



LITHIUM-ION BATTERY PACKS

New batteries must be charged before first use.

IMPORTANT SAFETY INSTRUCTIONS

WARNING READ AND UNDERSTAND ALL INSTRUCTIONS. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

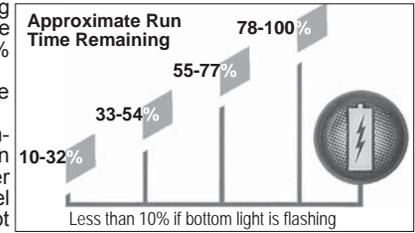
SAVE THESE INSTRUCTIONS

- 1. SAVE THESE INSTRUCTIONS - THIS OPERATOR'S MANUAL CONTAINS IMPORTANT SAFETY AND OPERATING INSTRUCTIONS FOR MILWAUKEE® LI-ION BATTERY PACKS AND THE MILWAUKEE® LI-ION CHARGER.**
- 2. BEFORE USING THE BATTERY PACK AND CHARGER, READ THIS OPERATOR'S MANUAL, YOUR TOOL OPERATOR'S MANUAL, AND ALL LABELS ON THE BATTERY PACK, CHARGER AND TOOL.**
- 3. CAUTION - TO REDUCE THE RISK OF INJURY, CHARGE MILWAUKEE® LITHIUM-ION PACKS ONLY IN THEIR MILWAUKEE® LITHIUM-ION CHARGER.** Other types of chargers may cause personal injury or damage. Battery pack and charger are not compatible with V™-technology or NiCd systems. Do not wire a battery pack to a power supply plug or car cigarette lighter. Battery packs will be permanently disabled or damaged.
- 4. USE MILWAUKEE® LITHIUM-ION PACKS ONLY ON COMPATIBLE MILWAUKEE® LITHIUM-ION TOOLS.** Battery pack and charger are not compatible with V™-technology or NiCd systems. Use with other tools may result in a risk of fire, electric shock or personal injury.
- 5. AVOID DANGEROUS ENVIRONMENTS.** Do not charge battery pack in rain, snow, damp or wet locations. Do not use battery pack or charger in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials) because sparks may be generated when inserting or removing battery pack, possibly causing fire.
- 6. CHARGE IN A WELL VENTILATED AREA.** Do not block charger vents. Keep them clear to allow proper ventilation. Do not allow smoking or open flames near a charging battery pack. Vented gases may explode.
- 7. DO NOT BURN OR INCINERATE BATTERY PACKS.** Battery packs may explode, causing personal injury or damage. Toxic fumes and materials are created when battery packs are burned.
- 8. DO NOT CRUSH, DROP, OR DAMAGE** battery pack. Do not use a battery pack or charger that has received a sharp blow, been dropped, run over, or damaged in any way (e.g., pierced with a nail, hit with a hammer, stepped on).
- 9. DO NOT DISASSEMBLE.** Incorrect reassembly may result in the risk of electric shock, fire or exposure to battery chemicals. If it is damaged, take it to your local authorised MILWAUKEE® dealer or service centre.
- 10. BATTERY CHEMICALS CAUSE SERIOUS BURNS.** Never allow contact with skin, eyes, or mouth. If a damaged battery pack leaks battery chemicals, use rubber or neoprene gloves to dispose of it. If skin is exposed to battery fluids, wash with soap and water and rinse with vinegar. If eyes are exposed to battery chemicals, immediately flush with water for 20 minutes and seek medical attention. Remove and dispose of contaminated clothing.
- 11. DO NOT SHORT CIRCUIT.** A battery pack will short circuit if a metal object makes a connection between the positive and negative contacts on the battery pack. Do not place a battery pack near anything that may cause a short circuit, such as coins, keys or nails in your pocket. A short circuited battery pack may cause fire and personal injury.
- 12. STORE YOUR BATTERY PACK AND CHARGER** in a cool, dry place. Do not store battery pack where temperatures may exceed 50°C (120°F) such as in direct sunlight, a vehicle or metal building during the summer.

Fuel Gauge

Use the Fuel Gauge to determine the battery pack's remaining run time. Press the Fuel Gauge button to display the lights. The Fuel Gauge will light up for 2-3 seconds. When less than 10% of charge is left, 1 light on the fuel gauge will flash slowly. **NOTE:** If the Fuel Gauge doesn't appear to be working, place the battery pack on the charger and charge as needed. Compared to NiCd battery pack types, MILWAUKEE® Lithium-Ion battery packs deliver fade-free power for their entire run time. The tool will not experience a slow, gradual loss of power as you work. To signal the end of discharge, 1 light on the fuel gauge will flash quickly for 2-3 seconds and the tool will not run. Charge the battery pack.

NOTE: Immediately after using the battery pack, the Fuel Gauge may display a lower charge than it will if checked a few minutes later. The battery cells "recover" some of their charge after resting.



Battery Pack Protection

To protect itself from damage and extend its life, the battery pack's intelligent circuit monitors current draw and temperature. In extremely high torque, binding, stalling, and short circuit situations, the battery pack will turn OFF the tool if the current draw becomes too high. All the fuel gauge lights will flash. Release the trigger and restart.

Under extreme circumstances, the internal temperature of the battery could become too high. If this happens, the fuel gauge lights will flash in an alternating pattern and the tool will not run. Allow the battery to cool down.

Fuel Gauge Lights	Diagnosis	Solution
Lights 1 - 4 Solid	Remaining run time	Continue working
1 Light, flashing slowly	Less than 10% run time left	Prepare to charge pack
1 Light, flashing quickly	End of discharge	Charge pack
Lights 1-4, flashing quickly	Current draw too high	Release trigger and restart, reduce pressure
Lights 1&3 / 2&4, flashing alternately	Battery temperature too high	Release trigger and allow battery to cool

Cold Weather Operation

MILWAUKEE® M18 LITHIUM-ION battery packs can be used in temperatures down to -10°C (14°F). When the battery pack is very cold, put the battery pack on a tool and use the tool in a light application. It may "buzz" for a short time until it warms up. When the buzzing stops, use the tool normally.

Maintenance and Storage

Do not expose your battery pack or cordless tools to water or rain, or allow them to get wet. This could damage the tool and battery pack. Do not use oil or solvents to clean or lubricate your battery pack. The plastic casing will become brittle and crack, causing a risk of injury.

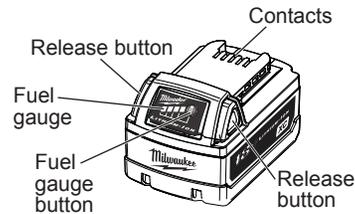
Store battery packs at room temperature away from moisture. Do not store in damp locations where corrosion of terminals may occur. As with other battery pack types, permanent capacity loss can result if the pack is stored for long periods of time at high temperatures (over 120°C). MILWAUKEE® Lithium-Ion battery packs maintain their charge during storage longer than other battery pack types. After about a year of storage, charge the pack as normal.

Disposing of MILWAUKEE® Li-Ion Battery Packs

MILWAUKEE® Lithium-Ion battery packs are more environmentally friendly than some other types of power tool battery packs (e.g., nickel-cadmium). Always dispose of your battery pack according to federal, state and local regulations. Contact a recycling agency in your area for recycling locations.

Even discharged battery packs contain some energy. Before disposing, use electrical tape to cover the terminals to prevent the battery pack from shorting, which could cause a fire or explosion.

SYMBOLGY	
	Volts Direct Current
	Properly Recycle Batteries



WARNING To reduce the risk of injury or explosion, never burn or incinerate a battery pack even if it is damaged, dead or completely discharged. When burned, toxic fumes and materials are created.

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