

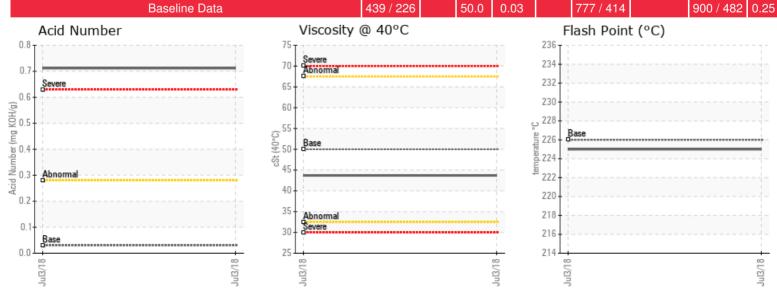
FULTON

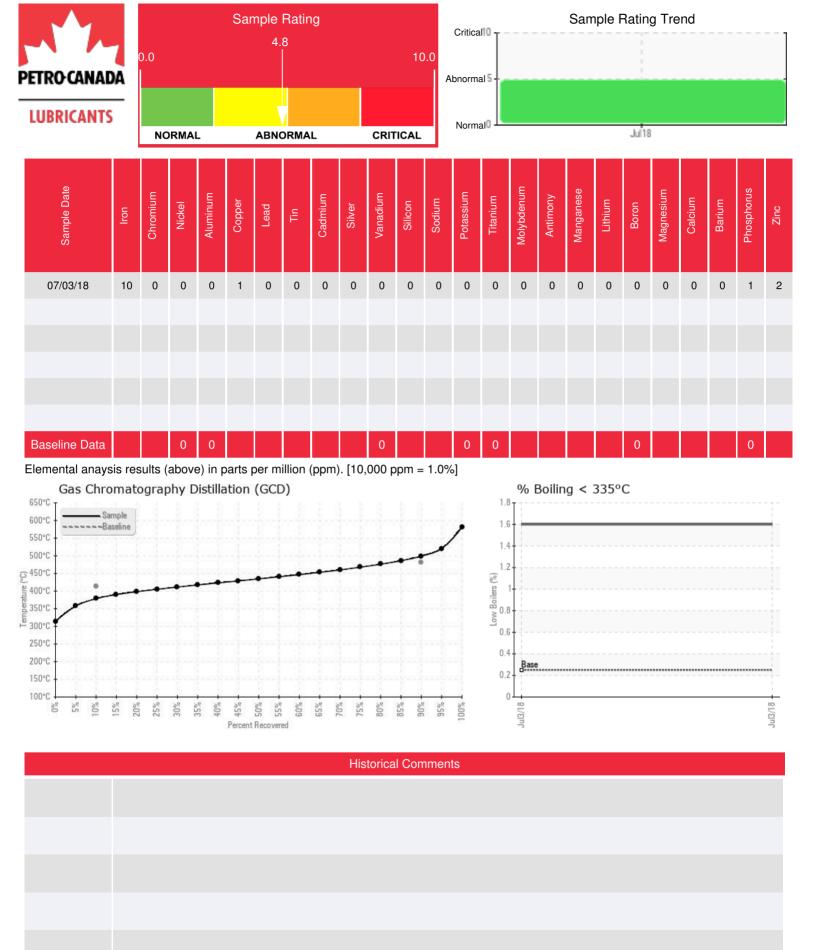
| Customer: PTRHTF10202 | System Information | Sample Information | | | |
|-----------------------------|---------------------------------------|---------------------------------------|--|--|--|
| MFM BUILDING PRODUCTS CORP. | System Volume: 700 gal | Lab No: 02234474 | | | |
| 525 ORANGE STREET | Bulk Operating Temp: 650F / 343C | Analyst: Yvette Trzcinski | | | |
| COSHOCTON, OH 43812 USA | Heating Source: | Sample Date: 07/03/18 | | | |
| Attn: Tony Williams | Blanket: | Received Date: 08/20/18 | | | |
| Tel: (740)622-2645 | Fluid: SUNOCO SUN HEAT TRANSFER 21 PD | Completed: 09/24/18 | | | |
| E-Mail: asw@mfmbp.com | Make: | To discuss this report contact Yvette | | | |
| | | Trzcinski at (262)933-0718 | | | |

Recommendation: Fluid is showing signs of thermal cracking and oxidation degradation. The acid number is severely high at 0.712 the high critical limit for a system your size is 0.63 this indicates the fluid is oxidizing and generating acidic by products. The increase in high boilers GCD 90% and the decrease in low boilers at 10% both point towards thermal cracking and oxidation which leads to system deposits of carbonaceous and acidic material that leads to system inefficiency. Recommend scheduling a time to drain, flush and refill the system

Comments: Acid Number (AN) is severely high. (GCD) 90% Distillation Point is abnormally high. (GCD) 10% Distillation Point is marginally low.

| Sample Date | Received Date | Fluid Age | Sample Location | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10% | GCD 50% | GCD 90% | GCD % < 335°C |
|-------------|---------------|-----------|-------------------|-------------------|------------|------------------|--------------|--------|-----------|-----------|-----------|---------------|
| | mm/dd/yy | | | °F/°C | ppm | cSt | mg/KOH/ g | %wt | °F/°C | °F/°C | °F/°C | % |
| 07/03/18 | 08/20/18 | 6y | OIL STRAINER PORT | 437 / 225 | 21.8 | 43.7 | 0.712 | 0.217 | 713 / 379 | 814 / 435 | 930 / 499 | 1.60 |
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