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Model Year Start: 2023	Model: Prius PHV	Prod Date Range: [12/2022 -]
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY: ADJUSTMENT; 2023 - 2025 MY Prius Prius PHV [12/2022 -]		

ADJUSTMENT

CAUTION / NOTICE / HINT

HINT:

- 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

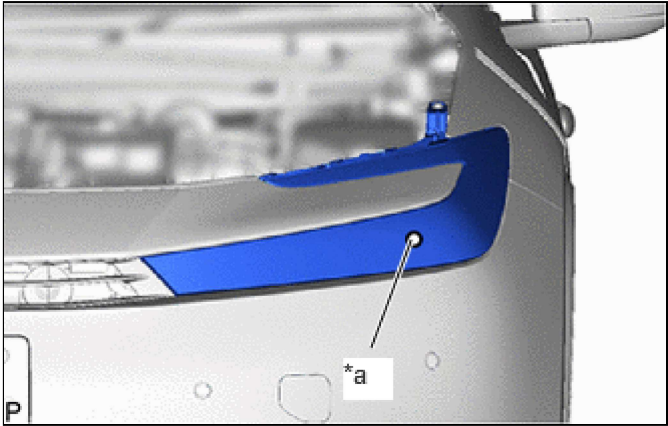
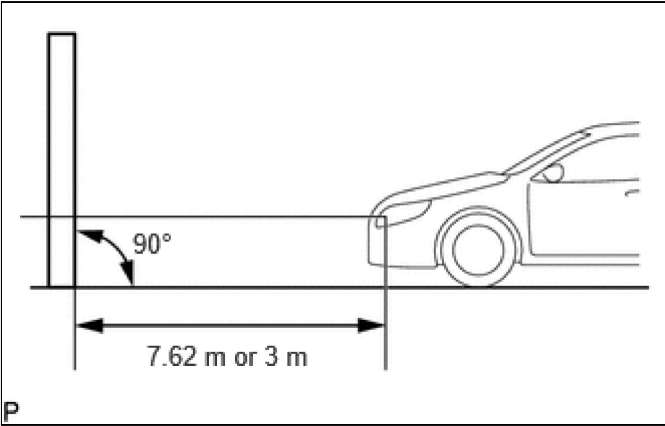
- (a) Prepare the vehicle:
- Ensure that there is no damage or deformation to the vehicle body around the headlights.
 - Fill the fuel tank.
 - Make sure that the engine oil is filled to the specified level.
 - Make sure that the engine coolant is filled to the specified level.
 - Inflate the tires to the appropriate pressure.
 - Unload the trunk and vehicle, ensuring that the spare tire, tools and jack are in their original positions.
 - Sit a person of average weight (68 kg, 150 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:



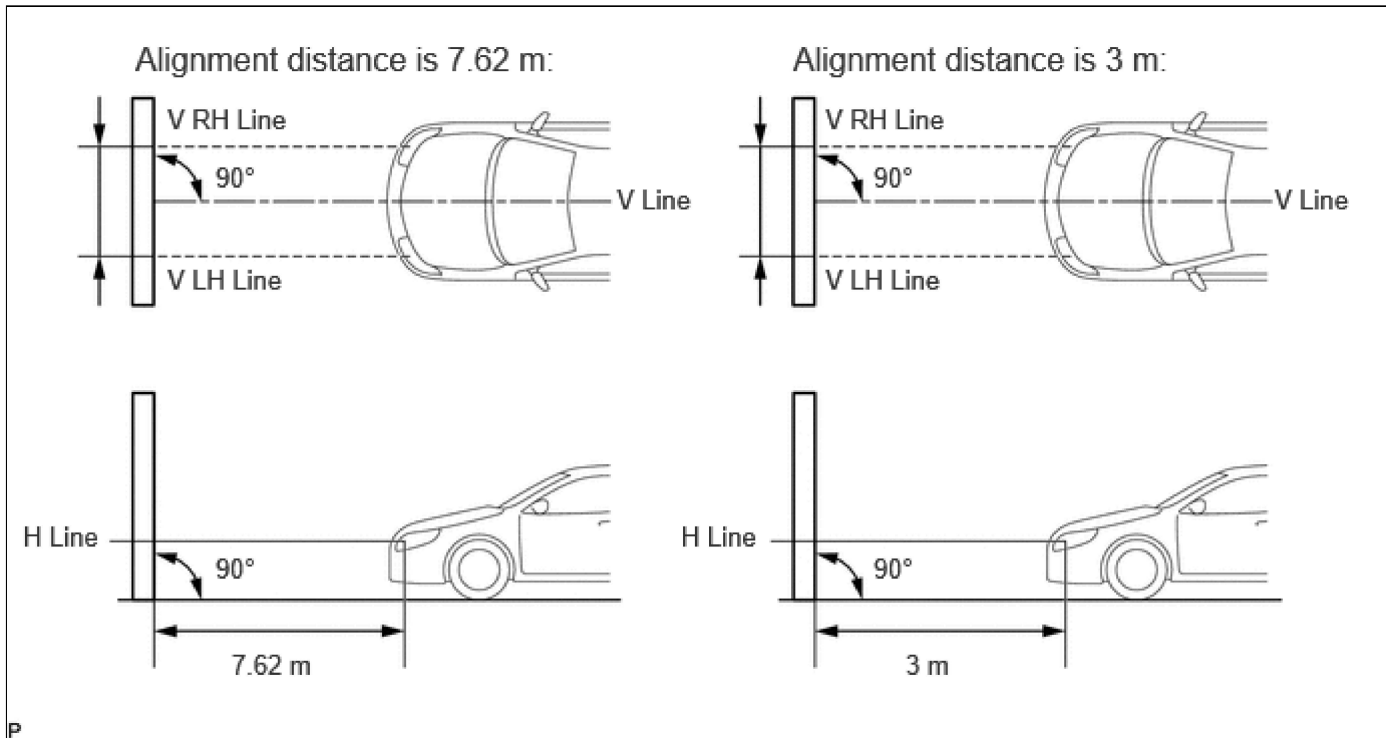
*a	Center Mark
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- Place the vehicle in a location that is dark enough to clearly observe the cutoff line. The cutoff line is a distinct line, below which light from the headlights can be observed and above which it cannot.
- Place the vehicle at a 90° angle to the wall.
- Create a 7.62 m (25 ft.) distance between the vehicle (center marks of the headlights) 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.

NOTICE:

A distance of 7.62 m (25 ft.) between the vehicle (center marks of the 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.)

- (b) 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.
- (c) Draw a vertical line down the center of the screen (V line).
- (d) Set the screen as shown in the illustration.

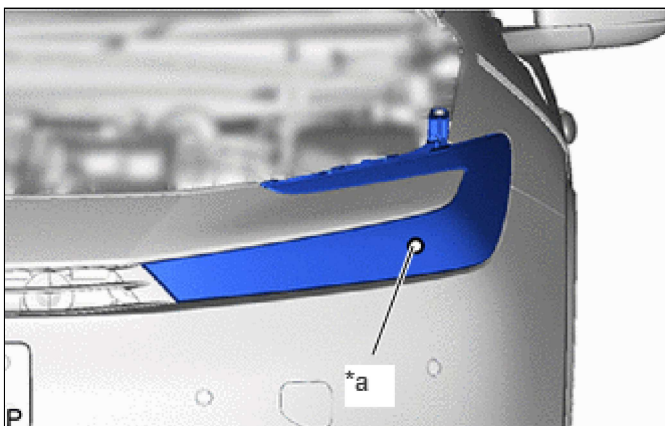
**HINT:**

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

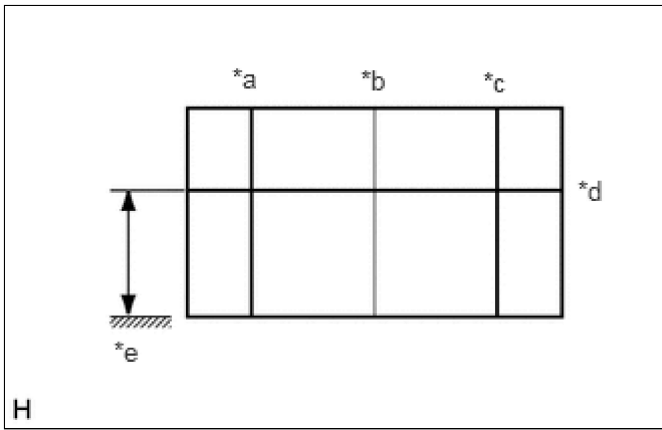
- (e) Draw base lines (H, V LH, and V RH lines) on the screen as shown in the illustration.

HINT:

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



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

(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 center marks of the headlights.

(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 headlights).

4. INSPECT HEADLIGHT AIMING

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

NOTICE:

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.

HINT:

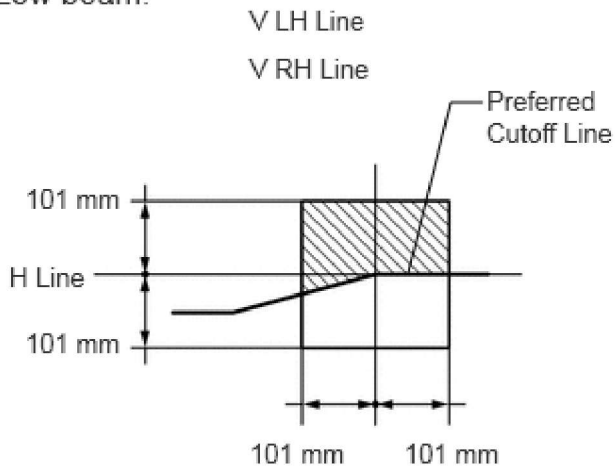
When checking the aim of the high beam, cover the low beam.

(b) Start the engine.

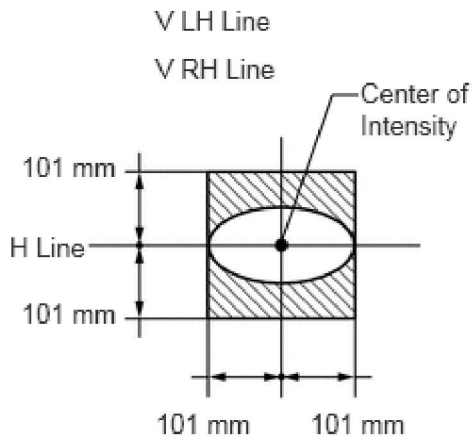
(c) Turn on the headlights and check the aiming of each beam.

Alignment distance is 7.62 m:

Low beam:

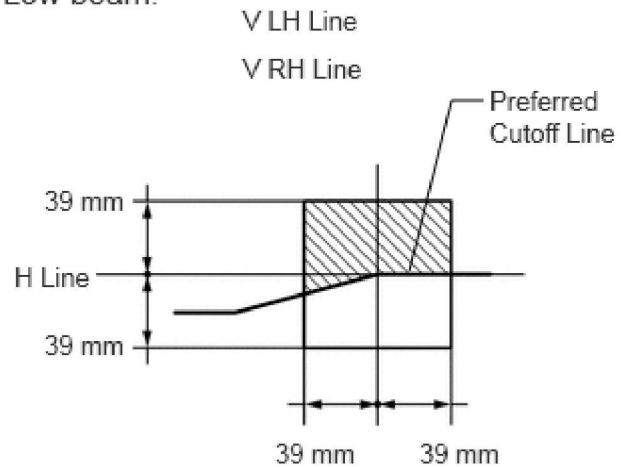


High beam:

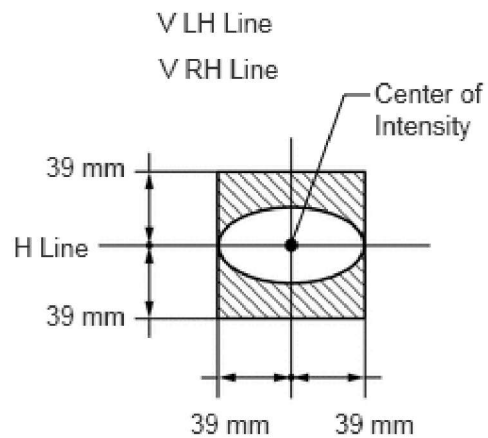


Alignment distance is 3 m:

Low beam:



High beam:



HINT:

- Since the low beam headlight and the high beam headlight 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 7.62 m (25 ft.):

The low beam cutoff line should be between 101 mm (3.97 in.) above or below the H line as well as 101 mm (3.97 in.) left or right of the V LH or RH line (SAE J599).

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

The low beam cutoff line should be between 39 mm (1.56 in.) above or below the H line as well as 39 mm (1.56 in.) left or right of the V LH or RH line (SAE J599).

- If the alignment distance is 7.62 m (25 ft.):

The high beam center of intensity should be within 101 mm (3.97 in.) above or below the H line as well as 101 mm (3.97 in.) left and right of the V LH or RH line (SAE J599).

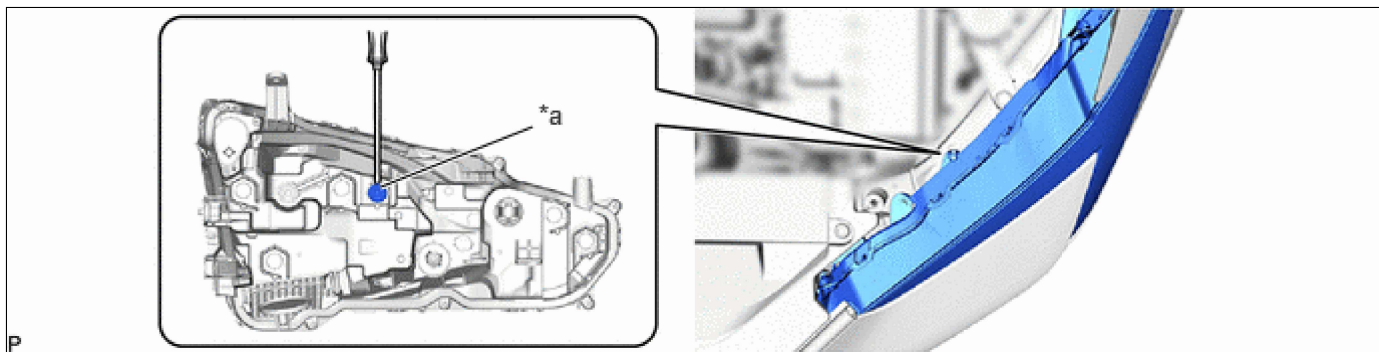
- If the alignment distance is 3 m (9.84 ft.):

The high beam center of intensity should be within 39 mm (1.56 in.) above or below the H line as well as 39 mm (1.56 in.) left and right of the V LH or RH line (SAE J599).

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 with a screwdriver.



*a	Aiming Screw	-	-
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NOTICE:

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.

HINT:

- Since the low beam headlight and the high beam headlight 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.

