Part #: PT398-42093

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

Conflicts:

Do not install into Vehicles equipped with TDS.

Kit Contents:



GBS Microphone



Recommended Tools

| Developed & Vehicle Drotestion | Description |
|--------------------------------|---|
| Personal & venicle Protection | Description |
| Safety Glasses | |
| Safety Gloves | (Optional) |
| Vehicle Protection | Blankets, Parts Boxes |
| Special Tools | |
| GBS Striker Tool | CAD-E IADS P/N ALL 02-016-01 |
| Installation Tools | |
| Screwdriver | #2 Phillips, Flat Blade Jeweler's |
| Nylon Panel Removal Tool | e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01 |
| Side Cutter | |
| Torque Wrench | 36 in•lbf (4.07 N•m) |
| Utility Knife | |
| Таре | Clear, Electrical |
| Socket | 10mm, extension |
| Pliers | Needle Nose, Pliers |
| Special Chemicals | |
| Cleaner | VDC Approved Cleaner |
| Glass Cleaner | Household Glass Cleaner |

Additional Items

(may be required)

| ltem# | Description |
|-------|-------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Recommended Sequence of Application

| ltem# | Description |
|-------|-------------------------------|
| 1 | TVIP V4 Remote Engine Starter |
| 2 | TVIP V5 RS3200 PLUS |
| | |
| | |
| | |
| | |

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Legend



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.



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| 10mm Socket Fig. 1-1 | 1. Disassembly. |
|----------------------|--|
| | a. For Manual Transmission Vehicles place the Vehicle in Park with the Parking Brake set. b. 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. |
| Disassembly Overview | 1 Glovebox Under Cover |
| | 2 PS Step Cover |
| | 3 PS Cowl Cover |
| 82 | 4 Glovebox |
| 5 | 5 DS Lower Dash Cover |
| | 6 DS Lower Dash Brace |
| 6 E | 7 Lower Steering Column Cover |
| DRIVERS SIDE CENTE | 8 Center Console Left Trim |
| PAU | 9 Center Console Right Trim |
| | 10 Radio |
| | Disconnect all Corresponding Connectors |
| | |

c. Remove the Passenger's Step Cover.

d. Remove the Passenger's Cowl Cover.

Remove 1 Nut.

e. Remove the Glove Box Under Cover.

f. Dislodge the Glove Box.

• Disconnect the Dampener.

g. Remove the Glovebox.

h. Remove both Trim Panels from the Center Console.

- 10mm Socket, Extension
 Fig. 1-8
 Fig. 1-8
 Remove 4 Bolts from the Radio.
 Remove the Radio Unit.
 - k. Remove the Driver's Side Lower Dash.
 - Remove 2 Screws.

- I. Remove the Lower Dash Brace.
 - · Remove 2 Bolts

Non-Smart Vehicles Only

- m. Dislodge the Center Clip.
 - Insert fingers into the opening of the Tilt Lever of the Steering Column Under Cover to disengage 1 Claw.



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

- n. Dislodge the Back Clips on both sides.
- o. Release the Front Clips on both sides.
 - Insert the Key into the Ignition and turn it to ON.
 - Turn the Steering wheel from Right to Left to access the Holes.
 - Use a Flat Blade Jeweler's Screwdriver wrapped with Electrical Tape to release the clips.
- p. Remove the Key from the Ignition.

2. V5 harness Installation.

Non-Smart Vehicles Only

 a. Secure the V5 Harness's White Tape Marker to the Vehicle Harness near the Vehicle Harness Clamp with 1 Wire Tie.

b. Disconnect the Vehicle's 2P Connector.

c. Connect the V5 2P Connectors in between the Vehicle's Connectors.

- d. Secure the 2P Connectors to the Vehicle Harness with 1 Wire Tie.
- e. Secure the V5 Harness to the Vehicle Harness with 1 Wire Tie.

Smart Vehicles ONLY

- f. Locate the V5's 2P Connectors with the White Tape.
- g. Bundle up the wire and Connectors and secure with Electrical Tape.

h. Secure V5 White Tape Marker to the Vehicle Harness with 1 Wire Tie.

- i. Route the V5's 18P Connectors toward the back of the Junction Box.
- j. Secure the V5 Harness to the Vehicle Harness with 1 Wire Tie.

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2009 -

3. V5 Harness Installation (Driver's Side Junction Box Area)

V5 ONLY

- a. Disconnect the Vehicle's 18P Connector from the backside of the Junction Box.
- b. Connect the V5 18P Connectors in between the Junction box and the Vehicle's 18P Connector.
- c. Secure the 18P Connectors and the V5 Harness to the Vehicle Harness with 1 Wire Tie.

V4/V5 ADD-ON ONLY

- d. Cut the Wire Tie securing the V4 18P Connectors.
- e. Disconnect the Vehicle's 18P Connector from the V4 18P Connector.
- f. Connect the V5 18P Connectors in between the V4 Harness and the Vehicle's 18P Connector.

 g. Bundle up both sets of connectors and secure them and the V4/V5 Harnesses to the Vehicle Harness with 1 Wire Tie.

ΤΟΥΟΤΑ RAV4 PROCEDURE

Q

TVIP V5 RS3200 PLUS

Fig. 4-1





4. V5 Harness Installation (Center Console Area)

- a. Route the V5 Harness from the Driver's Side to the Passenger's Side.
- b. Secure the V5 Harness to the Vehicle Brace with 1 Wire Tie.

c. Locate the Vehicle Connector located in this area on the backside of the Climate Control Console.

NOTE: The connector is different for Smart and Non-Smart Vehicles. See below.

Smart Vehicles ONLY

- d. Locate and Disconnect the 14P Vehicle Connector.
- e. Secure the V5 Yellow Wire to the Yellow Wire on the Vehicle Connector using 1 Splicing Connector.
- f. Reconnect the Vehicle Connector.

Non-Smart Vehicles ONLY

- g. Locate and Disconnect the 10P Vehicle Connector.
- h. Secure the V5 Yellow Wire to the Yellow Wire on the Vehicle Connector using 1 Splicing Connector.
- i. Reconnect the Vehicle Connector.

j. Secure the V5 Harness to the Vehicle Brace with 2 Wire Ties.

5. V5 Security ECU and GBS ECU Preparation and Installation.

- a. Attach the Security Bracket to the Security ECU.
- b. Insert the Clip into the Bracket.

- c. Apply 1 Medium Foam Tape to the Security ECU.
- d. Apply 1 and 1/2 pieces of Butyl Tape to the Security ECU.

NOTE: Do not remove the Protective Backing from both sides of the Butyl.

e. Set the GBS ECU to "9."

f. Attach the GBS ECU Bracket to the GBS ECU.

- g. Apply 1 Large Foam Tape to the edge of the GBS ECU.
- h. Apply 1/2 Piece of Large Foam Tape to the GBS ECU Bracket.
 - Do not discard excess.

6. V5 Harness Installation (Passenger's Side)

- Using VDC Approved Cleaner and Cleaning Method clean the area where the V5 Security ECU will be installed.
- b. Remove the remaining Protective Backing from the Butyl Tape on the Security ECU.
- c. Install the Security ECU.
 - Make sure that the Clip snaps in place.
- d. Connect the V5 36P Connector to the V5 Security ECU
- e. Remove the Bolt from the Top of the Blower Motor.

f. Install the GBS ECU using the Vehicle Bolt.

g. Connect the V5 8P Connector to the GBS ECU.

| h. | Locate the V5 2P Connector Without the Harness Shielding. |
|----|---|
| i. | Route this portion of the Harness downward. |
| j. | Route the other portion over the top of the Brace. |
| k. | Secure the V5 Harness to the Vehicle Harness with 2 Wire |

Ties.

I. Locate the Vehicles 2P Female Pre-Connector.

NOTE: There are 2 Pre-Connectors. Make sure to un-tape the 2P Connector ONLY.

- m. Remove the Tape securing it to the Vehicle Harness.
- n. Connect the V5 2P Connector to the Vehicles 2P Pre-Connector.

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- o. Secure the V5 Harness to the Vehicle Harness with 1 Wire Tie.
- p. Secure the 2P Connectors and the excess V5 Harness to the Vehicle Harness with 1 Wire Tie.

7. GBS Microphone Installation

- a. Using VDC approved Cleaner and Cleaning Method clean the area indicated on the Glovebox Under Cover.
- b. Remove the Protective Backing from the V5 Microphone.



CAUTION: Do not touch the Adhesive Surface.

- c. Attach the Microphone to the Glove Box Under Cover.
- d. Use 1/2 Piece of Large Foam Tape to secure the Microphone to the Glove Box Under Cover.



CAUTION: Do not cover the Microphone Opening with the Foam Tape.

- e. Connect the last V5 2P Connector to the Microphone's 2P Connector.
- f. Use 1 Piece of Medium Foam Tape to secure the 2P Connectors to the Glovebox Under Cover.

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8. Complete the Installation

a. Reassembling the Vehicle.



STOP

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

VERIFY: that all Connectors are plugged in.

- b. Use Household Glass Cleaner to clean the inside of the Front Door Windows.
- c. Use a piece of Clear Tape to lift the Label from the protective backing.



CAUTION: Do not touch the adhesive surface.

d. Attach the Label as shown.



NOTE: Make sure to Align according to Etching or Other Label.

REPEAT: steps b–d with the other Window.

- e. Verify that the Short Pin is Installed.
 - If not Install now.

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- g. Clean up and Remove trash.
- h. Sealed in its protective bag, place the Owner's Manual in the Glovebox.
- i. Reset the power windows.
 - Turn the ignition "ON."
 - Lower the Windows halfway.
 - Pull up on the Power Window Switches until the windows close.
 - Continue to hold up on the switches for a minimum of 1 Second.
- j. Reset the Moon Roof.
 - Open the Moon Roof halfway.
 - Push and hold the Moon Roof Switch to close until the Moon Roof closes.
 - Continue to hold the switch for a minimum of 1 Second.
- k. Reset the tailgate door.
 - Push door lock control switch to the "unlock" side.
 - Pull up tailgate door handle.

Accessory Function Checks (non-Smart Vehicles ONLY)

| 1 | Press and release the remote control lock button to start the system's arming process. | The turn signal lights flash once All doors lock. The Security LED lights up. |
|---|--|---|
| 2 | Wait 30 seconds. | Security LED starts flashing; the system is now armed. |
| 3 | Press and release the remote control's unlock button to disarm the system. | The turn signal lights flash twice. The driver's door unlocks. The Security LED flashing. |

Open the driver's door, insert the key into the ignition switch and turn it to "ON". Roll down all the windows, remove the key and exit the vehicle.

| 4 | Arm and disarm the system with the remote again, then wait 60 seconds. | The doors automatically relock. The system automatically starts the arming process. |
|----|---|--|
| 5 | Press and release the remote control's unlock button again to stop the arming process. | Refer to step 3. |
| 6 | Insert the key into the driver's door key cylinder and turn it toward the front of the vehicle to start the arming process. | All doors lock. The Security LED lights up. |
| 7 | Wait 30 seconds. | Security LED starts flashing; the system is now armed. |
| 8 | Reach inside and manually unlock the driver's door to trigger an alarm. | The driver's door automatically relocks. The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. |
| 9 | Manually unlock the driver's door again and hold it unlocked, open the door, then sit in the driver's seat. | The driver's door lock attempts to lock repeatedly. The horn continues to sound repeatedly. The headlights and turn signal lights continue flashing. The Security LED remains on. |
| 10 | Insert the key into the ignition switch and turn it to "START" to stop the alarm. | The horn stops sounding. All the lights stop flashing and/or turn off. The Security LED turns off. The starter cranks and the engine starts. |

Turn the key back to "LOCK", remove it, and then exit the vehicle.

| 11 | With the door open, press the lock switch on the door to lock the doors, then close the door to start the system's arming process. | All doors lock. The Security LED lights up. |
|----|--|--|
| 12 | Wait 30 seconds. | Security LED starts flashing; the system is now armed. |

| 14 Press and release the remote control's unlock button to stop the alarm. The horn stops sounding. All the lights stop flashing. The Security LED turns off. 15 Press and release the remote control's lock button to start the system's arming process, then wait 30 seconds until the system is armed. Refer to steps 1 and 2. | | |
|---|-----|--|
| 15Press and release the remote control's lock button to start the system's arming process, then wait 30 seconds until the system is armed.Refer to steps 1 and 2. | | |
| | | |
| 16Unlock and open one of the rear passenger doors to trigger an alarm. (if available).Refer to step 13. | | |
| 17 Press and release the remote control's unlock Befer to Step 14. | | |
| 18Repeat the above steps with the other rear passenger door. (if available).Refer to steps 1, 2, and 13. | | |
| Roll up all windows, remove the key and exit the vehicle. | | |
| 19Press and release the remote control's lock but- ton to start the arming process.Refer to step 1. | | |
| 20 Wait 30 seconds. After 30 seconds, the Security LED starts flashing: system is now armed. | the | |
| Perform the following check in a temperature-controlled environment. (50°-90° F) | | |
| 21 With the tip of a key, or Striker Tool pulled all the way out (PPO only), tap the center of the driver's door window to trigger the alarm. The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. | | |
| 22 Insert the key into the driver's door key cylinder and turn it toward the back of the vehicle to stop the alarm. | | |

NOTE: If the alarm does not trigger during the Glass Breakage Test, increase the GBS sensitivity to the next setting and test again.

NOTE: If you do not disarm the system, the alarm will last 20 seconds. It is not necessary to check the alarm duration.

Accessory Function Checks (Smart Vehicles ONLY)

| 1 | Press and release the remote control lock button to start the system's arming process. | The turn signal lights flash once All doors lock. The Security LED lights up. |
|---|--|---|
| 2 | Wait 30 seconds. | Security LED starts flashing; the system is now armed. |
| 3 | Press and release the remote control's unlock button to disarm the system. | The turn signal lights flash twice. The driver's door unlocks. The Security LED flashing. |

Open the driver's door, with the smart key in your possession, press the power button to "ON". Roll down all the windows, remove the key and exit the vehicle.

| 4 | Arm and disarm the system with the remote again, then wait 60 seconds. | The doors automatically relock. The system automatically starts the arming process. |
|----|---|--|
| 5 | Press and release the remote control's unlock button again to stop the arming process. | Refer to step 3. |
| 6 | Press the lock button on the driver's exterior door handle to start the arming process. | All doors lock. The Security LED lights up. |
| 7 | Wait 30 seconds. | Security LED starts flashing; the system is now armed. |
| 8 | Reach inside and manually unlock the driver's door to trigger an alarm. | The driver's door automatically relocks. The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. |
| 9 | Manually unlock the driver's door again and hold it unlocked, open the door, then sit in the driver's seat. | The driver's door lock attempts to lock repeatedly. The horn continues to sound repeatedly. The headlights and turn signal lights continue flashing. The Security LED remains on. |
| 10 | With the smart key in your possession, press the power button twice on the dash to "START" to stop the alarm. | The horn stops sounding. All the lights stop flashing and/or turn off. The Security LED turns off. The starter cranks and the engine starts. |

Press the "START" button to turn the vehicle off, and then exit the vehicle.

| 11 | With the door open, press the lock switch on the inside of the door to lock the doors, then close the door to start the system's arming process. | All doors lock. The Security LED lights up. |
|----|--|---|
| 12 | Wait 30 seconds. | Security LED starts flashing; the system is now armed. |
| 13 | Reach inside and manually unlock the front passenger's door to trigger an alarm. | The front passenger's door automatically relocks. The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. |

| 14 | Press and release the remote control's unlock button to stop the alarm. | The horn stops sounding. All the lights stop flashing. The Security LED turns off. |
|----|--|--|
| 15 | Press and release the remote control's lock button to start the system's arming process, then wait 30 seconds until the system is armed. | Refer to steps 1 and 2. |
| 16 | Unlock and open one of the rear passenger doors to trigger an alarm. (if available). | Refer to step 13. |
| 17 | Press and release the remote control's unlock button to stop the alarm. | Refer to Step 14. |
| 18 | Repeat the above steps with the other rear passenger door. (if available). | Refer to steps 1, 2, and 13. |

Roll up all windows, and exit the vehicle.

Take the Smart Key and the Smart Card Key away from the Vehicle. Place them 7 ft. (2 meters) or more away from the Vehicle.

| 1 | 9 | Press and release the remote control's lock button to start the arming process. | Refer to step 1. |
|---|----|---|--|
| 2 | 20 | Wait 30 seconds. | After 30 seconds, the Security LED starts flashing; the system is now armed. |

Perform the following check in a temperature-controlled environment. (50°-90° F)

| 21 | With the tip of a key, or Striker Tool pulled all the way out (PPO only), tap the center of the driver's door window to trigger the alarm. | The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up. |
|----|--|--|
| 22 | Press and release the remote control's unlock button to stop the alarm. | Refer to Step 10 |

NOTE: If the alarm does not trigger during functional verifications the Smart Key and Smart Card Key might be too close. Move them farther from the vehicle and test the system again.

NOTE: If the alarm does not trigger during the Glass Breakage Test, increase the GBS sensitivity to the next setting and test again.

NOTE: If you do not disarm the system, the alarm will last 20 seconds. It is not necessary to check the alarm duration.

| ТОҮОТА | RAV4 | 2009- |
|-------------|----------------|--|
| CHECKLIST - | these points l | MUST be checked to ensure a quality installation. |

Vehicle Function Check

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

TOYOTA RAV4

2009-

CHECKLIST – these points **MUST** be checked to ensure a quality installation.

| Function | | Function |
|---|---|--|
| Air Bag Warning Light 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 sys- tem malfunction. |
| Track/Skid Control Light (if equipped) If the warning light remains on, it may indicate a system malfunction. | | Front Wiper/Washer |
| HVAC | | Hood Latch Release |
| Power Locks (if equipped) | | Passenger Air Bag Switch (if equipped) |
| Power Windows (if equipped) | | Rollover Side Curtain Air Bag Switch (RSCA) (if equipped) |
| Power Seats (if equipped) | | Tire Pressure Monitoring System (TPMS). |
| | - | Prior to TPMS activation and Pre-delivery Service |
| Horn | | (PDS) of the Vehicle the TPMS light will blink when IG is turned on. |
| Gauges | | 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. |