

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 09/22/2003

Experimenters: Jason Marshall

ClientType: Lab

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Lubricating/Lapping Oils

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Five products were used at full strength, heated to 120 F on a hot plate. Fifteen preweighed coupons were coated with Houghton Chemical MTC 53 lubricant and allowed to dry for three days and reweighed. Three coupons were cleaned in each solution for 5 minutes using stir-bar-agitation, rinsed in a tap water bath for 15 seconds at 120 F and dried using air blow off for 30 seconds at 68 F. Coupons were allowed to dry overnight and then reweighed a final time. Efficiencies were calculated.

Note: Bio T Foam Plus was sprayed onto coupons at room temperature and allowed to sit for 5 minutes. The cleaner was then rinsed off.

Results: Only one product removed over 85% of the lubricant within the five minutes of cleaning. Many of the coupons had a residue on them. This residue may be removed with the addition ultrasonic cleaning or a longer rinse/drying process.

Summary:

Substrates:		Stainless Steel				
Contaminants:		Lubricating/Lapping Oils				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:	
AW Chesterton	278 Super Solv	100	66.48	<input type="checkbox"/>		
Bio Chem Systems	Bio T Foam Plus	100	91.16	<input checked="" type="checkbox"/>		
Invista S.a.r.l	Flexisolv DBE 3 ester	100	73.28	<input type="checkbox"/>		
Eastern Color and Chemical Company	Ecobrite Cleaner AK	100	80.68	<input type="checkbox"/>		
Gemtek Products	SC EZ Solv Safety Solvent	100	60.26	<input type="checkbox"/>		

Conclusion: Bio T Foam Plus was the only product removing over 85% of the lubricant.