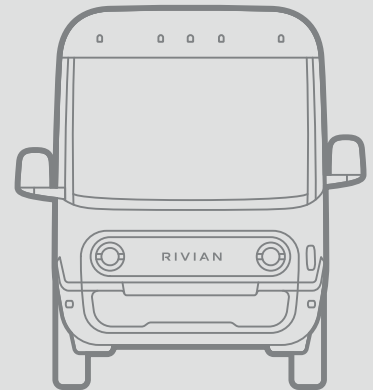
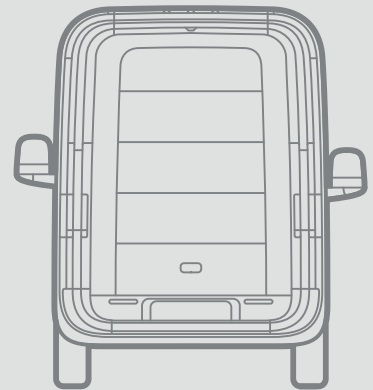
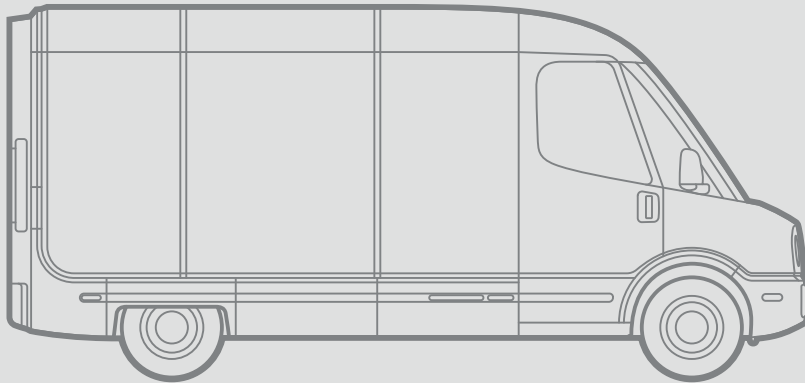
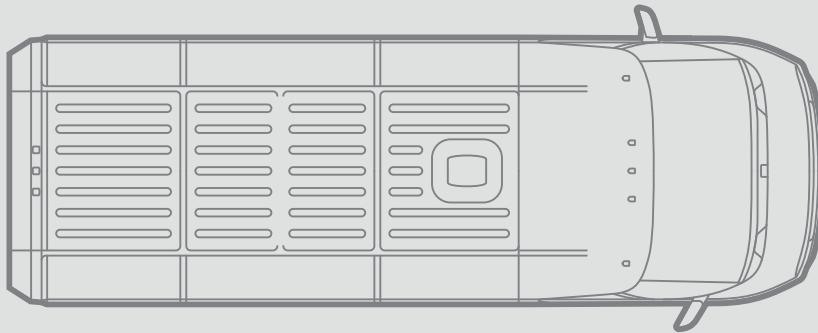




Rivian Commercial Van 500

Upfitting Guide



RIVIAN

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About This Guide

The *Rivian Commercial Van 500 Upfitting Guide* provides information to support modification and solution engineering for upfit partners.

Rivian recommends that upfit partners review this guide in full before performing any modifications or alterations to a vehicle.

This guide outlines Rivian's recommendations and requirements for maintaining the safety and integrity of Rivian vehicles during the upfit design and installation process. These instructions are intended to be used only by qualified engineers and technicians, with proper personal protective equipment (PPE), supervision, and training.

To ensure a successful and safe installation, consult the *Rivian Service Manual*, available through the Rivian Service Portal, for detailed instructions on general vehicle maintenance and repair. Be sure to refer to the Theory of Operations, which explains how the vehicle works and provides context for the modification statements outlined in this guide.

While Rivian is providing this guide to assist upfitters, Rivian does not warranty the aftermarket parts or materials used to perform the modifications, or the workmanship of the modifier. Conducting the modifications in this guide will not completely void your New Vehicle Limited Warranty. However, Rivian will exclude warranty coverage for defects or damage caused by the modifications, improper installation, unauthorized parts, improper service, or misuse of the vehicle.

Upfitters' Obligations

The National Highway Traffic Safety Administration (NHTSA) imposes certain requirements on those who alter or modify vehicles that have been previously certified by a manufacturer (Rivian), including ensuring that the vehicle meets all applicable Federal Motor Vehicle Safety Standards (FMVSS) when delivered to a customer. Questions regarding NHTSA's requirements should be directed to the agency at www.nhtsa.gov or 1 (888) 327-4236.

Further, Rivian recommends that upfitters follow industry standards and best practices, such as those published by the Work Truck Association (NTEA).

Your Safety

Certain techniques described in this guide can be dangerous if performed incorrectly. Follow all safety messages carefully.

Feedback and Changes

If you have any questions, please contact the [Rivian Upfit Support Team](mailto:aftersalesupport@rivian.com) at aftersalesupport@rivian.com. We welcome your feedback on the usefulness of this guide.

Following Rivian's policy of continuous improvement, vehicle specifications are subject to change.



Symbols Used in This Guide

The following are the meanings of symbols used in this guide.

**DANGER**

Risk of electrocution or electric shock

**DANGER**

Risk of major injury such as these:

- fire
- chemical or poison
- crushing
- maiming
- death

**WARNING**

Risk of minor injury

**CAUTION**

Risks such as these:

- damage to vehicle or property
- data disruption
- voiding warranty

IMPORTANT

Instructions to successfully complete a task

NOTE

Useful information

Essential Care Instructions

Preventing Damage to the Vehicle

General Guidelines

Prevent squeaks and rattles.

- Secure all wiring and connectors.
- Use tapes that do not squeak against metal or plastic.

Prevent water leaks.

- Provide drip loops to prevent water leakage into the vehicle interior.
- Use appropriate wiring assemblies or grommets for passages from outside to inside.

Prevent damage from drilling.

- Take care when drilling near all wiring harnesses, especially high-voltage cables, to prevent damage or injury.
- Orient fasteners away from the low-voltage harnesses and battery and from high-voltage cables.
- Do not install fasteners with the shank pointing toward the high-voltage battery.
- Use a drill depth gauge.

Before working on the vehicle:

- Always disconnect the [12 V auxiliary battery](#) terminals.
- Wait at least 5 minutes before starting work.
- Replace any damaged or missing covers.
- If adding additional batteries, protect the terminals to prevent metal-to-metal contact and arcing.

Working Near Airbag Systems



CAUTION

Work on airbag systems may be performed only by a Rivian-authorized facility.

When working near an airbag system:

- Turn off the 12 V system and disconnect the 12 V battery before starting work.
- Remove power to the low-voltage circuit that contains the restraints control module (RCM) system.
- When welding, connect the negative cable of the welder as close to the weld as possible.
- Never connect the negative cable of the welder near an airbag or control module.
- If welding or cutting near a control module, remove the control module first.



Do Not Modify any of these Components

Do not modify the:

- Axles
- Steering system
- Brakes
- Front or rear suspension, including springs and shock absorbers
- Wheel alignment from factory specs
- Crossmember structure from the front of the vehicle back to, and including, the B-pillar
- Rear portal, including the roof area
- Vehicle frame
- Battery or drivetrain components
- Vehicle cooling system
- High-voltage cables
- Exterior lighting components

Modification Notes

- If you modify the load-bearing structure, the total equivalent rigidity of the modified structure must equal that of the standard vehicle.
- Do not drill holes in or perform welding work on the A-pillar or B-pillar.
- If you modify the side wall of the vehicle, the rigidity of the modified body must equal that of the standard vehicle.
- Do not add equipment that could obstruct the deployment of inflatable restraints (airbags).
- Do not make modifications near the airbag crash sensors and restraints control module (RCM).



DANGER

Changes or reinforcements around the RCM can impact the deployment of the airbags, seat belt restraints, and high-voltage isolation, potentially causing uncontrolled deployments that may result in injury or death.



Do Not Drill Areas

Do not drill:

- Into the skateboard or its longitudinal midrail.
- Into the high-voltage battery pack.
- Into the bumper or modify it.
- Into closed sections.
- At the A- and B-pillars, including the AB-pillar flanges where the curtain airbag is resting.
- In the upper or lower flange or chord of the longitudinal frame member.
- In the vicinity of load application points (for example, spring brackets).
- In the vicinity of front axle or rear axle supporting points.
- In the vicinity of the airbags.
- In the vicinity of the driver assistance systems (for example, front and rear sensors).

NOTE

When drilling and grinding around the crash sensors, be sure to disconnect the battery cables. This work may affect the airbag deployment timing and result in an unnecessary airbag deployment. There are two crash sensors in the front, two in the B-pillars, and two in the rear.

Additional Guidance

Do not weld onto the high-voltage battery pack.

Do not ground welding equipment to the high-voltage battery, battery casing, or skateboard midrail.

Do not cut, drill, or weld any parts that are part of the load path in a crash. Do not add material in the crash zone.

When drilling around brake lines and high-voltage cables:

- Use drill depth gauges.
- Do not point fasteners down or towards high-voltage components.
- Use acorn-style rounded-cap nuts where possible.



Painting the Vehicle

When painting the vehicle, mask adjacent areas to protect them from overspray. Examples:

- Disc brakes
- Brake hoses
- Gearing unit for the parking brake
- Wheel hubs



CAUTION

After all work on the vehicle, remove drilling chips and deburr all sharp edges.

High-Voltage Battery Pack

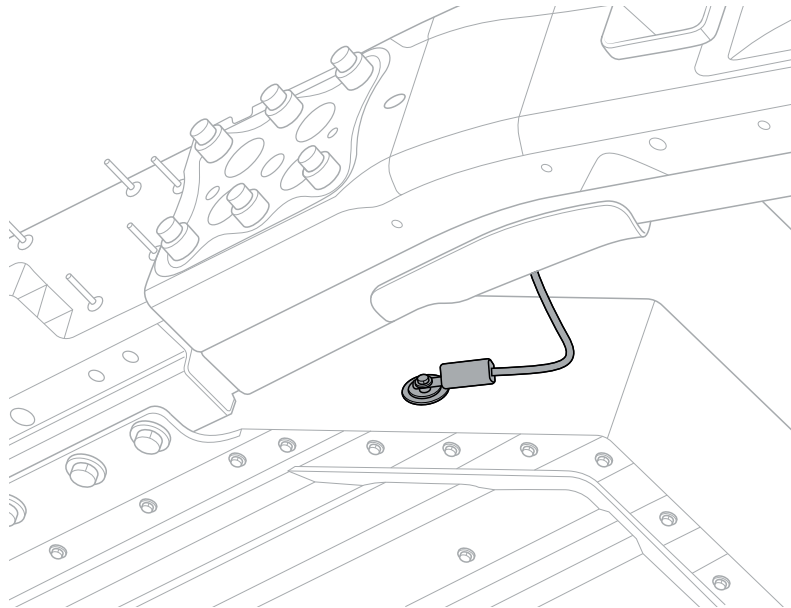
When painting near the high-voltage battery pack, be sure to mask the:

- [Exhaust vents](#)
- Regulatory labels on the front and rear of the battery pack

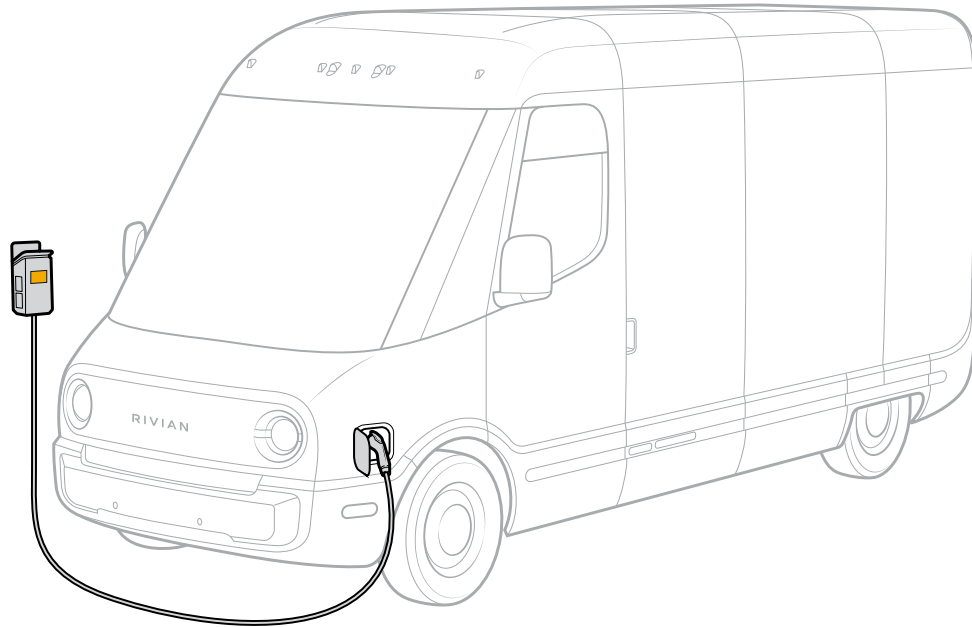


CAUTION

Do not paint the ground location.



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 Emergency Power Off 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.

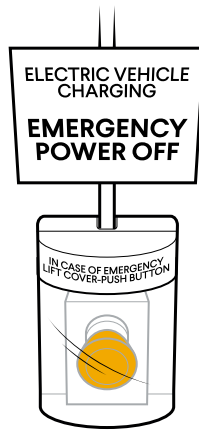
IMPORTANT

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 Emergency Power Off

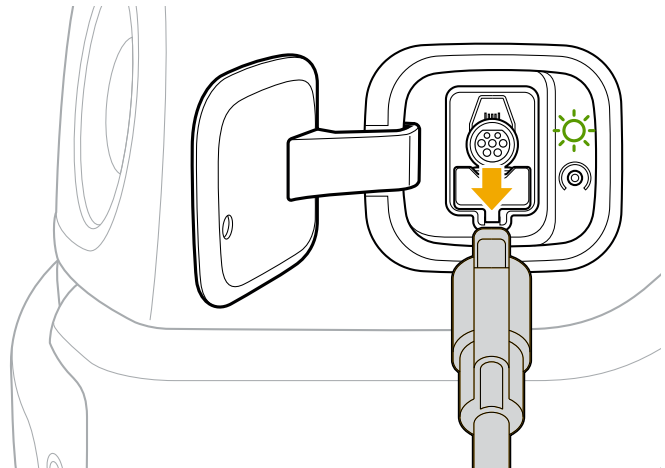
Use the Emergency Power Off to shut down the power to the charger. It's normally in the line of sight from the charger.



Remove the Charge Plug

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.



DANGER

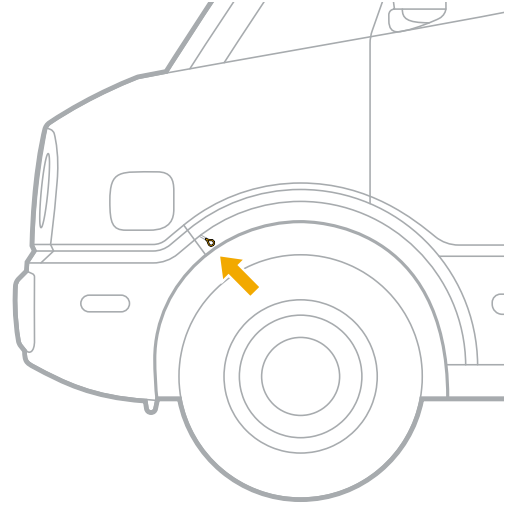
Do not cut the charging cable. You never want to interrupt a high-voltage current flow. Doing this could cause injury, electrocution, or death.



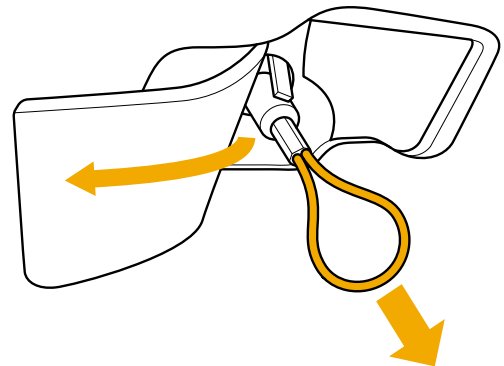
Manually Release the Charge Plug

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. Locate the release cable behind the access panel in the wheel liner on the driver side of the vehicle.



2. Open the access panel and gently pull the cable to release the charge plug.



3. Remove the charge plug from the charge port.

Lift the Vehicle Safely

Rivian recommends you use the following tools to lift the vehicle:

- Leather or abrasion-resistant gloves
- Personal protective equipment

Use Safe Lift Points

Lift the vehicle at these points only.

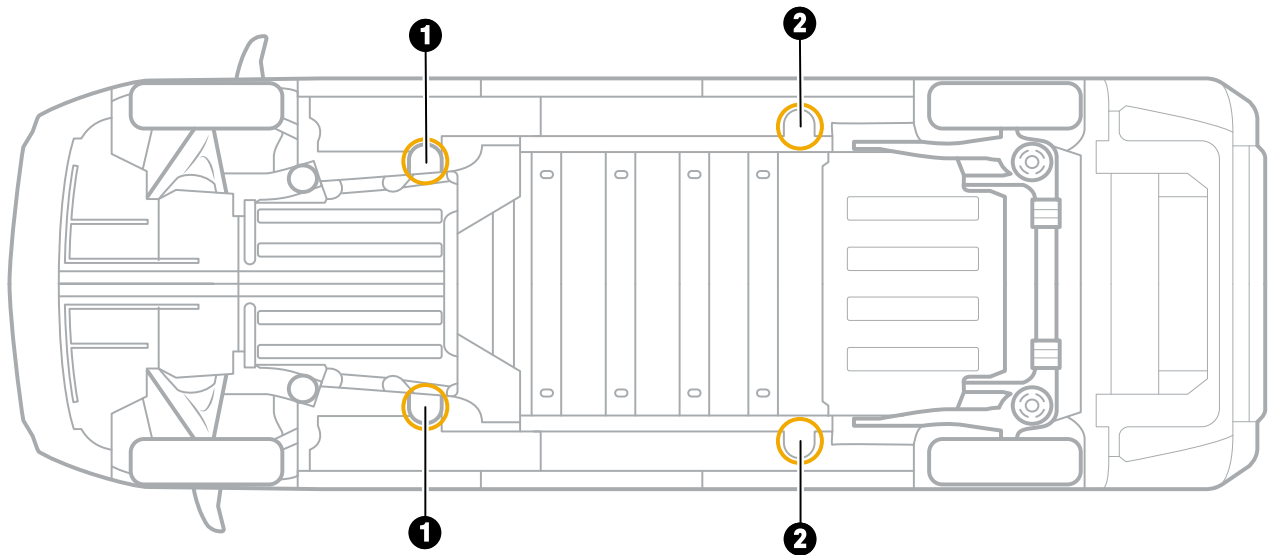
See the *Rivian Service Manual*, Raise and Support Vehicle, Labor Code 981020017.

NOTE

There are triangles stamped on the lower body panels marking the lift point locations.

IMPORTANT

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



Item	Description
1	Front jack location (frame rail)
2	Rear jack location (frame rail)

Vehicle Maintenance and Storage



CAUTION

- When storing the vehicle longer than 30 days, disconnect the [12 V battery](#) to maintain the state of charge for the high-voltage battery pack.
- When disconnecting the 12 V battery, isolate or separate the negative cable from the battery terminal to avoid unintended arcing or re-connection.
- Do not remove the enclosure cover from an incomplete vehicle until the modification is started.
- Store components that will be installed together in a clean and dry place in the vehicle.
- Make sure that components that were disassembled during a modification are retrofit in the same manner inside the vehicle.

Recover the Vehicle



WARNING

- Only transport the vehicle on a flatbed tow truck with a 21 ft (6.4 m) minimum flatbed length.
- Fire hazard. Towing Rivian vehicles with any wheels on the ground can lead to significant damage and overheating. Extreme overheating can cause a fire.
- Damage caused by improper towing is not covered under warranty.
- Be aware of overhead clearance limits. The vehicle height is 9 ft 7 in (2.92 m).

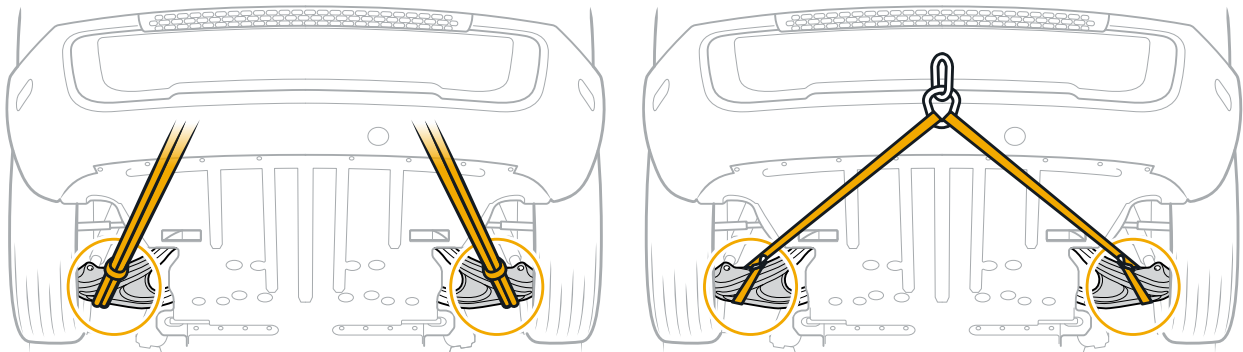
Prepare the Vehicle for Recovery

1. Ensure the front wheels face forward and are parallel with the vehicle.
2. Put the vehicle in **P** (Park) and chock the wheels.
3. Connect the vehicle to the tow truck winch with 3 ft (1 m) endless loops or a nylon bridle through the lower control arms.



CAUTION

To prevent damage, don't use the tow eye to connect to the tow truck and don't use j-hooks to connect to any suspension components.



4. Press and hold the brake pedal.
5. In the center display, go to **Safety**. Turn on **Park brake release**. Choose **Start Release**.

NOTE

Park brake release turns off after 15 minutes. You can also turn it off by putting the vehicle in **P** (Park) or turning off **Park brake release** under **Safety** in the center display.

6. Release the brake pedal and confirm release of the electronic park brake.

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



Connect to the Rear Axle

If you can't connect to the front control arms, you can recover the vehicle using the rear axle.



CAUTION

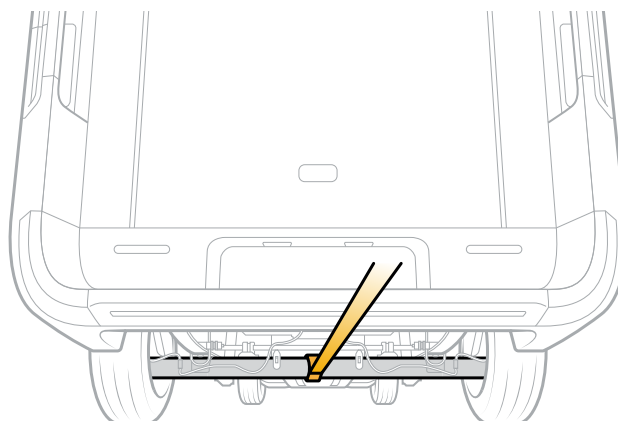
Do not connect to the anti-roll bar for recovery.

1. Ensure the front wheels face forward and are parallel with the vehicle.
2. Put the vehicle in **P** (Park) and chock the wheels.
3. Connect the vehicle to the tow truck winch with a nylon bridle or short endless loops through the rear axle.



CAUTION

To prevent damage, don't use the rear bumper step to connect to the tow truck.



4. Press and hold the brake pedal.
5. In the center display, go to **Safety**. Turn on **Park brake release**. Choose **Start Release**.

NOTE

Park brake release turns off after 15 minutes. You can also turn it off by putting the vehicle in **P** (Park) or turning off **Park brake release** under **Safety** in the center display.

6. Release the brake pedal and confirm release of the electronic park brake.



Lift the Rear Wheels

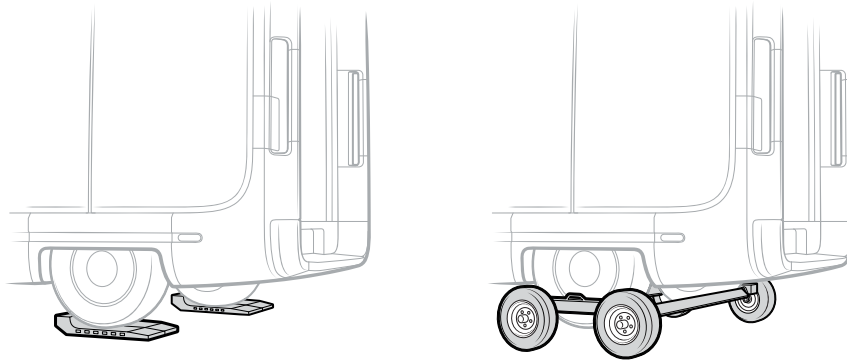
If you can't release the electronic park brake, lift the rear wheels to load the vehicle onto the tow truck.



DANGER

When the rear wheels are lifted, the vehicle can roll. Make sure to secure the vehicle and connect it to the tow truck before you lift 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 to be loaded onto the tow truck bed.

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

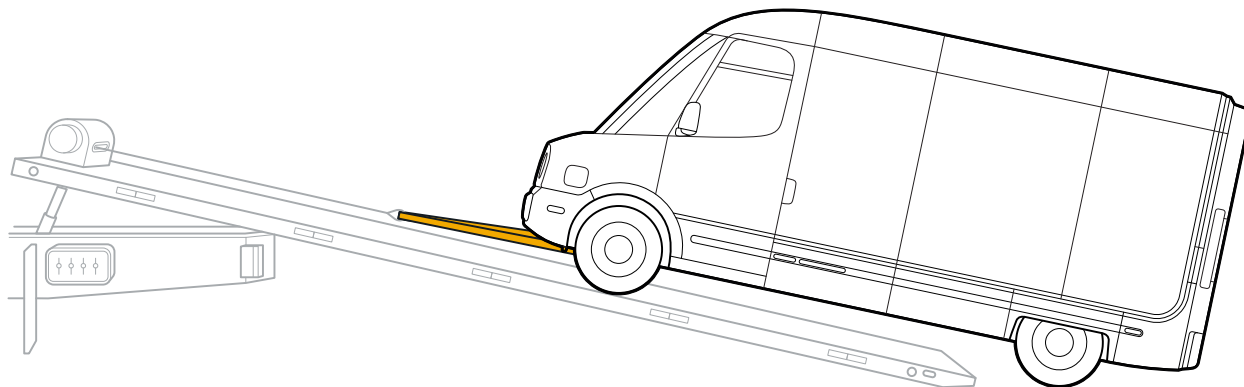
NOTE

If using skates, use the skates to pull the vehicle all the way up the tow truck ramp.



Load the Vehicle onto the Tow Truck

1. Ensure **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.

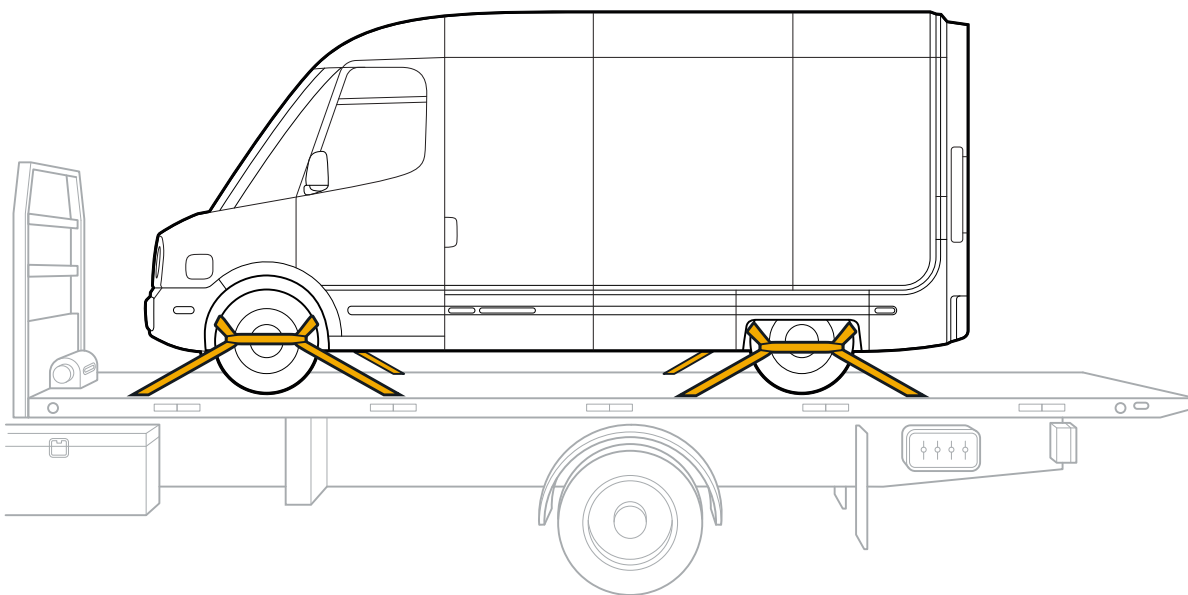


4. Pull at 5 mph (8 km/h) or less to prevent damage to the powertrain.

NOTE

If you pull too fast, the vehicle stops and shifts into **P** (Park).

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



CAUTION

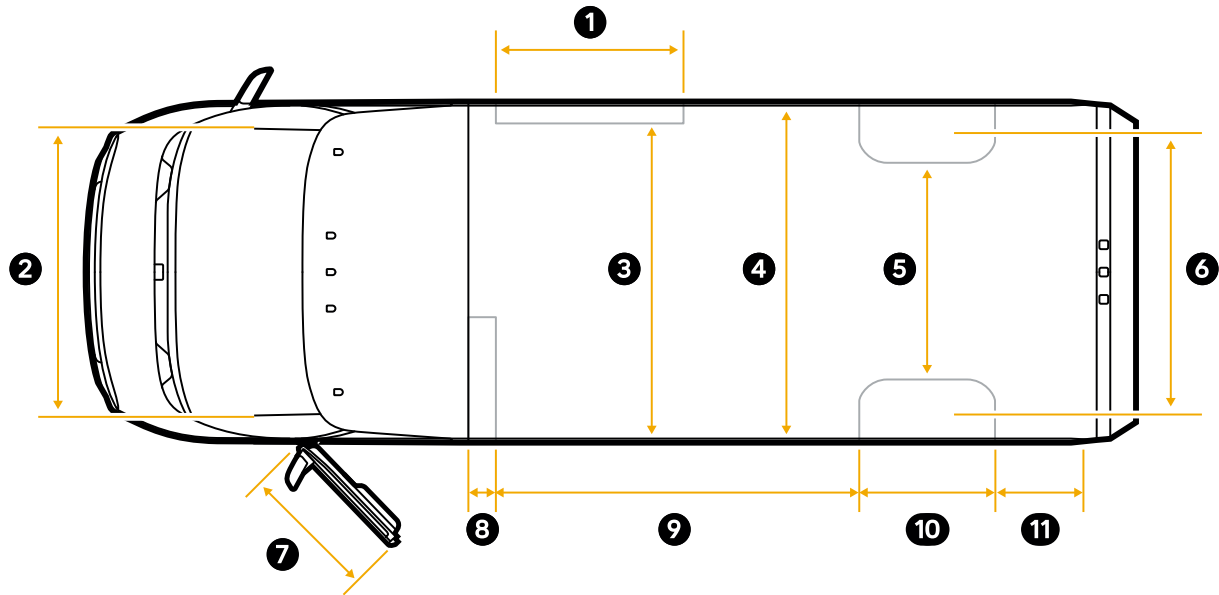
To prevent damage, ensure the straps don't contact the brake lines behind the tire.

6. Put the vehicle in **P** (Park).

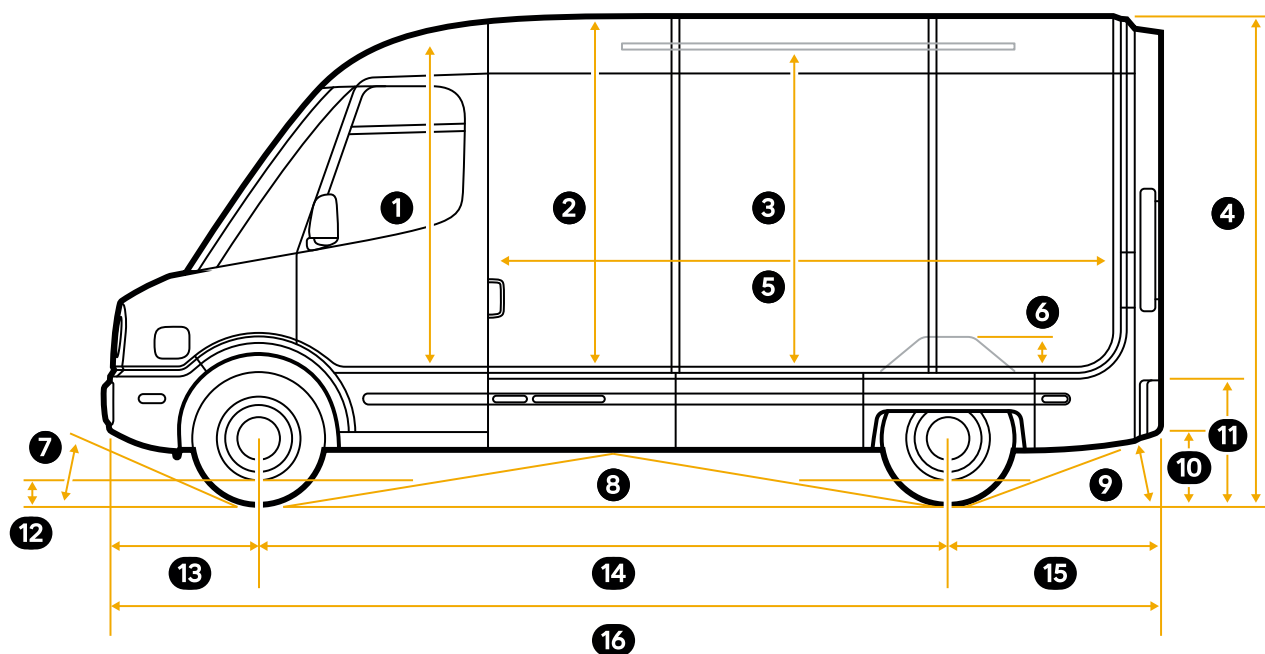
Vehicle Dimensions and Packaging

The 500 has 487 cubic feet (13.8 m³) of cargo volume.

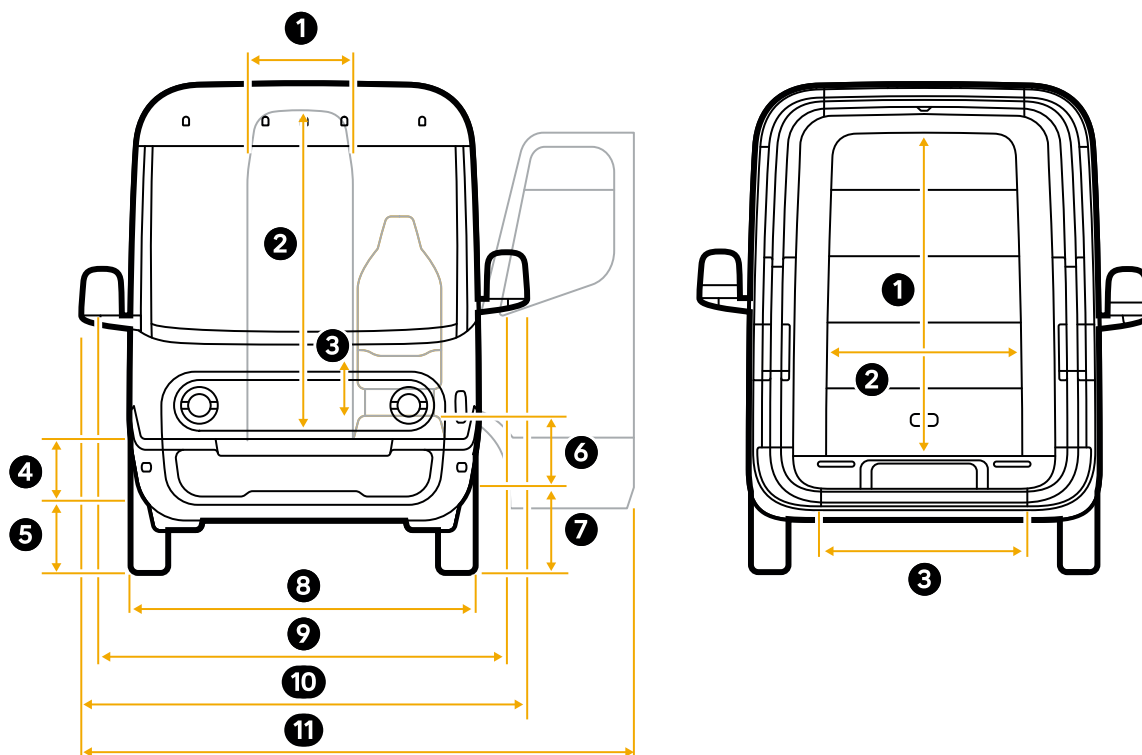
Simplified Model Layout



Item	Dimension
1	42 in (1,064 mm)
2	68.9 in (1,750 mm)
3	70.4 in (1,787 mm)
4	76.5 in (1,943 mm)
5	49.1 in (1,248 mm)
6	65.2 in (1,657 mm)
7	45.4 in (1,154 mm)
8	7.5 in (190 mm)
9	81.3 in (2,066 mm)
10	30.3 in (769 mm)
11	23.2 in (590 mm)



Item	Dimension
1	81.5 in (2,071 mm)
2	86 in (2,183 mm)
3	79.3 in (2,015 mm)
4	114.7 in (2,914 mm)
5	137.3 in (3,487 mm)
6	9.2 in (233 mm)
7	21°
8	15°
9	18°
10	18 in (456 mm)
11	28.2 in (716 mm)
12	7.1 in (181 mm)
13	39.7 in (1,008 mm)
14	157.5 in (4,000 mm)
15	51.3 in (1,303 mm)
16	248.5 in (6,311 mm)



Item	Dimension
Front View	
1	20.2 in (513 mm)
2	75.4 in (1,916 mm)
3	6.6 in (174 mm)
4	11.8 in (300 mm)
5	15.6 in (396 mm)
6	15.5 in (394 mm)
7	18.6 in (472 mm)
8	80.1 in (2,035 mm)
9	88.9 in (2,257 mm)
10	96.4 in (2,449 mm)
11	127.3 in (3,233 mm)
Rear View	
1	74.3 in (1,887 mm)
2	45 in (1,143 mm)
3	48.5 in (1,232 mm)



Overall Vehicle Specifications

Dimension	Specification
Overall length	248.5 in (6,311 mm)
Overall height, curb	114.7 in (2,914 mm)
Overall width, including mirrors	96.4 in (2,449 mm)
Overall width, not including mirrors	80.1 in (2,035 mm)
Driver visibility, front down-vision angle	19.5°
Driver visibility, front up-vision angle	20.0°
Front overhang	39.7 in (1,008 mm)
Rear overhang	51.3 in (1,303 mm)
Wheelbase	157.5 in (4,000 mm)
Track width, front	68.9 in (1,750 mm)
Track width, rear	65.6 in (1,665 mm)
Wheel size, steel	17 x 7 in
Tire size	LT245/70R17
Turning circle, curb to curb	46.9 ft (14.3 m)
Approach angle, curb	21°
Departure angle, curb	18°
Breakover angle, curb	15°
Minimum ground clearance	7.1 in (181 mm)



Cargo Area Dimensions

Dimension	Specification
Floor length, bulkhead to rear panel	137.3 in (3,487 mm)
Width, wall to wall, minimum	70.4 in (1,787 mm)
Width, wall to wall, maximum	76.5 in (1,943 mm)
Width, between wheelhouses	49.1 in (1,248 mm)
Width, aisle between shelves, lower	28.8 in (731 mm)
Width, aisle between shelves, upper	28 in (710 mm)
Height, with rear door closed	82.6 in (2,097 mm)
Height, with rear door open	79.3 in (2,015 mm)
Cargo lift-in height	28.2 in (716 mm)
Center of gravity, empty vehicle	40.7 in (1,035 mm)

Access Dimensions

Dimension	Specification
Bulkhead access, width	20.2 in (513 mm)
Bulkhead access, height	75.4 in (1,916 mm)
Rollup door opening, width	45 in (1,143 mm)
Rollup door opening, height	74.3 in (1,887 mm)
Rear step bumper, height to ground	18 in (456 mm)
Curbside door opening, width	35.4 in (900 mm)
Curbside door opening, height	79.8 in (2,028 mm)
Curbside step, height to ground, first step	15.6 in (396 mm)
Curbside step, height to ground, second step	11.8 in (300 mm)

Technical Limitations of the Vehicle

The following technical limitations apply to the Rivian Commercial Van 500. This section covers these limitations for the base vehicle.

Maximum Individual Tire Load Limit

The maximum individual tire load limit is 2,738 lb (1,242 kg). It applies to all four corners.

Approved Tire Size and Manufacturer

US: LT245/70R17 119S Hankook Dynapro HT

Towing

The vehicle is not equipped for towing.

Steerability

In all load states, the front axle load must represent at least the following proportion of the gross permissible vehicle mass.

- Up to 8,400 lb (3,810 kg) > 35% of gross vehicle mass
- Up to 10,000 lb (4,536 kg) > 30% of gross vehicle mass

The permissible axle loads must be observed regardless of the load situation.

Refer to the *Rivian Service Manual*, Labor Code 1000, for more information.

Center of Gravity

The height of a vehicle's center of gravity significantly affects its braking and handling characteristics. The tendency of a vehicle to tip over increases as the center of gravity height rises.

When designing and installing attachments, be sure to keep the center of gravity as low as possible. The maximum permissible position of the center of gravity in the 500 is 40.7 in (1,035 mm).

Do not exceed the individual tire load limit of 2,738 lb (1,242 kg).

The upfitter is responsible for determining and complying with the vehicle maximum center of gravity restrictions.

For any questions, please contact aftersalessupport@rivian.com.



Vehicle Exterior

See [Dimensions and Packaging](#) for details.

There are no wide mirror options, so there should be no variation from the factory vehicle dimensions.

The roof of the vehicle is not designed to bear aftermarket loads. See [Roof](#) in Modifications to Exterior Body System for details.

Weights

The vehicle ships from the factory fully certified and labeled as a complete vehicle. An upfitter who performs alterations or modifications to a complete vehicle has certain obligations to ensure that the changes are correctly documented and labeled.

This section serves as a general guide, but upfitters should follow federal and state laws and regulations that apply, as well as prevailing industry standards.

These terms apply to vehicle weights:

Terminology	Description
Curb Weight	The weight of the vehicle, as shipped from the Rivian factory, with all its standard equipment and necessary fluids (like coolant), but without any passengers or cargo. The published curb weight may not include optional equipment installed on your specific vehicle.
Gross Vehicle Weight Rating	The maximum allowable total weight when fully loaded, including the vehicle, passengers, cargo, and additional equipment. This limit is specified for safety and legal reasons.
Payload Capacity	The maximum weight of equipment, cargo, and the number of passengers the vehicle can carry safely. $\text{Payload Capacity} = \text{Gross Vehicle Weight Rating} - \text{Curb Weight}$.



DANGER

Never exceed the Gross Vehicle Weight Rating established by the manufacturer. This can cause vehicle damage, reduced performance, and increased risk of a crash.



Payload

The vehicle's payload is on the Tire and Loading Information Label, which is applied to the driver side door pillar at the factory. The rated payload allows for a small vehicle-to-vehicle variation and for factory options. Rivian does not generally provide an allowance for additional mass to be added by an upfitter after certification and labeling.

Additional Labeling When Adding Weight

When an upfitter adds significant weight to a certified vehicle that is greater than 1.5% of the Gross Vehicle Weight Rating or greater than 100 lb (45 kg), whichever is less, US law requires them to attach a yellow Reduced Load Carrying Capacity Label within 1 in (25 mm) of the original [tire placard label](#) on the driver's door pillar.

This label alerts the driver to the reduced carrying capacity from the originally certified amount. The reduced value must be shown to the nearest kilogram and pound, and be accurate within 1% of the actual added weight.

Suitable labels are available from the National Truck Equipment Association (NTEA) and other commercial sources.



Recommended Fastener Torque Values

These are the recommended fastener torque values for hard (all metal) joints, soft (mixed material) joints, and plastic tapping screws.

Hard and Soft Joints

The estimated maximum torque of soft joints is 75% of the hard joint maximum torque value.

The estimated minimum torque of soft joints is 33% of the maximum torque value for soft joints.

Self tapping (ST) threads fall under the soft joint torque values.

Nominal Thread Size	Property Class	Hard (All Metal) Joints		Soft (Mixed Material) Joints	
		Min (Nm)	Max (Nm)	Min (Nm)	Max (Nm)
M4 (ST 4.2)	8.8	1.7	3.3	0.8	2.5
	10.9	2.4	4.8	1.2	3.6
M5	8.8	3.3	6.5	1.6	4.9
	10.9	4.8	9.5	2.4	7.1
M6 (ST 6.3)	8.8	5.7	11.3	2.8	8.5
	10.9	8.3	16.5	4.1	12.4
M8	8.8	13.7	27.3	6.8	20.5
	10.9	20.1	40.1	9.9	30.1
M10	8.8	27.0	54	13.4	40.5
	10.9	39.5	79	19.6	59.3
M12	8.8	46.5	93	23.0	69.8
	10.9	68.5	137	33.9	102.8
M14	8.8	74.0	148	36.6	111.0
	10.9	109.0	218	54.0	163.5
M16	8.8	115.0	230	56.9	172.5
	10.9	169.0	338	83.7	253.5
M18	8.8	164.5	329	81.4	246.8
	10.9	234.5	469	116.1	351.8



Tapping Screws (Plastic)

The estimated minimum values are based off of the lowest yield common plastic material.

The estimated maximum values are based off of the highest yield common plastic material.

Nominal Thread Size (mm)	Min (Nm)	Max (Nm)
1.8	0.1	0.4
2	0.1	0.4
2.2	0.1	0.5
2.5	0.15	0.8
3	0.3	1.3
3.5	0.4	1.9
4	0.5	2.9
4.5	0.7	3.9
5	1	5.3
6	1.5	9.7
8	3.4	23.8



Typical Weight and Rating Values

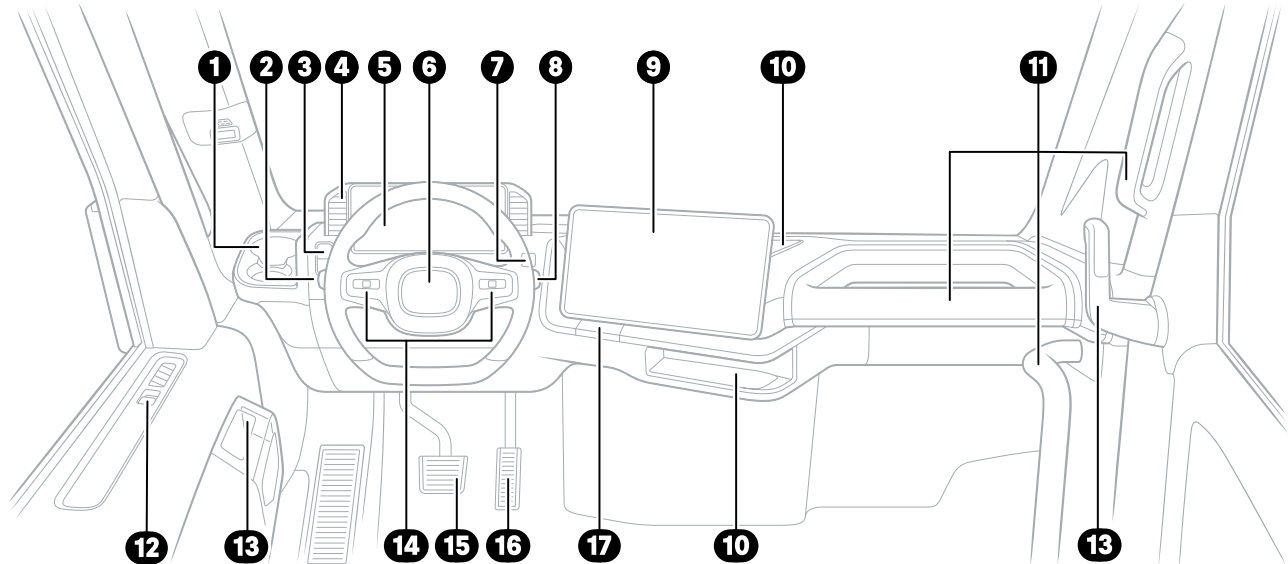
The table below provides typical weight and rating values at the time this document was published. Consult the label provided on your specific vehicle(s), as vehicle specifications are subject to change.

The best practice is to verify your vehicle weight at the beginning and end of upfitting. Commercial truck scales in your area can provide an accurate measurement, if your shop does not have an appropriate weigh scale available.

Weight/Rating	Specification
Gross Vehicle Weight Rating	9,500 lb (4,309 kg)
Gross Axle Weight Rating, Front and Rear	5,370 lb (2,436 kg)

Interior Overview

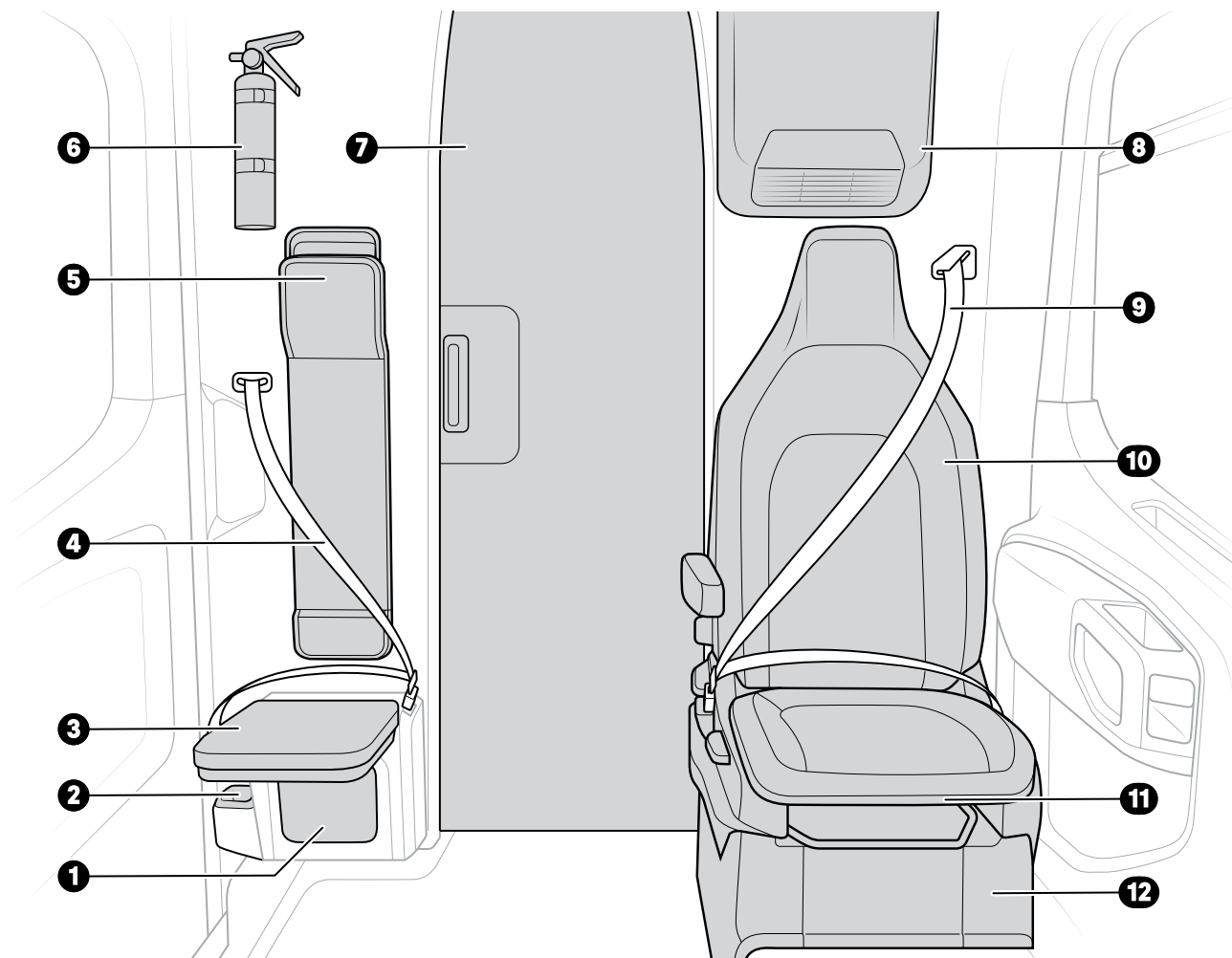
Cabin Front View



Item	Description
1	Cup holders
2	Lights stalk
3	Camera button (not yet operational)
4	Vents
5	Driver display
6	Horn and location of airbag module
7	SOS button
8	Drive stalk
9	Center display
10	Wireless chargers and ports
11	Grab handles
12	Window controls
13	Interior door release
14	Thumb controls
15	Brake pedal
16	Accelerator pedal
17	Hazard lights button



Cabin Rear View

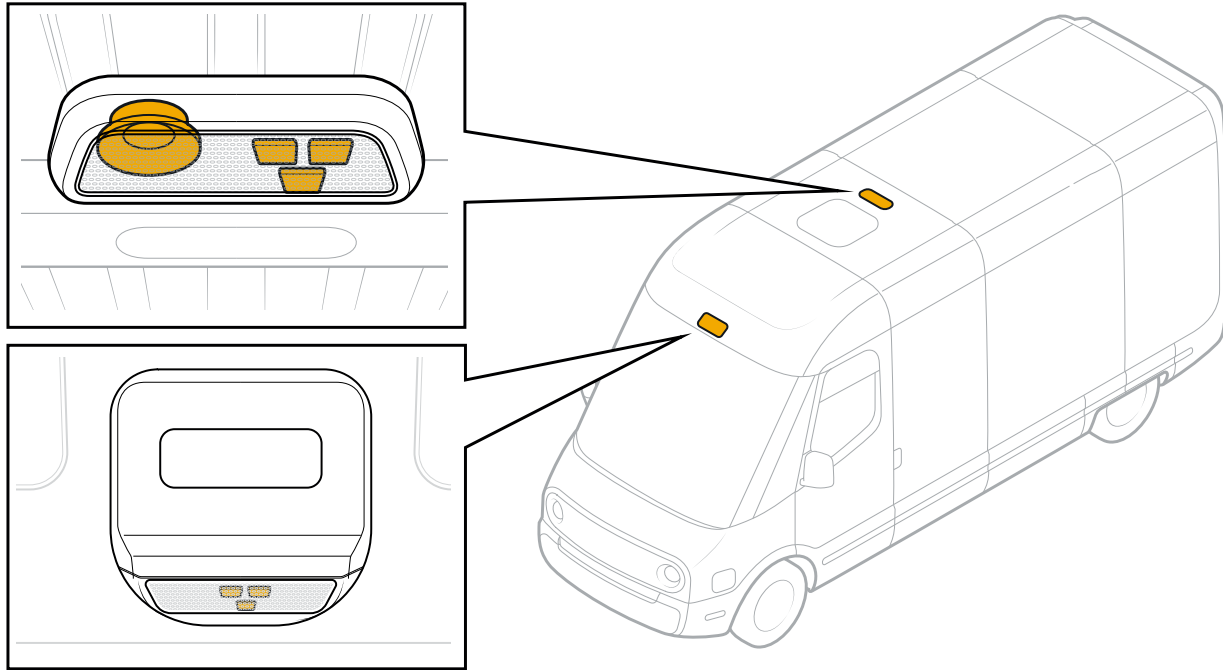


Item	Description
1	First aid kit and tow eye storage
2	Folding jump seat cupholder
3	Folding jump seat
4	Folding jump seat seat belt
5	Document holder
6	Fire extinguisher
7	Bulkhead door
8	Vent
9	Driver seat belt
10	Driver seat
11	Storage container
12	Fuse box (behind access panel)



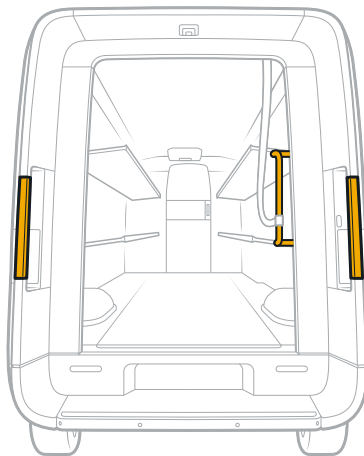
Microphones

Two microphones are located in the interior of the vehicle, one above the front cabin and the other above the cargo area.



Cargo Area View

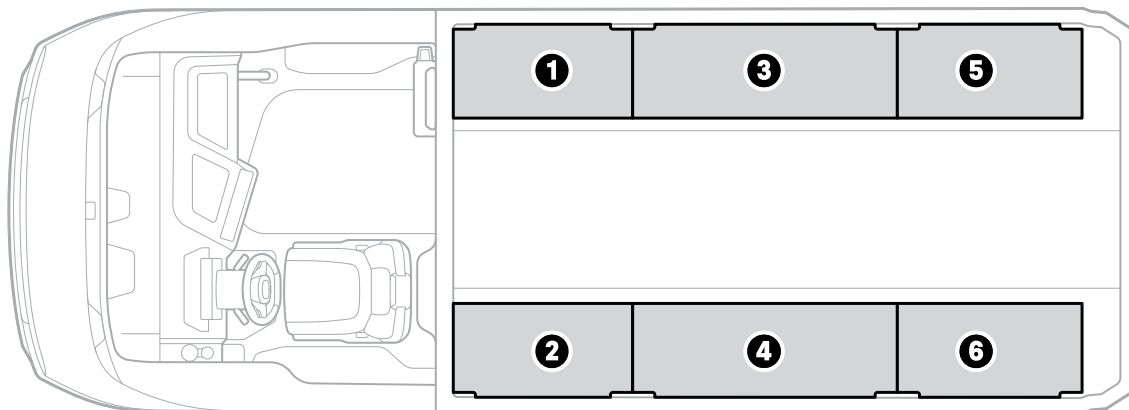
The interior grab handle (shown with strap) and the two exterior grab handles are located at the rear of the cargo area.





Cargo Shelves

Cargo shelves, if equipped, are divided into separate zones that contain fixed shelves (1–4) and folding shelves (5–6).



Cabin Interior Modifications

General Information

- Do not block:
 - vehicle entry and exit
 - use or function of any systems
 - access to any maintenance areas
 - visibility or movement of the driver
- Do not exceed the permissible center of gravity and maximum permissible axle loads.
- The interior must be designed with soft edges and surfaces.
- Fittings must be made of flame-resistant materials and be fitted securely.
- Allow unimpeded access to the seats.
- There must not be any protruding parts, edges, or corners in the seating area that could cause injury.

Recommended Fastener Torque Values

See the [recommended fastener torque values](#) for hard (all metal) joints, soft (mixed material) joints, and plastic tapping screws.

Don't Weld to these Parts

Don't weld to these parts or areas:

- A- and B-pillars
- In-bending radii
- Near the airbags
- Sensor locations for Driver Assistance systems (for example, radars and sensors for parking or distance control)
- Near the side sensors and Restraints Control Module (RCM)
- Bumper beam or crush cans



Keep Out Areas

For safety and to meet regulatory requirements, do not modify the:

- Driver or center displays
- Sun visors
- Driver door e-latch or manual emergency releases
- Vehicle controls and switches and their markings

Ventilation

The cabin area should have adequate ventilation and proper air circulation. Windshield and side window defrosters must remain operational.

Seal all fixings through the floor, sides, or roof. Specifically, seal any cutouts or openings between the cabin and the outside so that air does not enter the cabin.

Use drill depth gauges, and do not point fasteners down or towards high-voltage or safety-critical electrical cables. Use acorn-style rounded-cap nuts where possible.

Make sure that the fixings in the bulkhead area do not encroach on the seat belts or seat belt retractors.

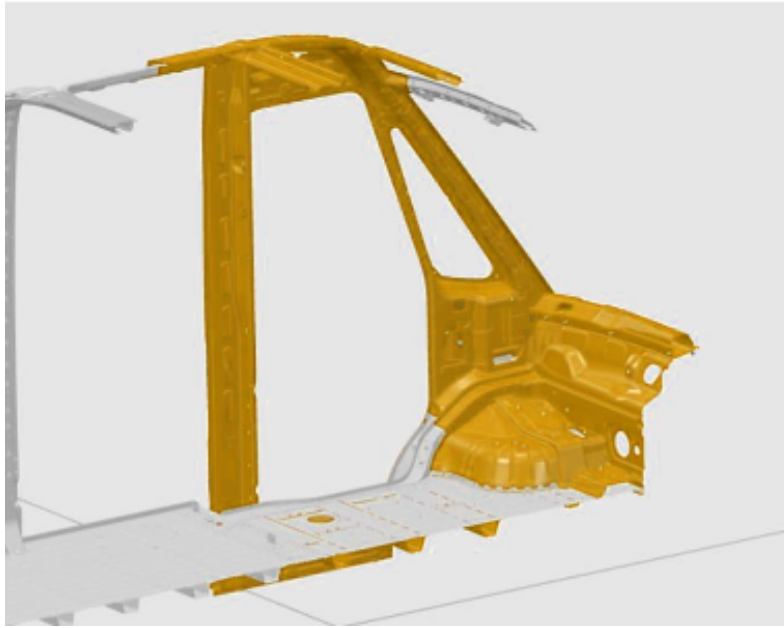
Glass

Rivian glass is homologated to FMVSS 205, so Rivian advises against modifying or removing the standard windshield or windows.

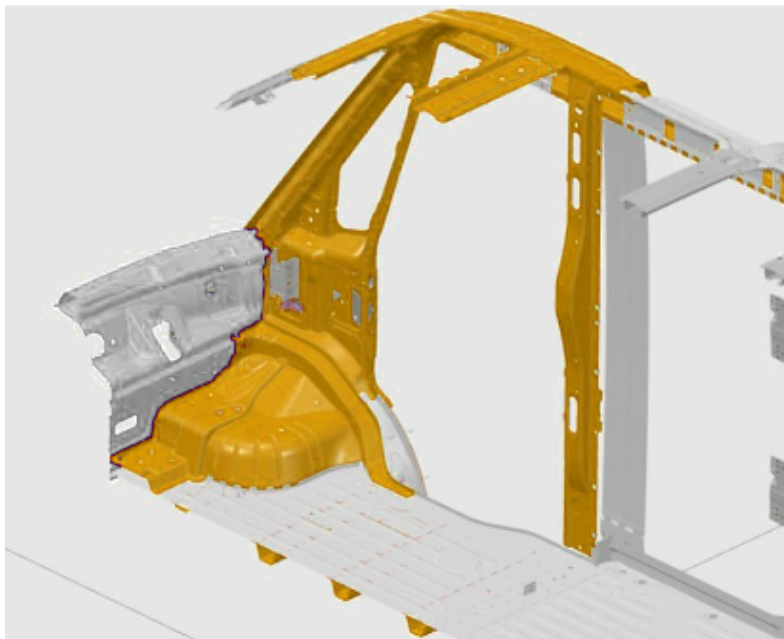


Structural Components

Do not drill, cut, weld, add structure, or modify the A-pillar, AB-pillar, B-pillar, cant rail, shotgun, wheelhouse, or dash assembly (highlighted) on the driver side (up to the centerline of the vehicle). The highlighted area is steel; the rest of the cargo area after the B-pillar is aluminum.



Do not drill, cut, weld, add structure, or modify the A-pillar, AB-pillar, B-pillar, cant rail, shotgun, wheelhouse, or assembly (highlighted) on the passenger side (up to the centerline of the vehicle).

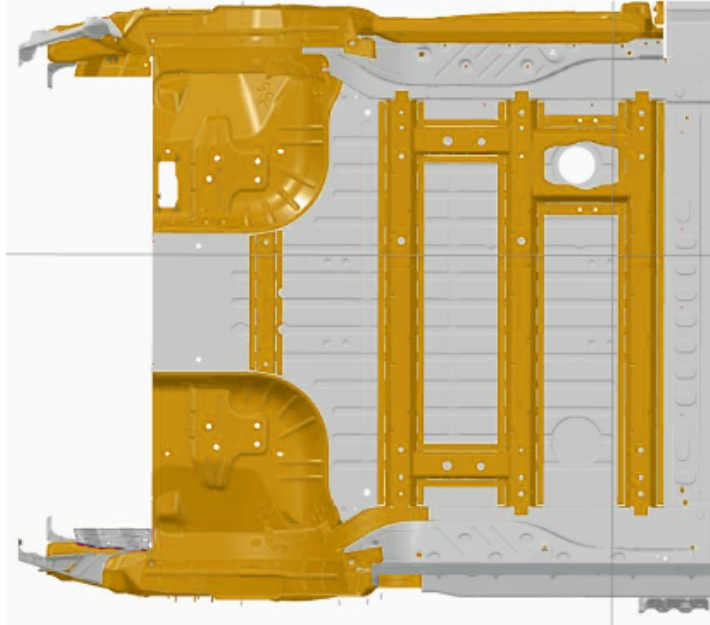


Do not weld or add structure to the dash assembly on the passenger side (up to the centerline of the vehicle). Use standard practices and care for drilling and sealing.

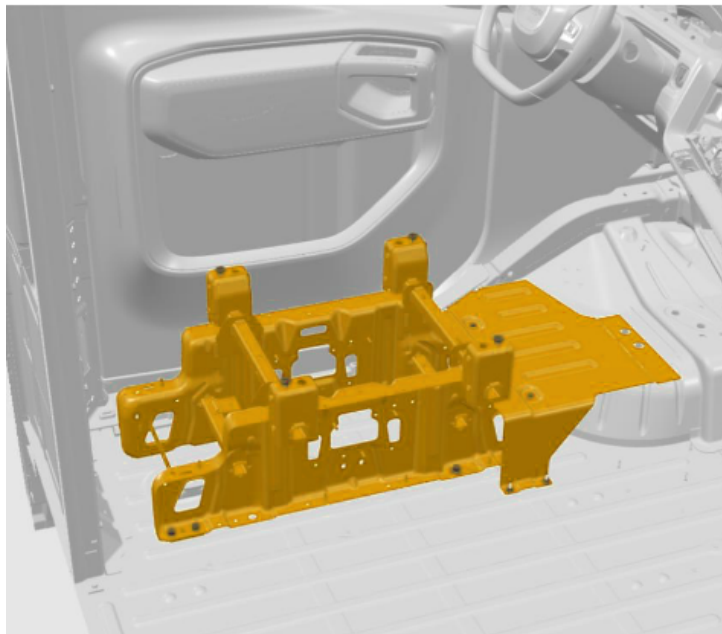


Driver Seat

Do not drill, cut, weld, or modify the cab floor crossmembers or the seat to floor reinforcement (highlighted).



The seat is attached to the body through a seat pedestal assembly (highlighted). Do not drill, cut, weld, add structure, or modify the seat pedestal assembly structure or its attachment to the vehicle body.



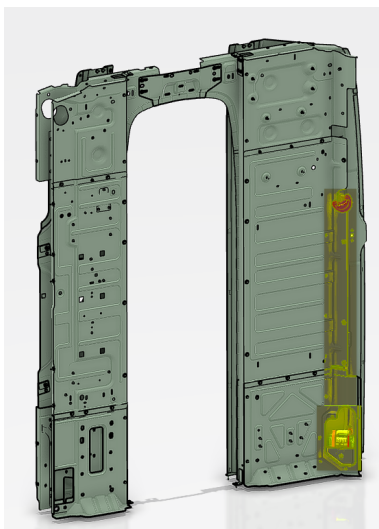
When drilling holes near or above the retractor and anchor pretensioner, cover the mechanism to prevent debris from falling into the assembly.

Do not drill into the seat belt retractor or the mounting location.



Bulkhead

Do not drill in the area of the bulkhead (highlighted).

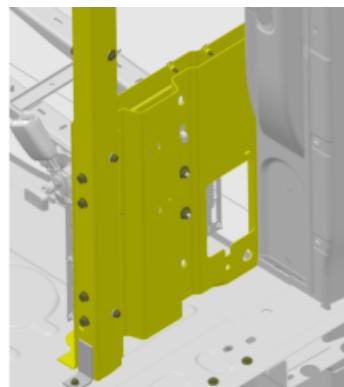
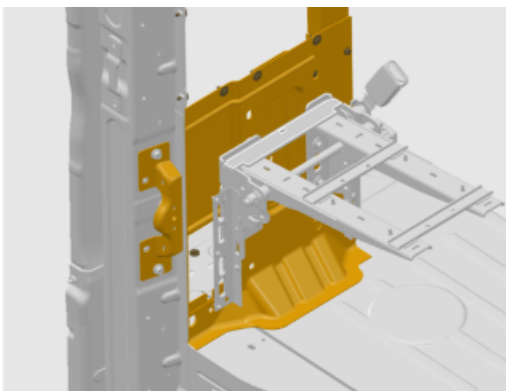


Passenger Side Jump Seat

The passenger side jump seat is a temporary-use training seat. It is not intended for continuous use and is not a "designated seating position" as defined by US federal regulations.

NOTE

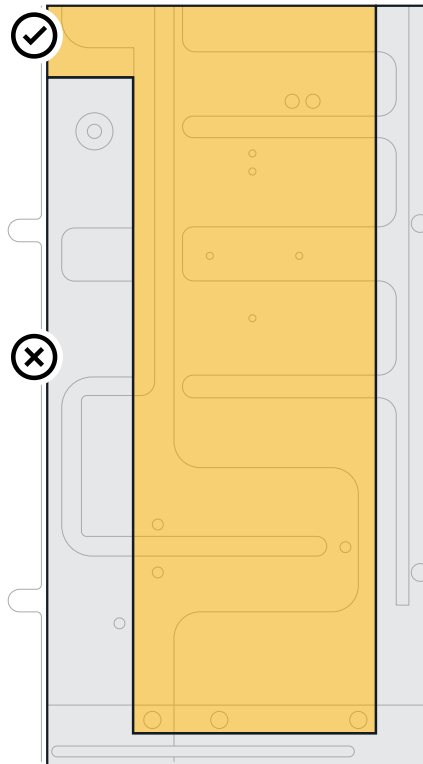
The passenger side jump seat is heated, so it has an electrical connection. The heat is turned on or off from the center display.



- Do not replace or modify any jump seat components.
- Do not drill, cut, weld, or modify the jump seat structure.
- Do not widen the jump seat cushion.



- The jump seat belt anchor is mounted to the passenger side B-pillar. Do not drill, cut, weld, add structure, or otherwise modify it.
- The jump seat is attached to the passenger side bulkhead (highlighted). Do not drill, cut, weld, add structure, or modify the bulkhead front wall lower section, the bulkhead inner reinforcement, or the bulkhead extrusion.
 - If the bulkhead is modified in these locations, then the passenger jump seat, restraints, retractor, anchor, and D-ring **must be** removed. Install dummy plugs at all electrical connections per the Rivian specification.
- When drilling holes near or above the retractor and anchor pretensioner, cover the mechanism to prevent debris from falling into the assembly.
- To prevent damage to the seat belt webbing:
 - Any additional hardware must not cut, pinch, or interfere with the seat belt.
 - Avoid sharp brackets near webbing. All edges must have a minimum radius of 0.02 in (0.5 mm).
 - Avoid upfitting parts that may change the belt routing to the occupant.
- Here is the passenger side bulkhead drill zone definition.



Cargo Interior Modifications

General Information

All modifications to the cargo walls, ceiling, and floor, including drilling and welding, are the responsibility of the upfitter. The modifications must comply with Federal Motor Vehicle Safety Standards (FMVSS) standards.

Install accessories and assemblies in a way that distributes loads laterally and does not exceed the gross vehicle weight rating. Installations must be able to withstand regular acceleration and jounce forces.

All fixings through the floor, sides, or roof must be sealed, and any cutouts between the cargo area and the outside must not allow air to pass into the vehicle.

The upfitter must maintain the vehicle's structural integrity. If the load-bearing structure is modified, the total equivalent structural rigidity of the upfitted structure must equal or surpass that of the standard unaltered vehicle.

Recommended Fastener Torque Values

See the [recommended fastener torque values](#) for hard (all metal) joints, soft (mixed material) joints, and plastic tapping screws.

Don't Weld to these Parts

Don't weld these parts or areas:

- The upper and lower flange of the frame
- In-bending radii
- Near the airbags
- Sensor locations for Driver Assistance systems (for example, radars and sensors for parking or distance control)
- Near the side sensors and Restraints Control Module (RCM)
- Bumper beam or crush cans

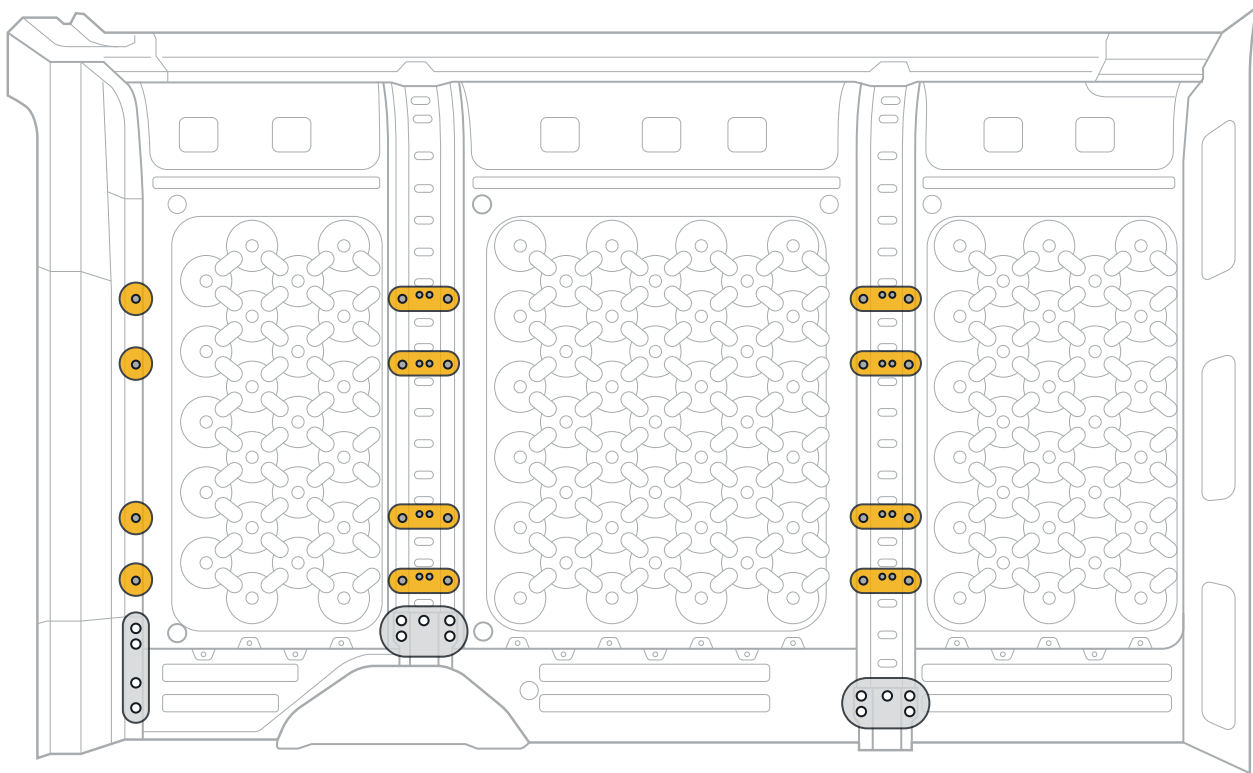


Attachments and Modifications to the Cargo Side Walls

M8 x 1.25 clinch nuts and weld nuts are installed in the highlighted locations and are available as mounting points for upfit assemblies and attachments.

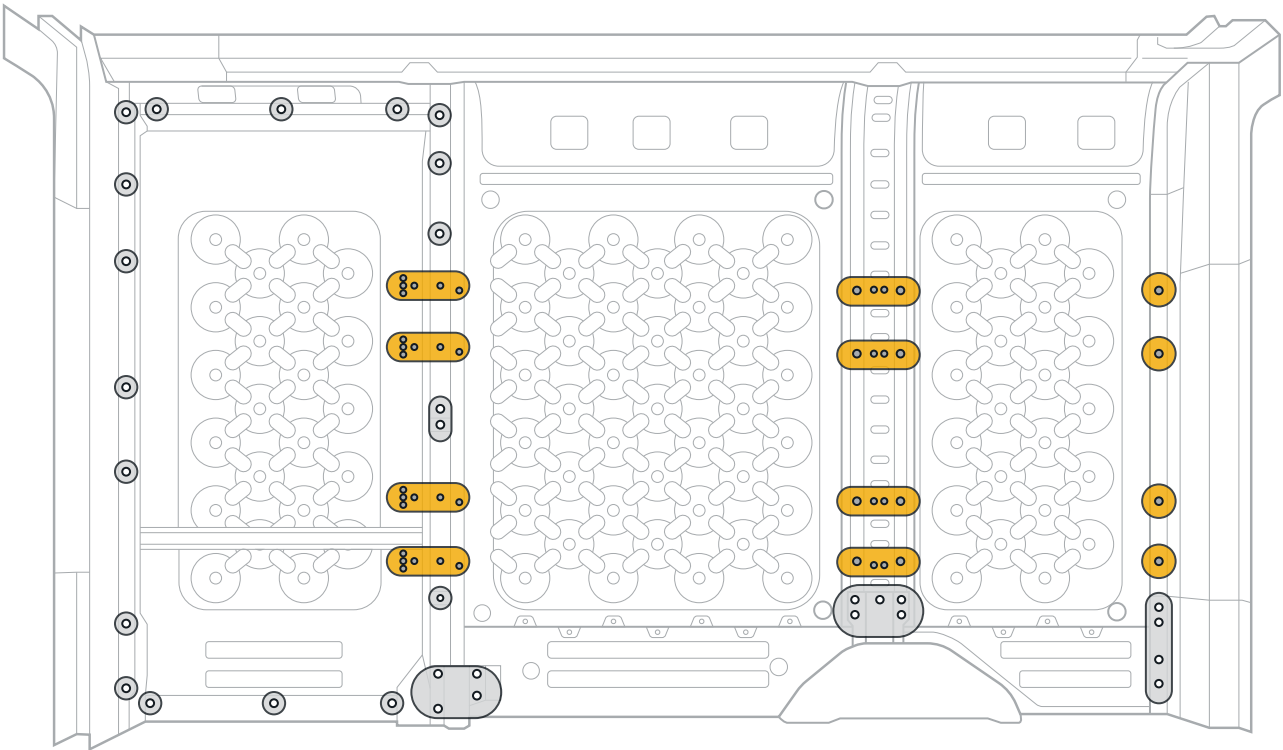
When mounting equipment, refer to the diagram and avoid the grey zones, as these are crucial structural areas. Mount equipment only in the designated yellow zones to ensure vehicle integrity and safety. Refer to the table under [Load Rating for Driver Side Cargo Wall Mounting Points](#) for the loading limits of each designated mounting point.

Driver Side





Passenger Side



Load Rating for Driver Side Cargo Wall Mounting Points

Several types of sheet-metal design are used to create the attachment points. Some attachment points have slightly higher load ratings than others.

Use this section to determine what load rating(s) are applicable to the attachment point(s).

Use SPAC® M8 nuts.

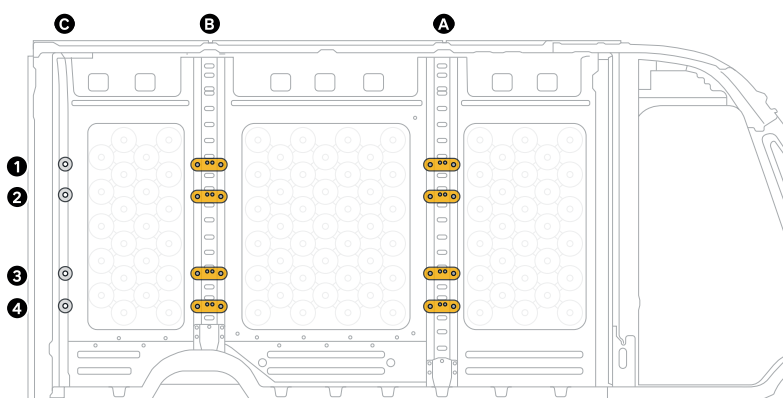
Joint	Stack Up	
Type 1 Outer	3T 0.1/0.04/0.1 in (2.5/0.9/2.5 mm) 6S-T4	



Joint	Stack Up	
Type 2 D-Pillar	2T 0.08/0.04 in (2.0/0.9 mm) 6S-T4	
Type 3 Inner	1T 0.1 in (2.5 mm) 6S-T4	
Type 3 Bottom Outer	1T 0.1 in (2.5 mm)	



This illustration shows an overview of the different attachment points available on the cargo area side walls.



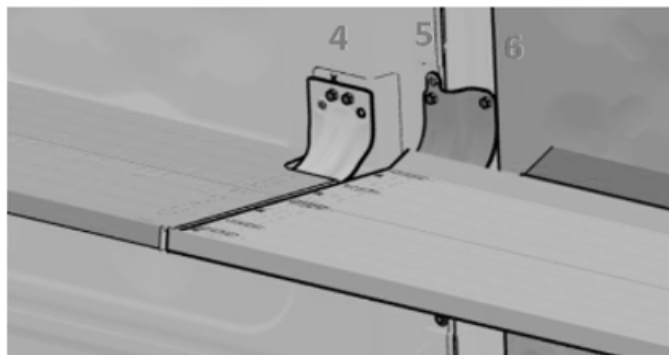
Joint	Points Measured	Max Tensile Load (N)	Max Shear Load (N)
3T (2.5/0.9/2.5)	B1R	2380	23809
	B2R	2336	24193
	B3R	2356	24656
	B4R	2313	23946
	B1F	1946	23497
	B2F	1846	21645
	B3F	2016	22486
	B4F	1955	22648
	A1R	1915	18610
	A2R	1944	21246
	A3F	2286	23465
	A4F	2315	23864
2T (2.0/0.9)	C1	543	10714
	C2	592	11018
	C3	593	11321
	C4	501	8333



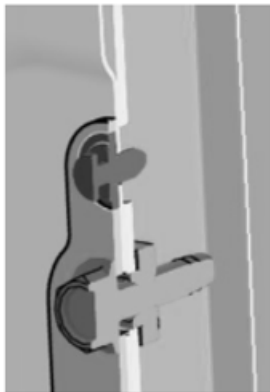
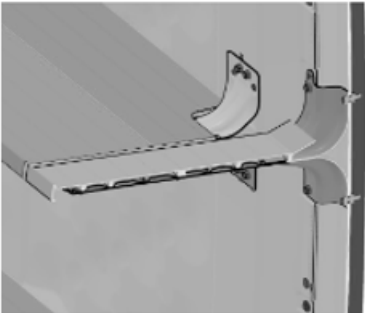
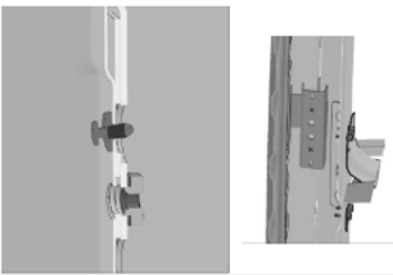
Joint	Points Measured	Max Tensile Load (N)	Max Shear Load (N)
1T (2.5)	A1	1376	9615
	A2	1304	11718
	A3	1384	13451
	A4	1402	12345
	B1	1326	11864
	B2	1343	12138
	B3	1352	10816
	B4	1311	10765

Load Rating for Passenger Side Cargo Wall Mounting Points

These are the passenger side stack ups. Use SPAC M8 nuts unless otherwise noted. Use these illustrations to help find mounting point locations.

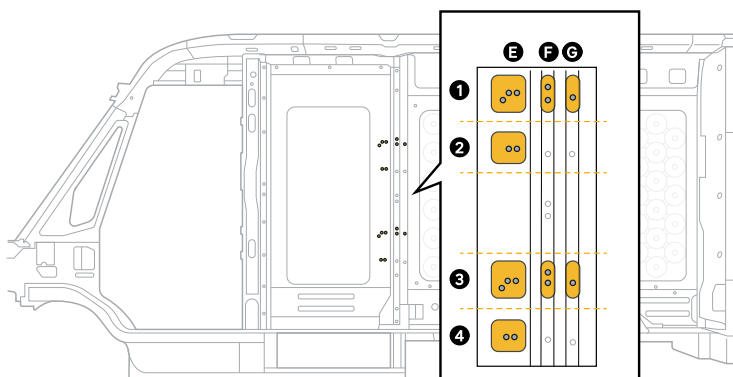




Joint	Stack Up	
Type 4 Curbside Pocket Door Left Side	3T 0.04 in (1.0 mm) 5S-O-SH-ST 0.08/0.1 in (2.0/2.5 mm) 6S-T4	
Type 5 Curbside Pocket Door Right Side	2T 0.04 in (1.0 mm) 5S-O-SH-ST 0.1 in (2.5 mm) 6S-T4	
Type 6 Body Panel Next to Curbside Type 1	3T 0.1/0.04/0.1 in (2.5/0.9/2.5 mm) 6S-T4	
Type 7 Sliding Door Striker Bracket Area Type 7	3T 0.1/0.08 in (2.5/2.0 mm) CR-420Y-480T-LA-SH-G160-U 0.1 in (2.5 mm) 5S-O-SH-T	



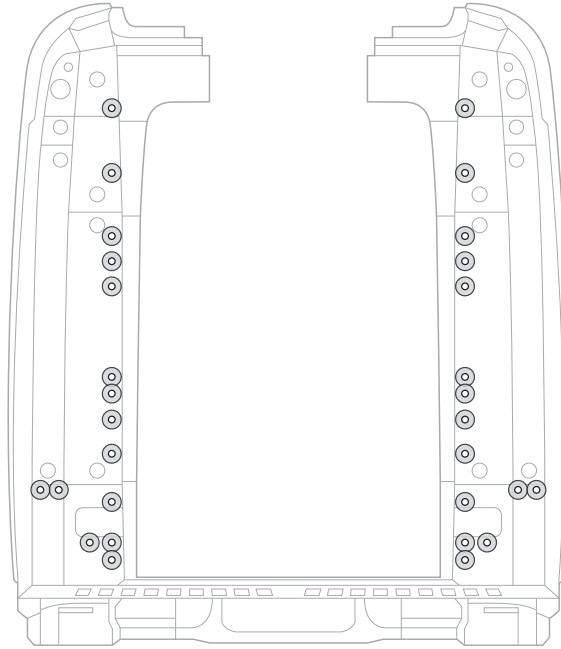
Refer to this illustration to locate items in column two in the load table below.



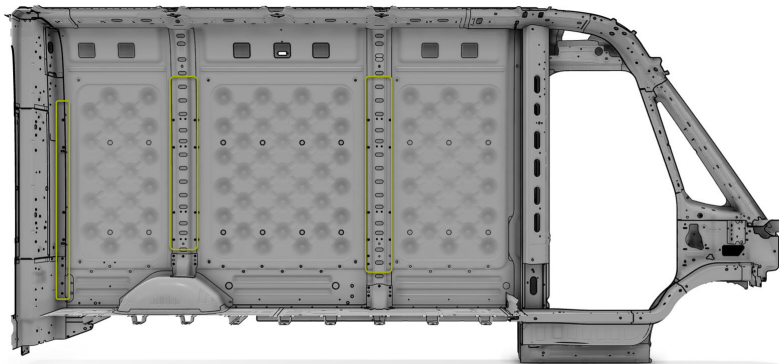
Joint	Points Measured	Max Tensile Load (N)	Max Shear Load (N)
3T (1.0 mm 5S / 2.0 mm 6S / 2.5 mm 6S)	E1	1401	25862
	E2	1428	26486
	E3	1602	30612
	E4	1376	24654
2T (1.0 mm 5S / 2.5 mm 6S)	F1	2586	13636
	F2	2513	12646
	F4	2565	12896
3T	G1	2380	20547
	G2	2361	21645
	G3	2205	22488
	G4	2294	21946
Type 7 3T (2.5 mm 6S / 2.0 mm CR-420 / 1.0 mm 5S)	F3	3289	20833



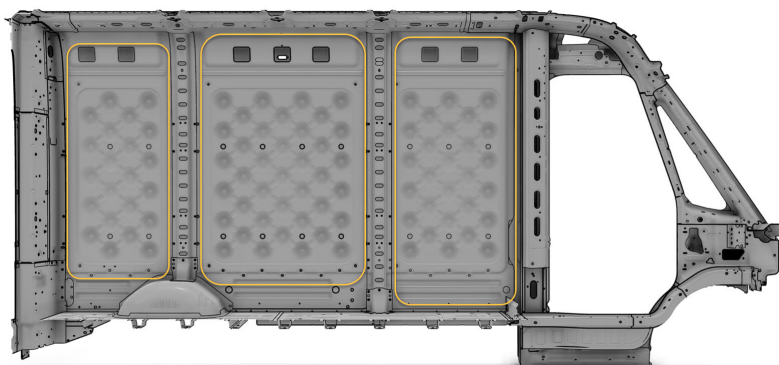
These attachment points are used for the roller door track, D-pillar structure, and grab handles.



Areas enclosed in the highlights below indicate places where it is OK to drill and add attachments. It is not OK to drill and add attachments on the radius and general curvatures along the length of the pillars.



Areas enclosed in the highlights below are places where it is not OK to drill and add attachments. This area is not designed to be load bearing.





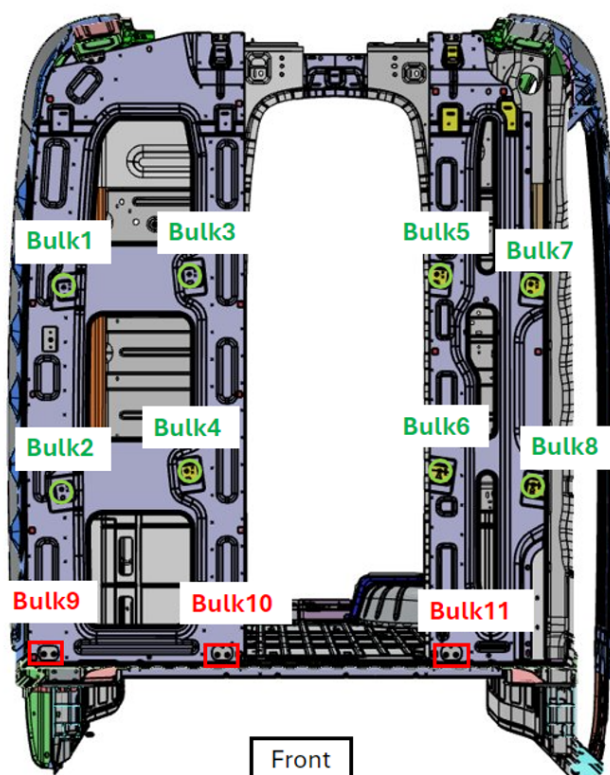
Front Bulkhead

M8 x 1.25 fastener locations on the front bulkhead may be used for attaching upfit components. Do not drill into the bulkhead.

Load Rating for Front Bulkhead Wall Mounting Points

These are the front bulkhead stack ups. Use a Type 6 joint and a stack up of 6S 0.05/0.08 in (1.2/2.0 mm).

Use this illustration to find the mounting point locations in the table.



Joint	Points Measured	Max Tensile Load (N)	Max Shear Load (N)
2T (1.2 mm 6S / 2.0 mm 6S)	Bulk1	328	6521
	Bulk2	339	7177
	Bulk3	468	6000
	Bulk4	468	6521



Joint	Points Measured	Max Tensile Load (N)	Max Shear Load (N)
3T	Bulk5	128	2500
	Bulk6	150	2895
	Bulk7	139	4545
	Bulk8	136	3125
	Bulk9	1136	3658
	Bulk10	1071	3061
	Bulk11	1156	3825



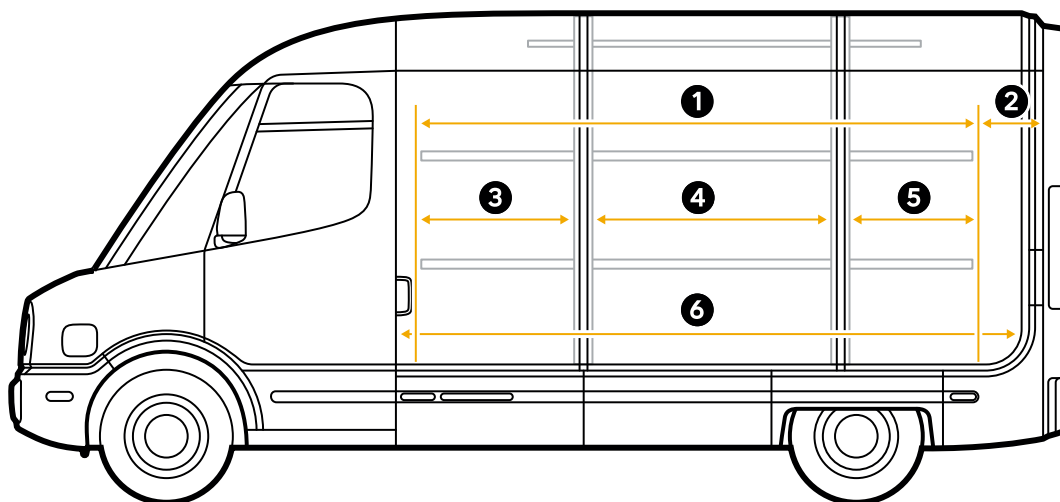
Fitted Shelving and Storage Installations

The vehicle offers shelving as a factory upfit option.

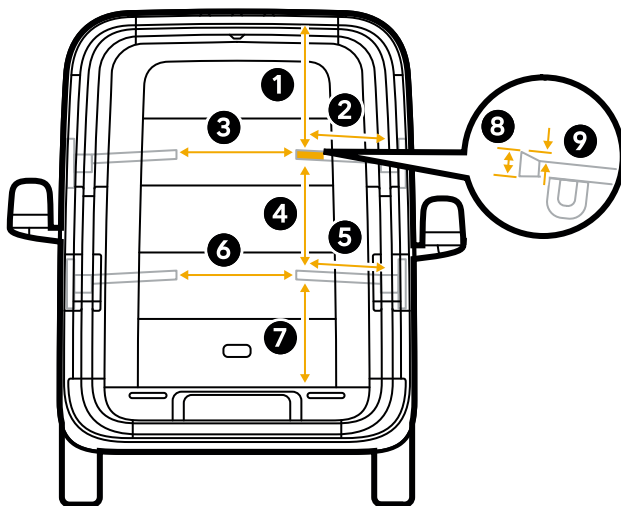
Rivian shelves are rated for 100 lb (45.4 kg) per fixed shelf and 50 lb (22.7 kg) per folding shelf. This adds up to 1,000 lb (453.6 kg) of capacity in the 500.

This shelving is made of magnesium, so it should not be welded.

Dimensions of available shelves are shown below.



Item	Dimension
1	123.2 in (3,129 mm)
2	10.7 in (273 mm)
3	35.7 in (907 mm)
4	56.8 in (1,442 mm)
5	29.7 in (754 mm)
6	137.3 in (3,487 mm)



Item	Dimension
1	28.2 in (716 mm)
2	22 in (560 mm)
3	28 in (711 mm)
4	26.1 in (664 mm)
5	18.9 in (480 mm)
6	28.8 in (731 mm)
7	27.5 in (698 mm)
8	1.3 in (34 mm)
9	0.3 in (8.4 mm)

**DANGER**

- Properly secure all cargo. Cargo that is unsecured can become a projectile in a crash.
- Properly distribute all cargo. Cargo that is unevenly distributed can adversely affect vehicle handling, which could lead to a crash.
- Never exceed the Gross Vehicle Weight Rating, Gross Axle Weight Rating, or available payload capacity. This can increase the risk of a crash.

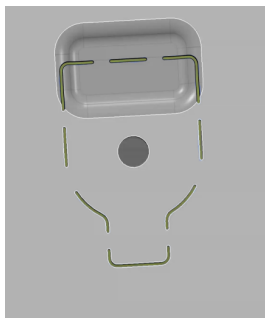
Custom shelving designs must be sufficiently strong and evenly supported for expected loads. Racking systems should not be designed in a way that allows for the center of gravity to be raised beyond specified limits.



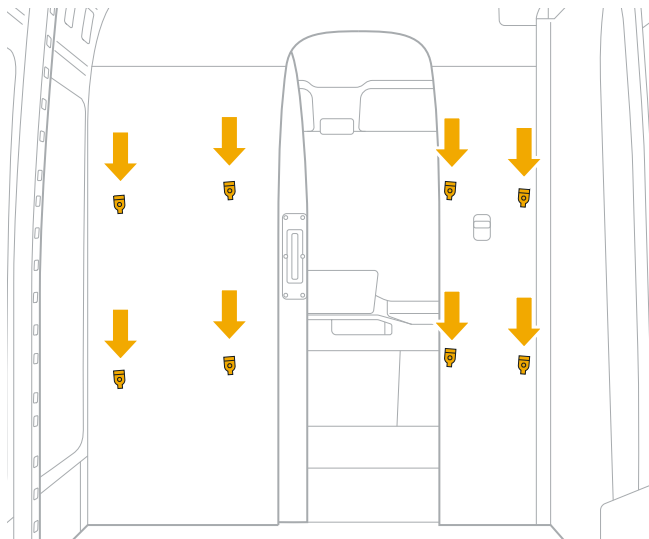
Cargo Area Shelf Mounting Holes

If you want to mount shelving in the cargo area, mounting holes are already provided on the bulkhead and the D-pillars. They are covered.

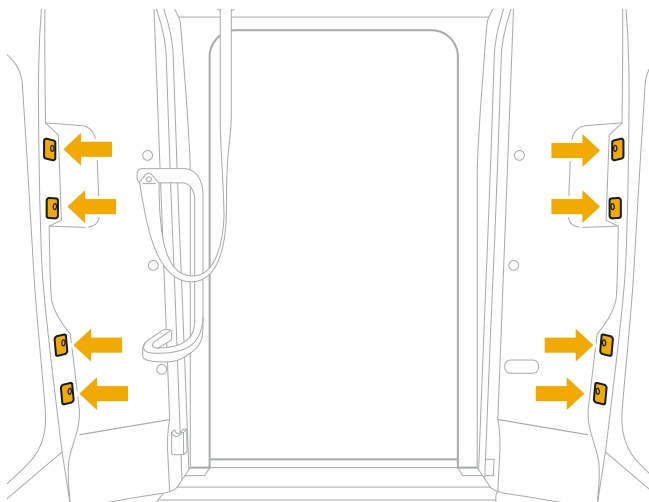
When installing shelving, follow the dotted lines on the covers and cut out the indicated shape.



These are the mounting holes in the bulkhead area.

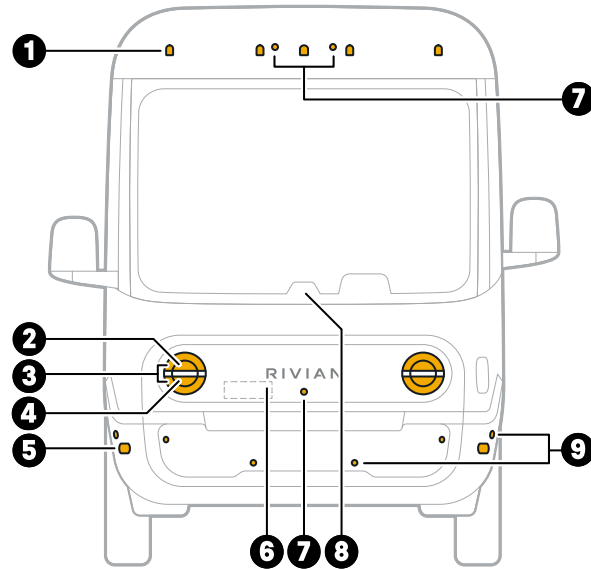


There are the mounting holes in the D-pillar area. The mounting holes are covered.



Exterior Overview

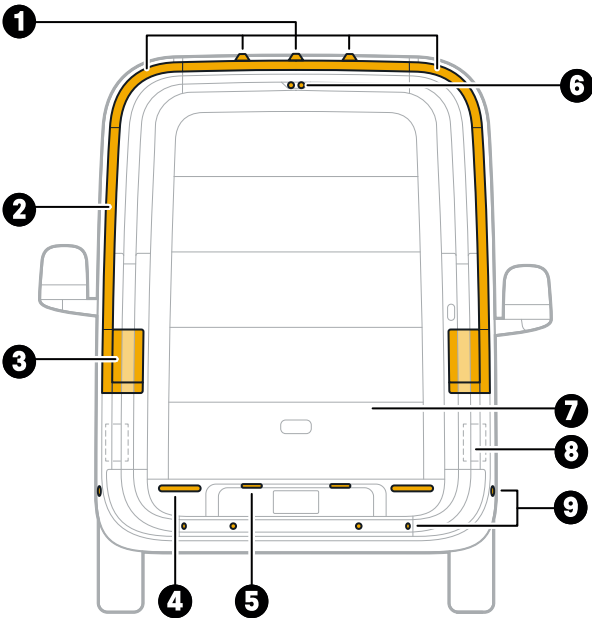
Front View Exterior



Item	Description
1	Front clearance and identification lights
2	Low beam headlights
3	Front turn signal lights, daytime running lights, and parking lights
4	High beam headlights
5	Front side markers and front reflex reflectors
6	Front radar module
7	Cameras
8	Front camera module
9	Ultrasonic sensors



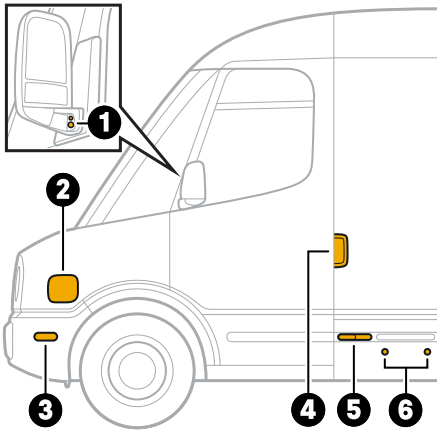
Rear View Exterior



Item	Description
1	Rear clearance and identification lights
2	Supplemental taillights
3	Rear turn signal lights, brake lights, and taillights
4	Reverse lights, rear fog lights, and rear reflex reflectors
5	License plate lights
6	Task light and camera
7	Rollup door
8	Corner radar
9	Ultrasonic sensors



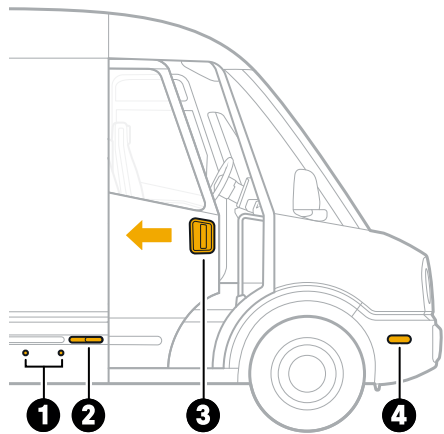
Driver Side View Exterior



Item	Description
1	Side mirror with lane change cameras
2	Charge port door
3	Front side marker and reflex reflector
4	Door handle
5	Mid side marker, side turn signal lights, and reflex reflector
6	Ultrasonic sensors



Curbside View Exterior



Item	Description
1	Ultrasonic sensors
2	Mid side marker, side turn signal lights, and reflex reflector
3	Door handle
4	Front side marker and reflex reflector

Modifications to Exterior Body System

Exterior Panels and Trims

It is not recommended to modify exterior body panels. The upfitter is responsible for ensuring the structural integrity and compliance of the upfitted vehicle. The vehicle must comply with all federal and state regulations.

Recommended Fastener Torque Values

See the [recommended fastener torque values](#) for hard (all metal) joints, soft (mixed material) joints, and plastic tapping screws.

Doors

Do not modify the doors on the vehicle.

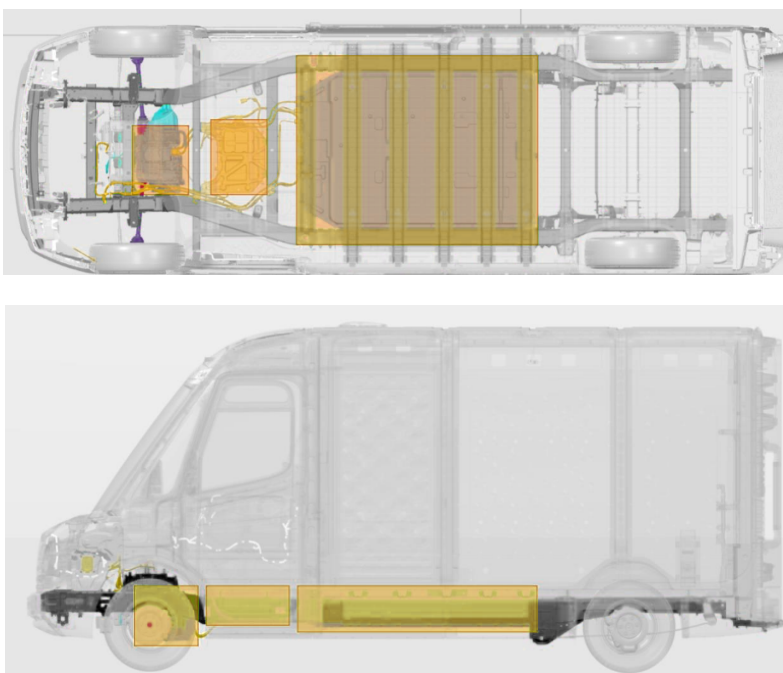
Roof

The roof of the vehicle is designed to be self-supporting and sustain snow loads. Any extra features attached to the roof by the upfitter will require additional support structures. The upfitter assumes responsibility for the reliability and compliance with relevant Federal Motor Vehicle Safety Standards (FMVSS) standards for any alterations and attachments to the vehicle's cargo roof.



Floor

Do not drill or weld into the floor within the highlighted areas. These volumes are defined as clearance zones around major parts, including the front drive unit, the onboard charger (OBC/DC-DC), and the battery pack. The dimensions "X, Y, and Z" refer to standard SAE coordinate directions.



Measurement from the Front Drive Unit

Coordinates	Measurements
Lower X-packaging defined by the drive unit assembly	- 1 in (25 mm)
Upper X-packaging defined by the drive unit assembly	+ 1 in (25 mm)
Lower Y-packaging defined by the drive unit assembly	- 1 in (25 mm)
Upper Y-packaging defined by the drive unit assembly	+ 1 in (25 mm)
Lower Z-packaging defined by the drive unit assembly	- 1 in (25 mm)
Upper Z-packaging defined by the floor	+ 0 in (0 mm)



Measurement from the On-board Charging DC-DC Unit

Coordinates	Measurements
Lower X-packaging defined by the OBC or the DC-DC unit	- 1 in (25 mm)
Upper X-packaging defined by the OBC or the DC-DC unit	+ 1 in (25 mm)
Lower Y-packaging defined by the OBC or the DC-DC unit	- 1 in (25 mm)
Upper Y-packaging defined by the OBC or the DC-DC unit	+ 1 in (25 mm)
Lower Z-packaging defined by the OBC or the DC-DC unit	- 1 in (25 mm)
Upper Z-packaging defined by the floor	+ 0 in (0 mm)

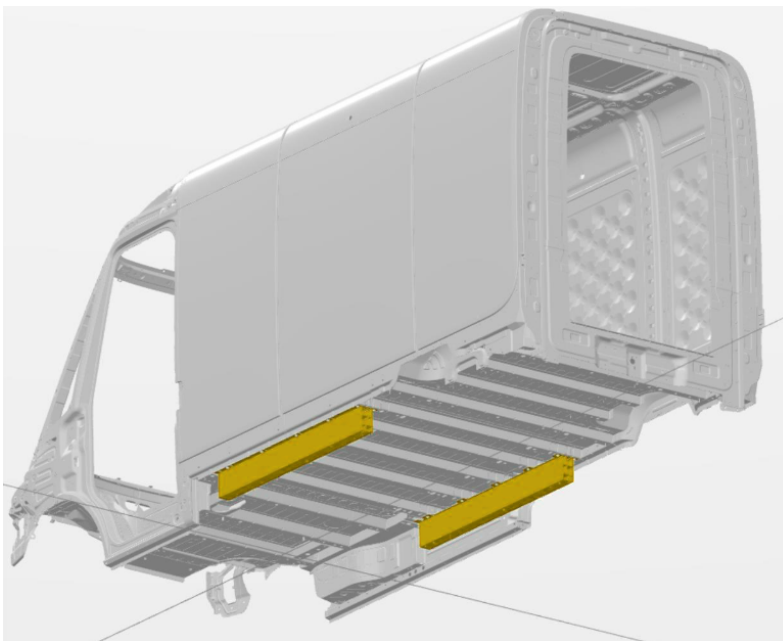
Measurement from the Battery Pack

Coordinates	Measurements
Lower X-packaging defined by the leading edge of the last cabin crossmember edge	- 1 in (25 mm)
Upper X-packaging defined by the trailing edge of the 5th body crossmember edge	+ 1 in (25 mm)
Lower Y-packaging defined by the left-hand outer surface of the skateboard midrail	+ 0 in (0 mm)
Upper Y-packaging defined by the right-hand outer surface of the skateboard midrail	+ 0 in (0 mm)
Lower Z-packaging defined by the battery pack	- 1 in (25 mm)
Upper Z-packaging defined by the floor	+ 0 in (0 mm)



Any cutouts or openings created between the occupant space and the vehicle's underbody must be sealed so that no air can pass from under the vehicle into the cabin or cargo area. The upfitter should verify the placement of brake lines, coolant line routing, hydraulic brake line routing, front drive unit location, etc. The upfitter must ensure that the body crossmember integrity is maintained.

Do not modify the body attachment extrusions (highlighted) as they serve as side impact protection to the high-voltage battery pack.

**CAUTION**

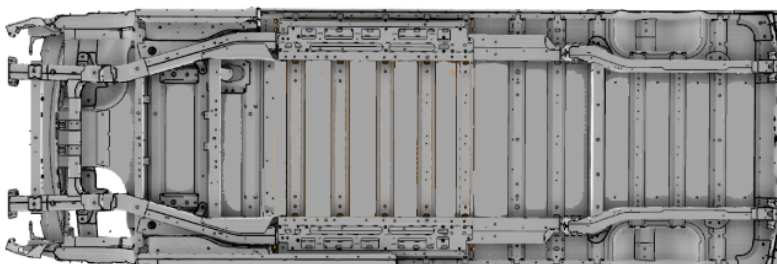
Holes in the longitudinal frame member are the result of the production process. Do not use them for mounting, as this could damage the frame.

**DANGER**

Drilling through the floor into the high-voltage battery may result in serious personal injury or death.

Crossmembers

No modifications should be made to the crossmembers under the floor.

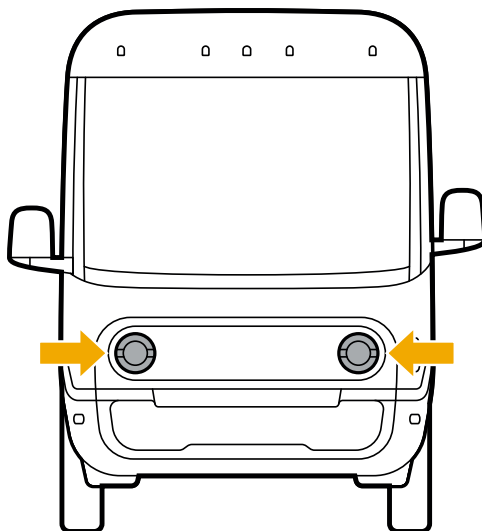




Exterior Lighting

Do not modify any exterior lighting components.

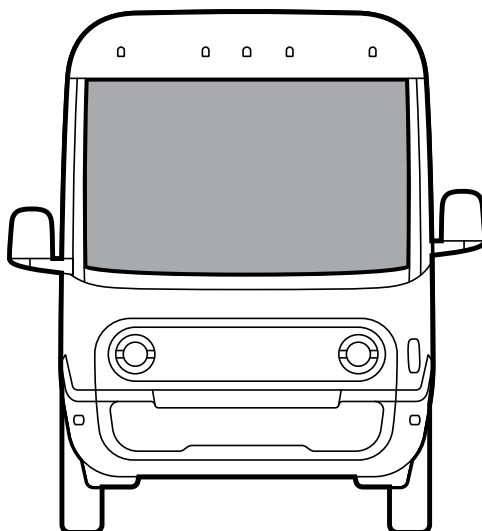
Remove and replace procedures can be found in the *Rivian Service Manual*. Upfitters must comply with local and federal regulations.



Windshield

Use Rivian-authorized windshield and installation tools to prevent a malfunction of the windshield sensors and seals.

See the *Rivian Service Manual*, Windshield and Glass Replacement, Labor Code RCI-52-23-003-2.





Badging and Decals

Ensure that any added decal or adhesive wrap does not interfere with the sensors, driver assistance systems, exterior lights, and washer nozzles. Follow all local and federal regulations to keep the vehicle in compliance.

Powertrain and Thermal System

Powertrain System Overview

The powertrain system includes the key components described below.

Front Drive Unit

- Inverter: The inverter converts the direct current (DC) from the high-voltage battery into an alternating current (AC) to power the electric motor. It plays a crucial role in controlling the motor's speed and torque.
- Gearbox: The gearbox transmits power from the electric motor to the drive shaft. It ensures optimal power delivery and efficiency across various driving conditions.
- Drive Shaft: The drive shaft transfers the mechanical power from the gearbox to the wheels, enabling vehicle movement.

High-Voltage Harness

- The high-voltage harness connects the high-voltage battery to the drive unit and other high-voltage systems within the vehicle. It ensures the safe and efficient transfer of electrical power throughout the powertrain system.
- The integration of these components ensures that the powertrain system operates seamlessly, providing the necessary power and efficiency for commercial applications.

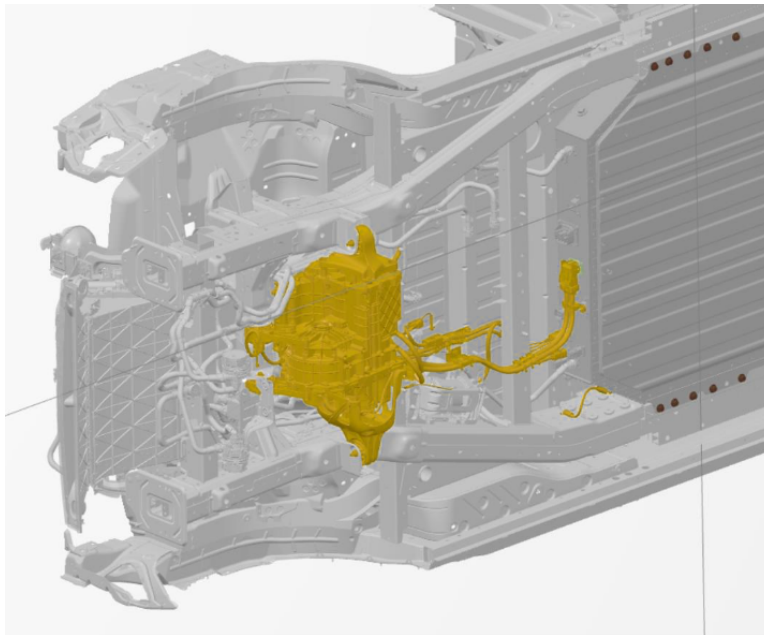
For more information on the powertrain system, see the *Rivian Service Manual*, Theory of Operations.



Modifications to the Powertrain System

Do Not Modify

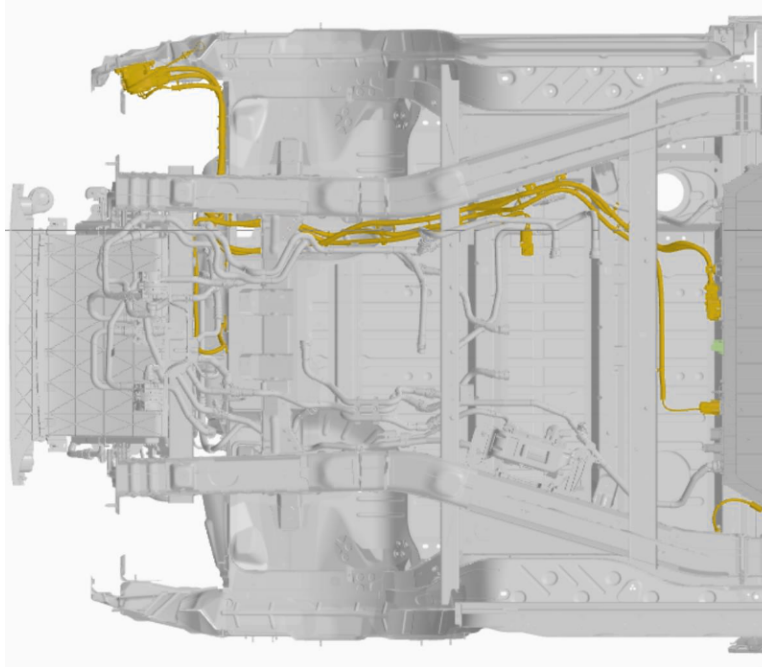
- Do not touch, drill, modify, or obscure the orange high-voltage cables, fasteners, channels, strain relief, grounding wire, or connections.
- Do not modify or move any high-voltage cable routings.
- Do not modify high-voltage grounding paths in any way.
- Do not modify the front drive unit housing, mounts, and bushings (front drive unit and high-voltage cables highlighted).



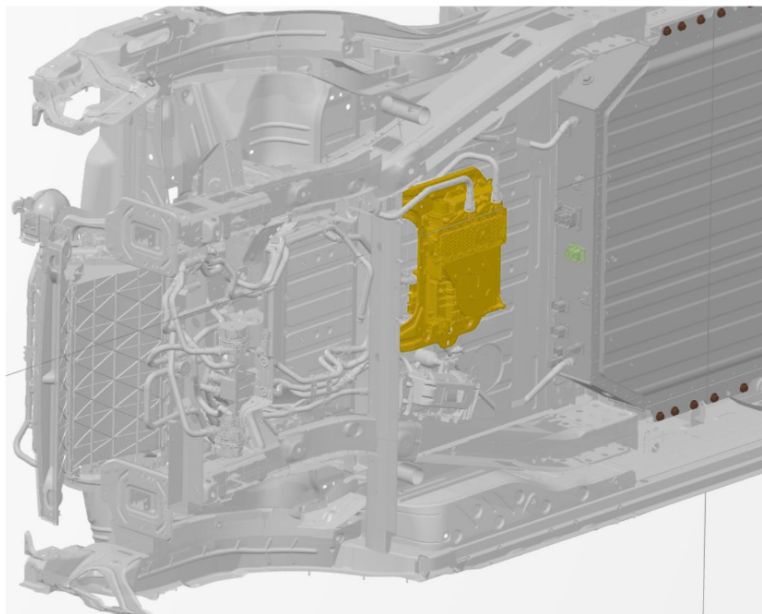
- Do not modify the half-shafts in the front drive unit.



- Do not modify the onboard charger, the charging port, or the high-voltage cables and their corresponding routings (charging port, cables, and grounding strap for high-voltage battery highlighted).



- Do not modify or alter the onboard charger, the DC-DC converter, or the mounting plate (highlighted).





Thermal Management System Overview

The thermal management system efficiently maintains optimal temperatures for both passenger comfort and vehicle performance.

System components include:

- Climate Control: Manages the cabin temperature to ensure passenger comfort and optimal operating conditions for the vehicle's components.
- Condenser Radiator Fan Module: Cools the refrigerant and coolant, ensuring efficient heat exchange and maintaining optimal temperatures for the vehicle's systems.
- Coolant System: Circulates coolant to regulate the temperature of the vehicle's powertrain and other critical components.
- Refrigerant System: Manages the refrigerant flow to provide effective air conditioning and temperature control within the vehicle.

For more information on the Thermal Management system, see the *Rivian Service Manual*, Theory of Operations.



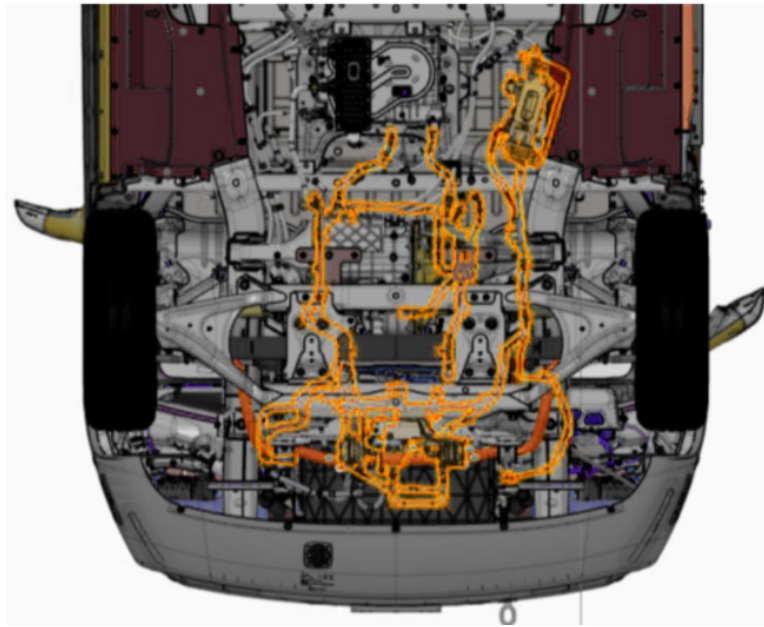
Modifications to the Thermal System

Safety Warnings

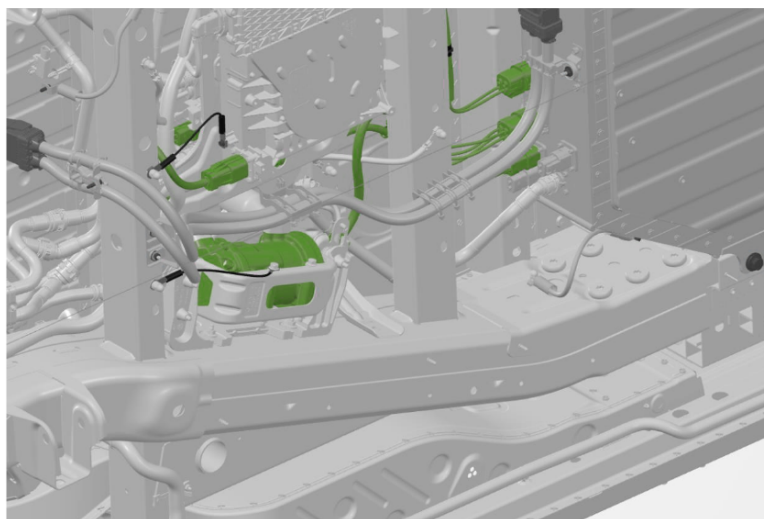
NOTE

The thermal management and the heating, ventilation, and air conditioning (HVAC) system are powered using high voltage.

- Do not modify any of the thermal management cooling lines.

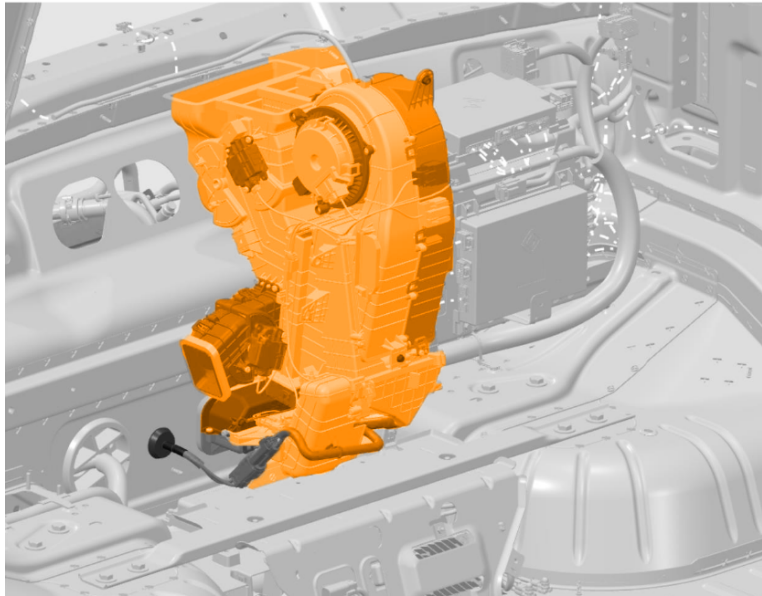


- Do not modify any of the high-voltage cables or their routing.





- Do not change the location of any of the thermal management or HVAC components.



- Do not modify the mounting brackets of the air conditioning (AC) compressor.

Coolant Systems

To maintain optimal performance and safety, any modifications to the coolant system are strictly prohibited. This system plays a vital role in controlling the temperature of the vehicle's powertrain and other essential components. Unauthorized changes could reduce the system's effectiveness, cause overheating or other failures, and void the vehicle's warranty. Preserving the coolant system's original design by Rivian is crucial.

Refrigerant System

The refrigerant system uses R-1234yf refrigerant. To ensure optimal performance and safety, no modifications are allowed to the refrigerant system. This system is critical for managing the vehicle's air conditioning and temperature control. Unauthorized alterations could compromise the system's efficiency, lead to potential failures, and void the vehicle's warranty. It is essential to maintain the integrity of the refrigerant system as designed by Rivian.

Chassis System

Overview

This section covers modifications to the following components:

- **Suspension system:** The suspension system ensures a smooth ride by absorbing shocks and maintaining vehicle stability. It includes components such as springs, dampers, and control arms.
- **Front subframe:** The front subframe supports the drive unit and front suspension components, providing structural integrity and alignment.
- **Rear axle:** The rear axle supports the rear suspension, ensuring proper alignment and stability.
- **Brake system:** The brake system includes components such as brake pads, rotors, calipers, and brake lines, ensuring effective stopping power and vehicle safety.
- **Hardware components:** These include various bolts, nuts, and fasteners that secure different parts of the chassis system, ensuring structural integrity.
- **Wheels and tires:** The wheels and tires are crucial for vehicle traction, handling, and overall performance. This section covers modifications to wheel size, tire type, and alignment.
- **Wheel alignment:** Proper wheel alignment ensures that the vehicle drives straight and reduces tire wear. This section covers adjustments to camber, caster, and toe angles.
- **Wheelbase:** The wheelbase is the distance between the front and rear axles. Modifications to the wheelbase can affect vehicle stability and handling.
- **Chassis frame:** The chassis frame is the backbone of the vehicle, providing structural support for all other components. This section covers modifications to the frame for various upfit applications.
- **Steering systems (steering column, mid shaft):** The steering system includes the steering column and mid shaft, which are essential for vehicle control and maneuverability. This section covers modifications to these components.

For more information on the Chassis system, see the *Rivian Service Manual*, Theory of Operations.

Modifications to Chassis Systems

This section provides critical guidelines and safety warnings for modifying the chassis systems of the vehicle. Adhering to these guidelines is essential for maintaining vehicle safety, performance, and reliability. Unauthorized modifications can compromise the structural integrity, handling, and crash sensor calibration of the vehicle. To ensure your vehicle remains compliant with Rivian's standards and operates safely, follow the detailed instructions below.

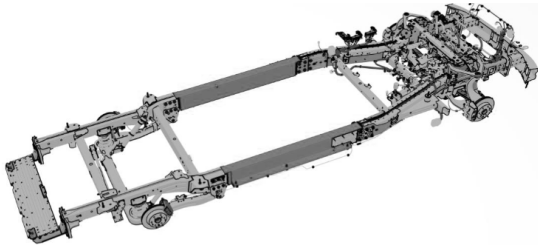
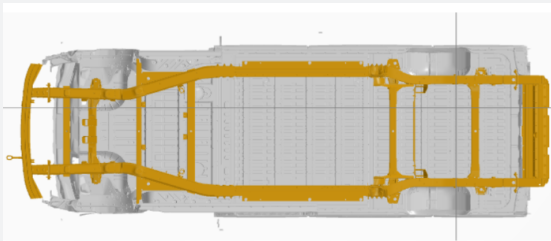
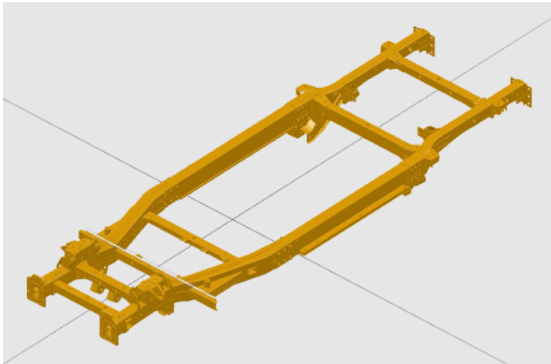


Safety Warnings

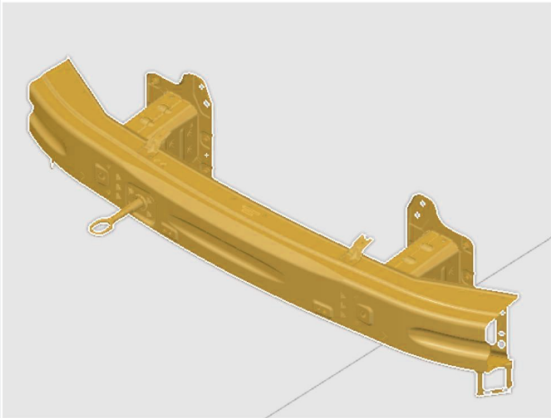
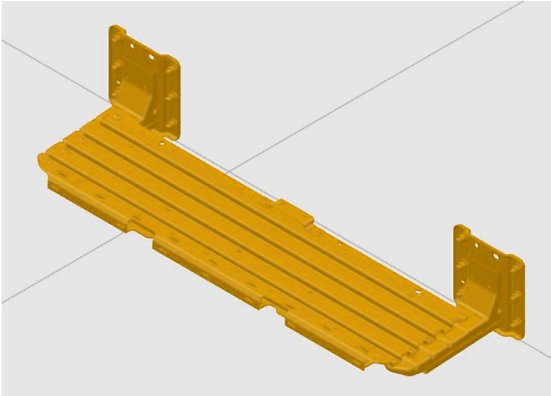
Do not drill, weld, or modify in any way:

- The front or rear suspension.
- The front, mid, or rear skateboard.
- The front bumper and crush can assembly. If replacement is necessary, use only an OEM Rivian-provided bumper and crush can assembly. Modifying these areas, or using non-Rivian replacement parts, could affect crash sensor calibration.
- The rear step. Use only an OEM Rivian rear step assembly. Modifying this area, or using non-Rivian replacement parts, could affect crash sensor calibration.

Modifications of non-structural, aerodynamic devices (such as underbody aerodynamic shields) should not hinder the crash behavior of the vehicle.

Description	Illustration
Skateboard structure	
Skateboard structure (below)	
Skateboard structure (above)	



Description	Illustration
Front bumper	
Rear step assembly	



Suspension Systems

The suspension of the vehicle is a passive system that operates without the use of any electrical or pneumatic systems to alter the characteristics of its individual components. This design ensures a straightforward and reliable suspension setup, free from the complexities of electronically controlled adjustments. If installed, the only electrical devices associated with the vehicle's suspension are two ride height sensors. If equipped, these sensors provide critical information about ride height and body roll to the Vehicle Dynamics Module (VDM). The VDM then transmits this data via the primary and secondary actuator Controller Area Network (CAN) and the Backbone Ethernet. On vehicles equipped with these sensors, this information helps maintain optimal vehicle dynamics and ensures a smooth and stable ride.



DANGER

- Modifying suspension system components can lead to impaired and unstable vehicle handling, increasing the risk of accidents, injuries, and fatalities. Therefore, do not modify any part of the suspension system. This includes components such as springs, dampers, and control arms, which are precisely engineered to ensure vehicle stability and safety.
- Leaf springs are prestressed and should not be altered under any circumstances. Alterations can compromise their structural integrity and performance, leading to unpredictable vehicle behavior.

Front Subframe

The addition of assemblies, aftermarket products, or any modifications to the front subframe is strictly prohibited. The front subframe is a vital structural component that supports the vehicle's powertrain, suspension, and other critical systems. Unauthorized modifications can compromise the integrity and performance of the vehicle, leading to potential safety hazards, including structural failures and impaired handling.

Maintaining the original design and specifications of the front subframe is essential for ensuring the safety and reliability of the vehicle. Any alterations could void the vehicle's warranty and result in unforeseen issues.

Do not exceed [permissible axle load values](#) under any circumstances.

Rear Axle

The addition of assemblies, aftermarket products, or any modifications to the rear axle is strictly prohibited. The rear axle is a crucial structural component that supports the vehicle's suspension and other essential systems. Unauthorized modifications can compromise the integrity and performance of the vehicle, leading to potential safety hazards, including structural failures and impaired handling.

Maintaining the original design and specifications of the rear axle is vital for ensuring the vehicle's safety and reliability. Any alterations could void the vehicle's warranty and result in unforeseen issues.

Do not exceed [permissible axle load values](#) under any circumstances.



Brake Systems

The addition of assemblies, aftermarket products, or any modifications to the brakes or the braking system, including the traction control system, anti-lock braking system, and the electronic stability control system, is strictly prohibited. After the vehicle is completely upfitted, the brakes must be fully functional and comply with FMVSS/CMVSS 105 standards.

The brake fluid reservoir must remain accessible and visible for service. Do not modify the brake fluid reservoir. The front and rear brake hoses should not come into contact with the chassis or moving parts. Ensure that there is adequate clearance under all operating conditions. Do not modify the brake hoses.

Brake lines should not be employed to secure or support any components. If any brake system components get damaged during the upfit process, they must be replaced with Rivian OEM parts, and full functionality should be verified.

Maintaining the original design and specifications of the braking system is crucial for ensuring the vehicle's safety and reliability. Unauthorized modifications can compromise the integrity and performance of the braking system, leading to potential safety hazards, including impaired braking performance and increased risk of accidents.

Brake fluid must meet FMVSS 116. Use only Rivian-specified brake fluid.

Protection for Multi-Collision Braking

Do not make any modifications to the braking subsystem electronic control unit (ECU). In the event of a crash, the electronic stability platform module aids the driver in applying friction brakes to reduce the vehicle's speed to less than 2 mph (3 km/h) before coming to a standstill, at which point the parking brakes are applied. Modifying the ECU will affect the performance of the Multi-Collision Braking feature, potentially compromising vehicle safety.

Maintaining the original design and specifications of the braking subsystem ECU is crucial for ensuring the vehicle's safety and reliability. Unauthorized modifications can lead to impaired braking performance and increased risk of accidents.

Hardware Components

Installation or removal of hardware components, such as factory installed nuts, clips, and bolts, must be done in accordance with the procedures shown in the *Rivian Service Manual*.

Certain hardware cannot be reused. Be sure to discard and not reuse it.



Wheels and Tires

Mount only [Rivian-approved wheels and tires](#) to the vehicle.

Mounting and de-mounting the wheels must be done in accordance with procedures laid out in the *Rivian Service Manual*.

The Tire Pressure Monitoring System (TPMS) cannot be modified, including both hardware and software. Maintaining the original TPMS is crucial for ensuring accurate tire pressure monitoring and vehicle safety.

Inflate tires to the tire pressure shown on the Tire and Loading Information Label on the driver door B-pillar.

Wheel Alignment

To prolong tire life, you may make adjustments to the standard wheel alignment values (camber/toe-in, toe-out, etc.). Rivian recommends that you consult the [Rivian Upfit Support Team](#) when making these adjustments to ensure optimal performance and safety.

Proper wheel alignment is essential for maintaining tire health, vehicle handling, and overall safety. Consulting with the Rivian Upfit Support Team will help you achieve the best results while adhering to Rivian's standards.

Wheelbase

Do not alter the wheelbase, extend the length of the chassis, or modify the width of the vehicle. Maintaining the original dimensions of the chassis is crucial for ensuring vehicle stability, safety, and performance.

Unauthorized modifications can compromise the structural integrity and handling characteristics of the vehicle, leading to potential safety hazards.

Chassis Frame

No modifications are allowed on the chassis frame. Do not drill holes in the chassis frame unless approved by the [Rivian Upfit Support Team](#). Maintaining the integrity of the chassis frame is essential for vehicle safety and performance.

Unauthorized modifications can weaken the chassis structure, leading to potential safety hazards and compromised vehicle reliability.

Steering System

No modifications are allowed to the power steering system or the steering column and the surrounding components (upper and lower shroud). Maintaining the original configuration of these components is crucial for ensuring vehicle safety and steering performance.

Unauthorized modifications can compromise the functionality and reliability of the steering system, leading to potential safety hazards.

Electrical System

Overview

This section provides information and suggested best practices for mitigating an emergency when handling high-voltage components. See the [Electric Delivery Van + Rivian Commercial Van Emergency Response Guide](#) for more information.

High-Voltage Battery Drop

Please refer to the *Rivian Service Manual*, Labor Code 301010010.

Electrical Precautions

Ensure that grease does not come into contact with electrical components and connectors. Grease can attract dirt, leading to electrical tracking (short circuits) or increased resistance.

Risks: Fire, Electrocution, and Inhalation Hazards

High-Voltage Lithium-Ion Battery Fires in Electrical Vehicles

High-voltage lithium-ion battery fires in electric vehicles differ from gasoline fires due to the chemical reactions within the battery and the presence of high-voltage electricity. While both types of fires are extremely dangerous, electric vehicle fires may present unique risks. Similar to gasoline vehicle fires, high-voltage lithium-ion battery fires can emit toxic and/or flammable gases that pose inhalation hazards. Always wear personal protective equipment (PPE), including a self-contained breathing apparatus (SCBA), and use the appropriate tools.

In case of a high-voltage battery emergency, perform the following steps.

First Secure the Vehicle and Disconnect High Voltage

Make sure the vehicle is parked and secured from rolling. Stabilize the vehicle if it is not upright or is on an unstable surface.

Disconnect the high voltage by severing either cut loop to disconnect the battery from the vehicle. See the [Electric Delivery Van + Rivian Commercial Van Emergency Response Guide](#) for further instructions. You can also access the guide by scanning the QR code on the driver-side door jamb.

Avoid Electrocution

Certain locations on the vehicle are unsafe to cut during a rescue operation or extrication.

De-energize the electric circuit or disconnect any damaged or burning vehicle that is connected to a charger.

**Be Careful When Moving or Storing a Vehicle**

Use caution when lifting the vehicle or working with submerged vehicles.

Tow the vehicle on a flatbed only.

After extinguishing a fire, store the vehicle away from other vehicles and buildings.

Avoid High-Voltage Dangers

Follow these instructions to avoid high-voltage dangers when working with the 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.
- Do not 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).



Voltages



DANGER

- The vehicle has low-voltage (12 V) and high-voltage (450 V) circuits. The high-voltage system can be energized any time the 12 V battery and first responder loop are connected. To fully disconnect the high-voltage system, refer to the *Rivian Service Manual*, Disable High-Voltage, Labor Code 340010017.
- Only technicians who have been trained in High-Voltage Awareness are permitted to perform procedures on Rivian high-voltage systems. Proper personal protective equipment (PPE) and insulating high-voltage gloves with a minimum rating of class 00 (500 V) must be worn any time a high-voltage cable is handled. Refer to the *Rivian Service Manual*, Vehicle Best Practices, for additional safety information.
- Ensure that multimeters and leads are capable of handling at least 500 V before performing a procedure that involves high voltage.
- Never disconnect or cut an orange high-voltage power cable or high-voltage component unless the high-voltage system has been disabled.
- After disabling the vehicle, power is maintained for 30 seconds in the Supplemental Restraints System (airbags and pretensioners) and 1 minute in the high-voltage electrical system.
- Never cut the high-voltage battery enclosure.
- Do not touch, drill, modify, or obscure the high-voltage cables, fasteners, channels, strain relief, ground wire, or high-voltage connectors. Do not modify or move any high-voltage cabling routings in any way. Do not modify the high-voltage grounding paths in any way.
- Service of the high-voltage system on this vehicle is strictly restricted to qualified personnel only. The required qualifications vary by region. Always observe local laws and legislative directives regarding electric vehicle service. Failure to follow the instruction may result in serious personal injury or death.
- To prevent the risk of high-voltage shock, always follow precisely all warnings and service instructions, including instructions to de-energize the system. The high-voltage system utilizes approximately 450 VDC, provided through high-voltage cables to its components and modules. The high-voltage cables and wiring are identified by orange harness tape or orange wire covering. All high-voltage components are marked with a high-voltage symbol.
- De-energizing the high-voltage system does not dissipate the voltage inside the high-voltage battery pack. The battery pack remains live and dangerous. Contact with the high-voltage battery pack internals may result in a serious personal injury or death.
- Powertrain software calibrations must not be modified within the vehicle.



High-Voltage Battery

The high-voltage battery stores all the energy required for the motor and vehicle electrical systems. The battery is equipped with sensors to detect various conditions that could potentially damage the vehicle or pose a safety risk. In such circumstances, the battery's primary response is to disconnect the high voltage from the rest of the vehicle.

When the battery is not installed in a vehicle, high voltage is not accessible without removing the enclosure cover.



DANGER

- Always remove the high-voltage battery before performing any procedure that might require using a drill near the high-voltage battery, especially drilling downward from inside the vehicle.
- A high-voltage battery poses a significant high voltage and electrocution risk if the outer enclosure or safety circuits have been compromised or have been significantly damaged.
- If the battery or vehicle displays signs of escaping gases, smoke, flames, excessive heat, sparks, or arcing, contact the local emergency department and refer to the [Electric Delivery Van + Rivian Commercial Van Emergency Response Guide](#). Gases or smoke exiting a lithium-ion high-voltage battery are likely flammable and could ignite at any time.

Electrical Connectors and Harnesses

Be sure to follow these guidelines to stay safe:

- Never pull on a wiring harness or an individual wire to disconnect an electrical connector.
- Never use tools to force connectors apart.
- Ensure that disconnected connectors and sensors are protected from oil, coolant, water, and other contaminants.
- Ensure that electrical items are dry and free of oil or grease before disconnecting and connecting test equipment.
- After reconnecting an electrical connector, lightly pull on it to ensure that it is secured.
- When replacing a component, keep oily hands away from electrical connection areas.
- Ensure that any protection (cover, insulation, etc.) is replaced if disturbed.

Grease for Electrical Connectors

Certain underhood and underbody connectors are protected against corrosion by the application of a special grease during vehicle assembly. When repairing or replacing these connectors, apply the appropriate grease as specified by the *Rivian Service Manual*. Do not use alternative greases, as incorrect grease can migrate into relays, switches, and other components, contaminating the contacts and causing intermittent operation or failure.

Do not apply grease to any connectors that do not have grease applied from the factory.



Emergency Response to Electrical Shock or Battery Exposure

Seek immediate medical assistance if an electrical shock or electrocution has occurred or is suspected.

Under normal conditions, technicians are not exposed to the contents of the high-voltage battery cells. If materials from a ruptured or otherwise damaged battery come into contact with skin, flush the area immediately with water and wash with soap and water. Avoid inhaling any vented gases. If a chemical burn occurs or if irritation persists, seek medical assistance. For eye contact, flush with significant amounts of water for 15 minutes and consult a physician immediately.



DANGER

- A high-voltage battery poses a significant high-voltage and electrocution risk if the outer enclosure or safety circuits have been compromised or have been significantly damaged.
- Avoid contact with gases escaping from a damaged battery. Vented gases might irritate the eyes, skin, and throat. Vent gas temperatures can exceed 1,100°F (600°C). Contact with hot gases can cause burns.

High-Voltage Battery Storage Precautions



WARNING

- Do not store high-voltage batteries below -4°F (-20°C).
- Do not store high-voltage batteries for over 10 days above 95°F (35°C).
- Do not charge or discharge a high-voltage battery below 32°F (0°C).
- Do not store high-voltage batteries for more than 30 days at full state of charge or completely discharged.
- Do not weld near high-voltage batteries.

Install the following covers on the high-voltage battery quick-connect connectors before storing the high-voltage battery:

- Coolant quick-connect safety cover on the coolant connector.
- High-voltage battery quick-connect safety cover on the high-voltage connector.
- Low-voltage quick-connect safety cover on the low-voltage connector.

NOTE

If either quick-connect safety cover is not available, cover the connector with 3M 2480S masking tape or 3M 471 vinyl tape.

High-voltage batteries should be stored in a dry area, in approved packaging or on non-conductive surfaces. To reduce the risk of accidental shorting, ensure that there are no loose metal or other conductive materials near stored batteries.

High-voltage batteries should not be stored longer than 9 months since battery service life likely will be affected. If longer storage is anticipated, contact aftersalesupport@rivian.com for instructions.



High-Voltage Battery Disposal Procedures

The lithium-ion cells in the battery do not contain heavy metals like lead, cadmium, or mercury.

High-voltage batteries should be disposed of or recycled in accordance with local, state, and federal regulations. Regulations regarding disposal of batteries vary by jurisdiction. In the United States, batteries are classified as Universal Waste, and in addition, many individual states have specific regulations regarding disposal of batteries.

High-voltage batteries contain recyclable materials. Rivian strongly encourages recycling. Rivian recommends that all high-voltage batteries be taken to a Rivian Service Center so that they can be evaluated and recycled safely and efficiently.

If disposing of a battery without returning it to Rivian, consult with local, state, and/or federal authorities on the appropriate methods for disposal and recycling.

Export Power Systems

The vehicle can be equipped with Rivian-authorized export power systems, allowing the customer to provide electricity to external devices from the vehicle. However, due to the complexity and potential hazards of working with high-voltage systems, specific requirements are mandatory to ensure the safety of customers, vehicles, and technicians.

Key Requirements

- **Rivian-Approved Export Power Systems Only:** Only Rivian-designed and validated export power systems are permitted for installation on Rivian vehicles. These systems are rigorously engineered and tested for compatibility and safety.
- **Rivian-Trained Upfit Partners Only:** Installation must be performed by trained and authorized Rivian upfit partners. Customer installation of the equipment is not supported.
- **No Unauthorized Modifications:** For safety reasons, connecting any hardware not explicitly approved by Rivian to the high-voltage system is prohibited. This includes hardware designed by upfitters or third parties. Such unauthorized hardware may compromise customer or vehicle safety, and will void the vehicle's warranty.

Selecting a System

- Upfit partners should reach out to the [Rivian Upfit Support Team](#) before purchasing or installing any equipment onto the high-voltage system.
- For all export power system needs, including ordering approved systems and obtaining technical support, upfit partners should contact the Rivian Upfit Support Team directly.

High-Voltage Distribution System

Overview

The High-Voltage Distribution System is a critical component that ensures efficient power management and distribution throughout the vehicle. This system includes the charge port, onboard charger, DC-DC converter, and high-voltage harnesses and connectors. Each of these components plays a vital role in maintaining the vehicle's electrical performance and safety.

- **Charge Port:** The charge port is the interface through which the vehicle connects to external power sources for charging. It is designed to support various charging standards and ensures safe and efficient energy transfer to the vehicle's battery.
- **Onboard Charger:** The onboard charger converts AC power from external charging stations into DC power, which is then used to charge the vehicle's high-voltage battery. This component is essential for enabling convenient and flexible charging options.
- **DC-DC Converter:** The DC-DC converter steps down the high-voltage DC power from the vehicle's battery to a lower voltage, which is used to power the vehicle's low-voltage systems and accessories. This ensures that all electrical components receive the appropriate voltage for optimal operation.
- **High-Voltage Harnesses and Connectors:** The high-voltage harnesses and connectors are responsible for safely transmitting high-voltage power between various components of the vehicle. These elements are designed to handle high power loads while ensuring insulation and protection against electrical faults.

For detailed operational information and safety guidelines, refer to the *Rivian Service Manual*, Theory of Operations, High-Voltage Distribution. Adhering to these guidelines is crucial for maintaining the safety and reliability of the High-Voltage Distribution System.

Charge Port

Do not modify the charge port. The charge port is a critical component that ensures safe and efficient energy transfer from external power sources to the vehicle's battery. Unauthorized modifications can compromise the integrity of the charging system, leading to potential safety hazards and reduced charging efficiency. Always adhere to Rivian's guidelines to maintain the safety and reliability of the High-Voltage Distribution System.

Onboard Charger

Do not modify the onboard charger. The onboard charger is essential for converting AC power from external charging stations into DC power for the vehicle's high-voltage battery. Unauthorized modifications can disrupt this conversion process, potentially causing safety hazards, charging inefficiencies, and damage to the vehicle's electrical system. To ensure the safety and reliability of the High-Voltage Distribution System, always follow Rivian's guidelines and avoid any alterations to the onboard charger.



DC-DC Converter

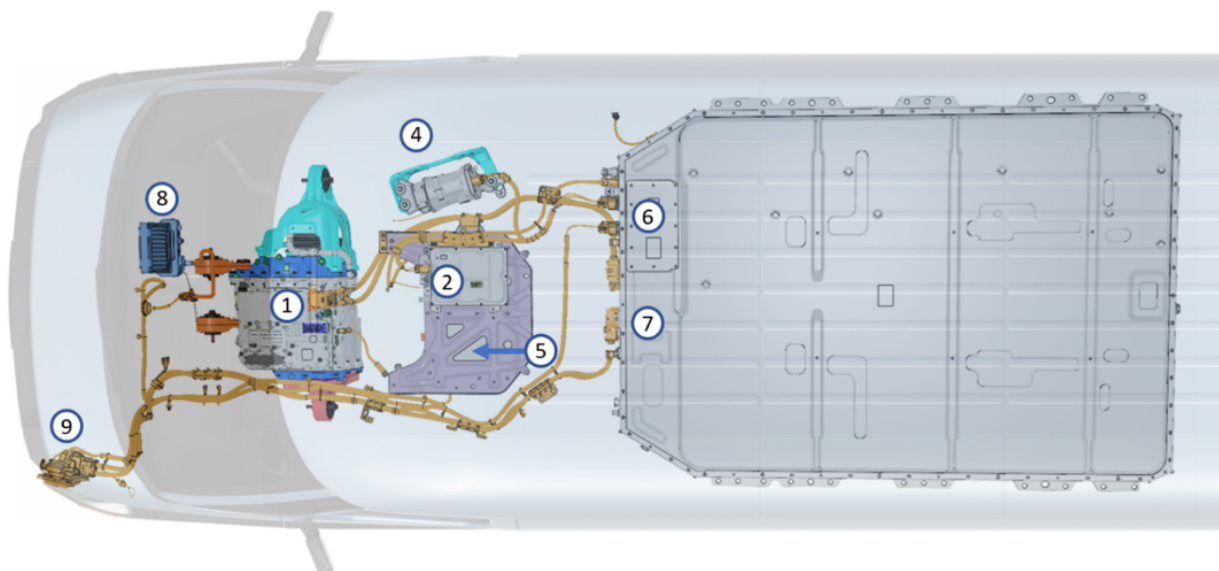
Do not modify the DC-DC converter. The DC-DC converter is a crucial component that steps down high-voltage DC power from the vehicle's battery to a lower voltage, which powers the vehicle's low-voltage systems and accessories. Unauthorized modifications can interfere with this voltage conversion process, leading to potential safety risks, electrical malfunctions, and damage to the vehicle's systems. To maintain the safety and reliability of the High-Voltage Distribution System, always adhere to Rivian's guidelines and avoid any alterations to the DC-DC converter.

Do Not Cut

Do not cut or modify any orange cables or other components shown in the image below.

NOTE

The actual location of components and cables may vary.



Callout	Description
1	Front drive unit (FDU)
2	DC-DC voltage converter
3	Not applicable
4	Electric AC compressor (EAC)
5	Onboard charger, located under the DC-DC bracket
6	High-voltage battery interlock connections (right-hand side)
7	Direct current fast charger (DCFC)
8	High-voltage cabin heater (HVCH)
9	Charge port



DANGER

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

Energy Storage Systems

Overview

The Energy Storage System, also referred to as the High-Voltage Battery, is a critical component designed to provide reliable and efficient power for the vehicle's operations. For detailed operational information and safety guidelines, refer to the *Rivian Service Manual*, Theory of Operations, High-Voltage Battery.

The vehicle utilizes a Lithium Iron Phosphate (LFP) battery pack, known for its high thermal stability, safety, and long cycle life. LFP batteries are less prone to overheating and can endure more charge and discharge cycles, making them ideal for commercial use.

The Energy Storage System comprises several key components:

- **High-Voltage Battery Assembly:** This is the complete battery unit, including all internal components and housing.
- **High-Voltage Battery Housing:** This provides structural integrity and protection for the internal components of the battery.
- **High-Voltage Battery Busbars:** These conduct high-voltage electricity within the battery pack, ensuring efficient power distribution.
- **High-Voltage Battery Internal Harnesses and Connectors:** These facilitate electrical connections between the various components within the battery pack.
- **High-Voltage Battery Fuses and Switching:** These components protect the battery and vehicle systems by interrupting the flow of electricity in case of a fault.
- **High-Voltage Battery Control Modules:** These modules manage the battery's performance, including monitoring the state of charge and ensuring safe operation.
- **High-Voltage Battery Thermal Management:** This system maintains optimal operating temperatures for the battery, enhancing performance and longevity.
- **High-Voltage Battery Energy Modules:** These are the individual cells or groups of cells that store electrical energy within the battery pack.



Energy Storage System Modifications

Safety Warnings

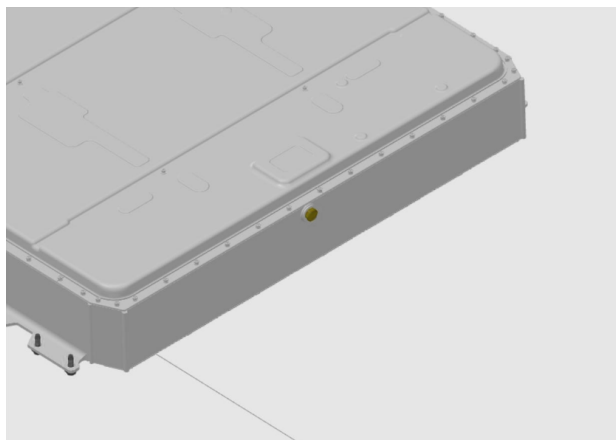
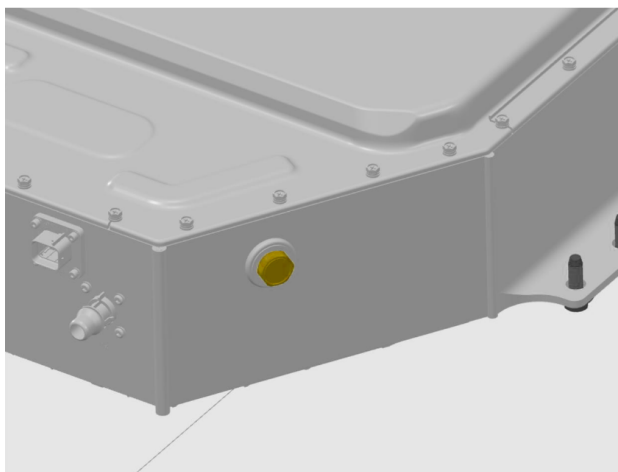
- Do not modify orange high-voltage connectors or cables.
- Do not grind, cut, drill, or modify in any way the high-voltage battery pack, battery casing, or skateboard midrails that support the battery pack.
- Do not ground welding equipment to the high-voltage battery pack, battery casing, or the skateboard midrails that support the battery pack.
- The high-voltage battery pack has a floating reference, which is designed to have the high-voltage system completely isolated from the vehicle chassis. As such, the high-voltage system is not grounded to the body/chassis in the same way as the low-voltage system. Although the high-voltage battery pack can be disconnected and de-energized, the high-voltage battery pack, including the high-voltage ground, remains live and dangerous.
- Do not make any modifications to high-voltage components as that can directly impact the system integrity and isolation resistance requirements from the vehicle chassis.



High-Voltage Battery Assembly

The battery pack is equipped with two exhaust vents (highlighted). To ensure proper ventilation and safety, no additional components or obstructions should be placed within 6 in (150 mm) of these vents in the vehicle's underbody. Furthermore, to prevent potential fire hazards, no components that may contain combustible liquids or gases at any time should be added within 12 in (300 mm) of these vents.

Exhaust Vents



No modifications or components are permitted that restrict or confine airflow to the battery pack beyond the original installation by Rivian. If additional ingress or egress paths are to be added to the cargo area, shielding must be installed to divert airflow away from the battery pack and the newly added paths. Any cutouts or openings created between the occupant space and the vehicle's underbody must be sealed to prevent air from passing into the occupant space. When working around the exhaust vents, ensure they are masked and protected from debris to maintain proper ventilation and safety.

High-Voltage Battery Housing

Do not modify the High-Voltage Battery Housing. The High-Voltage Battery Housing is crucial for maintaining the structural integrity and protection of the internal components of the battery. Any modifications could compromise the safety and performance of the battery system, potentially leading to electrical hazards, reduced efficiency, or even catastrophic failure. It is designed to withstand various environmental conditions and impacts, ensuring the longevity and reliability of the battery pack.



High-Voltage Battery Busbars

Do not modify the High-Voltage Battery Busbars. These busbars conduct high-voltage electricity within the battery pack, ensuring efficient power distribution. Any modifications to the busbars could disrupt the electrical flow, leading to potential safety hazards such as short circuits, overheating, or electrical fires. The busbars are designed to handle specific electrical loads and altering them could compromise the battery pack's performance and safety. Proper functioning of the busbars is essential for the overall efficiency and reliability of the vehicle's electrical system.

High-Voltage Battery Internal Harnesses and Connectors

Do not modify the High-Voltage Battery Internal Harnesses and Connectors. These components facilitate electrical connections between the various parts within the battery pack. Any modifications to the internal harnesses and connectors could disrupt these critical connections, leading to potential safety hazards such as short circuits, electrical arcing, or system malfunctions. The internal harnesses and connectors are specifically designed to handle the high-voltage requirements and environmental conditions within the battery pack. Altering them could compromise the integrity and reliability of the entire battery system, affecting the vehicle's performance and safety.

High-Voltage Battery Fuses and Switching

Do not modify the High-Voltage Battery Fuses and Switching. These components are critical for protecting the battery and vehicle systems by interrupting the flow of electricity in case of a fault. Any modifications to the fuses and switching mechanisms could compromise their ability to detect and respond to electrical faults, leading to potential safety hazards such as electrical fires, system failures, or damage to the battery pack. The fuses and switching components are specifically engineered to handle the high-voltage environment and ensure the safe operation of the vehicle. Altering them could jeopardize the overall safety and reliability of the vehicle's electrical system.

High-Voltage Battery Control Modules

Do not modify the High-Voltage Battery Control Modules. These modules are responsible for managing the battery's performance, including monitoring the state of charge and ensuring safe operation. Any modifications to the control modules could disrupt their ability to accurately monitor and regulate the battery's functions, leading to potential safety hazards such as overcharging, overheating, or system malfunctions. The control modules are designed to work within specific parameters to maintain the battery's efficiency, longevity, and safety. Altering them could compromise the overall performance and reliability of the vehicle's electrical system.



High-Voltage Battery Thermal Management

Do not modify the High-Voltage Battery Thermal Management system. This system is crucial for maintaining optimal operating temperatures for the battery, thereby enhancing its performance and longevity. Any modifications to the thermal management system could disrupt its ability to regulate temperatures effectively, leading to potential safety hazards such as overheating, thermal runaway, or reduced battery efficiency. The thermal management system is specifically designed to handle the high thermal loads and environmental conditions within the battery pack. Altering it could compromise the overall safety, reliability, and lifespan of the vehicle's electrical system.

High-Voltage Battery Energy Modules

Do not modify the High-Voltage Battery Energy Modules. These modules consist of individual cells or groups of cells that store electrical energy within the battery pack. Any modifications to the energy modules could disrupt the delicate balance required for optimal performance, leading to potential safety hazards such as thermal runaway, cell imbalance, or reduced energy storage capacity. The energy modules are engineered to work cohesively to ensure the battery pack's efficiency, longevity, and safety. Altering them could compromise the overall integrity and reliability of the vehicle's electrical system, affecting both performance and safety.

Low-Voltage Systems

Overview

The low-voltage system is responsible for managing various electrical components that operate at lower voltages compared to the high-voltage battery system. This system ensures the proper functioning of essential vehicle features and enhances overall safety and convenience. For detailed operational information, please refer to the *Rivian Service Manual*, Theory of Operations, Low-Voltage Electrical.

The low-voltage system includes the following components.

Low-Voltage Electronic Control Modules

These controllers are strategically integrated throughout the vehicle to manage, monitor, and control various subsystems, including sensors, actuators, and auxiliary systems. They ensure efficient operation and coordination of key vehicle functions.

Do not modify low-voltage electronic control modules.

Wipers and Washers

This component ensures clear visibility by controlling the windshield wipers and washer fluid systems. The windshield wiper/washer system is homologated per FMVSS 104 and should not be modified. If any modifications are made, the system must still meet FMVSS 104. When working on these components, refer to the *Rivian Service Manual*, Labor Code 781430010.

Communications Modules

Connectivity and telematics systems in modern vehicles enable communication and information sharing with external systems such as other vehicles, the cloud, Wi-Fi® networks, charging stations, satellites, and cellular networks.

The Rivian telematics and connectivity system enhances the ownership experience by acting as a data pipeline between the vehicle and the Rivian Cloud, enabling software updates for new or improved features. It provides cellular, Wi-Fi, *Bluetooth*®, and Global Navigation Satellite System (GNSS) connectivity, supporting infotainment applications, data streaming, emergency calls, and an in-vehicle Wi-Fi hotspot.

The telematics control module (TCM) serves as the gateway for diagnostics via the OBD-II interface and supports Diagnostics over IP (DoIP) applications.

Do not modify the communications modules.



Display Screens

Modern vehicles require interaction and feedback between the vehicle, driver, and passengers. The infotainment system serves as the Human Machine Interface (HMI), providing essential information and control over features like HVAC, drive modes, blinkers, and wipers through voice commands, stalk movements, or touch displays.

The Rivian infotainment system, including the eXperience Management Module (XMM) and other hardware, enhances the in-vehicle user experience by providing an interface between the vehicle and the customer through audio and visual means.

Do not modify the Rivian display screens.

Antennas

Rivian vehicles utilize various antennas in different locations to enable vehicle communications. These include antennas for the GNSS, LTE for cellular connectivity, Wi-Fi, and Bluetooth.

Do not modify any of these antennas.

Exterior Audio

The Acoustic Vehicle Alert System (AVAS) is a pedestrian warning system designed to meet global regulations requiring electric vehicles to produce a minimum noise level for pedestrian safety. Integrated into the vehicle architecture via a Controlled Area Network (CAN) bus, AVAS automatically generates a wide frequency range of sounds that change in pitch and volume based on vehicle speed and acceleration. The system activates when the vehicle shifts out of **P** (Park) and increases in pitch and volume as speed increases.

Do not modify this system.

12 V Batteries

These batteries provide power to the low-voltage system and ensure the operation of essential components.

12 V Power Distribution Unit (Fuse box)

The Power Distribution Unit (PDU) distributes 12 V power to various systems and modules within the vehicle. Fuses in the PDU also provide circuit protection.

Access and Authentication

The Vehicle Access System (VAS) is responsible for authenticating users to a vehicle. Once authenticated, users can remotely lock/unlock and open most vehicle closures, engage the alarm, and access various other features. The VAS achieves this functionality through a combination of hardware and software.

Security Hardware

The Rivian alarm system is primarily controlled by the Central Gateway Module (CGM). Acting as the hub for various sensors, the CGM routes commands to other Electronic Control Units (ECUs) to take action.



Modifications to Low-Voltage Systems

General Information

Modifications to electronic components, their software, or their wiring can impair the functioning of those electronic components and other networked components. Safety-relevant systems in particular may be affected. Because of this, they may no longer function properly and compromise the operational safety of the vehicle.

There is a heightened risk of accidents and injury! Never carry out any modifications to the existing wiring and electronic components or their software. Have all work on electrical and electronic equipment carried out at a qualified specialist workshop.

IMPORTANT

- Electrical and electronic components must fulfill local and national test requirements as well as ISO 16750 test requirements.
- Refer to the *Rivian Service Manual* when installing or removing 12 V batteries.
- Cables must be routed in such a way that there are no kinked points. Do not route cables over sharp edges.
- Cables should be fixed in place to avoid chafing, squeaks, and rattles.
- Consult the *Rivian Commercial Van 500 Operating Guide*.

The upfitter is responsible for functional safety of the body mounting work performed by the upfitter as well as for the observance of the applicable standards and regulations. Furthermore, the upfitter must guarantee compliance with the international standard ISO 26262 concerning functional safety, if applicable.

Please also refer to 49 CFR 567.5 in the US for requirements for manufacturers of vehicles manufactured in two or more stages.

Rivian has no control over the modification or installation process of the electrical content of auxiliary systems and therefore can take no responsibility for such installations. Contact the [Rivian Upfit Support Team](#) for further information.



Do not cut, splice, or wire into CAN buses. Similarly, do not cut, splice, or wire into the low-voltage harness that carries safety-critical harness signals, such as those for the satellite crash sensors or the control modules. Do not remove or cut these looms as well, as they consist of an outer-reinforcement mesh. The following must not be modified or extended:

- Cables/wire harnesses to the control modules.
- Cables/wire harnesses to the airbag, the seat belt retractors, anchors, or buckles.

**WARNING**

It is recommended to follow the guidelines in the electrical sections of this guide and the *Rivian Service Manual*. Incorrect design, for example, overloaded ground paths or insufficient mechanical protection of third-party wiring, could lead to serious system or vehicle failure.



Electromagnetic Compatibility

Electromagnetic compatibility describes an electrical system's ability to act neutrally near other systems when operating at full function. The system in question does not interfere with any of the active systems in the vicinity, nor does it suffer any interference related to electromagnetic disturbance.

Electrical interference can occur in vehicle on-board electrical systems because of the various consumers.

Rivian tests all factory-installed electrical and electronic components for their electromagnetic compatibility in the vehicle.



WARNING

If subsequent modifications are made, this may cause a reduction in comfort (for example, radio noise) or possibly more serious hazards.

When retrofitting electrical or electronic systems, these systems must be tested for electromagnetic compatibility, and this must be documented.

All electrical equipment fitted must be tested in accordance with FCC, CE in the European Union, and UL in the US.

The following standards provide information on this:

- CISPR 12
- CISPR 25
- DIN EN 55012
- DIN EN 55025
- ISO 7637
- ISO 10605
- ISO 11451
- ISO 11452
- UN R 10

High-Voltage Battery to Skateboard Grounding Fasteners

Do not use the skateboard grounding fasteners as additional or auxiliary grounding points for the low-voltage system. Any additional component that requires grounding must be bonded to the vehicle chassis to ensure proper electrical grounding and safety. It is crucial to meet FMVSS 305 isolation requirements to prevent electrical hazards and ensure compliance with safety standards.

Always use the vehicle chassis as the grounding point for any additional components to maintain the integrity and safety of the vehicle's electrical system.



12 V Battery

The 12 V battery is mounted to the floor underneath the driver's seat.



IMPORTANT

Only use a Rivian-approved battery. Using an unapproved battery can cause false warning lights, vehicle degradation, or a loss of power to critical systems.

Disconnect the 12 V Battery Terminals

See the *Rivian Service Manual*, Labor Code 780010017, for instructions.

Before working on the vehicle, always disconnect the 12 V battery terminals and wait at least 5 minutes before starting work. If any of the covers are damaged during upfitting or are missing, order replacement parts and fit them.



Location of 12 V Fuse Boxes

On each side of the driver seat is a fuse box. These contain 12 V fuses that protect the electrical circuits from damage caused by overload or short circuits. A blown fuse can prevent a specific electrical component from functioning and needs to be replaced to restore power. Do not change the rating of the 12 V fuses or relocate them.

If you need to service the fuses during the upfit or afterwards, you can access the fuses that have been allocated to you via the overlay harness. More information will be provided when you purchase the overlay harness.



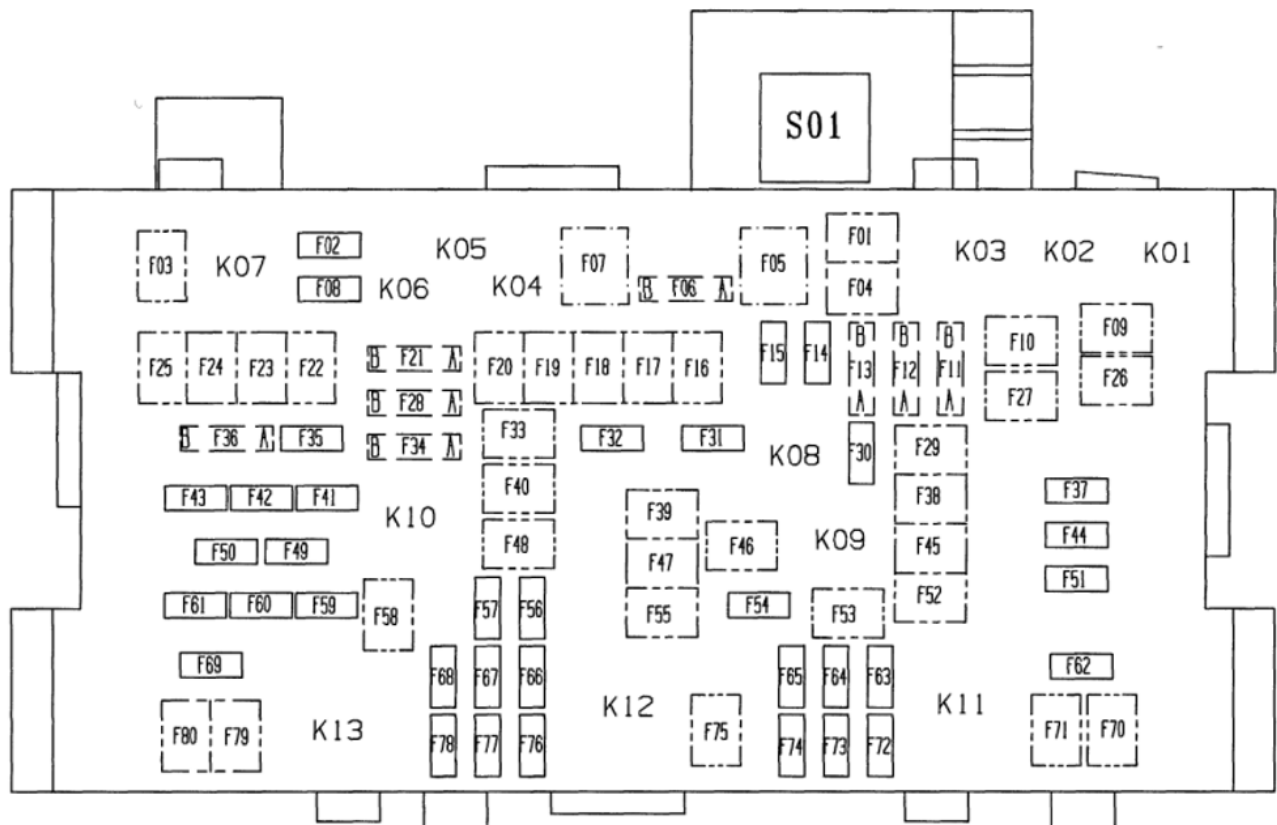
WARNING

Do not modify any fuses other than those detailed here.

Use the fuse map below to locate the fuses you can service.

NOTE

The Power Distribution Unit (PDU) uses the same map for both the primary and secondary sides.





12 V Power Distribution

**WARNING**

Do not modify the existing harnessing. This could void the vehicle warranty.

Rivian sells an overlay wiring harness to use for electrical upfits. The harness comes with detailed installation instructions and recommendations for various grounding points. The circuits on the harness have a variety of wire sizes in order to accommodate the needs of a wide range of applications. The circuit ampacity ratings are clearly labeled. Do not exceed these ratings, as it could cause circuit failures and potentially hazardous conditions.

If the provided overlay harness doesn't work for your program, please reach out to the [Rivian Upfit Support Team](#). The engineering team may be able to support more complex programs directly.

Driver Assistance Systems

Overview

Driver Assistance is Rivian's Advanced Driver Assistance System (ADAS). Driver Assistance automates certain driving activities and provides environmental information to enhance driver safety, aid in accident avoidance, and support autonomy. The system comprises cameras, radar sensors, antennas, and ultrasonic sensors that aid with vehicle operation.

To meet Rivian's standards, all repairs and calibrations involving Driver Assistance components should be performed by a Rivian-Certified Technician at either a Rivian Service Center or Rivian-Certified Collision Center. After repair, the Driver+ system needs to be calibrated, however, not all components require calibration. Refer to the appropriate service procedure(s) for detailed and vehicle-specific calibration instructions.

Always refer to the *Rivian Service Manual* for information on removal, installation, fault tracing, and calibration.



DANGER

- Improper maintenance and calibration of Driver Assistance components may result in catastrophic failure of the system, which can cause severe injury or death.
- Modification of Rivian-approved tools or resizing of calibration targets is strictly prohibited. Modifications and resizing can result in improper calibrations that may compromise the safe operation of the vehicle.

NOTE

Third-party exterior vehicle films, such as vinyl wrap or Paint Protection Film (PPF), which are not manufactured by XPEL may affect the performance of Driver Assistance components.



Cameras

Cameras digitize light information for onboard or external electronic control unit (ECU) processing. They are sensitive to lighting, debris, and windshield tinting.

Driver Assistance Control Modules and Sensors

These components create a digital representation of surroundings using cameras, radars, ultrasonics, and GPS. Signals are processed by two ADAS domain controller ECUs to control vehicle functions and provide feedback.

Radars

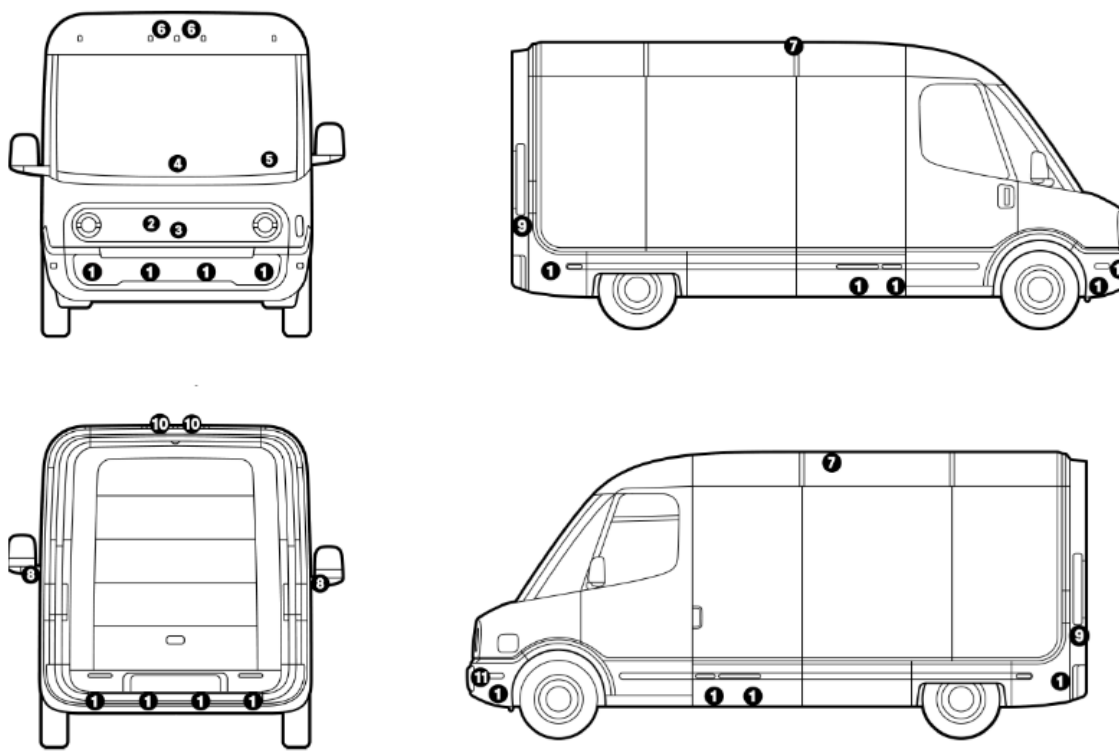
Radars consist of a transmitter, emitter, and ECU. The transmitter emits radio waves that reflect off of objects, and the receiver detects the returned pulse to determine object distance and speed.

Ultrasonic Sensors

Ultrasonic sensors use sound waves for short-range detection, crucial for low-speed collision warnings and Park Assist. Sixteen sensors transmit data to the Park Assist Module (PAM) via Park Assist Controller Area Network (CAN) bus signals.



Driver Assistance Component Locations



Number	Component Type
1	Ultrasonic Sensor
2	Sensor, Radar, Front, Center
3	Camera, Bumper, Front
4	Camera, Driver Assistance, Front
5	Camera, Long Range, Front
6	Camera, Stereo Vision, Front
7	Camera, Surround, Side
8	Camera, Lane Change
9	Sensor, Corner Radar, Rear
10	Cameras and Bracket, Rear
11	Sensor, Corner Radar, Front



Modifications to Cameras

To ensure the proper functioning of the vehicle's camera systems during upfit modifications, please adhere to the following guidelines:

- Do not block the exterior camera field of view, to maintain clear visibility.
- Avoid placing electronic devices near the cameras, to prevent interference.
- Do not drill through interior panels within a specified distance from camera wire harnesses, to avoid damaging the wiring.
- Keep the camera in its current position, to ensure accurate calibration and functionality.
- Do not modify the camera harness, including connectors, to maintain system integrity.
- Avoid placing any light sources within the camera's field of view limits, to prevent glare and distortion.
- Do not touch the lens of any camera on the vehicle, to avoid smudges and damage.
- Ensure no objects are placed between the driver and the interior Driver Monitoring System (DMS) camera that could block its field of view.
- Do not place heat sources next to the cameras, to prevent overheating and potential damage.

If a camera is moved during the upfitting process, a calibration must be performed after the upfitting process is complete.

These guidelines are crucial for maintaining the effectiveness of the driver assistance systems during and after upfit modifications.



Camera Calibration Requirements

Front Camera

Camera	Calibration Style	Calibrate When:
Camera, Driver Assistance, Front	Static or Dynamic	• Camera, Driver Assistance, Front is replaced or removed and installed • Camera, Driver Assistance, Front, Bracket is replaced or removed and installed

Surround View System

Camera	Calibration Style	Calibrate When:
Camera, Bumper, Front Camera, Surround, Side Camera, Surround, Rear	Static	• Camera, Bumper, Front is removed and replaced • Camera, Surround, Side is removed and replaced • Camera, Surround, Rear is removed and replaced • Camera and Bracket, Surround, Side, LX and/or Camera and Bracket, Surround, Side, RH is replaced or removed and installed NOTE If the upper front fascia or front grille is replaced or removed and installed, check for image clarity on the center information display to determine if calibration is necessary.



Modifications to Driver Assistance Control Modules and Sensors

To ensure the proper functioning of the Driver Assistance Control Modules and Sensors during upfit modifications, observe the following guidelines:

- Do not modify the Driver Assistance Control Modules and Sensors, including any associated wiring or connectors.
- Ensure that all sensors, including cameras, radars, and ultrasonics, remain in their original positions to maintain accurate calibration and functionality.
- Avoid placing any electronic devices or other objects near the sensors that could cause interference or block their field of view.
- Do not alter the mounting points or brackets of the sensors, to ensure they remain securely in place.

These guidelines are crucial for maintaining the effectiveness and reliability of the Driver Assistance systems during and after upfit modifications.



Modifications to Radar Sensors

Unauthorized fascia replacements or repainting can interfere with radar function or calibration. Nothing should be placed in front of the center of the fascia or on the corners of the front or rear fascias. This avoids blocking the five radar sensors on the vehicle. This guidance includes, but is not limited to, grille guards, decals, and rear bumper guards.

If the front center radar is uninstalled or reinstalled, a calibration must be performed after reinstallation. For corner radars, calibration occurs while driving.

Radar Calibration Requirements

Radar	Calibration Style	Calibrate When:
Sensor, Radar, Front, Center	Static or Dynamic	• Sensor, Radar, Front, Center is replaced or removed and installed • For front upper fascia removal and install, no calibration is necessary if you confirm radar angle is the same before and after the work is performed

IMPORTANT

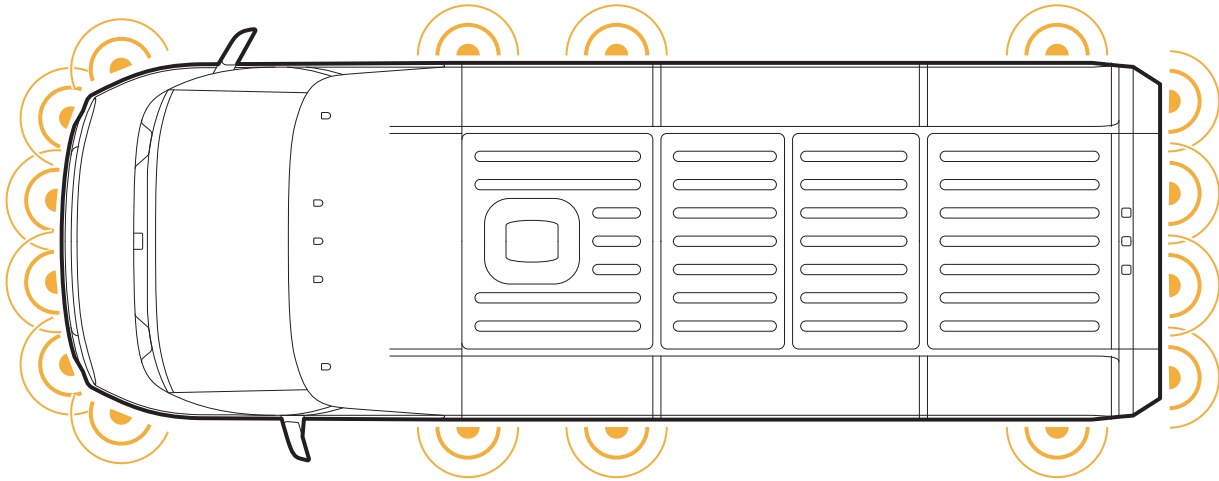
All new radar components must be variant coded when installed. Variant coding is not needed if the radar is removed and reinstalled. Refer to the *Rivian Service Manual*, Labor Code 8654.



Modifications to Ultrasonic Sensors

Sixteen sensors are arranged around the vehicle, transmitting signals to the Park Assist Module (PAM) behind the center display. They are powered by a connection to the harness from a Power Distribution Unit (PDU) and transmit data through Park Assist Controller Area Network (CAN). For detailed operational information, please refer to the *Rivian Service Manual*, Theory of Operations, Driver Assistance, Labor Code 86.

Ultrasonic sensors can be removed and reinstalled as needed without calibration, but sensors should not be swapped between positions or permanently moved.



Occupant Protection Systems

Overview

This section includes:

- Modifications to occupant protection systems
- Seat belts
- Crash sensors
- Airbags and restraints
- Restraints Control Modules (RCM)
- Front crash sensors
- Driver side door pressure sensor
- Standard driver airbags
- Standard pelvis/thorax side seat airbags
- Standard curtain airbags
- Working with airbag and seatbelt tensioner units
- Transporting and storing airbag units and seat belt tensioner units



Modifications to Occupant Protection Systems



WARNING

Any modifications to restraint systems or their wiring could result in these restraint systems not functioning correctly. A restraint system can fail or unintentionally activate. There is a risk of accident, personal injuries, and death if such systems no longer function correctly! Modifications to restraint systems or their wiring are therefore not permitted. This includes modifications to the belt mounting points and their positioning on the B-pillar and any modification of genuine Rivian belt system components.

The driver airbag unit, the window airbags, thorax/pelvis side airbags, and the seat belt tensioners are pyrotechnical components. The handling, transportation, and storage of airbag units are subject to the hazardous materials law regulated by FMCSA under 49 CFR Part 173 in the US, and to the Transportation of Dangerous Goods Act (Transport Canada) in Canada.

The purchase, transportation, storage, fitting, removal, and disposal of potentially explosive substances may only be carried out by trained personnel and in accordance with the relevant safety regulations.

Modifications in the cockpit area and above the belt line must fulfill the criteria associated with the head impact tests as per FMVSS/CMVSS 201. This applies in particular to the deployment areas of the airbags (wooden trim, additional fittings, mobile phone cradles, bottle holders, etc.). See the illustrations of the airbag deployment areas in the [airbags sections](#) for more information.

Painting or surface treatment is not permissible on the instrument panel, steering wheel impact absorber or airbag tear seams locations, driver airbag, side airbag from the seat (left side), roof rail airbag, or around the door opening. This also applies for restraint systems integrated in the seats (for example, flush-mounted modules).

Protective covers could interfere with the functioning of the thorax/pelvis side airbag and the seat mat detection system.

If paint or surface treatment is applied to the instrument panel, the window airbags, the steering wheel impact absorber, and the airbag tear seams, chemical reactions can occur on the treated surfaces. This could weaken or damage the materials and cause the restraint systems to no longer operate properly. There is a risk of accident, personal injuries, and death if such systems no longer function correctly. Painting or surface treatment is not allowed on the instrument panel, the window airbags, the steering wheel impact absorber, and the airbag tear seams.



Seat Belts

Do not drill in the left or the right retractor assembly.

To prevent seat belt webbing damage, no hardware must cut, punch, or interfere with the seat belt. Avoid sharp brackets near the webbing. All edges must have a minimum radius of 0.02 in (0.5 mm). Avoid parts that may change the belt routing to the occupant.

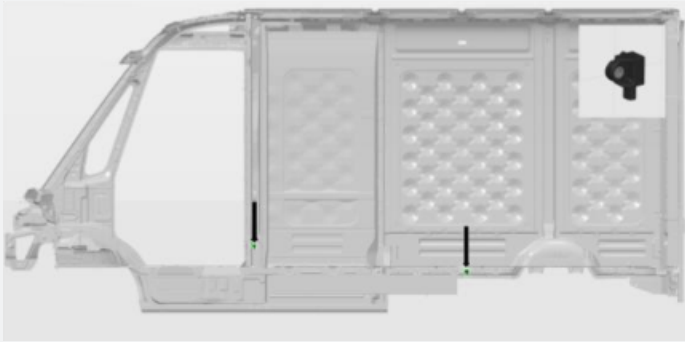
If drilling near the retractor and pretensioner, the mechanism must be covered to prevent debris from falling into the assembly and causing functional issues.

Do not modify seat belts or seat belt buckles.

Make no modifications to the driver seat and/or seat pedestal assembly or the passenger jump seat.

Crash Sensors

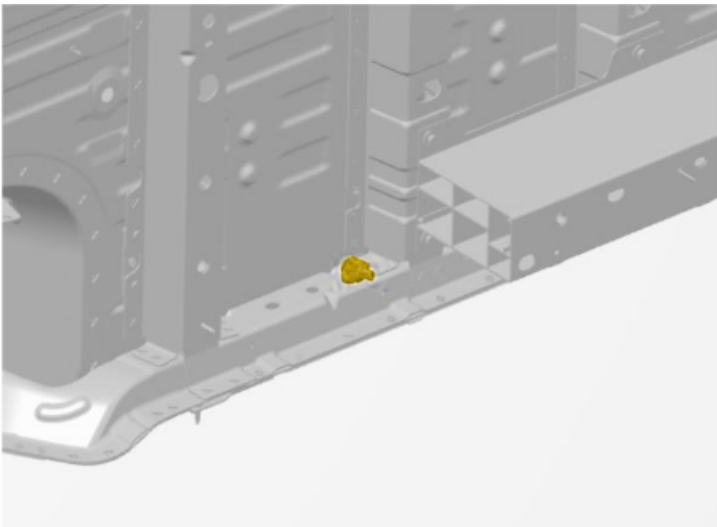
The side and rear sensors are located in the positions shown below. Do not relocate or reposition any of the side crash sensors. When drilling or grinding in these areas, turn off low voltage and disconnect the 12 V battery. Modifications or reinforcements in the area of the sensors may affect the deployment of the airbag, seat belt restraints, and high-voltage isolation and result in uncontrolled or no deployment.

Item	Location
Left Crash Sensor Locations	
Right Crash Sensor Locations	



Item	Location
Left B-pillar Crash Sensor	
Right B-pillar Crash Sensor	



Item	Location
Left Rear Crash Sensor	
Right Rear Crash Sensor	

Airbags and Restraints



WARNING

Do not drill into the A-pillar trim, left upper headliner. This may rupture the airbag or cause an uncontrolled deployment, which can lead to injury or death.



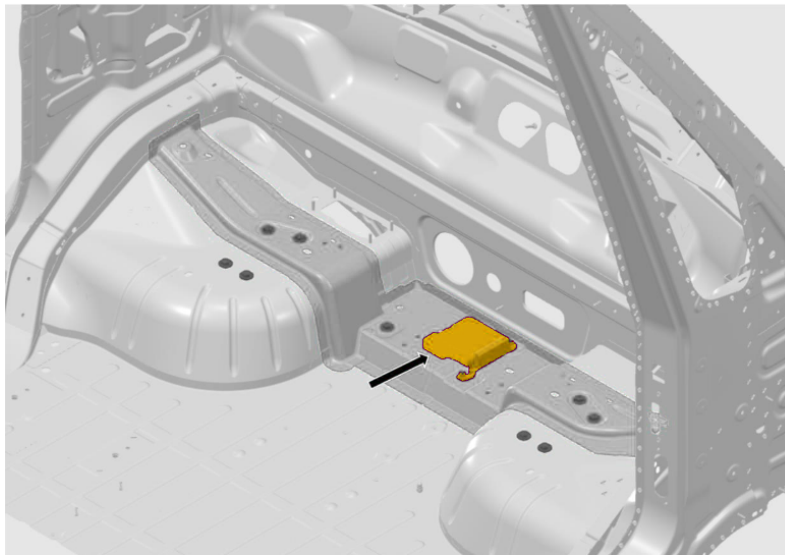
Restraints Control Module

The Restraints Control Module (RCM) is located on the cabin floor, underneath the dash and at approximately the center of the vehicle. The RCM is protected by the HVAC trim and the cabin floor.



WARNING

Modifications or reinforcements in the area of the RCM may affect the deployment of the airbag, seat belt restraints, and high-voltage isolation and result in uncontrolled deployments, which can lead to injury or death.

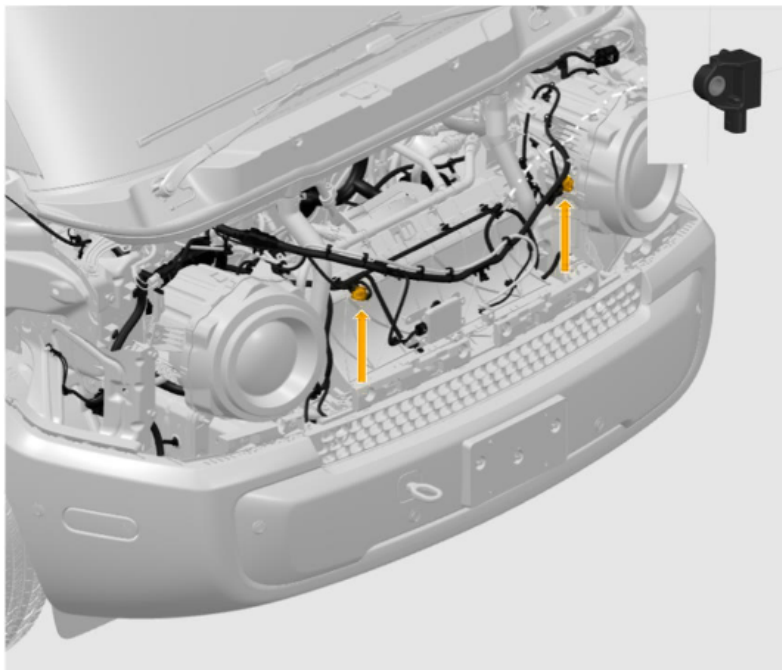




Front Crash Sensors

The front crash sensors are located behind the front fascia (highlighted).

- Modifications or reinforcements in the area of the sensors may affect the deployment of the airbag, seat belt restraints, and high-voltage isolation and result in uncontrolled deployments, which can lead to injury or death.
- Do not relocate or reposition any of the front crash sensors.
- When drilling or grinding in these areas, low voltage should be turned off and the 12 V battery should be disconnected.
- Do not modify or reroute the wiring to the front crash sensors.





Driver Side Door Pressure Sensor

The driver side door comes equipped with a pressure sensor for the restraints and high-voltage isolation system.

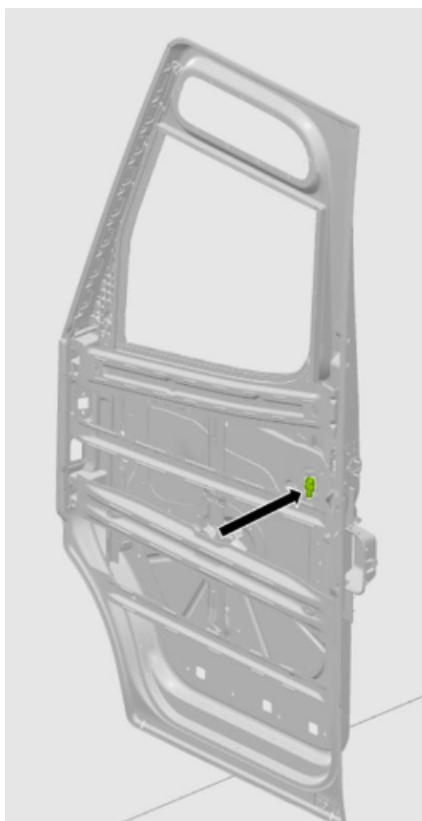


WARNING

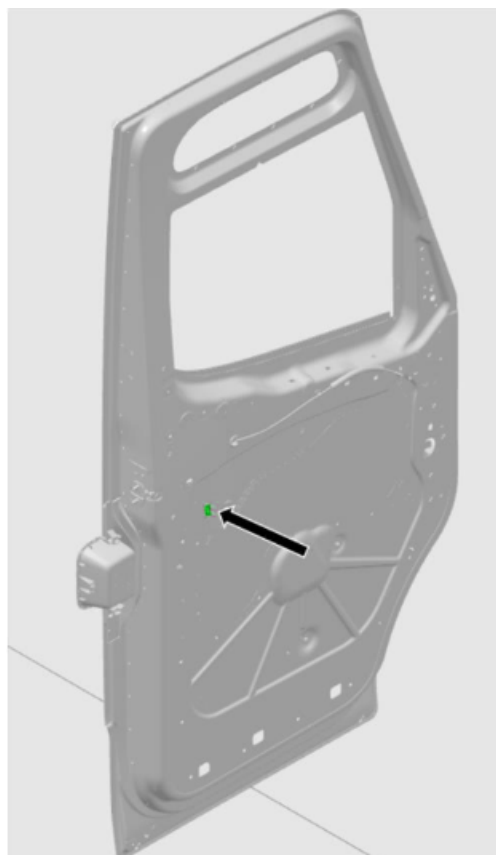
Exposure of these components to drilling or grinding operations is not permitted, even when the battery cables are disconnected.

- Modifications or reinforcements in the area of the sensors may affect the deployment of the airbag, seat belt restraints, and high-voltage isolation and result in uncontrolled deployments, which can lead to injury or death.
- Do not relocate or reposition any of the driver door pressure sensors.
- Do not drill, cut, weld, add structure, or modify any of the driver door structure or door trim.
- Do not modify the door seals.

Driver Door Outer View



Driver Door Inner View





Standard Driver Airbags

- Do not place accessories in the deployment zone of the driver airbags.
- Do not place stickers or decals over the driver airbag covers, as they may impair the airbag deployment.
- The vehicle comes with a collapsible steering column that works in conjunction with the driver airbag during a frontal collision. Do not modify the steering column, the steering column shroud, or its attachments in any way.

This is the driver airbag deployment zone.



Standard Pelvis/Thorax Side Seat Airbags

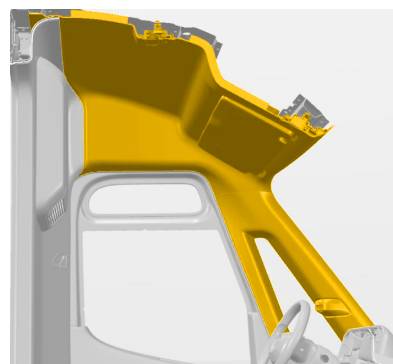
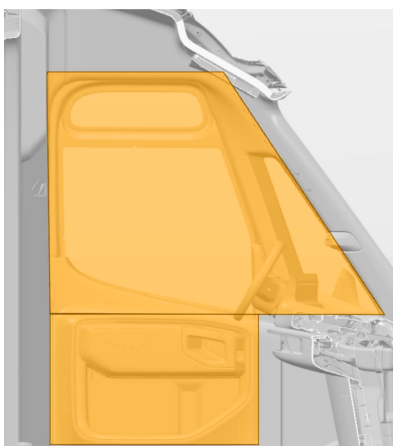
- Do not place accessories in the deployment zone of the pelvis/thorax side seat airbags.
- Do not place stickers or decals over the pelvis/thorax side seat airbags covers, as they may impair the airbag deployment.
- The pelvis/thorax side seat airbags work in conjunction with the door, the door trim, and the B-pillar in the event of a collision. Do not drill, cut, weld, add structure, or modify any of the driver door structure, door trim, or the B-pillar.
- The pelvis/thorax side seat airbags on this vehicle have not been validated for use with swiveling front seats. Swiveling seats are not allowed for the vehicle.
- The upfitter must ensure any seat covers installed are designed to be used with side airbag equipped seats.



Standard Curtain Airbag

- Do not place accessories in the deployment zone of the curtain airbag.
- Do not place stickers or decals over the curtain airbag cover, as they may impair the airbag deployment.
- Do not modify the installation location, position, and attachment of the curtain airbag.
- Do not use anything other than genuine OEM Rivian parts for the upper and/or lower windows of the driver door.
- Do not modify the headliner, sun visor, or A-pillar trim on the driver side (up to the centerline of the vehicle). Be careful when removing these items to ensure that the reinstallation of the components does not interfere with the curtain airbag deployment.

This is the driver side curtain and pelvis/thorax side seat airbag deployment zone.



Working with Airbag and Seat Belt Tensioner Units

No modification statement available. Content to follow in a future revision. For immediate support, please reach out to aftersalessupport@rivian.com.

Transporting and Storing Airbag Units and Seat Belt Tensioner Units

No modification statement available. Content to follow in a future revision. For immediate support, please reach out to aftersalessupport@rivian.com.

Safety Labels and Locations

NOTE

The labels shown below are for illustrative purposes only and should not be used as a certification reference. They serve as visual aids to indicate location and may not reflect the most current images.

For US vehicle labeling requirements, please visit the National Highway Traffic Safety Administration (NHTSA) at <https://www.nhtsa.gov> and the US Environmental Protection Agency (EPA) at <https://www.epa.gov>.

The upfitter may need to place additional labels to be compliant with regulations and standards on upfitted vehicles.



WARNING

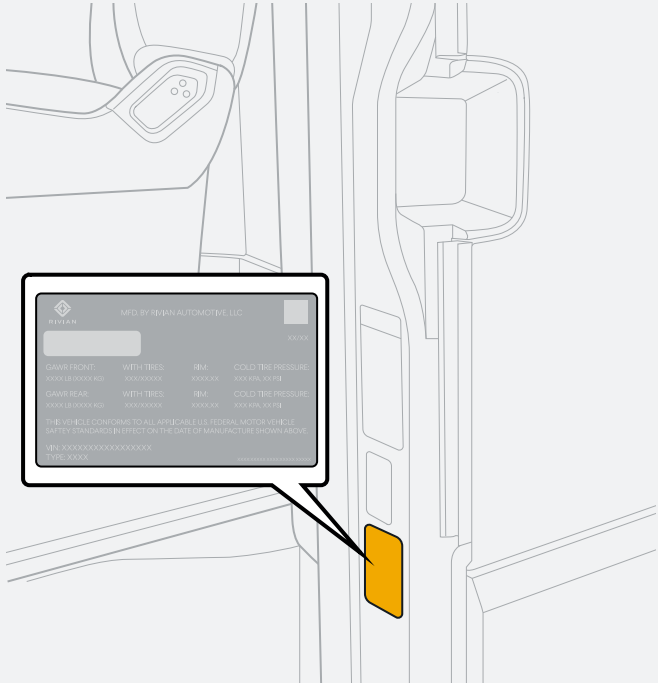
Do not remove any labels or move them to a different location. Some label locations are governed by regulations.

NOTE

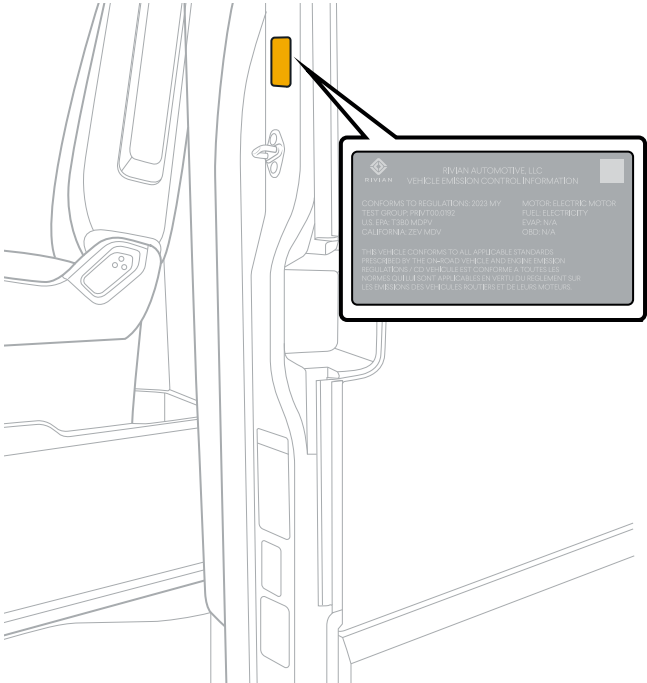
Label location may vary for different models or variants.

Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
Vehicle Identification Number Label	Regulatory	US	

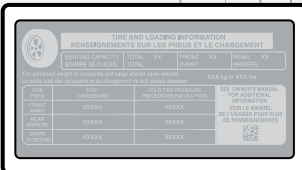
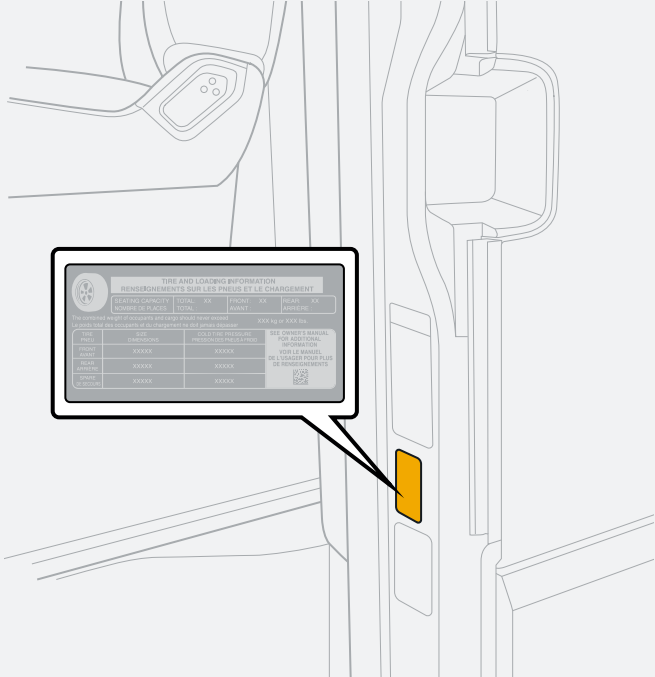
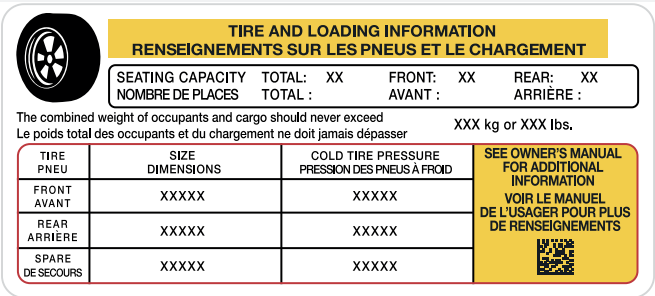


Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)																																
Certification Label	Regulatory	US	 RIVIAN MFD. BY RIVIAN AUTOMOTIVE, LLC XXXX <table><tr><td>GAWR FRONT:</td><td>WITH TIRES:</td><td>RIM:</td><td>COLD TIRE PRESSURE:</td></tr><tr><td>XXXX LB (XXXX KG)</td><td>XXXX/XXXXX</td><td>XXXXXX</td><td>XXX KPA, XX PSI</td></tr><tr><td>GAWR REAR:</td><td>WITH TIRES:</td><td>RIM:</td><td>COLD TIRE PRESSURE:</td></tr><tr><td>XXXX LB (XXXX KG)</td><td>XXXX/XXXXX</td><td>XXXXXX</td><td>XXX KPA, XX PSI</td></tr></table> THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. VIN: XXXXXXXXXXXXXXXXXX TYPE: XXXX RIVIAN MFD. BY RIVIAN AUTOMOTIVE, LLC XXXX GVWR XXXX LB (XXXX KG) <table><tr><td>GAWR FRONT:</td><td>WITH TIRES:</td><td>RIM:</td><td>COLD TIRE PRESSURE:</td></tr><tr><td>XXXX LB (XXXX KG)</td><td>XXXX/XXXXX</td><td>XXXXXX</td><td>XXX KPA, XX PSI</td></tr><tr><td>GAWR REAR:</td><td>WITH TIRES:</td><td>RIM:</td><td>COLD TIRE PRESSURE:</td></tr><tr><td>XXXX LB (XXXX KG)</td><td>XXXX/XXXXX</td><td>XXXXXX</td><td>XXX KPA, XX PSI</td></tr></table> THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE. VIN: XXXXXXXXXXXXXXXXXX TYPE: XXXX	GAWR FRONT:	WITH TIRES:	RIM:	COLD TIRE PRESSURE:	XXXX LB (XXXX KG)	XXXX/XXXXX	XXXXXX	XXX KPA, XX PSI	GAWR REAR:	WITH TIRES:	RIM:	COLD TIRE PRESSURE:	XXXX LB (XXXX KG)	XXXX/XXXXX	XXXXXX	XXX KPA, XX PSI	GAWR FRONT:	WITH TIRES:	RIM:	COLD TIRE PRESSURE:	XXXX LB (XXXX KG)	XXXX/XXXXX	XXXXXX	XXX KPA, XX PSI	GAWR REAR:	WITH TIRES:	RIM:	COLD TIRE PRESSURE:	XXXX LB (XXXX KG)	XXXX/XXXXX	XXXXXX	XXX KPA, XX PSI
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Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
Emission Label	Regulatory	US	 RIVIAN RIVIAN AUTOMOTIVE, LLC VEHICLE EMISSION CONTROL INFORMATION CONFORMS TO REGULATIONS: 2023 MY MOTOR: ELECTRIC MOTOR TEST GROUP: PRVT00.0192 FUEL: ELECTRICITY U.S. EPA: T3B0 MDPV EVAP: N/A CALIFORNIA: ZEV-MDV OBD: N/A THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED BY THE ON-ROAD VEHICLE AND ENGINE EMISSION REGULATIONS / CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LES EMISSIONS DES VEHICULES ROUTIERS ET DE LEURS MOTEURS.

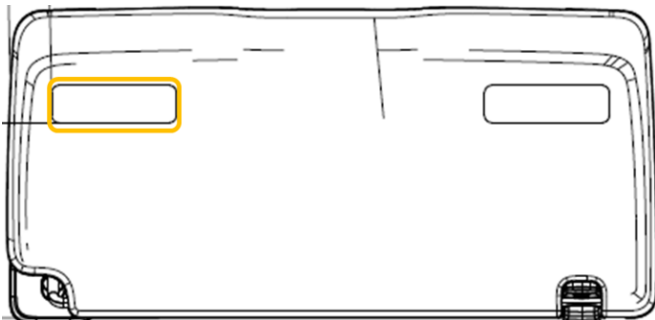


Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
Tire Placard Label	Regulatory	US	 

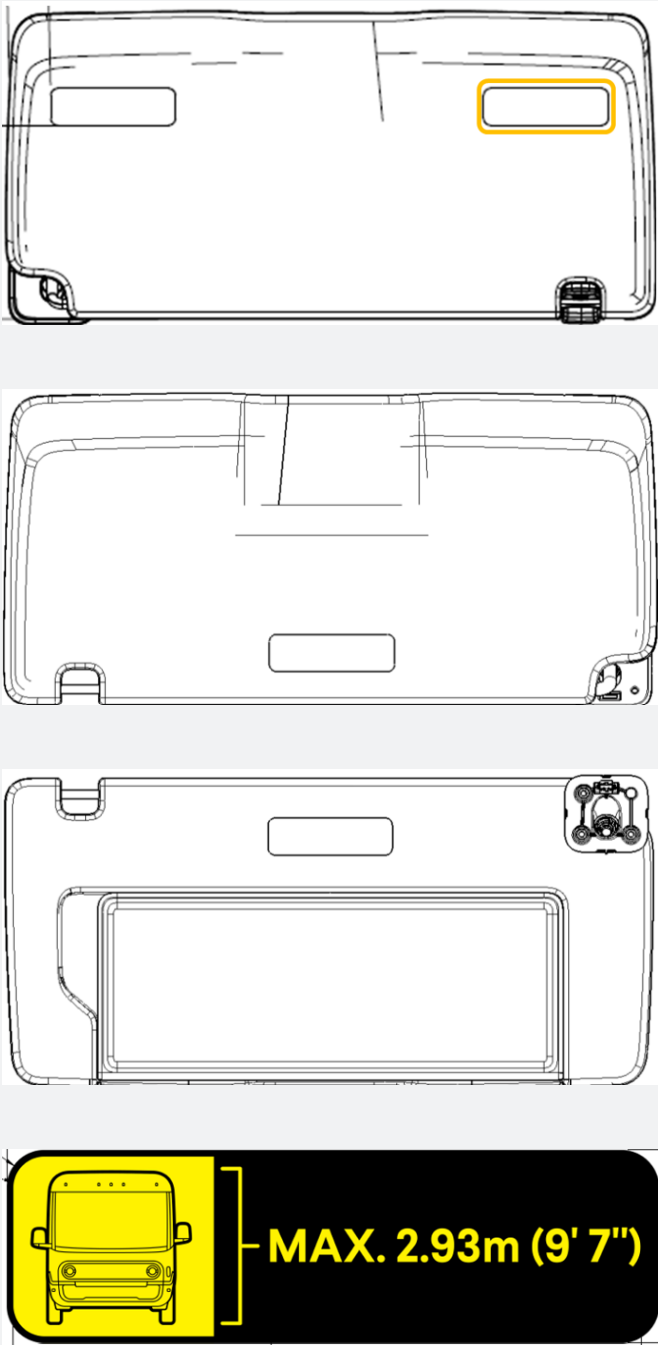


Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
Reduced Load Carrying Capacity Label	Regulatory	US	This label must comply with FMVSS 110 guidelines and be placed within 1 in (25 mm) of the Tire Placard Label. Refer to Weights for further information.
Sun Visor Air Bag Warning Label	Regulatory	US	

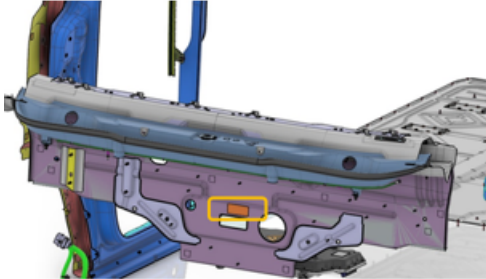
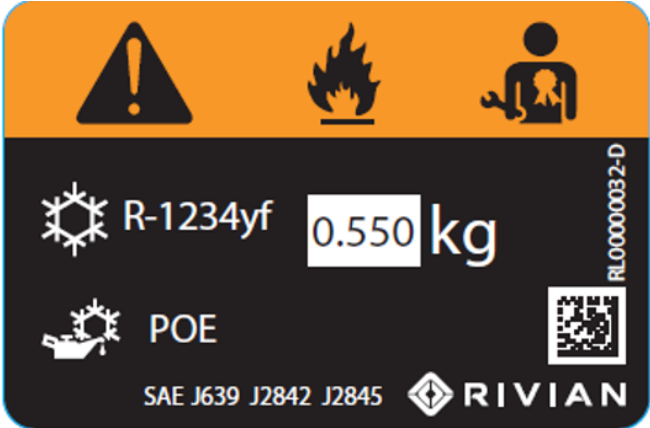


Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
Sun Visor Air Bag Alert Label	Regulatory	US	 

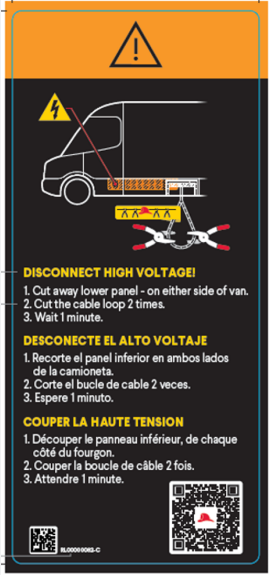


Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
Sun Visor Height Label	Warning	US	 

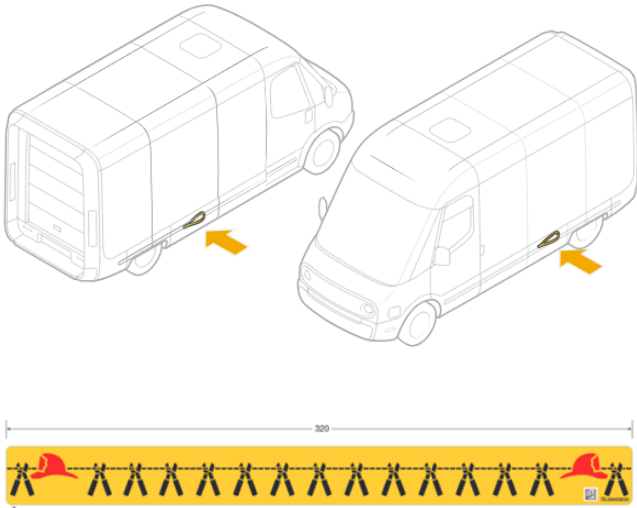


Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
AC Refrigerant Charge Label	Warning	US	 

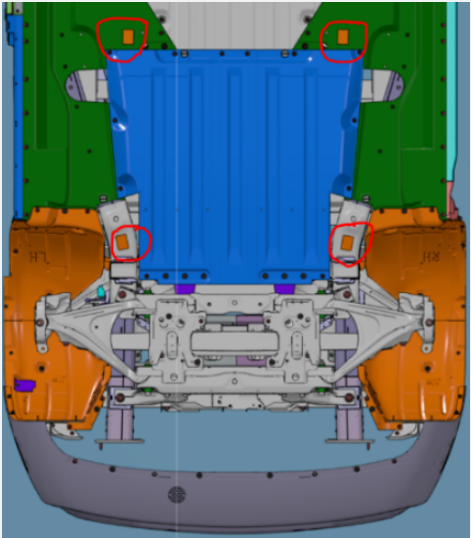
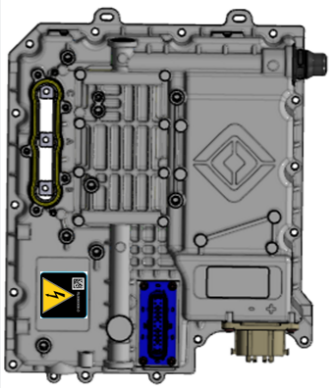
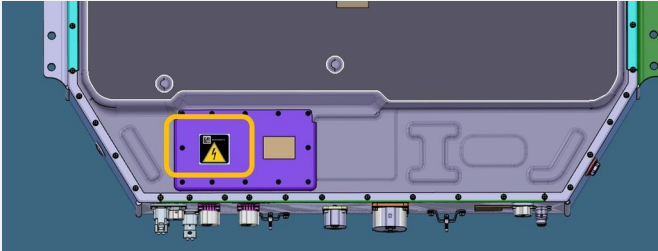


Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
First Responder Label	Warning	US	 



Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
First Responder Cable Disable Label	Warning	US	



Part Name	Warning or Regulatory	Country or Region	Locations Image (Reference Only)
High-Voltage Warning Label	Regulatory	US	

Upfitter Feedback, Queries, and Questions

Contact the Rivian Upfit Support Team at aftersalessupport@rivian.com.