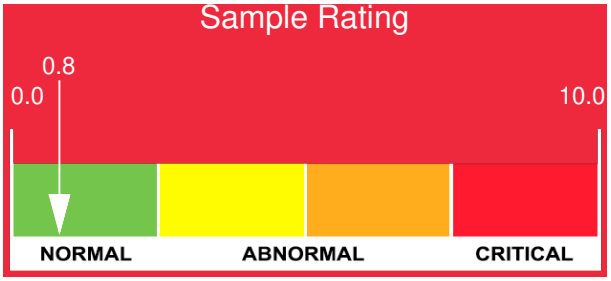


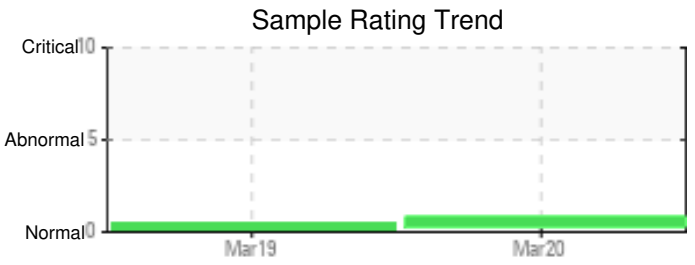


# FULTON PUMP

| Customer: PTRHTF10039 | System Information | Sample Information |
|---|---|---|
| Piedmont Chemical Industries<br>331 BURTON AVE.<br>HIGH POINT, NC 27261 USA<br>Attn: BOB BURGES<br>Tel: (336)885-5131<br>E-Mail: bburges@piedmontchemical.com | System Volume: 750 gal<br>Bulk Operating Temp: 536F / 280C<br>Heating Source:<br>Blanket:<br>Fluid: PETRO CANADA CALFLO AF<br>Make: FULTON | Lab No: 02341646<br>Analyst: Manny Garcia<br>Sample Date: 03/02/20<br>Received Date: 03/05/20<br>Completed: 03/11/20<br>Manny Garcia<br>manuel.garcia@petrocanadalsp.com |

Recommendation: 'Vent' the system to bring the distillation points back in check. Filter system fluid to remove contamination and extend life of the oil while maintaining optimum efficiencies. Oil is suitable for continued use. Please re-submit sample in march 2021.

Comments: (GCD) 90% Distillation Point is marginally high. Very Light debris detected in fluid

| 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 | % |
| 03/02/20 | 03/05/20 | 9y | FULTONPUMP | 414 / 212 | 0.4 | 30.8 | 0.060 | 0.108 | 703 / 373 | 812 / 433 | 913 / 490 | 1.41 |
| 03/11/19 | 03/20/19 | 7y | | 415 / 213 | 3.3 | 30.5 | 0.02 | 0.044 | 694 / 368 | 790 / 421 | 888 / 476 | 1.55 |
| | | | | | | | | | | | | |
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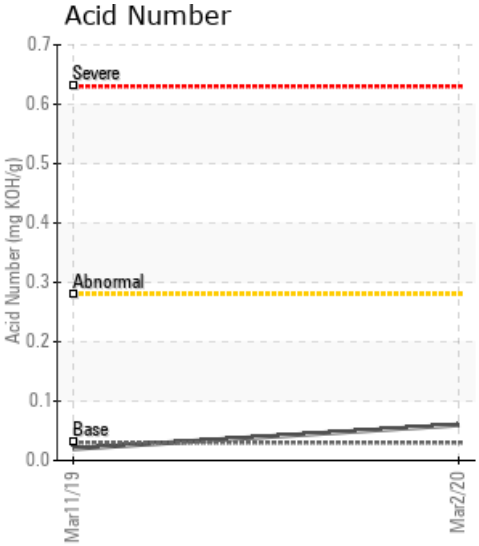
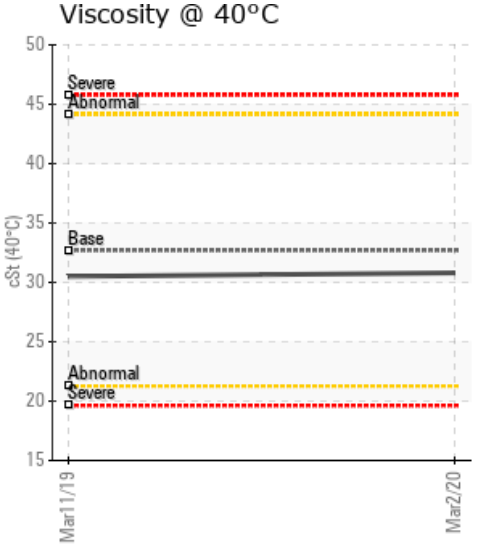
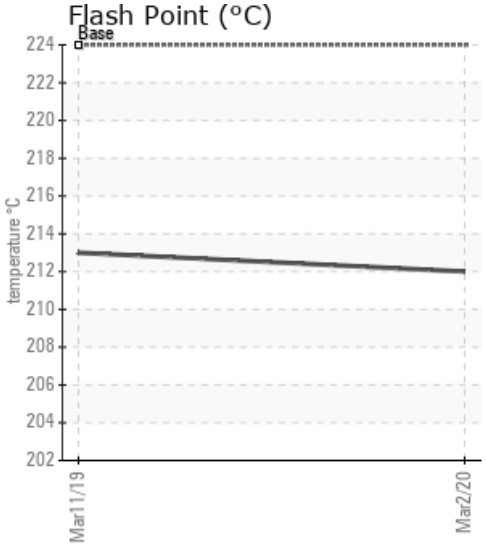
| | | | | | | | | | | | | |
| Baseline Data | | | | 435 / 224 | | 32.7 | 0.03 | | 693 / 367 | 790 / 421 | 887 / 475 | 2.5 |

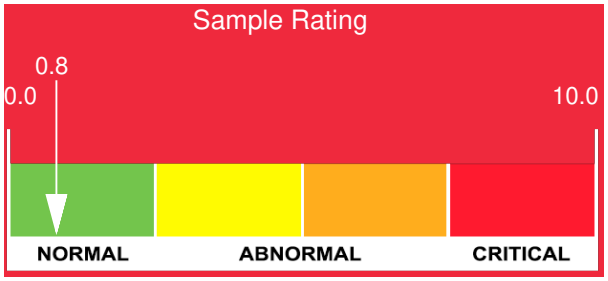


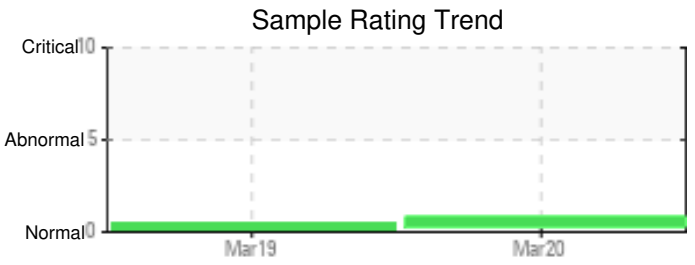



PETRO-CANADA LUBRICANTS




| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03/02/20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 0 |
| 03/11/19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
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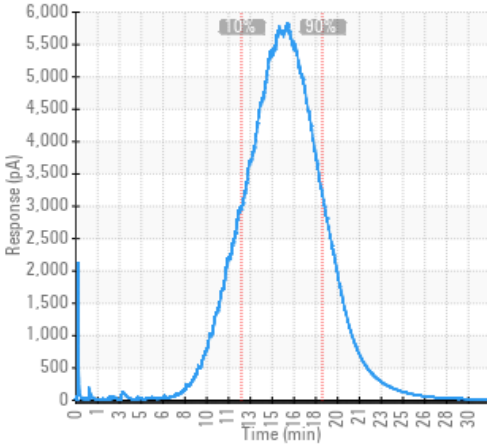
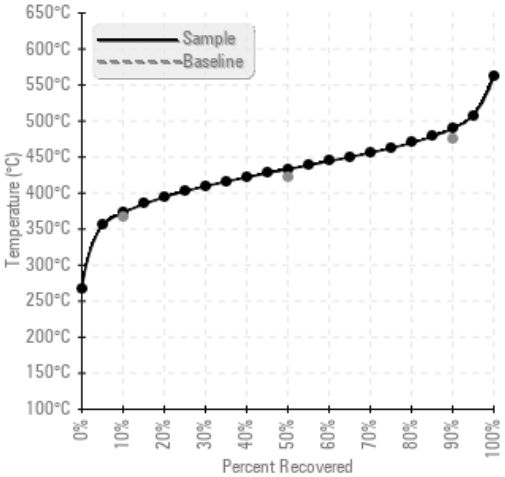
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Baseline Data | | | 0 | 0 | | | | | | 0 | | | 0 | 0 | | | | | 0 | | | | 270 | |

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

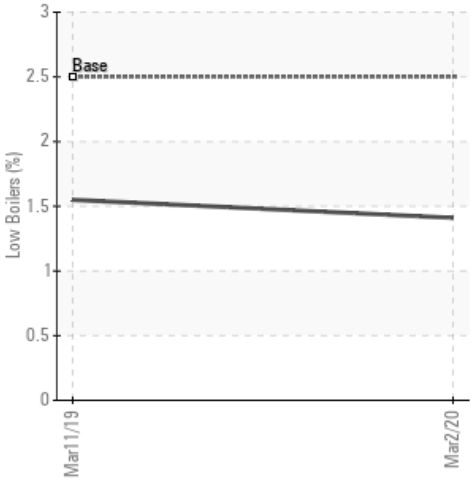
GCD Spectrum




Gas Chromatography Distillation




% Boiling < 335°C




## Historical Comments

| | |
|---|---|
| 03/11/19 | Fluid is suitable for continued use. Please re-sample in March 2020Wear metals are low; Viscosity is perfect at 30.5 CsT 2 40oC. Very lite debris seen in the fluid and during an outage the cleanliness level can be improved by using a 2-stage kidney loop system to filter out any debris. |
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