CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1997

DateRun: 07/28/1997

Experimenters: Jason Marshall, Prashant Trivedi

ClientType: Machine Construction Company

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Coatings

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Petroleum based rust preventative trial.

Experimental Procedure: Eighteen (18) coupons were weighed after being precleaned. The coupons were then contaminated with the rust preventive compound and placed in an conventional oven at 100 F for two hours. The coupons were allowed to reach room temperature and weighed. The same six chemistries from the pervious trial were used using the same operating conditions.
SUBSTRATE MATERIAL: Stainless Steel
CONTAMINANTS: Tectyl 506, Petroleum based rust preventative

Results:

% Contaminant Removed						
Product	AK-6215	Precision	2000XS	SP 2200	Blue Gold	625-XL
	99.90	41.60	14.80	26.70	14.10	10.90
	98.40	36.50	61.70	38.90	11.50	11.90
	100.00	12.10	23.40	19.90	10.50	14.90
Average	99.43	30.07	33.30	28.50	12.03	12.57
Std Dev	0.90	15.77	24.97	9.63	1.86	2.08

Summary:

Substrates:	Stainless Steel				
Contaminants:	Coatings				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
LPS Laboratories	Precision Clean Concentrate	5	30.07	☐	
Quaker Chemical	Formula 625 XL	5	12.57	☐	
Calgon Corporation	AK 6215	5	99.43	☑	
Carroll Company	Blue Gold Heavy Industrial Cleaner	5	12.03	☐	
US Polychem Corporation	Polychem A 2000 XS	5	33.30	☐	
Valtech Corporation	Valtron SP 2200	5	28.50	☐	

Conclusion: Calgon's AK-6215 cleaner solution was by far the most effective in the removal of the hard rust preventive substance. The solution had very good cleaning capabilities in the previous trial as well, 99.3% removal of the slushy, rust-preventive substance. Also the solution was able to be filtered quite readily, which would result in a longer bath life. From the results of the two experiments, Calgon AK-6215 appears to be the best cleaner for use in cleaning both rust-preventive materials. The next step in testing for Morgan will be to test cleaners for the removal of the final contaminant.