

# Technical Service Bulletin

**Service For:** Post Consumer Brands **Sector:** Food Industry



Originally founded in 1895, Post Consumer Brands is an American consumer cereal brand which includes well-known products such as Honey Bunches of Oats, Post Shredded Wheat, Post Raisin Bran, Honeycomb, Shreddies, and many more.

## **TECHNICAL SERVICE CHALLENGE:**

Post's plant incorporates some legacy equipment which occasionally, during regular inspections, requires replacement of some consumable parts. One part in particular was a custom drive sprocket. Post had no engineering data for this part, and required this information in order to have spare parts machined for future use. Post was also interested in having a set of 3D printed, full-scale replicates, for machine alignment and maintenance purposes. Due to the complex geometry of the part, conventional measurement techniques were not adequate, and a portable CMM arm and laser scanner were required to complete this work to Post's standards.

## **DELIVERABLES:**

To provide Post with a set of technical drawings for a custom size sprocket used on their Niagara Falls facility production line.

## **EQUIPMENT USED:**

Faro Edge Scan Arm and Laser Line Probe, Geomagic DesignX Software, Autodesk Inventor, Fortus 900mc 3D Printer.

## **RESOURCES:**

1x Niagara College TAC Staff, 1x - 4 year Niagara College Mechanical Engineering Technology student

## **DURATION:**

1 Month total duration

## **BENEFITS TO INDUSTRY PARTNER:**

Since being introduced to the Walker Advanced Manufacturing Innovation Centre, Post foods has had a complete set of technical drawings and CAD files for the machine part, in order to support future machining of spare parts as required. Post also received a set of 3D printed, full-scale sprockets for machine alignment and maintenance purposes.

## **BENEFITS TO NIAGARA COLLEGE:**

Real-world job experience with portable CMM arm usage, metrology software, and CAD optimization for Additive Manufacturing for students. This also further fosters a climate of innovative thinking, preparing students for post-graduation employment with experience using a suite of advanced manufacturing tools.

*For more information, contact Jim Lambert, Walker Advanced Manufacturing Innovation Centre Manager, at 905-735-2211, ext. #7177 or e-mail [jlambert@niagaracollege.ca](mailto:jlambert@niagaracollege.ca)*

Access Technical Services at the Walker Advanced Manufacturing Innovation Centre, your company's R&D partner, located at the Welland Campus of Niagara College. We provide a key competitive advantage to industry, offering access to cutting-edge equipment – and related services – for the development of products and manufacturing processes.

## We specialize in

### TECHNICAL SERVICES

Including: 3D Printing, 3D Design, 3D Measurement and Scanning

### AUTOMATION

Mechanizing a process to decrease human labour and increase efficiency

### PRODUCT DESIGN AND DEVELOPMENT

Creating a new product for deployment within your business or to be sold to a customer

### REVERSE ENGINEERING

Discovering the technological principles of a device, object or system through analysis of its structure and functions

### LEAN MANUFACTURING ASSESSMENT

Analyzing and improving an existing process within your operations

### PRODUCT RE-DESIGN AND IMPROVEMENT

Revamping an existing product to improve quality and/or adapt to changing market conditions



## Resources & Capabilities

- *Rapid Prototype Machine*
- *Laser Scanners (small-scale and room-size)*
- *Vision System*
- *Hand Measurement Tools*
- *3D Computer-Aided Design*
- *3D Factory Design*
- *Physical Simulations and Modelling*
- *Engineering Design*
- *Electronics and Electrical*

*“Niagara College brings youth, enthusiasm and knowledge to a tough playing field where every dollar is critical to the survival of many small businesses.”*

*~Bob Benner, Hamill Machine Company Inc.*

