CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 05/11/2004

Experimenters: Jason Marshall

ClientType: Bicycle Manufacturer

ProjectNumber: Project #1

Substrates: Titanium

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate five products on the fourth supplied soil

Experimental Procedure: Five cleaners were selected from the previous trial. All were aqueous based and were diluted to 5% using DI water in 600 ml beakers. All six products were heated to 120 F on a hot plate.

Fifteen preweighed titanium coupons were coated with client supplied peanut oil, using a hand held swab and then weighed a second time to determine the amount of soil added. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. Coupons were rinsed in tap water for 15 seconds at 120 F, followed by air blow off at room temperature. Once dry, coupons were weighed a final time and efficiencies for each cleaner were calculated.

Results: All five products removed over 98% of the oil in five minutes. Three of the five removed over 99%. The table lists the amount of oil added, the amount remaining and the efficiency for each coupon.

Cleaner	Initial wt	Final wt	% Removed
SC Aircraft & Metal Cleaner	0.1518	0.0024	98.42
	0.1971	0.0012	99.39
	0.0836	0.0024	97.13
Micro 90	0.1452	0.0003	99.79
	0.0777	-0.0003	100.39
	0.1994	0.0005	99.75
Daraclean 282 GF	0.0870	0.0006	99.31
	0.1537	0.0005	99.67
	0.0984	0.0003	99.70
Inproclean 3800	0.1430	-0.0001	100.07
	0.1101	0.0002	99.82
	0.1125	0.0004	99.64
Beyond 2004	0.1036	0.0004	99.61
	0.1144	0.0019	98.34
	0.2136	0.0038	98.22

Summary:

Substrates:	Titanium
Contaminants:	Oil

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	98.31	☑	
International Products Corporation	Micro 90 Conc.	5	99.98	☑	
Magnaflux	Daraclean 282 GF	5	99.56	☑	
Oakite Products	Inproclean 3800	5	99.84	☑	
Today & Beyond	Beyond 2004	5	98.72	☑	

Conclusion: The five products will all be tested on the flux. In addition, a few other products will be added for evaluation.