

# Funding Request



**To:** Board of Directors  
**From:** Matthew Hoyt, CGCS – Golf & Grounds Superintendent  
**Date:** 1/14/2026

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## Lithium Golf Car Batteries:

Over the past month the lithium battery pack in the Assistant Superintendent cart has continued to degrade. At this time, the cart can slowly climb out of the tunnel and has lost most of its torque. During charging sessions, that battery pack has now continued to fail when taking a nightly charge. The golf and grounds department is recommending full replacement of this single set battery pack with a modular lithium set of 4 Dakota Lithium golf car batteries.

The total investment to reinstate the full operation of the Assistant Superintendent cart is projected not to exceed: NTE: \$4,853 (due to the chance of expiration of the applied coupon)

## Order summary

1 DL+ 48V 135Ah Dual Purpose Golf Cart Battery Set	\$4,880 \$3,996
1 48V 15A LiFePO4 Battery Charger	\$305

Subtotal (after discounts)	\$4,085.95
Coupon: busyroaming	-\$215.05 <a href="#">[Remove]</a>
Shipping	Cost: \$193.55
Tax	\$357.52
Total	\$4,637.02

# DAKOTA LITHIUM+ 12V 135Ah BATTERY



The DL+ 12v 135Ah battery is the pinnacle of energy density and versatility. Combining deep cycle performance with 1,000 CCA engine starting power and even-heat technology, it defies limitations. From starting car engines to powering electronics, it excels in diverse applications. Engineered for rugged conditions, it charges five times faster than traditional batteries, with five times the power and half the weight of lead-acid batteries. With 135Ah capacity in a compact Group 24 case, it's perfect for marine, automotive, and other deep-cycle setups. Backed by an 11-year warranty, it exceeds ABYC standards and meets Mercury Outboard requirements, ensuring reliability and longevity.

## SPECIFICATIONS:

### 1 YEAR WARRANTY

World beating, best in class, eleven year manufacturer defect warranty.

### STORAGE CAPACITY

135 ampere hours (Ah), Dakota Lithium batteries provide consistent power for all 135 amp hours. DL LiFePO4 batteries have a flat voltage curve, which means they have a steady power output as the battery discharges. The power output will not dramatically drop like similar sized SLA batteries. You get all the juice down to the last drop.

### VOLTAGE

12.8V (Dakota Lithium 12V batteries can be used in series for up to 48V systems)

### ENGINE STARTING POWER

Lithium battery equivalent to 1,000 Cold Cranking Amps (CCA) of lead acid battery engine starting power. Suitable for marine, automotive, and other applications. 1/2 the weight of a normal car battery.

### SIZE

9.5" L x 6.9" W x 8.22" H (242.5mm x 176mm x 209mm)  
Group 24 equivalent

### GROUP SIZE 24 / 34 / GC2

Group 24 / 34 compatible physical dimensions & 24F terminal orientation. Cranking power (CCA rating) & usable deep cycle capacity is much higher than a lead-acid battery of the same group size. Group Size GC2 compatible.

### ENERGY

1620 Watt-hours (Wh)

### TERMINALS

F12 terminals (posts that screw in) with M8 size bolts. Includes a terminal adapter kit with automotive & marine posts that screw into the M8 bolt terminal, and M8 brass terminal bolts. Easy to adapt to different connection needs. (Max torque 15 ft. lbs.) (Max 5 ft. lbs. on terminal post adapters)

### WEIGHT

27.2 lbs (12.3 Kg). 65% lighter than a SLA or lead battery.

### LIFECYCLES (BATTERY LIFESPAN)

Up to 80% capacity for 5,000 cycles in recommended conditions. The typical automotive SLA has 500 cycles. Dakota Lithium batteries last so long that the price per use is a fraction of traditional batteries.

### OPERATING TEMPERATURE

Ideal for rugged & harsh environments. Much better than SLA or other lithium batteries. -20°F min, +150°F max optimal operating temps (battery performs well down to -20°F). Internal even-heat technology allows for charging below 32°F. BMS high temp cut off at 167°F / 75°C.

### DISCHARGE

270A max continuous discharge, 1000A max 2 second pulse, 900A max 5 sec pulse. The flat discharge voltage curve provides a 75% bigger capacity than a 135Ah SLA battery with the same CCA rating.

### CHARGE

Recommend for longest life 70A or less (.5C). Max continuous 135A (1C). 14.4 V recommended, 15 V max. BMS protection from over charging will cut off at 15V. Included is a free 12V 10 Amp (A) LiFePO4 compatible charger that charges at the recommended 14.4 Volts.

### CHARGE VIA ALTERNATOR

Drop in replacement for lead acid and AGM starter batteries for vehicles and outboard motors. NOTE: THE DL+ 135Ah IS LIMITED TO AN ALTERNATOR CHARGING PROFILE OF 135 AMPS OR LESS.

### INCLUDES ACTIVE BMS PROTECTION

Contains a high discharge capable circuit that handles cell balancing, low voltage cutoff (10V) preventing over discharge, high voltage cutoff (15V) preventing over charging, short circuit protection and temperature protection for increased performance and longer life.

### INTERNAL EVEN-HEAT TECHNOLOGY

Increases performance in extreme cold. When charging the battery in temperatures below 0°C/32°F DL's internal heating element will warm the cells to 0°C/32°F. This increases the lifespan, performance, and efficiency of the battery.

### CERTIFICATIONS

All DL batteries are UN 38 certified. Dakota Lithium's cells are UL1642 certified and have been tested per IEC62133 standards. Meets all US & International regulations for air, ground, train, & marine transport.

### ISO:9001 QUALITY CONTROL CERTIFIED

Engineering, design, quality control and manufacturing

### DUAL PURPOSE USE

Multi-purpose use as a deep cycle battery and/or as a starter battery for starting gasoline engines.

### SUITABLE FOR:

- STARTING CAR AND TRUCK ENGINES
- DEEP CYCLE APPLICATIONS
- TROLLING MOTORS #FISHLONGER
- OVERLAND & TRUCK BUILDS
- VANLIFE & RV BATTERY UPGRADE
- CAR AUDIO
- GOLF CARTS & ELECTRIC VEHICLES
- LINK IN SERIES FOR 24V, 36V, 48V
- INDUSTRIAL BATTERIES (BULK PRICING)
- LiFePO4 REPLACEMENT FOR SLA 12V
- FISH FIDERS, FLASHERS, & BOATING ELECTRONICS
- RECREATIONAL VEHICLES, CAMPER, AND TRAILERS
- OFF-GRID HOMES
- MERCURY OUTBOARD MOTORS

## Reserve Component Detail:

### Heritage Palms Homeowners Association Component Detail Directed Cash Flow Calculation Method; Sorted By Category

#### Golf Maint Equip - Cart, Asst Superintendent

Category	090 Golf Course	Quantity	1 cart
		Unit Cost	\$23,870.25
		% of Replacement	100.00%
		Current Cost	\$23,870.25
		Future Cost	\$24,586.36
Placed In Service	03/2019		
Useful Life	6		
Adjustment	+3	Assigned Reserves at FYB	\$14,635.92
Remaining Life	2	Monthly Member Contribution	\$121.81
Replacement Year	2027-28	Monthly Interest Contribution	\$24.73
		Total Monthly Contribution	\$146.55

The association rebuilt the Assistant Superintendent cart during 2018 with lithium batteries, new suspension, wheels and upholstery for a total cost of \$9,000. The association replaced this cart in March 2019 for an unknown total cost. ~~The association replaced the lithium batteries in this cart during 2022.~~

The remaining life of this component has been extended at the request of the client.