News Release

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GS Yuasa Corporation

Lead-Acid Battery for Idle-stop Cars Chosen for the Toyota Vitz

GS Yuasa Corporation (Tokyo Stock Exchange: 6674) announced today that its lead-acid automotive battery for idle-stop cars was chosen by Toyota Motor Corporation (Tokyo Stock Exchange: 7203) for its Vitz compact car equipped with Smart Stop idle-stop technology (Vitz models with 1.3F Smart Stop accessories package).

Automakers around the world are accelerating development of fuel-efficient vehicles to meet regulatory requirements, including more stringent CO_2 emissions regulations to be phased in by Europe between 2012 and 2015, and new fuel efficiency standards to take effect in Japan from 2015. Idle-stop cars are touted as a way to both raise fuel efficiency and reduce CO_2 emissions.

The S-85 lead-acid battery chosen for the Vitz boasts three advantages over lead-acid batteries for conventional drive systems: high output, high input (charge performance), and high durability. These features are the product of an optimal balance between GS Yuasa's thin-plate manufacturing technology,*1 carbon technology,*2 and long-life technology.*3

Idle-stop technology (also known as start-stop technology) shuts the car's engine down when stopped at traffic lights or during traffic congestion, while the battery supplies power to electronics (car navigation system, audio system, air conditioner, etc.). The battery supplies a large current to restart the engine when driver action indicates the intention to move off, and is recharged by regenerative braking. The S-85 was chosen for its ability to cope with frequent charging and discharging and its high input and output performance. The battery greatly improves the fuel efficiency of the Vitz, which is rated the most fuel-efficient vehicle in its class excluding hybrid vehicles (26.5 km/L).

GS Yuasa already manufactures and sells lead-acid batteries for idle-stop cars, and the S-85 is a newly developed series in that range. GS Yuasa plans to expand its lineup of lead-acid automotive batteries for idle-stop cars and widen manufacturing to overseas sites to help drive global uptake of these vehicles and reduce their environmental impact.

*1: Technology to improve the input-output performance of batteries by using a multitude of thin plates and reducing internal resistance.
*2: Technology to improve recharge performance by optimizing the amount of carbon added to the negative plate.
*3: Technology to achieve longer life by using a highly durable grid and high-density active materials for the positive plate.

Explanation of Battery Specifications

S-85: Specifications for lead-acid automotive battery for idle-stop systems according to Battery Association of Japan standard SBA S 0101:2006. The outer dimensions and electrode specifications conform to the Japanese Industrial Standard for D26L batteries.

S-85 lead-acid battery specifications

Outer dimensions (mm)	Total height	225
	Case height	202
	Width	173
	Length	260
Weight (kg)		approx. 19.5
Nominal voltage (V)		12
5hr capacity rate (Ah)		55

Image:
Toyota Motor Corporation's Vitz