

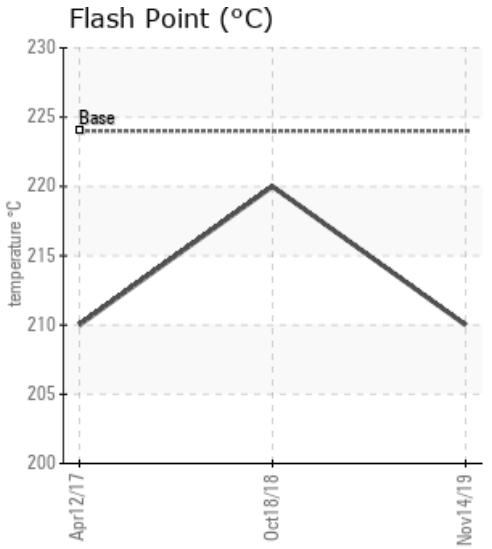
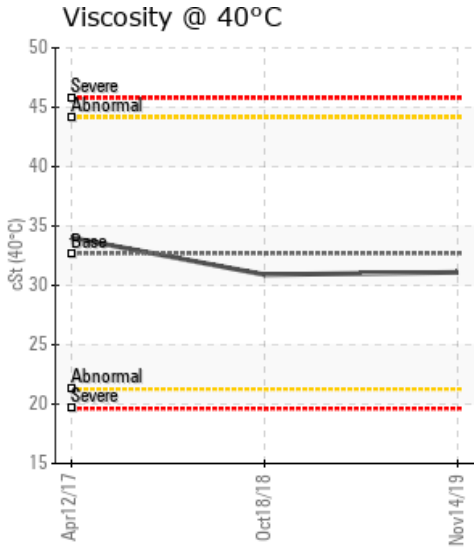
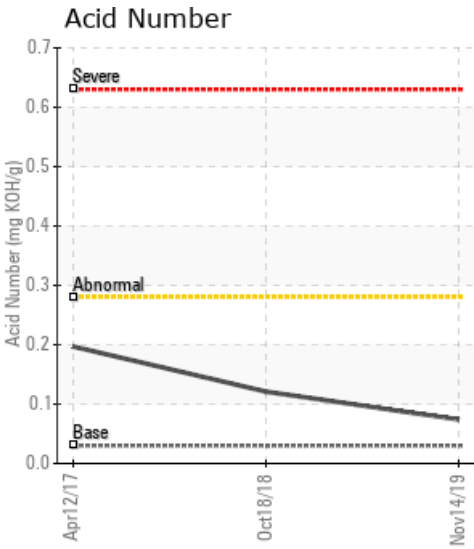
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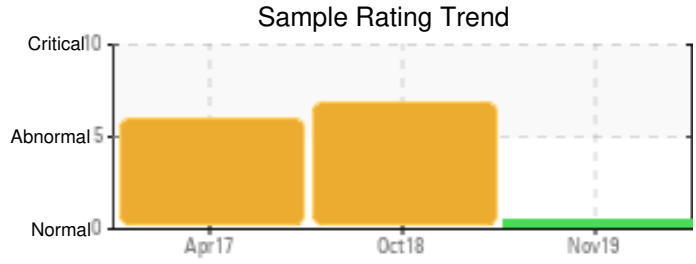
| Customer: PTRHTF10150 | System Information | Sample Information |
|---|---|--|
| PMC ORGANOMETALLIX 2316 HIGHLAND AVE CARROLLTON, KY 41008 USA Attn: ARMIN GHAZIPOUR Tel: (502)732-4411 E-Mail: armin.ghazipour@pmc-group.com | System Volume: 0 gal Bulk Operating Temp: 450F / 232C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: | Lab No: 02330709 Analyst: Joe Goecke Sample Date: 11/14/19 Received Date: 01/09/20 Completed: 01/13/20 |

Recommendation: Sample looks great. Continue to use and resample at next scheduled interval.

Comments:

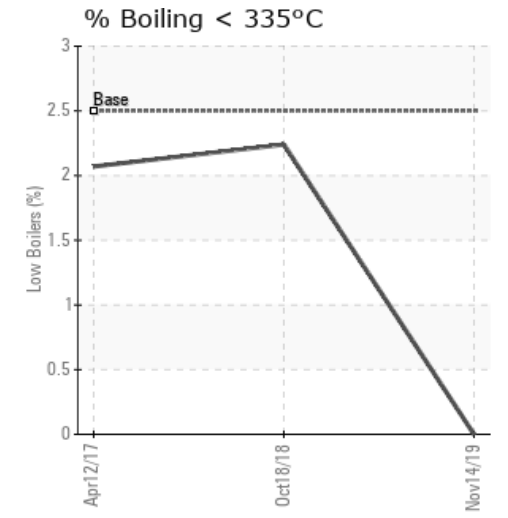
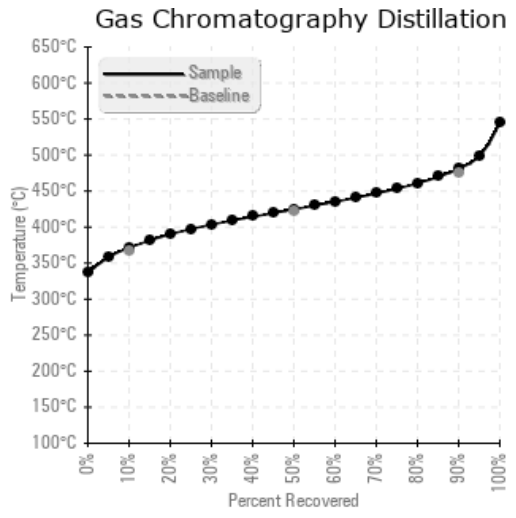
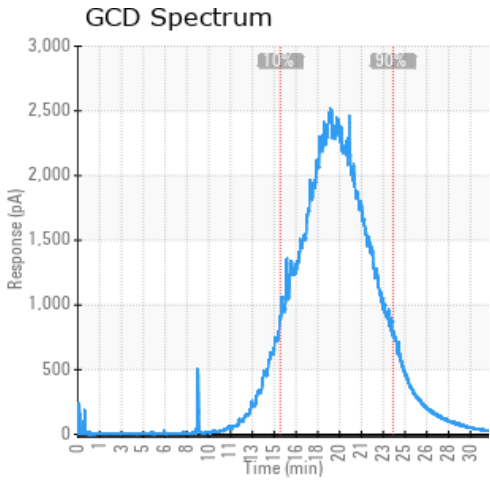
| Sample Date | Received Date | Fluid Age | Sample Location | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10% | GCD 50% | GCD 90% | GCD % < 335°C |
|---------------|---------------|-----------|-----------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|-----------|---------------|
| | mm/dd/yy | | | °F/°C | ppm | cSt | mg/KOH/g | %wt | °F/°C | °F/°C | °F/°C | % |
| 11/14/19 | 01/09/20 | 0y | | 410 / 210 | 17.5 | 31.1 | 0.074 | 0.173 | 700 / 371 | 796 / 425 | 898 / 481 | 0.00 |
| 10/18/18 | 12/03/18 | 5y | | 428 / 220 | 35.2 | 30.9 | 0.121 | 0.331 | 687 / 364 | 792 / 422 | 900 / 482 | 2.24 |
| 04/12/17 | 06/07/17 | 10y | | 410 / 210 | 40.8 | 34.0 | 0.197 | 0.187 | 693 / 367 | 803 / 429 | 913 / 490 | 2.07 |
| Baseline Data | | | | 435 / 224 | | 32.7 | 0.03 | | 693 / 367 | 790 / 421 | 887 / 475 | 2.5 |





| Sample Date | Iron | Chromium | Nickel | Aluminum | Copper | Lead | Tin | Cadmium | Silver | Vanadium | Silicon | Sodium | Potassium | Titanium | Molybdenum | Antimony | Manganese | Lithium | Boron | Magnesium | Calcium | Barium | Phosphorus | Zinc |
|----------------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|
| 11/14/19 | 12 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 |
| 10/18/18 | 282 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 2 | 2 | 20 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 125 | 1 |
| 04/12/17 | 173 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 11 | 5 | 74 | 1 |
| Baseline Data | | | 0 | 0 | | | | | | 0 | | | 0 | 0 | | | | | 0 | | | | 270 | |

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments

| | |
|----------|---|
| 10/18/18 | Iron level is elevated. May need to add filtration to remove the iron. Other parameters look okay. Continue to us and resample in 6 months. Iron ppm levels are abnormal. Tin ppm levels are noted. |
| 04/12/17 | Considering we do not know the age of this system the oil looks pretty good. The viscosity and flash points are within normal levels and the low boilers are not an issue. There is some wear metals in the system and as noted the Tin is high which could cause additional wear. But since we do not have history we do not know how long this has been high. Other than that the system is suitable for further use. To get on a good monitoring program I recommend cleaning and flushing the system within the next 6-12 months then take samples every 6 months for 18 months then yearly after that. Tin ppm levels are severe. (GCD) 90% Distillation Point is marginally high. |

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