

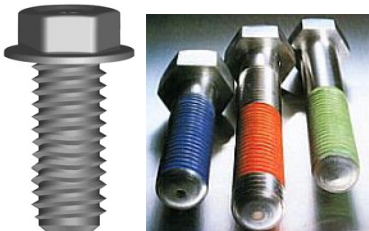


COST SAVINGS SUCCESS STORY

Report #7-10

Key Components:

- Improved Quality
- Eased Assembly
- Increased Joint Performance
- Improved Operator Ergonomics
- Reduced Warranty Cost



Oscillating Tool - Critical Motor Mount Fastener Redesign - New Product Introduction

Opportunity:

This part was presented to Field while in the **new product design stage**. The initial fastener was a **high cost**, proprietary design. The fastener requirements included resistance to vibration loosening. The fastener in the initial design was used in an existing product and would **loosen** after **very few hours** of use.

Previous Design:

The initial design used a **proprietary thread** design that relied on the principle of thread interference. This was accomplished by the addition of a wave in the thread. Through testing it was established that this design caused **excessive installation torque** while providing a **decreased failure torque** which did **not** resist vibratory loosening in this application.

New Design:

Field proposed a fastener with a **pre-applied micro-encapsulated patch**. The micro-encapsulated patch shears beads during installation, causing the two part epoxy to mix and start creating a bond line between the threads of the screw and nut. This new design **increased the life** of the motor mount joint by 20 times. This design also **decreased** the required installation **torque** while increasing the failure torque when compared to the previous design.

Field's Design
Increased Tool Life:
20 Times Longer Tool Life

Increased Consistency
Reduced Potential Warranty Claims