

Preparation

Part Number: PU322-42013-UW

Kit Contents

Item #	Qty	Description
1	1	Trailer Module Harness
2	1	Trailer 4-Flat Harness
3	1	Trailer Power Wire Harness
4	1	Mounting Bracket, 4-Flat
5	2	Screw #10-24
6	2	Nut/Washer #10-24
7	55	Wire Tie 8"
8	1	Stud Mount Wire Tie (M6)
9	4	Wire Tie 14"
10	2	Wire Tie, Push Mount Clip (Grey)
11	1	Connector Housing (Grey)
12	6	Foam-Pad
13	1	Fuse Location Card
14	1	Owner's Manual

Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1	1	3M Ultrapro Autobody Sealant (P/N 08302)
2	1	Towing Hitch
3	1	PT546-00141 (Hardware Kit)

Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	
Vehicle Protection	Cloth/Rag
Protective Tape	
Special Tools	Notes
Circuit Tester	
Installation Tools	Notes
Ratchet	3/8" Drive, Medium Extension
Socket	10, 12, and 14mm, 3/8" Drive
Trim Panel Remover Tool	
Screwdriver	Small Flat, Phillips #2
Pliers	Side Cutter
Wrench	12mm, 10mm, 14mm
Clip Remover	
Torque Wrench	5.4 N•m (48 in•lbf) 6.4 N•m (57 in•lbf) 8.4 N•m (74 in•lbf) 26.0 N•m (19 ft•lbf) 42.0 N•m (31 ft•lbf)
Drill	
Drill Bit	7.5 mm
Measuring Tape	
Scissors	
Special Chemicals	Notes
VDC Approved Cleaner	

General Applicability

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Recommended Sequence of Application


Item #	Accessory
1	Trailer Module & Power Wire Harnesses
2	Towing Hitch
3	Trailer 4-Flat Harness


*Mandatory


Vehicle Service Parts (may be required for reassembly)


Item #	Quantity Req'd.	Description
1		
2		
3		


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.

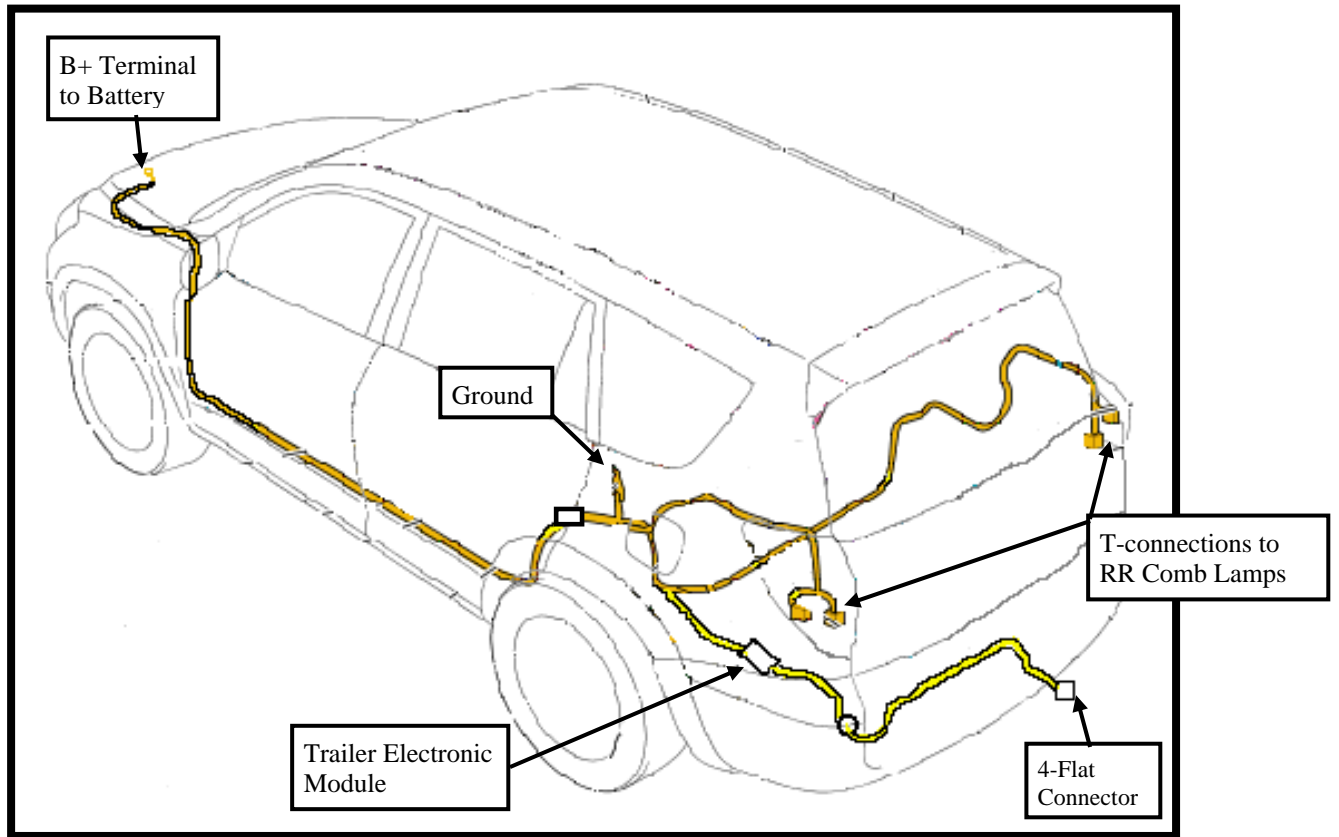
 **TOOLS & EQUIPMENT:** Used in Figures calls out the specific tools and equipment recommended for this process.

 **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.

Preparation

Trailer Wire Harness Outline (Under hood and Passenger Compartments)



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

Please see your Toyota dealer for a copy of this document.

Notes:



Removed Parts:

Place all removed parts on a protected surface.



Connectors:

When disconnecting connectors, do not pull on the wires; pull on the connectors.



Cable Ties:

When using cable ties to secure harness, clip the ties after securing them.



Machine Screws:

Start all machine screws by hand.

Vehicle Preparation:



1. Professional installation by an authorized dealer is highly recommended. Read all instructions thoroughly prior to installation. Ensure all parts are included in kit and follow all vehicle safety guidelines.



2. Read all battery warnings on disconnecting and reconnecting the vehicle's battery terminal from the battery. Follow all procedures and disconnect and isolate the negative battery terminal.



3. Wear safety glasses and take all safety precautions during installation.



4. Use protective covers on vehicle (particularly cover to both fenders and driver seat) to prevent damage to vehicle.

Section 1: Disassembly of Vehicle

NOTE: Please refer to repair manual for disassembly instructions if required.

Step 1


Open tail gate, and side doors.

NOTE:

Move power driver seat (if equipped) forward, just enough to access and remove lower seat belt bolt.

Step 2

Open the hood and locate the battery on the driver's side of the vehicle.

 10 mm Wrench



Step 3

Disconnect the negative (-) battery terminal from the battery using a 10 mm wrench, and isolate the negative battery terminal.



Figure 1-1

Step 4

Remove windshield wiper arms:

- a) Unclip two covers on the ends of the wiper arms in area shown (Figure 1-2)

CLIP x 2: 



Figure 1-2

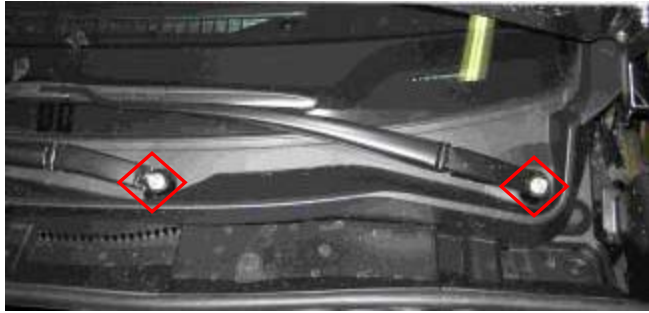



Figure 1-3

 14 mm Socket 3/8" Drive, Ratchet

- b) Remove 2 nuts, using 14mm socket (Figure 1-3)

NUT x 2: 

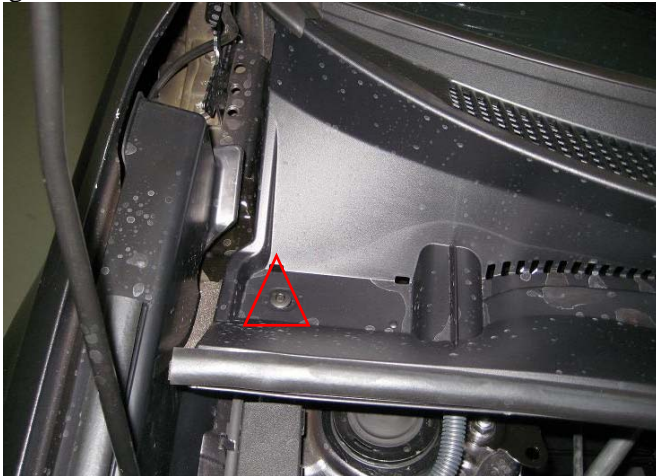



Figure 1-4

 Small Flat Screwdriver, Clip Remover

Step 5

Remove plastic cowl louver:

- a) Locate plastic push pin on each side of the vehicle and remove (Figures 1-4 and 1-5).

PUSH PIN x 2: 



Figure 1-5



Figure 1-6

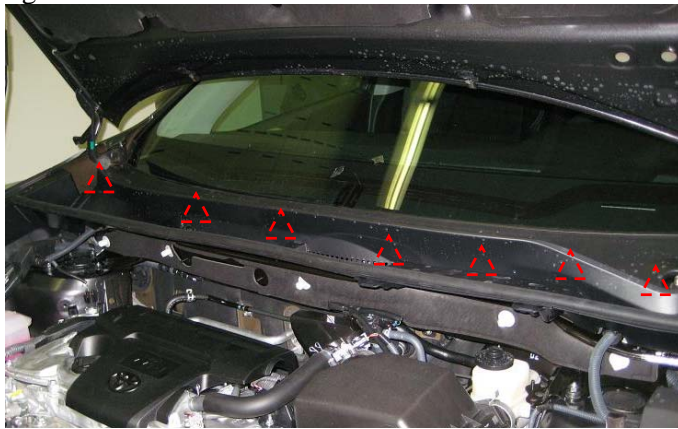


Figure 1-7

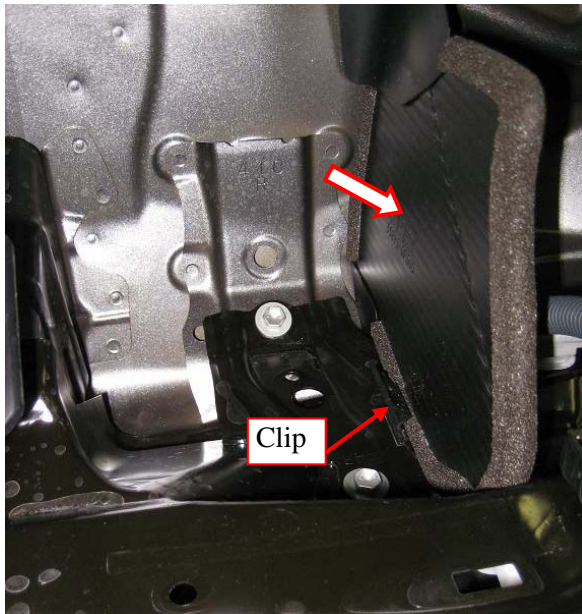


Figure 1-8

- b) Remove 2 plastic corner window trim panels:
 - i) Disengage the panel's clip and claw on the driver side and remove panel (Figure 1-6).
 - ii) Disengage the panel's clip and claw on the passenger side and remove panel.

CLAW x 1 per side: 

CLIP x 1 per side: 

- c) Disengage 7 clips and then pull cowl louver up and away from vehicle to remove it (Figure 1-7).

CLIP x 7: 

Step 6

Remove metal cowl:

- a) Release the clip and then remove baffle shown in Figure 1-8.

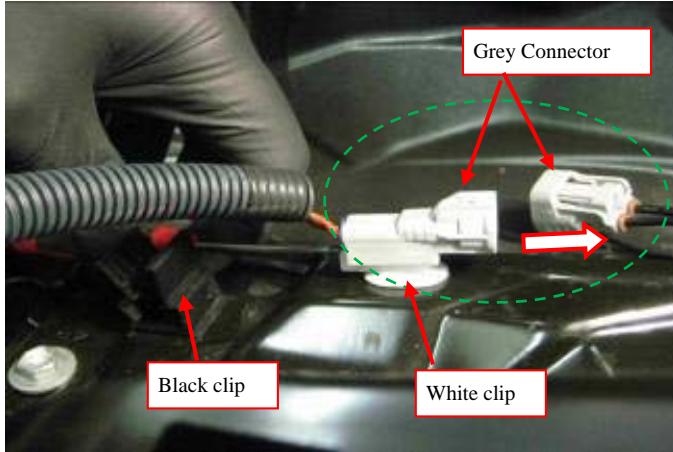


Figure 1-9

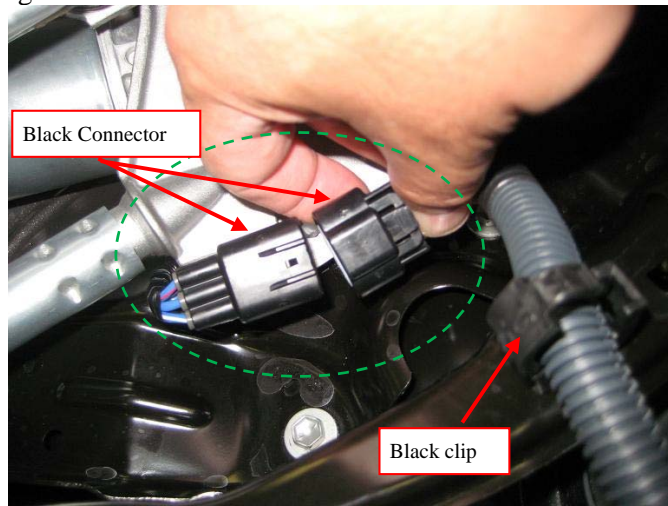


Figure 1-10



Figure 1-11

- b) If applicable, disconnect grey connector located on passenger side (Figure 1-9) and disengage vehicle wire from the black clip.

CLIP x 1:

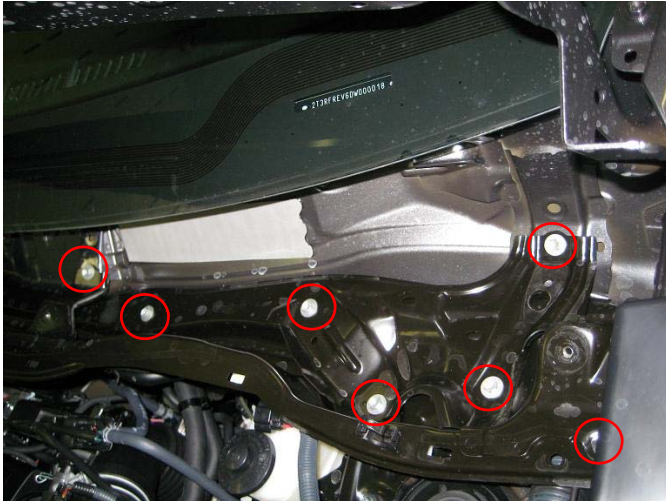
Small Flat Screwdriver

- b) Using a small flat screwdriver (Figure 1-9), disengage the grey connector housing from the white clip without removing the clip from the metal cowl.

- c) Disengage the vehicle wire from the black clip and then disconnect the black connector for the wiper motor located on driver side (Figure 1-10).

10 mm Socket 3/8" Drive, Medium Extension, Ratchet

- d) Remove wiper motor:
 - i) Remove 2 bolts, using 10 mm socket (Figure 1-11)
- BOLT x 2:
- ii) Disengage and remove wiper motor.



Figures 1-12

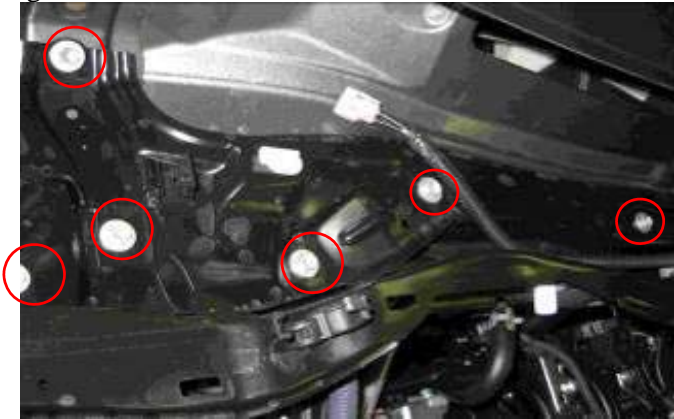


Figure 1-13



Figure 1-14



10 mm Socket 3/8" Drive, Medium Extension, Ratchet

e) Starting on driver's side, remove 13 bolts (Figures 1-12 and 1-13), then disengage and remove metal cowl.

BOLT x 13: ○

Step 7

Remove front door scuff plate LH:

a) Disengage the 5 claws and 2 clips (Figure 1-14) and remove the front door scuff plate LH.

CLAW x 5: □

CLIP x 2: △



Figure 1-15

Step 8

Remove kick panel LH:

- a) Remove retainer nut and disengage clip to remove kick panel LH (Figure 1-15).

CLIP x 1: 

NUT x 1: 



Figure 1-16

Step 9

Remove rear door scuff plate LH:

- (a) Disengage the 4 claws and 2 clips (Figure 1-16) and remove the rear door scuff plate LH.

CLAW x 4: 

CLIP x 2: 


Step 10

Remove rear door scuff plate RH:

- (b) Disengage the 4 claws and 2 clips and remove the rear door scuff plate RH.

CLAW x 4: 

CLIP x 2: 

 14 mm Wrench

Step 11

Remove center pillar lower garnish LH:

- a) Remove seat belt bolt cover and remove bolt, using 14mm wrench (Figure 1-17)

BOLT x 1: 



Figure 1-17



b) Partially remove weather strip from front and rear door LH openings in the center pillar panel area (Figures 1-18 and 1-19).

Figure 1-18



Figure 1-19



Figure 1-20

c) Disengage the 2 claws and 2 clips, and remove the center pillar lower garnish LH (Figure 1-20).

CLAW x 2: 

CLIP x 2: 



Figure 1-21

Step 12

Remove rear interior trim panels:

- a) Fold rear seats down (Figure 1-21).
- b) Remove tonneau cover and spare tire floor covering (Figure 1-21).

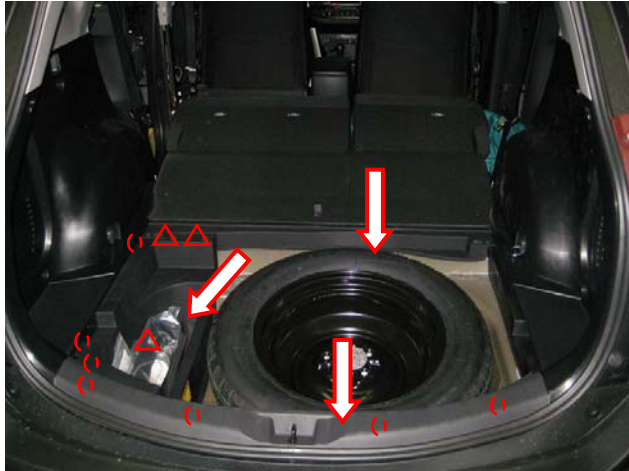


Figure 1-22

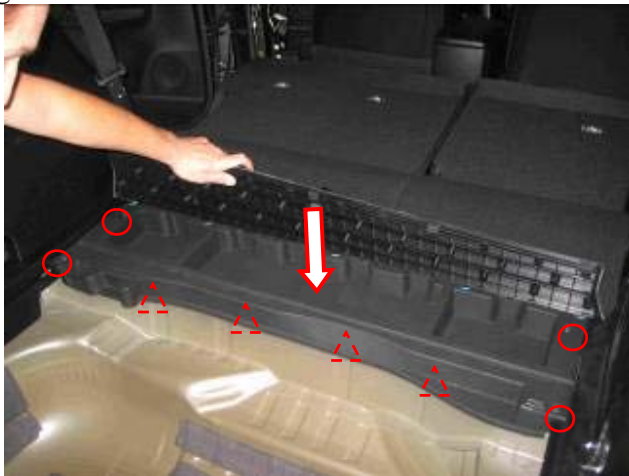


Figure 1-23



Figure 1-24

c) Disengage the jack storage tray clips & push pins on the driver side and remove tray (Figure 1-22).

CLIP x 4: (C)

PUSH PIN x 3: Δ

d) Remove spare tire and styrofoam insert (Figure 1-22).

e) Remove rear threshold plate (Figure 1-22).

CLIP x 4: (C)

 #2 Phillips Screw Driver

Step 13

Remove rear floor storage compartment:

a) Remove 4 screws and disengage 4 clips to disengage and remove the compartment (Figure 1-23).

BOLT x 4: (O)

CLIP x 4: Δ

 14 mm Socket 3/8" Drive, Medium Extension, Ratchet

Step 14

Move rear seats forward:

a) Using a 14 mm socket, remove 6 rear seat mount bolts (Figure 1-24).

BOLT x 6: (O)

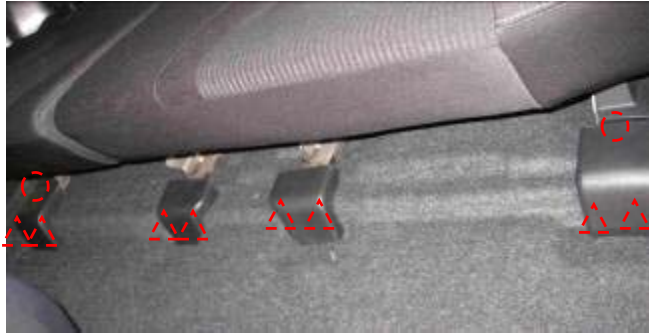


Figure 1-25

- Trim Panel Remover
- b) Using a trim panel remover, remove 4 plastic bracket covers on the front mounting brackets of the rear seats (Figure 1-25).
CLAW x 2: ()
CLIP x 8: △



Figure 1-26

- 14 mm Socket 3/8" Drive, Ratchet
- c) Using a 14 mm socket remove the 4 bolts that secure the frontal mounting brackets of the rear seats (Figure 1-26).
BOLT x 4: ○



Figure 1-27

- d) Move the rear seats forward (Figure 1-27).
- NOTE: Move seats forward enough to gain access to lower seat belt bolt.



Figure 1-28




Figure 1-29








Figure 1-30

Step 15

Partially remove weather strip in rear door openings LH and RH along C-Pillar trim (Figures 1-28 and 1-29).

 14, 10 mm Sockets 3/8" drive, Ratchet, Medium Extension, #2Phillips Screwdriver, Clip Remover
Step 16

Remove rear lower trim panel LH (Figure 1-30).

- a) Remove seat belt bolt, using 14 mm socket.
BOLT x 1: 
- b) Remove cargo hooks, by removing 2 bolts, using 10 mm & 14 mm sockets.
BOLT x 2: 
- c) Remove 3 bolts, using 10 mm socket and #2 screw driver, and disengage 4 clips.
BOLT x 3: 
CLIP x 4: 
CLAW x 6: 
- d) Remove trim panel.

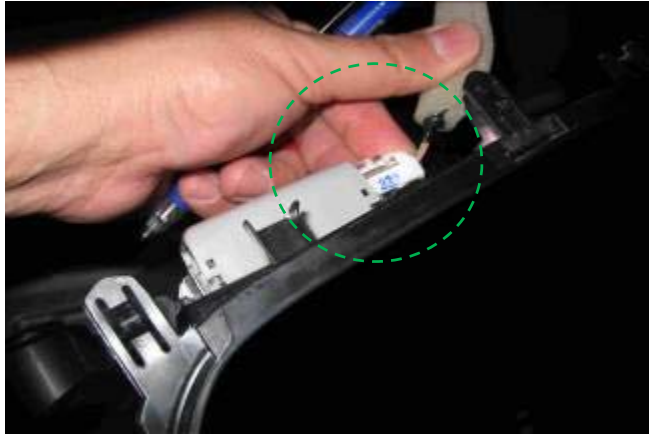


Figure 1-31

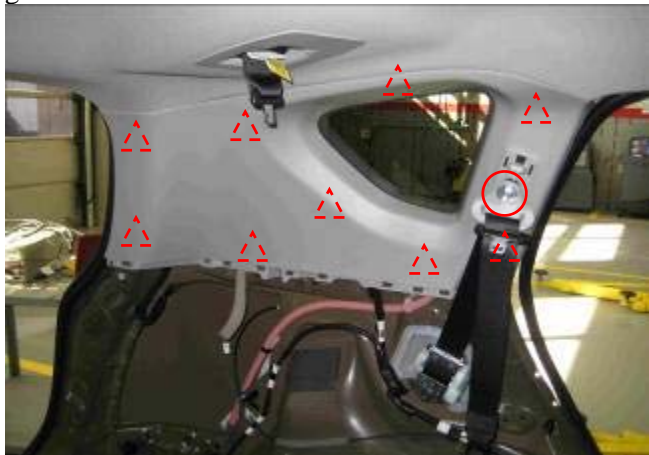


Figure 1-32

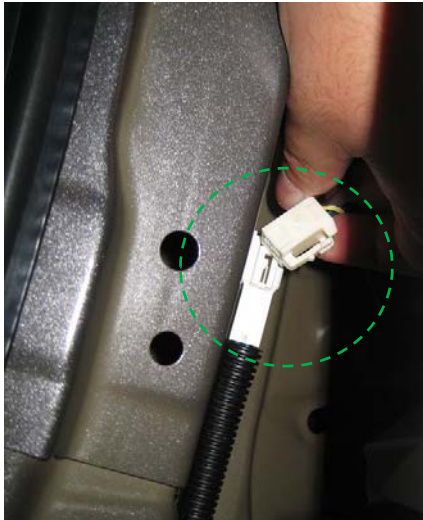



Figure 1-33

- e) Disconnect white electrical connector (Figure 1-31) from cargo lamp in the back of the panel.
- f) Remove trim panel.

 14 mm Socket 3/8" Drive, Ratchet, Clip Remover

Step 17

Disengage seat belt upper bolt cover, remove the bolt with 14 mm socket.

BOLT x 1: 

Disengage the upper trim panel clips on the driver side and remove trim panel to gain access to 4 Pin in-line electrical connector to LH Rear Combination Lamp Assy (Figure 1-32).

CLIP x 9: 

Step 18

Disconnect 4 Pin in-line electrical connector to LH Rear Combination Lamp Assy (Figure 1-33).



Figure 1-34

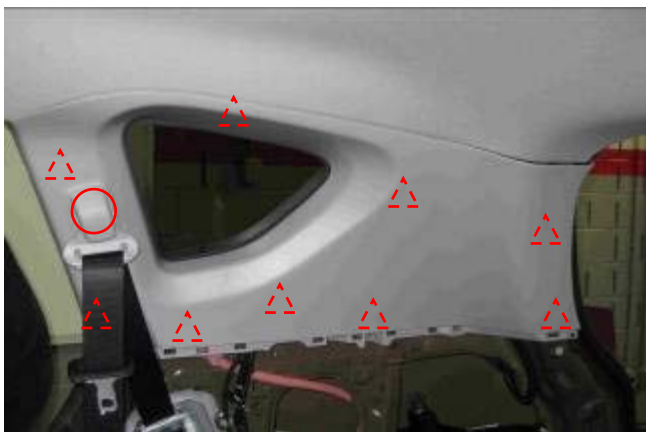


Figure 1-35

Section 2 - Trailer Power Wire Installation

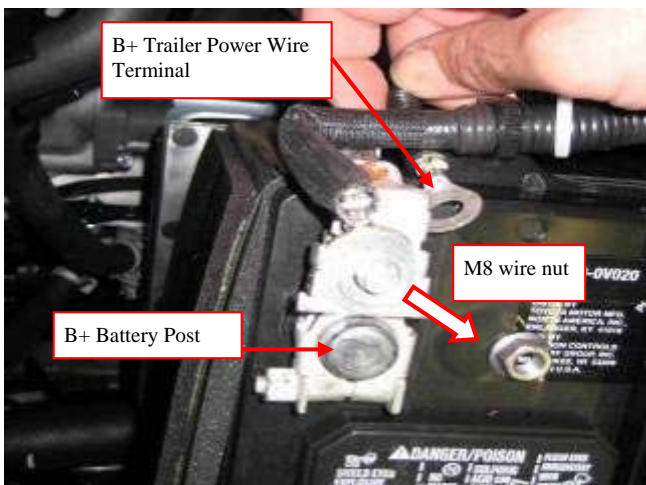


Figure 2-1



14, 10 mm Sockets 3/8" drive, Ratchet, Medium Extension, #2Phillips Screwdriver, Clip Remover

Step 19

Remove rear lower trim panel RH (Figure 1-34).

- a) Remove seat belt bolt, using 14 mm socket.
BOLT x 1:
- b) Remove cargo hooks, by removing 2 bolts, using 10 mm & 14 mm sockets.
BOLT x 2:
- c) Remove 3 bolts, using 10 mm socket and #2 screw driver, and disengage 4 clips.
BOLT x 3:
CLIP x 4:
CLAW x 6:
- d) Remove trim panel.



14 mm Socket 3/8" Drive, Ratchet, Clip Remover

Step 20

Disengage seat belt upper bolt cover, remove the bolt with 14 mm socket.

BOLT x 1:

Disengage the upper trim panel clips on the passenger side and remove trim panel to gain access to 4 Pin in-line electrical connector to RH Rear Combination Lamp Assy (Figure 1-33).

CLIP x 9:

Step 21

Disconnect 4 Pin connector to RH Rear Combination Lamp Assy.



12 mm Socket 3/8" Drive, Ratchet, Medium Extension

Step 1

Install B+ Terminal from trailer power wire to positive battery cable/terminal.



- a) Locate the trailer power wire harness provided and if not already removed, remove the 15 amp fuse before proceeding. The fuse will be re-installed in another step.



- b) Starting in the front of the vehicle, uncover/locate the B+ battery post and



Figure 2-2

remove M8 wire nut from battery cable using 12 mm socket.

- c) Route trailer power wire between vehicle wire harness and battery as shown in Figure 2-1 and attach terminal to battery terminal as shown in Figure 2-2

- d) Re-install M8 wire nut and torque it to 7.6 N-m (57 lbf-in). Reinstall B+ Cover.



Torque: 7.6 N-m (57 lbf-in)

NOTE: make sure to position the ring terminal so that the protective cover can be reattached over the post.

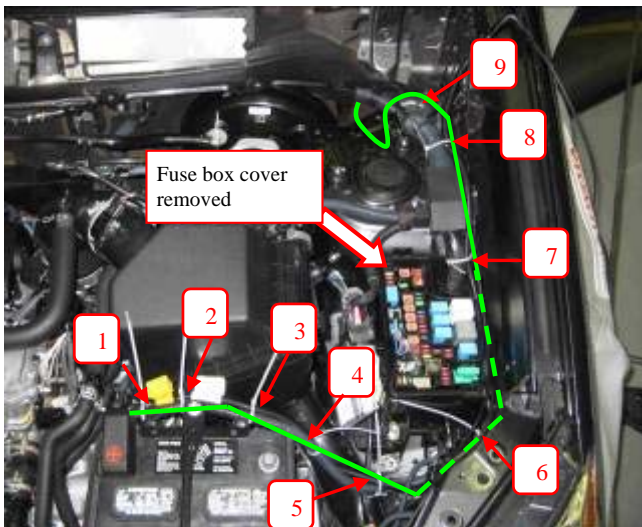


Figure 2-3

Step 2

Starting from the B+ battery terminal, route trailer power wire along vehicle wire harness in the under hood compartment (Figure 2-3).

- a) For ease of routing remove fuse box cover.
- b) Follow vehicle wire harness towards and along the LH fender and secure the trailer power wire with a wire tie every 150mm (6 inches) as shown in detail (Figures 2-4, 2-5 and 2-6). Make sure the wire is kept taut during routing.

8" WIRE TIE x 9

——— Trailer power wire - visible route

- - - Trailer power wire - not visible route

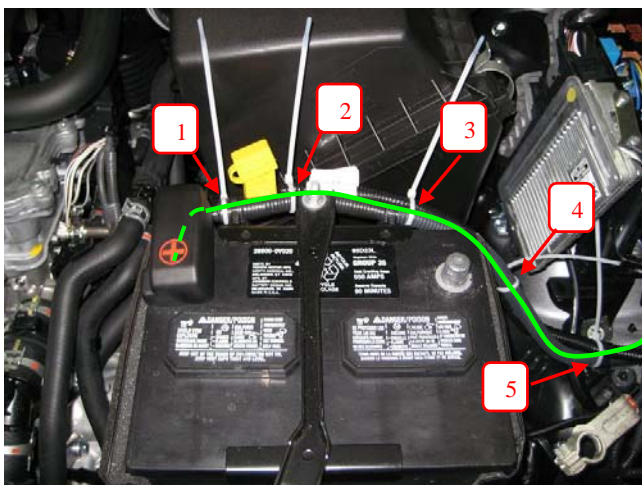


Figure 2-4

NOTE: White wire ties used for illustration purpose only.

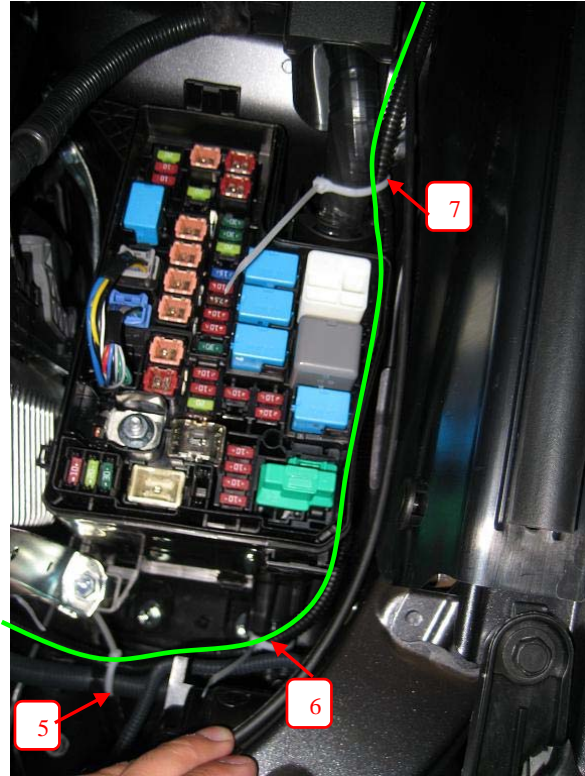


Figure 2-5



NOTE: Do not secure trailer power wire to hood cable.
Hood cable must be free for proper operation.

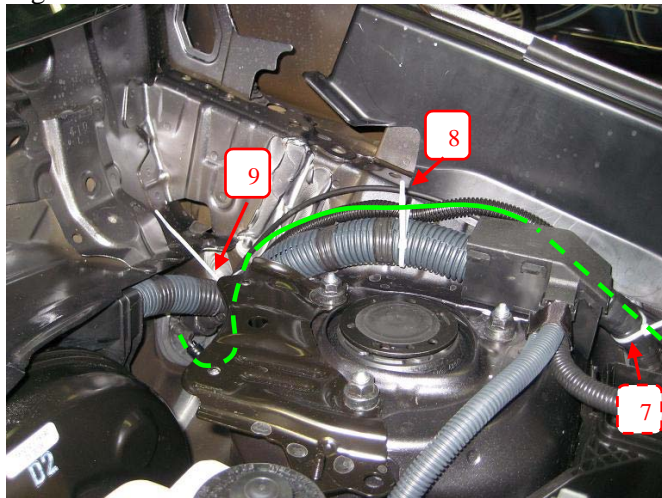


Figure 2-6

——— Trailer power wire - visible route

- - - Trailer power wire - not visible route



Figure 2-7

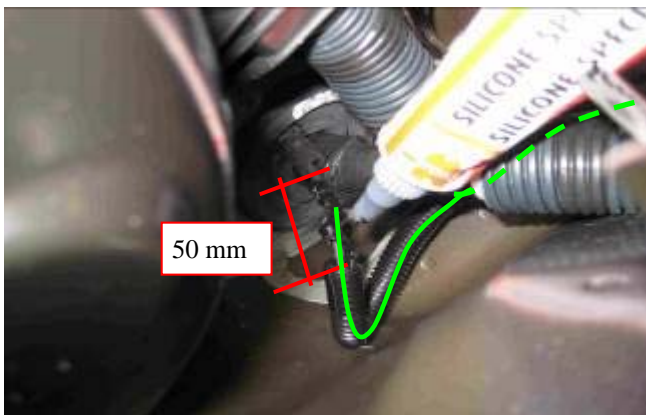


Figure 2-8

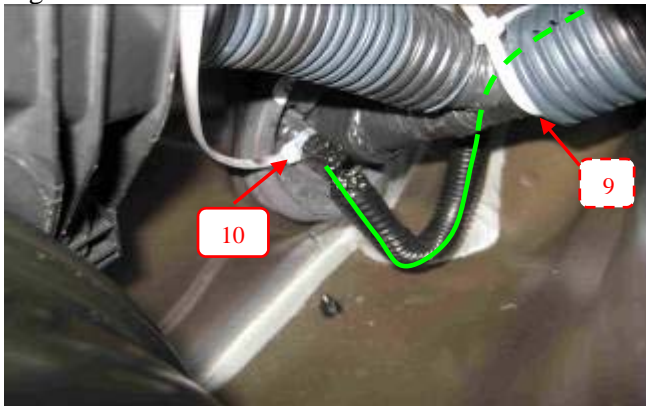



Figure 2-9

 Side cutter

Step 3

Route trailer power wire through the dash grommet:

- a) Locate grommet near brake booster and suspension on driver side of vehicle. Locate grommet nipple for wire pass through (Figure 2-7).




- b) Using a cutting tool, cut the end of the grommet nipple and route the power wire through it.

- c) Pull excess wire into the vehicle interior until there is about 50 mm of power wire left between its convoluted tube and the tip of the grommet nipple.



- d) Add 3M Ultrapro Autobody Sealant to the 50 mm of exposed wire insulation.

 Trailer power wire - visible route

 Trailer power wire – not visible route

- e) Pull excess of wire into vehicle interior until convoluted tube meets grommet nipple and secure wire with a wire tie over nipple grommet. Please refer to wire tie #10 in Figure 2-9.

8" WIRE TIE x 1 

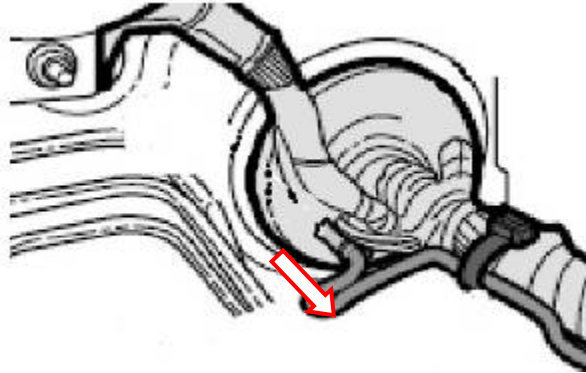


Figure 2-10

f) Confirm the power wire route consider a U-Shape loop (Figure 2-10) right before the grommet to prevent water intrusion to vehicle interior.



Side cutter

Step 4

Cut the excess of wire ties for all wire ties used in the under hood compartment.

Step 5

Route trailer power wire along vehicle wire harness in the vehicle interior:

- a) Follow vehicle wire harness and secure the trailer power wire every 150mm (6 inches) as shown (Figure 2-11).

8" WIRE TIE x 4



NOTE: Do not secure trailer power wire to hood cable. Hood cable must be free for proper operation.

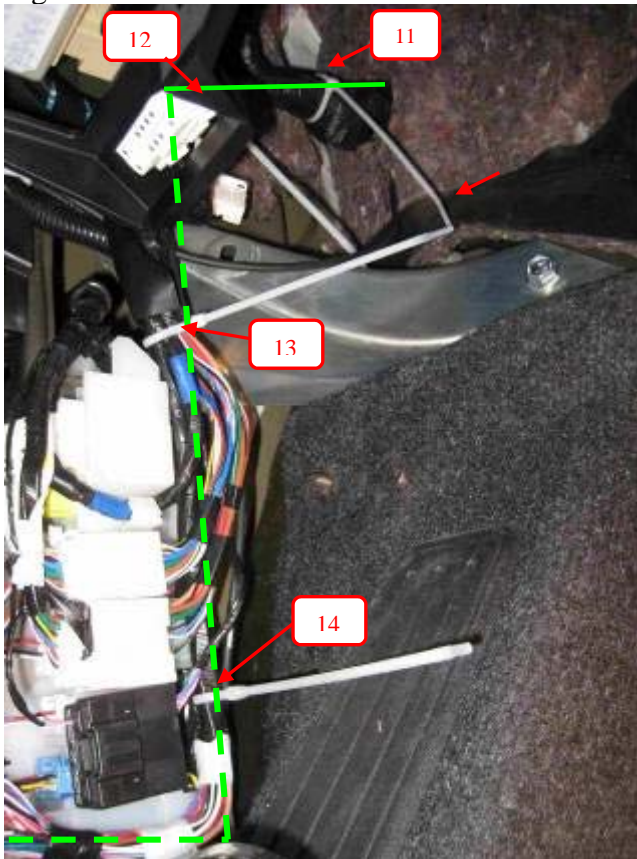


Figure 2-11

——— Trailer power wire - visible route

- - - Trailer power wire – not visible route

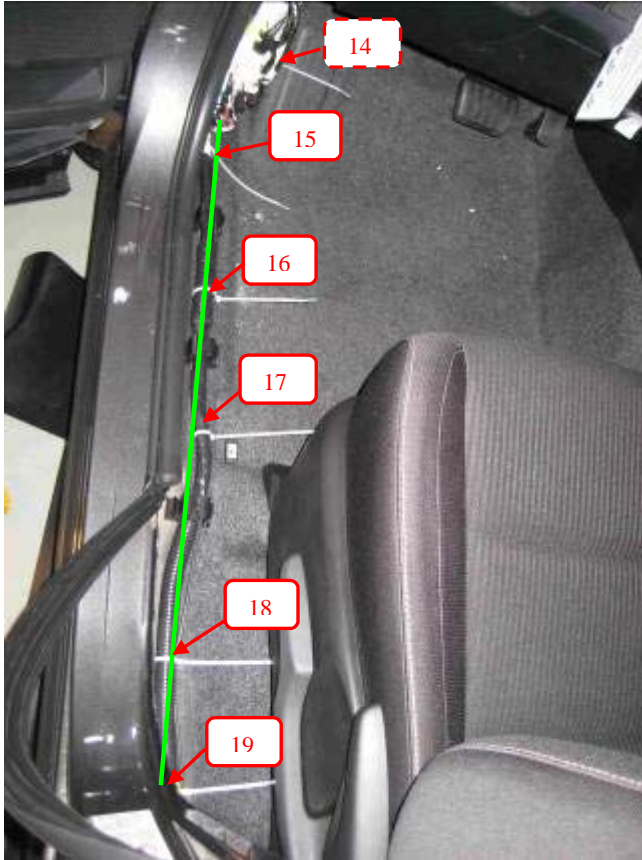


Figure 2-12

- b) Continue routing trailer power wire along vehicle wire harness in the driver's door threshold area.

8" WIRE TIE x 5 (Figure 2-12)

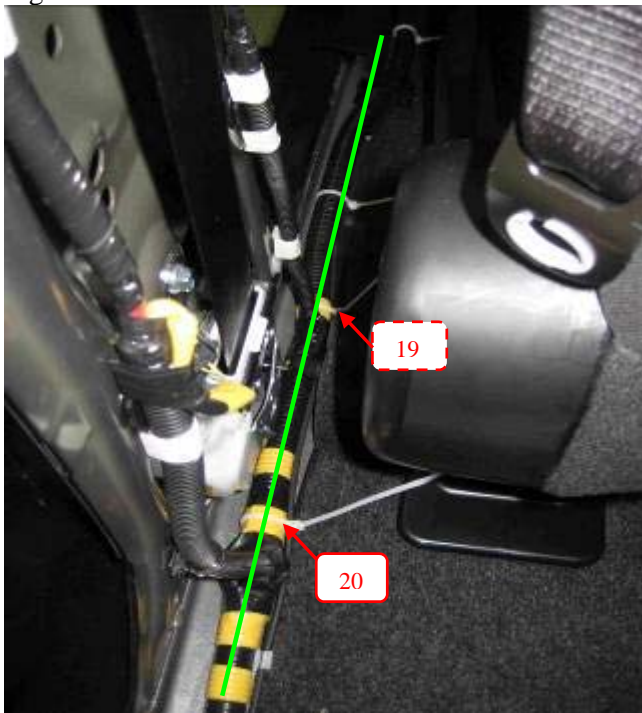


Figure 2-13

- c) Continue routing trailer power wire along vehicle wire harness in the LH B-pillar area.

8" WIRE TIE x 1 (Figure 2-13)

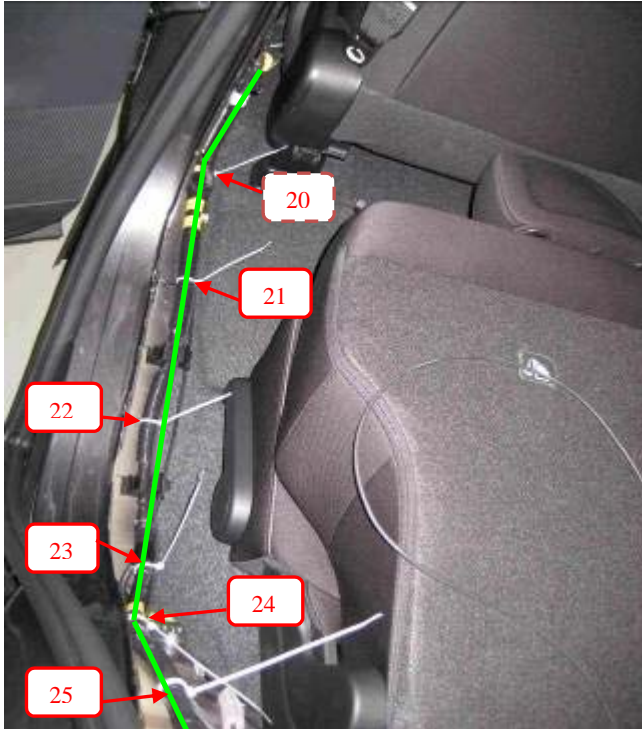


Figure 2-14

- d) Continue routing trailer power wire along vehicle wire harness in the the rear door threshold area.

8" WIRE TIE x 5

(Figure 2-14)



Figure 2-15

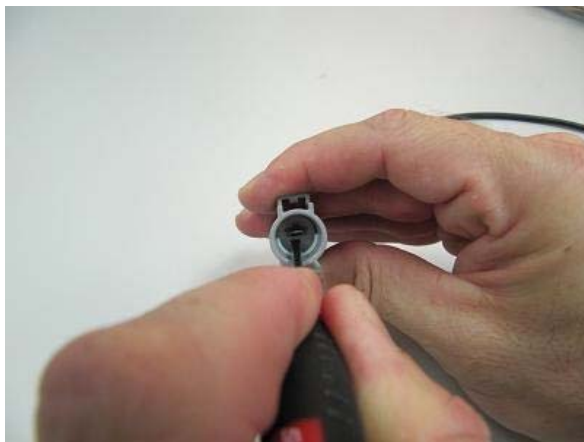


Figure 2-16



Small Screw Driver

- e) Once at the rear door, insert the power wire terminal into the gray housing provided.
 - i) Insert wire terminal into connector housing (Figure 2-15). Make sure terminal is fully inserted.
 - ii) Push the white tab (terminal secondary lock) to lock the wire terminal into position (Figure 2-16)

Section 3 - Trailer Module Harness Installation:



Figure 3-1

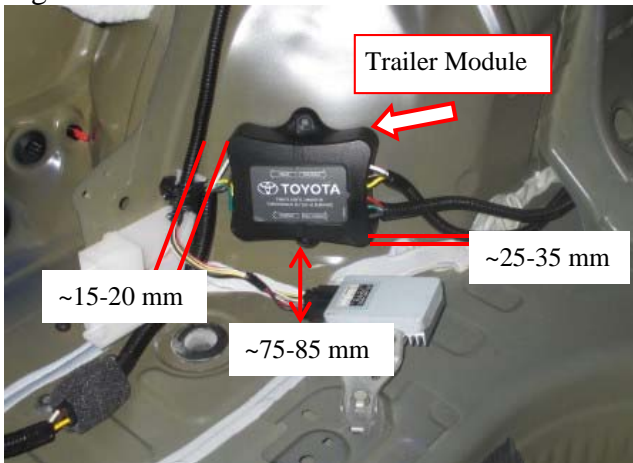


Figure 3-2



Figure 3-3


Step 1

Install the trailer electronic module in the trunk area:

- a) Locate flat surface to install trailer module nearby the LH wheel house area as shown in Figure 3-1.
- b) Clean the area with VDC approved cleaner.
- c) Determine the location of the trailer electronic module. Position the module against the body panel, according to the dimensions described below.

Dimensions for *reference only* while positioning the module (Figure 3-2):

- i) Approximately 15-20 mm away from body panel.
- ii) Approximately 25-35 mm rearward of cross member.
- iii) Approximately 75-85 mm vertically from the body floor.

 d) Test fit the LH rear lower wheel well panel to make sure it will sit flat and not interfere with trailer electronic module after panel re-installation.


e) Peel off the double side tape backing strips.

f) Apply pressure and secure the module to the vehicle as shown (Figure 3-3).

Step 2

Route the trailer wire harness to RH rear combination lamp assy:

- a) Route the T-connection, ground & power wires through an access opening under the cross member behind the rear seat (Figure 3-3).

 **NOTE:** While passing the wires through the opening, avoid sharp edges that may damage the wire or cause injury.

- b) Cut PVC Protective Sheet into 3 equal pieces. (Figure 3-4).

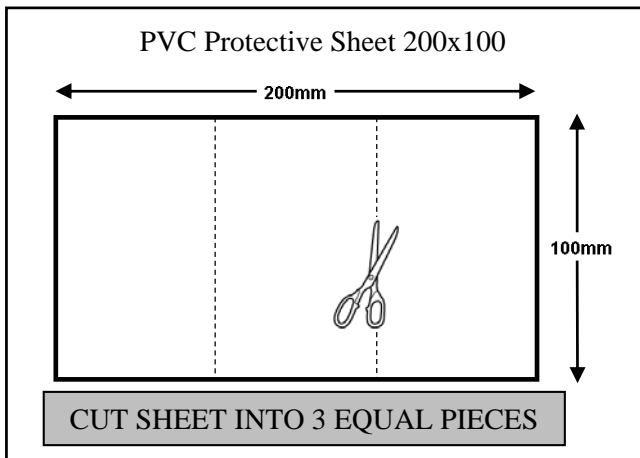


Figure 3-4

- c) Route the t-connection end with Green and Red wire (longer branch) to the passenger side of vehicle, along the forward side of the cross member as shown in Figure 3-5.
- d) Route trailer wire along vehicle wire harness and secure it with 3 wire ties and 3 pieces of PVC Protective Tape (Figure 3-5).

8" WIRE TIE x 3  (Figure 3-5)

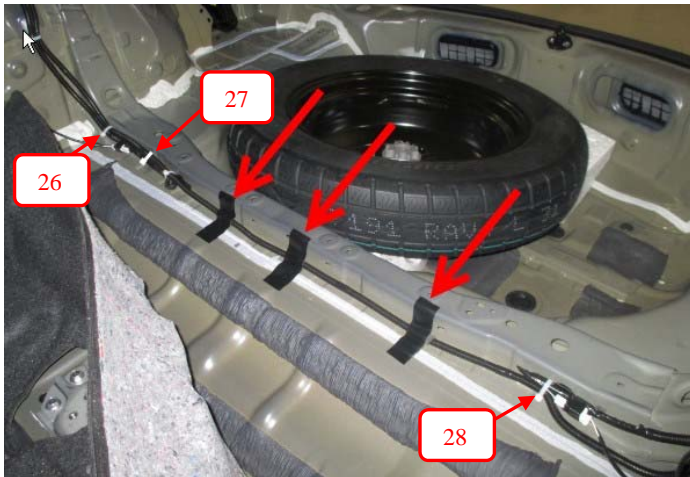


Figure 3-5

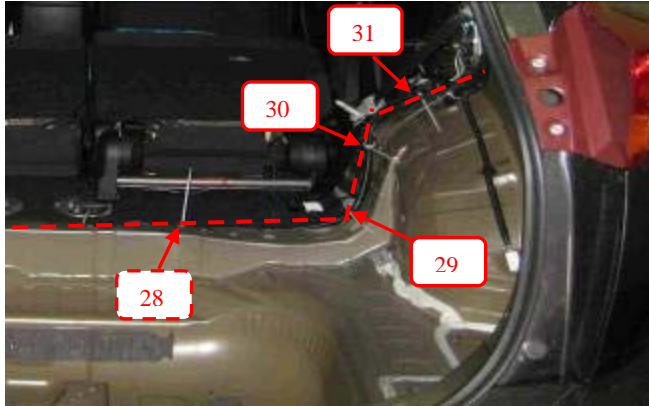


Figure 3-6

- e) Continue routing trailer wire harness along vehicle wire harness as shown in Figure 3-6.

8" WIRE TIE x 3  (Figure 3-6)

- - - - Branch to RH RR Comb Lamp Assy

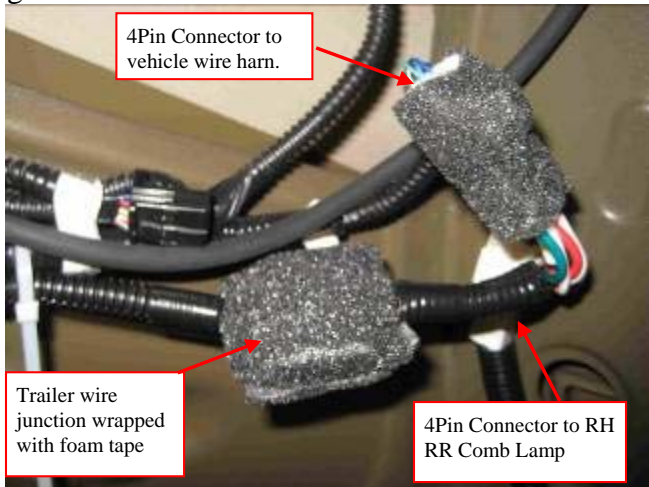


Figure 3-7

- f) Plug the trailer t-connection end with Green & Red wire into the 4Pin Connector from RH RR Combination Lamp Assy.
- g) Plug the trailer t-connection into the 4Pin Connector from vehicle wire harness.
- h) Wrap foam pads around the loose 4Pin connection and plastic junction block of the trailer wire harness (Figure 3-7).

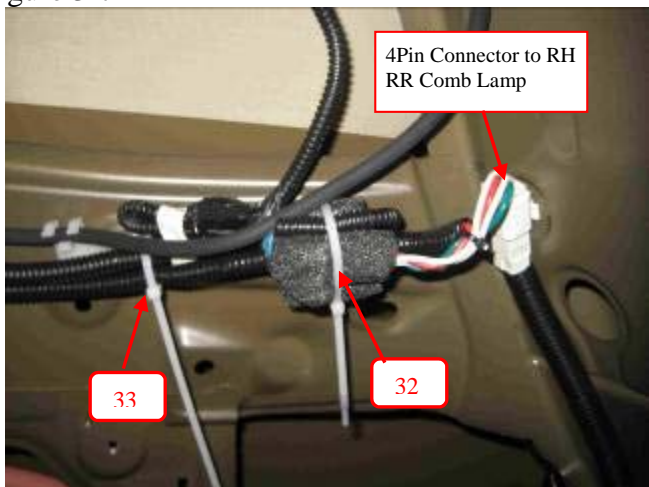


Figure 3-8

- i) Bundle the loose 4Pin connection and plastic junction block of the trailer wire harness to the vehicle wire harness and secure with wire tie #34 shown in Figure 3-8. Then, secure trailer wire to vehicle wire harness with another wire tie.

8" WIRE TIE x 2  (Figure 3-8)

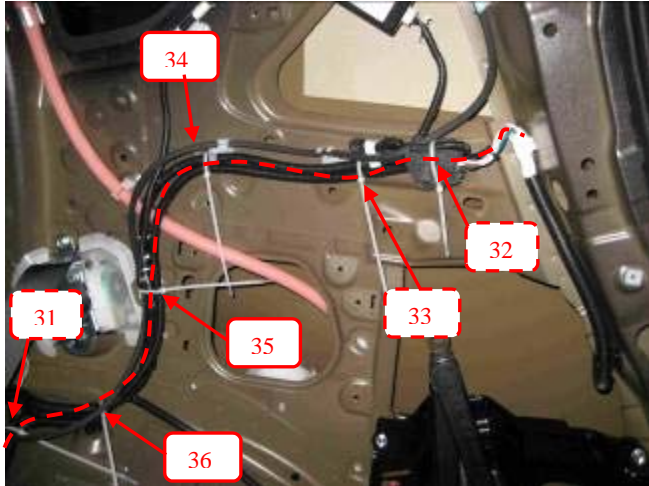


Figure 3-9

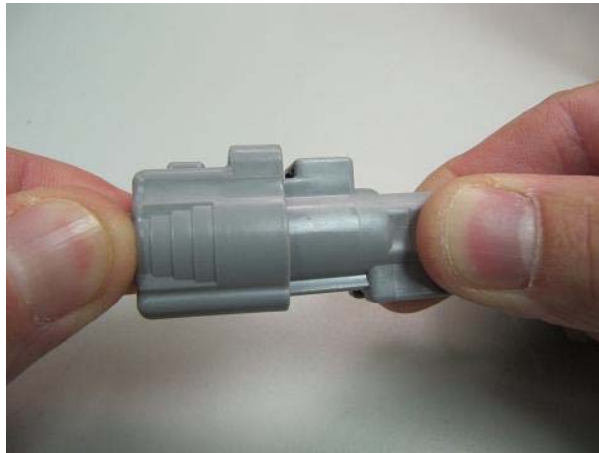


Figure 3-10

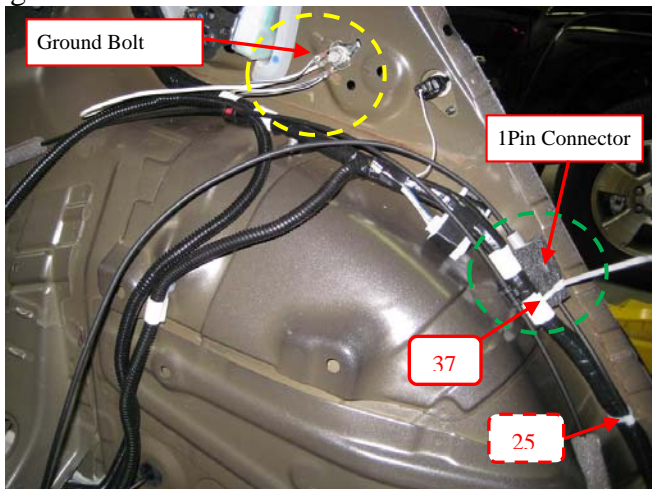


Figure 3-11

- j) Finalize the route of the trailer wire branch to RH RR Combination Lamp Assy. Route the trailer wire harness along vehicle wire harness and secure it with a wire tie every 150 mm (6 inches).

8" WIRE TIE x 3  (Figure 3-9)

--- Branch to RH RR Comb Lamp Assy


Step 3

Connect trailer power wire to trailer module harness (1Pin Connector) as shown in Figures 3-10.

Wrap connector with foam pad and secure it to vehicle wire harness with a wire tie (Figure 3-11).

8" WIRE TIE x 1 

NOTE: Make sure connectors are fully engaged.

 10 mm Socket 3/8" Drive, Ratchet; Torque Wrench


Step 4

Attach trailer wire ground terminal to vehicle ground bolt:

- a) Remove ground bolt, using 10mm socket. Attach trailer white wire with ring terminal on top of vehicle ground terminal.

BOLT x 1: 

- b) Re-install bolt and tighten it to 8.4 N•m (74 lbf•in). Note: make sure to re-install all existing ground wires/terminals.

 Torque: 8.4 N•m (74 lbf•in)

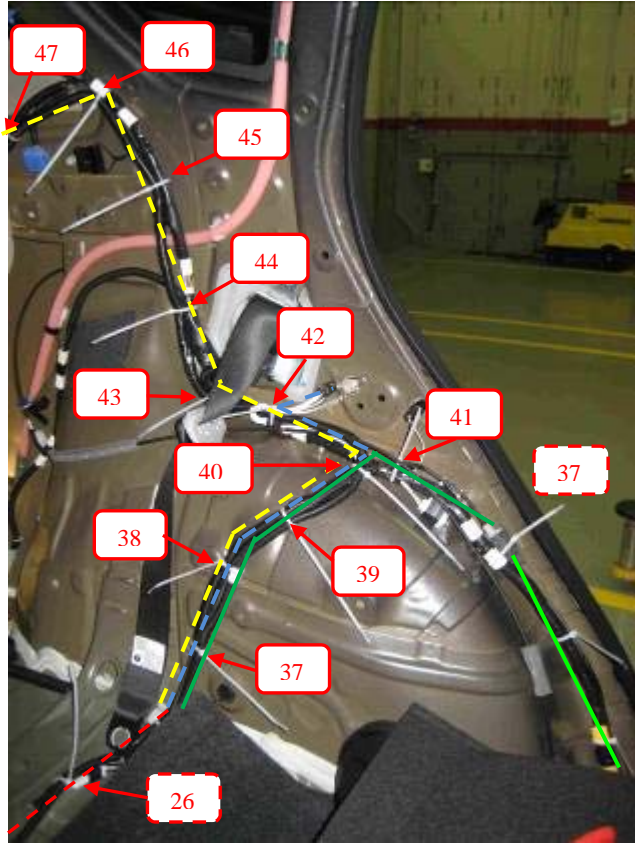


Figure 3-12

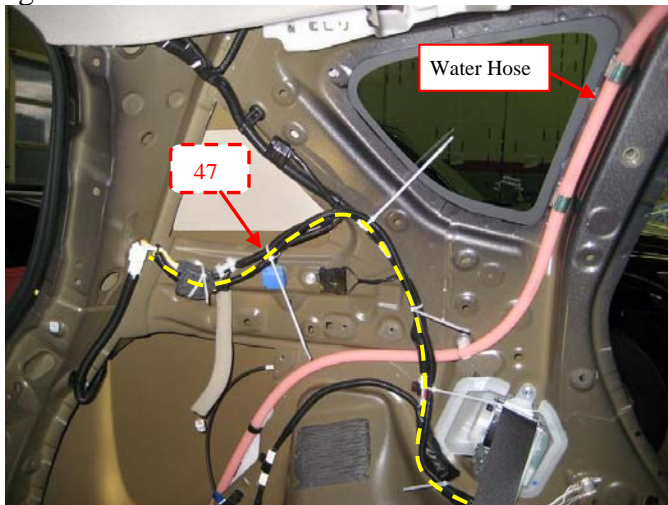






Figure 3-13

Step 5

Route the t-connection end, ground & Power wires along vehicle wire harness as shown in Figure 3-12.

8" WIRE TIE x 11  (Figure 3-12)

Legend:

-  Branch to LH RR Comb Lamp Assy
-  Ground wire
-  Power wire (trailer module harness side)
-  Power wire

- a) Plug the trailer t-connection end with Yellow & Brown wires into the 4Pin Connector from LH RR Combination Lamp Assy.
- b) Plug the trailer t-connection into the 4Pin Connector from vehicle wire harness.



NOTE: Do not secure trailer wire to water hose, which must be free for proper operation.

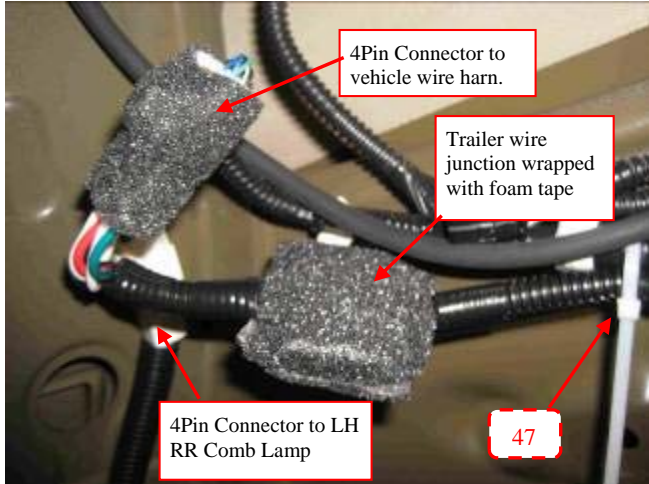


Figure 3-14

- c) Wrap foam pads around the loose 4Pin connection and plastic junction block of the trailer wire harness (Figure 3-14).

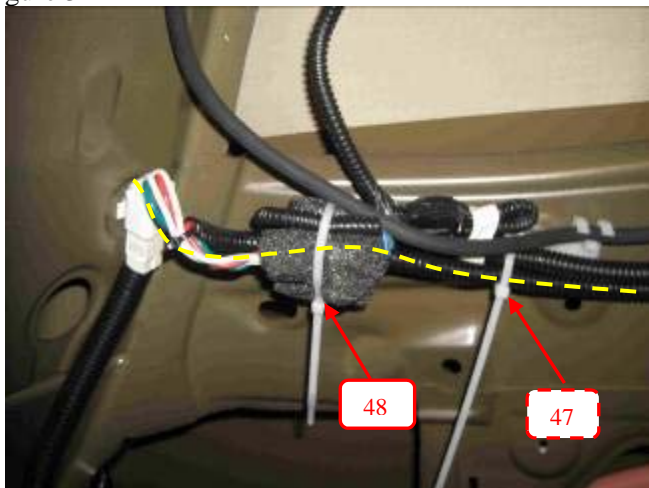


Figure 3-15

- d) Bundle the loose 4Pin connection and plastic junction block of the trailer wire harness to the vehicle wire harness and secure with wire tie #51 shown in Figure 3-15.

8" WIRE TIE x 1  (Figure 3-15)

 Side cutter

Step 6

Cut the excess of wire ties for all wire ties used in the under hood compartment.

Section 4 - Trailer 4-Flat Harness Installation:



NOTE: Install Towing Hitch before proceeding with next steps (PLEASE REFER TO TOWING HITCH INSTALLATION INSTRUCTIONS). Do not reinstall rear bumper fascia until completing the 4-flat harness installation.

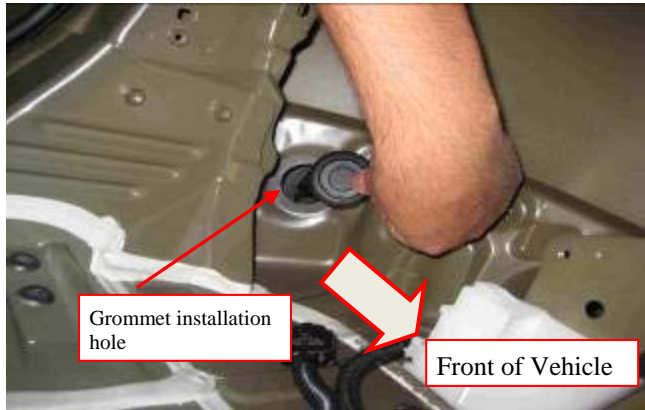


Figure 4-1



Figure 4-2



Figure 4-3

Step 1

Locate grommet installation hole below the LH RR Combination Lamp Assy (Figure 4-1). After that, remove the hole dummy cover and discard it.

Step 2

Route the 4-flat connector through hole (Figures 4-2 and 4-3) to the exterior of the vehicle until grommet on the harness can be seated in the hole.

Step 3



Install the grommet, making sure that grommet is fully seated to vehicle body.

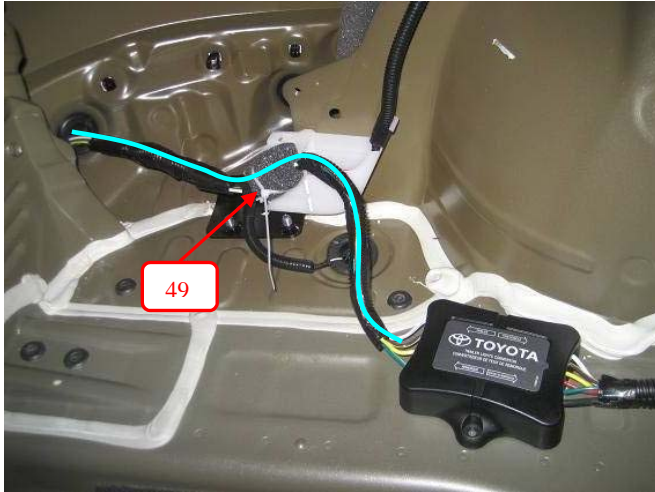


Figure 4-4

Step 4

Route 4-Flat wire harness in the vehicle interior and exterior areas:

- a) Plug the 4-flat harness to the trailer module harness
 - i) Wrap the plugs with foam pad.
 - ii) Secure the padded parts to vehicle wire channel with wire tie as shown in Figure 4-4.

8" WIRE TIE x 1 (Figure 4-4)

Trailer 4-Flat Harness - visible route

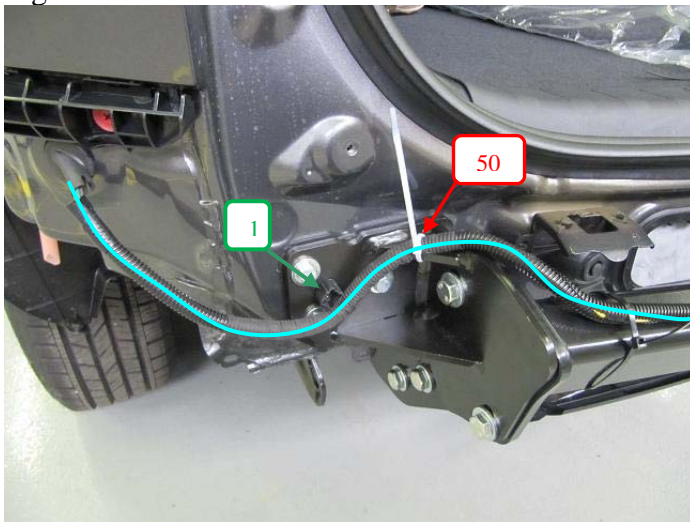


Figure 4-5

- b) Follow hitch bracket and secure with cable tie and M6 stud mount cable tie as shown (Figure 4-5).

8" WIRE TIE x 1

M6 STUD MOUNT CLIP x 1

Trailer 4-Flat Harness - visible route

Trailer 4-Flat Harness – not visible route

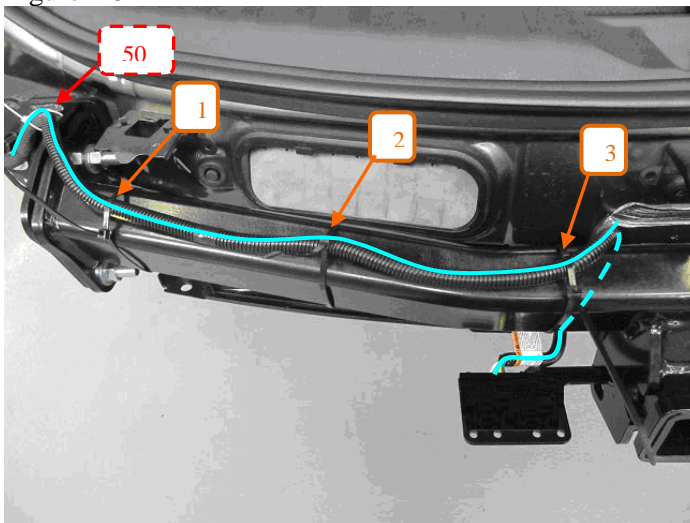


Figure 4-6

- c) Route 4-Flat wire harness along the top of hitch cross tube towards passenger's side. Secure trailer wire to hitch with three wire ties.

14" WIRE TIE x 3 (Figure 4-6)

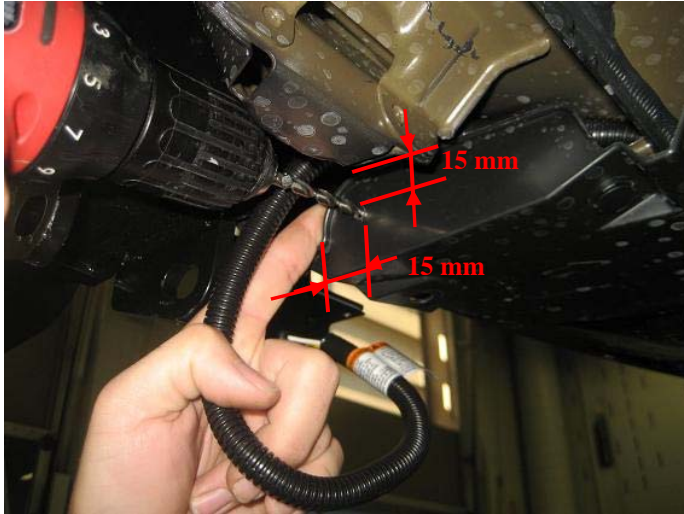


Figure 4-7



Drill, 7.5 mm Drill Bit

d) Drill the bumper undertray with a 7.5 mm drill bit as shown in Figure 4-7.

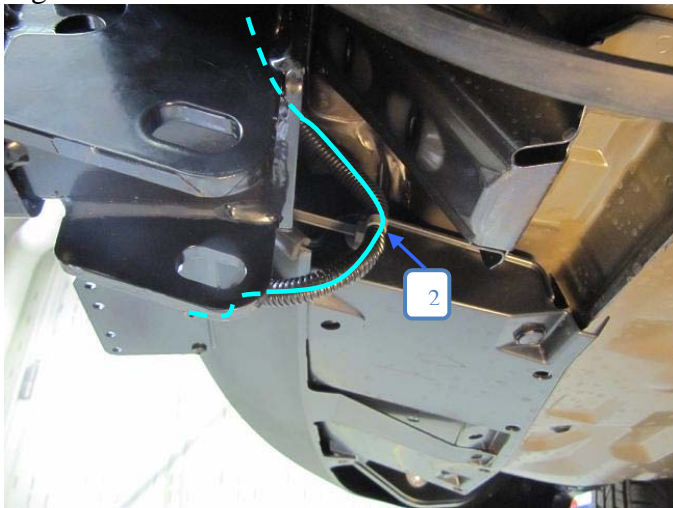


Figure 4-8

e) Insert trailer wire clip as shown in Figure 4-8.

PUSH MOUNT CLIP x 1  (Figure 4-8)

 Trailer 4-Flat Harness - visible route

 Trailer 4-Flat Harness – not visible route



Side cutter

Step 5

Cut the excess of wire ties for all wire ties used to secure 4-Flat Trailer Harness.



NOTE: PLEASE REFER TO TOWING HITCH INSTALLATION INSTRUCTIONS for re-installation of rear bumper fascia.



10 mm Wrench, #2 Phillips Screw Driver

Step 6

Attach 4-Flat Connector with L-Shape bracket into hitch bracket, using 2 sets of provided screws and Nut/Washer.



Figure 4-9

Section 5 – Completion of Installation:

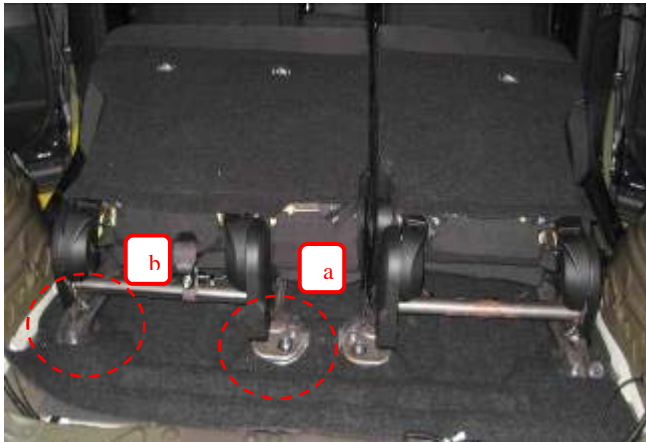


Figure 5-1

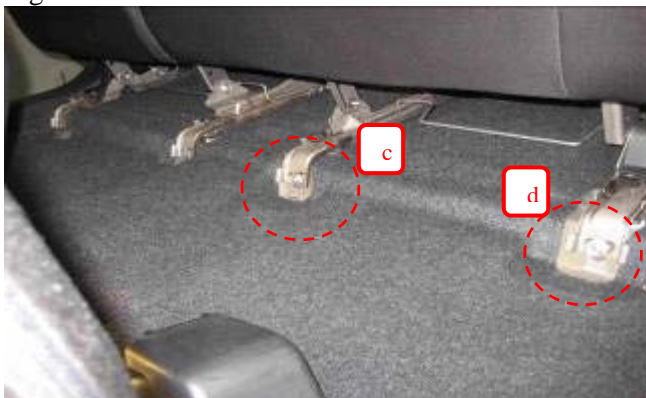


Figure 5-2

Step 1

Reinstall all vehicle components in reverse order of disassembly.



- a. Torque Seat Belt bolts to 42 N•m (31 ft•lbf)



Torque: 42 N•m (31 ft•lbf)

- b. Torque Seat bolts to 42 N•m (31 ft•lbf) per installation recommended pattern for both seats (Figures 5-1 and 5-2)



Torque: 42 N•m (31 ft•lbf)

- (a) Tighten RR inner bolts
- (b) Tighten RR outer bolts
- (c) Tighten FR inner bolts
- (d) Tighten FR outer bolts
- c. Torque wiper motor bolts to 5.4 N•m (48 in•lbf)
- d. Torque cowl panel bolts to 5.4 N•m (48 in•lbf)
- e. Torque wiper arm nuts to 26 N•m (19 ft•lbf)

Step 2

Verify the trim panels fit together properly with no uneven gaps between them.

Step 3

Install the 15 amp fuse into trailer wire harness.

Step 4



Re-install the vehicle's negative (-) battery terminal to battery and install DCC fuse if required. Tighten the nut of negative battery terminal and torque it to 5.4 N•m (48 in•lbf).



Torque: 5.4 N•m (48 in•lbf).

NOTE: Do not touch the positive terminal with any tool when installing the negative battery cable.

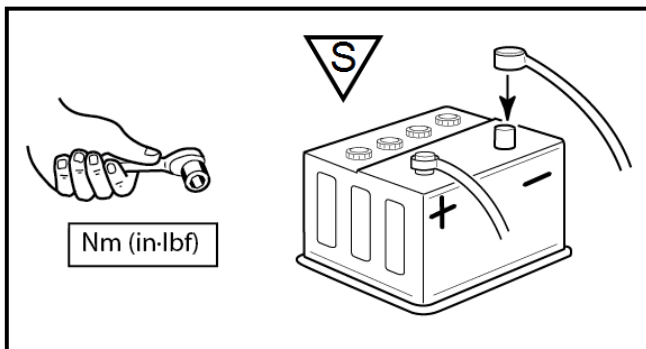


Figure 5-3

Step 5

Place installation instructions and fuse location card with owner's manual in the glove box for future reference.

Step 6

Carry-out functional check for trailer wire harness and post-installation check for the vehicle. Please refer to attached check-list.



WARNING:

Overloading circuit can cause fire. DO NOT exceed load of towing manufacturer rating or:



- Max. stop/turn light: 2 bulbs per side (total 4.2 amps)

- Max. tail lights: 7.5 amps



Read vehicle's owners manual & instruction sheet for additional information.

Checklist - these points **MUST** be checked to ensure a quality installation.

Check: _____

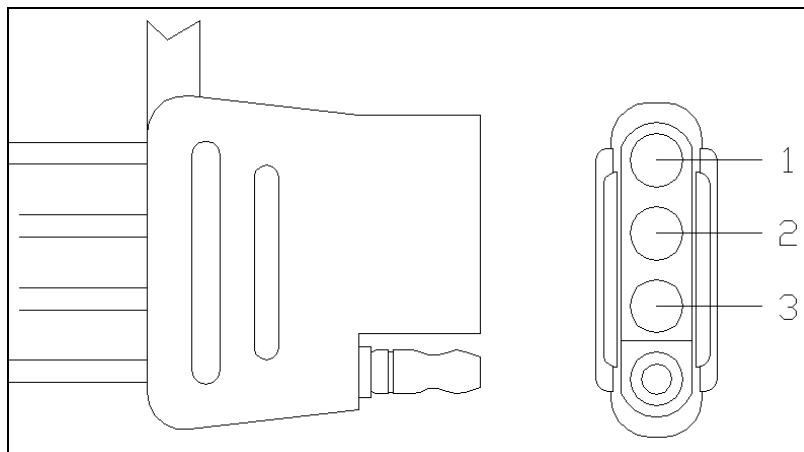
Look For: _____

Accessory Functional Check

Using Trailer lights, Circuit tester or Multi-meter

<ul style="list-style-type: none"> • Activate individual vehicle light functions 	<ul style="list-style-type: none"> • Verify that the corresponding functions activate the trailer 4-flat
Right Turn	Circuit 1*
Left Turn	Circuit 2*
Brake	Circuits 1 & 2
Tail light	Circuit 3
<ul style="list-style-type: none"> • Activate a combination of vehicle light functions simultaneously. 	<ul style="list-style-type: none"> • Verify that the corresponding functions activate the trailer 4-flat (color coded circuit)
Tail light & Brake	Circuit 1, 2 & 3
Left Turn & Brake	Circuit 1 & 2*
Right Turn & Brake	Circuit 1* & 2

*Flashes on and off when activated for turn circuit.



TOYOTA RAV4 2013-2015 TRAILER WIRE HARNESS

Checklist - these points **MUST** be checked to ensure a quality installation.

Check: _____

Look For: _____

Vehicle Functional Check

Visual Inspection required

<ul style="list-style-type: none"> • Activate individual vehicle light functions. 	<ul style="list-style-type: none"> • Verify that the corresponding vehicle lights activate. If light does not activate then check the connection.
<ul style="list-style-type: none"> • Trunk Light 	<ul style="list-style-type: none"> • Functioning Light
<ul style="list-style-type: none"> • Warning Lights 	<ul style="list-style-type: none"> • No presence of warning lights in the combination meter

Vehicle Appearance Check

After accessory installation and removal of protective cover(s), perform a visual inspection.

Ensure no damage (including scuffs and scratches) was caused during the installation process.
(For PPO installations, refer to TMS Accessory Quality Shipping Standard.)

Trouble Shooting Guide

Failure Mode	Trouble Shooting Steps
No Power to trailer light functions	Check trailer wiring harness fuse per owner's manual fuse location card.
	Check 4-flat connection between trailer and vehicle to make sure the connection is fully engaged.
	Turn all functions off and remove key for 10 seconds and retest functions with trailer attached.
	Turn all functions off and remove key for 10 seconds with trailer disengaged. Using a multi-meter check the function output at the 4-flat. If all functions work, check trailer for potential short or overload described in the owner's manual fuse location card.
Corrosion on 4-flat plug	Clean connection and add Dielectric Grease (sold separately) to the terminal pins.