CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2021

DateRun: 11/03/2021

Experimenters: Nicole Kebler

ClientType: Metal Working

ProjectNumber: Project #1

Substrates: Carbon Steel

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate the effectiveness of Simple Green and SC Aircraft for the removal of oil on stainless steel coupons using a stir bar at 400 rpm.

Experimental Procedure: The two cleaners were put into beakers. One coupon per cleaner that was previously soiled by the company was weighted for dirty weights. The coupons were then put into the cleaner and immersed for 15 minutes with a stir bar used at 400 rpm. After the 15 minutes, they were taken out of the cleaner. One test did not use a rinse step and the other did, it was rinsed for five minutes with a stir bar at 400 rpm. The clean weights were taken the next day once the coupons were fully dry. The coupons were then wiped clean till all oil was removed from the surface and were weighed for initial weights.

Results: The coupons that did not have a rinse step had a higher percentage removal than the coupons that did have a rinse step. Simple Green had an average removal of 79.4% without the rinse and 65% with the rinse. SC Aircraft had an average removal of 75% without the rinse and 58.5% with the rinse. There was no visible soil on the surface of the coupons, but they remained dark in color and were slick to the touch.

Cleaner	Rinse	Initial wt. of cont.	Final wt. of cont.	Average
Simple Green	N	0.2009	0.0414	79.39
	Y	0.2263	0.0793	64.96
SC Aircraft	N	0.1450	0.0360	75.17
	Y	0.2455	0.1018	58.53

Summary:

Substrates:	Carbon Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Simple Green	Crystal Simple Green Industrial Cleaner & Degreaser	1:20	79.00	☐	Simple Green was not effective.
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	1:3	58.00	☐	SC Aircraft was not effective.

Conclusion: Both Simple Green and SC Aircraft were not effective for the removal of oil from the stainless-steel coupons. A rinse step may not be needed, next steps are to try ultrasonics.