



## CaseStudy

**The Challenge:** Increase part throughput

### **Castrol Syntilo 9904 In Bearing OD Grinding**

### **42.5% Cycle Time Reduction**

A major bearing manufacturer was seeking a reduction in cycle time of inner ring OD grinding in order to increase production to meet increasing customer demand.

Syntilo 9904 reduced grinding cycle time by 42.5%, dramatically increasing the plant's ability to produce parts quicker.

#### **Before:**

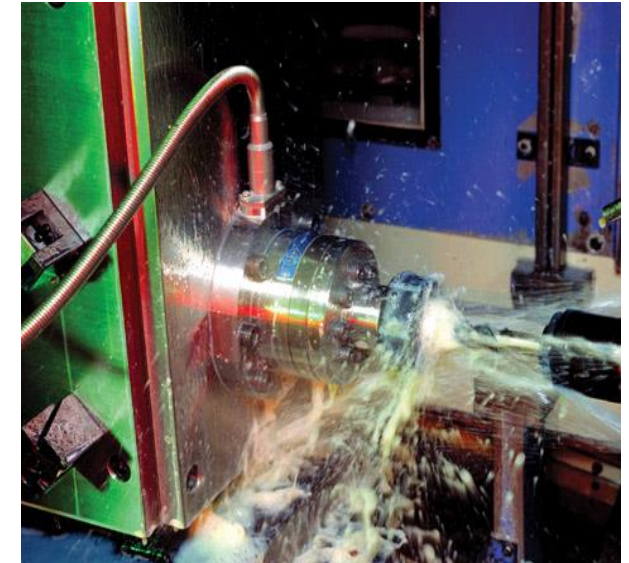
- Company "Q" semi-synthetic coolant
- Performance dramatically below printed machine specs
- High cycle time

#### **After:**

- Castrol Syntilo 9904 synthetic @ 5%
- Performance better than printed machine specs
- Reduced cycle time (42.5% less time versus the previous coolant baseline)

**Result:** The conversion to Syntilo 9904 dramatically increased the efficiency of the process while maintaining a high level of part quality.

The exceptional lubrication and clean-running nature of Syntilo 9904 allowed the customer to significantly impact production in a positive manner.



*Castrol Syntilo 9904 and Castrol Engineering support worked together to dramatically impact the customer's production capabilities. The true value of Syntilo 9904's superior lubrication was achieved only through the application support of Castrol personnel, who took the time to understand the process and evaluate the optimum machine settings.*

**Recommendations:** Castrol Engineers facilitated the cycle time reduction through on-site process monitoring, which included working directly with the customer's Engineering staff to make stepwise machine adjustments. Evaluations were performed on Cincinnati 2BV Micro Grinders performing OD grind of the inner raceway and thrust wall. Process was optimized through changes in feed rates, speeds, and positions.

CYCLE TIME	Baseline	Optimized	Change
Load/Unload	7 sec	10.8 sec	+3.8 sec
Course Grind	8 sec	23 sec	+15 sec
Fine Grind	91 sec	55.6 sec	-35.4 sec
Micro Grind	105 sec	27.8 sec	-77.2 sec
Tarray	4 sec	4 sec	0 sec
Total	211 sec	121.3 sec	-89.7 sec (42.5%)

Together, Castrol products and services can help meet the heavy production demands of bearing manufacturers. Castrol's Engineering staff will take the time necessary to understand the process environment and provide the support necessary to achieve outstanding results.

**Segment: Machinery Manufacturing**

**Sub Segment: Bearings -- Rings**

