EXIDE®

Batteries

Evolution Start-Stop Vehicles Range

EVOLUTION START-STOP VEHICLES RANGE

What is Start/Stop Technology?

This system allows the engine to be switched off in order to save fuel when the vehicle is temporarily idling at traffic signals or during traffic jams.

Whenever the vehicle is standing still, all electrical devices are receiving energy from the battery and act as an additional battery load. The engine restarts after each automatic stop, which also results in a significantly greater number of high-rate load phases during the battery life cycle.
With legislation limiting vehicle CO2 emissions to 130 g/km by 2015 in Europe, it is commonly accepted that 70% of all new vehicles will be stop/start fitted by this time. In their efforts to comply, car manufacturers have been developing alternative means of electric propulsion and innovative equipment to reduce fuel consumption. A complete line of new vehicle models is now emerging and given our local market will be supplied by Vehicle Importers in the future, this will impact us also.

Regenerative Braking

Regenerative braking systems are effectively used on vehicles with SS technology and hybrid/electric vehicles to turn kinetic energy into electricity. Once the driver lifts their foot off the accelerator, the regenerative breaking system converts the vehicle's kinetic energy (rotational speed of the alternator) into electrical energy. The friction generated inside the motor creates electricity that slows the forward motion of the vehicle and generates power that is used to help recharge the battery. This technology varies for hybrid electric and full electric vehicles.

Technology Design

Exide Batteries has a commitment to "Power the Future" through the delivery of Enhanced performance, Extreme product life and Ultimate value to its customers. Modern vehicles with SS technology have created new battery loading parameters forcing a new design from battery manufacturers to ensure the product supplied is suitable. The SS battery is manufactured in a unique way using a high number of ultrathin plates to ensure maximum cranking ability and along with this a significant amount of paste mixture to ensure the battery can accept charge/discharge demands of stop-start quickly and regularly.

There are currently two different technologies being used by battery manufacturers for SS vehicles, which is being driven by the vehicle manufacturer depending on what part of the world they are designed, manufactured and driven in. The two types of technology are better known as; AGM (Absorbed Glass Mat Stop-Start) and EFB (Enhanced Flooded Battery). The AGM technology option is currently the favoured technology throughout Europe including Audi, Volkswagon, Mercedes Benz and BMW and is the first choice option in those markets, whereas the ASEAN region is heavily favouring the EFB technology including Mazda and Subaru.

A current misconception is that these technologies are interchangeable and can be swapped out for one another. The charge rates of the SS vehicle coupled with resistance levels of the battery will be different causing performance issues. The same result will occur if your install a standard combustion engine lead acid battery in a SS application. Our tests have found that whilst the battery & the SS vehicle will work, it will take longer for the vehicle to engage after it has stopped, and the battery will eventually go flat after a few months in service because of the inability to recharge through the combined technology misapplication. It is for this reason that Vehicle manufactures may not support the alternate product fitted to their vehicles.

Furthermore, an AGM battery is not ideally suited to under bonnet installations due to the negative impact high temperatures can have on this technology. On the other side the EFB product is not regarded as suitable for installations that are not protected from the extreme cold and or where the product is in a position to leak or gas inside the vehicle.

EVOLUTION START-STOP VEHICLES
Enhanced Flooded Battery (EFB) Technology

Features	Benefits
• Superior Charge acceptance	• Provide energy for propulsion and idling
• Partial state of charge operation	• Active materials degradation is reduced
• Micro cycling capability	• Maximise the start-stop capability

PRODUCT CATEGORY	BATTERY TYPE	V	TECHNOLOGY	CCA	RC	AH	DIMENSION (MM)			WET WEIGHT (KG)	ASSEMBLY	POST TYPE	VENT	LEDGE	HYDRO	BASE WARRANTY (MONTHS)	EXTENDED WARRANTY (MONTHS)
							L	W	H								
EVOLUTION START-STOP VEHICLES RANGE I ENHANCED FLOODED BATTERY (EFB) TECHNOLOGY																	
	SSEFB-B24	12	EFB SS	460	90	55	238	129	225	13.0	C	STD	TS	NL	NO	18	24
	SSEFB-D23	12	EFB SS	650	110	65	232	173	225	18.0	C	STD	TS	NL	NO	18	24
	SSEFB-D23R	12	EFB SS	650	110	65	232	173	225	18.0	D	STD	TS	NL	NO	18	24
	SSEFB-D26	12	EFB SS	680	130	70	260	173	225	20.0	C	STD	TS	NL	NO	18	24
	SSEFB-D31	12	EFB SS	760	150	95	304	173	225	23.0	C	STD	TS	NL	NO	18	24
	SSEFB-55EU	12	EFB SS	610	100	60	245	175	190	11.9	C	STD	TS	F&EL	NO	18	24
	SSEFB-66EU	12	EFB SS	720	120	70	278	175	190	13.7	C	STD	TS	F&EL	NO	18	24

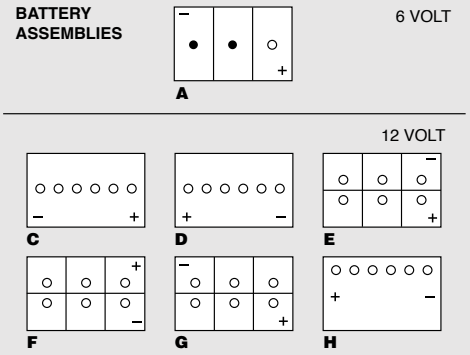
EVOLUTION START-STOP VEHICLES
Absorbed Glass Mat (AGM) Technology

Features	Benefits
• Absolute Charging acceptance	• Provide longer propulsion and idling • Accept all available energy through braking and engine recharging
• Full range of operation	• Able to operate as low as 20% of the battery capacity • Integrity of all internal component is retained throughout its service life
• Enhanced micro cycling capability	• Longer life despite of higher energy demand

PRODUCT CATEGORY	BATTERY TYPE	V	TECHNOLOGY	CCA	RC	AH	DIMENSION (MM)			WET WEIGHT (KG)	ASSEMBLY	POST TYPE	VENT	LEDGE	HYDRO	BASE WARRANTY (MONTHS)	EXTENDED WARRANTY (MONTHS)
							L	W	H								
EVOLUTION START-STOP VEHICLES RANGE I ABSORBED GLASS MAT (AGM) TECHNOLOGY																	
	SSAGM-55EU	12	AGM SS	680	100	60	242	175	190	18.8	C	STD	TS	F&EL	NO	18	24
	SSAGM-66EU	12	AGM SS	760	120	70	278	175	190	21.3	C	STD	TS	F&EL	NO	18	24
	SSAGM-77EU	12	AGM SS	800	140	80	315	175	190	24.0	C	STD	TS	F&EL	NO	18	24
	SSAGM-88EU	12	AGM SS	850	160	92	353	175	190	26.5	C	STD	TS	F&EL	NO	18	24

ABBREVIATIONS & BATTERY ASSEMBLIES

ACC	Accessible
CV	Central Venting
DFA	Dual Fit Aligned Terminals
DFP	Dual Fit Parallel Terminals
DST	Dual System Terminals
EL	End Ledge
FDH	Fold Down Handles
FL	Front Ledge
HE	Hydrometer Eye
OLT	Offset Lug Terminal
PT	Pencil Terminal
RPH	Rope Handles
RT	Recessed Terminal
RTH	Retractable Handles
ST	Side Terminal
STD	Standard Terminal
TM	Twin Marine Terminal - Type M
TS	Top Stud Terminal



Free Extended Warranty

Nationwide Convenience

Exide products come with a Free Extended Warranty Offer which not only rewards you with unprecedented peace of mind but most importantly, it will send you an alert when your battery is due for replacement.

There are two ways you can register your FREE EXTENDED WARRANTY

1. Look for our Quick Response Code (QR Code) on the top of the battery label. Scanning this QR Code via a compatible Smart Phone takes you to the registration page.
2. If you don't have a Smart Phone, you can record the critical details of the battery and your vehicle, then go online and register at **mplbatteries.com/xwarranty**. Alternatively, you can call us on our toll free number and we will do it for you.

Warranty terms and conditions are displayed on the top of the battery. To ensure optimal life of the battery, always keep your battery fully charged after use, particularly after prolonged discharge - batteries left discharged for any prolonged period of time will suffer from sulphuration which is unrecoverable causing premature failure.

EXIDE® Batteries

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