



First Responder Interaction Plan

Peterbilt 579



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Stack Mission Control Hotline



Call **(412) 887-1424** to speak with a member of Stack's Mission Control Team.

About Stack Trucks

Stack fleet consist of **Peterbilt 579 models.**

General information about Stack trucks:

- All Stack trucks use a diesel internal combustion engine (ICE).
- Truck operations include: data collection, testing Automated Driving System (ADS) features, manual operations, & commercial missions.
- Stack trucks are deploying & operating in various locations nationwide, such as Pennsylvania , West Virginia , Ohio , Texas , Arizona , and New Mexico .
- Stack's trucks are SAE Level 4 intent with a defined Operational Design Domain ("ODD"), including capabilities for nighttime operation, heavy rain conditions, and handling elements such as active construction zones.



Identifying a Stack Truck

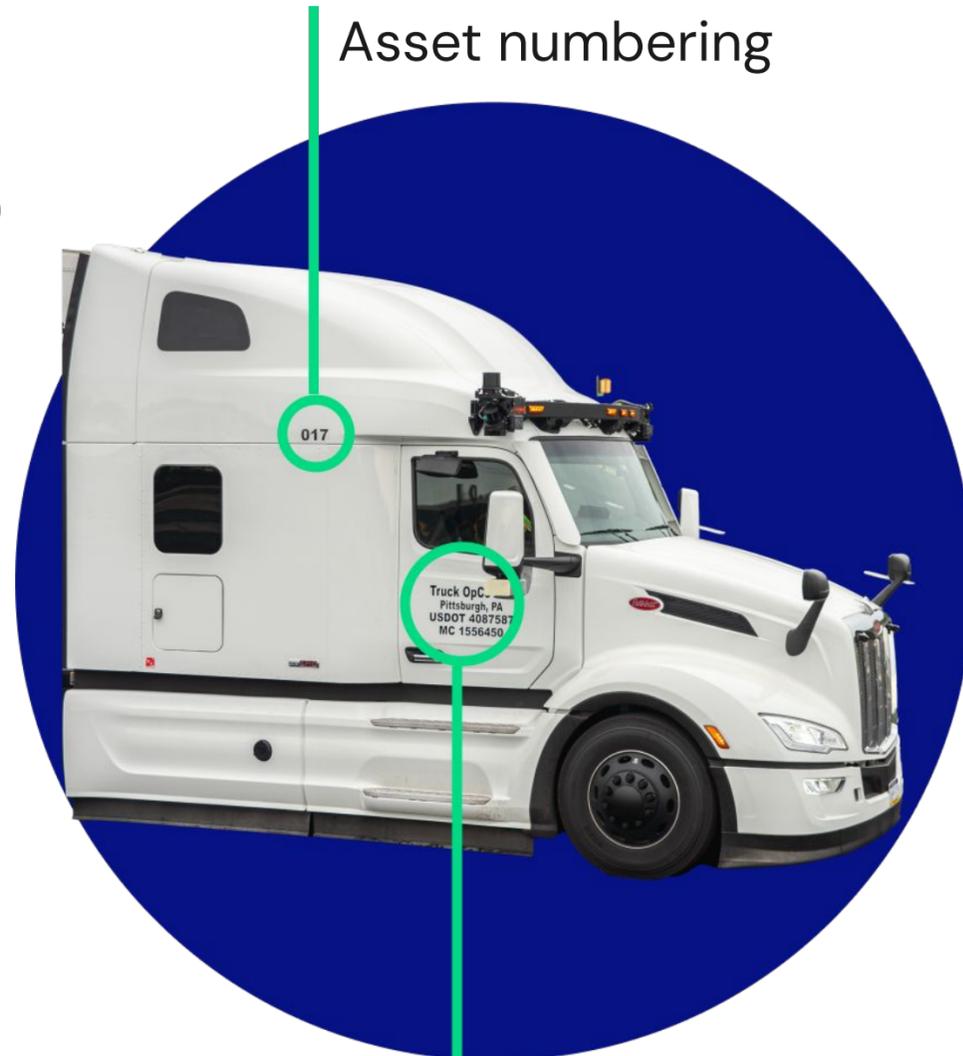
Stack's trucks will appear as either a **black** or **white** conventional cab with the following identifiers always present:

Asset Numbering

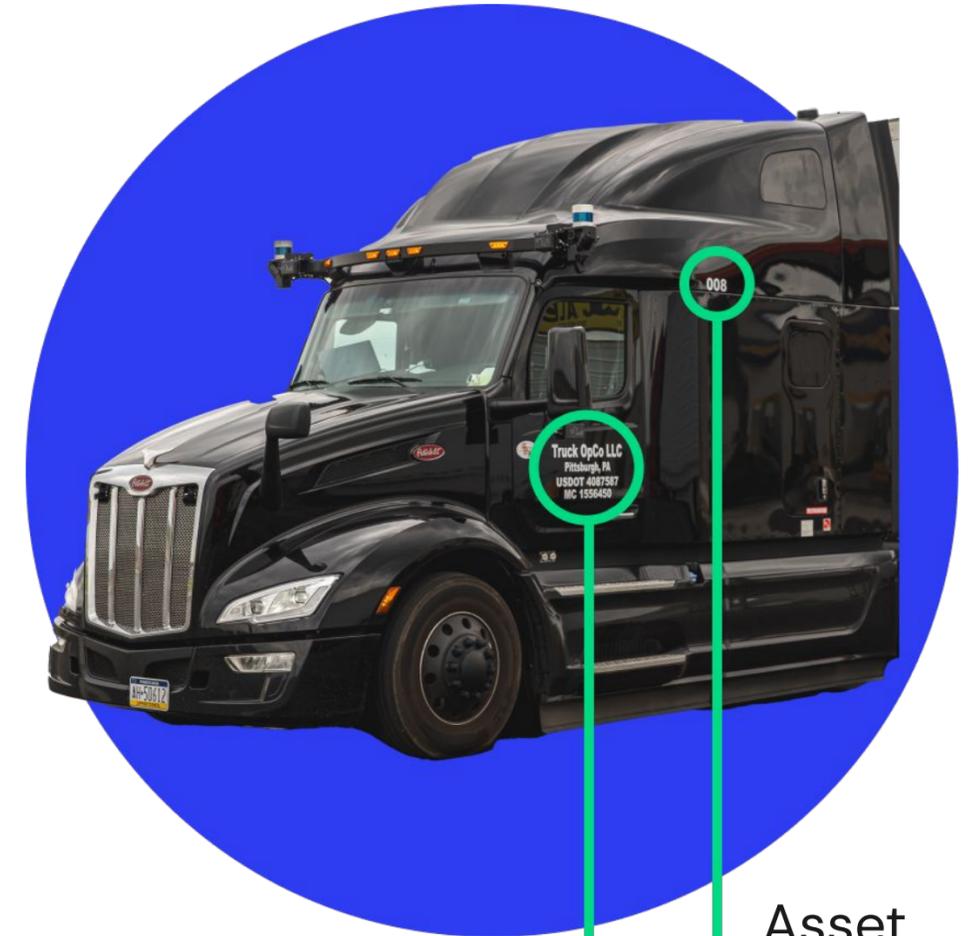
- Will be a number ranging from 008-040

USDOT Carrier Registration Details

- TruckOp Co LLC
Pittsburgh, PA
USDOT 4087587
MC 1556450



USDOT Carrier
Registration Details

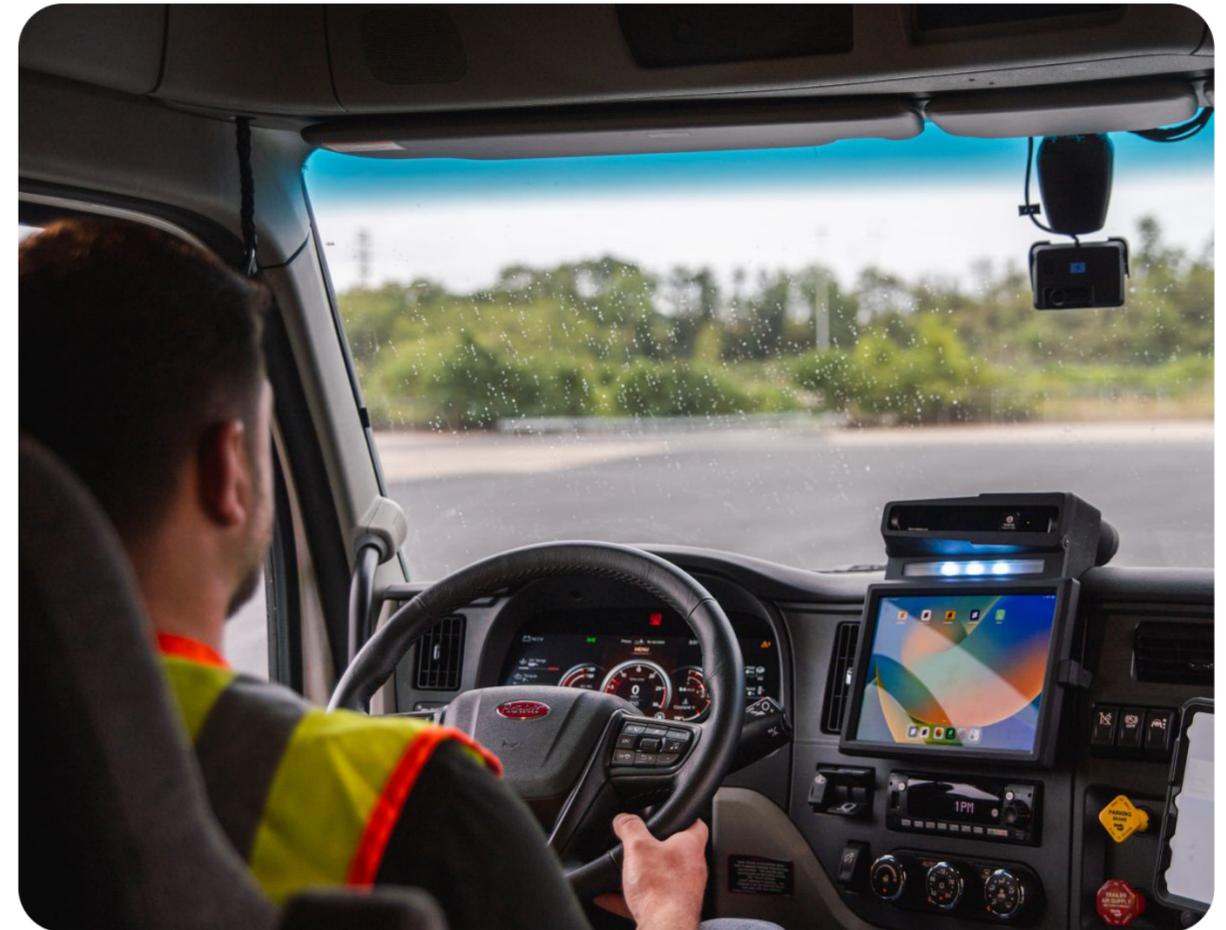


USDOT Carrier
Registration Details

Asset
numbering

Interacting with our Stack Fleet

If you encounter or must interact with a Stack truck, there is a **safety driver** behind the wheel for all test vehicle types to assist you with securing the vehicle.



Stack's Latest 2025 Truck Fleet

There is some variation in how you can expect to interact with Stack trucks depending on whether it is our white-cab fleet (2025 Peterbilt 579) or black-cab fleet (2022/2023 Peterbilt 579) because they are different model years.

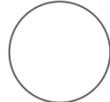
The following slides will outline **Stack's latest white cab fleet (2025 Peterbilt 579).**



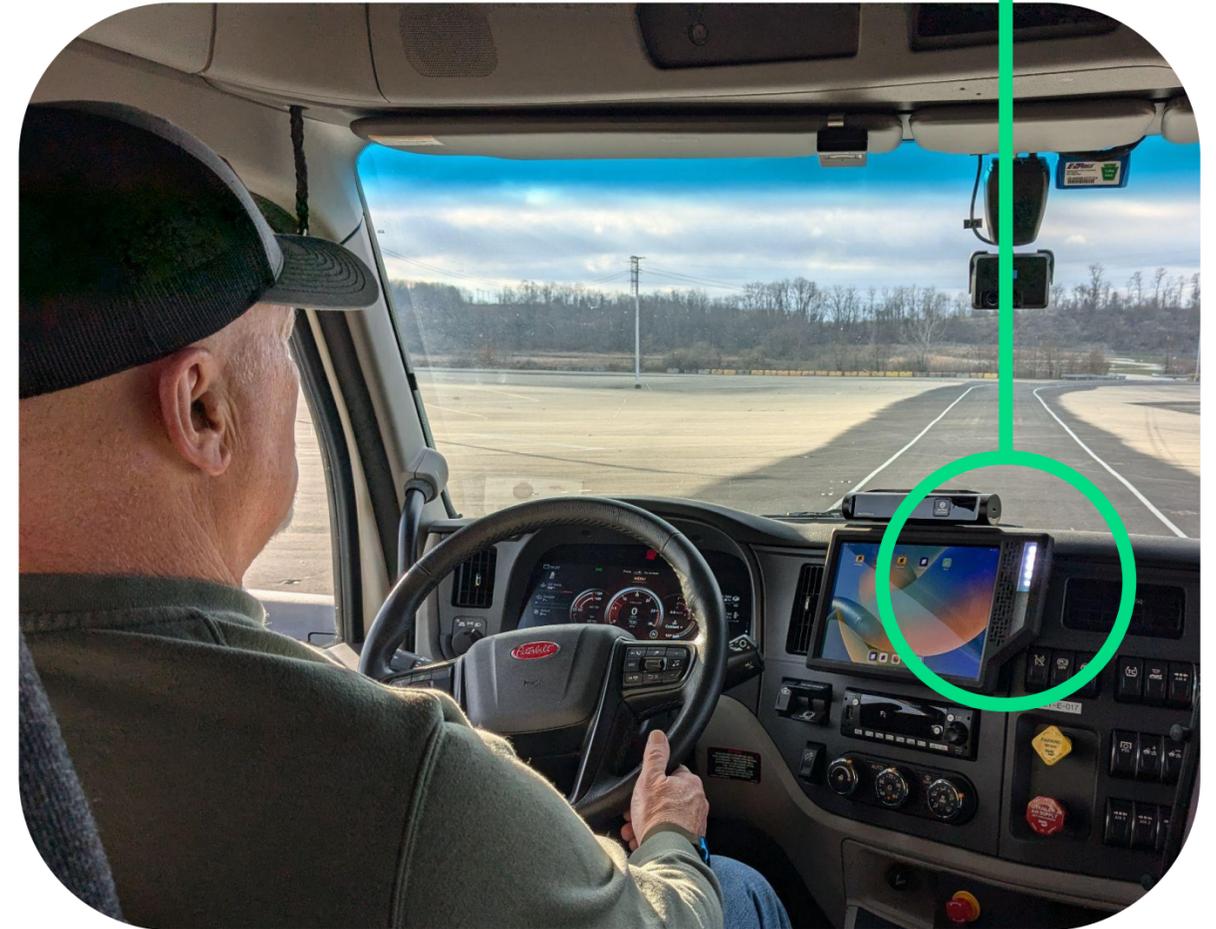
Interacting with & Securing Stack Trucks

If you encounter or must interact with a Stack truck, there is a **safety driver** behind the wheel for all test vehicle types to assist you with securing the vehicle.

To understand the truck's state of autonomy, look at the **Stack Visual Autonomy Indicator** located on the driver side at the 2 o'clock position from the steering wheel.

-  **Solid white light:** Manual driving mode
-  **Solid blue light:** System is "ready" to engage computer control
-  **Solid green light:** Vehicle under computer control
-  **Solid red light:** Safety driver disengagement required
-  **No light:** SDS system not powered on

Stack Visual
Autonomy Indicator



How to Disengage a Stack Test Truck

Disengagement

There are several methods to disengage a Stack test vehicle.

- Driver applies torque on the steering wheel
- Driver presses on the brake pedal
- Driver presses on the throttle pedal
- Driver depresses the **Red Button**

Red Button (Stack Installed)

- **Function:** An emergency fallback for the safety driver to regain control of the vehicle through disconnection of power and CAN signals. Driver will get full manual control of the truck (with power steering; no torque assist).
- **Primary Operation:** Not expected to be used in normal operation. Used in the event of other takeover mechanism failure.



Red button



Firefighting & Extraction

All Stack components and harnesses are using **Low Voltage (LV) of 12VDC** nominal.

All Stack components are protected by fuses and circuit breakers. There is NO high voltage wiring.

SDS Power Input

- The SDS power input comes from the base vehicle chassis battery box located under the cabin on the passenger's side.
- It is then brought along the underbody and into the cabin through a rear cabin passthrough under the rear bunk.
- This harness is Low-Voltage and **High-Current (2x 150A fuses).**

Some additional components on our trucks are:

- Batteries
- Main Power Cables
- Fuses
- Breakers / Switches

The locations of these components are detailed in the following slides.

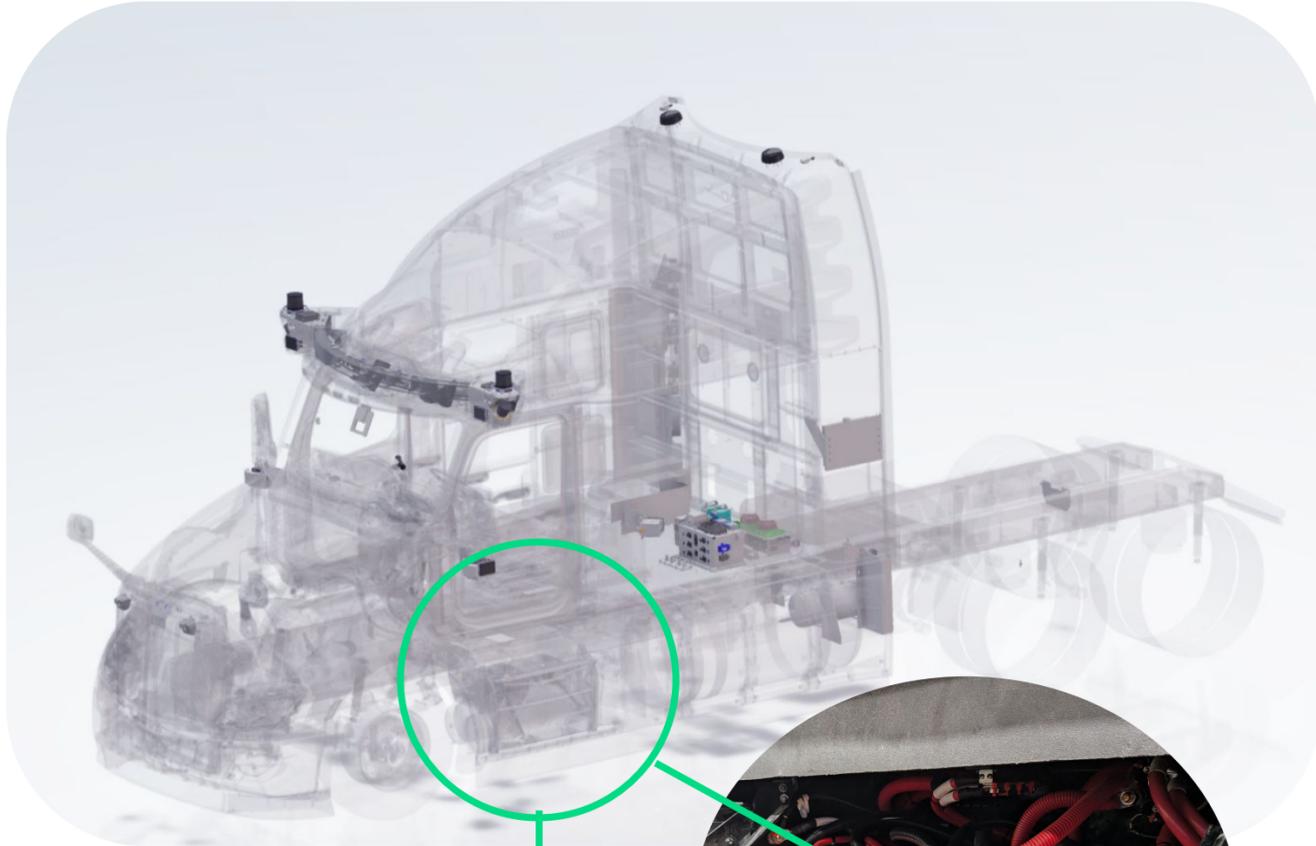


Precautions similar to any LV battery circuit should be observed when cutting SDS Power Input harnesses.

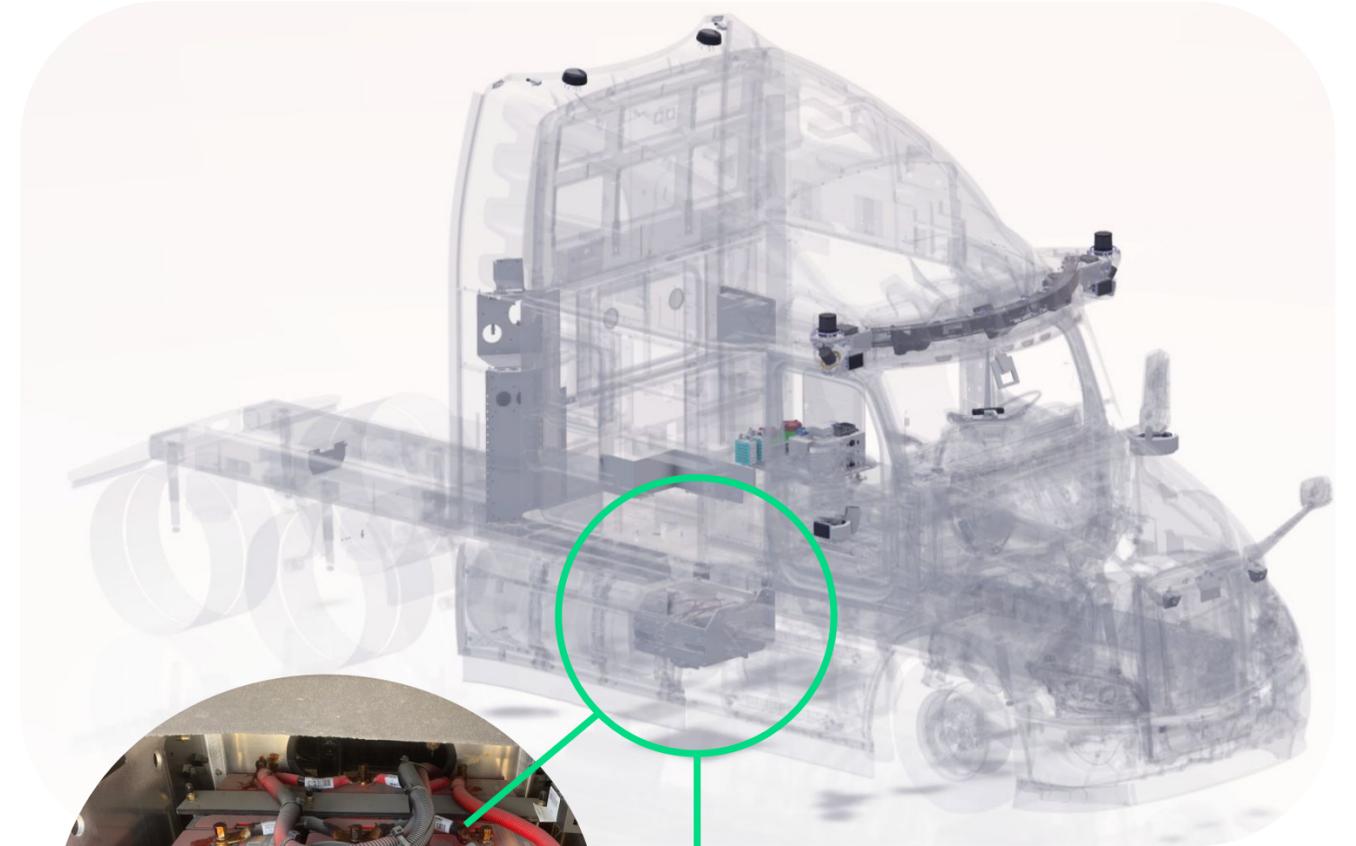


Firefighting & Extraction

Batteries & Power Distribution



Left side battery box contains **4 AGM31** batteries that power the truck



Right side battery box contains **2 AGM31** batteries that power the compute unit

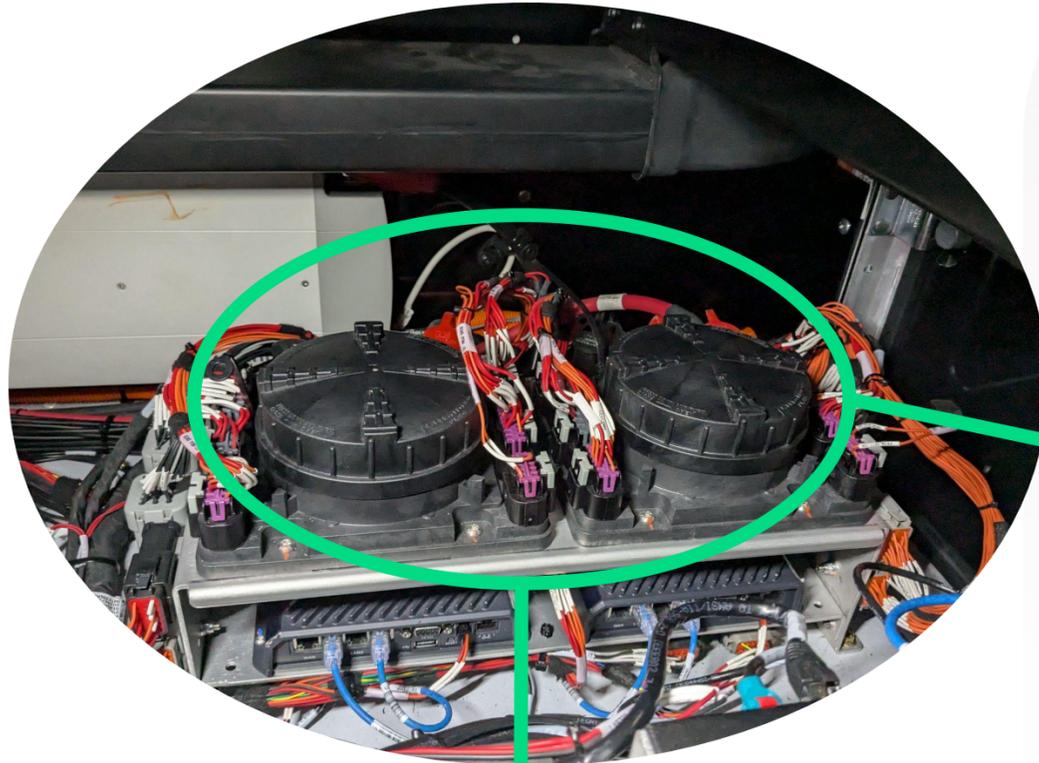


Use caution when interacting with components

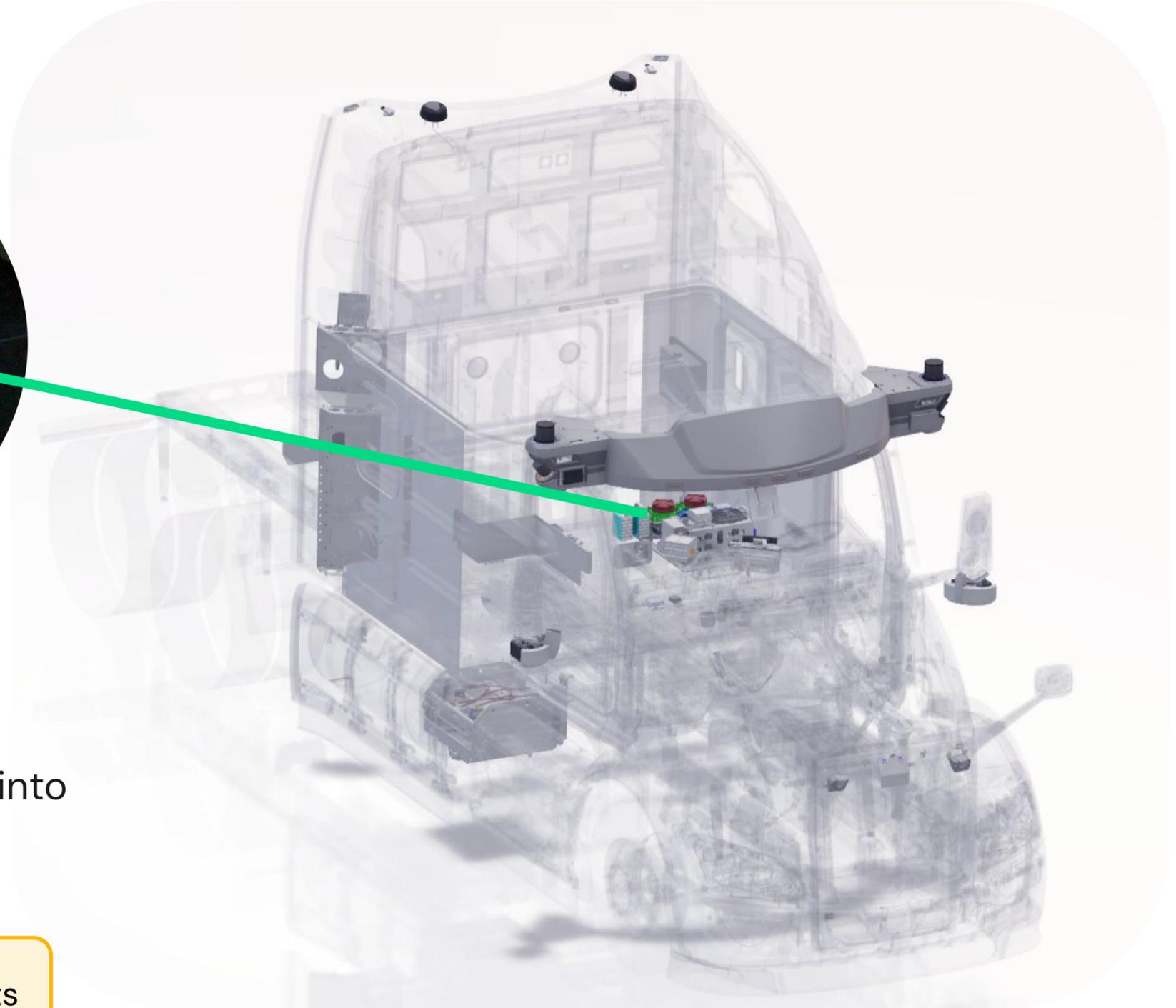


Firefighting & Extraction

Main Power Cables



Power cables run into the gray boxes

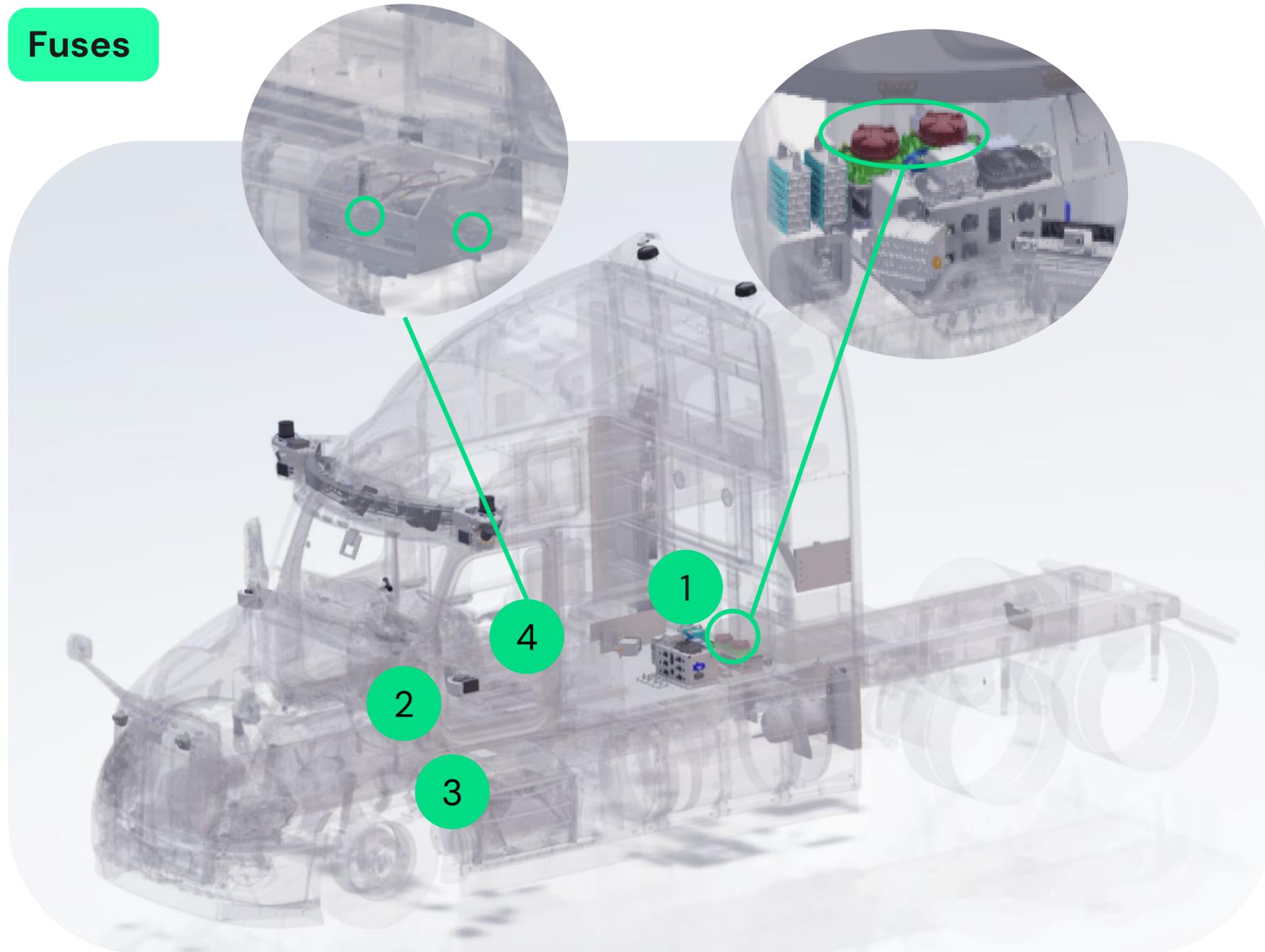


⚠ Use caution when interacting with components



Firefighting & Extraction

Fuses



There are a total of **6 main fuse boxes**.

On the **left side of the truck** you can expect to find the following:

1. 2 circular black fuse boxes located in the back of truck cab
2. A fuse box located in a passenger compartment by the driver's left leg
3. A fuse box located in stock battery box

On the **right side of the truck** you can expect to find the following:

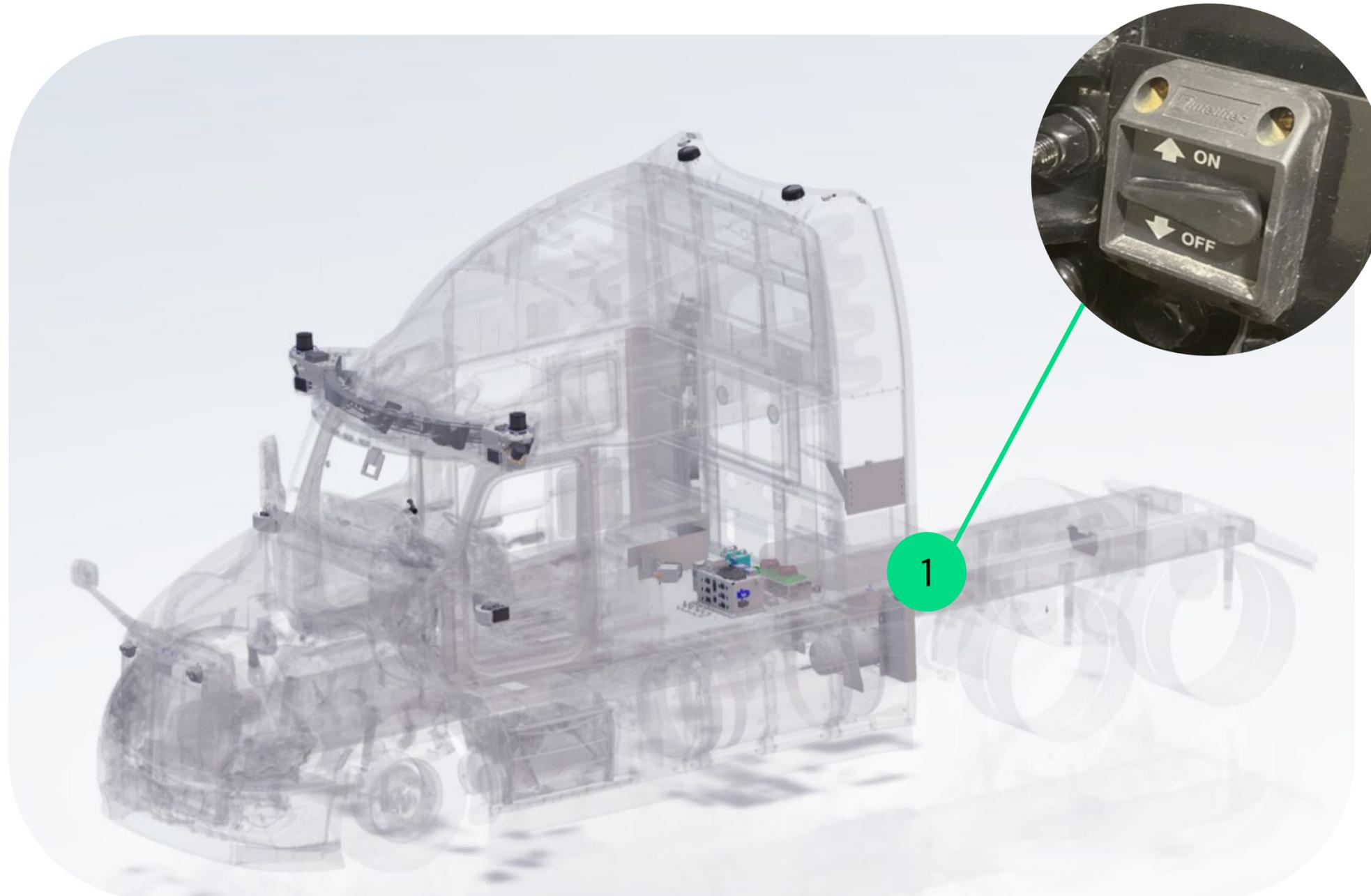
4. Two fuse boxes within the right side auxiliary battery box

 Use caution when interacting with components



Firefighting & Extraction

Breakers / Switches

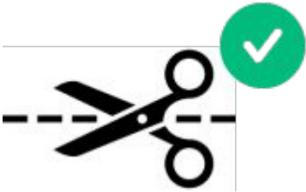


There is only 1 stock main battery disconnect switch. It is located behind the truck cab on the chassis.



Firefighting & Extraction

Sensors & Cooling



The following harnesses may be **cut without specific precautions**:

- Horn harnesses
- Antenna Harness
- Chassis IMU harness

Right horn harness
A-pillar



Left horn harness
A-pillar

Antenna harness
rear of cabin

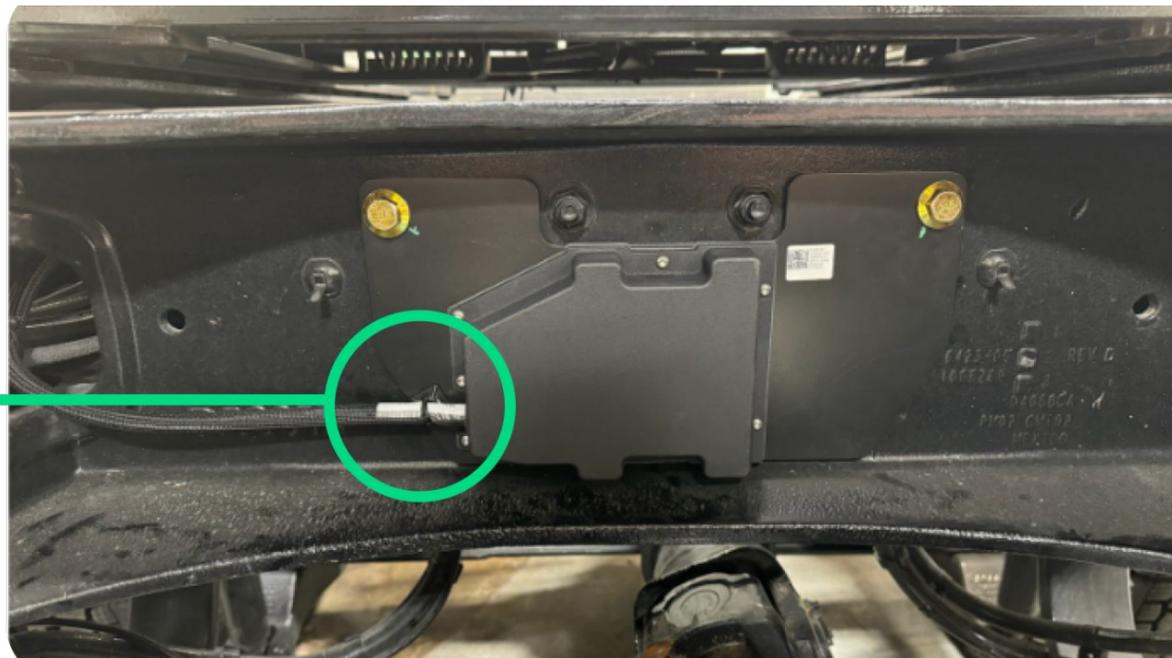


SDS coolant system:
reservoir,
pumps,
radiators

*Contains Antifreeze
+ Coolant*

Use Caution

Rear vehicle chassis IMU
harness



Stack's 2022/2023 Truck Fleet

There is some variation in how you can expect to interact with Stack trucks depending on whether it is our white-cab fleet (2025 Peterbilt 579) or black-cab fleet (2022/2023 Peterbilt 579) because they are different model years.

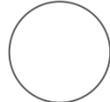
The following slides will outline **Stack's black cab fleet (2022/2023 Peterbilt 579)**.

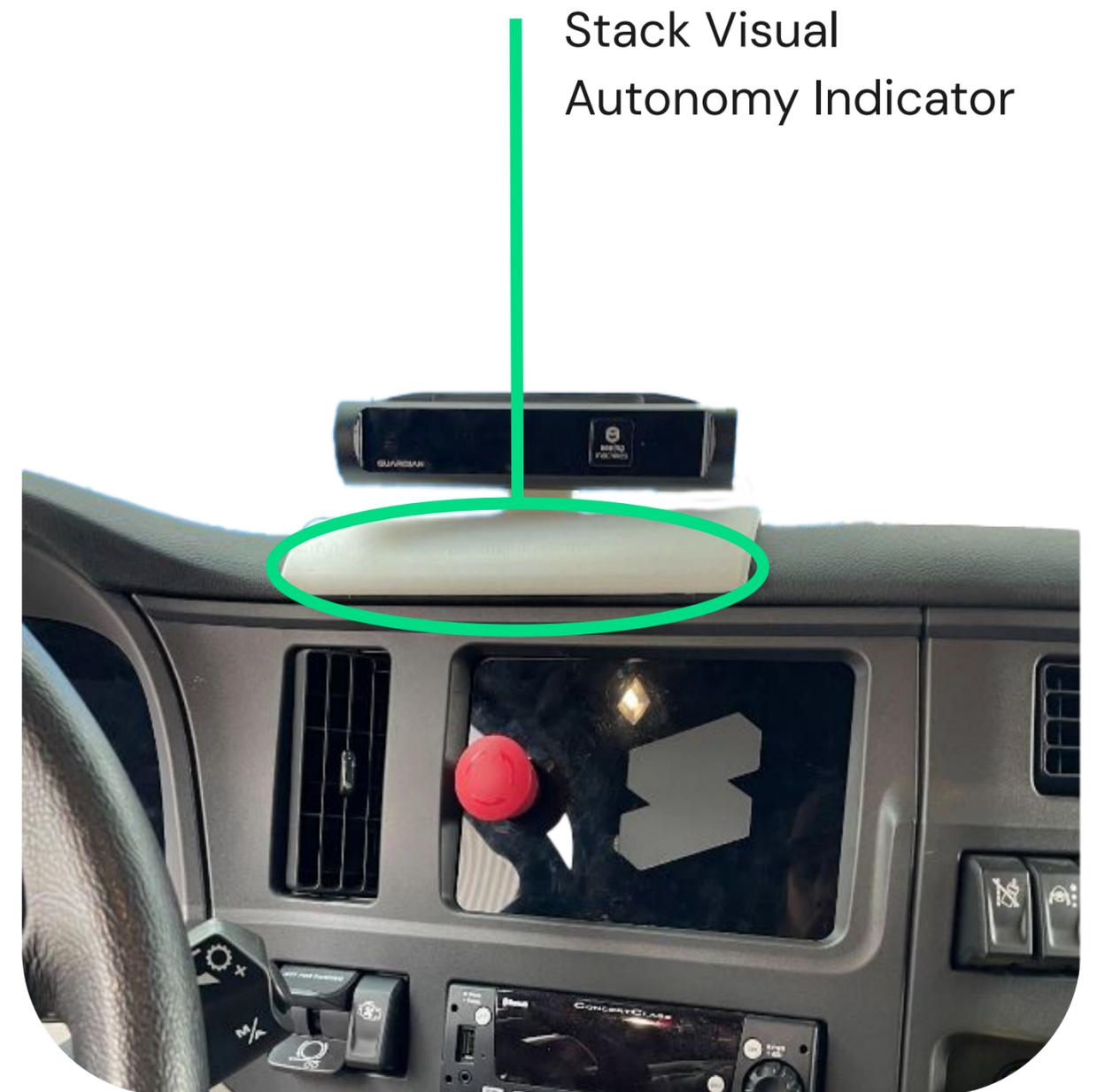


Interacting with & Securing Stack Trucks

If you encounter or must interact with a Stack truck, there is a **safety driver** behind the wheel for all test vehicle types to assist you with securing the vehicle.

To understand the truck's state of autonomy, look at the **Stack Visual Autonomy Indicator** located on the driver side at the 1 o'clock position from the steering wheel.

-  **Solid white light:** Manual driving mode
-  **Solid blue light:** System is "ready" to engage computer control
-  **Solid green light:** Vehicle under computer control
-  **Solid red light:** Safety driver disengagement required
-  **No light:** SDS system not powered on



How to Disengage a Stack Test Truck

Disengagement

There are several methods to disengage a Stack test vehicle.

- Driver applies torque on the steering wheel
- Driver presses on the brake pedal
- Driver presses on the throttle pedal
- Driver depresses the **Yellow Button**

Yellow Button (Stack Installed)

- **Function:** Simple input to the system to indicate the safety driver's intent to disengage computer control and take full manual control of the vehicle.
- **Primary Operation:** Not expected to be used in normal operation. Used in the event of other takeover mechanism failure.
- **Usage:** For if/when you come upon a vehicle and operator can or has not already depressed.



How to Disengage a Stack Test Truck

Red Button (Stack Installed)

- **Function:** An emergency fallback for the safety driver to regain control of the vehicle through disconnection of power and switched ignition to key ADS components and actuation.
- **Primary operation:** Not expected to be used in normal operation.
- **Emergency operation:** An escalation path to regain control, it is not expected to be used during normal operation, and its use operationally reflects a failure of takeover mechanisms or Yellow Button.
- **Usage:** For in the event of other takeover mechanism failure.



Firefighting & Extraction

All Stack components and harnesses are using **Low Voltage (LV) of 12VDC** nominal.

All Stack components are protected by fuses and circuit breakers. There is NO high voltage wiring.

SDS Power Input

- The SDS power input comes from the base vehicle chassis battery box located under the cabin on the passenger's side.
- It is then brought along the underbody and into the cabin through a rear cabin passthrough under the rear bunk.
- This harness is Low-Voltage and **High-Current (2x 150A fuses).**

Some additional components on our trucks are:

- Batteries
- Fuses
- Switches

The locations of these components are detailed in the following slides.

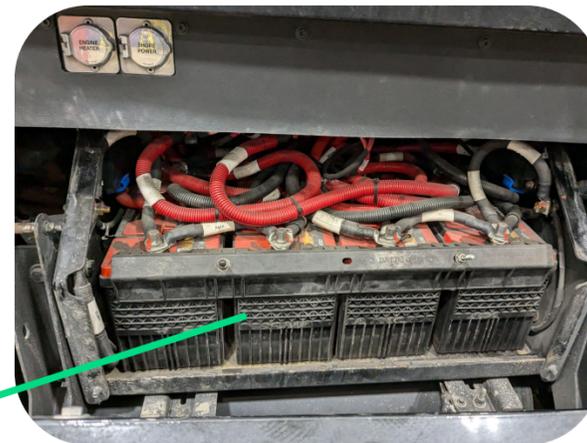
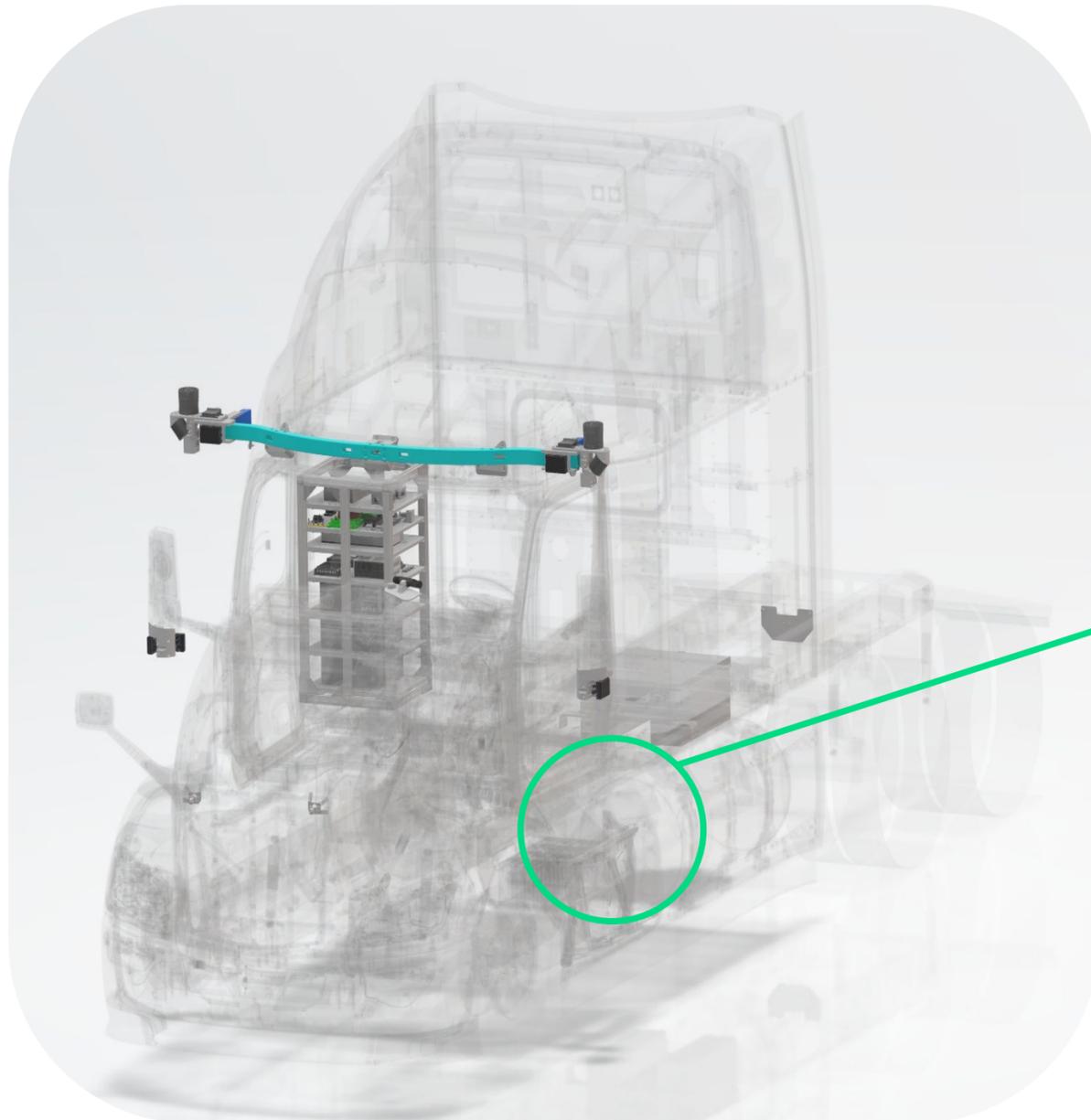


Precautions similar to any LV battery circuit should be observed when cutting SDS Power Input harnesses.



Firefighting & Extraction

Batteries & Power Distribution



The left side battery box contains **4 AGM31 batteries** that power the truck and main power cables that power the compute unit.

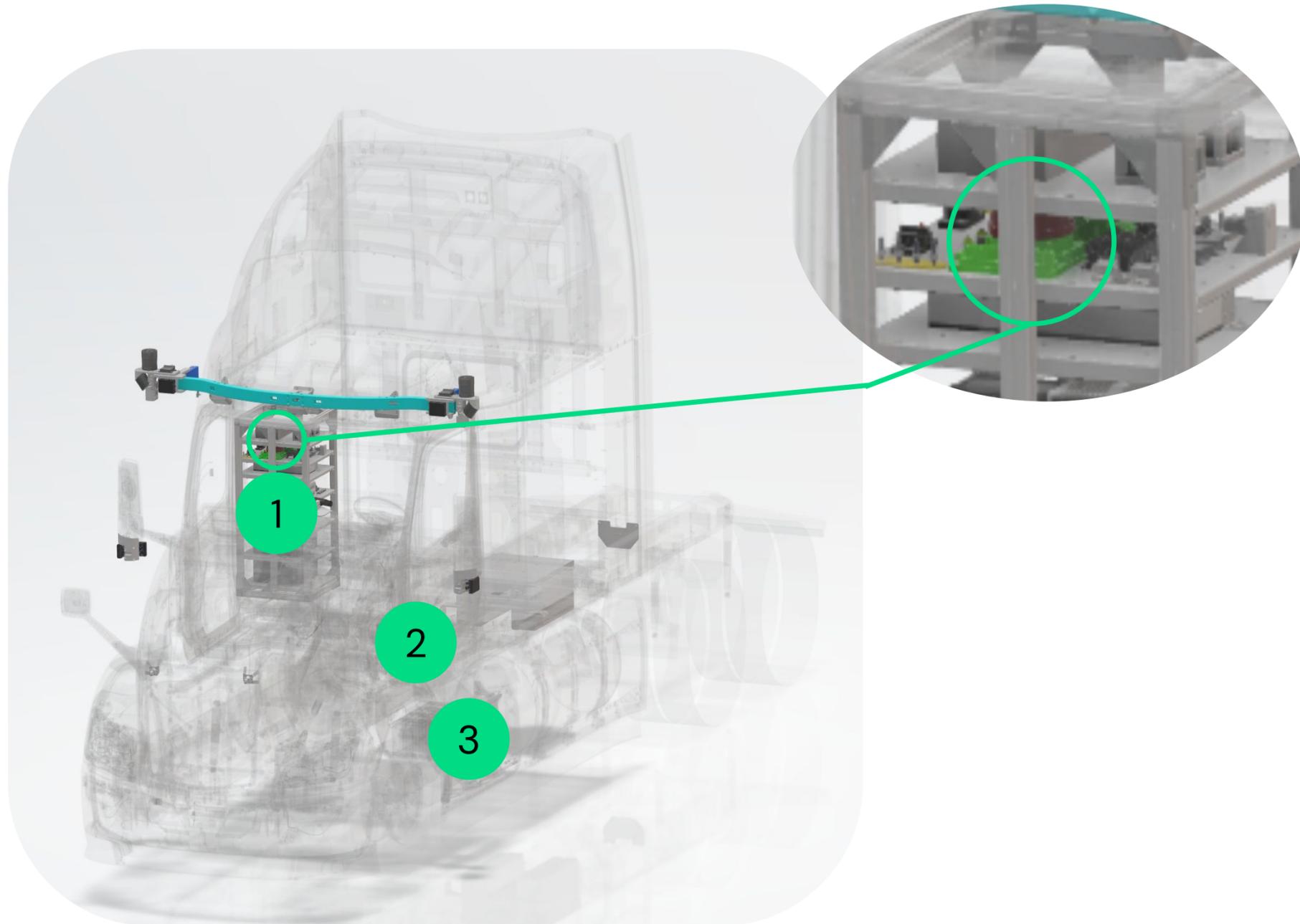
There are no batteries or battery boxes on the right side.

 Use caution when interacting with components



Firefighting & Extraction

Fuses



There are a total of **5 main fuse boxes**:

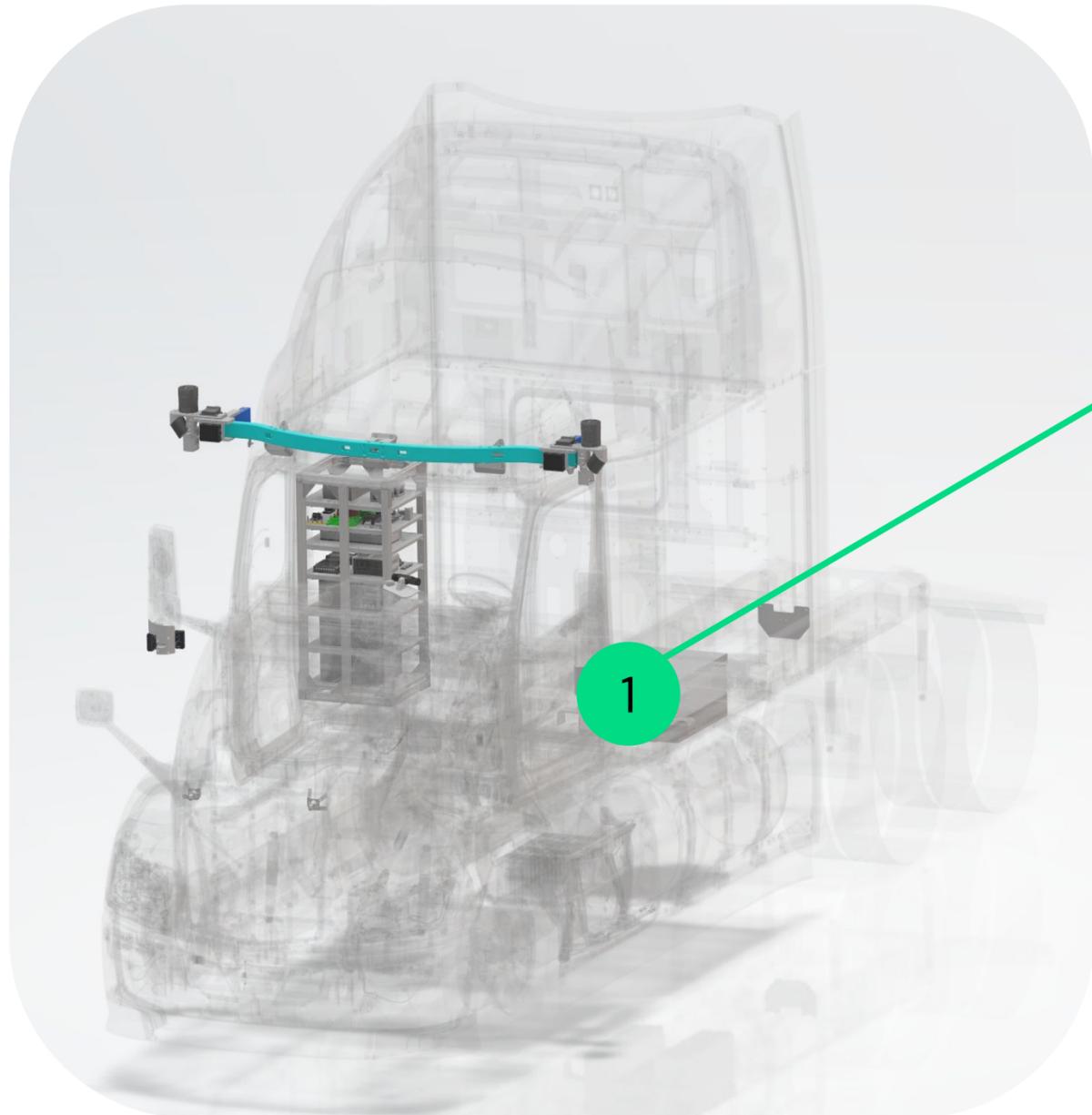
1. 2 circular black fuse boxes located in the back of truck cab on computer rack.
2. A fuse box located in a passenger compartment by the driver's left leg.
3. 2 fuse boxes located in battery box.

 Use caution when interacting with components



Firefighting & Extraction

Switches



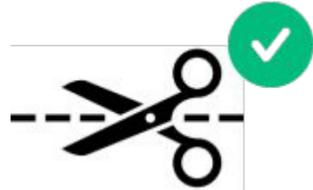
There is only 1 stock main battery disconnect switch.

It is located inside the cabin next to the driver's seat.



Firefighting & Extraction

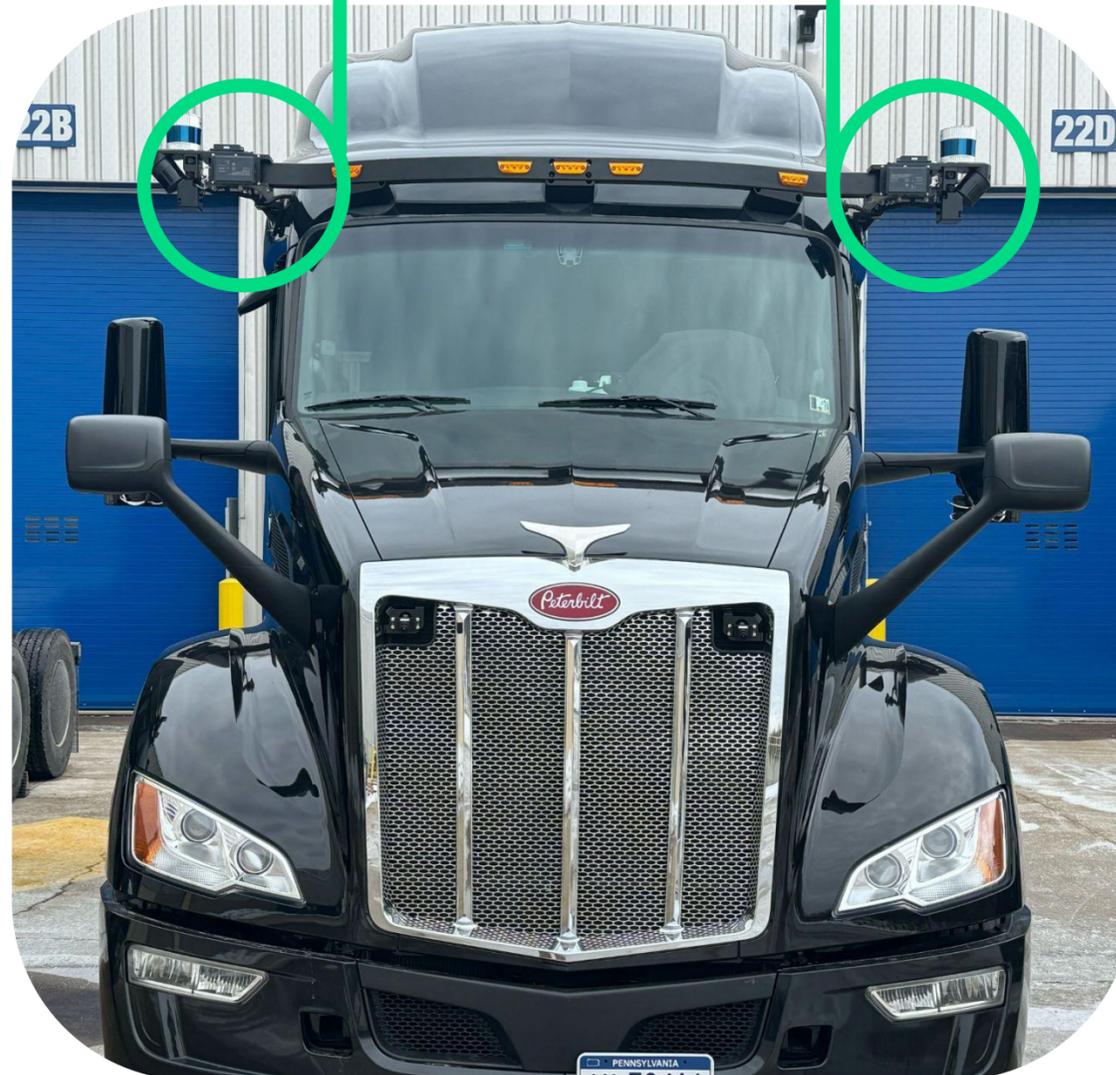
Sensors



The following harnesses may be cut without specific precautions:

- Horn harnesses
- Antenna Harness
- Chassis IMU harness

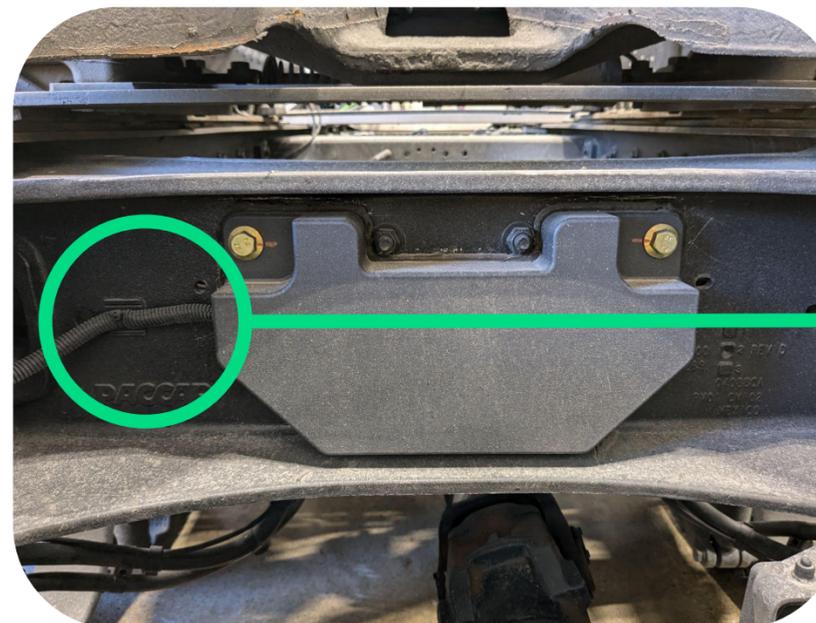
Right horn harness
A-pillar



Left horn harness
A-pillar



Antenna harness
rear of cabin



Rear vehicle chassis
IMU harness



Towing a Stack Truck

Stack vehicles are Peterbilt 579 truck models. The **Towing Power Requirement** is 19,000 lb Power Units.

Preferred Towing Vendor

Ryder Customer Response Center 24/7 (RCRC)

(866) 477-0438

Post-Crash Considerations

Defer to best practice for similar Class 8 heavy-duty diesel Internal Combustion Engine powertrains & vehicles.

For more guidance on Peterbilt 579 models, [refer to the manufacturer documentation.](#)

Vehicle Registration & Insurance

The truck registration & insurance are located in:

- Behind the passenger seat
- Inside a zippered folder

Content:

- Truck registration & insurance
- First Interaction Plan (hard copy)
- Towing procedure (hard copy)

Stack Mission Control Team Hotline:

(412) 887-1424

Truck Registration &
Insurance



THANK YOU