TOYOTA 4Runner w/ Smart

PREPARATION

Part #: PT398-89140

Conflicts:

Kit Contents





2012 -

Service Part #'s

Additional Items

(may be required)

ltem#	Description

Recommended Sequence of Application

ltem#	Description

Recommended Tools

(S) PT398-00070-SL

Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Parts Boxes
Special Tools	
Techstream	Use latest version on TIS (Do not use Techstream Lite)
Installation Tools	
Screwdriver	#2 Phillips, Phillips Jeweler's, Flat Blade Jeweler's
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Side Cutters	
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)
Utility Knife	
Таре	Clear, Electrical
Socket	10mm, extension
Pliers	Needle Nose
Special Chemicals	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

TOYOTA 4Runner w/ Smart

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Legend

Issue: C 06/10/13



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.

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4Runner RES w/ Smart	TVIP	Vehicle	Description	TO PREI
Wire Harness Outline* (Passenger's Compartment)	С	FN1	64P White	PAR/
	D	FN1	64P White	
	E	-	24P White (for RES ECU)	- 4R u
	G	E53	7P White	nne
	L	-	Wire Terminal (White/Black Wire)	er w/
	М	-	1P White (for Registration)	
	N	-	1P White (for Registration)	
	0	-	White Tape Marker	
	Р	-	2P White	
	R	-	RES ECU	
				_ 201)
				- ENG
				- ST/
*Color of Harness on Overview corresponds with Colored Tape near Connectors on Harness.				PV4 RES



TVIP V4 REMOTE ENGINE STARTER (RES)

Disassembly Overview				
ENGINE ROOM PASSENGER'S SIDE				
6				
4				
3				

1	Engine Cover			
2	Hood Lock Cover			
3	PS Step Cover			
4	PS Cowl Cover			
5	Glove box Under Cover			
6	PS IP Trim			
7	Lower Glove box Trim			
8	Center Console Trim			
9	PS Glove box			
Disconnect all Corresponding Connectors.				

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





WITH ALARM

(Vehicle has Hood Switch)

Security LED turns ON solid for 30 seconds then starts blinking

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.

Vehicles Without Hood Switch ONLY

d. Remove the Engine Cover.

Remove 12 clips.

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

f. Remove the Hood Latch Cover.

g. 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 the Hood Switch Lever is positioned properly.

If the Hood Switch is broken RES will not function.





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

k. Tighten 2 Screws.

I. Using 1 Wire Tie secure the V4 Hood Switch Harness to the Hood Latch Assembly.



Rotate the Wire Tie Lock to the inside of Hood Latch Assembly.

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

- n. Re-attach the Hood Latch Spring.
- o. Reattach the Hood Release Cable.

TVIP V4

Connector to the Vehicle's Pre-Connector.

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

Reinstall the Hood Lock r. Assembly.



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



66.4 in•lbf (7.5 N•m)



2. RES ECU Preparation

a. Attach the RES Bracket to RES ECU.

3. Disassembly (Passenger's Area)

a. Remove the PS Step Cover.

b. Remove the PS Cowl Cover.

• Remove 1 Nut.

c. Remove the Glove Box Under Cover.

• Dislodge the LED if present.

d. Remove the PS IP Trim.

e. Remove the Lower Glove Box Trim.

f. Remove the Center Console Trim.

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

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.

- j. Remove the 3 Screws from the Glove box.
 - Open the Glove box.
 - Remove 3 Covers.

k. Dislodge the Glove Box.

I. Dislodge 2 Harness Clamps.

m. Remove the Glove box light.

n. Temporarily Re-install the Passenger's Knee Airbag.

Tighten 3 Bolts.

- b. Disconnect the V4 Harness 2P Connectors.
 - Discard the portion of the Harness with the 8P Connectors and Fuses.
- c. Secure the 2P Connector to the V4 Harness using Electrical Tape and wrap 1 Foam Tape over it.

d. Route the V4 Harness over the Vehicle Brace.

e. Plug the V4 24P Connector to the RES ECU.

f. Secure the V4 Harness to the Vehicle Harness with 2 Wire Ties.

- g. Route the V4 Harness toward the Passenger's Cowl Area.
- h. Secure the V4 Harness to the Vehicle Harness with 4 Wire Ties.

Vehicles with USB ECU ONLY

- i. Remove the USB ECU.
 - Remove 2 nuts.

- j. Dislodge the Passenger's Side Junction Box (J/B).
 - Release 1 Clip.

- k. Locate the 7P Pre-connector on the backside of the Passenger's J/B.
- I. Plug the V4 7P Connector into the Vehicle's 7P Connector.
- m. Reinstall the J/B.
- n. Reinstall the USB ECU. (if equipped)

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

p. 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.

 q. Connect the V4 64P
Connectors in between the Vehicle's 64P Connectors.

STOP

2012 -

r. Disconnect the 8P Vehicle Connector from the Passenger's Cowl area.

- s. Lift up the Terminal Retainer Clip.
 - Do not pull out the Retainer.
- t. Insert the V4 White/Black Wire Terminal into the indicated location on the 8P Vehicle Connector.
- u. Close the Terminal Retainer.
 - Make sure that the Terminal does not come out when pulled from the back.

v. Reconnect the Vehicle's 8P Connector.

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

- x. 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.
- y. Secure the V4 Harness to the Vehicle Harness using 2 Wire Ties.



STOF

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NOTE: Do not secure the RES Diagnostic Connectors.

5. Registration Preparation

a. Partially reassemble the Vehicle.

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



VERIFY: That all Connectors are

S 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.









- e. Place the Vehicle in Park (P) position.
- f. Cycle the Engine Start/Stop Button from OFF to ON 5 times.

NOTE: One cycle consists of: OFF \rightarrow Accessory \rightarrow ON. This is equivalent to pressing the Engine Start/Stop Button 14 times.

LOOK: for the Hazard Lights to flash Once.

- g. Start the Engine.
- h. After 10 seconds stop the Engine.

LOOK: For the Hazard Lights to flash Once.

IF THIS PROCEDURE FAILED

The Hazard Lights won't flash or flashes Three Times.

- 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.
 - i. Connect the Techstream Notebook to the Vehicle's Diagnostic Port.
- j. With the Smart Key in your possession, press the Engine Start/Stop Button twice to select the Ignition "ON" position.

Fig. 6-6



I. Click "Connect to Vehicle."

- Confirm that the information displayed on the Vehicle Connection Wizard is correct for the vehicle. If not verify that the Techstream is properly connected.
- n. Select w/ Smart Key.
- Select w/ KDSS or w/o KDSS depending on the Vehicle's Specification.
- p. Click "Next>."

q. Select "Smart Key."





TIS techstream)))

- s. Click on "Utility."
- t. Select "ECU Communication ID Registration."



v. Click "Next>."

- w. Select "Remote Engine Starter."
- x. Click "Next>."

CONFIRM: That the ECU Communication ID was completed successfully.

y. Click "Exit."

IF THIS PROCEDURE FAILED

• Start again from step m.



- aa. Exit the vehicle.
- ab. Close the Hood.
- ac. Look for the Hazard Lights to flash Twice.

IF THIS PROCEDURE FAILED

The Hazard Lights flash 3 Times.

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

- ad. After a successful Registration, disconnect the 1P RES Diagnostic Connectors.
- ae. Using Electrical Tape secure the Female Connector and Harness to the Vehicle Harness.

af. Finish reassembling the Vehicle.



STOP

VERIFY: That all Connectors are plugged in.

7. 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 Smart 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 from the protective backing.
- CAUTION: Do not touch the TOP adhesive surface.
 - d. Attach the Label as shown.
 - NOTE: Align 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 area indicated on the underside of the Hood.
- g. Attach the Engine Room Warning Label as shown.

CAUTION: Do not touch the adhesive surface.

8. Complete the Installation

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



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.

Perform		Look For	
1	Press the remote control's lock button twice within 2 seconds, then press and hold the lock button for 3 seconds.	The hazard lights flash after 3 seconds. The engine starts. The hazard lights flash repeatedly for 10 seconds.	
2	With the engine running, pull the hood release handle. NOTE: Some Vehicles may require you to exit the Vehicle and pull up on the Hood.	The engine stops. The hazard lights flash once. The security alarm triggers. (Only if equipped with OE Factory Alarm, not Genuine Accessory alarm, and only if armed)	
3	Move the shift lever out of "P" (Park). Attempt to start the Vehicle using the remote.	The engine does not start.	

Vehicle Appearance Check

Perform		Look For	
	After accessory installation and removal of protective cover(s), perform a visual inspection of the vehicle.	Ensure no damage (including scuffs and scratches) was caused during the installation process. (For PPO installations, refer to TMS Accessory Quality Shipping Standard.)	

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ТОҮОТА	4Runner w/ Smart	2012-
CHECKLIST -	these points MUST be checked	ed to ensure a quality installation.

Vehicle Function Checks

		Function		Function	
Enter the Vehicle					
		Dome/Courtesy Lights		Steering Wheel Column Adjusts Without Interference	
		Horn		Hood Release Latch	
Sta	art the \	/ehicle			
		Starter		Gauges	
		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.		Track/Skid Control Light (if equipped) 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.		Tire Pressure Monitoring System (TPMS)	
		Air Bag Warning Light If the warning light remains on, it may indicate a system malfunction.		Service (PDS) of the Vehicle the TPMS light will blink when IG is turned on. After TPMS activation and PDS of the Ve-	
		Cruise Control Light (if equipped)		hicle the TPMS light will illuminate for a few seconds and go off when IG is turned on.	
		Mayday ECU (if equipped)			
U	sing a N	Airror 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)			
St	op the	Engine, Place the Vehicle's IG in the ON posit			
		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)	

2012-

ТОҮОТА	
CHECKLIST	

ТОҮОТА	4Runner w/ Smart	2012-
CHECKLIST -	these points MUST be checked to ensure a	quality installation.

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

Remove the short pin after Function check. Check with your Port/Dealer to see if this step is necessary.