

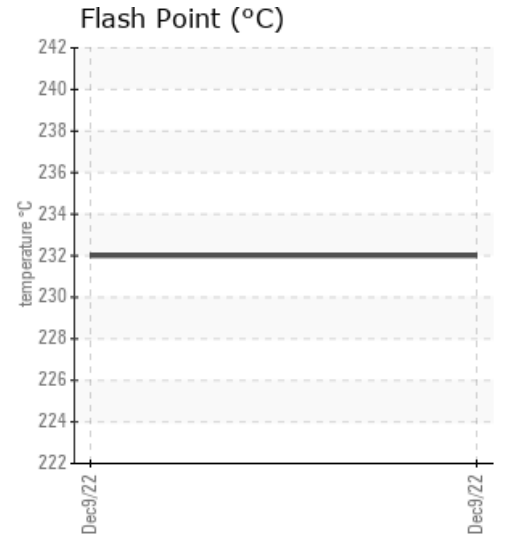
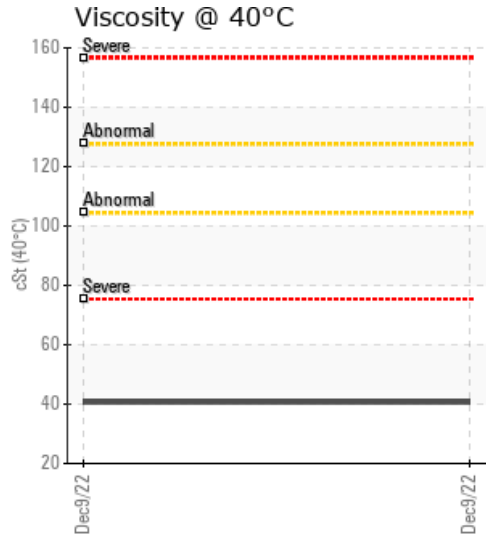
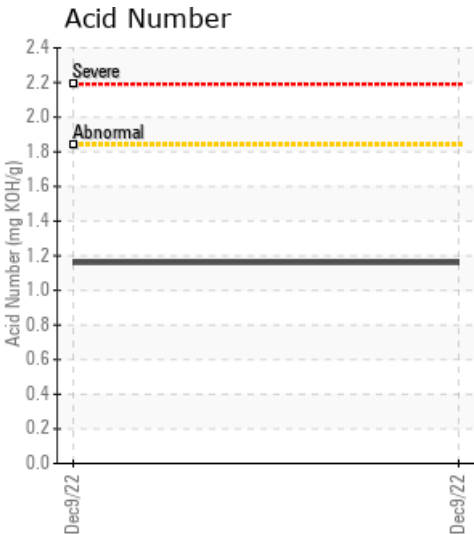
HEATER2

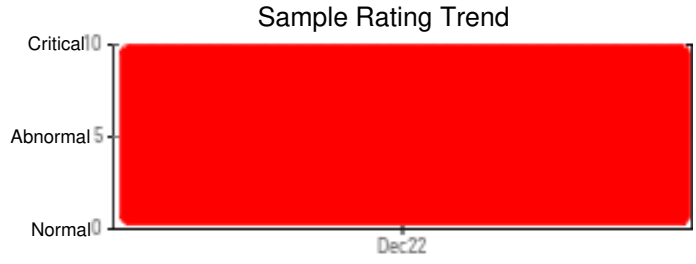
| Customer: PTRHTF30137 | System Information | Sample Information |
|---|---|---|
| McAsphalt Industries LTD 950 Boulevard Gérard-Cadieux Salaberry-de-Valleyfield, QC J6T 6L4 CA Attn: Dino Tsipsis Tel: (450)377-8420 E-Mail: dtsipsis@mcasphalt.com | System Volume: 10000 ltr Bulk Operating Temp: 380F / 193C Heating Source: Blanket: Fluid: N/A Make: HEATEC | Lab No: 02528513 Analyst: Jean Lacharite Sample Date: 12/09/22 Received Date: 12/13/22 Completed: 12/22/22 Jean Lacharite jean.lacharite@HFSinclair.com |

Recommendation: The presence of wear metals is normal. The sodium is at 211 ppm, it's contamination or a coolant leak. The acid number (AN) is high: 1.16, high insoluble pentane, 0.771%. Viscosity is high 40.6 cSt @ 40C this is a yellow flag. The acidity of the oil risks corroding the pipes and fittings with the risk of pitting and leaks. Should monitor the system and refresh some of the HTF, 25%, with fresh Petro Therm oil.

Comments: Pentane Insolubles levels are high (red Flag). Increase the level of filtration to remove solids in the systems. Sodium ppm levels are severely high (red Flag).

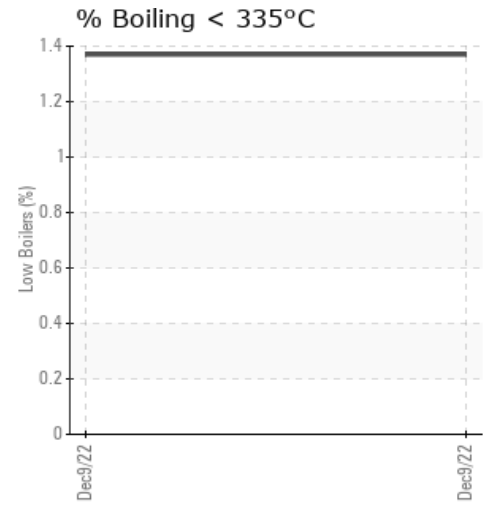
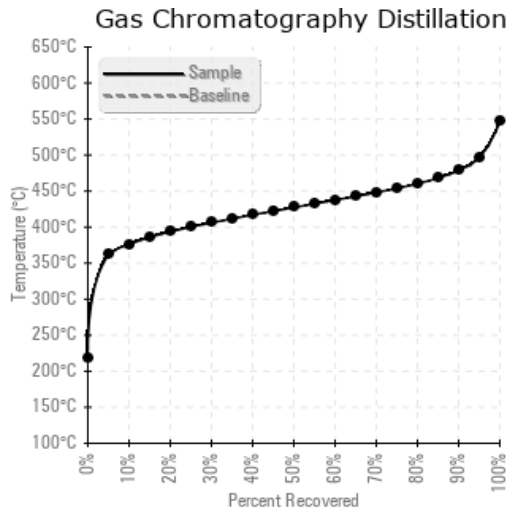
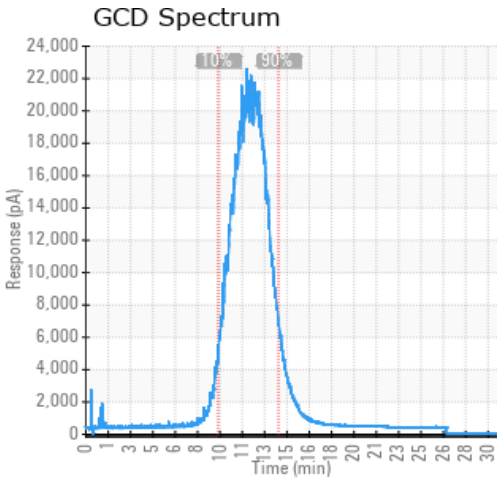
| Sample Date | Received Date | Fluid Age | Sample Location | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10% | GCD 50% | GCD 90% | GCD % < 335°C |
|---------------|---------------|-----------|--------------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|-----------|---------------|
| | mm/dd/yy | | | °F/°C | ppm | cSt | mg/KOH/g | %wt | °F/°C | °F/°C | °F/°C | % |
| 12/09/22 | 12/13/22 | 26.0y | PUMP 4 IN/OUT LOOP | 450 / 232 | 75.6 | 40.6 | 1.16 | 0.771 | 709 / 376 | 801 / 427 | 893 / 479 | 1.37 |
| Baseline Data | | | | 32 / 0 | | | | | | | | |





| 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 | |
|---------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|---|
| 12/09/22 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 211 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 |
| Baseline Data | | | | | | | | | | | | | 0 | | | | | | 0 | | | | 0 | | |

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



Historical Comments

| |
|--|
| |
| |
| |
| |
| |

Petro-Canada makes no representation or warranty of any kind, either express or implied, as to the accuracy or completeness of the analysis and assumes no responsibility and shall have no liability whatsoever with respect to such analysis, or a party's use of it. Petro-Canada is a division of HollyFrontier Corporation.