CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2021
DateRun:	02/08/2021
Experimenters:	Nicole Kebler
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Aluminum, Stainless Steel, Painted metal
PartType:	Coupon
Contaminants:	Greases
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Visual
Purpose:	To test the removal of maintenance soil from aluminum, stainless steel and painted metal using industrial cleaning methods.

Experimental Procedure:

A solution of 5% Buckeye Shopmaster was made prior to testing using 10 mL of concentrate with 190 mL of distilled water. Three coupons per substrate, per cleaner, were pre-weighed for initial values. They were covered with about 0.15g of pre-made maintenance soil. Maintenance soil was made from 10 grams of carbon black, 10 grams iron oxide, 100 ml WD-40, 100 ml hydraulic oil, and 100 ml gear oil. The coupons were oven dried for 30 minutes at 105 degrees Fahrenheit. They were taken out and felt to cool, once cool dirty weights were taken for all coupons. Three coupons of the same substrate, and same cleaner, were placed in the SLW Machine. The cleaners SAFH ISCD RTU and Buckeye Shopmaster were placed in squirt bottled. Three squirts were sprayed onto paper towel media and run for 20 cycles on the SLW Machine. The coupons were taken out and were left to dry for an hour. Once dry, they were weighed for their final clean weights.

Cleaners Used:

1. SAFH ISCD RTU
2. Buckeye Shopmaster 5%

Substrates Used:

a. Aluminum

b. Stainless Steel

c. Painted Metal

Results:

Both cleaners performed well for the removal of maintenance soil on the three substrates. The SAAFH ISCD performed slightly better than Buckeye Shopmaster and had an average of about 96% removal on aluminum, 95% removal on stainless steel and 95% on painted metal. Visually all of these coupons looked clean with minimal additional wiping needed. The Buckeye Shopmaster had an average of about 94% removal on aluminum, 97% removal on stainless steel and 92% on painted metal. This also visually looked clean, but there was some black residue left on the painted metal coupons.

Cleaner	Substrate	Initial wt. of cont.	Final wt. of cont.	%cont. removal	Average
1	A	0.1029	0.0061	94.07	96.09
		0.1357	0.0033	97.57	
		0.1182	0.0040	96.62	
	B	0.1171	0.0062	94.71	94.67
		0.0942	0.0055	94.16	
		0.1259	0.0061	95.15	
	C	0.1242	0.0074	94.04	94.58
		0.0932	0.0055	94.10	
		0.1338	0.0059	95.59	
2	A	0.0623	0.0055	91.17	94.00
		0.1033	0.0055	94.68	
		0.1400	0.0054	96.14	
	B	0.1280	0.0048	96.25	96.66
		0.1487	0.0047	96.84	
		0.1123	0.0035	96.88	
	C	0.1424	0.0143	89.96	91.70
		0.1131	0.0105	90.72	

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		0.0931	0.0052	94.41	

Summary:

Substrates:	Aluminum, Stainless Steel, Painted metal
Contaminants:	Greases

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Sustainable Tech LLC	SAAFH ISCD-Concentrate	RTU	0.00	☑	SAAFH ISCD was effective for the removal of maintenance soil on Aluminum, Stainless Steel and Painted Metal.
Buckeye International	Shopmaster	5%	0.00	☑	Buckeye Shopmaster was effective for the removal of maintenance soil on Aluminum, Stainless Steel and Painted Metal.

Conclusion:

The SAAFH ISCD industrial cleaner was effective for the removal of maintenance soil on all three substrates and performed better than the comparative product on Aluminum and Painted Metal. It was still effective on Stainless Steel and only had an average of 2% lower than Buckeye Shopmaster.