

TOYOTA

RAV4

2017

LED Fog Light & DRL 2in1

Part Number: 00016-00081

Accessory Code: LD4000



**Conflicts**

- Vehicles w/o factory fog lights, Model 4476

**Kit Contents**

Item #	Quantity Reqd.	Description
1	2	Fog Light +DRL Housing
2	1	Driver Box
3	1	Harness Bag
4	1	User's Card
5	1	Switch

**Hardware Bag Contents**

Item #	Quantity Reqd.	Description
1	1	Hood Wire harness
2	1	Cabin Wire harness
3	1	Relay
4	25	Wire ties
5	1	14" wire tie
6	2	Black T-Taps

**Additional Items Required For Installation**

Item #	Quantity Reqd.	Description

**Recommended Tools**

<b>Safety Tools</b>	
Safety Glasses	
Electrical Tape	
<b>Installation Tools</b>	
10mm Wrench	
Phillips Screw Driver	
Pliers	
Torque Wrench	48 in-lb & 67 in-lbs
90° Philips ratchet screw driver	
Side Cutters	
<b>Special Chemicals</b>	
3M Silicon Sealant	

**Accessory Service Parts**

Service Part	DRL+Fog Light Housing LH	DRL+Fog Light Housing RH	Switch	Complete Wire Harness	Driver Box	Relay
00016-00081-01	X					
00016-00081-02		X				
00016-32270-05			X			
00016-32270-03				X		
00016-32270-06					X	
00016-32260-04						X

**General Applicability**

MY17 RAV4 models with the exception of model 4476

**Recommended Sequence of Application**

Item #	Accessory
1	
2	
3	

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:**  
 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. Also some items listed to be removed may not need to be removed if caution is taken to not damage vehicle.

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)

## Battery Preparation



**NOTE:** It is recommended to use Option 1 when a lead wire is not being added to the positive side, or anytime the negative side 12mm nut is being removed, re-torque both to 67 in/lb.

**NOTE:** If removal of the positive battery terminal 12mm nut is required to install a lead wire, the negative battery terminal must be disconnected first to disable the electrical system. The positive battery or terminal should never be disconnected unless the negative battery terminal is first removed and waiting 90 seconds for the SRS system to power down.

### OPTION 1:

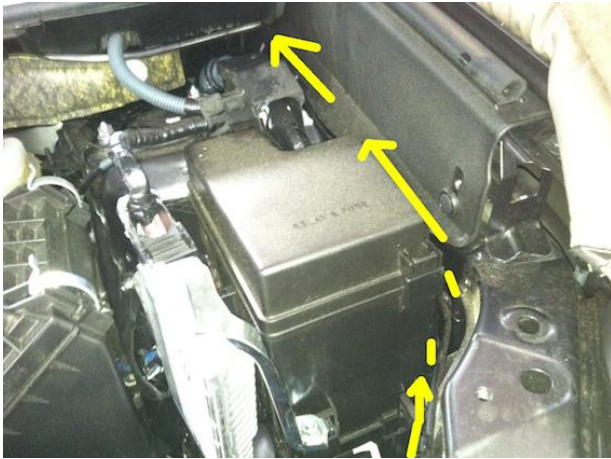
If the battery clamp nut cannot be accessed to set torque to the recommended specification without removing additional panels and/or other components. You may change (reverse the direction) the negative battery clamp bolt and nut. Battery terminal must have torque set to factory specification: CAUTION: Do not touch the positive terminal. Re-torque to 48 in/lb.

### OPTION 2:

Removing the 12mm nut from the positive or negative terminal junction. When re-tightening the torque specification is 67 in/lb.

## Installation

1. Route the DRL wire harness along the driver side from the battery towards the firewall of the vehicle. Secure the wire harness with wire ties as needed (picture 1)



Picture 1

2. From inside the car, locate the large vehicle harness grommet on the left side. If accessible, cut the auxiliary wiring nipple off the grommet or cut 1/4" slit in grommet. Using fish tape pull the red, black, red-white and black-white wires through firewall. Note: Extra caution should be taken not to damage the pins. Seal with 3M Silicone sealant from inside vehicle (pics. 2 & 2A).



Picture 2: View from inside vehicle

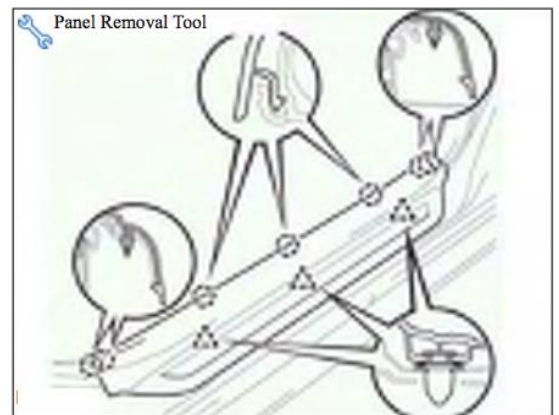


Picture 2A: View from the engine compartment

3. At the driver side, drop the other end of the 2in1 DRL harness to reach the left factory fog light.

**Vehicle Disassembly**

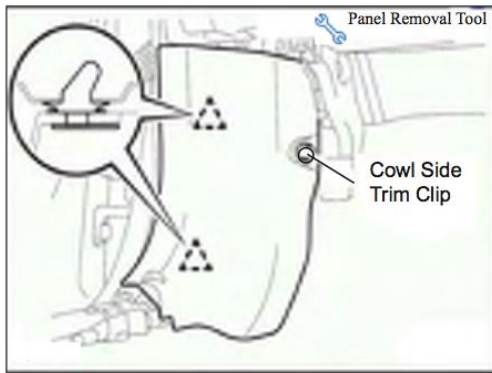
4. Remove driver side door scuff plate: Disengage with panel tool and remove. (pic.3).



Picture 3

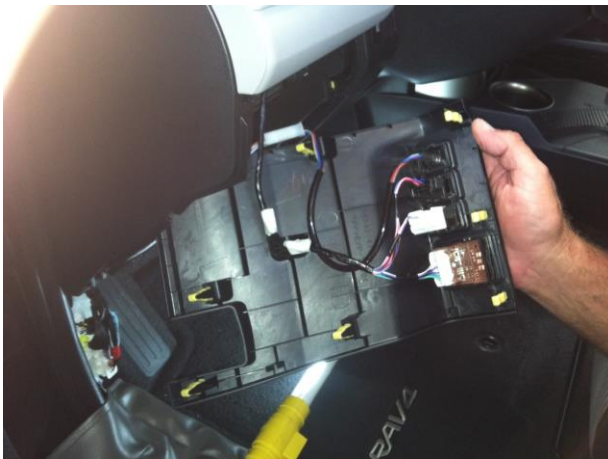
5. Remove the driver side cowl side trim. Unscrew the cowl side trim clip. Disengage two (2) clips and remove the cowl side trim (picture 4).





Picture 4

6. Remove driver's side upper panel (pic. 5).



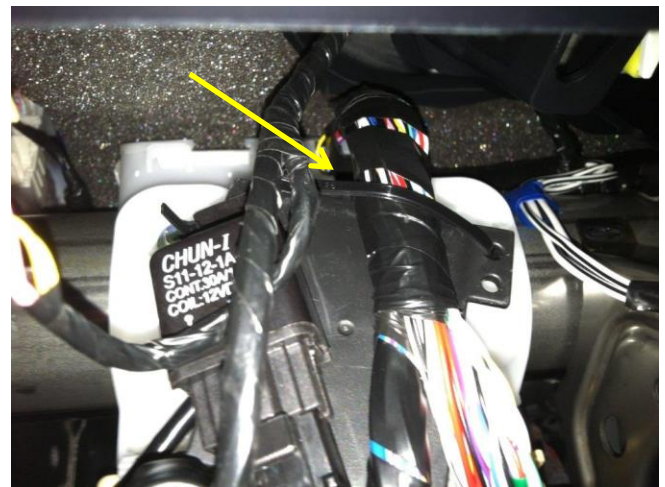
Picture 5

7. Locate the wires that were pulled through the grommet in step 2. Route wire harness towards the left side of steering wheel. Use wire ties as needed.
8. Using the driver box as a guide, push the pins of the DRL wire harness into the connector supplied in kit. Make sure that the wire colors of the connectors are aligned with the wire colors of the driver box: black with black and red with red, etc (picture 6).



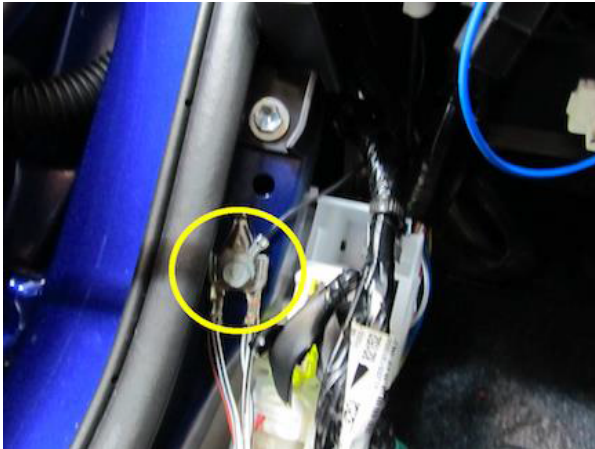
Picture 6

9. Connect the driver box to the wire harness (make sure wire colors are aligned).
10. Using a 14" wire tie, secure the driver box and relay to the main harness of the junction block (pic. 7).



Picture 7

11. Secure the black wire with a ring terminal from DRL harness to ground location behind kick panel (picture 8).

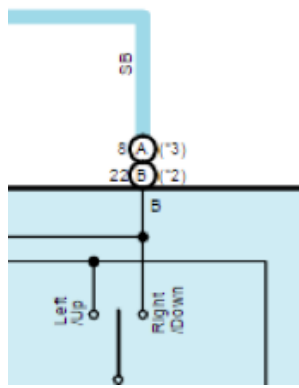


Picture 8

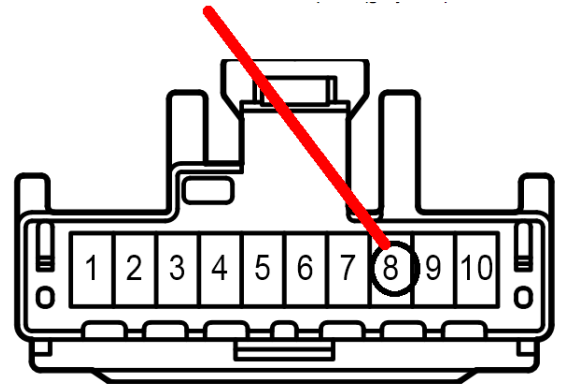


Note: If vehicle is made in Canada (TMMC), then follow step 12. If vehicle is made in Japan (TMC), then follow step 13. In the VIN Number of the vehicle, the letter “J” stands for Japan (TMC) and “C” for Canadian (TMMC).

- Canada made vehicles (TMMC): At connector G39 install a black T-Tap to pin 8, SKY BLUE wire. Then connect the red wire from DRL harness to T-tap. Connector G39 is located at the back of mirror control switch (pictures 9 and 9A).

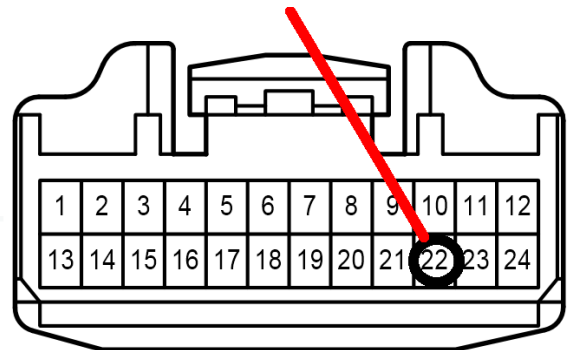


Picture 9: Mirror control switch  
 Connector G39, Pin 8: TMMC made  
 Connector G151, Pin 22, TMC made

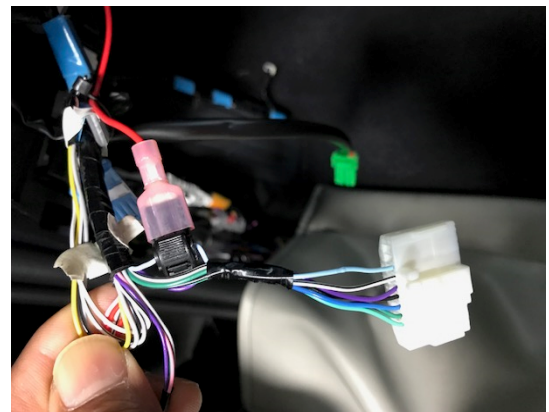


Picture 9A: Mirror control switch G39  
 NOTE: For Canada made vehicles ONLY

- Japan (TMC) made vehicles: At connector G151 install a black T-Tap to pin 22, SKY BLUE wire. Then connect the red wire from DRL harness to T-tap. Connector G151 is located at the back of mirror control switch (pictures 10 and 11).

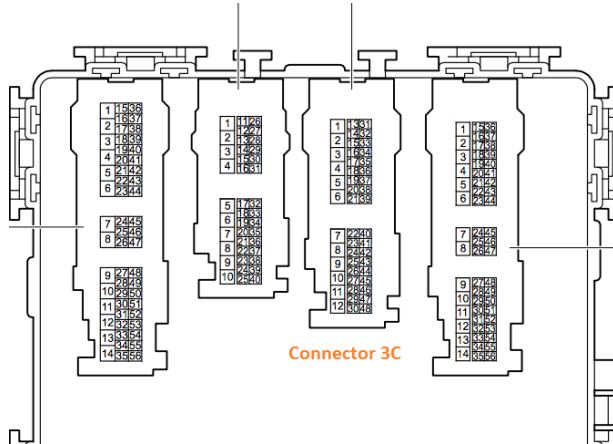


Picture 10: Mirror control switch G151  
 NOTE: For Japan made vehicles ONLY

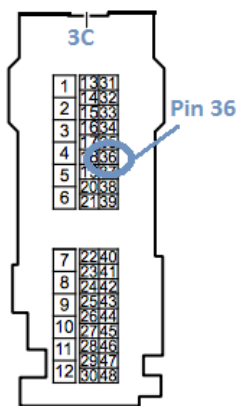


Picture 11

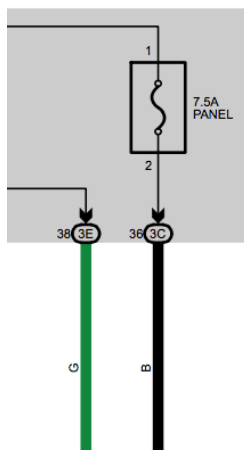
14. At J/B Block, Connector 3C, Pin 36, black wire, install a black T-Tap to the BLACK wire. Then connect the blue wire from the DRL harness to the t-tap. (Pictures 12a, 12b, 13 &14)



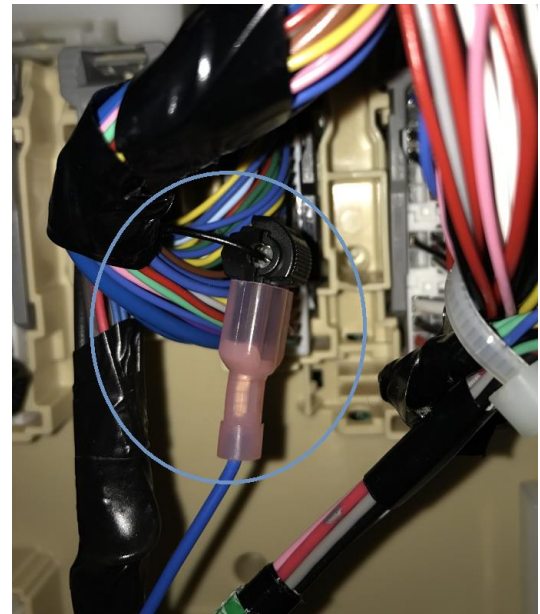
Picture 12a



Picture 12b

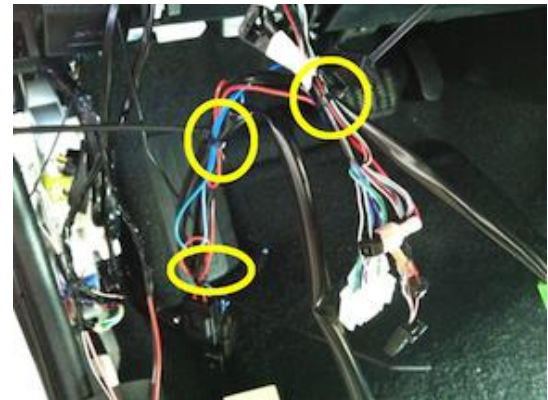


Picture 13



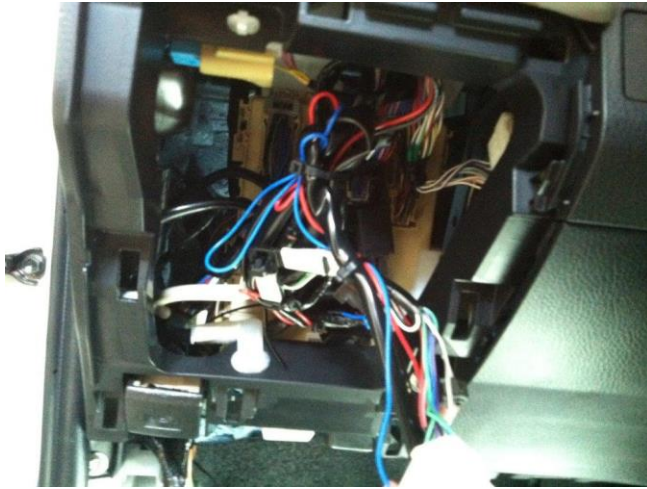
Picture 14

15. Secure any excess wire from t-taps, fuse and relay to main wire harness (picture 15 & 15A). Make sure to leave enough lead on the switch green connector.



Picture 15





Picture 15A

16. Push out the switch knockout located at the left of the steering wheel (picture 16).
17. Route DRL switch connector through switch knockout connector.
18. Mount switch into dash panel. Then connect the switch wire harness to switch (pic 16).



Picture 16

19. Reinstall panels and connectors.

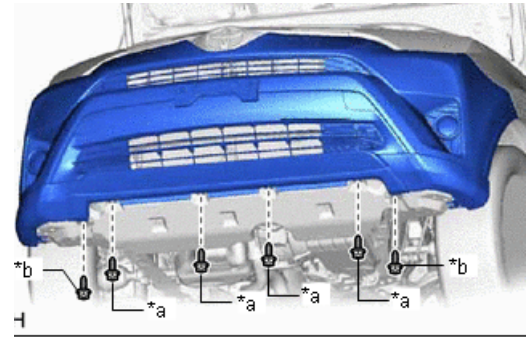
**ENGINE COMPARTMENT**

20. Loosen LH and RH front fender splash shields by removing screws (picture 17).



Picture 17

21. Remove the center splash guard, by removing bolts, screws and push pins at the bottom of front bumper cover (picture 18).



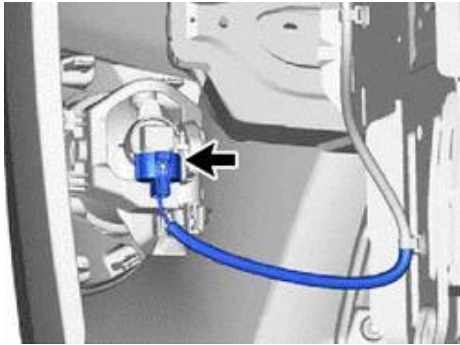
*a	Bolt
*b	Screw

Picture 18

22. Access the factory fog lights through the removed splash shields and unplug the wire harness from the lights (pictures 19 and 20).

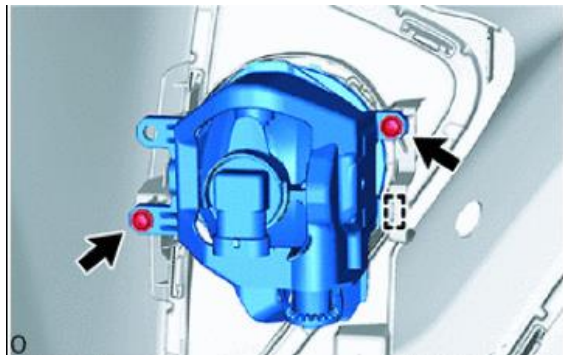


Picture 19



Picture 20

23. Using a small Philips screwdriver, remove the factory fog lights: Remove the 2 Philip screws per light (do not discard the screws, as they will be used to mount 2in1 light). If needed, use a 90° ratchet screwdriver to remove the passenger side fog light.



Picture 21

24. If removing the passenger side fog light through the splash shield on the passenger side is too difficult, it is suggested to loosen the fender liner to gain access (picture 22).



Picture 22

25. Mount the LH and RH 2in1 Lights into bumper: use the factory screws (picture 23).

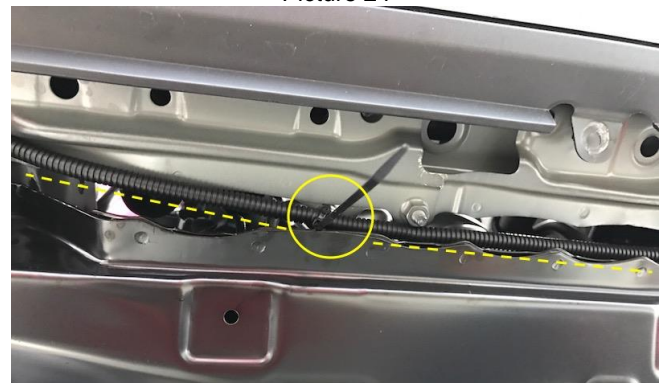


Picture 23

26. On the driver side fog light area, retrieve the DRL wire harness that was routed on step 3.
27. Route the RH end of the DRL wire harness to the passenger side of the vehicle.
28. Secure wire harness behind lower bumper sheet metal (pics. 24, 24A, 24B & 24C).

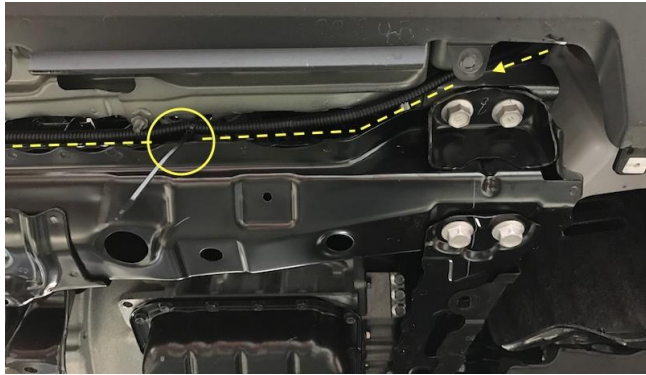


Picture 24



Picture 24A





Picture 24B



Picture 24C

- 29. If not pre-installed, connect the 2in1 fog light connectors: 2in1 fog light terminals to factory fog light wire terminal, and 2in1 DRL terminal to DRL wire harness (picture 25).



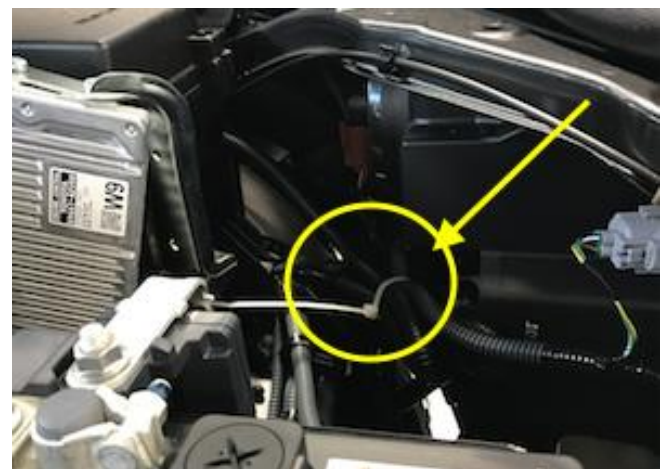
Picture 25

- 30. At the passenger side, secure the DRL wire harness to factory harness behind white fluid reservoir (picture 26).



Picture 26

- 31. At the driver side, secure excess wires to factory wire harness next to the battery behind headlamp (pic. 27).



Picture 27

- 32. Reinstall lower splash shields.
- 33. Reconnect negative battery terminal. Torque terminal to 48 in-lbs for option 1 and 67 in-lbs for option 2.
- 34. Adjust LED fog lights.

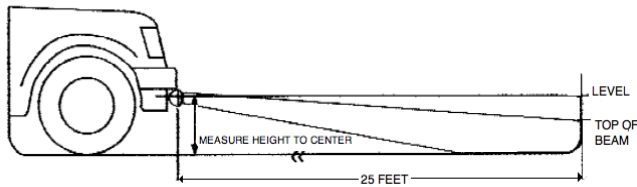
### Fog Light Aiming

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 (picture 28).



Picture 28

**!** **NOTE:** Use only hand tools to adjust the fog light aiming screw. DO NOT use automatic tools, as they will damage the fog light

**Checklist** – these points MUST be checked to ensure quality installation

### Check System for Operation

### Check System for Operation

1. DRL will work at full power when ignition switch is ON. DRL will dim out to accent specifications when factory headlights are ON.
2. If DRL switch position is off, DRL will not work at any time.



**Check**

Accessory Functions Checks

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- DRL function.....
- Fog Light function.....
- All Panels snapped into place.....
- Battery Terminal.....
  
- Operation Guide.....

Vehicle Function checks

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- Check functions all switch functions

**Look For:**

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....

Refer to vehicle owners manual.

Loose panels and switches.

Re-torque battery terminals to 48 in-lb for option 1 and 67 in-lb for option 2.

Place DRL operation guide inside glove box.