

TOYOTA

TUNDRA

2015

Billet Grille w/LED DRL

Part Number: 00016-34088

Accessory Code: BG3000



Conflicts

Models 1794 and Platinum

Kit Contents

Item #	Quantity Req'd.	Description
1	2	LED DRL
2	1	Driver Box
3	1	Switch
4	1	User's card
5	2	Hardware bags
6	1	Grille Assy
7	1	Logo Plate SR5
8	1	Logo Plate Limited

DRL Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	1	Relay
2	1	Hood Wire Harness
3	1	Cabin Wire Harness
4	8	Wire ties
5	2	Black T-Taps

Grille Hardware Bag Contents

Item #	Quantity.	Description
1	6	U-Nuts
2	8	#10 Screws
3	2	#8 Screws
4	2	2" Flange Brackets
5	2	Top Plate Extension Brackets (LH/RH)
6	2	Middle Extension Brackets (LH/RH)
7	2	Bottom Extension Brackets (LH/RH)
8	4	1" X 3/16" Flat Washer
9	3	3/16" Black PVC Tube
10	2	10/32" Nylon Lock Nuts

Recommended Tools

Safety Tools	
Safety Glasses	
Electrical Tape	
Installation Tools	
10mm Wrench	
Phillips Screw Driver	
Pliers	
Side Cutters	
Torque Wrench	48" lbs
Special Chemicals	
3M Silicon Sealant	

DRL Accessory Service Parts

Service Part	LED DRL LH	LED DRL RH	Switch	Relay	Wire Harness	Driver box
Part Number						
00016-32290-01	X					
00016-32290-02		X				
00016-32270-05			X			
00016-32260-04				X		
00016-32270-03					X	
00016-32270-06						X

Grille Accessory Service Parts

Service Part	Hardware Kit (Black)	Logo Mount Plate (Black)
Part Number		
00016-34088-01	X	
00016-34064-02		X


Recommended Sequence of Application


Item #	Accessory
1	LED DRL
2	Billet Grille


Mandatory


Legend


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 negative battery cable



Installation

1. From front of vehicle, lay the DRL's wire harness on the engine compartment, left side from the battery towards the firewall of the car (pictures A and B).



Picture A



Picture B

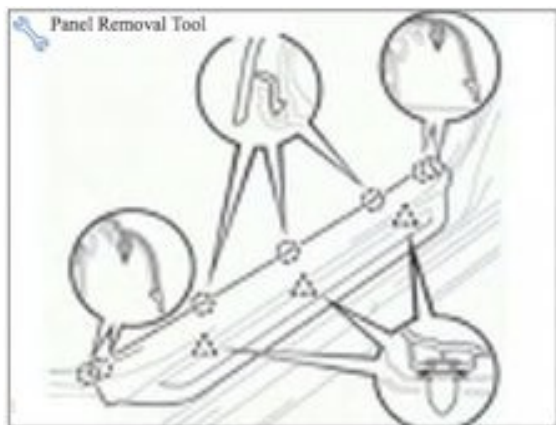
2. Locate the large vehicle harness grommet on the left side. If accessible, cut the auxiliary wiring access nipple off the grommet or cut 1/4" slit in grommet and push the red, black, black-white and red-white wires through firewall. Note: Extra caution should be taken not to damage the connector's pin. Seal with 3M Silicone sealant (picture 1)



Picture 1

Vehicle Disassembly

- 3. Remove driver side door scuff plate. Disengage with panel tool and remove (picture 2 and 2A)

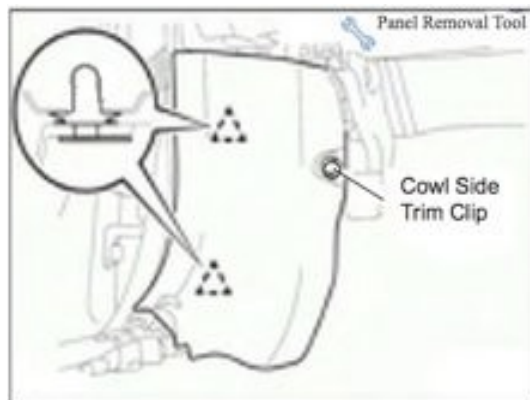


Picture 2



Picture 2A

- 4. Remove the driver side cowl side trim (pictures 3 and 3A)



Picture 3



Picture 3A

- 5. Remove the driver's side lower dash panel: remove two lower screws (picture 4)



Picture 4

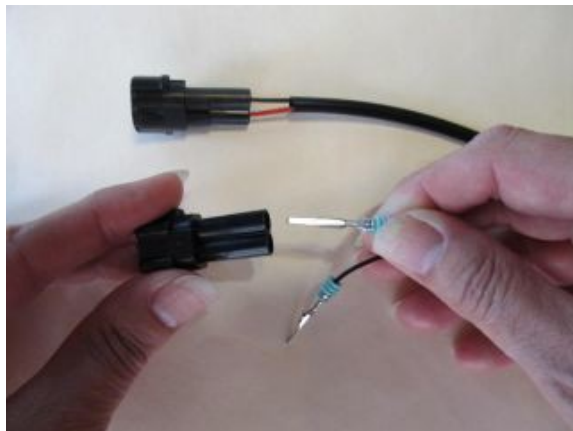
- 6. From inside the cabin, locate the wires that were pushed through in step 2. It will be the

grommet left to the emergency brake (picture 5)



Picture 5

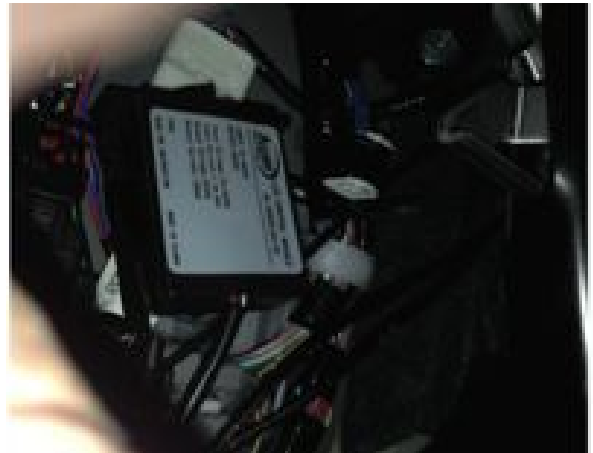
- 7. Route the wire harness to reach the left area of the steering wheel
- 8. Push the pins into the connector supplied in kit. The plastic connects have a mark with a positive (+) and a negative (-) symbol. Push the red wires into the "+" symbol and the black wires into the "-" symbol (picture 6)



Picture 6

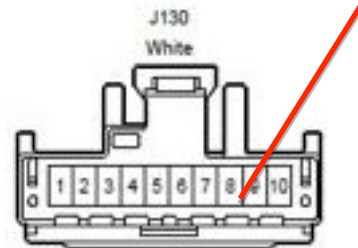
- 9. Connect the driver box to the wires pushed into the connectors on step 8 (make sure wire colors are aligned: black with black and red with red).

- 10. Using a 14" wire tie, secure the driver box to the factory harness by the kick panel (picture 7)

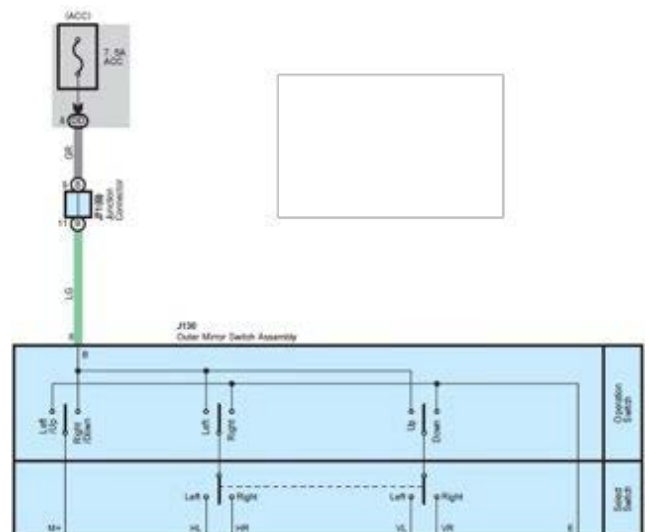


Picture 7

- 11. Install a black T-tap to connector J130 pin 8, light green wire. J130 is located on the back of the power mirror control switch. Then connect the red wire from DRL harness to the t-tap (pictures 8, 8A and 8B).



Picture 8: DRL red wire to connector J130 (light green wire)

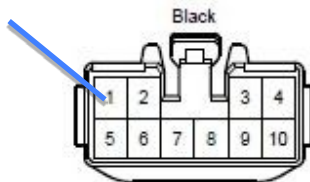


Picture 8A

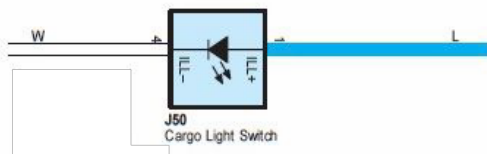


Picture 8B

12. Install a black T-tap to connector J50 pin 1, blue. J50 is located at the back of the cargo light switch. Then connect the blue wire from DRL harness to the t-tap (pictures 9, 9A and 8B).



Picture 9: DRL blue wire to connector J50, pin1 (blue wire)



Picture 9A

13. Secure ground (black) wire to bolt by the kick panel (picture 10)



Picture 11

15. Use an empty switch knock out on left panel, (left to the cargo light switch) and mount switch into switch knock out (picture 12).



Picture 12

- 16. Plug DRL harness into switch.
- 17. Reinstall dash panels and connectors.

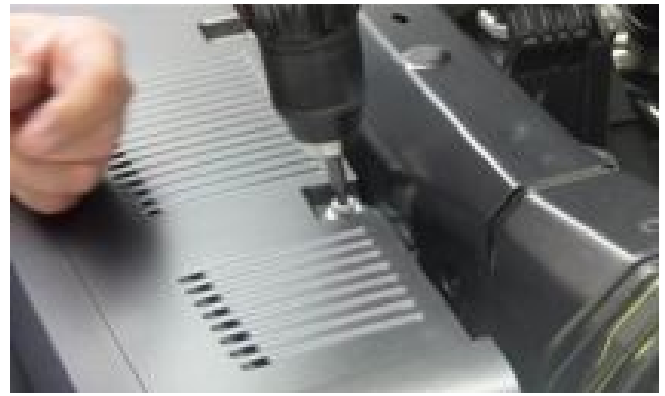
ENGINE COMPARTMENT

- 18. From underneath the hood remove two plastic fasteners from the factory grille located inside of the headlamps with a nylon fastener tool (picture 13).



Picture 13

- 19. Remove four 10mm bolts from the plastic radiator cover then pull the radiator cover upward to remove (picture 14)



Picture 14

- 20. Pull the top of the factory grille slightly forward a couple of inches, reach down behind the factory grille and press on two plastic latches located on the bottom and ends of the factory grille (picture 15) while pulling the bottom of the factory grille forward, remove the factory grille from the vehicle (Picture 15A).



Picture 15



Picture 15A

- 21. Place the factory grille face down on a clean soft surface (take special care to protect the chrome factory shell). On the back of the grille assembly use a Phillips screwdriver to remove two Phillips screws from each side of the factory grille: 4 total (picture 16)



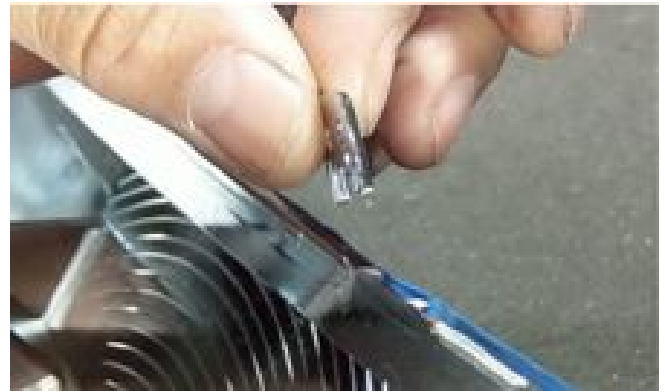
Picture 16

- 22. Now remove the black plastic grille insert from the factory grille shell by unlatching thirteen plastic latches around the grille with a flat screwdriver and remove the black plastic grille insert (picture 17)



17

- 23. With a pair of pliers break off all thirteen clips from chrome plastic frame, this will allow your billet grille to sit flush with the chrome frame during installation (picture 18)



Picture 18

- 24. Use a nylon fastener tool to remove two plastic fasteners located just below the inside bottom corner of each headlamp (picture 19). Save these fasteners, as you will use them later in the installation.



Picture 19

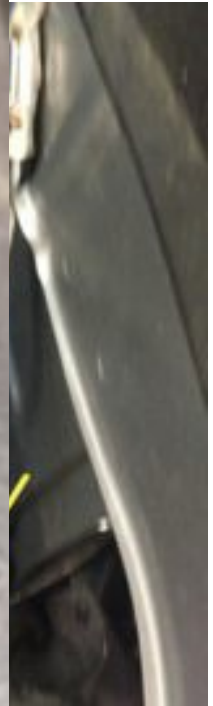
- 25. Remove the factory Toyota logo from the factory grille by pressing the tabs on the back of the logo inward while pulling the logo forward

ENGINE COMPARTMENT

- 26. Run DRL's wire harness from the large vehicle harness grommet on the left side (step 2) through the driver side, towards the front of the vehicle. Use wire ties to secure harness (picture 20, 20A and 20B)



Picture 20A

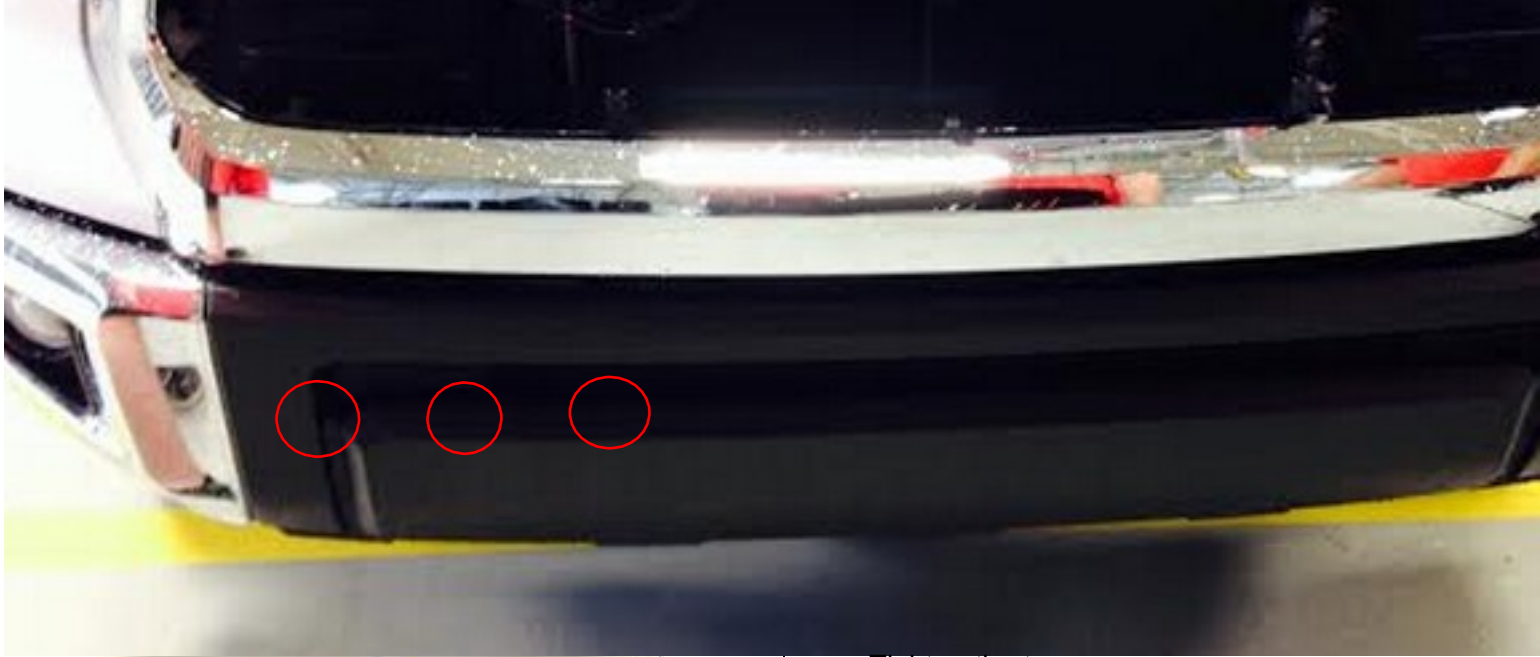


erness down on
ull the radiator
to retrieve the



Picture 21

28. Run the wire harness to the right side above the bumper, and secure with wire ties as shown (picture 22)



Picture 22

29. Secure excess wires at both sides with wires ties, leaving enough lead to connect the DRL to the harness (picture 23)



Picture 23

30. Secure excess wires with wire ties (pic. 24)



Picture 24

Tighten the two screws.



Picture 25

32. Take the two top plate extension brackets and install them on the upper corners of the factory grille shell using the factory screws to secure them to the grille shell and install the u-nuts onto the arms of the brackets as shown in (picture 26). Insure the u-nut is oriented with the side that accepts the screw facing outward as shown.



Picture 26

33. Reinstall the factory chrome grille shell (with the brackets installed) on the vehicle, make sure the brackets slide under the black plastic arms on the core support (picture 27) and that the holes in the u-nut and bracket line up with the hole in the plastic bracket on the core support.



Picture 27

34. Reach down behind the factory grille and locate the brackets that you installed on step 7 and insert the factory plastic fastener through the hole in the bracket and into the same hole in the vehicle it was removed from (picture 28). Make sure the fastener is fully inserted and secure.



Picture 28

35. Take the two bottom extension brackets and install u-nuts onto the small ends aligning with the holes in the brackets and orient it as shown (picture 29).



Picture 29

36. Install two u-nuts onto the two flange brackets aligning the holes in the u-nuts with the holes in the flange brackets and orient it as shown (picture 30).



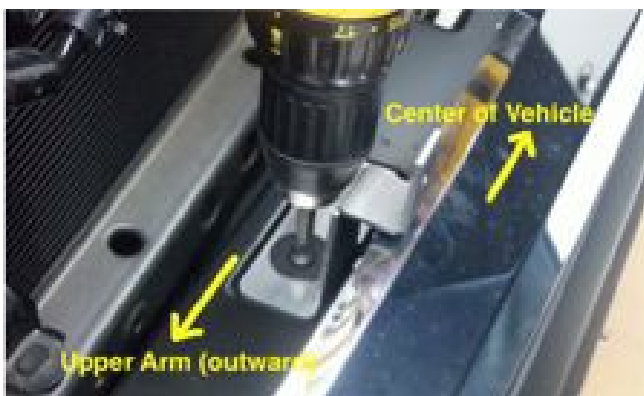
Picture 30

37. Take the two flange brackets (with the u-nuts installed) and attach them onto the large ends of the bottom extension brackets with one #8X3/4" screw and one 1" black fender washer. You will only need to screw the threads in a couple of turns as you want the flange brackets to have some space between them and the bottom extension bracket. You will have two assembled bottom extension brackets (picture 31).



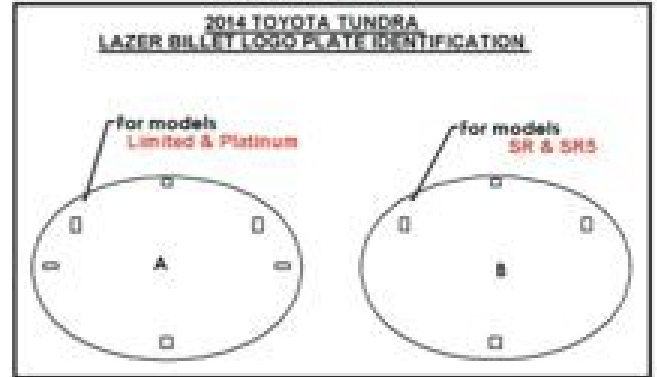
Picture 31

38. Take the two bottom extension brackets and install them down behind the factory grille shell onto the black metal bumper plate with rectangular holes. The longer side of the brackets base will install toward the center of the vehicle and the upper arms will be toward the outside of the vehicle (picture 32). The flange brackets will drop through the rectangular holes and grab the lip on the bottom of the rectangular hole when secured. Tighten the screws on the flange brackets to secure the brackets to the metal bumper plate. Test fit the Billet in the chrome shell opening to make sure the holes in the bracket arms and the holes in the mounting plates on the bottom back of the Billet align correctly.



Picture 32

39. Select the correct logo plate before installing. For Limited & Platinum edition use Logo (A), for SR & SR5 edition use Logo (B). See diagram below (picture 33)



Picture 33

40. Install the factory logo onto the logo plate, the tabs on the back of the logo insert through the holes in the front of the logo plate. Insert the bottom tab first and then the three top tabs, make sure the tabs latch on the back of the logo plate (picture 34). Slide the pvc tube down over the plastic latches of the factory logo on the back of the logo plate to secure the logo to the plate (picture 34A). Place the threaded studs on the logo plate through the billet bars and the tabs on the back of the Billet. Secure the plate with two 10/32" nylon lock nuts.



Picture 34



Picture 34A

41. Remove the yellow labels from the DRL harness.
42. Hold the billet grille in front of the vehicle and plug in the DRL's into harness.
43. Take the billet grille and place it into the chrome factory grille shell. Take six #10 screws and secure the top plate to the vehicle by inserting the screws through the six holes in the top plate and tighten (picture 35).




Picture 35

44. Insert two #10 screws through the billet bars at the bottom of the billet grille, through the mounting plates with holes in them on the back of the Billet and into the bottom extension brackets and tighten (picture 36).



Picture 36

4  tall negative battery cable and torque in-lbs



Check System for Operation

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

Check

Look For:

Accessory Functions Checks

- | | |
|---|---|
| <input type="checkbox"/> DRL function..... | |
| <input type="checkbox"/> All Panels snapped into place..... | - Loose panels and switches |
| <input type="checkbox"/> Battery Terminal..... | - Re-torque battery terminals to 48 in-lb |
| <input type="checkbox"/> Operation Guide..... | - Place DRL operation guide inside glove box. |
| <input type="checkbox"/> Alignment of Grille..... | - Loose hardware |
| <input type="checkbox"/> Wipe grille to remove marks..... | - General appearance of grille. |

Vehicle Function checks

- Check functions all switch functions
- Hood clearance and hood latch functions

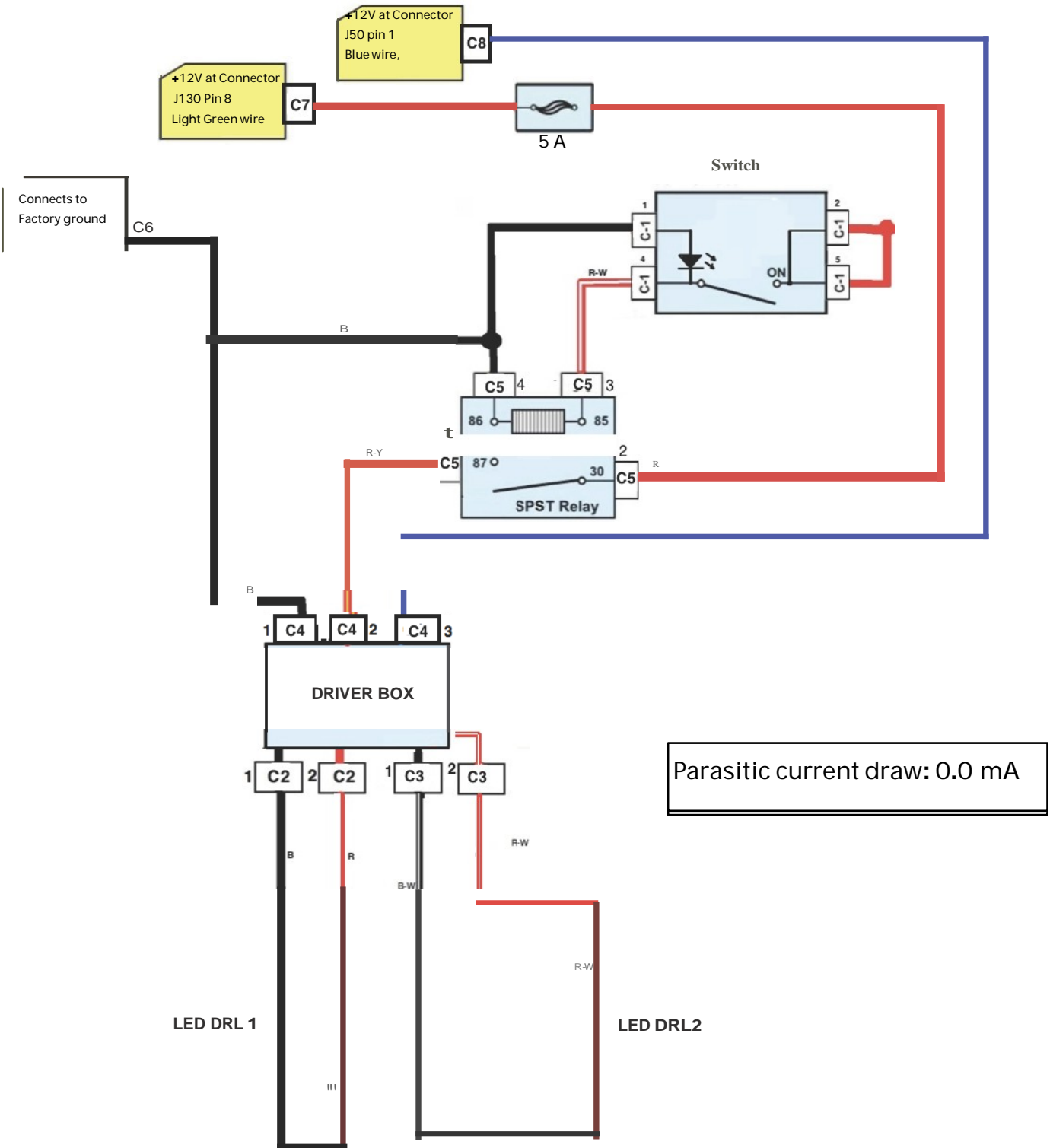
VEHICLE FUNCTION CHECK

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

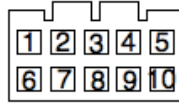
LED DRL

00016-34088



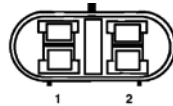
Pinout'test

Connector'C-1



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'ignition'switch'is'OFF' '+12'VDC'when'ignition'switch'is'ON
4	RedIWhite	Pin'4'to'Ground	Approximately'0'VDC'ignition'switch'is'OFF' Approximately'0'VDC'ignition'switch'is'ON,'DRL'switch'is'OFF' '+12'VDC'when'ignition'switch'is'ON'and'DRL'switch'is'ON
5	Red	Pin'5'to'Ground	Approximately'0'VDC'ignition'switch'is'OFF' '+12'VDC'when'ignition'switch'is'ON

Connector'C-2,'C-3



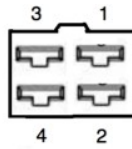
Pin	Wire'Color	Test'Reference	Proper'Operation
1	Red'or'RediWhite	Pin'1'to'Ground	Aproximately'0'VDC'when'ignition'switch'is'OFF Aproximately'0'VDC'when'ignition'switch'is'ON,'DRL'switch'is'OFF Aproximately'+18'to'+24'VDC'when'ignition'switch'is'ON,'DRL'switch'is'ON
2	Black'or'BlackIWhite	Pin'2'to'Ground	Aproximately'0'VDC

Connector'C-4



Pin	Wire'Color	Test'Reference	Proper'Operation
1	Black	Pin'1'to'Ground	Aproximately'0'VDC
2	RedIYellow	Pin'2'to'Ground	Approximately'0'VDC'ignition'switch'is'OFF' Approximately'0'VDC'ignition'switch'is'ON,'DRL'switch'is'OFF' '+12'VDC'when'ignition'switch'is'ON'and'DRL'switch'is'ON
3	Blue	Pin'3'to'Ground	Aproximately'0'VDC'dash'panel'lights'are'OFF '+12'VDC'when'dash'panel'lights'are'ON

Connector C-5



FEMALE TERMINALS
TERMINAL VIEW

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

Connector C-6



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

Connector C-7



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

Connector C-8



Pin	Wire Color	Test Reference	Proper Operation
1	Blue	Pin 1 to Ground	Approximately 0VDC dash panel lights are OFF +12VDC when dash panel lights are ON