

HEADLIGHT ASSEMBLY ADJUSTMENT

CAUTION / NOTICE / HINT

Tip

- Use the same procedure for the RH side and LH side.
- The following procedure is for the LH side.

PROCEDURE

1. PREPARE VEHICLE FOR HEADLIGHT AIM ADJUSTMENT

a. Prepare the vehicle:

- Ensure that there is no damage or deformation to the vehicle body around the headlights.
- Fill the fuel tank.
- Make sure that the oil is filled to the specified level.
- Make sure that the engine coolant is filled to the specified level.
- Inflate the tires to the appropriate pressure.
- Unload the trunk and vehicle, ensuring that the spare tire, tools and jack are in their original positions.
- Bounce the vehicle at the corners up and down to stabilize the suspension.
- Sit a person of average weight (75 kg, 165 lb) in the driver's seat.

2. PREPARE FOR HEADLIGHT AIMING (Using a headlight aim test machine)

a. Adjust the headlight aim in accordance with the headlight aim test machine instructions.

3. PREPARE FOR HEADLIGHT AIMING (Using a screen)

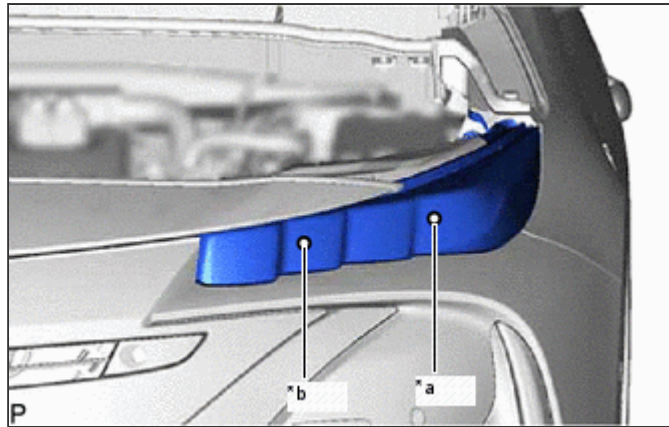
a. Prepare the vehicle:

- Place the vehicle in a location that is dark enough to clearly observe the cutoff line. The cutoff line is a distinct line, below which light from the headlights can be observed and above which it cannot.
- Place the vehicle at a 90° angle to the wall.
- Create a 25 m (82 ft.) distance between the vehicle (center marks of the low beam) and the wall.

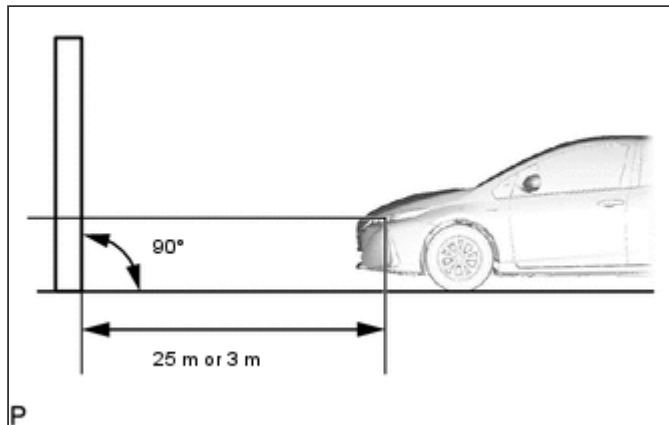
- Make sure that the vehicle is on a level surface.
- Position the front wheels straight ahead.
- Bounce the vehicle up and down to settle the suspension.

Note:

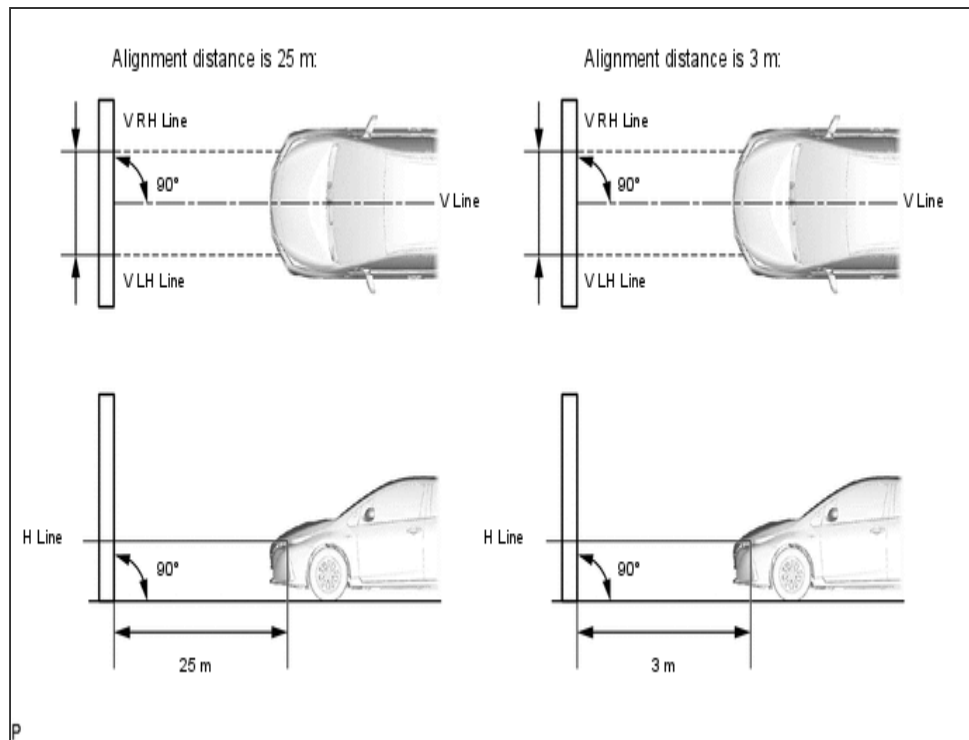
A distance of 25 m (82 ft.) between the vehicle (center marks of the low beam headlights) and the wall is necessary for proper aim adjustment. If sufficient space is not available, secure a distance of exactly 3 m (9.84 ft.) to allow for checking and adjustment of headlight aim. (The size of the target zone will change with the distance, so follow the instructions in the illustration.)



*a	Low Beam Center Mark
*b	High Beam Center Mark



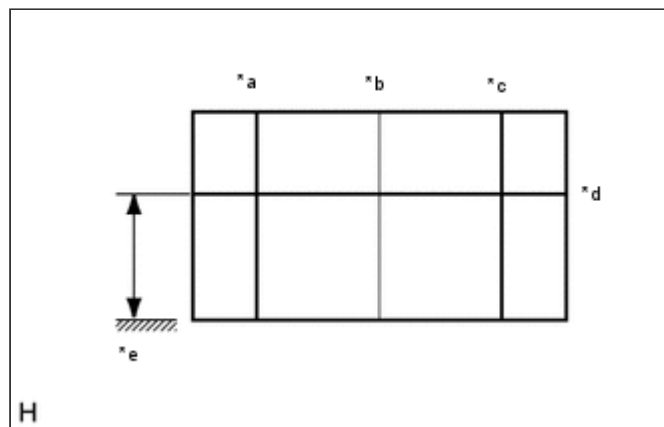
- Prepare a piece of thick white paper (approximately 2 m (6.56 ft.) (height) x 4 m (13.1 ft.) (width)) to use as a screen.
- Draw a vertical line down the center of the screen (V line).
- Set the screen as shown in the illustration:



Tip

- Stand the screen perpendicular to the ground.
- Align the V line on the screen with the center of the vehicle.

e. Draw base lines (H, V LH, and V RH lines) on the screen as shown in the illustration.



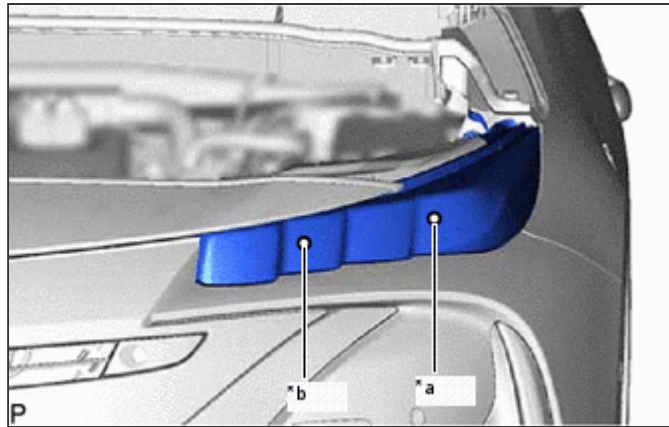
*a	V LH Line
*b	V Line
*c	V RH Line
*d	H Line
*e	Ground

Tip

- The base lines differ for "low beam inspection" and "high beam inspection".
- Mark the headlight center marks on the screen.

1. H Line (Headlight height):

Draw a horizontal line across the screen so that it passes through the center marks. The H line should be at the same height as the headlight low beam center marks of the low beam headlights.



*a	Low Beam Center Mark
*b	High Beam Center Mark

2. V LH Line, V RH Line

(Center mark position of left-hand (LH) and right-hand (RH) headlights):

Draw 2 vertical lines so that they intersect the H line at each center mark (aligned with the center marks of the low beam).

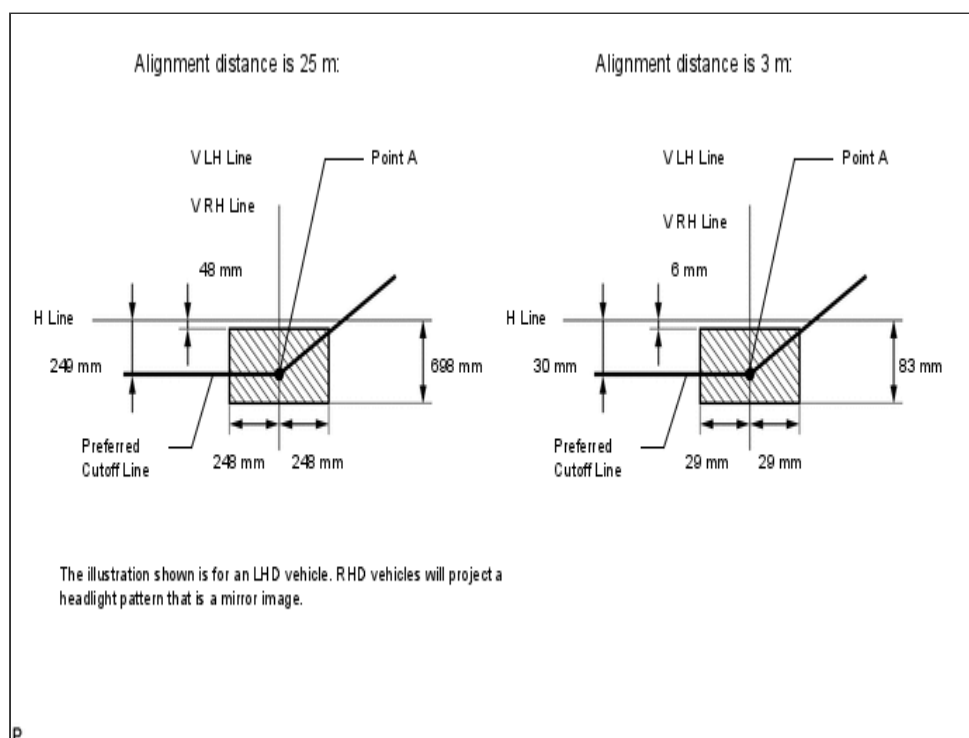
4. INSPECT HEADLIGHT AIMING

- Cover the headlight on the opposite side to prevent light from the headlight that is not being inspected from affecting the headlight aiming inspection.

Note:

Do not keep the headlight covered for more than 3 minutes. The headlight lens is made of synthetic resin, which may melt or be damaged due to excessive heat.

- Start the engine.
- Turn on the headlights and check if the cutoff line for each low beam matches the preferred cutoff line in the illustration.



Tip

- Since the low beam light and the high beam light are a unit, if the aim on the low beam is correct, the high beam should also be correct. However, check both beams just to make sure.
- If the alignment distance is 25 m (82 ft.):

The low beam cutoff line should be between 48 mm (1.89 in.) and 698 mm (2.29 ft.) below the H line as well as 248 mm (9.79 in.) left or right of the V LH or V RH line.

- If the alignment distance is 3 m (9.84 ft.):

The low beam cutoff line should be between 6 mm (0.227 in.) and 83 mm (3.29 in.) below the H line as well as 29 mm (1.17 in.) left or right of the V LH or V RH line.

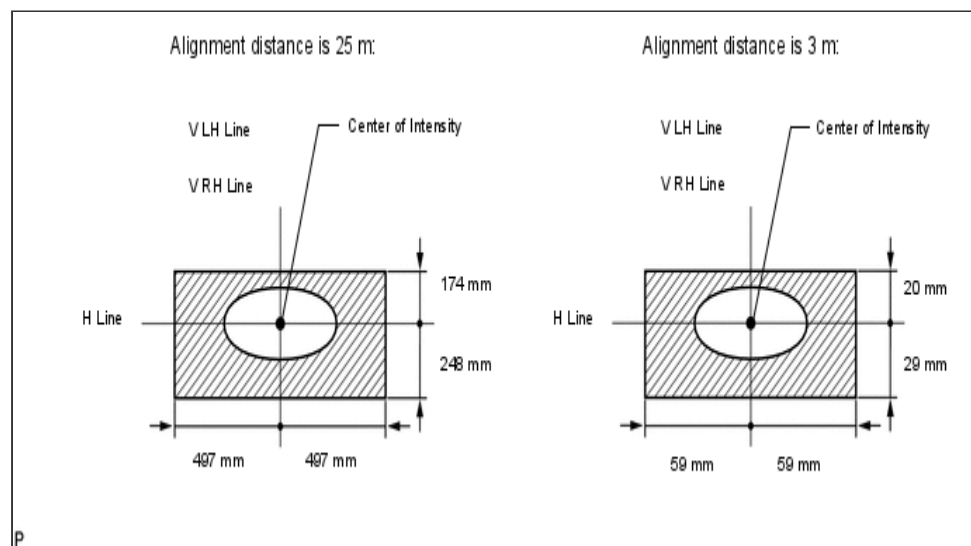
- If the alignment distance is 25 m (82 ft.):

The horizontal line of the preferred low beam cutoff line is 249 mm (9.79 in.) below the H line and point A of the preferred low beam cutoff line is on the V LH or V RH line.

- If the alignment distance is 3 m (9.84 ft.):

The horizontal line of the preferred low beam cutoff line is 30 mm (1.18 in.) below the H line and point A of the preferred low beam cutoff line is on the V LH or V RH line.

- d. Turn on the high beams and check if the center of intensity for each high beam matches the preferred center of the intensity in the illustration.



Tip

- Since the low beam light and the high beam light are a unit, if the aim on the low beam is correct, the high beam should also be correct. However, check both beams just to make sure.
- If the alignment distance is 25 m (82 ft.):

The high beam center of intensity should be within 174 mm (6.87 in.) above and 248 mm (9.79 in.) below the H line as well as 497 mm (1.63 ft.) left or right of

the V LH or V RH line.

- If the alignment distance is 3 m (9.84 ft.):

The high beam center of intensity should be within 20 mm (0.824 in.) above and 29 mm (1.17 in.) below the H line as well as 59 mm (2.35 in.) left or right of the V LH or V RH line.

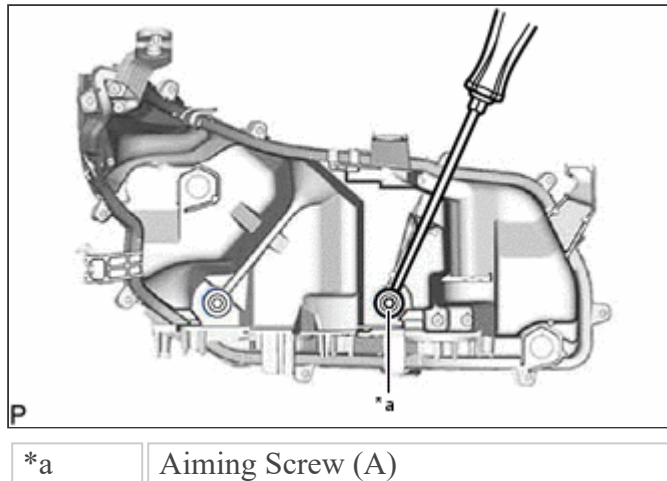
5. ADJUST HEADLIGHT AIMING

a. Adjust the aim vertically:

1. Adjust the aim of each headlight to the specified range by turning each aiming screw (A) with a screwdriver.

Note:

The final turn of the aiming screw should be made in the clockwise direction. If the screw is tightened excessively, loosen it and then retighten it, so that the final turn of the screw is in the clockwise direction.



Tip

- Since the low beam light and the high beam light are a unit, if the aim on the low beam is correct, the high beam should also be correct. However, check both beams just to make sure.
- If it is not possible to correctly adjust headlight aim, check the headlight unit and headlight unit lens installation.
- Confirm the direction of rotation of the aiming screw by observing it while it is being adjusted. Due to the position of the screwdriver, the direction of rotation of the adjusting screw can be different than the direction of rotation of the screwdriver being used to adjust it.

b. Adjust the aim horizontally:

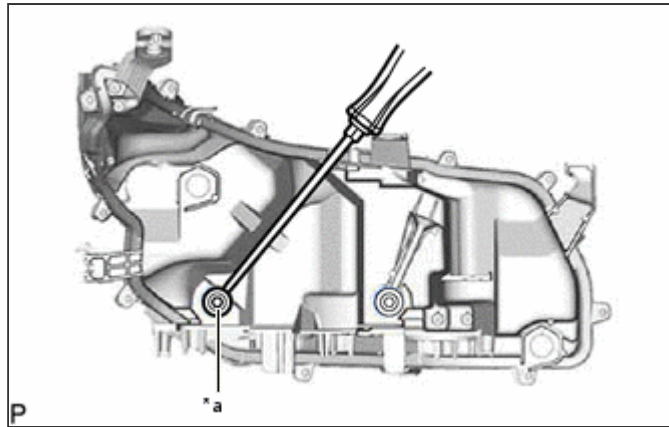
1. Adjust the aim of each headlight to the specified range by turning each aiming screw (B) with a screwdriver.

Note:

The final turn of the aiming screw should be made in the clockwise direction. If the screw is tightened excessively, loosen it and then retighten it, so that the final turn of the screw is in the clockwise direction.

Tip

- Since the low beam light and the high beam light are a unit, if the aim on the low beam is correct, the high beam should also be correct. However, check both beams just to make sure.



*a

Aiming Screw (B)

- If it is not possible to correctly adjust headlight aim, check the headlight unit and headlight unit lens installation.
- Confirm the direction of rotation of the aiming screw by observing it while it is being adjusted. Due to the position of the screwdriver, the direction of rotation of the adjusting screw can be different than the direction of rotation of the screwdriver being used to adjust it.