CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2007
DateRun:	05/14/2007
Experimenters:	Jason Marshall, Shweta Bansal
ClientType:	Metal
ProjectNumber:	Project #1
Substrates:	Alloys
PartType:	Coupon
Contaminants:	Lubricating/Lapping Oils
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate selected aqueous based products on first supplied lubricant.
Experimental Procedure:	Ten products were selected from the lab's on-line database, www.cleanersolutions.org based on client supplied information and past product performance. The products were diluted to 5% using DI water in 600 ml beakers. The dilutions were heated to 130 F on a hot plate. Thirty preweighed alloy coupons were coated with the first supplied lubricant and weighed a second time to determine the amount of contaminant added to each coupon. Three coupons were immersed into each solution and cleaned for 5 minutes using stir-bar agitation. Coupons were rinsed in room temperature tap water for 15 seconds and air dried using compressed dry air for 30 seconds. A final weight was recorded and efficiencies were calculated for each coupon cleaned.
Results:	Of the ten products selected, only three showed some signs of being able to remove the thick lubricant from the alloy coupons. 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 & Metal	1.7501	1.1948	31.73
	1.5068	1.1926	20.85
	1.3500	1.1380	15.70
Polyspray Jet 790 P	1.9233	1.2543	34.78
	1.3122	1.0725	18.27
	1.7553	1.5243	13.16
Micro 90	1.2420	0.3283	73.57
	1.9756	1.2284	37.82
	1.3315	0.8922	32.99
LF 2100	2.1409	1.8746	12.44
	1.7164	1.5725	8.38
	1.8697	1.6190	13.41
Inproclean 3800	1.2528	0.9363	25.26
	2.5296	1.2886	49.06
	1.6846	1.3318	20.94
Valtron 2275	1.5905	1.2694	20.19
	2.0955	1.6363	21.91
	2.1083	1.5927	24.46
Ozzy Juice SW 1	1.8810	1.5022	20.14
	2.3946	1.9648	17.95
	2.2442	1.6057	28.45
Sea Wash Blue	1.8201	1.4618	19.69
	1.3937	1.1213	19.55
	1.3957	1.2780	8.43
Ionox HC 2	2.0175	1.3857	31.32
	2.6364	1.2617	52.14
	2.2689	1.2530	44.78
	1.4962	1.0853	27.46

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Aquavantage 1400			
	1.8715	1.0629	43.21
	1.6282	0.8984	44.82

Summary:

Substrates:	Alloys
Contaminants:	Lubricating/Lapping Oils

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	22.76	☐	
US Polychem Corporation	Polyspray Jet 790 P	5	30.16	☐	
International Products Corporation	Micro 90 Conc.	5	48.13	☑	
International Products Corporation	LF 2100 (Liquid Foam Cleaner)	5	11.41	☐	
Oakite Products	Inproclean 3800	5	31.76	☐	
Valtech Corporation	Valtron SP 2275	5	22.19	☐	
Chem Free Corporation	SW-1 Ozzy Juice	5	22.18	☐	
Warren Chemical Company	Sea Wash Blue	5	15.89	☐	
Kyzen Corporation	Ionox HC 2	5	42.74	☑	
Brulin Corporation	Aquavantage 1400	5	38.50	☑	

Conclusion:

These three products, Micro 90, Ionox HC 2 and Aquavantage will be tested at higher concentrations in an attempt to improve efficiencies. In addition, non-aqueous products will be selected for evaluation as well.