



# TRANSPORTATION

**RELIABLE, DURABLE  
BATTERIES FROM THE  
NAME YOU TRUST**



# MOTIVE

## DEEP-CYCLE AGM BATTERIES

Not all batteries are the same. When it comes to heavy duty trucking and commercial vehicle applications, choosing the right battery can make all the difference. With nearly 100 years of powering business and industry, Trojan has grown to be the world's leading supplier of deep-cycle batteries, and the Trojan name is synonymous with reliability, long-life, and high-performance.

Trojan deep-cycle batteries have provided exceptional uptime, lower cost of ownership, enhanced life and unsurpassed durability that the trucking industry depends on to get the job done.

The Trojan Motive OverDrive AGM 31™ battery is a true deep-cycle battery, engineered to withstand the rigor and abuse of deep discharge applications. Our Motive OverDrive AGM 31 incorporates a series of design features essential to deliver the energy storage required for heavy-duty starting, creature comforts, medical devices such as CPAP, electric auxiliary power unit (APU) and liftgate applications for long durations.

Selecting the wrong type of battery will cause disappointing performance, shortened lifetime and wasted money. Most flooded starting and traditional AGM batteries are best suited for intermittent use and not deep-cycle applications. The Motive OverDrive AGM 31 delivers high power cycling for extended periods of time, with the ability to deliver 730 cold cranking amps.



HEAVY-DUTY  
COMMERCIAL VEHICLE  
AND REFRIGERATION  
UNITS



LIFTGATES

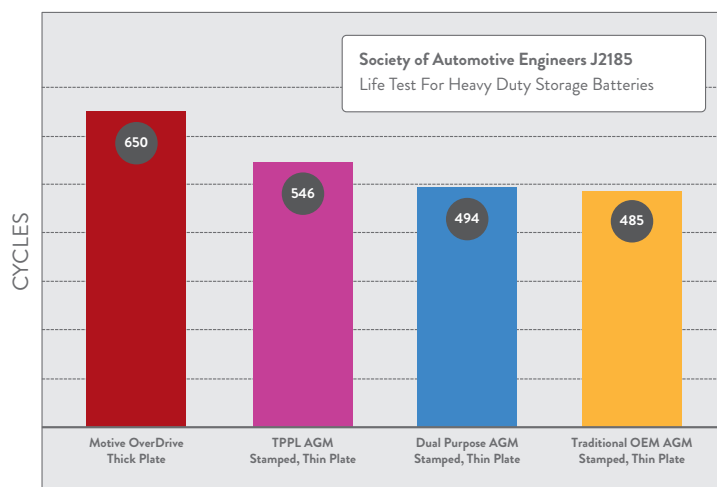


ELECTRIC APU'S

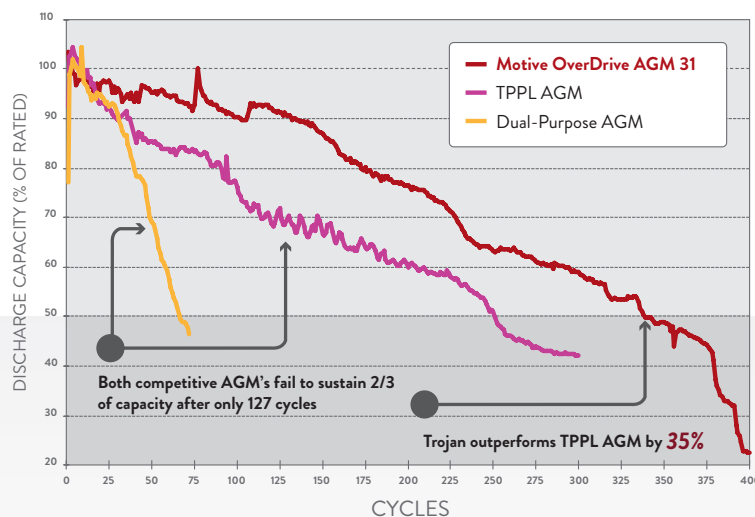
### BATTERY APPLICATION GUIDE

	DAYCAB	DAYCAB/ HIGHWAY TRACTOR	HIGHWAY TRACTOR W/ APU	TRAILER LIFTGATE	REFRIGERATION UNIT
ENGINE STARTING	⚡	⚡	⚡	⚡	⚡
# BATTERIES (STARTING)	2 - 4	2 - 4	4		1
# BATTERIES (AUXILIARY)				2 - 3	
HOTEL LOADS (INVERTER, ETC.)		⚡	⚡		
ELECTRIC APU			⚡		
MINIMUM ALTERNATOR SIZE	160 AMP	160 AMP	240 AMP	200 AMP	65 AMP
TRUCK BATTERY	Motive OverDrive	Motive OverDrive	Motive OverDrive		
AUXILIARY BATTERY			Motive OverDrive	Motive OverDrive	Motive OverDrive

### SAE J2185 PERFORMANCE



### BCIS - 06 CYCLE LIFE



## 1 ROBUST PLATE CONSTRUCTION

Trojan's Motive OverDrive AGM 31 is designed with a thick plate construction, which is more robust and more resistant to the stresses encountered during deep discharge cycling. During repeated discharge and recharge, active materials expand and contract causing erosion of the active material. The robust plate structure prevents erosion of the active material resulting in longer cycle life.

## 2 HIGH DENSITY PASTE

The Motive OverDrive AGM 31 features a high-density paste formulation that optimizes the grid's current flow providing exceptional battery performance. This high-density paste optimizes porosity development utilizing the active material more effectively resulting in longer life.

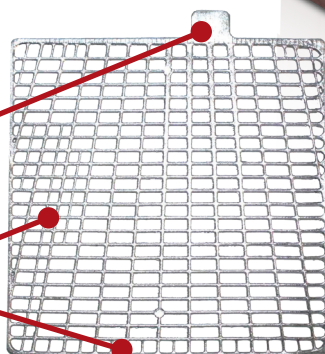
## 3 HEAVY-DUTY CORROSION RESISTANT GRID – CAST NOT STAMPED

Unique to Trojan's Motive OverDrive AGM 31 is the sunburst array grid design that is cast not stamped, which ensures that no hairline fractures develop during the manufacturing process that will inhibit the performance of the battery. This grid design features large cross sectional areas that securely support the active material making the battery highly resistant to corrosion – a typical failure mode in starting batteries. It also ensures peak starting performance by guiding all of the battery's power to its focal point of charge resulting in 730 cold cranking amps.

### TROJAN'S THICK CAST GRID

Energy is channeled to/from point of contact for maximum power, maximum recharge efficiency and low resistance

Increased structure for superior vibration handling



## 4 EXTREME TEMPERATURE TOLERANCE

The OverDrive AGM 31 battery has the ability to perform in extreme climates such as the frigid Alaska terrain to the ultra-high temperatures of the Southwest. It can withstand temperatures up to 160°F – delivering up to 40% greater heat tolerance over the competitions' AGM technology.

## 5 RUGGED POLYPROPYLENE CASE

For heavy-duty truck applications, increased battery protection is key. Trojan's Motive OverDrive AGM 31 battery is packaged in a rugged polypropylene case, rigid enough to protect the internal components from damage caused by shock and vibration. Resistant to oil, gasoline and other road chemicals, Trojan's polypropylene case can withstand the rigorous abuse over-the-road truck applications can cause.



BCI GROUP SIZE	TYPE	VOLTAGE	CAPACITY <sup>A</sup> MINUTES @25 Amps	CRANKING PERFORMANCE		CAPACITY <sup>B</sup> Amp-Hours (AH)		TERMINAL TYPE	DIMENSIONS <sup>C</sup> INCHES (MM)			WEIGHT LBS. (kg)	WARRANTY <sup>G</sup>
				C.C.A. <sup>D</sup> @0°F	C.A. <sup>E</sup> @32°F	5-HR RATE	20-HR RATE		LENGTH	WIDTH	HEIGHT <sup>F</sup>		
31	OVERDRIVE AGM 31	12 VOLT	180	730	875	84	102	3/8 Stud	13.42 (341)	6.81 (173)	9.21 (234)	69 (31)	24 Months

A. The number of minutes a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.

B. The amount of amp-hours (Ah) a battery can deliver when discharged at a constant rate at 80°F (27°C) for the 20-Hour and 86°F (30°C) for the 5-Hour rate and maintain a voltage above 1.75 V/cell. Capacities are based on nominal performance.

C. Dimensions are based on nominal size. Dimensions may vary depending on type of handle or terminal. Batteries to be mounted with .5 inches (12.7mm) spacing minimum.

D. C.C.A. (Cold Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 0°F at a voltage above 1.2 V/cell.

E. C.A. (Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 32°F at a voltage above 1.2 V/cell. This is sometimes referred to as marine cranking amps @ 32°F or M.C.A. @ 32°F.

F. Dimensions taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal.

G. Visit [www.trojanbattery.com](http://www.trojanbattery.com) for full details on limited warranty.

# LEADING THE CHARGE YESTERDAY, TODAY, AND TOMORROW.

You don't become the world's leading manufacturer of deep-cycle batteries by following others or being satisfied with the status quo. At Trojan, we have a long-established reputation for leadership, innovation, and a commitment to unsurpassed quality in every product we design and manufacture.

- ◆ Trojan made a name for itself in the golf car battery industry starting in 1952. Today we are a leader in deep-cycle markets with applications for mobile elevated work platforms, transportation, renewable energy, floor machines, golf, marine, and recreational vehicles.
- ◆ We believe in the power of research and development and dedicate significant resources to bringing advanced battery technologies to market.
- ◆ Quality is at the heart of everything we do, and every battery we design and manufacture is subjected to the most rigorous industry testing procedures.

## ENVIRONMENTAL STEWARDSHIP

We are proactive supporters of environmental sustainability. Trojan's environmental stewardship focuses on clean energy initiatives and recycling programs.

- ◆ Trojan batteries are 99% recyclable. The container plastic, battery lead and electrolyte from old deep-cycle flooded, AGM, and Gel batteries can be recycled to produce new deep-cycle batteries.

Your Local Trojan Battery Representative:



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Please check the Trojan Battery website ([www.trojanbattery.com](http://www.trojanbattery.com)) for the most up-to-date information.

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