

**Southeast Toyota Distributors, LLC
Accessory Installation Instructions**

**2018 Rav4
LED Fog Light & DRL 2in1**

Year & Model:	2018 Rav4
Part Number:	00016-00171
Accessory Code:	LD4010
PIO / DIO:	PIO / DIO
Business Partner:	J80

Conflicts

Note: Vehicles w/o factory fog lights, Models 4430, 4432, 4435, 4474 & 4476

General Applicability

Fits Models:
Note: All 2018 models with the exception of models 4430, 4432, 4435, 4474 & 4476

Additional Items Required For Installation

Item#	Description:
1.	N/A

Sequence of Application

Item#	Accessory:
1.	N/A

SPECIALNOTE: Installation Sequences

After TMS & 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 & 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.

Recommended Tool

Safety Items	
Safety Glasses	
Electrical Tape	
Special Tools	
N/A	
Installation Tools	
10mm Wrench	
Phillip Screw Driver	
Pliers	
Torque Wrench	48 & 67in lbs.
90degree Phillips Ratchet Screw Driver	
Side Cutter	
Special Chemicals	
3M Silicon Sealant	

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.

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Kit/Hardware Bag Contents:

Item #	Quantity	Description
1.	2	Fog Light + DRL Housing
2.	1	Driver Box
3.	1	Harness Bag
4.	1	User's Card
5.	1	Switch
6.	1	Hood Wire Harness
7.	1	Cabin Wire Harness
8.	1	Relay
9.	25	Wire ties
10.	1	14" Wire tie
11.	2	Black T-Taps

Parts for Installation:

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 a 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, re-checking torque procedure, etc.).
- Vehicle Disassembly/ Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

Item #	Quantity	Description
1.	2	Fog + DRL Housings
2.	1	DRL Driver Box
3.	1	DRL Harness Bag
4.	1	DRL User’s Card
5.	1	DRL Switch



Image Key	Parts information		Warranty Information	
	Part Number	Description	Warranty Time	Labor Op. Code
N/A	00016-00171	LED Fog Light and DRL 2in1	N/A	N/A
A	00016-00171-01	Left Light Assembly	0.7	ALF011 or ALD011
B	00016-00171-02	Right Light Assembly	0.7	ALF011 or ALD011
C	00016-32260-04	Fog Light Relay	0.4	ALF031
D	00016-32270-03	LED Wire Harness	1.0	ALD051
E	00016-32270-05	LED Switch	0.3	ALD031
F	00016-32270-06	LED Driver Box	0.5	ALD041

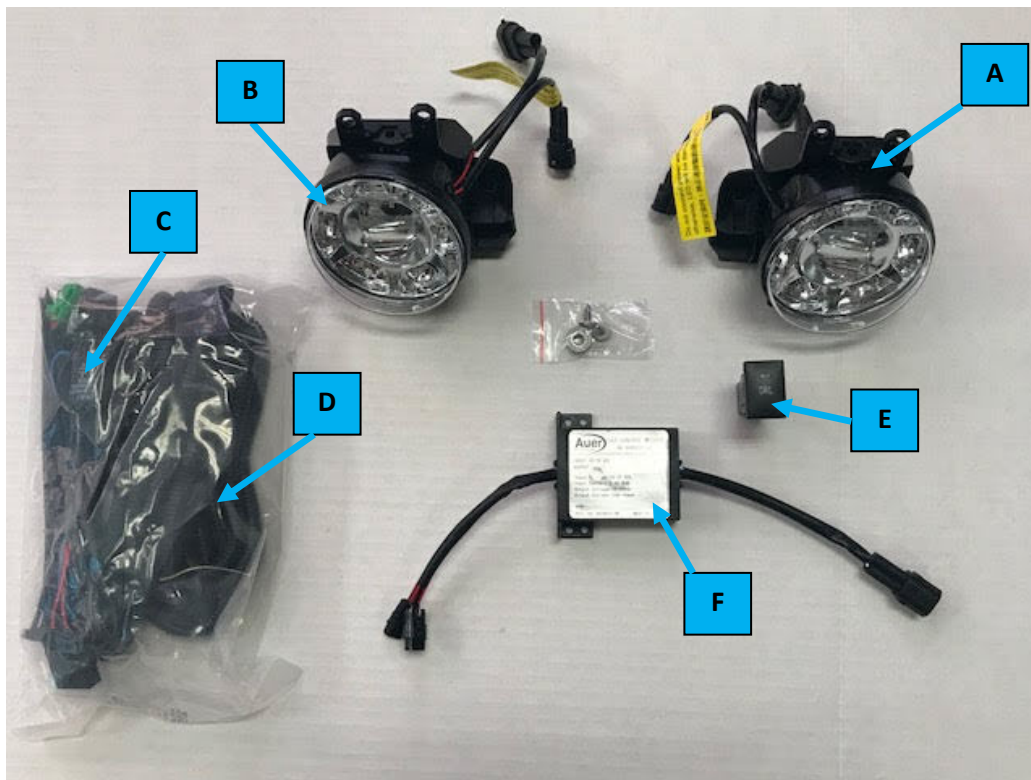
Notes:

- 1) Combo code A is applicable to ALF011 or ALD011 when replacing both sides for additional 0.3 hours labor.
- 2) ALF011 applicable to LED fog light defective condition in 2in1. ALD011 applicable to LED Daytime Running Light condition in 2in1.

Labor times include consideration for diagnosis and Administration time

If you are a dealer located outside of the Southeast Region, please contact the SET Accessory Warranty Department at (888) 851-2722 or email Accessory.Warranty@SEToyota.com for claim payment instructions.

Image:



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)



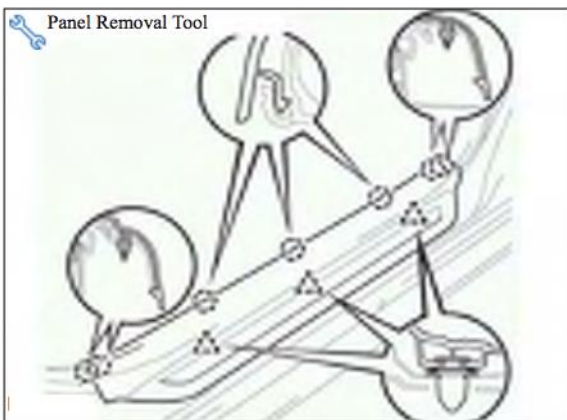
Picture 1



Picture 2: View from inside vehicle



Picture 2A: View from the engine compartment



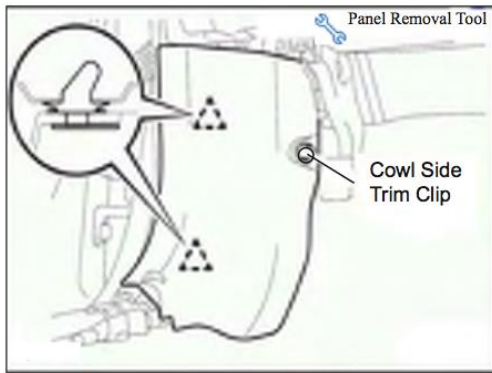
Picture 3

Vehicle Disassembly

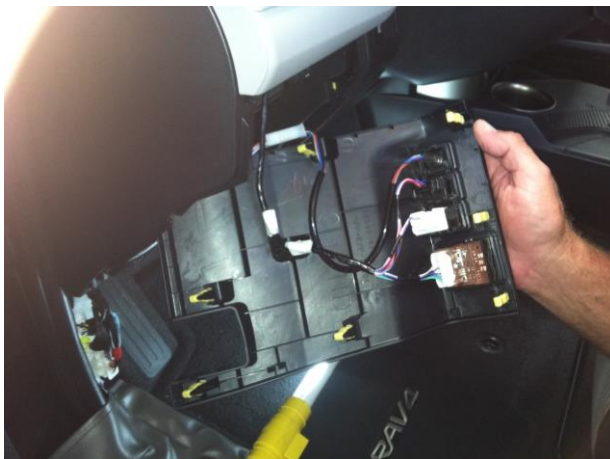
1. From inside the car, locate the large vehicle harness grommet on the left side. If accessible, cut the auxiliary wiring nipple off the grommet or cut 1/4" slit in grommet. Using fish tape pull the red, black, red-white and black-white wires through firewall. Note: Extra caution should be taken not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

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

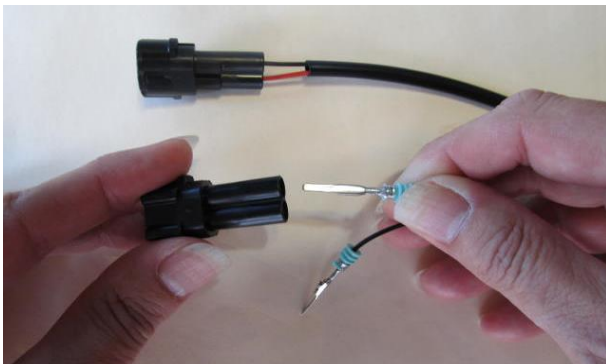
3. Remove driver side door scuff plate: Disengage with panel tool and remove. (pic.3).



Picture 4



Picture 5



Picture 6



Picture 7

4. 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).
5. Remove driver's side upper panel (pic. 5).

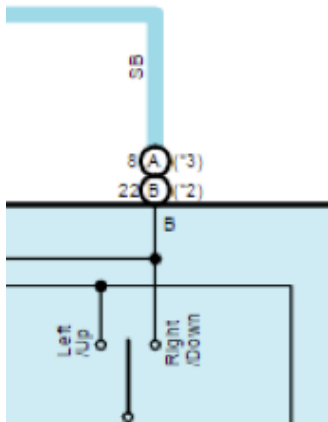
Vehicle Assembly Process:

6. 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.
7. 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).
8. Connect the driver box to the wire harness (make sure wire colors are aligned).
9. Using a 14" wire tie, secure the driver box and relay to the main harness of the junction block (pic. 7).



Picture 8

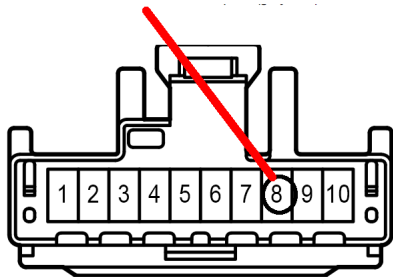
- Secure the black wire with a ring terminal from DRL harness to ground location behind kick panel (picture 8).



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

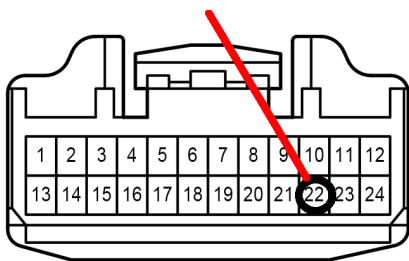


Note: If vehicle is made in Canada (TMMC), then follow step 12. If vehicle is made in Japan (TMC), then follow step 13. In the VIN Number of the vehicle, the letter “J” stands for Japan (TMC) and “C” for Canadian (TMMC).



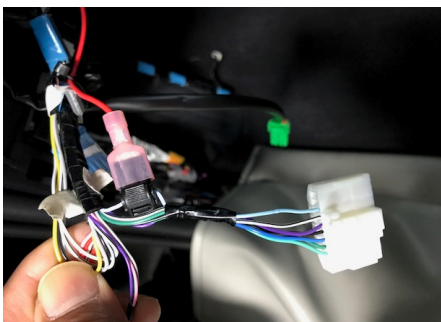
Picture 9A: Mirror control switch G39
NOTE: For Canada made vehicles ONLY

- 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).

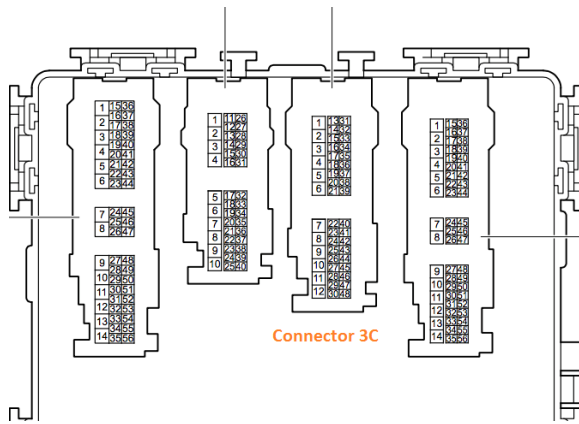


Picture 10: Mirror control switch G151
NOTE: For Japan made vehicles ONLY

- (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).

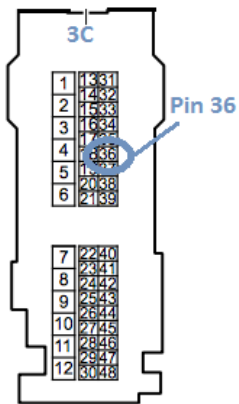


Picture 11

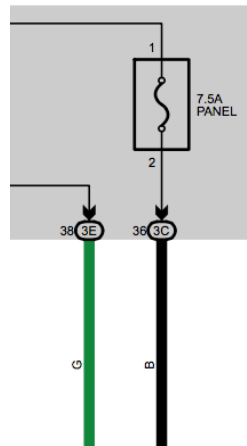


Picture 12a

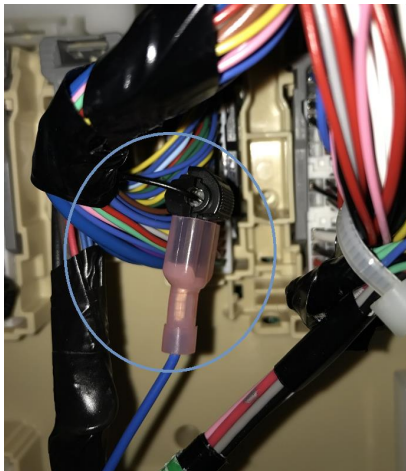
- 13. At J/B Block, Connector 3C, Pin 36, black wire, install a black T-Tap to the BLACK wire. Then connect the blue wire from the DRL harness to the t-tap. (Pictures 12a, 12b, 13 & 14)



Picture 12b

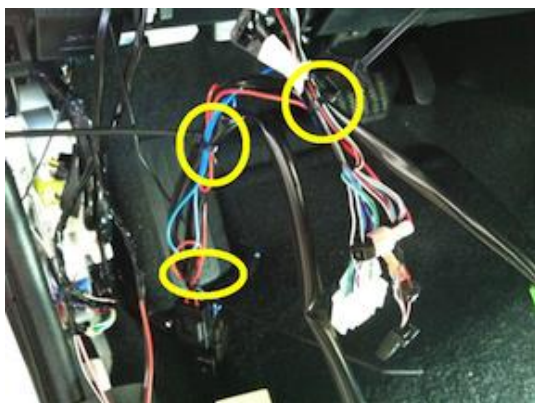


Picture 13

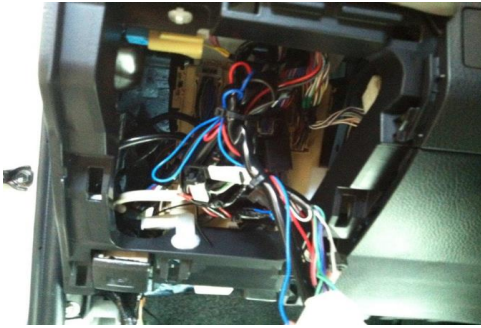


Picture 14

- 14. Secure any excess wire from t-taps, fuse and relay to main wire harness (picture 15)



Picture 15



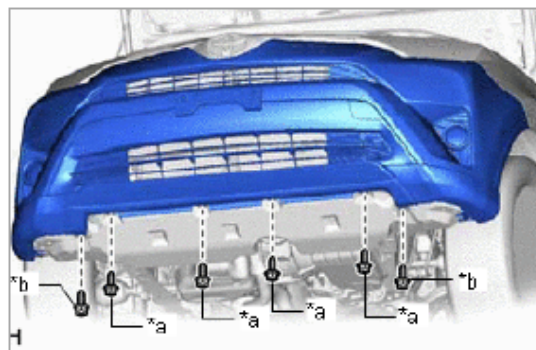
Picture 15A



Picture 16



Picture 17



Picture 18



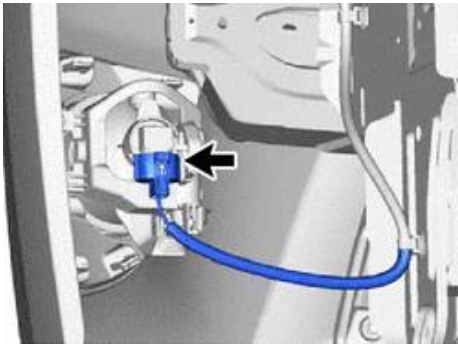
Picture 19

15. Secure fuse and relay to main wire harness. Make sure to leave enough lead on the switch green connector. (pic. 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.
19. Reinstall panels and connectors.

ENGINE COMPARTMENT

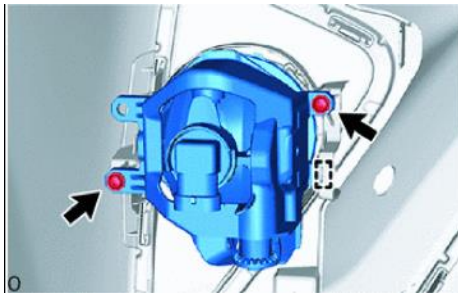
20. Loosen LH and RH front fender splash shields by removing screws (picture 17).
21. Remove the center splash guard, by removing bolts, screws and push pins at the bottom of front bumper cover (picture 18)

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



Picture 20

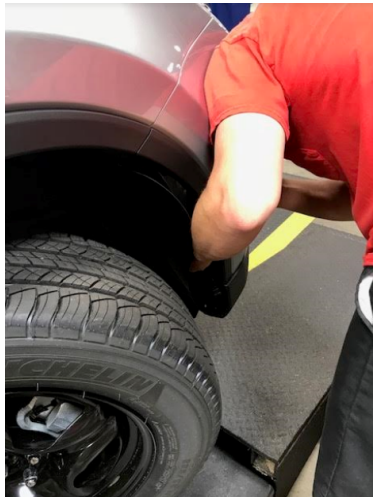
23. Using a small Philips screwdriver, remove the factory fog lights: Remove the 2 Philip screws per light (do not discard the screws, as they will be used to mount 2in1 light). If needed, use a 90° ratchet screwdriver to remove the passenger side fog light. (Picture. 20 & 21)



Picture 21



24. "Optional" If removing the fog lights through the splash shield is too difficult, you may loosen the fender liners to gain access (picture 22).

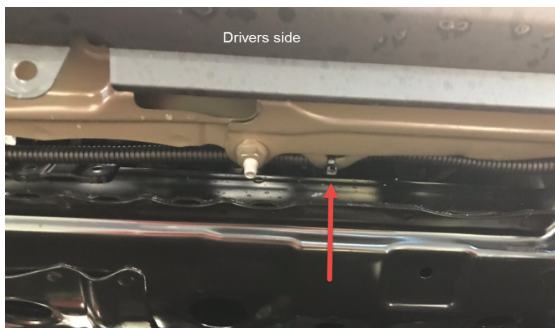


Picture 22



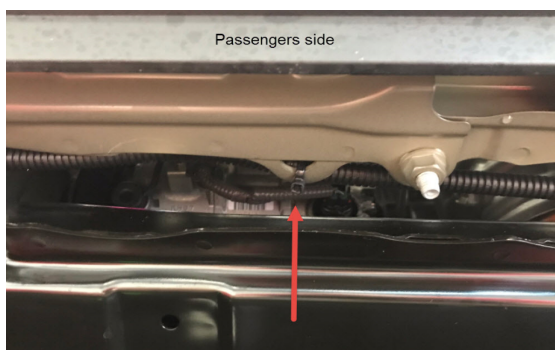
Picture 23

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



Picture 24

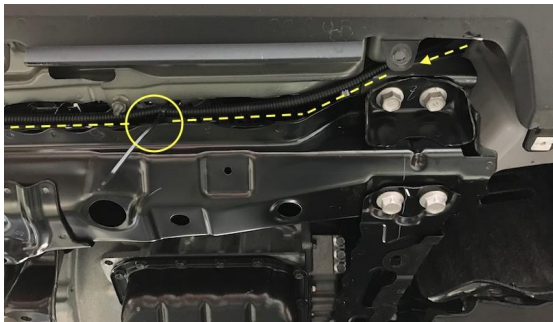
26. On the driver side fog light area, retrieve the DRL wire harness that was routed on step 3.



Picture 24A

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).



Picture 24B



Picture 24C



Picture 25

29. Secure wire harness behind lower bumper sheet metal (pics. 24B & 24C).

30. 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).

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

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



Picture 26



Picture 27

33. Reinstall lower splash shields.

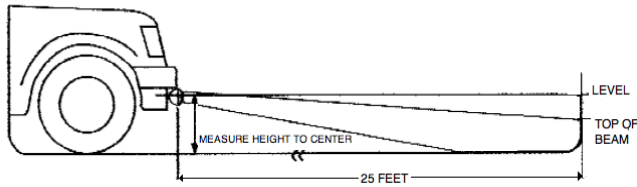


33. Reconnect negative battery terminal. Torque terminal to 48 in-lbs for option 1 and 67 in-lbs for option 2.

34. Adjust LED fog lights.

35. Print Warranty Statement and place in glove box, DIO only.

Fog Light Aiming



Picture 28

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).



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

Look For:

Accessory Functions Checks

- | | |
|--|--|
| <p>✓ DRL function.....</p> <p>Fog Light function.....</p> <p>All Panels snapped into place.....</p> <p>✓ Battery Terminal.....</p>
<p>✓ Operation Guide.....</p> <p>✓ Warranty Statement.....</p> | <p>Refer to vehicle owners manual.</p>
<p>Loose panels and switches.</p> <p>Re-torque battery terminals to 48 in-lb for option 1 and 67 in-lb for option 2.</p>
<p>Place DRL operation guide inside glove box.</p> <p>Place Warranty Statement in glove box, DIO only.</p> |
|--|--|

Vehicle Function checks

- ✓ Check functions all switch functions

LIMITED WARRANTY – SOUTHEAST TOYOTA

SOUTHEAST TOYOTA DISTRIBUTORS, LLC ("we," "our" and "us") provides the following limited warranty on our accessories, excluding tires, ("Accessories" or "Accessory") installed on a Toyota. This limited warranty is not provided by and does not bind or provide benefit to the vehicle dealer, the manufacturer, or Toyota Motor Sales, U.S.A., Inc. This limited warranty does not apply to tires; please consult the tire manufacturer and/or its materials accompanying the vehicle for any warranty terms concerning tires. This limited warranty also does not apply to ToyoGuard Exterior Paint Sealant and ToyoGuard Interior Protector; please consult the ToyoGuard Limited Warranty Certificate for the warranty terms concerning those products.

SCOPE OF LIMITED WARRANTY:

A. Protection:

- i. **Accessories Installed by Southeast Toyota Distributors, LLC on a new Toyota vehicle.** We warrant that, for a period of 36 months or 36,000 miles, whichever occurs first, we will repair or replace (includes labor), free of charge, any defect in such an Accessory due to faulty material or workmanship, or, at our option, provide a full refund of the purchase price of the Accessory. The warranty period begins on the vehicle's In-Service Date, which is the first date the new vehicle is either delivered to an ultimate purchaser, leased, or used as a company car or demonstrator. Accessories installed by Southeast Toyota Distributors, LLC are identified on the vehicle's window sticker (Monroney Label).
- ii. **Accessories Installed by a Toyota Dealer on a Toyota vehicle.** We warrant that, for 12 months, regardless of mileage, from the date such an Accessory was installed on the vehicle or the remainder of the Toyota new vehicle warranty, whichever is longer, we will repair or replace (includes labor), free of charge, any defect in the Accessory due to faulty material or workmanship, or, at our option, provide a full refund of the purchase price of the Accessory. For a new vehicle, the warranty period begins on the vehicle's In-Service Date, which is the first date the new vehicle is either delivered to an ultimate purchaser, leased, or used as a company car or demonstrator.
- iii. **Accessories purchased from a Toyota Dealer but not installed by the Toyota Dealer.** We warrant that, for a period of 12 months, regardless of mileage, from the date the accessory was purchased, we will repair or replace (does not include labor), free of charge, any defect in the Accessory due to faulty material or workmanship, or, at our option, provide a full refund of the purchase price of the Accessory.

B. Limitation of Warranty. This limited warranty does not apply to, and we will not repair, replace, or reimburse you for: (1) wheel balancing and wheel alignments, except for one wheel balancing or alignment during the first 12 months or 12,000 miles, whichever occurs first, from the vehicle's In-Service Date, as defined above, (2) abrasions or dents, whatever their cause, and any failure or damage resulting directly or indirectly from accidents, collisions, impacts from foreign objects, fire, theft, larceny, explosion, malicious mischief, vandalism, civil commotion, riots, war, or any other similar causes, (3) any failure or damage resulting directly or indirectly from lightning, windstorms, hail, water, floods, subfreezing temperatures, airborne chemicals, tree sap, dust, salt, and any other environmental conditions or similar causes, (4) any failure or damage caused by: (a) a failure of any part, other than the Accessory, (b) any misuse, abuse, improper towing, negligence or lack of maintenance of the vehicle or Accessory, (c) the alteration, modification or repair of the Accessory by anyone other than persons expressly authorized by us to perform such alteration, modification or repair, or (d) the use of the vehicle for commercial purposes, competitive driving or racing, (5) any failure or damage, if the Accessory has not been installed according to instructions, (6) any failure or damage occurring outside of Canada, the United States of America, its territories or possessions, (7) except to the extent required by the state whose laws govern this limited warranty, any consequential, secondary, or unreasonable costs that may be suffered as a result of the need to repair or replace the Accessory, including without limitation any loss of use of the vehicle, road service, towing, storage charges, inconvenience, loss of wages and/or income, additional expense incurred, loss of transportation, rental car expense, or any derivative damage to persons or things other than the Accessory, including other parts of the vehicle, or (8) liability for damage to property or for injury to or death of any person, arising out of the operation, maintenance or use of your vehicle whether or not related to the covered Accessory.

C. Exclusive Remedy. If there is a valid claim under this limited warranty for a defect due to faulty material or workmanship in the Accessory, we will, at our option, either: (i) repair, (ii) replace or (iii) provide a full refund of the purchase price of the Accessory. We have no other obligations under this limited warranty. Refunds will be made to the vehicle owner. If the vehicle is leased, the refund will be made to the leasing company.

HOW TO MAKE A CLAIM: In the event of a warranty claim, please contact the nearest Toyota dealer to arrange for repairs. The dealership must receive our prior authorization before making repairs covered by this limited warranty. The dealer will contact Southeast Toyota Distributors, LLC at 1-888-851-2722, select option #5 (Warranty Department), then option #4 (Repairs), for instructions on processing a warranty claim, if they are not already familiar with the process. If you have any questions or concerns regarding repairs covered by this limited warranty, please contact our **Customer Assistance Hotline at 1-800-301-6859**.

OUR DISPUTE RESOLUTION PROGRAM: Your satisfaction is our highest priority. In keeping with that focus, in the event that an issue arises related to this Limited Warranty, we invite you to call our Customer Assistance Hotline at 1-800-301-6859 to discuss it. In most cases, we expect that a satisfactory resolution of your issue can be reached through engagement with that Department. If our Customer Loyalty Department is unable to resolve your issue to your satisfaction, we offer a dispute resolution program administered by the National Center for Dispute Settlement (NCDS) ("the Program"). The purpose of the Program is to resolve disputes in an informal setting before an impartial arbitrator. The Program is free of charge to you (although you must bear the cost of any expert witness or attorney you elect to employ). You are required to complete the Program before exercising rights or seeking remedies under the federal Magnuson-Moss Warranty Act, 15 U.S.C. § 2301 et seq. ("the Act"). If you choose to seek remedies that are not created by the Act, you are not required to use the Program before pursuing such remedies – although the Program is still available to you to resolve the dispute. When utilizing the Program, you will need to provide (a) the vehicle identification number of your vehicle, (b) the identity of your selling and servicing dealerships, (c) the mileage on your vehicle at relevant times, (d) the date and nature of any relevant repairs, (e) legible copies of repair orders and other relevant documents, (f) a summary of the unresolved issue and the requested action, and (g) your contact information. In most cases, the dispute resolution process under the Program will be completed within forty (40) days of your submission of your request and will consist of steps such as an initial eligibility determination, an opportunity for you and us to submit information in writing relating to your claim, an oral hearing, and a decision from the arbitrator. A decision will be binding on you only if you choose to accept it. You may submit a request to NCDS by telephone at their toll free number: (877)-276-8848 or in writing at P.O. Box 463196, Mt. Clemens, MI 48046. You may obtain additional information regarding the Program at www.ncdsusa.org. In the event that the NCDS does not exist or no longer handles disputes for us at the time that you seek to submit a request, you may contact our **Customer Assistance Hotline at 1-800-301-6859** to obtain current information about our dispute resolution programs.

GENERAL LIMITATION OF WARRANTY: THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES OR LIABILITIES. IN NO EVENT SHALL WE BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY. SOME STATES DO NOT ALLOW THE EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE INFORMATION OR EXCLUSION MAY NOT APPLY. NO EXPRESS WARRANTY OF FITNESS OR MERCHANTABILITY IS GRANTED BY THIS LIMITED WARRANTY. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THOSE DESCRIBED IN THIS DOCUMENT. ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH MAY BE APPLICABLE BY OPERATION OF LAW SHALL BE LIMITED TO THE PERIOD OF THIS WRITTEN LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY. THIS LIMITED WARRANTY PROVIDES SPECIFIC LEGAL RIGHTS, AND THERE MAY BE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, MUST BE BROUGHT WITHIN A PERIOD NOT EXCEEDING 12 MONTHS AFTER EXPIRATION OF THIS LIMITED WARRANTY. THE REMEDIES SPECIFIED HEREIN AND THOSE SPECIFIED BY APPLICABLE LAW ARE THE ONLY REMEDIES AVAILABLE. WE ASSUME NO OTHER OBLIGATION OR RESPONSIBILITY WITH REGARD TO THE ACCESSORY. WE NEITHER ASSUME, NOR AUTHORIZE ANYONE TO ASSUME FOR US, ANY ADDITIONAL LIABILITY IN CONNECTION HEREWITH.

GENERAL: This limited warranty describes the complete and exclusive rights that result from the purchase of Accessories. No oral representations or statements may be relied upon. This limited warranty may not be amended or modified, and additional rights may not be granted, unless in a written statement signed by one of our officers. This limited warranty shall be governed by the laws of the state where the vehicle is purchased, excluding laws concerning conflicts of law. We may delegate the performance of our duties and obligations and assign our rights and benefits hereunder. For inquiries regarding this limited warranty, we can be contacted directly at **Customer Assistance Hotline at 1-800-301-6859**, or by mail to: **Southeast Toyota Distributors, LLC, Attention: Customer Loyalty Department, 100 Jim Moran Boulevard, Deerfield Beach, Florida 33442.**