

QUICK CHANGEOVER REDUCES INVENTORY, LEAD TIMES AND CYCLE TIMES WHILE IMPROVING MACHINE UPTIME AND QUALITY FOR CHARTER AUTOMOTIVE.

Company Profile:

[Charter Automotive](#) is a world class Tier 1 and Tier 2 supplier of engineered components for the automotive industry. The company has its headquarters in Milwaukee, Wisconsin, with worldwide manufacturing, commercial, technical, and distribution facilities to support Original Equipment Manufacturers' global requirements. Charter Automotive is a part of the Charter Manufacturing Co. Inc. family of businesses, which also includes Charter Steel and Charter Wire.

Situation:

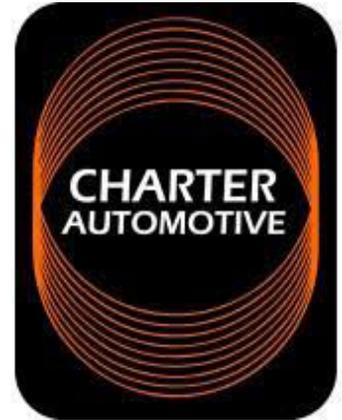
Charter Automotive wanted to reduce its changeover time in valve key stamping. In the past few years, there was an increase in machine downtime due to changeover of parts. This reduced available production time and product capacity. Set up times ranged from 4.5 hours to 2-3 times longer depending on various issues including material delays, waiting for tools and lack of employees. WMEP Manufacturing Solutions and Charter's Quick Changeover (QCO) team addressed the various issues including: inventory issues, inaccurate data, extended down time and changeover time for consumable and traditional tooling, lack of daily changeovers, and low overall productivity.

Solutions:

WMEP conducted a quick changeover (QCO) setup reduction training for Charter's setup staff focused on the valve key stamping area to start. This system emphasized decreasing manufacturing process changeover time, resulting in improved machine uptime and product quality while reducing work in-process inventory, lead times and cycle times, and allowing for smaller batch sizes. WMEP coached the Charter team to implement the new standard changeover process with supporting documentation and helped validate the results.

Results:

- 51% reduction in overall set-up hours.
- 78 occurrences of changeovers documented, compared to 140 from previous year.
- 44% reduction in occurrences of set up time charged
- Machine Rate Improvement resulted in a 5.6% increase in Parts Per Minute output.
- Setup efficiency allowed a transition to three shifts from four, allowing for increased asset utilization across a five-day work week, a reduction in overtime and increased capacity.



"Charter probably didn't have all of the lean technical skills to do this on our own and we definitely didn't have the TPI (Transformational Productivity Initiative) process. It helped us with the focus and problem-solving methodology to attack a problem and sustain it. We now have a standardized and documented process, improved training and better visibility for when we're out of standard and there's a problem. It allows us to react faster and get the right people involved. It's a full team sport where we've included the planning side of the business, reducing setups and time. It's been a double win for that."

Tim Pomroy, Director of Continuous Improvement