



**Battery Model:** D31T  
**Part Number:** 8050-160  
**Nominal Voltage:** 12 volts  
**NSN:** 6140 01 457 5469  
**Description:** High power, dual purpose engine start and deep cycle, sealed lead acid battery

**CAGE:** OUIJ55

### Physical Characteristics:

**Plate Design:** High purity lead-tin alloy. Wound cell configuration utilizing proprietary *SPIRALCELL*<sup>®</sup> technology.  
**Electrolyte:** Sulfuric acid, H<sub>2</sub>SO<sub>4</sub>  
**Case:** Polypropylene  
**Color:** Case: Light Gray  
 Cover: "OPTIMA" Yellow  
**Group Size:** BCI: 31

	Standard	Metric
<b>Length:</b>	12.774"	324.46 mm
<b>Width:</b>	6.529"	165.84 mm
<b>Height:</b>	9.355"	237.62 mm (Height at the top of terminals)
<b>Weight:</b>	59.8 lb	27.1 kg

**Terminal Configuration:** 3/8" threaded studs

### Performance Data:

**Open Circuit Voltage (Fully charged):** 13.1 volts  
**Internal Resistance (Fully charged):** .0025 ohms  
**Capacity:** 75 Ah (C/20)      66 Ah (C/1)  
**Reserve Capacity:** BCI: 155 minutes  
 (25 amp discharge, 80°F (26.7°C), to 10.5 volts cut-off)  
**Self-Discharge:** ~1% per month at 25C

### Power:

**CCA (BCI 0°F):** 900 amps  
**MCA (BCI 32°F):** 1125 amps

### Recommended Charging Information:

<b>Alternator</b>	14.2 to 14.8 volts. When possible use an alternator/regulator with temperature compensation. It's best to measure temperature at the battery location.
<b>Battery Charger</b>	Constant voltage type charger. Max charge voltage regulated between 14.4 to 15.0 volts. Typical charge current 10 to 20 amps. Higher is OK with proper voltage regulation. Always monitor battery during charging for signs of overheating.

For questions or unique application requirements contact the Optima Military Rep group:  
[www.milbatteries.com](http://www.milbatteries.com)

Recharge time will vary according to temperature and charger characteristics. When using Constant Voltage chargers, amperage will taper down as the battery becomes recharged. When amperage drops below 1 amp, the battery will be close to a full state of charge.

(All charge recommendations assume an average room temperature of 77°F (25°C).

Always wear safety glasses when working with batteries.

Always use a voltage regulated battery charger with limits set to the above ratings. Overcharging can cause the safety valves to open and battery gases to escape, causing premature end of life. These gases are flammable! You cannot replace water in sealed batteries that have been overcharged. Any battery that becomes very hot while charging should be disconnected immediately.

Not fully charging a battery can result in poor performance and a reduction in capacity.

### **Shipping and Transportation Information:**

OPTIMA batteries can be shipped by AIR. The battery is nonspillable and is tested according to ICAO Technical Instructions DOC. 9284-AN/905 to meet the requirements of Packing Instructions No. 806 and is classified as non-regulated by IATA Special Provision A-48 and A-67 for UN2800. Terminals must be protected from short circuit.

Optima Factory Representatives For  
US Military Applications:



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