

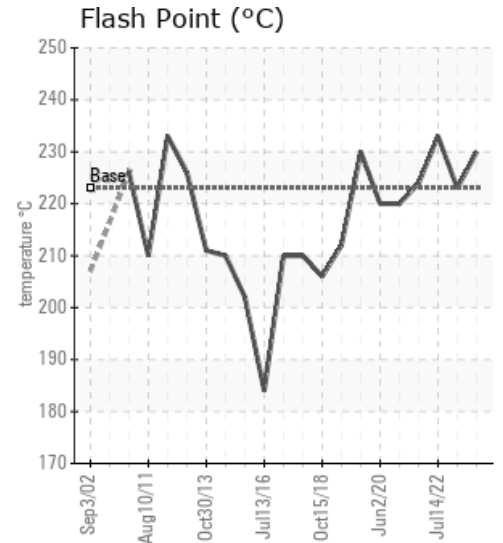
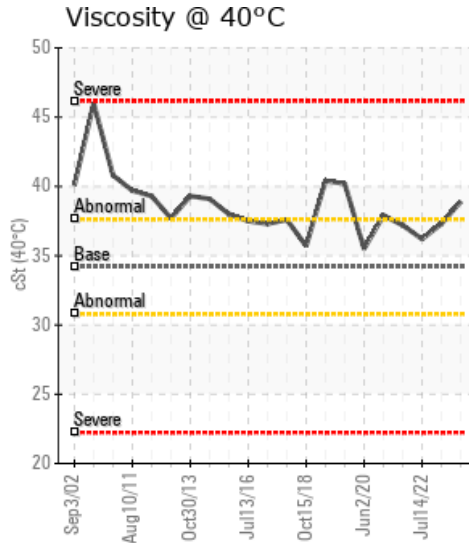
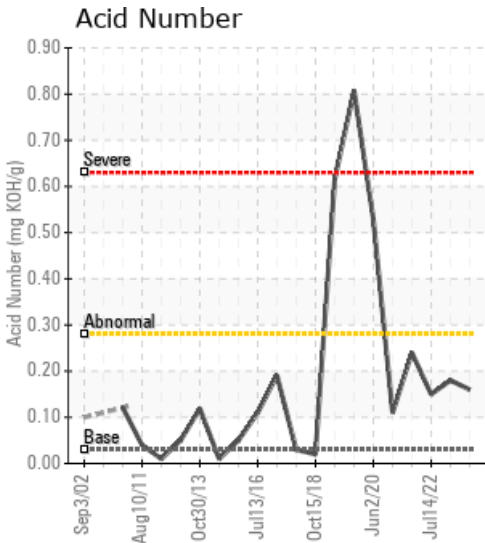
API BOILER

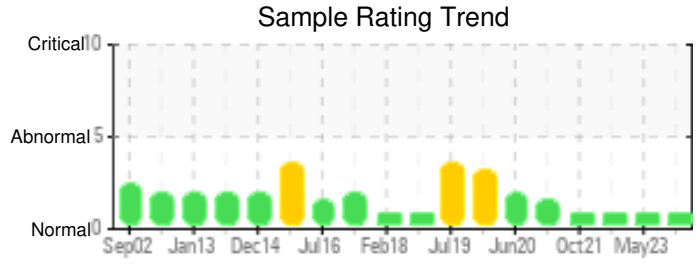
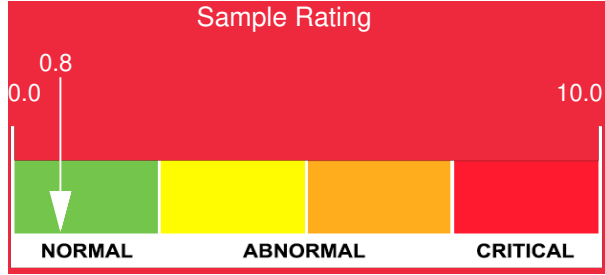
| Customer: PTRHTF30020 | System Information | Sample Information |
|--|--|--|
| IKO INDUSTRIES HAWKESBURY 1451 SPENCE ROAD HI-PARTS-HAWK YARD HAWKESBURY, ON K6A 3T4 CA Attn: Adam Aubry Tel: E-Mail: adam.aubry@iko.com | System Volume: 25000 ltr Bulk Operating Temp: 518F / 270C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: INDUSTRIAL | Lab No: 02617274 Analyst: Behshad Sabah Sample Date: 02/12/24 Received Date: 02/21/24 Completed: 02/26/24 Behshad Sabah behshad.sabah@HFSinclair.com |

Recommendation: oil in good condition. no actions to take. take another sample next year.

Comments: (GCD) 90% Distillation Point is abnormally high.

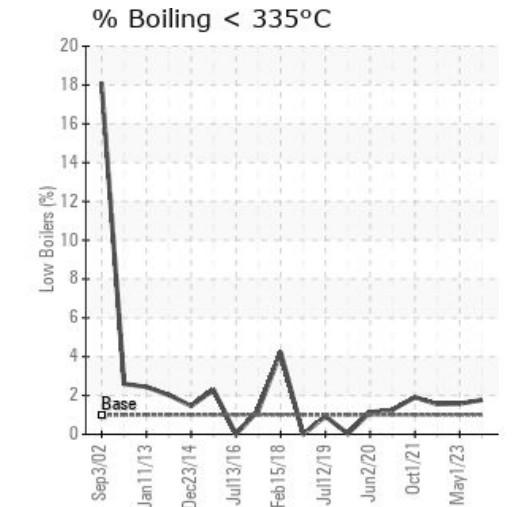
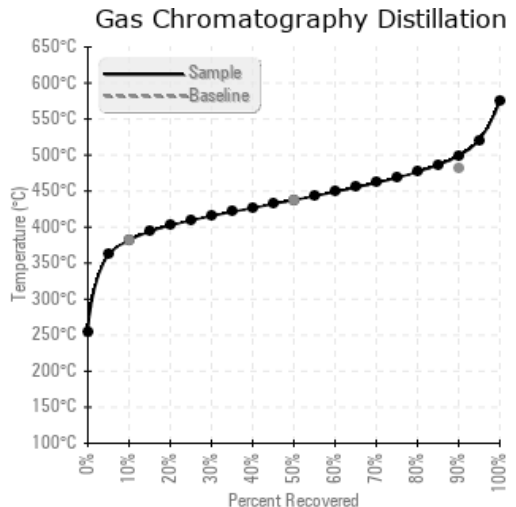
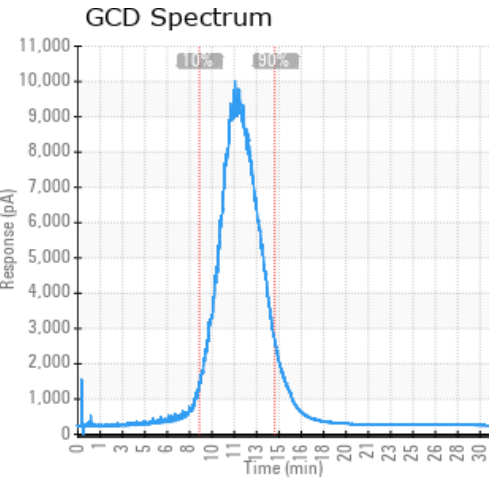
| Sample Date | Received Date | Fluid Age | Sample Location | Flash Point (COC) | Water (KF) | Viscosity (40°C) | Acid Number | Solids | GCD 10% | GCD 50% | GCD 90% | GCD % < 335°C |
|---------------|---------------|-----------|-----------------|-------------------|------------|------------------|-------------|--------|-----------|-----------|-----------|---------------|
| | mm/dd/yy | | | °F/°C | ppm | cSt | mg/KOH/g | %wt | °F/°C | °F/°C | °F/°C | % |
| 02/12/24 | 02/21/24 | 14.0y | | 446 / 230 | 49 | 38.9 | 0.16 | 0.151 | 719 / 382 | 819 / 437 | 930 / 499 | 1.77 |
| 05/01/23 | 05/02/23 | 13.0y | | 433 / 223 | 5.1 | 37.3 | 0.18 | 0.111 | 719 / 382 | 819 / 437 | 922 / 495 | 1.58 |
| 07/14/22 | 07/21/22 | 12.0y | | 451 / 233 | 23.1 | 36.2 | 0.15 | 0.262 | 722 / 383 | 819 / 437 | 925 / 496 | 1.55 |
| 10/01/21 | 10/20/21 | 11.0y | | 435 / 224 | 277.9 | 37.2 | 0.24 | 0.137 | 722 / 383 | 821 / 439 | 928 / 498 | 1.91 |
| 01/19/21 | 01/22/21 | 11.0y | | 428 / 220 | 5.3 | 37.9 | 0.11 | 0.454 | 724 / 384 | 822 / 439 | 930 / 499 | 1.26 |
| Baseline Data | | | | 433 / 223 | | 34.2 | 0.03 | | 720 / 382 | 817 / 436 | 900 / 482 | 1.00 |





| 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 |
|---------------|------|----------|--------|----------|--------|------|-----|---------|--------|----------|---------|--------|-----------|----------|------------|----------|-----------|---------|-------|-----------|---------|--------|------------|------|
| 02/12/24 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| 05/01/23 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 07/14/22 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/01/21 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 01/19/21 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 |
| Baseline Data | | | 0 | 0 | | | | | | 0 | | 0 | 0 | | | | | 0 | | | | 0 | | |

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



| Historical Comments | |
|---------------------|---|
| 05/01/23 | No presence of wear. Contamination are not present in sample. The viscosity and AN (acid number) are correct. COC flash point is on normal. GCD 10% is normal. GCD 90% is to report with severity 2 (yellow flag). Pentanes insolubles are correct. Graphic GCD is correct. The oil condition is good, very small indication of high boiler which is minimal. Please keep monitoring the oil. (GCD) 90% Distillation Point is marginally high. |
| 07/14/22 | No wear, no contamination are present in sample. Viscosity and AN (acid number) are correct. COC flash point is good. GCD 10% is good and GCD 90% is to report with severity 2 (yellow flag). Pentanes insolubles are good. The oil condition is good, very small indication of high boiler which is minimal. Please keep monitoring the oil. small change in the AN and viscosity. viscosity increase will reduce the heat transfer coefficient by 3%. in general oil is in good and acceptable condition. (GCD) 90% Distillation Point is marginally high. |
| 10/01/21 | Elemental Analysis is OK, FE = 6 ppm, max = 99. Water is ok, 278 ppm, max = 350 ppm. The Acid Number is ok at 0.24 and maximum is 0.29. The Viscosity @ 40C is ok. A result to 37.2 cSt and a fresh oil is 35.8 cSt. increase by 3.9%. The COC flash point is ok. A result to 224 C and a fresh oil is 225 C. The insolubles or solids (%W) is good. A result to 0.137 and the maximum is 0.29. GCD % 10% is ok and GCD 90% is a severity yellow, we will check for the next analysis, to do in one year. The graphic GCD is a good shape and we have not a large volume of low boiler and high boiler. Continue operation (GCD) 90% Distillation Point is abnormally high. |
| 01/19/21 | Solids (Pentane Insolubles) are high. High boilers (GCD @90%) are high. GCD <335C have increase. We could see some deposits in elbow, small lines etc. The heat transfer fluid is OK, for continuous use. Pentane Insolubles levels are abnormally high. (GCD) 90% Distillation Point is abnormally high. |

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.