



General Applicability:

2018-19 KIA Sorento

Issues

Current Kit does not allow for CAN DATA remote access

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.

TECHNICAL BULLETIN

ADVLFTKSO – KIA Sorento Power Liftgate

2018-19 KIA Sorento: CAN Data change.

Due to changes in the CAN Data from 2017 vehicles, the 3x Unlock button or Tailgate button on the Factory remote does not work to open or close rear lift gate. The following bulletin describes an alternate process to allow use of the factory remote.

You will need the following items to complete this installation:

1. PAC TR-7 Module
2. 12-volt 30-amp relay
3. Inline fuse holder with 5-amp fuse.



TR-7 Programming- Version, Event Pulses, and Timer

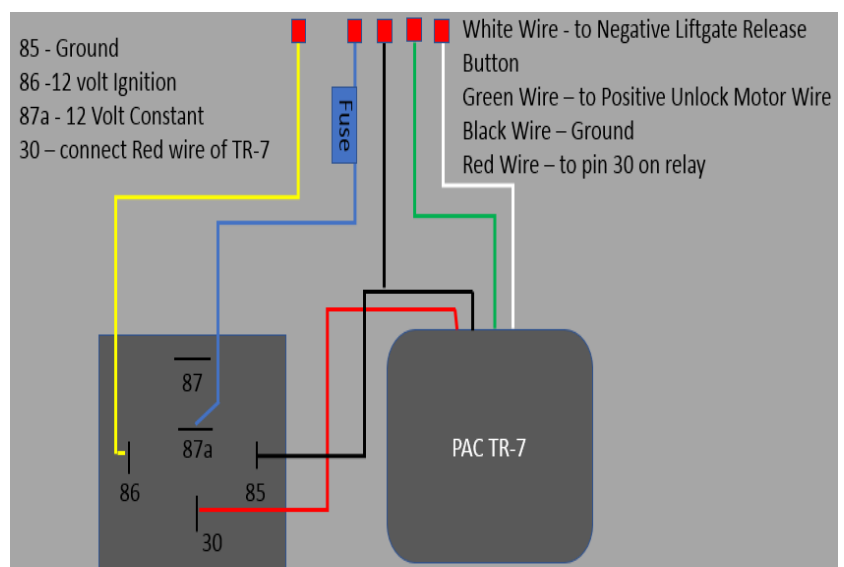
1. With Red wire disconnected from power source and Black wire grounded. Slide switch on TR-7 to right/on.
2. Apply 12 volts to Red wire.
3. "Pulse" ground-Brown wire 14 times (version 14). Wait 3 seconds.
4. LED will flash 14 times, if OK proceed to next step.
5. "Pulse" ground-Brown wire 2 times (Event pulses). Wait 3 seconds.
6. LED will flash 2 times, if OK proceed to next step.
7. "Pulse" ground-Brown wire 1 time (Start Timer).
8. LED will flash rapidly 1 time-wait 3 seconds (minutes).
9. LED will flash rapidly 2 times-wait 3 seconds (seconds in tens place).
10. LED will flash rapidly 3 times – "Pulse" ground-Brown wire 5 times (5 second timer).
11. LED will flash 5 times.
12. LED will then flash rapidly 4 times to indicate timer is done.
13. LED will flash rapidly 3 times. Slide programming switch to left/off.



If you make a mistake start back at step 1.

Pre-Wire Installation- Relay to TR-7 assembly

1. Connect Red wire of TR-7 to pin 30 of relay.
2. Connect black wire of TR-7 and pin 85 with lead to a male blade connector.
3. Green wire will end with Male blade connector.
4. White wire will end with Male blade connector.
5. Pin 87a, lead with fuse holder ending with Male blade connector.
6. Pin 86, lead ending with Male blade connector.
7. Pin 87, N/A



NOTE: TR7 allows for a 4x press unlock on the factory remote to open and close the tailgate.

2018 19 KIA Sorento's Have Non-Smart Key and Smart Key Configurations for vehicle wiring.

RELAY /TR-7 Assembly	2018-19 Sorento Non-Smart Key
<ul style="list-style-type: none"> • Ground wire - both • 12 Volt Ignition- relay • 12 Volt Constant-relay 	<ul style="list-style-type: none"> • Ground wire of Liftgate harness • Green(+) Ignition Switch, Black Con. 6 pin, pin#4 • Red(40A)(2018) Ignition Switch, Black Con. 6 pin, pin#1 • White(10A)(2019) Ignition Switch, Black Con. 6 pin, pin#1
<ul style="list-style-type: none"> • Pin 30, Red wire-both • White Wire - TR7 • Green Wire – TR7 	<ul style="list-style-type: none"> • Liftgate front button Negative Trigger–White wire • Passenger Unlock Motor Wire (+) - Brown wire IGPM - Dash Fuse Box, Black 46 pin connector, Pin #34

RELAY /TR-7 Assembly	2018-19 Sorento – with Smart Key
<ul style="list-style-type: none"> • Ground-Black wire (TR-7) • 12 Volt Ignition • 12 Volt Constant • Pin 30 – Red Wire (TR-7) • White Wire • Green Wire 	<ul style="list-style-type: none"> • Ground wire of Liftgate harness • Yellow(+) Dr. Kick Panel, White Con. 58 pin, pin#1 • Red(60A) Dash Fuse Box, Black Con. 2 pin, pin#2 • • Liftgate front button Negative Trigger–White wire • Passenger Unlock Motor Wire (+) - Brown wire IGPM - Dash Fuse Box, Black 46 pin connector, Pin #34

Installation of the TR-7 Assembly starts on Page 15 F3

A. Pre-Installation Precaution and Preparation

1. 2018-19 KIA Sorento. (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 #2 Phillips screwdriver, remove the screw at front edge of the corner trim. By hand pull out on trim to release fasteners. (Figure B2a-b) 

Figure A1



Figure B1a



Figure B1b



Figure B2a



Figure B2b



3. Using a #2 Phillips screwdriver, remove the 3 screws holding the large liftgate trim piece.


(Figure B3a-b) 

Figure B3a



Figure B3b




4. Using a small flat screwdriver, remove the small trim covers on the Liftgate pull handle. Then remove the handle by loosening the (2) 10mm bolts. Once the bolts have been removed pull trim down by hand. (Figure B4a-c) 

Figure B4a



Figure B4b



Figure B4c



5. Pry rubber harness gasket away from liftgate and vehicle panels. (Figure B5)

Figure B5



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

Figure B6




7. Remove headliner fastener using a NRT for harness routing. (Figure B7) 

Figure B7



8. Loosen rear driver side rubber gasket and remove lower door sill panel. (Figure B8a-b)

Figure B8a



Figure B8b




9. Using a NRT, pry off the hood release handle.
 Pull up and remove lower panel. Pull up and
 remove front lower panel. (Figure B9a-c) 

Figure
B9a



Figure
B9b



Figure
B9c



10. Remove the fuse panel door by hand.
 (Figure 10)


Figure
B10



11. 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
B11a



**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 B11a-b) 

C. Electric Strut Bar Installation

1. Install new electric struts into place making sure that the strut marked **LEFT** is on the Driver side. Push upper and lower strut sockets onto strut ball with harness down and facing the vehicle. Continue installing Passengers side strut. (Figure C1a-b)

3. Pop out the factory bushing. Route strut cable through bushing opening and out through liftgate opening. (Figure C3a-b)

Figure B11b



Figure C1a



Figure C1b



Figure C3a



Figure C3b



4. Remove slack in cable and rubber casing. Push bushing into the hole. Continue routing cable through liftgate area towards control module position. (Figure C4a-b)

Figure C4a



Figure C4b

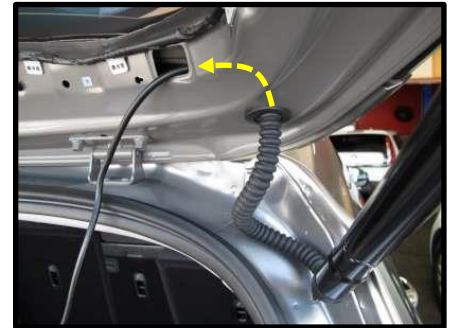


Figure C4c



D. Control Box Location

1. Temporarily mount Control Box to right rear brace of the liftgate. The Control box will mount above the support frame. Install the 1 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)

Figure D1a



Figure D1b



E. Rear Cable Routing

1. Locate Tailgate button connector (12 pin Black connector). Disconnect the connector and insert Button T-harness 4120360.

(Figure E1a-b)

2. Locate Tailgate latch connector (6 pin Black connector). Disconnect the connector and insert Lock T harness of ADVLFTKSO. Continue routing cable towards Control Box.

(Figure E2a-b)

Figure D1c



Figure E1a



Figure E1b



Figure E2a



Figure E2b



3. Mount buzzer and switch harness 4360730 to rear tailgate in location that will not interfere with tailgate trim panel. This cable also routes into rear switch. Temporarily leave switch hooked up for testing.

(Figure E3a-b)

Figure E3a



Figure E3b



4. Route the main harness 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 E4)

Figure E4



Figure E5a

5. 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 E5a-c)



Figure E5b



6. Using an 8mm socket install ground terminal of the main harness to the stud shown in figure.

(Figure E6) 

7. 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 E7a-b)

Figure E5c

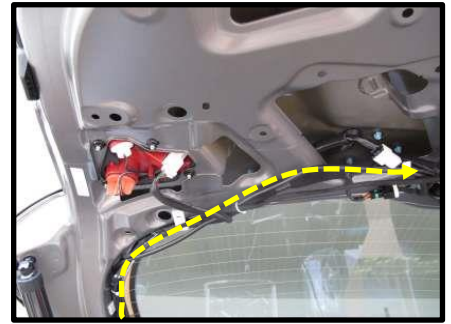


Figure E6



Figure E7a



Figure E7b



Figure E8



9. Continue routing cable forward tucked under lower B-pillar panel and into driver side sill area. (Figure E9a-b)

Figure E9a



Figure E9b



F. Front Cable Routing


1. Locate Main power supply connector inside fuse box opening (Red-Blue wires/ Grey connector). Connect X-large Tap connector (4120356) to the Red wire. Screw Tap cover into place. 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-f) 

Figure F1a



Figure F1b



Figure F1c

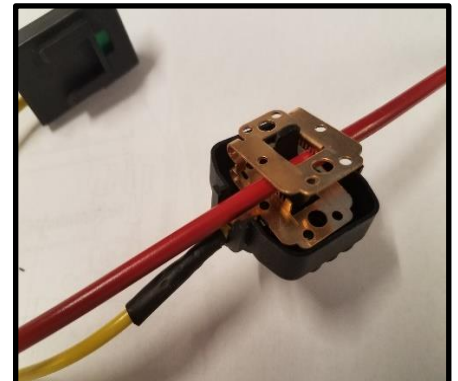


Figure F1d

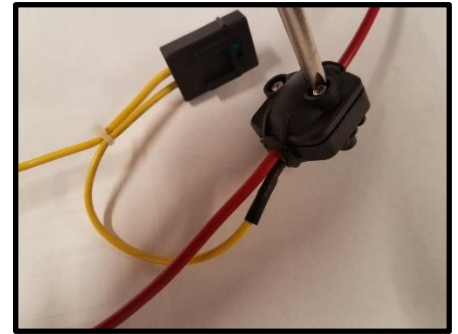


Figure F1e

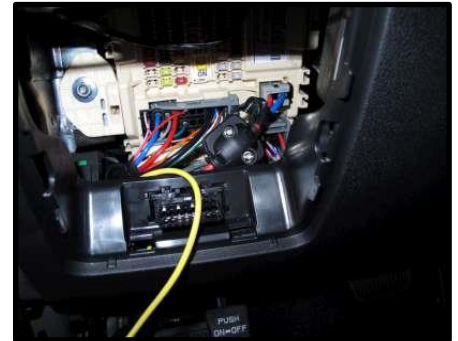
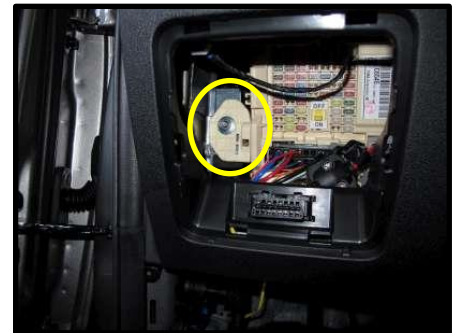


Figure F1f



2. Drill using 16mm bit and install switch /cable 4540012 into dash trim panel where indicated.

Figure F2a




Figure F2b



CAUTION: Drill bit is supplied for this switch, check size and clearance before drilling.



Route cable down to kick panel.

(Figure F2a-b) 



SERVICE BULLETIN

3. RELAY/TR-7 assembly install. **NOTE: This kit**



currently does not allow for CAN DATA




information to remotely open and close

liftgate. The following info will allow for a 4x

unlock on the remote open and close. Using

an NRT, loosening upper steering column

housing and tilting out of the way.

(Figure F3a-b) 

4. Turn steering wheel to left side. Using a Phillips

screwdriver remove screw. Turn steering wheel

to opposite side and remove other screw.

Remove 1 screw on lower side of panel and

remove panel. (Figure F4a-b) 

5. Locate the Ignition Switch Connector alongside

the steering column. Strip back the tape behind

the connector and locate the green and white

wires pins #4 and #1. Connect a T-Taps to each

of the green and white wires. Connect the wire

from pin 86 of the relay to the green

wire(ignition) and the wire from pin 87a of the

relay to the white wire(constant).

(Figure F5a-b) 

Figure
F3a



Figure
F3b



Figure
F4a



Figure
F4b



Figure
F5a



6. Add a T-tap to the ground wire of the main harness and connect the ground wire of the Relay/TR-7 assembly to it. (Figure F6a-b)



Figure F5b

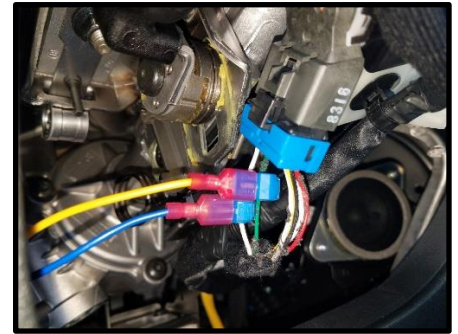


Figure F6a



Figure F6b



7. Add a T-tap to the white wire of the front liftgate button harness (installed F2) and connect the white wire of the Relay/TR-7 assembly to it.

(Figure F7a-b)



Figure F7a

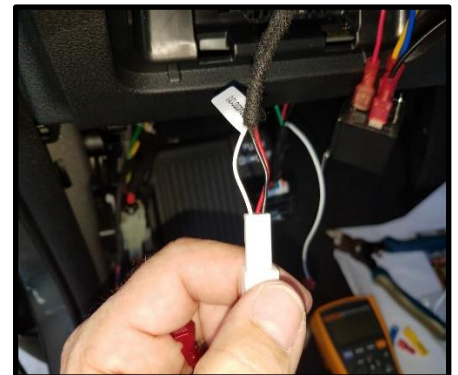
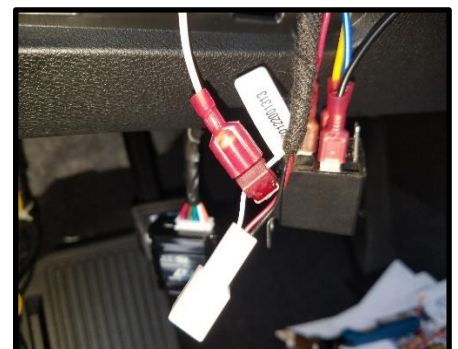


Figure F7b




8. Locate Passenger Unlock Motor wire – Brown wire at dash fuse box, black 46 pin connector pin#34. Connect a T-Tap to the brown wire. Connect the green wire from the Relay/TR-7 assembly to the brown wire. (Figure F8a-b) 

Figure F8a



Figure F8b



9. Wrap Relay/TR-7 and Fuse with foam tape and secure to prevent rattling. (Figure F9a-c)

Figure F9a



Figure F9b



Figure F9c



10. Install BUS Box to lower side kick panel wall with supplied double side tape. Route and plug in switch wires into BUS box. Connect BUS box cable to Main harness. (Figure F10a-c)

Figure F10a



Figure F10b

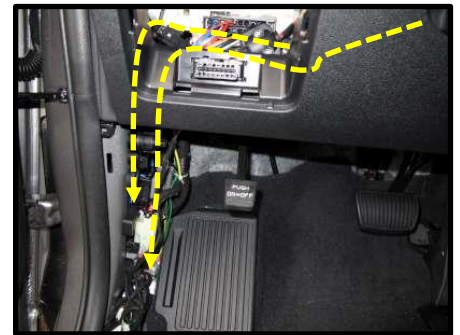


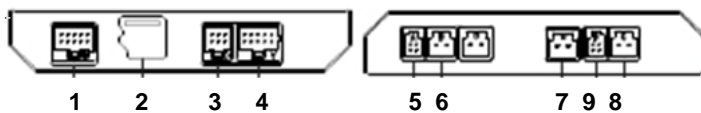
Figure F10c



G. Control Box Connections

1. Attach harnesses per diagram and connector fit.

(Figure G1a-b)



- 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 G1

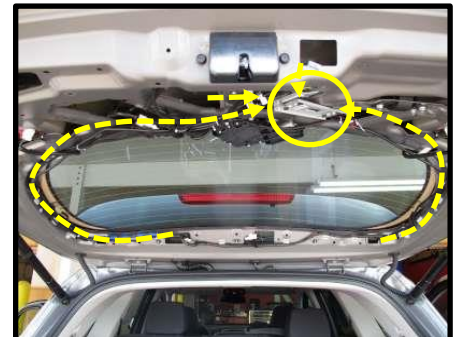


Figure G1b



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)

3. Before replacing Tailgate trim, connect rear button to proper wire for testing. (Figure G3)



4. 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 **4 times** to open or close liftgate. **(w/ Relay/TR-7)**
5. Check safety Intelligent anti-pinch. Close liftgate using button, put obstacle in path of closing door. Door will automatically stop and reverse position.

Figure G1c



Figure G2



Figure G3



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

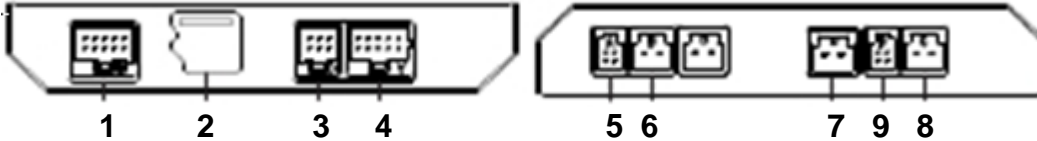
- 1. Re-install rear tailgate trim panel with rear button installed. (Figure I1)**
- 2. Re-install all other trim panels previously removed.**
- 3. Check all previously disconnected factory connectors and accessories to ensure they are all connected and operational.**

Figure I1



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

HARNESS CONNECTIONS:



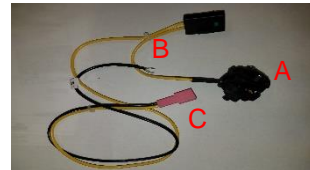
POWER WIRE

- 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



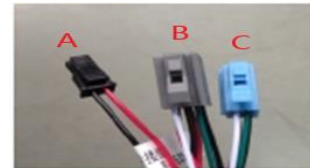
POWER SUPPLY UNIT

- A. Power out
- B. Ground
- C. 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. OBD out
- B. Connect to BUS box wire -C
- C. OBD in



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

