



## Redefine Productivity with KITAGAWA-NORTHTECH



### Increase Production Through Put with Sealed Chucks

Over 99% of power chucks in the world are not sealed. The resulting effects are contaminants (chips, coolant, etc.) entering the chuck and necessary lubricants escaping. The following article can apply to larger job shops, but is most relevant to high volume part manufacturers.

#### What is the impact to the end user?

There are two main reasons why using non-sealed chucks *negatively* affect the *high volume* manufacturer:

1. Productivity loss translates into lower profitability due to less machine output as measured in time.

The outcomes include:

- ▶ Higher cycle times
- ▶ More downtime (planned & unplanned)

2. Higher cost of ownership

#### Why is this so?

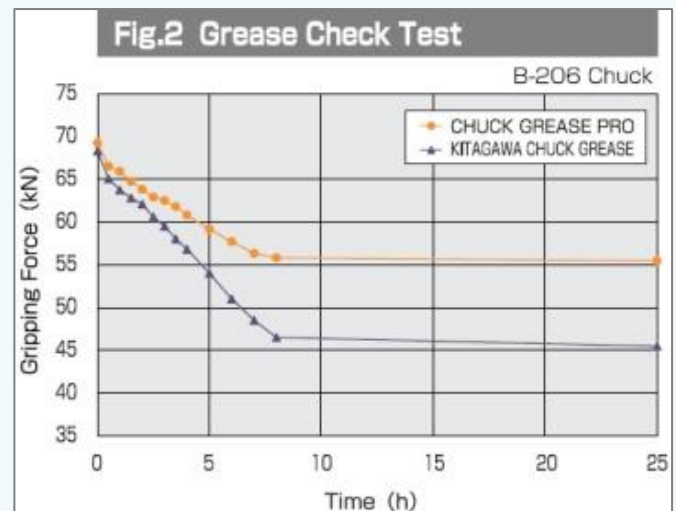
The first contributor of reduced through put (i.e. productivity) is grease loss due to centrifugal force (rotational speed) and coolant wash out. Most companies elect not to grease their chucks more frequently than every 8 hours, thus their machining program must accommodate reduced chuck performance which can result in cycle times running longer than needed.

**Figure 2** illustrates the 30% drop in grip force over 8 hours due to these cases.

Second influencer towards low through put is maintenance routine and frequency. By greasing every eight hours, and disassembling the chuck every four to six months, negatively affects actual production time and restricts profits.

#### Return on Investment (ROI)

When we consider longer cycle times, higher levels of downtime and faster chuck wear, the cost of ownership of non-sealed chucks is much higher when compared to a sealed design. Many manufacturers will experience returns on investment from sealed chuck investments within, or less than, sixteen weeks.



An example of successful returns involves a Kitagawa-NorthTech customer in Kentucky that machines high volume aluminum bars. It was estimated that they lose over 500 hours of machining time per year. The outcome of these activities on a yearly basis amounted to almost \$500,000 per year in lost profits.

Learn more on how sealed chucks will reduce contamination and help excel your productivity and profits by **contacting Kitagawa-NorthTech today!**

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