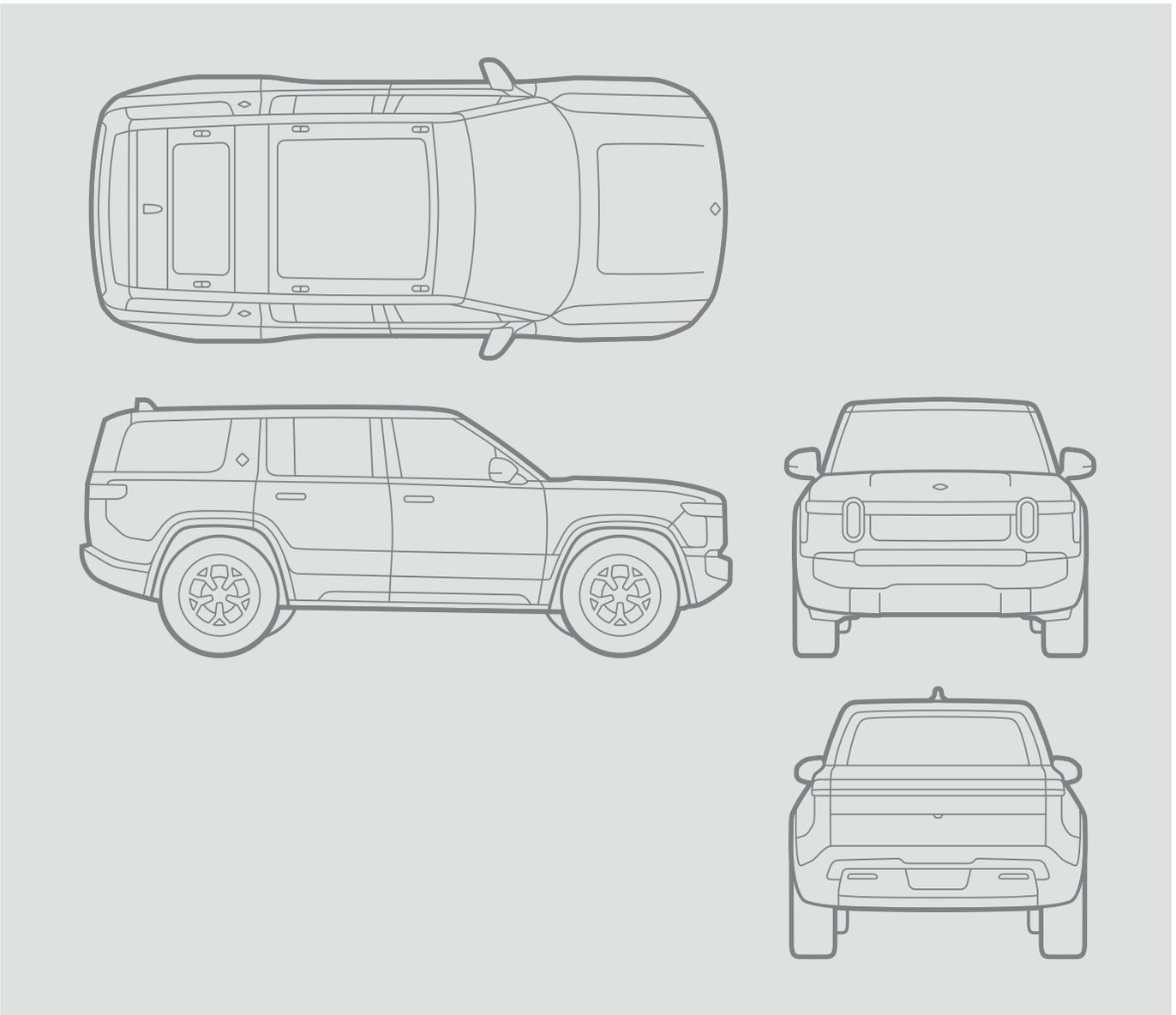


R1S

# Emergency Response Guide





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# Summary

This Emergency Response Guide provides information and suggested best practices for mitigating an emergency with a [Rivian electric vehicle](#).

## RISKS: FIRE, ELECTROCUTION, AND INHALATION HAZARDS

- High-voltage lithium-ion [battery fires](#) in electric vehicles [differ from gasoline fires](#) because of the chemical reaction in the battery and [high-voltage electricity](#). Both types of fires can be very dangerous, but an electric fire may present different risks. As in gasoline vehicle fires, inhalation hazards exist from toxic and/or flammable gases.
- Always wear [personal protective equipment \(PPE\)](#), including a self-contained breathing apparatus (SCBA), and use the right tools.

## FIRST SECURE THE VEHICLE AND DISCONNECT HIGH VOLTAGE

- Make sure the vehicle is [parked and secured](#) from rolling. Stabilize the vehicle if it's not upright or is on an unstable surface.
- [Disconnect the high voltage](#) by severing either cut loop to disconnect the battery from the vehicle.

## AVOID ELECTROCUTION

- Certain locations on the vehicle are [unsafe to cut](#) during a rescue operation/extrication.
- De-energize the electric circuit or disconnect any damaged or burning vehicle that is [connected to a charger](#).

## CONSIDERATIONS DURING A RESCUE OPERATION/EXTRICATION

- Some [high-strength steel components](#) may require special equipment.
- Beware of [pressurized components](#) that could rupture, fail, or suddenly release during a fire.

## BE CAREFUL WHEN MOVING OR STORING A VEHICLE

- Use caution when [lifting the vehicle](#) or working with [submerged vehicles](#).
- [Tow Rivian electric vehicles](#) on a flatbed only.
- After the fire is extinguished, [store the vehicle](#) away from other vehicles and buildings.

# Avoid High-Voltage Dangers

Note the following instructions for avoiding high-voltage dangers when responding to an emergency involving a Rivian vehicle:

- Always assume the vehicle is energized.
- Never cut or damage the [Do Not Cut locations](#) on the vehicle.
- Never touch or let tools come in contact with orange high-voltage cables.
- Don't touch any other exposed parts and cables.
- Use high-voltage insulated tools if possible.
- Wear personal protective equipment (PPE), insulated gloves, and a self-contained breathing apparatus (SCBA).

## Recommended Tools for Rivian Vehicle First Responders

You will need the following tools to respond to an emergency related to a Rivian vehicle:

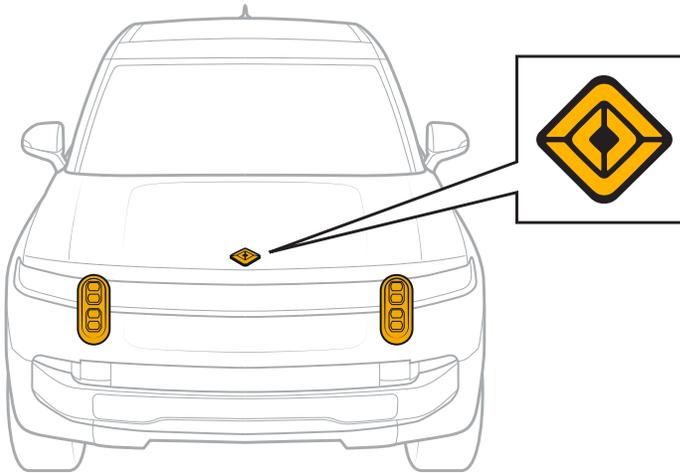
- insulated gloves
- personal protective equipment
- wheel chocks (or large blocks of wood)
- metal circular saw
- hydraulic cutter
- hydraulic spreader
- thermal imaging camera
- halligan bar
- insulated cable cutter
- rescue stabilization jacks

# Identify Rivian Electric Vehicles

Identify a Rivian R1S electric vehicle by these features:

## FRONT

- Rivian Compass logo hood ornament
- Stadium headlights



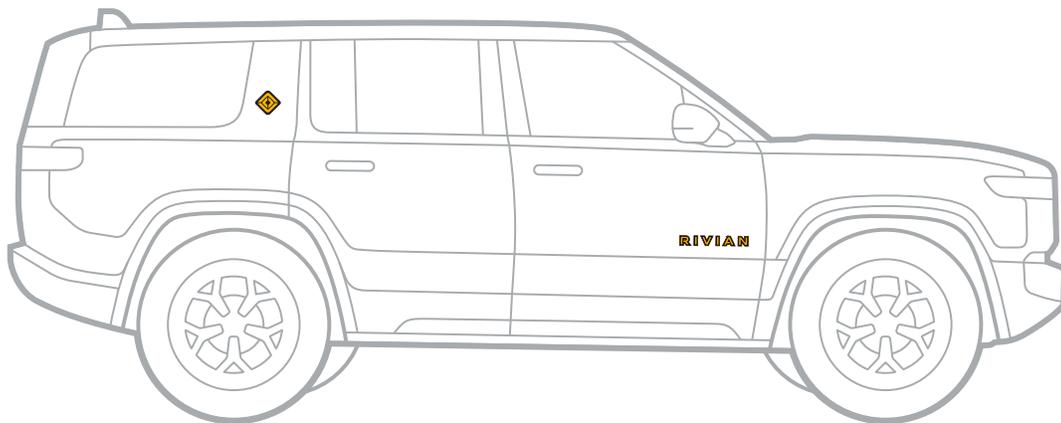
## REAR

- Rivian name and model on the tailgate
- No tailpipe



## SIDE

- Rivian name on front door
- Rivian Compass logo on C pillar



# Secure the Vehicle

In an emergency, always chock the wheels, put the vehicle in **P** (Park), and [stabilize the vehicle](#).

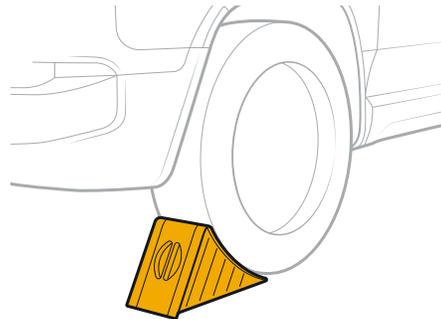
Rivian recommends these high-voltage insulated tools:

- wheel chocks (or large blocks of wood)
- insulated gloves
- personal protective equipment including SCBA
- rescue stabilization jacks

## CHOCK THE WHEELS AND PUT THE VEHICLE IN PARK

Follow these steps to secure the vehicle.

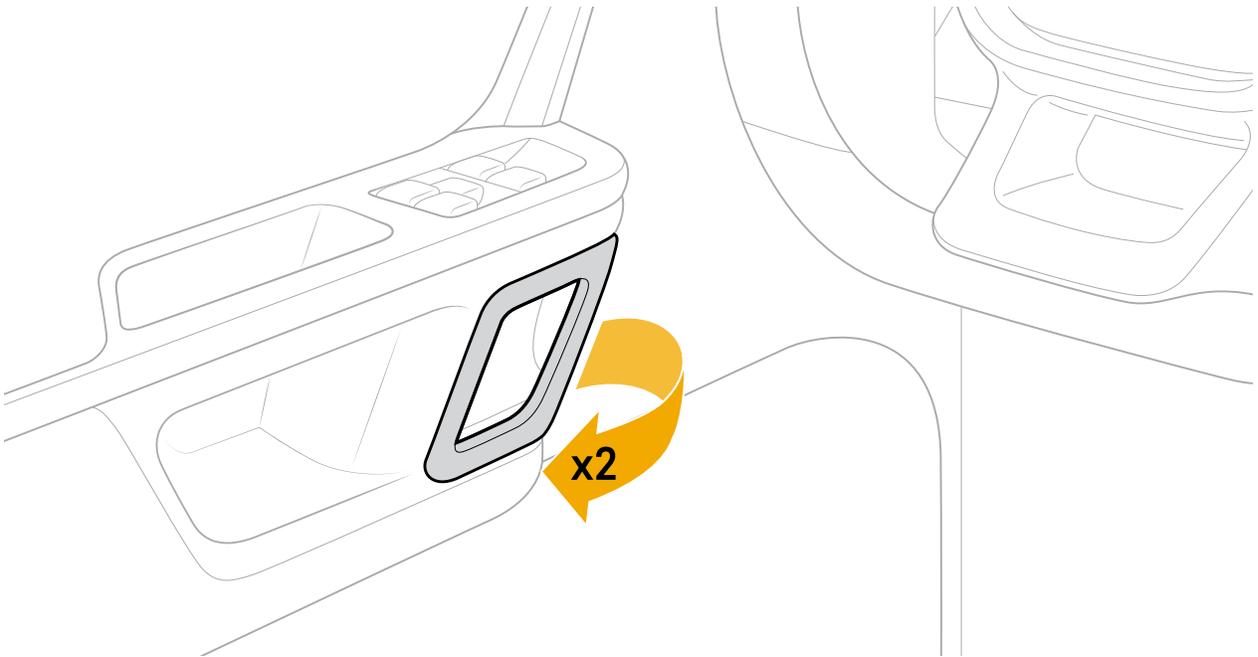
1. Chock the wheels to prevent the vehicle from moving.



**DANGER**

- Electric vehicles can roll silently.
- Protect people from being hit or crushed.

2. Open the driver door. Break the glass if necessary. If you need to use the inside handle, be sure to pull it twice.



**IMPORTANT**

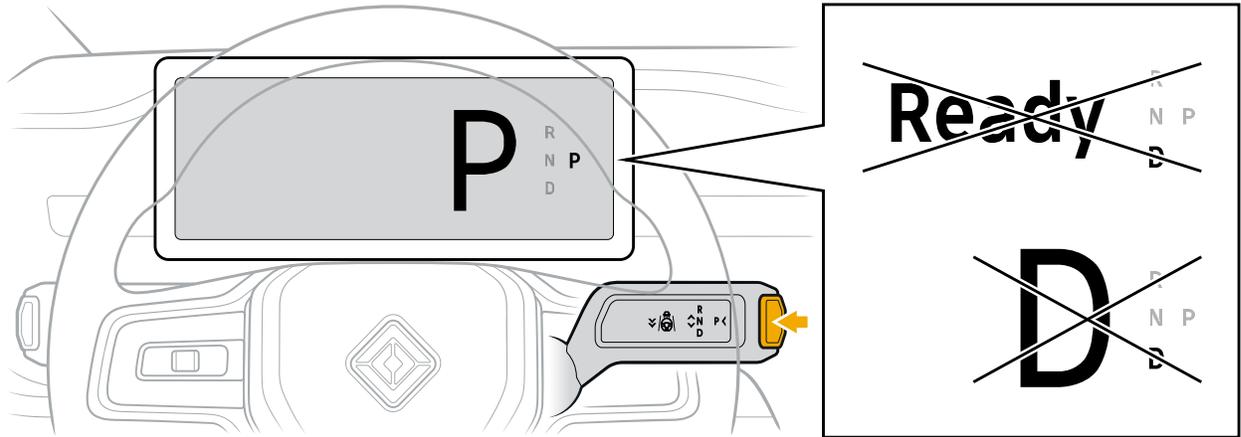
Don't press buttons on the key fob or Rivian phone app that would lock the doors or close the hood.

3. Shift into **P** (Park).

Press the button on the end of the lever on the right side behind the steering wheel.

**NOTE**

The display shows **P** when you put the vehicle in **P** (Park).



If the display shows **Ready**, the vehicle is in high voltage on mode. Immediately press the brake and press **P** on the end of the drive stalk to shift into **P** (Park).

# Lift the Vehicle Safely

Rivian recommends you use the following tools (high-voltage insulated) to lift the vehicle:

- insulated gloves
- personal protective equipment
- rescue stabilization jacks
- jack or other safe lifting device

## USE SAFE LIFT POINTS

Lift the vehicle at these points only:

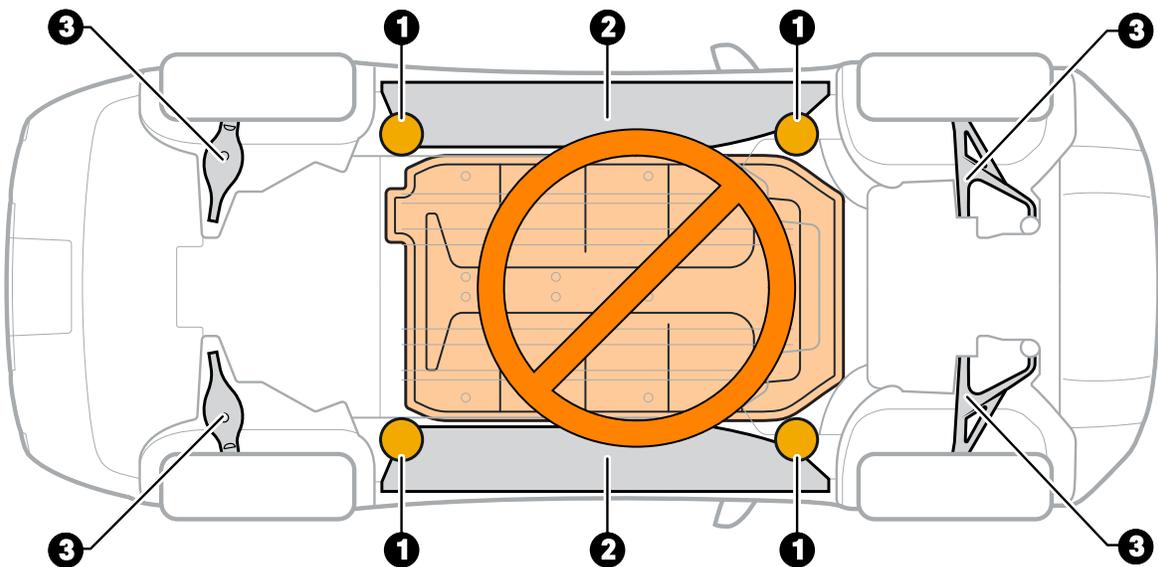
1. Underbody lift points (gold circles)
2. Underbody side rail
3. Suspension under any wheel

### NOTES

The underbody lift points (gold circles) are the safest.

### IMPORTANT

Do not use jacks or lifting equipment such as airbags under the battery pack.



# Disconnect the High Voltage

Before you attempt to disconnect the high voltage by severing a cut loop, take note of the following safety guidance:

## DO

- Wear personal protective equipment (PPE) appropriate for electric vehicles.
- Use insulated tools.

**Note:** If an insulated tool is not available, avoid contact with the vehicle while cutting the loop.

## DON'T

- Cut into or penetrate any other cables or [“Do Not Cut” locations](#).
- Touch any electrical cables.
- Touch electrical or battery components.

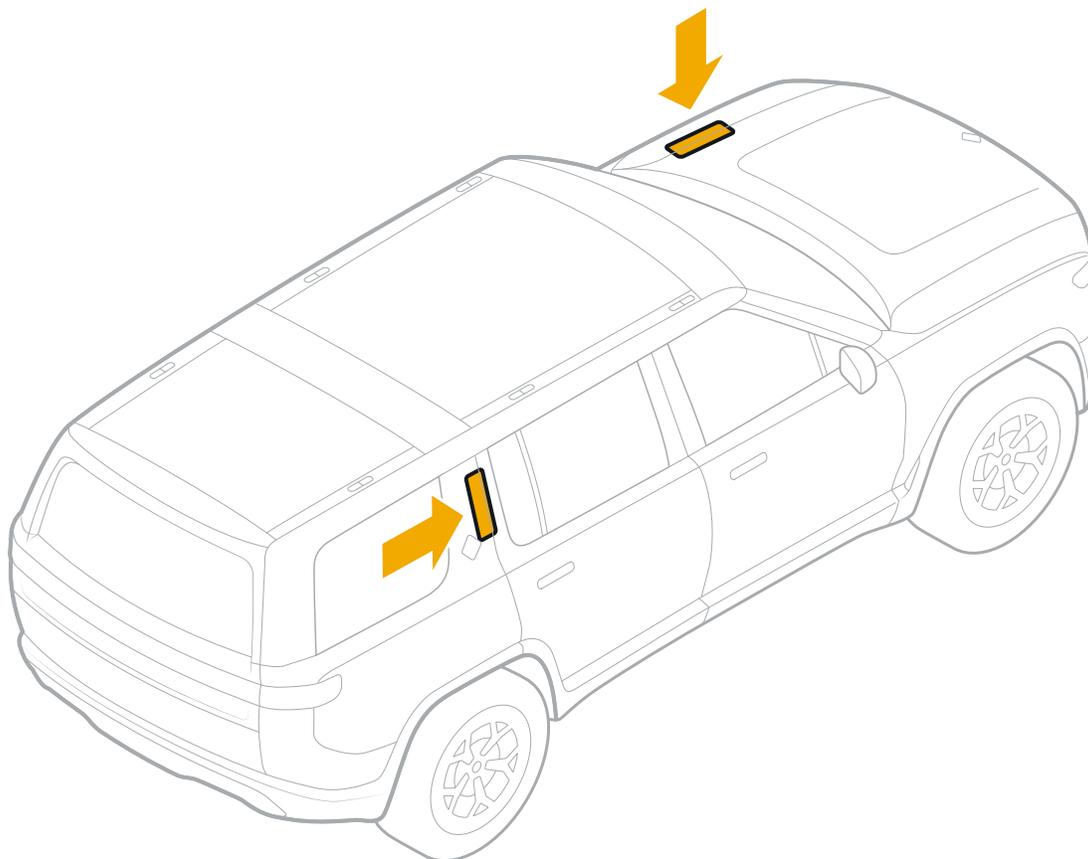
## DON'T ATTEMPT IF

- [Cut loop \(low-voltage\) cables](#) are inaccessible and can't be easily cut.
- Vehicle is on fire.
- Vehicle is in standing water or is submerged.
- You see a sign of potential fire, such as
  - sparks
  - detached cables
  - increased temperature
  - smoke or smell
  - hissing, gurgling, or bubbling
  - leaking fluid

### DISCONNECT THE HIGH VOLTAGE BY CUTTING A CUT LOOP

There are two cut loop locations in the vehicle. The cut loops are low-voltage circuits that enable power from the high-voltage battery and supplementary restraint system (SRS). Cutting either loop disconnects both the high voltage battery and the SRS systems within one (1) minute.

The primary cut loop is located under the hood. A secondary cut loop is located in the vertical post behind the passenger-side rear window (C pillar). Use the secondary cut loop only if the primary cut loop is inaccessible.



### DISCONNECT HIGH-VOLTAGE – FRONT

Rivian recommends you use the following tools (high-voltage insulated) to disconnect the high-voltage system by cutting the low-voltage cable at the front of the vehicle:

- insulated gloves
- personal protective equipment
- insulated cable cutter

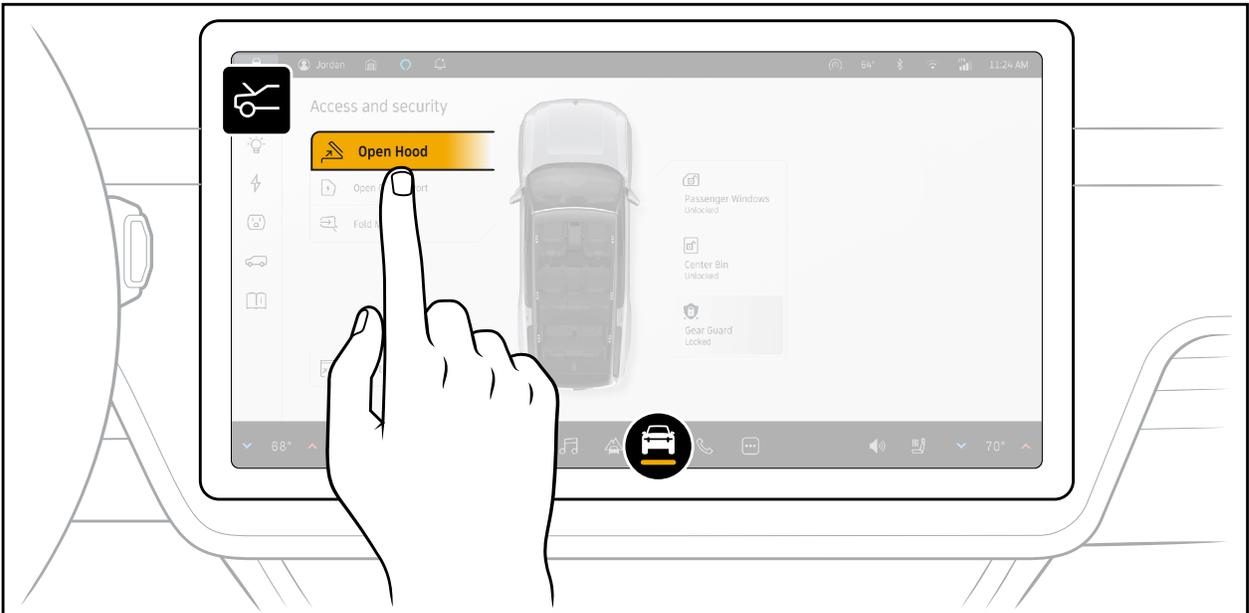
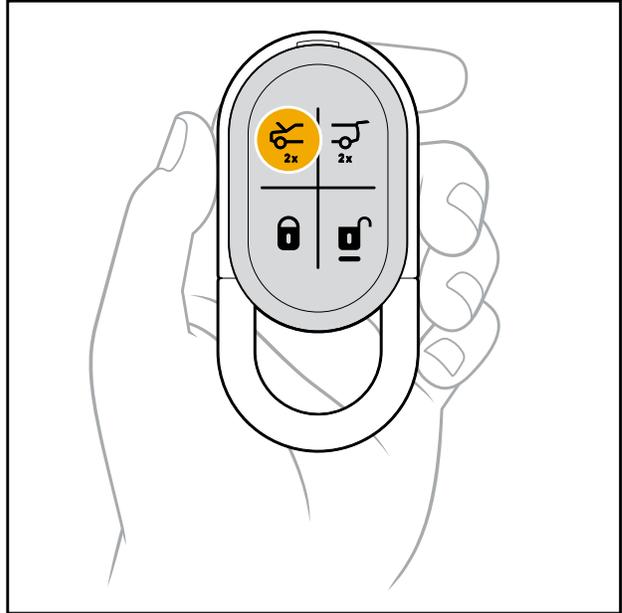
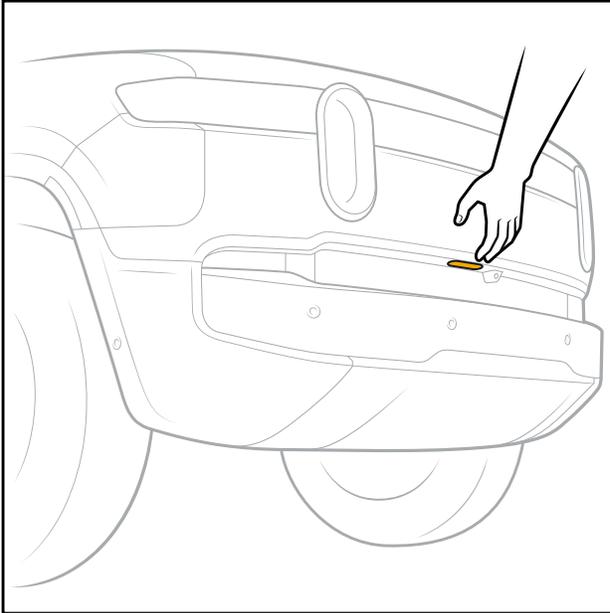
## DISCONNECT THE HIGH VOLTAGE

### CUT THE FRONT CUT LOOP

Follow these steps to access the front cut loop. The key fob and phone app are the safest options.

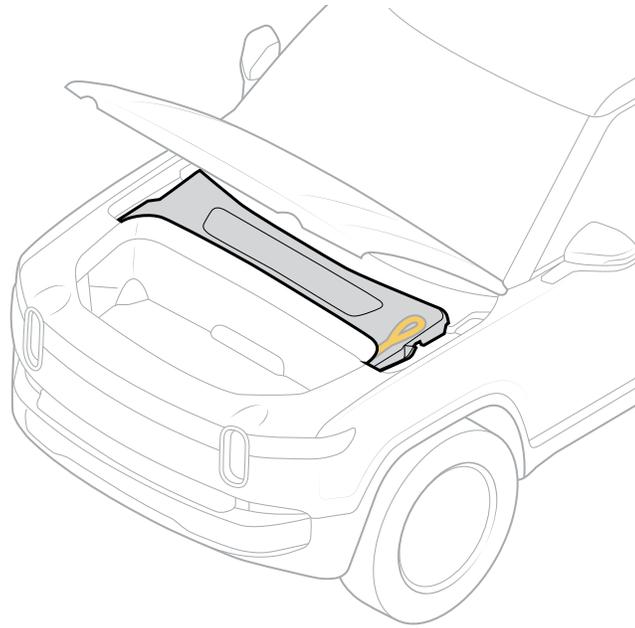
1. Use one of these methods to open the hood:

- Key fob
- Phone app
- Button above the front grille
- Open Hood button on the center display



## DISCONNECT THE HIGH VOLTAGE

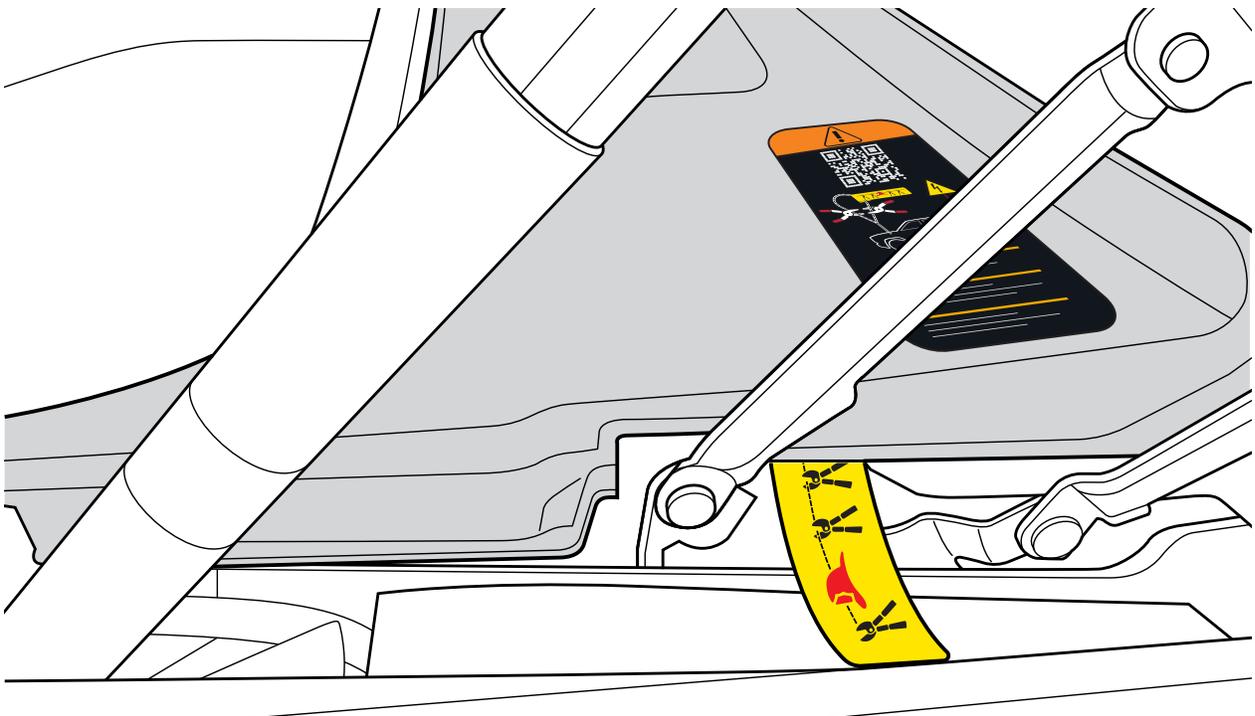
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2. Find the yellow cut tag shown.

### NOTE

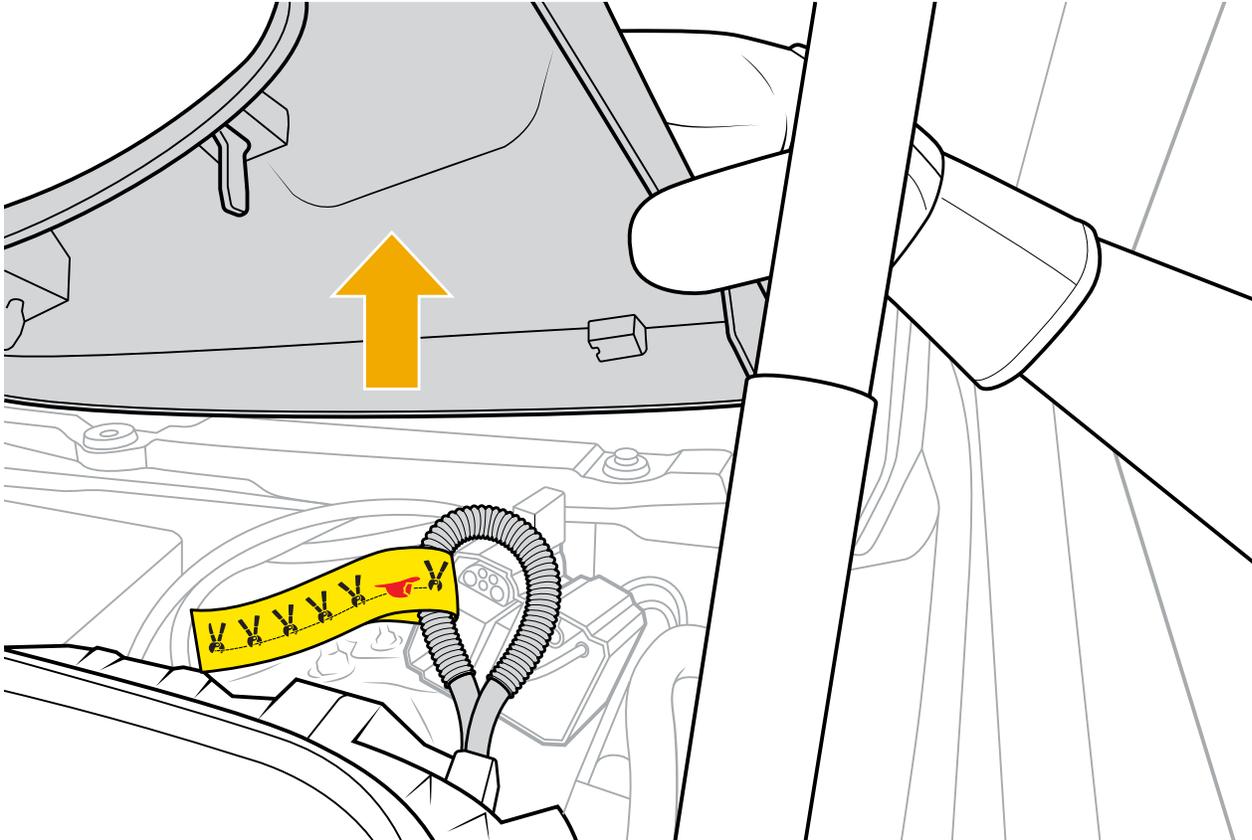
The front cut loop is under the flexible black panel.



## DISCONNECT THE HIGH VOLTAGE

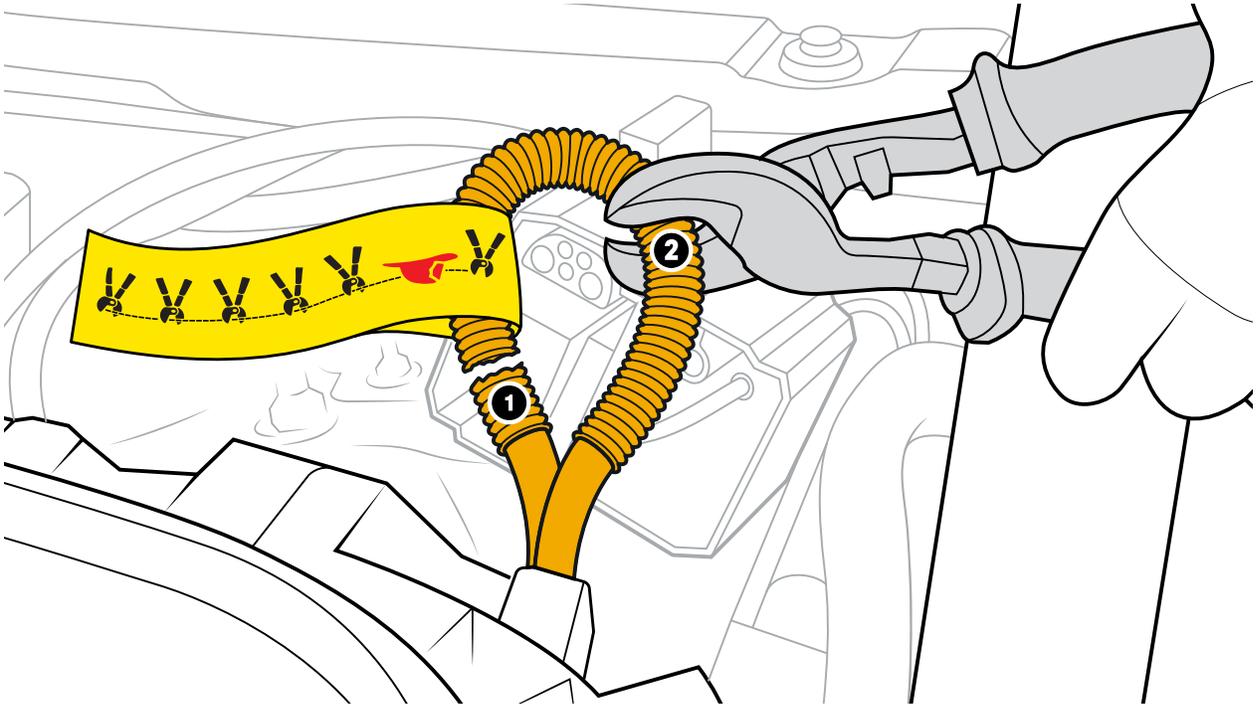


3. Grasp the flexible black panel by the right side and pull it up.



## DISCONNECT THE HIGH VOLTAGE

4. Find the loop of electrical cable with the yellow cut tag. Cut the loop at one end [1] and at the other end [2].



When you cut in two places and remove a section of the cable, it helps prevent the ends of the cable from touching again. If the ends of the cable touch, it could restore high voltage, which could result in death.

5. Wait one minute.

### NOTE

The air bags and seat belt system need up to one minute to discharge any remaining energy.

## DISCONNECT THE HIGH VOLTAGE

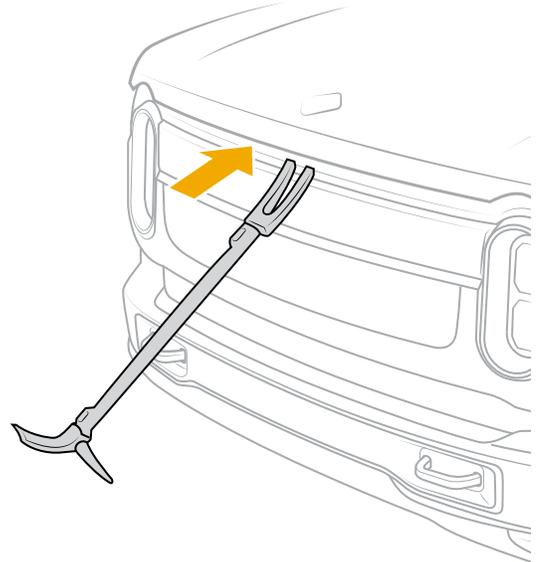
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### OPEN THE HOOD IF 12-VOLT POWER ISN'T WORKING

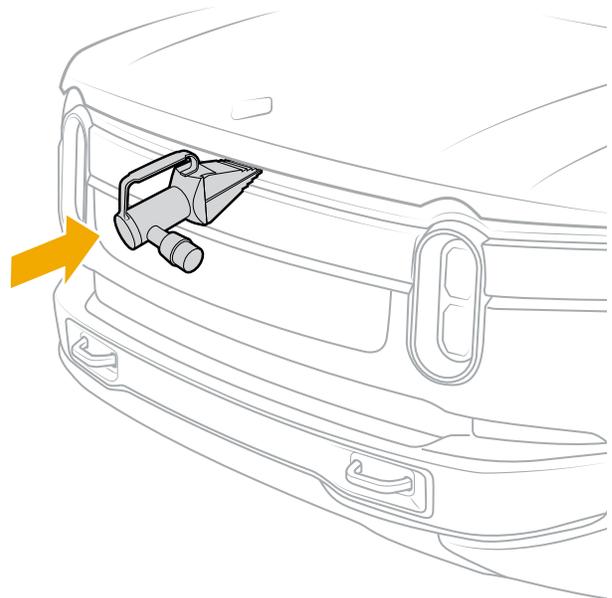
If you can't open the hood normally but you have time, use the [manually open the hood](#) procedure.

If you don't have time, open the hood quickly using this procedure.

1. Insert the halligan bar between the lower edge of the hood and the top of the light strip below the hood ornament and pry it open slightly.



2. Insert the hydraulic spreader and break the hood latch.
3. Lift the hood and follow the Disconnect the High-Voltage - Front procedure.

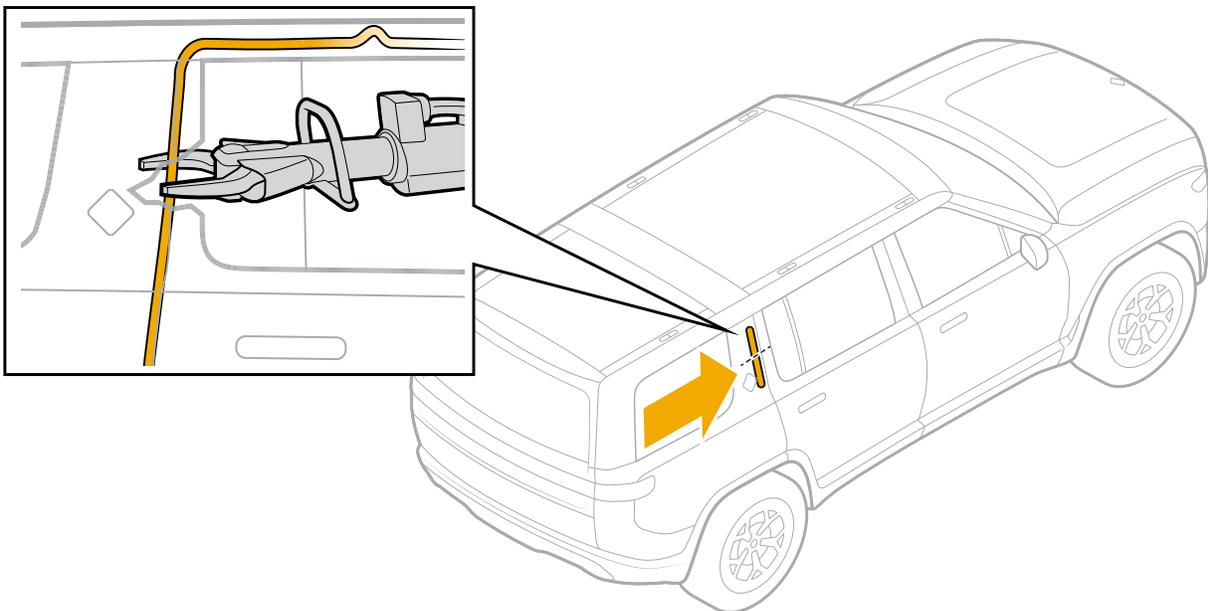


### DISCONNECT HIGH VOLTAGE – SIDE

Rivian recommends you use the following tools (high-voltage insulated) to cut the cut loop to disconnect high voltage on the side of the vehicle:

- insulated gloves
- personal protective equipment
- hydraulic cutter (a circular saw can be used if necessary)

If you can't reach the primary cut loop under the hood, cut the second cut loop inside the vehicle frame in the vertical post behind the passenger-side rear window (C pillar).

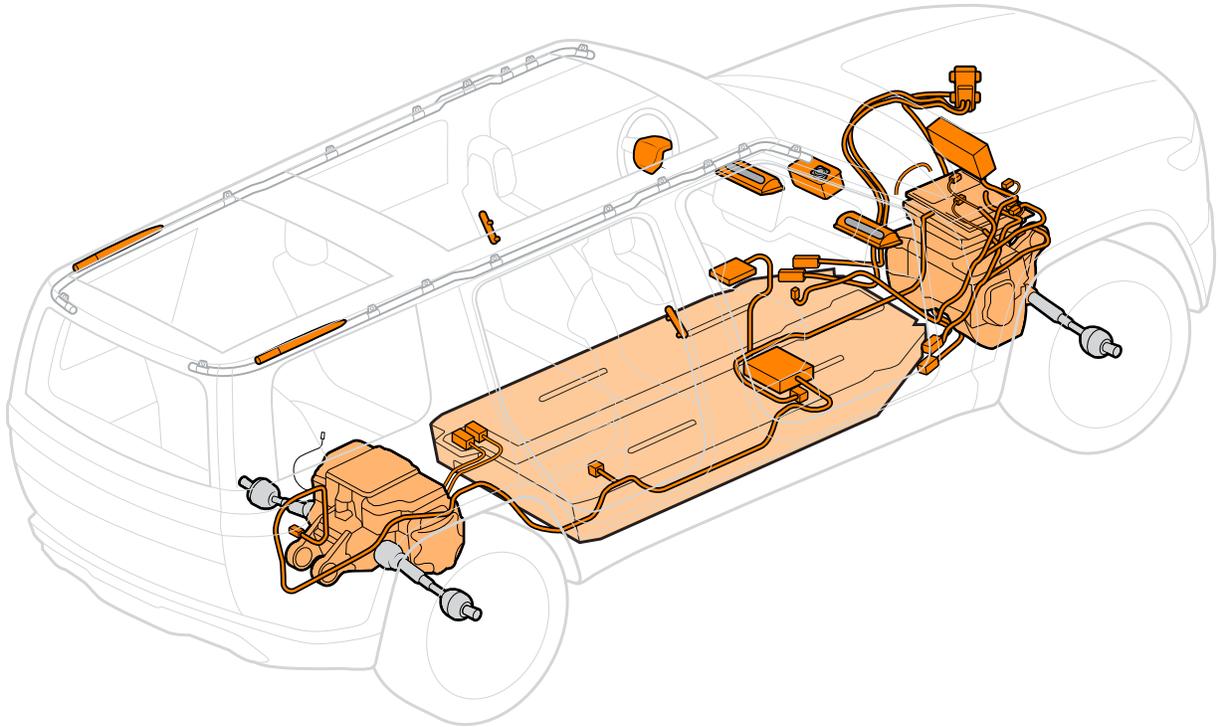


To disconnect the high-voltage cable, follow these steps:

1. Cut the post horizontally with the hydraulic cutter. Check to be sure that you have cut through the cut loop.
2. Wait one minute to allow the airbags and seat belt system to discharge any remaining energy.

# Do Not Cut

Never cut or damage the highlighted areas.



- You could be injured, electrocuted, or die if you cut, pierce, or damage the highlighted areas.
- These areas contain lithium-ion battery packs, high-voltage cables (up to 450 V), electrical outlet cables (120 V), traditional car batteries (12 V), compressed gas, and triggering devices.

# Extricate Occupants

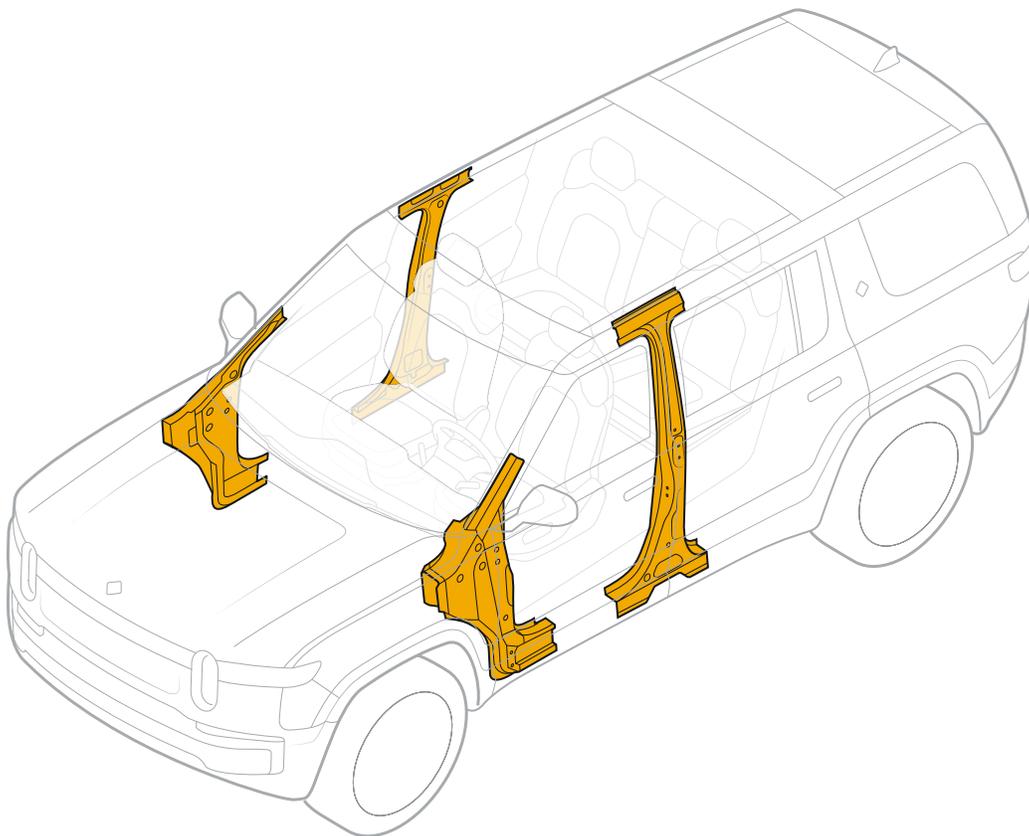
Rivian recommends you use the following tools (high-voltage insulated) to extricate occupants:

- insulated gloves
- personal protective equipment
- hydraulic cutter
- hydraulic spreader
- metal circular saw

## CUT HIGH-STRENGTH STEEL

The highlighted areas contain high-strength steel to protect passengers. Use a hydraulic cutter to cut these areas. Cutting through this material may take longer than expected.

Wear insulated gloves and personal protective equipment (PPE) when cutting high-strength steel.



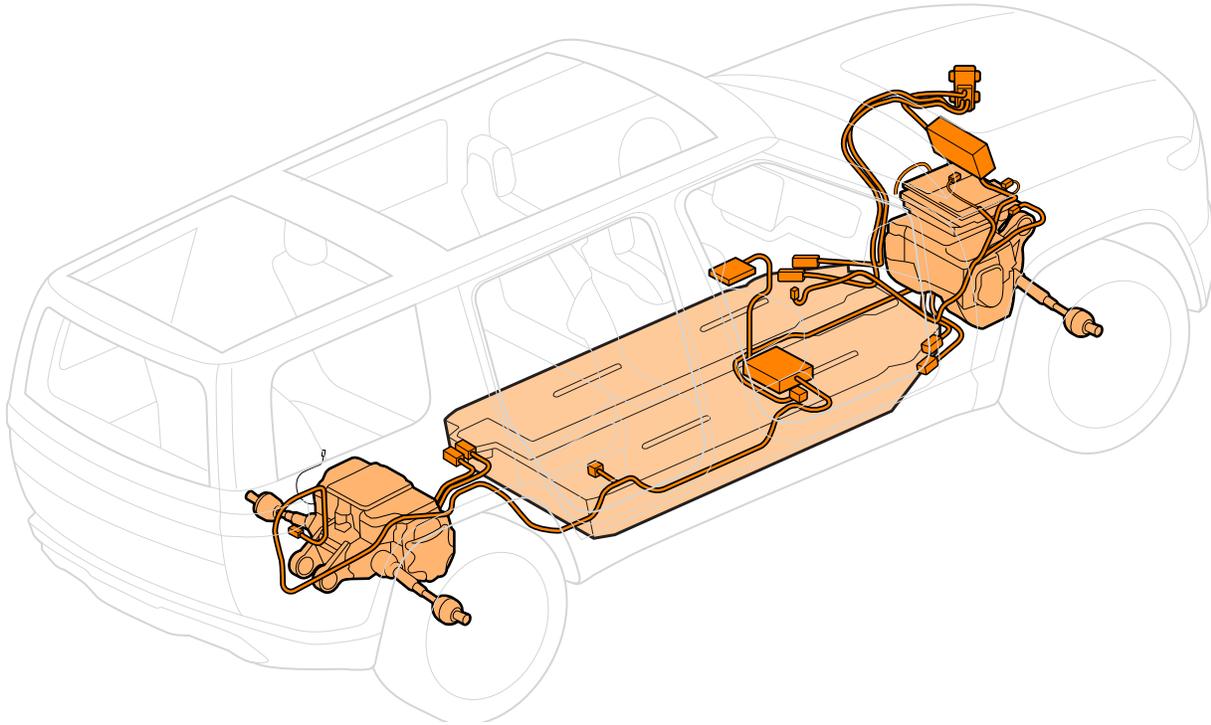
**DANGER**

Never cut or damage the Do Not Cut areas.

# Handle a Damaged High-Voltage Battery

Rivian vehicles use a lithium-ion high-voltage battery (up to 450 V) and high-voltage cable next to the axles.

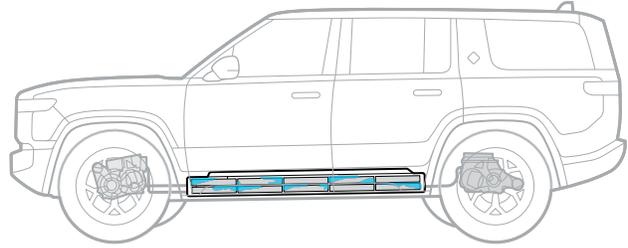
In case of fire, do not cut the battery or cables in an attempt to cool it down.



## HANDLE A DAMAGED HIGH-VOLTAGE BATTERY

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A damaged battery poses a potential electrical hazard that could release harmful and/or flammable gases.

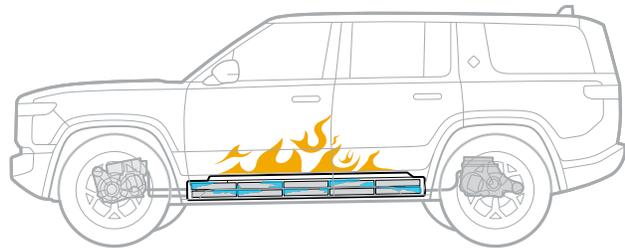


**DANGER**

The flammable gases that leak from the battery could ignite.

After a fire, clean up with large volumes of clean water before using chemicals.

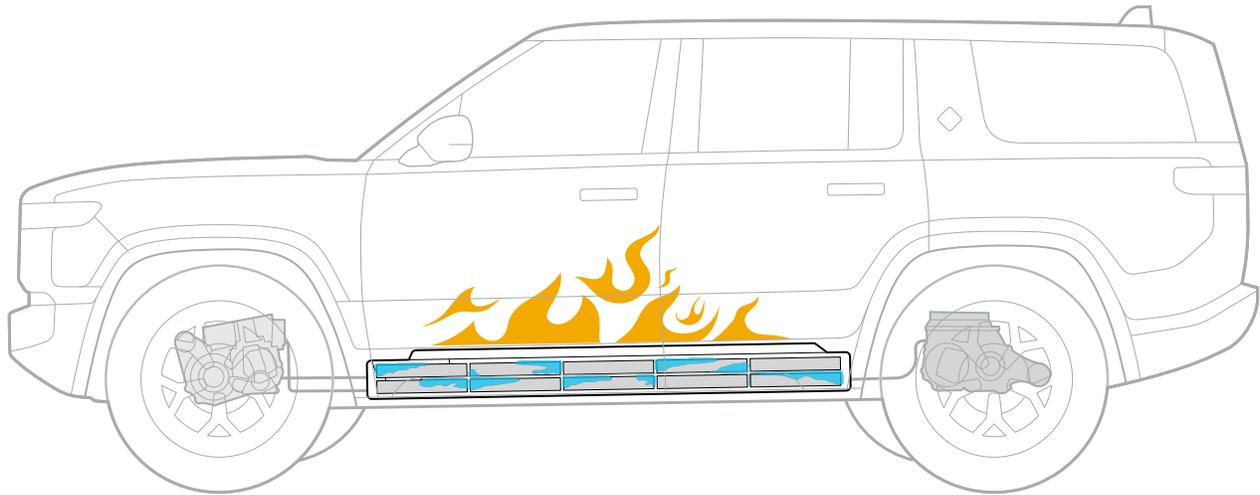
To prevent runoff into nearby storm drains or other waterways, you may deploy fluid gathering materials such as booms or powders to limit runoff contamination.



**DANGER**

Water applied to the battery pack can become caustic or could cause a chemical reaction and burn the skin. To prevent burns, apply more water for dilution. Rinse tools and clothing to decontaminate them.

# Extinguish a Vehicle Fire



## IMPORTANT

Rivian believes that electric vehicle fires are best addressed with defensive firefighting and management of the environment to minimize risk. Only attempt to extinguish a fire if you have a specific need to do so.

Perform these steps to extinguish a vehicle battery fire.

1. Wear proper personal protective equipment (PPE) with full SCBA when approaching any vehicle fire.
2. Use a sustained, high-volume water application. 2,000-3,000 gallons minimum will be needed. Consider an established water supply, a tender, or additional units to shuttle water to the pumping engine.
3. If water is not readily available, use defensive firefighting tactics to prevent the fire from spreading until a clear need to extinguish the fire is identified and water is available. If necessary, use CO<sub>2</sub>, dry chemicals, or other fire-extinguishing agents to suppress the fire, for example, to extricate passengers, until water is available.
4. Use a thermal imaging camera (TIC) or infrared (IR) to monitor the battery temperature during the cooling process. Look for ambient temperatures at or below 212°F (100°C). The battery still needs to cool down if it is at or above 302°F (150°C).
5. Continue evaluating the battery structure and apply water directly to any exposed areas. Submerge loose battery cells or modules in water for at least 24 hours.

### **IMPORTANT**

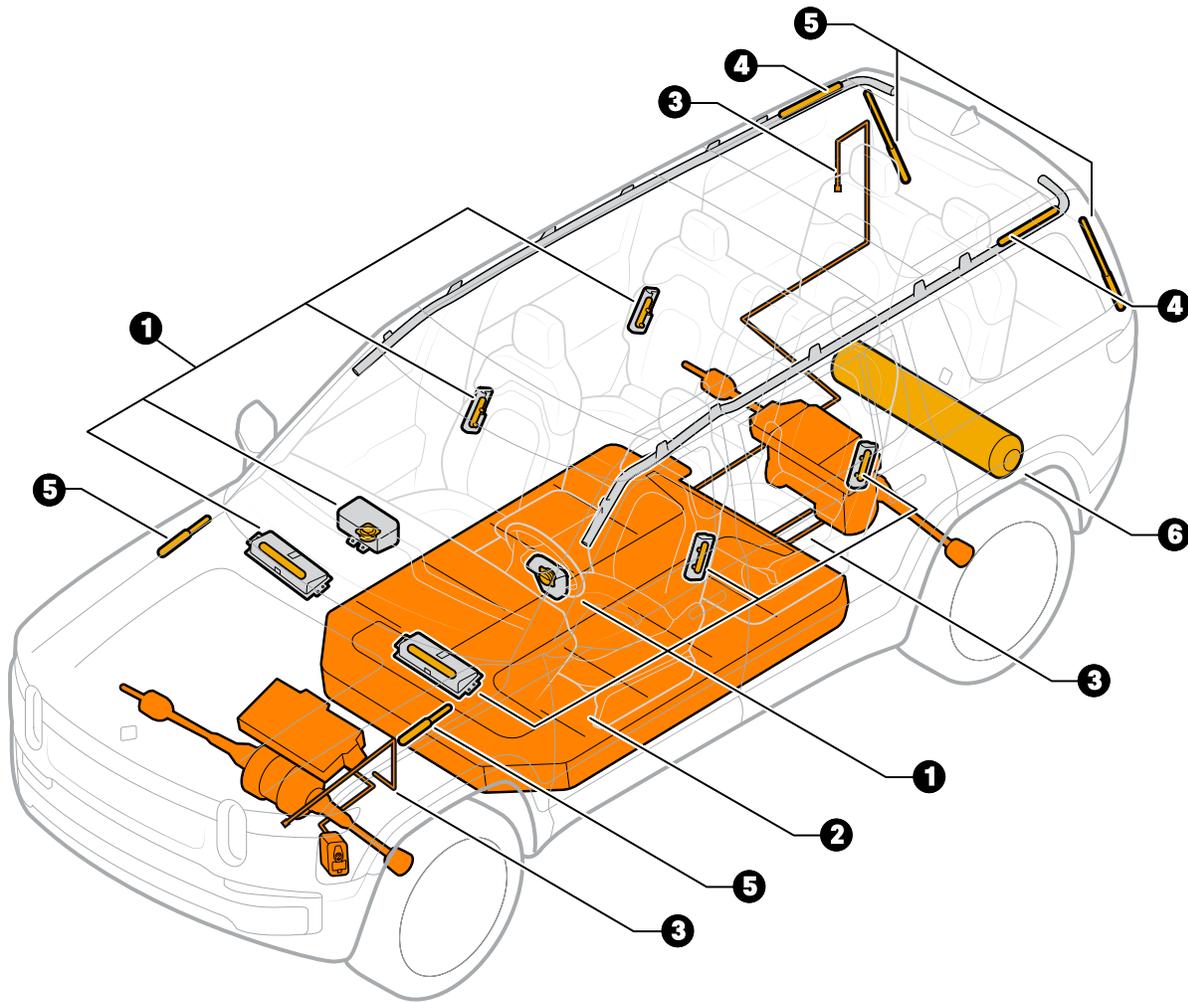
- Only firefighters should extinguish a high-voltage battery fire.
- Use a hand-held extinguisher only to protect occupants as they exit the vehicle or for small fires that don't involve the high-voltage battery.
- Foam may suppress, but will not extinguish a battery fire.

## SUDDEN RUPTURE RISKS



**DANGER**

Be aware of airbags, stored gas inflation cylinders, hydraulic shock absorbers, and the on-board air compressor tank.



- 1. Airbags
- 2. High-voltage battery
- 3. High-voltage cable

- 4. Gas inflation cylinders
- 5. Hydraulic shock absorbers
- 6. Air compressor tank

### NOTE

It's safe to use water to put out the fire on a Rivian vehicle because of the properties of current flow and voltage. Undamaged high-voltage electrical systems are normally isolated from the chassis.



**DANGER**

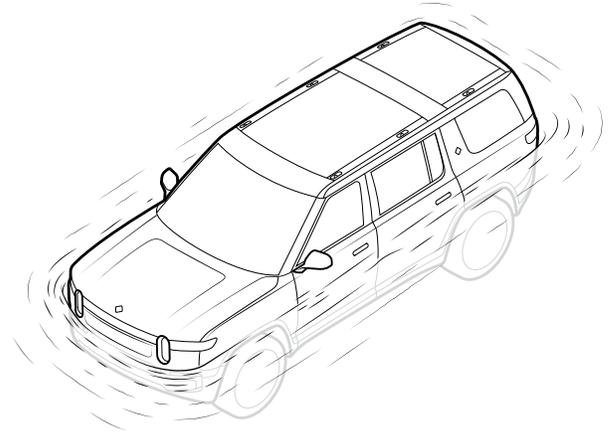
- Do not cut the battery. This can cause injury, electrocution, or death.
- The lithium-ion battery packs are high-voltage (up to 450 V).
- An undetected fire can remain inside the high-voltage battery.

# Remove a Submerged Vehicle from Water

Rivian recommends that you wear personal protective equipment (PPE) when removing the vehicle from water.

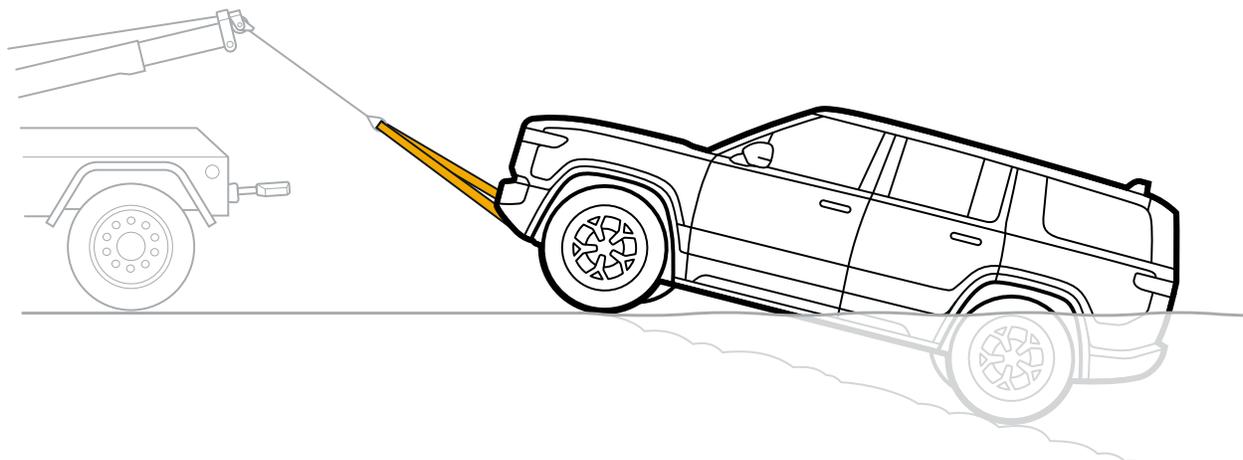
Always remove a submerged vehicle from water before you attempt to [tow or transport](#) it.

For safety, don't try to recover a submerged vehicle from the water by yourself—get help.



- If the battery is damaged, water may have entered the battery case. Use extreme caution and wear personal protective equipment (PPE) if you enter the water or attempt to tow the vehicle.
- Never attempt to charge a high-voltage battery that has been submerged, is gassing, or exhibits signs of external damage.

## RECOVER A SUBMERGED VEHICLE



You may see small bubbles in the water near the vehicle (microbubbling). This isn't a sign that the water is electrified or will cause a shock.



**DANGER**

When handling an emergency, always approach an electric vehicle from the side. Electric vehicles can run silently, and a damaged high-voltage battery can remain energized, allowing the vehicle to move unexpectedly.

# Tow and Transport



Only transport Rivian vehicles on a flatbed tow truck. To prevent damage, don't tow the vehicle behind another vehicle or with two wheels on the ground.

## PREPARE THE VEHICLE FOR TOWING

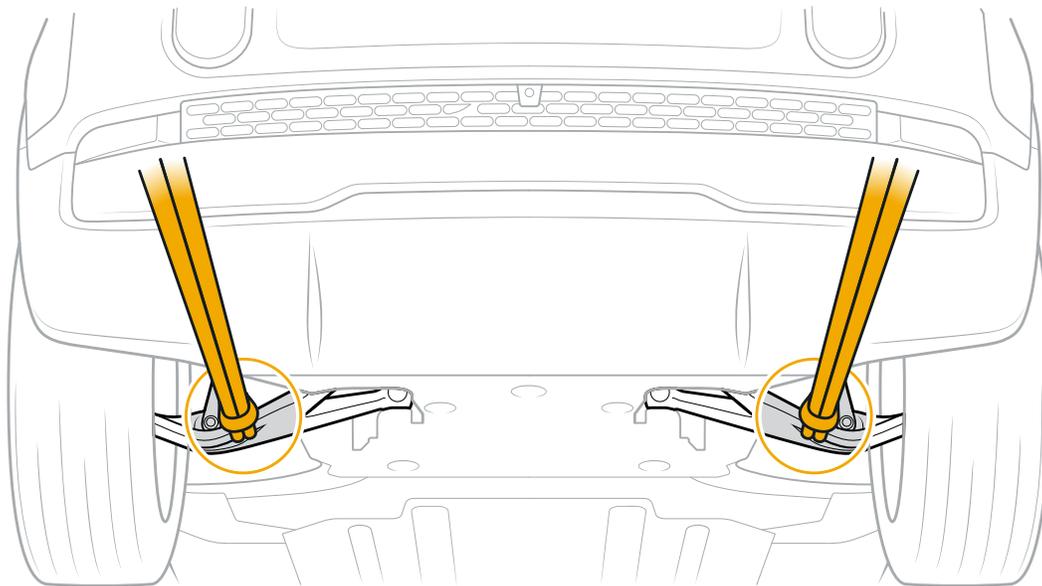
Follow these steps to tow the vehicle:

1. Ensure the front wheels face forward and are parallel with the vehicle.



To prevent damage, don't use J-hooks to connect to any suspension components.

2. Connect the vehicle to the tow truck winch with a nylon bridle or short endless loops through the lower control arms.



3. Press and hold the brake pedal.
4. Go to the **Settings** menu on the center display.
5. Choose **Vehicle**. Then choose **Service**.

6. Turn on **Park brake release**.

### NOTE

The park brake release will turn off after 15 minutes. You can also turn it off by putting the vehicle in **Park** or turning off **Park brake release** in the **Settings** menu in the center display.

7. Release the brake pedal and confirm release of the electronic parking brake.

You can now [load the vehicle](#) onto the tow truck.

## LIFT THE REAR WHEELS

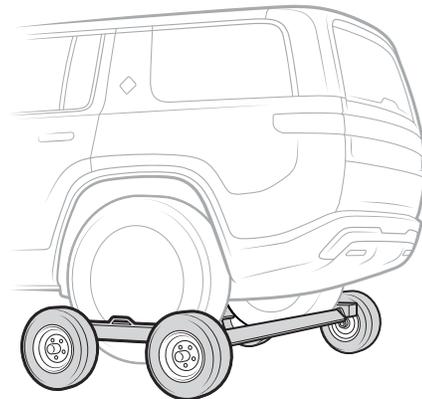
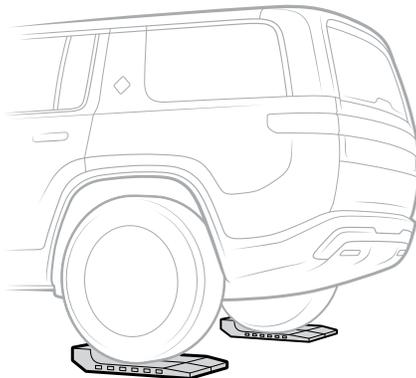
If you can't release the electronic park brake, you can load the vehicle onto the tow truck by lifting the rear wheels.



**DANGER**

When the rear wheels are lifted, the front wheels can roll. Make sure to secure the vehicle and connect to the tow truck before lifting the rear wheels.

1. Chock the front wheels to secure the vehicle.
2. Connect the vehicle to the tow truck using an endless loop through the front control arms or rear axle.
3. Lift the rear wheels using skates, a dolly, or a tow truck wheel lift.



4. With the rear wheels off the ground, position the vehicle for loading onto the tow truck bed.

You can now [load the vehicle](#) onto the tow truck.

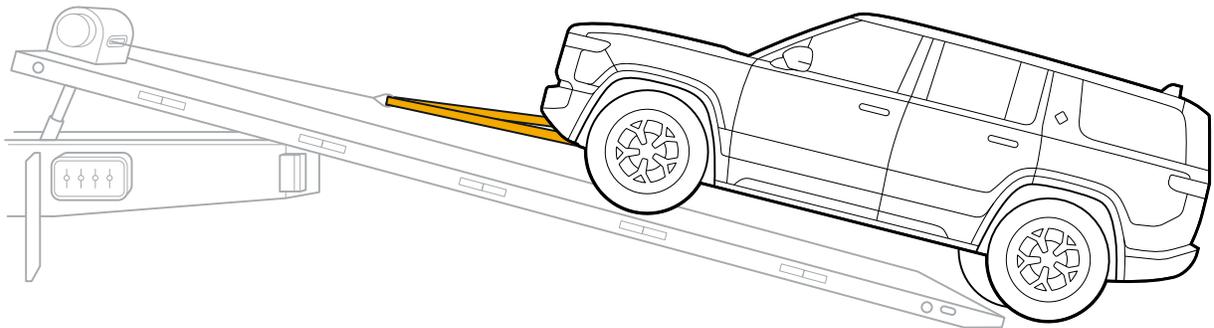
## LOAD THE VEHICLE ONTO THE TOW TRUCK

Follow these steps to load the vehicle onto a flatbed tow truck:

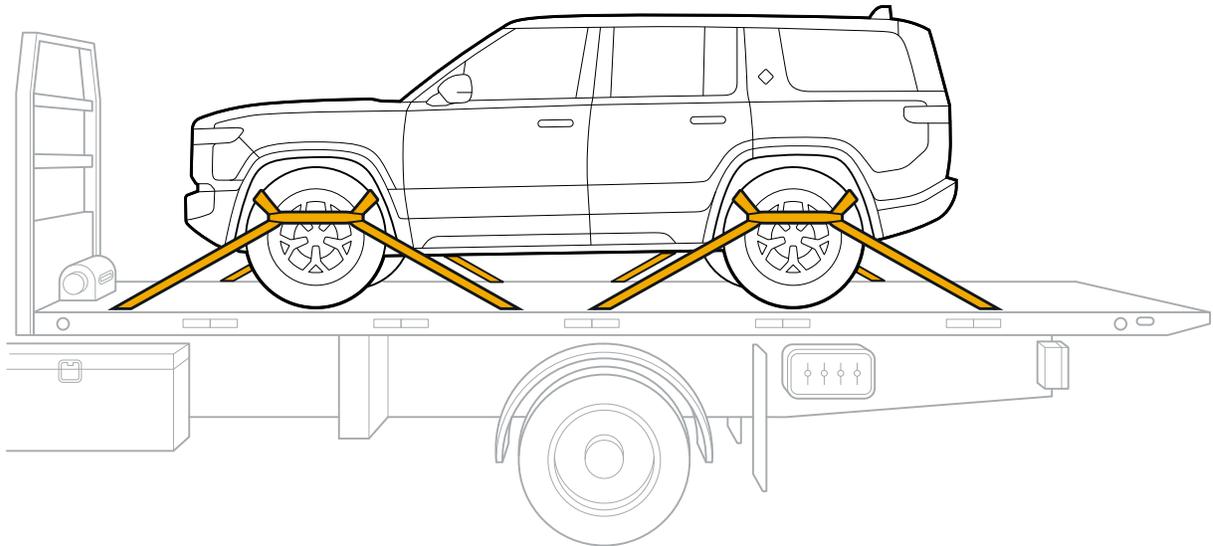
1. Ensure the **Park brake release** is turned on.
2. Remove the wheel chocks.
3. Use the tow truck winch to pull the vehicle onto the tow truck bed.
4. Pull at 5 mph (8 km/h) or less to prevent damage to the drive train.

### NOTE

If you pull too fast, the vehicle will stop and return to **Park**.



5. Tie down the vehicle using eight-point retention straps with two points of contact per corner.



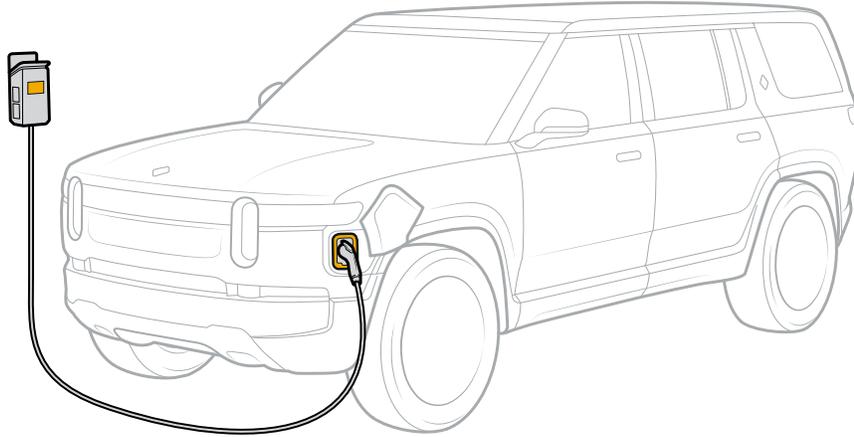


**CAUTION**

To prevent damage, ensure the straps don't contact the brake lines or suspension components behind the tire.

6. Put the vehicle into **Park**.
7. Go to **Drive Modes** in the center display. Choose **Sport** or **Conserve**. Then choose **Lowest** under **Ride Height**.

# Stop Charging in Case of an Emergency



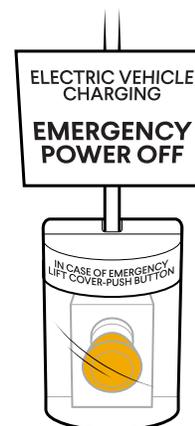
If a vehicle is damaged or on fire while connected to a charger during an emergency, the safest thing is to turn off the electricity. Shut down the main breaker for the charger and then inspect the situation. If a vehicle is damaged and at risk of a fire, you can attempt to disconnect the charging cable from the vehicle.

## IMPORTANT

A Rivian vehicle includes software that automatically senses battery issues and shuts off charging. However, if the fire is not battery related or the vehicle continues charging, try the charge plug disconnection procedures below.

## SHUT DOWN THE MAIN BREAKER

Use the main breaker to shut down the power to the charger. It's normally in the line of sight from the charger.



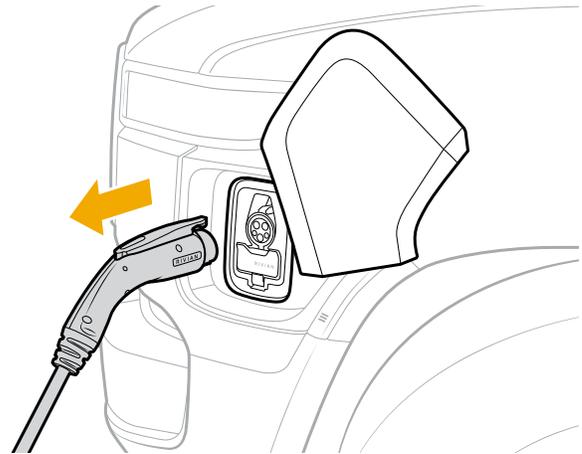
## REMOVE THE CHARGE PLUG WITH A KEY

The following serve as keys:

- Key fob (connected via Bluetooth)
- Rivian phone app (connected via Bluetooth)
- Card or wristband (must touch the unlock sensor on the vehicle)

Follow these steps to remove the charge plug:

1. Unlock the vehicle.
2. Remove the charge plug from the socket and place it on the charger.



## REMOVE THE CHARGE PLUG WITHOUT THE KEY

If you don't have the key but can access the hood, [use the emergency charger plug release cable](#).

## REMOVE THE CHARGE PLUG WITHOUT THE KEY OR ACCESS TO THE HOOD

If you don't have access to the hood, [use the emergency hood release](#).



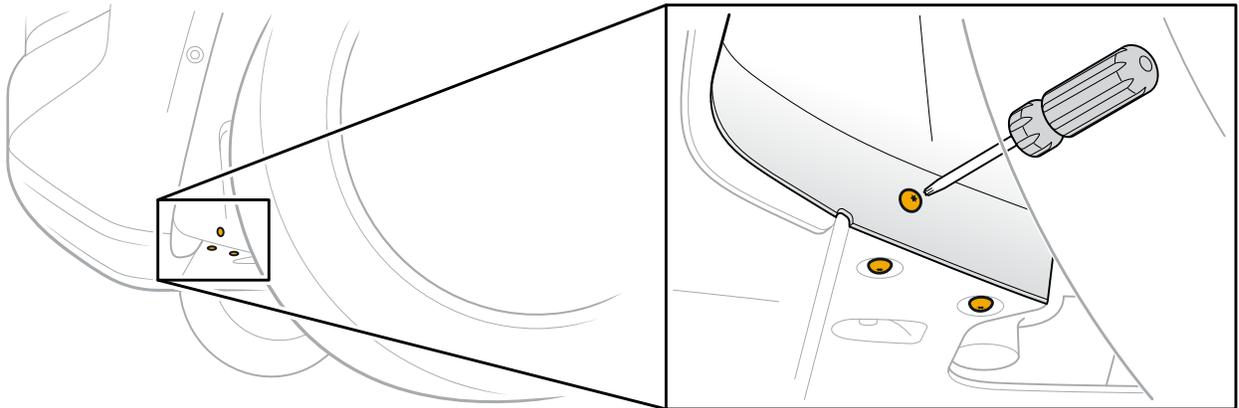
**DANGER**

Do not cut the charging cable. You never want to interrupt a high-voltage current flow. Doing this could cause injury, electrocution, or death.

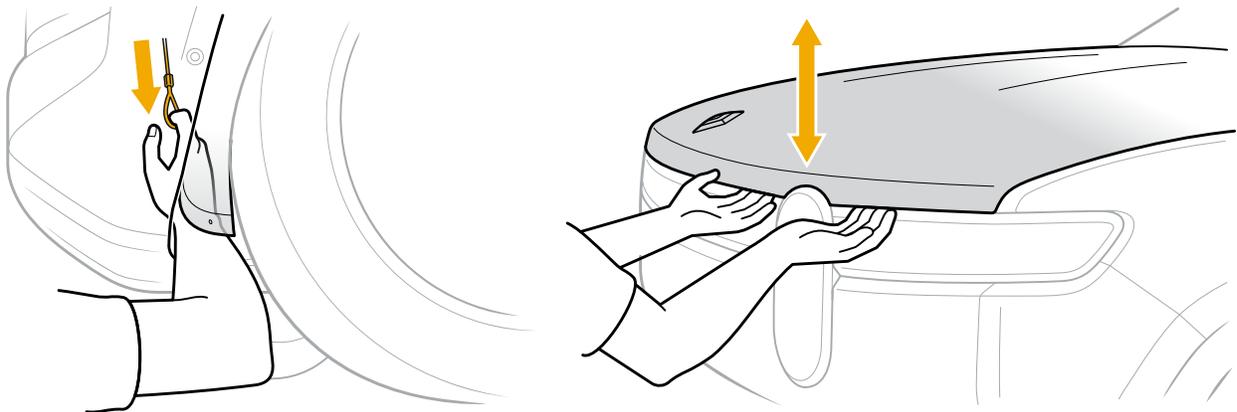
## MANUALLY OPEN THE HOOD

Follow these steps if the hood won't open normally:

1. Remove the screws from the left front wheel liner and lower the front skid plate to access the hood release cable.



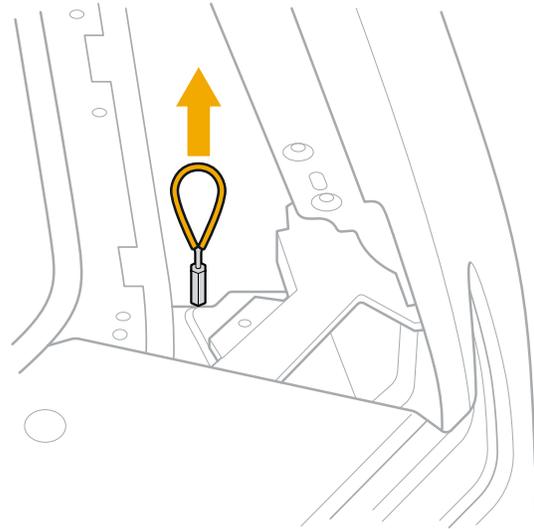
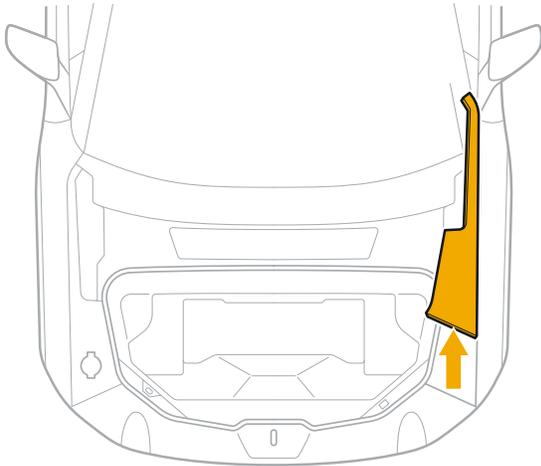
2. Pull the cable to release the hood latch. If the latch doesn't release, have a second person lift up and push down on the hood while you pull on the cable.



## MANUALLY RELEASE THE CHARGE PLUG

If the charge plug won't release from the charge port after you stop a charge session, manually release it by following these steps:

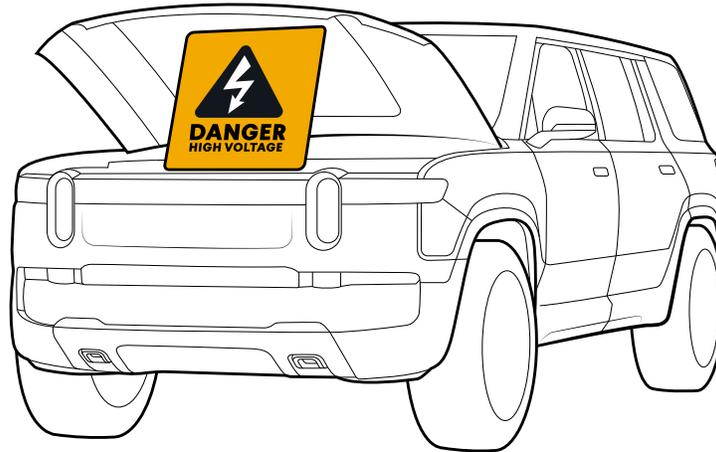
1. Open the vehicle hood.
2. Remove the trim panel from the driver side of the vehicle.
3. Gently pull the cable to release the charge plug.
4. Remove the charge plug from the charge port.
5. Replace the trim panel.
6. Close the hood.



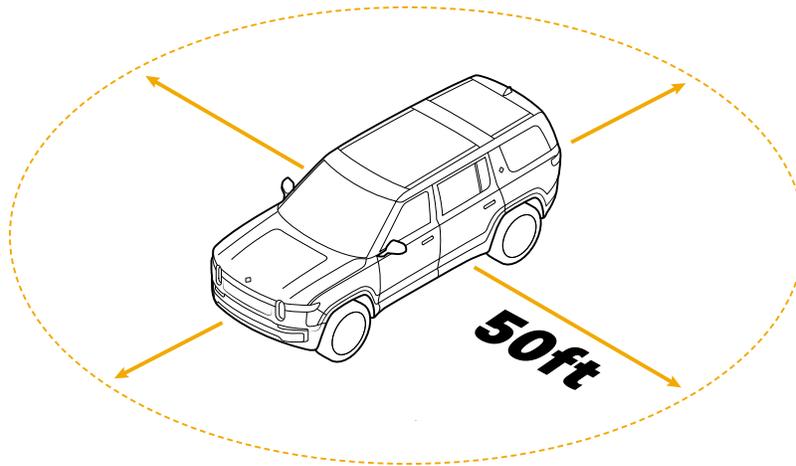
# Store the Vehicle

Be careful when storing a damaged Rivian electric vehicle after an accident or fire. Be sure to [secure it when you park it](#).

1. Use signage or some other visual indicator to identify it as an electric vehicle.



2. Store the vehicle outside at least 50 ft away from other vehicles, structures, or combustible material.



## NOTE

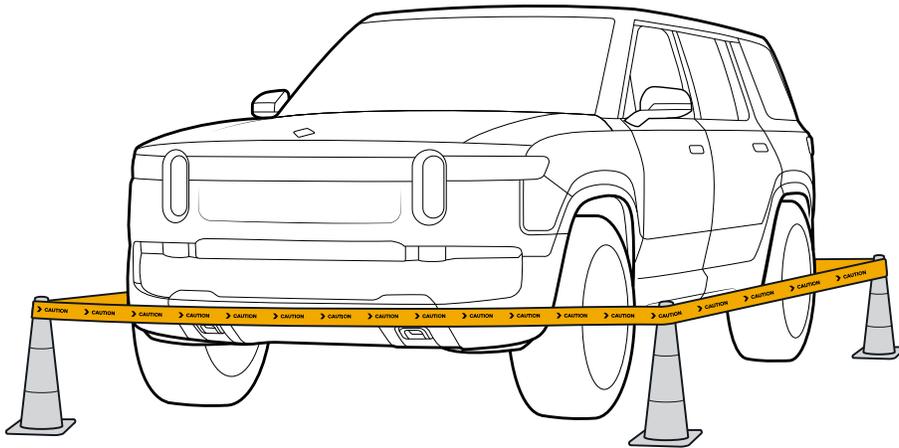
If this spacing can't be achieved, place the vehicle where it can quickly be towed or winched away. Consider access for fire personnel, fire apparatus, and a water supply and leave space for fire personnel to periodically and quickly reassess with thermal imaging.

3. Notify others that the vehicle is on the property and ask them not to interact with it unless authorized.
4. Monitor a vehicle with a [damaged high-voltage battery](#) for signs of gas emissions, fire, or any potential issues from a leak.

## STORE THE VEHICLE

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5. Rivian recommends creating a tape barrier around the vehicle in an isolated area of the lot.



**DANGER**

Energy that remains in a battery is especially concerning if the high-voltage components or battery are damaged. Exposed wiring and parts can also create an electrical safety hazard.