

TOYOTA

4Runner

2016

LED Illumination Package (Interior and Exterior)

Part Number: 00016-00069

Accessory Code: LL1000



Conflicts

Note: Power Running Boards

Kit Contents

Item #	Quantity Req'd	Description
1	4	Puddle Lights and Harnesses
2	1	Control Module
3	1	Power Harness
4	1	Hardware bag
5	2	Foot-well Lights
6	1	Foot-well Harness
7	4	Mounting Brackets

Hardware Bag Contents

Item#	Quantity Req'd.	Description
1	15	Wire Ties
2	4	Foil Tape
3	5	Foam Tape
4	14	Plastic Rivets
5	3	Red T-Taps
6	2	Black T-Tap
7	1	Blue T-Tap
8	8	Mounting Bracket Bolts
9	8	Mounting Bracket Nuts

Additional Items Required For Installation

Item #	Quantity Req'd	Description
1	If needed	Body Clip 76924-13020

Recommended Tools

Safety Tools	
Safety Glasses	
Special Tools	
Installation Tools	
Trim Removal Tool	Right Angle Drill
Pliers	Rivet Gun
Drill	Tape Measure
7/16" Drill Bit	Torque Wrench
11/64" Drill Bit	3mm Allen wrench
1/4" Drive Ratchet	Fish Tape
7 & 10mm 1/4" Drive Sockets	Utility Knife
Special Chemicals	
VPC Approved Sealant	

Color Applicability/Trim Level

[illegible]

General Applicability


All Models without factory power running boards


Recommended Sequence of Application


Item #	Accessory	
1	LED Illumination	
2	Step/Running Boards	
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: 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.

Procedure

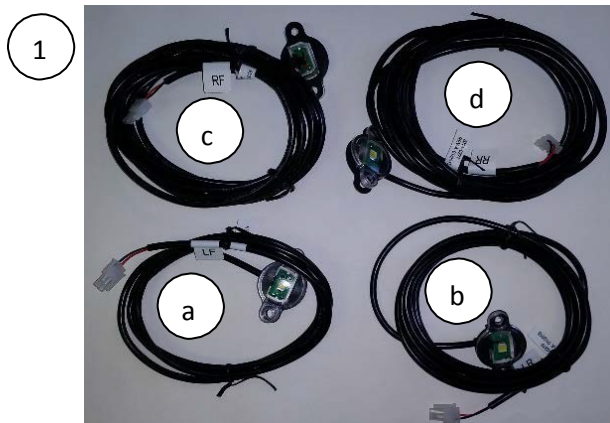
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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	Part Number
1.	4	Puddle Lights and Harnesses	
(a)	1	LF (4.9') Puddle Light	00016-00064-05
(b)	1	LR (7.8') Puddle Light	00016-00064-06
(c)	1	RF (10.8') Puddle Light	00016-00064-07
(d)	1	RR (13.8') Puddle Light	00016-00064-08
2.	1	Control Module	00016-00064-04
3.	1	Power Harness	00016-00064-01
4.	1	Foot-well Harness	00016-00064-02
5.	2	Foot-well Lights	00016-00064-03
6.	4	Puddle Light Mounting Brackets	00016-00069-01
7.	1	Hardware Bag	





VEHICLE PREPERATION:

1. Disconnect the negative battery cable for 90 seconds before beginning installation, to avoid unintended air bag deployment. Note and record any anti-theft radio codes prior to disconnecting.
2. Remove 7 rocker retainer clips and discard any damaged retainer clips (Figure 1).

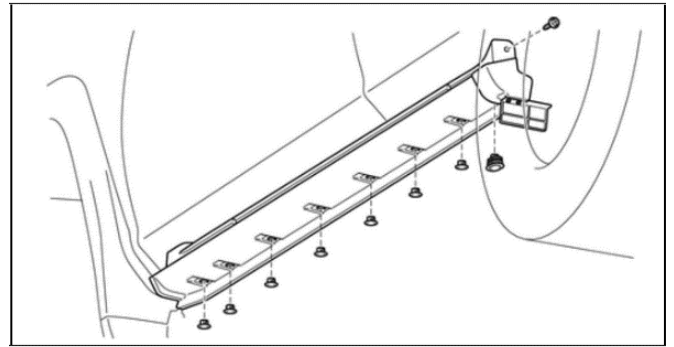


Figure 1

NOTE: Retainer part # 76924-13020

HINT:

- Use the same procedure for both the RH and LH sides.

NOTE: Insert a trim tool to use as a wedge so that rocker panel is not damaged during drilling (Figure 1b).



Figure 1b

3. Measure and drill locations for the rear light pod brackets using 11/64" drill bit. These should be centered approximately 13" forward of the end of the pinch weld (Figure 2).
4. Measure and drill locations for the front light pod brackets using 11/64" drill bit. The brackets should be in line with the second grommet from the front (Figure 3).
5. Install all 4 mounting brackets using included bracket hardware. Brackets should be in-board of pinch weld, with bolts being fed through the pinch weld then the bracket.



Figure 2

NOTE: Apply VPC approved sealant to all pinch weld holes before mounting brackets.

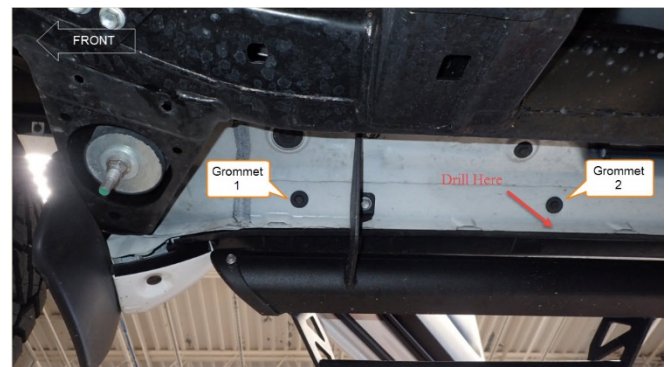


Figure 3

6. Mount appropriate light in corresponding location (RR-Right Rear) securing in place with plastic rivets.

NOTE: Arrow on puddle light lens must face out, away from vehicle.

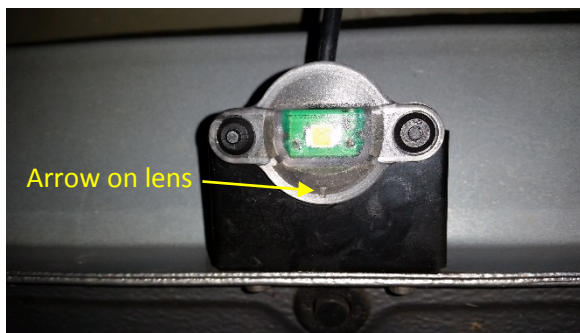


Figure 4a



Figure 4b

7. Route harnesses forward towards the front floor pan drain plugs.

(a) On *Limited* models wire tie harnesses to the rocker panel brackets, (Figures 4a & 4b).



Figure 5a

(b) On all other models, route harnesses along outside edge of rocker panel molding, outside of clips (Figure 5a). Route rear harnesses outside of the front lights, then route both harnesses forward pass the front clip exiting towards the front end of the rocker molding, (Figure 5b).



Figure 5b

8. Remove Front Door Scuff Plate (LH)

- (a) Put protective tape around the door scuff plate assembly LH (Figure 6).

Text in Illustration

*1	Protective Tape
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- (b) Using a screwdriver, detach the 4 clips, 10 claws and 2 guides to remove the door scuff plate assembly LH (Figure 6).

HINT:

Tape the screwdriver tip before use.

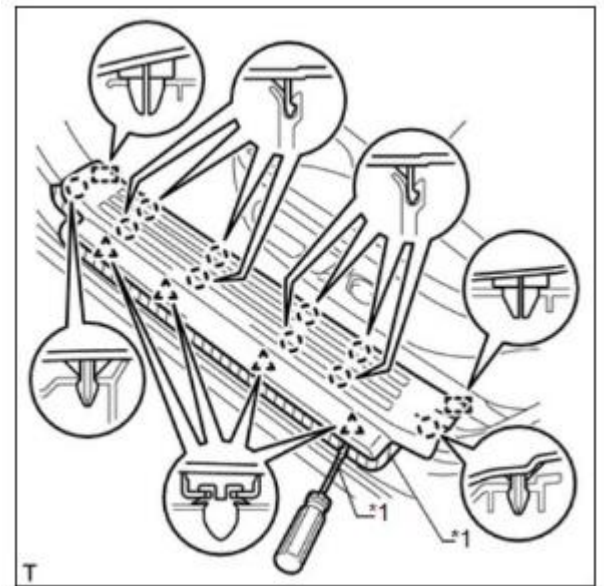


Figure 6

9. Remove Cowl Side Trim Board LH

- (a) Remove the clip (Figure 7).
- (b) Detach the clip and claw to remove the cowl side trim board LH.

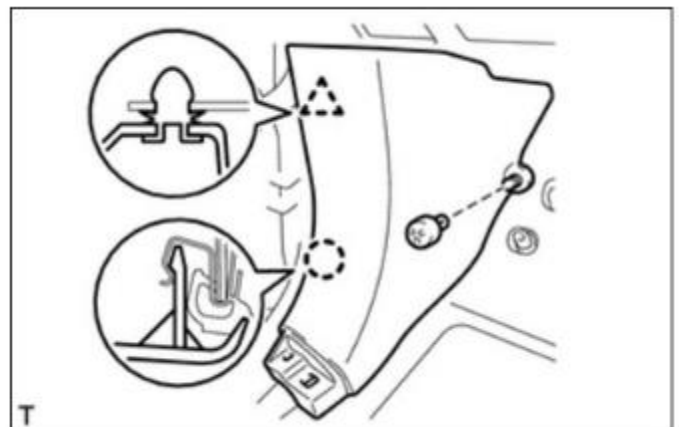


Figure 7

10. Remove Front Door Scuff Plate and Cowl Side Trim Board RH.

HINT:

Use the same procedure as for the LH side.

11. Remove left and right front drain plugs, located directly above frame rails (Figure 8).

12. Using a sharp blade, cut an 'X' in the middle of each drain plug, in order to route the harnesses through and into the vehicle.

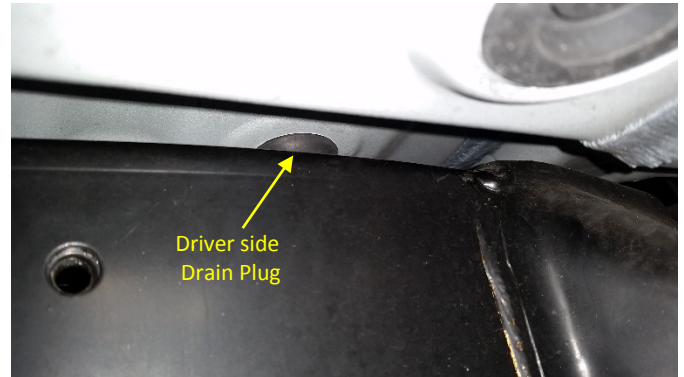


Figure 8

13. Lift carpet to gain access to the drain holes and route puddle light harnesses up and into the vehicle.

14. Re-install drain plugs, with both front and rear harnesses threaded through the plugs (Figure 9).

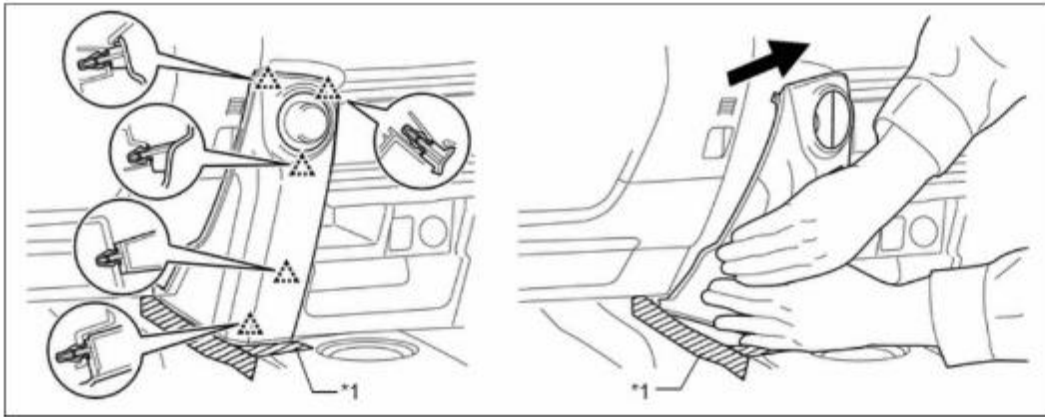


Figure 9

15. Seal harnesses to drain plugs using VPC approved sealant. Make sure to work sealant completely around wires for a water tight seal.

16. Remove No. 1 Instrument Cluster Finish Panel Garnish

- (a) Put Protective tape around the No. 1 instrument cluster finish panel garnish.
- (b) Grip the No. 1 instrument cluster finish panel garnish and pull it diagonally upward toward the rear to detach the 5 clips and remove the No. 1 instrument cluster finish panel garnish.



Text in Illustration

*1	Protective Tape
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17. Remove Front No. 1 Console Box Insert.

- (a) Detach the 2 clips and 2 guides to remove the front No. 1 console box insert (Figure 10).

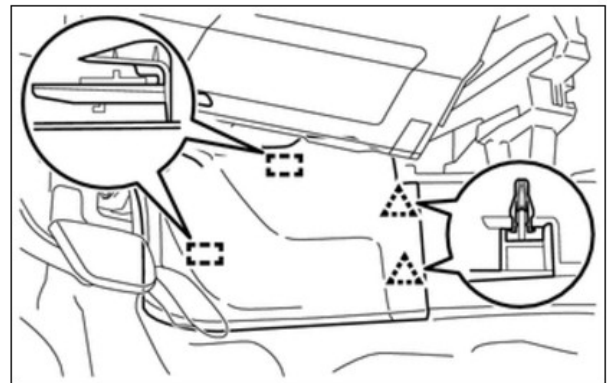


Figure 10

18. Remove Front No. 2 Console Box Insert

- (a) Detach the 2 clips and guide to remove the front No. 2 console box insert (Figure 11).

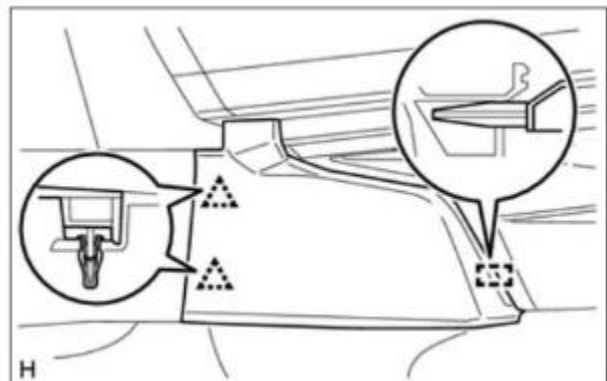


Figure 11

19. Disconnect the front door opening trim weather strip LH.

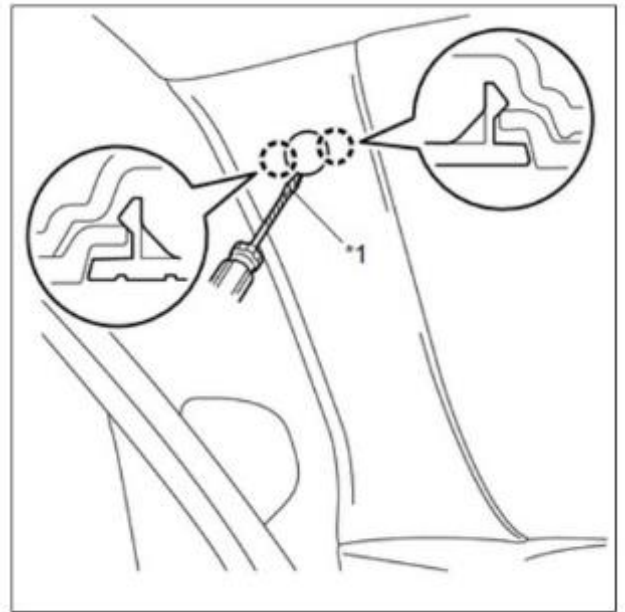


Figure 12a

20. Remove Front Pillar Garnish LH.
- (a) Using a screwdriver, detach the 2 claws to remove the front pillar garnish cover LH (Figure 12a).

Text in Illustration

*1	Protective Tape
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HINT:

Tape the screwdriver tip before use.

- (b) Remove the bolt (Figure 12b).

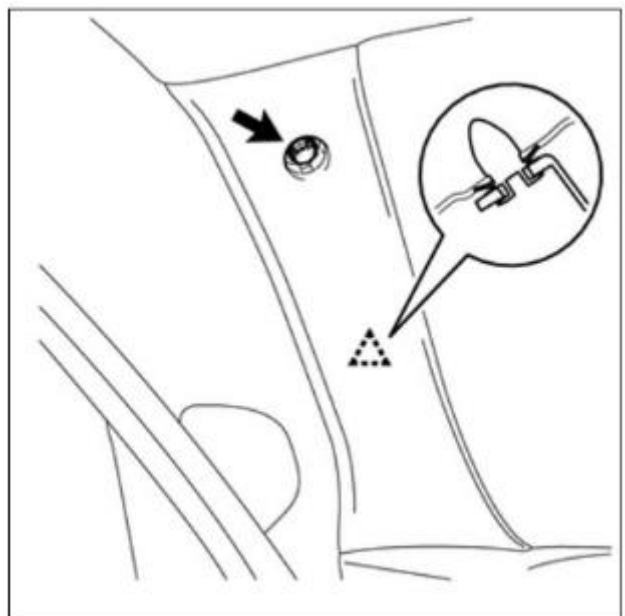


Figure 12b

- (c) Detach the clip.

- (d) Detach the 2 guides to remove the front pillar garnish LH (Figure 13).

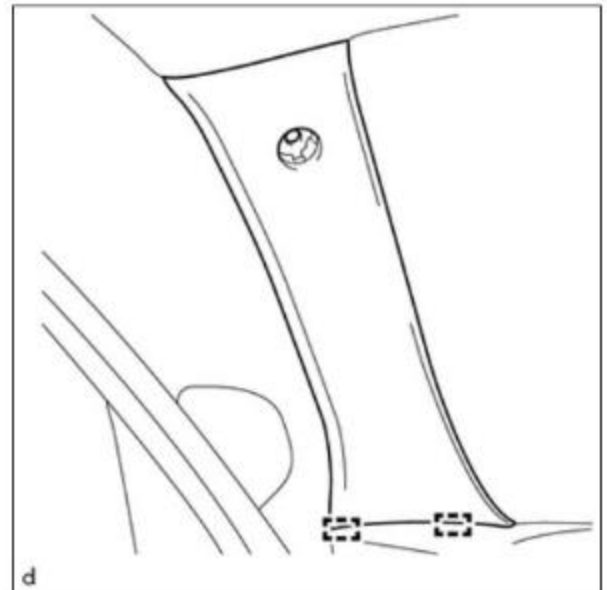


Figure 13



21. Remove Lower Instrument Panel Finish Panel Sub-assembly (Figure 14).

- (a) Using a screwdriver, detach the 2 claws to open cover.

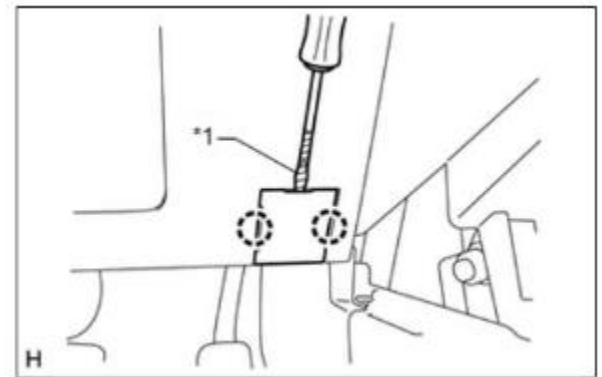


Figure 14

Text in Illustration

*1

Protective Tape

HINT:

Tape the screwdriver tip before use.

- (b) Remove the 2 bolts.
- (c) Detach the 13 clips and 2 guides.
- (d) Disconnect each connector and hood lock control cable assembly and remove the lower instrument panel finish panel sub-assembly.

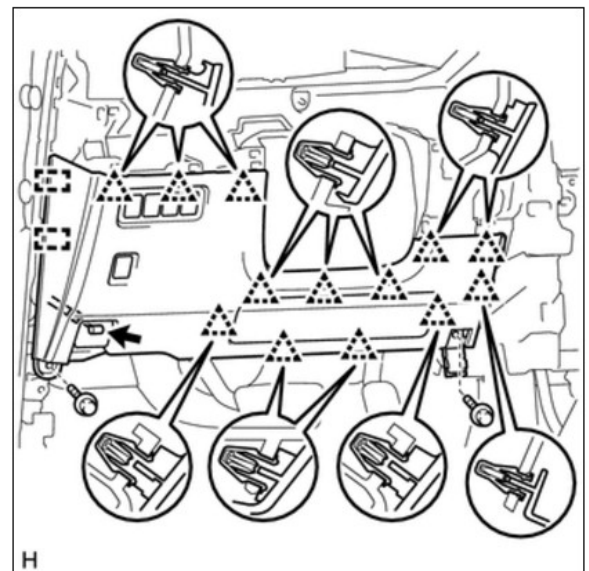


Figure 15

22. Remove the Passenger Side No. 2 Instrument Panel Under Cover Sub-assembly (Figure 16).

(a) Detach the 3 clips and 2 guides to remove the No. 2 instrument panel under cover sub-assembly.

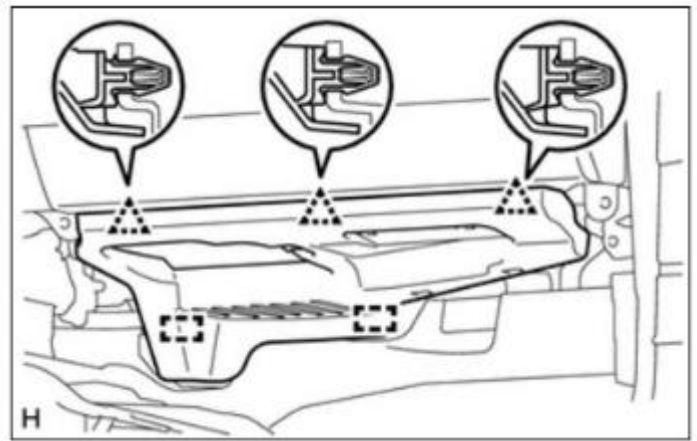


Figure 16

23. Drill a 7/16" hole in the injection release point shown in Figure 17.

24. Align foot-well light with connector in hole and flat side facing seats. Using a 11/64" drill bit, drill mounting holes. Attach using included rivets.



Figure 17

25. Mark where driver side foot-well light will be mounted, 1" from the protrusion and 1/2" from the back edge (Figure 18).

26. Drill a 7/16" hole where the foot-well light will be mounted.

27. Align light with the connector through the hole and flat side facing the seats. Using an 11/64" drill bit, drill mounting holes. Mount light using included rivets.



Figure 18

28. Route passenger side puddle light harnesses towards the center console, under foam footboard.

29. Fish harnesses over to driver side foot-well.

30. Route driver side harnesses under foam foot-board towards kick panel.



Figure 19

31. Route the long side of the foot-well power harness from the driver side to the passenger side, securing all passenger side harnesses to the E-brake cable (Figure 19 & 20).

32. Drop the fused end of the power harness from the lower corner of the A-pillar down towards the driver's kick panel, securing in existing wire locations.



Figure 20

33. Using a Red T-tap, connect the **Red** wire from the puddle light power harness to the **Red** wire in **Pin 13** of the **FS1** connector in the A-pillar (Figure 21).

NOTE: All Connectors Pin Side View

34. Using a Red T-tap, connect the **Black** wire of the puddle light power harness to the **Green** wire in **Pin 15** of the **FS1** connector in the A-pillar (Figure 21).

35. Connect the **Red** wire from the foot-well harness to the **Red** wire from the puddle light power harness. Connect the **White** wire from the foot-well harness to the **White** wire from the puddle light harness.

36. Using a Black T-tap, connect the **Yellow** wire to the **Pink** wire in **Pin 8** of the **F4** remote mirror connector (Figure 22).

37. Using a Red T-tap, connect the **Black** wire to the **White/Black** wire in **Pin 7** of the **F4** remote mirror connector (Figure 22).

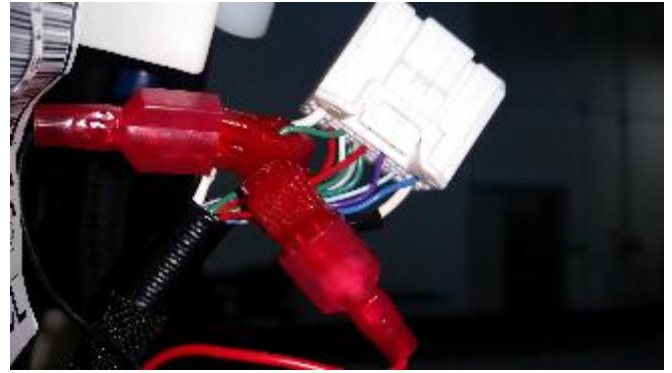


Figure 21

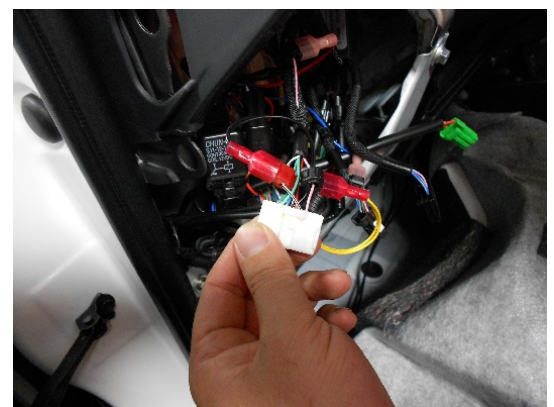
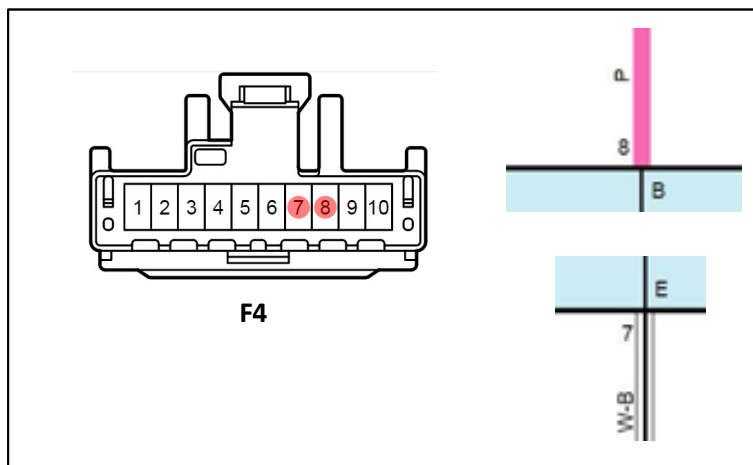
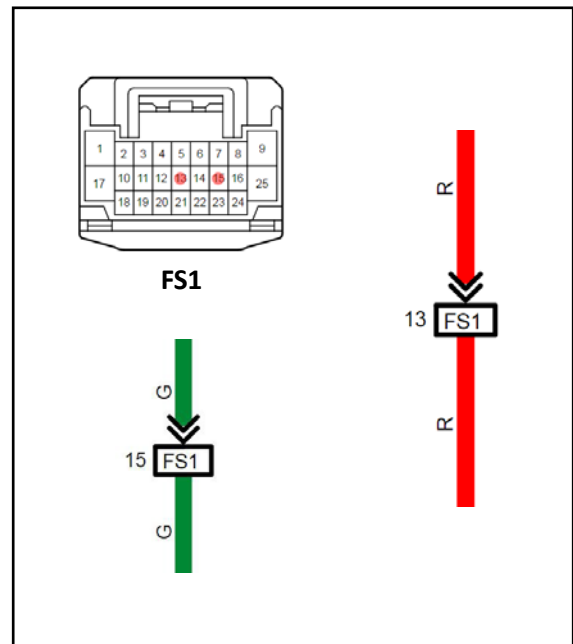


Figure 22

38. Bundle all excess harnesses and wire tie to upper end of E-Brake cable (Figure 23).

39. Connect all harnesses to the control module and mount to the factory harnesses in the driver side kick panel (Figure 24).

40. Reinstall No. 2 Instrument panel under cover sub-assembly with attached light and connect lamp.

41. Route additional foot-well connector to driver side foot-well light, connect light, and reinstall lower instrument panel finish panel sub-assembly. Wire tie harness to panel (Figure 25).



Figure 23



Figure 24



Figure 25

TESTING AND REASSEMBLY



1. REINSTALL ALL TRIM PANELS IN THE ORDER OF REMOVAL TAKING SPECIAL CARE TO MAKE SURE ALL HARNESSSES AND WIRING ARE PROPERLY SECURED. MAKE SURE HARNESSSES ARE NOT PINCHED OR BOUND BY TRIM PIECES.



2. RECONNECT NEGATIVE BATTERY CABLE AND TORQUE TO 48 IN/LBS.

NOTE: REINSTALL BATTERY HOLD DOWN BRACKET ASSEMBLY, IF REMOVED. TORQUE BOTH THE J-HOOK(S) NUT(S), AND THE 10MM BOLT FOR THE BATTERY HOLD DOWN BRACKET TO 53 IN. LBS.

CHECKLIST - THESE POINTS MUST BE CHECKED TO ENSURE A QUALITY INSTALLATION

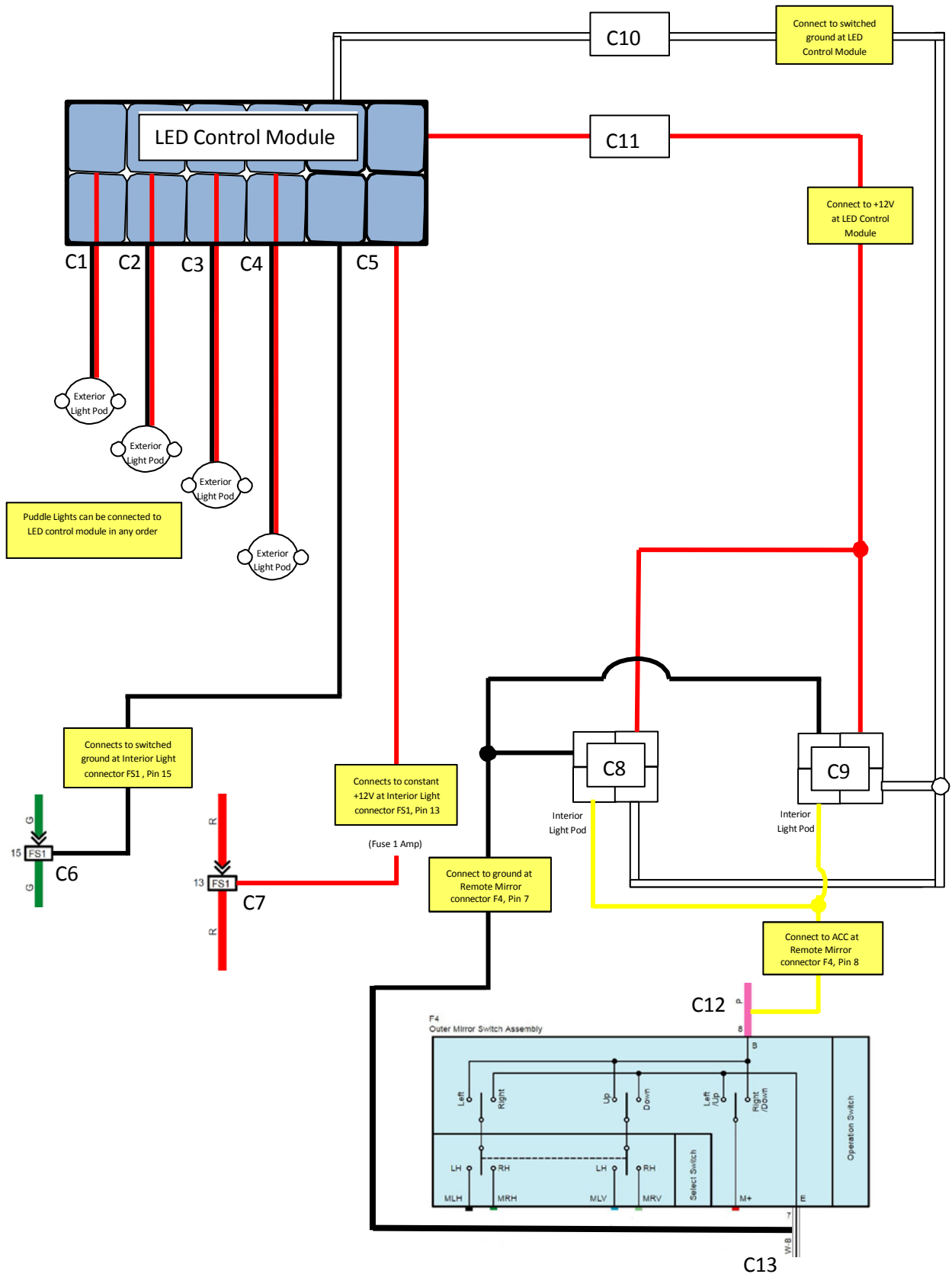
ACCESSORY FUNCTION CHECK

CHECK:	LOOK FOR:
Test for Full Light condition	Close all doors and lock vehicle, do foot-well and puddle lights go out? Unlock vehicle, do foot-well lights come on full brightness? Do puddle lights come on?
Test for Low Light condition	Start vehicle, do puddle lights go out? Do the foot-well lights dim to low level?

VEHICLE FUNCTION CHECK

VEHICLE FUNCTION:	VEHICLE FUNCTION DETAIL:
IGNITION	VERIFY THAT THE VEHICLE WILL CRANK.
SRS WARNING LIGHT	CONFIRM SRS WARNING LIGHT ILLUMINATES FOR APPROXIMATELY 6 SECONDS WITH THE IGNITION ON, AND THEN GOES OUT.

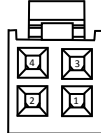
Block Diagram 4Runner Lighting Package





Connector C-1 thru C-4

Pin	Wire Color	Test Reference	Proper Orientation
1	Black	Pin 1 to Ground	Exterior LEDs (-)
2	Red	Pin 2 to Ground	Exterior LED (+)



Connector C5

Pin	Wire Color	Test Reference	Proper Operation
1	Black	Pin 1 to Ground	Approximately 0 VDC
2	Red	Pin 2 to Ground	Approximately 0 VDC when Dome Light is ON +12 VDC when Dome Light is OFF
3	White	Pin 3 to Ground	Approximately 0 VDC (when disconnected from control module)
4	Red	Pin 4 to Ground	Approximately 0 VDC (when disconnected from control module)

Connector C6



Pin	Wire Color	Test Reference	Proper Operation
1		Pin 1 to Ground	Approximately 0 VDC when Dome Light is ON +12 VDC when Dome Light is OFF

Connector C7



Pin	Wire Color	Test Reference	Proper Operation
1			+12 VDC

Connector C8 & C9



Pin	Wire Color	Test Reference	Proper Operation
1	Red	Pin 1 to Ground	+12 VDC
2	Black	Pin 2 to Ground	Approximately 0 VDC
3	White	Pin 3 to Ground	Approximately 0 VDC when Dome Light is ON +12 VDC when Dome Light is OFF
4	Yellow	Pin 4 to Ground	Approximately 0 VDC ignition switch OFF +12 VDC when ignition ON

Connector C10

Pin	Wire Color	Test Reference	Proper Operation
1	White	Pin 1 to Ground	Approximately 0 VDC when Dome Light is ON +12 VDC when Dome Light is OFF

Connector C11

Pin	Wire Color	Test Reference	Proper Operation
1	Red	Pin 1 to Ground	+12 VDC

Connector C12

Pin	Wire Color	Test Reference	Proper Operation
1	Yellow	Pin 1 to Ground	Approximately 0 VDC ignition switch OFF +12 VDC when ignition ON

Connector C13

Pin	Wire Color	Test Reference	Proper Operation
1	Black	Pin 1 to Ground	Approximately 0 VDC