

Buyer's information about handling hybrid and electric cars

These instructions are meant for buyers of damaged hybrid or electric cars. They contain information about the good practices in the field and the legislation and regulations related to electrical safety. The purpose of the instructions is to improve safety when handling the vehicle.

General safety aspects

Hybrid and electric cars contain traction batteries and other high-voltage components that require special attention for the correct and safe handling of the vehicle.

- Read the vehicle manufacturer's instructions for the make in question and learn about how the electric system of the vehicle works
- Get to know the product thoroughly
- Check the vehicle's current condition and the detected faults, particularly in the batteries and high-voltage components
- Consider the vehicle's features case by case, and how they impact its handling (moving, transfer, storage, troubleshooting etc.)
- Familiarise yourself with the Electrical Safety Act and instructions by authorities (Tukes and Traficom)

You need special professional skills and competence to handle damaged hybrid and electric cars. Follow the vehicle manufacturer's instructions for repair work and when handling the vehicle. If you need more information, you can turn to the vehicle manufacturer or specialised operators.

Safe handling of damaged hybrid and electric cars

Handling the high-voltage components of hybrid and electric cars incorrectly can be life-threatening. Handling batteries and high-voltage components is electrical work, and such work requires adherence to the regulations on electrical safety. (*Electrical Safety Act 1135/2016*)

For repair work, you must adhere to the safety standard concerning electrical work, SFS 6002. Mechanics repairing electrical vehicles must be professional and thorough. The mechanic must also read up on the dangers of electricity and the electric system of the vehicle type to be repaired to ensure safe electrical work. The mechanic repairing the vehicle is responsible for the conformance and electrical safety of the repaired hybrid or electric car (electrical appliance).

Things to consider in safe handling:

- Always read the car manufacturer's model-specific instructions
- Check the past inspections and measures (such as failure assessment, inspection report on the electrical systems, condition and state of the battery, etc.)
- Find out if the vehicle has been de-energised, and whether its repair involves de-energising it and detaching the high-voltage components before repair (for example, vehicles that have an intact high-voltage system, the vehicle is energised but the body is damaged)
- Find out which entries concerning detected faults have been made to the register maintained by a public authority
- Find out which documents you need for a re-inspection of the vehicle
- Find out whether there are any recall campaigns on the vehicle (<https://takaisinkutsut.traficom.fi/>)
- Make sure that the parts used in the repair are compliant with the requirements
- Ensure that the vehicle is marked and sealed during the repair work, and that any third parties are warned about the dangers of high-voltage systems.

Remember that the vehicle might have other faults in addition to the ones already detected. The battery of a hybrid or electric car might have internal damage in addition to external damage caused by a physical hit or collision.

Safe transport and storage of vehicles and their batteries

Pay attention to safety and regulations regarding moving, transporting and storing the vehicle

- To avoid additional damage, pay attention to where the vehicle's traction battery and high-voltage components are when lifting or moving the car, for example
- If you don't transport the vehicle yourself, you should read upon the requirements different transport businesses have for transporting hybrid and electric vehicles (transport businesses, shipping companies, etc.)

If you suspect or detect any faults in the power train or traction battery, remember the following:

- Keep a safe distance from other vehicles, buildings and other burning materials
- Ensure that the battery's condition is checked and documented as early as possible, and monitor the vehicle during its storage
- Follow the vehicle manufacturer's instructions for the terms of changing or repairing the traction battery
- Consider whether the regulation for the transport of dangerous goods by road applies to transporting the vehicle that has damaged high-voltage components. (*please note the special rules 666 and 667 concerning the transport of dangerous goods in relation to hybrid vehicles and traction batteries*)

Even if the damaged traction battery of the car is stable at the time of purchase, its possible internal damage may lead to a risk of fire over the course of time. If you start hearing a sound from the car, it starts to emit smoke or its temperature rises, the vehicle has probably become dangerous to use.