

Headlamp Durability Enhancement

Service Category Vehicle Exterior

Section Lighting (ext)

Market USA

Lexus Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2010 - 2012	HS250H	

REVISION NOTICE

February 21, 2018 Rev1:

- The Required Tools & Equipment and Repair Procedure sections have been updated. Any previous printed versions of this bulletin should be discarded.

Introduction

Some 2010 – 2012 model year HS 250h vehicles may exhibit a condition where a halogen low beam headlamp bulb lifetime is shorter than customer expectation. A modified wiring harness is available to address this condition.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EL1709	Install No. 4 Wire Harness With Headlamp Alignment (One Side)	1.7	90981-13075	72	71
EL1709A	Other Side	1.2			

APPLICABLE WARRANTY

- This repair is covered under the Lexus Basic Warranty. This warranty is in effect for 48 months or 50,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Headlamp Durability Enhancement

Parts Information

PART NUMBER	PART NAME	QTY
04007-52147	Repair Kit, Headlamp Bulb	1

Headlamp Bulb Repair Kit Parts

PART NUMBER	PART NAME	QTY
90981-13075	Bulb	2
82114-47010	Engine Wire No. 4	2
82999-52010	Sleeve Tube	2
82999-30010	Heat Shrink Tube	2

Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Plastic Pry Tool Kit*	00002-06020-02	1
Lance Canceling Tool M	09991-00510	1
Wire Crimper	09042-2C100	1

* Essential SST.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

REQUIRED TOOLS & MATERIAL	QTY
Nylon Ties	10
Measuring Tool (Metric Ruler)	1
Heat Gun	1

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Repair Procedure

1. Replace the headlamp bulbs.
2. AFTER confirming the headlamps work, verify headlight aim is visually correct and that there are no signs of damage or alterations to wiring or the headlamps.

NOTE

If a NEW bulb has been installed and the bulb is still inoperative, this bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

3. Remove the front bumper cover assembly.

Refer to TIS, applicable model and model year Repair Manual:

- [2010](#) / [2011](#) / [2012](#) HS 250h:

Vehicle Exterior – Exterior Panels/Trim – “Exterior Panels/Trim: Front Bumper: Removal”

NOTE

If the vehicle is equipped with headlight cleaners, be sure to drain the washer fluid system BEFORE the bumper cover is completely removed.

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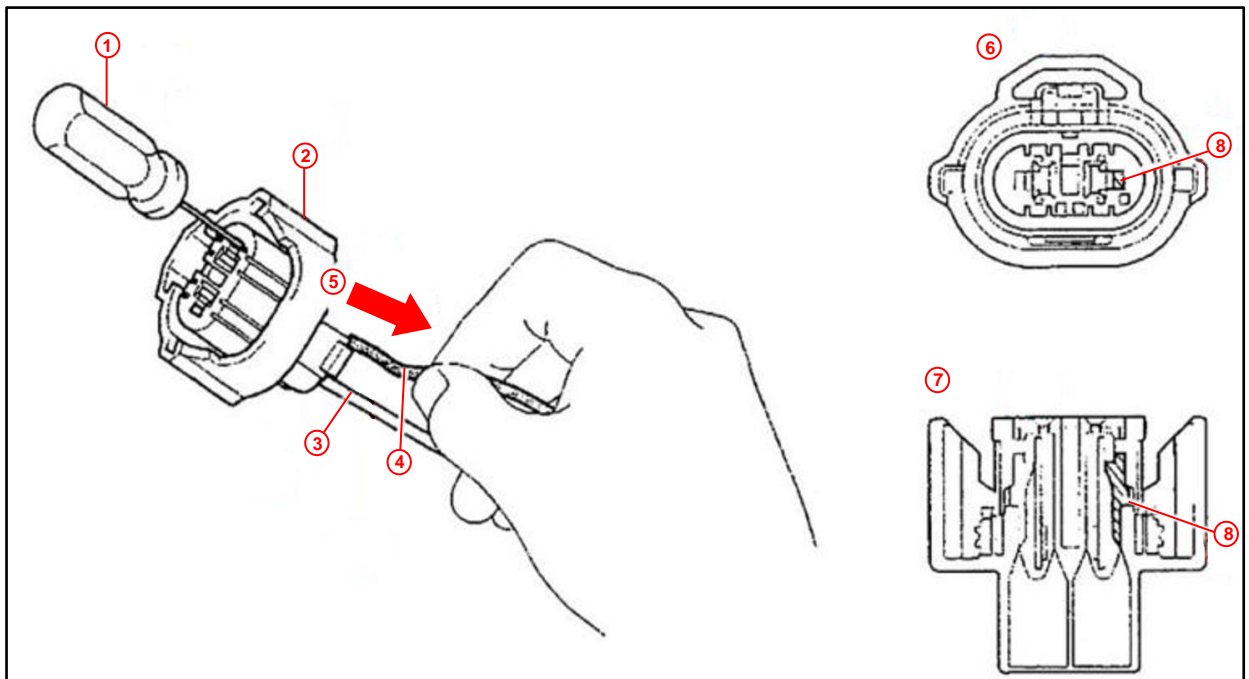
Repair Procedure (continued)

- Remove the affected headlamp assembly.

Refer to TIS, applicable model and model year Repair Manual:

- [2010](#) / [2011](#) / [2012](#) HS 250h:
Vehicle Exterior – Lighting (Ext) – “Lighting (Ext): Headlight Assembly (except LED Headlight): Removal”

Figure 1.



1	Lance Canceling Tool M
2	Headlamp Bulb No. 2 Connector
3	Engine ROOM Main Wire Harness (White-Black)
4	Engine ROOM Main Wire Harness*

5	Remove Engine ROOM Main Wire Harness From Connector*
6	Front View
7	Cross Section
8	Lock

* Driver side: 2010 model year (violet), 2011 –2012 model year (brown)
 Passenger side: 2010 – 2012 model year (black)

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Repair Procedure (continued)

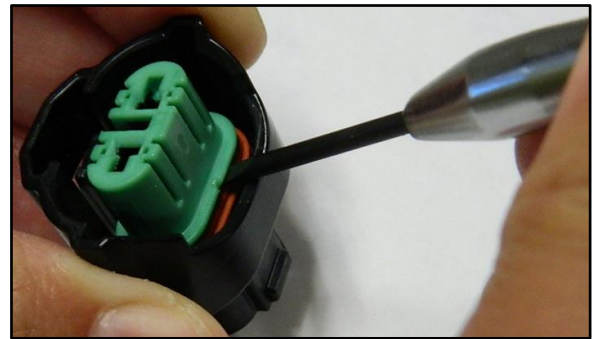
5. Modify the existing headlamp harness and install the engine wire No. 4 harness.

NOTE

This wiring harness extends the factory headlamp wiring harness and will be placed between the headlight socket and existing headlamp wiring harness. The harness will be cut with a special crimping tool to make an adequate crimp. It is important to use the suggested crimp tool and follow the instructions below to ensure a proper crimp.

- A. Remove the green cap from the headlamp connector by carefully using a small screwdriver or pick to detach the cap as shown.

Figure 2.



- B. AFTER the cap is removed, remove terminal 2* from the low beam headlight connector wire using lance canceling tool M.

SST: P/N 09991-00510

- (1) AFTER the terminal cap is removed, gently insert lance canceling tool M into the connector between the terminal and the terminal lock (see Figures 1 and 3), then gently push the terminal lock to the outward side of the connector. Do NOT overstress the lock or it will NOT properly hold the terminal when reassembled.

Figure 3.



NOTICE

When inserting lance canceling tool M, pry carefully outward just enough to remove the terminal from the wire side. Excessive pressure may damage the lock or bend the tool.

- (2) As the lock is held outward, gently pull on the wire* from the back of the connector to remove it.

1	TerminalLock
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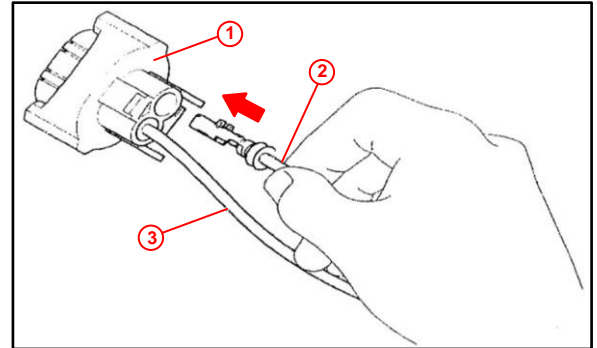
*Driver side: 2010 model year (violet), 2011–2012 model year (brown)
 Passenger side: 2010–2012 model year (black)

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Repair Procedure (continued)

- C. Insert the terminal of engine wire No. 4 (white-black) in the headlamp bulb No. 2 connector.
- D. Cut the wire* previously removed from the headlamp bulb No. 2 connector near the terminal.

Figure 4.



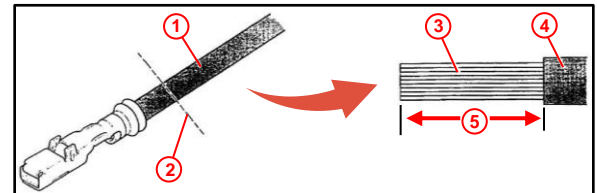
1	Headlamp Bulb No. 2 Connector (Low Beam)
2	Insert Engine Wire No. 4 in Terminal (White-Black)
3	Engine ROOM Main Wire Harness (White-Black)

- E. Remove the wire outer coat insulation 10 mm from the edge.

NOTE

Measure the length of the wire carefully to ensure the wire fits properly.

Figure 5.



1	Engine ROOM Main Wire Harness*
2	Cut Here
3	Strip Off 10 mm of Insulation
4	Wire Insulation Coat
5	10 mm

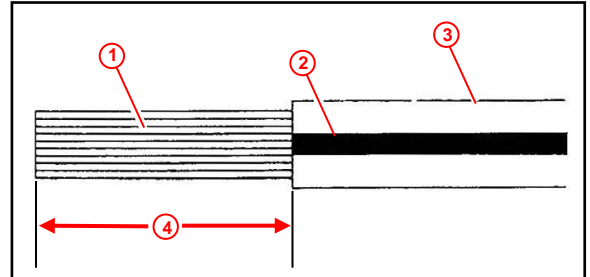
*Driver side: 2010 model year (violet), 2011–2012 model year (brown)
 Passenger side: 2010 – 2012 model year (black)

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Repair Procedure (continued)

- F. Remove 10 mm of the wire outer coat insulation from engine wire No. 4 (white-black wire).

Figure 6.



1	Strip Off 10 mm of Insulation
2	Wire Insulation Coat
3	Engine ROOM Wire No. 4
4	10 mm

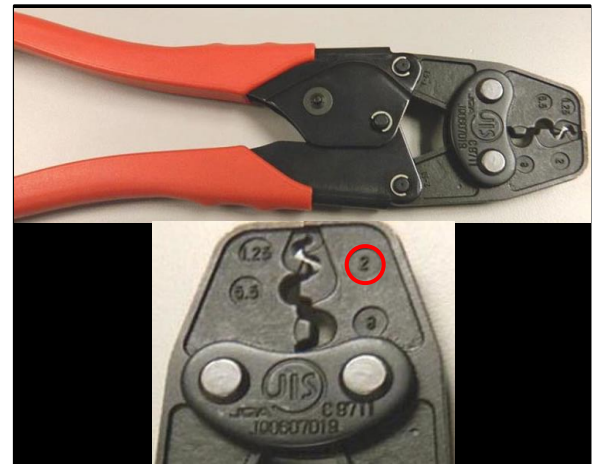
- G. Insert a section of heat shrink tubing (P/N 82999-30010) over the engine wire No. 4.
- H. Insert the stripped, bare wires into the sleeve tube (P/N 82999-52010), ensuring the wires overlap in the center of the crimp.
- I. Using the wire crimper, apply a 2 crimp to the center of the sleeve tube.

SST: P/N 09042-2C100

NOTE

The wire crimper tool handles **MUST** be fully depressed for them to release. Verify proper alignment **BEFORE** applying pressure to the crimper handles.

Figure 7.

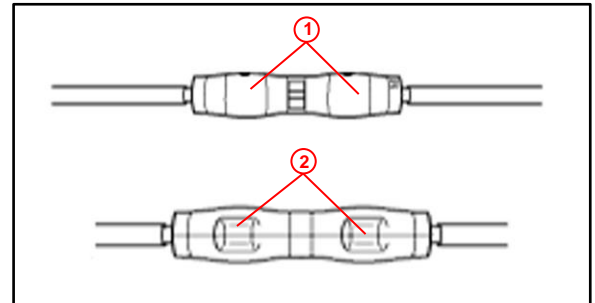


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Repair Procedure (continued)

- J. Apply one additional crimp on both sides of the center crimp as shown.

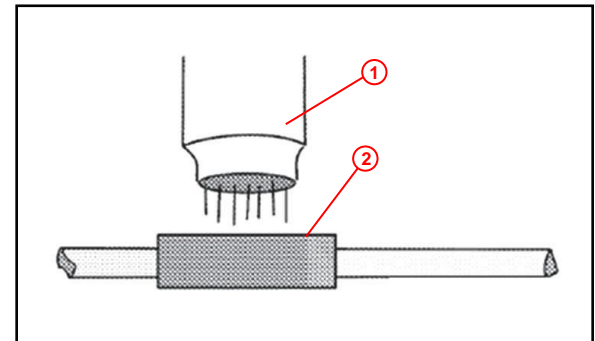
Figure 8.



1	Apply a 2 Crimp Here
2	Crimped Sleeve Tube

- K. Slide the heat shrink tubing over the crimp and apply sufficient heat with a heat gun to close the heat shrink around the wire insulation.

Figure 9.



1	Heat Gun
2	Shrink Tube

- L. Insert the headlamp connector back into the headlamp socket.
 - M. Test for normal high and low beam headlamp operation with headlamp temporarily connected to the wiring harness.
6. Reinstall the headlamp assembly.
Refer to TIS, applicable model and model year Repair Manual:
- [2010](#) / [2011](#) / [2012](#) HS 250h:
Vehicle Exterior – Lighting (Ext) – “Lighting (Ext): Headlight Assembly (except LED Headlight): Installation”

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Repair Procedure (continued)

7. Install the engine wire No. 4 wire harness on the left or right side. Make sure to attach nylon ties less than 100 mm apart.

NOTE

- Each nylon tie should be located no more than 100 mm from the next one.
- There should be no free play between the factory harness and the engine wire No. 4 harness loom.
- The ties should face outside the vehicle.
- Make sure to trim the ties AFTER application.

A. Driver Side Installation:

- (1) Install the connector from the engine wire No. 4 harness connector into the headlamp assembly.
- (2) Route the No. 4 harness by following the contour of the current harness. (Test fit routing as necessary to ensure fit.)
- (3) Apply nylon ties less than 100 mm from each other, facing outward.

NOTE

Five tie wraps are needed for the driver side.

- (4) Trim the nylon ties AFTER installation.

B. Passenger Side Installation:

- (1) Plug the engine wire No. 4 harness connector into the headlamp assembly.
- (2) Route the No. 4 harness by following the contour of the current harness. (Test fit routing as necessary to ensure fit.)
- (3) Apply the nylon ties less than 100 mm from each other, facing outward.

NOTE

Five tie wraps are needed for the passenger side.

- (4) Trim the nylon ties AFTER installation.

Figure 10. Nylon Ties Less Than 100 mm Apart

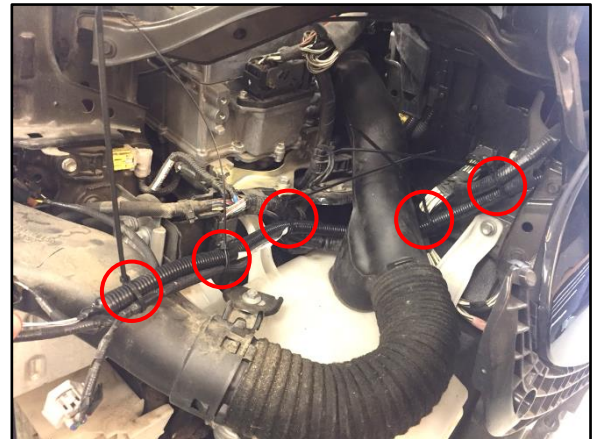
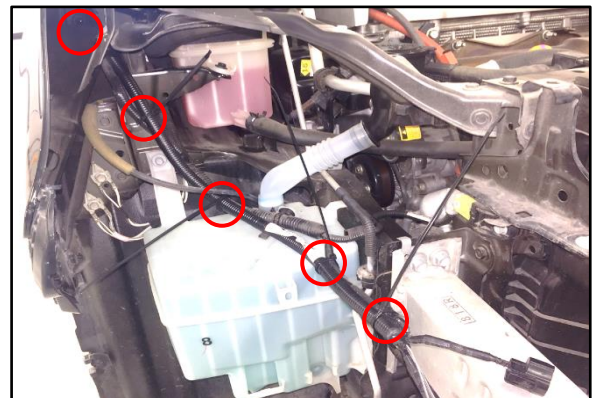


Figure 11. Nylon Ties Less Than 100 mm Apart



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Repair Procedure (continued)

8. Reinstall the bumper cover.

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- [2010](#) / [2011](#) / [2012](#) HS 250h:

Vehicle Exterior – Exterior Panels/Trim – “Exterior Panels/Trim: Front Bumper: Installation”

9. Adjust the headlamps.

Refer to TIS, applicable model and model year Repair Manual:

- [2010](#) / [2011](#) / [2012](#) HS 250h:

Vehicle Exterior – Lighting (Ext) – “Lighting (Ext): Headlight Assembly (except LED Headlight): Adjustment”

10. Verify normal operation of ALL affected systems.