

# WHITE PAPER

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Sponsored by InterMotive Vehicle Controls

## Cutting Idle Costs: A Smarter Approach to Fuel, Maintenance and Compliance



# Idle Management



## Executive Overview

InterMotive's EcoStar™ III Idle Management System is engineered to drastically reduce unnecessary engine idling in commercial and fleet vehicles.

By automatically shutting down the engine during extended idle periods—while maintaining power to critical vehicle systems—EcoStar™ III delivers measurable fuel savings, operational cost reductions and compliance with anti-idling regulations across North America.

This white paper outlines the system's functionality, quantifies fuel and dollar savings and highlights how EcoStar™ III supports fleets in meeting increasingly strict anti idle laws.



## The Cost of Idling

Unnecessary idling is a major source of wasted fuel and avoidable emissions in fleet operations.

- A typical gasoline or diesel engine burns 0.6–1.0 gallons of fuel per hour while idling.<sup>1</sup>
- For a fleet vehicle idling 2 hours per day, this equates to 300–500 gallons per year.
- At an average fuel cost of \$4.00 per gallon, annual idle-related fuel waste can exceed \$1,200–\$2,000 per vehicle.

Across a fleet of 50 vehicles, idle waste can easily surpass **\$100,000 annually**.

EcoStar™ III directly targets this loss by eliminating unnecessary idle time without compromising vehicle functionality.

<sup>1</sup> See [Energy.gov](http://Energy.gov)

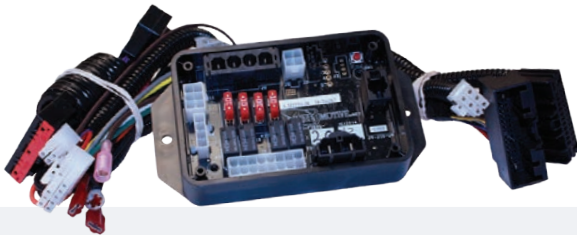
## How EcoStar™ III Works

EcoStar™ III is an intelligent, plug-and-play idle management system that integrates with OEM vehicle networks. It automatically shuts down the engine when preset conditions are met and restarts it only when necessary.

### KEY CAPABILITIES

- **Automatic engine shutdown** when idle thresholds are exceeded.
- **Cab comfort preservation** through the chassis HVAC.
- **Battery protection** with voltage monitoring and auto restart.
- **Customizable parameters** to match fleet duty cycles.
- **Seamless OEM integration** using CAN based communication.
- **Theft prevention** by functioning with the key out of the ignition and the vehicle locked in Park.

The system ensures operators maintain full access to lighting, HVAC, radios and safety systems—without burning excess fuel.



### REAL WORLD EXAMPLE

A national fleet that provides armored transportation services reported saving \$275 per month in fuel costs alone **on a single vehicle**.

Annualized, that is a **fuel savings of \$3,300 per year**. This result has led them to a broader roll-out of EcoStar III in their fleet.

## Fuel and Dollar Savings

EcoStar™ III reduces idle time **by up to 70%**, depending on duty cycle and system settings.

### EXAMPLE SAVINGS MODEL

Using these calculations based on a typical mid-sized commercial fleet vehicle:

- 2 hours of idle per day
- 0.8 gallons per hour consumption
- \$4.00 per gallon fuel cost
- 60% idle reduction with EcoStar™ III
- Vehicle operates 252 days a year

### ANNUAL SAVINGS PER VEHICLE

- Idle hours eliminated: **302 hours**
- Fuel saved: **241 gallons**
- Dollar savings: **\$964 per vehicle per year** (just for fuel alone)
- Add in savings for:
  - Reduced oil change intervals
  - Longer engine life
  - Lost revenue for down time for maintenance
  - Potential declined warranty coverage based on engine hours

### FLEET-LEVEL IMPACT (50 VEHICLES)

- Fuel saved: **12,050 gallons annually**
- Cost savings: **\$48,200 annually**
- CO<sub>2</sub> reduction: **~228,950 lbs. per year**<sup>2</sup>

These savings compound over the vehicle's service life, often delivering full ROI within 12–18 months.

**Over a 7-year service life, total savings for a fleet of 50 vehicles exceeds \$500,000.**

<sup>2</sup> Each gallon of diesel fuel produces 22 lbs. of carbon dioxide; see U.S. Energy Information Administration

## Compliance With Anti Idle Laws

Anti-idling regulations are expanding across the U.S. and Canada. Many states and municipalities enforce:

- One to 5-minute idle limits
- Fines ranging from \$100 to \$25,000 depending on jurisdiction
- Strict enforcement for commercial vehicles and public fleets

The American Transportation Research Institute publishes a Compendium of Idling Regulations for states and municipalities which includes their laws and fines; visit [www.Truckingresearch.org](http://www.Truckingresearch.org).

### EcoStar™ III helps fleets maintain compliance by:

- Automatically preventing idling beyond legal thresholds
- Providing configurable timers to match local regulations
- Reducing risk of citations and associated down-time

### REGULATORY EXAMPLES

- California: 5-minute limit for most commercial vehicles
- New York City: \$350–\$2,000 fines for violations
- Colorado, Massachusetts, New Jersey: strict state wide idle limits

With EcoStar™ III, fleets can confidently operate across jurisdictions without risking penalties.



## Operational and Environmental Benefits

Beyond direct fuel savings, EcoStar™ III delivers broader value:

- **Reduced engine wear:** Less idle time means longer engine life and lower maintenance costs.
- **Lower emissions:** Significant reductions in CO<sub>2</sub>, NOx and particulate matter.
- **Improved driver behavior:** Automated control removes guesswork and inconsistency.
- **Enhanced sustainability reporting:** Quantifiable reductions support ESG goals.

## Conclusion

InterMotive's EcoStar™ III Idle Management System provides a proven, cost effective solution for fleets seeking to reduce fuel waste, lower operating costs and comply with anti idling regulations.

With rapid ROI, seamless integration and measurable environmental benefits, EcoStar™ III is a strategic investment for modern fleet efficiency.



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