

NTN's Sealed Ball Bearings Halve Maintenance on Bag Seal Checking Line

A major producer of potato chips and other snack products was experiencing bearing failures on its potato chip bag seal checking line almost every month due to the frequent washdowns required for the production area. The recurring failures resulted in over \$25,920 in bearing spending and about \$10,000 in downtime and maintenance costs annually at the facility.

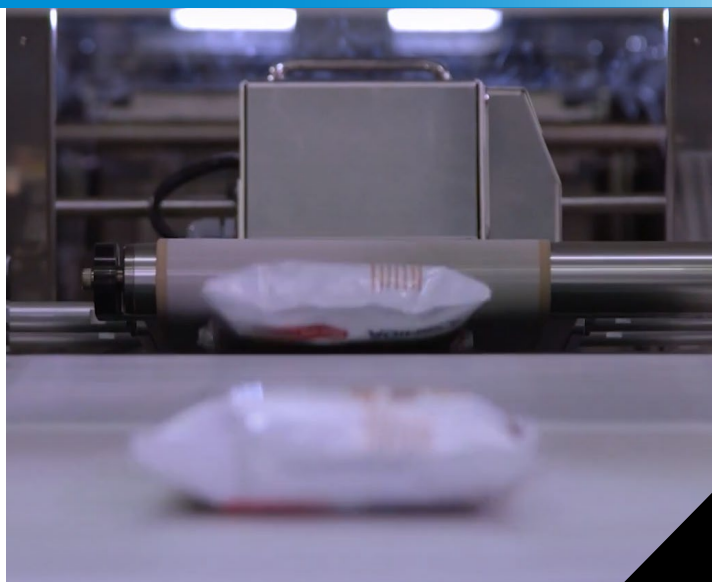
NTN's engineering and sales support team performed a thorough evaluation of the production line and determined the bearing failures were being caused by insufficient lubrication due to grease washout as a result of daily high-pressure washdowns of the equipment.

The NTN Solution

NTN's team recommended the implementation of our LLU sealed ball bearings as a replacement for the competitor's bearings with single-lip seals. NTN's LLU sealed ball bearings utilize double-lip contact seals to maintain better contact with the sealing surfaces than single-lip seals, allowing for extended seal life and effectiveness. The improved sealing helps extend the life of the bearing by preventing contamination ingress and reducing grease washout.

The Result

The NTN solution lasted *two and a half months*; doubling bearing life and cutting maintenance in half. The increased uptime, reduced maintenance, and reduced bearing spend resulted in *\$26,964 of cost savings* for the customer.



VALUE ADDED BREAKDOWN

REDUCED ACQUISITION COST

\$22,072

MAINTENANCE REDUCTION

\$2,462

UPTIME IMPROVEMENT

\$2,430

DOCUMENTED COST SAVINGS

\$26,964

CS-1734



**ANNUALIZED
COST SAVINGS
\$26,964**

NTN SEALED BALL BEARINGS

Grooved Type Sealing Figure for Excellent Performance (All Models)

A v-shaped groove is cut around the inner ring. Under centrifugal force, the outer surface of the 'v' acts to keep out dirt; the inner surface of the 'v' acts to seal in the grease.

Double-Lip Seal Adjusts to Wear (LLU Spec)

The inner lip of a double-lip seal is pressed against the inside surface of the V-groove; the outer lip is spread open by the elastic force of rubber to create a small gap between the outer lip and the inner ring, creating a labyrinth effect (Figure 2). Should the inner lip wear, the contact pressure will decrease; however, the outer lip will get closer to the inner ring (Figure 1). In effect, a constant degree of sealing will be maintained; and, as a result, bearing service life will be noticeably lengthened.

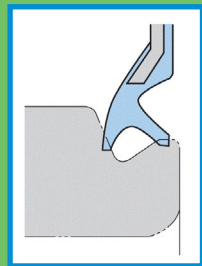


Figure 1

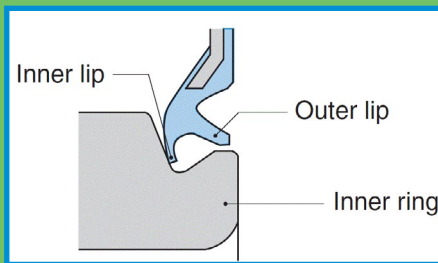


Figure 2

We will not leave you holding the bag.

We're here to help you achieve your productivity and performance goals. For more information, contact your NTN Sales Representative or call **1.800.323.2358**. For technical questions, email eng@ntnamerica.com.

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