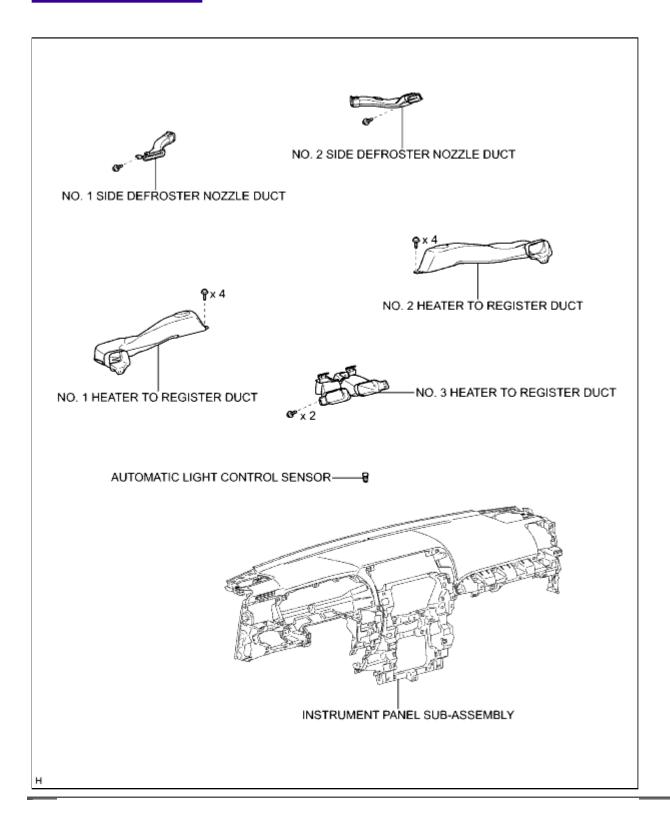
Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000004081002X
Title: LIGHTING (EXT): AUTOMATIC LIGHT CONTROL SENSOR: COMPONENTS (2010 4Runner)		

# **COMPONENTS**

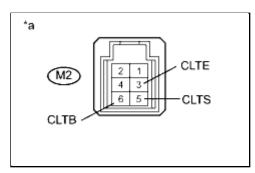
# **ILLUSTRATION**



Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003V8W004X
<b>Title:</b> LIGHTING (EXT): AUTOMATIC LIGHT CONTROL SENSOR: ON-VEHICLE INSPECTION (2010 4Runner)		

# **ON-VEHICLE INSPECTION**

### 1. CHECK AUTOMATIC LIGHT CONTROL SENSOR



(a) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER	SWITCH	SPECIFIED
CONNECTION	CONDITION	CONDITION
G2-6 (CLTB) - G2-3 (CLTE)	Ignition switch ON	11 to 14 V

(b) Measure the resistance according to the value(s) in the table below.

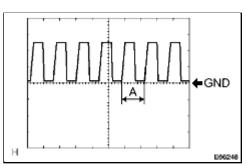
Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
G2-3 (CLTE) - Body ground	Always	Below 1 Ω

(c) Reconnect the G2 sensor connector.

(d) Check the waveform of the G2 sensor connector.

Waveform:



TESTER	TOOL	SWITCH	SPECIFIED
CONNECTION	SETTING	CONDITION	CONDITION
G2-3 (CLTE) - G2-5 (CLTS)	5 V/DIV., 5 msec./ DIV.	Ignition switch ON, headlight dimmer switch AUTO	Correct waveform is as shown

### **HINT:**

If the ambient light becomes brighter, width A becomes narrower.

If the result is not as specified, there may be a malfunction in the automatic light control sensor.

# **Text in Illustration**

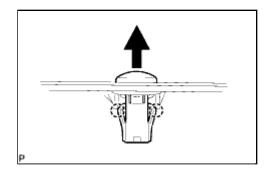
\*a Front view of wire harness connector (to Automatic Light Control Sensor)

(49)

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000004082002X
Title: LIGHTING (EXT): AUTOMATIC LIGHT CONTROL SENSOR: REMOVAL (2010 4Runner)		

## **REMOVAL**

- 1. REMOVE INSTRUMENT PANEL SUB-ASSEMBLY
  - (a) Remove the instrument panel sub-assembly
- 2. REMOVE NO. 1 HEATER TO REGISTER DUCT
- 3. REMOVE NO. 2 HEATER TO REGISTER DUCT
- 4. REMOVE NO. 1 SIDE DEFROSTER NOZZLE DUCT
- 5. REMOVE NO. 2 SIDE DEFROSTER NOZZLE DUCT
- 6. REMOVE NO. 3 HEATER TO REGISTER DUCT
- 7. REMOVE AUTOMATIC LIGHT CONTROL SENSOR



(a) Disconnect the connector.

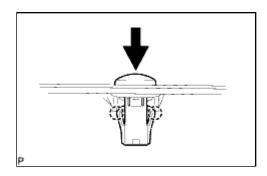
(b) Detach the 2 claws and remove the sensor.



Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000004080002X
Title: LIGHTING (EXT): AUTOMATIC	LIGHT CONTROL SE	NSOR: INSTALLATION (2010 4Runner)

# **INSTALLATION**

### 1. INSTALL AUTOMATIC LIGHT CONTROL SENSOR



(a) Attach the 2 claws to install the sensor.

- (b) Connect the connector.
- 2. INSTALL NO. 3 HEATER TO REGISTER DUCT
- 3. INSTALL NO. 1 SIDE DEFROSTER NOZZLE DUCT
- 4. INSTALL NO. 2 SIDE DEFROSTER NOZZLE DUCT
- 5. INSTALL NO. 1 HEATER TO REGISTER DUCT NO.
- 6. INSTALL NO. 2 HEATER TO REGISTER DUCT
- 7. INSTALL INSTRUMENT PANEL SUB-ASSEMBLY

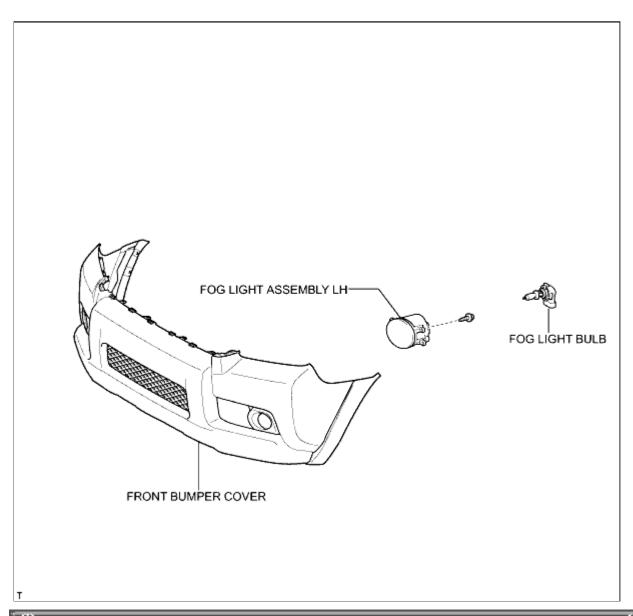
(9)

⊕ TOYOTA 🗦

Last Modified: 5-10-2010	6.4 K	From: 200908	
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003OCC009X	
Title: LIGHTING (EXT): FOG LIGHT ASSEMBLY: COMPONENTS (2010 4Runner)			

# **COMPONENTS**

# **ILLUSTRATION**



: (2)

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Last Modified: 5-10-2010	6.4 N	From: 200908	
Model Year: 2010	Model: 4Runner	Doc ID: RM000001GEG00UX	
Title: LIGHTING (EXT): FOG LIGHT ASSEMBLY: ADJUSTMENT (2010 4Runner)			

## **ADJUSTMENT**

#### 1. VEHICLE PREPARATION FOR FOG LIGHT AIM ADJUSTMENT

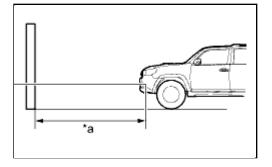
- (a) Prepare the vehicle:
  - Make sure that the vehicle has no damage or deformation around the headlights.
  - Fill the fuel tank.
  - Make sure that all of the different types of oil in the vehicle (engine oil, etc.) are filled to the specified levels.
  - Make sure that the coolant is filled to the specified level.
  - Inflate the tires to the appropriate pressure.
  - Place the spare tire, tools, and jack in their original positions.
  - Unload the trunk.
  - Have a person that weighs approximately 68 kg (150 lb) sit in the driver seat.

### 2. PREPARATION FOR FOG LIGHT AIMING (Using a screen)

(a) Prepare the vehicle according to the following conditions:

## **Text in Illustration**

* a	7.62 or 3 m
<u> </u>	7.02 01 3 111



- Move the vehicle to a location that is sufficiently dark so that the headlight cutoff line can be visually checked. The cutoff line is an imaginary plane below which headlight light is projected and above which light is not projected.
- Move the vehicle to a level surface.
- Point the front of the vehicle at a wall. The wall must be perpendicular to the surface that the vehicle is on.
- Position the vehicle 7.62 m (25 ft.) from the wall.
- Push down on the vehicle several times to settle the suspension.

#### HINT:

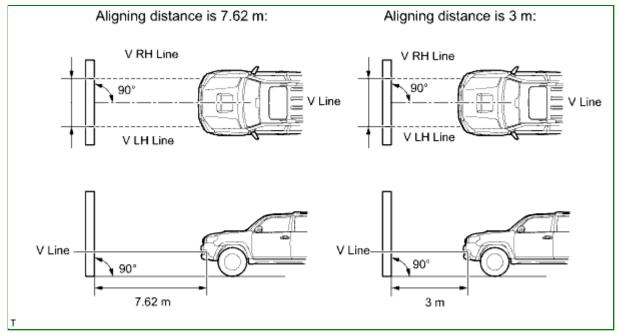
A distance of 7.62 m (25 ft.) between the vehicle and wall is necessary for proper aim adjustment. If unavailable, secure a distance of exactly 3 m (9.8 ft.). View the part of the illustration below applicable to the distance from the vehicle to the wall.

#### **NOTICE:**

- (b) Prepare a piece of thick white paper that is 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.

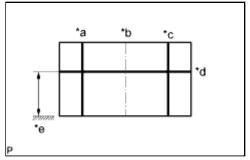
### **HINT:**

- 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 line, V LH and V RH lines) on the screen as shown in the illustration.

## **Text in Illustration**



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

(1) H Line (fog light 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 fog light bulb center marks of the fog lights. (2) V LH Line, V RH Line (center mark position of LH and RH fog lights): Draw two vertical lines so that they intersect the H line at each center mark.

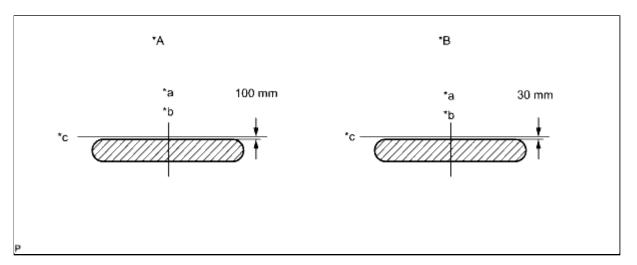
#### 3. INSPECT FOG LIGHT AIMING

- (a) Choose a headlight to inspect first. Cover or disconnect the connector of the other fog light to prevent light from that fog light from affecting the fog light aiming inspection.
- (b) Start the engine.

#### **NOTICE:**

The engine speed must be 1500 or more.

(c) Turn on the fog lights and make sure that the cutoff line is within the specified area shown in the illustration.



#### **Text in Illustration**

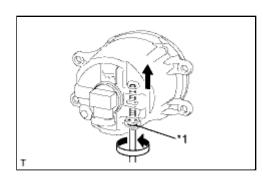
* A	Aligning distance is 7.62 m	*B	Aligning distance is 3 m
* a	V LH Line	* b	V RH Line
* c	H Line	-	-

### 4. ADJUST FOG LIGHT AIMING

(a) A djust the fog light aim into the specified range by turning the aiming screw with a screwdriver.

## **Text in Illustration**

* 1	Aiming Screw



#### **NOTICE:**

If the screw is tightened too much, loosen it and then retighten it so that the final turn of the screw is in the clockwise direction.

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Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001GEK00VX
Title: LIGHTING (EXT): FOG LIGHT ASSEMBLY: REMOVAL (2010 4Runner)		

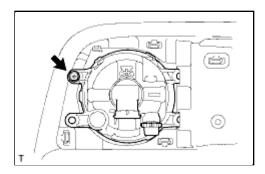
# **REMOVAL**

## **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

## 1. REMOVE FRONT BUMPER COVER

(a) Remove the front bumper cover



## 2. REMOVE FOG LIGHT ASSEMBLY LH

(a) Remove the screw and light.

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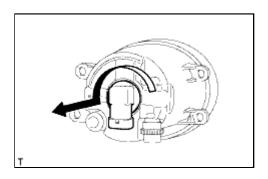
⊕TOYOTA -

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001GEK00WX
Title: LIGHTING (EXT): FOG LIGHT ASSEMBLY: DISASSEMBLY (2010 4Runner)		

# **DISASSEMBLY**

## **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.



### 1. REMOVE FOG LIGHT BULB

(a) Turn the bulb in the direction indicated by the arrow and  $\,$  pull to remove it.

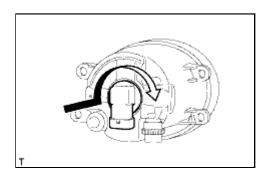
\_32

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001GEL00VX
Title: LIGHTING (EXT): FOG LIGHT ASSEMBLY: REASSEMBLY (2010 4Runner)		

# **REASSEMBLY**

## **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.



## 1. INSTALL FOG LIGHT BULB

(a) Turn the bulb in the direction indicated by the arrow to install it.

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Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000001GEL00WX
Title: LIGHTING (EXT): FOG LIGHT ASSEMBLY: INSTALLATION (2010 4Runner)		

# **INSTALLATION**

### **HINT:**

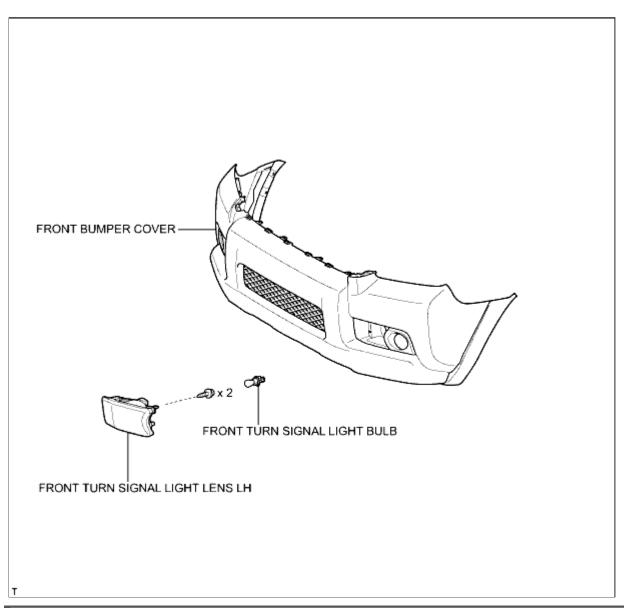
- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.
- 1. INSTALL FOG LIGHT ASSEMBLY LH
  - (a) Install the light with the screw.
- 2. INSTALL FRONT BUMPER COVER
  - (a) Install the front bumper cover
- 3. VEHICLE PREPARATION FOR FOG LIGHT AIMING ADJUSTMENT
- 4. PREPARATION FOR FOG LIGHT AIMING
- 5. INSPECT FOG LIGHT AIMING
- 6. ADJUST FOG LIGHT AIMING FO



Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QUF005X
Title: LIGHTING (EXT): FRONT TURN SIGNAL LIGHT ASSEMBLY: COMPONENTS (2010 4Runner)		

# **COMPONENTS**

# **ILLUSTRATION**



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Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QUG005X
Title: LIGHTING (EXT): FRONT TURN SIGNAL LIGHT ASSEMBLY: REMOVAL (2010 4Runner)		

# **REMOVAL**

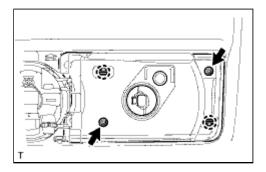
### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

## 1. REMOVE FRONT BUMPER COVER

(a) Remove the front bumper cover

### 2. REMOVE FRONT TURN SIGNAL LIGHT LENS LH



(a) Remove the 2 screws.

(b) Detach the 2 claws and remove the light.





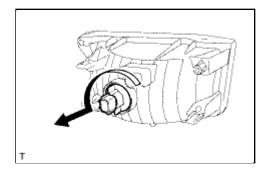
Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QUH005X
Title: LIGHTING (EXT): FRONT TURN SIGNAL LIGHT ASSEMBLY: DISASSEMBLY (2010 4Runner)		

# **DISASSEMBLY**

### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

### 1. REMOVE FRONT TURN SIGNAL LIGHT BULB



(a) Turn the bulb in the direction indicated by the arrow in the illustration and remove it from the turn signal light unit.

(b) Remove the bulb.





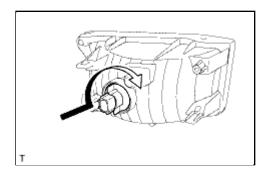
Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QUI005X
Title: LIGHTING (EXT): FRONT TURN SIGNAL LIGHT ASSEMBLY: REASSEMBLY (2010 4Runner)		

# **REASSEMBLY**

### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

### 1. INSTALL FRONT TURN SIGNAL LIGHT BULB



(a) Install the bulb.

(b) Turn the bulb in the direction indicated by the arrow to install it to the turn signal light unit.



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Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QUE005X
<b>Title:</b> LIGHTING (EXT): FRONT TURN SIGNAL LIGHT ASSEMBLY: INSTALLATION (2010 4Runner)		

# **INSTALLATION**

## HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

### 1. INSTALL FRONT TURN SIGNAL LIGHT LENS LH

- (a) Attach the 2 claws to install the light.
- (b) Install the 2 screws.

## 2. INSTALL FRONT BUMPER COVER

(a) Install the front bumper cover

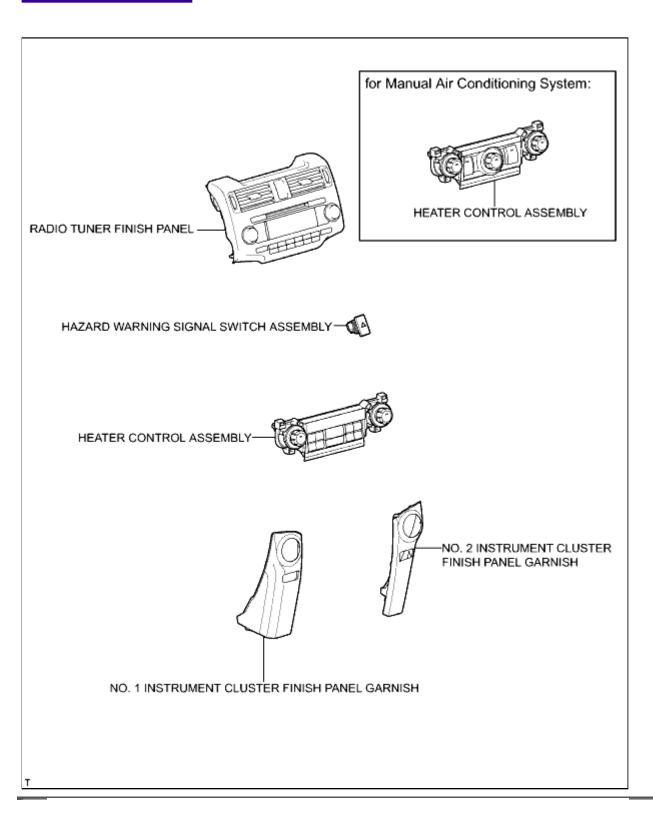




Last Modified: 5-10-2010	6.4 K	From: 200908	
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJW004X	
Title: LIGHTING (EXT): HAZARD WARNING SWITCH: COMPONENTS (2010 4Runner)			

# **COMPONENTS**

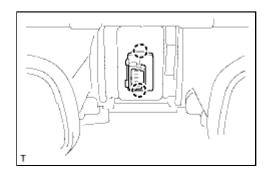
# **ILLUSTRATION**



Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJX004X
Fitle: LIGHTING (EXT): HAZARD WARNING SWITCH: REMOVAL (2010 4Runner)		

# **REMOVAL**

- 1. REMOVE NO. 1 INSTRUMENT CLUSTER FINISH PANEL GARNISH
- 2. REMOVE NO. 2 INSTRUMENT CLUSTER FINISH PANEL GARNISH
- 3. REMOVE HEATER CONTROL ASSEMBLY
- 4. REMOVE RADIO TUNER FINISH PANEL
- 5. REMOVE HAZARD WARNING SIGNAL SWITCH ASSEMBLY



(a) Disconnect the connector.

(b) Detach the 2 claws and remove the switch.

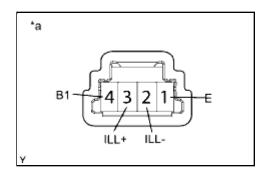




Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJV004X
Title: LIGHTING (EXT): HAZARD WARNING SWITCH: INSPECTION (2010 4Runner)		

# **INSPECTION**

### 1. INSPECT HAZARD WARNING SIGNAL SWITCH ASSEMBLY



(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
4 (01) 1 (5)	Hazard warning signal switch off	10 kΩ or higher
4 (B1) - 1 (E)	Hazard warning signal switch on	Below 1 Ω

(b) Apply battery voltage to the connector and check the LED illumination condition.

OK:

SPECIFIED CONDITION
LED illuminates

If the result is not as specified, there may be a malfunction in the hazard warning signal switch.

#### **Text in Illustration**

\*a Component without harness connected (Hazard Warning Signal Switch Assembly)

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Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJU004X
Title: LIGHTING (EXT): HAZARD WARNING SWITCH: INSTALLATION (2010 4Runner)		

# **INSTALLATION**

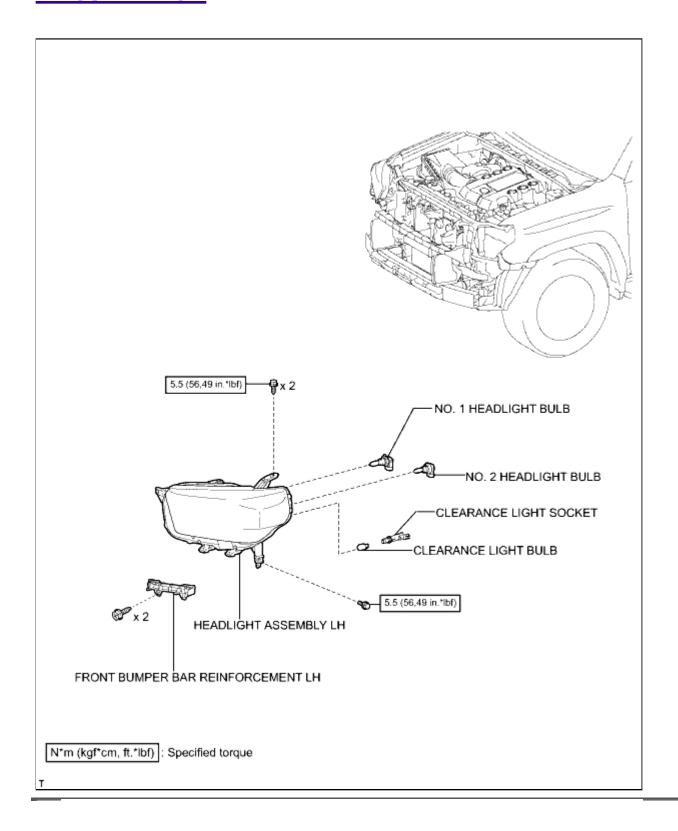
- 1. INSTALL HAZARD WARNING SIGNAL SWITCH ASSEMBLY
  - (a) Attach the 2 claws to install the switch.
  - (b) Connect the connector.
- 2. INSTALL RADIO TUNER FINISH PANEL MFO
- 3. INSTALL HEATER CONTROL ASSEMBLY
- 4. INSTALL NO. 1 INSTRUMENT CLUSTER FINISH PANEL GARNISH
- 5. INSTALL NO. 2 INSTRUMENT CLUSTER FINISH PANEL GARNISH

(9)

Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM00000303F00BX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY: COMPONENTS (2010 4Runner)		

# **COMPONENTS**

# **ILLUSTRATION**



Last Modified: 5-10-2010	6.4 N	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QVI008X
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY: ADJUSTMENT (2010 4Runner)		

## **ADJUSTMENT**

#### HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

### 1. VEHICLE PREPARATION FOR HEADLIGHT AIMING ADJUSTMENT

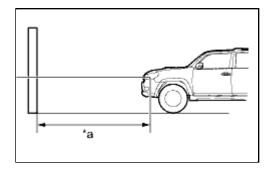
- (a) Prepare the vehicle:
  - Make sure that there is no damage to the body around the headlights.
  - Fill the fuel tank.
  - Make sure that the oil is filled to the specified level.
  - Inflate the tires to the appropriate pressure.
  - Unload the trunk and vehicle, making sure that the spare tire, tools and jack are also removed.
  - Have a person of average weight (68 kg, 150 lb) sit in the driver seat.

### 2. PREPARATION FOR HEADLIGHT AIMING (Using a screen)

(a) Prepare the vehicle:

## **Text in Illustration**





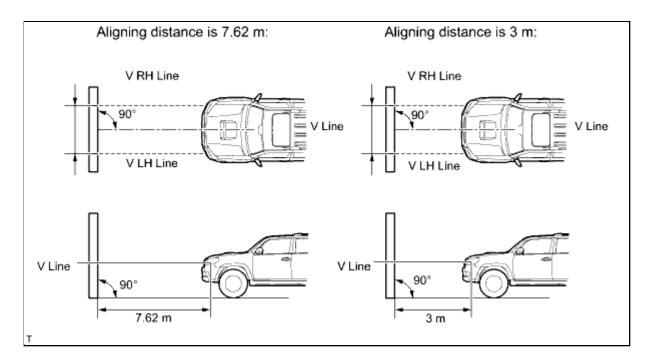
- Place the vehicle in a location that is dark enough to clearly observe the cutoff line. The cutoff line is a distinct line, below which light from the headlights can be observed and above which it cannot.
- Place the vehicle at a 90° angle to the wall.
- Create a 7.62 m (25.0 ft.) distance between the vehicle (headlight bulb center) and wall.
- Make sure that the vehicle is on a level surface.
- Bounce the vehicle up and down to settle the suspension.

#### **NOTICE:**

A distance of 7.62 m (25.0 ft.) between the vehicle (headlight bulb center) and wall is necessary for proper aim adjustment. If unavailable, secure a distance of exactly 3 m (9.84 ft.) for the check and adjustment (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.

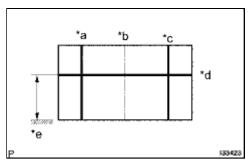


### HINT:

- 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.

## **Text in Illustration**



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

## **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 name of the manufacturer marked on the headlight as the center mark.

### (1) H Line (Headlight):

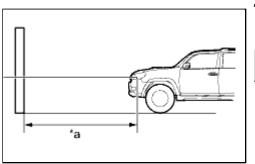
Draw a horizontal line across the screen so that it passes through the center marks. The H line should be at the same height as the headlight bulb center marks of the low beam headlights.

(2) V LH Line, V RH Line (Center mark position of the 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).

#### 3. 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.



## Text in Illustration

* a	7.62 or 3 m
	7 10 Z 01 0 111

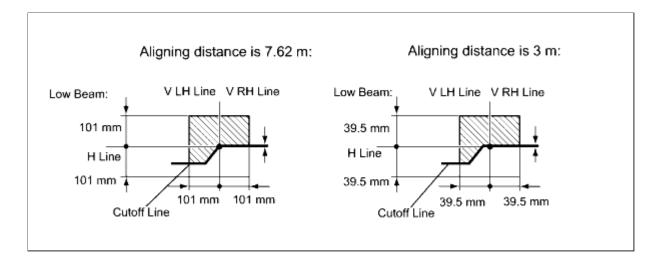
### **NOTICE:**

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 headlight, cover the low beam headlight or disconnect the connector.

- (b) Start the engine.
- (c) Turn on the headlight and check if the cutoff line matches the preferred cutoff line in the following illustration.



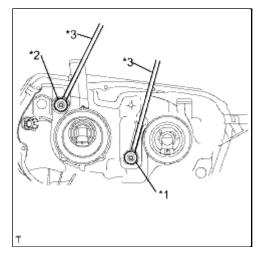
#### HINT:

- The low beam and high beam headlight are a unit. Adjusting the aim on the low beam to the correct position should also result in the high beam adjustment being correct.
- If the alignment distance is 7.62 m (25.0 ft.): The low beam cutoff line should be within 79.5 mm (3.13 in.) above or below the H line as well as 79.5 mm (3.13 in.) left or right of the V line.
- If the alignment distance is 3 m (9.84 ft.): The low beam cutoff line should be within 71.5 mm (2.81 in.) above or below the H line as well as 71.5 mm (2.81 in.) left or right of the V line.
- If the alignment distance is 7.62 m (25.0 ft.): The high beam center of intensity should be within 79.5 mm (3.13 in.) above or below the H line as well as 79.5 mm (3.13 in.) left or right of the V line.
- If the alignment distance is 3.0 m (9.84 ft.): The high beam center of intensity should be within 71.5 mm (2.81 in.) above or below the H line as well as 71.5 mm (2.81 in.) left or right of the V line.

### 4. ADJUST HEADLIGHT AIMING

(a) Using a screwdriver, adjust the aim.





*1	Vertical Aiming
* 2	Horizontal Aiming
*3	Screwdriver

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

### 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:

• The low beam and high beam headlight are a unit.

- Adjusting the aim on the low beam to the correct position should also result in the high beam adjustment being correct.
- If it is not possible to correctly adjust headlight aim, check the bulb, headlight unit and headlight unit reflector installation.
- The headlight aim moves up when turning the vertical aiming screw clockwise, and moves down when turning the vertical aiming screw counterclockwise. The headlight aim moves right when turning the horizontal aiming screw clockwise, and moves left when turning the horizontal aiming screw counterclockwise.



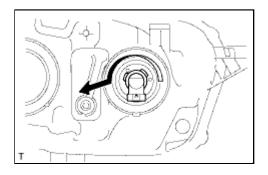


Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000001H5J00ZX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY: DISASSEMBLY (2010 4Runner)		

## **DISASSEMBLY**

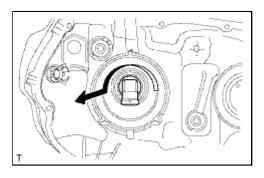
### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.



### 1. REMOVE NO. 1 HEADLIGHT BULB

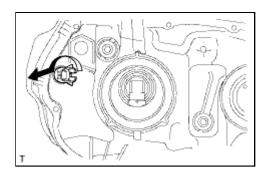
(a) Turn the bulb in the direction indicated by the arrow and pull to remove it.



### 2. REMOVE NO. 2 HEADLIGHT BULB

(a) Turn the bulb in the direction indicated by the arrow and pull to remove it.

### 3. REMOVE CLEARANCE LIGHT SOCKET



(a) Turn the socket in the direction indicated by the arrow and pull to remove it.

### 4. REMOVE CLEARANCE LIGHT BULB

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000001H5J00YX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY: REMOVAL (2010 4Runner)		

# **REMOVAL**

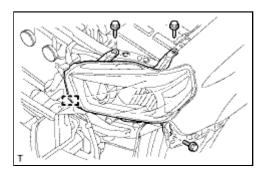
### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

## 1. REMOVE FRONT BUMPER COVER

(a) Remove the front bumper cover

# 2. REMOVE FRONT BUMPER BAR REINFORCEMENT LH



### 3. REMOVE HEADLIGHT ASSEMBLY LH

- (a) Remove the 2 screws and bolt.
- (b) Detach the clamp.
- (c) Disconnect the connectors and remove the headlight.





Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000001H5K00YX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY: REASSEMBLY (2010 4Runner)		

## **REASSEMBLY**

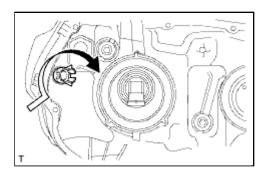
### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

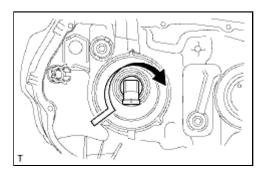
### 1. INSTALL CLEARANCE LIGHT BULB

(a) Install the bulb.

### 2. INSTALL CLEARANCE LIGHT SOCKET

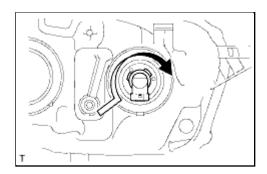


(a) Turn the socket in the direction indicated by the arrow to install it.



## 3. INSTALL NO. 2 HEADLIGHT BULB

(a) Turn the bulb in the direction indicated by the arrow to install it.



### 4. INSTALL NO. 1 HEADLIGHT BULB

(a) Turn the bulb in the direction indicated by the arrow to install it.

SS2 SS2

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000001H5K00ZX
Title: LIGHTING (EXT): HEADLIGHT ASSEMBLY: INSTALLATION (2010 4Runner)		

#### HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

#### 1. INSTALL HEADLIGHT ASSEMBLY LH

- (a) Connect the connectors and install the headlight.
- (b) Attach the clamp.
- (c) Install the 2 screws and bolt.

Torque: 5.5 N·m (56 kgf·cm, 49in·lbf)

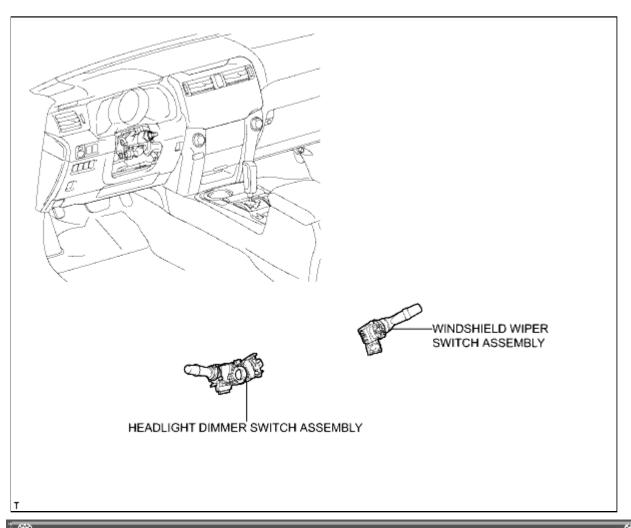
- 2. INSTALL FRONT BUMPER BAR REINFORCEMENT LH
- 3. INSTALL FRONT BUMPER COVER
- 4. VEHICLE PREPARATION FOR HEADLIGHT AIMING ADJUSTMENT
- 5. PREPARATION FOR HEADLIGHT AIMING (Using a headlight aim test machine)
- 6. INSPECT HEADLIGHT AIMING
- 7. ADJUST HEADLIGHT AIMING NFO
- 8. VEHICLE PREPARATION FOR FOG LIGHT AIMING ADJUSTMENT
- 9. PREPARATION FOR FOG LIGHT AIMING
- 10. INSPECT FOG LIGHT AIMING
- 11. ADJUST FOG LIGHT AIMING **NFO**

(B)

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Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJK004X
Title: LIGHTING (EXT): HEADLIGHT DIMMER SWITCH: COMPONENTS (2010 4Runner)		

# **ILLUSTRATION**



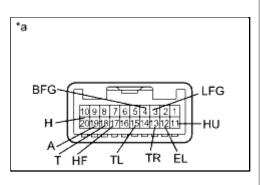
Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJJ004X
Title: LIGHTING (EXT): HEADLIGHT DIMMER SWITCH: INSPECTION (2010 4Runner)		

### **INSPECTION**

#### 1. INSPECT HEADLIGHT DIMMER SWITCH ASSEMBLY

- (a) Inspect the light control switch.
  - (1) Measure the resistance according to the value(s) in the table below.

#### Standard Resistance:



TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
20 (H) - 12 (EL)		
18 (T) - 12 (EL)	Light control switch off	10 kΩ or higher
19 (A) - 12 (EL)		
19 (A) - 12 (EL)	Light control switch auto	Below 1 Ω
18 (T) - 12 (EL)	Light control switch tail	Below 1 Ω
18 (T) - 12 (EL)	Light control switch	Below 1 Ω
20 (H) - 12 (EL)	head	DEIOM I 77

- (b) Inspect the headlight dimmer switch.
  - (1) Measure the resistance according to the value(s) in the table below.

#### Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
11 (HU) - 12 (EL)	Llandlight dimmor quitab flach	Polou 1 O
17 (HF) - 12 (EL)	Headlight dimmer switch flash	Below 1 Ω
11 (HU) - 12 (EL)	Headlight dimmer switch hi beam	Below 1 Ω

#### HINT:

Perform the flash and high beam inspection with the light control switch set to head.

- (c) Inspect the turn signal switch.
  - (1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
13 (TR) - 12 (EL)	Turn signal switch right turn	Below 1 Ω
13 (TR) - 12 (EL)	Turn signal switch right lane change	Below 1 Ω
13 (TR) - 12 (EL)	Turn signal switch neutral	$10~\mathrm{k}\Omega$ or higher
15 (TL) - 12 (EL)	i um signai switch neutrai	10 ksz of fligher
15 (TL) - 12 (EL)	Turn signal switch left lane change	Below 1 Ω
15 (TL) - 12 (EL)	Turn signal switch left turn	Below 1 Ω

- (d) Inspect the fog light switch.
  - (1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
4 (BFG) - 3 (LFG)	Fog light switch off	10 kΩ or higher
4 (BFG) - 3 (LFG)	Front fog light switch on	Below 1 Ω

If the result is not as specified, replace the headlight dimmer switch.

#### **Text in Illustration**

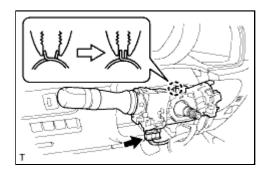
4	Component without harness connected
*a	Component without harness connected (Headlight Dimmer Switch Assembly)

(9)

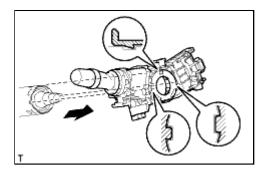
(#) TOYOTA

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJL004X
Title: LIGHTING (EXT): HEADLIGHT DIMMER SWITCH: REMOVAL (2010 4Runner)		

- 1. REMOVE SPIRAL CABLE SUB-ASSEMBLY
  - (a) Remove the spiral cable sub-assembly
- 2. REMOVE WINDSHIELD WIPER SWITCH ASSEMBLY
- 3. REMOVE HEADLIGHT DIMMER SWITCH ASSEMBLY



(a) Disconnect the connector.



(b) While loosening the band clamp as shown in the illustration, detach the claw to remove the headlight dimmer switch.

#### **NOTICE:**

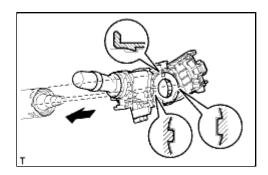
If the claw is pressed forcefully, it will break.

: (20)

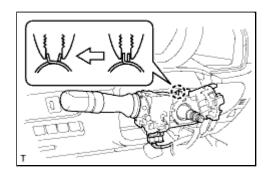
(#) TOYOTA

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJI004X
Title: LIGHTING (EXT): HEADLIGHT DIMMER SWITCH: INSTALLATION (2010 4Runner)		

#### 1. INSTALL HEADLIGHT DIMMER SWITCH ASSEMBLY



(a) Install the headlight dimmer switch to the steering column, making sure that the stopper protrusions and cutout parts align.



(b) While loosening the band clamp, attach the claw to install the headlight dimmer switch.

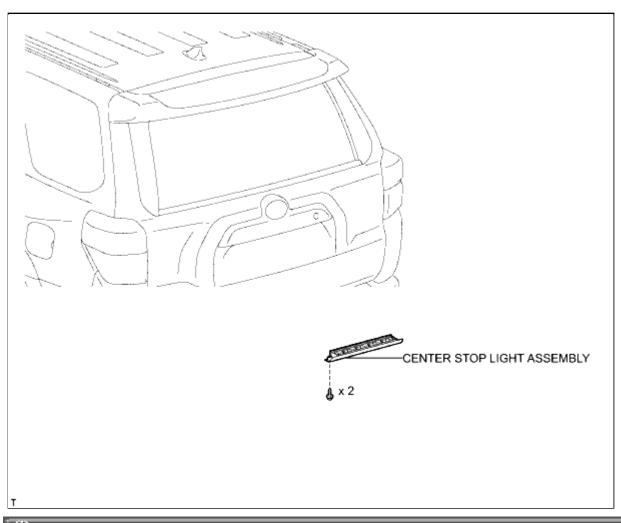
- (c) Connect the connector.
- 2. INSTALL WINDSHIELD WIPER SWITCH ASSEMBLY
- 3. INSTALL SPIRAL CABLE SUB-ASSEMBLY
  - (a) Install the spiral cable sub-assembly

(9)

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Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S80004X
Title: LIGHTING (EXT): HIGH MOUNTED STOP LIGHT ASSEMBLY: COMPONENTS (2010		
4Runner)		

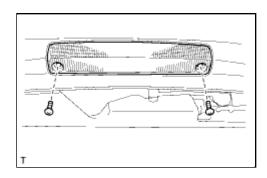
# **ILLUSTRATION**



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Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S8P004X
Title: LIGHTING (EXT): HIGH MOUNTED STOP LIGHT ASSEMBLY: REMOVAL (2010 4Runner)		

### 1. REMOVE CENTER STOP LIGHT ASSEMBLY



(a) Remove the 2 screws and stop light.

(b) Disconnect the connector.





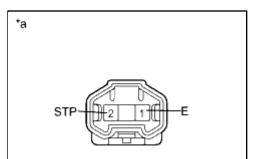
Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S8N004X
Title: LIGHTING (EXT): HIGH MOUNTED STOP LIGHT ASSEMBLY: INSPECTION (2010 4Runner)		

## **INSPECTION**

#### 1. INSPECT CENTER STOP LIGHT ASSEMBLY

(a) Apply battery voltage to the connector and check the LED illumination condition.

OK:



MEASUREMENT CONDITION	SPECIFIED CONDITION
Battery positive $(+) \rightarrow Terminal\ 2$ (STP)  Battery negative $(-) \rightarrow Terminal\ 1$ (E)	LED illuminates

If the result is not as specified, replace the center stop light assembly.

## **Text in Illustration**

\*a Component without harness connected (Center Stop Light Assembly)

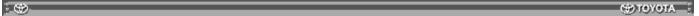
(95)

(W) IOTOIA

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S8M004X
Title: LIGHTING (EXT): HIGH MOUNTED STOP LIGHT ASSEMBLY: INSTALLATION (2010 4Runner)		

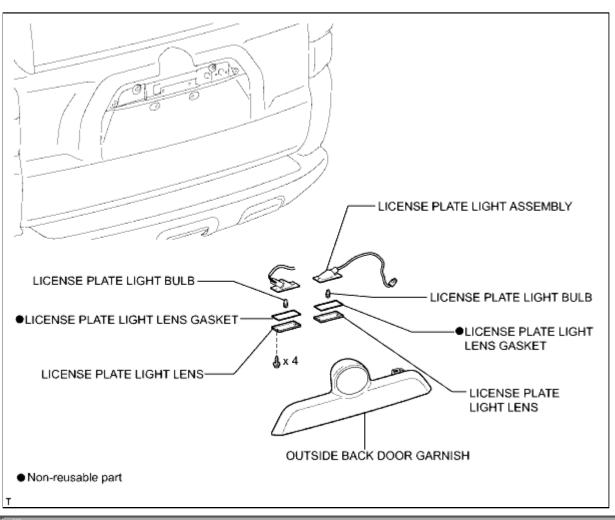
### 1. INSTALL CENTER STOP LIGHT ASSEMBLY

- (a) Connect the connector.
- (b) Install the stop light with the 2 screws.



Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S88005X
Title: LIGHTING (EXT): LICENSE PLATE LIGHT ASSEMBLY: COMPONENTS (2010 4Runner)		

# **ILLUSTRATION**

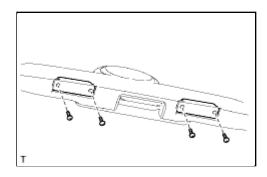


⊕ TOYOTA

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S89005X
Title: LIGHTING (EXT): LICENSE PLATE LIGHT ASSEMBLY: REMOVAL (2010 4Runner)		

#### 1. REMOVE OUTSIDE BACK DOOR GARNISH

#### 2. REMOVE LICENSE PLATE LIGHT ASSEMBLY



(a) Remove the 4 screws and light.

#### 3. REMOVE LICENSE PLATE LIGHT LENS

(a) Remove the lens.

#### 4. REMOVE LICENSE PLATE LIGHT LENS GASKET

(a) Remove the gasket.

#### 5. REMOVE LICENSE PLATE LIGHT BULB

(a) Remove the bulb.

(B)

(#) TOYOTA

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S87005X
Title: LIGHTING (EXT): LICENSE PLATE LIGHT ASSEMBLY: INSTALLATION (2010 4Runner)		

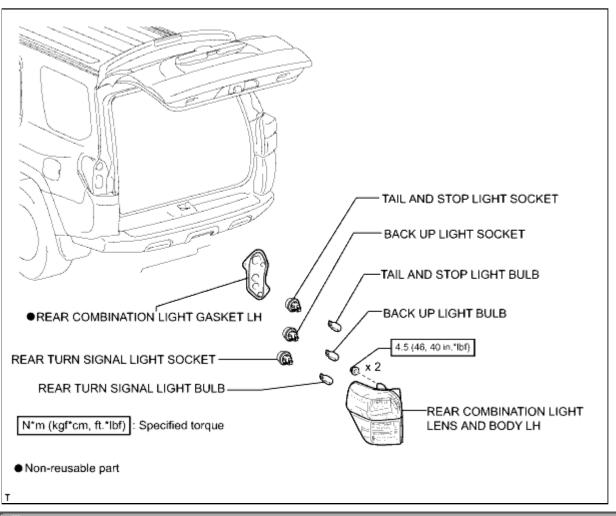
- 1. INSTALL LICENSE PLATE LIGHT BULB
  - (a) Install the bulb.
- 2. INSTALL LICENSE PLATE LIGHT LENS GASKET
  - (a) Install a new gasket.
- 3. INSTALL LICENSE PLATE LIGHT LENS
  - (a) Install the lens.
- 4. INSTALL LICENSE PLATE LIGHT ASSEMBLY
  - (a) Install the light with the 4 screws.
- 5. INSTALL OUTSIDE BACK DOOR GARNISH
  - (a) Install the outside back door garnish lacktriangle .





Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S7T005X
Title: LIGHTING (EXT): REAR COMBINATION LIGHT ASSEMBLY: COMPONENTS (2010 4Runner)		

# **ILLUSTRATION**



(2)

⊕ TOYOTA

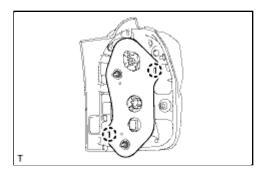
Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S7V005X
Title: LIGHTING (EXT): REAR COMBINATION LIGHT ASSEMBLY: DISASSEMBLY (2010 4Runner)		

### **DISASSEMBLY**

#### **HINT:**

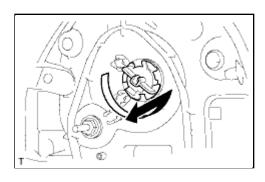
- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

#### 1. REMOVE REAR COMBINATION LIGHT GASKET LH



(a) Detach the 2 claws and remove the gasket.

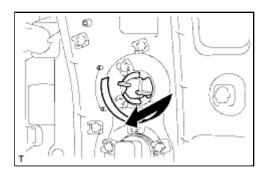
#### 2. REMOVE TAIL AND STOP LIGHT SOCKET



(a) Turn the socket in the direction indicated by the arrow and remove it.

#### 3. REMOVE TAIL AND STOP LIGHT BULB

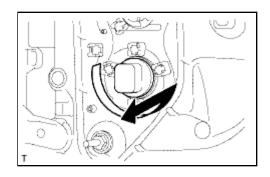
- (a) Remove the bulb.
- 4. REMOVE BACK UP LIGHT SOCKET
  - (a) Turn the socket in the direction indicated by the arrow and remove it.



#### **5. REMOVE BACK UP LIGHT BULB**

(a) Remove the bulb.

#### **6. REMOVE REAR TURN SIGNAL LIGHT SOCKET**



(a) Turn the socket in the direction indicated by the arrow and remove it.

### 7. REMOVE REAR TURN SIGNAL LIGHT BULB

(a) Remove the bulb.

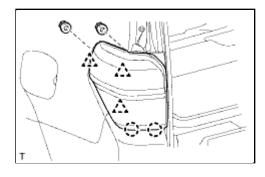


Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S7U00AX
Title: LIGHTING (EXT): REAR COMBINATION LIGHT ASSEMBLY: REMOVAL (2010 4Runner)		

#### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

#### 1. REMOVE REAR COMBINATION LIGHT LENS AND BODY LH



(a) Remove the cover.

- (b) Disconnect the connector.
- (c) Remove the 2 nuts.
- (d) Detach the 3 clips and 2 claws and remove the rear combination light lens and body.



(#) TOYOTA

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S7W005X
Title: LIGHTING (EXT): REAR COMBINATION LIGHT ASSEMBLY: REASSEMBLY (2010 4Runner)		

### **REASSEMBLY**

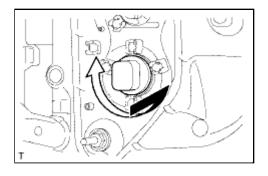
#### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

#### 1. INSTALL REAR TURN SIGNAL LIGHT BULB

(a) Install the bulb.

#### 2. INSTALL REAR TURN SIGNAL LIGHT SOCKET



(a) Turn the socket in the direction indicated by the arrow to install it.

#### 3. INSTALL BACK UP LIGHT BULB

(a) Install the bulb.

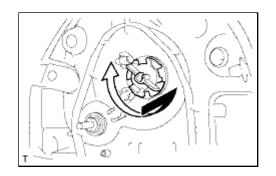
#### 4. INSTALL BACK UP LIGHT SOCKET



(a) Turn the socket in the direction indicated by the arrow to install it.

#### 5. INSTALL TAIL AND STOP LIGHT BULB

- (a) Install the bulb.
- 6. INSTALL TAIL AND STOP LIGHT SOCKET



(a) Turn the socket in the direction indicated by the arrow to install it.

#### 7. INSTALL REAR COMBINATION LIGHT GASKET LH

(a) Attach the 2 claws to install the gasket.



Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003S7R00AX
Title: LIGHTING (EXT): REAR COMBINATION LIGHT ASSEMBLY: INSTALLATION (2010 4Runner)		

#### HINT:

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

#### 1. INSTALL REAR COMBINATION LIGHT LENS AND BODY LH

- (a) Attach the 3 clips and 2 claws to install the rear combination light lens and body.
- (b) Install the 2 nuts.

Torque: 4.5 N·m (46 kgf·cm, 40in·lbf)

- (c) Connect the connector.
- (d) Install the cover.

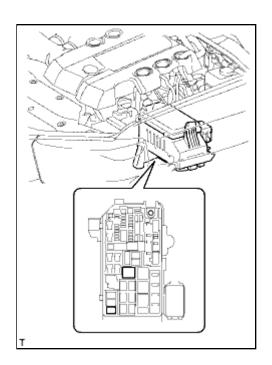




Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003SBL004X
Title: LIGHTING (EXT): RELAY: ON-VEHICLE INSPECTION (2010 4Runner)		

# **ON-VEHICLE INSPECTION**

#### 1. REMOVE HEADLIGHT RELAY

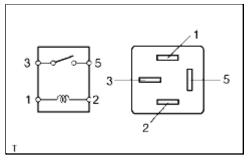


(a) Remove the headlight relay from the engine room relay box.

#### 2. INSPECT HEADLIGHT RELAY

(a) Measure the resistance according to the value(s) in the table below.

#### Standard Resistance:



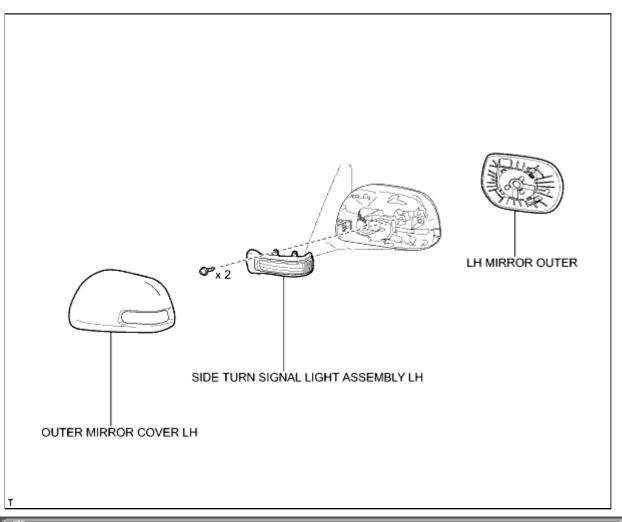
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
3 - 5	Battery voltage not applied to terminals 1 and 2	10 kΩ or higher
	Battery voltage applied to terminals 1 and 2	Below 1 Ω

If the result is not as specified, replace the headlight relay.

#### 3. INSTALL HEADLIGHT RELAY

Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000002DYY00FX
Title: LIGHTING (EXT): SIDE TURN SIGNAL LIGHT ASSEMBLY: COMPONENTS (2010 4Runner)		

# **ILLUSTRATION**



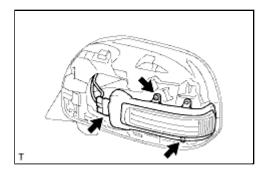
9

**ЭТОУОТА** 

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000002DYZ00IX
Title: LIGHTING (EXT): SIDE TURN SIGNAL LIGHT ASSEMBLY: REMOVAL (2010 4Runner)		

#### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.
- 1. REMOVE OUTER REAR VIEW MIRROR ASSEMBLY LH
  - (a) Remove the outer rear view mirror assembly LH
- 2. REMOVE MIRROR OUTER LH
- 3. REMOVE OUTER MIRROR COVER LH
- 4. REMOVE SIDE TURN SIGNAL LIGHT ASSEMBLY LH



(a) Remove the 2 screws and light.

(b) Disconnect the connector.



ATOYOTA

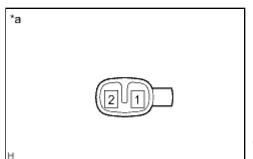
Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM00000460I000X
Title: LIGHTING (EXT): SIDE TURN SIGNAL LIGHT ASSEMBLY: INSPECTION (2010 4Runner)		

## **INSPECTION**

#### 1. REMOVE SIDE TURN SIGNAL LIGHT ASSEMBLY LH

(a) Apply battery voltage to the connector and check the LED illumination condition.

OK:



MEASUREMENT CONDITION	SPECIFIED CONDITION
Battery positive $(+) \rightarrow Terminal 1$ Battery negative $(-) \rightarrow Terminal 2$	I FD IIIIIMINAIAS

If the result is not as specified, replace the side turn signal light assembly.

### **Text in Illustration**

\*a Component without harness connected
(Side Turn Signal Light Assembly LH)

(2)

(#) TOYOTA

Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	Doc ID: RM000002DYX00IX
Title: LIGHTING (EXT): SIDE TURN SIGNAL LIGHT ASSEMBLY: INSTALLATION (2010 4Runner)		

#### **HINT:**

- Use the same procedure for the RH and LH sides.
- The procedure listed below is for the LH side.

#### 1. INSTALL SIDE TURN SIGNAL LIGHT ASSEMBLY LH

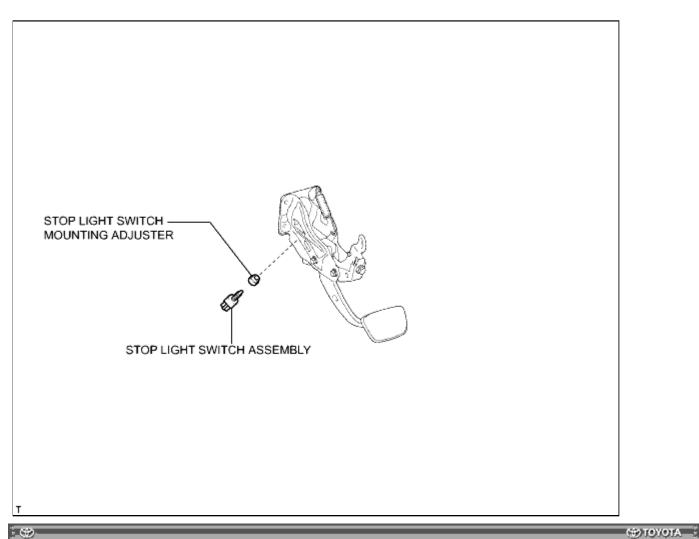
- (a) Connect the connector.
- (b) Install the light with the 2 screws.
- 2. INSTALL OUTER MIRROR COVER LH
- 3. INSTALL MIRROR OUTER LH
- 4. INSTALL OUTER REAR VIEW MIRROR ASSEMBLY LH

(<del>(2)</del>

(#) TOYOTA

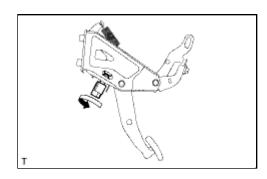
Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJS004X
Title: LIGHTING (EXT): STOP LIGHT SWITCH: COMPONENTS (2010 4Runner)		

# **ILLUSTRATION**



Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJT004X
Title: LIGHTING (EXT): STOP LIGHT SWITCH: REMOVAL (2010 4Runner)		

#### 1. REMOVE STOP LIGHT SWITCH ASSEMBLY



(a) Disconnect the connector.

(b) Turn the stop light switch counterclockwise and remove the stop light switch.

#### 2. REMOVE STOP LIGHT SWITCH MOUNTING ADJUSTER

(a) Remove the stop light switch mounting adjuster.





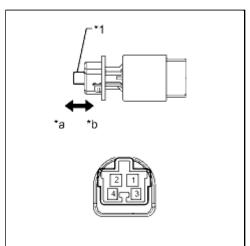
Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJR004X
Title: LIGHTING (EXT): STOP LIGHT SWITCH: INSPECTION (2010 4Runner)		

# **INSPECTION**

#### 1. INSPECT STOP LIGHT SWITCH ASSEMBLY

(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 2	Pin pushed	10 kΩ higher
1 - 2	Pin not pushed	Below 8.3 Ω
3 - 4	Pin pushed	Below 1.6 Ω
	Pin not pushed	10 kΩ higher

If the result is not as specified, replace the stop light switch assembly.

### **Text in Illustration**

*1	Pin
*a	Not Pushed
* b	Pushed

(B)

⊕ TOYOTA

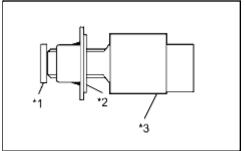
Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QJQ004X
Title: LIGHTING (EXT): STOP LIGHT SWITCH: INSTALLATION (2010 4Runner)		

#### 1. INSTALL STOP LIGHT SWITCH MOUNTING ADJUSTER

(a) Install the stop light switch mounting adjuster to the pedal support.

#### 2. INSTALL STOP LIGHT SWITCH ASSEMBLY

(a) Install the stop light switch to the adjuster so that the switch body slightly touches the brake pedal.



### **Text in Illustration**

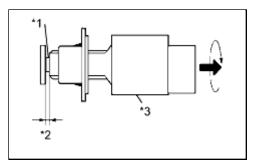
*1	Brake Pedal
*2	Adjuster
*3	Stop Light Switch

#### **NOTICE:**

Do not depress the brake pedal.

(b) Rotate the stop light switch counterclockwise so that the clearance is between 1.5 and 2.5 mm (0.0590 to 0.0984 in.) as shown in the illustration.

Torque: 1.5 N·m (15 kgf·cm, 13in·lbf)



### **Text in Illustration**

*1	Shaft
*2	1.5 to 2.5 mm
*3	Stop Light Switch

#### **NOTICE:**

Do not depress the brake pedal.

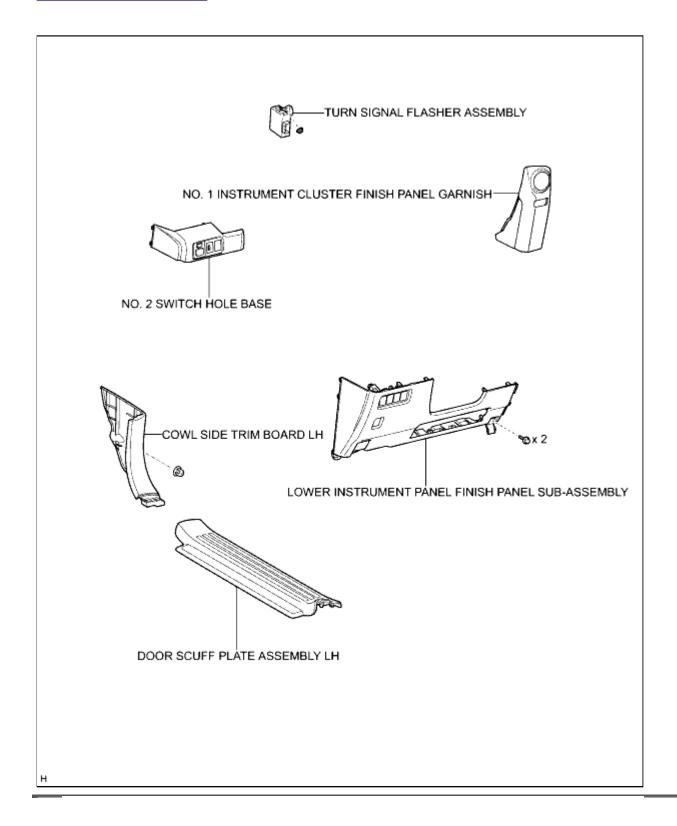
(c) Check the stop light switch clearance.

Stop light switch clearance:

- 1.5 to 2.5 mm (0.0590 to 0.0984 in.)
- (d) Connect the connector to the stop light switch.

Last Modified: 5-10-2010	6.4 K	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QVG004X
Title: LIGHTING (EXT): TURN SIGNAL FLASHER ASSEMBLY: COMPONENTS (2010 4Runner)		

# **ILLUSTRATION**

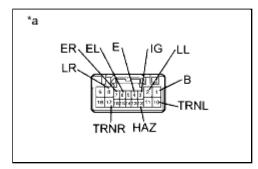


Last Modified: 5-10-2010	6.4 G	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QVF004X
Title: LIGHTING (EXT): TURN SIGNAL FLASHER ASSEMBLY: ON-VEHICLE INSPECTION (2010		

4Runner)

# **ON-VEHICLE INSPECTION**

#### 1. CHECK TURN SIGNAL FLASHER ASSEMBLY



(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 (E) - Body ground	Always	Below 1 Ω

(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
	Hazard warning switch off	Below 1 V
8 (LR) - 4 (E)	Hazard warning switch on	Alternating between 11 to 14 V and below 1 V (60 to 120 times per minute)
	Hazard warning switch off	Below 1 V
2 (LL) - 4 (E)	Hazard warning switch on	Alternating between 11 to 14 V and below 1 V (60 to 120 times per minute)
	Hazard warning switch off	Below 1 V
17 (TRBR) - 4 (E)	Hazard warning switch on	Alternating between 11 to 14 V and below 1 V (60 to 120 times per minute)
	Hazard warning switch off	Below 1 V
10 (TRBL) - 4 (E)	Hazard warning switch on	Alternating between 11 to 14 V and below 1 V (60 to 120 times per minute)
1 (B) - 4 (E)	Always	11 to 14 V
3 (IG) - 4 (E)	Ignition switch O N	11 to 14 V

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	
6 (EL) - 4 (E)	Ignition switch ON Headlight dimmer switch (turn left) off	9 V or higher	
0 (LL) - 4 (L)	Ignition switch ON Headlight dimmer switch (turn left) on	Below 1 V	
7 (50) 4 (5)	Ignition switch ON Headlight dimmer switch (turn right) off	9 V or higher	
7 (ER) - 4 (E)	Ignition switch ON Headlight dimmer switch (turn right) on	Below 1 V	
12 (447) 4 (5)	Hazard warning switch off	9 V or higher	
12 (HAZ) - 4 (E)	Hazard warning switch on	Below 1 V	

If the result is not as specified, there may be a malfunction in the turn signal flasher.

### Text in Illustration

		Front view of wire harness connector	
* 5	a	(to Turn Signal Flasher Assembly)	

(2)



Last Modified: 5-10-2010	6.4 A	From: 200908
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QVH004X
Title: LIGHTING (EXT): TURN SIGNAL FLASHER ASSEMBLY: REMOVAL (2010 4Runner)		

- 1. REMOVE DOOR SCUFF PLATE ASSEMBLY LH
- 2. REMOVE COWL SIDE TRIM BOARD LH
- 3. REMOVE NO. 2 SWITCH HOLE BASE
- 4. REMOVE NO. 1 INSTRUMENT CLUSTER FINISH PANEL GARNISH
- 5. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY
- 6. REMOVE TURN SIGNAL FLASHER ASSEMBLY



(a) Disconnect the connector.

(b) Remove the nut and flasher.



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Last Modified: 5-10-2010	6.4 A	From: 200908	
Model Year: 2010	Model: 4Runner	<b>Doc ID:</b> RM000003QVE004X	
Title: LIGHTING (EXT): TURN SIGNAL FLASHER ASSEMBLY: INSTALLATION (2010 4Runner)			

- 1. INSTALL TURN SIGNAL FLASHER ASSEMBLY
  - (a) Install the flasher with the nut.
  - (b) Connect the connector.
- 2. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL SUB-ASSEMBLY
- 3. INSTALL NO. 1 INSTRUMENT CLUSTER FINISH PANEL GARNISH
- 4. INSTALL NO. 2 SWITCH HOLE BASE
- 5. INSTALL COWL SIDE TRIM BOARD LH
- 6. INSTALL DOOR SCUFF PLATE ASSEMBLY LH



