

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009
 DateRun: 05/22/2009
 Experimenters: Jason Marshall, Junhee Cho
 ClientType: Machine Construction Company
 ProjectNumber: Project #2
 Substrates: Steel
 PartType: Part
 Contaminants: Greases, Oil
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Visual

Purpose: To evaluate cleaners on supplied dirty parts following current cleaning process

Experimental Procedure: The two products were selected from the previous trials based on success for removing the supplied soils using heated immersion cleaning. Both were used at full strength based on vendor recommendations. Beakers were heated to 130 F on a hot plate. Steel parts were supplied by the client with grease and oils caked on to the parts. One part was cleaned in each solution for 10 minutes using stir bar agitation. Parts were not rinsed but were dried using compressed air at room temperature for 30 seconds. Parts were visually inspected and pictures were taken.

Results: Much of the oil and grease was visually observed to have been removed from various regions of the supplied parts. However, after cleaning and drying, both cleaning solutions left behind a residue on the parts making it difficult to assess effectiveness of the two products.

| Cleaner | Part Location | Observation |
|-----------------|---------------|--|
| Bean-e-doo | Threads | Some solid matter removed from threads. Residue remaining |
| | | from cleaner. Grease still in threads |
| | Bolt head | Rust like material gone |
| | Overall part | Cleaner residue left on most areas but most in the threads |
| Smart Solve 605 | Threads | Some solid matter removed from threads. Residue remaining |
| | | from cleaner. Grease still in threads |
| | Bolt head | Rust like material gone |
| | Overall part | Cleaner residue left on most areas but most in the threads |

Summary:

| | | | | | | |
|-----------------------------------|-----------------------------------|---------------|--------------------|--------------------------|----------------------|--|
| Substrates: | Steel | | | | | |
| Contaminants: | Greases, Oil | | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| Franmar Chemical | Bean-e-doo (Parts Washer Solvent) | 100 | | <input type="checkbox"/> | | |
| United Laboratories International | Smart Solve 605 | 100 | | <input type="checkbox"/> | | |

Conclusion: Cleaned parts will be returned to for inspection to determine whether products were effective at removing the greases and oils.