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Coding Information

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Title: LT Truck Headlight Harness Inspection and Repair

Applies To: All LTs built until 4/11/2022

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

03/07/2023 - Initial Article Release

DESCRIPTION

Certain International® LT® Series trucks may have headlight issues due to headlight harness damage.

This procedure will guide the user to perform an inspection, complete any wire repair if needed, and installing electrical harness tape (abrasive tape) for additional protection to the wiring harness.

DTCs

Note: These fault codes may be present with wiring issues but are not guaranteed to set when the symptoms listed below are present.

DTC/Light	Description
33-2378-5	Park Lights Undercurrent
33-2378-6	Park Lights Overcurrent
33-2368-5	Left Front Turn Lamp Undercurrent
33-2368-6	Left Front Turn Lamp Overcurrent
33-2370-5	Right Front Turn Lamp Undercurrent
33-2370-6	Right Front Turn Lamp Overcurrent
33-2653-5	Left Low Beam Under Current
33-2653-6	Left Low Beam Under Current
33-2655-5	Right Low Beam Open Circuit
33-2655-6	Right Low Beam Short To Ground
33-4011-5	Left High Beam Open Circuit
33-4011-6	Left High Beam Short To Ground

33-4012-5	Right High Beam Open Circuit
33-4012-6	Right High Beam Short To Ground
33-520693-5	Left High Beam Open Circuit
33-520693-6	Left High Beam Short To Ground
33-520694-5	Right High Beam Open Circuit
33-520964-6	Right High Beam Short To Ground

Symptoms

- Left High Beam Does Not Illuminate
- Right High Beam Does Not Illuminate
- Left Low Beam Does Not Illuminate
- Right Low Beam Does Not Illuminate
- Some or All Marker Lights Do Not Illuminate
- Front Left Turn Signal Does Not Flash
- Front Right Turn Signal Does Not Flash
- Front Left Daytime Running Lights (DRL) Does Not Illuminate
- Front Right Daytime Running Lights (DRL) Does Not Illuminate

SPECIAL TOOLS / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
Diagonal Cutting Pliers	Locally Sourced	N/A	N/A
Butt Splice Crimping Tool 20 to 10 AWG	Locally Sourced	If Needed	N/A
Terminal Crimping Tool 14-24 AWG	Locally Sourced	If Needed	N/A
Wire Stripper, 22 to 10 AWG	Locally Sourced	If Needed	N/A
Pistol-Grip Heat Guns for Polyolefin & PVC Shrink Wrap	Locally Sourced	If Needed	N/A
Modular Soldering Iron	Locally Sourced	If Needed	N/A

SERVICE PARTS INFORMATION

Kit Description	Part Number	Qty. Required	Notes
TAPE, ELECTRICAL HARNESS	7096462C1	1	Use approximately 5 feet per side
Nut, Battery Terminal 3/8-inch UNC (One Time Use)	476074C1	1	
SLEEVE, HEAT SHRINK	2644000R1	1	If Needed
22-18 gauge. Butt Splices	TXT126870101	1	Request from Product Support Center – If Needed
Solder (60/40 rosin core)	Locally Sourced	1	If Needed

DIAGNOSTIC STEPS

N/A

REPAIR STEPS



WARNING:

To prevent property damage, personal injury, and / or death, park vehicle on a hard, flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in either direction.



WARNING:

To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.



WARNING:

To prevent property damage, personal injury, and / or death, keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases.



WARNING:

To prevent personal injury and / or death or damage to property, remove the ground cable from the negative terminal of the battery before disconnecting any electrical components. Always connect the ground cable last.

1. Park vehicle on level surface.
2. Shift transmission into Park or Neutral and set parking brake.
3. Turn ignition to Key OFF position.
4. Install wheel chocks.
5. Disconnect and isolate negative battery cable on main vehicle battery. Discard battery terminal nut due to one-time use.
6. Unlatch and open hood.

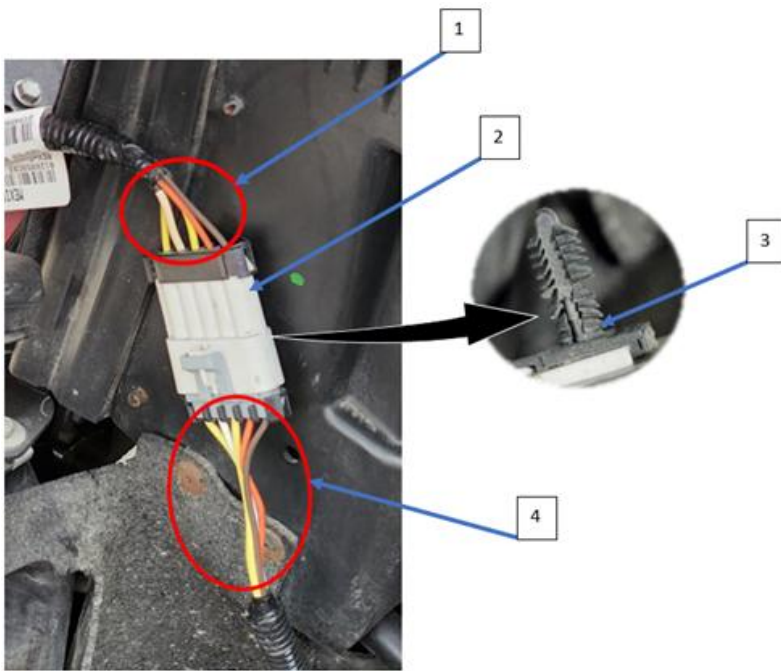


Figure 1. Driver-Side Headlight Assembly Harness

1. Headlight assembly harness
2. Connector 8001F
3. Fir tree
4. Forward chassis Harness

7. Carefully remove fir tree (Figure 1, Item 3) with connector 8001F (Figure 1, Item 2) from radiator shield.

NOTE:

When performing the wire repair (s). ensure to use the correct tools for proper crimping and solder any butt splice connections.

8. Inspect headlight assembly harness (Figure 1, Item 1) and forward chassis harness (Figure 1, Item 4) for any damage to the wires.

- a. Repair any damaged wire(s) using butt splice, solder and heat shrink.

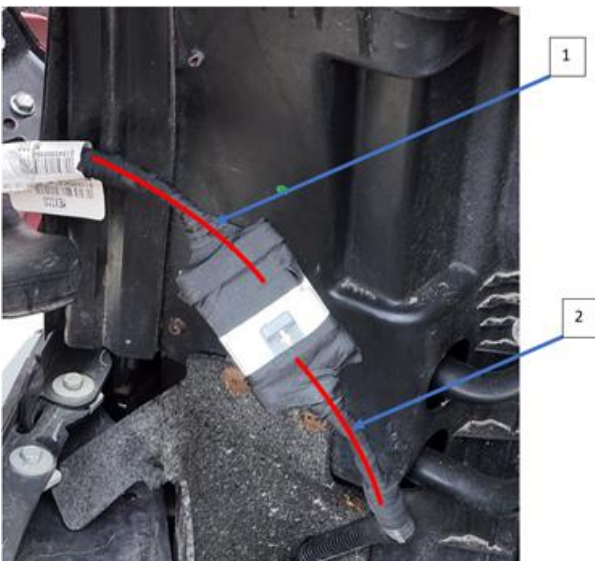


Figure 2. Wiring Harness Taped

1. Headlight assembly harness
2. Chassis forward harness

NOTE:

Use approximately 5 feet of electric harness tape for driver-side headlight assembly harness

9. Add electric harness tape to the 5-pin connector and headlight assembly harness (Figure 2, Item 1).
10. Add electric harness tape to the 5-pin connector and chassis forward harness (Figure 2, Item 2).



Figure 3. Driver-Side Headlight Assembly Harness

1. 5-pin connector

11. Install and position the 5-pin connector (Figure 3, Item 1) as close to horizontal position as possible.

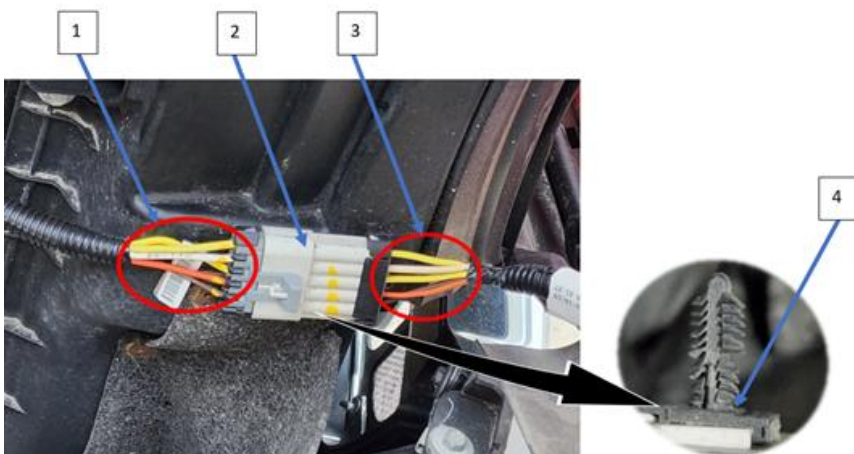


Figure 4. Passenger-Side Headlight Assembly Harness

1. Chassis forward harness
2. Connector 8000F
3. Headlight assembly harness
4. Fir tree

12. Carefully remove fir tree (Figure 4, Item 4) with connector 8000F (Figure 4, Item 2) from radiator shield.

NOTE:

When performing the wire repair (s), ensure to use the correct tools for proper crimping and solder any butt splice connections.

13. Inspect headlight assembly harness (Figure 4, Item 3) and chassis forward harness (Figure 4, Item 1) for any damage to the wires.

a. Repair any damaged wire (s) using butt splice, solder and heat shrink.

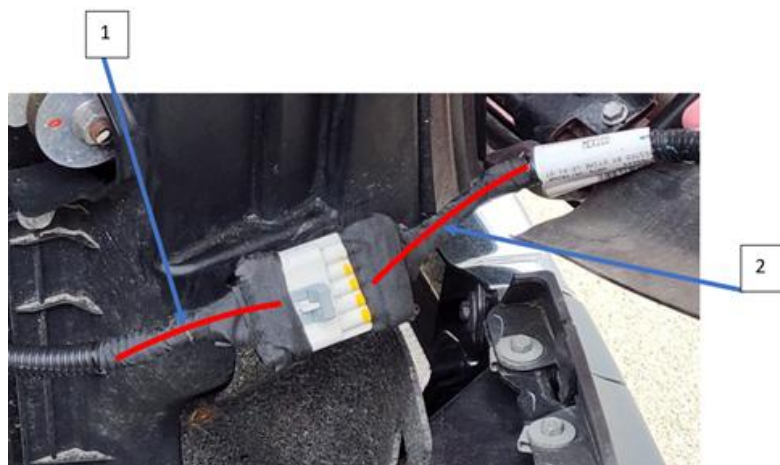


Figure 5. Wiring Harness Taped

1. Chassis forward harness

2. Headlight assembly harness

NOTE:

Use approximately 5 feet of electric harness tape for passenger-side headlight assembly harness

14. Add electric harness tape to the 5-pin connector and headlight assembly harness (Figure 5, Item 2).

15. Add electric harness tape to the 5-pin connector and chassis forward harness (Figure 5, Item 1).



Figure 6. Passenger-Side Headlight Harness.

1. 5-pin connector
16. Install and position the 5-pin connector (Figure 6, Item 1) as close to horizontal position as possible.
17. Close and latch hood.
18. Clean battery terminal with wire brush. Then clean with electrical contact cleaner and dry with shop air.
19. Apply BLUE dielectric grease to battery terminal stud, negative battery cable ring terminal, and threads of new battery stud nut.
20. Using new battery stud nut, reconnect negative battery cable to negative terminal on main vehicle battery and install new battery terminal nut.
21. Using torque wrench, tighten battery stud nut to 12 - 15 lb-ft (16 - 20 N•m)..
22. Remove wheel chocks.

WARRANTY INFORMATION

Repair	SRT	Suggested Hrs
Headlight Wire Harness Inspection and Electric Harness Tape Installation - Both Sides	T-Time	0.4 hr.
Wiring Repair(s), Perform (Per wire)	T-Time	0.2 hr.

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

[Master Service Information Site](#)

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