

Part Numbers: TAV-313 / TAV-813**Kit Contents**

Item #	Quantity Req'd.	Description
1	2	Light Housings
2	2	Fog Light bezels
3	1	Switch Assembly
4	1	Fog Light Operation guide
5	1	Harness bag

Hardware Bag Contents

Item #	Quantity Req'd.	Description
1	1	Hood wire harness
2	1	Cabin wire harness
3	2	Relays
4	25	Wire ties
5	4	Phillip head screws
6	2	Black T-Taps
7	2	LED Connectors (for TAV-813)

Conflicts

- Factory Installed Fog Lights

General Applicability






Models:

Recommended Tools

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

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
	CRITICAL PROCESS: Proceed with caution to ensure a quality installation.
	TOOLS & EQUIPMENT: This calls out the specific tools and equipment required for this process
	REVISION MARK: This mark highlights a change in installation with respect to previous issue.

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.

Preparation



Remove negative battery cable

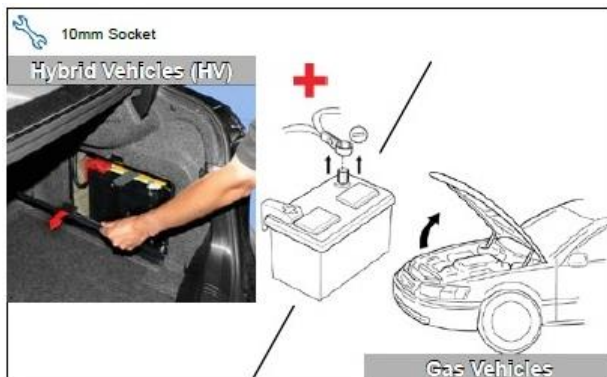
- Place the vehicle in Park with the parking brake set.

Hybrid vehicles, the battery is in the trunk

- Remove the Battery Cover (for hybrid vehicles only)

Gas vehicles, the battery is in the Engine compartment

- Remove battery from vehicle
 - Note the Battery Cable Position as it will be re-installed in the same position
- CAUTION: do not touch the positive battery terminal

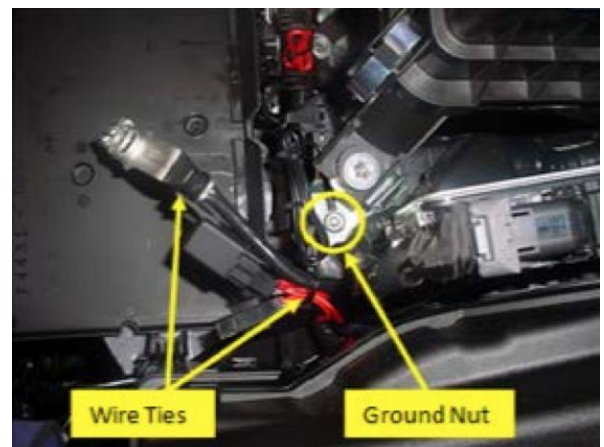


Installation

Hybrid models proceed to steps 4 ~ 13.

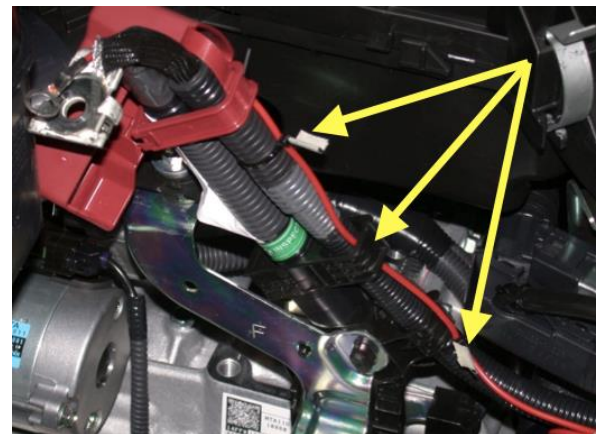
- Secure the relay and fuse to the battery negative cable with wire ties. Secure top and bottom with wire ties. See yellow marks on picture 1 for wire ties locations.

- Attach the ring terminal with 2 black wires (from Fog Light harness) to the 10mm (ground) nut next to the relay (picture 1)



Picture 1

- Connect the ring terminal from the relay (from Fog Light harness; 12v red wire) routing it through positive red terminal cover. Use wire ties to secure wire harness to the positive cable from battery (picture 2).



Picture 2

4. **(Hybrid models only, steps 4~13)** In the engine compartment, remove the push pins holding the driver side plastic cowl on top of the head lamp (pictures 3 and 3A)

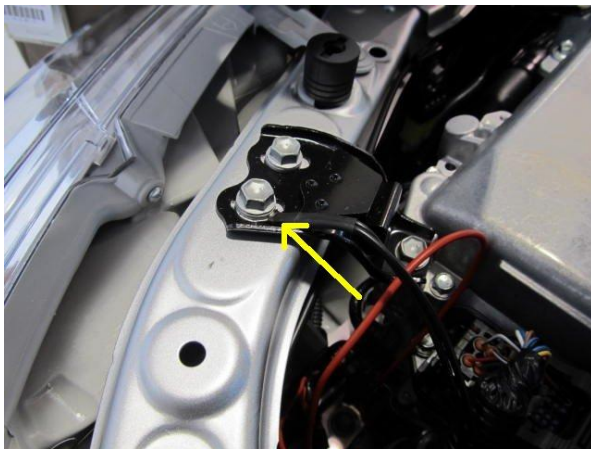


Pictures 3



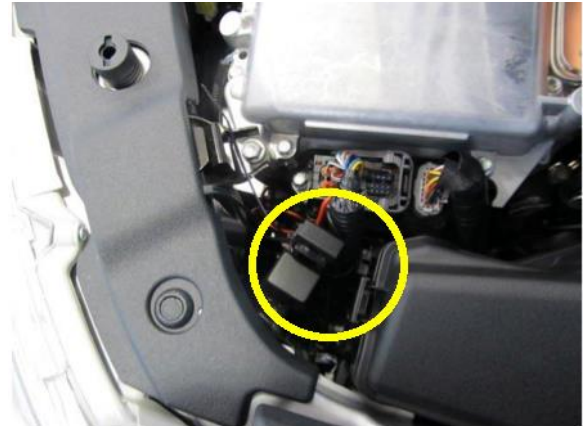
Picture 3A

5. **(Hybrid)** Secure the black ring terminal of the fog light harness to the 10 mm bolt on top the driver side frame (picture 4)



Picture 4

6. **(Hybrid)** Secure the relay and fuse to the factory wire harness in front of the fuse box (pic. 5)



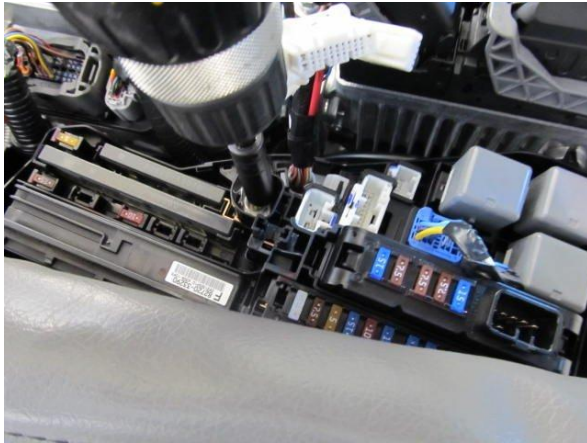
Picture 5

7. **(Hybrid)** Disconnect the white wire harnesses in the middle of the fuse box (picture 6)



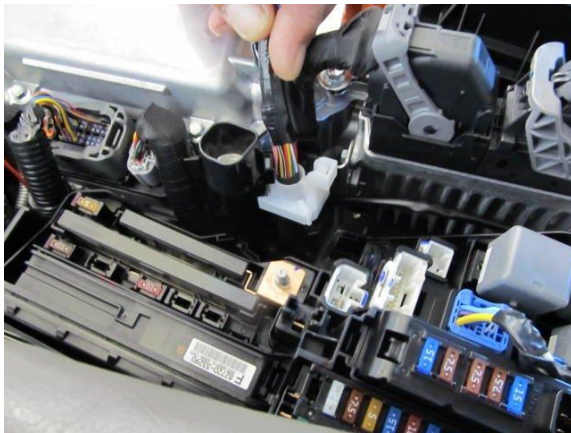
Picture 6

8. **(Hybrid)** With a 10 mm socket, remove the positive nut in the center of the fuse block: + positive terminal (picture 7)



Picture 7

9. **(Hybrid)** Lift up the harness assembly (picture 8)



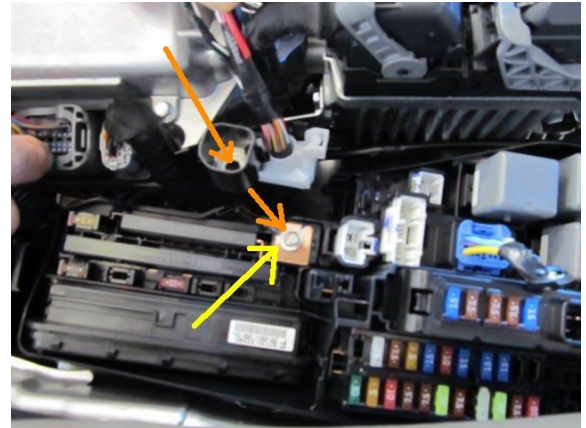
Picture 8

10. **(Hybrid)** Run the positive ring terminal of the fog light harness through the area of fuse block (picture 9)



Picture 9

11. **(Hybrid)** Place the red ring terminal of the fog light wire harness in the positive terminal of the fuse box (picture 10)



Picture 10

12. **(Hybrid)** Reposition the harness assembly and lock into place. Tighten nut (picture 11)



Picture 11

13. **(Hybrid)** Reconnect white wire harnesses removed in step 7
14. Route the fog light wire harness along the driver side from the battery (Hybrid: from left front) towards the bulkhead of the vehicle. Secure the wire harness with wire ties as needed (picture 12 & 12B: showing for regular and hybrid engine layout)



Picture 12



Picture 12B: Hybrid Models

15. Optional step: Remove the air intake duct from intake manifold for gas models (pic.13)



Picture 13

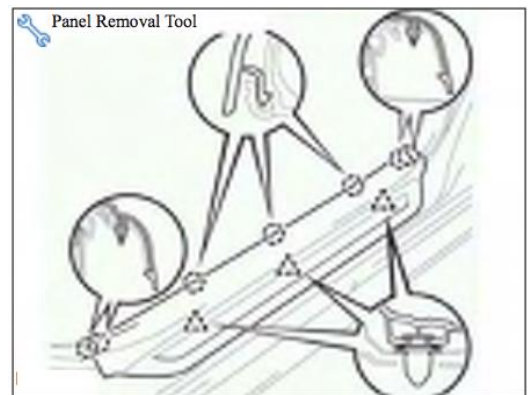
16. Locate the large vehicle harness grommet on the driver side. If accessible, cut the auxiliary wiring access nipple off the grommet or cut 1/4" slit in grommet. Using fish tool Push the fog light wire harness through grommet. Note: Extra caution should be taken not to damage the connectors on the fog light harness or on the vehicle harness. Seal with 3M Silicone sealant (picture 14).



Picture 14

Vehicle Disassembly

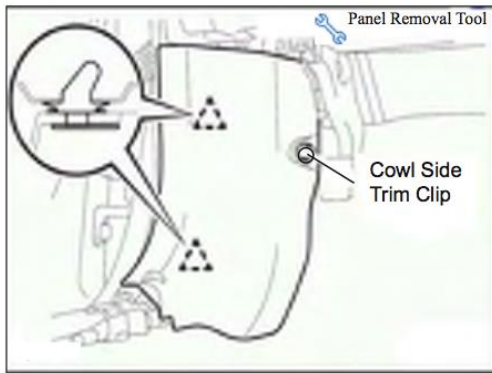
17. Remove driver side door scuff plate
 - a. Disengage with panel tool and remove (picture 15)



Picture 15

18. Remove the driver side cowl side trim:
 - a. Unscrew the cowl side trim clip

- b. Disengage two (2) clips and remove the cowl side trim (picture 16)



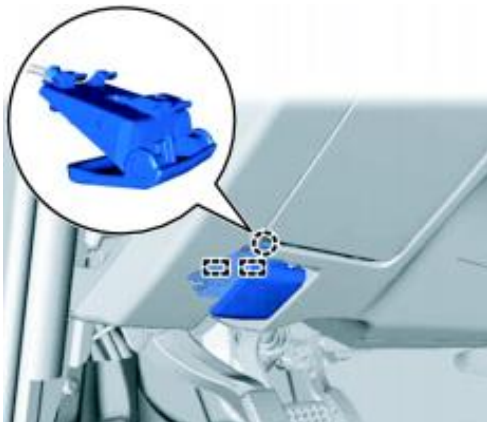
Picture 16

- 19. Remove the driver's side panel. Disengage with panel tool and remove (picture 17)



Picture 17

- 20. Disconnect the hood lock control lever, then disengage the claw and two guides (pic.18)



Picture 18

- 21. Place masking tape on the center console panel prior to remove panel. Then loosen the center panel below a/c control (pic.19).



Picture 19

- 22. Remove lower left switch panel by removing a bolt, clips and a screw, (optional step). Remove 4 bolts holding the knee air-bag. If knee airbag is not removed, remove lower steering column cover (pictures 20 & 20A)

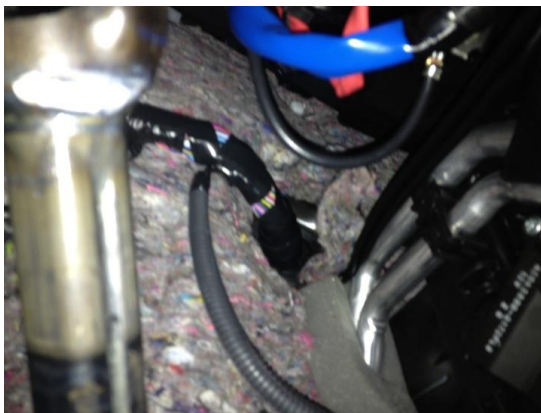


Picture 20



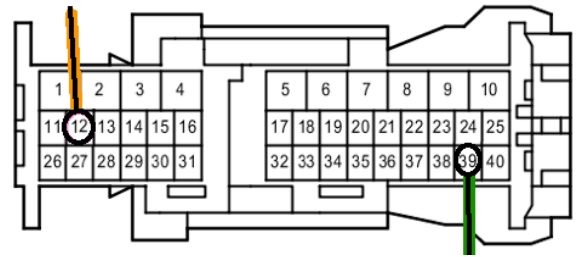
Picture 20A

23. Locate the wires that were pushed through the grommet in step 11. It will be the grommet above the gas pedal. Route the wire harness to reach the area on right of the steering wheel and tie wrap to factory harness (picture 21)

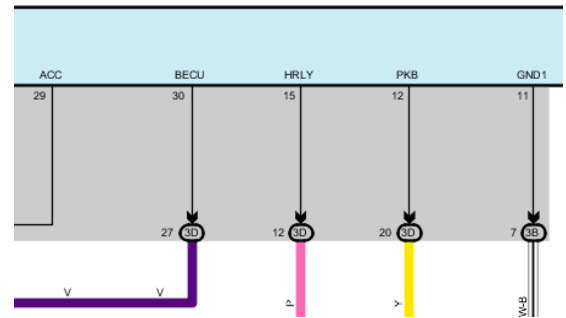


Picture 21

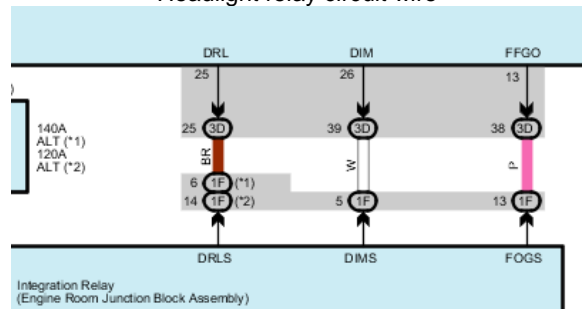
24. T-tap the green/black wire from fog light harness to connector 3D pin 39, white wire. Use a black T-Tap. Connector 3D is left of steering wheel at the main junction block (pictures 22 ~ 22C)
25. T-Tap orange/black wire from fog light harness to connector 3D pin 12, pink wire. Use a black T-Tap (pictures 22 ~ 22C)



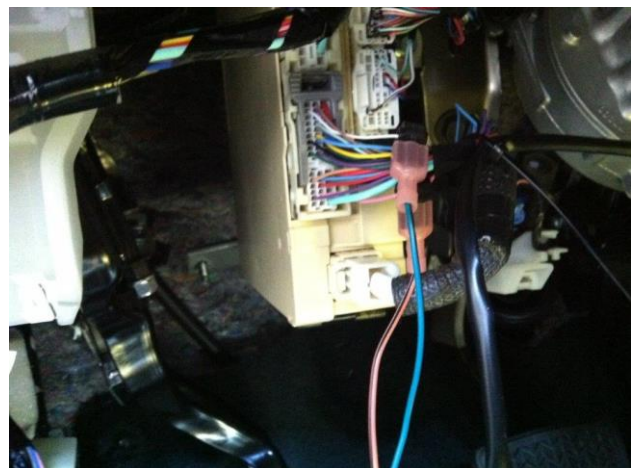
Picture 22



Picture 22A: Connector 3D, pin 12
Orange-Black to Pin 12, Pink wire
Headlight relay circuit wire

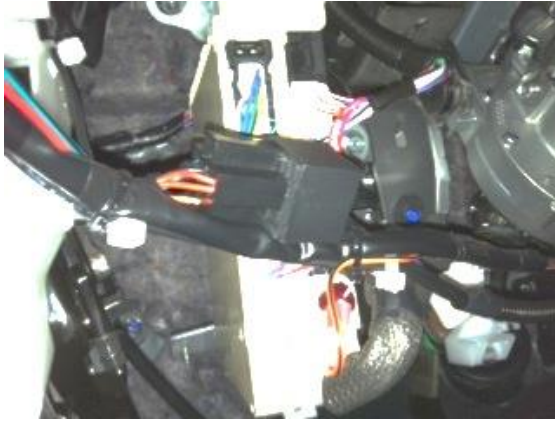


Picture 22B: Connector 3D, pin 39, white wire
Head light dim circuit

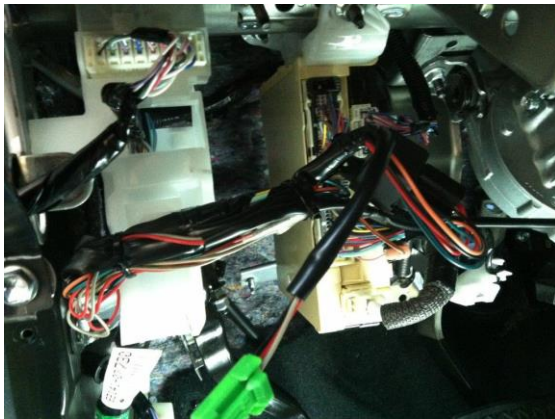


Picture 22C

26. Secure any excess wire from t-taps, fuse and relay to main wire harness (picture 23 and 24A). Make sure to leave enough lead on the green-switch connector to reach the switch.



Picture 23



Picture 23A

27. If removed, reinstall knee airbag and torque the 4 bolts to 7 ft-lbs.
28. Remove dash switch plug from switch panel and install fog light switch into dash (pic. 24)

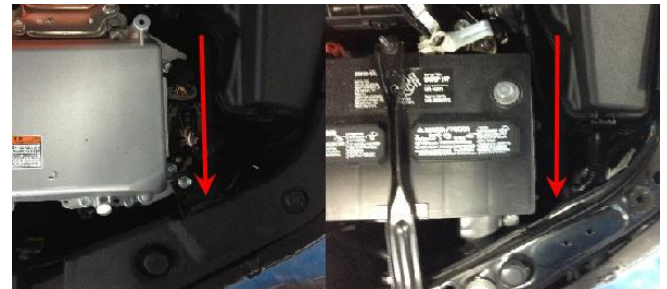


Picture 24

29. Reinstall all panels and connectors inside car, including fog light switch connector

ENGINE COMPARTMENT

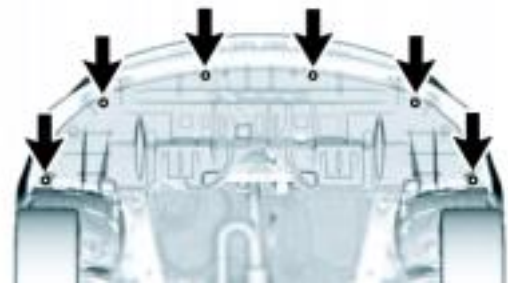
30. Drop wire harness behind headlight, towards the driver side fog lamp area (picture 25)



Picture 25

NOTE: If the vehicle calls for LED DRL kit and the front bumper is already removed, it is suggested that the harnesses be routed together. If NOT, continue to step 32.

31. Using a fish tool, pull the wire harness through the bumper, from the driver side towards the passenger side.
32. From under the car, remove lower splash shield 6 screws on the bottom of bumper (picture 26)



Picture 26

33. Remove lower splash shield by removing the remaining push pins at the bottom of splash shields (pictures 27 and 27B)

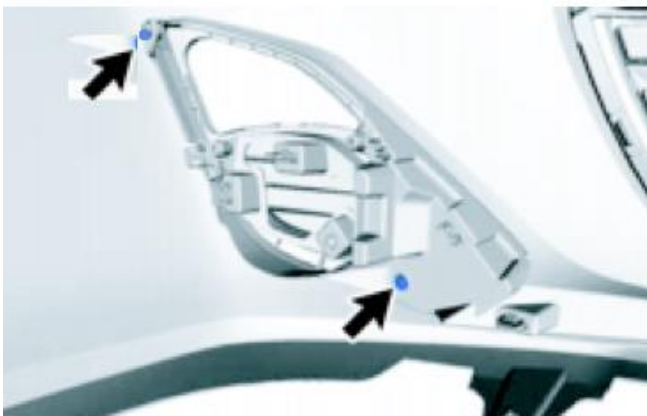


Picture 27



Picture 27B

34. Remove factory fog light covers. Remove 2 screws, then disengage the 3 claws (picture 28 and 28B)



Picture 28



Picture 28B

35. Locate the fog light wire harness on the driver side, (pic. 29)

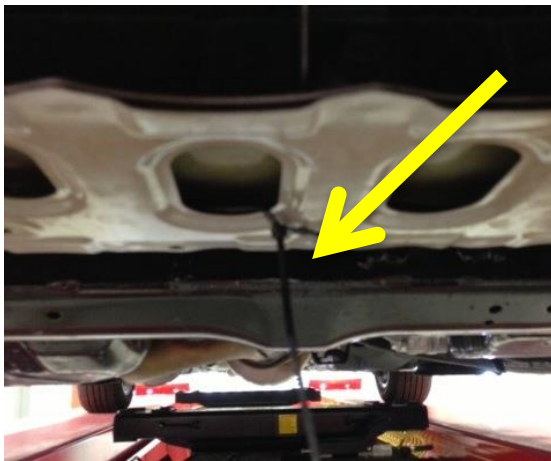


Picture 29

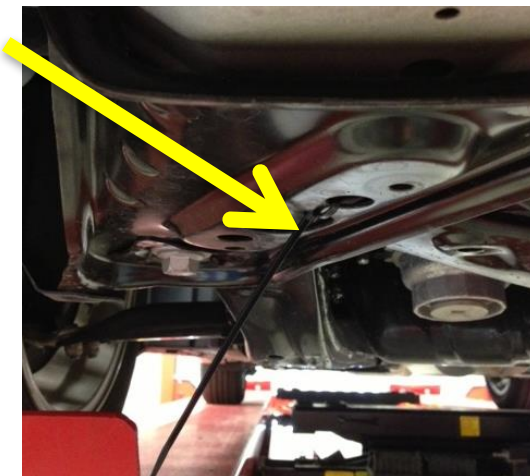
36. Run passenger side of wire harness under the car and secure with wire ties as needed (pictures 30~30B).



Picture 30



Picture 30A



Picture 30B

37. Insert one side of the fog light into the plastic sleeve and secure other side with

supplied Phillip screw (picture 31). Follow this step for both left and right fog lamps.

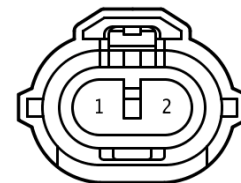


Picture 31

38. Note: For Halogen installations, proceed to step 39. For LED installations; The LED fog light wires may not be pushed into their connectors. If not, push the negative wire (black or black-white) into Pin 2 of the connector. Then, push the positive wire (red or red-white) into Pin 1 of the connector. See Picture 32 below.



LED Lights will NOT work if the polarity is reversed. Be sure the red positive wire of the harness matches the red positive wire of the light housing, and the black negative wire of the harness matches the black negative wire of the light housing.



Picture 32

39. Plug in left and right side fog light into harness plug and secure with wire ties



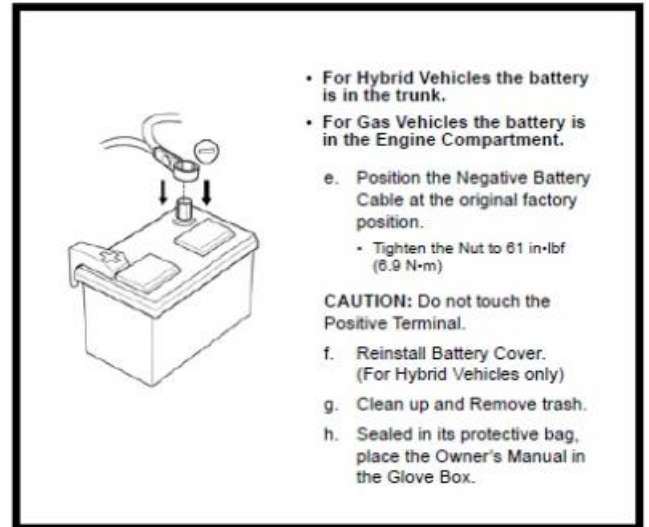
Picture 33

40. Snap and screw on both fog light bezels (picture 34)



Picture 34

41. Reattach the lower splash shields.
 42. Replace Battery and/or reconnect negative battery cable. Torque to 61 in/lbs.



Checklist – these points MUST be checked to ensure quality installation

Check System for Operation

Reconnect battery terminals

1. Turn on headlamp low beams, then press fog light switch to “ON” position. Fog lights should be working. Fog lights will only work when the low beam headlamps are “ON”. Fog lights will NOT work when the high beam headlamps are “ON”

Fog Light Aiming

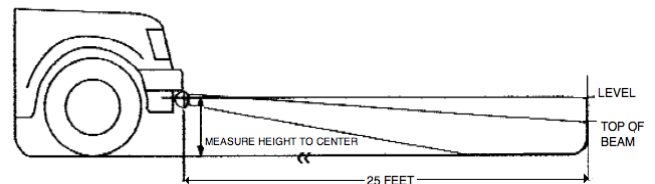


NOTE: Use only hand tools to adjust the fog light aiming screw. DO NOT use power assisted tools, as they will damage the fog light.

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 driver's 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 (see picture 35)



Picture 35

Check

Accessory Functions Checks

- Fog Lights function.....
- All Panels snapped into place.....
- Battery Terminal.....

Vehicle Function checks

- Check all vehicle functions

Look For:

- Inoperable fog light function
- Loose panels and switches
- Re-torque battery terminals to 61 in-lb