



# HAWKER®

## Headlines Winter 2023 edition

### Quick Tips!



Hawker® batteries are UN Class 2800 (non-spillable)  
 Want to ship your Hawker® battery by air, land, or sea  
 and need to know the shipping requirements?  
 Learn more at [hawkerbattery.com/shipping-requirements/](http://hawkerbattery.com/shipping-requirements/)  
*It's a lot easier than you might think!*



### Answer to question from last issue:

*How do cold, very cold, and extremely cold temperatures affect my battery?*

Battery performance is decreased as its temperature goes down and increased as its temperature goes up. **This is why a battery that previously started your vehicle's engine on a hot summer day can't do the same after the vehicle was parked outside on a cold winter's night.** The colder a battery becomes, the more viscous (thicker) the electrolyte becomes. This increased viscosity slows down the chemical reaction that occurs between the electrolyte and the plates.

The result...**more amps for cranking when the battery is warm, but less when the battery is cold.**

### Did you know:



**Extreme Cold Cranking Amps (ECCA)** is a non-standard battery industry rating referring to the amount of cranking power that a fully-charged battery has for engine start when temperatures are extremely cold. Specifically, it's the amount of amps that a nominal 12-volt battery can deliver at -40°F (-40°C) for 30 seconds while still maintaining at least 7.2 volts (that's 1.2 volts per cell). For example, the Hawker® ARMASAFE™ Plus battery has an ECCA rating of **500 amps**.

### Hawker® ARMASAFE Plus 6TAGM battery

#### 30 Seconds of Cranking Amperage

Rating	Temp F	Temp C	State of Health (SoH) (Recoverability)				
			100%	90%	80%	70%	60%
HCA	80°	27°	1730	1557	1384	1211	1038
CA	32°	0°	1550	1395	1240	1085	930
CCA	0°	-18°	1225	1103	980	858	735
none	-20°	-29°	780	702	624	546	468
ECCA	-40°	-40°	500	450	400	350	300

*Note: If after recharge, a battery cannot achieve at least an 80% SoH, it should be replaced.*

### Training: *With spring nearing...it's a time for cheering!*



It's also a great time to get your mechanics and operators trained on how to properly care for and maintain your fleet of batteries. **Simply call your Hawker® FSR for free onsite Battery Maintenance & Recovery Training.** You provide the students, we provide the training...right at your location!



**Next Issue:**  
*What is a parasitic load or drain?*

### Questions?

Visit our website at [hawkerbattery.com/](http://hawkerbattery.com/)  
 Call us at **877.485.1472**



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