

Idling Reduction Technology Solutions for Class 1–8 Vehicles^{*,†}



Services provided	Vehicle type (LD, MD, HD, trailer)	Power source	Company/Product(s)	EPA verification [‡]	Notes
<i>Idle management</i>					
	LD, MD	Battery/electric	Derive Systems / Derive Efficiency	No	Idle efficiency gains are achieved by reducing idle RPM levels
	LD, MD, HD	Battery/electric	GRIP / Grip Idle Management	No	Enables use of heat and cooling and provides power for auxiliaries while maintaining battery state of charge
	LD	Battery/electric	Havis / ChargeGuard	No	Automatic idle shutoff timer
	LD, MD	Battery/electric	Havis / IdleRight2	No	Monitors the battery's voltage while the vehicle is turned off and electronics, such as emergency lighting, are on. Restarts vehicle when battery voltage drops below a preset level
	MD, HD	Battery/electric	IdleSmart / IdleSmart	No	Cycles engine on and off as needed to maintain battery state of charge and coolant heat
	LD, MD, HD	Battery/electric	InterMotive Vehicle Controls / EcoStar	No	Programmable system that automatically turns the engine off when specific customizable conditions are met
	HD	Battery/electric	Temp-a-Start / Temp-a-Start system	No	Cycles engine on or off to maintain engine block temperature, battery state of charge, and/or bunk temperature
	LD, MD, HD	Battery/electric	Vanner / IdleWatch	No	Idle management system to cycle on and off engine as needed to maintain battery state of charge and coolant heat

<i>Heat only</i>					
	LD, MD, HD	Battery/electric	Autotherm / No-Idle Cab Heating System (T2500, T2524, T3015)	Yes (T 2500)	Through a small, magnetically coupled coolant pump, distributes “waste heat” into the cab after the engine is turned off
	LD, MD, HD	Fuel	Eberspaecher / Airtronic series, Hydronic series, E-Guardian	Yes	E-Guardian for school buses
	MD, HD	Fuel	Proheat / Various	Yes	Trucks, buses, off-road vehicles
	HD	Fuel	Webasto / Air Top series	Yes	Offers both recirculation and fresh-air modes
	HD	Fuel	Webasto / Thermo series	Yes	Coolant heaters integrated into the engine coolant circuit; provides cab heat
	MD, HD	Fuel	Webasto / Scholastic series	Yes	For school buses
<i>Cooling only</i>					
	HD	Battery/electric	Arctic Breeze / Hammond Air Conditioning	Yes	Sleeper cab
	MD, HD	Battery/electric	Bergstrom / Integral Power System	No	Utility vehicles
	LD, MD, HD	Battery/electric	DC Power Solutions / B-Cool	No	Roof mounted
	MD, HD	Battery/electric	Eberspaecher / Various	No	Buses
	LD, MD, HD	Battery/electric	VIESA (previously Safer Corp.) / VIESA Ecological Cab Cooler	Yes	Evaporative air cooler
<i>Heat, cooling, and power^s (APU)</i>					
	HD	Fuel	Acemco / ACEMCO Power Unit	Yes	
	MD, HD	Battery/electric	Bergstrom / NITE Phoenix, NITE SSI, eClimaCoach, and eCoolPark	Yes	Day cab, sleeper cab
	HD	Fuel	Carrier Transicold / ComfortPro Diesel Auxiliary Power Unit	Yes	Grid-power compatible

	HD	Battery/electric	Carrier Transicold / ComfortPro Electric Auxiliary Power Unit	Yes	Grid-power compatible
	HD	Fuel	Centramatic / Centramatic APU	Yes	Grid-power compatible
	HD	Fuel	Dynasys / Dynasys Generation II, Dynasys SL	Yes	Grid-power compatible
	MD	Battery/electric	Griffin / Griffin Idle Reduction System	No	Armored vehicles
	LD, MD, HD	Battery/electric	eNow / Solar-Powered No-Idle System	No	Buses, refrigerated trailers, battery APU charging, and liftgate battery charging
	HD	Fuel	Go Green / Adam and Evolution APUs	No	Evolution smaller than Adam for reduced frame rail availability
	HD	Fuel	Green APU / P60a APU	No	
	MD, HD	Fuel	Parks Industries / HP2000 Xtreme	Yes	
	MD, HD	Battery/electric	Phillips and Temro / Idle-Free Electric APU	Yes	Grid-power compatible; optional Reefer Link recharges batteries from refrigeration unit
	MD, HD	Fuel	Rigmaster / Rigmaster APU (MTS-T46K, LG-200K, CAPP-18)	Yes (MTS-T4-6) MTS T4-6	
	HD	Fuel or battery/electric	Rosenbauer America / Green Star IRT	No	Fire engines
	LD, MD, HD	Battery-electric	StealthPower / SPAIRS	No	Emergency vehicles
	HD	Fuel	Thermo King / TriPac Evolution	Yes	Grid-power compatible
	HD	Battery/electric	Thermo King / TriPac Envidia	Yes	Grid-power compatible
	HD	Fuel	Tridako Energy Systems / PowerCube Pro	Yes	Emergency vehicles
	LD, MD, HD	Battery/electric	ZeroRPM / Zero RPM Idle Mitigation System	No	Modular idle reduction management system with engine start-stop control, electric HVAC (with battery storage and optional solar panels)

Power takeoff (PTO)					
	MD, HD	Battery/electric	Air Works Compressors / Vortex Hyper Pack	No	—
	LD, MD, HD	Battery/electric	Altec / Jobsite Energy Management System (JEMS)	No	Plug-in hybrid (battery) system for power, heating, and cooling
	MD, HD	Battery/electric	Odyne / Odyne Parallel Hybrid System	No	Plug-in hybrid system for vocational trucks to power truck equipment with electric power (batteries); grid-power compatible
	MD	Battery/electric	Terex / Hypower	No	Plug-in hybrid system for vocational trucks to power truck equipment with electric power (batteries) and optional cab comfort system; grid-power compatible
		Battery-electric	Viatec / SmartPTO	No	Plug-in electro-hydraulic hybrid (battery) system for booms, buckets, and material handling truck equipment
Cargo refrigeration					
	Trailer	Electricity	Atlantic Dynamics / SafeConnect	Yes	Electric power connection for trailer refrigeration units
	Trailer	Battery/electric	Carrier Transicold / Vector 8500 and X4	Yes	Grid-power compatible
	Trailer	Battery/electric	eNow / Solar-Electric Refrigeration Systems	No	Grid-power compatible
	Trailer	Battery/electric	Hercules / Hybrid Cold Plate Systems	No	Grid-power compatible
	Trailer	Fuel	Thermo King / Spectrum	No	Urban delivery, urban distribution, and long haul; optional grid-power connection (230 or 460 V)
	Trailer	Fuel	Thermo King / SLXi Local	No	Optional solar panels
	Trailer	Fuel	Thermo King / Precedent models and SLXi Local	No	Grid-power compatible

Wayside power/truck stop electrification					
	MD, HD	Electricity	IdleAir / IdleAir	Yes	Truck stops and terminals
	MD		MOVE Systems / Simply Grid	No	Food truck focus
	LD, MD, HD	Electricity	Shorepower / Shorepower truck stop electrification	Yes	Pedestal-mount truck stop electrification ; Higher power (220v/480v) connections available for refrigeration trailers in some locations
	LD, MD, HD	Electricity	Truck Star Systems/ Truck Star	No	Pedestal-mount truck stop electrification; solar component and grid-power compatible

*This table focuses on equipment that can be installed on or used with existing vehicles (i.e., aftermarket solutions). Sources of information include manufacturers' websites, [EPA's SmartWay Verified List of Idling Reduction Technologies \(IRTs\) for Trucks and School Buses](#), and the North American Council for Freight Efficiency's (NACFE) 2019 report, "Confidence Report: Idle-Reduction Technologies," which can be downloaded [here](#). For those interested in OEM long-haul trucks equipped with idle reduction systems, see pages 71 and 72 of NACFE's report.

†Abbreviations: APU = auxiliary power unit; EPA = U.S. Environmental Protection Agency; HD = heavy duty (Class 7 and 8 vehicles); LD = light duty (Class 1 and 2 vehicles); MD = medium duty (Class 3–6 vehicles).

‡The U.S. Environmental Protection Agency's (EPA) SmartWay program verifies technologies that have been proven to save fuel and reduce emissions for long-haul heavy-duty trucks and school buses. Because the [SmartWay Verified List of Idling Reduction Technologies for Trucks and School Buses](#) focuses on heavy-duty vehicles, technologies designed for medium- and light-duty vehicles are not submitted for SmartWay verification. At the time of this compilation, the SmartWay list had been last updated in September 2019.

§See also the Wayside power/truck stop electrification section.

Version: August 2020. To report errors or changes, please e-mail ldlingreduction@anl.gov.

Argonne National Laboratory ("Argonne") is a U.S. Department of Energy laboratory managed by UChicago Argonne, LLC under contract DE-AC02-06CH11357.

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