CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 05/21/2006

Experimenters: Jason Marshall

ClientType: General

ProjectNumber: Project #2

Substrates: Plastic

PartType: Part

Contaminants: Inks, Paints

Cleaning Methods: Ultrasonics

Analytical Methods: Visual

Purpose: To evaluate additional products for removing paint and ink from supplied parts

Experimental Procedure: Individual products and mixture of products were used at various concentrations. Each product/mix was heated to 150 F in a 40 kHz ultrasonic tank. One golf ball was cleaned in each solution for 30 minutes. At the end of the cleaning, the ball was rinsed in a tap water spray for 15 seconds at 120 F and wiped dry with a paper towel. Observations were made and compared to the client's current cleaner. An additional 30 minutes of cleaning was included if the alternative started to remove the paint and ink.

Results:

Alternative	Observation
D Zolve 1012 @10%	No visual effect
D Zolve 1012 @50%	Some removal of ink - ball still shiny
Metabolix E3HB	Some removal, not as shiny, ink coming off
Metabolix & Actisolv 50-50 mix	Good removal, ink very faded
Inproclean 4000 T 30%	Followed with 20 minutes of cleaning with
	Metabolix & Actisolv mix - did not improve
	cleaning
Soy Cleaner 180 D	No removal
DFC Degreaser	No removal
Actisolv & Inproclean & Water	Paint flaking off with some ink removal
50%-15%-35%	Additional 30 minutes had lots of paint
	flaking off and ink nearly gone
	Not completely cleaned

Summary:

Substrates:	Plastic
Contaminants:	Inks, Paints

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Oakite Products	Inproclean 4000 T	30	0.00	☐	
Sysco Corporation	Soy Cleaner 180 D	100	0.00	☐	
Cogent Environmental Solutions	DFC Degreaser	100	0.00	☐	
Gemtek Products	SC Actisolv Safety Solvent	50	0.00	☑	Mix with Inproclean 4000 T and water
Transene Company, Inc.	D Zolve 1012	10	0.00	☐	
Transene Company, Inc.	D Zolve 1012	50	0.00	☐	
Metabolix Inc	Metabolix E3HB	100	0.00	☐	
Metabolix Inc	Metabolix E3HB	50	0.00	☑	Mix with Actisolv

Conclusion: Despite some of the products having moderate success when mixed with other successful products, nothing worked as well as the current solvent.