CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 12/16/2007

Experimenters: Shweta Bansal

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Lubricating/Lapping Oils

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure:

Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning.

Using the laboratories standard operating procedures, several products were evaluated for lubricant removal.

Cleaning: 5 minutes of immersion soak at 130 F with stir-bar agitation.
Rinsing: Tap Water
Drying: 30 seconds with air blow off
Contaminant: Lubricant - SYNCOOL
Substrate: 2"x 4"x 0.06" - Aluminum Coupons

Products were based on the compatibility of substrate and removal of foreign substance. Used 5% concentration and heated the samples at 135F. The coupons were immersed in a product for 5 minutes, rinsed for 30 seconds in tap water at 120F and dried in 30 seconds using compressed air is room temperature.

Coupons were coated with used oil. Using a handheld swab and allowed to dry for 144 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. After cleaning process, the final weights were recorded, efficiencies were calculated and recorded.

Results:

Cleaner	Initial wt	Final wt	% Removed
ozzy juice sw-1			
	0.6734	0.0318	95.28
	0.882	0.0457	94.81
	1.1297	0.0531	95.30
sea wash blue			
	0.8113	0.0417	94.86
	0.7418	0.0080	98.92
	0.7798	0.0578	92.59
new pig degreaser			
	1.0190	0.0290	97.15
	1.4917	0.0130	99.13
	0.9191	0.0132	98.56
sc aircraft and metal cleaner			
	1.4091	0.1041	92.61
	1.0064	0.0641	93.63
	1.4272	0.1246	91.27
Inproclean 3850			
	1.0591	0.0146	98.62
	1.3548	0.0341	97.48
	1.3566	0.0360	97.35

Summary:

Substrates:	Aluminum				
Contaminants:	Lubricating/Lapping Oils				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Chem Free Corporation	SW-1 Ozzy Juice	5	95.13	☑	

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New Pig Corporation	New Pig Degreaser	5	98.28	☑	
Warren Chemical Company	Sea Wash Blue	5	95.46	☑	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	92.50	☑	
Oakite Products	Inproclean 3800	5	97.82	☑	

Conclusion: All five products removed over 92% of the syncool lubricant using immersion cleaning.