

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1997
 DateRun: 07/09/1997
 Experimenters: Jason Marshall, Prashant Trivedi
 ClientType: Machine Construction Company
 ProjectNumber: Project #1
 Substrates: Stainless Steel
 PartType: Coupon
 Contaminants: Inks
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric, Visual
 Purpose: Four terpene based cleaners were tested

Experimental Procedure: Four coupons were handled as in the previous trial with weighing and contamination application. Four terpene based cleaners were selected due to their possible cleaning capabilities.

SUBSTRATE MATERIAL: Stainless Steel

CONTAMINANTS: Ink--Steel Blue DX-100 solvent based dye

Results:

coupon #	Coupon weight	contaminated coupon wt	cleaned coupon wt	remaining contaminator	%cont remaining	comments
9	63.223	63.2503	0.0273	63.2307	0.0077	28.2051 good removal time
10	63.072	63.0919	0.0199	63.0732	0.0012	6.03015 excellent removal time
11	62.8395	62.8499	0.0104	62.8357	-0.0038	-36.5385 damage-excellent time
12	63.2235	63.242	0.0185	63.2418	0.0183	98.9189 poor cleaning time
cleaner ID						
9		Terpene Technology HTF-50				
10		Terpene Technology HTF-60				
11		T Square HTF-50				
12		T Square HTF-321				

Of the four terpene cleaners used in the trial, it was determined after the experiment was performed that Terpene Technologies was the same company as T Square, therefore only two new cleaners were chosen for testing. Number 9 was the same as number 11 and number 12 was the same as number 2 from the previous trial. HTF-50 and -60 both removed the ink from the coupons. HTF-321 did not clean well during the second trial unlike the first trial.

Summary:

Substrates:		Stainless Steel				
Contaminants:		Inks				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:	
Tarksol Inc	Tarksol HTF 321	100		<input type="checkbox"/>		
Tarksol Inc	Tarksol HTF-50	100	71.80	<input checked="" type="checkbox"/>		
Tarksol Inc	Tarksol HTF 60	100	94.00	<input checked="" type="checkbox"/>		

Conclusion:

From the two new cleaners actually used, both appeared able to remove the ink from the substrate. During one of HTF-50's trials, damage to the coupon was noticed through gravimetric analysis. The amount of damage to the coupon was not significant enough to worry about when the sizes of the parts to be cleaned were considered. The parts being cleaned are several magnitudes larger than the coupons and the small amount of damage would not be noticed