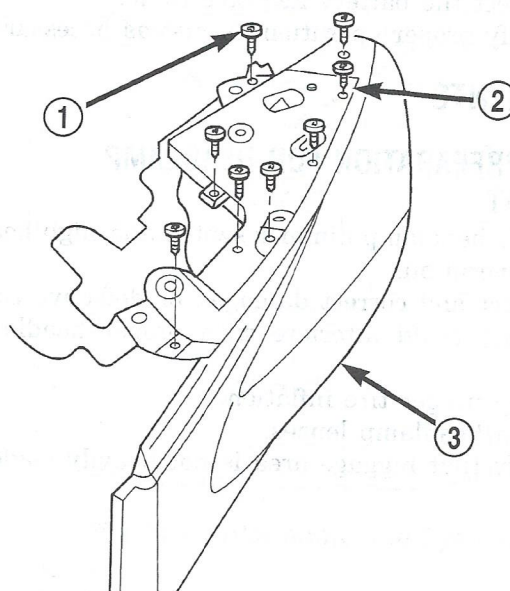
CONDITION	POSSIBLE CAUSES	CORRECTION
HEADLAMPS DO NOT ILLUMINATE	<ol style="list-style-type: none"> 1. No voltage to headlamps. 2. No Z1-ground at headlamps. 3. Faulty headlamp switch. 4. Faulty headlamp dimmer (multi-function) switch. 5. Broken connector terminal or wire splice in headlamp circuit. 6. Faulty or burned out bulb. 7. Body controller malfunction. 	<ol style="list-style-type: none"> 1. Repair open headlamp circuit. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, further details of wire harness routing and retention, as well as pin-out and location views for the various wire harness connectors, splices and grounds. 2. Repair circuit ground. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, further details of wire harness routing and retention, as well as pin-out and location views for the various wire harness connectors, splices and grounds. 3. Replace headlamp switch. 4. Replace multi-function switch. 5. Repair connector terminal or wire splice. 6. Replace bulb. 7. Refer to appropriate body controller diagnostics.

REMOVAL

- (1) Disconnect and isolate the battery negative cable.
- (2) Remove screws holding headlamp bulb access cover to headlamp module (Fig. 10).
- (3) Separate access cover from headlamp module.
- (4) Remove grille.
- (5) Remove top screws attaching headlamp module to headlamp mounting bracket.
- (6) Remove plastic nut attaching front of headlamp mounting bracket from underside of headlamp module (Fig. 11).
- (7) Disconnect wire harness.
- (8) Lift front of headlamp up, disengaging stud.
- (9) Slide headlamp forward.
- (10) Remove headlamp module from vehicle.

INSTALLATION

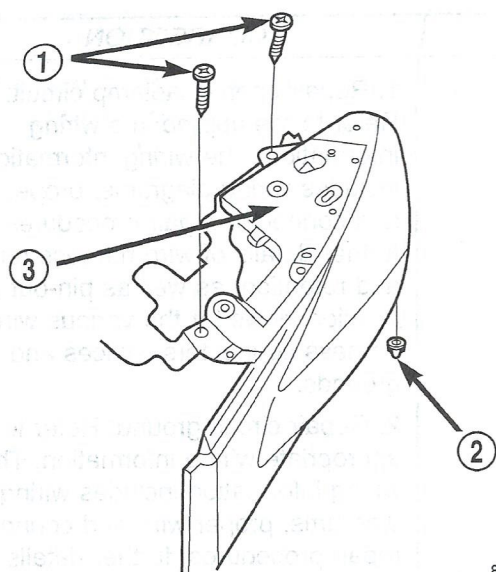
- (1) Position headlamp module to headlamp mounting bracket.
- (2) Connect wire harness.
- (3) Install plastic nut attaching front of headlamp mounting bracket from underside of headlamp module.



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Fig. 10 Headlamp Bulb Access Cover Screw

- 1 - ACCESS COVER SCREW
- 2 - BULB ACCESS COVER
- 3 - HEADLAMP MODULE

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Fig. 11 Headlamp Module Screws

- 1 - HEADLAMP MODULE SCREWS
- 2 - PLASTIC NUT UNDERNEATH LAMP
- 3 - HEADLAMP BULB ACCESS COVER

- (4) Install top screws attaching headlamp module to mounting bracket.
- (5) Install grille.
- (6) Position headlamp bulb access cover on headlamp module.
- (7) Ensure gasket is properly positioned.
- (8) Install screws to hold access cover to headlamp module.
- (9) Connect the battery negative cable.
- (10) Verify proper operation. Adjust as necessary.

ADJUSTMENTS**VEHICLE PREPARATION FOR HEADLAMP ALIGNMENT**

- (1) Verify headlamp dimmer switch and high beam indicator operation.
- (2) Inspect and correct damaged or defective components that could interfere with 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.

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. 12).

(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 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 low beam unit to the ground. Transfer measurement to the alignment screen (with tape). Use this line for up/down adjustment reference.

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

HEADLAMP ALIGNMENT

The Prowler headlamps are equipped with a bubble level to aid up/down headlamp alignment (Fig. 13).

The bubble level is used to assist headlamp alignment when compensating for vehicle ride height changes due to heavy luggage compartment load (Fig. 14). The bubble level cannot be calibrated. Headlamps must be replaced if bubble level is faulty. An aiming scale and pointer system is located on the top of the headlamp module to assist left/right alignment.

A properly aimed headlamp will project the vertical step of the beam pattern 20 mm (0.75 inches) above the headlamp center line. The horizontal aim will project the vertical step on the vertical center line of the headlamp.

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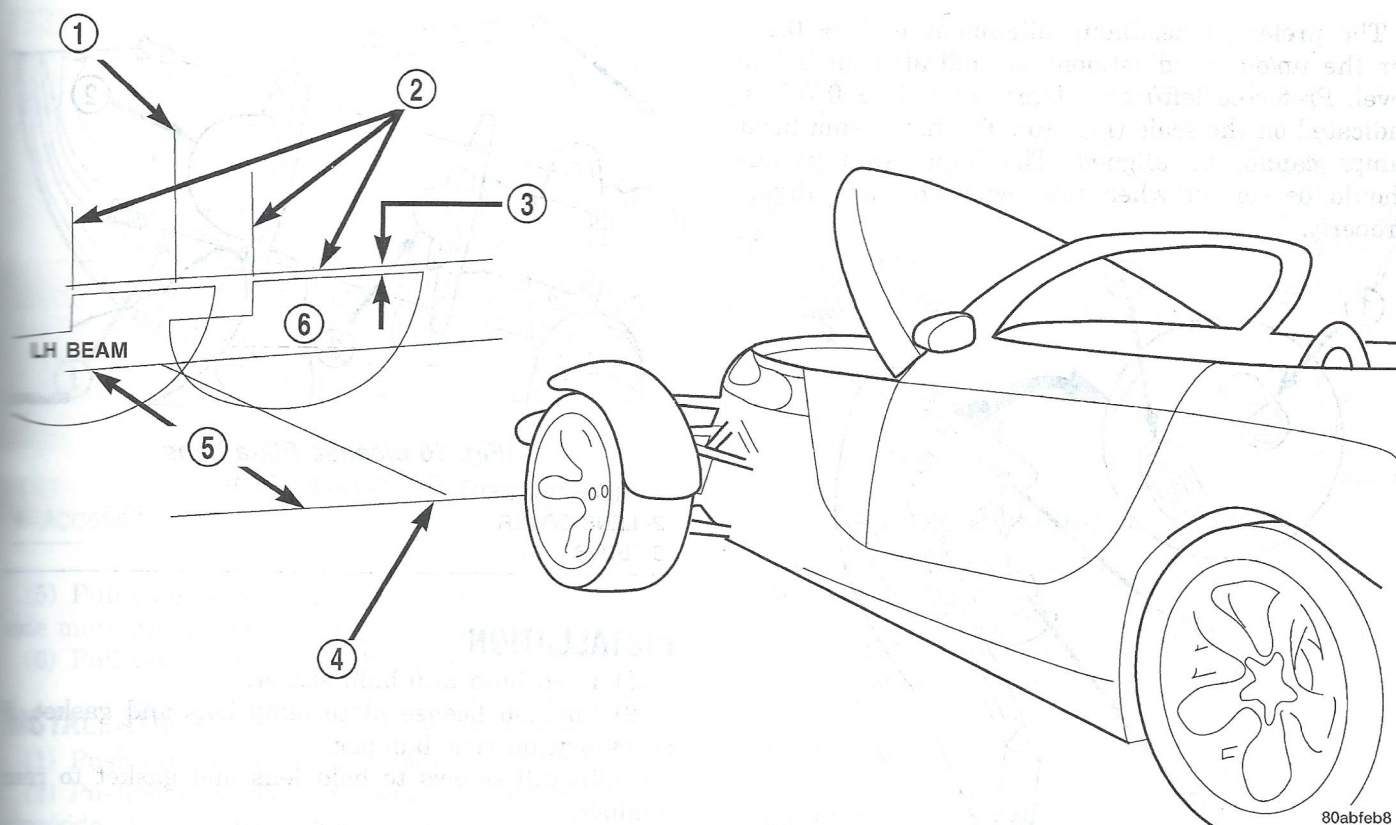


Fig. 12 Headlamp Alignment Screen

- 1 - CENTER OF VEHICLE
- 2 - CENTER OF HEADLAMPS
- 3 - 20 MM (0.75 IN.)
- 4 - FRONT OF HEADLAMP

- 5 - 7.62 METERS (25 FT.)
- 6 - RH BEAM

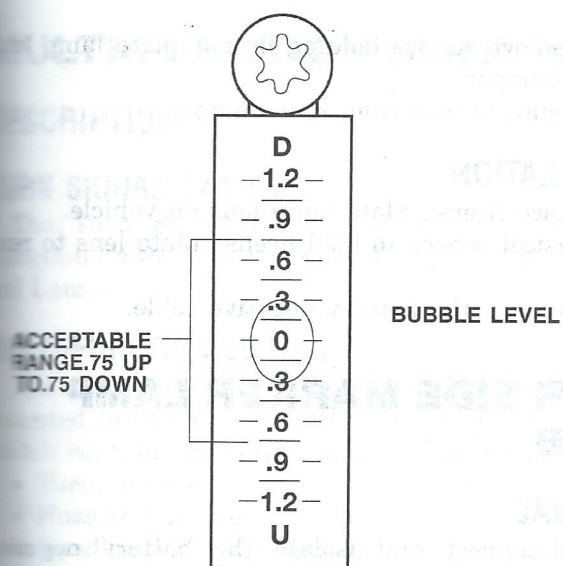
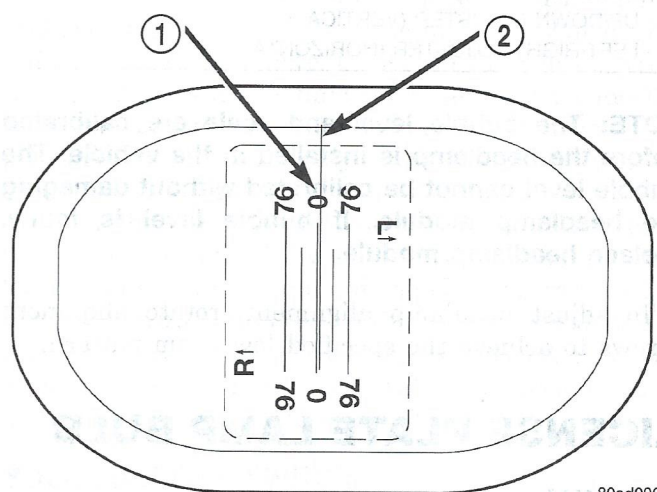


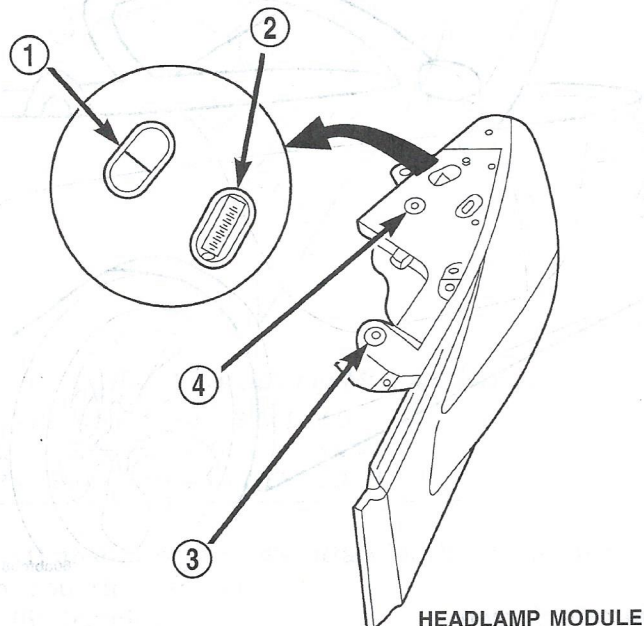
Fig. 13 Bubble Level

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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 scale (Fig. 15). The high beam headlamps cannot be aligned. The high beam pattern should be correct when the low beams are aligned properly.

**Fig. 15 Headlamp Adjustment**

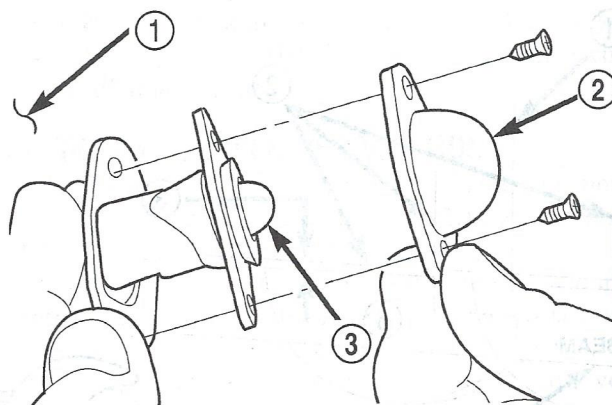
- 1 - HORIZONTAL AIMING
- 2 - BUBBLE VIAL VERTICAL AIMING
- 3 - UP/DOWN ADJUSTER (VERTICAL)
- 4 - LEFT/RIGHT ADJUSTER (HORIZONTAL)

NOTE: The bubble level and scale are 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 pattern.

LICENSE PLATE LAMP BULB**REMOVAL**

- (1) Disconnect and isolate the battery negative cable.
- (2) Remove screws holding the license plate lamp lens to rear bumper.
- (3) Separate lens from the rear bumper (Fig. 16).
- (4) Pull bulb from bulb socket.

**Fig. 16 License Plate Lens**

- 1 - REAR BUMPER
- 2 - LENS COVER
- 3 - BULB

INSTALLATION

- (1) Push bulb into bulb socket.
- (2) Position license plate lamp lens and gasket, if necessary, on rear bumper.
- (3) Install screws to hold lens and gasket to rear bumper.
- (4) Connect the battery negative cable.

LICENSE PLATE LAMP LENS**REMOVAL**

- (1) Disconnect and isolate the battery negative cable.
- (2) Remove screws holding license plate lamp lens to rear bumper.
- (3) Separate lens from rear bumper.

INSTALLATION

- (1) Place license plate lamp lens on vehicle.
- (2) Install screws to hold license plate lens to rear bumper.
- (3) Connect the battery negative cable.

REAR SIDE MARKER LAMP BULB**REMOVAL**

- (1) Disconnect and isolate the battery negative cable.
- (2) Remove screws attaching the tail/stop/side marker/turn signal lamp access door to the lamp housing (Fig. 17).
- (3) Remove access door.
- (4) Rotate side marker bulb socket counterclockwise one quarter turn.