

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1995
 DateRun: 08/22/1995
 Experimenters: Donald Garlotta, Jay Jankauskas
 ClientType: Lapping Job Shop
 ProjectNumber: Project #1
 Substrates: Steel
 PartType: Part
 Contaminants: Lubricating/Lapping Oils, Dirt, Films
 Cleaning Methods: Low Pressure Spray
 Analytical Methods: Visual
 Purpose: Preliminary test to evaluate cleaners

Experimental Procedure: PART #1
 CLEANING PRODUCT: Oakite Inproclean #3800
 CONCENTRATION: 10% by volume
 PART #2
 CLEANING PRODUCT: Cleaning Systems Inc. Release
 CONCENTRATION: 15% by volume
 PART #3
 CLEANING PRODUCT: Calgon Corporation Geo-Guard #3015
 CONCENTRATION: 10% by volume
 PART #4
 CLEANING PRODUCT: AW Chesterton KPC 820N
 CONCENTRATION: 4% by volume

The purpose of this trial is simply to perform a preliminary test demonstration for Lapping Job Shop to show the effectiveness of various cleaners in removing lapping oils. For the various cleaners, cleaning will take place for five minutes at 110 F. All three parts will first be rinsed for one minute in a tap water bath set at 110 F. One of the parts will then be rinsed in a room temperature DI bath for 10 seconds. After rinsing the parts were then placed under the air knives for one minute and then blown dry with the heat gun. After drying the parts were observed for lapping compound residue and spotting. One part was then cleaned in the Graymills spray unit. Cleaning temperature was set at 100 F and cleaning took place for two minutes. The part was then rinsed under warm, running tap water for a few seconds.

Results: All four cleaners were successful in quickly removing the lapping compound from the parts. No spotting was noticed on the parts, so a DI rinse may not be necessary.

Summary:

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|----------------------|----------------------|---------------------------------------|--------------------|-------------------------------------|----------------------|
| Substrates: | | Steel | | | |
| Contaminants: | | Lubricating/Lapping Oils, Dirt, Films | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Oakite Products | Inproclean 3800 | 10 | | <input checked="" type="checkbox"/> | |
| AW Chesterton | KPC 820 N | 4 | | <input checked="" type="checkbox"/> | |
| Cleaning Systems | Release | 15 | | <input checked="" type="checkbox"/> | |
| Calgon Corporation | Geo Guard 3015 | 10 | | <input checked="" type="checkbox"/> | |

Conclusion: Preliminary tests show that all four cleaners and both mechanical methods are possible cleaning methods for Lapping Job Shop. Future testing should be done with a variety of substrates and on parts that are more heavily contaminated.