

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016
 DateRun: 11/16/2016
 Experimenters: Francisco Abreau, Vinh Tran, James Keats
 ClientType:
 ProjectNumber: Project #1
 Substrates: Aluminum, Stainless Steel
 PartType: Coupon
 Contaminants: Lubricating/Lapping Oils, Dirt
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of the supplied cleaners with bike soil removal on provided substrates.

Experimental Procedure: Fifteen stainless steel coupons and fifteen aluminum coupons were weighed to attain initial weights. Bike soil was prepared using 1.6 grams of bike soil and 50 drops of Tri-flow lubricant. Each coupon was then soiled with 1.6 grams of bike soil and 50 drops of Tri-flow lubricant. Dirty weights were recorded. Three coupons were placed in the manual SLW machine at a time and sprayed twice each with the selected cleaner, as well as the paper towel. The coupons were then run for a total of 5 cycles. The process was repeated for all of the 30 coupons. After the cleaning process the coupons were allowed to dry. Subsequently, the dried coupons were weighed to attain final weights.

| Results: | | Initial wt. | Final wt | % Removed | Average % |
|----------|------------------------------|-------------|----------|-----------|-----------|
| | Pro-Gold Degreaser | 0.1719 | 0.0099 | 94.24 | 93.57 |
| | | 0.2574 | 0.0209 | 91.88 | |
| | | 0.2475 | 0.0134 | 94.59 | |
| | Pedro's Oranj Peelz | 0.2628 | 0.0070 | 97.34 | 95.34 |
| | | 0.3059 | 0.0167 | 94.54 | |
| | | 0.2986 | 0.0175 | 94.14 | |
| | Pedro's Degreaser 13 | 0.3862 | 0.0182 | 95.29 | 94.17 |
| | | 0.3260 | 0.0413 | 87.33 | |
| | | 0.2809 | 0.0003 | 99.89 | |
| | Pedro's Green Fizz | 0.5200 | 0.0236 | 95.46 | 96.38 |
| | | 0.4137 | 0.0138 | 96.66 | |
| | | 0.2818 | 0.0084 | 97.02 | |
| | Clean Streak White Lightning | 0.3676 | 0.0311 | 91.54 | 95.2 |
| | | 0.5533 | 0.0203 | 96.33 | |
| | | 0.3292 | 0.0075 | 97.72 | |

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|----------|---|------------------------|---------------|--------------------|-------------------------------------|
| Summary: | Substrates: Aluminum, Stainless Steel | | | | |
| | Contaminants: Lubricating/Lapping Oils, Dirt | | | | |
| | Company Name: | Product Name: | Conc.: | Efficiency: | Effective: |
| | Abc Compounding | Pro-gold Degreaser | 100 | 93.57 | <input checked="" type="checkbox"/> |
| | Pedro's | Oranj Peelz | 100 | 95.34 | <input checked="" type="checkbox"/> |
| | Pedro's | Degreaser 13 | 100 | 94.17 | <input checked="" type="checkbox"/> |
| | Pedro's | Green Fizz | 100 | 96.38 | <input checked="" type="checkbox"/> |
| | White Lightning | Clean Streak (Aerosol) | 100 | 95.20 | <input checked="" type="checkbox"/> |

Conclusion: Overall, all five of the cleaners were very effective at removing the bike soil from both stainless steel and aluminum. All of the cleaners had an average removal of above 93%, well above the optimal percentage removal of 85%.