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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: ADVANCED DRIVER ASSISTANCE SYSTEM: FRONT SIDE RADAR SENSOR: ON-VEHICLE INSPECTION; 2023 - 2024 MY Prius Prime [12/2022 -]		

ON-VEHICLE INSPECTION

PROCEDURE

1. PERFORM FRONT SIDE RADAR SENSOR INSTALLATION CONDITION INSPECTION

NOTICE:

- After a minor collision has occurred or body repairs have been performed, etc., make sure to perform this inspection as there is a possibility that the installation angle has changed.
- Perform this inspection on level ground.
- Unload the vehicle before beginning the inspection.
- Confirm that the tire pressure is correct before beginning the inspection.

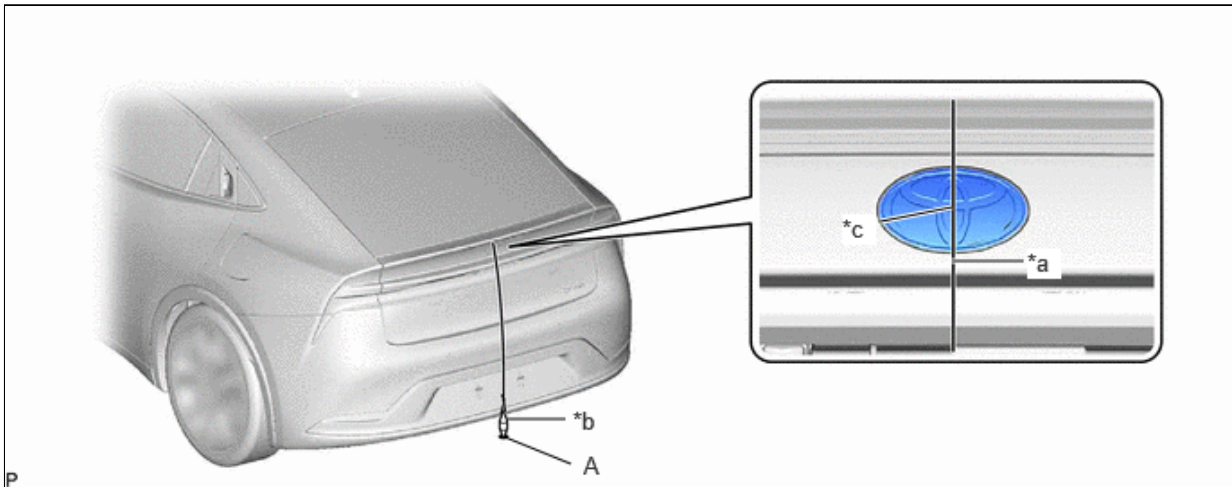
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HINT:

When checking the installation condition of the front side radar sensor, make sure it is between 26 and 34° with respect to the vehicle center line. Also, using a tool, perform a check to make sure that the sensor is aligned perpendicular to the ground (+/- 2.2°).

(a) Horizontal mounting angle check

- (1) Hang a weight with a pointed tip from the center of the rear emblem, and mark the rear center point of the vehicle (point A) on the ground.

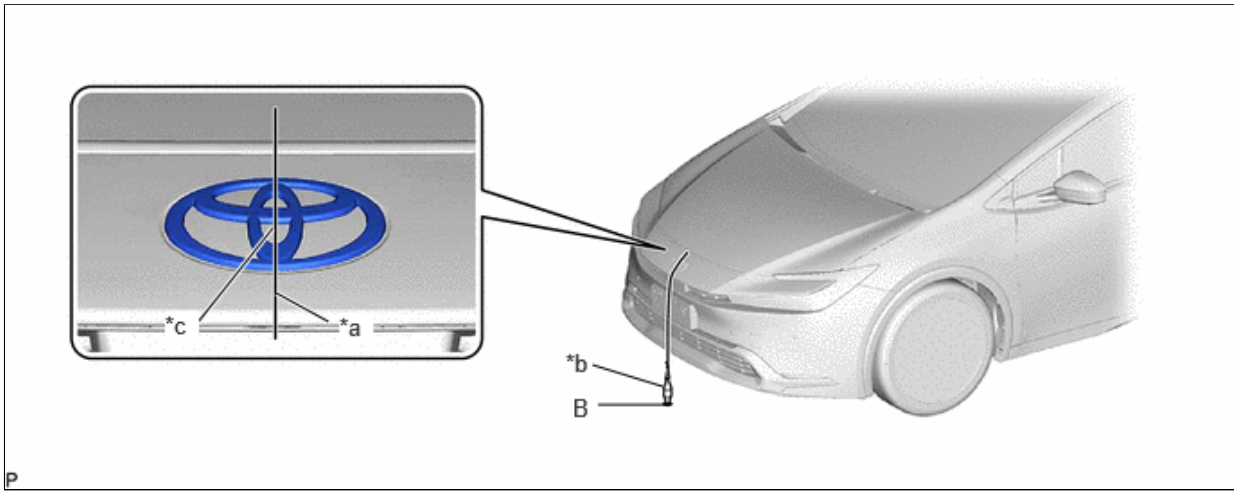


*a	String	*b	Weight
*c	Center	-	-

HINT:

Lightly flick the string with your fingers several times to confirm that the string is perpendicular to the ground.

- (2) Hang a weight with a pointed tip from the center of the radiator grille (or front panel) emblem, and mark the front center point of the vehicle (point B) on the ground.



*a	String	*b	Weight
*c	Center	-	-

HINT:

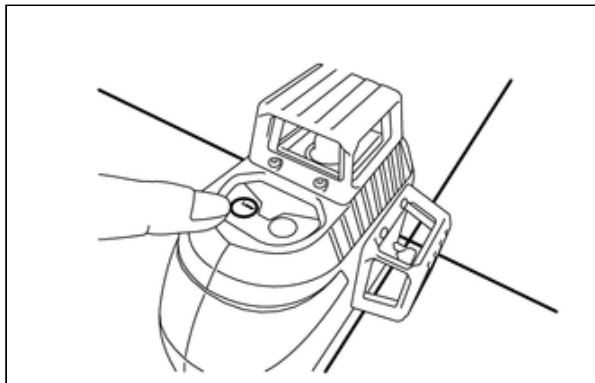
Lightly flick the string with your fingers several times to confirm that the string is perpendicular to the ground.

(3) When using a laser line marker:

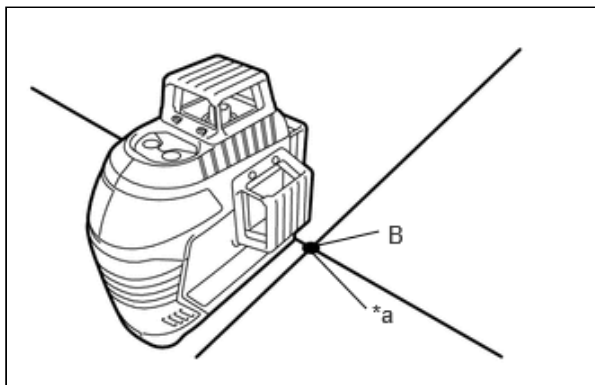
NOTICE:

Do not look directly into the laser beam.

1. Press the laser mode button on the laser line marker.

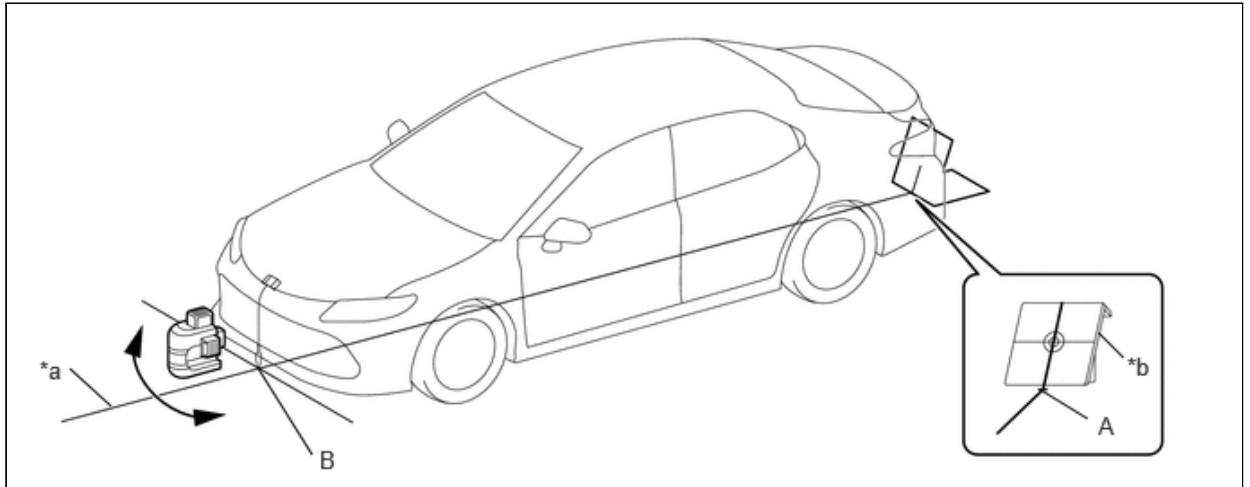


2. Align the laser beam ground marking point (cross portion) with point B.



*a	Ground Marking Point (Cross Portion)
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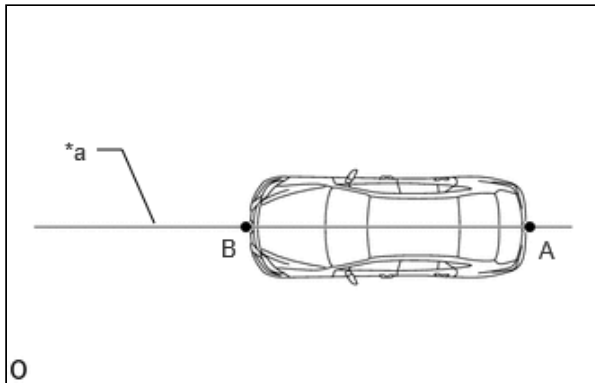
3. Align the center of the target panel with point A, and set the target panel so that it faces forward.



*a	Center Line	*b	Target Panel
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4. Adjust the position of the laser line marker so that the laser beam is aligned with the center line of the target panel.

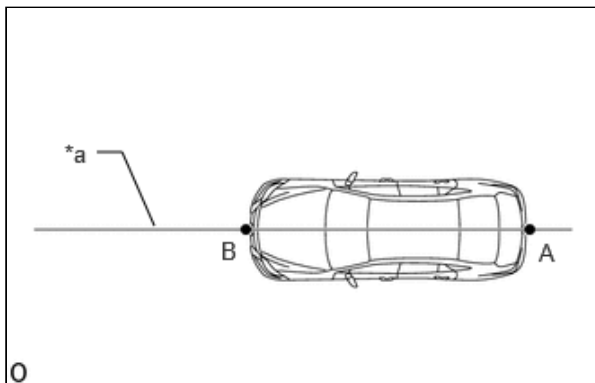
5. Using a laser marker, create a vehicle center line that connects point A and point B.



*a	Vehicle Center Line
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(4) When not using a laser line marker:

1. Draw a vehicle center line so that it passes through mark A and B (front and rear center points).



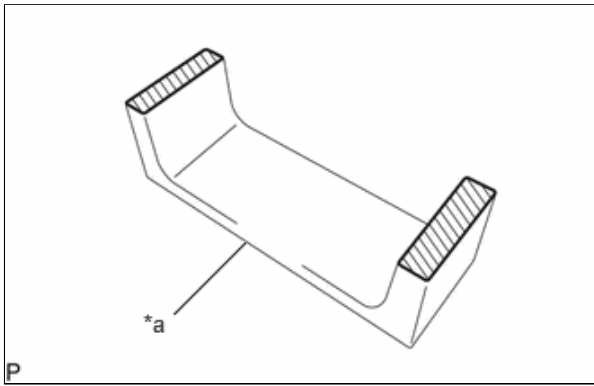
*a	Vehicle Center Line
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(5) Remove the front bumper assembly.

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(6) Attach double-sided tape to the digital angle gauge attachment A as shown in the illustration.

SST: 09989-00010

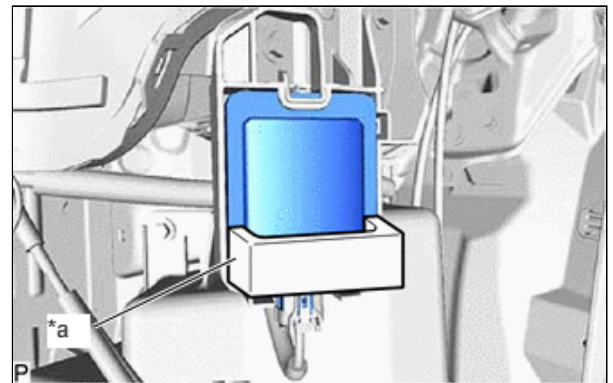


*a	SST (Digital Angle Gauge Attachment A)
	Double-sided Tape

HINT:

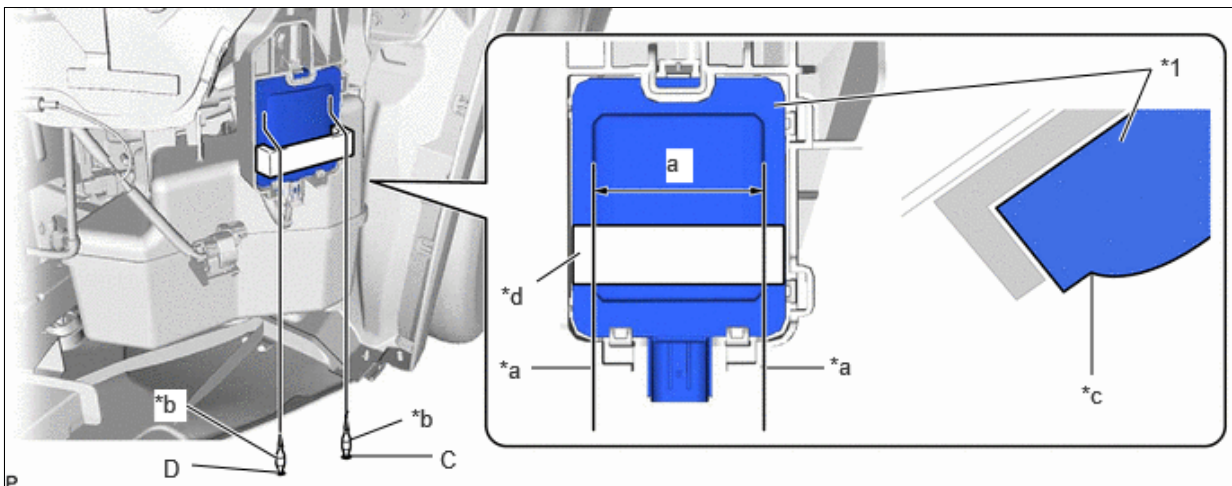
- Make sure to use double-sided tape with the same thickness for both the left and right sides.
- If the thickness of the double-sided tape is different for the left and right sides, an accurate measurement cannot be performed.

(7) Remove the release paper from the double-sided tape, and attach the digital angle gauge attachment A to the front side radar sensor.



*a	SST (Digital Angle Gauge Attachment A)
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(8) Mark points C and D on the ground by hanging a pointed weight from two points at the side part of the convex surface of the radome, as shown in the illustration.



*1	Front Side Radar Sensor	-	-
*a	String	*b	Weight

*c	Side Part of Convex Surface of Radome	*d	SST (Digital Angle Gauge Attachment A)
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Standard:

LOCATION	MEASUREMENT
a	55 mm (2.17 in.)

HINT:

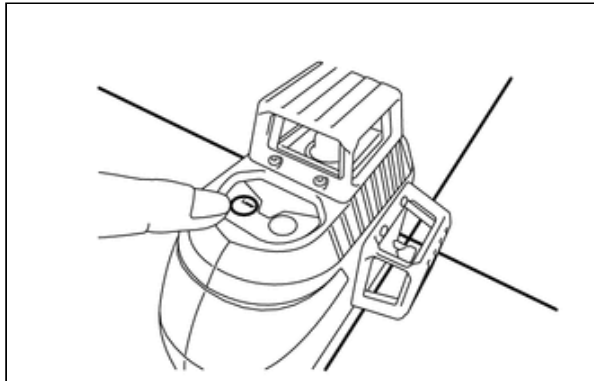
Make sure the string hangs straight down so that it does not contact parts of the vehicle.

(9) When using a laser line marker:

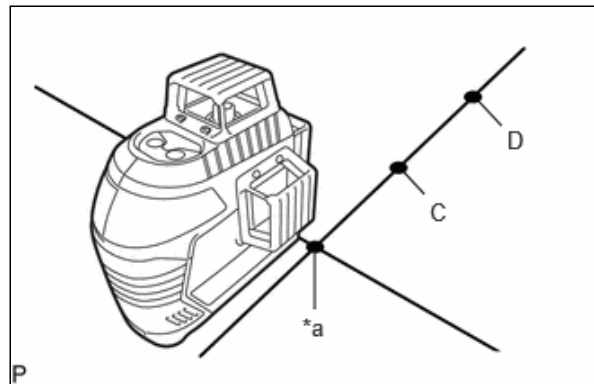
NOTICE:

Do not look directly into the laser beam.

1. Press the laser mode button on the laser line marker to activate the laser line emitters.



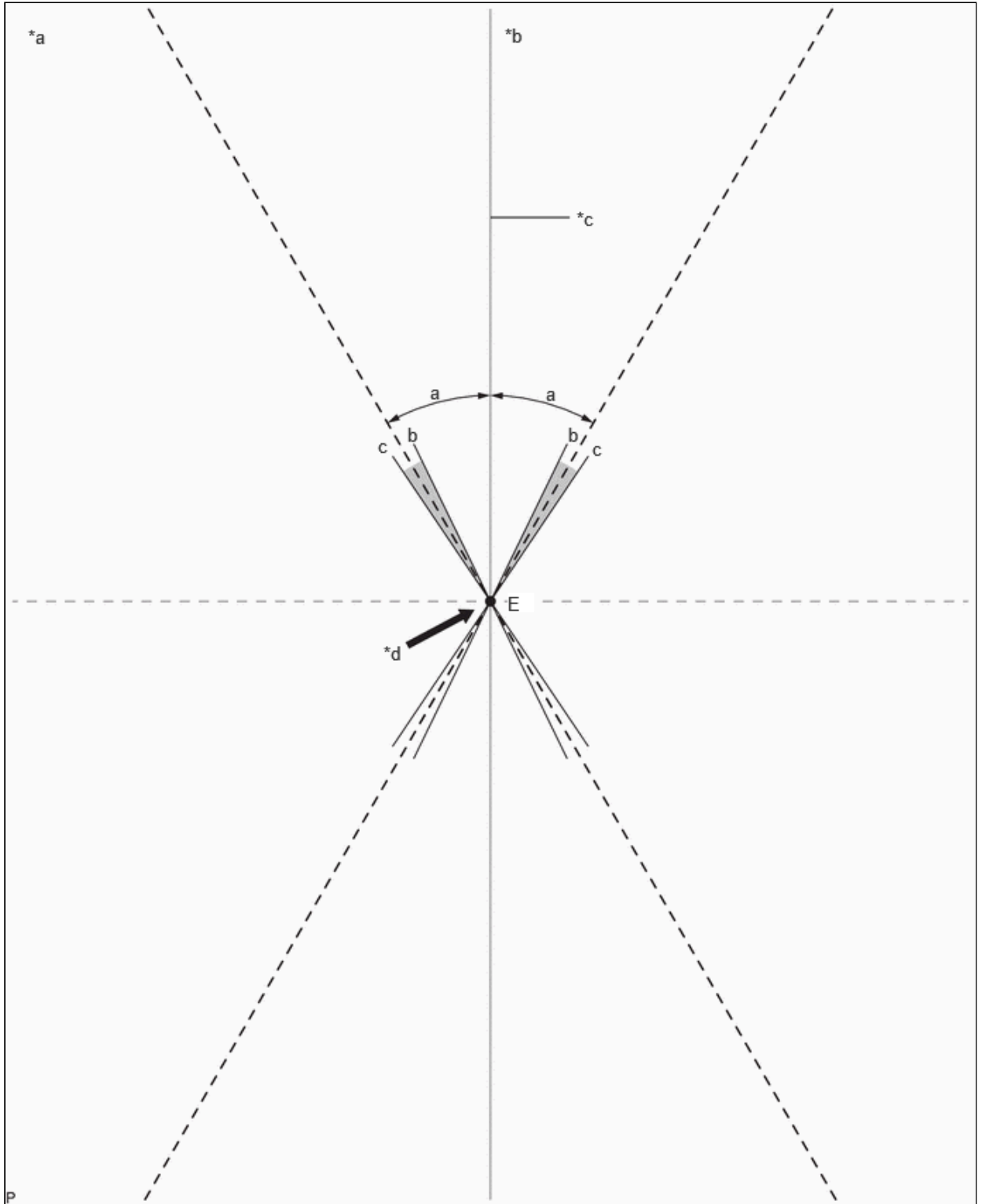
2. Adjust the position of the laser line marker so that the laser beam passes through point C and point D as shown in




the illustration.

*a	Ground Marking Point (Cross Portion)
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3. Enlarge and print out the poster shown in the illustration.

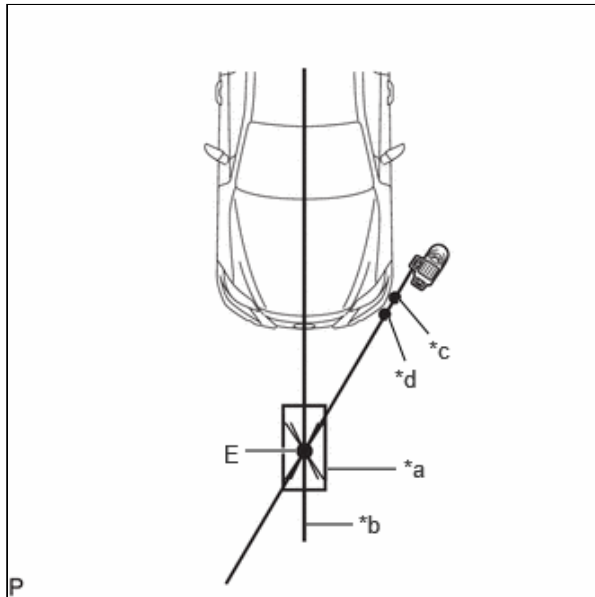


*a	Poster	*b	Vehicle
*c	Vehicle Center Line	*d	Intersection of Vehicle Center Line and extension lines of Point C and Point D
	Allowable Range	-	-

Standard:

PART	ANGLE
a	30°
b	-4°
c	+4°

4. As shown in the illustration, attach the poster to the ground by aligning the center line of the vehicle and point E. Then check that the horizontal angle of the front side radar sensor is within the allowable range.



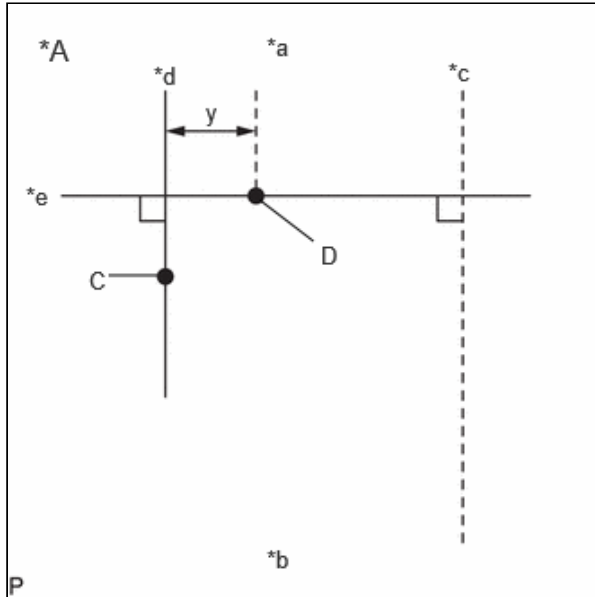
*a	Poster
*b	Vehicle Center Line
*c	Point C
*d	Point D

Standard:

ITEM	ALLOWABLE RANGE
Front Side Radar Sensor (for LH Side)	26 to 34°
Front Side Radar Sensor (for RH Side)	26 to 34°

(10) When not using a laser line marker:

1. Check that the following dimensions are obtained based on point C and point D.



*A	Vehicle Front (LH)
*a	Vehicle Front
*b	Vehicle Rear
*c	Vehicle Center Line
*d	Line Parallel to Vehicle Center Line
*e	Line Perpendicular to Vehicle Center Line

Standard:

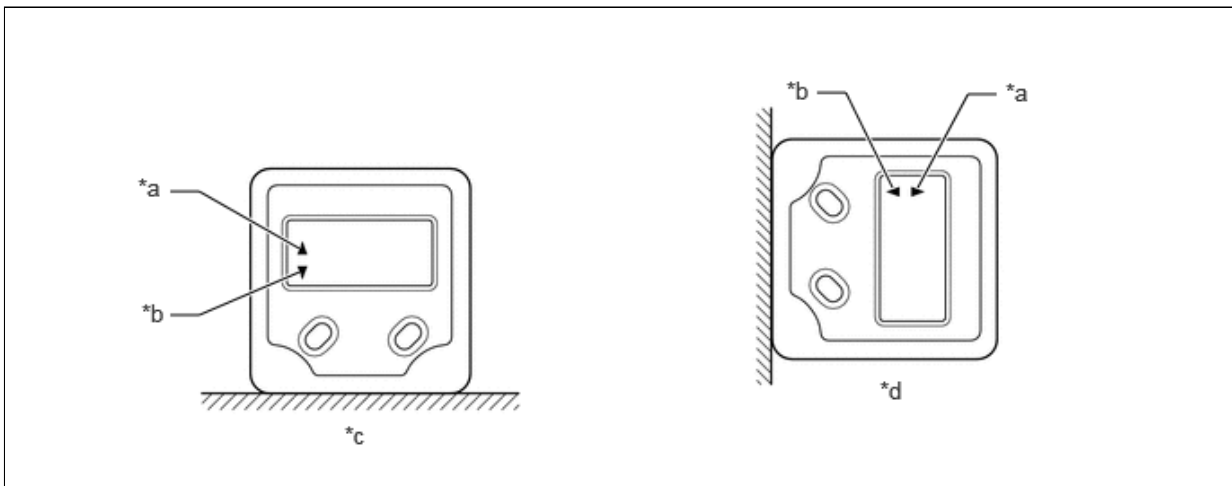
LOCATION	MEASUREMENT
y	24 to 31 mm (0.94 to 1.22 in.)

HINT:

If the results are not as specified, it is possible that the front side radar sensor installation area (frame, head light assembly) is deformed, so make corrections as necessary.

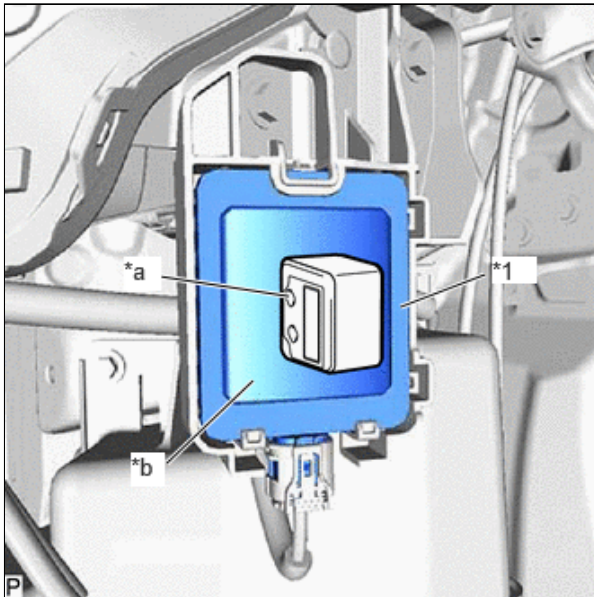
(b) Vertical mounting angle check

(1) Place the digital angle gauge on a level (gradient within 1%) and perform zero-point adjustment as shown in the illustration.



*a	(+)	*b	(-)
*c	When Storing Zero Point	*d	After Storing Zero Point, Indicates 90° When Fully Horizontal

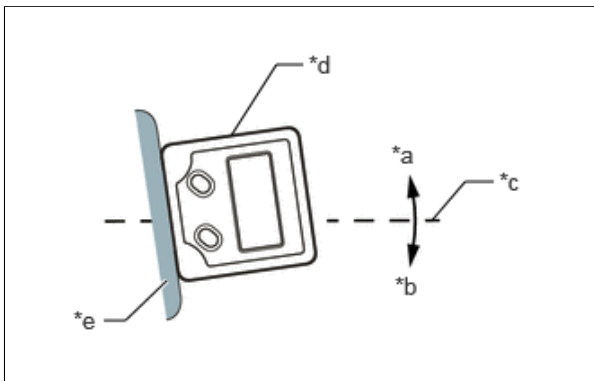
(2) Set the digital angle gauge to the outward facing surface of the front side radar sensor as shown in the illustration, and check that the perpendicular angle of the front side radar sensor is within the permissible range.



*1	Front Side Radar Sensor
*a	Digital Angle Gauge
*b	Outward Facing Surface

NOTICE:

The sensor angle is the measured sensor angle subtracted from 90°.



*a	(+)
*b	(-)
*c	Horizontal Line
*d	Digital Angle Gauge
*e	Outward Facing Surface

HINT:

- The digital angle gauge should indicate 90° when turned on its side.
- The outward facing surface (installation angle) is positive (+) when it faces higher than horizontal.

Standard:

ITEM	ALLOWABLE RANGE
Front Side Radar Sensor (for LH Side)	-2.2 to +2.2°
Front Side Radar Sensor (for RH Side)	-2.2 to +2.2°

(c) Install the front bumper assembly.

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