CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2021

DateRun: 11/14/2021

Experimenters: Nicole Kebler

ClientType: Metal Working

ProjectNumber: Project #1

Substrates: Carbon Steel

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Ultrasonics

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate the effectiveness of Crystal Simple Green and SC Aircraft for the removal of oil from stainless steel coupons.

Experimental Procedure: The cleaners were put into beakers and heated to 110 F in the ultrasonics tank. The coupons were weighed for dirty weights and once the cleaners were at the correct temperatures, the coupons were put into the beakers. The ultrasonics tank was turned on and ran for 15 minutes. The coupons were taken out and left to dry fully. Once dry, the clean weights were taken. The coupons were cleaned again till all remaining oil was removed from the coupons and the initial weights were taken. The ultrasonics tank was run at 40 KHz.

Results: The cleaners removed some oil but not all from the coupons and there were man dark spots left on the surface of the coupons. Crystal Simple Green removed about 77% of the oil from the coupon and SC Aircraft removed about 75% of the oil.

Cleaner	Initial wt. of cont.	Final wt. of cont.	Average
Simple Green 1:20	0.2756	0.0647	76.52
SC Aircraft 1:3	0.2975	0.0744	74.99

Summary:

Substrates:	Carbon Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Simple Green	Crystal Simple Green Industrial Cleaner & Degreaser	1:20	77.00	☐	Crystal Simple Green did not remove all the oil from the substrate at 110 F.
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	1:3	75.00	☐	SC Aircraft did not remove all of the oil from the substrate at 110 F.

Conclusion: Neither cleaner fully removed the oil from the substrates. Next steps are to increase the concentration and the temperature.