CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023

DateRun: 06/01/2023

Experimenters: Mei Jin, Dylan Labonte

ClientType: Lab

ProjectNumber: Project #6

Substrates: Aluminum, Stainless Steel

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Vacuum Cycle Nucleation

Analytical Methods: Gravimetric, Visual

Purpose: To test the efficacy of the VCN in removing soil from complex/intricate parts

Experimental Procedure: Three aluminum pre weighed complex parts and three stainless steel complex parts were used as coupons. The coupons were soiled by swabbing Geartronics soil all over the parts, making sure to get the soil into any holes or divots in the parts. The dirty weights of all coupons were then recorded and visual rankings according to the key shown below were recorded. The coupons were then subjected to a one-minute heated cycle at 140 degrees F in the VCN using LF2100 1% concentration. The coupons were then removed and left to air dry overnight. The next day the clean weights of the coupons were recorded, and visual rankings were recorded.

Visual Rankings Key

1= 100% of soil removed

2= 75% of soil removed

3= 50% of soil removed

4= 25% of soil removed

5= 0% of soil removed

Results:

Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
Aluminum	2.0996	0.0761	96.38	98.22	97.54
	1.7808	0.0082	99.54		
	1.0941	0.0137	98.75		
Stainless Steel	0.6915	0.0121	98.25	96.86	
	7.4525	0.1754	97.65		
	1.2535	0.0665	94.69		

Substrate	Dirty Visual	Clean Visual	AVG Clean Visual	AVG Overall
Aluminum	5	1	1.0	1.42
	5	1.0		
	5	1		
Stainless Steel	5	2	1.8	
	5	2		
	5	2		

Observations:

The VCN sometimes struggles with parts that have holes/divots that don't cut all the way through the part. It should be noted that for these particular parts, the orientation that the part is placed in to the VCN at matters (the hole or divot should be facing downwards)

Summary:

Substrates:	Aluminum, Stainless Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
International Products Corporation	LF 2100 (Liquid Foam Cleaner)	1	98.00	☑	

Conclusion: The VCN method was successful in removing Geartronics soil from complex aluminum and stainless steel parts with LF2100 1% concentration.