

*Power your world*

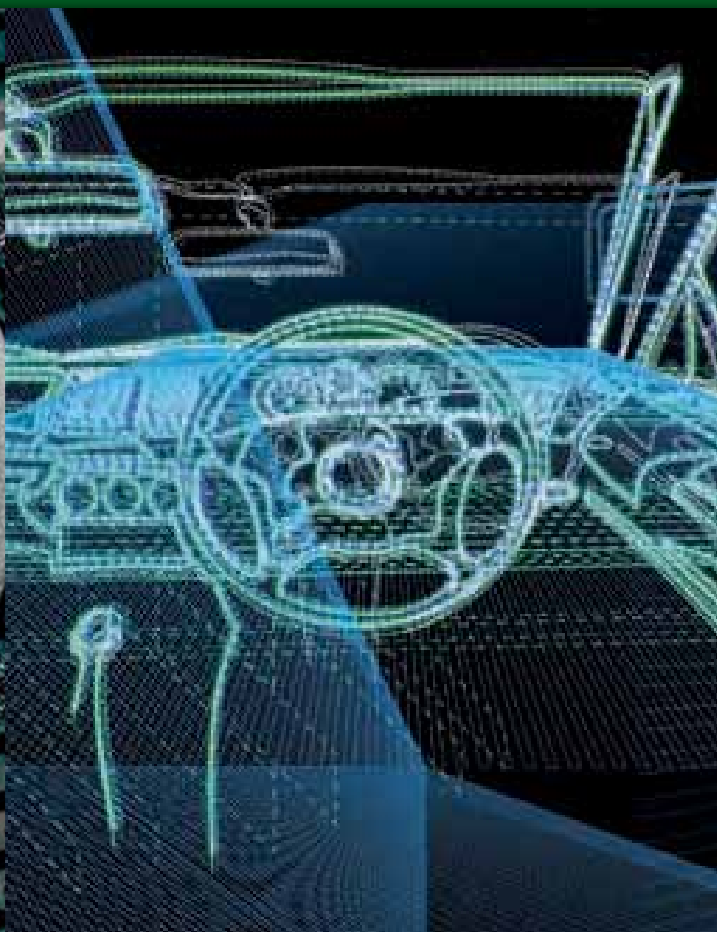


**EXIDE**®\*

**Batteries**

SINCE 1935

# Start/Stop Vehicle Batteries



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- for fitment guide
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\* Trademark of Exide Australia Pty Ltd.



## Start/Stop Vehicle Batteries

*Exide has introduced a range of sophisticated Start/Stop (SS) batteries to accommodate the growing evolution, as more new vehicles are manufactured using SS technology systems. These batteries require significantly more cranking power and a far better ability to recharge than a conventional automotive starting battery.*

## What is Stop Start 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.**

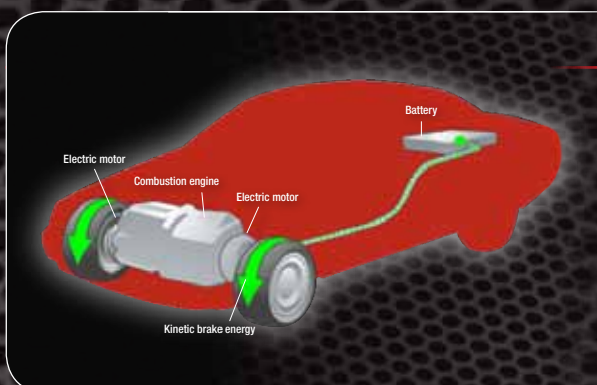
Whenever the vehicle is standing still, all electrical devices are receiving energy from the battery and act as an additional battery load. The engine restarts after each automatic stop, which also results in a significantly greater number of high-rate load phases during the battery life cycle.

With legislation limiting vehicle CO<sub>2</sub> 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 braking 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, Volkswagen, 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.*



## Enhanced Flooded Battery Range

This technology is commonly regarded as the most cost effective product option and is considered a very reliable technology able to provide maximum flexibility with high performance in high temperature cycling applications as generally found in under bonnet installations. These factors are critical for micro-hybrid vehicles equipped with SS technology and an under bonnet battery location.

The EFB (Enhanced Flooded Battery) is capable of high endurance and has 2 - 3 times the life cycle durability of a standard battery. Along with this, the EFB (Enhanced Flooded Battery) is the best option for under bonnet installations due to the high resistance to heat at an affordable cost.

Warranty - 18 month with extended warranty offer.



## Absorbed Glass Matt (AGM) technology

It is also the most expensive to produce and there is a move by European OEM designers to consider the EFB technology moving forward. This technology is commonly regarded as the premium product option and is considered the most advanced technology able to provide optimal performance in extreme cycling applications, with both high-charge acceptance and partial state-of-charge operations. These factors are absolutely key for micro-hybrid vehicles equipped with SS and Regenerative Braking systems. The AGM technology is capable of extreme endurance and has 3 times the life cycle durability of a standard battery, along with this the AGM technology is seen as providing maximum safety due to the battery being a completely sealed battery therefore reducing any risk of leaks or spillage.

The AGM technology will provide reliable power even for the ever increasingly congested markets of mass urban areas, has excellent chargeability characteristics, exceptional cranking performance in cold weather climates and is totally sealed and leak proof and completely maintenance free.

Warranty - 18 month with extended warranty offer.



Product Code	New Bar Code	Volts	Technology	Length	Width	Height	CCA	RC	AH	Vent	Ledge	Post	Assembly
SSEFB-B24	9313122901966	12	EFB SS Maint	238	129	225	460	90	55	RP	NL	SAE	C (+R)
SSEFB-D23	9313122901973	12	EFB SS Maint	232	173	225	550	110	65	RP	NL	SAE	C (+R)
SSEFB-D26	9313122901980	12	EFB SS Maint	260	173	225	680	130	70	RP	NL	SAE	C (+R)
SSEFB-D31	9313122901997	12	EFB SS Maint	304	174	225	760	150	95	RP	NL	SAE	C (+R)
SSAGM-55EU	9313122902000	12	AGM SS	245	175	190	750		60	TS	S&EL	SAE	C (+R)
SSAGM-66EU	9313122902017	12	AGM SS	278	175	190	800		70	TS	S&EL	SAE	C (+R)
SSAGM-77EU	9313122902024	12	AGM SS	315	175	190	850		80	TS	S&EL	SAE	C (+R)
SSAGM-88EU	9313122902031	12	AGM SS	353	175	190	950		90	TS	S&EL	SAE	C (+R)
SSAGM-95EU	9313122902048	12	AGM SS	513	189	223	1080		120	TS	S&EL	SAE	C (+R)