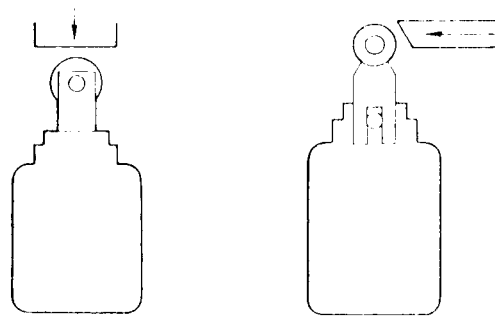


LOCTITE*Adhesives for more
reliable assemblies***APPLICATION CASE HISTORY****No. 246**

Loctite Manufacturing Reliability Process Saves Manufacturer \$57,000 In Unscheduled Downtime & Labor Costs

Situation:

A leading cause of unscheduled downtime related to mechanical failures is typically due to fastener loosening. A large wood and lumber manufacturer was experiencing these "tap root" cause failures with their limit switch arms. Limit switches translate motion into switch actuation. The maintenance department found the screws were loosening in the arms, which allowed the wand to fall out or become misaligned. A maintenance person was assigned to tighten all the screws. This task took about 5 to 10 minutes per occurrence with 2 occurrences per shift. Each time the task is completed, the equipment must be "tagged out," tightened and brought back on line. In one year, it was found that over 91 hours had been spent on labor and downtime.



Typical push-roller and rotary limit switches.

Solution:

The Loctite Manufacturing Reliability Process incorporates equipment reliability training for maintenance personnel. This training provides maintenance technicians with techniques, procedures, and methods to overcome problems such as fastener loosening.

Based on what they had learned in this training, the maintenance personnel of this manufacturer chose Loctite® 222 Threadlocker to remedy their limit switch situation. Loctite 222 is a product applied before the fasteners are assembled and is recommended for small fasteners, especially less than 1/4". Once 222 has cured in place, it has a torque removal resistance of 62 in. lbs., and can be disassembled with standard hand tools. It resists vibration loosening and does not breakdown when in contact with various shop chemicals.

Results:

Loctite 222 Threadlocker unitized the screws within the assembly and prevented them from vibrating loose. Since implementing this technique and product, the manufacturer has forecasted that in one year it will prevent 91 hours of downtime and labor costs. This translates into a cost savings of just over \$57,000.

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