CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 11/03/2009

Experimenters: Johnny Le

ClientType: Ceramic Coating Company

ProjectNumber: Project #2

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate top five products on sixth supplied contaminant using manual cleaning

Experimental Procedure: Five products from the previous trials were selected based on performance. All were used at room temperature. Two alkaline aqueous cleaners were diluted to 5% using DI water in 300 ml beakers. Three cleaners were used at full strength. Fifteen preweighed aluminum coupons were coated with Poseo Premium HPL 6 oil using a handheld swab. The contaminated coupons were weighed again to determine the amount of soil added.

Each cleaner tested with three coupons. Three coupons were placed into a Gardner Straight Line Washability unit. A Kimberly Clark Reinforced paper towel was attached to the cleaning sled and soaked with 5-7 sprays of cleaning solutions. Each coupon was sprayed 3 times with the same cleaning solution. First, Coupon was cleaned for 15 cycles two times; after coupon was cleaned for 15 cycles, experimenter changed the paper towel and soaked with 5 spray of same cleaning solution. At the end of the cleaning, coupons were dried at room temperature naturally. Final weights were recorded and efficiencies were calculated and recorded.

Results: Four of the five worked very well on the light oil, removing more than 85%. The Activeion unit had the lowest efficiency at 75%. The table lists the amount of oil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Shopmater RC 100%			
	0.0418	0.0048	88.52
	0.0366	0.0050	86.34
	0.0424	0.0039	90.80
SC Aircraft metal cleaner 5%			
	0.0229	0.0020	91.27
	0.0122	0.0017	86.07
	0.0160	0.0035	78.13
Solsafe 245 100%			
	0.1359	0.0160	88.23
	0.0465	0.0088	81.08
	0.0324	0.0022	93.21
Detergent 8 5%			
	0.0683	0.0045	93.41
	0.0202	0.0025	87.62
	0.0257	0.0037	85.60
Activeion			
	0.0247	0.0020	91.90
	0.0271	0.0099	63.47
	0.0201	0.0054	73.13

Summary:

Substrates:	Aluminum				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Buckeye International	Shopmaster RC	100	88.55	☑	

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Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	85.15	☑	
Bio Chem Systems	Solsafe 245	100	87.50	☑	
Alconox Inc	Detergent 8	5	88.88	☑	
Activeion Cleaning Solutions LLC	Activeion Pro	100	76.17	☐	

Conclusion: Based on past performance on the previous contaminants, all five products will be tested on the next supplied contaminant under the same conditions.