CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 11/13/2006

Experimenters: Jason Marshall

ClientType: Metal Working

ProjectNumber: Project #1

Substrates: Nickel, Chrome

PartType: Part

Contaminants: Buffing/Polishing Compounds

Cleaning Methods: Ultrasonics

Analytical Methods: Visual

Purpose: To re-evaluate products on supplied parts using ultrasonic cleaning

Experimental Procedure: Three products were selected based past testing. Each product was diluted to 10% in 1000 ml beakers using DI water and heated to 130 F on a hot plate. Each beaker was immersed into a Branson 3510 ultrasonic tank and degassed for 5 minutes. One part was immersed into the 40 kHz ultrasonic tank and cleaned for 5 minutes. Parts were rinsed for 15 seconds in a tap water bath at 120 F and dried using a dry compressed air for 30 seconds. Once dry, parts were inspected visually and compared to the other products.

Additional concentrations, temperatures or time may be introduced based in an attempt to increase cleaning effectiveness.

Results: Two products were still not completely successful in removing the buffing compound from the supplied parts. US Polychemical PolyJet 790XS was the most successful at 10% at 130. The product also was tested at 25% concentration and 150 F.

Cleaner	Observation
Det 8	Appear to be tarnishing the surface of the parts. Not as clean as Polyspray Jet 790 XS.
MC 132	Didn't remove all from front. Back looked good. Some front surface damage.
Jet790XS 10%	Very clean after 5 minutes on both sides. A follow up piece was cleaned to verify results. The second piece had very little of the buffing compound left. (This part had been previously cleaned in another product from previous trial)
Jet790XS 20% (130)	Part looked very clean.
Jet790XS 20% (150)	Very clean after 2 minutes of cleaning.

Summary:

Substrates:	Nickel, Chrome				
Contaminants:	Buffing/Polishing Compounds				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Alconox Inc	Detergent 8	10	0.00	☐	
Matchless Metal Polish Company	MC 132	10	0.00	☐	
US Polychem Corporation	Polyspray Jet 790 XS	10	0.00	☑	
US Polychem Corporation	Polyspray Jet 790 XS	20	0.00	☑	

Conclusion: The US Polychemical PolyJet 790 XS provided the cleanest parts without damaging the surface of the supplied parts. There are a couple of operating conditions that were found to be successful in cleaning the supplied parts.