

## ***ArmaKleen Technical Service Report Summary***

**Cleaning Trial Type:** Aqueous

**Industry:** Battery Technology

**Segment:** 29 Miscellaneous Manufacturing

**Soil:** Shop dirt, oil, grime, cutting fluids, anti-seize, grease

**Substrate:** Steel/iron

**Description of Part(s):** Nuts and bolts

**Customer objective:** Improve cleaning performance, automate cleaning process, reduce rework and reject rate

**Cleaner used:** 5% by volume ArmaKleen™ BIO-24

**Machine used:** Ultrasonic Washer (SK Blackstone 6315)

**Temperature used:** 160°F

**Time required:** 30 minutes

**Post Cleaning:** Half of the parts were rinsed with fresh water and air pressure dried, followed by being placed in an oven; the other half were air pressure dried with no water rinse

**Recommendation to Customer:** The ArmaKleen Technical Center recommends using a 5% by volume solution of Bio24 at 160°F in an Ultrasonic bath for a minimum of 30 minutes with no water rinse

**Before Picture**



**After Picture**



**Source:** TSR #19-A-065