CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2017
DateRun:	12/12/2017
Experimenters:	Carla De La Cruz, Jenna Davidson
ClientType:	General
ProjectNumber:	Project #1
Substrates:	Brass, Nickel
PartType:	Part
Contaminants:	Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Visual, Visual, microscopic
Purpose:	To assess whether Gemtek products are comparable to TCE when cleaning Bird Precision provided parts.
Experimental Procedure:	Clean parts were provided by Bird Precision, and initial observations were taken using a microscope. Photographs were taken through the eyehole of the microscope and visual observations were recorded. This was repeated once soiled and after the parts were cleaned. Brass parts were hollow, and photos were taken on both sides. Nickel parts were only photographed on the perforated side. Parts were soiled with skin oils, cloth fibers, and a lubricating oil provided by Bird Precision. Parts were placed in a beaker of solution for a minute using a basket with slight agitation. After cleaning, the parts were removed and placed over a heated air gun for 1 to 5 minutes. Final observations were recorded after drying.
Results:	SC 1000/SC SuperSolv 95/5 Initial Brass: Part reused from precious test showed some residue around jewel from oil. Nickel: Part reused from previous test appears to have blue residue outside of orifice and debris. Dirty Brass: Oil visible on the inside of the jewel. Nickel: Oil visible on the inside of the jewel. Clean Brass: Oil still present in the jewels and orifices completely or partially blocked with some discoloration on outer surface. Nickel: Some fluid inside opening with debris outside and blue coloration. SC 1000/SC SuperSolv 90/10 Initial Brass: Parts reused still show signs of oil inside jewels from previous test Nickel: Parts reused show little to no residue visible. Dirty Brass: Oil visible on the inside of the jewel. Nickel: Oil visible on the inside of the jewel. Clean Brass: Outer surface appears scratched with oil completely burnt on top of jewel blocking orifice. Appears crystallized. Nickel: Blue residue with some fibers present on surface and some pitting. Jewels appear darkened to a brown color.

Summary:

Substrates:	Brass, Nickel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Gemtek Products	SC-1000 Super Concentrate /SC Supersolve Mixture	95%/5%	0.00	☐	
Gemtek Products	SC-1000 Super Concentrate /SC Supersolve Mixture	90%/ 10%	0.00	☐	

Conclusion: The Gemtek cleaners showed little removal of the lubricating oil for this particular application. Further testing can be done with other cleaning methods.