CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 09/05/2006

Experimenters: Jason Marshall

ClientType: Metal Working

ProjectNumber: Project #1

Substrates: Brass

PartType: Part

Contaminants: Buffing/Polishing Compounds, Fingerprints

Cleaning Methods: Ultrasonics

Analytical Methods: Visual

Purpose: To evaluate selected cleaners on supplied brass belt buckles using ultrasonic cleaning.

Experimental Procedure: Three products from the lab's database were selected based on client supplied information. The products were diluted to 5% in 250 ml beakers using DI water and immersed in a hot water bath at 130 and degassed for five minutes in a Branson 3510 ultrasonic 40 kHz unit.

One supplied dirty buckle was cleaned in each solution for five minutes using 40 kHz ultrasonic agitation. Buckles were rinsed for 15 seconds in a tap water bath at 120 F and dried using a dry compressed air for 30 seconds. Buckles were visually inspected for cleanliness.

Results:

Cleaner	Observation
MC 132	Solution turned red from buffing compound. Initially, buckle looked clean and free of contamination. After sitting for a few hours, brown marks began showing up.
Polyspray Jet 790 XS	Solution turned a light brown from buffing compound. Part looked clean and no spots showed up.
Detergent 8	Solution turned a milky pink from buffing compound. Part looked very clean and no spots showed up.

Summary:

Substrates:	Brass				
Contaminants:	Buffing/Polishing Compounds, Fingerprints				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Matchless Metal Polish Company	MC 132	5	0.00	☐	Some brown spots appeared
US Polychem Corporation	Polyspray Jet 790 XS	5	0.00	☑	Clean looking
Alconox Inc	Detergent 8	5	0.00	☑	Very clean looking

Conclusion: Two products were found to work on the supplied brass buckles using ultrasonic energy. With the products successful on the buffing compound, the next step will be to evaluate these cleaners on supplied additional parts at or after workshop.