



Saving fuel and the environment

Proven reliable and efficient

Eaton hybrid power systems are sold all around the world and have accumulated more 200 million miles of road-tested service and contributed to the saving of more than 8 million gallons of fuel and reducing more than 80,000 tons of harmful emissions.

Eaton is a global leader in the development and manufacturing of complete hybrid power systems for commercial vehicles. Our hybrid systems help cities and businesses to run cleaner, greener, more responsible commercial fleets.

With nearly one third of all fuel being consumed by commercial vehicles, making the transition to Eaton's hybrid power system means cities and businesses can significantly reduce the amount of fuel they consume and emission they produce while also reducing their overall fleet operating costs. It's a decision that's as economical as it is ecological.

A hybrid is defined as a vehicle that uses two or more distinct power sources to move. To create a hybrid commercial vehicle, Eaton combines a vehicle's traditional internal combustion engine with an electric motor or a hydraulic pump to move the vehicle forward and then through regenerative braking the system recharges itself.

Eaton's hybrid power systems provide their greatest value in commercial vehicles that burn tremendous amounts of fuel by stopping and starting and trucks and buses that idle at work sites to run accessories or tools.



Powering Business Worldwide

Eaton Corporation is a diversified power management company ranked among the largest Fortune 500 companies. Eaton is a global leader in electrical components and systems for power quality, distribution and control; hydraulics components, systems and services for industrial and mobile equipment; aerospace fuel, hydraulics and pneumatic systems for commercial and military use; and truck and automotive drivetrain and powertrain systems for performance, fuel economy and safety. Eaton has approximately 73,000 employees and sells products to customers in more than 150 countries. www.eaton.com

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Medium-Duty Hybrid Electric Vehicle (HEV) & Hydraulic Launch Assist (HLA) Systems

Application & Value	Improved Fuel Economy (estimated annual fuel savings per vehicle)*	ePTO (Electronic Power Takeoff)	Engine Off at Stop	Hill Start Assist	Shiftable Park	DC to DC	Low Profile Shifter	Brake savings	Annual Emissions Reduction (Carbon and CO2)
City Delivery – Low Profile	Up to 43%								Up to 20,861 lbs; 9,462 kg
City Delivery	14%-37%								Up to 37,473 lbs; 16,997 kg
Refuse (HLA)	Up to 1500 gal; 5678 ltr							Up to 300%	
Utility	Up to 1360 gal; 5148 ltr								
Utility with ePTO**	Up to 1360 gal; 5148 ltr								
Tractor	14%-37%								
Passenger Transport	Up to 30%								
Passenger School Bus	Up to 30%								

*Dependent on duty cycle, driver behavior, weight and operating conditions.

**Combines both drive and worksite fuel savings. Also dependent on duty cycle, driver behavior, weight and operating conditions.

Shading indicates availability.

Solutions for multiple applications

We offer the world's most complete line-up of hybrid power systems for commercial vehicle applications, and have extensive knowledge of electric hybrid, plug-in electric hybrid and hydraulic hybrid power systems.

- City Transit, Shuttle and School Buses**

Buses are the world's people movers. They operate round-the-clock in nearly every city and every country in the world. Their frequent start-and-stop cycles and need to keep passengers safe and comfortable even when not moving, make them a good choice for hybrid.

- City Delivery/Pick-Up & Delivery**

Delivery trucks come in many shapes and sizes based on their intended use but they all have frequent start-and-stop duty cycles which make them an ideal hybrid application. Add in our engine-off at idle feature and three-phase auxiliary power generator to a refrigerated delivery vehicles and fuel consumption and emissions improve greatly.

- Utility, Telecommunications & Municipality**

Our electric hybrid system with our patented engine-off power-take-off (ePTO) and optional Auxiliary Power Generator and AC Power Panel is ideally suited for the utility, telecom and municipal markets that utilize medium duty bucket trucks to keep operations running. In addition to reducing fuel consumption and emissions, this system can fully operate the existing hydraulic system which also greatly reduces noise while performing service in residential areas.

- Refuse**

A residential refuse truck can start and stop nearly 1,200 times per day and often only travels a small distance between stops making it a perfect application for our hydraulic hybrid system. By launching the vehicle with the HLA[®] we can reduce annual fuel consumption by more than 1,000 gallons and improve brake life by 300% which means fewer expensive brake jobs. The HLA system can also provide productivity gains of 5-9% in residential pick ups.



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