CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 10/12/2006

Experimenters: Jason Marshall

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Carbon Deposits, Greases, Oil

Cleaning Methods: Low Pressure Spray

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative aerosol cleaning products

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

Six products were selected for testing based on an aerosol formulation for brake cleaning. Another product was selected but tested using a manual pumping delivery. The products were used at full strength in spray cans as delivered by the vendors. Products were used at room temperature. Seven preweighed aluminum coupons were coated with a collection of brake/engine soil collected from an automobile shop. The coupons were allowed to sit for several days before a second weight was recorded. One coupon was cleaned in for 30 seconds using the spray can. Coupons were weighed and efficiencies were calculated.

Results: The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
BioBrake	0.2126	0.0273	87.16
Mirachem 500 A	0.1413	0.0224	84.15
Brakleen	0.1252	0.0197	84.27
Heavy Duty Cleaner-Degreaser	0.5537	0.0893	83.87
Micro X	0.3644	0.0143	96.08
Non-chlorinated Brake Cleaner	0.8154	0.0322	96.05
SL 100	0.6062	0.0935	84.58

Summary:

Substrates:	Aluminum
Contaminants:	Carbon Deposits, Greases, Oil

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Bio Chem Systems	BioBrake	100	87.16	☑	
Mirachem Corporation	Mirachem 500 A	100	84.15	☑	
CRC Industries	Brakleen Brake Aerosol	100	84.27	☑	
WD 40 Company	Heavy Duty Cleaner-Degreaser	10	83.87	☑	
LPS Laboratories	Micro X	100	96.08	☑	
Barnes	Non Chlorinated Brake Washer	100	96.05	☑	
Bi-O-Kleen Industries	Soy Lube- SL 100	100	84.58	☑	

Conclusion: All seven aerosol products showed good cleaning abilities in the preliminary testing phase and all will be evaluated further.