

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002
 DateRun: 10/10/2002
 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		<input checked="" type="checkbox"/>	Rank = 1
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5		<input type="checkbox"/>	Rank = 3
Magnaflux	Daraclean 282	5		<input checked="" type="checkbox"/>	Rank = 2, almost equal to 1

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