

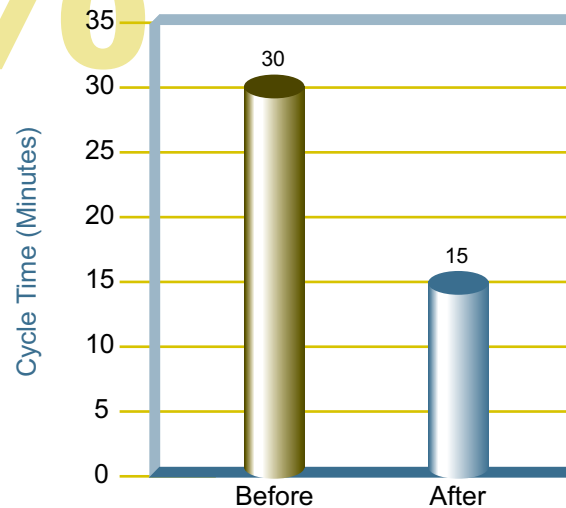
# Honda

## Honda of America Cuts Cycle Time and Scrap by Improving Ergonomics with Humantech

Honda of America Manufacturing initiated operations in Ohio in 1979 at its Marysville Motorcycle Plant, a 260,000 square-foot facility. Three new plants have since been added, each ranging in size from just over a million square feet to over three million square feet. Today, Honda of America has 13,000 associates at its four plants in west central Ohio. Together they produce cars, motorcycles, ATVs, engines, and drive train components for customers in North America and for export to more than 75 destinations around the world.

# 50%

## 50% Reduction in Cycle Time



Humantech assisted Honda's Marysville, Ohio, motorcycle plant with coaching and ergonomics problem-solving skill development. The ergonomics team redesigned a fender finishing station to improve the cycle time by 50% and reduce potential scrap by 83%. Honda estimates the overall savings to be \$500,000 per year.

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## The Challenge

In early 2001, Honda's Marysville Motorcycle Plant (MMP) invited Humantech to assist its ergonomics team in fine-tuning the plant's ergonomics improvement process. By acting as a technical resource to the team while facilitating ergonomic risk factor identification and solution development, Humantech consultants confirmed that the MMP ergonomics process was focusing on the highest priorities, and achieving low-cost, high-impact improvements.

Later that year, Honda associates identified the fender finishing operation in the Weld department as a candidate for an ergonomic redesign. The operation involved excessive forward reaching to 28", awkward upper body postures, and an average of 24 lifts of a 12-pound part per cycle. The workbench nature of the workstation—originally designed for performing operations on a motorcycle gas tank—required associates to lift and reposition the fender multiple times, resulting in a cycle time of 30 minutes. The fender also remained at a fixed height, making it difficult for some associates to reach all areas of it. Although injuries were minimal among the fender finishing workers, morale was low, as they avoided the job due to its physical demands and difficulty. The job also produced a large amount of costly scrap material.

## The Solution

Using ergonomics principles and experiences at the workstation, Honda associates worked through two iterations in just a few months to design the freestanding fixture they use today—a model for good ergonomics. The new fender positioner is height adjustable, and requires only two lifts to load and unload the part.

It's simple to operate, allowing associates to easily maneuver and lock the part—without lifting—into an infinite number of positions. Its design requires forward reaches of only 15", and eliminates the awkward postures. No injuries have occurred at the new fender positioner, and associates who once avoided the operation have enthusiastically accepted the new concept. Jose Banaag, Honda Staff Engineer, Corporate Health and Safety, credits the associates' initiative and teamwork: "They recognized that there was a need for a redesign and obtained input from everyone as they developed it."

## The Results

The redesigned fender positioner demonstrates the bottom-line value of good ergonomics; scrap material was reduced by 83%, and Honda attributes a \$500,000 per year savings to injury avoidance, and to improvements in quality and productivity. According to Banaag, the most significant impact on cost has been the 50% reduction in cycle time—from 30 minutes to only 15 minutes—"a critical element in a business environment where people demand more for less." The new fixture has earned Honda of America MMP an "Ergo Cup" award at the 2002 Applied Ergonomics conference held in Baltimore, Maryland. Conference voters felt it best demonstrated the combination of ergonomic principles and innovation in the workplace. Since implementing the fender positioner, Honda has installed over a dozen similar fixtures, including one in an automotive plant, and continues to investigate implementing the concept at its other facilities.

### About Humantech

For 30 years, global companies have relied on Humantech for workplace improvements. By combining the science of ergonomics and our unique 30-Inch View®—where people, work, and environment intersect—we deliver practical solutions that impact safety, quality, and productivity. At Humantech, we believe people make productivity happen. The 30-Inch View is a registered service mark of Humantech, Inc., 2008.