



June 8, 2026

Mazda Advances Toward Commercialization of Onboard CO₂ Capture System

—Successfully Demonstrates CO₂ Storage in Super Taikyu Series Testing Toward Carbon-Negative Operation—

HIROSHIMA, Japan - Mazda Motor Corporation (Mazda) conducted a demonstration test of its under development onboard CO₂ (carbon dioxide) capture system, 'Mazda Mobile Carbon Capture,' during Round 3* of the Super Taikyu Series 2026, held from June 5 to 7, 2026. During the test, Mazda successfully demonstrated CO₂ storage during driving, newly added to this round of testing, marking a step forward toward the practical application of the system and the achievement of carbon negativity.



Demonstration Experiment



CO₂ capture device installed on the demonstration vehicle

Under the theme "The Joy of Driving Fuels a Sustainable Tomorrow," Mazda announced "Mazda Mobile Carbon Capture" at last year's JAPAN MOBILITY SHOW 2025, and is aiming to realize mobility that reduces CO₂ the more you drive by 2035.

In this demonstration test, a CO₂ desorption function of the adsorption unit and a CO₂ storage tank were added to the race car "MAZDA SPIRIT RACING 3 Future concept" (No. 55), which was driven using carbon-neutral fuel—hydrotreated vegetable oil (HVO) which is already in practical use in Europe. As in the previous test, zeolite with a porous structure was employed as the adsorbent. Zeolite readily releases CO₂ when heated, enabling the captured CO₂ to be desorbed using the exhaust heat generated during driving. The desorbed CO₂ is then compressed by an electric compressor and stored in a tank. Mazda has successfully demonstrated this integrated process as a complete system for the first time. As a result of repeating this process throughout the 24-hour race, a total of 804 grams of CO₂ was captured, achieving a significant advancement—approximately 9.6 times the previous result of 84 grams.

Demonstration test	Previous: 1st (November 2025)	This time: 2nd (June 2026)
Equipment (Function)	CO ₂ Adsorption Unit (adsorption only)	Dehumidifier, CO ₂ Adsorption Unit (adsorption + desorption)• CO ₂ Tank (storage)
CO ₂ captured	84g	804g

In addition to the storage experiment, the combined effect of CO₂ reduction achieved through HVO and the amount of CO₂ captured by the system temporarily exceeded the target recovery level assumed for typical use of Mazda production vehicles, confirming the potential for carbon-negative operation in production vehicles, albeit for a limited period. Building on these results, Mazda is embarking on a new phase of challenges aimed at achieving carbon negativity in racing cars, which operate under higher loads and more demanding conditions. Specifically, Mazda aims to achieve short-term carbon negativity in its racing car at Round 7 of the Super Taikyu Series, to be held this November.

Moving forward, Mazda will continue to collaborate with numerous partners to further refine the technology and equipment based on the insights gained to date, contributing to the realization of a sustainable mobility society.

■ Related News Releases

- Mazda Begins Demonstration Experiment of Onboard CO₂ Capture System
<https://newsroom.mazda.com/en/publicity/release/2025/202511/251117b.html>

■ Related information: Mazda Corporate Website

<MAZDA MIRAI BASE>

- Japan Mobility Show 2025: The Joy of Driving Fuels a Sustainable Tomorrow. Mazda's Vision for the Future of Smart Mobility in 2035
<https://www.mazda.com/en/mazda-mirai-base/articles/20251029-jms2025-concept/>
- Japan Mobility Show 2025: The More You Drive, the Cleaner the Planet? The MAZDA VISION X-COUPE and the Future of Joy of Driving
<https://www.mazda.com/en/mazda-mirai-base/articles/20251029-jms2025-mazda-vision-xcoupe/>
- Creating a Positive Future for Combustion Engine Cars: Mazda's Public Proof-of-Concept Testing for Carbon Neutral Combustion Engine Car
<https://www.mazda.com/en/mazda-mirai-base/articles/20251210-CO2-capture/>

<MAZDA SPIRIT RACING>

- Super Taikyu Series: One of Japan's premier endurance racing series featuring a wide range of vehicle models: (Japanese only)
<https://www.mazda.com/ja/experience/mspr/motorsports/supertaikyu/>

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* ENEOS Super Taikyu Series 2026 Empowered by BRIDGESTONE Round 3: Fuji 24-Hour Race