

Part Number: PT398-52080

Conflicts

| |
|--|
| Do not install into Manual Transmission Vehicles or Vehicles without RKE systems |
|--|

Recommended Sequence of Application

| Item # | Accessory | |
|--------|-----------|--|
| | | |

Kit Contents

| Item # | Quantity | Description |
|--------|----------|-------------------------------|
| 1 | 1 | Wire Harness |
| 2 | 1 | Hood Switch Harness |
| 3 | 1 | Gate Way ECU Mounting Bracket |
| 4 | 1 | RES ECU Mounting Bracket |
| 5 | 1 | Protection Bracket |
| 6 | 2 | Butyl Tape |

Hardware Bag Contents

| Item # | Quantity | Description |
|--------|----------|-----------------------------|
| 1 | 1 | RES ECU |
| 2 | 1 | BUS ECU |
| 3 | 7 | Small Foam Tape |
| 4 | 1 | Large Foam Tape (1 pair) |
| 5 | 1 | Nut (holder clip) |
| 6 | 1 | Spacer |
| 7 | 1 | M6x35 Bolt |
| 8 | 1 | M3x14 Screw |
| 9 | 30 | Wire Ties |
| 10 | 1 | Hood Switch |
| 11 | 1 | Warning Label (engine room) |
| 12 | 2 | Warning Label (Window) |
| 13 | 2 | Remote/Key Label |
| 14 | 2 | Key Tag |
| 16 | 1 | Owners Manual |

Additional Items Required For Installation

| Item # | Quantity | Description |
|--------|----------|-------------|
| | | |

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

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

Recommended Tools

| Personal & Vehicle Protection | Notes |
|-------------------------------|---|
| Safety Glasses | |
| Safety Gloves | (Optional) |
| Vehicle Protection | Blankets, Parts Boxes |
| Special Tools | Notes |
| Wire Routing Tool | |
| Installation Tools | Notes |
| Phillips Screwdriver | #2 screwdriver or tip |
| Flat Blade Screwdriver | Jewelers Screwdriver |
| Nylon Panel Removal Tool | e.g. Panel Pry Tool #1 Toyota SST # 00002-06001-01 |
| Side Cutters | |
| Torque Wrench | 36 in•lbf (40.67 n•cm) |
| Tape | Clear |
| Socket | 10mm, Extension |
| Special Chemicals | Notes |
| Cleaner | VDC Approved Cleaner |
| Glass Cleaner | Household Windex |

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.

TABLE OF CONTENTS

| | |
|---|----|
| PRECAUTIONS | 3 |
| WIRE ROUTING OVERVIEW | 4 |
| INSTALLATION | |
| - A. Hood Switch Harness Installation (Engine Room) | 5 |
| - B. Vehicle Disassembly | 7 |
| - C. Wire Harness Installation (Driver Side) | 9 |
| - D. TVIP ECU Preparation | 14 |
| - E. Wire Harness Installation (Passenger Side) | 15 |
| - F. Registration | 21 |
| - G. Attaching Labels | 24 |
| - H. Completion of Installation | 26 |
| ACCESARRY FUNCTION CHECK | 28 |
| VEHICLE FUNCTION CHECK | 29 |
| ADDENDUM I | 30 |

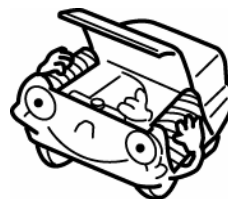
PRECAUTIONS

Please Follow These Precautions During Installation

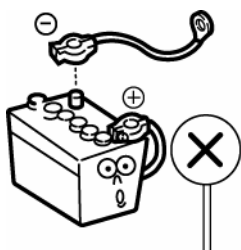
Confirm that lamps, horn, wiper and other car accessories operate normally before and after installation.



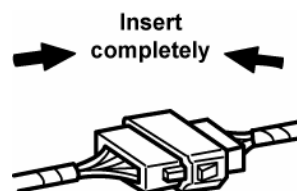
Protect your car surfaces from scratches, cover work area with blankets.



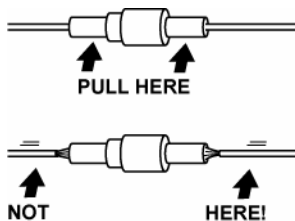
Do not touch the positive battery terminal when removing the negative cable



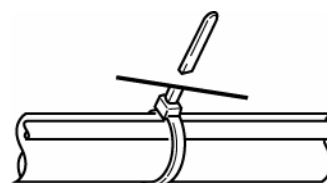
Verify secure connections.



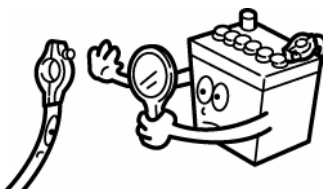
When disconnecting the connectors, be sure to grip the connector body. Do not tug on the wiring.

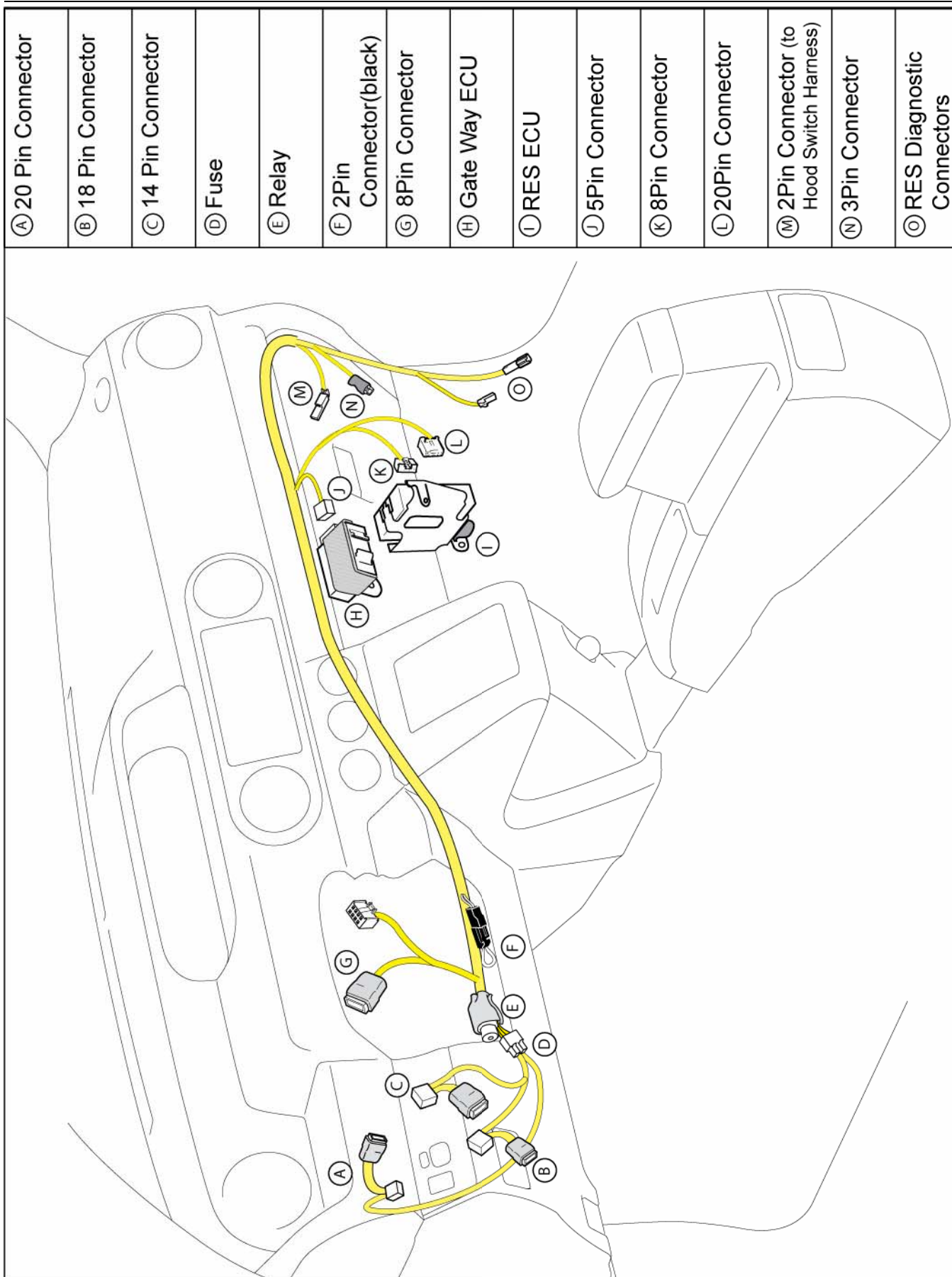


Clip all excess wire ties.



Before connecting the power wiring to the battery, check the wiring connections, harness, etc. to see that they are properly secure.





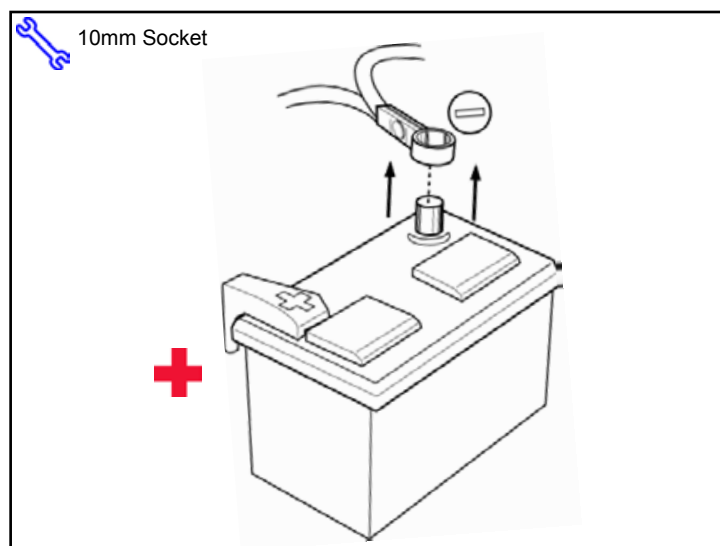


Fig. A-1

A. Hood Switch Harness Installation (Engine Room)

1. Vehicles must be in Park and have the Parking brake set.
2. Remove the Negative Battery Cable.

Note the battery cable position, as it will be reinstalled in the same position.

DO NOT TOUCH THE POSITIVE BATTERY TERMINAL.

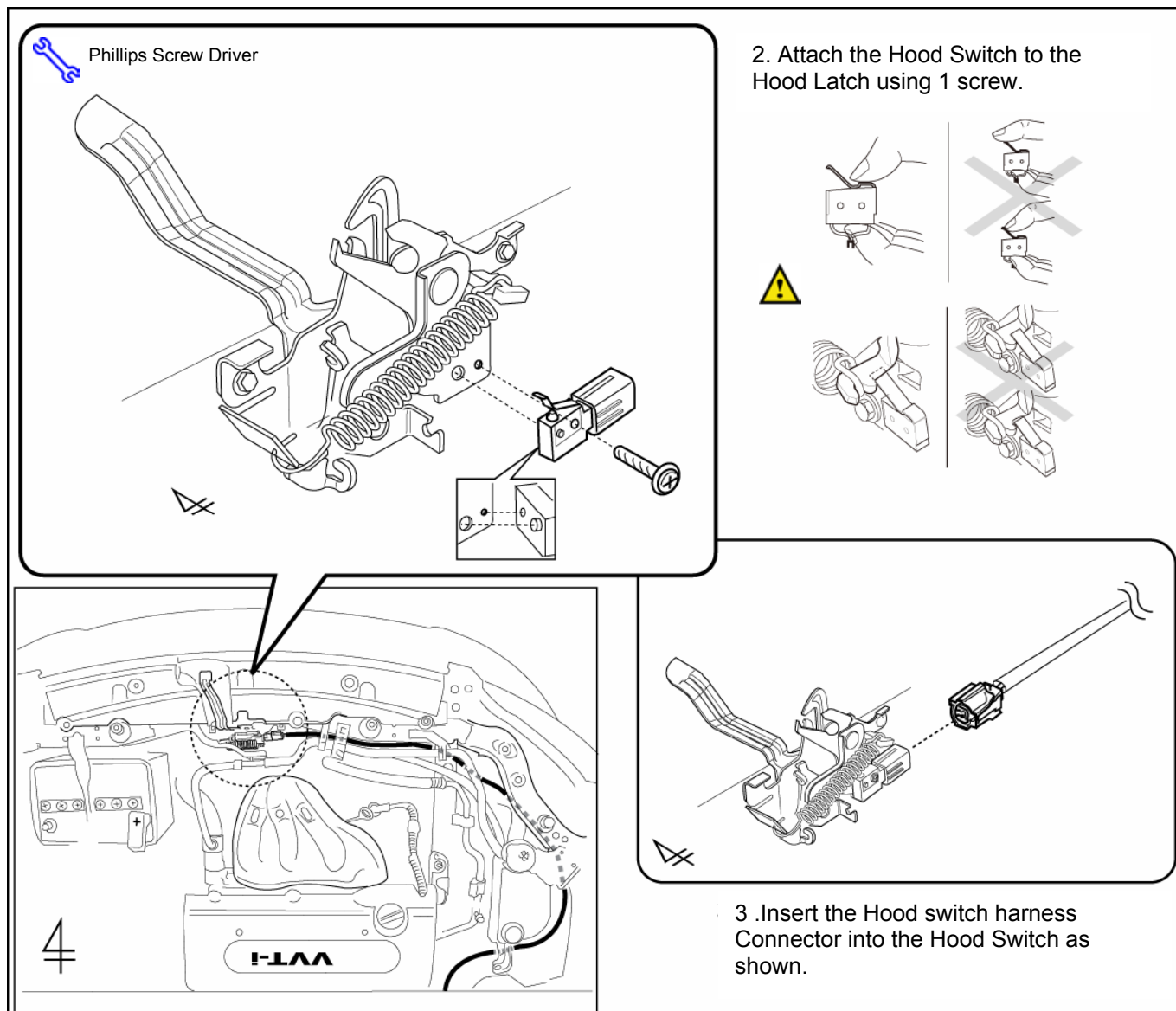


Fig. A-2

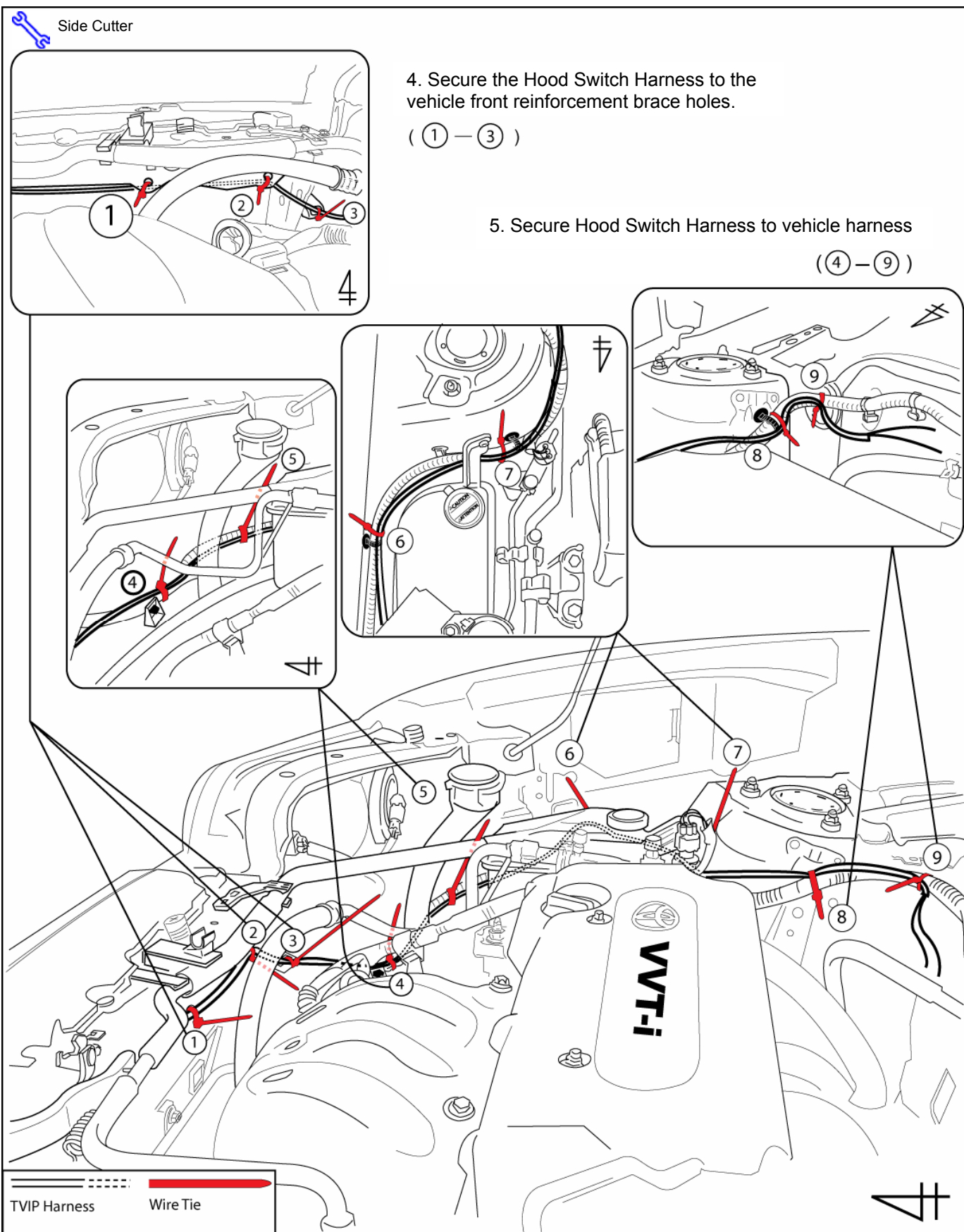


Fig. A-3

B. Vehicle Disassembly

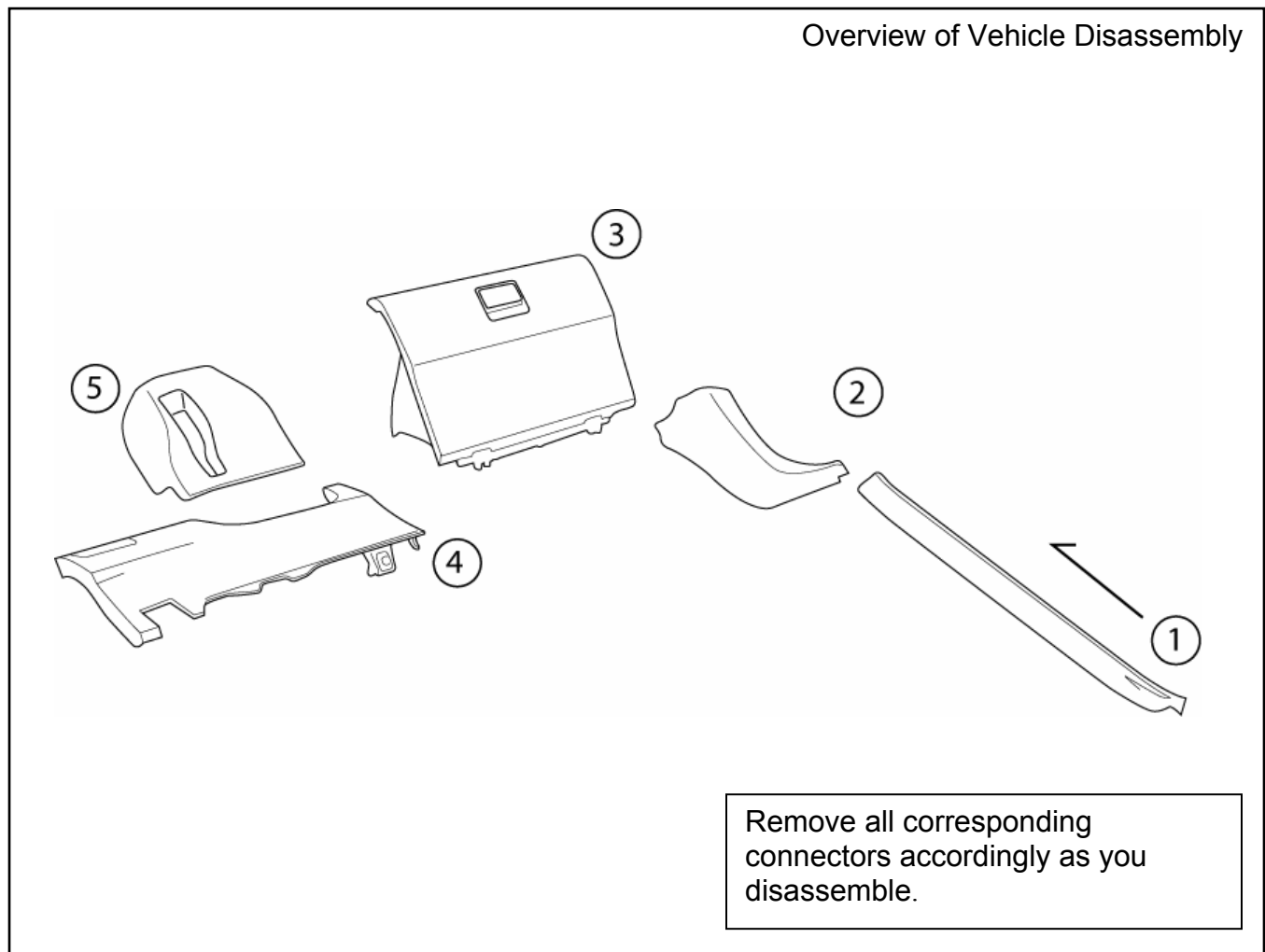


Fig. B-1

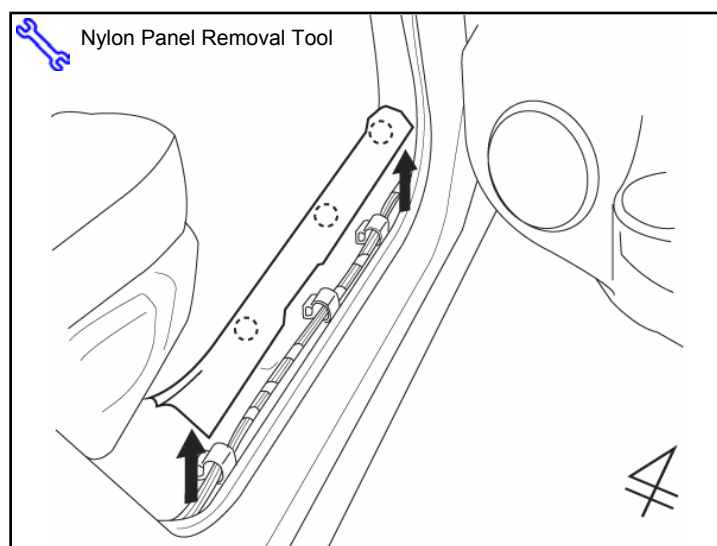


Fig. B-2

1. Remove passenger side Step cover.

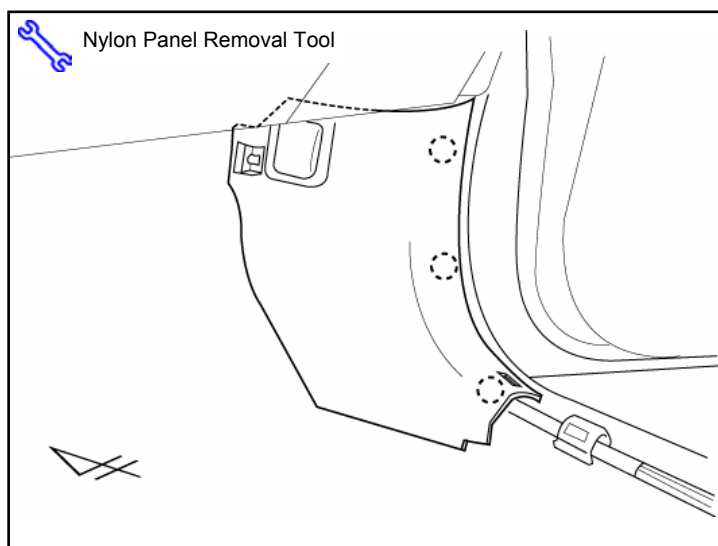


Fig. B-3

2. Remove the Cowl cover.

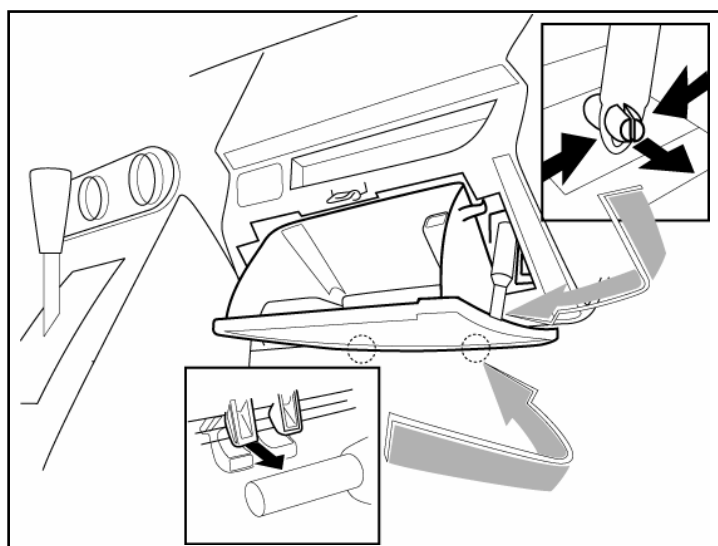


Fig. B-4

3. Remove the Glove box.

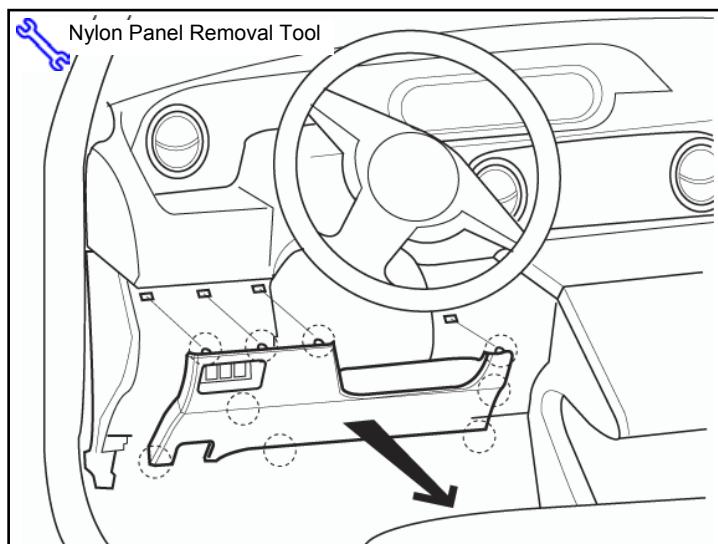


Fig. B-5

4. Remove the Lower dash cover.

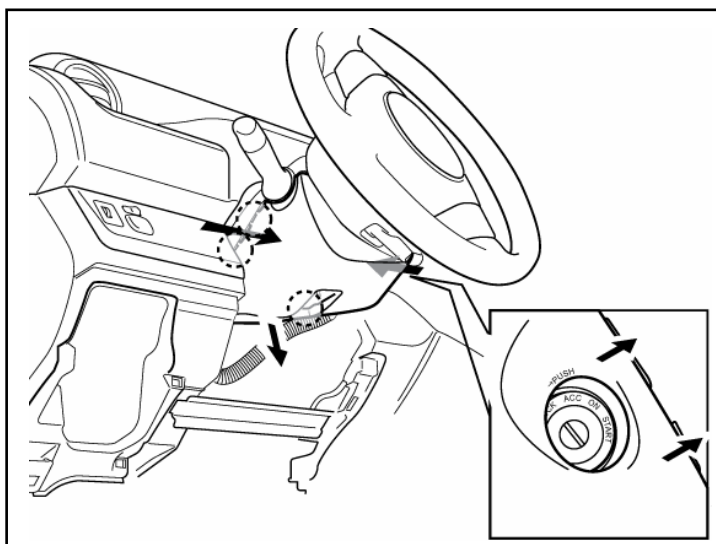


Fig. B-6

5. Loosen the Steering column cover as shown.

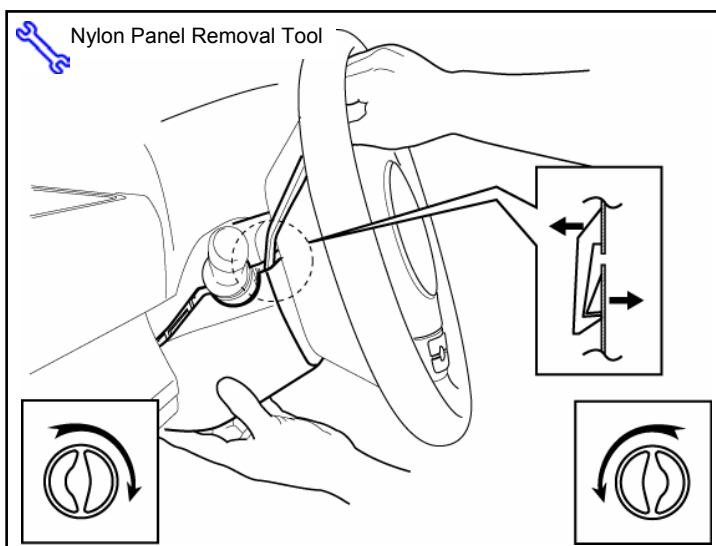


Fig. B-7

6. Release the inner clip lock, using Nylon panel removal tool.
7. Remove the Steering column cover.

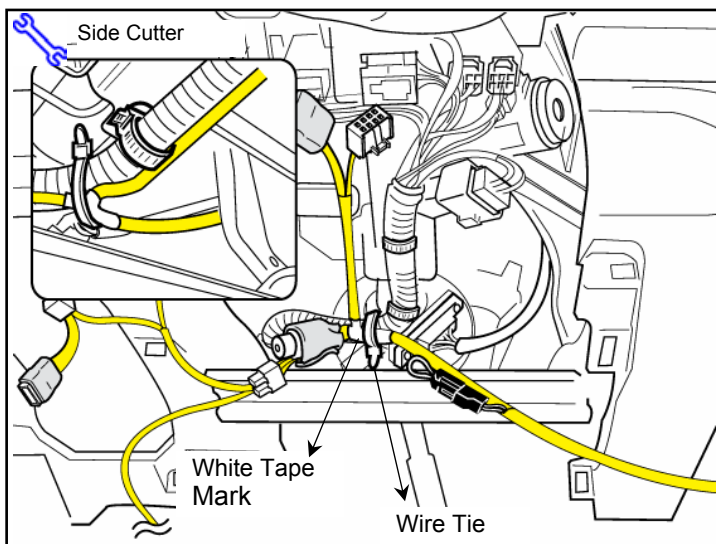


Fig. C-1

C. Wire Harness Installation (Driver's side)

1. Locate the vehicle clamp on the steering shaft.
Secure the white tape mark of V4 Harness with 1 Wire Tie.

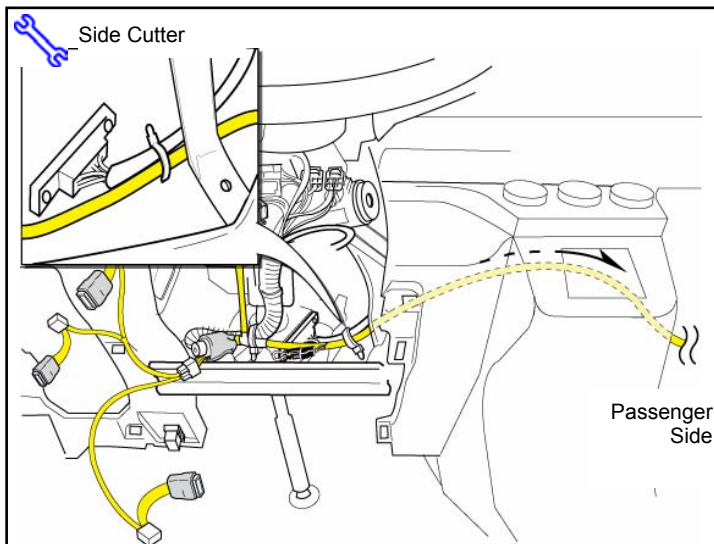


Fig. C-2

2. Secure V4 Harness onto the vehicle harness with 1 Wire Tie.
3. Route the V4 Harness over to the passenger side by running it through the back area of the center console.

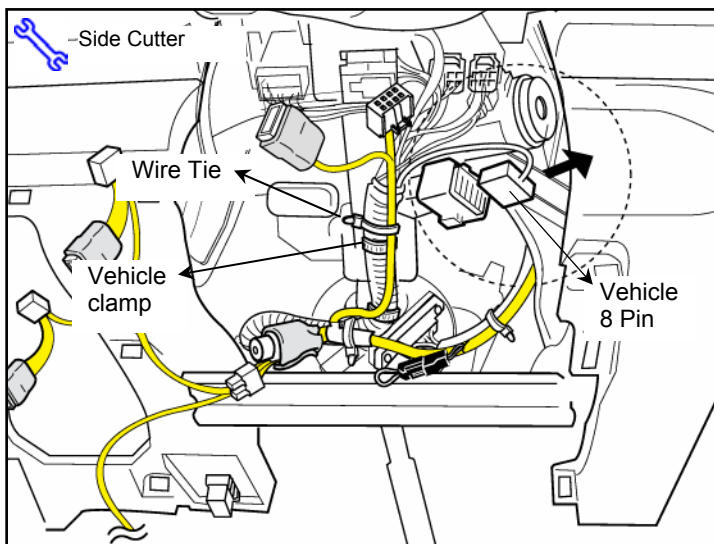


Fig. C-3

4. Locate vehicle clamps on the steering column. Secure V4 Harness onto the vehicle harness with 1 Wire Tie.
5. Disconnect the vehicle 8 Pin connector from its matching 8 Pin connector under ignition switch.

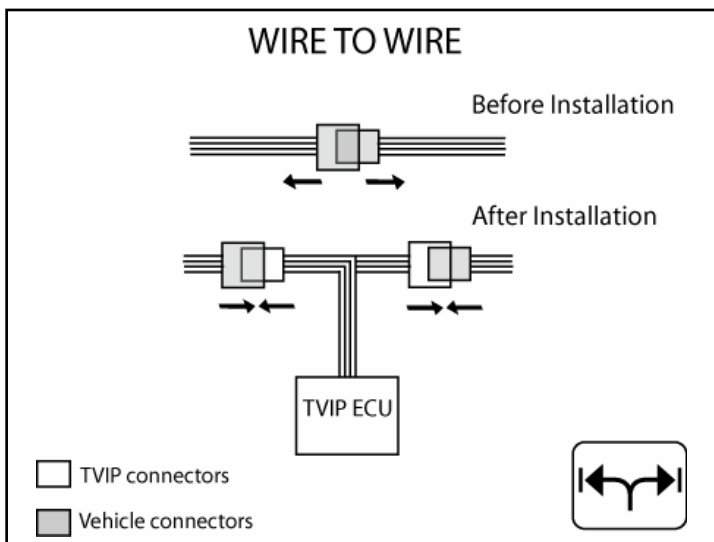


Fig. C-4



“Wire To Wire” is a process of inserting TVIP connectors between vehicle connectors in order to obtain appropriate electronic signals.

It will be repeated throughout installation.

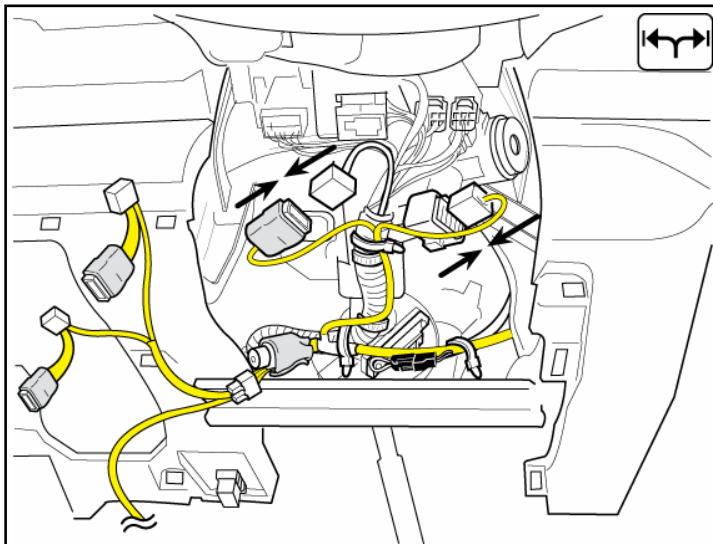


Fig. C-5

6. Proceed with "Wire To Wire" by plugging V4 8 Pin Connectors to vehicle 8 Pin connectors.

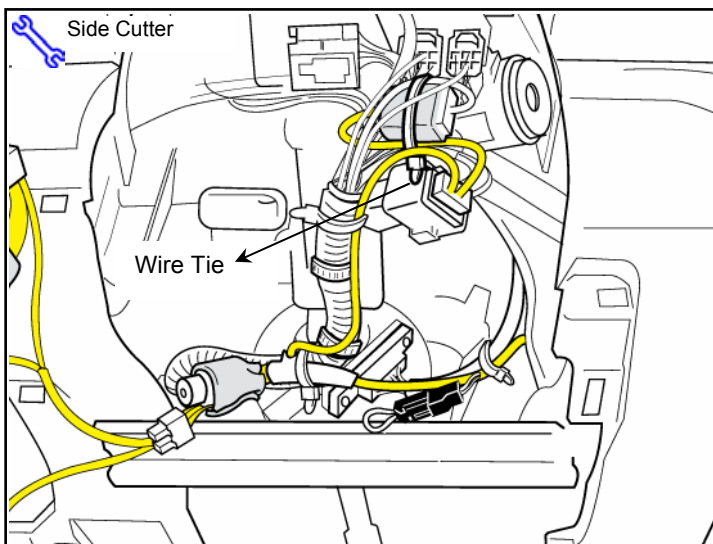


Fig. C-6

7. Secure the joint 8 Pin Connectors onto vehicle harness with 1 Wire Tie.

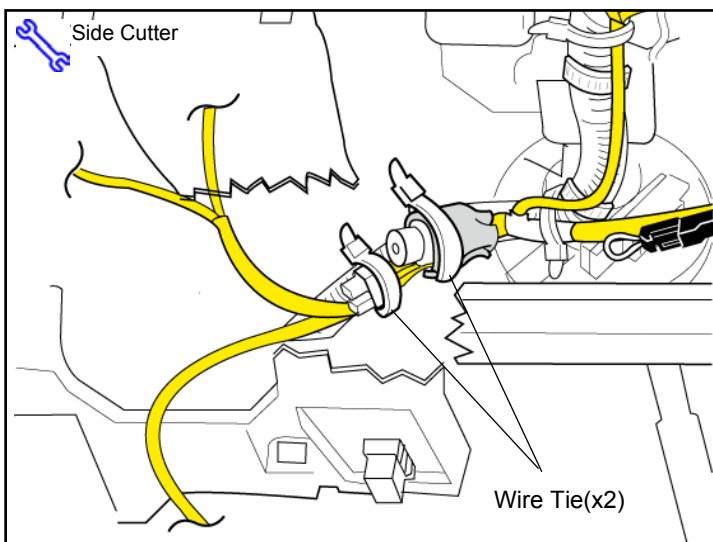


Fig. C-7

8. Secure the V4 Relay and the Fuse using 2 Wire Ties.

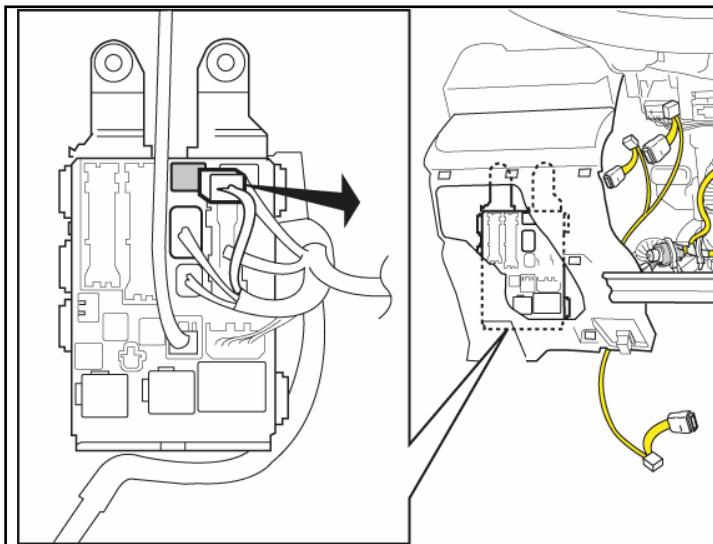


Fig.C-8

9. Locate and disconnect the vehicle 14 Pin connector on the junction box.

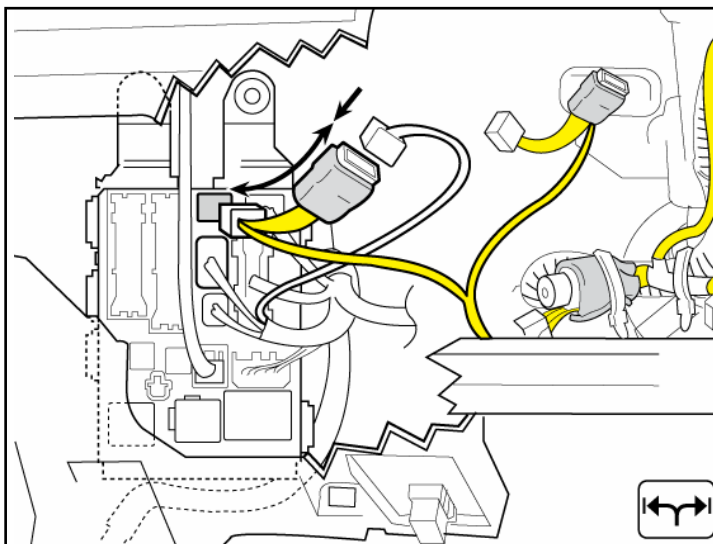


Fig.C-9

10. Proceed with "Wire to Wire", plugging V4 14 Pin Connectors to vehicle 14 Pin connectors.

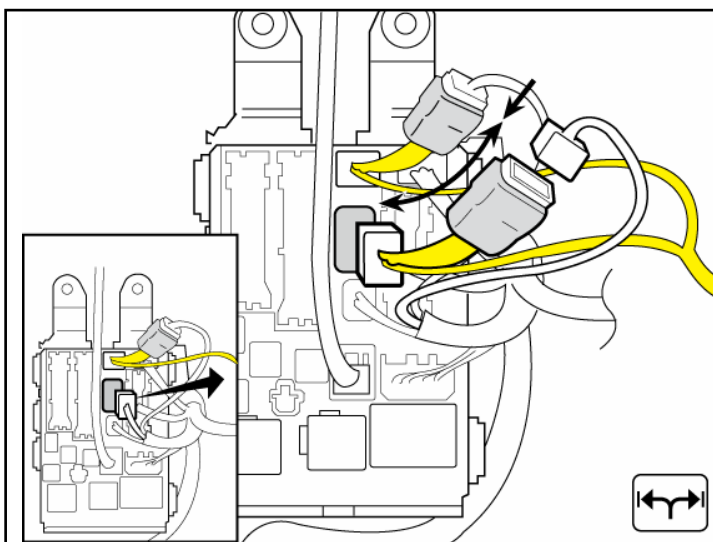


Fig.C-10

11. Locate and disconnect vehicle 18 Pin connector on junction box.

12. Proceed with "Wire To Wire", plugging V4 18 Pin Connectors to vehicle 18 Pin Connectors.

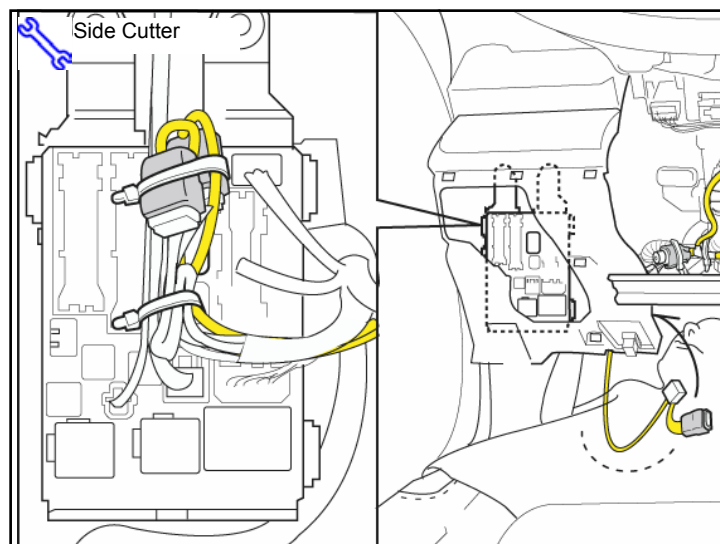


Fig.C-11

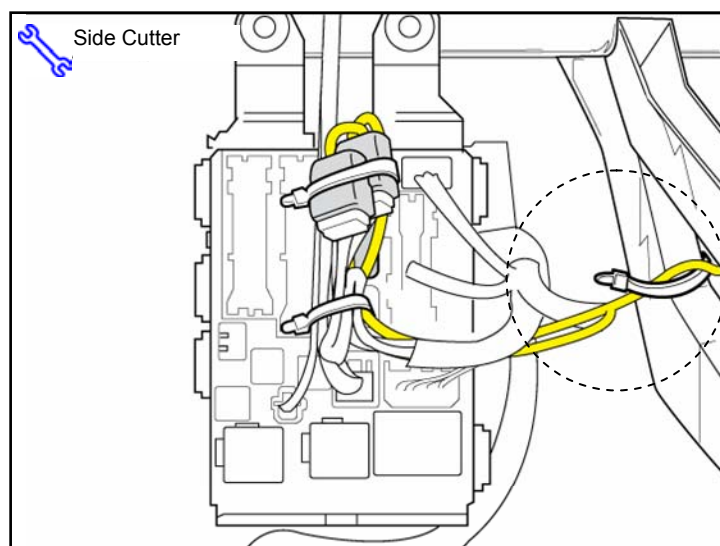


Fig.C-12

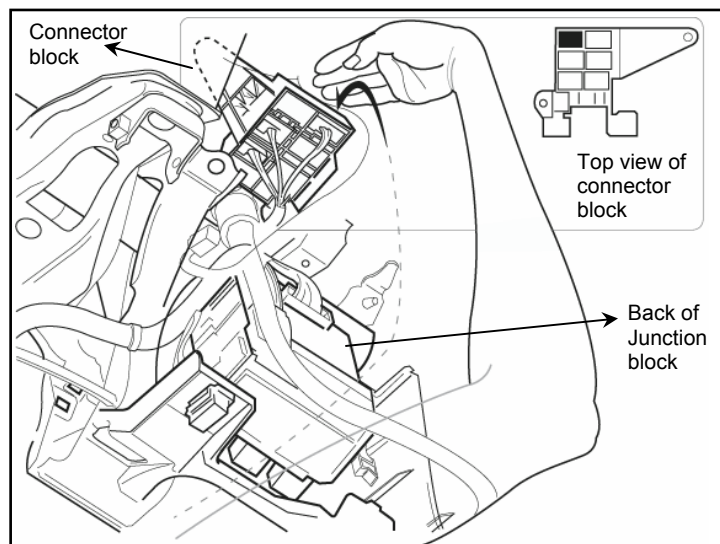


Fig.C-13

13. Secure the joint 18 Pin Connectors and 14 Pin Connectors with 1 Wire Tie.

14. Bundle and secure wires and harness together with 1 Wire Tie.

15. Route the V4 20 Pin Connectors near fire wall and *up* and *behind* Junction Box.

16. Secure the V4 Harness onto the vehicle metal brace with 1 Wire Tie.

17. Disconnect vehicle 20 Pin connector out of Connector block.

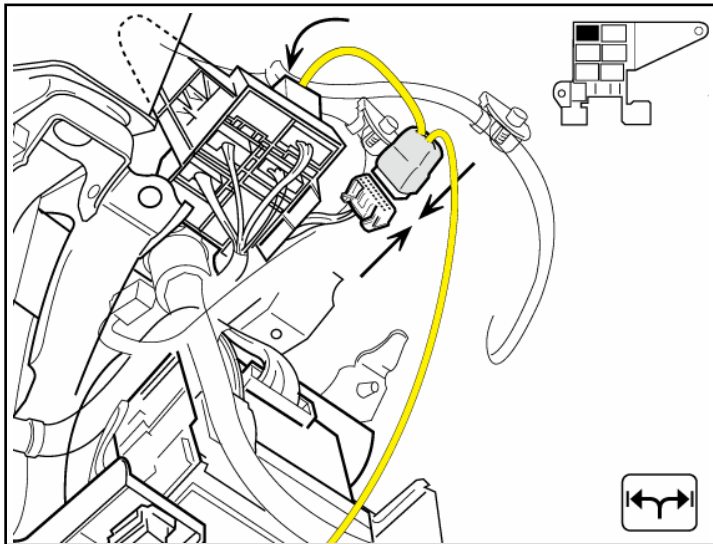


Fig.C-14

18.Proceed with "Wire To Wire";

plug V4 20 Pin Connector into the indicated slot of connector block.

Plug the vehicle 20 Pin connector into foam taped V4 20 Pin Connector.

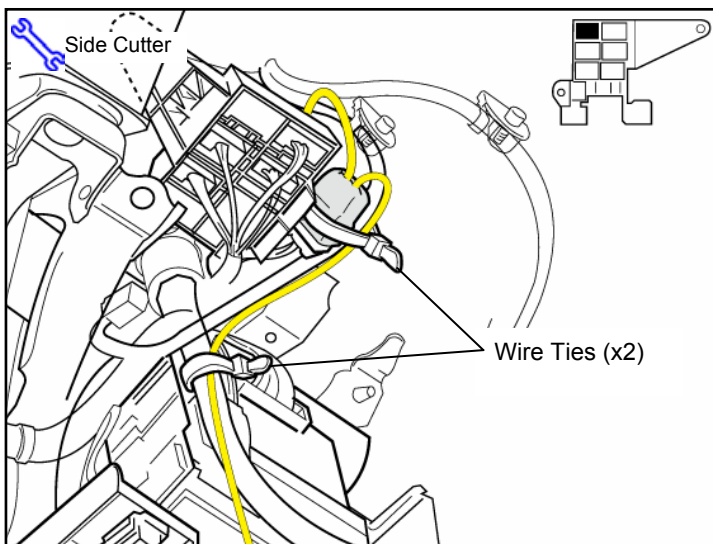


Fig.C-15

19. Secure the joint 20 Pin Connectors with 1 Wire Tie.

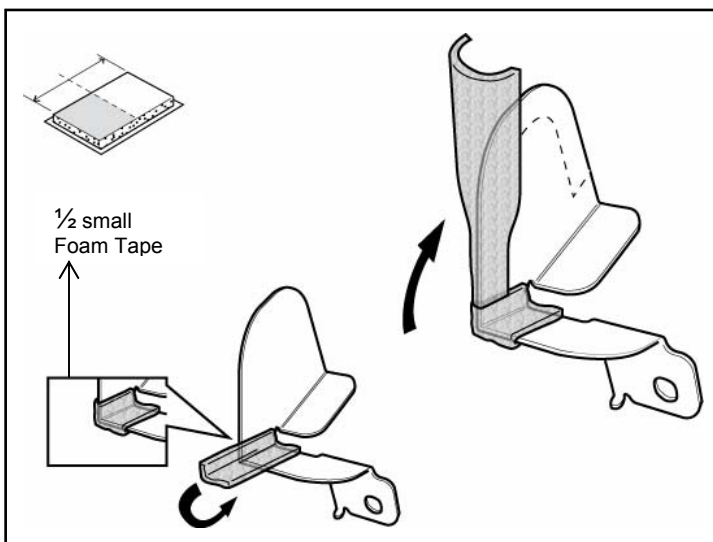


Fig.D-1

D. TVIP ECU Preparation

1. Apply 1/2 piece of small Foam Tape onto a corner of Protection Bracket.
2. Apply 1 small Foam Tape onto Protection Bracket.

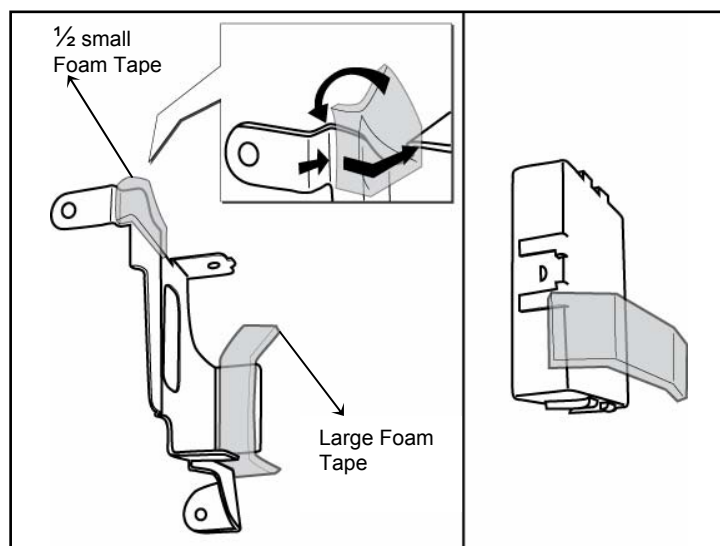


Fig.D-2

3. Apply 1/2 small Foam Tape and 1 large Foam Tape on RES ECU Mounting Bracket.

4. Apply 1 small Foam Tape onto RES ECU.

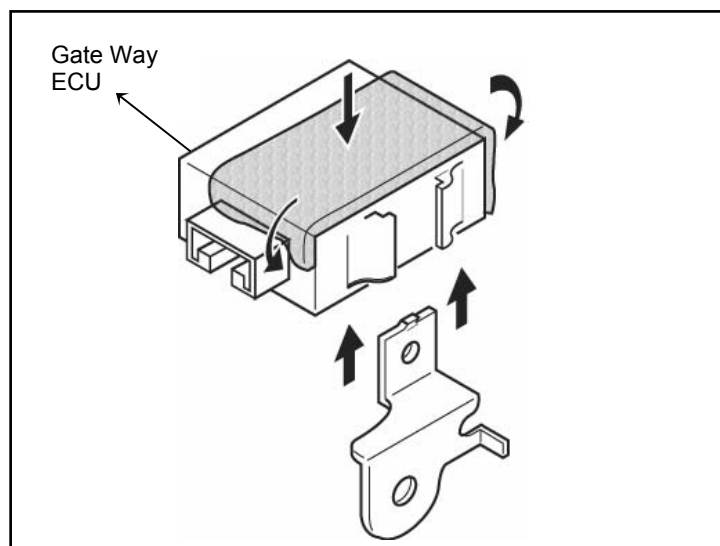


Fig.D-3

5. Apply 1 small Foam Tape onto Gate Way ECU.

6. Insert the bracket into the bracket slot on Gate Way ECU.



Make sure correct slot is selected. Bracket attachment is permanent once installed.

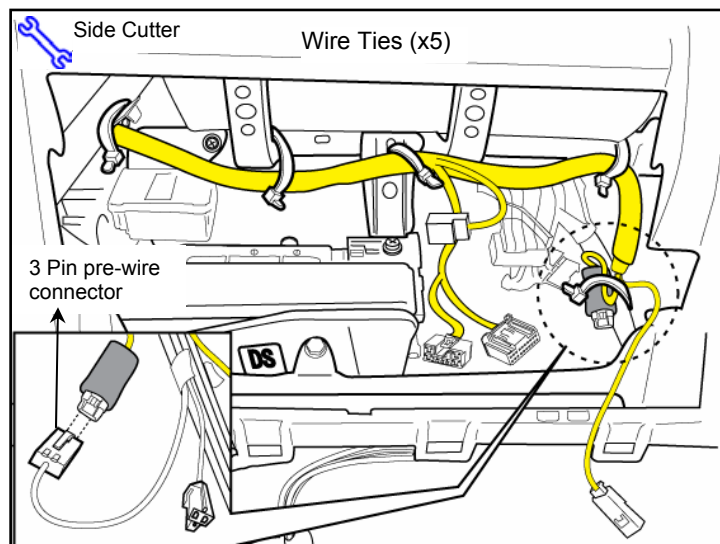


Fig.E-1

E. Wire Harness Installation (Passenger Side)

1. In passenger side, secure the V4 Harness to vehicle metal clip and reinforcement with 4 Wire Ties.
2. Plug V4 3Pin Connector and vehicle pre-wire 3pin connector.
3. Secure the joint 3Pin connectors onto vehicle harness with 1 Wire Tie.

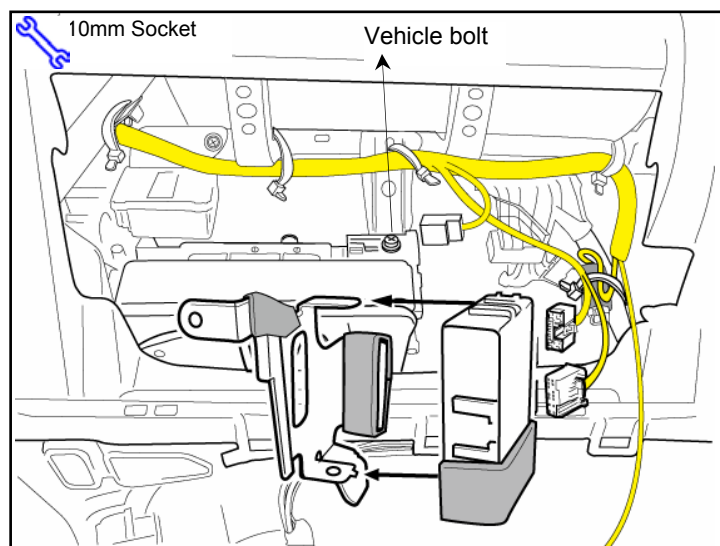


Fig.E-2

4. Unscrew the vehicle bolt
(Do Not Discard).
5. First, plug V4 8 Pin and 20 Pin
connectors into RES ECU.
6. Then, insert the Mounting Bracket into
indicated slots of RES ECU.



Make sure correct slot is selected.

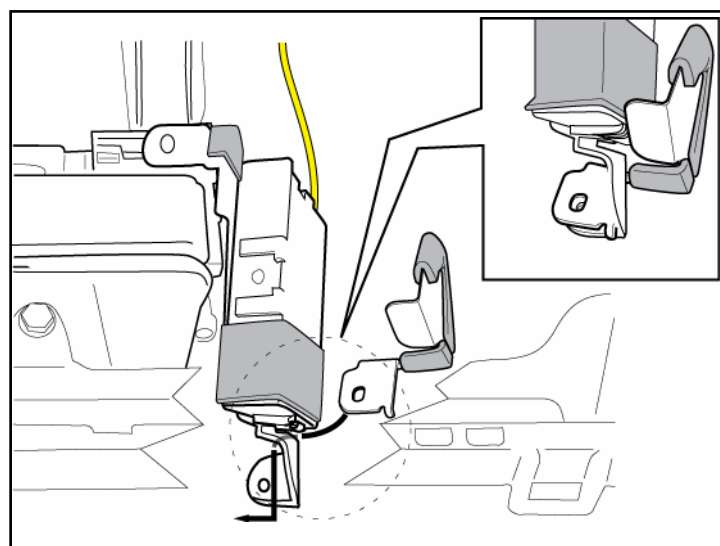


Fig.E-3

7. Slide in the Protection Bracket onto
RES ECU Mounting Bracket.

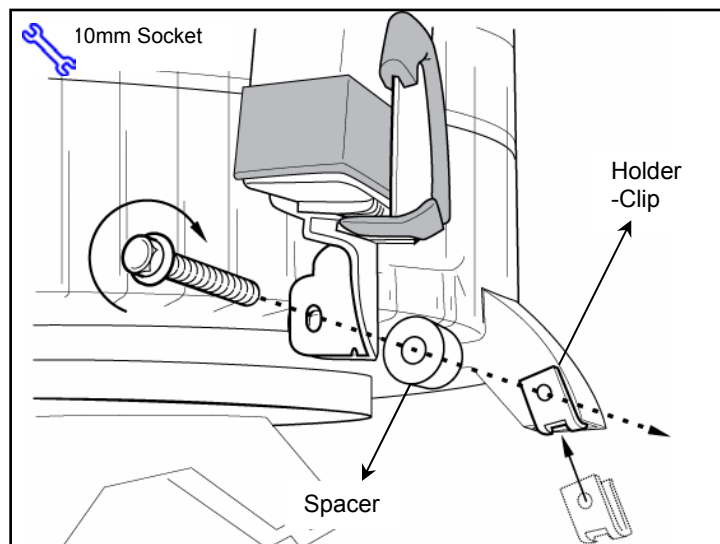


Fig.E-4

8. Clip the Holder-Clip onto the lip of AC
unit as shown.
9. Align and mount V4 brackets and the
Spacer onto the AC unit with the Large
M6 Bolt supplied.

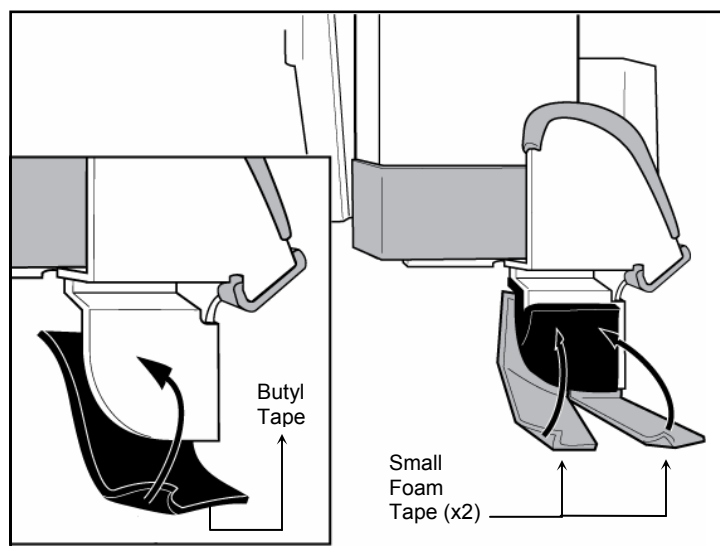


Fig.E-5

10. Apply 1 Butyl Tape on the RES ECU Mounting Bracket as shown.

11. Apply 2 small Foam Tapes over the Butyl Tape as shown.

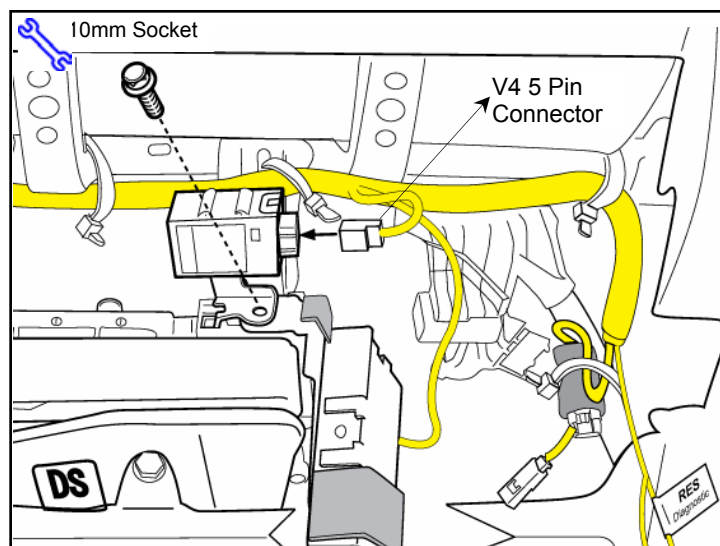


Fig.E-6

12. Using vehicle bolt(from step 4), secure both RES ECU bracket and Gate Way ECU bracket onto the AC unit,

13. Plug V4 5 Pin Connector into Gate Way ECU.

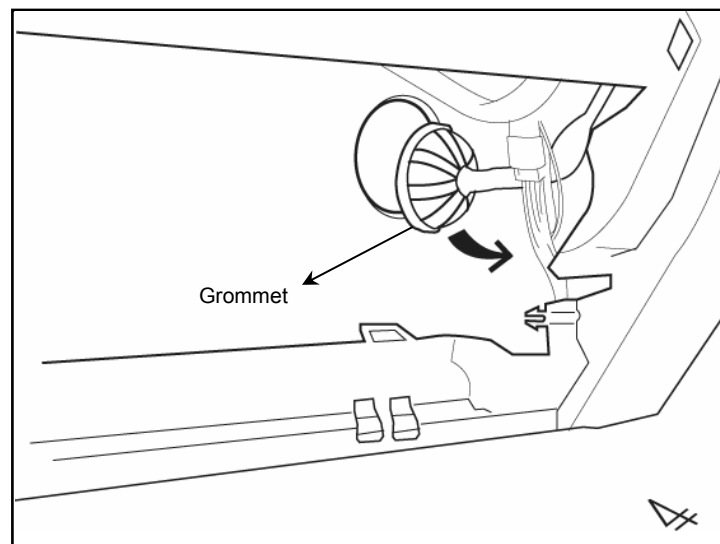


Fig.E-7

14. Locate and pull out the grommet to gain access to the engine room.

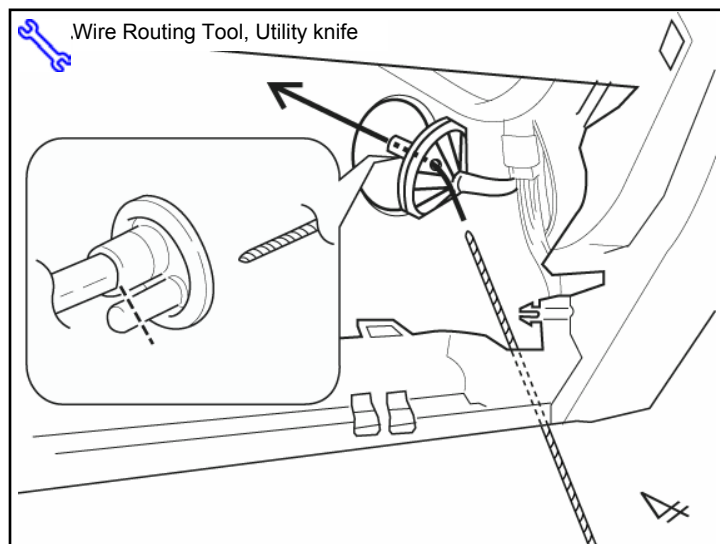


Fig.E-8

15. Cut the tip of the grommet nipple.

16. Run the Wire Routing Tool through the grommet nipple into the engine room.

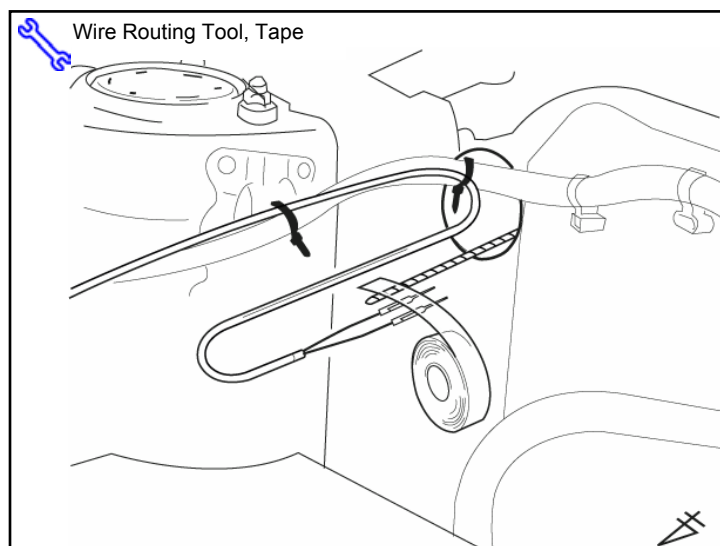


Fig.E-9

17. With a tape, secure the 2 Pin Terminals to the cable wire routing tool.



Pin Terminals are useless if bent, proceed with caution.

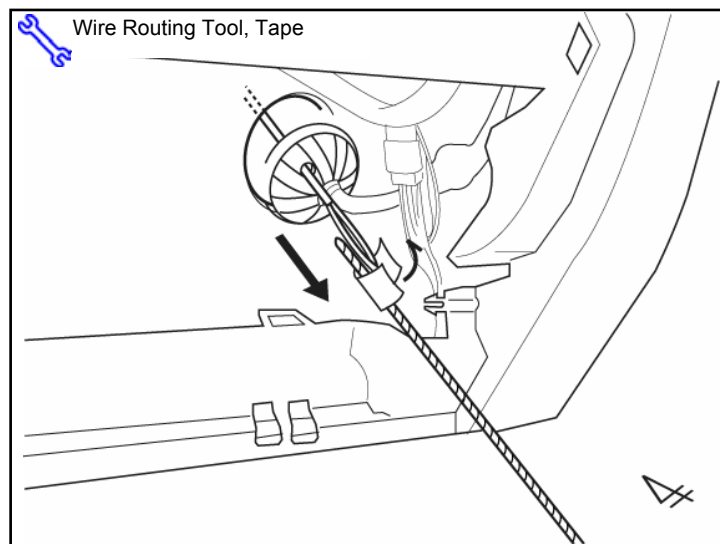


Fig.E-10

18. Pull the Wire Routing Tool into the Passenger area and detach the tape.

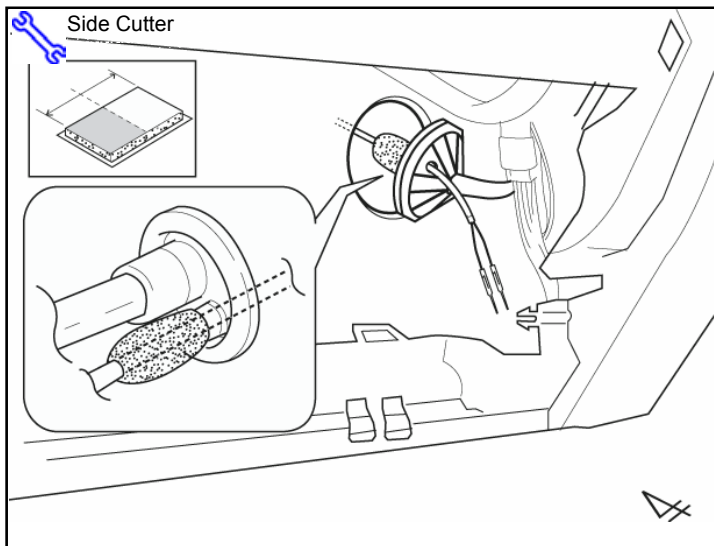


Fig.E-11

19. With half piece butyl tape, wrap around the Hood Switch Harness and the grommet nipple to attain a seal.



This prevents water entering the vehicle. Ensure a tight seal

20. Insert the grommet back in place.

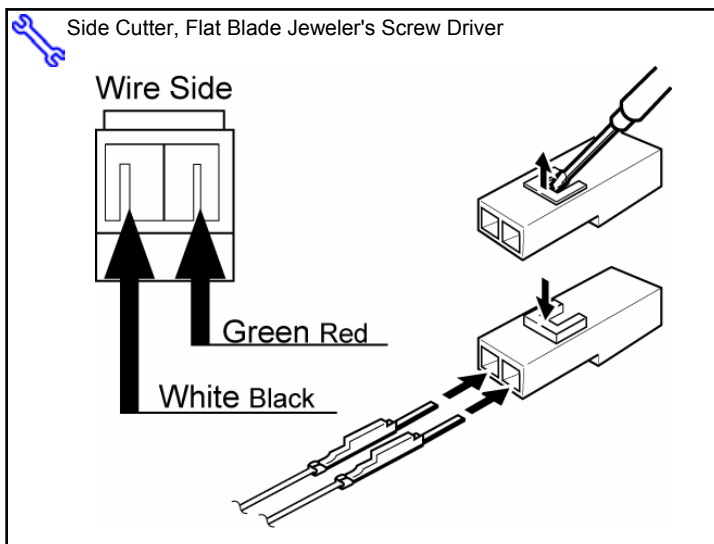


Fig.E-12

21. Disconnect empty V4 2 Pin Connectors.

22. Pull up (do not remove) retaining clip.

23. Insert the Hood Switch Harness 2 Pin Terminals into the TVIP 2 Pin Connector (black)



Make sure each Pin is inserted into the correct slot.

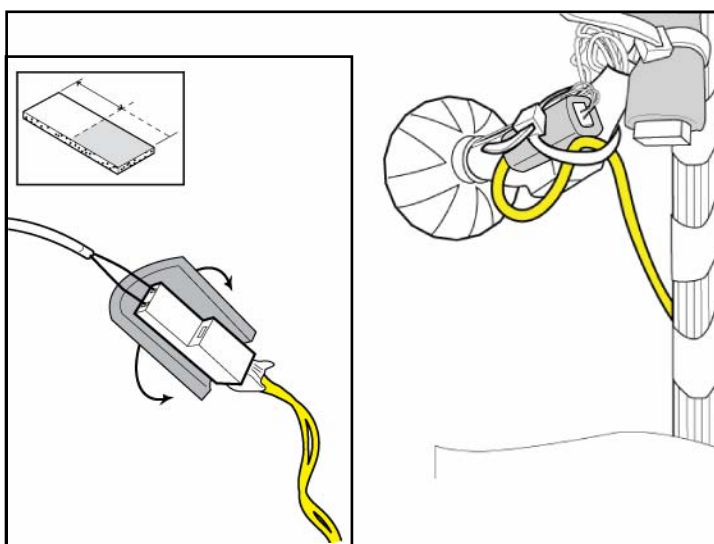


Fig.E-13

24. Reconnect the 2 Pin Connectors.

25. Wrap the 2 Pin connectors with 1/2 small Foam Tape.

26. Secure V4 2 Pin Connector (black) to vehicle harness with 1 Wire Tie, as shown.

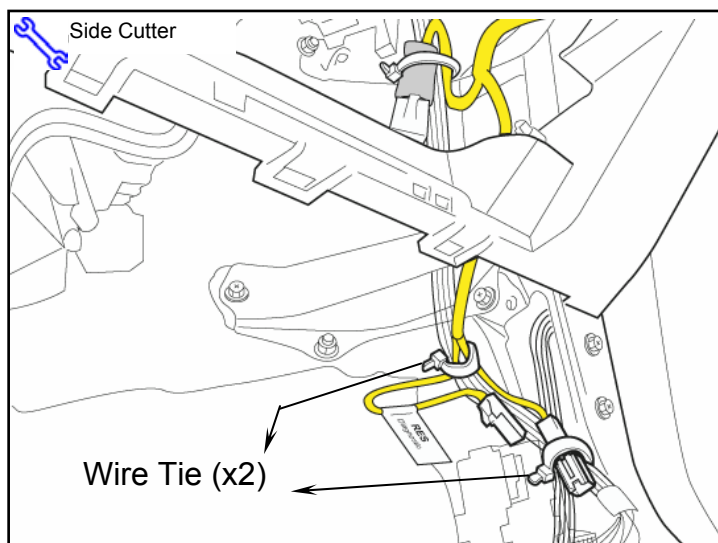


Fig.E-14

27.Route the TVIP Harness down to cowl cover area, and secure it with 2 Wire Ties.

Fig.E-13

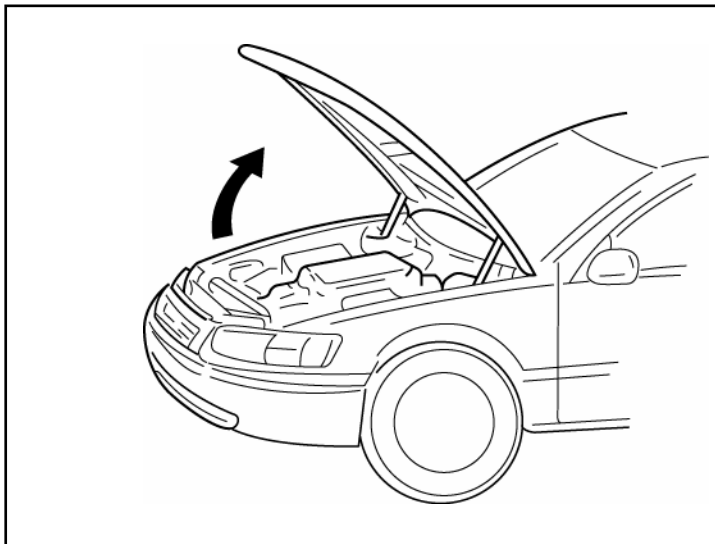


Fig.F-1

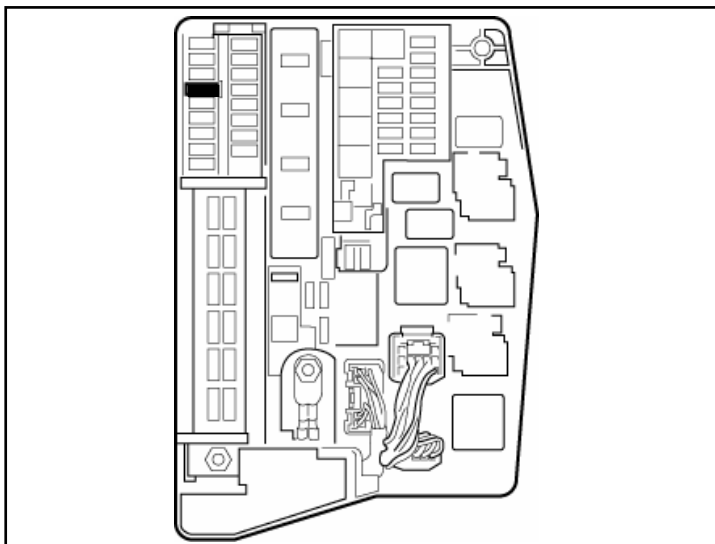


Fig.F-2

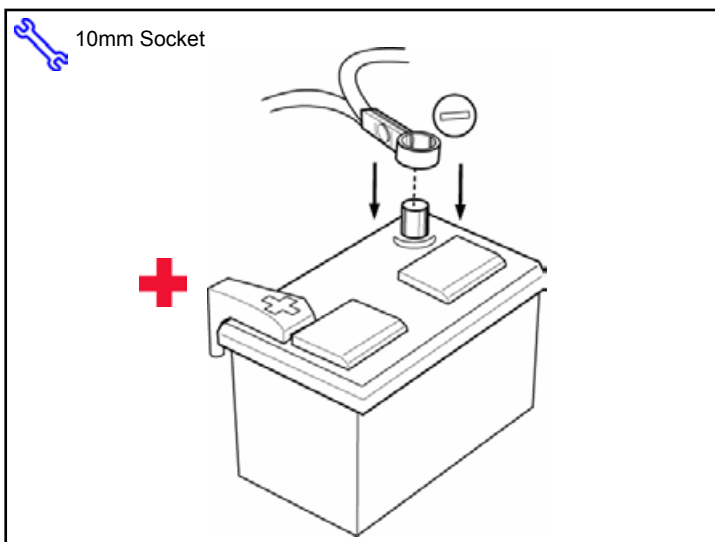


Fig.F-3

F. Registration
refer to addendum I for additional information.

1. Open the Hood. (Fig. 9-1)

2. Verify the Short Pin is installed.

3. Partially Reassemble the vehicle, except the cowl cover and step cover.
(a) Reconnect all corresponding connectors.

4. Temporarily reconnect the Vehicle's Negative Battery Cable. (Fig. 9-2)

+ Do not touch the positive battery terminal.

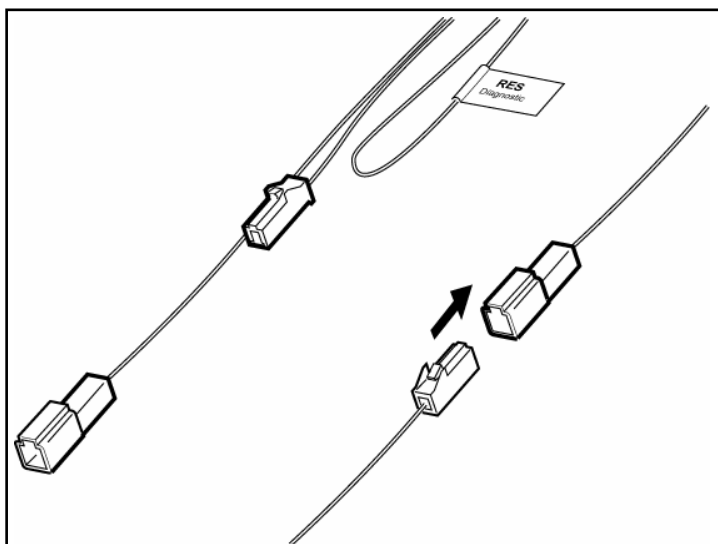


Fig.F-4

5. Locate RES Diagnostic Connectors in the passengers side cowl area.
6. Remove the Tape from the Connectors and Connect them together.



Once connected, you will have 10 minutes to complete steps 5-23.

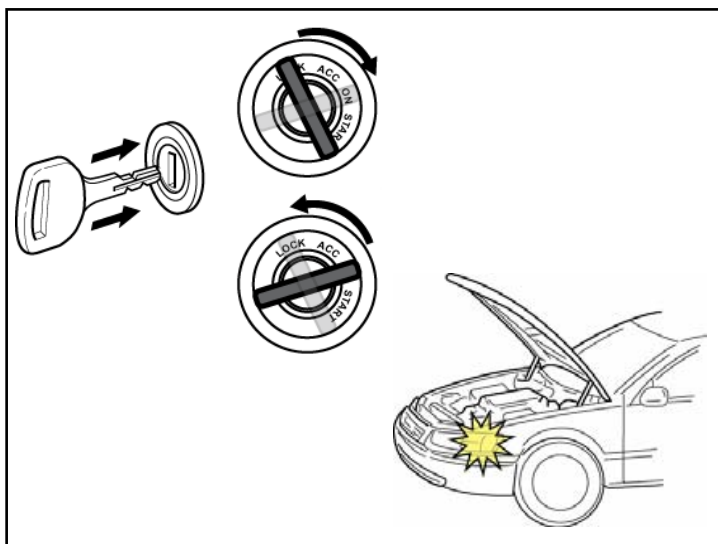


Fig.F-5

7. Close all doors. (Fig. 9-4)
8. Insert the key into the ignition and turn it from "OFF" to "ON". Repeat 5 times.
9. The hazard lights flash 1 time.
10. Turn the key to the "OFF" position.
11. Remove the Key from the Ignition.

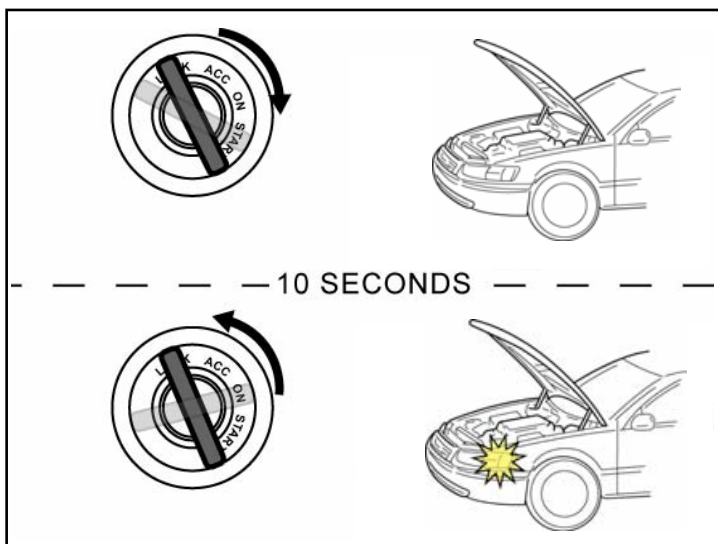


Fig.F-6

12. Start the Engine.
13. After 10 seconds stop the Engine
14. The hazard lights flash 1 time.

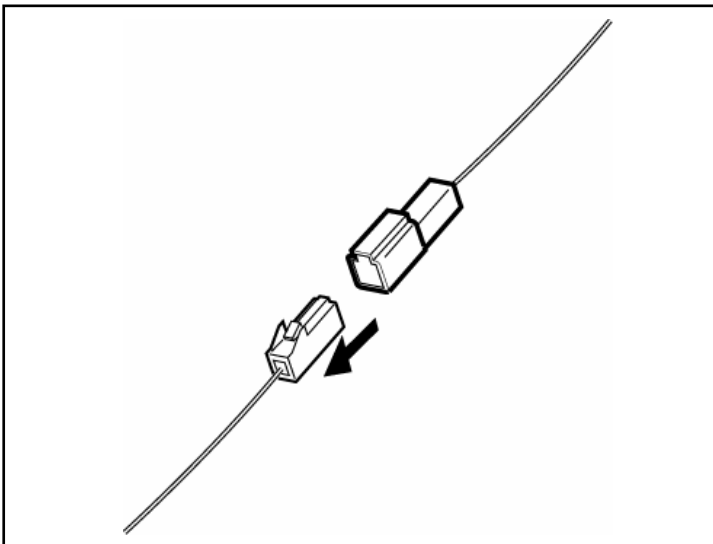



Fig.F-7

 If this procedure failed, the Hazard Lights flash 2 times.

Disconnect RES Diagnostic Connector in the passenger side cowl area.

Start again from step c.

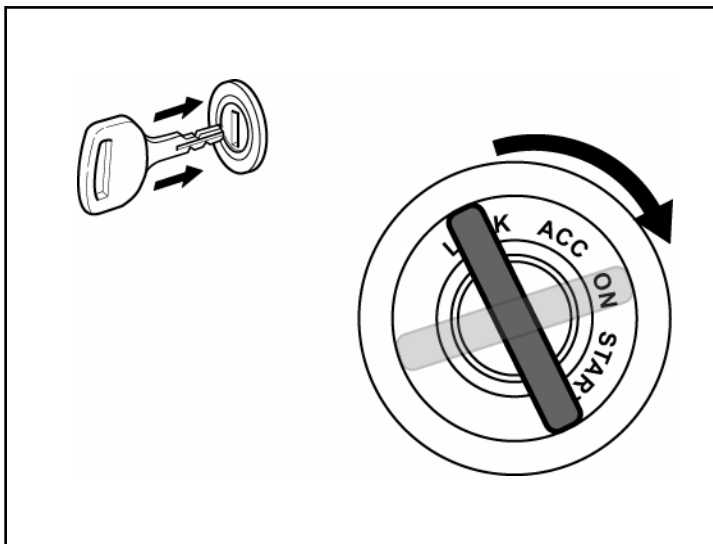


Fig.F-8

15. Verify that all doors are closed.

16. Insert the key into the ignition and turn it from "OFF" to "ON" 5 times (ending at OFF).

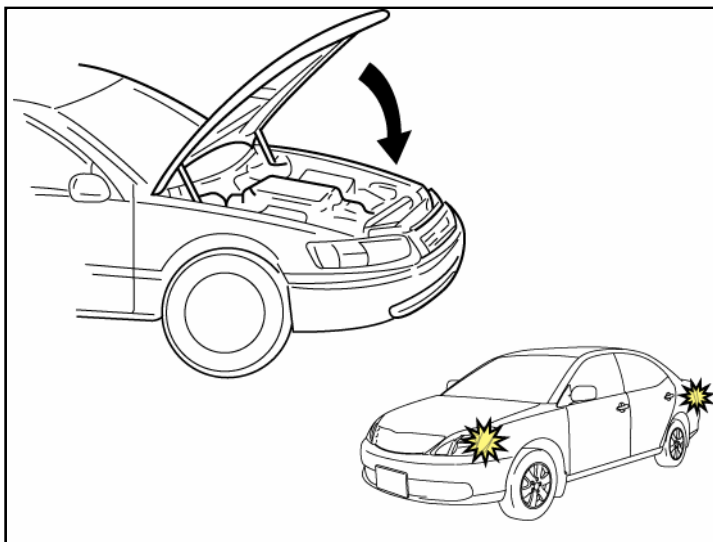


Fig.F-9

17. Close the Hood.

18. The Hazard Lights flash once.
Registration is complete.

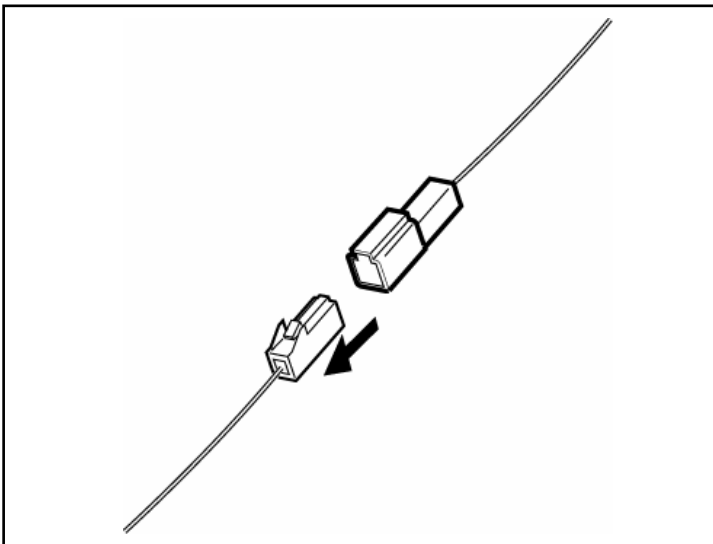


Fig.F-10



If this procedure failed, the hazard Lights flash 3 times.

Disconnect RES Diagnostic Connector in the passengers side cowl area.

Start again from step c.

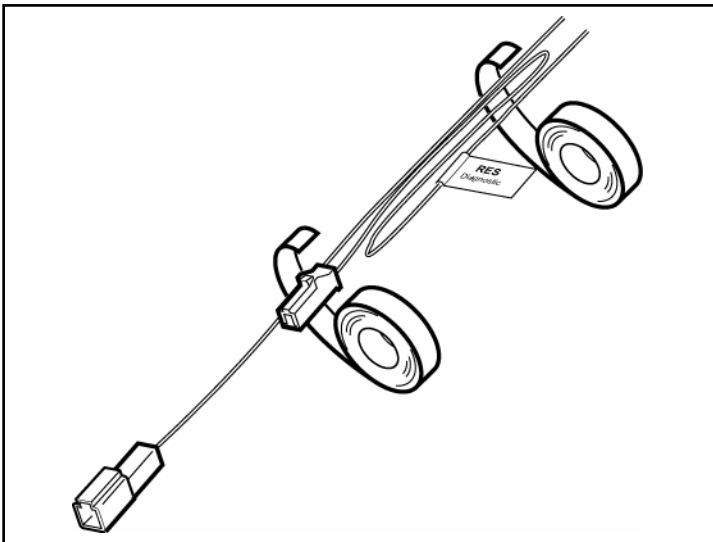


Fig.F-11

19. After a Successful Registration disconnect the V4 Harness's White 1P Connectors

20. Secure the V4 Harness and 1P Connectors with Electrical Tape as shown.

21. Remove the Key from the Ignition Switch.

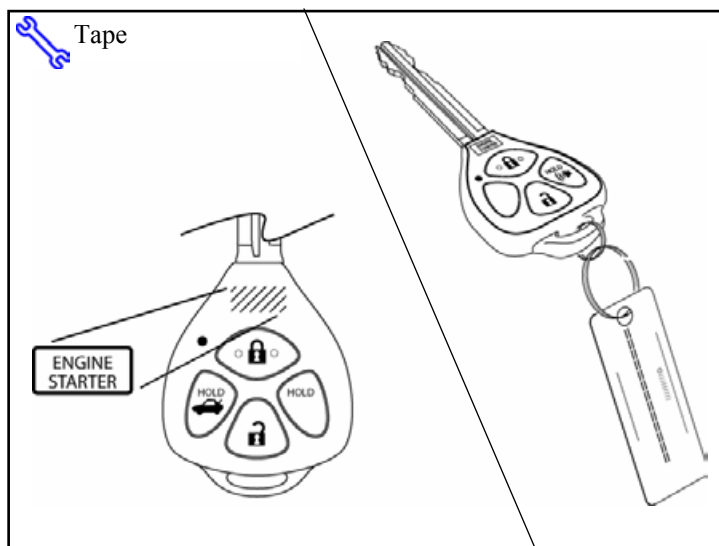


Fig.G-1

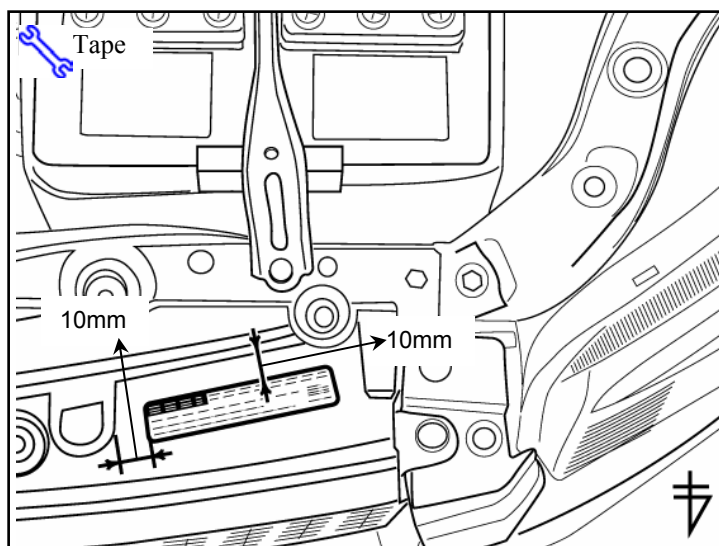


Fig.G-2

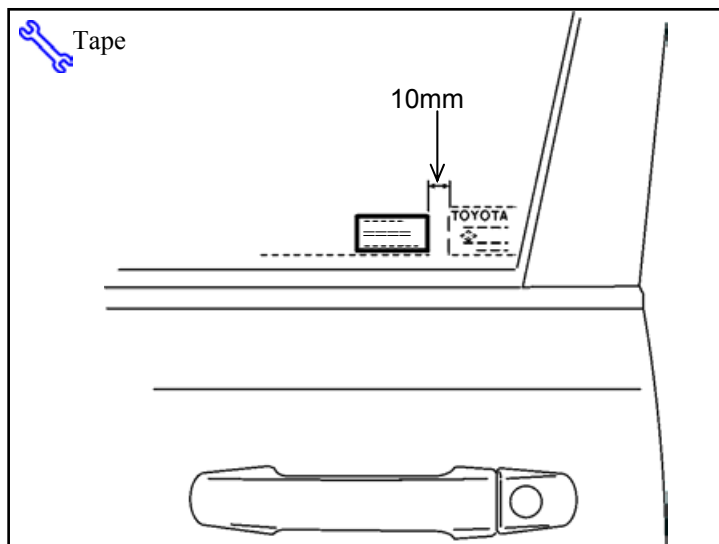


Fig.G-3

G. Attaching the Labels

1. Using VDC approved cleaner and cleaning method, clean the indicated area on the key fob.
2. Use a piece of Clear Tape to lift the Key Label off its protective backing.
3. Attach the Key Label and the Key Tag.
4. Using the VDC approved cleaner and cleaning method, clean the indicated area of Engine compartment.
5. Lift the label off using Clear tape and Attach the Label as shown.
6. Using Household Windex, clean the inside of the both front door Windows.
7. Lift the label off using Clear tape and Attach the Warning Labels on the inside of front door windows as shown.



Line up Labels properly.
Do not attempt to reposition the Labels once they are placed.
Align it 10mm from the last label, if there is one.

H. Completion of Installation

1. Reassemble the vehicle.



Verify that panels fit together properly, with no uneven gaps.

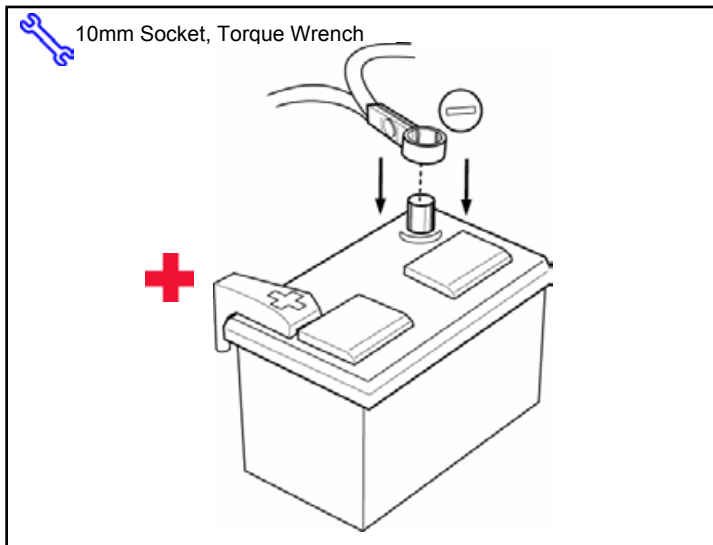


Fig.H-1

2. Position the Negative Battery Cable at the original factory position.
3. Tighten the Nut to 36 in•lbf.
(40.67 n•cm)



DO NOT TOUCH THE POSITIVE BATTERY TERMINAL.

4. Clean up and Remove trash.
5. Sealed in a protective bag, place the owner's manual in the glove box.

Accessory Function Checks

Close the hood, place the shift lever in the "P" (parking) position, set the parking brake, remove the key from the ignition, close all doors, and exit the vehicle.

| | | |
|---|---|--|
| 1 | Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds. | The hazard lights flash after 3 seconds. The engine starts. The hazard lights flash repeatedly for 20 seconds. |
| 2 | Press the remote control's unlock button. | The engine stops. The hazard lights flash twice. |
| 3 | Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine. With the engine running, press and hold the remote control's lock button 2 seconds. | Refer to Step 1. The engine stops. The hazard lights flash once. |
| 4 | Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine. Unlock the doors with the key. | Refer to Step 1. The engine stops. The hazard lights flash once. |

Enter the vehicle and close all doors.

| | | |
|---|--|--|
| 5 | Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine. With the engine running, manually unlock any door with the inside lock switch. | Refer to Step 1. The engine stops. The hazard lights flash once. The security alarm triggers. (if equipped) |
| 6 | Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine. With the engine running, push on the foot brake. | Refer to Step 1. The engine stops. The hazard lights flash once. |
| 7 | Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine. With the engine running, insert the key into the ignition switch. | Refer to Step 1. The engine stops. The hazard lights flash once |
| 8 | Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine. With the engine running, pull the hood release handle. | Refer to Step 1. The engine stops. The hazard lights flash once. The security alarm triggers. (if equipped) |

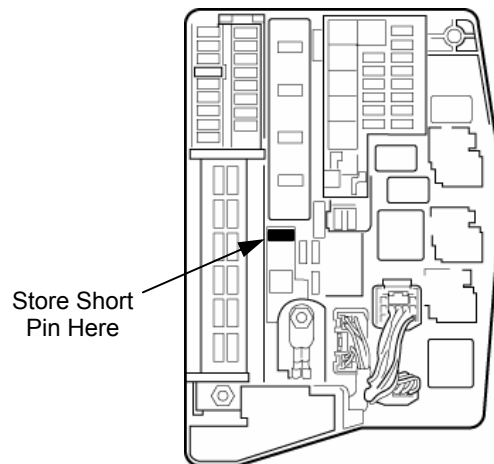
Vehicle Function Check

| | Function | | Function |
|--------------------------|--|--------------------------|--|
| <input type="checkbox"/> | Head Light | <input type="checkbox"/> | ABS Light (if equipped) <i>If the warning light remains on, it may indicate a system malfunction.</i> |
| <input type="checkbox"/> | High Beams | <input type="checkbox"/> | Rear Wiper/Washer (if equipped) |
| <input type="checkbox"/> | Turn Signal Lights | <input type="checkbox"/> | Clock (if equipped) |
| <input type="checkbox"/> | Tail Lights | <input type="checkbox"/> | Accessory Power Socket (if equipped) |
| <input type="checkbox"/> | Stop Lights | <input type="checkbox"/> | Starter |
| <input type="checkbox"/> | Backup Lights | <input type="checkbox"/> | Audio/Video (if equipped) |
| <input type="checkbox"/> | Hazard Lights | <input type="checkbox"/> | Power Sliding Door (if equipped) |
| <input type="checkbox"/> | Marker Lights | <input type="checkbox"/> | Convenience Memory Settings (if equipped) |
| <input type="checkbox"/> | Dome/Courtesy Lights | <input type="checkbox"/> | Heated Seats (if equipped) |
| <input type="checkbox"/> | Panel/Switch Illumination | <input type="checkbox"/> | Massage Seats (if equipped) |
| <input type="checkbox"/> | Accessory Controls/Illumination (if equipped) | <input type="checkbox"/> | Rear Window Defogger (if equipped) |
| <input type="checkbox"/> | Key Sensor Buzzer | <input type="checkbox"/> | Power Side Mirrors (if equipped) |
| <input type="checkbox"/> | Fog Lights (if equipped) | <input type="checkbox"/> | Side Mirror Defogger (if equipped) |
| <input type="checkbox"/> | Daytime Running Lights (if equipped) | <input type="checkbox"/> | Front Windshield Defogger (if equipped) |
| <input type="checkbox"/> | Trunk/Tailgate/Bed Lights (if equipped) | <input type="checkbox"/> | Navigation System (if equipped) |
| <input type="checkbox"/> | Glove Box Light (if equipped) I | <input type="checkbox"/> | Rear Sunshade (if equipped) |
| <input type="checkbox"/> | Cruise Control Light (if equipped) | <input type="checkbox"/> | Steering Wheel Audio Control (if equipped) |
| <input type="checkbox"/> | Seat Belt Warning Light <i>If the warning light remains on, it may indicate a system malfunction.</i> | <input type="checkbox"/> | Steering Wheel Column Adjusts Without Interference |

| | Function | | Function |
|--------------------------|--|--------------------------|--|
| <input type="checkbox"/> | Air Bag Warning Light <i>If the warning light remains on, it may indicate a system malfunction.</i> | <input type="checkbox"/> | Lamp Failure Sensor <i>If the warning light remains on, it may indicate a system malfunction.</i> |
| <input type="checkbox"/> | Track/Skid Control Light (if equipped) If the warning light remains on, it may indicate a system malfunction. | <input type="checkbox"/> | Front Wiper/Washer |
| <input type="checkbox"/> | HVAC | <input type="checkbox"/> | Hood Latch Release |
| <input type="checkbox"/> | Power Locks (if equipped) | <input type="checkbox"/> | Passenger Air Bag Switch (if equipped) |
| <input type="checkbox"/> | Power Windows (if equipped) | <input type="checkbox"/> | Rollover Side Curtain Air Bag Switch (RSCA) (if equipped) |
| <input type="checkbox"/> | Power Seats (if equipped) | | |
| <input type="checkbox"/> | Horn | | |
| <input type="checkbox"/> | Gauges | | |

Remove the short pin after Function check.

Check with your Port/Dealer to see if this step is necessary.



TIPS FOR REMOTE ENGINE STARTER (RES) REGISTRATION PROCEDURE

1. **SLOW DOWN** this is the best thing you can do. The procedure is difficult and long but there is plenty of time to do everything.
When turning the key, inserting the key or pressing the remote make your action rhythmic like a clock. Slow and deliberate.
2. **READ** these instructions and the instructions supplied in the *Vehicles V4 Installation Instructions* completely before attempting Registration.
3. **ASK** someone else to read these steps to you while you perform the procedure. This will help you remember what needs to be done next without having to look back at the Instructions.
4. **PROBLEMS** if you've failed to Register the Vehicle several times RESET the Vehicle. Start by disconnecting the RES Diagnostic Connectors. Then disconnect the Vehicle Battery. Next turn the Vehicles Ignition Switch to ON and then back to OFF.
Now **TAKE A BREAK** let you and the Vehicle de-stress for about 10 minutes. This will allow the RES ECU's to completely RESET and give you a fresh start to try Registration.

REMOTE ENGINE STARTER (RES) REGISTRATION PROCEDURE -----For vehicles w/o Smart Entry and w/o Immobilizer-----

1. **OPEN** the Hood
2. **VERIFY** that the Short Pin is in the Appropriate location (disconnect the Battery if you need to move the Short Pin)
3. Temporarily **CONNECT** the Negative Battery Terminal
4. **OPEN** the Passenger Front Door
5. **LOCATE** the 1P RES Diagnostic Connectors in the Right Kick Panel.
6. **CONNECT** the 1P RES Diagnostic Connectors together
7. **CLOSE** all Doors (LEAVE THE HOOD OPEN)
8. **INSERT** a Key into the Ignition Switch
9. **TURN** the Key from LOCK to ON five (5) times, ending in the ON position
10. **LOOK** for the Hazard Lights to flash ONCE
11. **TURN** the Ignition Switch to the OFF position
12. **START** the Engine and allow to idle for at least 10 seconds
13. **TURN** the Ignition Switch to the OFF position.
14. **LOOK** for the Hazard lights to flash ONCE. If they do not flash or they flash TWICE, disconnect the 1P RES Diagnostic Connectors and start over from Step 6.
15. **TURN** the Key from LOCK to ON five (5) times, ending in the ON position
16. **TURN** the Ignition Switch to the OFF position
17. **REMOVE** the Key from the Ignition Switch
18. **CLOSE** the Hood
19. **LOOK** for the Hazard lights to flash ONCE to confirm Registration.
If the Hazard lights flash THREE times Registration was NOT successful (Start over from step 6)
20. **UNPLUG** the 1P RES Diagnostic Connector.

