



*Adhesives for more
reliable assemblies*

APPLICATION CASE HISTORY

No. 216

Loctite® Threadlockers Save Over \$550,000 For Japanese Tire Manufacturer

Manufacturing Reliability Training Gives Maintenance Team The Know-How

Problem:

A major tire manufacturer in Japan had been experiencing problematic machinery downtime due to fastener loosening. In fact, 284 cases a year were attributed to nut and bolt failures caused by vibration loosening, improper torque and thermal expansion. Repair costs (*time and material only*) were averaging \$130 per incident, and average downtime per case was *two hours*.

Consider the ramifications over a one year period:

Failure Incidents Per Year	284
<u>Average Repair Cost Per Incident</u>	<u>x \$130</u>
Approximate Repair Cost Per Year	\$36,920

Now, assuming one hour of downtime is worth \$1000:

Total Hours Production Lost (2 hrs. x 284 failures)	568
<u>Average Hourly Downtime Cost</u>	<u>x \$1000</u>
Total Yearly Downtime Cost	\$568,000

Solution:

The Loctite Manufacturing Reliability Process has given maintenance personnel the tools and techniques to implement a proactive maintenance plan throughout their facility. After identifying the problem areas, maintenance personnel determined that proactive use of Loctite® Threadlockers would help stop the fastener loosening. Now as a regular maintenance procedure, every nut and bolt on every machine in the plant is being treated with Loctite Threadlockers.

Results:

This proactive use of Loctite Threadlockers has enabled this tire manufacturer to significantly reduce downtime by reducing fastener loosening and virtually eliminating the high rate of threaded fastener failures. By saving over 550 hours of unscheduled downtime per year, they expect to recover over \$550,000 in additional production.

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