CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 05/16/2007

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 effective alternatives on the sixth supplied contaminant.

Experimental Procedure: Five products from the previous trial were selected and used at full strength based on past performances. The cleaning solutions were all heated to 130 F on a hot plate.

Fifteen preweighed alloy coupons were coated with the sixth contaminant 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: All five products removed over 92% of the lubricant. Three removed over 95% and one of these (DS 108) removed over 97%. 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
Soy Gold 1100	0.6604	0.0227	96.56
	0.7529	0.0258	96.57
	0.4799	0.0346	92.79
Solsafe 245	0.4885	0.0197	95.97
	0.5469	0.0269	95.08
	0.5791	0.0279	95.18
Shopmaster RC	0.4321	0.0467	89.19
	1.4430	0.0325	97.75
	0.4722	0.0505	89.31
DS 108	0.4749	0.0130	97.26
	0.4202	0.0135	96.79
	0.6765	0.0140	97.93
D Greeze 500 LO	0.3274	0.0223	93.19
	0.4527	0.0240	94.70
	0.4694	0.0234	95.01

Summary:

Substrates:	Alloys				
Contaminants:	Lubricating/Lapping Oils				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AG Environmental Products	Soy Gold 1100	100	95.31	☑	
Bio Chem Systems	Solsafe 245	100	95.41	☑	
Buckeye International	Shopmaster RC	100	92.08	☑	
Dysol	DS 108 Wipe Solvent	100	97.33	☑	
Transene Company, Inc.	D Greeze 500 LO	100	94.30	☑	

Conclusion: The five products should be retested on the fourth and fifth contaminants with modified operating conditions to improve cleaning efficiency.