

Machine Shop Customer Delivery Improvement

Project Start Date: December 3, 2007

Project End Date: February 20, 2009

Company profile

Machine Shop Customer is a machined parts supplier for major industrial catalogue companies. Based in Dayton, Ohio, Machine Shop Customer both machines and assembles parts shipped to their customers. Primary metal parts machined consist of tooling kits, knobs, studs, and bolts, while primary parts assembled are metal plungers. The companies growing area of business is the metal plunger business used for industrial application.

Machine Shop Customer consists of just one plant which does the majority of machining of the parts. Some outside operations do occur which Machine Shop Customer contracts out to other local Dayton businesses.

Business situation

With an ever-growing market for the metal plungers, Machine Shop Customer had difficulty fulfilling customer orders timely. A constant backlog of orders plagued the shipping department, where orders could not be processed by the due dates. With relatively flat sales year after year on the majority of Machine Shop Customer's parts, Strategy3 was hired to convert Machine Shop Customer from a make-to-order shop to a make-to-stock shop. Strategy3 increased turnaround time with a very strategic approach:

- Time studying all machined and assembled parts
 - Issuing labor standards to hold the people accountable to productivity goals
- Reviewing historical sales on all finished goods parts
 - Inclusive of kits as well as individual parts
- Publishing an on-hand quantity in-stock goal for each part number required the plant to build inventory to a 6 month on-hand availability.

By setting an on-hand inventory goal for each part number of 6 months, Machine Shop Customer would be able to run parts in economic order quantities, thus reducing changeover times and increasing efficiencies.

Implementation Approach

First, Strategy3 time studied all assembled parts and made the batch sizes conducive to minimal setup and changeovers. Next, Strategy3 published a goal-tracking board for the assemblers to report their times against. Visual feedback boards were instrumental in maintaining increased levels of production.

For the Machine shop, fixture carts and re-organized workspace created standard setups for the operators. Changeovers were studied to identify 75% opportunity reductions.

Results

Average daily piece count on the machines increased from 377 to 517, **for an overall daily piece count improvement of 37%**. For assembly, pieces per hour rose from 155 to 227, **for an overall hourly piece count improvement of 46%**. Backlogged orders improved by over 40%.