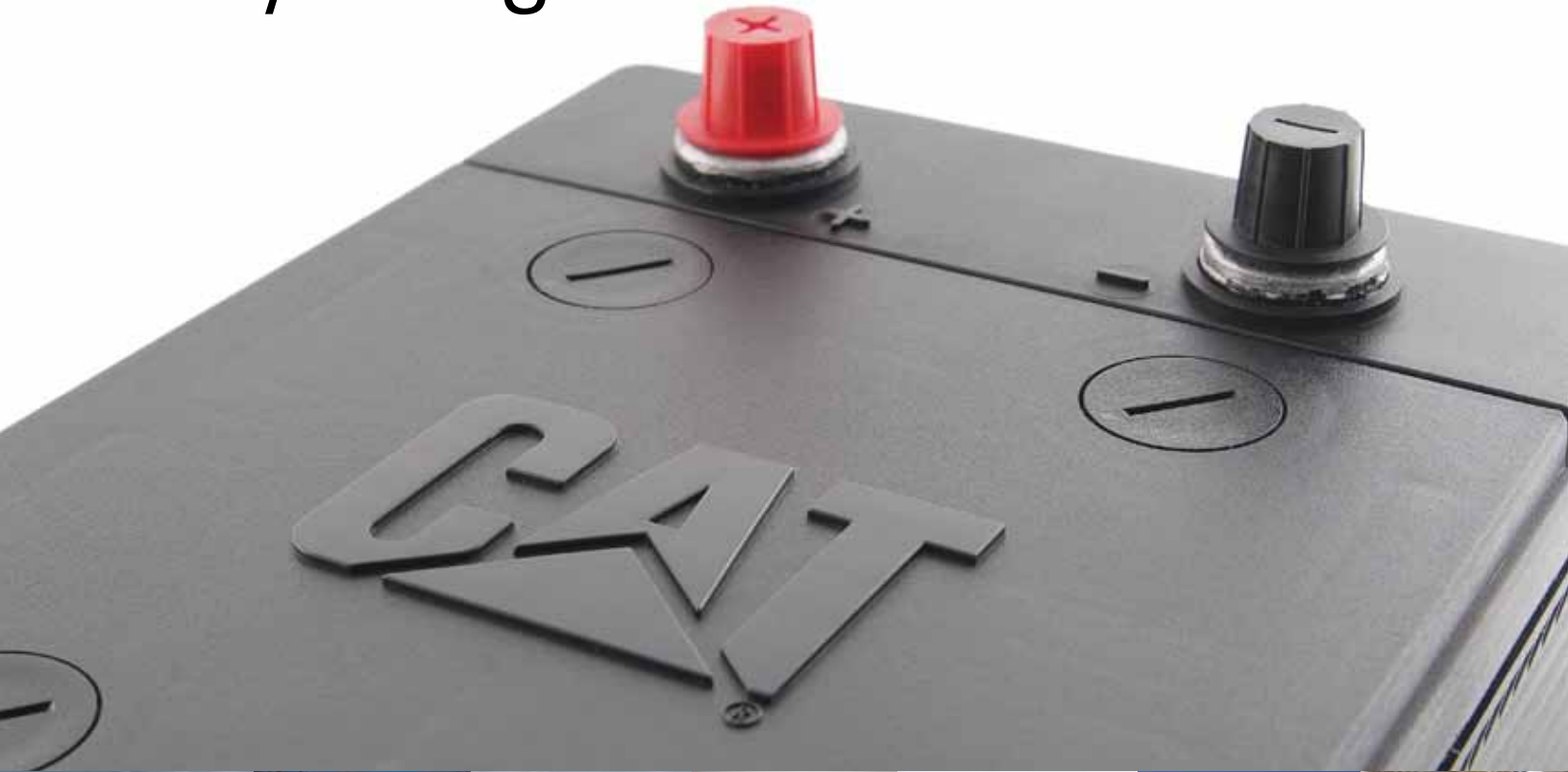


# POWERFUL

by Design



CAT<sup>®</sup> BATTERIES



# POWERFUL, PROVEN PERFORMANCE

Cat® **Premium High Output (PHO)** and **Cat General Service** Batteries are built for your toughest jobs—and the harshest climates. They stand up to intense vibration and deliver dependable starting power in any condition or application.

All Cat Batteries are designed and tested rigorously to Caterpillar specifications—the most stringent in the industry. So you're assured Cat Batteries bring the power and proven performance you need for all your equipment.

## **Quality, Long-Life Batteries for a Wide Range of Applications**

Both Cat Battery lines are offered worldwide in popular Battery Council International (BCI) group sizes for Cat and other manufacturers' equipment. They are available in Maintenance Free Accessible or Maintenance Free designs. A Maintenance Free Accessible battery design has caps for monitoring and maintaining electrolyte fluid levels. This is the key difference between Maintenance Free Accessible and Maintenance Free batteries. They are also available in wet or dry configurations. Although all of the Cat batteries are 'wet cell' or 'flooded' batteries, they can either be wet-charged or dry-charged, meaning the electrolyte solution can be included or excluded in the battery when it is shipped.

## **Highest Performance Ratings in the Industry**

Cat Premium High Output (PHO) Batteries are used in all Cat Equipment and Generator Sets. They are designed with demanding specifications to provide industry leading Cold Cranking Amp (CCA) capability, up to 1500 CCA—and maximum vibration resistance.

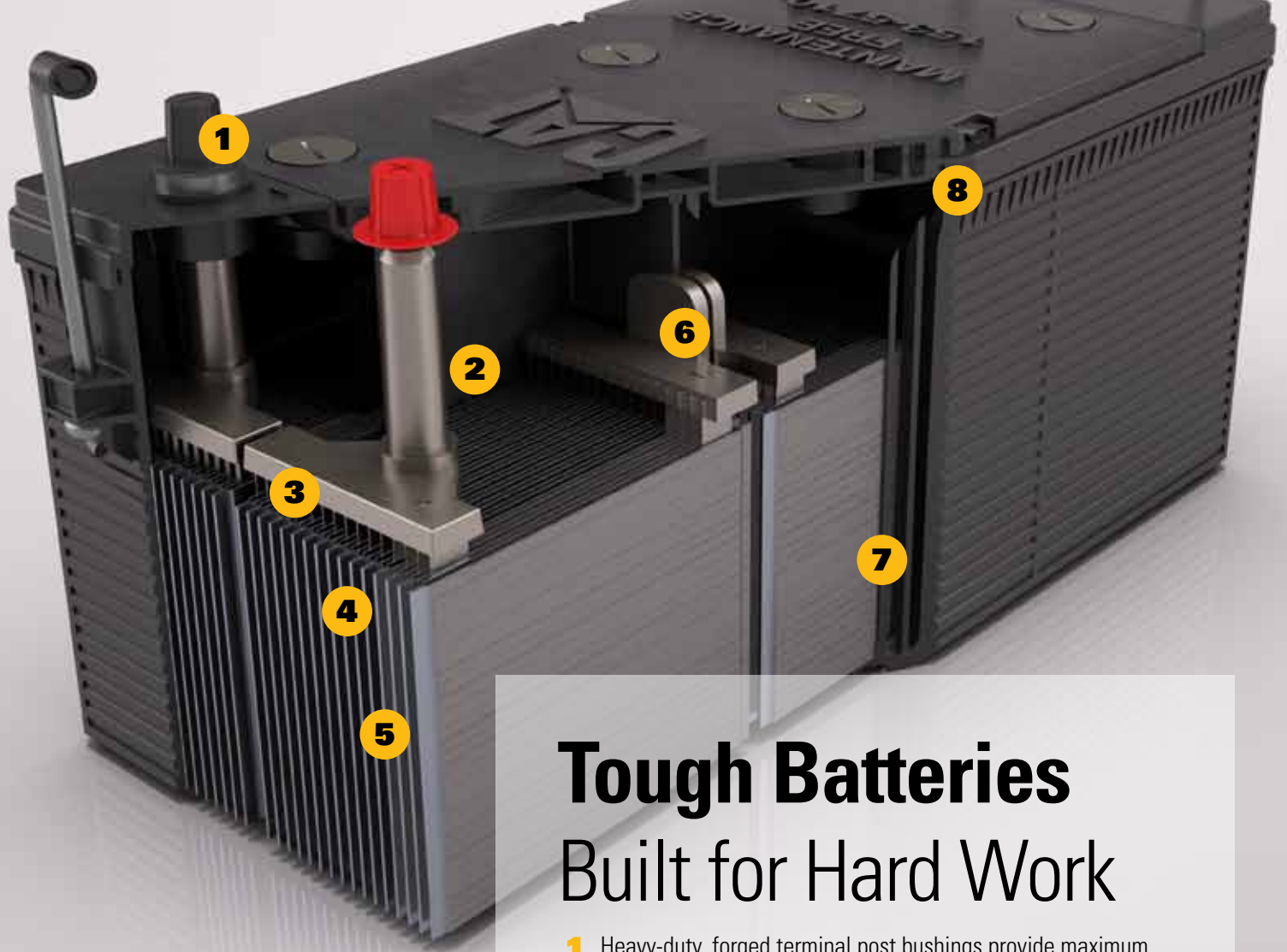
They supply sure starting power and last longer in all climates. Due to their high CCAs and reserve capacities, Cat PHO Batteries have the highest performance ratings in the industry.

- Vibration resistance that's five times the industry standard
- Easier starts because less capacity is used
- Exclusive flat top design of Maintenance Free Accessible PHO Batteries reduces maintenance costs
- Lowest owning and operating costs

## **Ideal for Various Applications**

Cat General Service Batteries provide sure starts, with quality comparable to other top-of-the-line batteries. They are ideal for automotive, light truck, bus, marine, industrial, agricultural, stationary power and recreational usage.

- Deep Cycle and Valve Regulated (VRLA) Gelled or Absorbed Glass Mat (AGM) choices
- Optimum acid/paste combination means better charge acceptance after deep discharge
- Silver calcium grids for high temperature automotive usage
- Commercial batteries feature anchor lock elements for vibration resistance



# Tough Batteries Built for Hard Work

- 1** Heavy-duty, forged terminal post bushings provide maximum strength and resistance to acid seepage.
- 2** Thicker internal posts with extra corrosion resistance provide built-in overcharge protection and higher CCA output.
- 3** Durable positive and negative plates anchored to the container bottom and locked at the top to offer maximum vibration resistance.
- 4** Premium microporous polyethylene separators protect against "shorts" and vibration damage.
- 5** Optimum acid/paste combination resists material shedding and protects against shorts.
- 6** Rugged partition connectors, anchored to resist vibration, shorten the electrical path and maximize starting power.
- 7** Impact-resistant, reinforced case provides extra strength in all temperature extremes, and helps prevent flexing and punctures.
- 8** Manifold vented cover with built-in flame arrestor reduces the possibility of explosion from external sparks.



# PROOF OF PERFORMANCE

## **Cat Premium High Output (PHO)**

Batteries undergo the five most demanding performance tests in the industry. Some competitors perform a few of the tests—but not to the extreme that Caterpillar does—and none of them does them all. Results of these rigorous tests prove that Cat PHO Batteries consistently deliver maximum life and reliable starting power in extreme conditions and applications—over and over again.

## **Maximum resistance to vibration damage**

100-hour Vibration Test lasts over five times longer than the industry standard of 18 hours. Because vibration is the number one reason batteries fail, Cat Batteries must withstand tremendous vibration forces—without suffering mechanical damage, loss of capacity, loss of electrolyte or developing internal/external leaks—and then pass a high rate discharge test.

## **Reliable starting power**

72-hour Deep Discharge/Recharge Cycle Test, run five times to simulate the most demanding field conditions, requires batteries to recover to 25 charging amps within 20 minutes and meet Industry Electrical Performance Standards.

## **Maximum life**

30-Day Complete Discharge Test demands batteries recover to 25 charging amps within 60 minutes, after being completely discharged for 30 days.

## **Reliability in harshest conditions**

SAE J2185 Heavy Duty Life Cycle Test subjects batteries to deeper discharge and charge cycles at extreme temperatures than normally encountered in starting your equipment, vehicles or generator sets.

## **Starting power in extremely cold temperatures**

Cold Soak Test places batteries in sub-freezing water temperatures, and then requires ice-cold batteries to start an equally cold engine.



# CAT BATTERIES— Worldwide Applications

## **Marine Commercial Vessels**

Maintenance Free Accessible Batteries in BCI group sizes 4D, 8D and 31. General Service Line Valve Regulated (VRLA) Gel Batteries. High marine cranking amps and deep cycling capabilities.

## **Marine Pleasure Craft**

Premium High Output Batteries in BCI group 31 sizes. Dual Terminal Deep Cycle Batteries. General Service Line BCI group 24M, 27M and 8V sizes.

## **Automotive, Truck, Bus and RV**

A wide selection of popular BCI group sizes. Maintenance Free Accessible, Severe Service and Deep Cycle models. Application-specific BCI group 31 Truck Batteries.

## **Electric Power Generation**

Premium High Output Maintenance Free Accessible Batteries in BCI group sizes 4D, 8D and 31. High CCA capability. General Service Line Valve Regulated (VRLA) Gel Batteries for UPS or stationary power applications.

## **Commercial and Recreational**

A wide selection of premium batteries in most BCI group sizes for light commercial, recreational, agricultural and industrial applications.

## **Construction and Mining**

Premium High Output Maintenance Free Accessible Batteries in BCI group sizes 4D, 8D and 31. Industry leading CCA and maximum vibration resistance.

# BATTERY MANAGEMENT

## Keeps Equipment Running

A dead battery means equipment down time, and that leads to lost productivity—and reduced profits. No battery will last forever, but using a few simple management and maintenance techniques, you can maximize the service life of your Cat Batteries.

- **Charge batteries slowly—**  
a fast charge risks overheating the battery; boiling out the water and buckling the plates.
- **Store batteries properly—**  
for storage periods of four weeks or more, disconnect battery cables to avoid discharge. In cold weather, remove batteries and store them at the correct, recommended temperatures to avoid freezing.
- **Inspect batteries periodically—**  
damage, corrosion and improper connections can lead to sudden failure.
- **Count on your Cat Dealer—**  
to help you manage battery life to keep them strong and your equipment up and running. Using the Cat Digital Battery Analyzer, your Dealer can assess battery condition and diagnose actual state of health to keep batteries healthy and to avoid sudden failure.





## Cat Battery **RECYCLING PROGRAM**

### **Why Recycle?**

Imagine the environmental damage caused by simply discarding a typical lead-acid battery that contains 18 pounds of lead, two pounds of plastic and a gallon of acid.

Then think about the damage that would be inflicted by discarding 75 million batteries, which is approximately the number of lead-acid batteries available for recycling each year in the United States alone. Recycling is the right thing—the only thing—to do.

### **Protecting the Planet**

The Cat Battery Recycling Program makes discarding spent batteries easy for you, relying on North American Cat Dealers as your trusted source for disposal. You are assured your batteries will be properly handled and virtually 100 percent recycled in a manner that protects the planet—meeting all environmental regulatory standards.

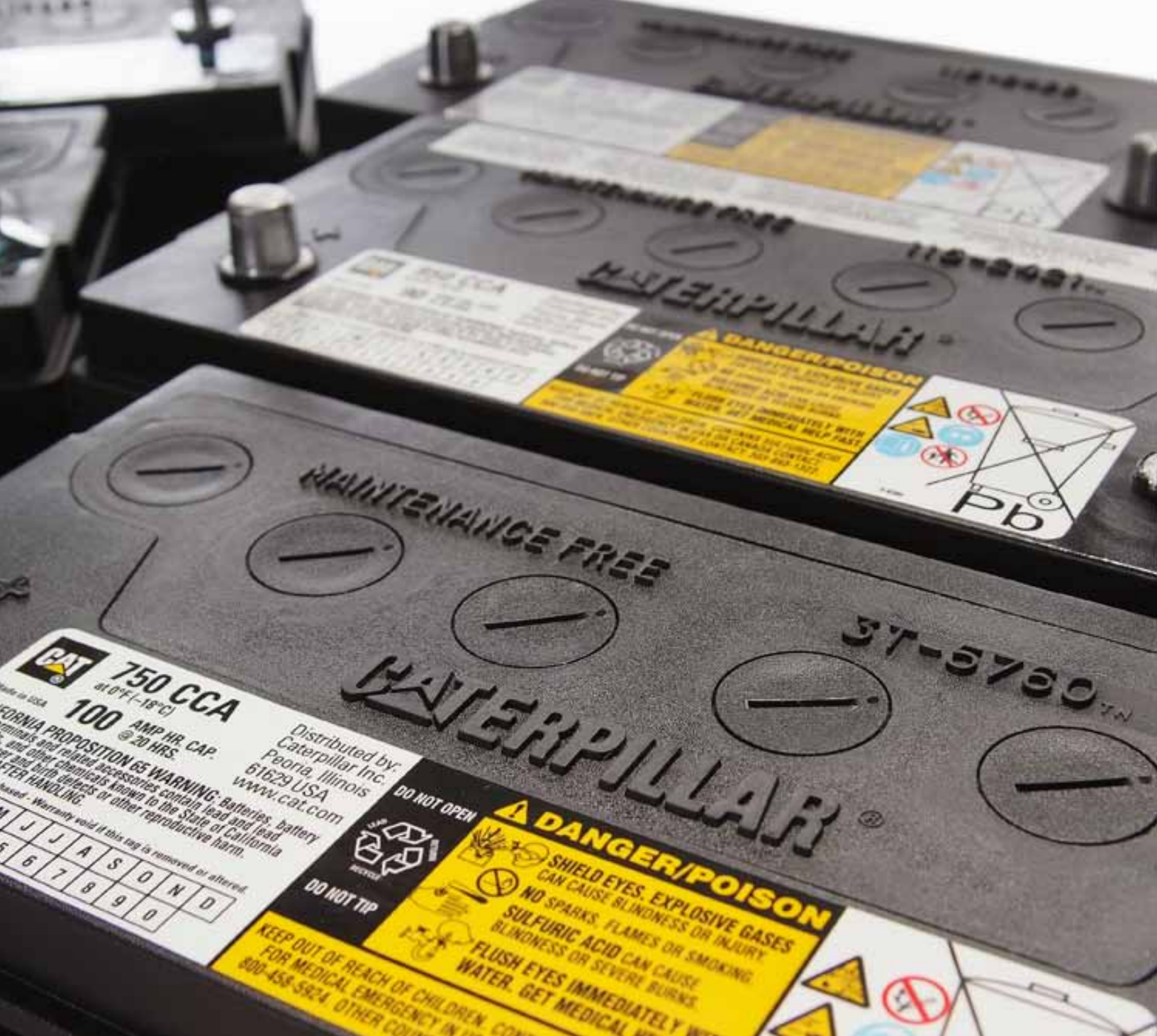
### **Rewards of Recycling Responsibly**

Heavy environmental regulatory standards govern the disposal of lead-acid batteries when their useful service life ends. Beyond simply complying with environmental laws, recycling batteries responsibly through the Cat Battery Recycling Program reaps other rewards.

- Harvests plastic, metal and other core materials for re-use
- Minimizes the consumption of raw materials
- Protects our natural resources
- Creates jobs in the recycling industry

### **Partners for the Planet**

We encourage your active participation in the Cat Battery Recycling Program. Simply bring your lead-acid batteries to your local Cat Dealer, or contact your Dealer to see if pickup is available in your area. Caterpillar and your North American Cat Dealers look forward to partnering with you to recycle your batteries—and protecting our planet.



Talk to your Cat Dealer today to learn more about  
 Cat Batteries and the **Cat Battery Recycling Program**.