

HySE to participate in the Dakar 2025 “Mission 1000 ACT2” with the HySE-X2, to tackle further technical challenges



HySE-X2 (Conceptual Illustration)

HySE (Hydrogen Small mobility & Engine technology Association) will participate in the “Mission 1000 ACT2*¹” of Dakar 2025(Dakar Rally*²), which will be held in Saudi Arabia from 3rd to 17th January 2025, with the HySE-X2. “Mission 1000” is the category newly added to Dakar 2024, which is well-known as “Dakar Rally” for the world’s toughest motorsport, inviting vehicles using powertrains of next generation for the carbon neutrality.

HySE participated in it this year with hydrogen engine-equipped HySE-X1 to identify potential issues with small mobility that are yet unknown. HySE-X1 kept running through the final day and came in 4th position in the category.

This time, which will be our second entry, HySE will be launching the HySE-X2 which has the engine and the chassis that are progressed from those of HySE-X1, in order to tackle new technical challenges like increasing output at the high revolution range, improving fuel consumption at the middle range and increasing capacity of the hydrogen tank. HySE will continuously work to build a global and cross-industry network for the realization of compact hydrogen mobility, by promoting HySE’s presence and initiatives through the participation in the world-renowned Dakar Rally.

HySE is also going to participate in “European Hydrogen Week*³” which will be held at Brussels, Belgium between 18th and 22nd November and display the HySE-X2 at the booth, “Automobile Club de l’Ouest” located in HALL7 · M20.

* 1. Mission 1000: <https://www.dakar.com/en/dakar-world/therace/dakar-future/mission-1000>

* 2. Dakar Rally is a rally raid event that has been held every year since 1978, covering various terrains like deserts, muddy fields and mountains.

* 3. EUROPEAN HYDROGEN WEEK is the largest annual event of Europe specialized to hydrogen, organized by the European Commission, Hydrogen Europe and the Clean Hydrogen Partnership.

■ Comment from Daichi Kai, Team Manager of HySE Dakar 2025

“We have decided to participate in the Dakar Rally with HySE-X2 which has the engine and the chassis that are progressed from those of HySE-X1. We would like to contribute to the establishment of technologies for the small hydrogen mobility engine, by verifying the effects of the countermeasures for technical issues found with HySE-X1 this year and by challenging more severe performance area of the engine. The details of our activities will be shown through Instagram and we would appreciate your support.”



HySE's Instagram QR code

■ Overview of the HySE-X2 hydrogen-powered engine vehicle

Overall length x width x height: 4,000mm x 2,000mm x 1,900mm

Weight: 1,250kg

Engine type / valve train: Liquid-cooled, 4-stroke, inline four-cylinder, supercharged engine / DOHC 16valves

Displacement: 998 cm³

Hydrogen tank: Internal Pressure:70 MPa, Capacity:7.2kg, 4 tanks installed

(3 tanks for HySE-X1. Improvements of the chassis layout enabled installation of 4 tanks this time.)



Actual HySE-X2 waiting for cosmetic finish

■ Crew

Driver

Yoshio Ikemachi

Date of birth: 24th November 1971

Nationality: Japanese

Racing Career:

2000 Dakar Rally, 10th overall in the motorbike category.

* The highest ranking Japanese in the motorcycle category has yet to be updated.

2004 Dakar Rally, 4-wheel category, 22nd overall (1st overall in T1 class)

2024 Dakar Rally, Motorcycle category, 60th overall (44th in rally2 class, 6th in veteran class).

Motto: Dreams come true!

Co-Driver

Paulo Marques

Date of birth: 2nd December 1962

Nationality: Portugal

Racing Career:

1997 Dakar Rally, 8th overall in the motorbike category.

2004 Dakar Rally, 25th overall in 4-wheel category.

Motto: Never give up.

■ Overview of HySE

Name: Hydrogen Small mobility & Engine technology Association

Location: Yaesu Central Tower, 2-2-1 Yaesu, Chuo-ku, Tokyo, Japan

Established: 17th May 2023

Full members:

Kawasaki Motors, Ltd., Suzuki Motor Corporation, Honda Motor Co., Ltd., Yamaha Motor Co., Ltd.,

Kawasaki Heavy Industries, Ltd., Toyota Motor Corporation, DENSO CORPORATION

* As of 1st November 2024

Chairman: Kenji Komatsu (Executive Officer, Yamaha Motor Co., Ltd.)