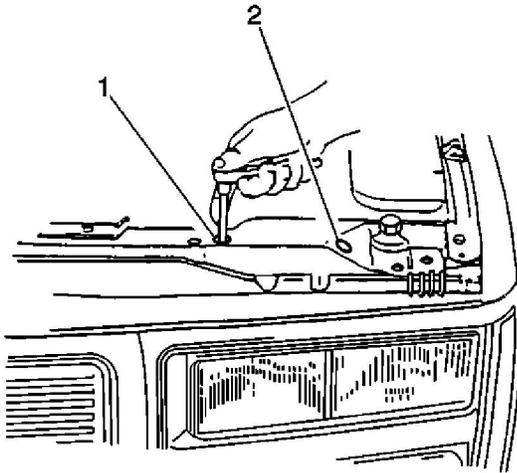


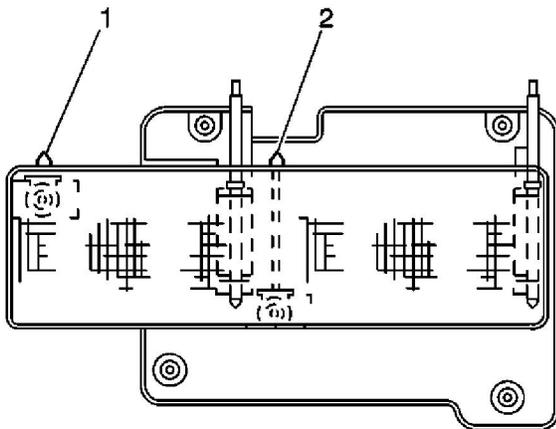
## Headlamp Aiming (Composite)

### Composite Headlamps

Two adjusting screws control the horizontal and vertical aiming of each headlamp assembly.



The screws (1, 2) are in the radiator support. The location is not readily visible.

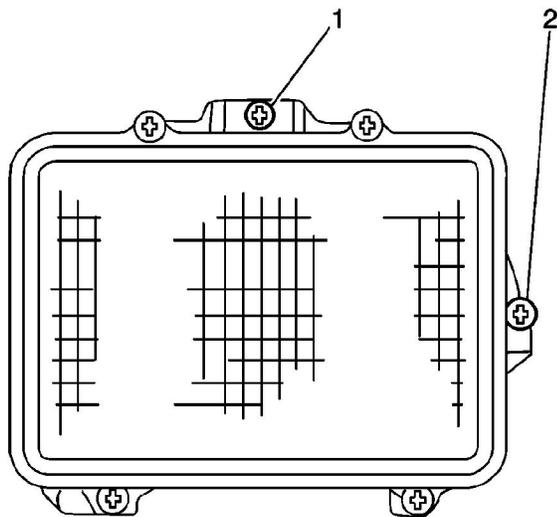




The 2 holes in the radiator support for each headlamp assembly provide access to the recessed adjusting screws (1,2). Using a T15 TORX® head bit, turn the screws.

Adjust the headlamps to the specifications required by the state and/or the local authorities.

### Sealed Beam Headlamps



Correct the horizontal aiming and the vertical aiming of each headlamp by adjusting the screws. The screws move the mounting bracket against the tension of the coil spring. The screws are in the headlamp bezel area on the models with the sealed beam headlamp.

The screw (1) directly above the headlamp adjusts the vertical position. The screw (2) to the side of the headlamp adjusts the horizontal position.

### Visual Aiming Procedure

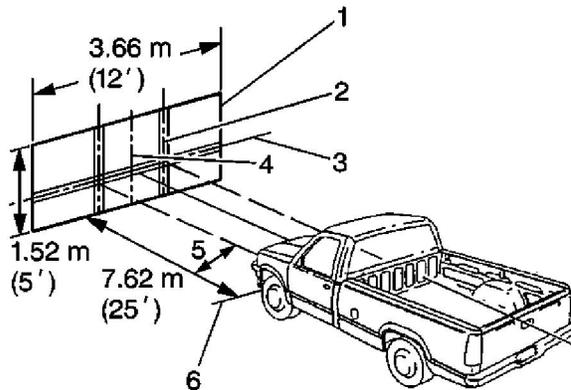
- All equipment for testing headlamps must comply with the SAE Recommended Practice for Headlamp Inspection Equipment.
- If you use a headlamp testing machine, the machine should give results equivalent to the results obtained using the screen procedure.
- The machine should be in good condition and be properly adjusted.  
Use the machine in accordance with the manufacturer's instructions.
- Machines that use a photoelectric cell or cells to determine aim, should also include a visual screen on which you can project a beam pattern proportional to the beam appearance, and aim on a screen at 7.62 m (25 ft).

- The screen should be plainly visible to the technician who is adjusting the headlamps.
- The screen should have horizontal and vertical reference lines in order to permit visual evaluation of the headlamp beam.

### Headlamp Aiming Location (Using Screen Method)

- The aiming area should be darkened and large enough to allow for the vehicle and an additional 7.62 m (25 ft), measured from the face of the headlamps to the front of the screen.
- The floor on which the vehicle rests must be parallel with the bottom of the screen.  
If the floor is not level, compensate accordingly.

### Headlamp Aiming Screen



- ▮ If you use a screen, the screen should be at least 1.52 m (5 ft) high x 3.66 m (12 ft) wide with a matte white finish, well shaded from extraneous light.
- ▮ Properly adjust the screen to the floor on which the vehicle rests.
- ▮ The screen should be moveable so that you can align the screen parallel to the rear axle of the vehicle.
- ▮ Position the screen so that a horizontal line drawn perpendicular to the centerline of the screen will pass an equal distance midway between the two headlamps.
- ▮ The screen should have the following items:
  - A vertical centerline (4)
  - Two laterally adjustable vertical tapes (2)
  - One vertically adjustable horizontal tape (3)
- ▮ If a regular commercial aiming screen is not available, the screen may consist of a wall having a clear, uninterrupted area at least 1.83 m (6 ft) x 3.66 m (12 ft) wide. The surface

should be finished with a no-gloss white paint.

- After the aiming screen has been set up and located, paint or tape a reference line (6) on the floor 7.62 m (25 ft) from the screen. Park the vehicle with the front of the headlamps directly over this reference line.

## Headlamp Aiming Procedure

1. Park the vehicle square with the screen, with the headlamps directly over this reference line.
2. Ensure that the components are in place if other work has been done on the vehicle.
3. Ensure that the vehicle is on a level surface.
4. Stop all other work on the vehicle.
5. Ensure that the vehicle has half a tank, or less, of fuel.
6. Close all of the doors.
7. Rock the vehicle sideways.
8. Line up the centerline of the vehicle with the centerline of the aiming screen.
  - Mark the vertical center of the rear and front windows using tape.
  - Use these lines as sights in order to line up the centerline of the vehicle and the screen.
9. Adjust the vertical tapes on the screen in order to match the vertical centerline of each low beam headlamp.

Measure the distance from the centerline of the low beam lamp.

10. Adjust the horizontal tapes on the screen in order to match the horizontal centerline of each low beam headlamp.

Measure the height from the floor to the center of the low beam.

11. Turn on the low beam headlamps.
12. Observe the left and the top edges of the high intensity zone on the screen.
13. Adjust the headlamps to the following specifications:
  - The top edge of the center of intensity on the screen for the low beam should be less than 101.6 mm (4 in) above or below the cross section of the headlamp centerlines.
  - The left edge of the center of intensity on the screen for the low beam should be less than 101.6 mm (4 in) to the left or right of the cross section of the headlamp centerlines.

## Headlamp Aiming Alternative Procedure

### Tools Required

[J 25300-D](#) Headlamp Aimer

1. Prepare the vehicle.
2. Make sure all of the components are in place, if other work has been completed on the vehicle.
3. Park the vehicle on a level surface.
4. Stop all of the other work on the vehicle.
5. Make sure the vehicle has one-half tank of fuel or less.
6. Close the doors.
7. Rock sideways the vehicle.
8. Make sure the headlamps are not illuminated.
9. Using the [J 25300-D](#), adjust the headlamps to the specifications required by the state and/or

local authorities.

- Follow the instructions accompanying the tool for aiming the headlamps.
- The kit contains special adapters for use with the composite headlamps.