Vehicle-Specific Power Tailgate Lift System



Kia Carnival

2020-2023

Part no. ARKCNV20

Points to Note

- For safety and to ensure proper product use, we recommend professional installation. Do not attempt to disassemble or install the system yourself, as this may result in product damage or personal injury.
- Route each wire harness according to the instructions in this manual, securing them to the vehicle's factory harnesses with cable ties. Ensure the wiring is kept clear of fasteners and screw holes to prevent the harnesses from being crushed or pinched by trim panel clips and screws during reassembly.
- Some wire harness terminals (indicated by the red ellipses below) are left disconnected during manufacturing. Please insert these terminals into their corresponding connectors before routing the harnesses to prevent short circuits. Once routed, connect the remaining harness plugs (indicated by the blue ellipses) to the vehicle's factory plugs.



- Before beginning installation, inspect the vehicle's instrument panel display, verify that all buttons, doors, and windows operate correctly, and check for any pre-existing scratches on the interior or exterior. Report any issues to the customer immediately.

Installation Precautions

- Remove any metal accessories or hard objects from your person during installation to prevent damaging the vehicle's paint, seats, or interior. Carefully store all removed trim components in a safe location to avoid scratches.
- The illustrations in this manual are for reference only. While specific vehicle configurations may vary slightly from the pictures, the general installation methods remain the same.

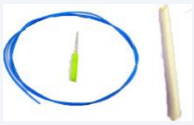
In the Box

1		Strut	Qty 2
2		Tailgate ECU	Qty 1 set
3		Wire harness	Qty 1 set
4		Power latch	Qty 1
5		Tailgate switch	Qty 1

Other Accessories

Screws, brackets

Recommended Tools



Threading tools



Quick release ratchet wrench set



Electric drill and drill bits



Other tools

Notice

This vehicle-specific kit converts the manual tailgate on the vehicle listed in this manual to power operation. Installation requires a good level of technical knowledge. Please read this manual in its entirety before you start.

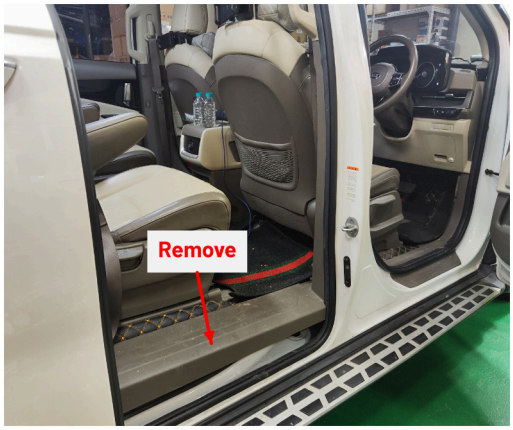
Use the correct tools during installation to prevent damage to the vehicle or the product. Please note that we cannot be held liable for any issues arising from improper installation.

Before starting the installation, disconnect the negative battery terminal and make sure the ignition is off and the key is removed or kept away from the vehicle.

Installation



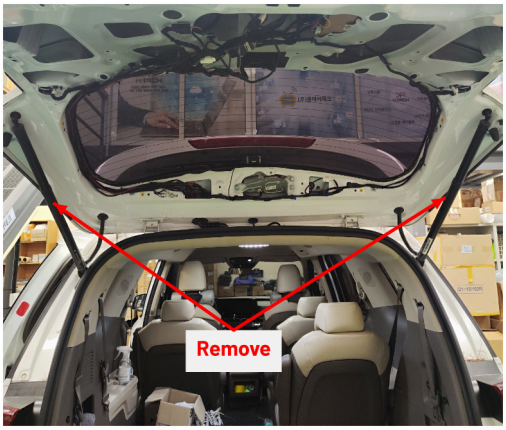
1 Remove the indicated fuse box trim panel and door sill panels.



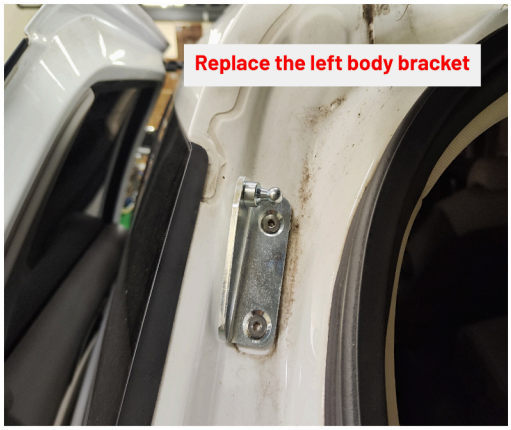
2 Remove the middle right step board.



3 Remove the tailgate trim panels.



4 Remove the factory gas struts. To do this safely, remove and replace one strut at a time.



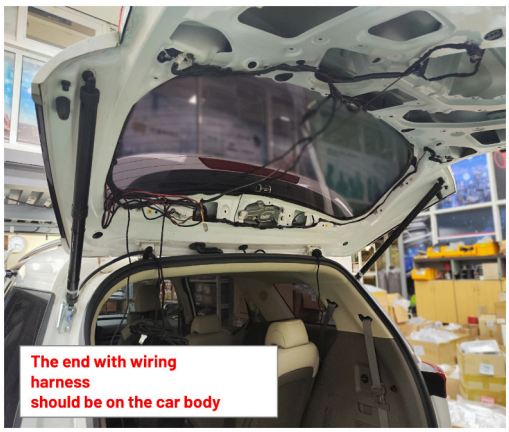
5 Replace the left body bracket.



6 Replace the right body bracket.



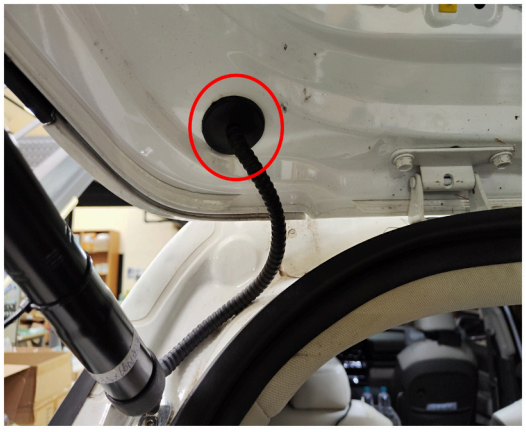
7 Replace the tailgate ball studs.



8 Install the electric struts(L for the left side, R for the right side, as indicated by the first letter of the strut code).



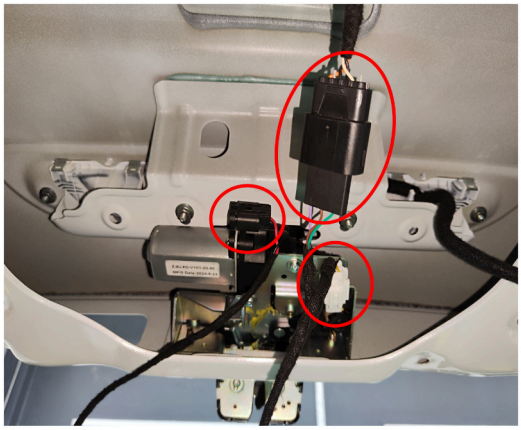
9 Thread the wire harnesses through the holes into the tailgate and route them as indicated.



10 Seal the holes on both sides securely.



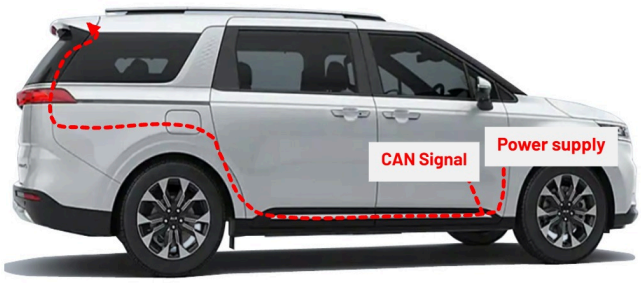
11 Remove the factory latch and install the new power latch.



12 Connect the connectors of the lock signal harness to the power latch.



13 Connect the connectors of the lock signal harness to the factory tailgate switch.

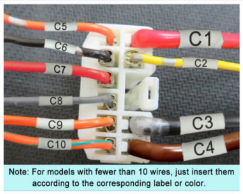


Routing only, no plug or power connection

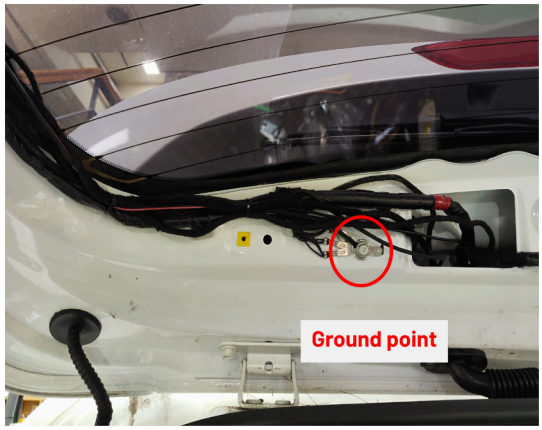
14 Route the power harness (if you need to install the front switch, route the switch wire harness in the same way).

15 Thread the power harness to the tailgate.

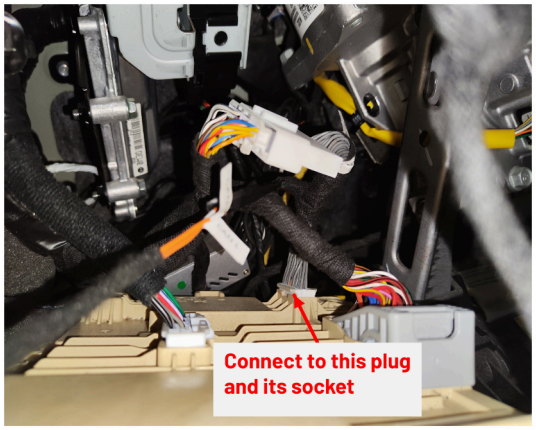




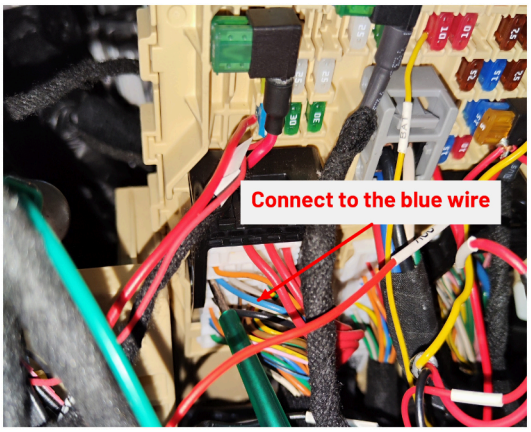
16 Insert the power harness terminals into the connector according to the diagram.



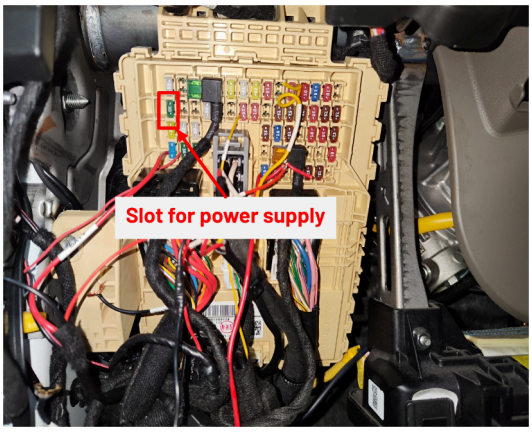
17 Connect to the ground at the indicated position on the tailgate.



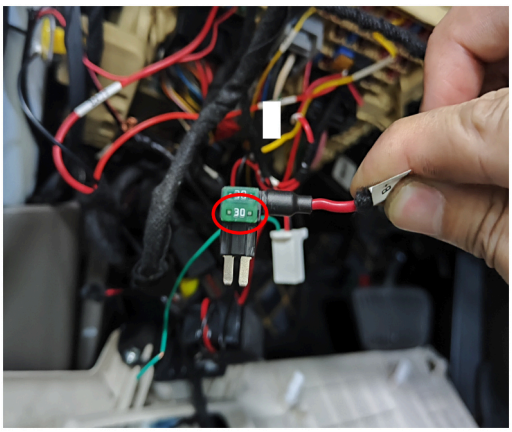
18 Connect to the indicated CAN plug and its socket behind the fuse box.



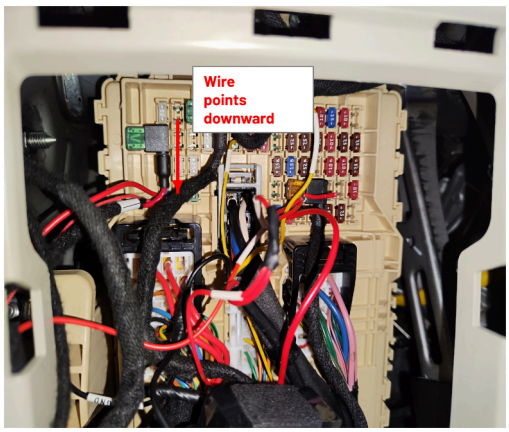
18.1 If you choose not to connect the CAN signal, connect the orange wire of the power harness to the indicated blue wire.



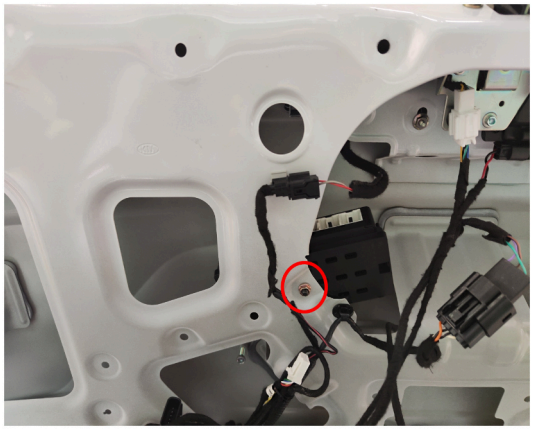
19 The power supply fuse slot is as indicated.



20 Move the fuse from the fuse box to the fuse tap.



21 Plug the fuse tap into the fuse box, paying attention to the direction.



22 Secure the tailgate ECU at the indicated position of the tailgate.



23 Insert the left and right strut wire harnesses①②, lock signal harness③, and power harness④ into the tailgate ECU in sequence.



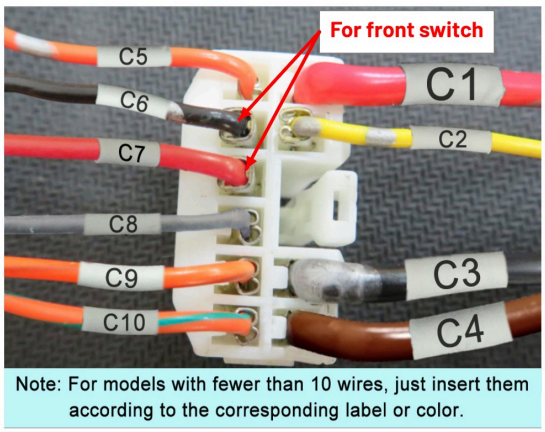
24 Press the new tailgate switch to close the tailgate once. The system completes initialisation. Test each function of the electric tailgate.



25 Install the new tailgate switch and reinstall all the trim panels.



(Optional) Drill a 21mm hole using the provided hole saw and fit the front switch.



Insert the two terminals of the front switch extension wire into the power harness connector according to the wire labels.

System Initialisation

1. Press the newly installed tailgate switch to close the tailgate automatically.
2. Press the exterior tailgate switch to open it; you will hear a long beep.
3. System initialisation is now complete.

Operating Instructions

1. Opening and Closing the Tailgate:
   - Press and hold the unlock button on the remote key;
   - Press the unlock button near the driver's seat three times;
   - Press the vehicle's exterior tailgate switch;
   - Press the newly installed tailgate switch to close the tailgate.
   - Press the front switch: hold for 4 seconds to open, or press briefly to close.
2. Pausing the Tailgate:

   While the tailgate is in motion, press any of the control buttons to pause it. Pressing a button again will reverse the tailgate's direction.

Configuring the Tailgate Switch Settings

1 Adjusting Closing Speed (5 Levels)

1. Press and hold the switch until you hear a single short beep.
2. Release the button; a short beep confirms the new closing speed is set.
3. Repeat this process to increase the speed by one level.

2 Adjusting Opening Speed (5 Levels)

1. Press and hold the switch until you hear two short beeps.
2. Release the button; two short beeps confirm the new opening speed is set.
3. Repeat this process to increase the speed by one level.

3 Voice Module Configuration

1. Press and hold the switch until you hear three short beeps.
2. Release the button; three short beeps confirm the voice module has entered configuration mode. (See the voice module operation manual for details.)

4 Muting the Voice Module

1. Press and hold the switch until you hear four short beeps.
2. After releasing the button, you will hear three four beeps indicating that the voice module has been blocked.

5 Setting the Maximum Opening Height

1. Press and hold the switch until you hear five short beeps.
2. Release the button; a long beep confirms the new height setting is saved.

6 Remote Key Unlock Button Sensitivity(Quick/Slow Press)

1. Press and hold the switch until you hear the sixth short beep.

2. Release the button; a long beep followed by a short beep confirms the switch between quick and slow presses of the unlock button has taken effect.

7 Remote Key Activation (Double-Press vs. Triple-Press)

1. Press and hold the switch until you hear the seventh short beep.
2. Release the button; a long beep followed by two short beeps confirms the switch between pressing the unlock button twice or three times has taken effect.

8 Adjusting Braking Force (5 Levels)

1. Press and hold the switch until you hear the eighth short beep.
2. Release the button; a long beep followed by three short beeps confirms the switch between pressing the unlock button twice or three times has taken effect.
3. Repeat this process to increase the setting by one level.

9 Factory Reset

1. Press and hold the switch until you hear the ninth short beep.
2. Release the button; a long beep followed by four short beeps confirms the factory settings have been restored.

Buzzer Sound Indicators

One Beep: An open, close, or pause signal has been received; the tailgate will immediately open, close, or pause.

Two Beeps: The tailgate is fully opened or fully closed.

Three Beeps: The tailgate encountered excess resistance; the intelligent anti-pinch safety feature has been activated.

Technical Support

If you need help setting up or using your Aerpro product, now or in the future, call Aerpro Support Australia on 03 8587 8889, Monday to Friday, 9am to 5pm AEST.

To download a digital copy of this manual, or other Aerpro manuals and software, visit aerpro.com.