## **ArmaKleen Technical Service Report Summary**

Cleaning Trial Type: Aqueous

Industry: Surgical and medical instrument manufacturer

**Segment:** 34 – Mfg – Non-Metal (Plastic, Rubber, Glass)

Soil: cutting fluids and grease (Etching Fluids, ECM Fluids, Pointing Fluids, End Forming and CNC Swiss Lathe Fluids

Substrate: stainless steel, aluminum and titanium

**Description of Part(s):** an assortment of needles

Customer objective: The customer was looking to introduce a pre-clean cleaning process prior to parts being cleaned

Cleaner used: 5% by volume solution of ArmaKleen<sup>™</sup> 4 in 1 Cleaner

## Machine used:

Ultrasonic Washer (SK Blackstone model 6315)

- Agitating Immersion (SK Model 81.8, Graymills T24)
- Spray Under Immersion Washer (Graymills T12, Graymills T24, SK Model 81.8 w/SUI)
- Spray Washer (JRI TL3, JRI FL250, JRI FL500, Better Engineering G-2000)

**Temperature used:** 150°F – 160°F

Time required: 15-30 minutes

**Post Cleaning:** De-ionize water rinse followed by air pressure drying.

**Recommendation to Customer:** The ArmaKleen Technical Center recommends using a 5% by volume solution of ArmaKleen™ 4 in 1 Cleaner at 150°F in an Agitating Immersion Washer or at 150°F in a Spray-Under Immersion Washer or at 160°F in an Ultrasonic Washer or at 160°F in a Spray Washer for a minimum of 15-30 minutes.

## **Before Picture**



## **After Picture**



Source: TSR #17-A-097