



Headlamp Assembly

Base Part Number: [13005](#)

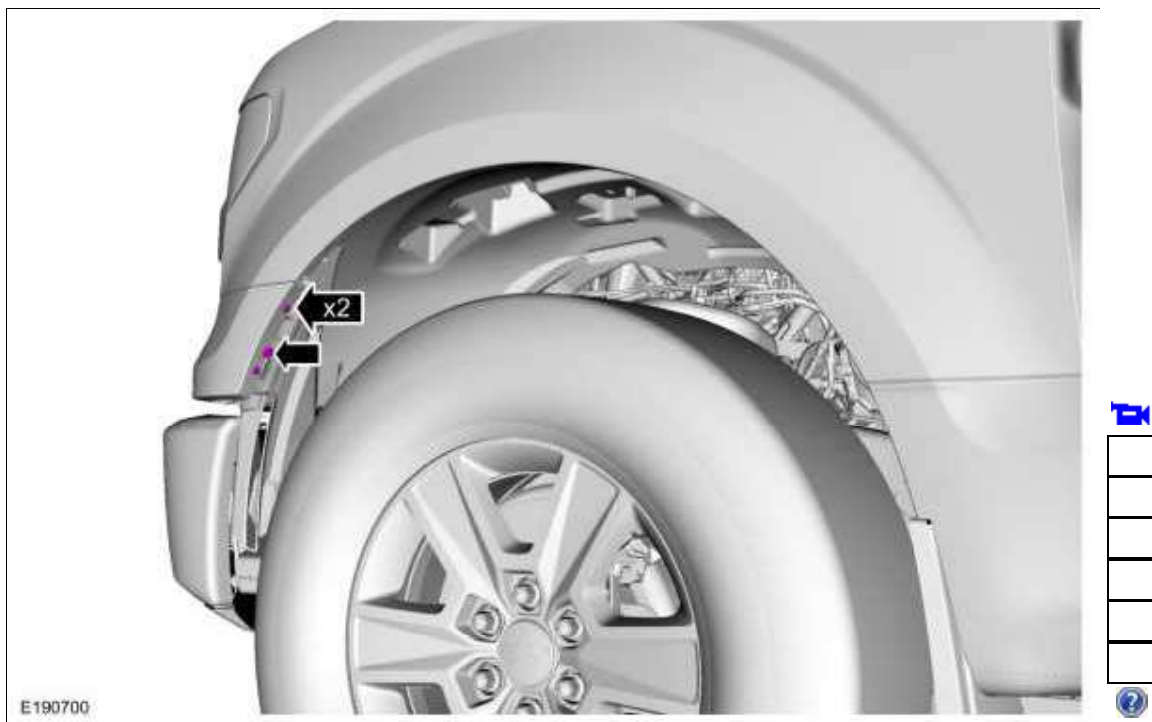
Removal

All vehicles

1. Raise the vehicle on a hoist.
Refer to: [Jacking and Lifting - Overview](#) (100-02 Jacking and Lifting, Description and Operation).

Vehicles without fender mouldings

2. Remove the headlamp trim panel screws and push pin.



Vehicles equipped with fender mouldings

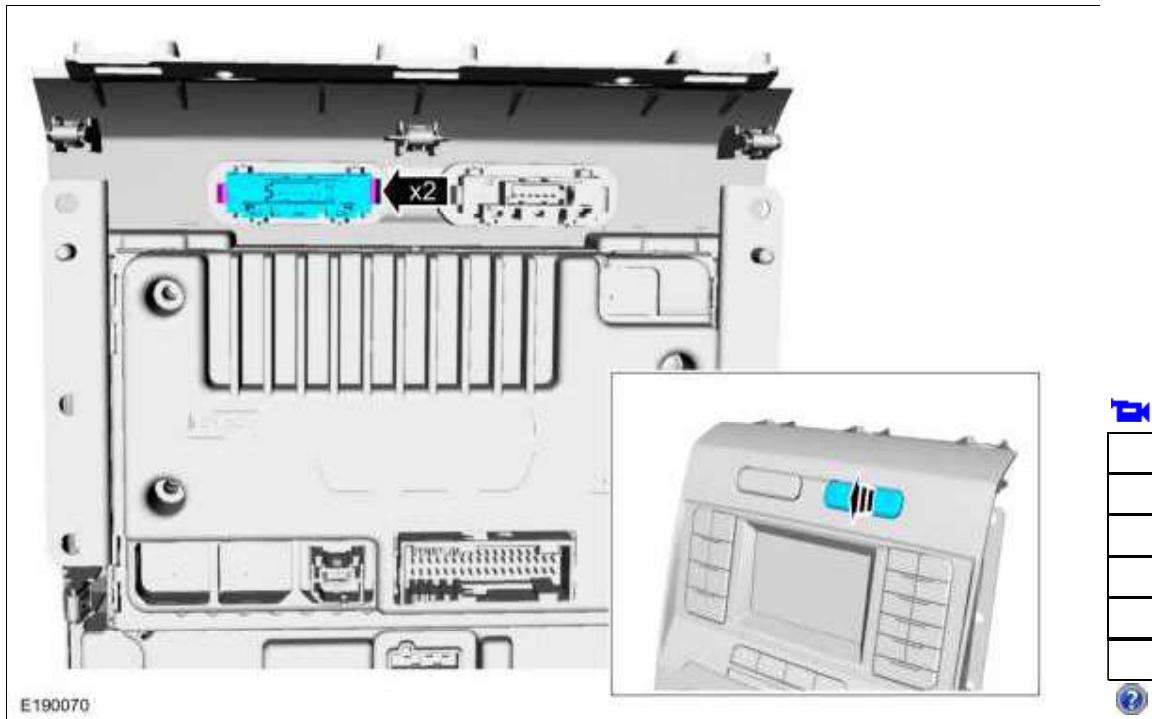
3. Remove the two fender moulding screws.



Hazard Flasher Switch

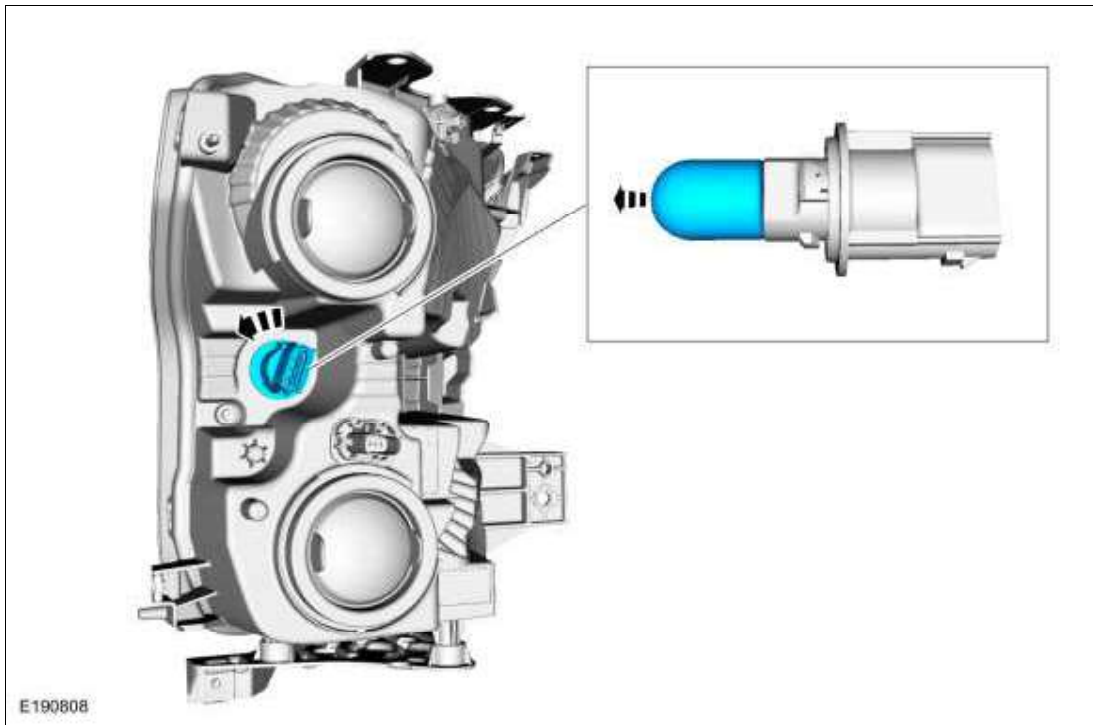
Removal

1. Remove the FCIM.
Refer to: [Front Controls Interface Module \(FCIM\)](#) (415-00C Information and Entertainment System - General Information - Vehicles With: Touchscreen Display, Removal and Installation).
2. Release the tabs and remove the hazard flasher switch.



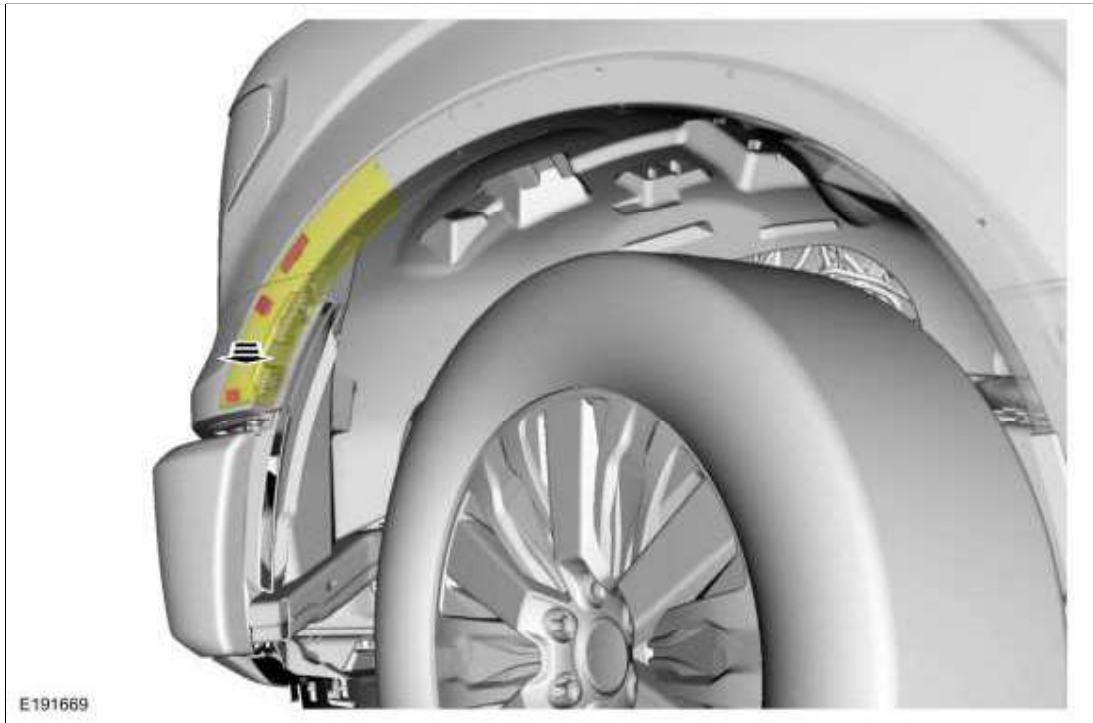
Installation

1. To install, reverse the removal procedure.



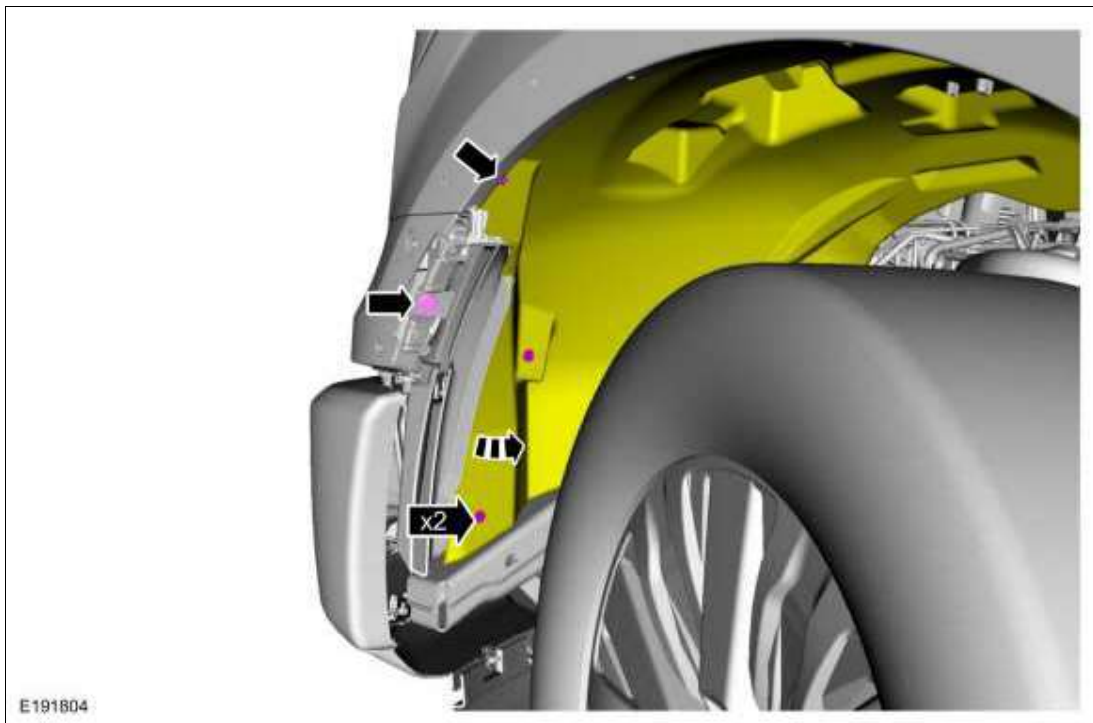
Installation

1. To install, reverse the removal procedure.



Vehicles equipped with halogen headlamps

4. Remove the pushpins and screw, Position the fender liner aside.



5. Remove the bulb holder and remove the turn signal bulb.



Front Turn Signal Lamp Bulb

Base Part Number: [13466](#)

Removal

Vehicles equipped with halogen headlamps

1. Raise the vehicle on a hoist.
Refer to: [Jacking and Lifting - Overview](#) (100-02 Jacking and Lifting, Description and Operation).
2. Remove the headlamp trim panel screws and push pin.



Vehicles equipped with fender mouldings

3. Release the front three fender moulding retainers and position the fender moulding out.

Installation

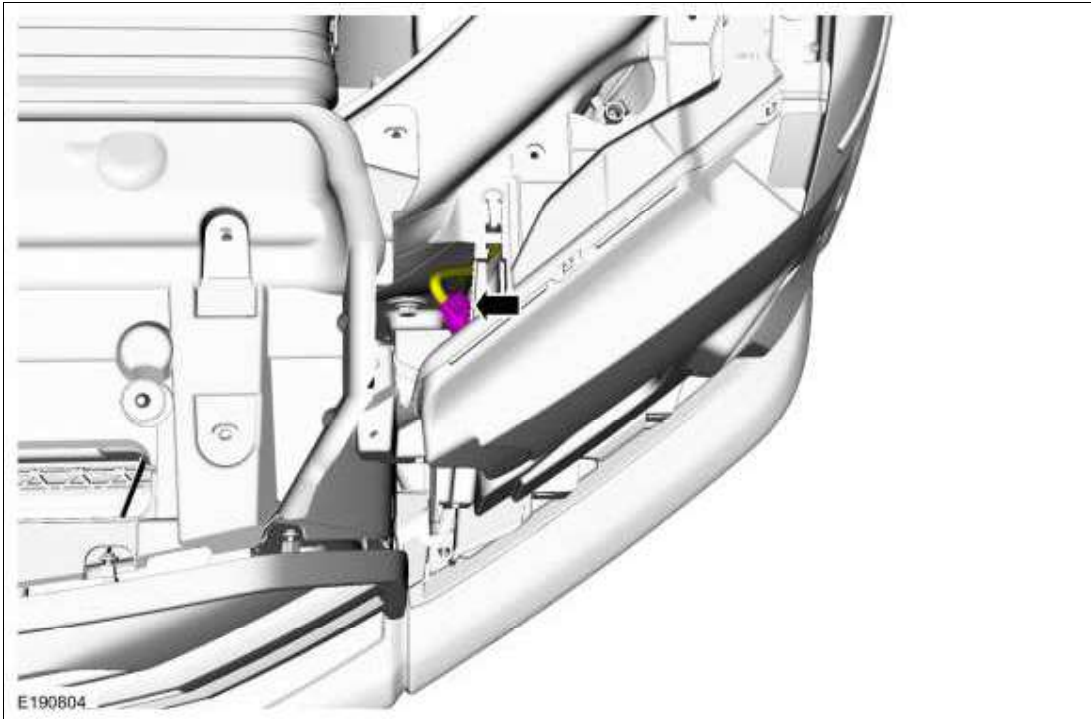
1. To install, reverse the removal procedure.



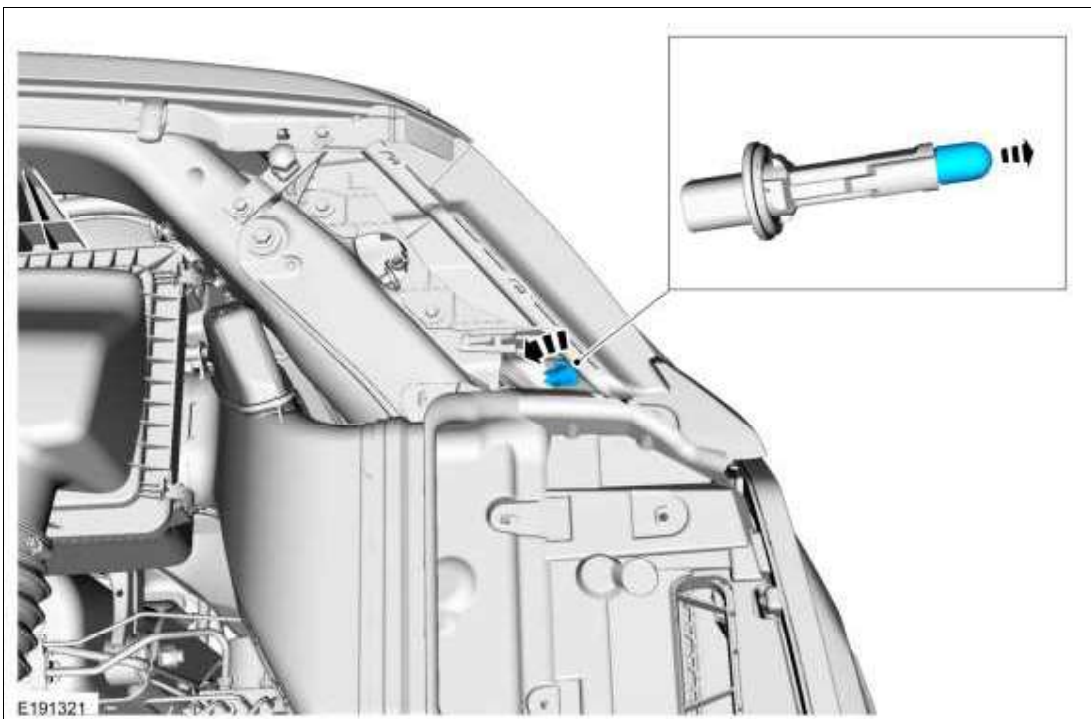
Front Marker Lamp

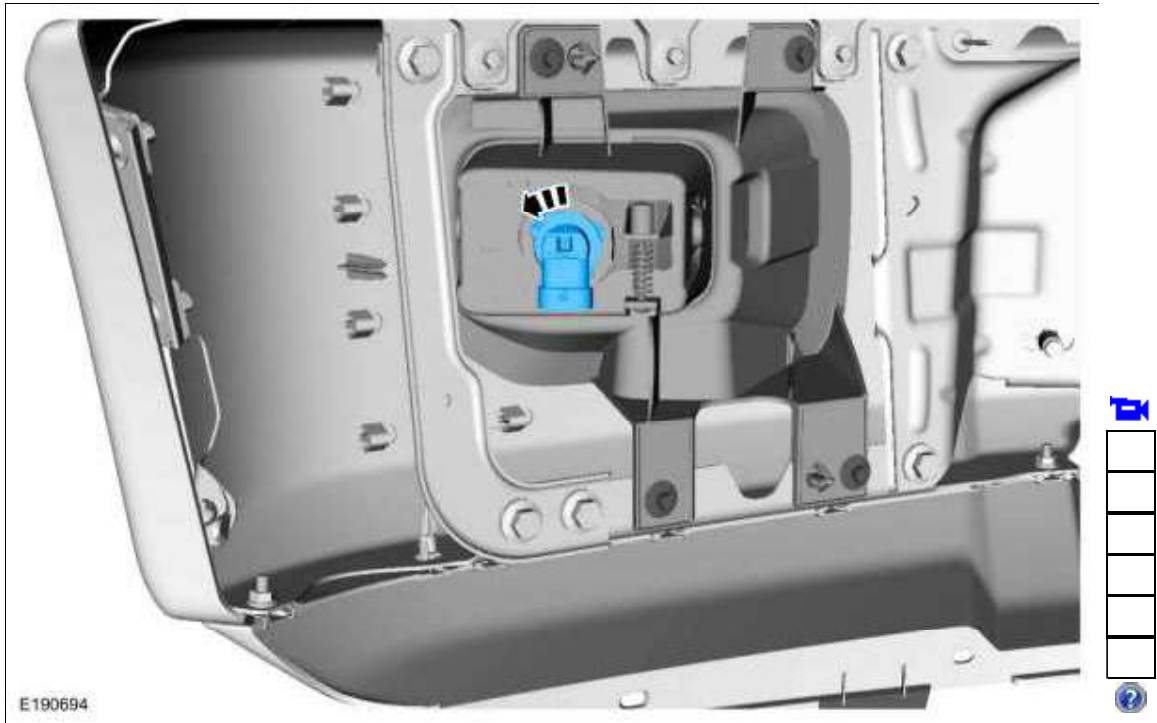
Removal

1. Disconnect the front marker lamp electrical connector.



2. Remove the bulb holder and the front marker lamp bulb.





Installation

1. To install, reverse the removal procedure.



Front Fog Lamp Bulb

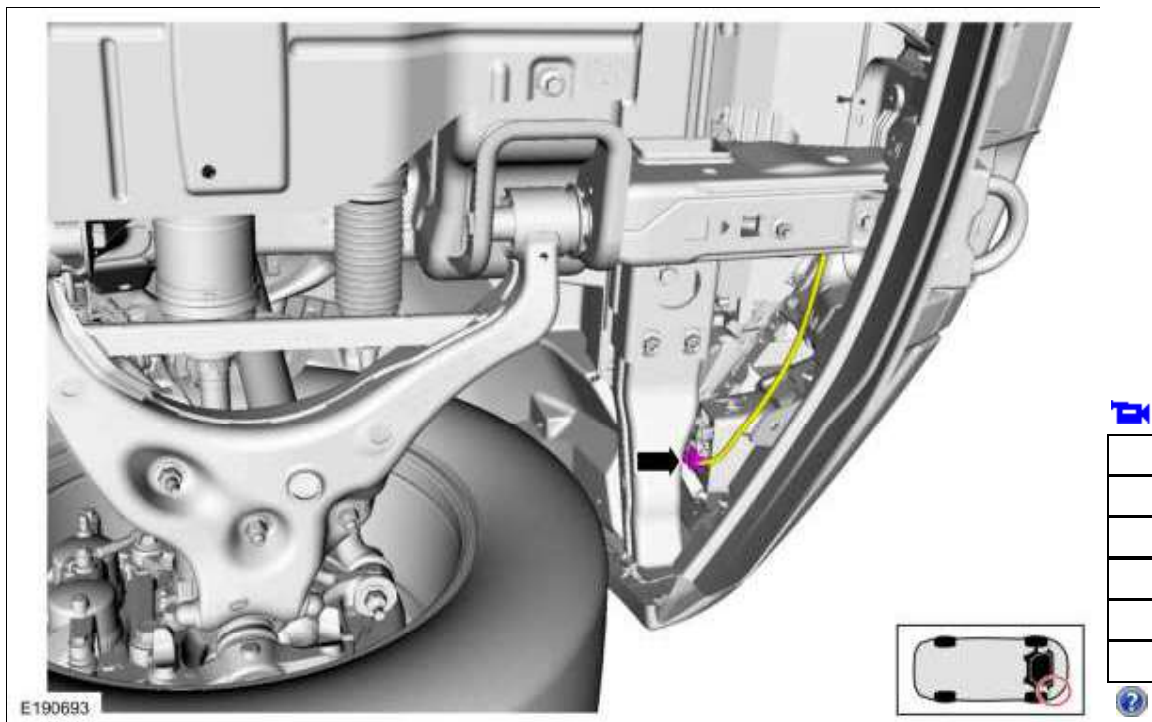
Removal

⚠ WARNING: The bulb contains gas under pressure. The bulb may shatter if the glass envelope is scratched or if the bulb is dropped. Handle the bulb only by its base. Avoid touching the glass envelope. Failure to follow these instructions may result in personal injury.

NOTE: The fog lamp bulb should not be removed from the fog lamp assembly until just before a new bulb is installed. Removing the bulb for an extended period of time may affect fog lamp bulb performance. Contaminants may enter the fog lamp assembly where they can settle on the lens and reflector. Never turn on the fog lamps with the bulb removed from the fog lamp assembly.

NOTE: Make sure the fog lamp switch and ignition switch are in the OFF position.

1. Raise the vehicle on a hoist.
Refer to: [Jacking and Lifting - Overview](#) (100-02 Jacking and Lifting, Description and Operation).
2. Disconnect the fog lamp electrical connector.



3. Rotate the fog lamp bulb counter clock-wise and remove the bulb.

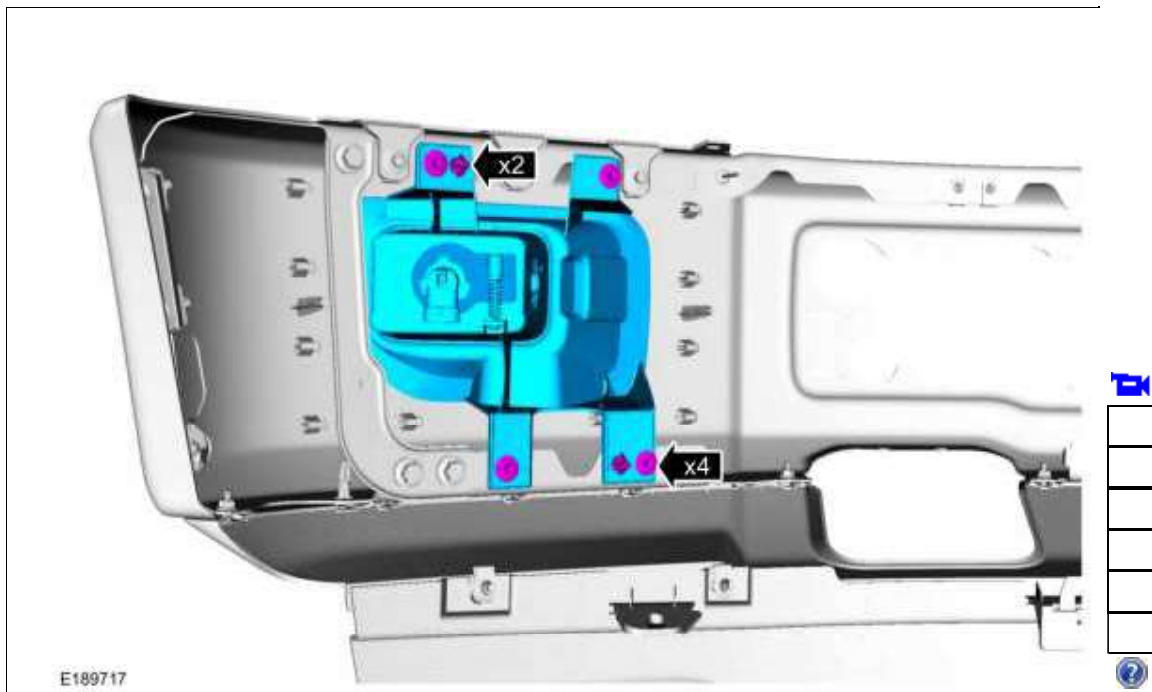


Front Fog Lamp

Removal

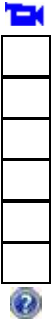
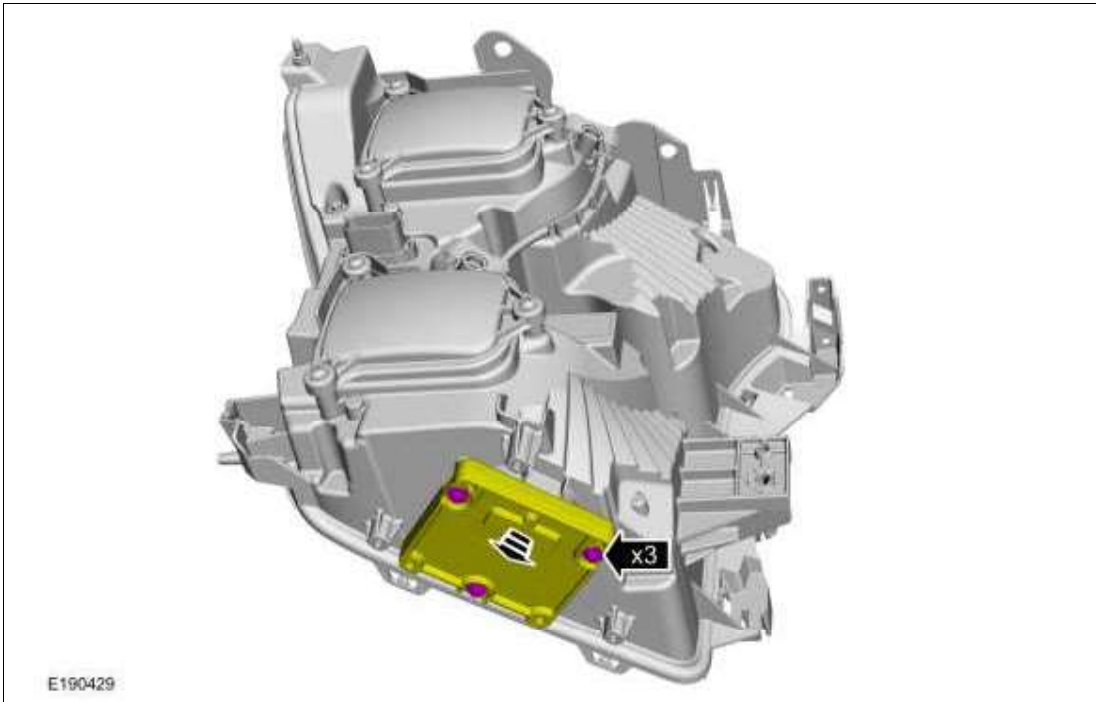
1. Remove the front bumper.
Refer to: [Front Bumper](#) (501-19 Bumpers, Removal and Installation).
2. **NOTE:** *On both sides.*

Remove the fog lamp bolts, release the push pins and remove the the fog lamp assembly.
Torque: 48 lb.in (5.4 Nm)

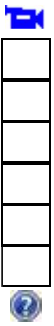
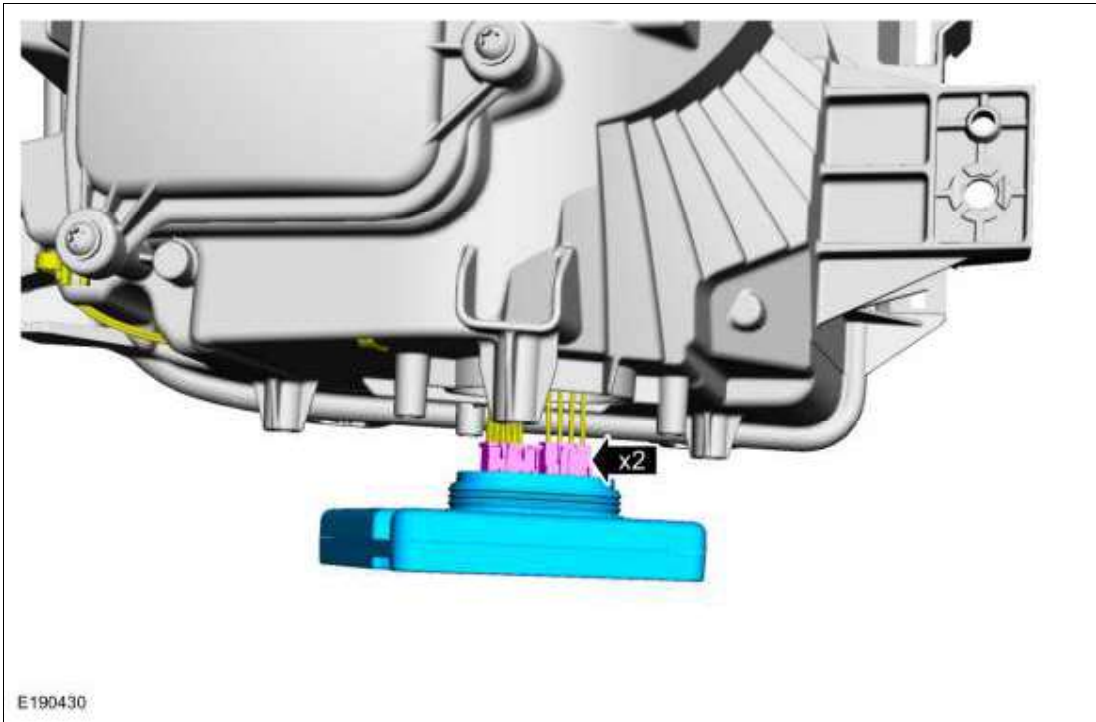


Installation

1. To install, reverse the removal procedure.
2. Adjust the fog lamp.
Refer to: [Front Fog Lamp Adjustment](#) (417-01 Exterior Lighting, General Procedures).



4. Disconnect the electrical connectors and remove the ballast.



Installation

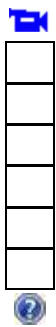
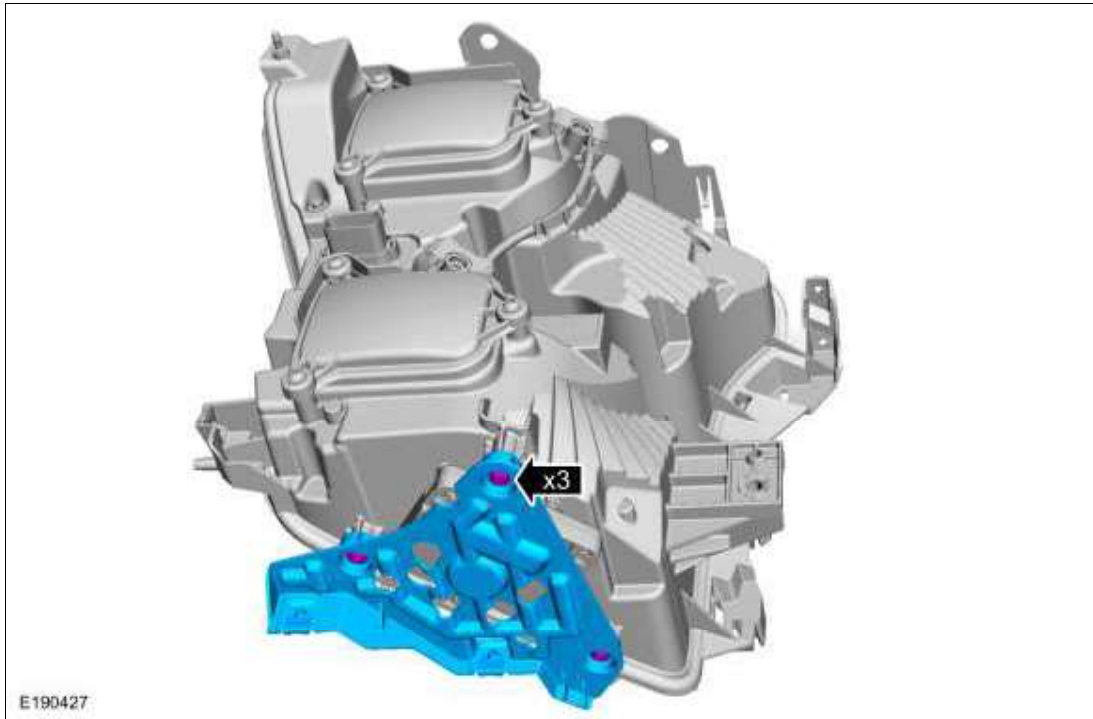
1. To install, reverse the removal procedure.



Ballast

Removal

1. Remove the headlamp assembly.
Refer to: [Headlamp Assembly](#) (417-01 Exterior Lighting, Removal and Installation).
2. Remove the screws and the headlamp bracket.



3. Remove the screws and position the ballast down

15. **NOTE:** *Align one headlamp while covering the other headlamp.*

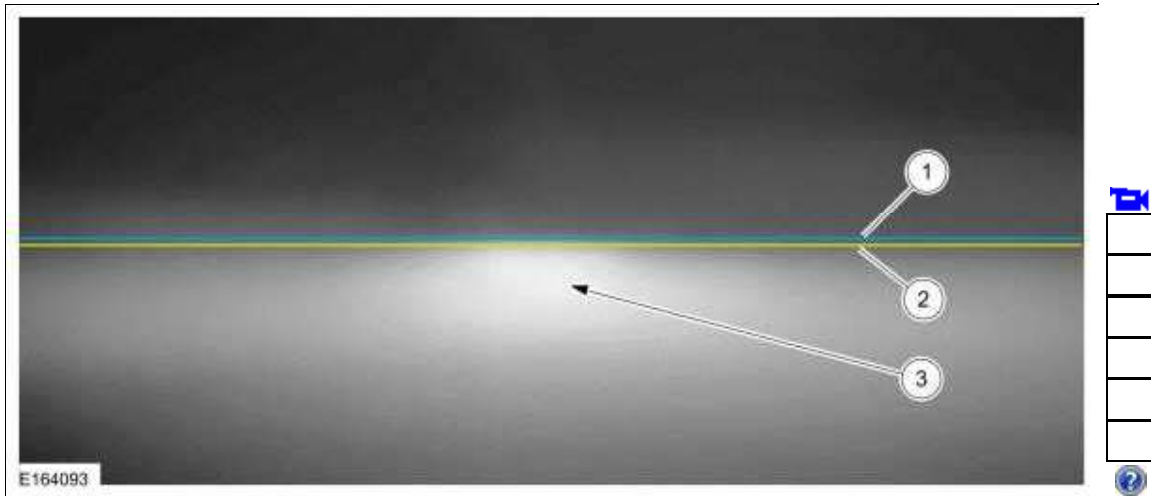
Align the headlamps to the horizontal reference line. Adjust the headlamp as necessary using the headlamp adjusting screw.

16. Repeat the previous step for the remaining headlamp.

9. **NOTE:** *The appearance of the VOR beam pattern may vary between vehicles.*

There is a distinct cutoff in the right portion of the beam pattern.

- 10.
- 1 - Horizontal reference line
 - 2 - Cut off
 - 3 - High intensity zone



11. **NOTE:** *Align one headlamp while covering the other headlamp.*

Align the headlamps to the horizontal reference line. Adjust the headlamp as necessary using the headlamp adjusting screw.

12. Repeat the previous step for the remaining headlamp.

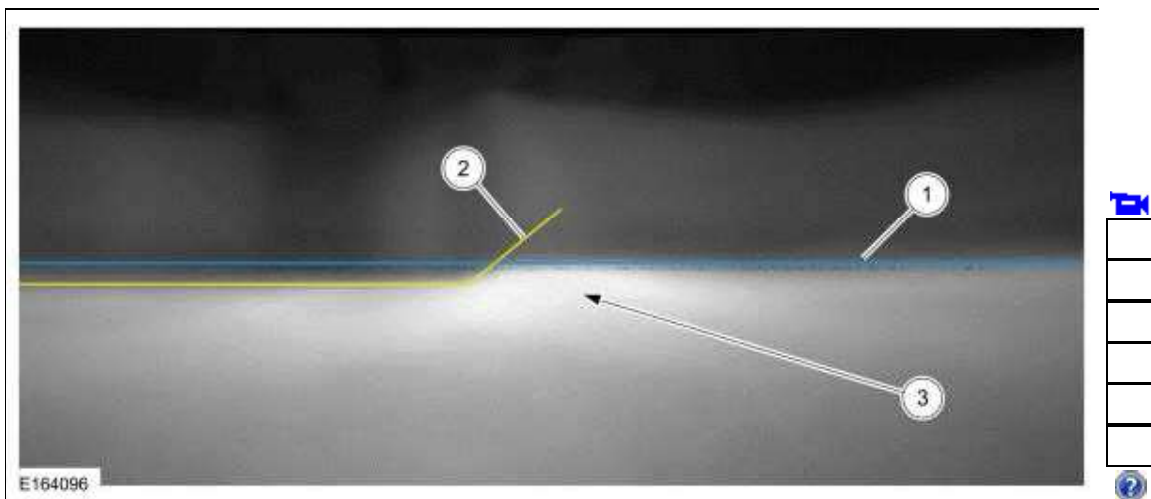
VOL-type headlamps

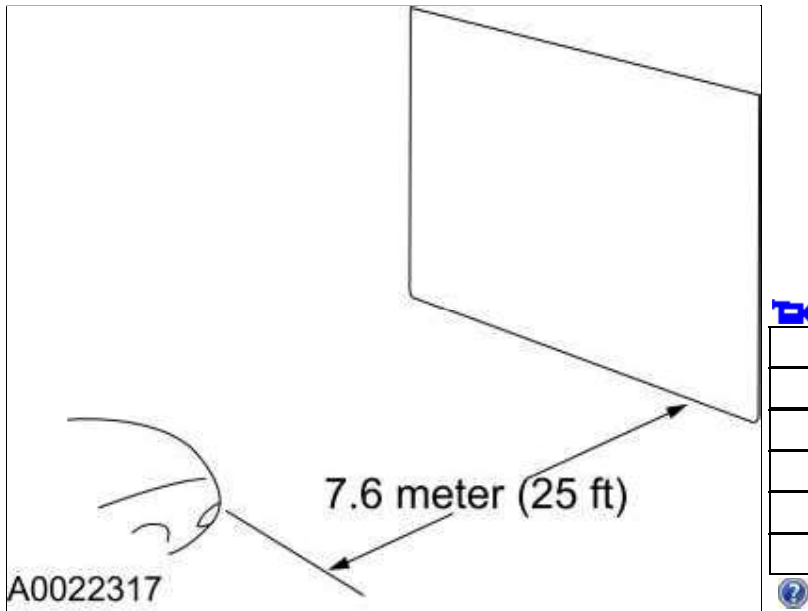
NOTE: *Procedure applies to both left and right headlamps with VOL molded on lens.*

13. **NOTE:** *The appearance of the VOL beam pattern may vary between vehicles.*

For VOL-type headlamps, there is a distinct cutoff in the left portion of the beam pattern. The edge of this cutoff should be positioned 5 CM (2 in) below the horizontal reference line.

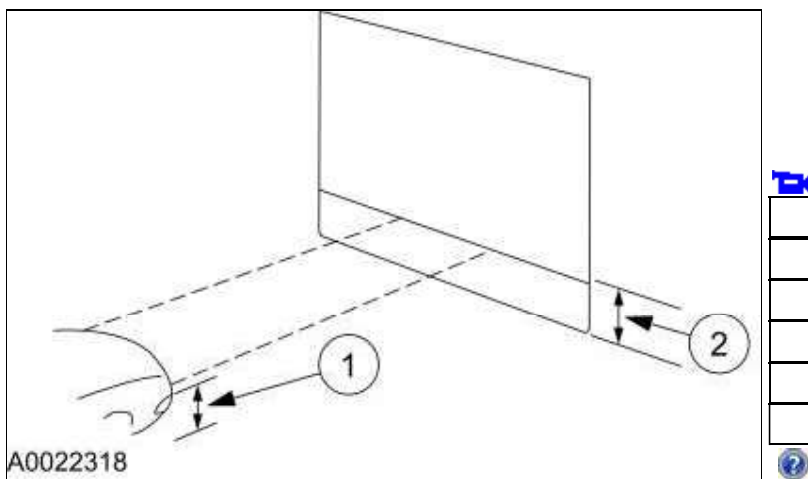
- 14.
- 1 - Horizontal reference line
 - 2 - Cut off
 - 3 - High intensity zone





5. **NOTE:** The bulb center of the low beam bulb is sometimes marked on the lens (circle, crosshair or other mark) or is the center of the low beam reflector, bulb shield or the low beam projector inner lens.

Measure the center of the headlamp height to ground and record the measurement.



6. **NOTE:** Use a 2.4 m (8 ft) section of masking tape for the horizontal reference line.

- For vehicles with headlamp bulb center heights below 95 cm (37.5 inches), place the horizontal reference line equal to the headlamp bulb center height.
- For vehicles with headlamp bulb center heights between 95 cm - 105 cm (37.5 - 41.5 inches), place the horizontal reference line at the headlamp bulb center height minus 1.3 cm (0.5 inch).
- For vehicles with headlamp bulb center heights above 105 cm (41.5 inches), place the horizontal reference line at the headlamp bulb center height minus 2.5 cm (1.0 inch).

7. **NOTE:** Carry out this procedure in a dark environment to effectively see the headlamp beam pattern.

Turn the low beam headlamps on to illuminate the wall or screen and open the hood.

8. **NOTE:** The cut off of the beam pattern is the horizontal line of the beam pattern where there is MAXIMUM change between light and dark.

On the wall or screen, locate the cut off of the beam pattern.

VOR-type headlamps

NOTE: Procedure applies to both left and right headlamps with VOR molded on lens.



Headlamp Adjustment

Adjustment

1. **NOTE:** If the flash video link does not load or is incompatible with your browser, a .wmv version of the video can be accessed at: http://www.fordservicecontent.com/Ford_Content/videos/FusionHeadlampAdj2.wmv

Click on the link above to view video.

 [Click here to view a video version of this procedure.](#)

All headlamp types

NOTE: Refer to the Owner's Literature for the headlamp adjustment screw location.

NOTE: Consult your state vehicle inspection manual for recommended tolerance ranges for visual aiming.

NOTE: Horizontal aim is not adjustable.

2. Identify the headlamp type. Vehicles are equipped with Visually Optically Aligned Left (VOL) or Visually Optically Aligned Right (VOR) headlamps. Molded in small letters on the headlamp lens is one of the following: VOL and SAE or VOR and SAE.

3. **NOTE:** Before starting headlamp adjustment, entry conditions must be met.

- Vehicle must be on level ground.
- Tires must be correctly inflated.
- Vehicle must be normally loaded.
- Headlamps must be clean.
- Headlamps must operate correctly.
- Air suspension switch must be on (if equipped).

4. **NOTE:** The vertical wall or screen must be a minimum of 2.4 m (8ft) wide.

Park the vehicle on a level surface approximately 7.6 m (25 ft) from the vertical wall or screen directly in front of it.



Front Fog Lamp Adjustment

Adjustment

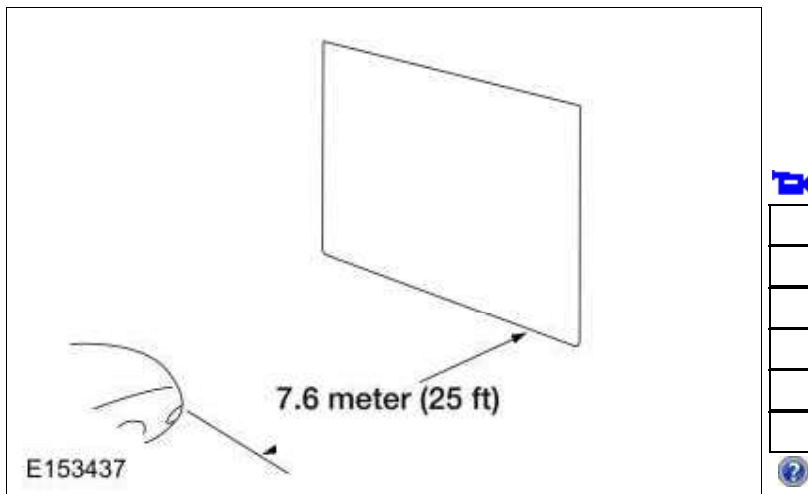
1. **NOTE:** Horizontal aim is not adjustable. Consult your state vehicle inspection center for recommended tolerance ranges for visual aiming.

NOTE: Before starting fog lamp adjustment, entry conditions must be met.

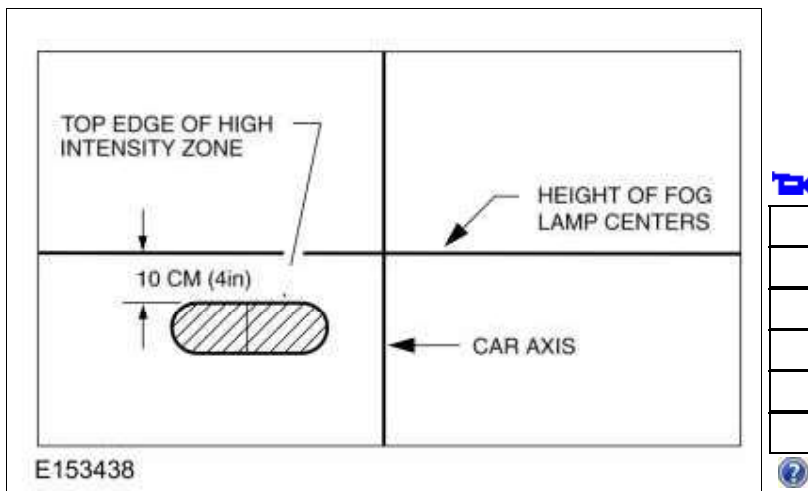
- Vehicle must be on level ground.
- Tires must be correctly inflated.
- Vehicle must be normally loaded.
- Fog lamps and headlamps must be clean.
- Headlamps must be operating and correctly aimed.

2. **NOTE:** The vertical wall screen must be a minimum of 10 ft (2.4 m) wide.

Park the vehicle on a level surface approximately 7.6 m (25 ft) from the vertical wall or screen directly in front of it.



3. The correct visual aim for the fog lamps is with the top edge of the high-intensity zone 101.6 mm (4 in) below the horizontal center of the fog lamps.




For T_LMP_OUT_LR or T_LMP_OUT_RR, INSTALL a new rear lamp assembly, REFER to: [Rear Lamp Assembly](#) (417-01 Exterior Lighting, Removal and Installation).

No GO to [D6](#)

D6 CHECK FOR CORRECT BCM (BODY CONTROL MODULE) OPERATION

- Disconnect and inspect all BCM connectors.
- Repair:
 - corrosion (install new connector or terminals – clean module pins)
 - damaged or bent pins – install new terminals/pins
 - pushed-out pins – install new pins as necessary
- Reconnect the BCM connectors. Make sure they seat and latch correctly.
- Operate the system and determine if the concern is still present.

Is the concern still present?


Yes CHECK OASIS for any applicable Technical Service Bulletins (TSBs). If a TSB exists for this concern, DISCONTINUE this test and FOLLOW TSB instructions. If no Technical Service Bulletins (TSBs) address this concern,   [Click here to access Guided Routine \(BCM\).](#)

No The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

- Connect: For T_LMP_OUT_LF or T_LMP_OUT_RF, [BCM C2280F](#).
- Connect: For T_LMP_OUT_LR or T_LMP_OUT_RR, [BCM C2280E](#).
- Ignition ON.
- Using a diagnostic scan tool, view [BCM](#) Parameter Identifications (PIDs).
- Monitor the Left Front Turn Lamp Outage Feedback Status (T_LMP_OUT_LF), Right Front Turn Lamp Outage Feedback Status (T_LMP_OUT_RF), Left Rear Turn Lamp Outage Feedback Status (T_LMP_OUT_LR) and Right Rear Turn Lamp Outage Feedback Status (T_LMP_OUT_RR) Parameter Identifications (PIDs).
- Connect a fused jumper wire:


[Click to display connectors](#)

For T_LMP_OUT_LF

Positive Lead	Measurement / Action	Negative Lead
C1284-2		CBATTERY POSITIVE


[Click to display connectors](#)

For T_LMP_OUT_RF

Positive Lead	Measurement / Action	Negative Lead
C1285-2		CBATTERY POSITIVE


[Click to display connectors](#)

For T_LMP_OUT_LR

Positive Lead	Measurement / Action	Negative Lead
C4483-2		CBATTERY POSITIVE

[Click to display connectors](#)

For T_LMP_OUT_RR

Positive Lead	Measurement / Action	Negative Lead
C4484-2		CBATTERY POSITIVE

Does the suspect PID indicate Lamp On ?

Yes	For T_LMP_OUT_LF or T_LMP_OUT_RF, INSTALL a new ballast. REFER to: Ballast (417-01 Exterior Lighting, Removal and Installation). CLEAR the Diagnostic Trouble Codes (DTCs) and REPEAT the self-test. TEST the system for normal operation. If the condition returns, INSTALL a new headlamp assembly. REFER to: Headlamp Assembly (417-01 Exterior Lighting, Removal and Installation).
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Yes	GO to D4
No	REPAIR the circuit.

D4 CHECK THE TURN LAMP OUTAGE CIRCUIT FOR AN OPEN

- Measure:

[Click to display connectors](#)

For T_LMP_OUT_LF

Positive Lead	Measurement / Action	Negative Lead
C1284-2	Ω	C2280F-6

[Click to display connectors](#)

For T_LMP_OUT_RF

Positive Lead	Measurement / Action	Negative Lead
C1285-2	Ω	C2280F-17

[Click to display connectors](#)

For T_LMP_OUT_LR

Positive Lead	Measurement / Action	Negative Lead
C4483-2	Ω	C2280E-31

[Click to display connectors](#)

For T_LMP_OUT_RR

Positive Lead	Measurement / Action	Negative Lead
C4484-2	Ω	C2280E-44

Is the resistance less than 3 ohms?

Yes	GO to D5
No	REPAIR the circuit.

D5 ISOLATE THE LAMP ASSEMBLY