CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 07/27/2008

Experimenters: Shweta Bansal

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To remove used engine oil from aluminum using immersion cleaning

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning.

Products were selected based on the compatibility of substrate and for removal of the contaminant. Five percent concentrations were used and heated the samples at 130F. The coupons were immersed in a product for 5 minutes, rinsed with tap water and dried using room temperature compressed air. Coupons were coated with used engine oil using a handheld swab and allowed to dry for one hour at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. After cleaning process, the final weights were recorded, efficiencies were calculated and recorded.

Results:

Cleaner	Initial wt	Final wt	% Removed
Daraclean 235			
	0.5769	0.0452	92.17
	0.5707	0.0855	85.02
	0.5951	0.0747	87.45
SC Supersolve			
	0.6130	0.0802	86.92
	0.5702	0.0901	84.20
	0.6408	0.0981	84.69
Bio T Max			
	0.6109	0.0362	94.07
	0.6555	0.0461	92.97
	0.7552	0.0377	95.01
Sea Wash Blue			
	0.6631	0.0235	96.46
	0.8800	0.0333	96.22
	1.0313	0.0375	96.36
Valtron SP 2275			
	0.6526	0.0675	89.66
	0.5956	0.0405	93.20
	0.8108	0.0891	89.01
SC Aircraft & Metal Cleaner			
	0.6564	0.0578	91.19
	0.7331	0.0571	92.21
	0.6991	0.0488	93.02

Summary:

Substrates:	Aluminum				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Magnaflux	Daraclean 235	5	88.21	☑	
Gemtek Products	SC Supersolve Safety Solvent	5	85.27	☑	
Bio Chem Systems	Bio T Max	5	94.02	☑	
	Sea Wash Blue	5	96.35	☑	

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Warren Chemical Company					
Valtech Corporation	Valtron SP 2275	5	90.62	☑	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	92.10	☑	

Conclusion: All six products removed over 85% of the used engine oil in five minutes of immersion cleaning.