CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 10/09/2002

Experimenters: Jason Marshall

ClientType: Manufacturing

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Part

Contaminants: Cutting/Tapping Fluids, Lubricating/Lapping Oils, Oil

Cleaning Methods: Ultrasonics

Analytical Methods: Visual, Wipe

Purpose: To evaluate successful cleaners on supplied parts

Experimental Procedure: Three products from the previous trial were selected for cleaning supplied parts. Two were diluted to 5% and one was diluted to 3% using DI water in 1500 ml beakers. All three products were heated to 130 F on a hot plate. Each solution was degassed for 5 minutes in a Crest 40 kHz ultrasonic tank. Several supplied parts were cleaned in each solution for 5 minutes using ultrasonic energy. Parts were rinsed in tap water at 120 F for 15 seconds, dried using air blow off at room temperature for 15 seconds, followed by a Master Appliance Heat Gun at 500 F for 30 seconds. Once dry parts were visible inspected and wiped with a white towel to determine cleanliness.

Contaminant: Milacron Marketing Company CIMTECH® 310 metal working fluid concentrate (102-71-6, 78-96-6, 26896-20-8)

Results: Both Citranox and Daraclean 282 appeared to remove the fine layer of black contamination present on the dirty parts. Upon wiping the surface with a kimwipe soaked with acetone resulted in no visible black on the parts cleaned in Citranox and very little for the Daraclean cleaned products. The wipe test of the Aircraft & Metal Cleaner cleaned parts resulted in the appearance of the black residue.

Summary:

Substrates:	Stainless Steel				
Contaminants:	Cutting/Tapping Fluids, Lubricating/Lapping Oils, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Alconox Inc	Citranox	3	0.00	☑	Rank = 1
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	0.00	☐	Rank = 3
Magnaflux	Daraclean 282	5	0.00	☑	Rank = 2, almost equal to 1

Conclusion: Citranox worked the best out of the three cleaners, followed closely by Daraclean 282.