CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 01/21/2004

Experimenters: Jason Marshall

ClientType: Tool Manufacturer

ProjectNumber: Project #1

Substrates: Steel

PartType: Part

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual, Wipe

Purpose: To evaluate effective cleaners on supplied parts.

Experimental Procedure: Four products from the previous trials were selected to clean the first set of supplied parts using immersion cleaning. A fifth, untested product was added. Three products were used at full strength. One product was diluted to 10% using DI water in a 600 ml beaker. The last product was diluted to 12.5% using DI water, based on vendor recommendations. Two products were used at room temperature and the other three were heated to 120 F on a hot plate.
The dirty parts were photographed in groups of two and immersed into a beaker with cleaning solution and allowed to soak for 10 minutes. Following the cleaning, the parts were dried using air blow off at room temperature. The cleaned parts were then photographed again for comparison to the dirty pictures. Observations during cleaning were recorded and products were ranked based on how effective the products were.

Contaminant: Quench oil and dirt residues.

Results: The five products did remove some of the dirt/oil mix from the supplied parts. Based on wipe analysis the parts still had some gray film remaining. The film was less then the uncleaned parts.

Cleaner	Part Group	Observation
278 Super Solv	1	Less soil on parts than when dirty. Slightly less grey film then when dirty.
DS 108	2	Some improvement. Still had grey film. Cleaner than part group 1.
E3HB	3	Not as clean as part group 2 but cleaner than part group 1.
SC Aircraft & Metal	4	Grey film. Not as clean as part group 1.
Commercial All Purpose	5	Least clean part group.

Summary:

Substrates:	Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AW Chesterton	278 Super Solv	100	0.00	☑	Rank = 3
Dysol	DS 108 Wipe Solvent	100	0.00	☑	Rank = 1
Metabolix Inc	Metabolix E3HB	100	0.00	☑	Rank = 2
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	10	0.00	☑	Rank = 4
Lifetime Solutions Ltd	Commercial All Purpose Colloidal Cleaner	12	0.00	☐	Rank = 5

Conclusion: The five products were only partially successful in removing the dirt/oil mix. The bonding of the soil to the parts could be broken with the addition of mechanical energy.