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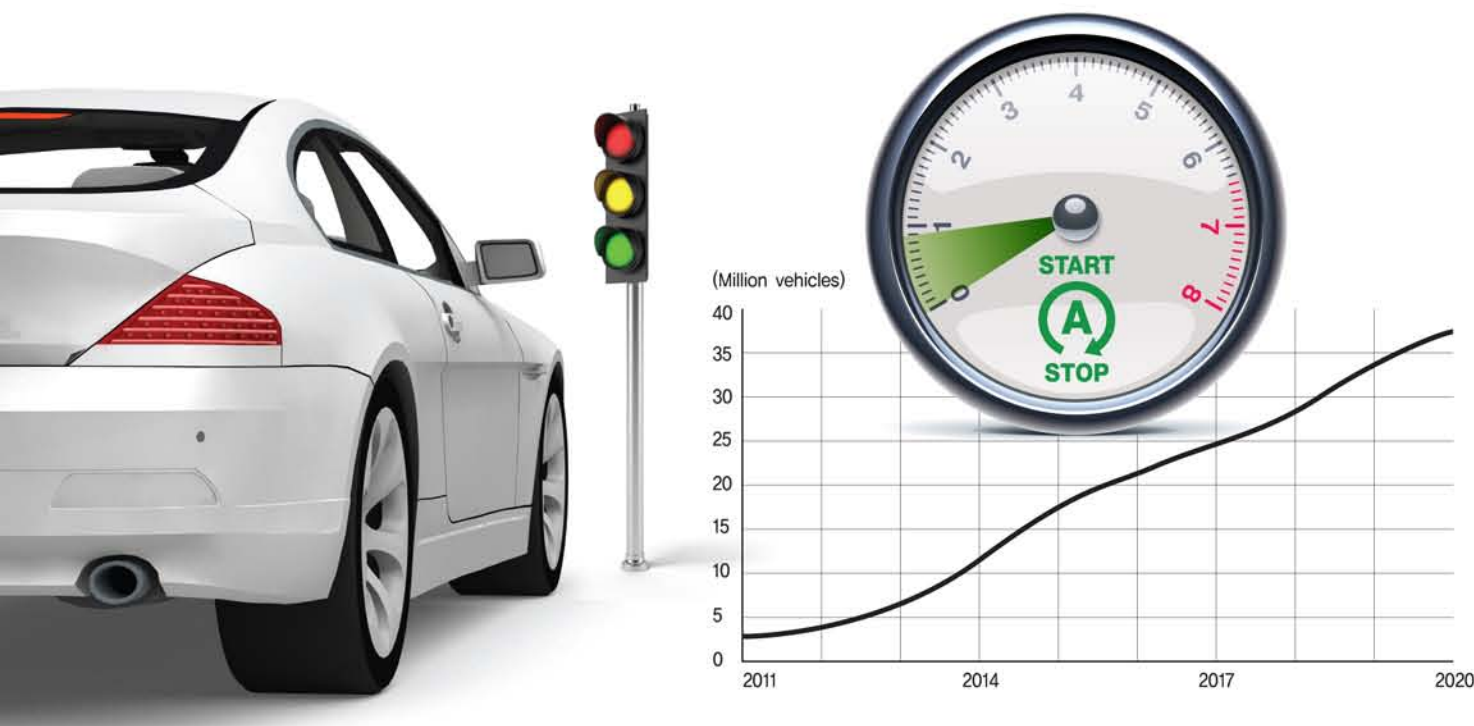


**ATLASBX AGM & EFB Batteries  
For Start Stop Vehicles**



**ATLASBX™**  
DYNAMIC POWER





## Fuel economy trend by Automotive Technologies

From 2012, international environmental regulations against global car makers have come to the fore. Major countries of vehicle production and sales such as the United States, China, Japan and European Union have been reinforcing the regulations on CO2 emission and the fuel economy to cope with global climate change and excessive energy consumption.

Start-stop technology is one of the fuel economy car technologies to help to reduce the CO2 emission, playing a key role in a way to achieve stringent emission norms for vehicle manufacturer. On the other hand it reduces fuel consumption, which is what a vehicle owner mostly looks for in a vehicle, with ever increasing fuel prices.

## What is Start Stop System?

Start Stop system controls engine to stop when the vehicle is not in movement and restart the engine when vehicles begin its acceleration. This technology can help to avoid unnecessary energy loss caused by engine idling and has in fact been proved to cut fuel consumption by 5~15%, also Start Stop system improves engine silence for the consumer's driving comfort.

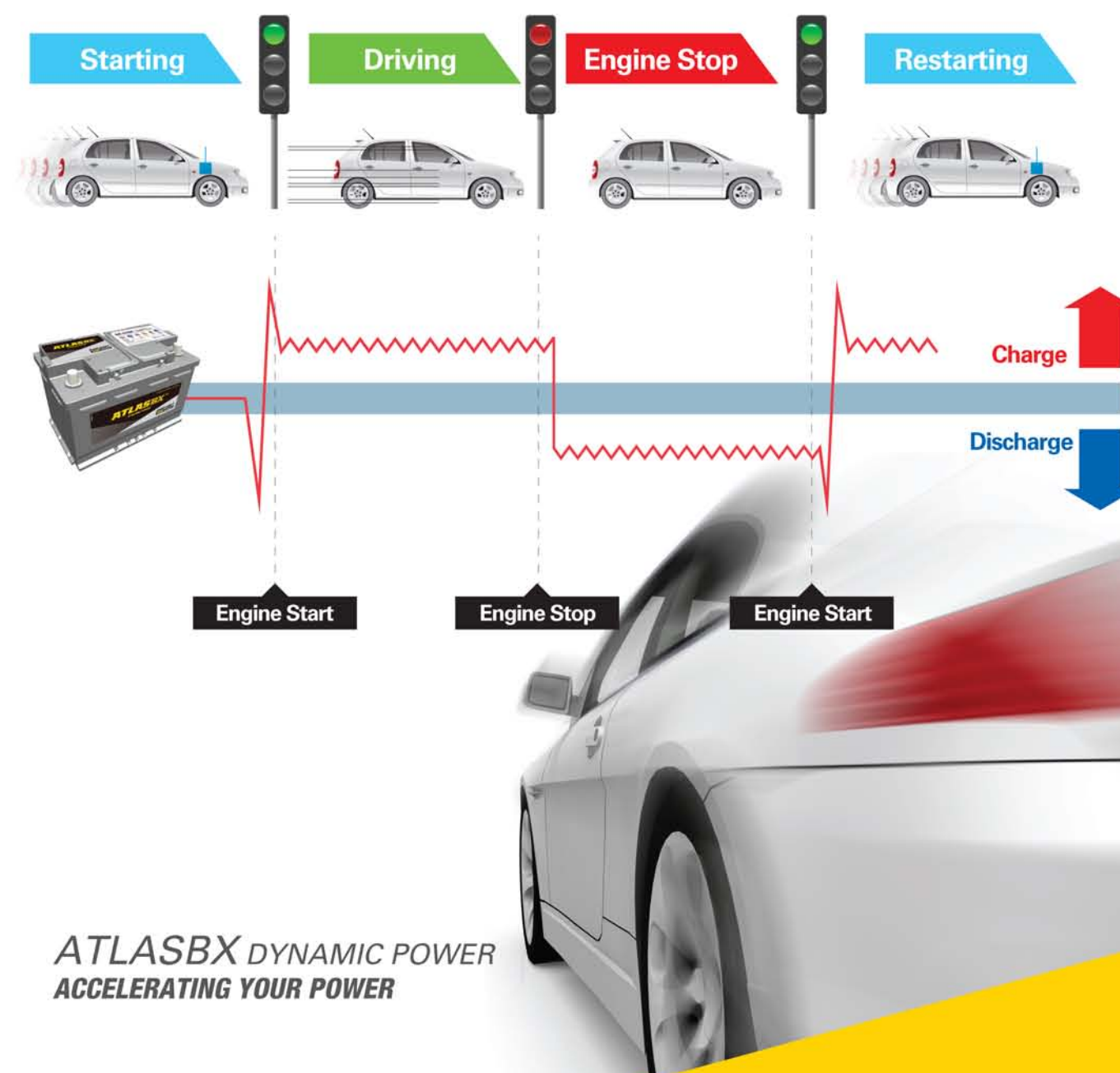
## Next Icon to drive your business forward

In 2013, 8 million vehicles were equipped with Start Stop system and it is forecasted to grow up to 23 million vehicles by 2017. Particularly in Europe, around 70% of total vehicle sales in 2015 will include start stop system

## The Role of Start Stop Battery

Start Stop vehicles require enhanced battery due to the frequent start and stop events at traffic light. Therefore, battery with enhanced durability and charge acceptance is required to withstand the severe driving environments for the Start Stop vehicles. ATLASBX Start Stop series have enhanced the durability and battery life to perfectly optimize for the Start Stop vehicles. Also it is not only optimized for Start Stop vehicles but it could perform higher stability and longer life for the previous Internal Combustion Engine (ICE) equipped vehicles as well.

## Start Stop System



ATLASBX DYNAMIC POWER  
ACCELERATING YOUR POWER

**ATLASBX**<sup>TM</sup>  
DYNAMIC POWER





## Start Stop+ with AGM Technology

For Advanced Start Stop vehicles heavily equipped with electronic devices ,  
the most prestigious vehicles

Group No	Type No	Capacity	CCA	Dimension(mm)				Layout	Terminal	Hold-down
		(20HR)	(EN)	L	W	H	TH			
L2	SA 56020	60	680	242	174	190	190	0	A	B13
L3	SA 57020	70	760	277	174	190	190	0	A	B13
L4	SA 58020	80	800	314	174	190	190	0	A	B13
L5	SA 59520	95	850	352	174	190	190	0	A	B13

### Key Features

- Absorbent Glass Mat separator
- VRLA sealed construction
- ATLASBX X-Frame Grid Technology
- Reinforced case design
- Meets OE quality, performance & specification

### Benefits

- x4 times longer idling stop life cycle
- Charge acceptance 150% up
- Starting power 130% up
- Optimal safety for passenger compartment installation

## Application



► Start Stop system



► Regenerative Braking System



► Urban intensive use



► Heavily equipped electronic devices



## Start Stop with EFB Technology

For Start Stop Vehicle heavily equipped with electronic devices

Group No	Type No	Capacity	CCA	Dimension(mm)				Layout	Terminal	Hold-down
		(20HR)	(DIN:EN/JIS:SAE)	L	W	H	TH			
L2	SE 56010	60	560	242	174	190	190	0	A	B13
L3	SE 57010	70	650	277	174	190	190	0	A	B13
L4	SE 58010	80	730	315	174	190	190	0	A	B13
L6	SE 61010	110	950	398	174	190	190	0	A	B13
LB3	SE 56510	65	650	277	174	175	175	0	A	B13
LB4	SE 57510	75	730	315	174	175	175	0	A	B13
B20	SE M42(55B20L)	40	420	196	127	200	220	0	A(B)	B0
	SE M42R(55B20R)	40	420	196	127	200	220	1	A(B)	B0
B24	SE N55(70B24L)	45	460	234	127	200	220	0	A(B)	B0(B1)
D23	SE Q85(90D23L)	65	670	230	172	200	220	0	A	B0(B1)
	SE Q85R(90D23R)	65	670	230	172	200	220	1	A	B0(B1)
D26	SE S95(100D26L)	68	730	257	172	200	220	0	A	B0(B1)
D31	SE T110(115D31L)	80	800	302	172	200	220	0	A	B0(B1)

### Key Features

- Sealed Maintenance Free with double lid
- Grid Protect System with special tissue
- ATLASBX X-Frame Grid Technology
- Carbon additives
- Meets VDA standard

### Benefits

- x3 times longer idling stop life cycle
- Charge acceptance 130% up
- Starting power 115% up
- Optimal fit for engine compartment

## Application



► Start Stop System



► Urban intensive use



► Heavily equipped electronic devices







## Performance Rating Comparison

	SMF	Start Stop (EFB)	Start Stop+ (AGM)
Starting Power	★	★★	★★★★
Charge Acceptance	★	★★	★★★★
Vibration Resistance	★	★	★★★★
ISS Life Cycle	—	★★	★★★★
Safety	★	★★	★★★★
Application	Standard diesel & petrol engine	Start Stop System	Advanced Start Stop System

★ Good    ★★ Very Good    ★★★ Excellent

## Technical Information

### Layout

0	1

### Terminal

	A(Standard)	B(Small)
Positive Terminal		
Negative Terminal		

### Hold-Down

B1
10.5mm on long sides only
B13
5 notches
10.5mm on all four sides

• B0 :There is no Hold-Down

## Auxiliary Battery with AGM Technology

Back Up for Hybrid Electric Vehicle, Utility

Group No	Type No	Capacity (20HR)	CCA (SAE)	Dimension(mm)				Layout	Terminal	Hold-down	Remark
				L	W	H	TH				
B24	AX S46B24R	45	370	236	125	200	220	1	B	B0	Toyota Prius
D23	AX S55D23R	55	550	220	170	200	220	1	A	B0(B1)	Toyota Camry HV
D26	AX S65D26R	75	750	260	172	200	220	1	A	B1	

### Key Features

- Absorbent Glass Mat separator
- VRLA sealed construction
- ATLASBX X-Frame Grid Technology
- Reinforced case design

### Benefits

- High operational reliability
- Charge acceptance 150% up
- Starting power 130% up
- Optimal safety for passenger compartment installation

## Application

- Hybrid Electric Vehicle
- Back up utility
- Heavily equipped electronic devices

## ATLASBX AGM & EFB Technology

