CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2016
DateRun:	02/03/2016
Experimenters:	Alicia Melvin, Carla De La Cruz, Rhoda Gindi, Catherine York
ClientType:	
ProjectNumber:	Project #1
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Greases
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To conduct testing on possible drop in solvents for Dow grease.
Experimental Procedure:	Stainless steel coupons were selected and arranged into rows of 3 coupons, a row per cleaner. Initial weights were taken, and coupons were soiled and reweighed. The lower third of the coupons were soiled. beakers with drop in solvent replacement solutions were set up on stirring plates equipped with a stir bar. The coupons were immersed for 5 minutes. Observations were taken during the cleaning process. The coupons were dried on a rack for 15 minutes. Final weights were recorded.
Results:	Some drop in solvents were effective on the Dow Grease. Based on visual observations, the Solstice products seemed more effective cleaners.

Cleaner	Initial wt.	Final wt.	%Removed
Solstice PF			
	0.2787	0.1025	63.22
	0.2057	0.0034	98.35
	0.1692	0.0003	99.82
Solstice PF-2A			
	0.1879	0.0140	92.55
	0.1976	0.0187	90.54
	0.2125	0.0430	79.76
Fluosolv CX			
	0.4184	0.3682	12.00
	0.5053	0.4356	13.79
	0.4937	0.4097	17.01
Fluosolv NC-786			
	0.4384	0.0588	86.59
	0.3859	0.0430	88.86
	0.5182	0.0060	98.84
Ethyl 408			
	0.3499	0.0376	89.25
	0.3140	0.2973	5.32
	0.2145	0.2037	5.03
Ethyl 408			
	0.3449	0.3734	-8.26
	0.3140	0.3023	3.73
	0.2145	0.2106	1.82
Methyl 408			
	0.1991	0.1956	1.76
	0.2049	0.2116	-3.27
	0.1590	0.1456	8.43
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	0.2057	0.0034	98.35
	0.1692	0.0003	99.82
Solsticel PF-2A			

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	0.5053	0.4356	13.79
	0.4937	0.4097	17.01
	0.4384	0.0588	86.59
FluoSolv NC – 786			
	0.3859	0.0430	88.86
	0.5182	0.0060	98.84
	0.4657	0.0680	85.40
FluoSolv FR-110			
	0.6054	0.5919	2.23
	0.3813	0.3681	3.46
	0.4638	0.4355	6.10
FluoSolv CX-500			
	0.5198	0.5109	1.71
	0.7304	0.7289	0.21
	0.7166	0.7103	0.88
Vertrel Sion			
	0.3530	0.1317	62.69
	0.4428	0.2205	50.20
	0.2691	0.1014	62.32

Summary:

Substrates:	Stainless Steel
Contaminants:	Greases

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Honeywell	Solstice PF-2A with N2	100	87.62	☑	Results were streaky.
Honeywell	Solstice PF with N2	100	87.13	☑	Residue intensified during drying
NuGeneration Technologies, LLC	FluoSolv CX	100	14.27	☐	White residue developed during drying
NuGeneration Technologies, LLC	FluoSolv NC 786	100	91.43	☑	White film developed during the drying period.
Xf Technologies	Methyl 408	100	2.31	☐	Clumping effect occurred.
Xf Technologies	Ethyl 408	100	-0.90	☐	Clumping effect occurred.
DuPont	Vertrel Sion	100	58.40	☐	
NuGeneration Technologies, LLC	Fluosolv FR-100	100	3.93	☐	

Conclusion: Honeywell Solstice PF-2A, Honeywell Solstice PF, and Ecolink Fluosolv NC 786 were most effective in removing Dow Corning Vacuum Grease.