



# RECHARGEABLE LITHIUM-ION BATTERY BEST PRACTICES

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# FOCUS AREAS



Battery Pack  
Usage

Manufacturer's  
Guidance

Charging Stations

Battery-Powered  
Work Vehicles

# BATTERY PACK USAGE

## Charger



Charge lithium-ion batteries in the **original branded charger** or its factory replacement to help ensure compatibility between the battery and charger.

## Visual Inspection



Inspect batteries visually before each charge to **identify hazards** that might prevent charging or future use, such as cracks or bulges.

## Tool Compatibility



Only use battery packs with **compatible tools**, listed in the manufacturer's guide, to reduce the risk of fires, electric shock, or personal injury.

## UL Listed



Confirm your team is using **UL listed** batteries that have been tested to meet nationally recognized safety standards.

# ● ● ● MANUFACTURER'S GUIDANCE

Have your team read the battery's instruction manual for guidance on the following:

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Safely using **lithium-ion batteries** to accomplish daily tasks.

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Correct **charging times**.

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Proper **storage** of the battery when not in use.

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**Recycling the battery** when it is damaged or has reached the end of its lifespan.

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# CHARGING STATIONS

## Location



Place battery **charging stations** away from high-traffic areas, such as evacuation routes or entrances/exits, to reduce the risk of spontaneous fires impeding travel..

## Sunlight



Avoid charging batteries in **direct sunlight** to help avoid increased internal temperatures, which can shorten the lifespan and lead to critical failure..

## Ignitable Liquids



Do not charge batteries near **ignitable liquids, dust, or gases** to help reduce the available fuel load if a battery fire occurs.

## Charging Outlet



Plug chargers directly into an **outlet**, not an extension cord; a licensed electrician can guide your team on using multiple chargers if necessary.

# BATTERY-POWERED WORK VEHICLES

Charge **large battery-powered vehicles** (ebikes, golf carts, forklifts, etc.) outside, in a monitored outbuilding, or a 2-hour fire-rated cutoff area inside your facility.

Set up central monitored **smoke detection systems** in charging areas.

If you have a **fire sprinkler system** on your property, have a fire protection engineer or contractor confirm at least .30/2500 gpm of water is delivered from the system to charging areas.

Consider installing **hydrogen fluoride gas detection systems** in areas where you frequently charge multiple batteries to be alerted to gas leaks that often precede battery fires.



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