

Mazda and Yazaki First Apply Co-Creation Results for Near-Site and Automated Wire Harness Production in All-New MAZDA CX-5 —Toward Building Resilient Supply Chain and Achieving Sustainable Manufacturing—

HIROSHIMA and TOKYO, Japan— Mazda Motor Corporation (Mazda) and Yazaki Corporation (Yazaki) have been engaged in co-creation activities since early 2022 aimed at bringing wire harness production closer to vehicle assembly plants and advancing automation, with the goal of building a resilient supply chain and realizing sustainable manufacturing. Transcending the traditional boundaries between an automaker and a parts manufacturer, the two companies combined their expertise and technologies from the early stages of development. As the first outcome of this collaboration, wire harnesses produced through this new production method have been adopted for the first time in the all-new MAZDA CX-5.



Automated wire harness production line at a Yazaki Corporation affiliate (Mine City, Yamaguchi Prefecture)

Wire harnesses are critical components that distribute power and transmit data throughout vehicle systems. To accommodate differing vehicle specifications, a large number of wires and terminals must be combined, and many manufacturing processes are still performed manually. In addition to challenges associated with inventory management and increasingly complex production and logistics operations resulting from a growing variety of parts, manufacturers have also needed to respond to changes in the business environment.

To address these challenges, the two companies focused on near-site production, whereby finished products are manufactured close to vehicle assembly plants, and on the automation required to achieve it. While near-site production contributes to supply stability, greater efficiency in production and logistics, and reduced environmental impact, achieving competitive manufacturing remains a key challenge. At the same time, wire harness production involves many delicate and complex manual processes, making automation difficult to achieve through equipment installation or robotic automation alone.

To overcome this challenge, the two companies collaborated from the early stages of vehicle development and reviewed wire harness variants, specifications, structures, and manufacturing processes with automation in mind. By simultaneously redesigning products and production processes, they improved manufacturing capability and operational efficiency, enabling more competitive manufacturing. Furthermore, through optimization of the entire vehicle, including these initiatives, the number of wire harness variants used in the all-new MAZDA CX-5 was reduced by approximately 80% compared with the previous-generation CX-5.

As a result, the two companies established a production and supply system under which component parts procured by Yazaki are assembled into finished wire harnesses at a Yazaki affiliate's plant in Mine City, Yamaguchi Prefecture, and delivered to Mazda plants in Hiroshima and Yamaguchi prefectures. The system enables domestic production to respond flexibly to fluctuations in demand and changes in the external environment, while improving efficiency and resilience across the entire supply chain. The companies also aim to support the sustainable development of regional manufacturing capabilities while fostering the next generation of talent and preserving manufacturing skills and expertise.

Both companies plan to apply the knowledge gained through this co-creation initiative to wire harnesses used in future vehicle models. Through stable supply, improved production and logistics efficiency, and reduced environmental impact, they will continue their efforts to realize a highly competitive supply chain and sustainable manufacturing.



Left: Kazuhiko Sumi, Corporate Leadership Executive Officer and CSCO, Mazda;
Right: Kunio Tsuyuki, Senior Managing Director, Yazaki Corporation

■ **Comment by Kazuhiko Sumi, Corporate Leadership Executive Officer and CSCO, Mazda Motor Corporation**

This initiative embodies the supply chain structural transformation and “Mazda Manufacturing Innovation 2.0” outlined in our 2030 Management Policy. Through proactive co-creation with our business partners, we have combined expertise and manufacturing capabilities to reduce component variants, bring production closer to vehicle assembly sites, and advance automation. These efforts have strengthened both our cost competitiveness and our ability to respond to change, helping us achieve more competitive manufacturing. We will not limit the application of these achievements to the all-new “MAZDA CX-5.” We will also leverage them to support the development of regional manufacturing capabilities and the transfer of technologies and skills to future generations. Together with our partners, we will continue creating new value for our customers.

■ **Comment by Kunio Tsuyuki, Senior Managing Director, Yazaki Corporation**

This initiative reaffirmed my belief that when companies share the common goal of delivering greater value to customers, automakers and suppliers can combine their expertise and technologies beyond traditional organizational boundaries to create new sources of competitiveness. In particular, our efforts to advance automation are not simply about reducing labor requirements or lowering costs. They are important initiatives that contribute to stable quality, higher productivity, skills transfer, and ultimately sustainable manufacturing. Through continued co-creation with Mazda, we will further advance manufacturing innovation and supply stability while delivering safe, reliable, and high-quality products to our customers.
