

TOYOTA

COROLLA

2014

LED FOG LIGHTS

Part Number: 00016-12019

Accessory Code: LFLE10

**Conflicts**

Vehicles with factory fog lights. S models

Kit Contents

Item #	Quantity Req'd.	Description
1	2	LED Fog Lamps
2	2	Fog Lamps' Bezels
3	1	Harness bag
4	1	User's card
5	1	Switch
6		

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	1	Hood Wire Harness
2	1	Cabin Wire Harness
3	25	Wire ties
4	1	Black T-Tap
5	4	Phillip head screws
6	1	Relay box / module
7	1	High beam headlight jumper wire

Additional Items Required For Installation

Item #	Quantity Req'd.	Description

Recommended Tools

Safety Tools	
Safety Glasses	
Electrical Tape	
Installation Tools	
10mm Wrench	
Phillips Screw Driver	
Panel Removal Tool	
Pliers	
Side Cutters	
Fish tool	
Torque Wrench 48in/lbs	
Special Chemicals	
3M Silicon Sealant	

Accessory Service Parts

Part Number	LED Fog Light Housing LH	LED Fog Light Housing RH	Switch	Wire Harness	Relay Box	Bezel LH	Bezel RH
00016-32360-02	X						
00016-32360-01		X					
00016-32230-02			X				
00016-12019-03				X			
00016-12019-04					X		
00016-12019-02						X	
00016-12019-01							X

General Applicability

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Recommended Sequence of Application

Item #	Accessory
1	
2	

Mandatory**Legend****STOP:** Damage to the vehicle may occur. Do not proceed until process has been complied with.**OPERATOR SAFETY:** Use caution to avoid risk of injury.**CAUTION:** A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.**TOOLS & EQUIPMENT:** Used in Figures calls out the specific tools and equipment recommended for this process.**REVISION MARK:** This mark highlights a change in installation with respect to previous issue.**SAFETY TORQUE:** This mark indicates that torque is related to safety.**SPECIAL NOTE: Installation Sequences**

After TMS and Safety mandated preparatory steps have been taken, the installation sequence is the suggested method for completing the accessory installation. In some instances the suggested sequence is written for one associate to install and in others the sequence is given as part of a team accessory installation. Unless otherwise stated in the document, the associates may perform the installation steps in any order to make the installation as efficient as possible while maintaining consistent quality.

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure quality installation. These guidelines can be found in the Accessory Installation Practices document.

This document covers such items as:

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc)
- Safety (eye protection)
- Vehicle Disassembly / Reassembly (panel removal, part storage, etc)

Preparation



Remove battery from vehicle



Installation

1. Route the 12v red wire from fog light harness through positive red terminal cover. Use wire ties to secure wire harness and fuse to the positive cable from battery (picture 1). Secure the ring terminal to the positive battery terminal.



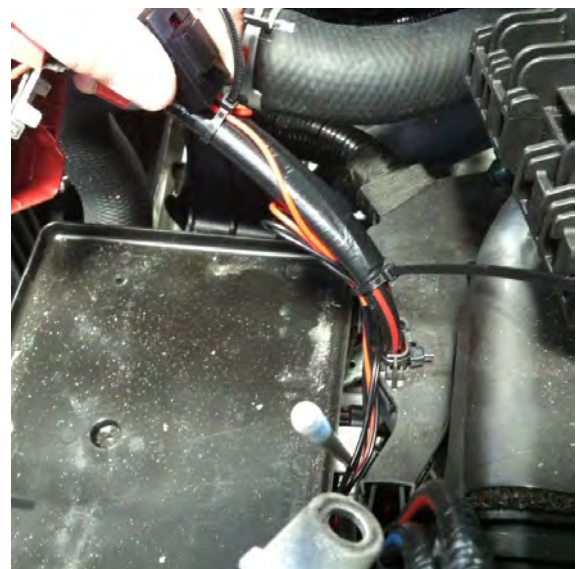
Picture 1

2. Attach the ring terminal with 2 black wires to the 10mm (ground) nut next to the battery (picture 2)



Picture 2

3. Secure excess wire to battery positive wire (picture 3)



Picture 3

4. Route the fog light wire harness along the driver side from the battery towards the bulkhead of the vehicle. Secure the wire harness with wire ties as needed (picture 4)



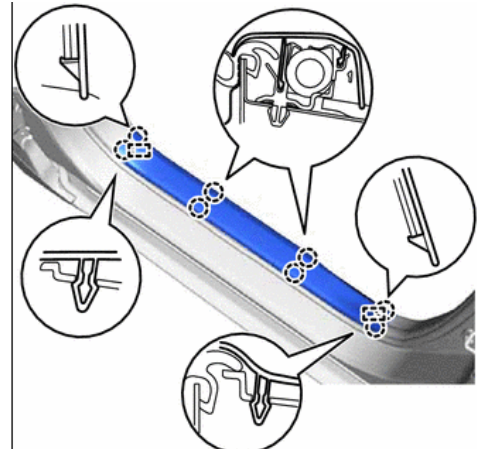
Picture 4

5. Locate the large vehicle harness grommet on the driver side. If accessible, cut the auxiliary wiring access nipple off the grommet or cut 1/4" slit in grommet. Using fish tool Push the fog light wire harness through grommet. Note: Extra caution should be taken not to damage the connectors on the fog light harness or on the vehicle harness. Seal with 3M Silicone sealant (picture 5).



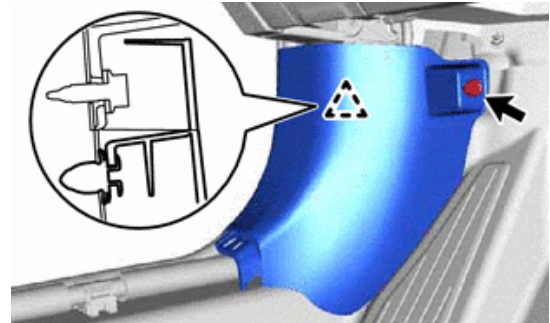
Picture 5

6. Remove the driver's scuff plate, by disengaging the claws (picture 6)



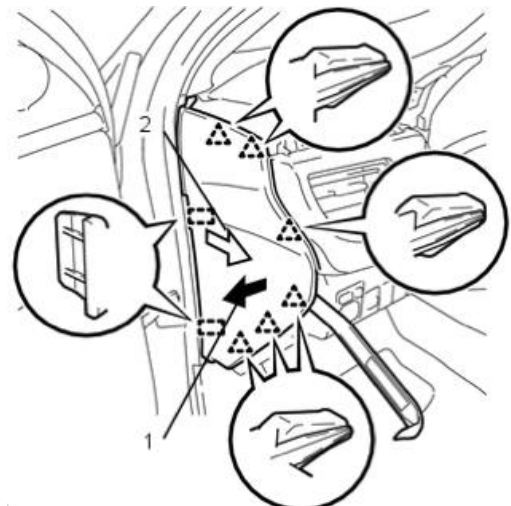
Picture 6

7. Remove the side kick panel by removing the clip (picture 7)



Picture 7

8. Remove side instrument panel. Using a pry tool, disengage the clips (picture 8)



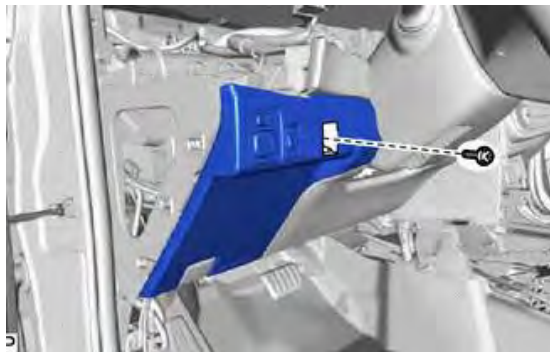
Picture 8

Vehicle Disassembly

9. Remove left side switch panel: Remove switch knockout, then remove screw and claws securing panel (pictures 9 and 9A)



Picture 9



Picture 9A

10. Use an empty switch knock out on left panel, then mount switch into switch knock out (picture 10)



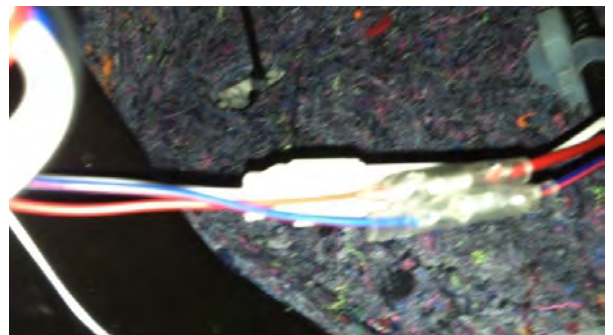
Picture 10

11. Locate the wires that were pushed through the grommet in step 5. It will be the grommet above the gas pedal. Route the wire harness to reach the area on left of the steering wheel and tie wrap to factory harness (picture 11)



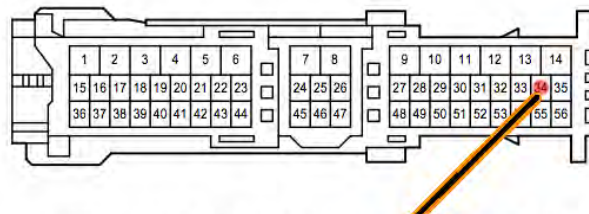
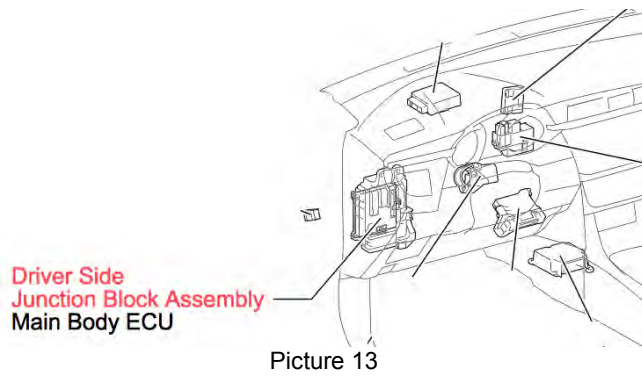
Picture 11

12. Push the supplied white connector into the white wire pin. Then connect the switch harness to the wire harness: 2 bullet connectors and one white connector (pic. 12)

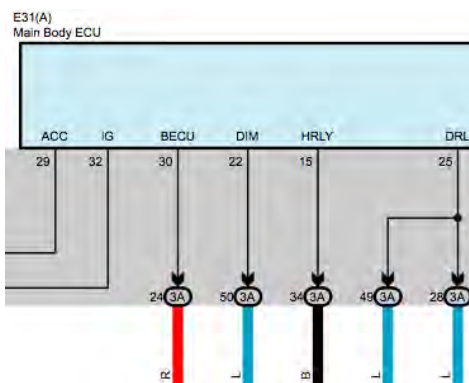


Picture 12

13. Install a black T-tap to the headlight circuit connector 3A pin 34, black wire. Connect the orange/black wire from fog light harness. Connector 3A is left of steering wheel at the main junction block (pictures 13 ~ 13C)



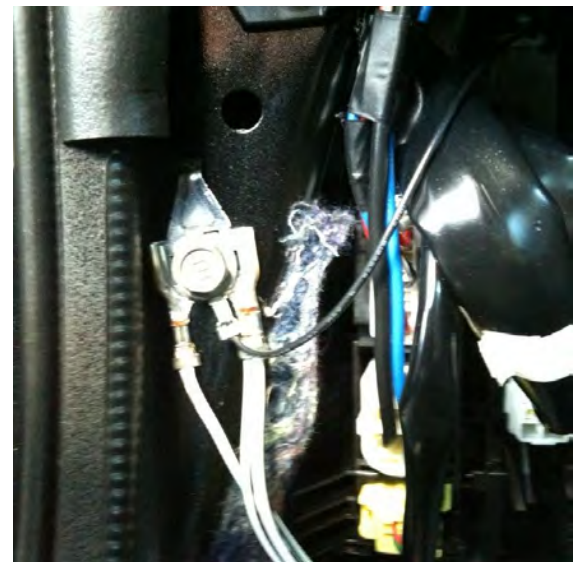
Picture 13A Connector 3A, pin 34
Orange-Black to Pin 34, Black wire



14. Secure black relay box and excess wire to main wire harness (picture 14).



15. Secure black ground wire to ground point behind kick panel (picture 15).



16. Reinstall all panels and connectors inside car, including fog light switch connector

ENGINE COMPARTMENT

17. Remove 2x12 mm bolts holding the radiator supports from core support (picture 16)



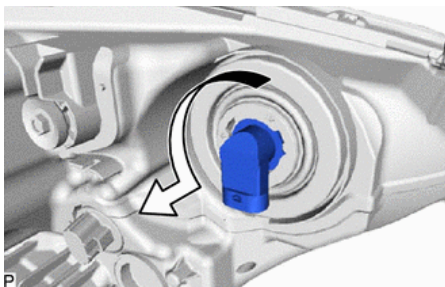
Picture 16

18. Run harness along top of radiator and secure with a wire tie at each end (picture 15)



Picture 15

19. Reinstall radiator supports and torque to 14 ft-lb.
20. Run harness down right and left side of vehicle
21. On the driver side, remove the high beam bulb by turning it counter-clock. Caution: Do not touch glass part of bulb (pic. 16 and 16A)



Picture 16



Picture 16A

22. Unplug the high beam socket from bulb, then connect the 9005 jumper harness from the fog light kit to the high beam wire harness and the high beam bulb (picture 17).



Picture 17

23. Reinstall bulb into headlamp
24. Plug white wire from jumper harness into white wire of fog light harness (picture 18)



Picture 18

25. Secure excess wires with wire ties behind headlamp (picture 19).



Picture 19

26. From under the car, remove driver side lower splash shield: There are 2 screws and one push-pin. Using a pry tool to remove push pin (pictures 20 and 20A)



Picture 20



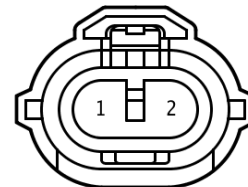
Picture 20A

27. Remove fog light cover plates on both sides of vehicle (picture 21)



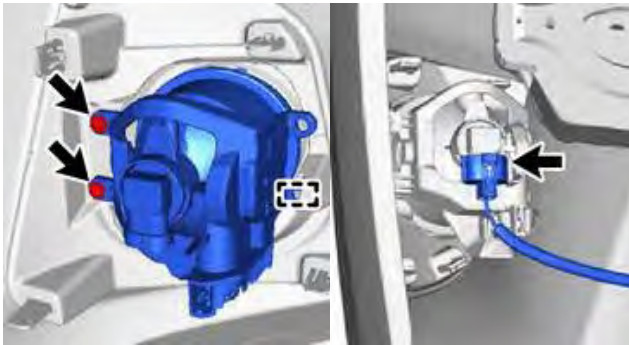
Picture 21

28. Push the negative wire (black or black-white) from LED fog light housing into pin 2 of supplied connector. Push positive wire (red or red-white) into pin 1 (pic. 22)



Picture 22: Showing LED fog light connector

29. Before connecting the LED Fog light, make sure that wires are aligned as follows:
- Red or red-white (LED fog light) with blue/red wire (fog light harness)
 - Black or black-white (LED fog light) with black wire (fog light harness)
30. Insert one side of the LED fog lamp into the plastic sleeve and secure other side with factory screws. Plug Fog light connector into LED fog light (picture 23)



Picture 23

31. Repeat steps 2~6 for right side.
32. Reattach the lower splash shields.
33. Reinstall battery to vehicle. Torque terminals to 48 in/lbs.

Checklist – these points MUST be checked to ensure quality installation**Check System for Operation**

Reconnect battery terminals

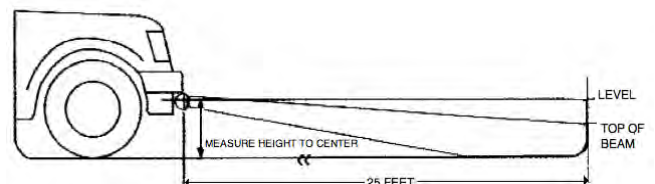
1. Turn on headlamp low beams, then press fog light switch to “ON” position. Fog lights should be working. Fog lights will only work when the low beam headlamps are “ON”. Fog lights will NOT work when the high beam headlamps are “ON”

Fog Light Aiming

Traditional fog lights are usually mounted in the front bumper about 10-24 inches from the ground. There are two important issues to address when installing fog lights: the first is to minimize the amount of return glare into the drivers eyes, and the other is to minimize the glare into oncoming eyes. Both of these issues must be accomplished while putting as much light as possible on the road.

These fog weather light aiming instructions are suggestions taken from common practice and the S.A.E. standard J583. Some modifications to these instructions may be necessary to minimize glare.

Visual aim is made with the top of the beam 4 inches below the lamp center at 25 feet with the lamp facing straight forward (see picture 32)



Picture 32

CheckAccessory Functions Checks

- ☐ Fog Lights function.....
- ☐ All Panels snapped into place.....
- ☐ Fog Lights.....
- ☐ Battery Terminal.....

- ☐ Operation Guide.....

Vehicle Function checks

- ☐ Check functions all switch functions

Look For:

....

Loose panels and switches

Visually confirm lights are straight forward

Re-torque battery terminals. 48 in-lb.

Place fog light operation guide inside glove box.

VEHICLE FUNCTION CHECK

AFTER ALL PANELS, COVERS AND COMPONENTS THAT WERE REMOVED HAVE BEEN REINSTALLED, TEST THOROUGHLY ALL MECHANICAL AND ELECTRICAL COMPONENTS DISCONNECTED AND/OR REMOVED FROM THE VEHICLE DURING THE INSTALLATION OF THIS ACCESSORY

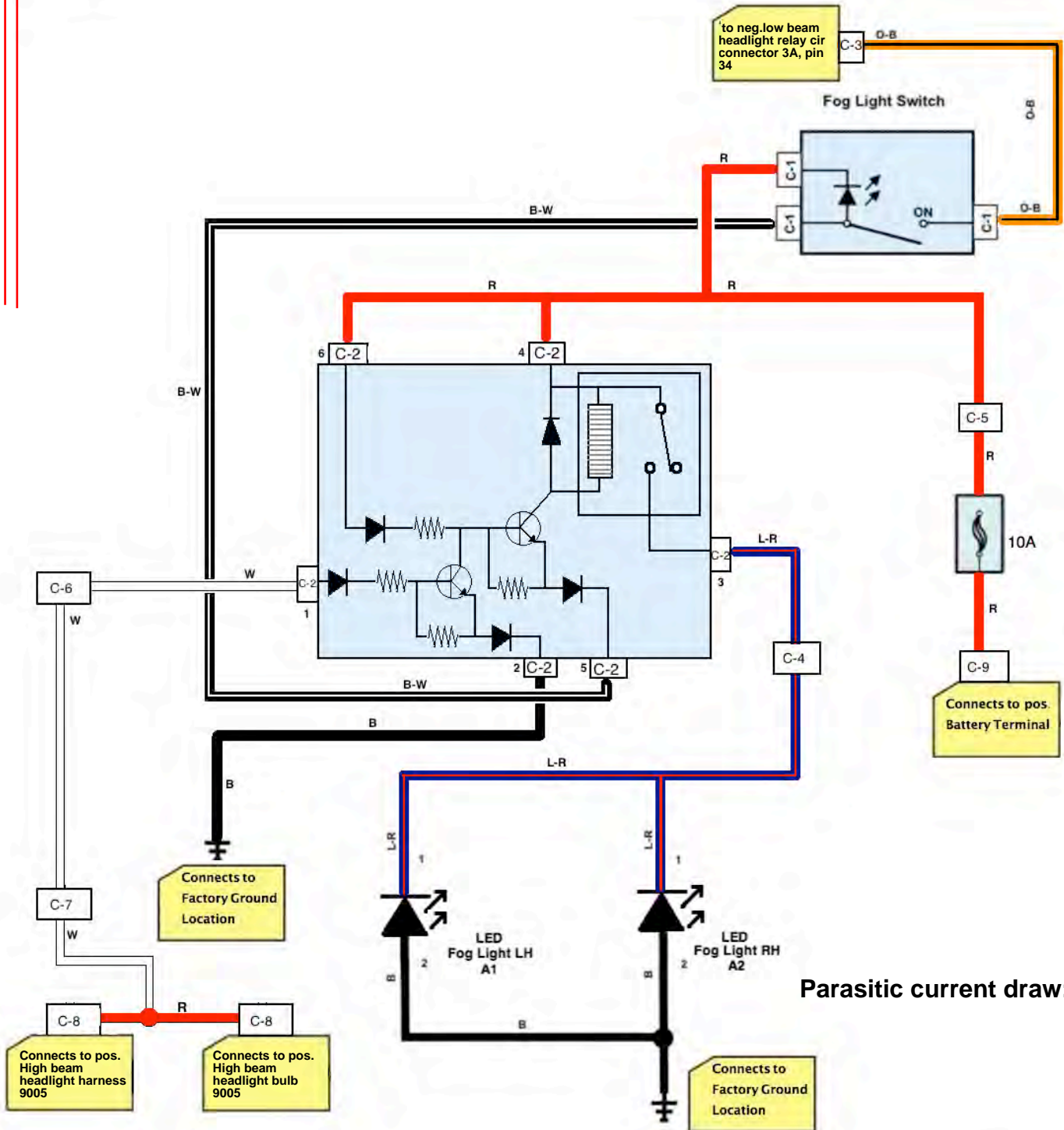
Block Diagram

LED Fog Light

Corolla 2014

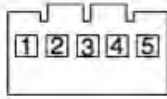
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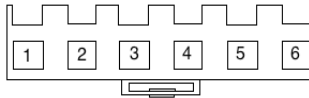
Pinout test

Connector C-1



Pin	Wire Color	Test Reference	Proper Operation
1	Orange-Black	Pin 1 to Ground	Approximately +12 VDC when headlights are OFF or HIGH BEAM ON +0 VDC when headlights are ON (LOW BEAM position)
2	Red	Pin 2 to Ground	Always +12 VDC
3	White-Black	Pin 3 to Ground	Approximately +12 VDC when FOG LIGHT switch is OFF Approximately +12 VDC when headlights are OFF or HIGH BEAM ON 0 VDC with FOG LIGHT switch ON and headlights are ON (LOW BEAM position)

Connector C-2,



Pin	Wire Color	Test Reference	Proper Operation
1	White	Pin 1 to Ground	Aproximately 0 VDC High beams are OFF Aproximately +12 VDC when High beams are ON
2	Black	Pin 2 to Ground	Aproximately 0 VDC
3	Blue-Red	Pin 3 to Ground	Approximately 0 VDC when FOG LIGHT switch is OFF Approximately 0 VDC when headlights are OFF or HIGH BEAM ON +12 VDC with FOG LIGHT switch ON and headlights are ON (LOW BEAM position)
4	Red	Pin 4 to Ground	Always + 12 VDC
5	Black-White	Pin 5 to Ground	Approximately +12 VDC when FOG LIGHT switch is OFF Approximately +12 VDC when headlights are OFF or HIGH BEAM ON 0 VDC with FOG LIGHT switch ON and headlights are ON (LOW BEAM position)
6	Red	Pin 6 to Ground	Always + 12 VDC

Connector C-3



Pin	Wire Color	Test Reference	Proper Operation
1	Orange-Black	Connector to Ground	Approximately +12 VDC when headlights are OFF or HIGH BEAM ON +0 VDC when headlights are ON (LOW BEAM position)

Connector C-4



Pin	Wire Color	Test Reference	Proper Operation
	Blue-Red	Connector to Ground	Approximately 0 VDC when FOG LIGHT switch is OFF Approximately 0 VDC when headlights are OFF or HIGH BEAM ON +12 VDC with FOG LIGHT switch ON and headlights are ON (LOW BEAM position)

Connector C-5



Pin	Wire Color	Test Reference	Proper Operation
	Red	Connector to Ground	Always +12 VDC

Connector C-6



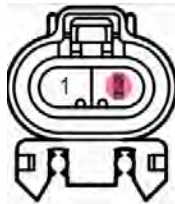
Pin	Wire Color	Test Reference	Proper Operation
1	White	Pin 1 to Ground	Aproximately 0 VDC High beams are OFF Aproximately +12 VDC when High beams are ON

Connector C-7



Pin	Wire Color	Test Reference	Proper Operation
1	White	Pin 1 to Ground	Aproximately 0 VDC High beams are OFF Aproximately +12 VDC when High beams are ON

Connector C-8



9005 Socket

Pin	Wire Color	Test Reference	Proper Operation
1	Black	Pin 1 to Ground	Always continuity
2	Red	Pin 2 to Ground	Aproximately 0 VDC when High beams are OFF Aproximately +12 VDC when High beams are ON

Connector C-9



Pin	Wire Color	Test Reference	Proper Operation
	Red	Connector to Ground	Always +12 VDC