



Volvo Car USA LLC: Electric Vehicle (EV) Welding

Battery safety

Warning!

Only specially trained technicians may work with the High Voltage system.

Warning!

Ensure that local rules and regulations regarding electrical work are followed.

Warning!

All batteries 12V and over are to be considered as highly dangerous.

Warning!

In principle, all batteries can cause serious injury if they are short-circuited by, for example, jewelry or metal tools.

Warning!

It is prohibited to charge the vehicle during work or repairs.

Warning!

No High Voltage-related components may be disassembled unless otherwise stated in VIDA.

Warning!

Make sure that tools used in safety related tests of with the High Voltage system are fully functional, maintained, and do not show any visible damage.

Warning!

Batteries produce explosive hydrogen gas. Do not allow open flames, burning materials, or sparks near the battery.

Warning!

Batteries contain sulphuric acid, avoid contact with skin, eyes or clothing. Wear safety goggles when working near the battery to protect against possible splashing of the acid solution.

Warning!

When charging the battery, protect face and wear safety goggles. Make sure of adequate ventilation.

Warning!

SWALLOWED: If acid is swallowed, rinse the mouth with plenty of water and then drink plenty of water or milk. Do not induce vomiting. Seek immediate medical attention.

Caution!

All persons working on electric vehicles should complete CPR training.

Caution!

All work must be preceded by a risk assessment / risk analysis. See EV Battery Handling EV Battery & Vehicle Handling Post Collision statement.

Caution!

Boost charging with excessive current or voltage above 16 volts will damage the battery.

Before Welding

Always disconnect the 12V battery prior to welding, refer to VIDA's Battery Disconnection and Connection instructions. Always de-energize the high voltage battery before welding. De-energize must only be performed by a certified trained technician, refer to VIDA's High Voltage Battery: Disconnecting and Connecting. Locate the ground connection as close as possible to the welding point. If the welding must be carried out in the immediate vicinity of an electronic unit/high voltage battery, then the electronic unit/high voltage battery must be removed. These areas include, but are not limited to, the inner rocker panel, the outer rocker panel and the passenger floor pan. The battery can only be removed by a Volvo Trained Certified Technician. The battery must be stored according to Volvo Cars guidelines when removed from the vehicle, see EV Battery & Vehicle Handling Post-Collision. If there is any visible damage to the battery casing, the battery must go to an authorized Volvo workshop.

Assembly Procedure

Unless otherwise specified in methods, always strive to use spot welding for repairs. Refer to VIDA for all approved welding methods by model. Unless otherwise specified in the method, the distance between the welds must be the same as the original design. Use extraction equipment. Always follow VIDA procedures when completing a weld repair. Refer to Welding General in VIDA for further assembly guidelines.

Use of aftermarket, damaged, or deformed hardware in a repair cannot be guaranteed and therefore should never be used. All collision repair guides have been designed around the use of genuine Volvo Car Replacement Parts. Volvo Cars cannot ensure a safe repair utilizing anything other than Genuine Volvo Car Replacement Parts.

Third party or non-Volvo components may lead to system or component errors which can have an adverse effect on collision avoidance systems and occupant safety.

Using only genuine Volvo parts will help ensure vehicle safety, performance and residual value.

Volvo genuine parts are designed and manufactured to exacting specifications to help maximize safety, performance and reliability.

All Volvo exterior paneling, glass, unibody components, drivetrain, electronics, suspension SRS and steering components are essential to safe control of the vehicle. These parts are designed to work with other vehicle components to help keep occupants safe in an accident.

In the event of a collision, Volvo Cars recommends that all repairs are performed by a Volvo Certified Technician through a Volvo Certified Collision Center using only genuine Volvo Cars parts.

Always refer to Volvo Information and Diagnostics for Aftersales (VIDA) for the latest technical