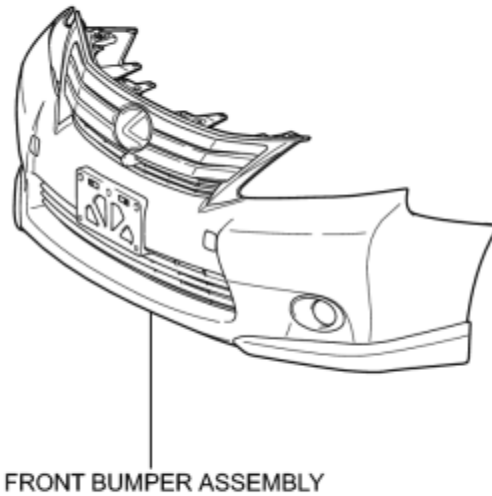


Last Modified: 5-25-2010	6.4 K	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000001QBR012X
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY (except LED Headlight): COMPONENTS (2010 HS250H)		

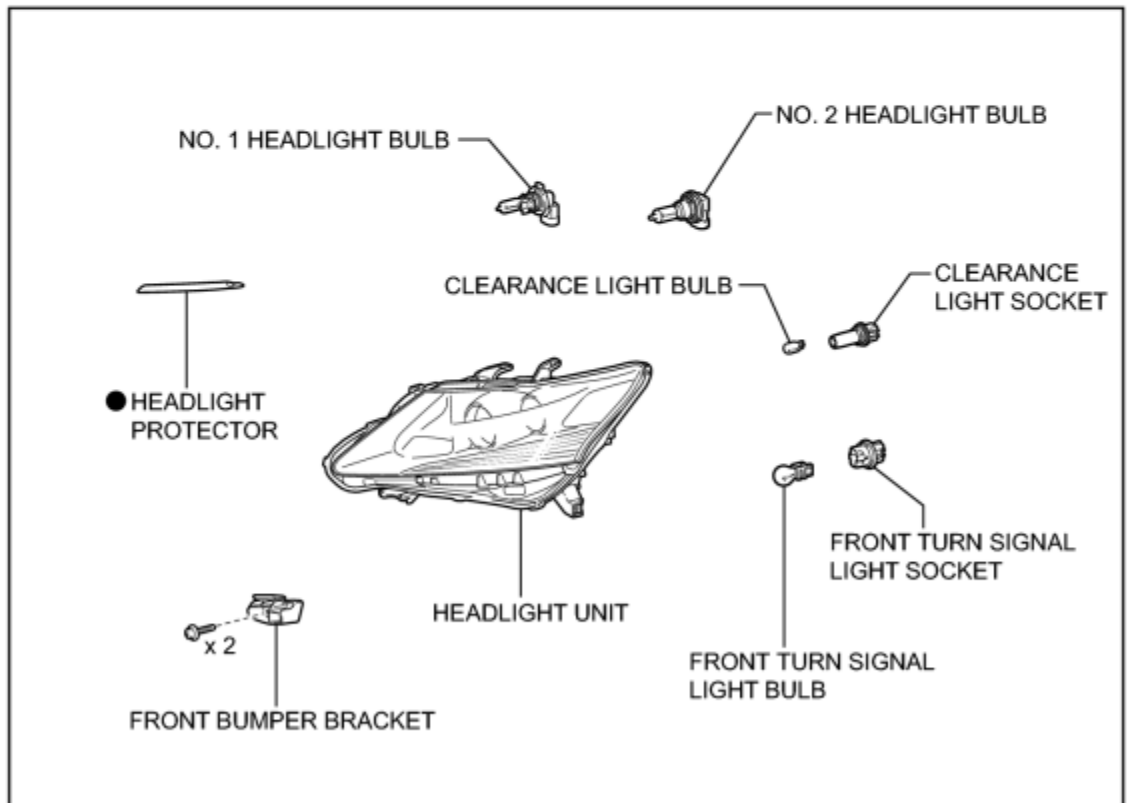
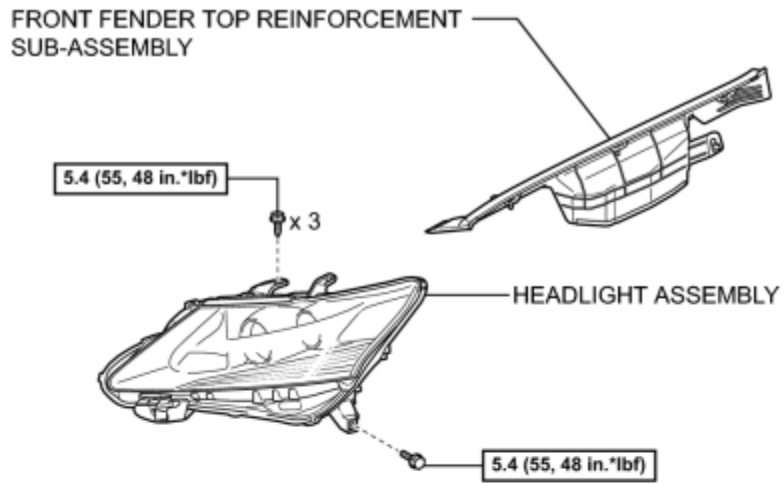
COMPONENTS

ILLUSTRATION



P

ILLUSTRATION



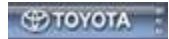
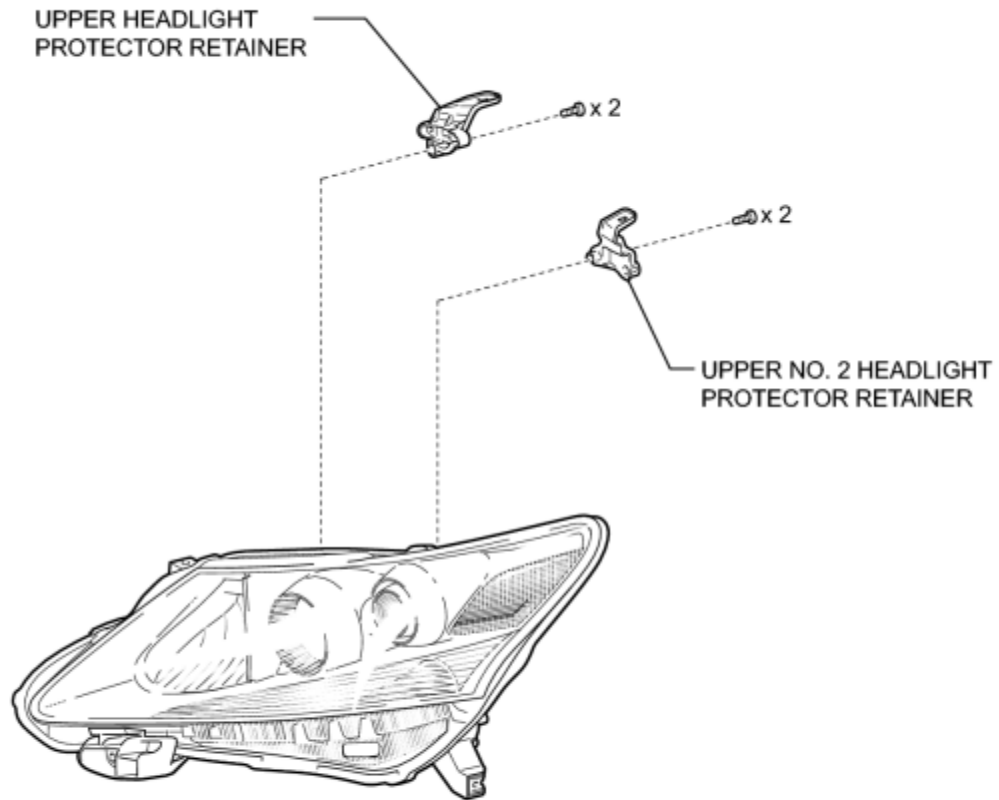
N*m (kgf*cm, ft.*lbf): Specified torque

● Non-reusable part

P

ILLUSTRATION

Bracket for Repair:



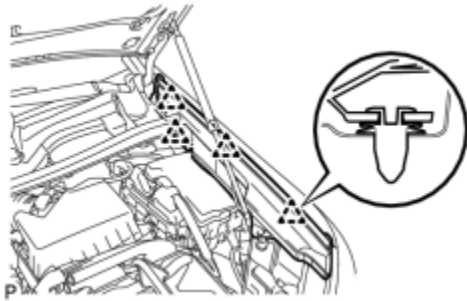
Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000001QBS01LX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY (except LED Headlight): REMOVAL (2010 HS250H)		

REMOVAL

1. REMOVE FRONT BUMPER ASSEMBLY

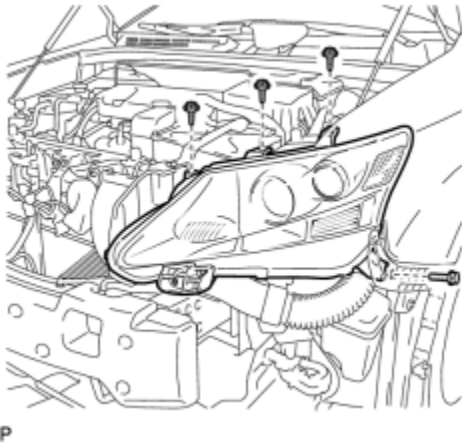
(a) Remove the front bumper assembly [INFO](#).

2. REMOVE FRONT FENDER TOP REINFORCEMENT SUB-ASSEMBLY



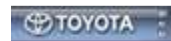
(a) Disengage the 4 clips and remove the front fender top reinforcement sub-assembly.

3. REMOVE HEADLIGHT ASSEMBLY



(a) Remove the bolt and 3 screws.

(b) Disconnect each connector and remove the headlight assembly.

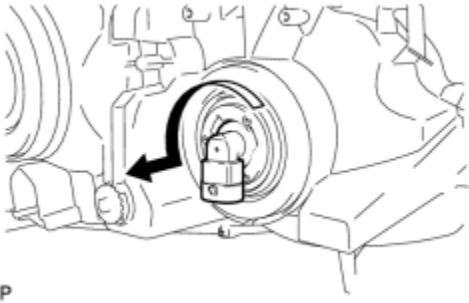


Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000001QBT01BX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY (except LED Headlight): DISASSEMBLY (2010 HS250H)		

DISASSEMBLY

1. REMOVE NO. 1 HEADLIGHT BULB

(a) Turn the No. 1 headlight bulb in the direction indicated by the arrow shown in the illustration, and

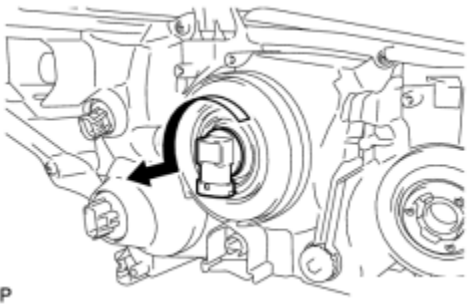


remove it.

NOTICE:

Do not touch the bulb glass.

2. REMOVE NO. 2 HEADLIGHT BULB

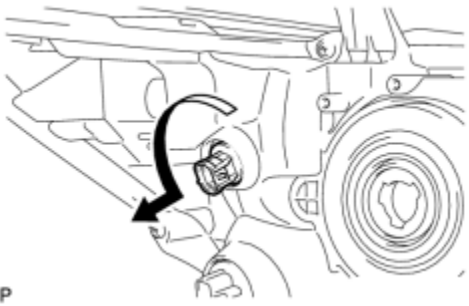


(a) Turn the No. 2 headlight bulb in the direction indicated by the arrow shown in the illustration, and remove it.

NOTICE:

Do not touch the bulb glass.

3. REMOVE CLEARANCE LIGHT BULB

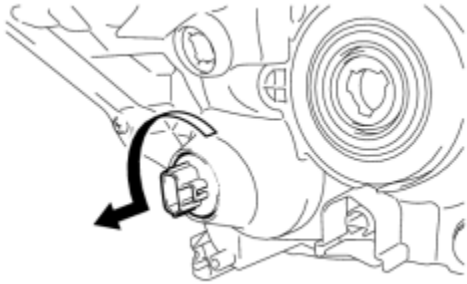


(a) Turn the clearance light bulb and clearance light socket in the direction indicated by the arrow shown in the illustration, and remove them as a unit.

(b) Remove the clearance light bulb from the clearance light socket.

4. REMOVE FRONT TURN SIGNAL LIGHT BULB

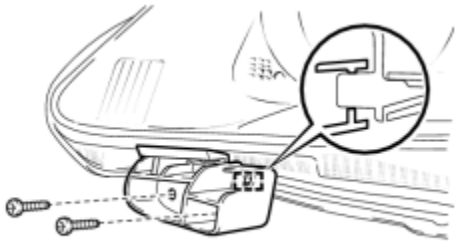
(a) Turn the front turn signal light bulb and front turn signal light socket in the direction indicated by the arrow shown in the illustration, and remove them as a unit.



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(b) Remove the front turn signal light bulb from the front turn signal light socket.

5. REMOVE FRONT BUMPER BRACKET

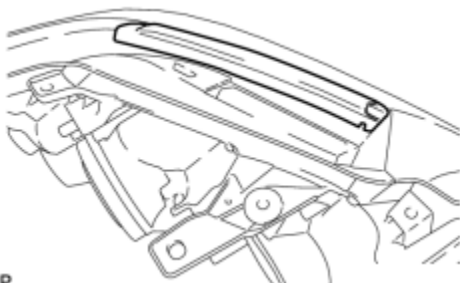


(a) Remove the 2 screws.

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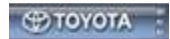
(b) Disengage the guide and remove the front bumper bracket.

6. REMOVE HEADLIGHT PROTECTOR



(a) Remove the headlight protector.

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Last Modified: 5-25-2010	6.4 N	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM0000011MI03UX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY (except LED Headlight): ADJUSTMENT (2010 HS250H)		

ADJUSTMENT

HINT:

It is possible that a bulb is incorrectly installed, affecting headlight aim. Bulb installation should be considered prior to performing the adjustment procedure.

1. PREPARE VEHICLE FOR HEADLIGHT AIM ADJUSTMENT

(a) Prepare the vehicle:

- Ensure there is no damage or deformation to the body around the headlights.
- Fill the fuel tank.
- Make sure that the oil is filled to the specified level.
- Make sure that the 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.

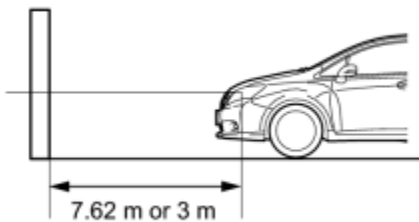
2. PREPARE FOR HEADLIGHT AIMING (Using a headlight aim test machine)

(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:

- 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 (headlight bulb center) 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.



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NOTICE:

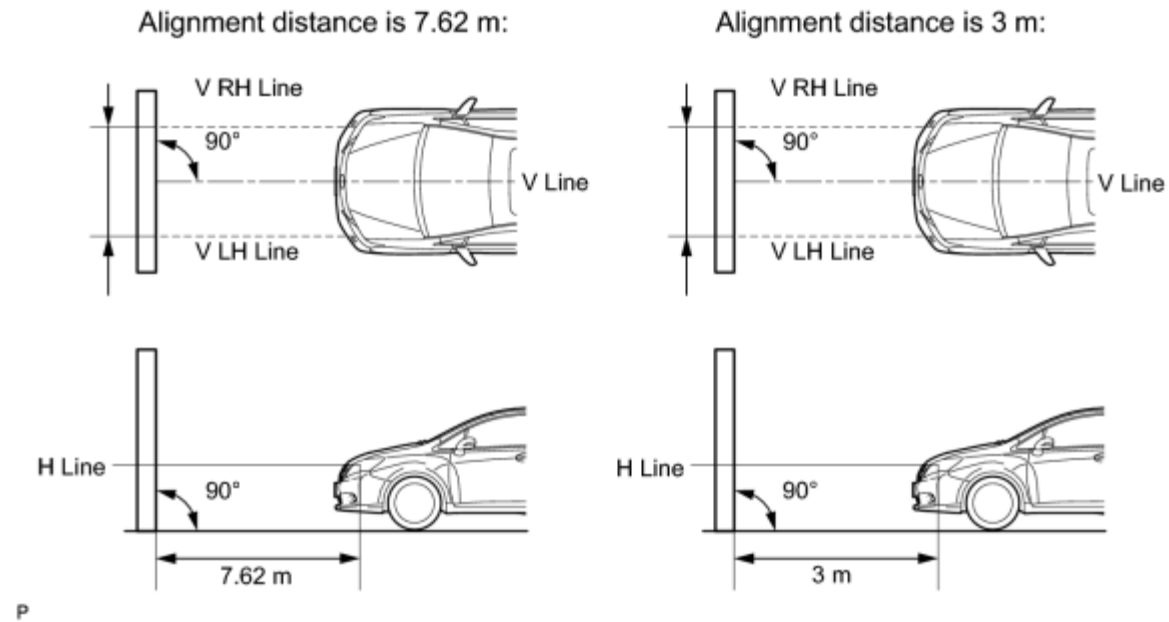
A distance of 7.62 m (25 ft.) between the vehicle

(headlight bulb center) 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 (6.6 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.



P

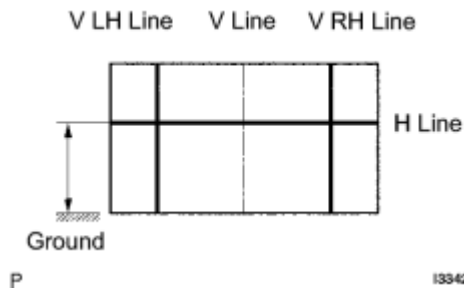
HINT:

- 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 bulb center marks on the screen. If the center mark cannot be observed on the headlight, use the center of the headlight bulb or the manufacturer's name marked on the headlight as the center mark.

133423 (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 bulb center marks of the low beam headlights.

(2) V LH Line, V RH Line (Center mark position of left-hand (LH) and right-hand (RH) headlights):

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

4. INSPECT HEADLIGHT AIMING

(a) Cover the headlight or disconnect the connector of 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 or disconnect the connector.

(b) Start the engine.

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

HINT:

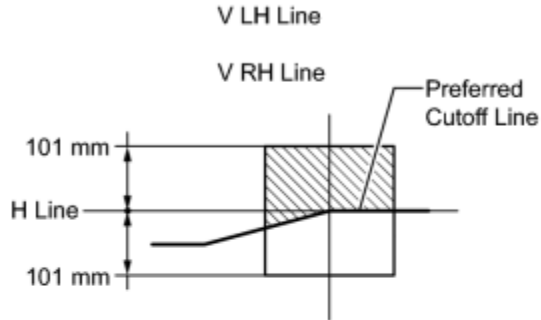
Preferred position for the low beam: Matches preferred cutoff line shown in the illustration

Preferred position for the high beam: Matches center of intensity shown in the illustration

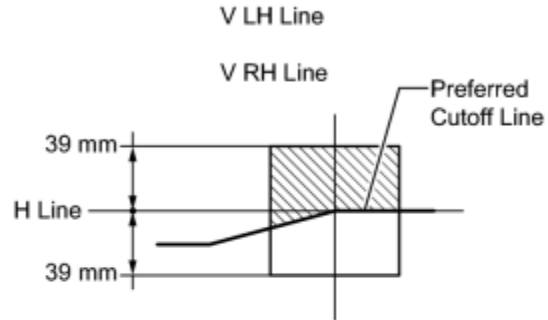
Alignment distance is 7.62 m:

Alignment distance is 3 m:

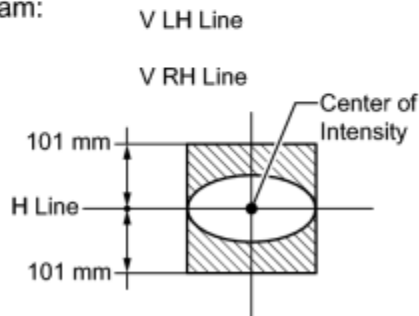
Low beam:



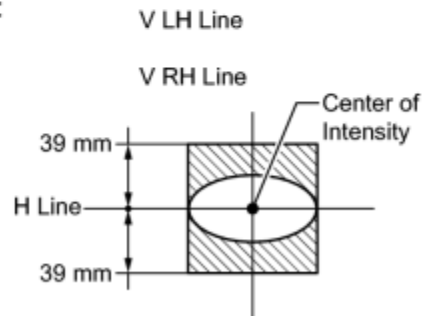
Low beam:



High beam:



High beam:



P

HINT:

- 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 7.62 m (25 ft.):

The right half of the low beam cutoff line should be within 101 mm (3.97 in.) above or below the H line (SAE J599).

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

The right half of the low beam cutoff line should be within 39 mm (1.56 in.) above or below the H 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 (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 (SAE J599).

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

The right half of the low beam cutoff line should be on the H line (preferred cutoff line target).

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

The right half of the low beam cutoff line should be on the H line (preferred cutoff line target).

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

The high beam center of intensity should be on the H line (preferred center of intensity).

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

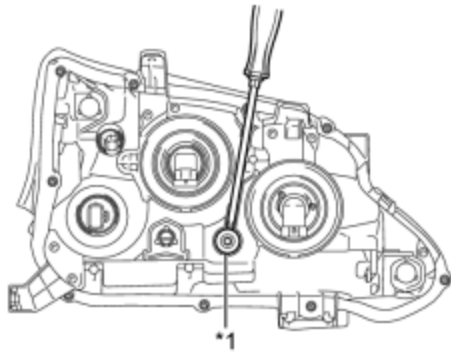
The high beam center of intensity should be on the H line (preferred center of intensity).

5. ADJUST HEADLIGHT AIMING

(a) Remove any covers necessary to access the headlight adjusters.

(b) Adjust the aim vertically:

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



P

Text in Illustration

*1

Aiming Screw

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 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 bulb, headlight unit and headlight unit reflector installation.
- The headlight aim moves down when turning the aiming screw clockwise, and moves up when turning the aiming screw counterclockwise.
- 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.

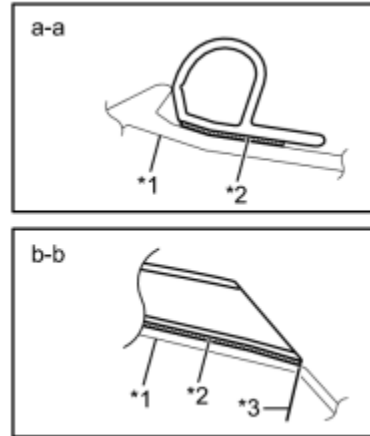
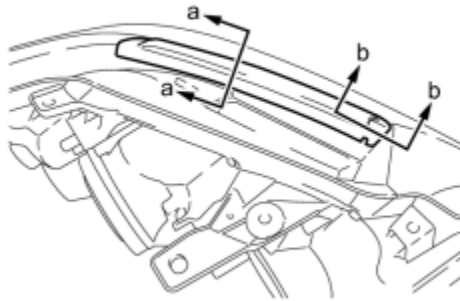
(c) Install any covers that were removed to access the headlight adjusters.

 		
Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000001QBU01BX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY (except LED Headlight): REASSEMBLY (2010 HS250H)		

REASSEMBLY

1. INSTALL HEADLIGHT PROTECTOR

- (a) Remove the double-sided tape from the headlight assembly.
- (b) Wipe off any tape adhesive residue with cleaner.
- (c) Using double-sided tape, install a new headlight protector to the area indicated in the illustration.



P

Text in Illustration

*1	Headlight Assembly	*2	Double-sided Tape
*3	End of Headlight Protector Installation Surface	-	-

2. INSTALL FRONT BUMPER BRACKET



(a) Engage the guide.

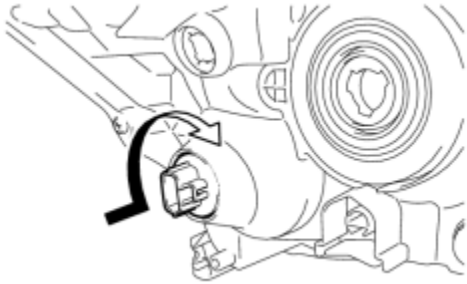
P

(b) Install the front bumper bracket with the 2 screws.

3. INSTALL FRONT TURN SIGNAL LIGHT BULB

(a) Install the front turn signal light bulb to the front turn signal light socket.

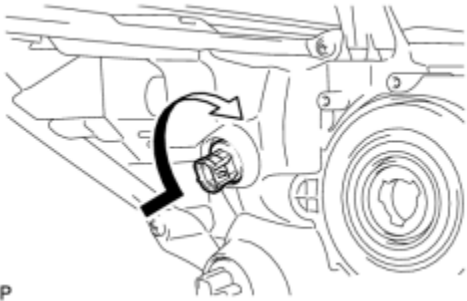
(b) Turn the front turn signal light bulb and front turn signal light socket in the direction indicated by the arrow shown in the illustration and install them as a unit.



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4. INSTALL CLEARANCE LIGHT BULB

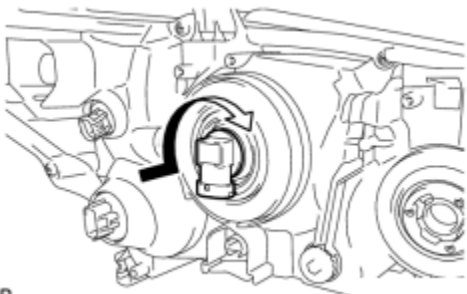
(a) Install the clearance light bulb to the clearance light socket.



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(b) Turn the clearance light bulb and clearance light socket in the direction indicated by the arrow shown in the illustration and install them as a unit.

5. INSTALL NO. 2 HEADLIGHT BULB



P

(a) Turn the No. 2 headlight bulb in the direction indicated by the arrow shown in the illustration to install it.

NOTICE:

Do not touch the bulb glass.

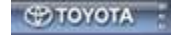
6. INSTALL NO. 1 HEADLIGHT BULB

(a) Turn the No. 1 headlight bulb in the direction indicated by the arrow shown in the illustration to install it.



NOTICE:
Do not touch the bulb glass.

P



Last Modified: 5-25-2010	6.4 A	From: 200907
Model Year: 2010	Model: HS250H	Doc ID: RM000001QBQ01IX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY (except LED Headlight): INSTALLATION (2010 HS250H)		

INSTALLATION

1. INSTALL HEADLIGHT ASSEMBLY

- (a) Connect each connector.
- (b) Install the headlight assembly with the bolt and 3 screws.

Torque: **5.4 N·m (55 kgf·cm, 48in·lbf)**

2. INSTALL FRONT FENDER TOP REINFORCEMENT SUB-ASSEMBLY

- (a) Engage the 4 clips to install the front fender top reinforcement sub-assembly.

3. INSTALL FRONT BUMPER ASSEMBLY

- (a) Install the front bumper assembly [INFO](#).

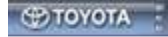
4. PREPARE VEHICLE FOR HEADLIGHT AIM ADJUSTMENT_ [INFO](#)

5. PREPARE FOR HEADLIGHT AIMING (Using a headlight aim test machine)_ [INFO](#)

6. PREPARE FOR HEADLIGHT AIMING (Using a screen)_ [INFO](#)

7. INSPECT HEADLIGHT AIMING_ [INFO](#)

8. ADJUST HEADLIGHT AIMING INFO



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Model Year: 2010	Model: HS250H	Doc ID: RM000003TYF00FX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY (except LED Headlight): REPAIR (2010 HS250H)		

REPAIR

HINT:

- Use the same procedure for the RH side and LH side.
- The procedure listed below is for the LH side.
- If the installation area of the headlight assembly is damaged, use the supply retainer for low-cost repair.
- Ensure that the headlight assembly is not damaged.

1. INSTALL UPPER HEADLIGHT PROTECTOR RETAINER

(a) Cut off the part shaded in the illustration and sand smooth with sandpaper.



NOTICE:

After cutting off the part, place the upper headlight protector retainer against the bosses and gradually file away the old bracket if it interferes with the installation of the supply retainer.

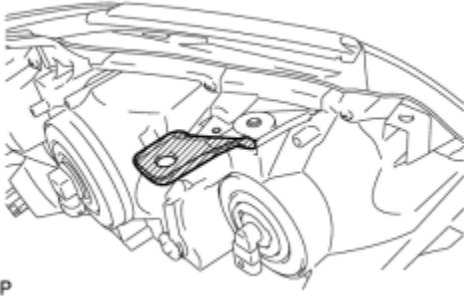


(b) Install the upper headlight protector retainer with the 2 screws.

2. INSTALL UPPER NO. 2 HEADLIGHT PROTECTOR RETAINER

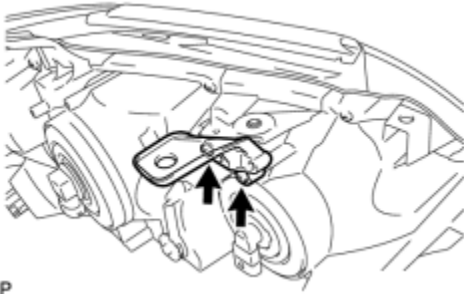
(a) Cut off the part shaded in the illustration and sand

smooth with sandpaper.



NOTICE:

After cutting off the part, place the upper headlight protector retainer against the bosses and gradually file away the old bracket if it interferes with the installation of the supply retainer.



(b) Install the upper No. 2 headlight protector retainer with the 2 screws.

