CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1997

DateRun: 07/29/1997

Experimenters: Jason Marshall, Prashant Trivedi

ClientType: Machine Construction Company

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Greases, Lubricating/Lapping Oils, Dirt, Metal fines

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Dirt, Grease, Oil, and metal fines cleaning.

Experimental Procedure: Seventeen (17) coupons were weighed after being precleaned. The coupons were then contaminated with the "gunk". The coupons were allowed to sit for a short while and then reweighed. Three of the cleaners from the previous trials were selected to be tested in this trial due to their possible ability to remove the listed contaminants. Also, three other cleaners were selected using the laboratory's database of chemistries. The coupons were placed in the cleaners for ten minutes at 150 F. Then the coupons were rinsed for two minutes in a tap water bath at 120 F. Finally the coupons were allowed to drip dry at ambient temperature. Once the coupons were dry, they were weighed to obtain their "cleaned" weight.
SUBSTRATE MATERIAL: Stainless Steel
CONTAMINANTS: Dirt, Grease, Oil, and metal fines ("gunk")

Results: Of the six chemistries selected only two showed possible signs of contaminant removal. The remaining cleaners had minimal to no effect on the "gunk."

%Contaminant Removed						
	Blue Gold	Ak-6215	Special F	625-XL	4000T	Release
	2.70	0.19	1.97	-11.08	3.23	
	-4.44	-2.53	0.98	-12.12	14.31	11.32
	-1.27	1.72	2.58	2.49	9.67	0.38
Average	-1.00	-0.21	1.84	-6.90	9.07	5.85
std dev	3.57	2.15	0.81	8.15	5.57	7.74

Summary:

Substrates:	Stainless Steel				
Contaminants:	Greases, Lubricating/Lapping Oils, Dirt, Metal fines				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Calgon Corporation	AK 6215	5	-0.21	☐	
Carroll Company	Blue Gold Heavy Industrial Cleaner	5	-1.00	☐	
Quaker Chemical	Formula 625 XL	5	-6.90	☐	
Hurri Kleen Corportion	HurriSafe - Hot Immersion Degreaser	5	1.84	☐	
Oakite Products	Inproclean 4000 T	5	9.07	☐	
Cleaning Systems	Release	5	5.85	☐	

Conclusion: With the results of the experiment being unsatisfactory, a further trial will be run using Oakite Inproclean 4000T, Cleaning Systems Release at full strength as well as a couple of newly selected cleaners.