

GS Yuasa's Lead-acid Storage Battery for Start & Stop Vehicles Adopted for Nissan Motor's New Serena

GS Yuasa Corporation (Tokyo Stock Exchange: 6674; "GS Yuasa") announced that the new fifth-generation Serena by Nissan Motor Co., Ltd. (Tokyo Stock Exchange: 7201; "Nissan") has adopted the latest model of the company's lead-acid storage battery for start & stop ("S&S") vehicles.

Launched by Nissan on August 24, 2016, new Serena is equipped with the S-HYBRID (Smart Simple Hybrid) system, continued from the fourth-generation Serena, as well as the cutting-edge autonomous drive technology ProPILOT^{*1}.

The S-HYBRID system uses the optimal lead-acid storage battery to fully capture the regenerative energy during deceleration^{*2}. This has enabled turning off of the engine for long periods and torque assistance from the motor, thus improving the vehicles' mileage.

GS Yuasa introduced the lead-acid storage battery for S&S vehicles for the first time in 2009. It continued with the development, and the S-95 and K-42, the latest models adopted for Nissan's new Serena, boast regenerative charge acceptance performance that is three times better than the batteries for conventional drive systems while durability has improved exponentially by about four times. The products were adopted based on the assessment that GS Yuasa's lead-acid storage batteries for S&S vehicles are the best suited for the sophisticated energy management of S-HYBRID system.

GS Yuasa manufactures and markets lead-acid storage batteries for S&S vehicles at its business bases in Japan and abroad and these batteries are adopted for many models by new vehicle manufacturers including the new Serena by Nissan.

The company will further advance technology innovation and expand product lineup to contribute to customers' safe and comfortable driving as well as reduce the environmental burden by responding to the spread of S&S vehicles around the world.

- *1 A system that enables following a preceding vehicle while constantly maintaining the distance with it on a single lane of an expressway, including steering on curves.
- *2 Recovering the kinetic energy generated during deceleration as electric energy when a vehicle brakes. While large energy can be obtained, as the braking time is typically short from a few seconds to about 10 secs, the storage battery is required to have regenerative charge acceptance performance that can accept large quantity of charging current in a short period.

[Features of GS Yuasa's lead-acid storage batteries for S&S vehicles]

- 1. Realization of high regenerative charge acceptance performance Adopted carbon additive technology to negative-electrode active material and new electrolyte solution additive technology
- Exponential improvement in durability Employed technology for increasing the density of positive-electrode active material and degradation control additive technology as well as corrosion-resistant surface alloy coating treatment on negative electrode ears

Product name	S-95	K-42
Nominal voltage (V)	12	12
20 hour rating capacity (Ah)	75	33
Maximum external dimensions (mm)	W173 x D260 x H225	W127 x D187 x H227
Weight (approx. kg)	19.5	9.5

[Specifications of lead-acid storage battery for start & stop vehicles used in the new Serena]

[Images]

1. New Serena by Nissan Motor Co., Ltd.



2. Lead-acid storage battery for start & stop vehicles (from left K-42, S-95)

