

Delphi Freedom® Heavy-Duty Battery — North America

Delphi is a technology leader in energy storage chemistries, providing customers with systems capabilities, global engineering presence, and expertise in energy storage and electrical interfaces. Beyond the standard energy management functions of starting, lighting, and ignition, entirely new applications are emerging that demand improved fuel efficiency, lower environmental impact, and increased vehicle utility. Through ongoing development within its Freedom® family of maintenance-free batteries, Delphi is positioned to help original equipment manufacturers meet changing market needs for battery technology.

Description – Delphi Freedom® heavy-duty batteries are designed to withstand the punishment of commercial applications. With center cast-on plate straps and anchored plates, they offer excellent resistance to vibration damage. In fact, they exceed industry vibration standards.

Delphi's maintenance-free lead-calcium design resists corrosion, overcharging, gassing, water usage, self-discharge, and thermal runaway. When used with sealed connectors, the studded terminal design also reduces corrosion of cables and terminals, eliminating the need for regular cleaning. Models are available to meet specific application requirements for high cycling capability, deep cycling capability, and cold cranking amperage.



Typical Application – Freedom® heavy-duty batteries are ideal for heavy-duty truck, transit bus, construction, and agricultural applications.

Performance Advantages – Delphi is the largest global original equipment battery supplier to heavy-duty and automotive vehicle manufacturers, and Freedom® heavy-duty batteries are manufactured to meet or exceed specifications.

Patented flex ribs (for element retention) and computer-aided case design provide excellent vibration resistance for commercial vehicle applications. Delphi continues to incorporate incremental design improvements and develop technologies to provide

DELPHI

www.delphi.com

Delphi Energy & Chassis
5820 Delphi Drive
Building D
Troy, Michigan 48098-2815 U.S.A.
Tel: [1] 248.813.4707 Fax: [1] 248.813.4711

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Features	Benefits
Factory-sealed, maintenance-free	<ul style="list-style-type: none"> – Battery never needs water or service – Lower electrolyte loss, ensuring longer life – Minimizes gassing and acid spewing
Wrought lead-calcium grid design with plastic bottom border	<ul style="list-style-type: none"> – Resists overcharge, heat, and thermal runaway – Reduces self-discharge and permits storage for one year or more
No antimony in plates	
Built-in hydrometer	<ul style="list-style-type: none"> – Instant state-of-charge indication
Flat-top design	<ul style="list-style-type: none"> – Improved mounting flexibility
Center cast-on plate straps	<ul style="list-style-type: none"> – Excellent vibration resistance
Hot melt anchored on top of elements	
Envelope separators encapsulating the plates	<ul style="list-style-type: none"> – Prevents treeing and internal shorting
Exclusive liquid/gas separator	<ul style="list-style-type: none"> – Prevents electrolyte loss by collecting liquid and returning to main reservoir
Rugged polypropylene case	<ul style="list-style-type: none"> – Outside case bottom waffled to help prevent puncture – Cover is factory heat-sealed for added strength – Flex-rib design for improved vibration characteristics
Built-in flame arrestor	<ul style="list-style-type: none"> – Prevents flame entry from outside source

longer lasting, more durable batteries that meet the needs of increasingly sophisticated heavy-duty electrical systems.

Delphi Freedom® Heavy-Duty Battery

Applications – All Freedom® heavy-duty batteries are 12 volt. They all have top retainer mounting and the same physical dimensions: 13.0 in. (330.2 mm) L x 6.8 in. (172.0 mm) W x 9.5 in. (240.3 mm) H. Maximum ambient temperatures are 125°F (52°C) continuous and 167°F (75°C) intermittent.

Delphi Freedom® BU-31-950 Series

The BU-31-950 is rated at 950 cold cranking amps (CCAs). A three-battery complement satisfies the cranking requirements for diesels operating in extremely cold climates and where battery mounting space is limited. A two-battery system is suitable for high-mileage or high-hour applications where cycling is limited. The BU-31-950 series in a four-hour battery complement provides 3,800 CCAs and meets most starting requirements for large diesel and gasoline engines in heavy-duty service.

Delphi Freedom® BU-31-750 Series

The BU-31-750 is rated at 750 CCAs. A three-battery complement satisfies most engine starting requirements where battery mounting area is limited. And a two-battery complement is suitable for mid-range diesel trucks with limited cycling and where less starting power is required.

Delphi Freedom® BU-31HC-700 Series

The BU-31HC-700 high-cycle, rated at 700 CCAs, was designed to achieve maximum performance and durability in commercial applications. It optimizes the combination of cranking power, cycling capability, vibration resistance, and system capacity, providing reliability and economical operation. The BU-31HC-700's unique characteristics make it the ideal choice for line-haul truck, coach, off-road, emergency vehicle, and gasoline-powered pickup and delivery applications.

Delphi Freedom® BU-31-600 Series

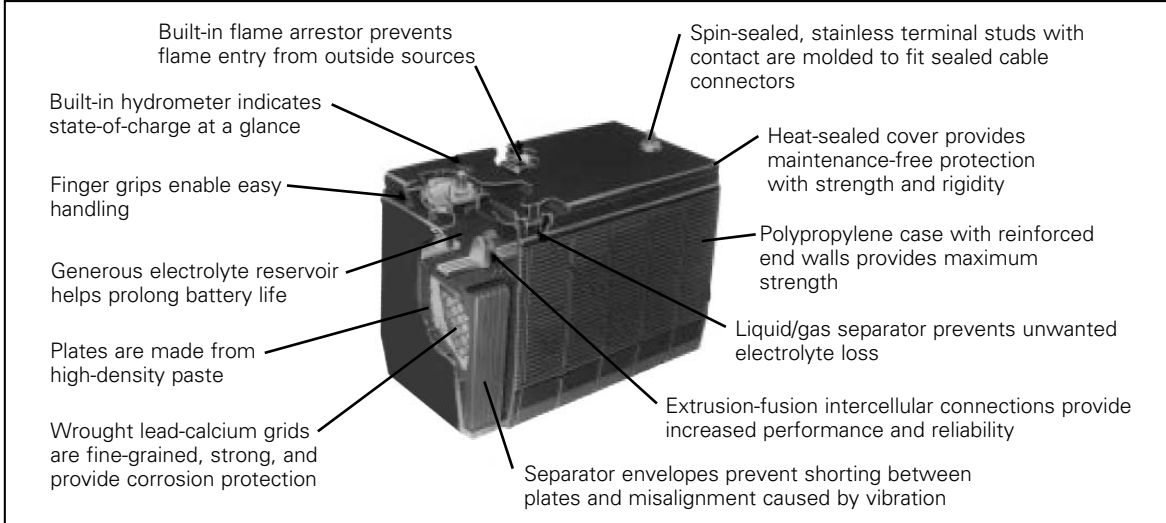
Rated at 600 CCAs, the BU-31-600 in a four-battery complement provides 2,400 CCAs and meets most starting requirements for large diesel and gasoline engines in heavy-duty service.

Delphi Freedom® BU-31DC-650

Rated at 650 CCAs, the BU-31DC-650 deep-cycle is specifically designed for severe cycling applications such as car carriers, recreational vehicles, refrigerated trailers, commercial-marine, coaches, and school buses.

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Battery Specifications

Part Number	BCI Group Size	Performance		Top Terminal Type
		CCA, Amps @ 0°F	RC, Minutes @ 80°F	
BU-31-600S	31	600	140	Bolt
BU-31-600P	31	600	140	Post
BU-31HC-700S	31	700	180	Bolt
BU-31HC-700P	31	700	180	Post
BU-31-750S	31	750	160	Bolt
BU-31-750P	31	750	160	Post
BU-31-950S	31	950	170	Bolt
BU-31-950P	31	950	170	Post
BU-31DC-650S	31	650	165	Bolt
BU-31SP-115S	31	600	115AH	Bolt