

25<sup>th</sup> November, 2024 Diamond Electric Holdings Co., Ltd

# Prototype of Ignition Coil for Hydrogen-fueled Engine Accomplished

## Fail-safe Ignition System Capable of High-power Output

Diamond & Zebra Electric Mfg. Co., Ltd. (hereinafter "Diamond & Zebra"), an Osaka-based group company of Diamond Electric Holdings Co., Ltd., has developed an ignition coil for hydrogen-fueled engines equipped with a function to prevent false ignition caused by the ignition system, and has begun accepting orders from engine manufacturers for prototypes as evaluation samples since October 2024..

Development of engines powered by hydrogen fuel, which can be produced from renewable energy and is CO<sub>2</sub>-free, is gaining momentum as a countermeasure against global warming.

Hydrogen fuel is highly ignitable and spreads flame easily, So even slight heat or electrical energy may cause false ignition at an unintended timing. Also, as hydrogen is low in calorific value per volume, an ignition system capable of high-voltage output corresponding to supercharging and high compression is required to secure engine output.

We are confident that this prototype, by installing a false ignition prevention function in a high-output ignition coil, can be adopted for a wide range of hydrogen-fueled engines with various specifications so that it will greatly contribute to the promotion of hydrogen-fueled engine development.



Diamond & Zebra will strive to contribute to the development of our customers and to the prosperity of society, based on its vision "Contribute to the Improvement of Global Environment by Connecting Cars and Homes through Manufacturing" as stated in our medium- to long-term management plan "Scrum of Fire."

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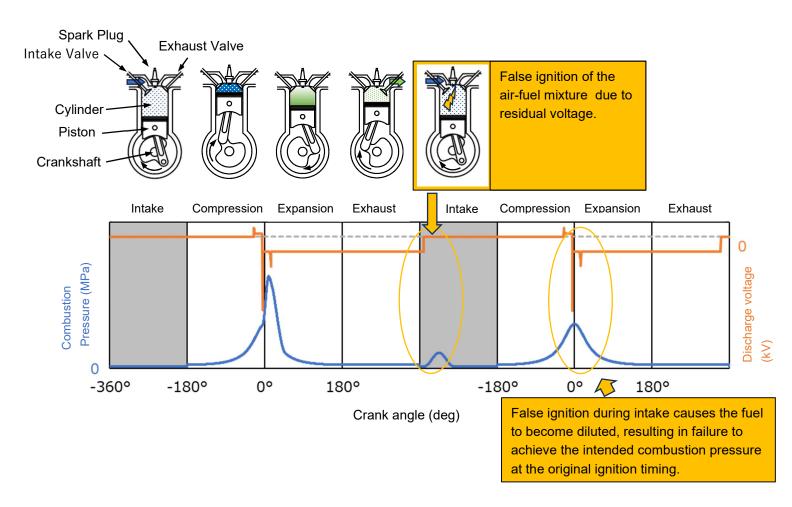
\*Please contact us by email for inquires.

#### **News Release**



## ■Main applications Hydrogen-fueled spark-ignition engines in general

#### **■**Conventional ignition coil (in case of false ignition):



### ■This prototype (ignition coil for hydrogen-fueled engine):

Suppresses voltages other than those required for ignition timing and prevents false ignition.

