INFORMATION FOR FIRST AND SECOND RESPONSERS

EMERGENCY RESPONSE GUIDE

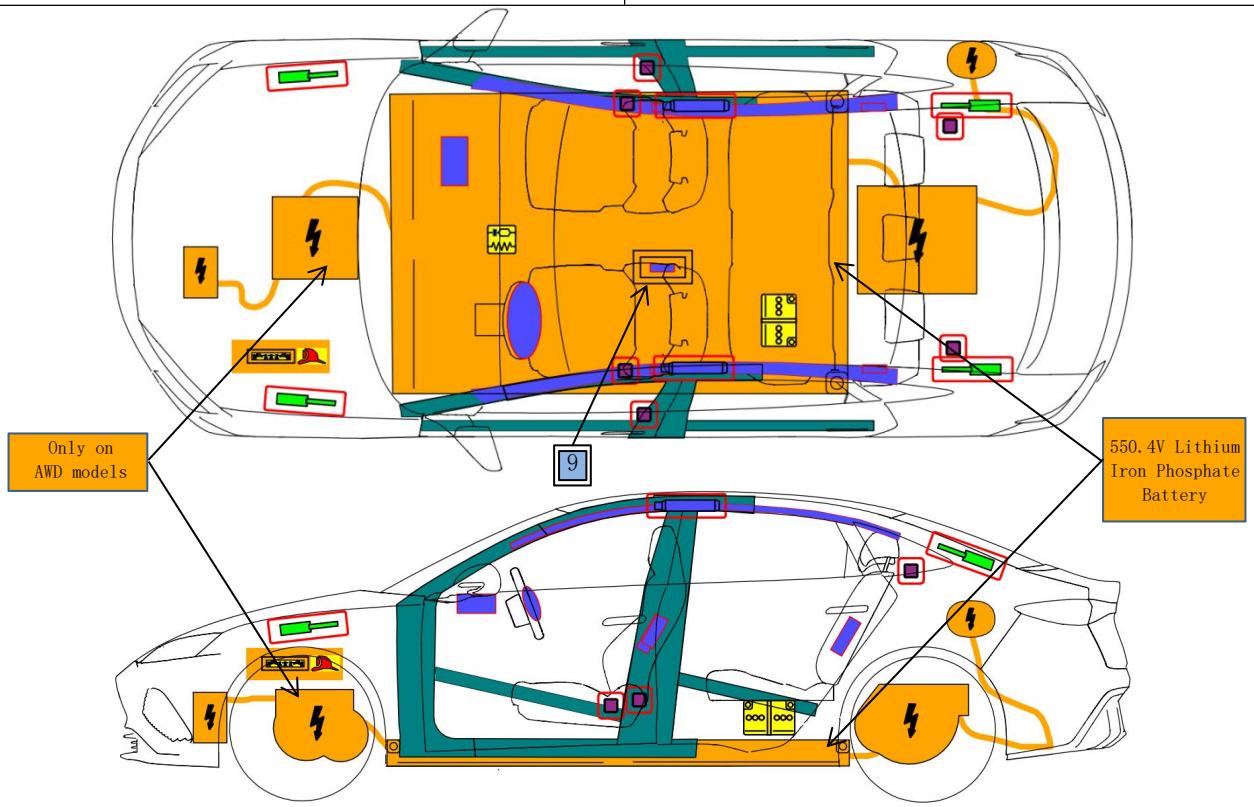
BYD SEAL

ELECTRIC

CONTENTS

0. Rescue Sheet(s)

BYD SEAL
(4-door model, 2023.07)



	Airbag		Battery low voltage		Battery pack, high-voltage		Gas strut/ Preloaded spring
	High voltage component		High voltage power cable		High strength zone		Seat belt pretensioner
	SRS control unit		Stored gas inflator		Zone requiring special attention		
	Cable cut						

Document number	ID No.	Version No.
Rescue sheet_BYD SEAL_001_en	01	07/2023

1. Identification / recognition

The electric motor is silent. The OK indicator light on the instrument cluster indicates that the current electric drive system is operational. Wear appropriate personal protective equipment.

Logo & charge port

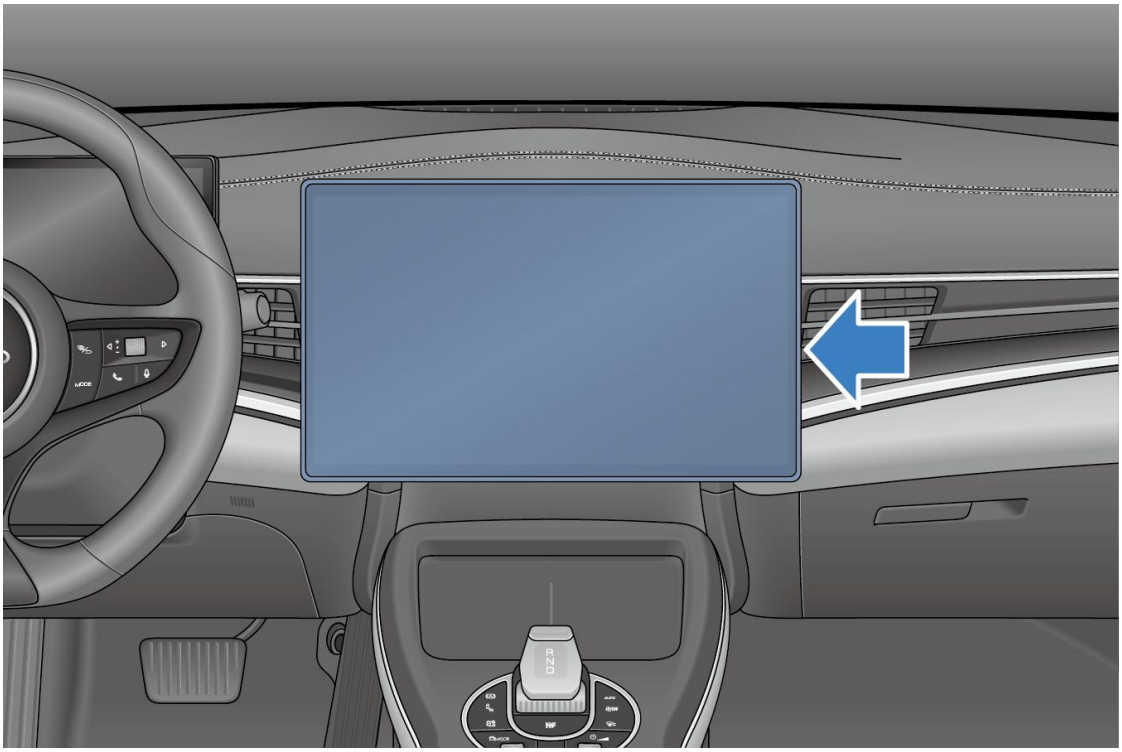
This vehicle can be identified by the "BYD" logo on the front, "BYD SEAL" on right side of the rear, and "3.8s" below is only for AWD model. The charge ports of left-hand drive (LHD) and right-hand drive (RHD) vehicles are located above rear right wheels.

Vehicle identification number (VIN)

The vehicle identification number (VIN) can be easily found on the VIN slot of the upper cover of the front windscreen cross sill and on the lower beam of the front passenger's seat. Other positions marked with VIN include: the front anti-impact beam, the front hood inner panel, the front side of the rear motor, the lower corner of driver door, the left rear door sill, the left rear wheel hubcap metal and the plot inside the trunk lid.

Infotainment touchscreen

This vehicle is equipped with a 15.6 in touchscreen that is mounted in a landscape or portrait orientation, as well as an instrument cluster (10.25 in) in front of the steering wheel. Refer to the Owner's Manual for information on touchscreen operation.



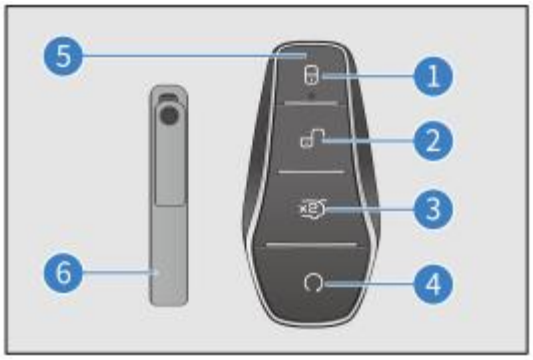
If vehicle airbags have deployed, the 12V power supply may not be available and the touchscreen will not be operational. After an accident, connecting the 12V power supply may cause a fire. BYD does not recommend attempting to reconnect the 12V power supply.

Key

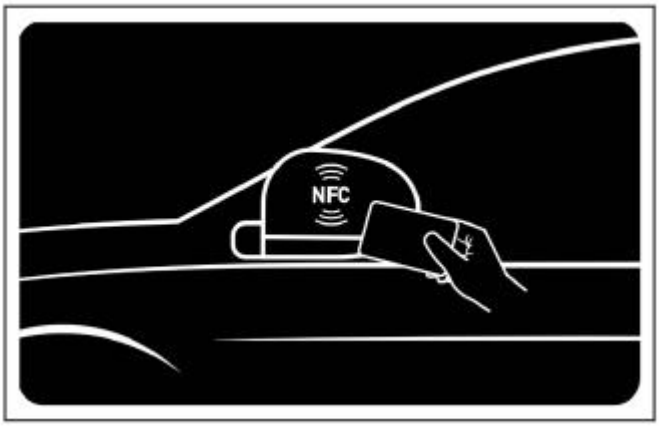
This vehicle supports 3 types of keys.

• **Electronic smart key** – Lock/Unlock all doors by pressing the driver's door microswitch while carrying the electronic smart key. Buttons on the smart key help you lock/unlock doors, open the boot lid, and perform a remote start, as shown in the figure below.

① "Lock" button
② "Unlock" button
③ "Trunk unlock" button
④ "Start/Stop" button
⑤ Indicator
⑥ Mechanical Key



• **Mechanical key (in the electronic smart key)** – Unlock/Lock the driver's door.

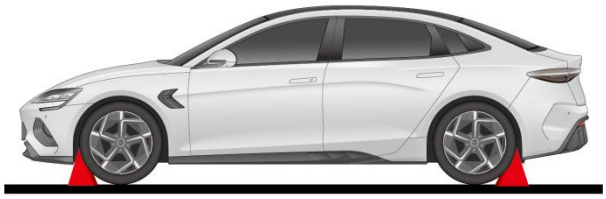
• **NFC card** – Unlock/Lock all doors when the vehicle is powered off by putting the card on the NFC mark of the side mirror on the driver's side.	

2. Immobilisation / stabilisation / lifting

Immobilisation

(1) Chock wheels

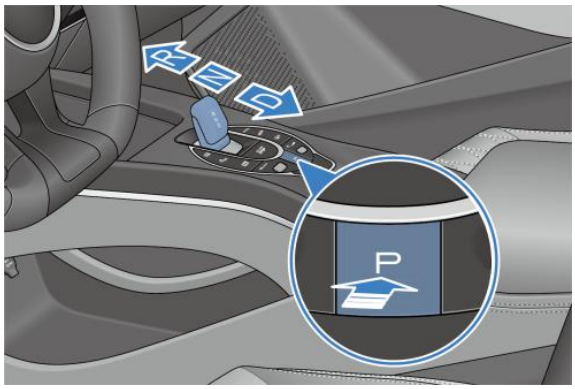
This vehicle moves silently, so never assume it is powered off or will not move. Always chock the wheels to prevent the vehicle from sliding.



Be careful not to damage the battery pack when stabilising the vehicle.

(2) Shift into Park

This vehicle moves silently, so never assume it is powered off. Pressing the accelerator pedal even slightly can cause the vehicle to accelerate quickly if the active gear is Drive or Reverse. To ensure proper parking, please press the "P" button, and engage the EPB on the vehicle setting on the infotainment touchscreen. When the vehicle is in Park, the instrument cluster displays "P".



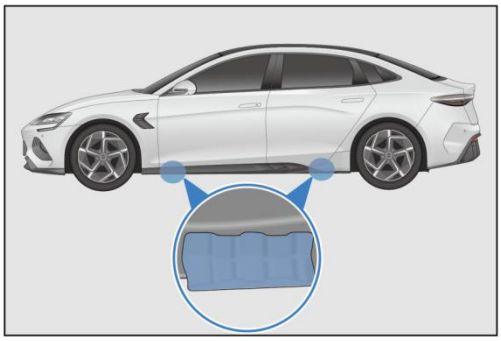
Stabilisation / lifting points

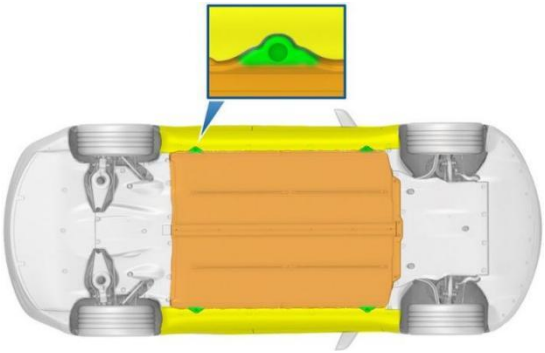
The high-voltage battery is located under the floor pan. A large section of the undercarriage houses the high-voltage battery. When lifting or stabilising this vehicle, only use the designated lift areas, as shown in green.

Be careful not to damage the battery pack when stabilising the vehicle.

The vehicle should be lifted or manipulated only if first responders are trained. Use caution to ensure you never come into contact with the high-voltage battery or other high-voltage components while lifting or manipulating the vehicle.

Do not use the high-voltage battery to lift or stabilise the vehicle.



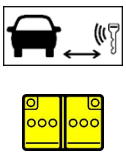


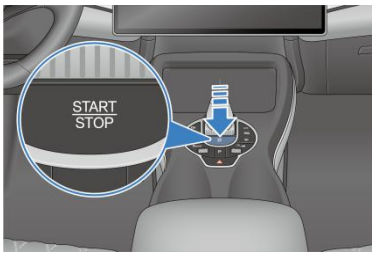
	Appropriate lift areas
	Safe stabilisation points
	High-voltage battery

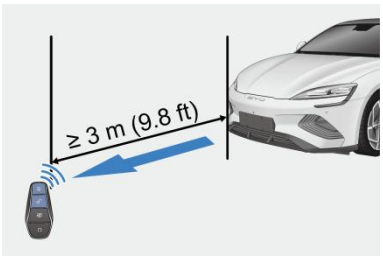
3. Disable direct hazards / safety regulations

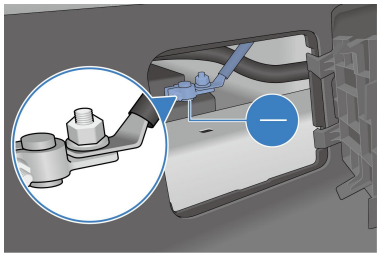
Main disable method: disable the 12V battery

Press the Start/Stop button, and keep the smart key at least 9.8 ft (3 m) away from the vehicle. Open the access door under the rear seats to expose the negative terminal and GND harness of the 12V battery. Please disconnect the negative terminal of the 12V battery.



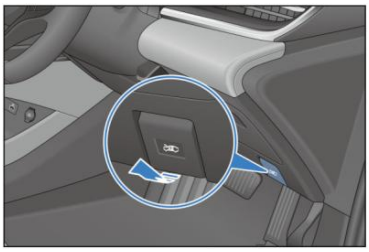


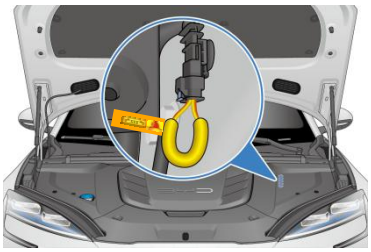


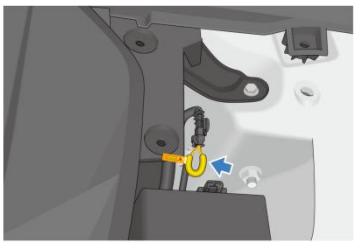


Alternative disable method: cut the cable

Open the bonnet (see Chapter 4: Access to the Occupants). Disconnect the high-voltage connector by following the label on it.





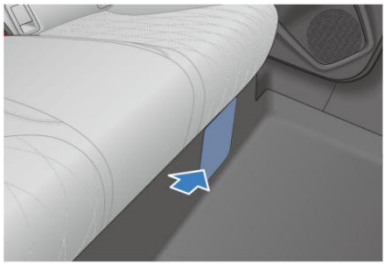


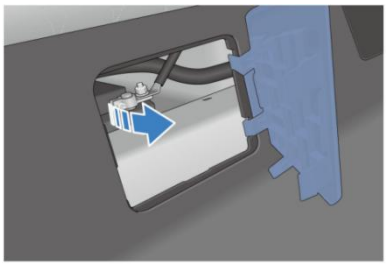
Do not touch, cut or open high-voltage components and the high-voltage battery! Wear appropriate protective equipment!

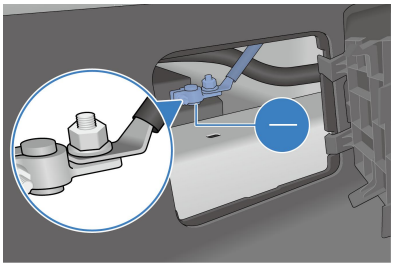
In the event of an accident in which the airbags are deployed, the high-voltage system will be automatically deactivated. The high-voltage system is de-energised approximately 60 seconds after deactivation.

Battery low-voltage

The 12V battery is arranged under the rear seats, and the battery access door at the position corresponding to the ankle of the passenger in the rear left seat. The negative terminal and GND harness of the 12V battery are visible after the access door is opened.





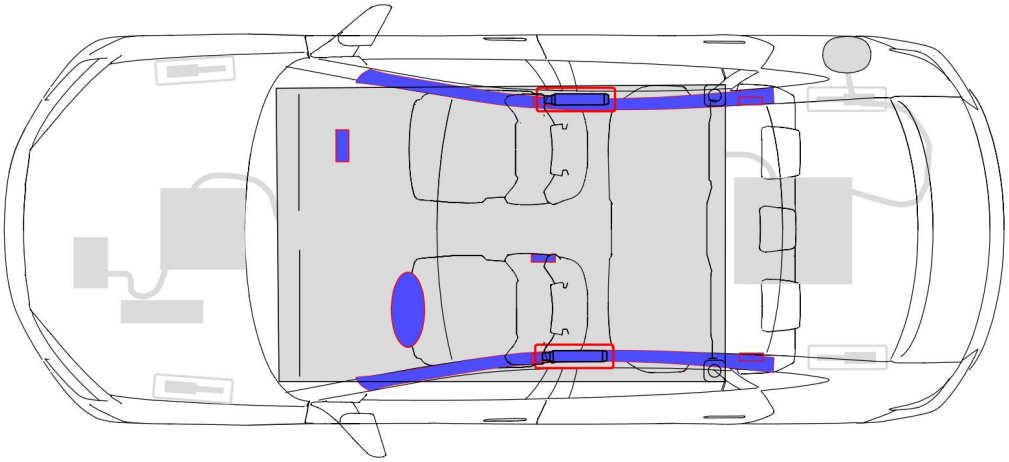


Airbag

Airbags are located in the approximate areas shown below. The airbag warning label is hot-stamped on the sun visor on the front passenger's side.

When the airbags are deployed by the restraint control module (RCM), the pyro-technic fuse that deactivates the vehicle's high-voltage system is simultaneously triggered.

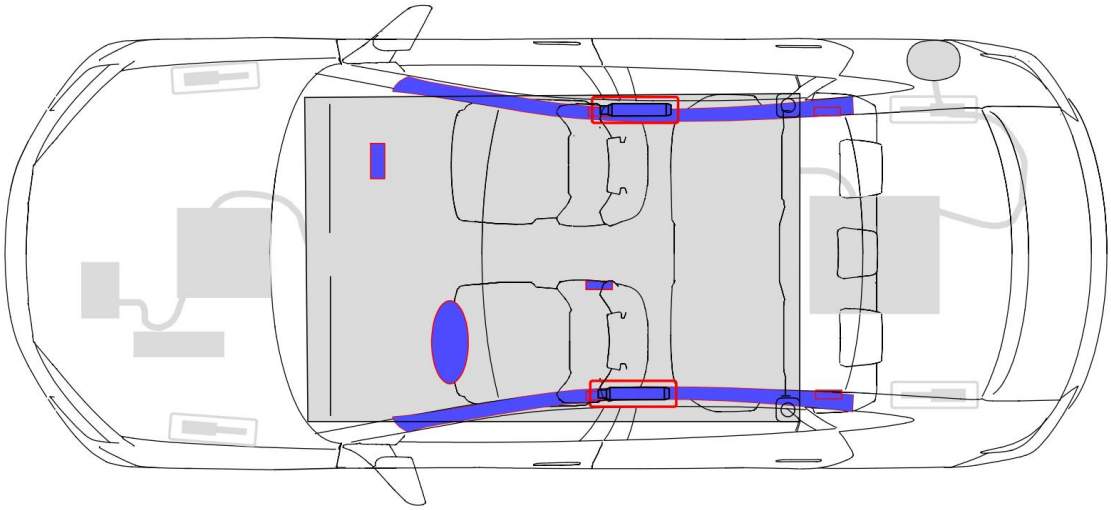
This vehicle is designed to deactivate the high voltage in all components and cables outside of the high-voltage battery when an airbag is deployed. Care must be taken not to cut any orange high-voltage cables or try to gain access into the high-voltage battery pack. Even though the high-voltage system has shut down due to the airbag deployment, it must always be assumed that there may be high voltage present in the high-voltage cables and components. The high-voltage battery cells within the battery pack have stored energy and should not be compromised with rescue tools.



The RCM has an internal energy reserve that allows it to remain powered for some time after the 12V power supply is disconnected. The RCM will remain powered (from the vehicle) after it deploys any airbag or pretensioner. Do not touch the RCM within 10s of an airbag or pretensioner deployment.

Stored gas inflator

The stored gas inflators, outlined in red, are located near the roof.



The RCM has a backup power supply with a discharge time of approximately 10s. Do not touch the RCM within 10s of an airbag or pretensioner deployment.

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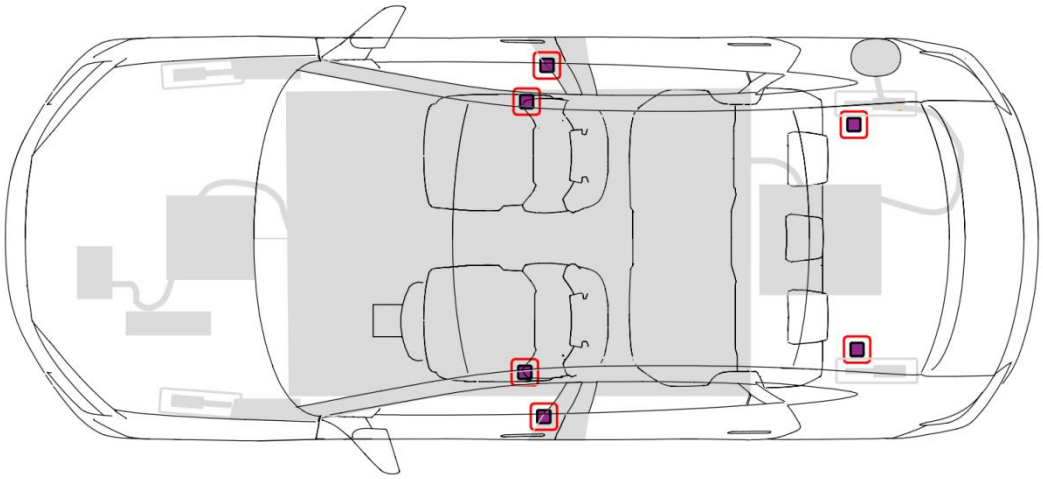
Seat belt pretensioner

The seat belt pretensioners outlined in red, are located at the bottom of the B-pillars, outboard of the 2nd row seats, and near the lap belts.



Rescuers should never cut or crush inflation cylinders. Cutting or compressing cylinders causes catastrophic failure, leading to injury or death.

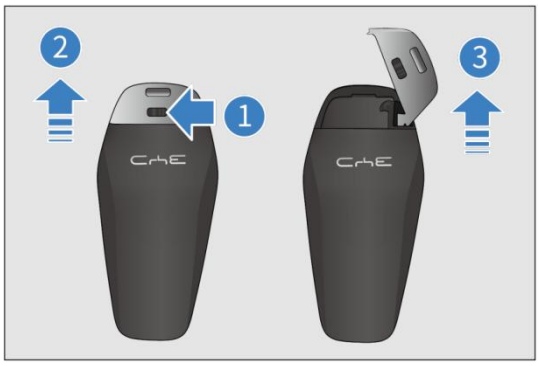
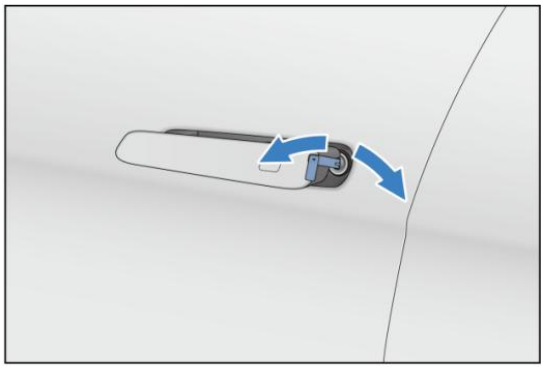
Electrical and mechanical releases may be compromised after a collision.

4. Access to the occupants

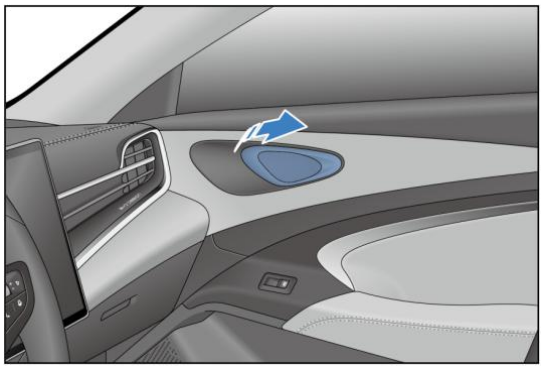
The seats are electrically powered and may not function after a collision.

After a collision, there is a risk of failure to open doors or the trunk lid if the extent of the collision is not enough to trigger the collision signal or the trunk lid power-off. Extrication may be required.

Opening doors with mechanical key

● **Taking out the mechanical key:** As shown in the figure, slide the lock-up button in the direction of arrow ① and push the back cover of the electronic smart key in the direction of arrow ②, hook the head hole of the mechanical key with the projection parts at both ends of the back cover of smart key and pull it in the direction of arrow ③ to take out the mechanical key.	
Pull up the outer handle of the driver's door. Insert the key and turn it clockwise (for LHD) or counterclockwise (for RHD) to unlock the door. After pulling out the key, pull the outer handle to open the door.	

Opening with inner doors handle

● When the vehicle is unlocked, pull the handle once to open the door from the inside. ● When the vehicle is locked, pull the handle twice continuously to open the door from the inside.	

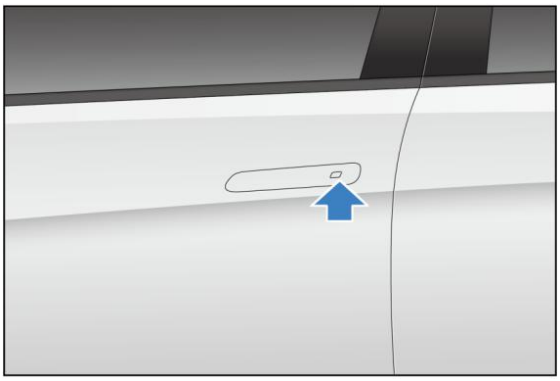
Due to child protection locks provided for the vehicle, please ensure that such locks are unlocked before opening rear doors by interior handles.

Opening doors with smart key

● Press the unlock button. All doors are unlocked, the hidden door handles automatically extend, and the turn signal flashes twice. ● When all doors are unlocked with the smart key, the interior light (with the door light switch turned on in the infotainment system) will light up for 15 seconds and then go out, even if the doors are not opened.	

Opening doors with microswitch

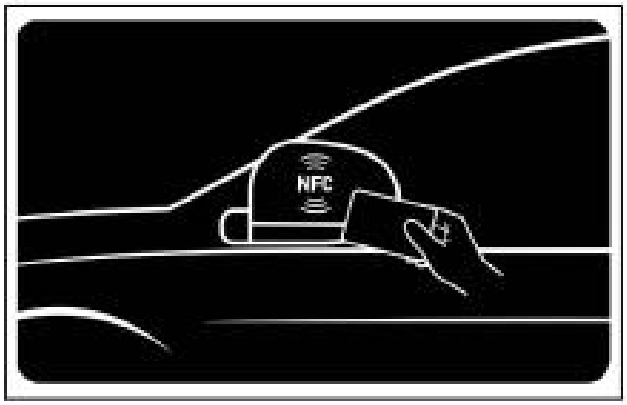
- When the anti-theft system is activated, press the microswitch on the front door handle while carrying the smart key to unlock all doors.
- When the anti-theft system is activated, please open the door within 30s after unlocking. Otherwise, all doors lock automatically.



- Pressing the microswitch does not work if: The microswitch is pressed while the door is opened/closed, and at the same time the key is left in the vehicle.

Opening doors with NFC card

- When the anti-theft system is activated, put the NFC key card close to the NFC mark of the side mirror on the driver's side. All doors unlock simultaneously. The signals will flash twice.
- When the anti-theft system is activated, please open the door within limited time after unlocking with the NFC key card. Otherwise, all doors lock automatically.



- Putting the NFC key card close to the NFC mark of the side mirror on the driver's side does not work if:
  - This is performed while the door is opened or closed; or
  - The vehicle is not powered off

Front seats - electric adjustment

Electrical front seat adjustment includes back-and-forth adjustment of seat cushiong*, angle adjustment of seat base* and angle adjustment of seat backs. Choose the following methods according to the funcitons available in your vehicle.

- ① Seat position adjustment switch

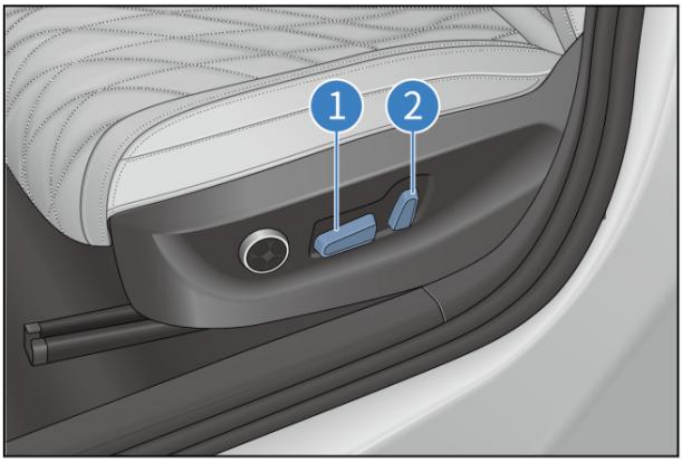
Move the seat position adjustment switch back or forth to move the seat backward or forward.

Move the front end of the switch up or down to change the seat base angle.

Move the rear end of the switch up or down to raise or lower the seat.

- ② Seat back angle adjustment switch

Toggle the upper end of the seat back angle adjustment switch to adjust the seat back angle.

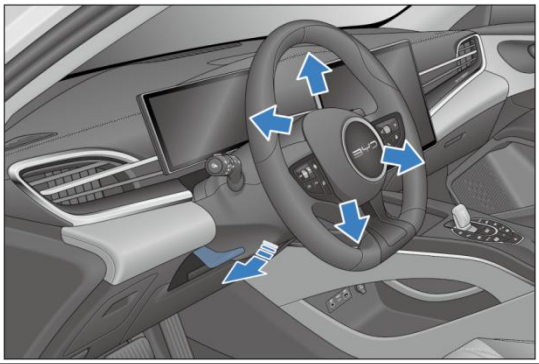


If 12V power supply is not available, the front seats cannot be adjusted.

Steering column adjustment

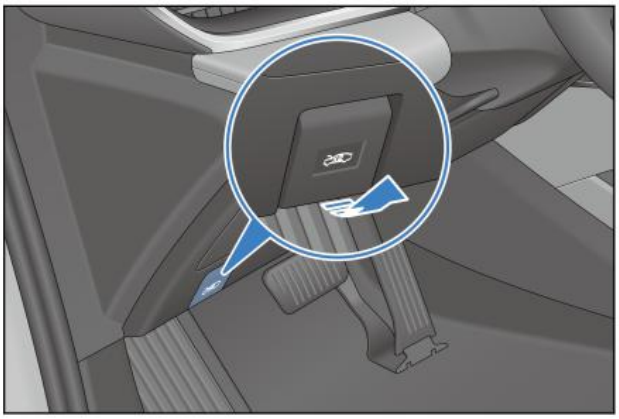
To adjust the angle of axial position of the steering wheel, do the following while holding the steering wheel:

Press the steering wheel adjustment handle down to adjust the steering wheel to the desired[position and return the handle to its original position.



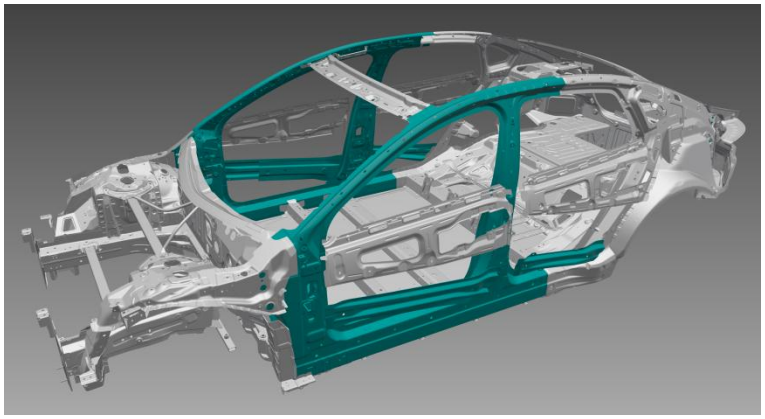
Opening the bonnet

Pull up the bonnet opening handle of the lower dashboard body on the driver's side twice in a row to unlock and slightly open the bonnet. Lift up the bonnet and support it with a stay bar.



Reinforced zone

This vehicle is reinforced to protect occupants in a collision. Suitable tools must be used to cut or crush these areas. Reinforced zones are shown in teal below.



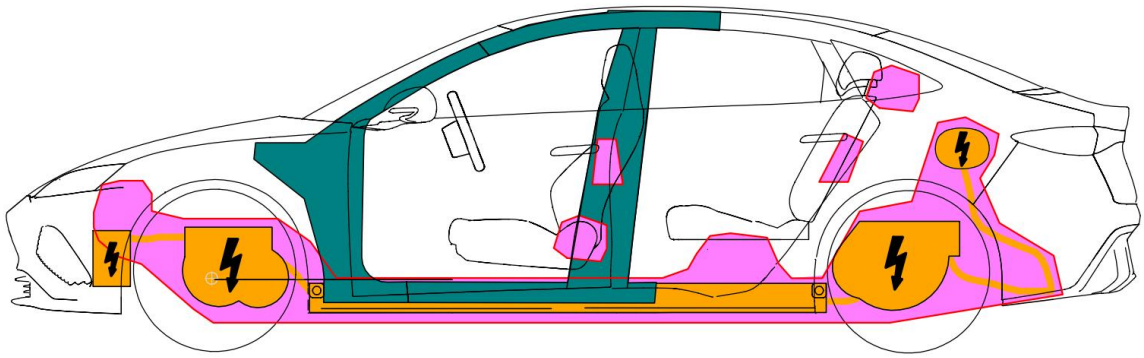
The B-pillars of this vehicle are constructed of reinforced steel. The vehicle's doors are made of galvanised steel. All other structural body components are made of various strengths of steel.

Always use appropriate tools, such as a hydraulic cutter, and always wear appropriate PPE when cutting this vehicle. Failure to follow these instructions may result in serious injury or death.

Regardless of the disabling procedure you use, always assume that all high-voltage components are energised. Cutting, crushing, or touching high-voltage components may result in serious injury or death.

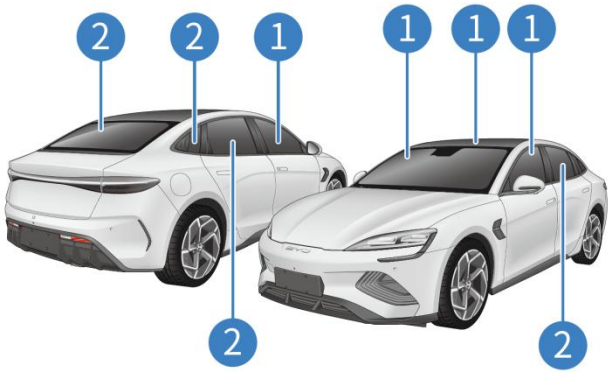
No-cut zones

This vehicle has areas that are defined as "no-cut zones" due to the presence of high voltage, gas struts, supplemental restraint system (SRS) components, or other hazards. Never cut or crush in these areas. Doing so may result in serious injury or death. The "no-cut zones" are shown in pink below.



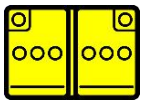
Window

This vehicle comes with tempered side window glass (including front corner glass) and rear windscreen glass, as well as laminated front windscreen glass and roof glass (if any).



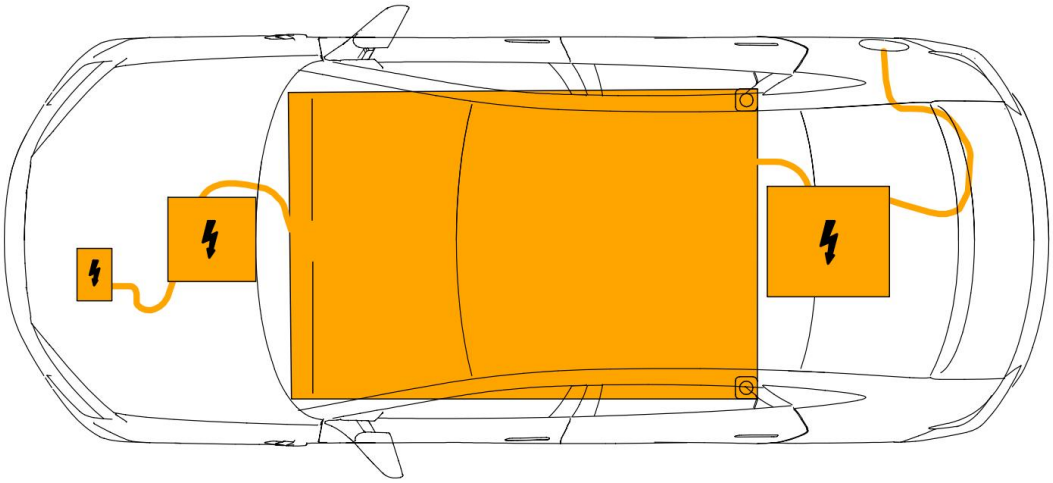
1. Laminated glass
2. Tempered glass

5. Stored energy / liquids / gases / solids

		12V
		550.4V Lithium iron phosphate battery
		R-1234yf 1400/1650 ±10g

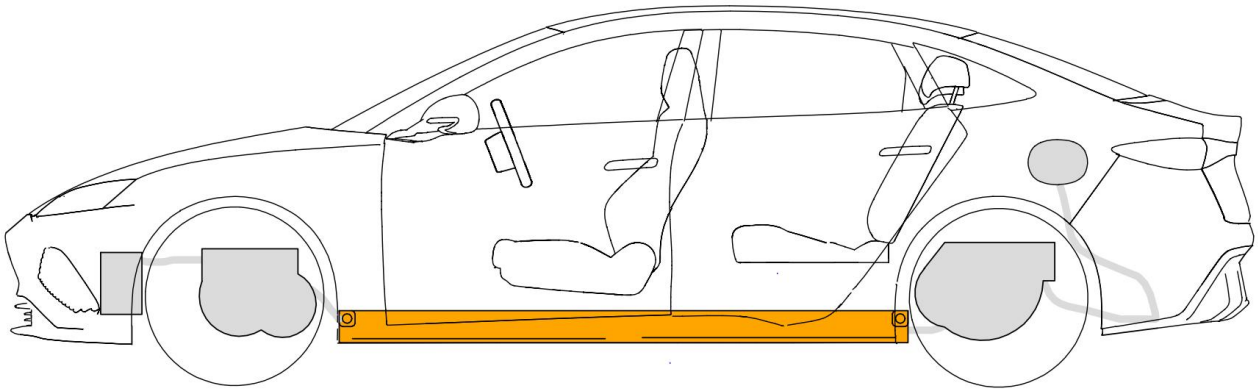
When there is a coolant leakage, the battery pack may become unstable and there is risk of thermal runaway. The battery temperature must be checked with a thermal imaging camera.

High-voltage components 



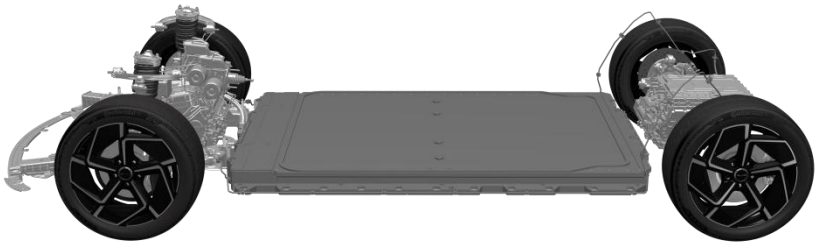
High-voltage battery pack

This vehicle is equipped with a floor-mounted 550.4V high-voltage LFP battery. The battery is made up of many cells that are liquid cooled with coolant. The coolant appears pink in colour and may leak from the battery pack if the pack has been compromised during a vehicle collision. The battery cells will have stored energy within them. Never breach the high-voltage battery when lifting from under the vehicle. When using rescue tools, pay special attention to ensuring that you do not breach the floor pan or compromise the high-voltage battery pack. Refer to Chapter 2: Lifting Points for instructions on how to properly lift the vehicle.



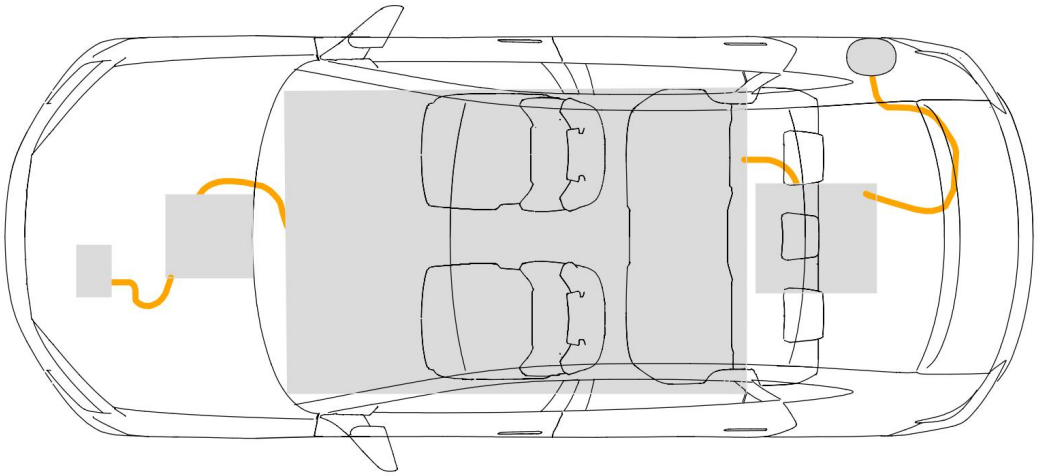
Pushing on the floor pan

The high-voltage is below the floor pan. Never push on the floor pan itself inside of the vehicle, or it may damage the high-voltage or the high-voltage components and cause severe injury or death. Never use rescue tools to damage the high-voltage pack at any time.



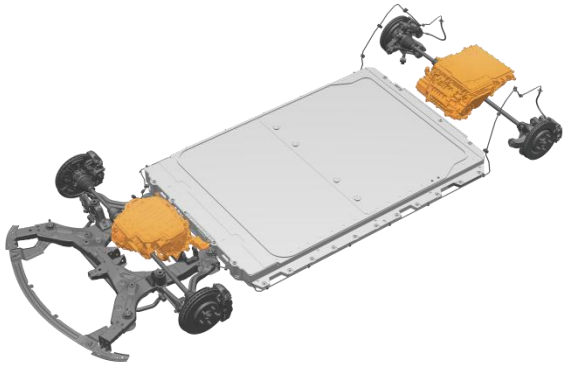
High-voltage cables/components

High-voltage cables are shown in orange. There are high-voltage cables at the bottom of the vehicle. Do not compromise these high-voltage cables with rescue tools. At no time should any high-voltage cables be compromised with rescue tools. The assumption should be made that at all times there may be high voltage present in the orange high-voltage cables.



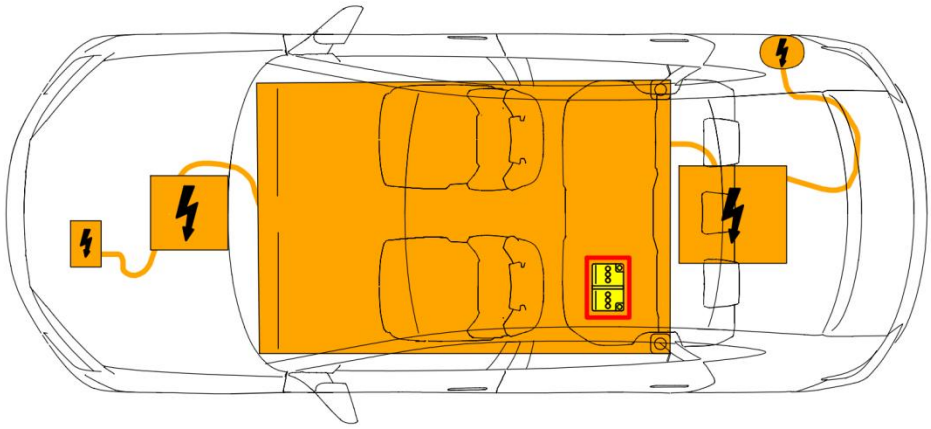
Drive unit

The front drive unit is located between the front wheels, and the drive inverter within the drive unit. The drive unit converts the direct current (DC) from the high-voltage battery into alternating current (AC) to power the wheels.



Battery low-voltage

In addition to the high-voltage system, this vehicle has a low-voltage electrical system. Its 12V battery powers the restraint system, airbags, windows, door locks, touchscreen, and interior and exterior lights. The 12V battery, outlined in red, is accessible after the access door under the rear seats is opened (see Chapter 3 in this document).



6. In case of fire

Firefighting

Do not submerge the vehicle to extinguish/cool a battery fire.

Extinguish the fire using large amounts of water.

BATTERY RE-IGNITION!

Use water to fight a high-voltage battery fire. If the battery catches fire, is exposed to high heat, or is generating heat or gases, use a large amount of water to cool the battery. Due to a large amount of water required to fully extinguish a battery fire and cool the battery, always establish or request additional water supply early. If you don't have enough water, please use CO2, dry powder, or another typical fire-extinguishing agent.

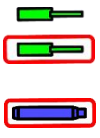
BYD does not recommend the use of foam on electric vehicles.

Apply water directly to the battery. If safety permits, lift or tilt the vehicle for more direct access to the battery (see Chapter 2). Apply water from a safe distance only if a natural opening (such as a vent or opening from a collision) already exists. Do not open the battery for the purpose of cooling it.

BYD does not recommend placing the vehicle in a large container full of water. The use of a thermal imaging camera or infrared (TIC or IR) device is recommended to monitor battery temperatures during cooling. Continue to use water until the battery temperature is equal to or less than the ambient temperature, indicated by the TIC. When using the TIC, allow enough time, once the application of water has stopped, to allow for heat within the battery to transfer to the battery enclosure.

Extinguish small fires that do not involve the high-voltage battery using typical vehicle firefighting procedures.

During firefighting, do not make contact with any high-voltage components. Always use insulated tools for firefighting.



Heat and flames can compromise airbag inflators, gas inflation cylinders of stored gas inflators, gas struts, and other components which can result in an unexpected overheating and subsequent cylinder explosion. Perform an adequate knock down before entering a hot zone.

Battery fires may take up to 24 hours to fully cool. After the fire is extinguished and smoke visibly subsides, a TIC can be used to actively measure the temperature of the high-voltage battery and monitor the heating or cooling. There must be no fire, smoke, audible popping/hissing, or heating present in the high-voltage battery for at least 45 min before the vehicle can be released to second responders (such as law enforcement and vehicle transporters). The battery must be completely cooled before the vehicle is released to second responders or otherwise moved out of the incident site.

Always inform second responders of battery re-ignition risk, and advise them to tilt or reposition the vehicle for draining excess water. This operation can assist in mitigating possible re-ignition.

Due to potential re-ignition, a vehicle that has been involved in a submersion, fire, or a collision that has compromised the high-voltage battery should be stored in an open area at least 50 ft (15 m) from any other object.

During all firefighting activities, consider the vehicle energised. Always wear full PPE, including a SCBA.

High-voltage battery - fire damage

Burning batteries release super-heated gases and toxic vapours, similar to those of conventional and other electric and hybrid vehicles. This release may include volatile organic compounds, hydrogen gas, carbon dioxide, carbon monoxide, soot, and particulates containing oxides of nickel, aluminium, lithium, copper, cobalt, and hydrogen fluoride. Responders should always protect themselves with full PPE, including a self-contained breathing apparatus (SCBA), and take appropriate measures to protect civilians downwind from the incident.

The high-voltage battery consists of LFP cells. If the battery is damaged, the fluid may leak.

The vehicle's drive unit is liquid cooled with ethylene glycol organic acid coolant. The high-voltage battery uses R1234yf. If damaged, pink coolant may leak from the battery.

A damaged high-voltage battery can create rapid heating of the battery cells. If you notice smoke, steam, or audible popping or hissing coming from the high-voltage battery, assume that it is heated and take appropriate action as described above.

7. In Case of Submersion

Treat this vehicle like any other submerged vehicle. The vehicle body does not present a greater risk of electric shock because it is in water. However, handle any submerged vehicle while wearing the appropriate PPE. Remove the vehicle from the water and continue with normal high-voltage disabling.

Vehicles that have been submerged in water should be handled with greater caution due to the potential risk of a high-voltage battery fire. First responders should be prepared to respond to a potential fire risk. Raise the front of the vehicle to allow water to drain out of the vehicle and the high-voltage battery pack. After the vehicle is removed from the water, continue normal disabling procedures as outlined in Chapter 3.

After removing the vehicle from the water, shut off the high-voltage system (see Chapter 3) and drain water out of the vehicle. Appropriate personal protective equipment must be worn during this procedure.

8. Towing / transportation / storage

This vehicle is equipped with a front drive motor. During vehicle transport, ensure that the front wheels are off the ground and unable to spin.

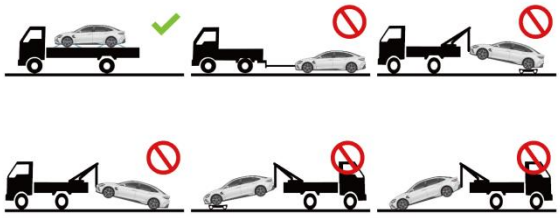
Never transport the vehicle with the tyres in a position where they can spin. Doing so may lead to significant damage and overheating. In rare cases, extreme overheating may cause the surrounding components to ignite.

Store at a safe distance from other vehicles!

IR

BATTERY RE-IGNITION!

If vehicle towing is required, it is recommended to contact a BYD authorised dealer or service provider, professional towing service provider, or a roadside assistance organisation that you have joined. A flatbed is the best choice. Towing the vehicle with a front wheel on the ground compromises high-voltage components.

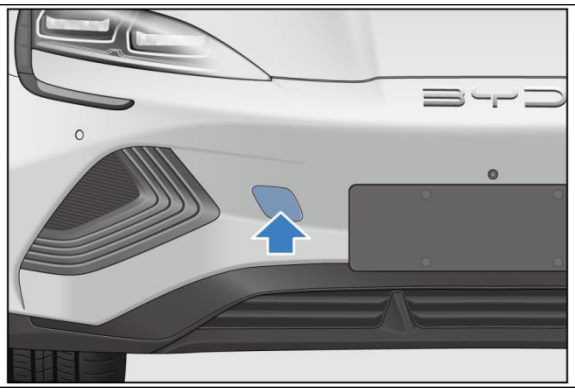


The vehicle is equipped with high-voltage components that may be compromised as a result of a collision. Before transporting, be sure to assume that these components can be energised. Always follow high-voltage safety precautions (wearing PPE, etc.), until emergency response professionals have evaluated the vehicle and can accurately confirm that all high-voltage systems are no longer energised. Failure to do so may result in serious injury.

Never have your vehicle towed by another vehicle with just ropes or chains.

BYD is not responsible for any damage caused by or during transport of the vehicle, including personal property damage.

Tow eye

The tow eye is stored in the tool box under the boot cover. The position to fasten the hook is shown in the figure. 1. Pry it up with a straight screw driver. 2. Fasten the hook into the front eye.	

• BYD does not recommend using the towing hook to move the vehicle. It is better to contact a professional towing service provider or roadside assistance organisation that you have joined.
• Use only the towing hook that comes with the vehicle to avoid vehicle damages.
• Do not tow the vehicle from the rear when its four wheels are on the ground. Otherwise, the vehicle will be damaged.

9. Important Additional Information

This document contains important instructions and warnings that must be followed when this vehicle is handled in an emergency situation.

Driver's seat has a far side airbag in addition to the side airbag. Location of the far side airbag is shown in the mark 9 on page 1.	

Figures in this document show a LHD vehicle for the European market. Unless otherwise noted, RHD vehicles are mirrored.

Be careful not to damage the battery pack when stabilising the vehicle.

The vehicle should be lifted or manipulated only if first responders are trained. Use caution to ensure you never come into contact with the high-voltage battery or other high-voltage components while lifting or manipulating the vehicle.

Do not use the high-voltage battery to lift or stabilise the vehicle.

Do not touch, cut or open high-voltage components and the high-voltage battery! Wear appropriate protective equipment!

After airbags deploy, the vehicle is in an abnormal state. Please leave the vehicle immediately.

The RCM has a backup power supply with a discharge time of approximately 10s. Do not touch the RCM within 10s of an airbag or pretensioner deployment.

Never transport the vehicle with the tires in a position where they can spin. Doing so may lead to significant damage and overheating. In rare cases, extreme overheating may cause the surrounding components to ignite.

The vehicle is equipped with high-voltage components that may be compromised as a result of a collision. Before transporting, be sure to assume these components can be energised. Always follow high-voltage safety precautions (wearing PPE, etc.), until emergency response professionals have evaluated the vehicle and can accurately confirm that all high-voltage systems are no longer energised. Failure to do so may result in serious injury.

10. Explanation of pictograms used

	Warning, Electricity		Flammable
	General warning sign		Corrosives
	Thermal imaging camera or infrared (TIC or IR) device		Acute toxicity
	Bonnet		Hazardous to the human health
	Use water to extinguish the fire		Explosive
	Warning; low temperature		Air-conditioning component
	Remove smart key		Electric vehicle
	Seat height adjustment		Seat adjustment, longitudinal
	Use thermal infrared camera		