

2016

LED Illumination Package (Interior and Exterior)

Part Number: 00016-00069

Accessory Code: LL1000



Conflicts

Note: None

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	Blue T-Tap
7	1	Sealing Putty
8	8	Mounting Bracket Bolts
9	8	Mounting Bracket Nuts

Additional Items Required For Installation

Item #	Quantity Req'd	Description

Recommended Tools

Safety Tools	
Special Tools	
Installation Tools	
Phillips Screwdriver	
Trim Removal Tool	Rivet Gun
Pliers	Tape Measure
Drill	Torque Wrench
5/32" Drill Bit	3mm Allen wrench
11/64" Drill Bit	Fish Tape
7/16" Drill Bit	Utility Knife
7 & 10mm Sockets/Ratchet	
Special Chemicals	
50/50 alcohol water mixture	
NPC Approved Sealant	

Color Applicability/Trim Level

[illegible]

General Applicability


2016 Tacoma


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 chemical, 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.).

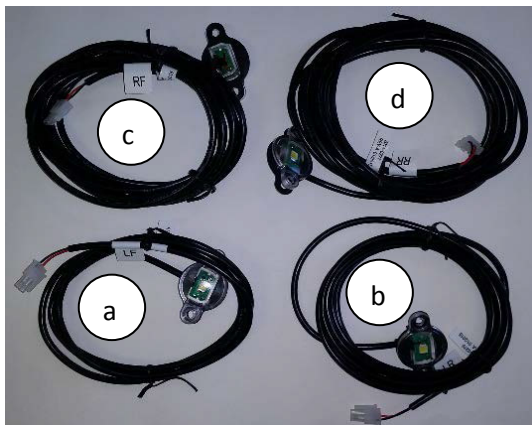
Battery Preparation: Remove the negative (-) battery terminal using a 10mm socket/ratchet before starting any disassembly.



Wait at least 90 seconds after disconnecting the cable from the neg (-) battery terminal to disable the SRS system.

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	

1



2



3



5



4



7



6





VEHICLE PREPERATION:

1. Measure and drill locations for the rear light pod brackets using 11/64" drill bit. These should be centered at the 3rd grommet from the rear on both C&D cab trucks (Figure 1).

NOTE: Flip bracket to the outside of the pinch weld and hold flush to the bottom to mark drill locations.

2. Measure and drill locations for the front light pod brackets using 11/64" drill bit. They should be centered 3rd grommet from the front (Figure 2).

3. 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 3).

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

4. Mount appropriate light in corresponding location securing in place with plastic rivets (Figure 3).

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

5. Remove left and right drain plugs from under the front seats. The driver side plug is smaller than the passenger side pictured in Figure 4.



Figure 1



Figure 2



Figure 3



Figure 4

6. Remove Front Door Scuff Plate (LH)

- (a) Disengage the 11 claws and guide to remove the front door scuff plate, LH (Figure 5).

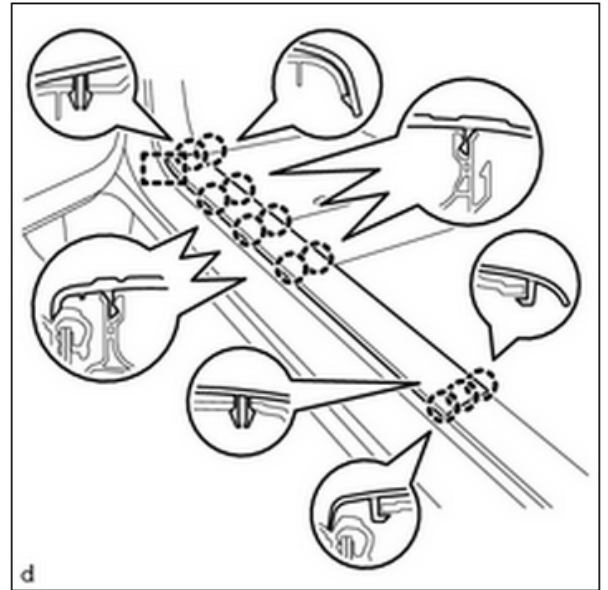


Figure 5

7. Remove Cowl Side Trim Board LH

- (a) Remove the clip (Figure 6a).

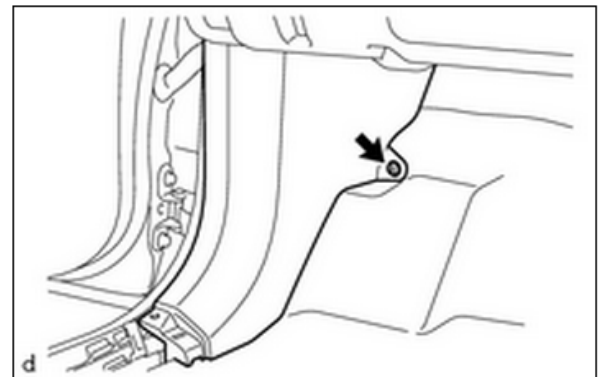


Figure 6a

- (b) Disengage the 2 clips and guide to remove the cowl side trim board (Figure 6b).

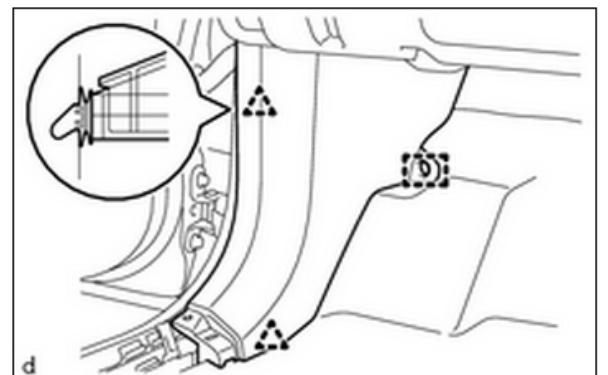


Figure 6b

- (c) Repeat for RH side.

8. Route rear harnesses forward along frame rails wire tying to factory harness on driver side (Figure 7).

Note: Passengers side may come equipped with a factory harness, if so tie to it. If not tie to Frame rail.

9. 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.

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

11. Re-install drain plugs with both front and rear harnesses threaded through the plugs (Figure 8).

12. Seal harnesses to drain plugs using half of included sealing putty per side. Make sure to work putty completely around wires for a water tight seal.

NOTE: The use of VPC approved sealant can be used for sealing drain plugs.

13. Route harnesses forward along thresholds, wire tying to factory harnesses (Figure 9).



Figure 7



Figure 8



Caution: Avoid airbag harness on driver side threshold as shown in photo below.



Figure 9

14. Route harnesses below the passenger side foam foot board and tape in place using foam tape (Figure 10).

NOTE: All excess harness to Driver's side.

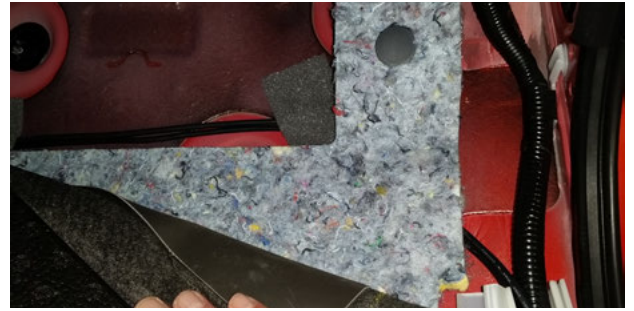


Figure 10

15. Route driver side harnesses in the same fashion to the driver side kick panel.

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

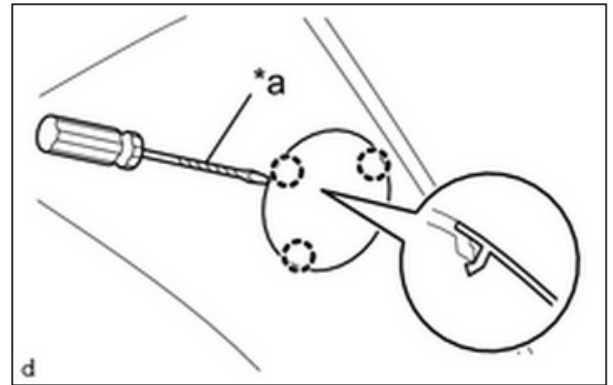


Figure 11a



17. Remove Front Pillar Garnish LH.

- (a) Using a screwdriver with its tip wrapped in protective tap, disengage the 3 claws to open the cover(Figure 11a).

Text in Illustration

*a	Protective Tape
----	-----------------

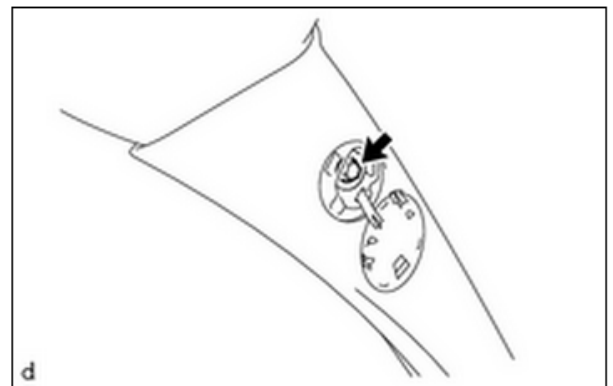


Figure 11b

- (b) Remove the bolt (Figure 11b).

- (c) Disengage the clip and 2 guides to remove the front pillar garnish LH (Figure 11c).

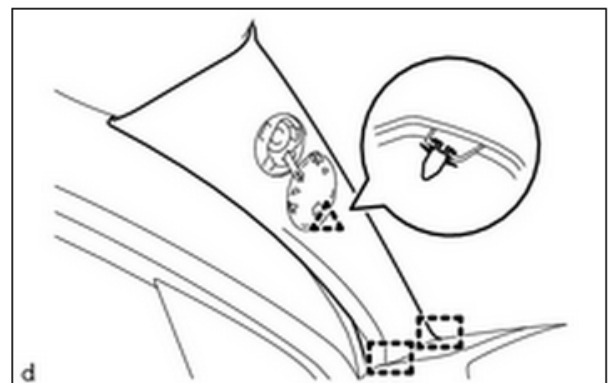


Figure 11c

18. Disconnect Hood Lock Control Lever Sub-Assembly (Figure 12).

- (a) Disengage the Claw and 3 guides to disconnect the hood lock control lever sub-assembly

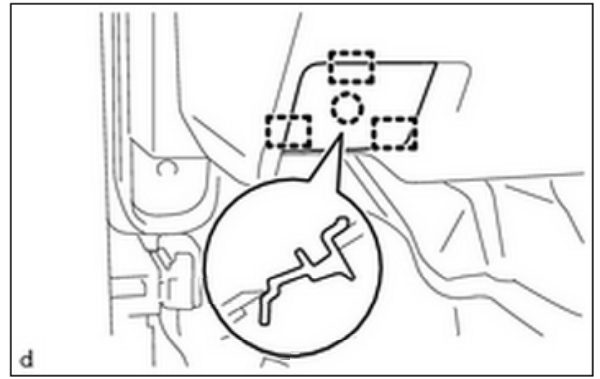


Figure 12



19. Remove Instrument Panel Lower Finish Panel Sub-Assembly (Figure 13).

- (a) Remove Bolt <A>.
- (b) Remove the 2 screws <E>.
- (c) Disengage the 11 clips and 4 claws.
- (d) Disconnect the connectors to remove the instrument panel lower finish panel sub-assembly.

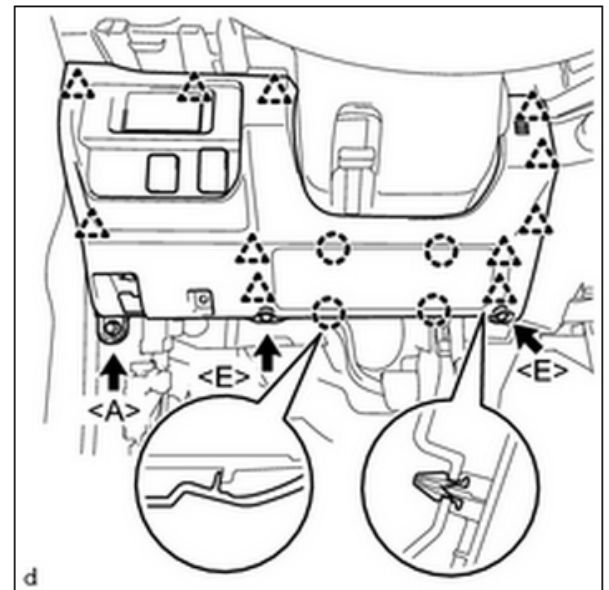


Figure 13

20. On the panel, measure $\frac{3}{4}$ " from the lower edge and $\frac{1}{4}$ " to the left of the rib shown in Figure 14. Drill a $\frac{7}{16}$ " hole for the foot-well light.

- 21. Align foot-well light with the connector through the hole and the flat side facing the seats. Using a $\frac{5}{32}$ " bit, drill mounting holes. Attach using included rivets.



Figure 14

22. Route the long side of the foot-well power harness from the driver side to the passenger side, securing to the blower motor factory harness and connect foot-well light (Figure 15).



Figure 15

23. Wire tie the passenger side foot-well lamp to the factory harness that is attached to the blower motor housing (Figure 16).



Figure 16

24. Make sure the foot-well lamp has the flat side facing the seats and is securely fastened on both sides of the factory harness retainer (Figure 17).



Figure 17

25. 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.

NOTE: All Connectors Pin Side View

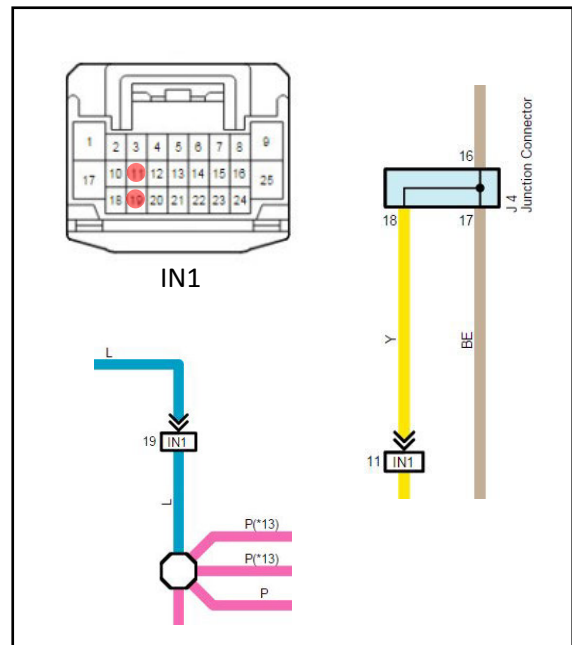
26. Using a Red T-tap, connect the **Red** wire from the puddle light power harness to the **Blue** wire in **Pin 19** of the IN1 Gray connector in the A-pillar (Figure 18).



Figure 18

27. Using a Red T-tap, connect the **Black** wire of the puddle light power harness to the **Yellow** wire in **Pin 11** of the IN1 connector in the A-pillar (Figure 18).

28. 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.



29. Using a Red T-tap, connect the **Yellow** wire to the Gray wire in **Pin 8** of the IC3 White connector in the driver side kick panel.

30. Using a Red or Blue T-tap, connect the **Black** wire to a White/Black wire at the **IA ground stud** in the driver side kick panel.

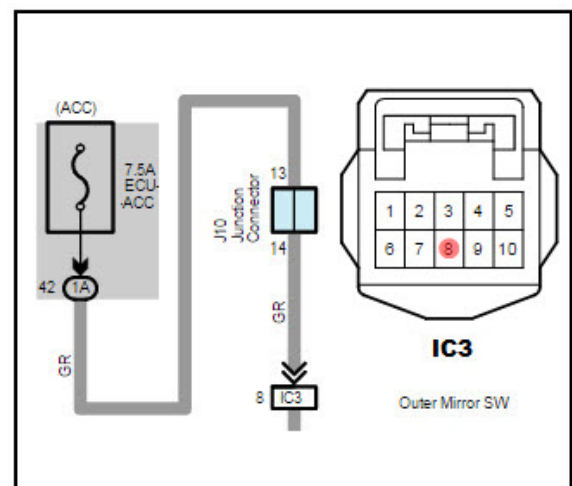


Figure 19

31. Secure all passenger side harnesses, across the driver floor, under the carpet. Tape in place as shown in Figure 20.



Figure 20

32. Route additional connector to driver side foot-well light, wire tying to OBD2 mount (Figure 21).



Figure 21

33. Reinstall lower garnish with attached light and connect lamp.

34. Connect all harnesses to the control module and mount it to the factory harnesses in the driver side kick panel (Figure 22).



Figure 22

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.

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

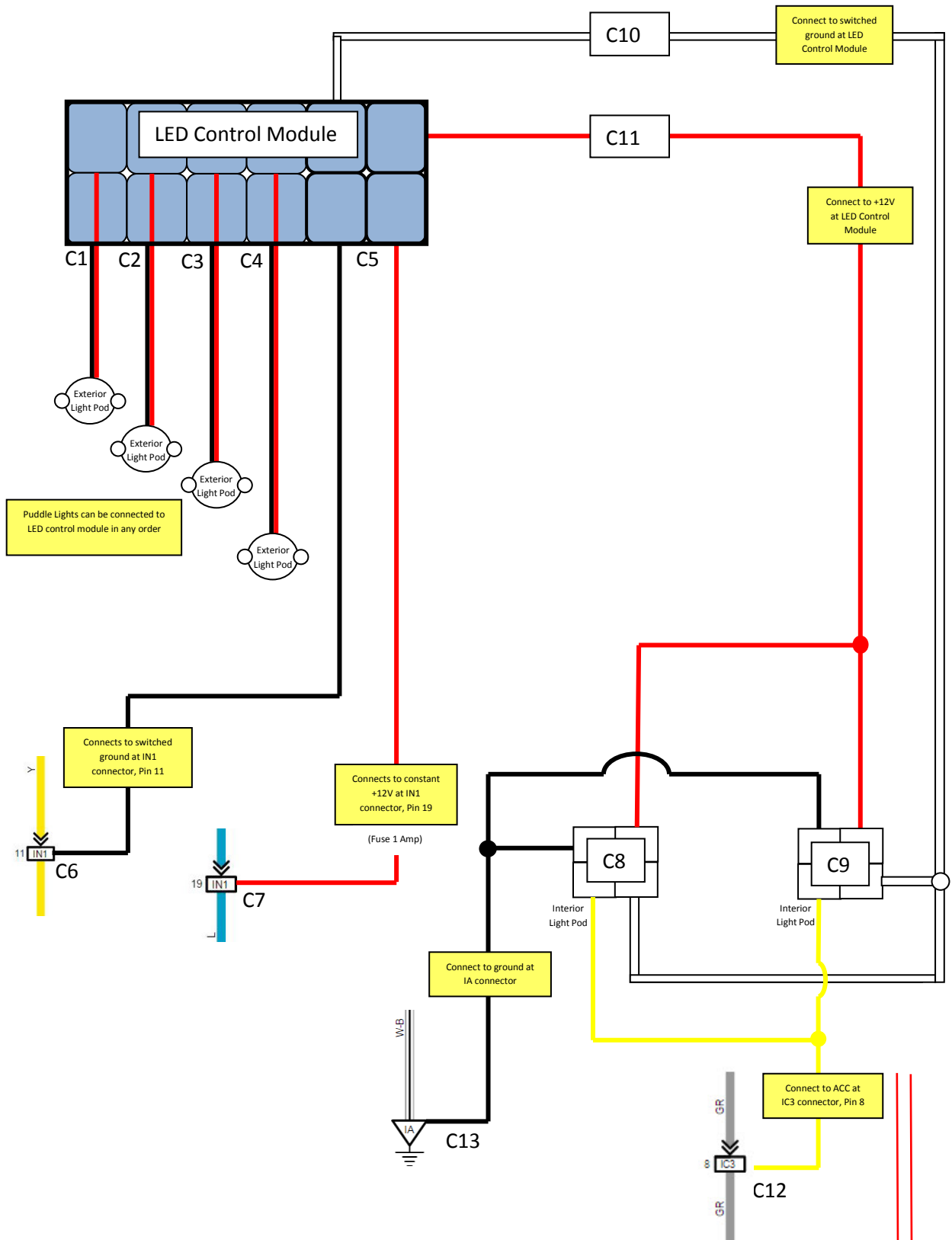
ACCESSORY FUNCTION CHECK

	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.

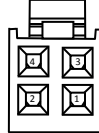
Block Diagram Tacoma Lighting Package





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