

RCI-34-23-003-2: EDV High Voltage (HV) System Overview

Rivian Automotive, LLC - Service Guideline

Document Type	Collision Repair Information Document
Date	November 5, 2024
Affected Region(s)	USA
Affected Model(s)	EDV
Model Year(s)	2022+ Vehicles
Vehicle System	34 - High Voltage Distribution

Attention:

- This document is intended as a general High Voltage (HV) system component overview and servicing guideline. Always refer to the Rivian service manual for vehicle-specific information when servicing or replacing HV components.
- Rivian recommends that only Factory Certified Service Technicians inspect and repair the HV System in Rivian vehicles. Please contact your regional Rivian Collision/Service Team to request more information or assistance with repairs.

General Information

To promote and maintain its rigorous standards of quality and safety, Rivian Automotive provides the collision industry with important information, and safety precautions, to use when performing repairs on a Rivian vehicle after a collision event.

Important:

Always refer to the Rivian service manual for up-to-date information regarding the disablement of the HV system and safety precautions/steps to follow prior to performing any work on the HV system.

Warning:

To lower the risk of possible electrocution, always assume the HV battery pack, and associated components, are energized and fully charged until their status can be verified by following the HV disabling guidelines in the service manual.

Warning:

Exposed HV electrical components, cables, and batteries present potential HV shock hazards that could result in bodily injury or death. service manual.

Warning:

Any venting/off-gassing HV battery vapors may be toxic and/or flammable and could result in bodily injury or death.

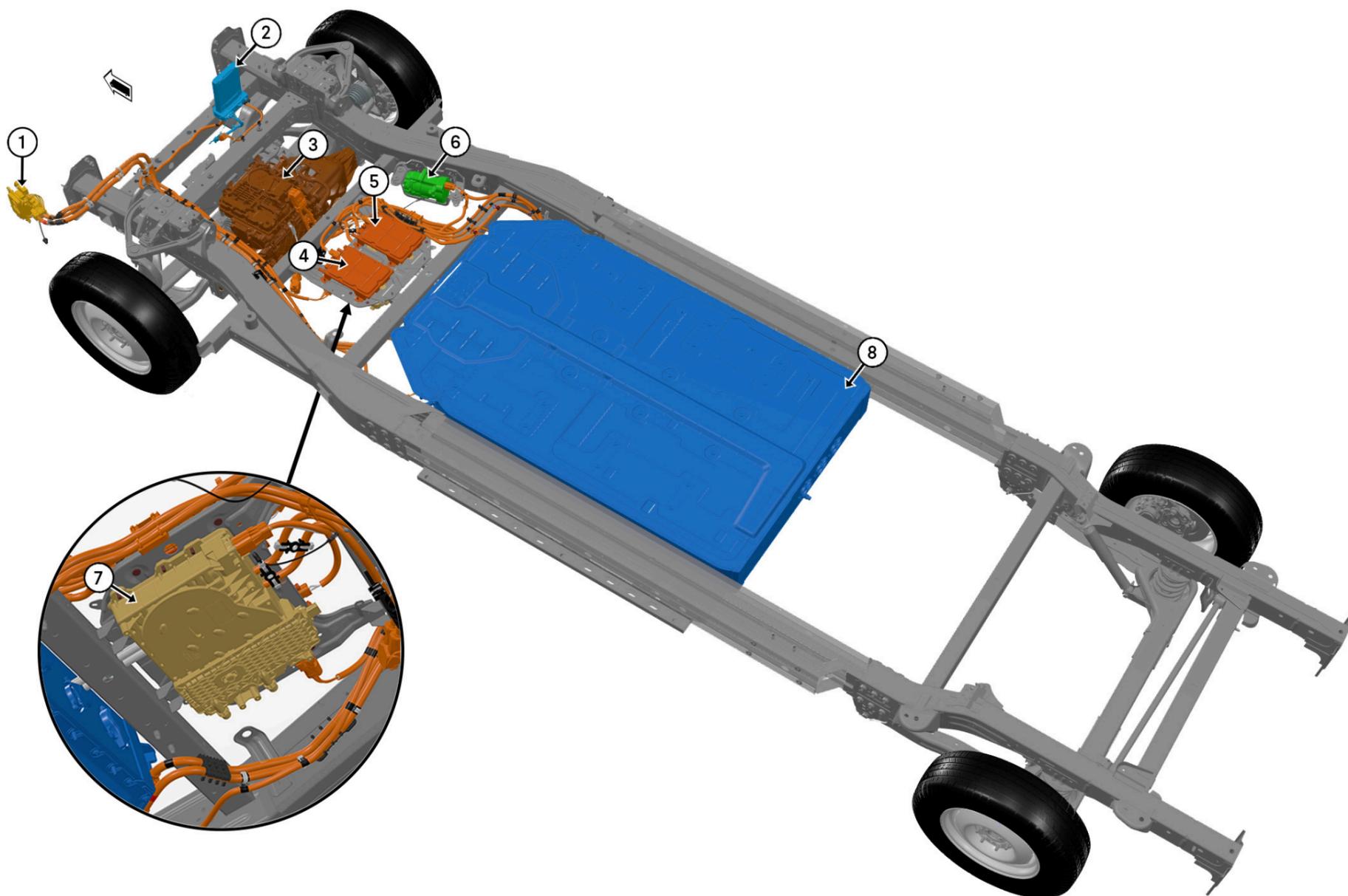
Warning:

Physical damage to the HV battery may result in a fire or in immediate, or delayed, release of toxic and/or flammable gases which could result in bodily injury or death.

Things to keep in mind,

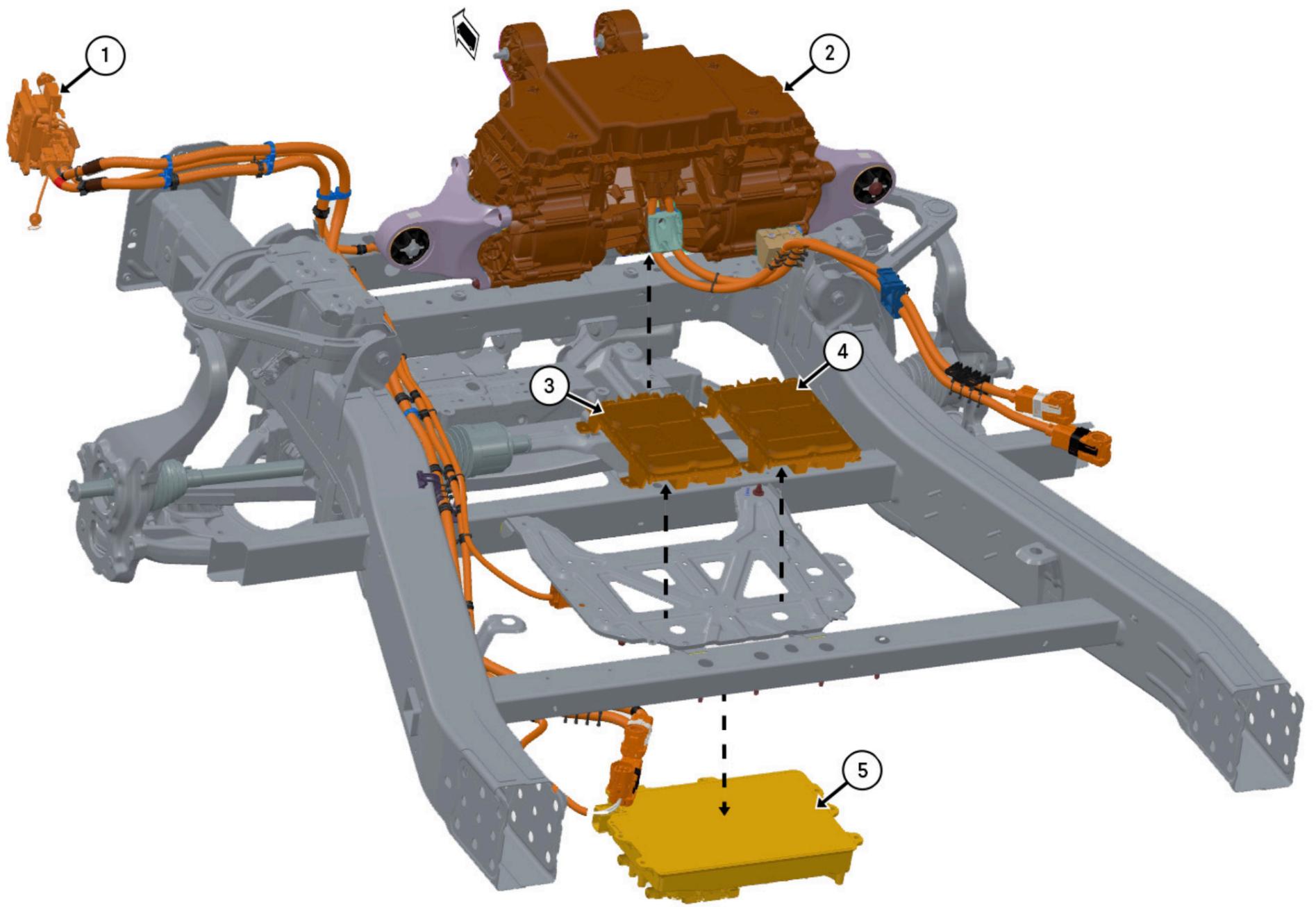
- The HV system may vary by vehicle model and configuration.
- Locations to inspect for the presence of HV, after the HV system has been disabled, will vary between by vehicle chassis model and battery/drive unit configurations.
- Review all necessary service procedures and safety documents prior to performing repairs or storage of the HV battery pack.
- A Pre and Post system scan is required when performing any HV repairs on Rivian vehicles.
- Follow all applicable laws or safety guidelines for storage and handling of HV battery packs.
- Make sure the appropriate PPE is worn as per NFPA 70E, OSHA guidelines, or the local equivalent.

High Voltage (HV) Component Location



Number	HV Component
1	Charge Port
2	Cabin Heater
3	Drive Unit
4	Primary DC/DC Converter
5	Secondary DC/DC Converter
6	Air Conditioning Compressor
7	On-Board Charger (OBC) (Mounted Under Vehicle)
8	HV Battery

HV Component – Drive Unit / Power Electronics Group

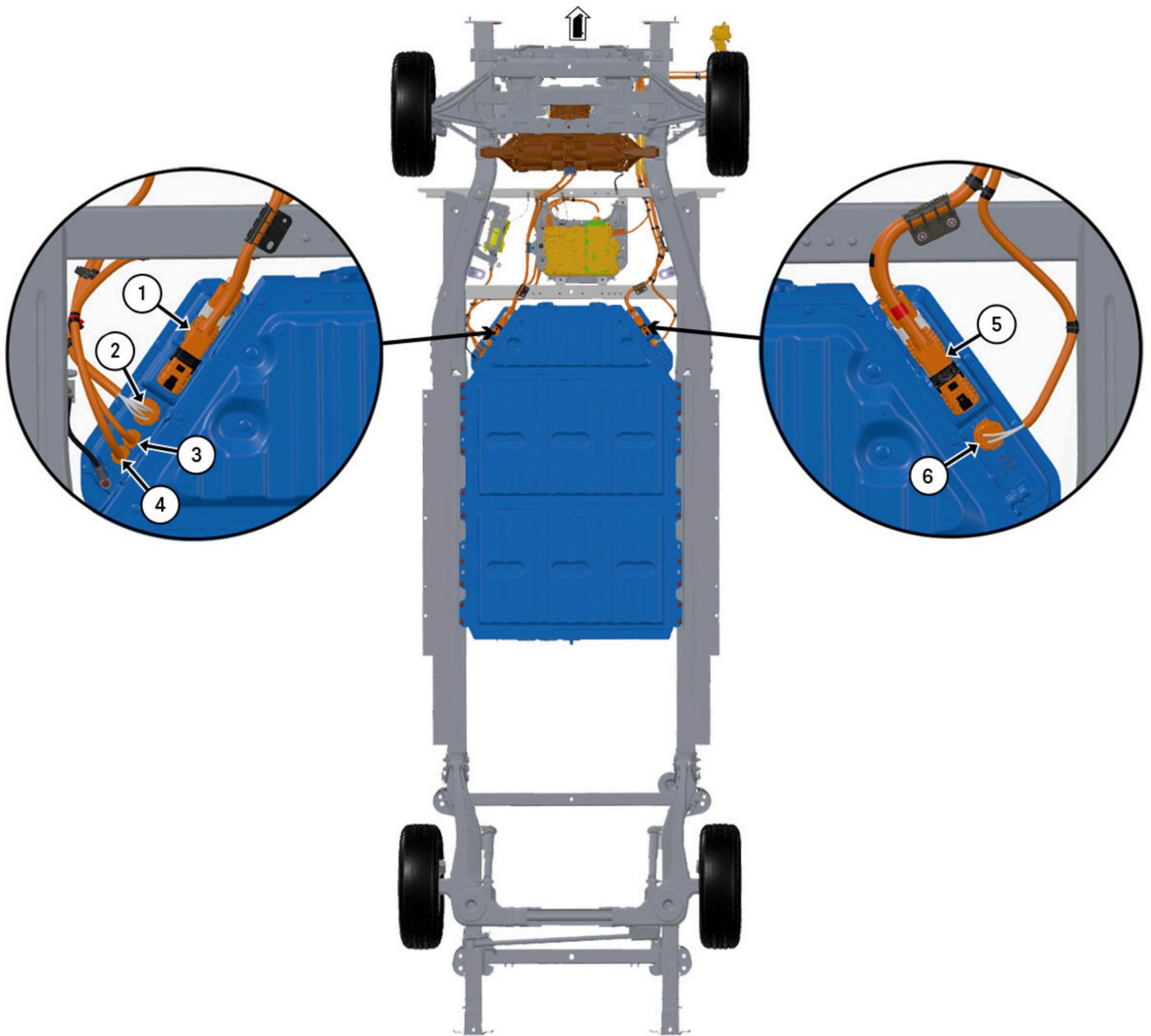


Number	HV Component
1	Charge Port
2	Drive Unit
3	Primary DC/DC Converter
4	Secondary DC/DC Converter
5	On-Board Charger (OBC)

Battery Pack Connectors

NCA Pack

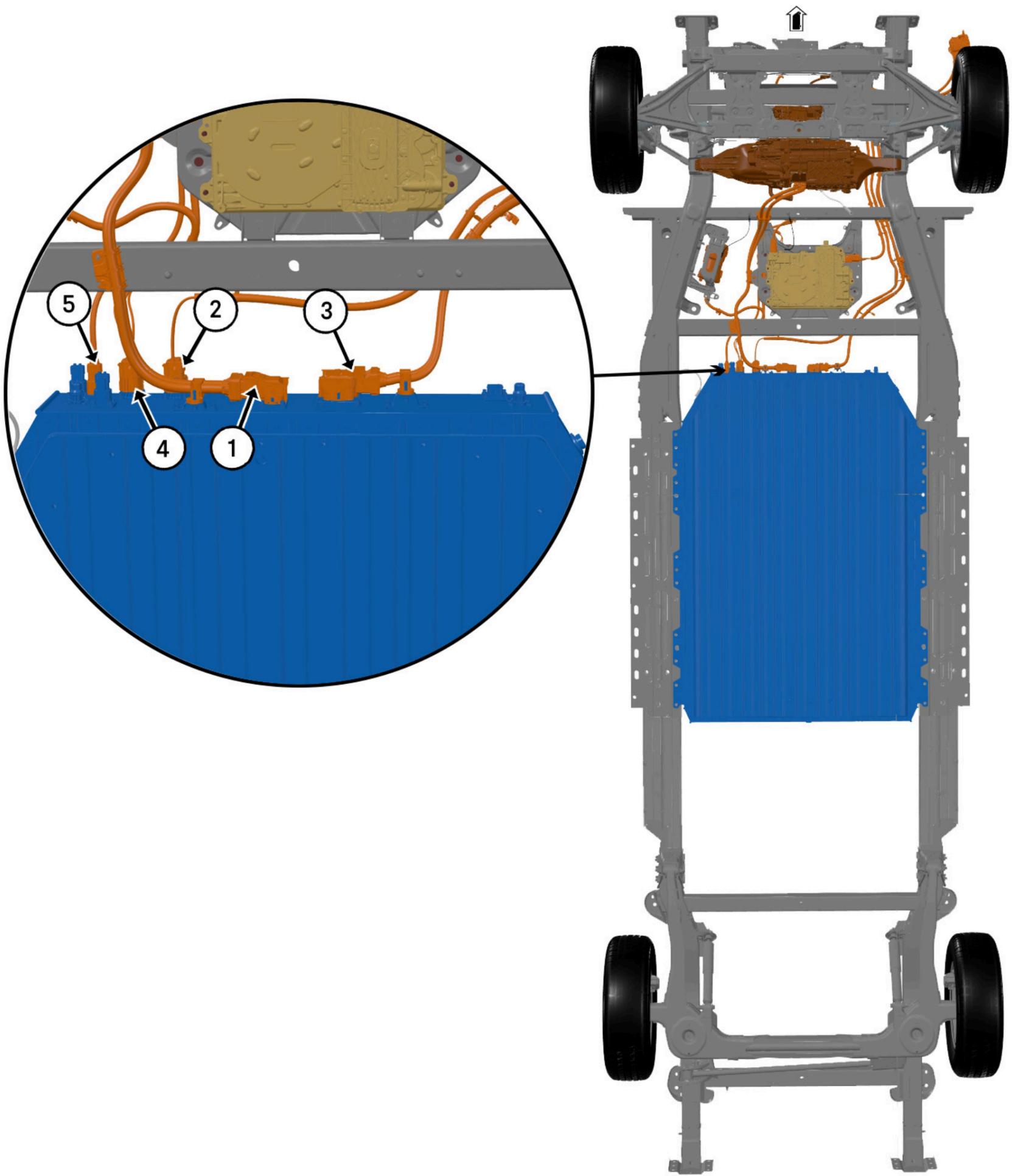
Bottom View



Number	HV Connector
1	Drive Unit (x2)
2	Air Conditioning Compressor
3	On-Board Charger (OBC)
4	DC/DC Converters
5	Charge Port
6	Cabin Heater

LFP Pack

Bottom View



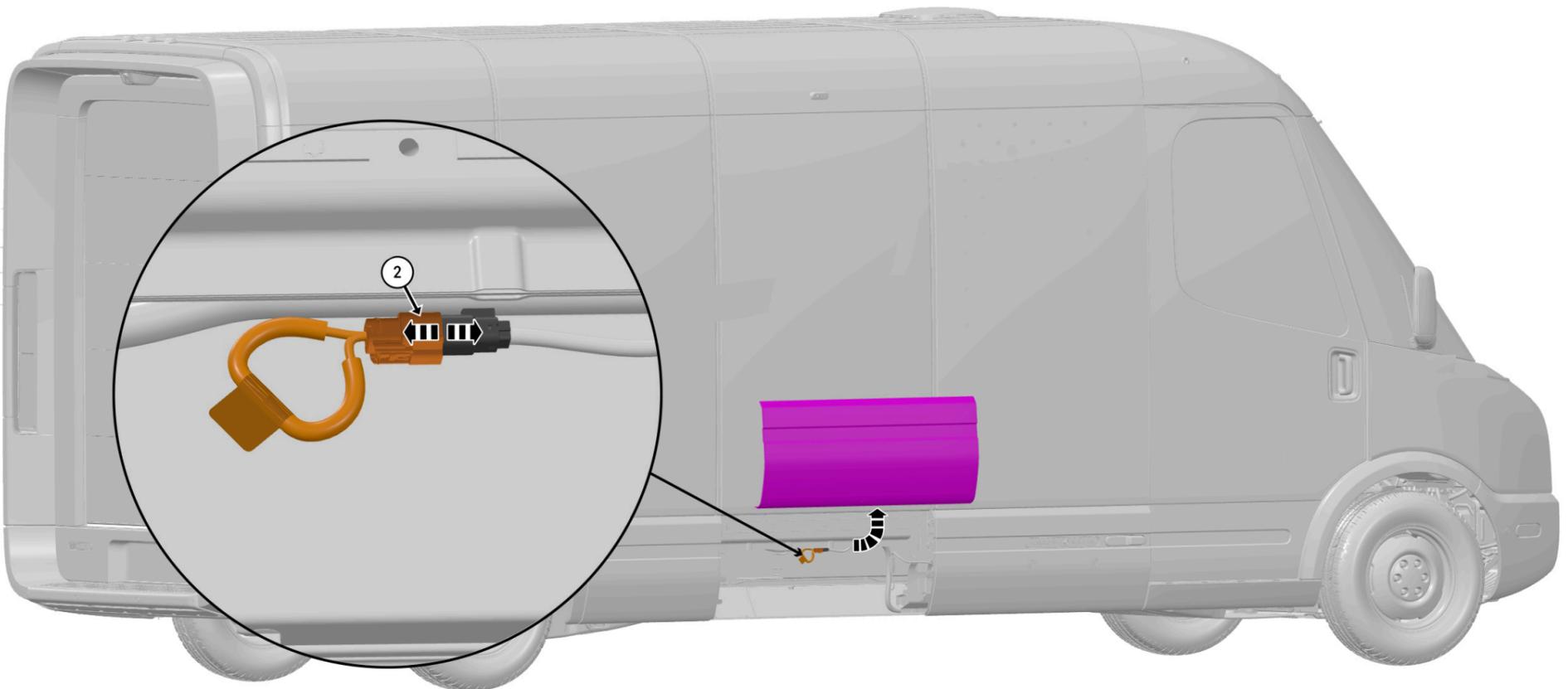
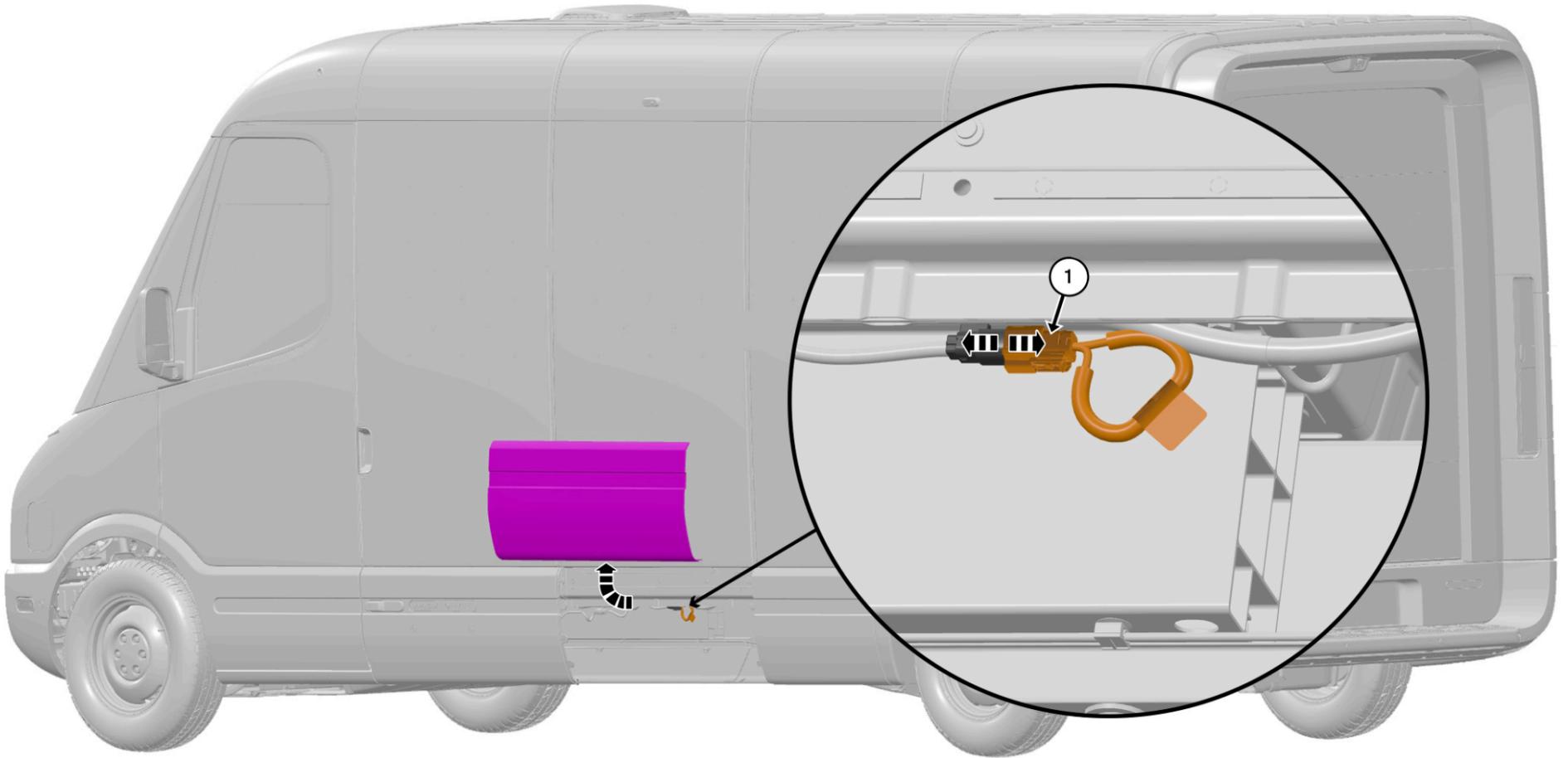
Number	HV Connector
1	Drive Unit
2	Cabin Heater
3	On-Board Charger (OBC), Charge Port
4	DC/DC Converters, Air Conditioning Compressor
5	On-Board Charger (OBC)

First Responder HV Disconnect Cable

Disconnection of the First Responder HV Disconnect Cable manually disables the HV system to allow for servicing of the HV system in a safe manner. First Responder HV Disconnect Cables are located on both sides of the vehicle. Either cable can be disconnected to disable the HV system.

Important:

Always refer to the Rivian service manual for up-to-date information regarding the disablement of the HV system and safety precautions/steps to follow prior to performing any work on the HV system.



Number	Component
1	First Responder HV Disconnect Cable – Left Side
2	First Responder HV Disconnect Cable – Right Side

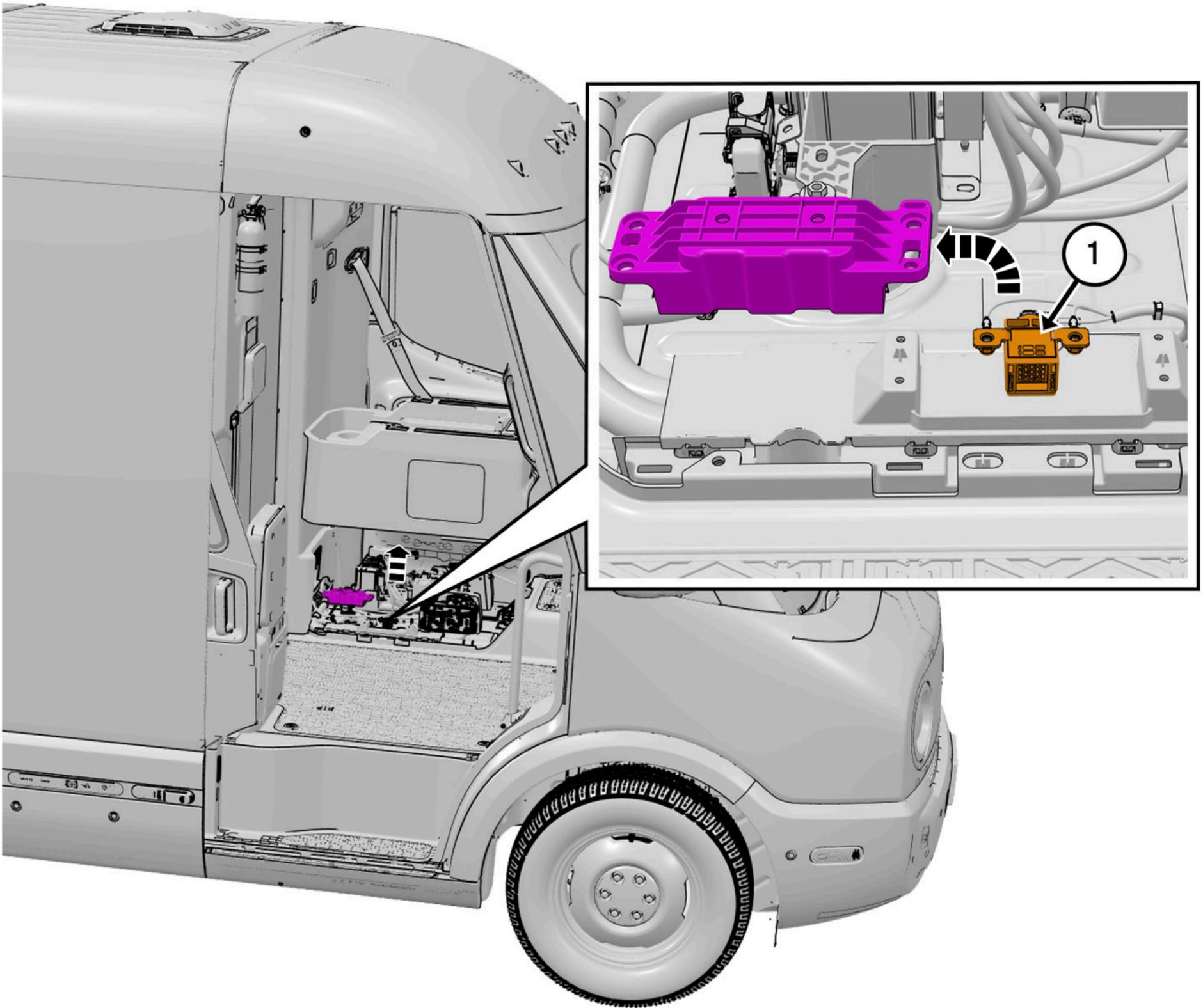
Pyrotechnic Fuse

The Pyrotechnic Fuse automatically disables the High Voltage (HV) system to prevent short circuits in the event of a collision with significant vehicle deceleration, at the time of impact. An activated Pyrotechnic Fuse will disable the HV system by cutting 12-Volt power to the HV contactors.

Attention:

- The Pyrotechnic Fuse cannot be reset and requires replacement after it has been triggered. Refer to the applicable procedure in the service manual for replacement.

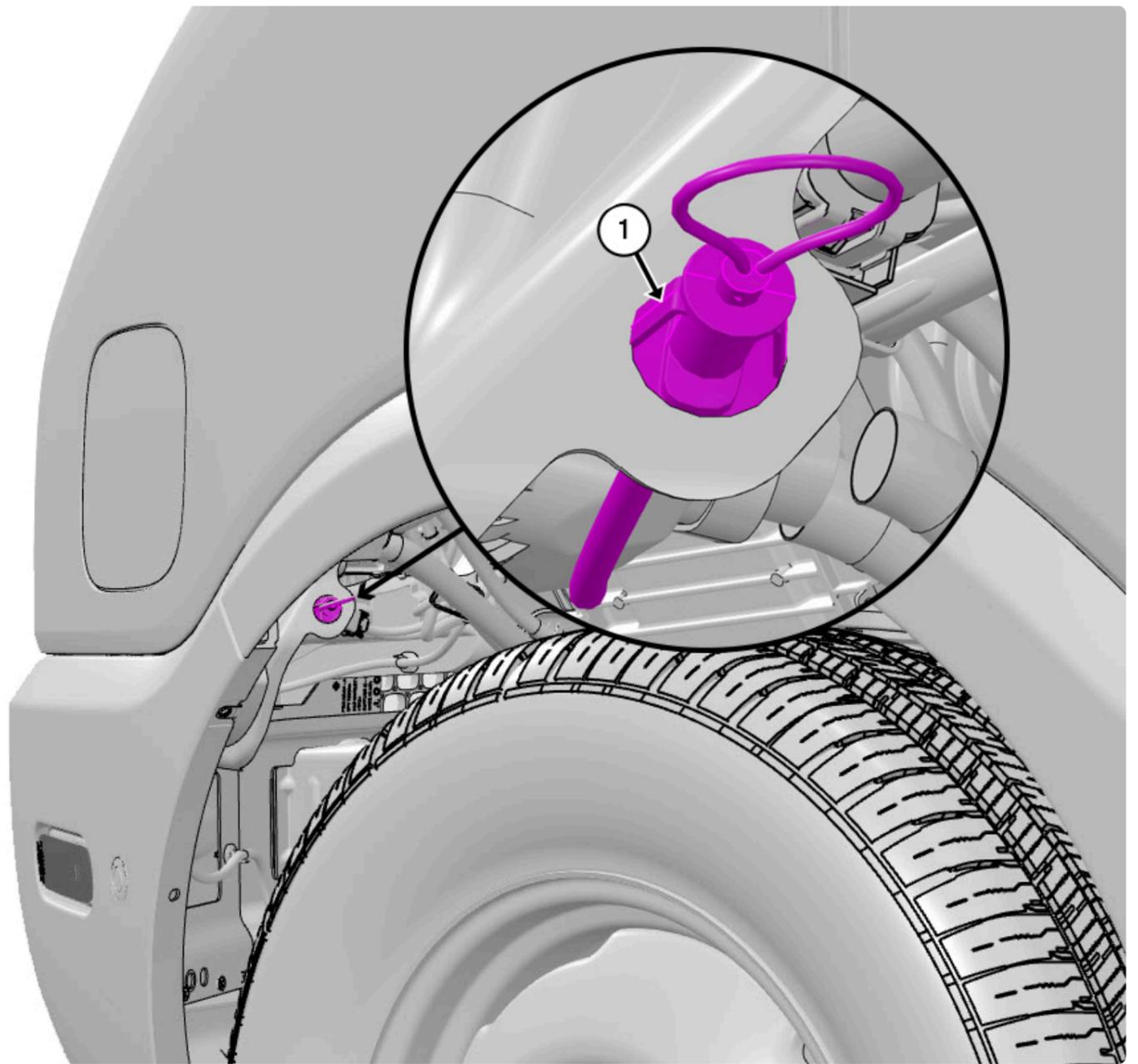
- HV contactors can become welded together, under certain circumstances, resulting in the HV system remaining energized even if the pyrotechnic fuse has been deployed. Refer to the Service Manual procedure for disabling the HV system for instructions on how to check the status of the HV system before working on any HV components.



Number	Component
1	Pyrotechnic Fuse

Charging Connector Manual Release Cable

The charging connector manual release cable can be used to release a connector that will not disengage from the charge port. Refer to the EDV Owner's Guide for more information.



Number	Component
1	Charging Connector Manual Release Cable

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