CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 03/06/2006

Experimenters: Jason Marshall

ClientType: Manufacturers of Precision Parts and Assemblies

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Low Pressure Spray

Analytical Methods: Gravimetric

Purpose: To evaluate spray cleaners on supplied soil.

Experimental Procedure: Six alternative cleaners were selected from the laboratory's inventory and past testing. Each product, including a seventh cleaner supplied by the client, was used at full strength at room temperature. Only two of the seven products were supplied to the lab in spray cans. The other products had to be applied using a modified air delivery spray.

Twenty-one preweighed 6061 aluminum coupons were coated with Fuch's Lubricants Renocut 6515 NC (mineral oil, vegetable oil) using a hand held swab. Coupons were allowed to sit for over an hour. A second set of weights were recorded to determine the amount of soil added.

Three coupons were sprayed with each contact cleaner for about 30 seconds and allowed to air dry. Final clean weights were recorded and efficiencies were calculated.

Results: Of the six alternatives tested, only one removed over 85% of the soil. However, this product also resulted in an odor that remained long after the cleaning process was completed. 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
Micro X	0.0955	0.0023	97.59
	0.1618	0.0018	98.89
	0.2249	0.0027	98.8
Ionox HC2	0.0996	0.0977	1.91
	0.1584	0.1414	10.73
	0.232	0.1819	21.59
Surface Cleanse 930	0.1397	0.1025	26.63
	0.2138	0.13	39.2
	0.2347	0.1502	36
Mirachem 500 A	0.1877	0.104	44.59
	0.2166	0.1604	25.95
	0.2045	0.1059	48.22
Citrus Pure Remover	0.2836	0.0469	83.46
	0.2356	0.0354	84.97
	0.3575	0.0273	92.36
D Greeze 500	0.1369	0.1021	25.42
	0.2641	0.082	68.95
	0.1553	0.0943	39.28
No-Tox RTX9	0.2623	0.1423	45.75
	0.1712	0.1441	15.83
	0.1645	0.1323	19.57

Summary:

Substrates:	Aluminum				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
LPS Laboratories	Micro X	100	98.43	☑	
Kyzen Corporation	Ionox HC 2	100	11.41	☐	

CLEANING LABORATORY EVALUATION SUMMARY

International Products Corporation	Surface Cleanse Concentrated Neutral 930	5	33.94	☐	
Mirachem Corporation	Mirachem 500	100	39.58	☐	
Abatement Technologies	Citrus Pure AS850	100	86.93	☑	lingering odor
Transene Company, Inc.	D Greeze 500 LO	100	44.35	☐	
Bradley's	No-Tox RTX 9	100	27.05	☐	

Conclusion: Only one alternative was able to remove over 85% of the oil from the coupons.