



Personal Protective Equipment

Help Protect the Heartbeat of Your Automotive Manufacturing Operations with PPE

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As the future of the automotive manufacturing industry continues to evolve with automation, connected technologies, AI, robotics and new ways of working, nothing can replace the human touch. The integration of advanced technologies into manufacturing facilities plays a critical role in helping workers free up their time to work like humans and demonstrate their value through creativity and problem solving to build a better future for everyone.

Robots in the automotive manufacturing industry are designed to take over repetitive motion tasks that put humans at risk of muscle strains, reducing injuries and allowing human workers to use their specialized skills for other operations. National Public Radio (NPR) echoes this sentiment in their article, *Even In The Robot Age, Manufacturers Need The Human Touch*.

“In general, people and robots work best together, with robots handling dangerous, monotonous jobs and precision work, while people handle tactile work, switch between tasks, make decisions — and come up with creative ideas for improving things.”

Here are three aspects of automotive manufacturing where the human touch enables manufacturers to produce a high-quality vehicle:

Quality Assurance

Quality assurance is a critical stage in automotive manufacturing. When vehicles leave automotive manufacturing facilities, their final stop is the road with drivers behind the wheel. Workers are tasked with ensuring vehicles on the assembly line are produced with consistency to meet the industry standards. Vehicles that leave the facility without proper quality checks can result in product recalls and can be dangerous for drivers.

While robots and sensors can be configured to test for imperfections, they're limited by the parameters set within them. Workers can identify and eliminate defects using their keen attention to detail, taking note of anything that might seem out of place. They can investigate and amend as necessary using their creative problem-solving skills to fix any issue before the vehicle gets on the road.

Assembly of Complex Shapes

Even though robots have replaced many of the repetitive motion tasks on the assembly line, more complex assemblies still require the human touch. Certain aspects of automotive manufacturing require the assembly of complex shapes. With humans' hand-eye coordination and ability to manipulate certain shapes more effectively, such as the parts attached to an engine, the human touch isn't obsolete from the assembly line.

Problem Solving

Humans can both see and feel imperfections or potential problems in production that robots can't. Robots rely on configurations to accomplish their goal and are limited to identifying mistakes based on how the software is set up. However, humans can look at things holistically, giving workers a distinct advantage over their mechanical counterparts to problem-solve, identify problems across multiple areas and keep production running smoothly.

NPR says it best: "Humans edge out robots at these tasks even when everything is going smoothly, but they have a particular advantage whenever things go wrong."

Human-Centric Innovation in the Automotive Manufacturing Industry

Honeywell recognizes the importance of human-centric innovation in automotive manufacturing. It's a value that drives the efforts of their Honeywell User Experience (HUE) team from the inception of the product development process. Their product designers take a holistic approach to creating human-centered product designs based on customer research that helps workers across industries complete their work tasks safely with minimal intrusion.

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Mark Peurifoy

Honeywell's Principal HUE Design Manager for SPS Healthcare and Industrial

"We're seeing a lot of automation with smart features like AI and machine learning coming into manufacturing facilities," said Mark Peurifoy, Honeywell's Principal HUE Design Manager for SPS Healthcare and Industrial. "As technologies enhance the sophistication of automotive manufacturing plants, the workers' PPE also needs to become more sophisticated to achieve synchronous flows with automation. Ultimately, it's about keeping people safe to avoid 'clashing' with advanced technology in the plant."

A focus of HUE's user-centered design approach is on engineering products specifically for the human wearing them to help ensure compliance through improved comfort and ease of use, so the PPE doesn't get in the way of the job at hand.

"We try to understand the workers' pain points and challenges and design out those pain points whenever possible within the PPE," Peurifoy said. "The PPE is critically important to the safety of the worker and... to others that are part of that safety culture. Nothing makes a safety manager feel better than sending their employees home safe. And nothing makes that worker feel better than knowing the PPE they have on is going to help protect them against any sort of harm."

At the end of the day, your workers are the heartbeat of your automotive manufacturing plant – an

irreplaceable asset to your operation. They deserve the highest quality of PPE that rivals the sophistication of the industry and its advancements so they can do what they do best – fuel the operation that fuels the world.

Check out Honeywell's *automotive manufacturing solutions* to find the right products to help protect your greatest asset – your workers.

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