



TO: AUTHORIZED portable electric tool SERVICE STATIONS factory SERVICE / SALES SUPPORT BRANCH

TOOL(S) \ PRODUCT(S) AFFECTED: 48-11-0490 4.0V, 48-11-1815 18.0V, 48-11-1830 V™18 18V, 48-11-2401 12.0V, 48-11-2830 V™28 28V Lithium-Ion Battery Pack 48-59-0490 4.0V, 48-59-1801 18.0V, 48-59-2401 12.0V, 48-59-2801 V™28, 48-59-2818 V™18V/ V™28V Lithium-Ion Charger

SUBJECT: COLD WEATHER symptoms / affects - Troubleshooting Guide Milwaukee Lithium-Ion Battery Pack & Charger

Table with 3 columns: Symptom, Possible Cause(s), and Solution(s). It contains three rows of troubleshooting information for cold weather issues with Milwaukee Lithium-Ion Battery Packs and Chargers.

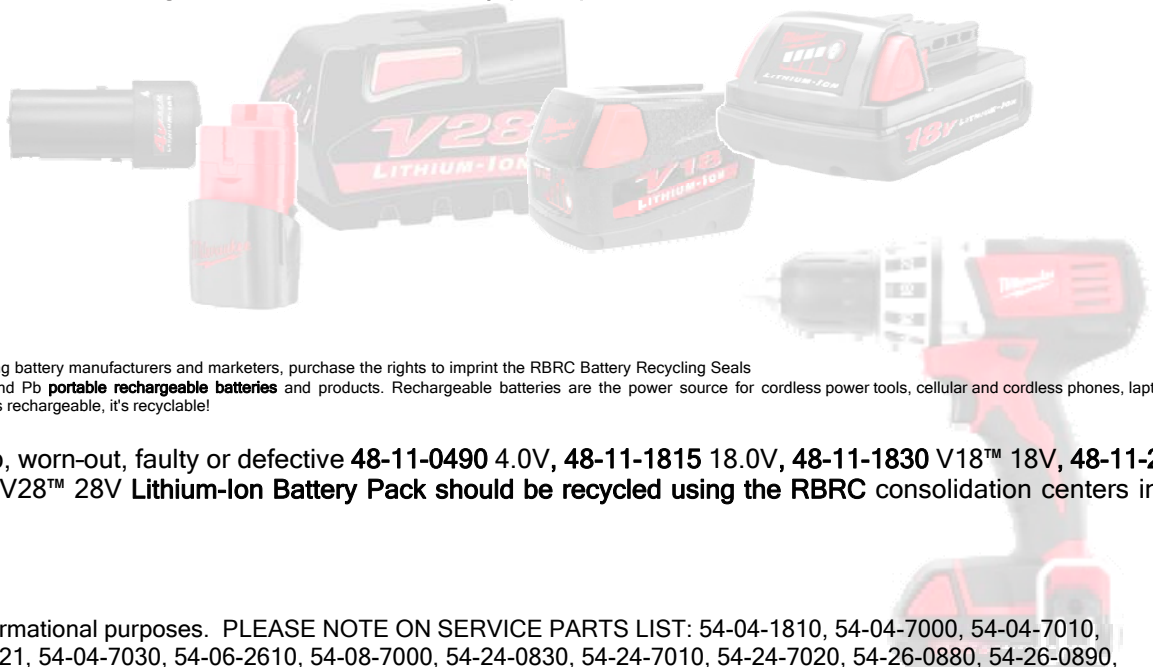
— COLD WEATHER SYMPTOMS / AFFECTS LITHIUM-ION BATTERY PACK TROUBLESHOOTING GUIDE CONTINUED —

Charger lights go out after charging for a short period of time.	Battery Pack was cold	Charging in cold weather can cause this effect to occur. Remove/reinsert Battery Pack. If lights do not turn on, unplug Charger for one minute and plug it back in.
Fuel gauge lights blink when Battery Pack is placed on Charger.	Pack is cold while charging	If the Battery Pack is cold, charge current is “pulsed” at a slow rate. This can show up as blinking fuel gauge lights. Wait for green Charger LED to indicate full charge, or in some conditions, Charger lights will turn off (see above).
Fuel gauge lights inaccurate while charging.	Battery Pack is cold	If the Battery Pack is cold, the Battery Pack voltage rises higher than normal during times when charge current is applied. This can cause the fuel gauge to read higher than the Battery Pack actually is. This effect will be more apparent at the start of charge with a cold, discharged Battery Pack. Wait for green Charger LED to indicate end of charge or in some conditions, charge lights will turn off (see above).
Fuel gauge button does not operate with Battery Pack connected to Charger.	Normal	Pack fuel gauge button is inoperable while Battery Pack is on Charger. Remove Battery Pack from Charger.

— COLD WEATHER SYMPTOMS / AFFECTS LITHIUM-ION CHARGER TROUBLESHOOTING GUIDE —

Symptom	Possible Cause(s)	Solution(s)
Battery Pack takes a long time to charge.	Cold Battery Pack under < 40°F (4°C)	Charger reduces charging current at low temperatures. Increased charge times are normal under these conditions. Move Charger and Battery Pack to warmer location, if faster charge time is desired.

Battery Pack Protection - a feature not offered in competitor Li-Ion Battery Packs; damage to these battery packs can result with an ensuing reduction in their battery pack performance and life.



The RBRC licensees, participating battery manufacturers and marketers, purchase the rights to imprint the RBRC Battery Recycling Seals on their Ni-Cd, Ni-MH, Li-Ion and Pb **portable rechargeable batteries** and products. Rechargeable batteries are the power source for cordless power tools, cellular and cordless phones, laptop computers and camcorders. If it's rechargeable, it's recyclable!

A depleted, used up, worn-out, faulty or defective **48-11-0490 4.0V, 48-11-1815 18.0V, 48-11-1830 V18™ 18V, 48-11-2401 12.0V, 48-11-2830 V28™ 28V Lithium-Ion Battery Pack** should be recycled using the RBRC consolidation centers in the USA and Canada.

This bulletin is for informational purposes. PLEASE NOTE ON SERVICE PARTS LIST: 54-04-1810, 54-04-7000, 54-04-7010, 54-04-7020, 54-04-7021, 54-04-7030, 54-06-2610, 54-08-7000, 54-24-0830, 54-24-7010, 54-24-7020, 54-26-0880, 54-26-0890, 54-26-7000, 54-40-7000, 54-40-7020, 54-40-7040, 54-40-7050, 54-42-0490, 54-42-2400