CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2006
DateRun:	08/29/2006
Experimenters:	Jason Marshall, Heidi Wilcox
ClientType:	Lab
ProjectNumber:	Project #1
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Carbon Deposits, Greases, Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	Laboratory evaluations of alternative aerosol cleaning products
Experimental Procedure:	Eight products were selected for testing based on equipment compatibility and soil removal. Products needed to be able to be used in a pressure spray wash system for the removal of oil, grease and carbon contaminants. All eight products were diluted to 5% using DI water in 600 ml beakers. Products were used at room temperature. Twenty-four preweighed aluminum coupons were coated with a collection of brake/engine soil collected from an automobile shop. The coupons were allowed to sit for several days before a second weight was recorded. Three coupons were cleaned in each solution for 5 minutes using minimal agitation from a magnetic stir bar. Coupons were then rinsed in tap water for 15 seconds and dried using air blow off at room temperature for 30 seconds. Following drying, final weights were recorded and cleaning efficiencies were calculated.
Results:	The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
SC Aircraft	0.4983	0.4560	8.49
	0.2890	0.2706	6.37
	0.3818	0.3649	4.43
Shopmaster HP	0.4513	0.4402	2.46
	0.4281	0.4197	1.96
	0.2291	0.2134	6.85
Hydroforce Butyl Free	0.3552	0.3367	5.21
	0.3141	0.2962	5.70
	0.5485	0.5393	1.68
Aquavantage 3800 GD	0.3729	0.3585	3.86
	0.4222	0.4040	4.31
	0.3187	0.3054	4.17
Heavy Wt Non Butyl	0.5421	0.5271	2.77
	0.3828	0.3602	5.90
	0.1620	0.1466	9.51
Cal Parts Washer	0.2553	0.2295	10.11
	0.1560	0.1252	19.74
	0.2841	0.2126	25.17
New Dimension LF	0.1795	0.1704	5.07
	0.1852	0.1806	2.48
	0.1330	0.1270	4.51
LF 2100	0.2552	0.2508	1.72
	0.2786	0.2745	1.47
	1.1507	1.1413	0.82

Summary:

Substrates:	Aluminum
Contaminants:	Carbon Deposits, Greases, Oil

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Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	6.43	☐	
Buckeye International	Shopmaster HP	5	3.74	☐	
CRC Industries	HydroForce Butyl-Free All Purpose Cleaner	5	4.31	☐	
Brulin Corporation	Aquavantage 3800 GD	5	4.12	☐	
EcoLink	Heavy Weight Non Butyl Detergent	5	6.06	☐	
Phase III Inc	California Parts Washer Solution	5	18.34	☑	
MacDermid Industrial Products	New Dimensions LF Supreme	5	4.02	☐	
International Products Corporation	LF 2100 (Liquid Foam Cleaner)	5	3.15	☐	

Conclusion: Only one of the eight products showed any signs of removing the oil/grease/carbon soil mix. This product, California Parts Washer, will be retested at a higher concentration.