CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 10/28/2002

Experimenters: Jason Marshall

ClientType: Manufacturing

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate client requested cleaner on supplied contaminant

Experimental Procedure: One client requested product was diluted to 3% (Liquinox) in 1500 ml beaker and the other was diluted to 5% in 400 ml beaker using DI water. The solutions were heated to 130 F on a hot plate. Six preweighed coupons were coated with Milacron Marketing Company CIMTECH® 310 metal working fluid concentrate (102-71-6, 78-96-6, 26896-20-8) using a hand held swab. Coupons were then reweighed using a Denver Instruments A250 balance to determine the amount of contaminant added. The coupons were immersed into each solution and cleaned for 5 minutes using stir bar agitation. Coupons were rinsed for 15 seconds in a tap water bath at 120 F and finally dried using a Master Appliance Hot Air gun at 500 F for 30 seconds. After the coupons were dried, final weights were recorded and efficiencies calculated for each cleaning solution.

Results: The Det-O-Jet cleaner was more effective than the Liquinox solution. The table below lists the amount of contaminant applied and remaining as well as the product efficiency.

Cleaner	Initial wt	Final wt	% Removed
Liquinox	0.1857	0.0438	76.41
	0.4069	0.0428	89.48
	0.1169	0.0437	62.62
Det-O-Jet	0.1841	0.02	89.14
	0.2441	0.0225	90.78
	0.1244	0.0131	89.47

Summary:

Substrates:	Aluminum				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Alconox Inc	Liquinox	3	76.17	☐	
Alconox Inc	Det-O-Jet	5	89.80	☑	

Conclusion: Having been successful in removing the metal working fluid, Det-O-Jet will be evaluated on supplied parts using ultrasonic cleaning and OSEE analysis.