CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	08/04/2008
Experimenters:	Jason Marshall, Heidi Wilcox, Shweta Bansal
ClientType:	Machine Construction Company
ProjectNumber:	Project #2
Substrates:	Steel
PartType:	Coupon
Contaminants:	Coatings
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate aqueous based alternatives for removing rust preventative coating using immersion cleaning.
Experimental Procedure:	Eight products were selected from the lab's database, www.cleanersolutions.org, based on client supplied information and past testing results. Seven of these products were diluted to 5% using DI water in 600 ml beakers. The eighth was used at full strength. The client's current cleaning solvent was included for comparative purposes. Twenty-seven preweighed steel coupons were coated with rust preventative VCI 325 using a hand held swab. Dirty weights were recorded. Three coupons were cleaned in each product for five minutes using minimal agitation. No rinse was used and coupons were air dried at room temperature. Once dry, final weights were recorded and efficiencies calculated.
Results:	During the cleaning process non of the alternative products removed over 65% of the rust preventative. Where as the current product removed over 90%. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Aquavantage 1400			
	0.0793	0.0445	43.88
	0.0929	0.0342	63.19
	0.1821	0.0353	80.62
Aeromaster			
	0.1172	0.0710	39.42
	0.2441	0.0548	77.55
	0.1419	0.0544	61.66
Ozzy Juice SW 1			
	0.2446	0.0844	65.49
	0.2296	0.1380	39.90
	0.2723	0.0801	70.58
Grease Feast			
	0.2585	0.0843	67.39
	0.2273	0.0893	60.71
	0.2322	0.0805	65.33
SC Aircraft & Metal cleaner			
	0.2283	0.0646	71.70
	0.2614	0.1036	60.37
	0.1490	0.0696	53.29
Inproclean 3800			
	0.1876	0.0897	52.19
	0.1817	0.1145	36.98
	0.1267	0.0904	28.65
Beyond 2004			
	0.1646	0.0990	39.85
	0.1558	0.0582	62.64
	0.2174	0.0866	60.17

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Sea Wash Blue			
	0.1775	0.0982	44.68
	0.1900	0.1094	42.42
	0.1568	0.1022	34.82
Degreasol Formula 99 R			
	0.1555	0.0176	88.68
	0.1840	0.0145	92.12
	0.2479	0.0256	89.67

Summary:

Substrates:	Steel
Contaminants:	Coatings

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Brulin Corporation	Aquavantage 1400	5	62.56	☑	
Buckeye International	Aeromaster	5	59.54	☑	
Chem Free Corporation	SW-1 Ozzy Juice	5	58.66	☑	
Ensolve Biosystems Inc	Grease Feast Plus	100	64.48	☑	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	61.79	☑	
Oakite Products	Inproclean 3800	5	39.22	☐	
Today & Beyond	Beyond 2004	5	54.22	☐	
Warren Chemical Company	Sea Wash Blue	5	40.64	☐	
Kleer Flo Company	Degreasol Formula 99-R	100	90.16	☑	
Fisher Scientific	Absolute Ethanol	0	0.00	☐	
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Conclusion: A follow up test will be conducted using the top performing alternatives at higher concentrations.