CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 05/27/2004

Experimenters: Jason Marshall

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Vapor Degreasing

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

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

Two hundred fifty milliliters of each product wereused at full strength in a 4000 ml beaker and heated to its boiling point on a hot plate. Preweighed aluminum coupons were coated with the Nisseki SAS 40 oil (27776-01-8, 612-00-0, 103-29-7, 101-81-5) using a handheld swab. Coupons were weighed a second time to determine the amount of soil added to each coupon. Three coupons were cleaned in each solution for 5 minutes using vapor degreasing. After cooling to room temperature, the coupons were weighed a final time and efficiencies were calculated.

Results:

Summary:

Substrates:	Aluminum				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AGA Chemical	AK 225	100	99.64	☑	
DuPont	Vertrel CCA	100	98.70	☑	
DuPont	Vertrel MCA	100	99.32	☑	
Micro Care	Heavy Duty Degreaser C	100	100.13	☑	
Micro Care	Flux Remover C	100	100.01	☑	
3M	HFE 7100	100	94.64	☑	
3M	HFE 7200	100	98.22	☑	
Enviro Tech International Inc	Ensolv A	100	99.99	☑	
Kyzen Corporation	Metalnox M6960	100	100.47	☑	
Poly Systems USA Inc	Solvon Kreussler PB	100	99.80	☑	
Poly Systems USA Inc	Solvon Kreussler IP	100	100.20	☑	
Dow Chemical Company	OS 10	100	100.06	☑	
Dow Chemical Company	OS 20	100	98.36	☑	
Dow Chemical Company	OS 30	100	91.97	☑	

Conclusion: All fourteen of the products removed over 85%.