

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

**Cleaning Trial Type:** Aqueous

**Industry:** Blade manufacturing

**Segment:** 26 Fabricated Metal Products

**Soil:** Shop dirt, oil, glue/adhesive, grime, cutting fluids, silicone and rust/oxides

**Substrate:** Steel

**Description of Part(s):** 11" steel circular cutting blades, 13" steel circular cutting blades

**Customer objective:** The customer was looking to improve their cleaning performance, automate their cleaning process, reduce rework and reject rate, eliminate hazardous chemicals and waste and reduce VOC's.

**Cleaner used:** 5% by volume ArmaKleen™ 4 in 1 Cleaner

**Machine used:**  
1. Spray Washer (TL3, FL250, FL500)  
2. Agitating Immersion Washer (81.8)

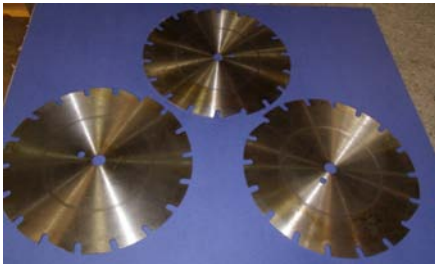
**Temperature used:** 160°F

**Time required:**  
Spray Washer: 1 hour  
Agitating Immersion Washer: 1 hour

**Post Cleaning:** 4 blades were fresh water rinsed and air pressure dried. 2 of the blades were left unrinsed and just air pressure dried, leaving the ArmaKleen™ 4 in 1 Cleaner residue on the blades.

**Recommendation to Customer:** The ArmaKleen Technical Center recommended using 5% by volume ArmaKleen™ 4 in 1 Cleaner at 160°F in either a Spray Washer or an Agitating Immersion Washer for a minimum of 1 hour.

### **Before Picture**



### **After Picture Rinsed**



### **After Picture Unrinsed**



**Source:** TSR #12-A-244