CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 07/11/2004

Experimenters: Jason Marshall, Heidi Wilcox, Andy Harris

ClientType: Metal Finishing

ProjectNumber: Project #2

Substrates: Aluminum

PartType: Coupon

Contaminants: Coatings

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate successful products on the second supplied contaminant.

Experimental Procedure: Five cleaners were selected from the previous trial. All products were diluted to 5% using DI water in 600 ml beakers. All nine products were heated to 120 F on a hot plate. Fifteen preweighed aluminum coupons were coated with client supplied coating, Castrol Industries Rustilo DW 924 (64742-88-7, 64742-95-6, 64741-89-5, 64741-97-5, 64742-53-6, 95-63-6), using a hand held swab and then weighed a second time to determine the amount of soil added. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. Coupons were rinsed in tap water for 15 seconds at 120 F, followed by air blow off at room temperature. Once dry, coupons were weighed a final time and efficiencies for each cleaner were calculated.

Results: All five products removed over 99% of the rust preventative coating. The table below lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Beyond 2004	0.2034	-0.0013	100.64
	0.1339	0.0001	99.93
	0.1758	0.0002	99.89
Aeromaster	0.1281	0.0007	99.45
	0.1751	0.0004	99.77
	0.1752	0.0004	99.77
1400 GD	0.3453	0.0001	99.97
	0.2659	-0.0003	100.11
	0.2920	-0.0004	100.14
M Aero	0.2214	-0.0003	100.14
	0.2546	-0.0007	100.27
	0.1804	-0.0002	100.11
815 QR	0.2150	-0.0002	100.09
	0.1106	-0.0002	100.18
	0.2082	-0.0003	100.14

Summary:

Substrates:	Aluminum
Contaminants:	Coatings

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Today & Beyond	Beyond 2004	5	100.15	☑	
Buckeye International	Aeromaster	5	99.67	☑	
Brulin Corporation	Aquavantage 1400	5	100.07	☑	
Church & Dwight Co Inc.	Armakleen M Aero NS	5	100.17	☑	
Brulin Corporation	815 QR	5	100.14	☑	

Conclusion: The same five products will be used on the third supplied contaminant under the same conditions.