# Part Number: 08921-42900

#### **Kit Contents**

1110 001	1001105	
Item #	Quantity Reqd.	Description
1	1	Converter
2	1	Wire harness
3	1	Sub wire harness No.1
4	2	Plastic Tie (300mm)
5	21	Plastic Tie (150mm)
6	1	Plastic Tie
7	5	Packing
8	1	Bolt (M6)
9	2	Bolt (M5)
10	1	Connector clip
11	1	Nut (M6)
12	1	Owner's manual
13	1	Fuse (30A)
14	1	Sub wire harness No.2
15	1	Fuse (15A)
16	1	Label

### **Hardware Bag Contents**

Item #

Quantity Reqd. Description

### **Additional Items Required For Installation**

Item #	Quantity Reqd.	Description
~ ~		

### Conflicts

### **Recommended Tools**

Personal & Vehicle	Notes
Protection	
Safety Goggles	
Seat Covers	
Floor Protectors	
Special Tools	Notes
L.E.D. Tester	S.S.T. 00002-62195
<b>Installation Tools</b>	Notes
Torque Wrench	
Ratchet 3/8" Drive	
6" Extension	
8mm Socket	
10mm Socket	
14mm Socket	
Clip Removal Tool	
Nylon Removal Tool	
Nipper	
Screw driver	
Slot Precision Screw Driver	

**NOTE:** Part number of this accessory may not be the same as the part number shown.

Special Chemicals	Notes

#### **General Applicability**

#### **Recommended Sequence of Application**

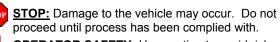
Item #	Accessory
1	Trailer Hitch*
2	Trailer Wire Harness

\*Mandatory

#### Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Reqd.	Description
1		
2		
3		

### Legend



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.

> 061896-1150 (52100105E)

Issue: A 01/19/06

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.

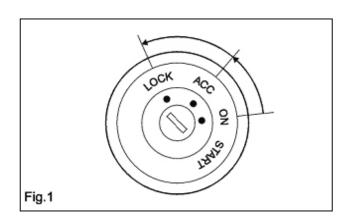
2006 -

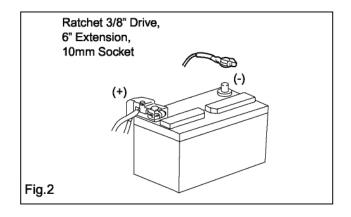
These guidelines can be found in the "Accessory Installation Practices" document.

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



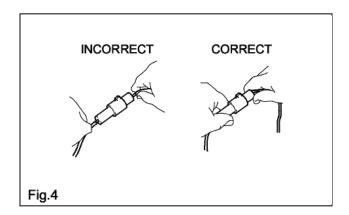




### 1. Supplemental Restraint System SRS

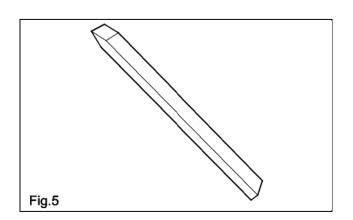
- (a) Failure to carry out procedures listed below could result in possible deployment of airbag, personal injury, or unnecessary repairs to SRS.
- (b) Turn the key switch to the LOCK position. (Fig. 1)
- (c) Remove the key from the ignition switch.
- (d) Disconnect the negative battery cable. (Fig. 2)

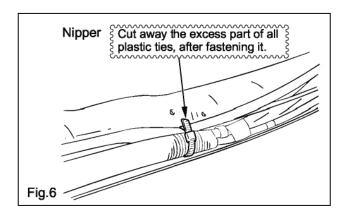
- (e) Never use a voltmeter to trouble shoot any of Accidentally probing the connectors to the SRS can lead to deployment of the airbag.
   (Fig 3)
- (f) SRS wire harness loom/cover is bright yellow in color.



### 2. Wiring Precautions

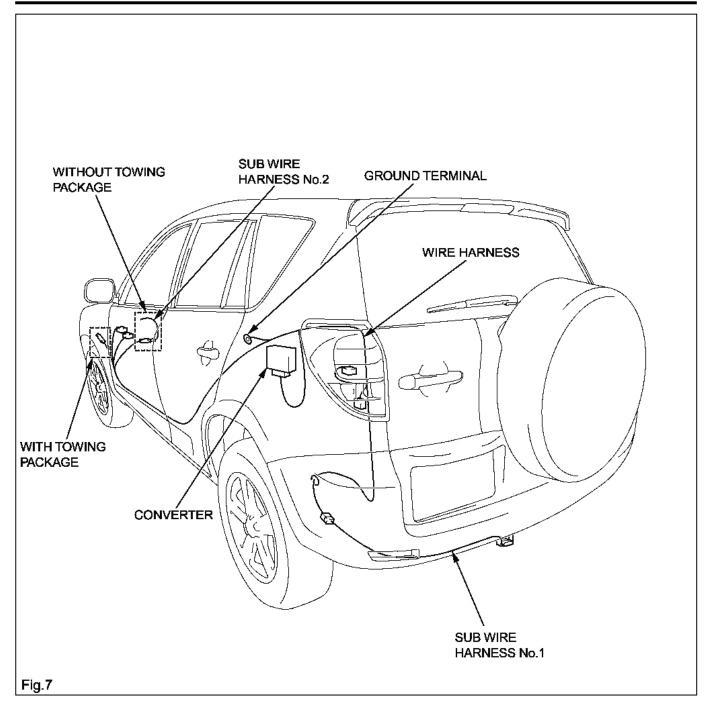
- (a) DO NOT pull on vehicle wires and/or wireharness. To uncouple electrical connectors, pull only on the connector itself. (Fig. 4)
- (b) Use nylon ties and adhesive foam strips to secure the vehicle harness and the trailer wire harness.
- (c) Ensure all wires are properly insulated from ground.
- (d) When installing the trailer wire harness make sure it is not cut or perforated by any sharp metal objects.



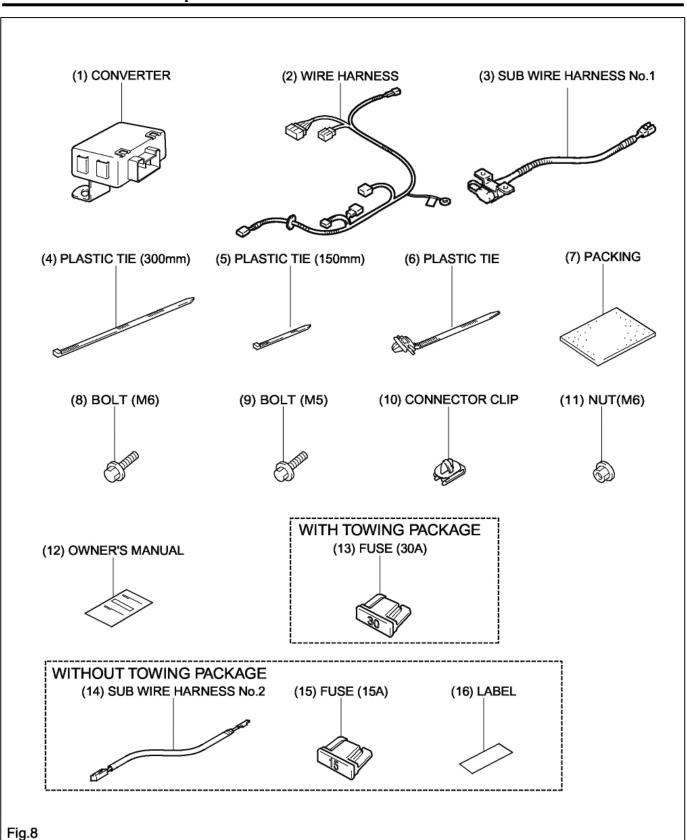


# **3. General Practices and Procedures**

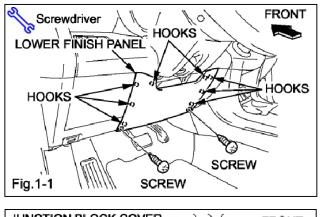
- (a) Before starting installation, refer to the supplemental restraint system procedures in Section 1.
- (b) Take care not to scratch any part of the vehicle. Bind the tips of tools (clip remover, slot screw driver, etc.) with vinyl tape to prevent damage to any part of the car, or use a nylon removal tool (resin based prying tool). (Fig. 5)
- (c) Use a small parts container to store removed bolts and tapping screws so that they can be reassembled correctly.
- (d) Ensure seat/floor protectors are in position.
- (e) After fastening plastic ties, clip away all the excess of the ties using diagonal pliers. (Fig. 6)

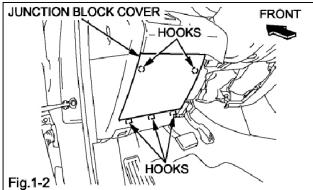


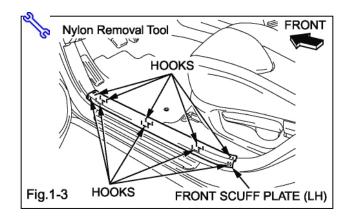
# 2006 -

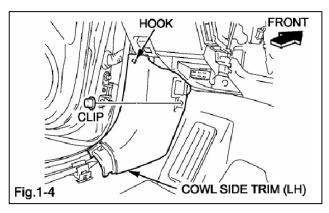










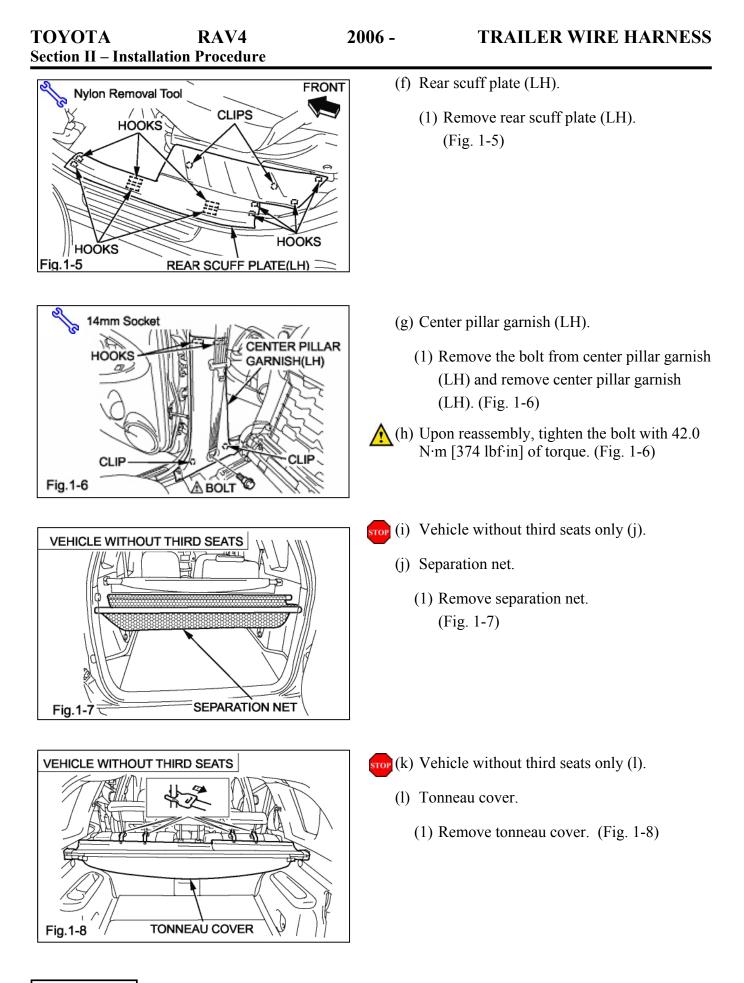


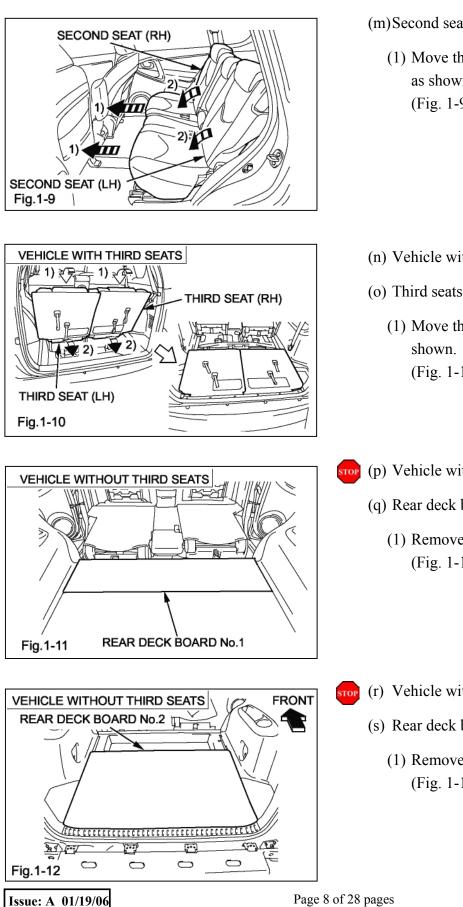
# 1. Parts Removal No.1

- (a) Before installation, remove the negative (-) terminal of the battery.
- (b) Lower finish panel.
  - (1) Remove 2 screws from lower finish panel and remove lower finish panel. (Fig. 1-1)
- (c) Junction block cover.
  - (1) Remove junction block cover. (Fig. 1-2)

- (d) Front scuff plate (LH).
  - (1) Remove front scuff plate (LH). (Fig. 1-3)

- (e) Cowl side trim (LH).
  - (1) Remove the clip from cowl side trim (LH) by turning it counter clockwise. Remove cowl side trim (LH). (Fig. 1-4)



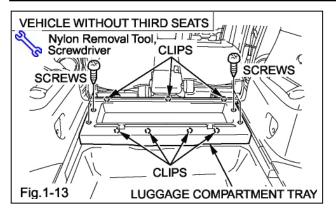


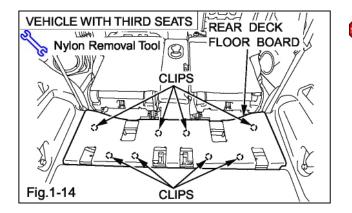
(m)Second seats (RH, LH).

(1) Move the second seats (RH, LH) forward as shown. (Fig. 1-9)

- (n) Vehicle with third seats only (o).
- (o) Third seats (RH, LH).
  - (1) Move the third seat (RH, LH) forward as (Fig. 1-10)
- (p) Vehicle without third seats only (q).
  - (q) Rear deck board No. 1.
    - (1) Remove rear deck board No. 1. (Fig. 1-11)

- (r) Vehicle without third seats only (s).
  - (s) Rear deck board No. 2.
    - (1) Remove rear deck board No. 2. (Fig. 1-12)

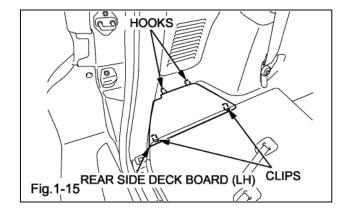




- (t) Vehicle without third seats only (u). TOP
  - (u) Luggage compartment tray.
    - (1) Remove luggage compartment tray. (Fig. 1-13)

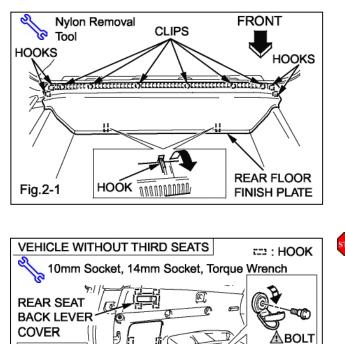
- (v) Vehicle with third seats only (w).
  - (w)Rear deck floor board.
    - (1) Remove rear dock floor board. (Fig. 1-14)

- (x) Rear side deck board (LH).
  - (1) Remove rear side deck board (LH). (Fig. 1-15)



CAP

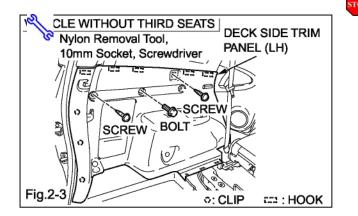
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# 2. Parts Removal No.2

- (a) Rear floor finish plate.
  - (1) Remove rear floor finish plate. (Fig. 2-1)

- (b) Vehicle without third seats only (c)-(d). STOP
  - (c) Deck side trim panel (LH).
    - (1) Remove rear seat back lever cover and cap from deck side trim panel.
    - (2) Remove 3 bolts from deck side trim panel (LH) and remove deck side trim cover.
  - (d) Upon reassembly, tighten the bolt with 42.0 N·m [374 lbf·in] of torque. (Fig. 2-2)



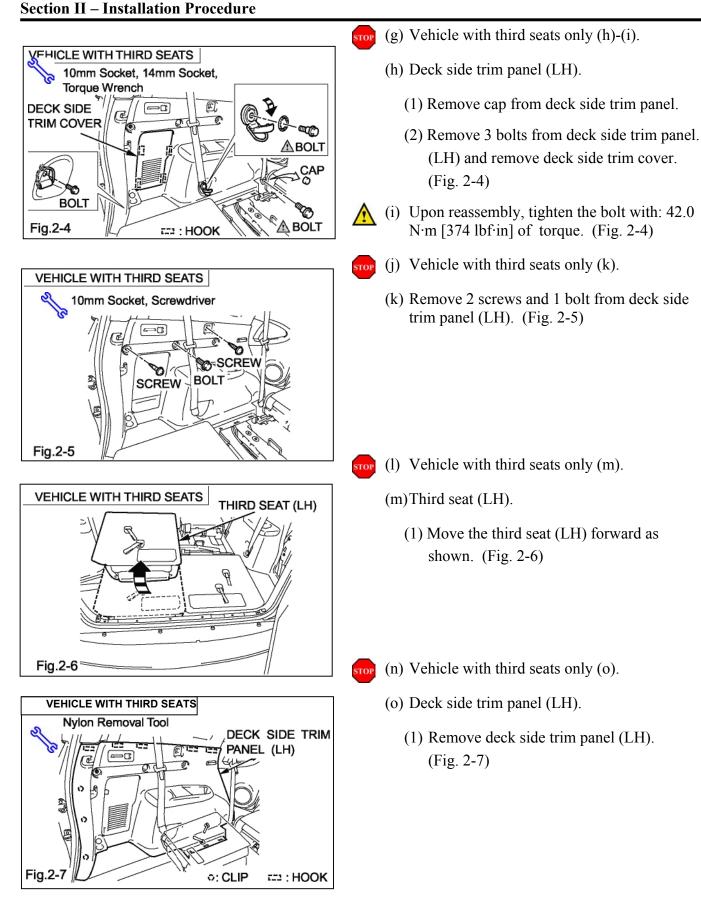
DECK SIDE

- (e) Vehicle without third seats only (f).
  - (f) Deck side trim panel (LH).
    - (1) Remove deck side trim panel (LH). (Fig. 2-3)

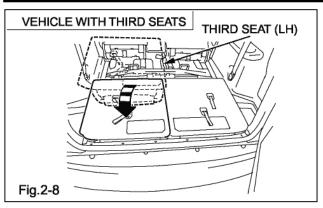
BOLT

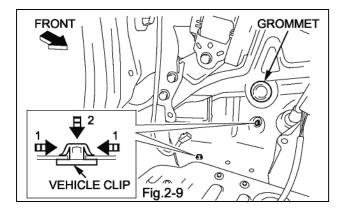
Fig.2-2

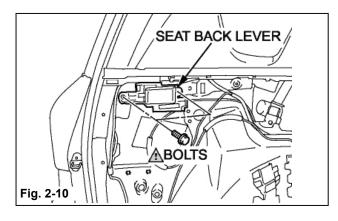
RAV4

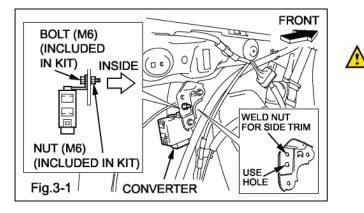


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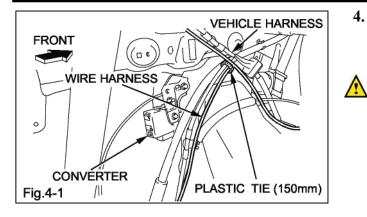


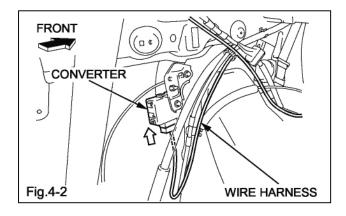


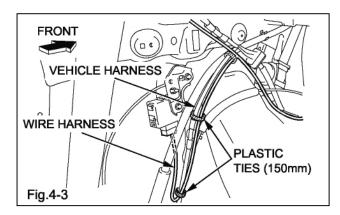
- (p) Vehicle with third seat only (q).
  - (q) Third seats. Move the third seat (LH) backwards as shown. (Fig. 2-8)
    - (1) Remove deck side trim panel (LH).(Fig. 2-8)
  - (r) Vehicle grommet.
    - (1) Remove vehicle grommet. (Fig. 2-9)
  - (s) Vehicle clips.
    - (1) Remove vehicle clips. (Fig. 2-9)
  - (t) Vehicle without third seat only (u).
    - (u) Seat back lever.
      - (1) Remove 2 bolts from seat back lever and leave the cable attached. Wrap in cloth. (Fig. 2-10)
    - (2) Upon reassembly, tighten the bolt with18.0 N·m [160 lbf·in] of torque.(Fig. 2-10)

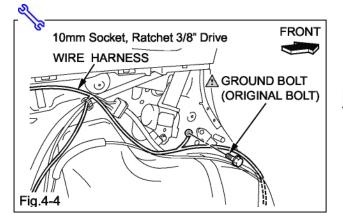
# 3. Converter installation

- (a) Install the converter to the vehicle hole with a bolt (M6) (included in kit) and nut (M6) (included in kit). (Fig. 3-1)
- (b) Upon reassembly, tighten the bolt with 5.5 N·m [49 lbf·in] of torque. (Fig. 3-1)





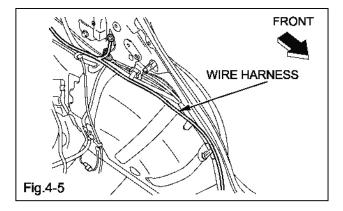


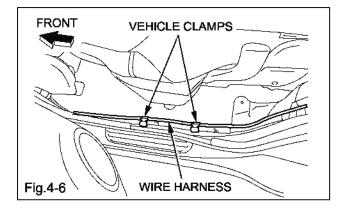


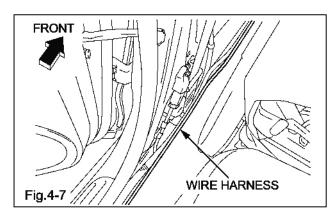
## 4. Wire harness installation No. 1

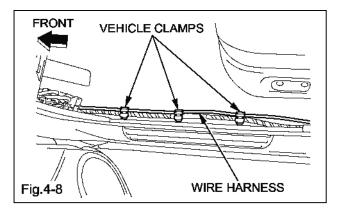
- (a) Securing wire harness.
- (1) Tie the wire harness and vehicle harness at their branch points so that they are secured in a bundle with a plastic tie (150 mm).
  - (2) Secure wire harness to vehicle harness with a plastic tie (150mm) as shown.(Fig. 4-1)
- (b) Connecting wire harness (10P).
  - (1) Connect the wire harness (10P) to the converter (10P). (Fig. 4-2)
- (c) Securing wire harness.
  - Secure the wire harness to the vehicle harness with two plastic ties (150mm).
     (Fig. 4-3)
- (d) Routing of wire harness.
  - (1) Route the wire harness as shown. (Fig. 4-4)
- (e) Route the wire harness to the vehicle harness, fasten the wire harness ground terminal to the ground bolt (original bolt).
- (f) Tighten the bolt with: 8.5 N·m [75lbf·in] of torque. (Fig. 4-4)

# TOYOTA RAV4 Section II – Installation Procedure





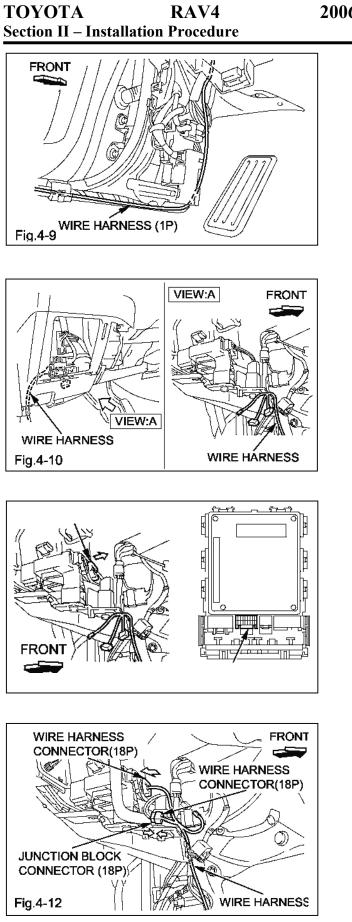




- (g) Routing of wire harness.
  - (1) Route the wire harness as shown.(Fig. 4-5)

- (h) Securing wire harness.
  - (1) Lift the 2 vehicle clamps and route the wire harness (1P) along the vehicle harness. (Fig. 4-6)
- (i) Routing of wire harness.
  - (1) Route the wire harness as shown.(Fig. 4-7)

- (j) Securing wire harness.
  - (1) Lift the 3 vehicle clamps and route the wire harness along the vehicle harness.(Fig. 4-8)

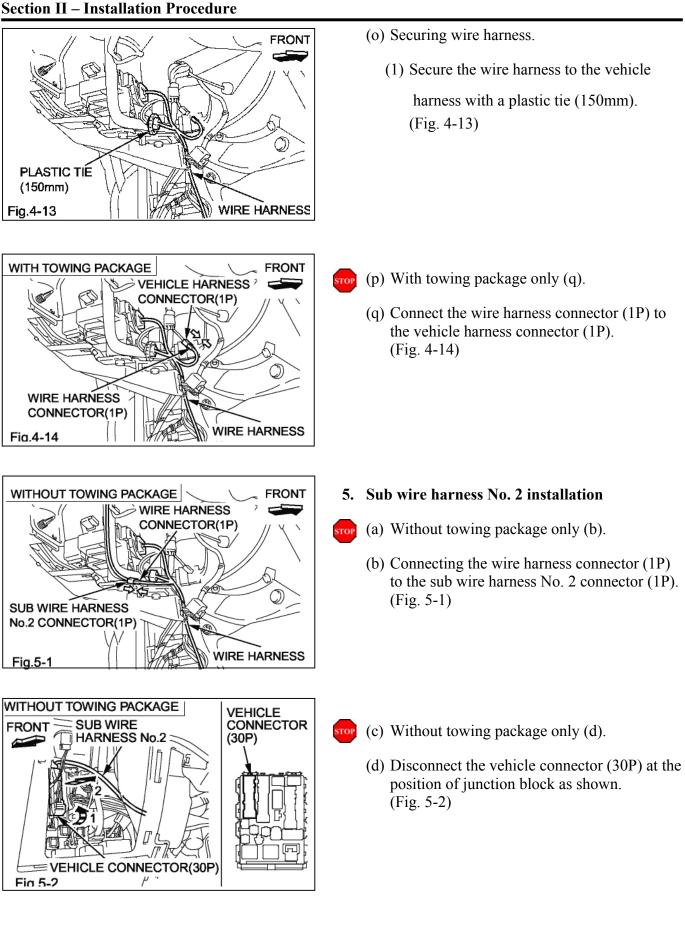


- (k) Routing of wire harness.
  - (1) Route the wire harness as shown. (Fig. 4-9)

- (1) Routing of wire harness.
  - (1) Route the wire harness as shown. (Fig. 4-10)

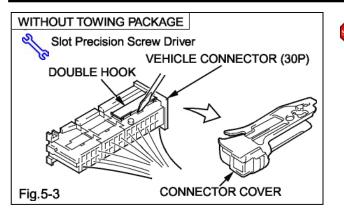
(m)Disconnect the rear junction block connector (18P). (Fig. 4-11)

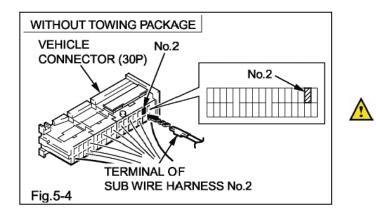
(n) Route the wire harness as shown and connect it to the junction block connector (18P). (Fig. 4-12)



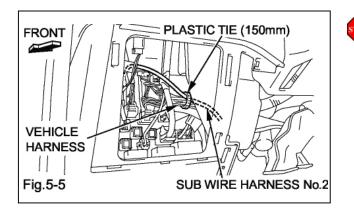
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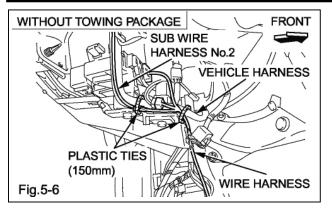


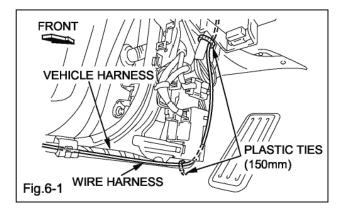
- (e) Without towing package only (f).
  - (f) Insert the terminal of sub wire harness No. 2 into No. 2 of vehicle connector (30P).
    - (1) Remove connector cover.
    - (2) Lift the double hook of vehicle connector(30P) with a slot precision screwdriver.(Fig. 5-3)
    - (3) Insert the terminal of sub wire harness No.2 into the position as shown.(Fig. 5-4)
    - (4) Do not insert the terminal of sub wire harness No. 2 into other connectors than the connector No. 2.
    - (5) Put back the double hook to the original position.(Fig. 5-4)
    - (6) Connect the vehicle connector (30P) to the original position.

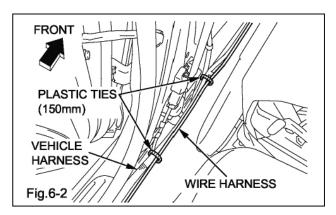


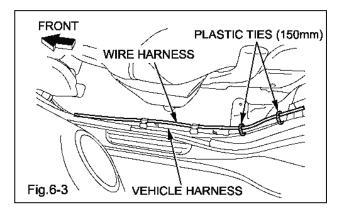
- (g) Without towing package only (h).
- (h) Securing sub wire harness No. 2.
  - (1) Secure the sub wire harness No. 2 to the vehicle harness with a plastic tie (150mm). (Fig. 5-5)

STOP







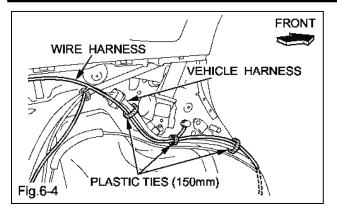


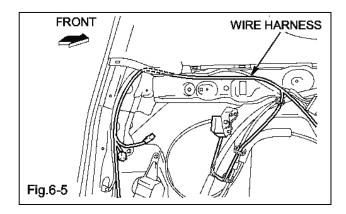
- (i) Without towing package only (j).
- (j) Securing sub wire harness No. 2.
  - (1) Secure the sub wire harness No. 2 and wire Harness to the vehicle harness with two plastic ties (150mm). (Fig. 5-6)

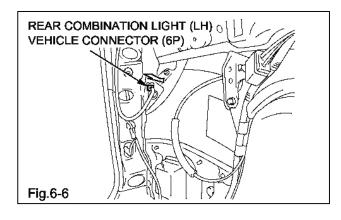
# 6. Wire harness installation No.2

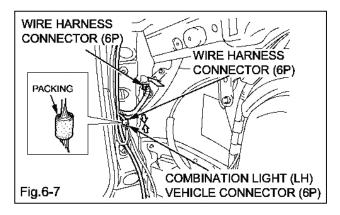
- (a) Securing wire harness.
  - (1) Secure the wire harness to the vehicle harness with two plastic ties (150mm). (Fig. 6-1)
- (b) Securing wire harness.
  - (1) Secure the wire harness to the vehicle harness with two plastic ties (150mm). (Fig. 6-2)

- (c) Securing wire harness.
  - (1) Secure the wire harness to the vehicle harness with two plastic ties (150mm). (Fig. 6-3)









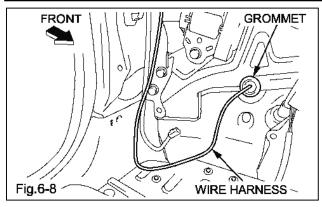
- (d) Securing wire harness.
  - (1) Secure the wire harness to the vehicle harness with three plastic ties (150mm). (Fig. 6-4)

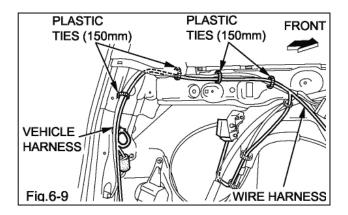
- (e) Routing of wire harness.
  - (1) Route the wire harness as shown.(Fig. 6-5)

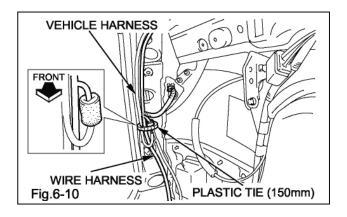
(f) Disconnect the rear combination light (LH) vehicle connector (6P).(Fig. 6-6)

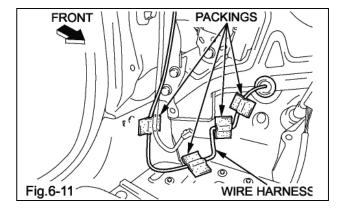
- (g) Route the wire harness as shown and connect it to the combination light (LH) vehicle connector (6P). (Fig. 6-7)
- (h) Wrap a packing around the branch connector connection.(Fig. 6-7)







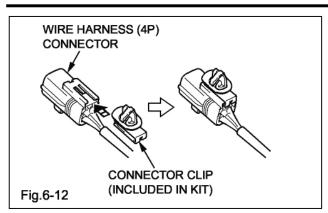


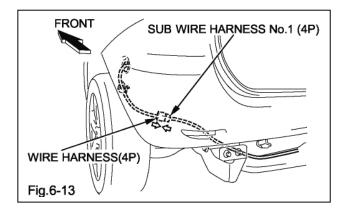


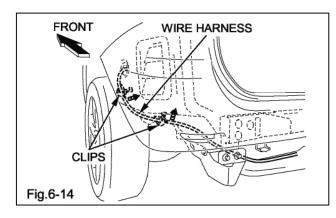
- (i) Wire harness routing and securing.
  - Pass the wire harness through the vehicle hole and fit wire harness grommet to the vehicle hole.
     (Fig. 6-8)

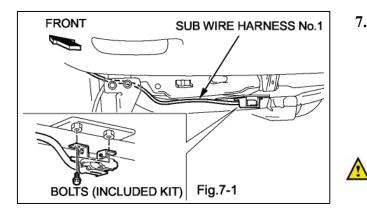
- (j) Securing wire harness.
  - (1) Secure the wire harness to the vehicle harness with four plastic ties (150mm). (Fig. 6-9)

- (k) Securing wire harness.
  - (1) Secure the wire harness to the vehicle harness with a plastic tie (150 mm).(Fig. 6-10)
- (1) When the connector connection is not secured as shown, deck side trim panel cannot be reattached.
  - (m)Securing wire harness.
    - Secure wire harness to vehicle body with four packings as shown.
       (Fig. 6-11)









- (n) After passing the wire harness (4P) connector through the vehicle hole, assemble wire harness (4P) connector and connector clip (included in kit).
  (Fig. 6-12)
- (o) Confirm that the connector clip (included in kit) and the connector are securely fitted.
  - (p) Connect the wire harness (4P) to the sub wire harness No.1 (4P).(Fig. 6-13)

- (q) Securing wire harness clip.
  - (1) Secure the wire harness with 2 clips to the vehicle body.(Fig. 6-14)

- 7. Sub wire harness No. 1 installation
  - (a) Fastening flat (4P) connector
    - (1) Fasten flat (4P) connector with 2 bolts(M5) (included in kit).(Fig. 7-1)
  - (2) Torque bolts to: 3.9 N·m [36lbf·in] (Fig. 7-1)

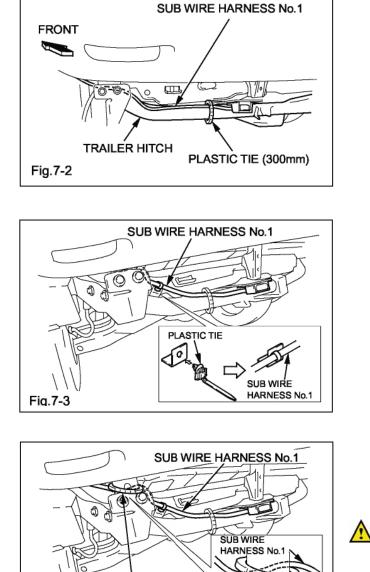


Fig.8-1

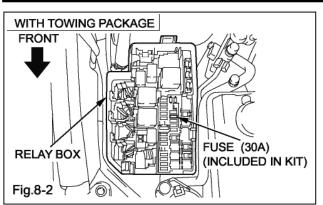
PLASTIC TIES (300mm)

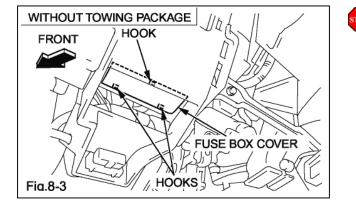
(b) Tie the sub wire harness No. 1 and secure to the trailer hitch with a plastic tie (300mm). (Fig. 7-2)

(c) Secure the sub wire harness No.1 as shown to bracket of the trailer hitch with the plastic tie. (Fig. 7-3)

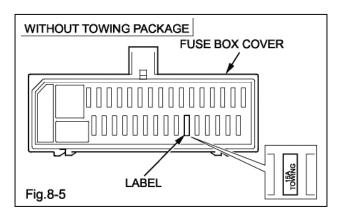
- (d) Tie the sub wire harness No.1 and secure to the trailer hitch with a plastic tie (300mm). (Fig. 7-4)
- (e) Secure the sub wire harness with a plastic tie (300mm) so that it does not interfere with trailer hitch.
- 8. Installing the fuse
- (a) With towing package only (b).
  - (b) Relay box cover.
    - (1) Remove relay box cover. (Fig. 8-1)

STOP





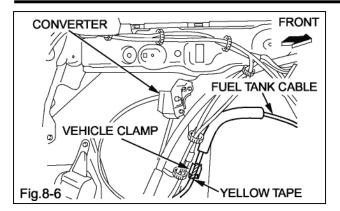
WITHOUT TOWING PACKAGE FRONT

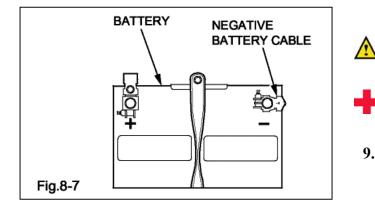


- (c) With towing package only (d)-(e).
- (d) Install the fuse (30A) (included in kit) to the position as shown.(Fig. 8-2)
- (e) Be sure to use a 30A fuse. Do not use a 15A fuse.
- (f) Without towing package only (g).
  - (g) Fuse box cover.
    - (1) Remove fuse box cover. (Fig. 8-3)

- (h) Without towing package only (i)-(j).
- (i) Install the fuse (15A) (included in kit) to the position as shown.(Fig. 8-4)
- (j) Be sure to use a 15A fuse. Do not use a 30A fuse.
  - (k) Without towing package only (l).
  - (l) Apply label (included in kit) to the position on the fuse box cover reverse side as shown. (Fig8-5)







- (m)If the part of the fuel tank cable with yellow tape comes off from the vehicle clamp, attach it to the vehicle clamp.(Fig. 8-6)
- (n) Put Owner's Manual into the glove box.

- (o) Reconnect the vehicle's negative battery cable to original factory position.(Fig. 8-7)
- (1) Torque nut to: 3.9 N•m [36lbf•in]. (Fig. 8-7)
- (2) Be careful not to touch the positive battery cable. (Fig. 8-7)

# 9. Reinstallation.

(a) After functional verification, reinstall all temporarily removed body parts.



- Tighten seatbelt bolt (center pillar garnish) to 42 N-m (374 lbf-in) of torque.
- (2) Tighten deck side trim panel bolts (LH) to 42 N-m (374 lbf-in) of torque.
- (3) Tighten seat back lever bolts to 18 N-m(160 lbf-in) of torque.
- (4) Tighten the converter bolt to 5.5 N-m(49 lbf-in) of torque.

TOYOTARAV4200Section III – Functional Verifications	06 - TRAILER WIRE HARNESS
Check:	Look For:
Accessory Function Checks	
Faults in the wiring harness installation.	Correct routing of the wire harness.
Converter mounting.	Pushing or pulling of the converter by any outside force.
Wire harness	Pinching of the wire harness.
Plastic tie locations.	Positioning of the plastic tie locations.
Vehicle Function Checks	
Removed parts.	
With the Special Service Tool (SST) (Part Number 00002-62195) attached to the trailer sub wire harness plug and with the engine running, perform the following steps:	Scratches or other damage
Caution: Be sure the exhaust gas is completely ventilated.	
Caution: Be sure the vehicle is in "Park" and that the parking brake is applied.	
Turn on headlamps.	Marker and tail lights on both SST and vehicle are lit.
Turn on left turn signal.	Left turn lights on both SST and vehicle are flashing.
Turn on right turn signal.	Right turn lights on both SST and vehicle are flashing.
Apply foot brake.	Stop lights on both SST and vehicle are lit.
Turn on left turn signal and apply foot brake.	Left turn lights are flashing and right stop Lights are lit on both SST and vehicle.
Turn on right turn signal and apply foot brake.	Right turn lights are flashing and right stop lights are lit on both SST and vehicle.
Turn on hazard lights switch.	All turn signal lights are flashing on both SST and vehicle.

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Section III – Functional Verifications		
Check:	Look For:	
With hazard lights switch on, apply the foot brake.	Both stop lights on the vehicle are lit, both turn/stop lights on the SST and the turn lights the vehicle are flashing.	
<ul> <li>Turn off the hazard light switch, apply the foot brake.</li> <li>The following checks are to be performed With the ignition switch off and the engine Stopped.</li> </ul>	Both turn/stop lights on the SST and the stop lights on the vehicle are lit.	
Turn on headlamps.	Marker and tail lights on both SST and	
Apply foot brake.	vehicles are lit. Stop lights on both SST and vehicle are lit.	
Turn on left turn signal.	Left turn lights are not lit on both SST and	
Turn on right turn signal.	vehicle. Right turn lights are not lit on both SST and vehicle.	
Turn on left turn signal and apply foot brake.	Both stop lights are lit and not flashing on both SST and vehicle.	
Turn on right turn signal and apply foot brake.	Both stop lights are lit and not flashing on both SST and vehicle.	
With hazard lights switch on, apply the foot brake.	All turn signal lights are flashing on both SST and vehicle.	
Turn off the hazard light switch, apply foot brake.	Both stop lights on the vehicle and the turn/stop lights on the SST are lit but not flashing.	
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