



**GS Yuasa Lead-acid Battery for Idle-stop Vehicles
Chosen for Suzuki MR Wagon, Wagon R, Wagon R Stingray, and Alto Eco**

GS Yuasa Corporation (Tokyo Stock Exchange: 6674) announced today that its lead-acid automotive battery for idle-stop vehicles was chosen by Suzuki Motor Corporation (Tokyo Stock Exchange: 7269) for its MR Wagon, Wagon R, Wagon R Stingray, and the Alto Eco, which features a new idle-stop system.

Automakers are accelerating the development of fuel-efficient vehicles to meet regulatory requirements, including more stringent CO₂ emissions regulations to be phased in Europe between 2012 and 2015, and new fuel efficiency standards to take effect in Japan from 2015. Idle-stop vehicles are touted as a way to both raise fuel efficiency and reduce CO₂ emissions.

The M-42 lead-acid battery chosen for the Suzuki Alto Eco and three other vehicle models boasts three advantages compared with batteries for conventional drive systems: high output, high input (charge acceptance), 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 shuts the engine down when stopped at lights or during traffic congestion, while the battery supplies power to the vehicle's electronics (car navigation system, audio system, air conditioner, etc.). When prompted by the driver, the battery provides a large current to restart the engine, and is recharged by regenerative braking. The new idle-stop system installed in the Alto Eco also shuts the engine down when the vehicle decelerates before making a stop. The M-42 was chosen for its ability to cope with this type of frequent charging and discharging. The battery greatly improves the fuel efficiency of the Alto Eco, which boasts the highest fuel-efficiency^{*4} rating among gasoline engine vehicles excluding hybrid vehicles (30.2 km/L) ^{*5}.

GS Yuasa plans to expand its lineup of lead-acid automotive batteries for idle-stop vehicles and widen manufacturing to overseas sites to help drive global uptake of these vehicles and help lower 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 charge acceptance 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.

*4: Based on JC08 drive-mode fuel economy (verified by Ministry of Land, Infrastructure, Transport and Tourism) and excludes hybrid vehicles. Suzuki Motor research as of November 2011.

*5: Fuel economy rating in JC08 drive mode (verified by Ministry of Land, Infrastructure, Transport and Tourism).

Explanation of Battery Specifications:

M-42: 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 B20 batteries.

(Image)
Suzuki Motor's Alto Eco

