

Loss Prevention Safety Tip



Loss Prevention
Program

By Red River Mutual

ELECTRICAL VEHICLE CHARGING SAFETY

Electric vehicles (EVs) are transforming transportation, from personal cars and SUVs to commercial fleets and micro-mobility devices like e-bikes and scooters. This shift brings significant benefits for sustainability, but also introduces new safety challenges, particularly around battery technology and charging.

Lithium-ion batteries are efficient and reliable, but hazardous if mishandled. EV fires are complex and dangerous due to thermal runaway, which can cause intense heat, combustion, electrical shock, and the risk of re-ignition. Following these safety practices will enable homeowners and businesses to adopt EV technology safely and securely:



Safety Tips

- Use devices that are CSA or ULC certified.
- Read and follow all manufacturer installation and operation instructions.
- Regularly check batteries, charging contacts and cords for damage before use, and never use damaged equipment.
- Do not use extension cords with the charger.
- Install charging equipment in safe locations. Keep away from busy areas and things that could catch fire. In commercial settings, install bollards to protect equipment from vehicle impact.
- Keep charging items out of reach of children and animals when not in use.
- Use an approved weatherproof cover on charging station outlets when not in use to prevent water intrusion.
- Before charging an electric vehicle at your home or business, have a qualified electrician:
 - o Check your electrical system to see if it can handle charging.
 - o Install a new circuit just for your charging device.
- Keep a fire blanket near the charging equipment for emergency response.

For Level 1 Charging:

- Use the charging cord that came with the electric vehicle.
- Use a standard household plug.
- Make sure charger or outlet has GFCI protection.
- Use only a dedicated circuit to charge.

For Level 2 Charging:

- Use a 240-volt outlet. A qualified electrician needs to install this type of outlet.
- Only use outdoor rated charging stations outdoors.
- Keep cords off the ground.



WARNING:

- Electric vehicles have high voltage batteries.
- Battery maintenance should be performed by the manufacturer.
- Do not touch the orange high voltage cables.

Source: National Fire Protection Association

See more loss prevention tips at www.preventingloss.com

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