Part #: PT398-89140

Conflicts: Will not program with Techstream Lite.

Kit Contents

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RES ECU</td>
<td>PT398-89100-NS x1</td>
</tr>
<tr>
<td>RES ECU Bracket</td>
<td>PT398-89100-RS x1</td>
</tr>
<tr>
<td>RES Harness</td>
<td>90167-20001 x1</td>
</tr>
<tr>
<td>Hood Switch</td>
<td>91651-60618 x1</td>
</tr>
<tr>
<td>Hood Switch Screw</td>
<td>90167-20001 x2</td>
</tr>
<tr>
<td>M6 Bolt</td>
<td>91651-60618 x1</td>
</tr>
<tr>
<td>Wire Tie</td>
<td>205mm x30</td>
</tr>
<tr>
<td>Key Tag</td>
<td>(E) PT398-4209E x1 (S) PT398-4209S x1</td>
</tr>
<tr>
<td>Window Label</td>
<td>(E) PT398-00070-EL x1 (S) PT398-00070-SL x1</td>
</tr>
<tr>
<td>Engine Room Label</td>
<td>(E) PT398-00071-SL x1</td>
</tr>
<tr>
<td>Owner’s Guide</td>
<td>(E) PT398-00071-SL x1 (S) PT398-00071-SL x1</td>
</tr>
<tr>
<td>Foam Tape</td>
<td>x3</td>
</tr>
</tbody>
</table>

Additional Items (may be required)

<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Glasses</td>
<td>(Optional)</td>
</tr>
<tr>
<td>Safety Gloves</td>
<td></td>
</tr>
<tr>
<td>Vehicle Protection Blankets</td>
<td></td>
</tr>
<tr>
<td>Vehicle Protection Parts Boxes</td>
<td></td>
</tr>
<tr>
<td>Special Tools Use latest version on TIS (Do not use Techstream Lite)</td>
<td></td>
</tr>
<tr>
<td>Installation Tools #2 Phillips, Phillips Jewelers, Flat Blade Jewelers</td>
<td></td>
</tr>
<tr>
<td>Nylon Panel Removal Tool e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01</td>
<td></td>
</tr>
<tr>
<td>Side Cutters</td>
<td></td>
</tr>
<tr>
<td>Torque Wrench Battery : 48 in•lbf (5.4 N•m); Hood Lock Assy : 66.4 in•lbf (7.5 N•m); Passenger’s Knee Airbag : 88.5 in•lbf (10 N•m)</td>
<td></td>
</tr>
<tr>
<td>Utility Knife</td>
<td></td>
</tr>
<tr>
<td>Tape Clear, Electrical</td>
<td></td>
</tr>
<tr>
<td>Socket 10mm, extension</td>
<td></td>
</tr>
<tr>
<td>Pliers Needle Nose</td>
<td></td>
</tr>
<tr>
<td>Special Chemicals VDC Approved Cleaner</td>
<td></td>
</tr>
<tr>
<td>Glass Cleaner Household Glass Cleaner</td>
<td></td>
</tr>
</tbody>
</table>

Recommended Sequence of Application

<table>
<thead>
<tr>
<th>Item#</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window Label</td>
<td></td>
</tr>
<tr>
<td>Owner’s Guide</td>
<td></td>
</tr>
<tr>
<td>Engine Room Label</td>
<td></td>
</tr>
<tr>
<td>Key Tag</td>
<td></td>
</tr>
<tr>
<td>Window Label</td>
<td></td>
</tr>
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<td>Engine Room Label</td>
<td></td>
</tr>
<tr>
<td>Owner’s Guide</td>
<td></td>
</tr>
<tr>
<td>Key Tag</td>
<td></td>
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<tr>
<td>Key Tag</td>
<td></td>
</tr>
<tr>
<td>Key Tag</td>
<td></td>
</tr>
<tr>
<td>Key Tag</td>
<td></td>
</tr>
</tbody>
</table>

Issue: C 06/10/13
TOYOTA 4Runner w/o Smart 2012– TVIP V4
PREPARATION  REMOTE ENGINE STARTER (RES)

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Legend

STOP Do not proceed until process has been completed.

Follow steps carefully to avoid damaging the Vehicle or Accessory.

Use caution to avoid injury.

Used in Figures to call attention to specific tools recommended for the process.

Highlights a change in installation with respect to previous issue.

Indicates that torque is related to safety.

Video available; click to play.

Accessory Installation Practice (read before installation)

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, checking 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.
4Runner RES w/o Smart
Wire Harness Outline* (Vehicle Interior)

*Color of Harness on Overview corresponds with Colored Tape near Connectors on Harness.
4Runner RES w/o Smart
Wire Harness Outline (Engine Compartment)

*Color of Harness on Overview corresponds with Colored Tape near Connectors on Harness.
1. Hood Switch Installation
   a. Verify that the Short Pin is installed.
      • If not, install now.
Confirm the following:

Before beginning, close the Hood and the Doors. Press the remote control's lock button.

Observe the Security LED on the console

Security LED Turns ON solid for 30 Seconds then starts blinking

WITH ALARM
(Vehicle has Hood Switch)

Security LED starts blinking immediately

WITHOUT ALARM
(Vehicle does not have Hood Switch)

b. Place the Vehicle in Park with the Parking Brake set.

c. Disconnect the Negative Battery Terminal.
   • Protect the Fender.
   • Note the Battery Cable Position as it will be re-installed in the same position.

CAUTION: Do not touch the Positive Terminal.
d. Remove the Engine Cover.
   • Remove 12 clips.

e. Remove the 3 Bolts on the Hood Latch Cover.

f. Remove the Hood Latch Cover.
PROCEDURE

REMOTE ENGINE STARTER (RES)

TOYOTA 4Runner w/o Smart

2012–

TVIP V4

- Dislodge the Hood Latch Assembly.
  - Remove 3 Bolts.

h. Remove the Hood Release Cable from the Hood Latch Assembly.

i. Dislodge the Spring on the Hood Latch Assembly.
  - Do not discard the Spring.
Make sure to hold Hood Switch by its sides.

Make sure the Hood Switch Lever is positioned properly.

If the Hood Switch is broken RES will not function.

j. Install the Hood Switch with the Switch Lever underneath the Hood Lock Trigger Lever.

CAUTION: Make sure the Hood Switch Lever is under the Latch Lever.

k. Tighten 2 Screws.
PROCEDURE

REMOTE ENGINE STARTER (RES)

m. Disconnect and discard the Connector Cover from the Hood Switch Pre-Connector.

n. Reattach the Hood Latch Spring.

o. Reattach the Hood Release Cable.
p. Connect the Hood Switch Connector to the Vehicle’s Pre-Connector.

q. Affix the Hood Switch Connector to the Vehicle as shown.

r. Reinstall the Hood Lock Assembly.

NOTE: Make sure to Torque the Bolts in the correct sequence.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>66.4 in•lbf (7.5 N•m)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. RES ECU Preparation
   a. Attach the RES Bracket to RES ECU.

b. Attach 2 Foam Tapes on the RES ECU as shown.
   - 1 piece for the label side and 1 piece for the Bracket side.

3. Disassembly (Passenger’s Area)
   a. Remove the PS Step Cover.
d. Remove the PS IP Trim.

b. Remove the PS Cowl Cover.
   • Remove 1 Nut.

c. Remove the Glove Box Under Cover.
   • Dislodge the LED if present.
f. Remove the PS Center Console Trim.

g. Dislodge the PS Knee Airbag.
   - Remove 3 Bolts.

e. Remove the Lower Glove Box Trim.
j. Remove the 3 Screws from the Glove box.
   • Open the Glove box.
   • Remove the 3 Covers.

h. Wrap the Airbag in a blanket and place on the TVIP Box.

i. Remove the 2 Bolts from the bottom of the Glove box.
k. Dislodge the Glove box.

l. Dislodge 2 Harness Clamps.

m. Remove Glove box light.
b. Remove the DS Cowl Cover.
   • Remove 1 Nut.

n. Temporarily Re-install the Passenger’s Knee Airbag.
   • Tighten 3 Bolts.

4. Disassembly (Driver’s Area)
   a. Remove the DS Step Cover.
c. Remove the DS IP Trim.

d. Remove the 2 Bolts on the DS Lower Dash.
   • Open the cover using Flat Blade Jeweler’s Screwdriver.

e. Remove the DS Lower Dash.
   • Dislodge the Hood Release Cable.
f. Remove the 2 Screws on the Steering Column Cover.

g. Dislodge the Center Clip on the Steering Column.

**CAUTION:** Do not force this clip as it is very easy to break.

h. Remove the Steering Column Cover.
i. Remove the A/C Panel.

j. Remove the Audio Unit.
   • Remove 4 Bolts.

Vehicles with Mayday ECU ONLY

k. Dislodge the Connector as shown.
5. **V4 ECU and Wire Harness Installation (Passenger’s Area)**
   
a. Using the M6 Bolt install the RES ECU onto the PS Reinforcement Brace.
   
b. Disconnect the V4’s 2P Connectors.

**NOTE:** Make sure that the RES ECU Bracket Guide Pins seat properly.
c. Route the V4 Harness through the Center Console as shown.

d. Connect the V4’s 2P Male and Female Connectors together.
Remote Engine Starter (RES)

- Secure the V4 Harness’s Relay to the Vehicle Harness with 1 Wire Tie.

Vehicles with Mayday ECU ONLY

- Reconnect the Mayday ECU Connector.

- Connect the V4’s 24P and 8P Connectors to the RES ECU.
h. Secure the V4 Harness to the Vehicle Harness with 2 Wire Ties.

i. Secure the V4 Connector Harnesses together with 1 Wire Tie.

j. Route the V4 Harness toward the Passenger’s Cowl Area as shown.

k. Secure the V4 Harness to the Vehicle Harness with 4 Wire Ties.

Vehicles with USB ECU ONLY

l. Remove the USB ECU.
   • Remove 2 nuts.
m. Dislodge the Passenger’s Side Junction Box (J/B).
   - Release 1 Clip.

n. Locate the 7P Pre-connector on the backside of the Passenger’s J/B.

o. Disconnect the Vehicle’s 7P Pre-connector.

**CAUTION**: Do not discard the pre-connector.

p. Plug the V4 7P Connector into the Vehicle’s 7P Connector.

q. Reinstall the J/B.

r. Reinstall the USB ECU (If Equipped)

s. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.
TOYOTA 4Runner w/o Smart PROCEDURE 2012 – TVIP V4

REMOTE ENGINE STARTER (RES)

u. Disconnect the 64P Vehicle Connector from the Passenger’s Cowl area.

NOTE: Some Vehicles may have two 64P Connectors present. Make sure you disconnect the correct one.

t. Using Electrical Tape secure the Vehicle’s 7P Pre-connector to the Vehicle Harness.

NOTE: If the RES system is removed this Pre-connector must be re-installed.
w. Disconnect the 8P Vehicle Connector from the Passenger’s Cowl area.

x. Lift up the Terminal Retainer Clip.
   • Do not pull out the Retainer.

y. Insert the V4 White/Black Wire Terminal into the indicated location on the 8P Vehicle Connector.

z. Close the Terminal Retainer.
   • Make sure that the Terminal does not come out when pulled from the back.

v. Connect the V4’s 64P Connectors in between the Vehicle’s 64P Connectors.
aa. Reconnect the Vehicle’s 8P Connector.

ab. Connect 2 Wire Ties together to make 1 long Wire Tie.

ac. Use the Double Wire Tie to secure the V4 64P Connector to the Vehicle Harness.
   • Route the Wire Tie created around the V4 64P Connector and Vehicle Harness as shown.

ad. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.

NOTE: Do not secure the RES Diagnostic Connectors.
6. V4 Wire Harness Installation (Driver’s Area)

a. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.
b. Using 1 Wire Tie secure the V4 Harness to the Vehicle Brace.
c. Using 2 Wire Ties secure the V4 Harness’s Diode and Fuse to the Vehicle’s Harness near the Harness Clamp.
d. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.
e. Disconnect the Vehicle’s 8P Connector from the steering area.
f. Disconnect the Vehicle’s 2P Connector from the steering area.
i. Using 1 Wire Tie secure the V4 8P Connector to the Vehicle Harness.

j. Bundle up the excess V4 Harness and secure it to the Vehicle Harness with 1 Wire Tie.

k. Using 2 Wire Ties secure the V4 Harness to the Vehicle Harness.

NOTE: Make sure the V4 Harness is routed along the Vehicle Harness as shown.
7. Registration Preparation
   
   a. Partially reassemble the Vehicle.
      
      **VERIFY:** That panels fit together properly, with no uneven gaps.
      
      **VERIFY:** That all Connectors are plugged in.
      
      **CAUTION:** Make sure to Torque the 3 Bolts of the PS Knee Airbag to 88.5 in•lbf (10 N•m).
      
   b. Verify that the Short Pin is Installed.
      
      • If not Install now.
8. Registration

a. Open the Hood.

b. Temporarily reconnect the Negative Battery Cable.

CAUTION: Do not touch the Positive Terminal.

c. Locate the 1P RES Diagnostic Connectors in the Passenger’s Side Cowl Area and connect them.

NOTE: Once connected you will have 10 minutes to complete this section, steps d–ac.

d. Close all doors.

e. Insert the key into the Ignition.

f. Turn it from “OFF” to “ON” 5 times.

LOOK: For the Hazard Lights to flash Once.

g. Turn the key to the “OFF” position.
IF THIS PROCEDURE FAILED

The Hazard Lights don’t flash or flashes Twice.

- Disconnect the V4 Harness’s 1P RES Diagnostic Connectors.
- Start again from step c.

CAUTION: Techstream Lite will not work for this section, use the Techstream Notebook ONLY.

j. Connect the Techstream Notebook to the Vehicle’s Diagnostic Port.
k. Turn the Key in the Ignition to the “ON” position.

LOOK: For the Hazard Lights to flash Once.

h. Start the Engine.

i. After 10 seconds stop the Engine.
TOYOTA 4Runner w/o Smart 2012– TVIP V4
PROCEDURE
REMOTE ENGINE STARTER (RES)

1. Start the TIS Techstream Application by clicking on the shortcut located on the Desktop.

m. Click “Connect to Vehicle”

n. Confirm that the information displayed on the Vehicle Connection Wizard is correct for the vehicle. If not verify that the Techstream is properly connected.

o. Select w/o Smart Key.

p. Select w/ KDSS or w/o KDSS depending on the Vehicles Specification.

q. Click “Next>.”

r. Select “Body Electrical” tab.

s. Select “Remote Engine Starter.”

t. Click
PROCEDURE

REMOTE ENGINE STARTER (RES)

u. Select “Utility.”
v. Select “ECU Communication ID Registration.”
w. Click .

x. Click “Next>.”

y. Follow the steps on the Tech-stream.

z. Click “Next>.”
CONFIRM: That the ECU Communication ID was completed successfully.

aa. Click “Exit.”

IF THIS PROCEDURE FAILED

- Click “Try Again”
- Start again from step u.

ab. Exit the vehicle.
ac. Close the Hood.
ad. Look for the Hazards to flash Twice.

IF THIS PROCEDURE FAILED

The Hazard Lights flash Three Times.

- Disconnect the V4 Harness’s 1P RES Diagnostic Connectors.
- Start again from step c.
ae. After a successful Registration, disconnect the 1P RES Diagnostic Connectors.

af. Using Electrical Tape secure the Female Connector and Harness to the Vehicle Harness.

ag. Finish reassembling the Vehicle.

VERIFY: That panels fit together properly, with no uneven gaps.

VERIFY: That all Connectors are plugged in.

9. Tags and Labels

- For US Vehicles use the English Tags and Labels, and discard the Spanish Tags and Labels.

- For Mexico Vehicles use the Spanish Tags and Labels, and discard the English Tags and Labels.
  a. Attach the Key Tag.

REPEAT: step a with the other Key.
b. Use Household Glass Cleaner to clean the inside of the Front Door Window.

c. Use a piece of Clear Tape to lift the label off its protective backing.

**CAUTION:** Do not touch the adhesive surface.

d. Attach the Label as shown.

**NOTE:** Align the Label according to Etching or Other Label.

**REPEAT:** steps b–d with the other Front Door Window.

e. Sealed in its protective bag, place the Owner’s Manual in the Glove box.

f. Using VDC approved cleaner and cleaning method, clean the indicated area on the underside of the Hood.

g. Attach the Engine Room Warning Label as shown.

**CAUTION:** Do not touch the adhesive surface.

10. **Complete the Installation**

   a. Position the Negative Battery Cable at the original factory position and torque the nut.

   **Torque:** 5.4 N•m (48 in•lbf)

   **CAUTION:** Do not touch the Positive Terminal.

   b. Clean up and Remove trash.
Accessory Function Checks

Close the hood, enter the vehicle and close all doors. Place the shift lever in the “P” (Park) position, set the parking brake and make sure the Vehicle is off.

<table>
<thead>
<tr>
<th>Perform</th>
<th>Look For</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Press the remote control’s lock button twice within 2 seconds, then press and hold the lock button for 3 seconds.</td>
</tr>
<tr>
<td>2</td>
<td>With the engine running, pull the hood release handle. <strong>NOTE:</strong> Some Vehicles may require you to exit the Vehicle and pull up on the Hood.</td>
</tr>
<tr>
<td>3</td>
<td>Move the shift lever out of “P” (Park). Attempt to start the Vehicle using the remote.</td>
</tr>
</tbody>
</table>

Vehicle Appearance Check

<table>
<thead>
<tr>
<th>Perform</th>
<th>Look For</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>After accessory installation and removal of protective cover(s), perform a visual inspection of the vehicle.</td>
</tr>
</tbody>
</table>
## Vehicle Function Checks

<table>
<thead>
<tr>
<th>Function</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dome/Courtesy Lights</td>
<td>Steering Wheel Column Adjusts Without Interference</td>
</tr>
<tr>
<td>Horn</td>
<td>Hood Latch Release</td>
</tr>
</tbody>
</table>

### Enter the Vehicle

- **Dome/Courtesy Lights**  
  - Check Engine Light  
    - If the warning light remains on, it may indicate a system malfunction.
  - ABS Light (if equipped)  
    - If the warning light remains on, it may indicate a system malfunction.
- **Lamp Failure Sensor**  
  - If the warning light remains on, it may indicate a system malfunction.
- **Seat Belt Warning Light**  
  - If the warning light remains on, it may indicate a system malfunction.
- **Air Bag Warning Light**  
  - If the warning light remains on, it may indicate a system malfunction.
- **Cruise Control Light (if equipped)**
- **Mayday ECU (if equipped)**

### Start the Vehicle

- **Starter**
- **Gauges**
- **ABS Light (if equipped)**
- **Track/Skid Control Light (if equipped)**
- **Tire Pressure Monitoring System (TPMS)**
  - Prior to TPMS activation and Pre-delivery Service (PDS) of the Vehicle the TPMS light will blink when IG is turned on.
  - After TPMS activation and PDS of the Vehicle the TPMS light will illuminate for a few seconds and go off when IG is turned on.
- **Air Bag Warning Light**
  - If the warning light remains on, it may indicate a system malfunction.

### Using a Mirror or Assistant check the following.

- **Trunk/Tailgate/Bed Lights (if equipped)**
- **Tail Lights**
- **Brake Lights**
- **Daytime Running Lights (if equipped)**
- **Backup Lights**
- **Marker Lights**
- **Clearance Sonar (if equipped)**

### Stop the Engine, Place the Vehicle’s IG in the ON position.

- **Hazard Lights**
- **Turn Signal Lights**
- **Head Light**
- **Fog Lights (if equipped)**
- **High Beams**
- **Accessory Controls/Illumination (if equipped)**
- **Power Side Mirrors (if equipped)**
- **Convenience Memory Settings (if equipped)**
## Function Checklist

<table>
<thead>
<tr>
<th>Function</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Front Wiper/Washer</td>
<td>□ Rear Wiper/Washer (if equipped)</td>
</tr>
<tr>
<td>□ Power Sun/Moon Roof (if equipped)</td>
<td>□ Rollover Side Curtain Air Bag Switch (RSCA) (if equipped)</td>
</tr>
<tr>
<td>□ Clock (if equipped)</td>
<td>□ Navigation System (if equipped)</td>
</tr>
<tr>
<td>□ Audio/Video (if equipped)</td>
<td>□ USB Connections (if Equipped)</td>
</tr>
<tr>
<td>□ Steering Wheel Audio Control (if equipped)</td>
<td>□ HVAC</td>
</tr>
<tr>
<td>□ Front Windshield Defogger (if equipped)</td>
<td>□ Rear Window Defogger (if equipped)</td>
</tr>
<tr>
<td>□ Side Mirror Defogger (if equipped)</td>
<td>□ Accessory Power Socket (if equipped)</td>
</tr>
<tr>
<td>□ Massage Seats (if equipped)</td>
<td>□ Heated/Vented Seats (if equipped)</td>
</tr>
<tr>
<td>□ Glove box Light (if equipped)</td>
<td>□ Passenger Air Bag Switch (if equipped)</td>
</tr>
<tr>
<td>□ Power Locks (if equipped)</td>
<td>□ Power Windows (if equipped)</td>
</tr>
<tr>
<td>□ Power Seats (if equipped)</td>
<td>□ Key Sensor Buzzer</td>
</tr>
</tbody>
</table>

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*Remove the short pin after Function checks.*

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