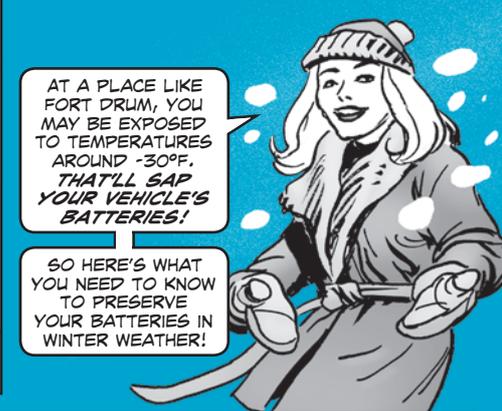
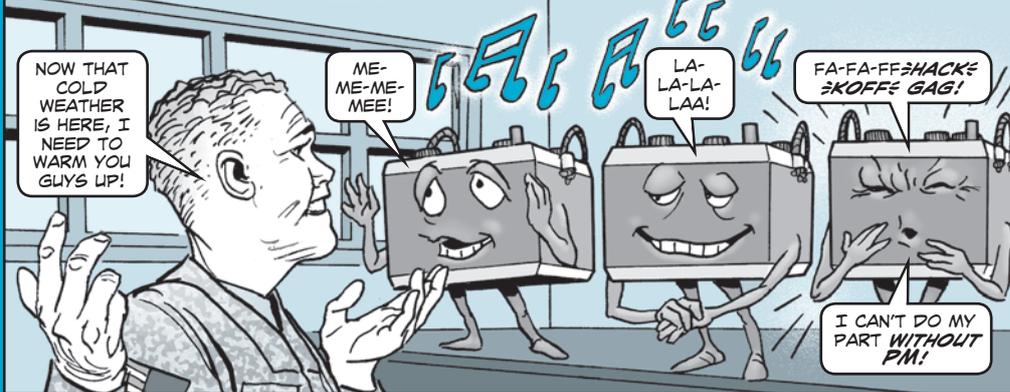


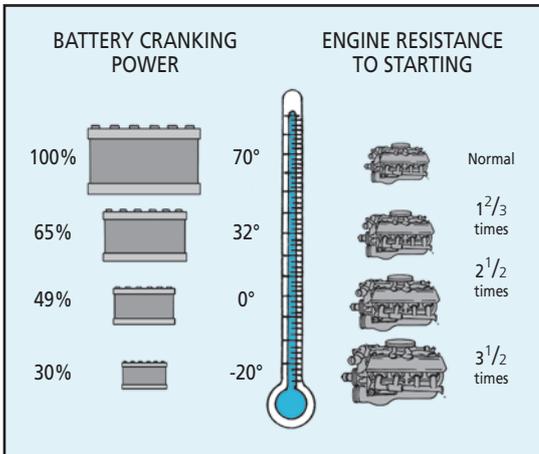
WINTER BATTERY CARE



Daily Start-ups

Daily start-up helps to preserve the life of your batteries. But you need to run the engine long enough to recharge the battery. Thirty minutes should be enough.

A fully charged lead-acid battery loses a third of its cranking power at 32°F. At 0°F, it has less than half its cranking power, and at -20°F it has only 30 percent. If that's what happens to a battery in good shape, imagine what happens to one that's in bad shape!



Check your batteries now so they'll work when cold weather hits. And take these steps to determine if your batteries can survive the cold.

Read the TM

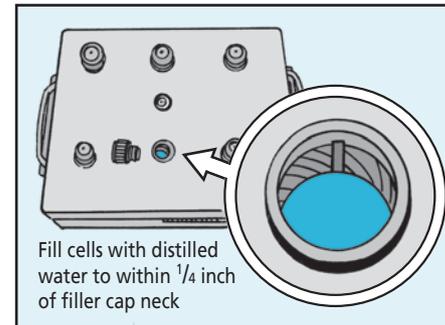
HAVE A COPY OF TM 9-6140-200-14 (SEP 98), OPERATOR'S, UNIT, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL FOR LEAD-ACID STORAGE BATTERIES, HANDY.

THE GUIDANCE YOU NEED TO TEST AND KEEP YOUR BATTERIES FULLY CHARGED IS IN CHAPTER 3.



Test the Battery Condition

Before testing the condition of a flooded type battery, check the level of electrolyte. (**Don't** do this on sealed AGM or gel type batteries.) Add distilled water, NSN 6810-00-682-6867, as needed. Replace the caps, then start the vehicle's engine and let it run on fast idle (1,000-1,200 rpm) for at least 20 minutes, or attach a charger for 20-30 minutes. Charging mixes the water and electrolyte.



Fill cells with distilled water to within 1/4 inch of filler cap neck

Make sure you do this because if they don't mix, you'll end up only testing water! This mixing also helps keep plain water from freezing, preventing cracked battery cases.

It's best to test the electrolyte right after shutting off the engine; if you see bubbling in the cells, wait until that stops before testing. Then use an antifreeze and battery tester, also known as a refractometer, NSN 6650-00-105-1418, or a hydrometer tester, NSN 6630-00-171-5126.

Check Specific Gravity

Before putting a battery—old or new—on the job, mechanics, use the tester to check the battery's specific gravity. That tells you the battery's state of charge.

If the specific gravity is less than 1.100, or if the difference in specific gravity between cells is more than 0.025, don't use the battery! Turn it in.

