PREPARATION

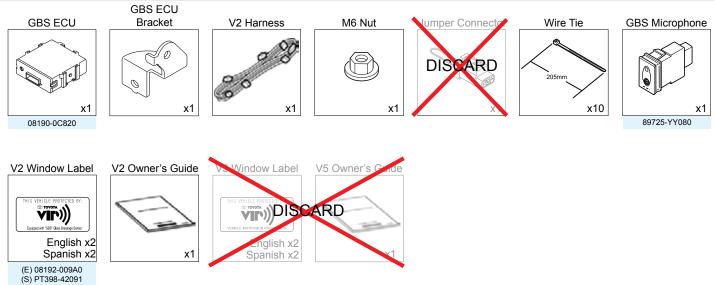
# 2012– TVIP V2 GLASS BREAKAGE SENSOR (GBS)

## Part #: PT398-03122

## Conflicts:

Do not install into Vehicles without Factory Alarm System.

#### Kit Contents



Service Part #'s

#### Additional Items

(may be required)

ltem#	Description

# Recommended Sequence of Application

ltem#	Description

## **Recommended Tools**

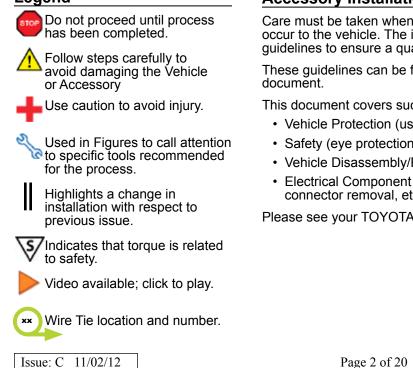
Personal & Vehicle Protection	Description
Safety Glasses	
Safety Gloves	(Optional)
Vehicle Protection	Blankets, Parts Boxes
Special Tools	
Striker Tool	CAD-E IADS P/N ALL 02-016-01
Installation Tools	
Screwdriver	#2 Phillips, Flat Blade Jeweler's
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Side Cutters	
Torque Wrench	Battery: 61 in•lbf (6.9 N•m),
	Passenger's Knee Airbag: 88.5 in•lbf (10 N•m)
Таре	Clear, Electrical
Socket	10mm, extension
Special Chemicals	
Cleaner	VDC Approved Cleaner
Glass Cleaner	Household Glass Cleaner

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### Legend



#### Accessory Installation Practice (read before installation)

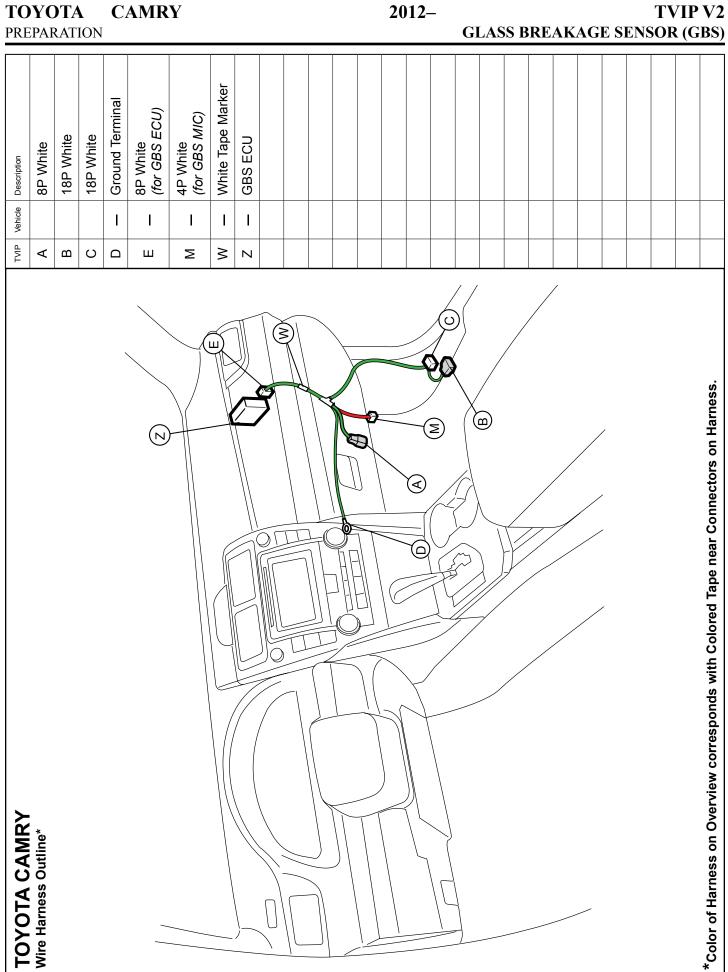
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices"

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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# **TVIP V2**

PROCEDURE

Disassembly Overview	1	Glove Box Under Cover
STOP	2	PS Step Cover
	3	PS Cowl Cover
	4	PS Dash Side Cover
	5	Knee Airbag (Do not disconnect connectors)
(5)	6	Glove Box
The second se		
2		
		sconnect all Corresponding
		onnectors.

## 1. Vehicle Disassembly.

- a. Place the Vehicle in Park with the Parking Brake set.
- b. Disconnect the Negative Battery Terminal.
  - Note the Battery Cable Position as it will be re-installed in the same position.

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

c. Dislodge the Glove Box Under Cover.

d. Disconnect the Vehicle's Connector from the Glove Box Under Cover.

e. Remove the Passenger's Side Step Cover.

- f. Remove the Passenger's Side Cowl Cover.
  - Remove 1 Nut.



**NOTE:** If the clips stays in the vehicle, make sure to remove and re-attach to the Cowl Cover.

g. Remove the Passenger's Side Dash Cover.

- h. Dislodge the Passenger's Knee Airbag carefully.
  - Remove 3 Bolts



**CAUTION:** Do not disconnect the Vehicle's Connector.

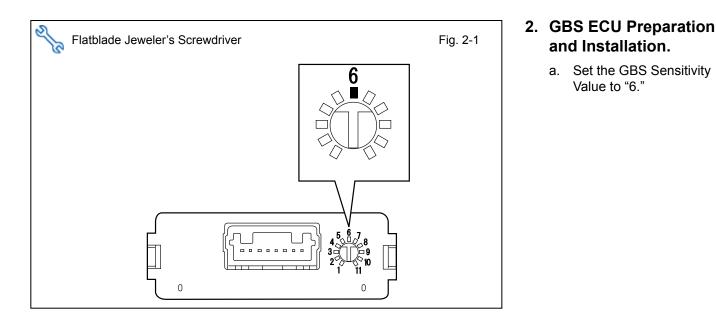
- i. Wrap the Airbag in a Blanket or the like as shown.
- Place the Airbag on top of the j. TVIP box.

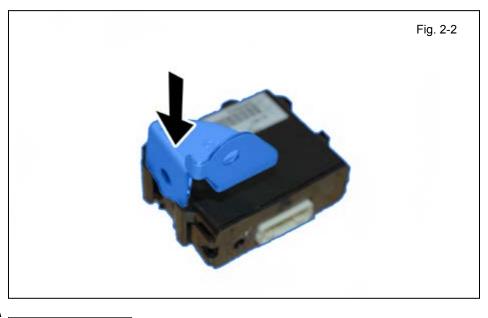
CAUTION: Prevent stress on the Airbag Wire.

k. Remove 2 Screws from the bottom of the Glove Box.

- Open the Glove Box. Ι.
- m. Dislodge the Glove Box.
  - Remove 3 Screws.

- n. Remove the Vehicle's clamp on the top left side of the Glove Box.
- o. Disconnect the Vehicle's Connector.
- p. Remove the Glove Box Light.





b. Attach the GBS ECU Bracket to the GBS ECU.

c. Install the GBS ECU using the supplied Nut.



**NOTE:** Make sure the Guide Pin is seated correctly and verify that the Nut is tightened securely.

## 3. V2 Harness Installation.

a. Connect the V2 White 8P Connector to the GBS ECU.

b. Use the V2 Harness Clip to secure it to the hole on the Vehicle's Reinforcement.

c. Use the V2 Harness Clamp to secure it to the Vehicle Harness.



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**NOTE:** Place the V2 Harness parallel to the Vehicle Harness.

**NOTE:** Make sure to follow steps above to avoid interference with the Glove Box.

d. Remove the Tape securing the Vehicle's 8P Pre-connector.

e. Connect the V2 White 8P Connector to the Vehicle's 8P Pre-Connector.

## **TVIP V2 GLASS BREAKAGE SENSOR (GBS)**

f. Use the V2 Harness Clamp to secure it to the Vehicle's Harness.



NOTE: Place the V2 Harness parallel to the Vehicle Harness.

NOTE: Make sure to follow steps above to avoid interference with the Glove Box.

g. Route the V2 Ground Wire across the Glove Box area.

- h. Secure the V2 Ground Wire to the Vehicle Harness using 1 Wire Tie.
- i. Attach the V2 Ground Wire to the HVAC Wire Clamps along with the Vehicle Harness.

j. Secure the V2 Ground Wire to the Vehicle Harness using 1 Wire Tie.

k. Remove the Bolt from the Vehicle's Ground Terminal.



**NOTE:** Do not remove the Vehicle's Ground Terminal.

I. Secure the V2 Ground Terminal to the Vehicle's Ground Terminal using the same Bolt.

#### Vehicles With Smart Key

- m. Route the V2 Harness toward the Passenger's Side Cowl area.
- n. Secure the V2 Harness to the Vehicle Harness using 3 Wire Ties.

# Vehicles Without Smart Key

- o. Route the V2 Harness toward the Passenger's Side Cowl area.
- p. Secure the V2 Harness to the Vehicle Harness using 2 Wire Ties.

 q. Disconnect the Vehicle's White 18P Connector from the Passenger's Side Cowl Connector Block.

r. Connect the V2 White 18P Connector to the Vehicle's White 18P Connector.

s. Plug in the V2 White 18P Connector to the Vehicle's Connector Block.

- t. Secure the 18P Connectors to the Vehicle Harness using 1 Wire Tie.
- u. Secure the V2 Harness to the Vehicle Harness using 1 Wire Tie.

## TOYOTA CAMRY PROCEDURE

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#### 4. Microphone Installation.

- a. Reassemble the Vehicle except for the Glove Box Under Cover.
- **NOTE:** When reinstalling Knee Airbag, make sure to tighten the Bolts to 88.5 in•lbf (10 N•m).
- **VERIFY:** That all Connectors are plugged in.
- **VERIFY:** That panels fit together properly, with no uneven gaps.

b. Install the GBS Microphone to the Glove Box Under Cover as shown.

- c. Connect the V2 White 4P Connector to the Microphone's Connector.
- d. Reconnect the Vehicle's Connector.
- e. Reinstall the Glove Box Under Cover.

## 5. Complete the Installation.

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

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.

- 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 off its protective backing.



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CAUTION: Do not touch the adhesive surface.

d. Attach the Label as shown.

NOTE: Make sure to Align the STOP Label according to Etching or

Other Label.

REPEAT: steps b-d with the other Window.

Issue: C 11/02/12

e. Position the Negative Battery Cable at the original factory position.



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Tighten the Nut to 61 in•lbf • (6.9 N•m)

CAUTION: Do not touch the Positive terminal.

- f. Clean up and Remove trash.
- Sealed in its protective bag, g. place the Owner's Manual in the Glove Box.
- h. 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.
- i. Reset the Moon Roof. (if equipped)
  - Turn the ignition "ON."
  - · 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.

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#### **Accessory Function Checks**

Roll up all windows, and exit the vehicle with the remote.

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



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

Perform		Look For	
1	Lock the doors 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.	

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

3	With the tip of a key, or Striker Tool pulled all the way out (PPO only), tap the center of the driver's door windows to trigger the alarm.	The horn sounds repeatedly. The headlights flash repeatedly. The turn signal lights flash repeatedly. The Security LED lights up.
4	Insert the key into the driver's door key cylinder and turn it toward the back of the vehicle to stop the alarm.	The horn stops sounding. All the lights stop flashing and/ or turn off. The Security LED turns off.

**For Smart Vehicles:** 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 still does not trigger during the section 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.

#### Vehicle Appearance Check

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

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

#### **Vehicle Function Checks**

		Function	Function
En	ter the	Vehicle	
		Dome/Courtesy Lights	Steering Wheel Column Adjusts Without Interference
		Horn	

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#### Start the Vehicle

· · · ·	Vernicie -			
	Starter		Gauges	
	Panel/Switch Illumination		ABS Light (if equipped) If the warning light remains on, it may indicate a system malfunction.	(ABS)
	Lamp Failure Sensor If the warning light remains on, it may indicate a system malfunction.	Ì	Track/Skid Control Light (if equipped) If the warning light remains on, it may indicate a system malfunction.	3
	Seat Belt Warning Light If the warning light remains on, it may indicate a system malfunction.		Tire Pressure Monitoring System (TPMS) Prior to TPMS activation and Pre-delivery	
	Air Bag Warning Light If the warning light remains on, it may indicate a system malfunction.	20	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)	CRUISE	hicle the TPMS light will illuminate for a few seconds and go off when IG is turned on.	

#### 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 Lights	Fog Lights (if equipped)
	High Beams	Accessory Controls/Illumination (if equipped)
	Power Side Mirrors (if equipped)	Convenience Memory Settings (if equipped)
	Power Sliding Door (if equipped)	Rear Sunshade (if equipped)

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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