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Topic: Grease Colorimetry

### Using a Teflon Disk for An Improved Color Response



**Figure 1** Grease Thief Colorimeter with the Teflon disk installed marked in red. Baseplate and spacers is marked in green.

#### Introduction:

The Grease Thief Colorimeter has been developed to determine the color of a given grease sample and evaluate the health of the lubricant based on its color deviation from an unworked baseline sample. This instrument combines the use of a color scanner and an arbor press to squeeze a grease sample to the proper thickness for a color measurement. Historically, the Grease Thief Colorimeter used silver stickers. After rigorous testing, it was determined that the silver stickers had an influence on the L\* and B\* responses of blue, light-colored, white, and clear lubricating greases. L\* represents the light (100) to dark (0) change in a sample and B\* represents the change from blue (negative values) to yellow (positive values). To mitigate this, MRG Laboratories developed a Teflon disk to replace the silver stickers and provide an improved color value for grease samples. Figure 1 shows the new Teflon disk and how it is installed onto the Grease Thief Colorimeter.

#### Parts Impacted

- Grease Thief Colorimetry sticker
- Grease Thief Colorimetry Baseplate
- Grease Thief Colorimetry Spacers

#### What this Means to You:

MRG Laboratories recommends purchasing the Teflon disk to improve the color of a given grease sample. It also allows for an easier cleanup process and a faster sample analysis time. MRG laboratories will also upgrade the baseplate and spacers to stainless-steel to prevent corrosion. The modification of the Teflon disk, stainless steel baseplate and stainless-steel spacers will now be referred to as MGT-01-GTC-Upgrade and is available for \$500. If you choose not to purchase MGT-01-GTC-Upgrade, you may notice a silver tint to the color results and corrosion on the baseplate and spacers. All Grease Thief Colorimeters moving forward will be manufactured with a Teflon disk and stainless-steel spacers.

### **Installing and using MGT-01-GTC-Upgrade:**

Installing MGT-01-GTC-Upgrade simply requires sending your previous unit back with the spacers (excluding the iPad) to MRG Laboratories. You will then be shipped an upgraded unit and spacers. Continue to use the Grease Thief Colorimeter using standard operating procedures. Cleaning up the upgraded Grease Thief Colorimeter just requires wiping the disk using a lint free wipe after testing a grease sample but before running the next sample. A small amount of solvent may be used on more pigmented greases.

### **Recommendations:**

After purchasing MGT-01-GTC-Upgrade, MRG Laboratories recommends retesting previous (analyzed/scanned) baselines to remove any influence the historical silver stickers. Understand that this addition to the instrument may change limits set for grease-lubricated components, and a reevaluation of those limits may need to be performed.

### **Questions or modification requests may be directed to:**

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### **Keywords**

*Grease Colorimetry*  
*Grease Thief Colorimeter*  
*Grease Screening*