

Preparation

**Part Number: 08586-07860**

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

**Kit Contents**

Item #	Quantity Req'd.	Description
1	1	Wire Harness

**Hardware Bag Contents**

Item #	Quantity Req'd.	Description
1	1	RES ECU
2	1	BUS ECU
3	1	ECU Mounting Bracket
4	1	Splicing Connector
5	1	Nut
6	3	Small Foam Tapes
7	20	Medium Wire Ties
8	5	Large Wire Ties
9	2	Window Labels
10	1	Key Tag
11	1	Shift Tag
12	1	Key Label (For Remote Control Key)
13	1	Caution Label (For Engine Compartment)
14	1	Owner's Manual
15	1	Survey Card

**Additional Items Required For Installation**

Item #	Quantity Req'd.	Description

**Conflicts**

Note: Must not be installed in vehicles with V5 security.

**Recommended Tools**

<b>Personal &amp; Vehicle Protection</b>	<b>Notes</b>
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Part Boxes
<b>Special Tools</b>	<b>Notes</b>
Scan Tool and Software Card	01001271 with Version 12.01a Software (or later)
<b>Installation Tools</b>	<b>Notes</b>
Phillips Head Screwdriver	#2, screwdriver or tip
Socket	10mm
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST # 00002-06001-01
Pneumatic/Electric Wrench	
Side Cutters	
Torque Wrench	4.1 N·m (36 lbf·in)
Pliers	

Wrench	10mm
Utility Knife	
<b>Special Chemicals</b>	<b>Notes</b>
Cleaner	3M™ Prep Solvent-70
Glass Cleaner	Household Windex

**General Applicability**

Note: Avalon with factory anti-theft alarm system only.

**Recommended Sequence of Application**

Item #	Accessory
1	Satellite Radio
2	V4

\*Mandatory

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

Item #	Quantity Req'd.	Description

**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.

**Procedure**

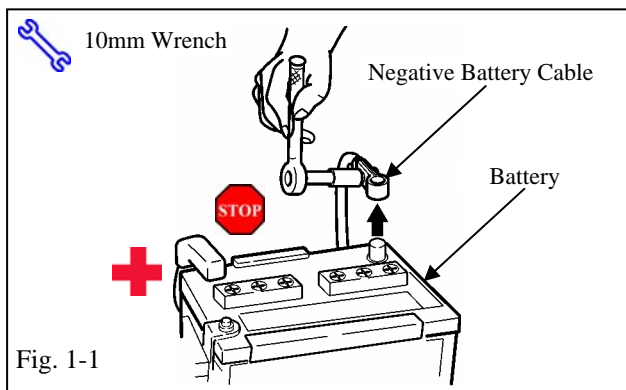
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

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.



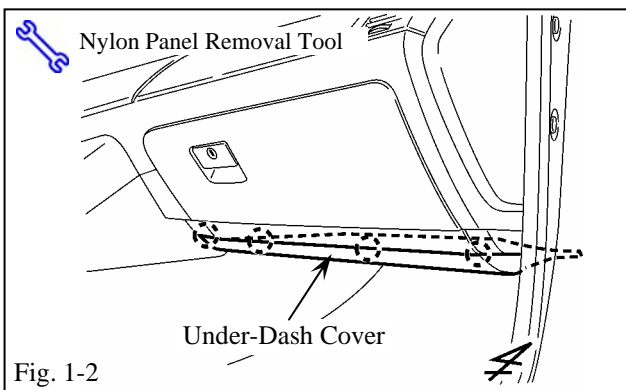
**1. Vehicle Disassembly.**

- (a) Remove the negative battery cable.  
(Fig. 1-1)

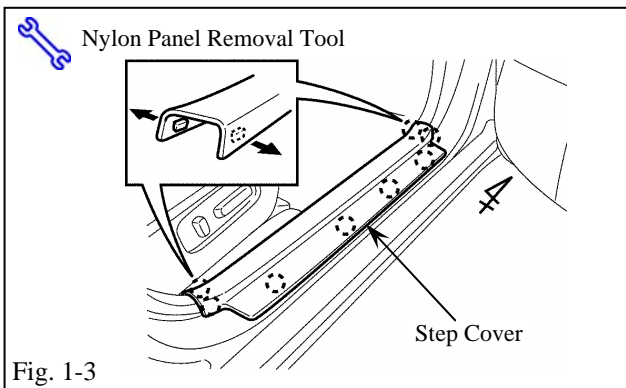


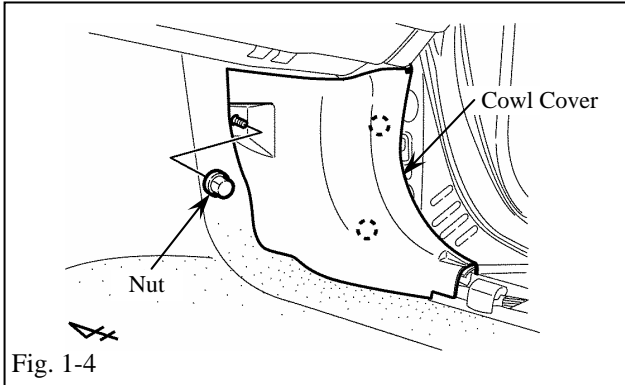
- (1) Protect the fender before starting.  
(2) Do not touch the positive terminal with any tool removing the cable.

- (b) Remove the glove box under-dash cover.  
(Fig. 1-2)



- (c) Remove the passenger's step cover.  
(Fig. 1-3)





(d) Remove the passenger's cowl cover.  
(Fig. 1-4)

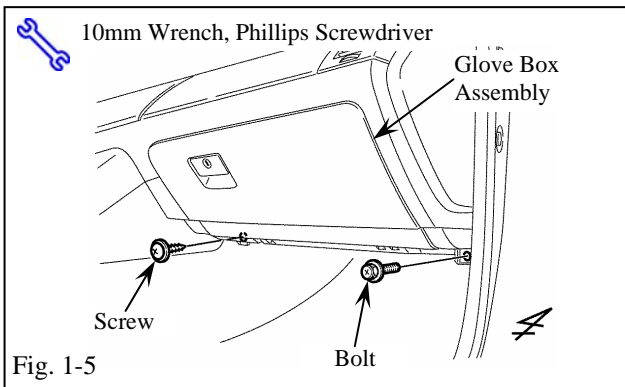
(1) Remove one nut securing the cowl cover.

(e) Remove one screw and one bolt from the glove box assembly. (Fig. 1-5)

(f) Remove the glove box assembly. (Fig. 1-6)

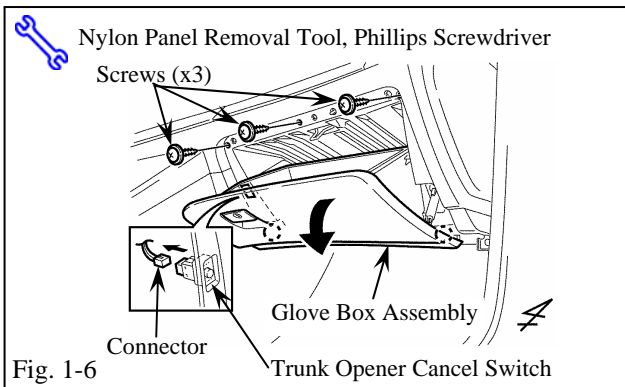
(1) Open the glove box door and remove three screws securing the glove box assembly.

(2) Disconnect the trunk opener cancel switch from the glove box assembly if equipped.



**For vehicles with Smart Entry, the disassembly process ends on Step f. Go to Section 5.**

**For vehicles without Smart Entry, continue the disassembly process.**

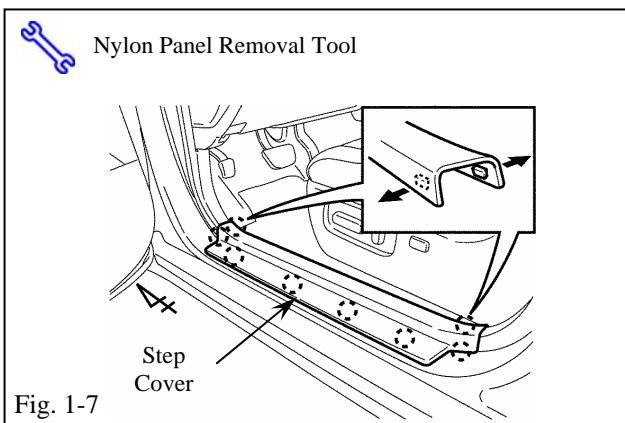


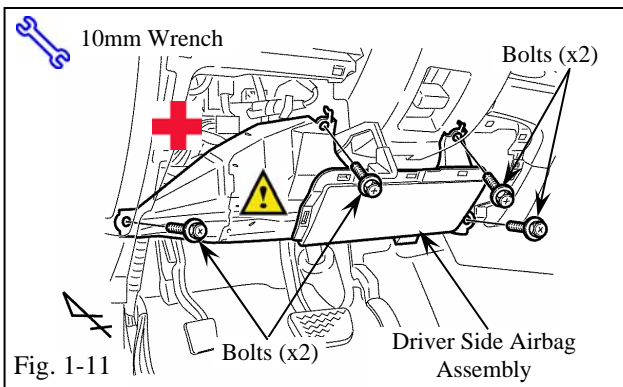
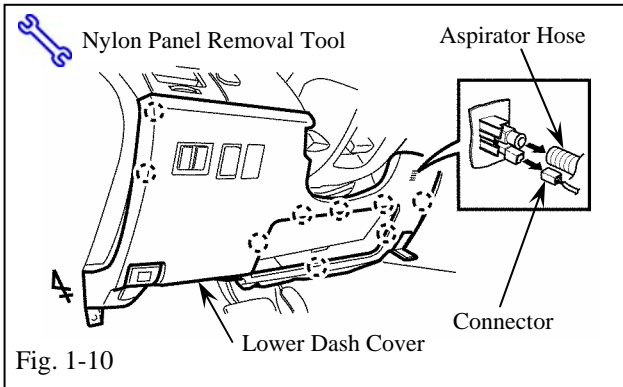
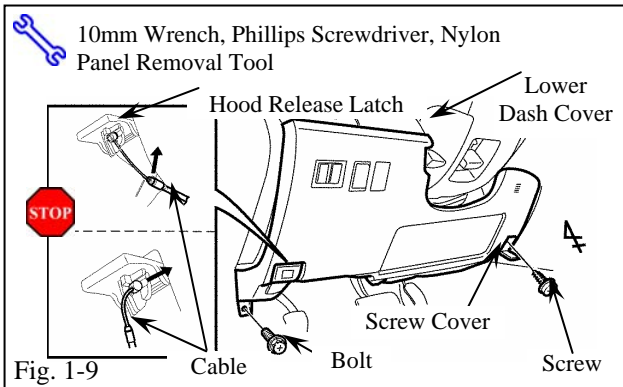
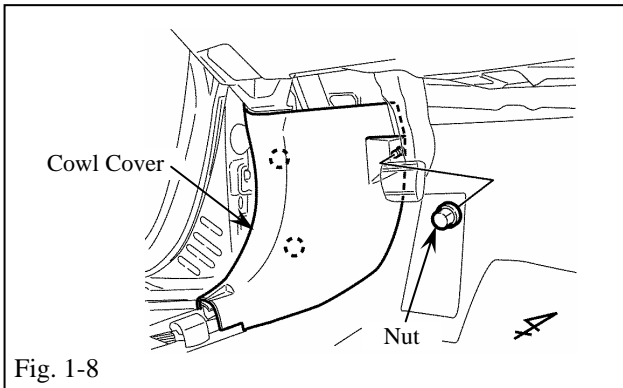
**FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Step g)**



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

(g) Remove the driver's step cover. (Fig. 1-7)





**FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps h-l)**



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

- (h) Remove the driver's cowl cover. (Fig. 1-8)
  - (1) Remove the one nut securing the cowl cover.



- (i) Remove the hood release cable. (Fig. 1-9)
  - (1) Do not bend the hood release cable.

- (j) Open the screw cover on the lower dash cover. Insert the tip of a Nylon Panel Removal Tool in the upper slot to loosen it. (Fig. 1-9)
  - (1) Remove one screw and one bolt securing the lower dash cover.

- (k) Remove the lower dash cover. (Fig. 1-10)
  - (1) Disconnect the temperature sensor (connector and aspirator hose) from the lower dash cover if equipped.

- (l) Remove the driver side airbag assembly. (Fig. 1-11)
  - (1) Disconnect the temperature sensor (connector and aspirator hose) from the lower dash cover if equipped.



- (1) Carefully remove the driver side airbag assembly. (Fig. 1-11)
  - (1) Remove four bolts securing the driver side airbag assembly.

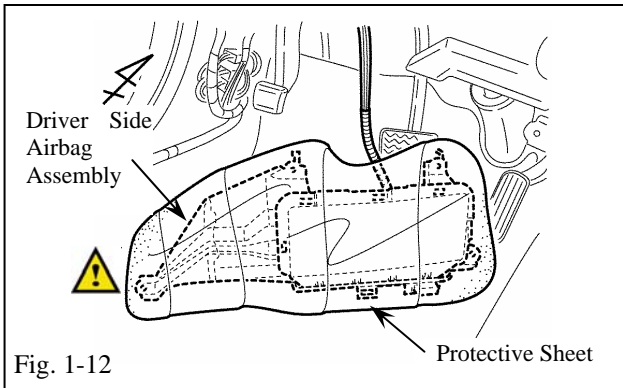


- (2) Be careful not to get cut by the sharp metal edges.



- (3) Do not disconnect the airbag assembly.

- (4) Use the empty V4 kit box to support the airbag assembly on the floor.



FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Step m)

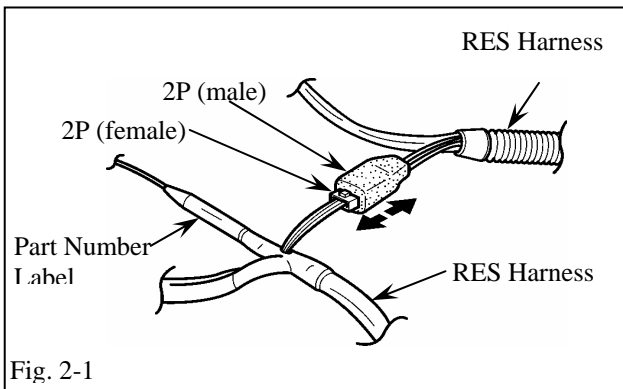


**NOTE:** Do not perform this step if the vehicle has Smart Entry.

(m) Using a protective sheet or blanket, completely wrap the driver side airbag assembly. Then place it over the box on the floor. (Fig. 1-12)



(1) Take caution when handling the driver side airbag assembly.



**2. RES Harness Installation. (Passenger Side Area)**

FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps a-c)



**NOTE:** Do not perform this step if the vehicle has Smart Entry.



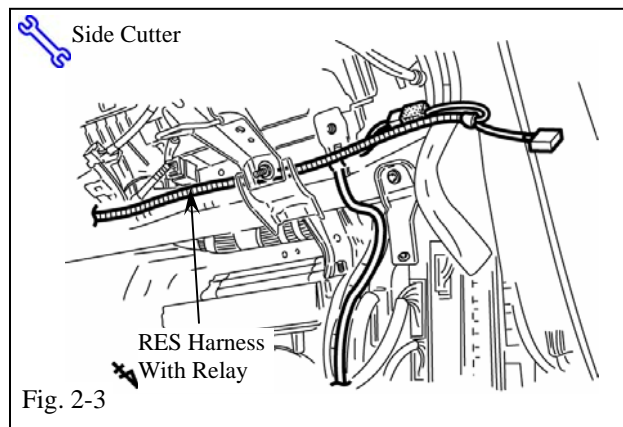
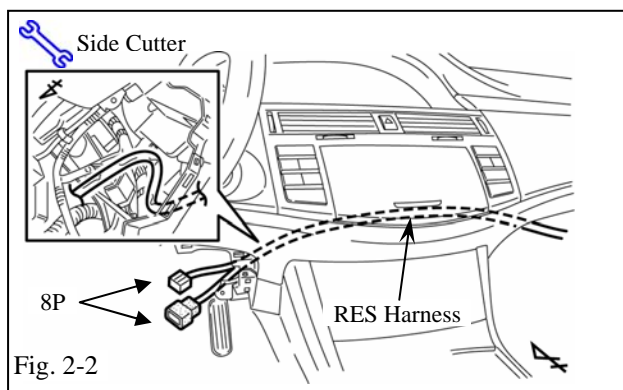
**NOTE:** The RES harness as supplied in the kit is composed of two separate harnesses joined by the white 2P connector with foam wrap.

(a) Locate and disconnect the white 2P connector with foam wrap on the RES harness to separate the harness portions. (Fig. 2-1)

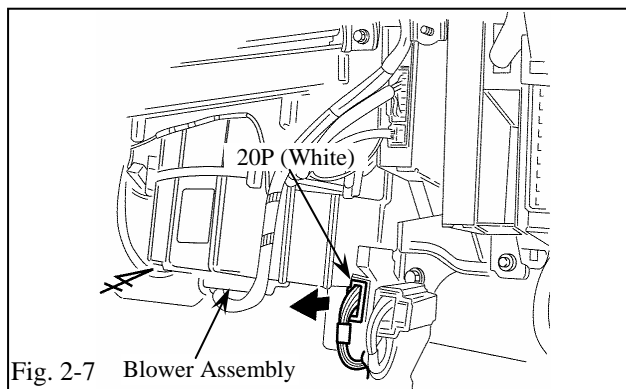
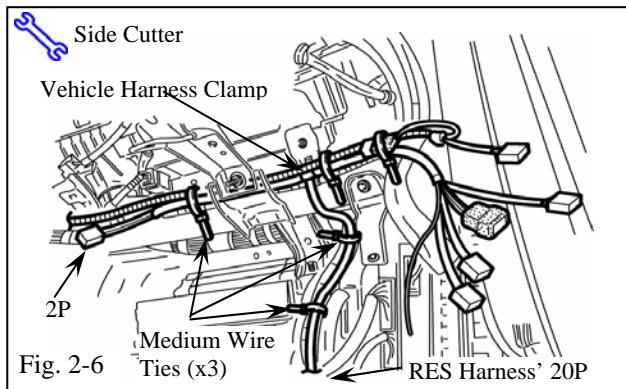
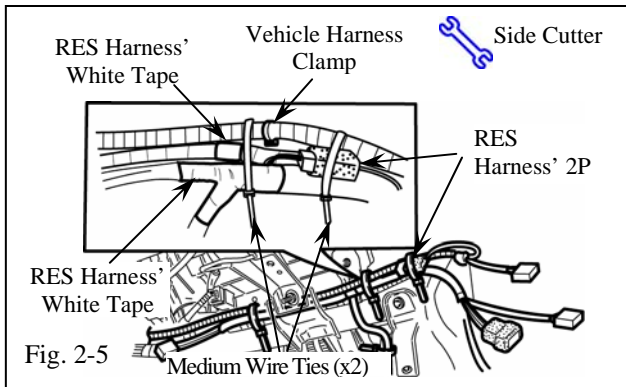
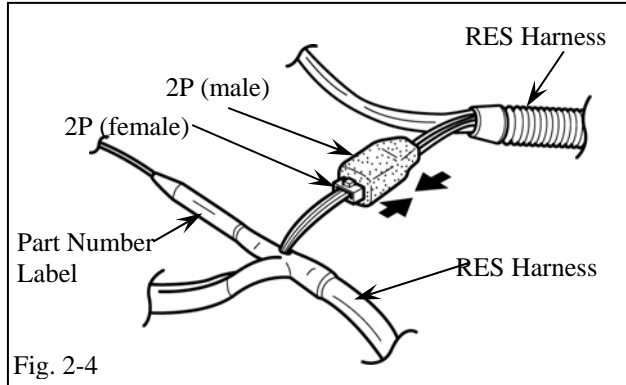
(b) Starting with the two 8P connectors on the driver side, route the portion of the RES harness with the relay through the center dash to the glove box area. (Fig 2-2)

(1) Be sure to route the RES harness in front of the brace as shown, on both sides of the center dash.

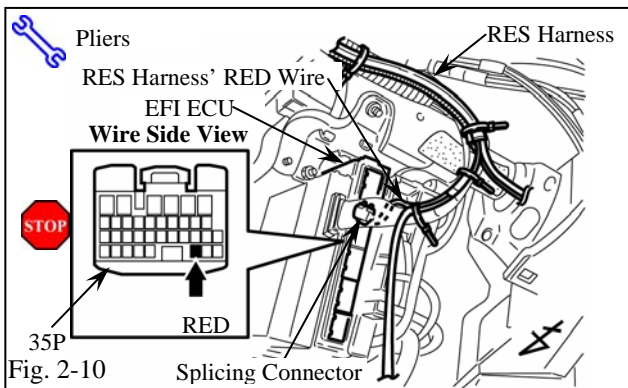
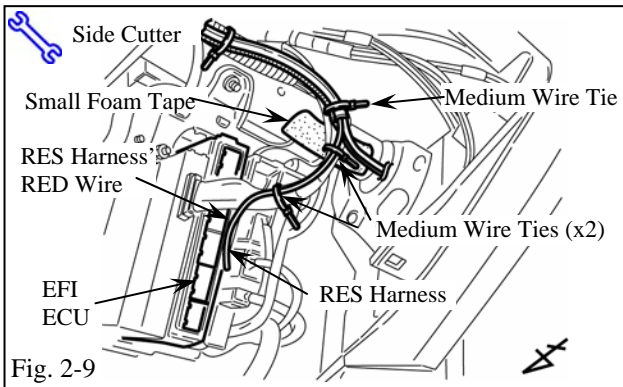
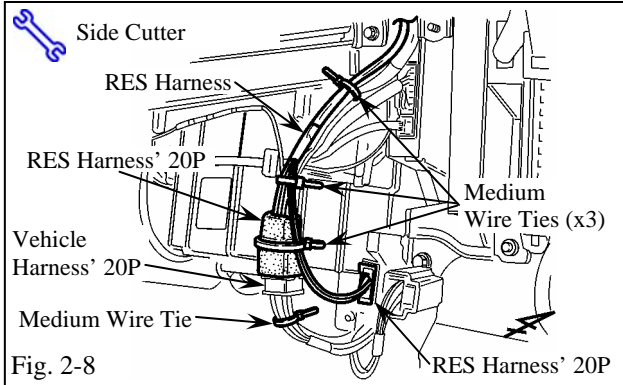
(c) Route the RES harness over the reinforcement support brace and above the GBS ECU bracket, if equipped. (Fig. 2-3)



**FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps d-i)**



- (d) Reconnect the 2P connector with foam wrap to join the two RES harness portions. (Fig. 2-4)
- (e) Locate the vehicle harness clamp on the reinforcement in the glove box area. Secure the two white taped markers of the RES harness next to the vehicle harness clamp with one medium wire tie. (Fig. 2-5)
  - (1) Line up the RES harness' white tape markers to the vehicle harness clamp.
- (f) Secure the RES harness' 2P connector with foam wrap to the vehicle harness with one medium wire tie. (Fig. 2-5)
- (g) Route the RES harness' white 2P connector with the label back toward the center console area and above the GBS ECU bracket if equipped. Then secure the RES harness to the vehicle harness with one medium wire tie (Fig. 2-6)
- (h) Route the RES harness' white 20P connectors downward toward the blower assembly area, then secure the RES harness to the vehicle harness with two medium wire ties. (Fig. 2-6)
- (i) Locate and disconnect the vehicle harness' white 20P connector on the right side of the blower assembly in glove box area. (Fig. 2-7)



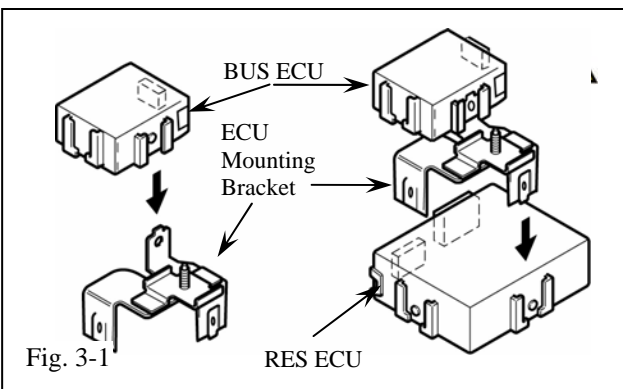
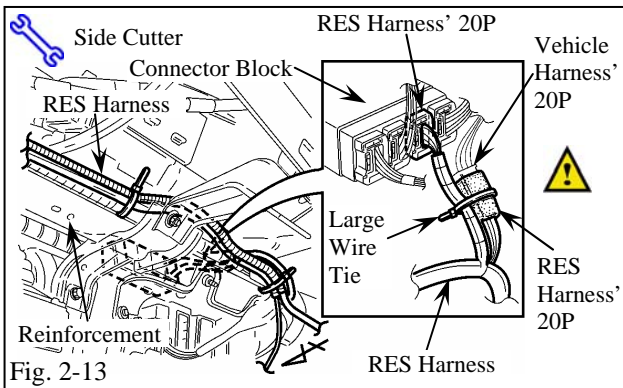
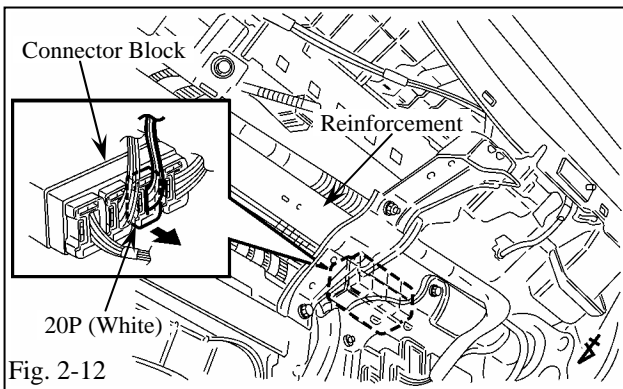
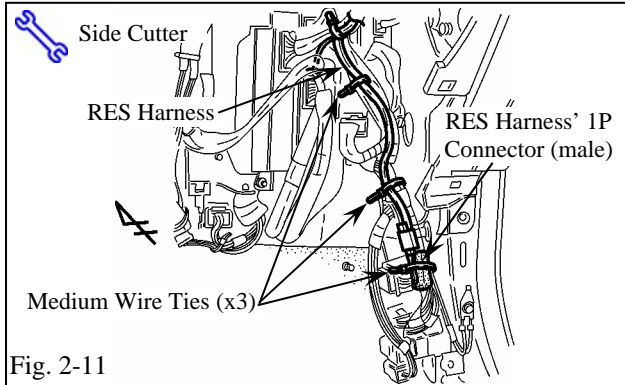
FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps j-p)



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

- (j) Plug in the RES harness' white 20P connectors between the vehicle harness' 20P connector and the connector block. (Fig. 2-8)
  - (1) Verify the connectors are plugged in securely.
- (k) Secure the 20P connectors to the RES harness with one medium wire tie. (Fig. 2-8)
- (l) Secure the RES harness to the vehicle harness with three medium wire ties. (Fig. 2-8)
  - (1) Be sure the cut end of each wire tie is turned away from the vehicle harness.
- (m) Place a small foam tape over the mounting tab of the reinforcement brace as shown. Be sure the bolt and sharp edges are covered. (Fig. 2-9)
- (n) Route and secure the RES harness to the vehicle harness with one medium wire tie. (Fig. 2-9)
- (o) Route the RES harness' RED wire toward the EFI ECU, and then secure the RES harness to the vehicle harness with two medium wire ties. (Fig. 2-9)
- (p) Locate the EFI ECU's white 35P connector's RED wire (bottom row, six space from the left). Attach the RES harness' RED wire with a splicing connector. (Fig. 2-10)
  - (1) Turn the connector so the wires face you and the tab is on top.
  - (2) Verify the correct wire is chosen for splicing.
  - (3) Verify the splicing connector is applied properly.





**FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps q-s)**



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

(q) Route the RES harness toward the passenger side cowl area. Secure the RES harness and RES harness' 1P male connector with three medium wire ties. (Fig. 2-11)

(r) Locate the connector block above the reinforcement in the upper right side of the glove box area. Disconnect the white 20P connector, third space from the left. (Fig. 2-12)



(1) Use the correct 20P connector because other connectors in the connection block will fit the RES harness.

(s) Plug in the RES harness' white 20P connectors between the vehicle harness' 20P connector and the connector block, then secure the 20P connectors to the RES harness with one large wire tie. (Fig. 2-13)

(1) Verify connectors are plugged in securely.

**3. RES ECU and BUS ECU Preparation and Installation.**

**FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Step a)**



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

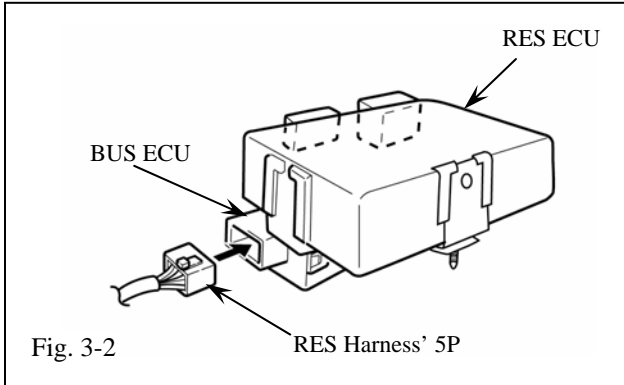
(a) Insert the ECU mounting bracket into the indicated bracket slot on the BUS ECU, then insert the RES ECU into the indicated slots on mounting bracket. (Fig. 3-1)

(1) Insert the mounting bracket into the correct ECU's slot.



**CAUTION:** Bracket is permanently attached once installed.

(2) Ensure the bracket is firmly attached to each ECU.



FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps b-d)



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

(b) Connect the RES harness' white 5P connector to the BUS ECU. (Fig. 3-2)

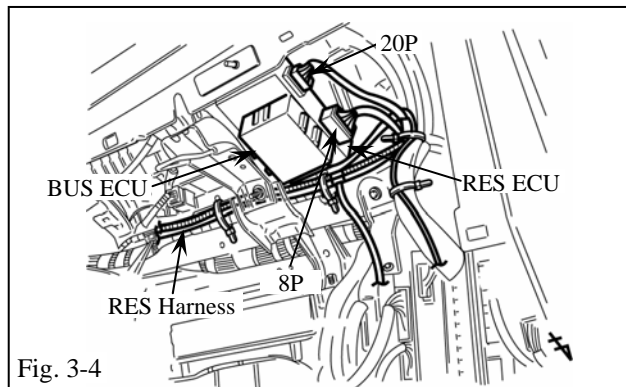
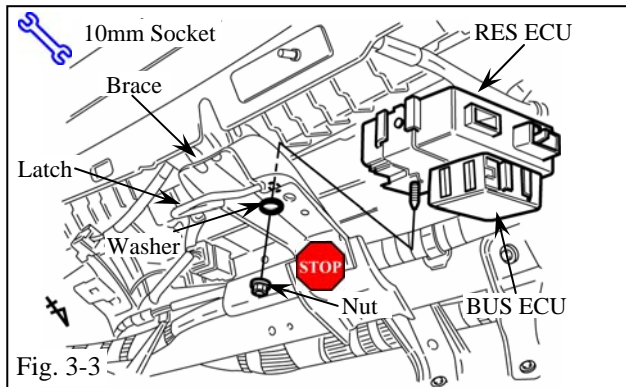
(c) Locate the hole in the brace in the upper section of the glove box area. Secure the RES ECU and BUS ECU to the brace with the nut supplied in the kit. (Fig. 3-3)

(1) Verify the nut is tightened and secured.



**NOTE:** A quarter-inch steel washer may be used with the existing nut to better secure the RES ECU (the washer is not supplied in the kit). A larger flange nut (Toyota Part No. 90179-06097) can be used in place of the washer if available.

(d) Connect the RES harness' white 20P and white 8P connectors to the RES ECU. (Fig. 3-4)



**4. RES Harness Installation.**

**(From Passenger Area to Driver Area)**

FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Step a)

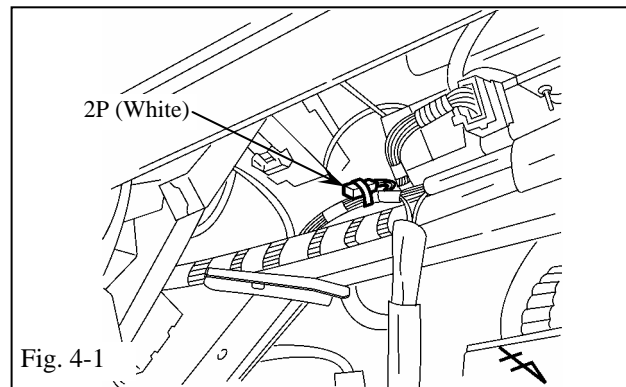


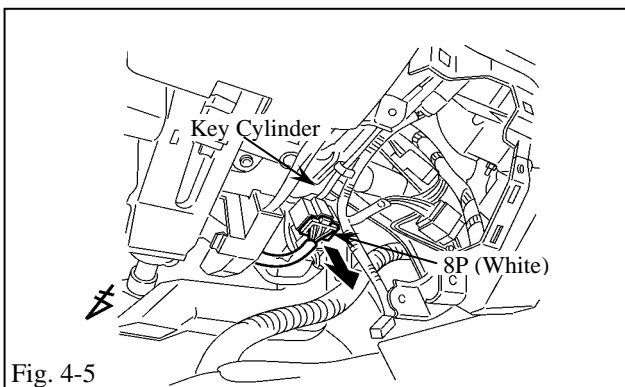
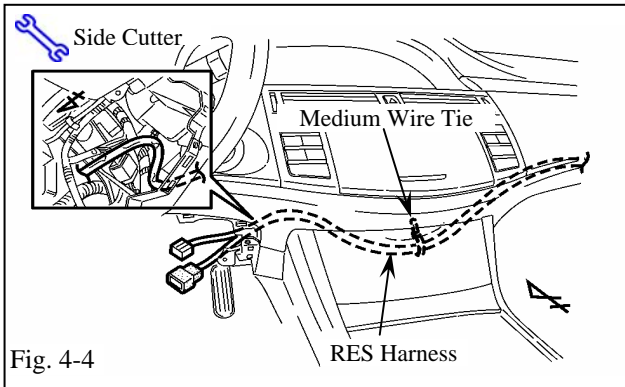
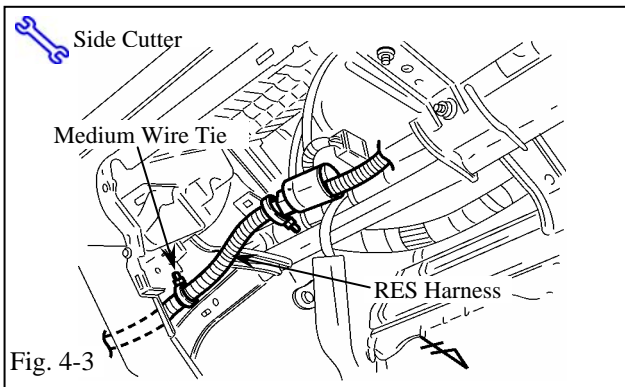
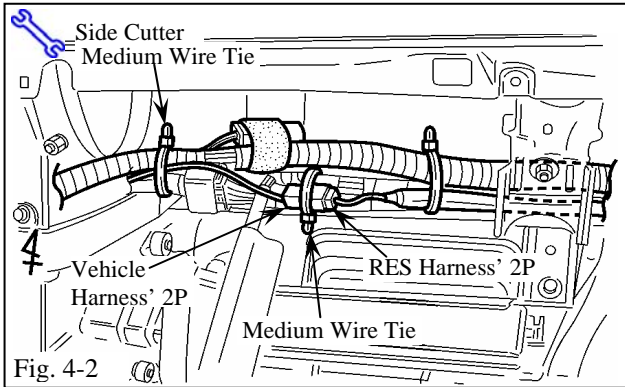
**NOTE:** Do not perform this step if the vehicle has Smart Entry.

(a) Locate and remove the tape securing the vehicle harness' white 2P connector to the GBS connector wiring from the left side of the glove box area. (Fig. 4-1)



**NOTE:** For vehicles not equipped with GBS, ensure that the GBS connector wiring remains secured to the vehicle harness.



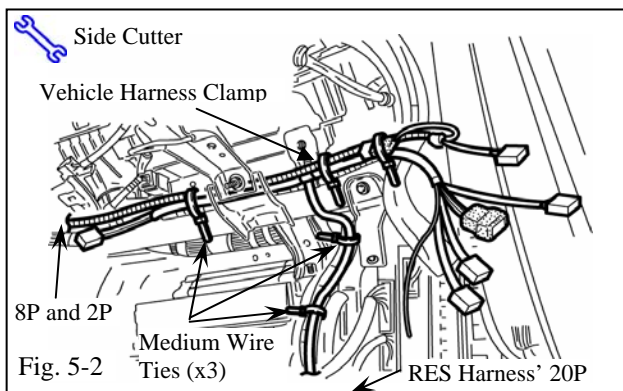
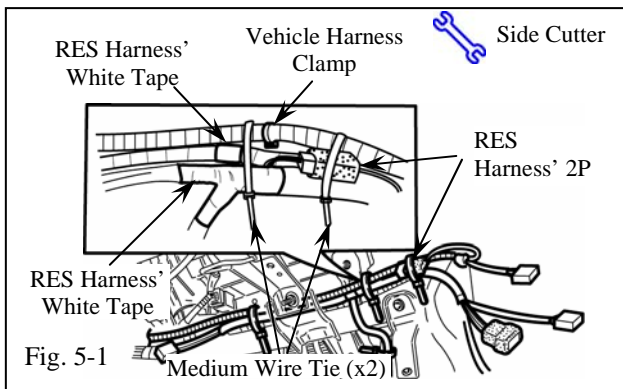
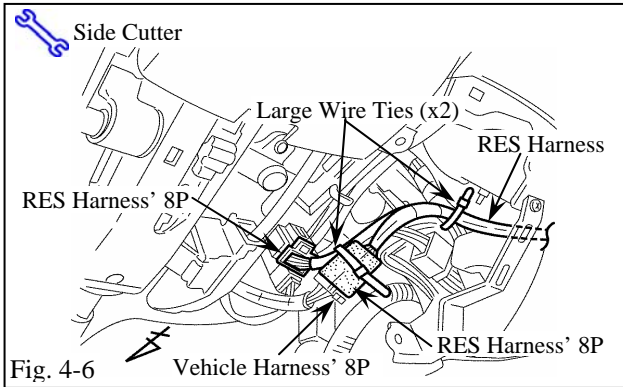


**FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps b-f)**



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

- (b) Plug in the RES harness' white 2P connector to the vehicle harness' white 2P connector. Secure the 2P connector to the vehicle harness with one medium wire tie. (Fig. 4-2)
  - (1) Verify the connectors are plugged in securely.
- (c) Secure the RES harness with the relay to the vehicle harness with one medium wire tie near the relay in the glove box area. (Fig. 4-2)
- (d) Secure the RES harness to the vehicle harness with one medium wire tie in the center console area in front of the brace. (Fig. 4-3)
- (e) Secure the RES harness behind the audio unit, in the opening between the heater unit and audio unit, to the vehicle harness with one medium wire tie. (Fig. 4-4)
- (f) Locate and disconnect the white 8P connector from the ignition switch area. (Fig. 4-5)



FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps g-i)



**NOTE:** Do not perform this step if the vehicle has Smart Entry.

- (g) Plug in the RES harness' white 8P connectors between the vehicle harness' 8P connector and the ignition switch. (Fig. 4-6)
  - (1) Verify the connectors are plugged in securely.
- (h) Secure the RES harness to the vehicle harness with one large wire tie, and secure the 8P connector to the RES harness with one large wire tie. (Fig. 4-6)
- (i) Go directly to Section 8.

**5. RES Harness Installation. (Passenger Area)**

FOR VEHICLES WITH SMART ENTRY SYSTEM ONLY. (Steps a-d)



**NOTE:** Only perform this step on Smart Entry vehicles.

- (a) Locate the vehicle harness clamp on the reinforcement in the glove box area. Secure the two white taped markers of the RES harness next to the vehicle harness clamp with one medium wire tie. (Fig. 5-1)
  - (1) Line up the RES harness' white tape markers to the vehicle harness clamp.
- (b) Secure the RES harness' 2P connector with foam wrap to the vehicle harness with one medium wire tie. (Fig. 5-1)
- (c) Route the RES harness' one white 2P connector and two white 8P connectors toward the center console area and above the GBS ECU bracket if equipped. Then secure the RES harness to the vehicle harness with one medium wire tie. (Fig. 5-2)
- (d) Route the RES harness' white 20P connectors downward toward the blower assembly area, then secure the RES harness to the vehicle harness with two medium wire ties. (Fig. 5-2)

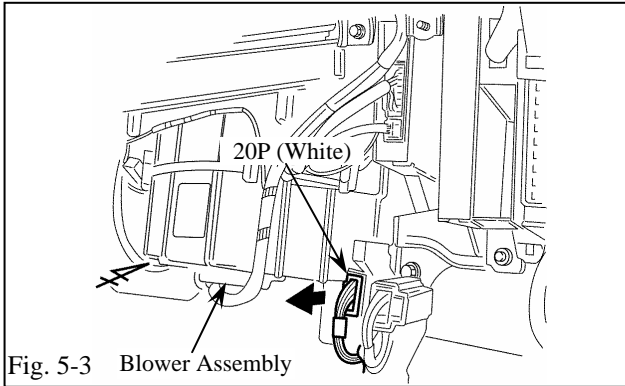


Fig. 5-3 Blower Assembly

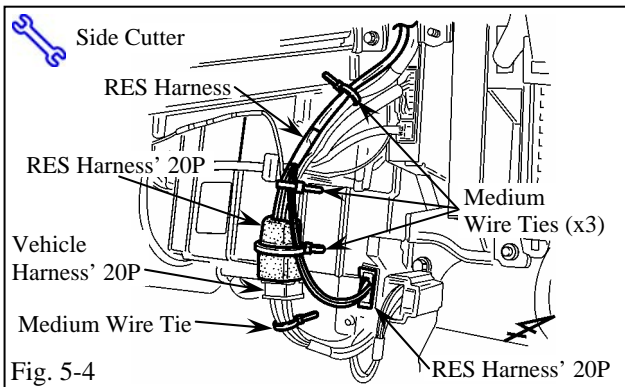


Fig. 5-4

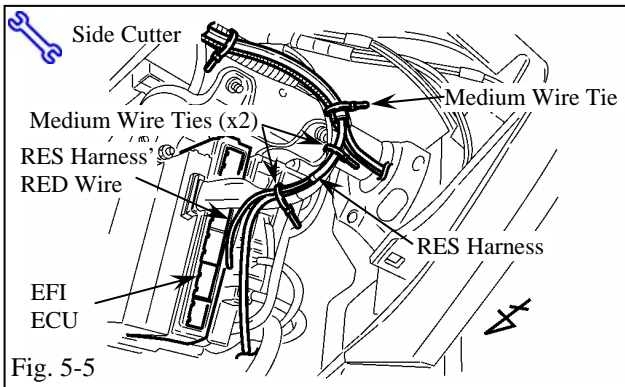


Fig. 5-5

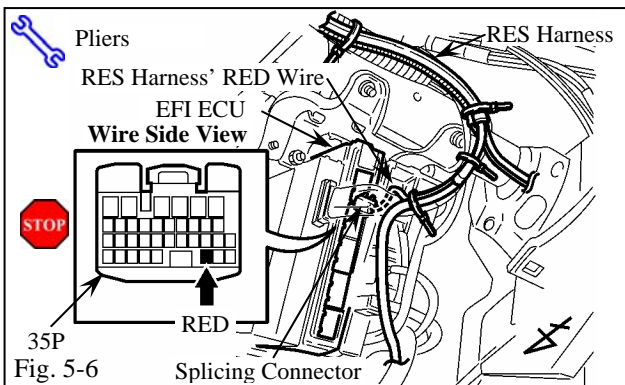


Fig. 5-6

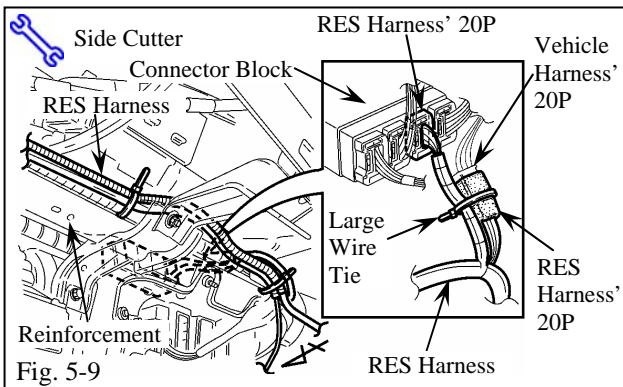
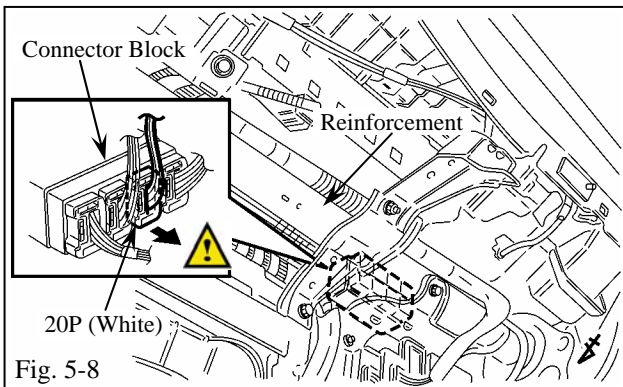
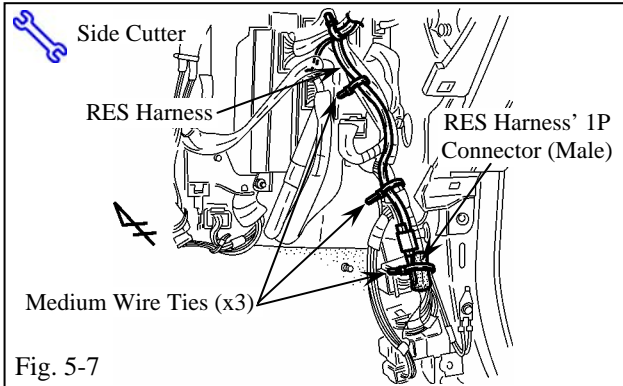
FOR SMART ENTRY VEHICLES ONLY.  
(Steps e-k)



**NOTE:** Only perform this step on Smart Entry vehicles.

- (e) Locate and disconnect the vehicle harness' white 20P connector on the right side of the blower assembly in the glove box area. (Fig. 5-3)
- (f) Plug in the RES harness' white 20P connectors between the vehicle harness' 20P connector and the connector block. (Fig. 5-4)
  - (1) Verify the connectors are plugged in securely.
- (g) Secure the 20P connectors to the RES harness with one medium wire tie. (Fig. 5-4)
- (h) Secure the RES harness to the vehicle harness with three medium wire ties. (Fig. 5-4)
  - (1) Be sure the cut end of each wire tie is turned away from the vehicle harness.
- (i) Route and secure the RES harness to the vehicle harness with one medium wire tie. (Fig. 5-5)
- (j) Route the RES harness' RED wire toward the EFI ECU, then secure the RES harness to the vehicle harness with two medium wire ties. (Fig. 5-5)
- (k) Locate the EFI ECU's white 35P connector's RED wire (bottom row, six spaces from the left). Attach the RES harness' RED wire with a splicing connector. (Fig. 5-6)
  - (1) Turn the connector so the wires face you and the tab is on top.
  - (2) Verify the correct wire is chosen for the splicing.
  - (3) Verify the splicing connector is applied properly.





FOR SMART ENTRY VEHICLES ONLY.  
(Steps l-n)



**NOTE:** Only perform this step on Smart Entry vehicles.

(l) Route the RES harness toward the passenger side cowl area. Secure the RES harness and RES harness' 1P male connector with three medium wire ties. (Fig. 5-7)

(m) Locate the connector block above the reinforcement in the upper right side of the glove box area, then disconnect the white 20P connector, third space from the left. (Fig. 5-8)



(1) Be sure to use the correct 20P connector because other vehicle connectors in the connector block will fit the RES harness.

(n) Plug in the RES harness' white 20P connectors between the vehicle harness' 20P connector and the connector block, then secure the 20P connectors to the RES harness with one large wire tie. (Fig. 5-9)

(1) Verify the connectors are plugged in securely.

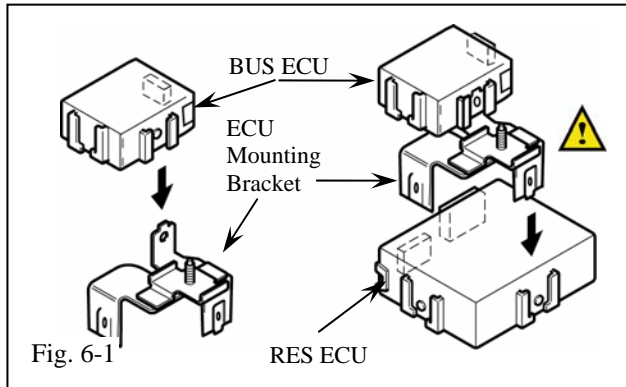


Fig. 6-1

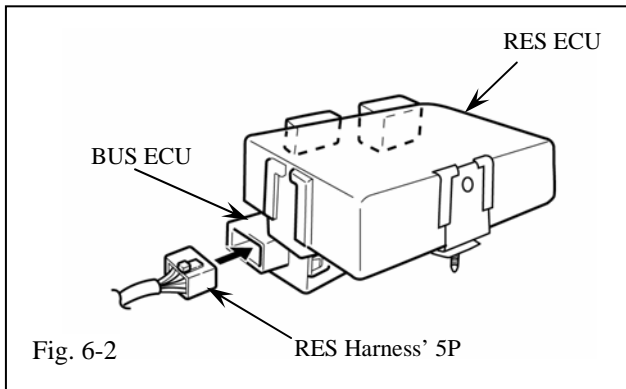


Fig. 6-2

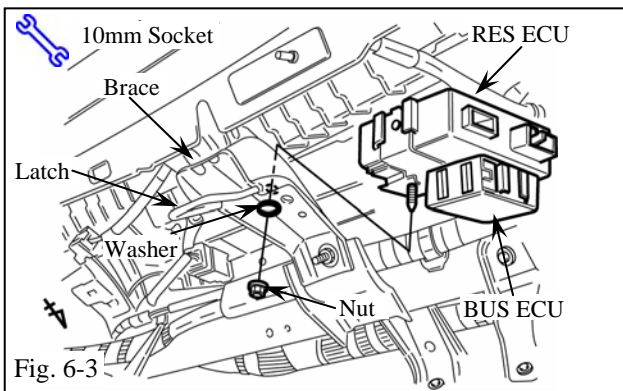


Fig. 6-3

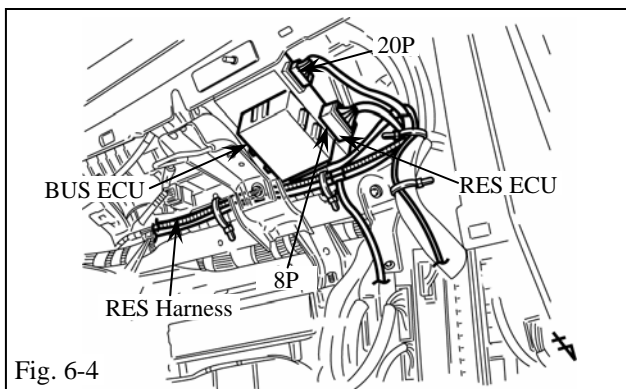


Fig. 6-4

## 6. RES ECU and BUS ECU Preparation and Installation.

FOR SMART ENTRY VEHICLES ONLY.  
(Steps a-e)



**NOTE:** Only perform this step on Smart Entry vehicles.

(a) Insert the mounting bracket into the correct ECU's slot.



**CAUTION:** Bracket is permanently attached once installed.

(b) Insert the ECU mounting bracket into the indicated bracket slot on the BUS ECU, then insert the RES ECU into the indicated slots on the mounting bracket. (Fig. 6-1)

(1) Ensure the bracket is firmly attached to each ECU.

(c) Connect the RES harness' white 5P connector to the BUS ECU. (Fig. 6-2)

(d) Locate the hole in the brace in the upper section of the glove box area. Secure the RES ECU and BUS ECU to the brace with the nut supplied in the kit. (Fig. 6-3)

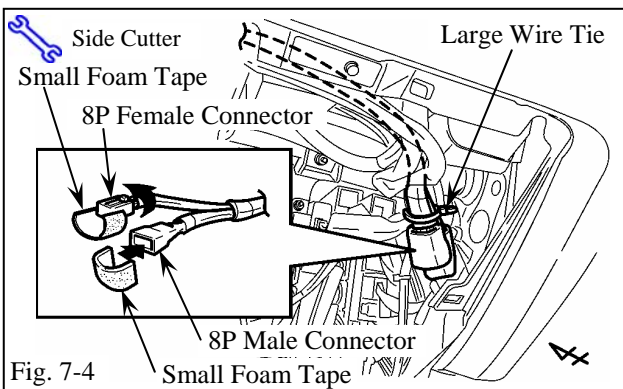
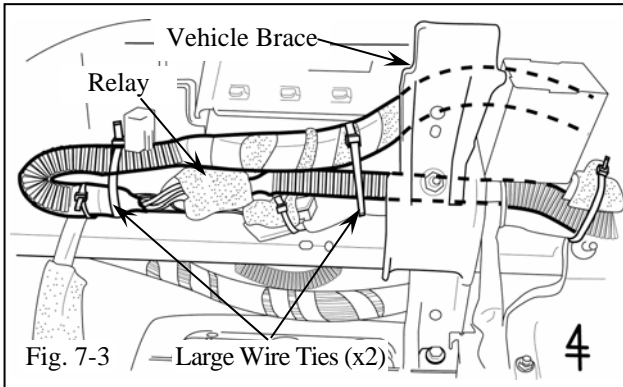
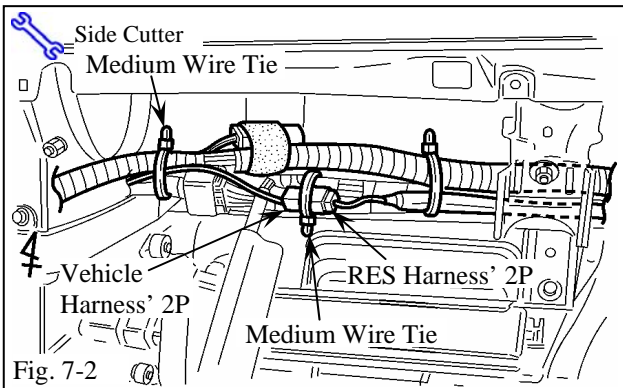
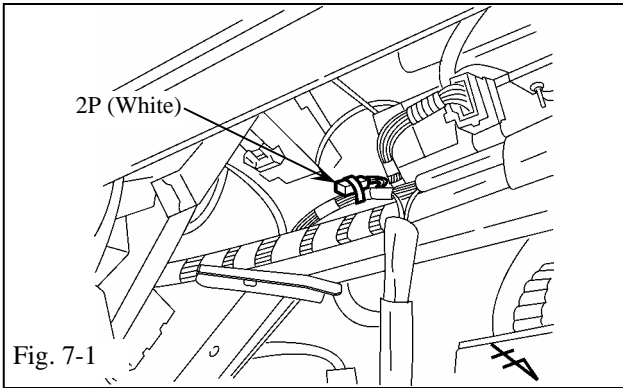


(1) Verify the nut is tightened and secured.



**NOTE:** A quarter-inch steel washer may be used with the existing nut to better secure the RES ECU (the washer is not supplied in the kit). A flange nut (Toyota Part No. 90179-06097) can be used in place of the washer if available.

(e) Connect the RES harness' white 20P and white 8P connectors to the RES ECU. (Fig. 6-4)



**7. RES Harness Installation. (continued)**

**FOR SMART ENTRY VEHICLES ONLY.**  
(Steps a-e)



**NOTE:** Only perform this step on Smart Entry vehicles.

(a) Locate and remove the tape securing the vehicle harness' white 2P connector to the GBS connector wiring from the left side of the glove box area. (Fig. 7-1)



**NOTE:** For vehicles not equipped with GBS, ensure that the GBS connector wiring remains secured to the vehicle harness.

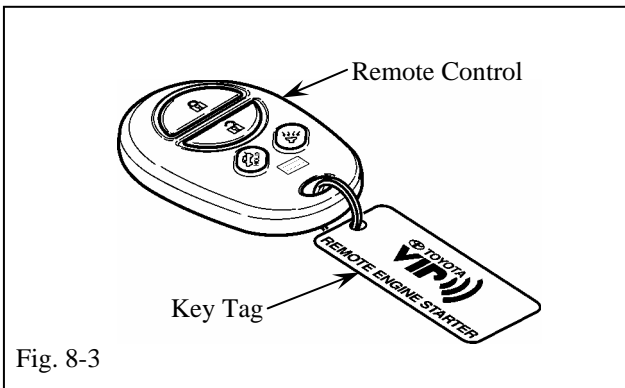
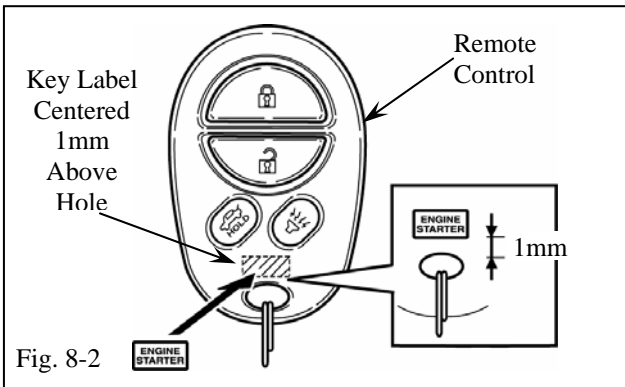
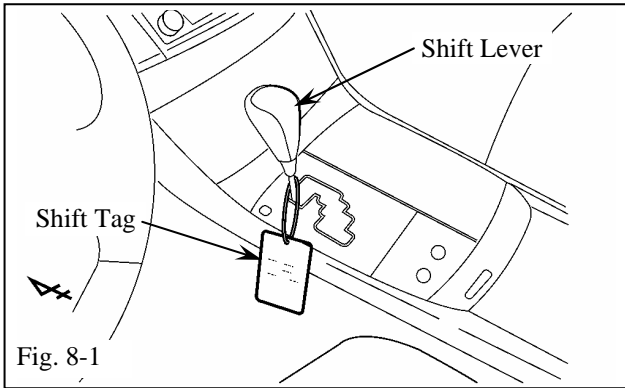
(b) Plug in the RES harness' white 2P connector to the vehicle harness' white 2P connector. Secure the 2P connector to the vehicle harness with one medium wire tie. (Fig. 7-2)

(1) Verify the connectors are plugged in securely.

(c) Route the RES harness with the relay toward the center console area, then secure it to the vehicle harness with one medium wire tie. (Fig. 7-2)

(d) Loop the RES harness over itself and route it over the brace, securing it to the vehicle harness with two large wire ties. (Fig. 7-3)

(e) Wrap the RES harness' 8P connectors with two small pieces of foam tape as shown. Secure them to the vehicle harness with one large wire tie. (Fig. 7-4)



### 8. Tags and Labels Installation.

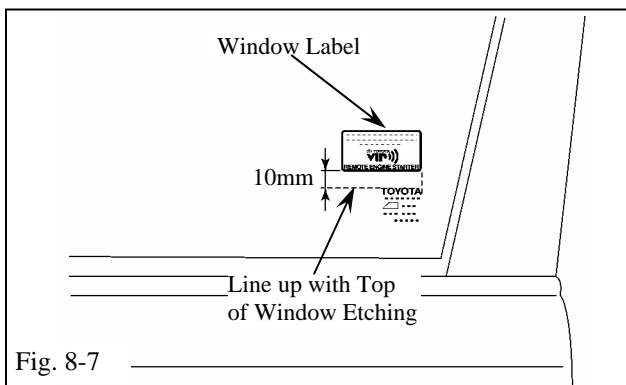
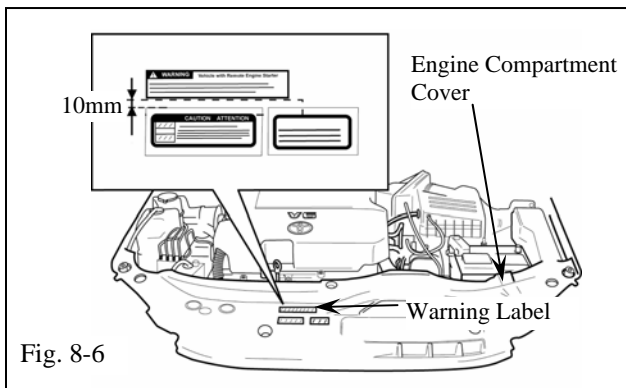
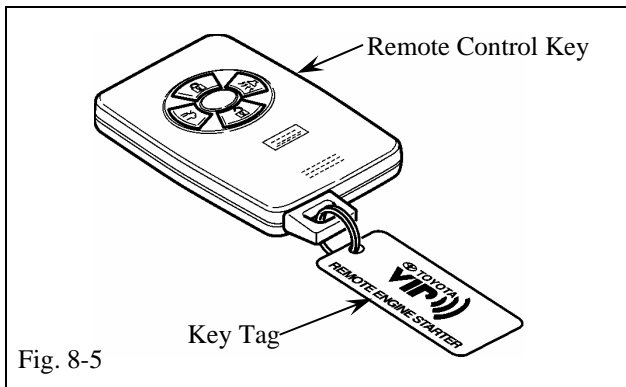
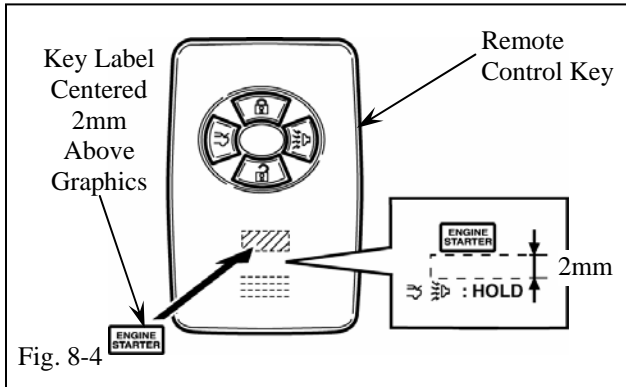
- (a) Hang the shift tag on the shift lever.  
(Fig. 8-1)

FOR VEHICLES WITHOUT SMART ENTRY SYSTEM ONLY. (Steps b-e)



**NOTE:** Do not perform this step on Smart Entry vehicles.

- (b) Remove one of the remote controls from its protective bag. With the utility knife, neatly cut a slit to open the bag. (Fig. 8-2)
- (c) Using the 3M™ Prep Solvent-70, clean the area indicated on the remote control key.  
(Fig. 8-2)
  - (1) When cleaning with 3M™ Prep Solvent-70, follow the manufacturer's directions. Do not allow cleaner to air dry.
- (d) Remove the backing sheet and attach the key label to the remote control as shown.  
(Fig. 8-2)
  - (1) Use a piece of clean adhesive tape to lift the label off its protective backing sheet.
  - (2) Do not touch the label's adhesive surface.
- (e) Attach the key tag to the remote control key's ring. (Fig. 8-3)

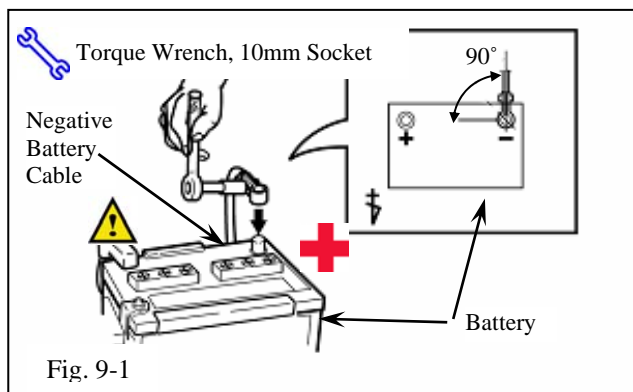


**FOR SMART ENTRY VEHICLES ONLY.**  
(Steps f-i)




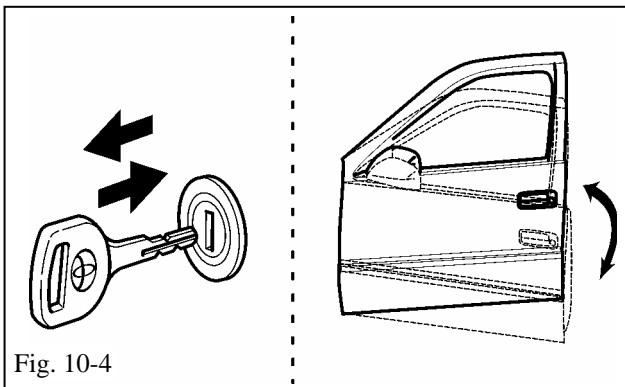
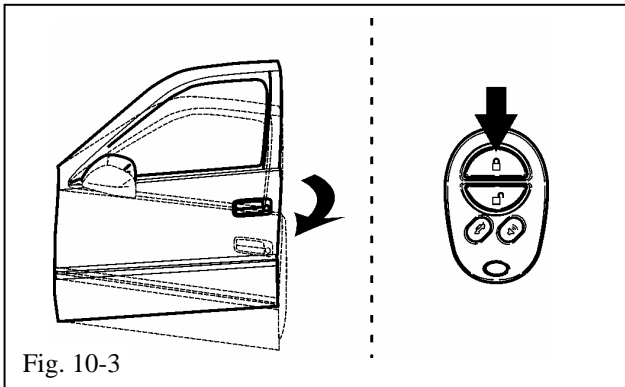
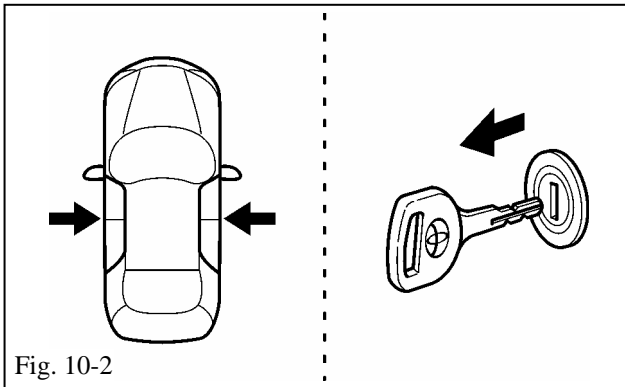
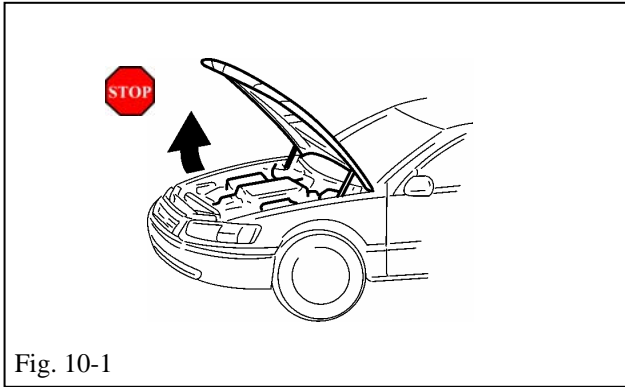
**NOTE:** Only perform this step on Smart Entry vehicles.

- (f) Remove one of the remote controls from its protective bag. With the utility knife, neatly cut a slit to open the bag. (Fig. 8-4)
- (g) Using the 3M™ Prep Solvent-70, clean the area indicated on the remote control. (Fig. 8-4)
  - (1) When cleaning with 3M™ Prep Solvent-70, follow the manufacturer's directions. Do not allow cleaner to air dry.
- (h) Remove the backing sheet and attach the key label to the remote control key as shown. (Fig. 8-4)
  - (1) Use a piece of clean adhesive tape to lift the label off its protective backing sheet
  - (2) Do not touch the label's adhesive surface.
- (i) Attach the key tag to the remote control key's ring. (Fig. 8-5)
- (j) Using the 3M™ Prep Solvent-70, clean the area indicated on the engine compartment cover as shown. (Fig. 8-6)
  - (1) Do not allow cleaner to air dry.
- (k) Remove the backing sheet and attach the warning label to the engine compartment cover 10mm above the vehicle label's placement box. Do not touch the label's adhesive surface. (Fig. 8-6)
- (l) Using household Windex, clean the inside surface of the front door's windows. (Fig. 8-7)
  - (1) When cleaning with household Windex, follow the manufacturer's directions.
- (m) Place the window labels on the inside surface of the front door's windows as shown. (Fig. 8-7)
  - (1) Use a piece of clean adhesive tape to lift the labels off their protective backing sheet.
  - (2) Do not touch the labels' adhesive surface.



## 9. Completing the Installation.

- (a) Complete the reassembly of the vehicle.
  - (1) Reconnect any disconnected connectors.
  - (2) Verify the panels fit together properly with no uneven gaps between them.
- (b) Clean up and remove any trash.
- (c) Temporarily reconnect the vehicle's negative battery cable. (Fig. 9-1)
-  (d) Place the owner's manual, left in its protective bag, in the glove box.



**10. IMMOBILIZER Setting Procedure.**

FOR VEHICLES WITHOUT SMART ENTRY ONLY. (Steps a-e)



**NOTE:** Do not perform this step on Smart Entry vehicle.

(a) Open the hood. (Fig. 10-1)



(1) Do not close the hood during the IMMOBILIZER setting procedure. (Steps b-g)

(b) Close all doors. Insert the master (black) key into the ignition switch and turn it to the “ON” position. Then turn it to the “OFF” position and remove the key from the ignition switch. (Fig. 10-2)

(c) Open the driver’s door. Using the remote control, press the lock button twice within 2 seconds, then press and hold the lock button 4 seconds. (Fig. 10-3)

(d) Insert the key into the ignition switch, and remove it six (6) times. Then insert and leave the key in the ignition switch. (Fig. 10-4)

(1) Complete this step within 20 seconds of opening the driver’s door.

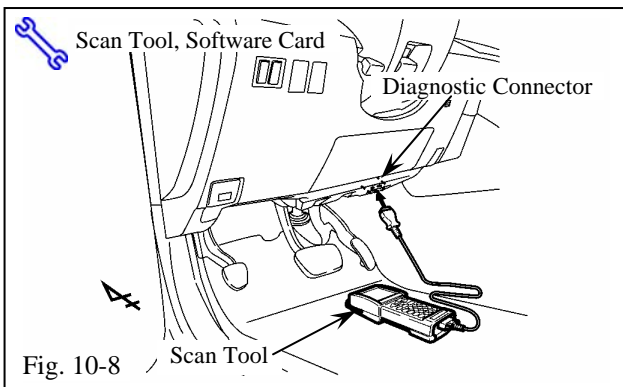
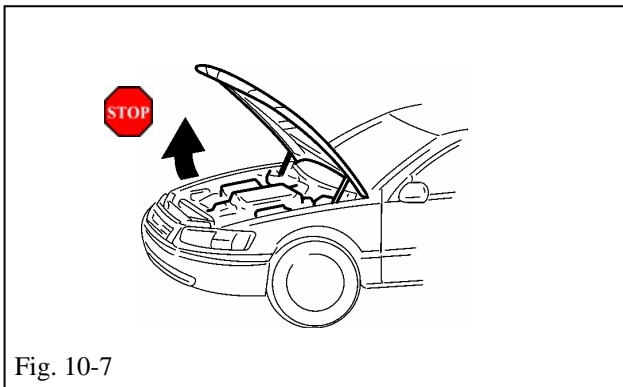
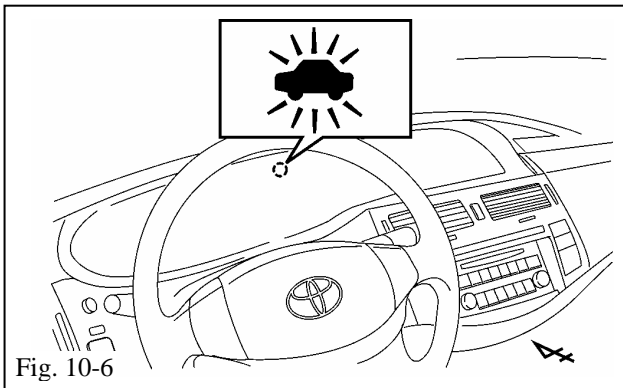
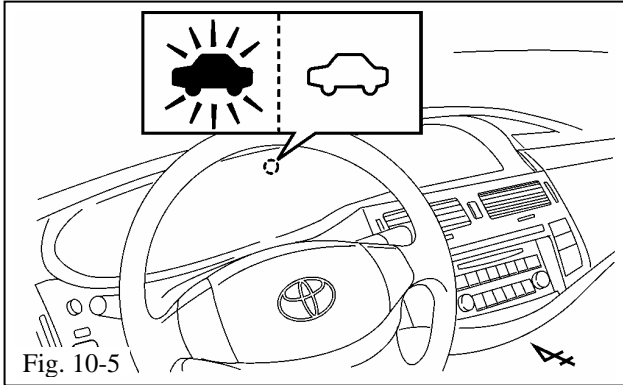
(e) Close the driver’s door, then open and close the driver’s door seven (7) times. (Fig. 10-4)

(1) Complete these steps within 35 seconds, with the driver’s door closed when finished.

(2) If you fail this procedure or exceed 35 seconds during programming steps, the IMMOBILIZER SYSTEM will not set. Start again from the Step b.



**NOTE:** Registration confirmation continued on next page



FOR VEHICLES WITHOUT SMART ENTRY ONLY. (Step f)



**NOTE:** Do not perform this step on Smart Entry vehicles.

(f) After the REGISTRATION process has been completed successfully

(1) Watch the LED light up for 1 second then turn off. (Fig. 10-5)

(2) After the light is off for 1 second, the LED should light up again and stay on until the key is removed from ignition. (Fig. 10-6)

**NOTE:** If the LED does light up as indicated above, the IMMOBILIZER SYSTEM is not setting. Start again from Step a.

FOR SMART ENTRY VEHICLES ONLY.  
(Steps g-i)



**NOTE:** Only perform this step on Smart Entry vehicles.

(g) Open the hood. (Fig. 10-7)



(1) Do not close the hood during the IMMOBILIZER setting procedure. (Steps h-ag)



**NOTE:** Check for the latest version of the software on Toyota Information System (TIS) before setting up the Remote Engine Starter system.



**NOTE:** Ensure the software is the latest version. (Production Version 12.01a or later.)



**NOTE:** Download the latest software from Toyota Information System (TIS).

(h) Connect the scan tool connector to the vehicle's diagnostic connector in the right side of the lower dash area. (Fig. 10-8)

(i) With the remote control key in your possession, press the power button on the dash twice to select the ignition "ON" position.

(1) Verify the shift lever position is in "N" or "P."

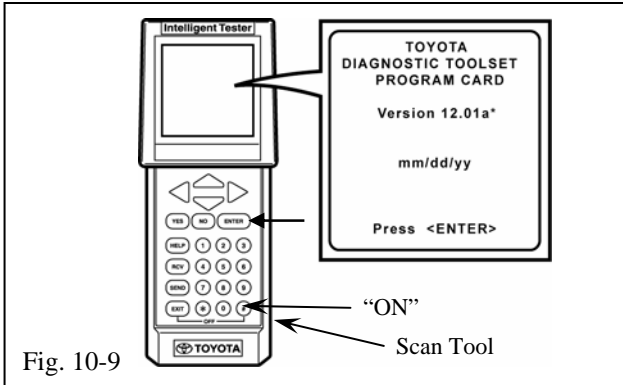


Fig. 10-9

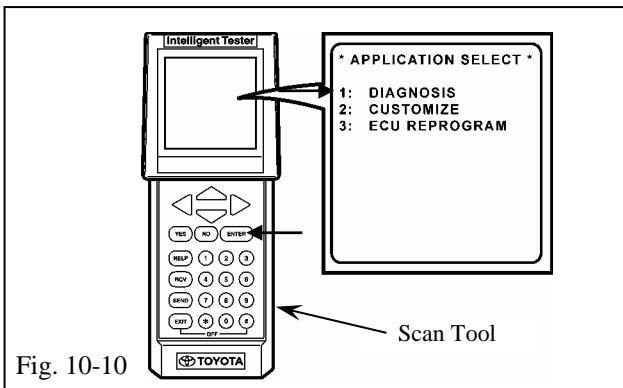


Fig. 10-10

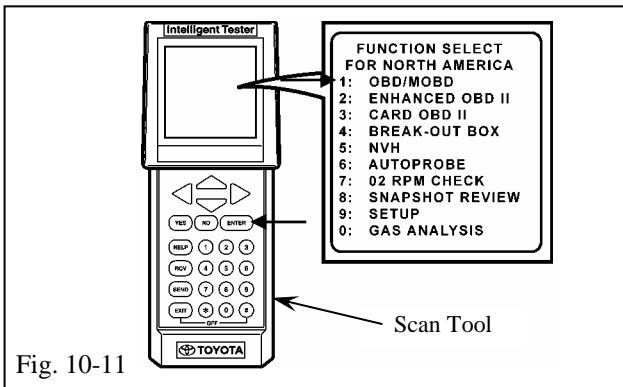


Fig. 10-11

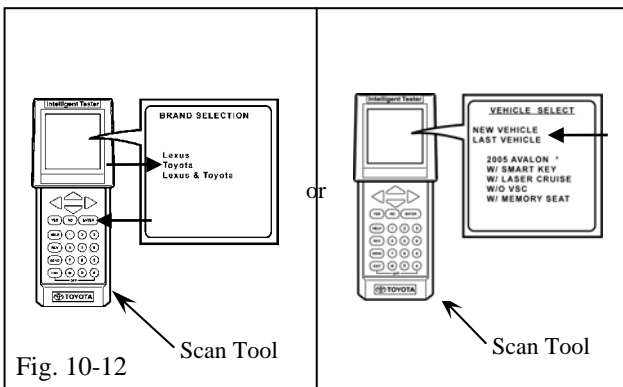


Fig. 10-12

**FOR SMART ENTRY VEHICLES ONLY.**

(Steps j-m)



**NOTE:** Only perform this step on Smart Entry vehicles.

- (j) Push the scan tool main switch to “ON,” then press the “ENTER” button. (Fig. 10-9)
- (k) Select “DIAGNOSIS” in the Application Select menu with the scroll key, then press the “ENTER” button. (Fig. 10-10)
- (l) Select “OBD/MOBD” in the Function Select menu with the scroll key, then press the “ENTER” button. (Fig. 10-11)
- (m) Make the appropriate selection based on the information below, then press the “ENTER” button. (Fig. 10-12)
  - (1) In the case of the left-side screen, select “TOYOTA” in the Brand Selection menu.
  - (2) In the case of the right side screen, select “NEW VEHICLE” in the Vehicle Select menu.

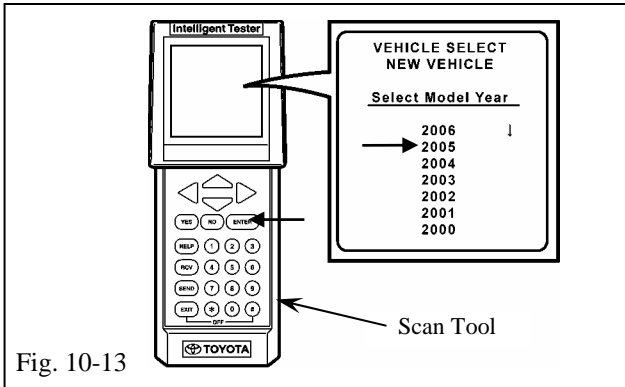


Fig. 10-13

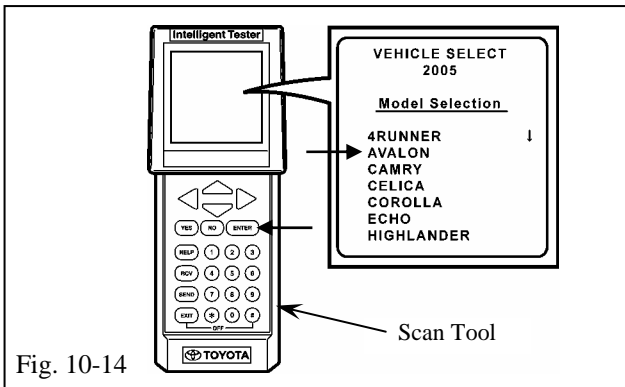


Fig. 10-14

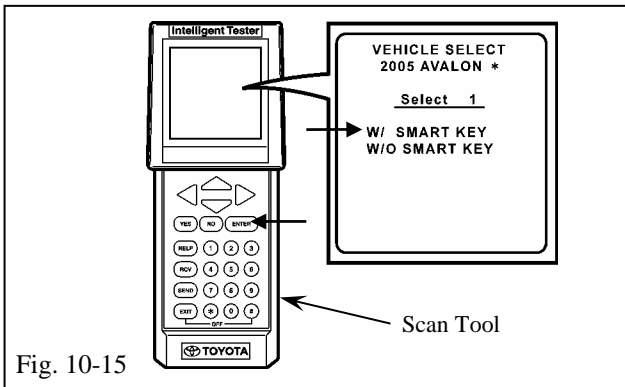


Fig. 10-15

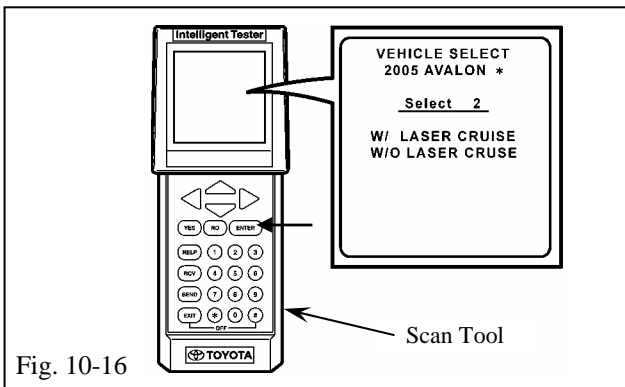


Fig. 10-16

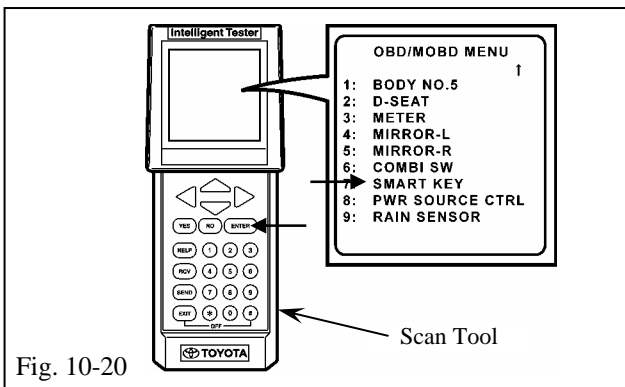
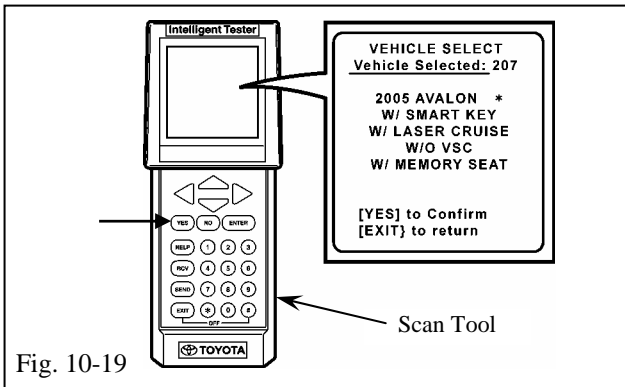
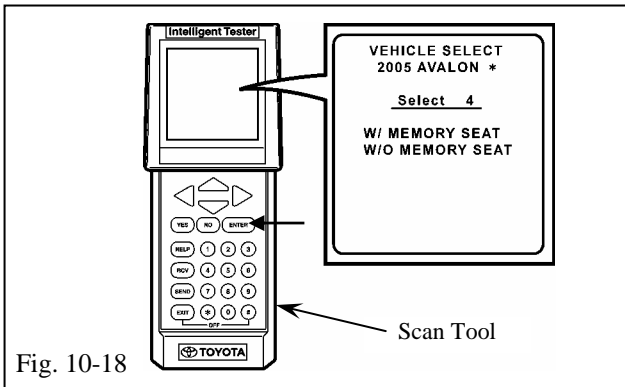
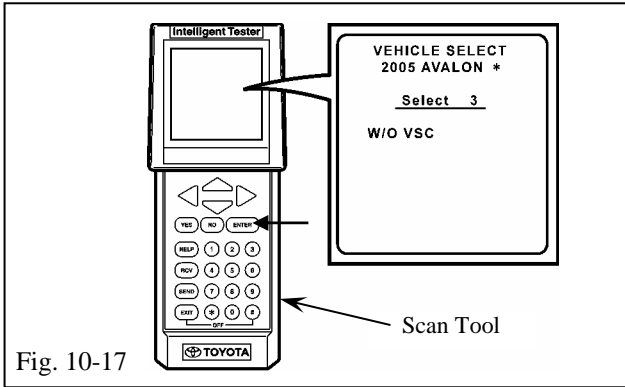
FOR SMART ENTRY VEHICLES ONLY.  
(Steps n-q)



**NOTE:** Only perform this step on Smart Entry vehicles.

SELECT VEHICLE PROCESS

- (n) Select “2005” with the scroll key, then press the “ENTER” button. (Fig. 10-13)
- (o) Select “AVALON” with the scroll key, then press the “ENTER” button. (Fig. 10-14)
- (p) Select “W/ SMART KEY” with the scroll key, then press the “ENTER” button. (Fig. 10-15)
- (q) Select the correct vehicle cruise option with the scroll key, then press the “ENTER” button. (Fig. 10-16)

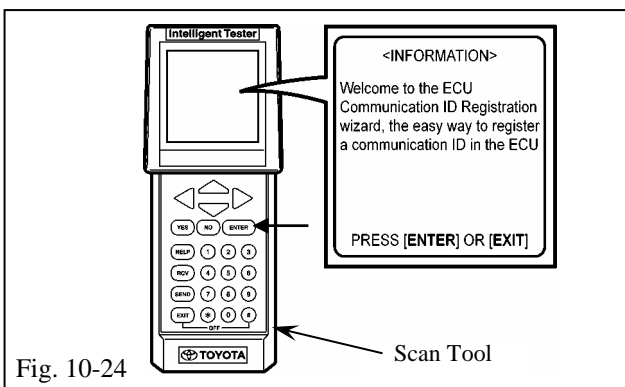
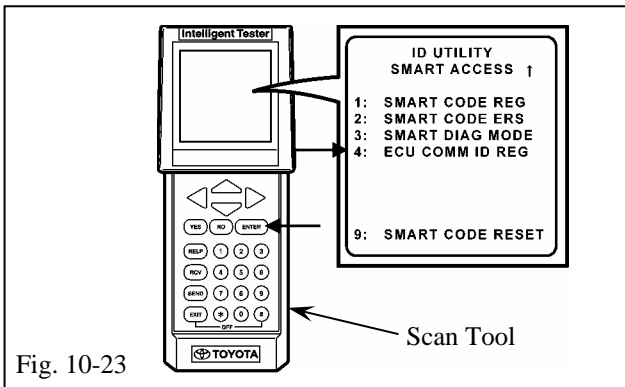
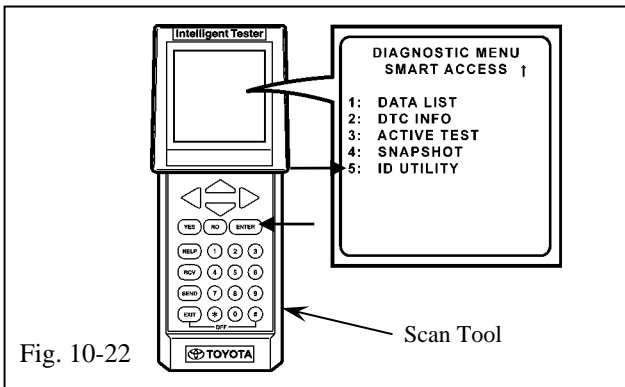
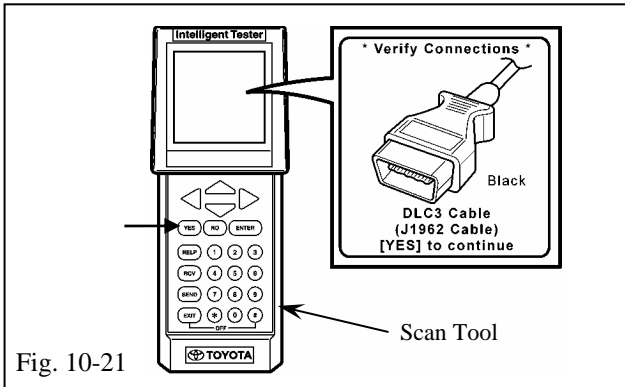


FOR SMART ENTRY VEHICLES ONLY.  
(Steps r-u)



**NOTE:** Only perform this step on Smart Entry vehicles.

- (r) Select the correct vehicle VSC option with the scroll key, then press the “ENTER” button. (Fig. 10-17)
- (s) Select the correct vehicle memory seat option with the scroll key, then press the “ENTER” button. (Fig. 10-18)
- (t) Confirm that the correct vehicle applications are displayed. Press the “YES” button to continue. (Fig. 10-19)
- (u) Select “SMART KEY” in the OBD/MOBD menu with the scroll key, then press the “ENTER” button. (Fig. 10-20)



FOR SMART ENTRY VEHICLES ONLY.  
(Steps v-y)



**NOTE:** Only perform this step on Smart Entry vehicles.

(v) Verify the connection of the DLC3 Cable.

Press the “YES” button to continue.

(Fig. 10-21)

(w) Select “ID UTILITY” in the Diagnostic Menu with the scroll key, then press the “ENTER” button. (Fig. 10-22)

(x) Select “ECU COMM ID REG” in the ID Utility menu with the scroll key, then press the “ENTER” button. (Fig. 10-23)

(y) At the Information screen, press the “ENTER” button. (Fig. 10-24)

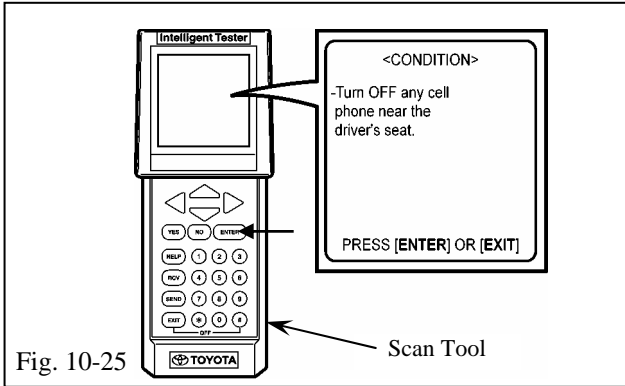


Fig. 10-25

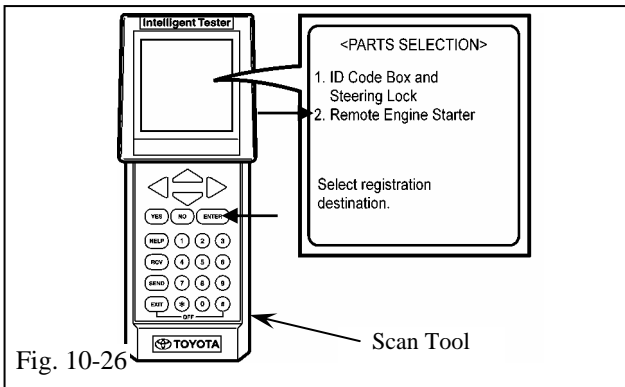


Fig. 10-26

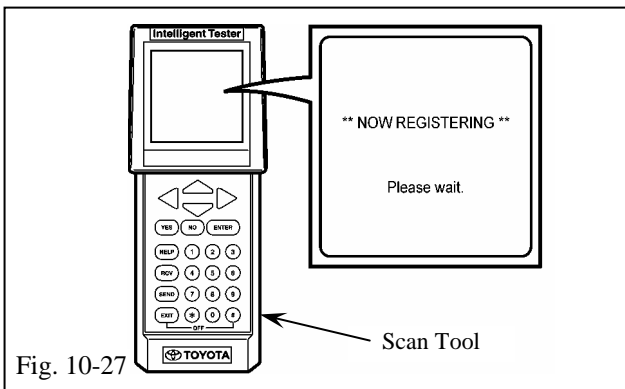


Fig. 10-27

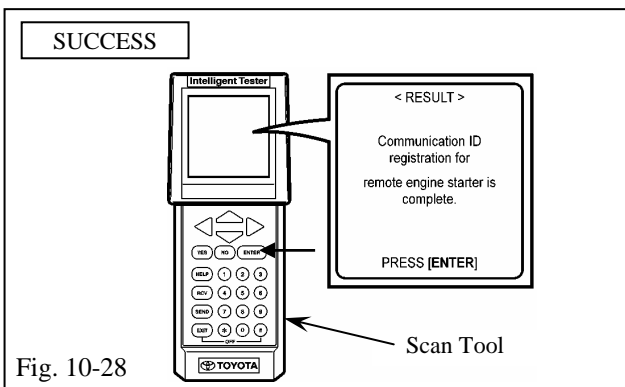


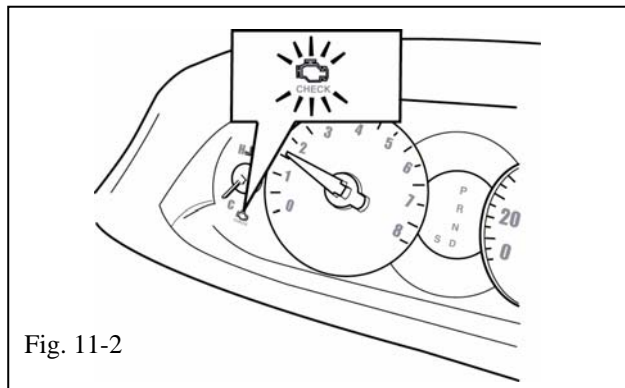
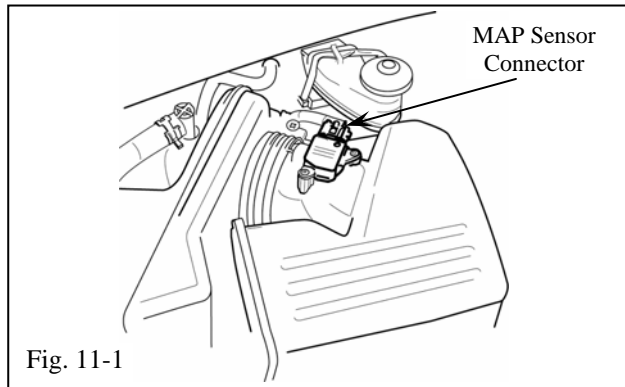
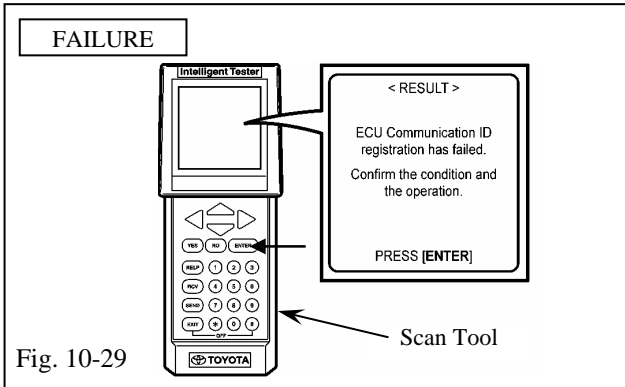
Fig. 10-28

FOR SMART ENTRY VEHICLES ONLY.  
(Steps z-ac)



**NOTE:** Only perform this step on Smart Entry vehicles.

- (z) At the CONDITION screen, press the “ENTER” button. (Fig. 10-25)
  - (aa) Select “Remote Engine Starter” in the Parts Selection menu with the scroll key, then press the “ENTER” button. (Fig. 10-26)
  - (ab) Verify the screen. Wait a few minutes. (Fig. 10-27)
  - (ac) When the IMMOBILIZER setting is completed, confirm what appears on the screen as shown, then press the “ENTER” button. (Fig. 10-28)
- (1) Go to Step ad.



FOR SMART ENTRY VEHICLES ONLY.  
(Steps ad-ag)

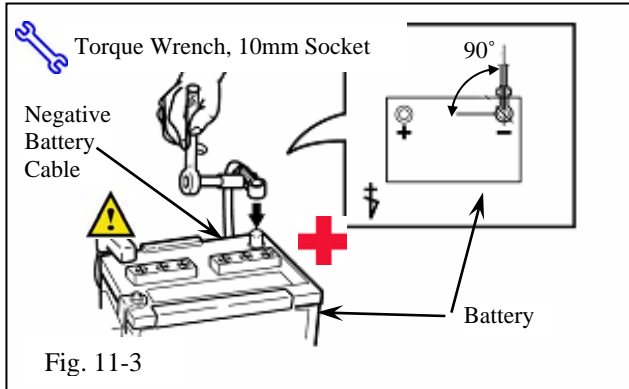


**NOTE:** Only perform this step on Smart Entry vehicles.

- (ad) If the IMMOBILIZER setting fails, as displayed on the screen, then press the “ENTER” button. (Fig. 10-29)
- (2) Start again from step h.
- (ae) Press and hold the “ON” button, then press the “EXIT” button to turn off the scan tool.
- (3) Disconnect the scan tool from the vehicle’s diagnostic connector.
- (af) Press the power button on the dash twice to select the ignition “OFF” position, then close the hood.
- (ag) After completing the functional verifications, place the remote control with key tag attached back in its protective bag, and place the remote controls in their original location inside the vehicle.

**11. Check Engine Light Connection Verification and Resets.**

- (a) Disconnect the MAP sensor connector located on the air intake in the engine compartment. (Fig. 11-1)
- (b) Reconnect the MAP sensor connector.
- (c) Use the ignition key or the power button to start the engine.
- (d) Confirm that the “Check Engine” light remains on with the engine running. (Fig. 11-2)
- (e) Turn off the engine.
- (f) Using the remote control, press the lock button twice within two seconds, then press and hold the lock button 3 seconds to remote start the vehicle.



- (g) Confirm that the engine shuts down when the “Check Engine” light turns back on.
  - (1) If the engine does not shut down, verify that the splicing connector of the RED wire from figures 2-10 and 5-6 was correctly attached.
- (h) Disconnect the battery for at least 10 seconds to clear the “Check Engine” light, then reconnect the vehicle’s negative battery cable. (Fig. 11-3)

- (1) Position the negative terminal at an angle of 90° to the battery as shown.
- (2) Tighten the nut at 4.1 N·m (36 lbf·in) of torque.
- (3) Do not touch the positive terminal with any tool when replacing the cable.



- (i) Reset the power windows.
  - (1) Turn ignition key to the "ON" position.
  - (2) Push down the power window switches of each door, and lower the windows halfway.
  - (3) Pull up the switches until the windows close and hold switches up for a minimum of one (1) second.
- (j) Reset the power moon roof.
  - (1) Push and hold the moon roof switch to close side until the moon roof closes. Hold for a further two (2) seconds.

<u>Check:</u>	<u>Look For:</u>
<u>Accessory Function Checks</u>	Function
<p><b>Fit the appropriate fuse before beginning.</b></p>	
<p><b>Close the hood, place the shift lever in the “P” (parking) position, set the parking brake, remove the key from the ignition (without smart entry vehicle), close all doors, and exit the vehicle.</b></p>	
<p><input type="checkbox"/> Press the remote control’s lock button twice within 2 seconds, then press and hold the lock button 3 seconds.</p>	<p>1. The hazard lights flash after 3 seconds. The engine starts. The hazard lights flash repeatedly for 20 seconds.</p>
<p><input type="checkbox"/> Press the remote control’s unlock button.</p>	<p>2. The engine stops. The hazard lights flash twice.</p>
<p><input type="checkbox"/> Press the remote control’s lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine.</p>	<p>3. Refer to Step 1. The engine stops. The hazard lights flash once.</p>
<p>With the engine running, press and hold the remote control’s lock button 2 seconds.</p>	
<p><b>For Vehicles <u>Without</u> Smart Entry</b></p>	
<p><input type="checkbox"/> Press the remote control’s lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine.</p>	<p>4. Refer to Step 1. The engine stops. The hazard lights flash once.</p>
<p>Unlock the doors with the key.</p>	

Check:

**For Vehicles With Smart Entry**

- 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 and the smart key in your possession, pull the outside door handle.

**Enter the vehicle and close all doors.**

- 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.

- 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.

**Exit the vehicle, close the hood, then enter the vehicle and close all doors.**

- 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.

Look For:

- 5. Refer to Step 1.  
The engine stops.  
The hazard lights flash twice.

- 6. Refer to Step 1.  
The engine stops.  
The hazard lights flash once.  
The security alarm triggers.

- 7. Refer to Step 1.  
The engine stops.  
The hazard lights flash once.  
The security alarm triggers.

- 8. Refer to Step 1.  
The engine stops.  
The hazard lights flash once.

Check:

**For vehicles without Smart Entry**

- 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.

**For vehicles with Smart Entry**

- 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 and the smart key in your possession, press the power button on the dash.
- Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine. Step on the gas pedal until engine speed exceeds 3000 RPM.
- Move the shift lever from "P" (parking) to another position. Press the remote control's lock button twice within 2 seconds, then press and hold the lock button 3 seconds to start the engine.

Look For:

- 9. Refer to Step 1.  
The engine stops.  
The hazard lights flash once.
  
- 10. Refer to Step 1.  
The engine stops.  
The hazard lights flash once.
  
- 11. Refer to Step 1.  
The engine stops.  
The hazard lights flash once.
  
- 12. The engine does not start.

**TOYOTA AVALON 2005 - TVIP V4 (REMOTE ENGINE STARTER)**  
 Checklist - these points **MUST** be checked to ensure a quality installation.

<u>Check:</u>	<u>Look For:</u>
<u>Vehicle Function Checks</u>	
<input type="checkbox"/> Head Lights	Functioning Head Lights
<input type="checkbox"/> High Beams	Functioning High Beams
<input type="checkbox"/> Turn Signal Lights	Functioning Turn Signal Lights
<input type="checkbox"/> Tail Lights	Functioning Tail Lights
<input type="checkbox"/> Stop Lights	Functioning Stop Lights
<input type="checkbox"/> Backup Lights	Functioning Backup Lights
<input type="checkbox"/> Hazard Lights	Functioning Hazard Lights
<input type="checkbox"/> Marker Lights	Functioning Marker Lights
<input type="checkbox"/> Dome/Courtesy Lights	Functioning Dome/Courtesy Lights
<input type="checkbox"/> Panel/Switch Illumination	Functioning Controls/Illumination
<input type="checkbox"/> Accessory Controls/Illumination (if equipped)	Functioning Accessory
<input type="checkbox"/> Key Sensor Buzzer	Functioning Key Sensor
<input type="checkbox"/> Fog Lights (if equipped)	Functioning Fog Lights
<input type="checkbox"/> Daytime Running Lights (if equipped)	Functioning DR Lights
<input type="checkbox"/> Trunk/Tailgate/Bed Lights (if equipped)	Functioning Lights
<input type="checkbox"/> Glove Box Light (if equipped)	Functioning Glove Box Light
<input type="checkbox"/> Cruise Control Light (if equipped)	Functioning Cruise Control Light

**TOYOTA AVALON 2005 - TVIP V4 (REMOTE ENGINE STARTER)**  
 Checklist - these points **MUST** be checked to ensure a quality installation.

Check:

- Seat Belt Warning Light
- Air Bag Warning Light
- ABS Light (if equipped)
- Lamp Failure Sensor (if equipped)
- Track/Skid Control Light (if equipped)
- HVAC
- Power Locks (if equipped)
- Power Windows (if equipped)
- Power Seats (if equipped)
- Horn
- Gauges
- Front Wiper/Washer
- Rear Wiper/Washer (if equipped)
- Clock (if equipped)
- Accessory Power Socket (if equipped)
- Starter

Look For:

- Functioning Seat Belt Warning Light. If the warning light remains on, it may indicate a system malfunction.
- Functioning Air Bag Warning Light. If the warning light remains on, it may indicate a system malfunction.
- Functioning ABS Light. If the warning light remains on, it may indicate a system malfunction.
- Functioning Lamp Failure Light. If the warning light remains on, it may indicate a system malfunction.
- Functional Track/VSC Light. If the warning light remains on, it may indicate a system malfunction.
- Functioning HVAC Controls
- Functioning Power Locks
- Functioning Power Windows
- Functioning Power Seats
- Functioning Horn
- Functioning Gauges
- Functioning Front Wiper/Washer
- Functioning Rear Wiper/Washer
- Functioning Clock
- Functioning Power Socket
- Functioning Starter

**TOYOTA AVALON 2005 - TVIP V4 (REMOTE ENGINE STARTER)**

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

Check:

- Audio/Video (if equipped)
- Power Sliding Door (if equipped)
- Convenience Memory Settings (if equipped)
- Heated Seats (if equipped)
- Massage Seats (if equipped)
- Rear Window Defogger (if equipped)
- Power Side Mirrors (if equipped)
- Side Mirror Defogger (if equipped)
- Front Windshield Defogger (if equipped)
- Navigation System (if equipped)
- Rear Sunshade (if equipped)

**Remove the appropriate fuse after checks are completed.**

Look For:

- Functioning Audio/Video
- Functioning Power Sliding Door
- Functioning Memory Settings
- Functioning Heated Seats
- Functioning Massage Seats
- Functioning Rear Window Defogger
- Functioning Power Side Mirrors
- Functioning Side Mirror Defogger
- Functioning Front Windshield Defogger
- Functioning Navigation System
- Functioning Rear Sunshade