



General Applicability:

2018-19 Toyota Sienna

Issues

Updated CAN wire location and attachment

Kit Contents:

Item#	Component Description
1	Stay Bar (Strut)(right)
2	Stay Bar (Strut)(left)
5	Control Box
6	Control Box Bracket
7	Front Switch w/Harness
8	Rear Switch (Factory Style)
9	Rear Buzzer
10	BUS Box w/Harness
11	Main Harness
12	Power Supply Harness
13	Rear Button / Buzzer Harness
14	Lock Control Harness
15	Hardware bag (Screws)

Installation Kit Contents:

Item#	Component Description
1	16mm Hole Bit
2	Warning Labels
3	Wire Ties

Recommended Tools:

Safety Tools	
Seat/ Floor Covers	Blankets
Installation Tools	
8mm Socket / Ratchet	Drill / Assorted Bits
10mm Socket / Ratchet	Side Cutters
NRT-Nylon Removal Tool	Razor Knife
Hook Tool	#2 Phillips Screwdriver
Pick	Small Flat Screwdriver
Special Tools	

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.
	CRITICAL PROCESS: Proceed with caution to ensure a quality installation. These points will be audited on a completed vehicle installation.
	TOOLS & EQUIPMENT: This calls out the specific tools and equipment required for this process.
	REVISION MARK: This mark highlights a change in installation with respect to previous issue.

PRECAUTION / INSTALLATION NOTES:

- After **Safety** mandated preparatory steps have been taken, the installation sequence is the suggested method for completing the accessory installation.
- When prying panels, use masking tape on all surfaces that a tool may come in contact with to prevent marring.
- After a wire tie is fully fastened, cleanly cut excess wire tie length with a pair of wire cutters.
- The wiring information is on an “as is” basis without any representation or warranty. It is the installer’s responsibility to verify any circuit before interfacing with it using a digital multi-meter.
- Manufacturer’s service documents can be used for any vehicle disassembly that may be depicted differently from what the instruction states.
- To ensure safety and normal usage of the liftgate, please let a professional complete the install. Do not dismantle the liftgate product, may cause damage to vehicle.
- Start engine before installation; check dashboard display function, check button operation, and check for scratches or damage to exterior and interior. Report any issues immediately.
- Check whether the Tailgate can normally open and close. Check that interior lights are working with tailgate operation.
- Do not change any wires with engine ON.

A. Pre-Installation Precaution and Preparation

1. 2018-19 Toyota Sienna. (Figure A)
2. Familiarize yourself with the installation instructions. Inspect kit components to verify everything is present, there is no damage, and to familiarize yourself with the parts.
3. Use Seat and Floor protectors to avoid damage to vehicle surfaces.



Disconnecting the battery prior to any ground or harness removal/ tapping to prevent possible vehicle damage is recommended. The battery may be temporarily reconnected and disconnected throughout the installation process to perform various tasks. However, prior to doing so all connectors and harnesses must be reassembled and reconnected. Once tasks are completed disconnect battery until installation is complete and Electric Tailgate system is ready to be tested. After testing, the vehicles interior may be re-assembled. Disconnecting the battery may cause certain vehicle settings to be lost. Manufacturer's recommendations for the battery removal should be followed.

B. Disassemble Vehicle Trim

1. Detach upper tailgate cover by using a Nylon Removal Tool /NRT and prying along upper edge. (Figure B1a-b) 
2. Using a Nylon Removal Tool /NRT, release the side/corner trim panels. The trim panel will stay attached to the main trim panel. By hand and NRT release the main tailgate trim panel. (Figure B2a-c) 

Figure A1



Figure B1a



Figure B1b



Figure B2a



Figure B2b



3. Using a Nylon Removal Tool /NRT, remove the rear grab-handle trim piece.


(Figure B3a-b) 

Figure B2c

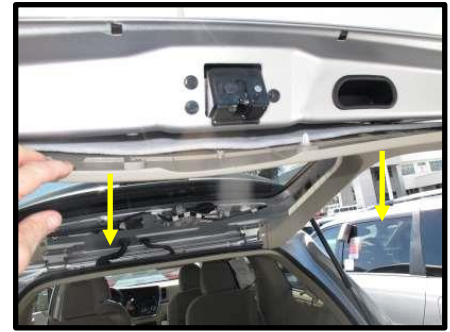


Figure B3a



Figure B3b




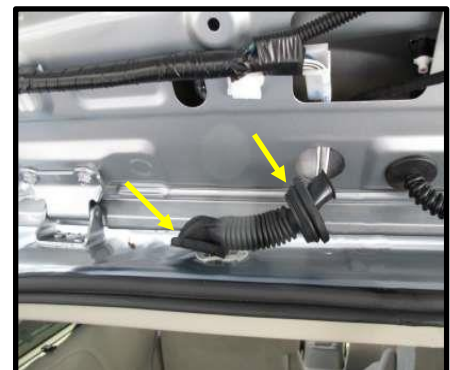
4. Using a Nylon Removal Tool /NRT, pry rubber harness gasket away from liftgate and vehicle panels. (Figure B4a-b) 

Figure B4a



Figure B4b



5. Pry rubber seal gasket away from liftgate and vehicle panels. **NOTE: be careful of gasket**



sealer. It can stain fabric surfaces. (Figure B5)



6. Remove rear driver side panels, upper or lower depending on preference of harness routing. (Figure B6)

7. Remove lower sliding door sill panel. (Figure B7)



Figure B5



Figure B6a



Figure B6b



Figure B7a



Figure B7b



8. Remove lower front door sill panel.
(Figure B8a-b)

Figure B8a



Figure B8b




9. By hand, twist off the plastic panel nut. Pull up and remove lower panel. (Figure B9a-b) 

Figure B9a



Figure B9b



10. Using a 10 mm socket wrench, remove the lower bolt securing the lower dash trim panel.
(Figure B10)

Figure B10




11. Using a NRT pry the Button trim panel from the upper dash. (Figure B11a-b) 

Figure B11a



Figure B11b



12. By hand pry lower dash forward. Do not remove, only access to ECU is needed. (Figure B12)

Figure B12



13. Using a hook tool pull out on retaining clips of the rear tailgate air struts. Do not remove clip completely, by wedging hook tool between clip and strut should allow removal of the strut.

Figure B13a




Figure B13b



NOTE: To perform this process the installer



must have a second person to hold the tailgate up or jack stand to hold tailgate in place. (Figure B13a-b) 

14. Using a 12mm Socket wrench, remove bolts holding upper(liftgate side) Ball mount bracket. Re-install new brackets(44600580 & 44600580) and bolts using a 5mm Allen wrench or socket.



NOTE: Must use replacement Allen bolts for clearance.


(Figure B14a-b) 

Figure B14a



Figure B14b



C. Electric Strut Bar Installation

1. Install new electric struts into place making sure that the strut marked **RIGHT** is on the Passenger side. Push upper and lower strut sockets onto strut ball with harness down and facing the vehicle. Continue installing Drivers side strut.



(Figure C1a-b)

Figure C1a



Figure C1b



3. Pop out the factory bushing. Route strut cable through bushing opening and out through liftgate opening. Use wire puller or cable to assist in routing cable through liftgate. (Figure C3a-c)

Figure C3a



4. Remove slack in cable and rubber casing. Push bushing into the hole. Complete process on opposite side. Continue routing cable through liftgate area towards control module position near upper center liftgate. (Figure C4a-c)

Figure C3b



Figure C3c



Figure C4a



Figure C4b



Figure C4c



D. Rear Cable Routing

1. Locate Tailgate button connector (White connector). Disconnect the connector and insert Button T-harness 3040122001199. (Figure D1a-b)

2. Locate Tailgate latch connector (6 pin Black connector). Disconnect the connector and insert Lock T harness of 3040122001199. Continue routing cable towards Control Box area. (Figure D2a-b)

3. Mount buzzer (1901454235500) and switch harness (3140122001030) to rear tailgate in a location that will not interfere with tailgate trim panel. This cable also routes into rear switch. Mount switch (PBB2800020000) to rear grab handle area. (Figure D3a-c)

Figure D1a



Figure D1b



Figure D2a



Figure D2b

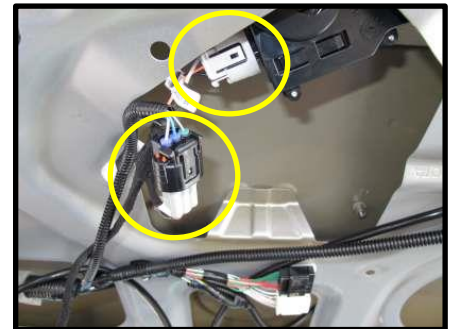
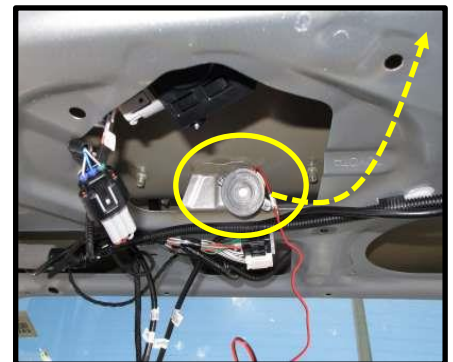


Figure D3a



E. Control Box Location

1. Temporarily mount Control Box to center front opening of the liftgate. The Control box will mount above the support frame. Install the mounting bracket to the lower side as shown. The screws should run through the bracket up to the module. Do not crush the bracket by



tightening the screws too tight. **NOTE: Leave control box hand tight until installation is complete.** (Figure D1a-c)



2. Route the main harness (3120122002006) through the rubber gasket. Allow enough harness to extend towards rear of vehicle to reach Control box. **NOTE: use a wire puller to pull harness through gasket. Protect harness connectors by taping over them so they pass through easier.** (Figure E2)



Figure D3b



Figure D3c



Figure E1a



Figure E1b



Figure E2



3. Continue routing main harness into liftgate.
 Once inside liftgate route harness following factory harness to rear of liftgate and Control box securing harness with supplied wire ties.
 (Figure E3a-b)

Figure E3a

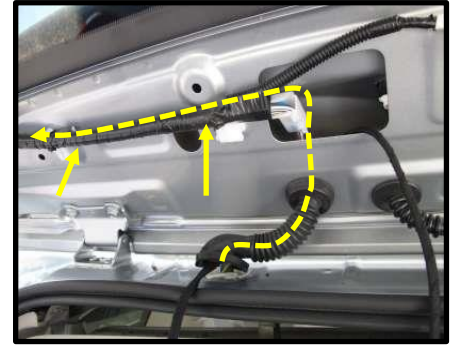


Figure E3b




4. Using an 10mm socket install ground terminal of the main harness to the stud shown in figure.
 (Figure E4) 

Figure E4



5. Now route main harness into vehicle. Continue routing main cable through gasket between headliner and over to rear side panel. Continue behind side interior panel or lower panel depending on routing preference. **DO NOT route harness where it may interfere with seat belt or air bags.** (Figure E5a-b)

Figure E5a

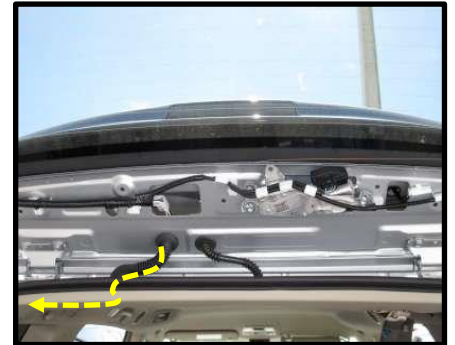
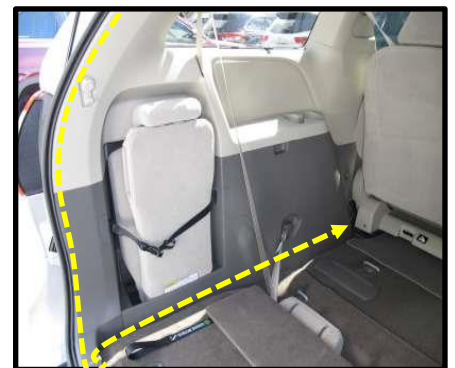


Figure E5b



6. Once harness exits passenger door area, tuck harness alongside trim panel and across sill area (Figure E6)

Figure E6



7. Continue routing cable forward tucked under lower kick panel and into driver side sill area. (Figure E7)

Figure E7



F. Front Cable Routing

1. Locate Main power supply connector inside fuse box opening (White connector) and un-plug. Plug Power T- harness(3140122001028) into the ECU and the factory connector into the other half of the T-Harness. Route cable and ground eyelet down to door sill. Connect ground loop eyelet to the factory stud shown. Continue routing power cable towards main harness in kick panel. (Figure F1a-d)

Figure F1a

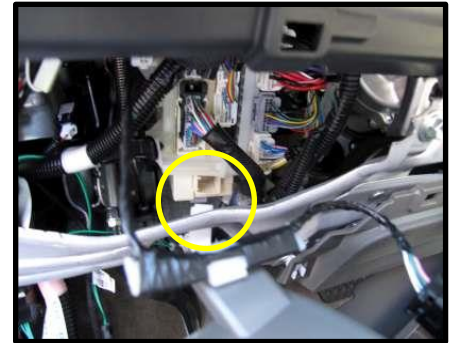



Figure F1b



Figure F1c



2. Pop out one of the blank button inserts of the button panel. The insert button (PBB2866010001) into the panel. Connect cable from CAN BUS Module (3140122001024) to the button and route cable down to kick panel.

(Figure F2a-c) 

3. The 2018-2019 Sienna's use a different CAN BUS wire connection. Cut the 2 green wires from the OBD T Harness (3040160001258). You can add male spade connectors to the green wires, or use a Scotch lock, or if you prefer to solder these wires to the CAN BUS wires.


(Figure F3a-b) 

Figure F1d



Figure F2a



Figure F2b



Figure F2c

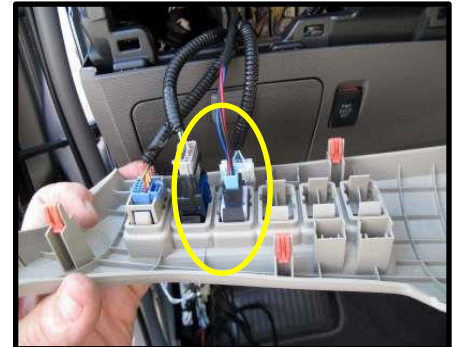


Figure F3b



4. On the ECU middle row disconnect the 30 Pin/white connector. Locate the white and grey wires at pin# 13 and 14. Connect as listed:



Liftgate wire Can-H Green to Vehicle wire



Can-H Gray.




Liftgate wire Can-L Green/Black to Vehicle



wire Can-L White.

Installation shows using Male spade connector and T-Taps. Re-install into connector into ECU and route green wires over to driver kick panel.

(Figure F4a-C) 

5. Install CAN BUS module onto driver kick panel using supplied Velcro. Connect Can Bus wires, and button cable to CAN BUS module.

(Figure F5a-b) 

Figure F4a

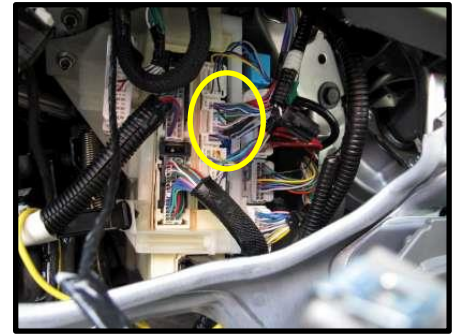


Figure F4b



Figure F4c

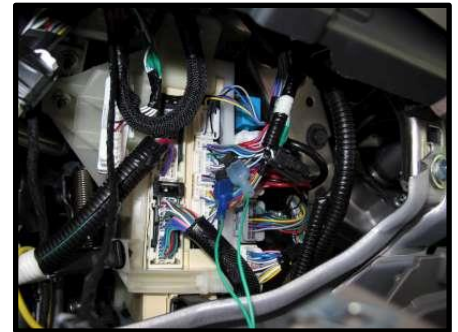


Figure F5b



Figure F5b



6. Connect CAN BUS cable to Main Cable.

Connect Power cable to Main Cable.

(Figure F6a-b) 

Figure F6b



G. Control Box Connections

1. Attach harnesses per diagram and connector fit.

(Figure G1a-b)

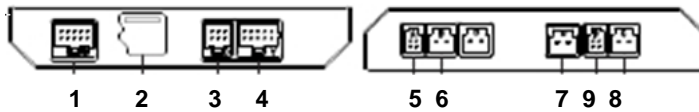


Figure G1a



1.Tailgate Button/Lock harness

3.Button/Buzzer Harness

5.Main Harness

6.Main Harness

7.Passenger Stay Bar Harness

8.Driver Stay Bar Harness

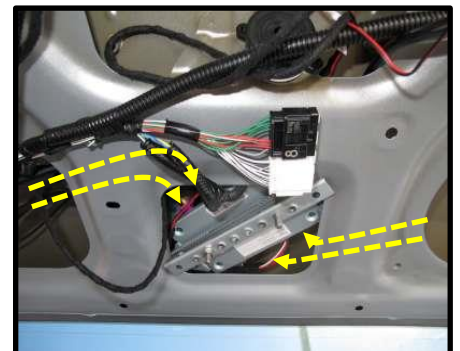
9.Driver stay Bar Harness

Figure G1b



2. Mount Control box permanently. Use wire ties to clean up all routing making sure cables do not rattle or interfere with any other vehicle parts or operation. (Figure G2)

Figure G2



3. IMPORTANT: Manually close the tailgate




door to initialize the Power Lift Gate System.

Function test the System to verify proper

operation as follows.

H. System Testing

1. With tailgate in the closed position, push the front button to open and close the liftgate.
2. Open tailgate using rear outer factory button.
3. Close tailgate using rear inner button.
-  4. With Keyless Remote, press unlock button **3 times** to open or close liftgate.
5. Check safety Intelligent anti-pinch. Close liftgate using button, put obstacle in path of closing door. Door will automatically stop and reverse position.

H. System Adjustments

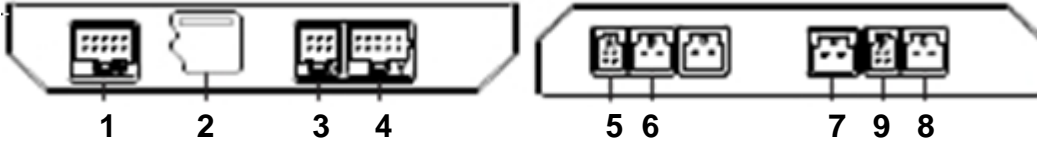
1. **Height Adjustment:** Manually adjust tailgate to preferred height. Press and hold inside **TAILGATE BUTTON** until system beeps 2 times, then release. Cycle system to verify height adjustment.
2. **Speed Adjustment:** Press and hold inside **TAILGATE BUTTON** until system beeps 5 times, then release 10 quick beeps= fast, 1 long beep=slow (default)
3. Video of adjustments available on YouTube @ <https://www.youtube.com/watch?v=HZY5rlysk4Y>

I. Reassemble Trim and Complete Installation

1. Re-install rear tailgate trim panel.
2. Re-install all other trim panels previously removed.
3. Check all previously disconnected factory connectors and accessories to ensure they are all connected and operational.

**For Customer or Technical support please call VOXX Support:
1-800-645-4994
9 AM – 6 PM (EST -Eastern
Monday - Friday**

HARNESS CONNECTIONS:



POWER WIRE

- A. Connect to Control box port. -5
- B. Connect to Control box port. -6
- C. Connect to BUS box wire -D
- D. Connect to Power supply unit -B
- E. Ground



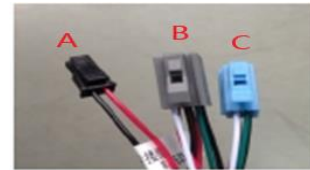
POWER SUPPLY UNIT

- A1-A2 Power in/out
- A. Ground
- B. Connector joint power wire -A



REAR BUTTON WIRE

- A. Buzzer -A
- B. Control box port -3
- C. Rear button port



BUS BOX WIRE

- A. Front button terminal
- B. Connect to BUS box
- C. Connect to communication -C
- D. Connector joint power wire -B



OBD ADAPTER

- A. Not used
- B. Connect to BUS box wire -C and Vehicle wires
- C. Not used



LOCK CONTROL WIRE

- A. Tailgate button in
- B. Tailgate button out
- C. Lock control in
- D. Lock control out
- E. Control box port -1



ELECTRIC STRUT

- A. Connect to Control box port -8-9
- B. Connect to Control box port -7



Buzzer

- A. Connect to Rear button wire -A

