News Release

October 19, 2023

Honda Motor Co., Ltd.
Yamato Transport Co., Ltd.

Honda and Yamato Transport to Begin Demonstration Testing of a Mini-EV Powered by Swappable Batteries for Package Pickup/Delivery Service

- **Contributing to the realization of more efficient energy management by utilizing the electricity generated from renewable energy sources**

TOKYO, Japan, October 19, 2023 – Honda Motor Co., Ltd. (Honda) and Yamato Transport Co., Ltd. (Yamato Transport) will begin demonstration testing in November 2023, of a Honda mini-EV model powered by swappable batteries for Yamato Transport's package pickup/deliver service.

This demonstration testing will use the Honda MEV-VAN Concept, a mini-EV model powered by swappable batteries, with the swappable batteries storing electricity from renewable energy sources ("renewable electricity"), which will contribute to the realization of more efficient energy management.

Honda MEV-VAN Concept experimental vehicle to be used in this demonstration testing

Swappable batteries installed inside the vehicle

Honda is aiming to realize carbon neutrality for all products and corporate activities Honda is involved in by 2050. To this end, Honda has been pursuing a number of initiatives, including the enhancement of the lineup of electric mobility products and services that utilize Honda Mobile Power Pack e: (MPP) and the expansion of the use of renewable electricity.

Yamato Group is aiming to reduce greenhouse gas (GHG) emissions from its business activities by 48% by 2030 (compared to the FY2020 level) and achieve net zero GHG emissions (carbon neutrality) by 2050. To this end, Yamato Group has been pursuing various initiatives, including the following measures: introduction of 20,000 units of electric vehicles to its fleet; introduction of 810 units of solar power generation facilities; working toward the establishment of operations that use zero dry ice; and expansion of the use of renewable electricity to 70% of overall electricity use.

Since June 2023, the two companies have been jointly verifying the practicability of package pickup/delivery service using Honda N-VAN e:, an all-new commercial-use mini-EV Honda is

planning to launch in the spring of 2024 in Japan, as a part of the demonstration testing toward the realization of sustainable logistics.

In the meantime, a number of challenges have been identified in the use of EVs for delivery operations, including that EVs cannot be used while being charged and charging all EVs in the fleet simultaneously at night would contribute to an imbalance in electricity use with the company experiencing a surge during peak use at night.

Honda MEV-VAN Concept to be used in this demonstration testing is a mini-EV concept model powered by the power unit featuring eight units of the MPP swappable battery. The use of swappable batteries charged with renewable electricity generated with solar power during the daytime will reduce the standby time and mitigate peak electricity use, which will contribute to the realization of more effective energy management.

■ **Overview of the testing:**

- Start of testing: November 2023
- Number of test EVs to be used: 1 (Testing with multiple units is scheduled in the future)
- Testing site: Gunma Prefecture in Japan

■ **What will be tested:**

(1) Practicability of EV use and EV performance in package pickup/delivery service

- Usability of the EV, including battery layout design, for parcel pickup/delivery service
- Compatibility between range/battery swapping operations and real-world pickup/delivery service
- Dynamic performance of the EV required under various conditions in pickup/delivery service, such as when climbing up hills and carrying a heavy load.

(2) Effective use of renewable electricity generated with solar power generation

(3) Collection and verification of various basic data for the use of swappable batteries

- Battery durability in package pickup/delivery service
- Basic data related the EV use in daily package pickup/delivery service, such as 1) vehicle speeds, 2) driver inputs such as acceleration and braking, 3) battery consumption by air conditioning unit and 4) amount of remaining battery charge and charging schedule after a day of pickup/delivery service
- Feasibility of charging operations and energy management with an assumption of using multiple units of the EV

Mobile Power Pack e: swappable battery to be used in the demonstration testing

■ **Exhibition of MEV-VAN Concept at the JAPAN MOBILITY SHOW 2023***

The MEV-VAN Concept is scheduled to be exhibited at the Honda booth during the JAPAN MOBILITY SHOW 2023 to be held at Tokyo Big Sight in Tokyo, Japan. This vehicle will feature a special design developed exclusively for the JAPAN MOBILITY SHOW 2023, so please visit the venue to check it out.

https://www.japan-mobility-show.com/

*Press days: October 25-26, 2023/ Public days: October 28 – November 5, 2023

<References>

■ **Joint press release** (on April 14, 2023): “Honda and Yamato Transport to Begin Verification of the Practicability of All-new Commercial-use EVs for Parcel Pickup/Deliver Service”
https://www.yamato-hd.co.jp/english/news/2023/pdf/newsrelease_20230414_en01.pdf (English)
https://global.honda/jp/news/2023/4230414.html (Japanese)

■ **Honda press release** (on October 29, 2021)**:** “Honda Introduces Initiatives for the Utilization of Honda Mobile Power Pack, Portable and Swappable Batteries”
https://global.honda/en/newsroom/news/2021/c211029beng.html (English)
https://global.honda/jp/news/2021/c211029b.html (Japanese)

■ **Yamato Transport release** (on May 10, 2022)**:** “Yamato Transport Announces Concrete 2030 greenhouse gas (GHG) emission reduction target toward the realization of Carbon Neutrality by 2050”
https://www.yamato-hd.co.jp/news/2022/newsrelease_20220510_1.html (Japanese only)