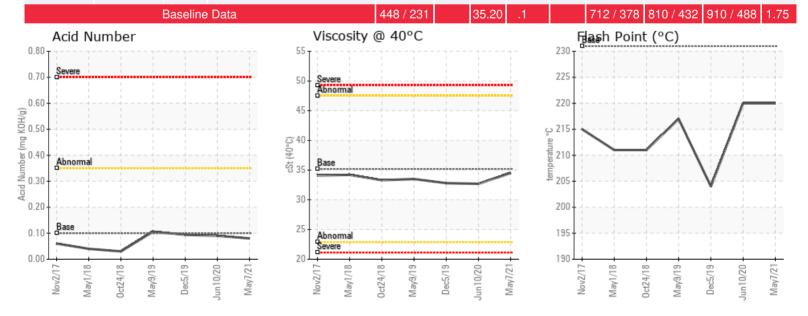


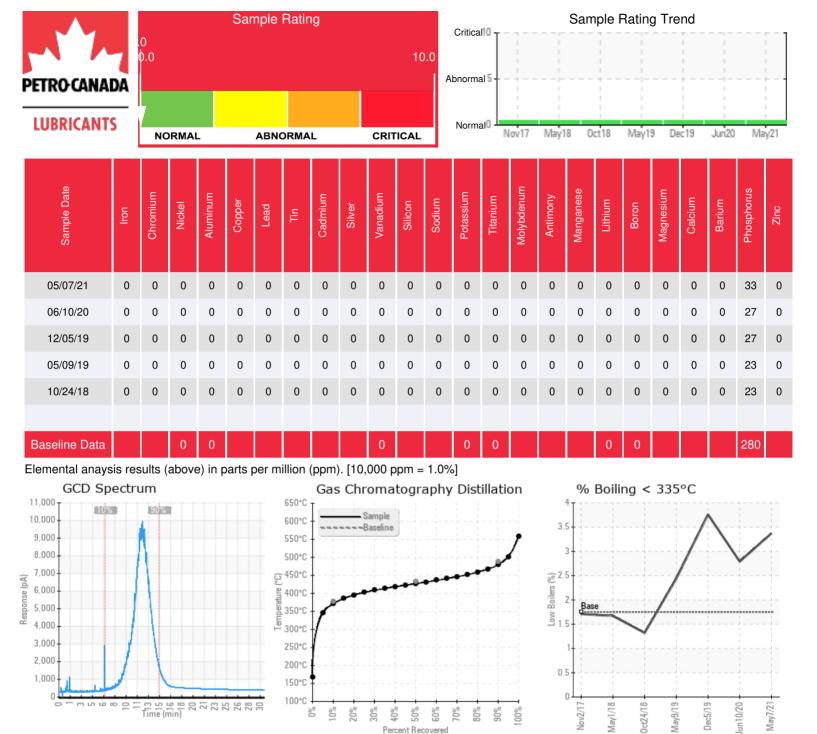
| Customer: PTRHTF10141 | System Information | Sample Information |
|------------------------------|----------------------------------|-----------------------------|
| TAMKO BUILDING PRODUCTS | System Volume: 110 gal | Lab No: 02421596 |
| 2300 35TH ST | Bulk Operating Temp: 350F / 177C | Analyst: Jake Finn |
| TUSCALOOSA, AL 35401 USA | Heating Source: | Sample Date: 05/07/21 |
| Attn: Eric Foote | Blanket: | Received Date: 05/19/21 |
| Tel: x: | Fluid: PETRO CANADA CALFLO HTF | Completed: 05/20/21 |
| E-Mail: eric_foote@tamko.com | Make: Heat Exchanger And T | Jake Finn |
| | | jake.finn@hollyfrontier.com |

Recommendation: Analysis indicates the current fluid is in great condition and is suitable for continued use. Please resample and submit for testing in one year.

Comments: N/A

| 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 | % |
| 05/07/21 | 05/19/21 | 0.0y | | 428 / 220 | 24.0 | 34.5 | 0.08 | 0.043 | 699 / 371 | 800 / 427 | 894 / 479 | 3.37 |
| 06/10/20 | 06/29/20 | 0.0y | | 428 / 220 | 6.7 | 32.7 | 0.09 | 0.162 | 708 / 375 | 810 / 432 | 906 / 486 | 2.79 |
| 12/05/19 | 12/13/19 | 0.0y | PORT | 399 / 204 | 35.7 | 32.8 | 0.094 | 0.052 | 691 / 366 | 804 / 429 | 914 / 490 | 3.76 |
| 05/09/19 | 05/17/19 | 2.0y | PORT | 423 / 217 | 32.4 | 33.5 | 0.106 | 0.026 | 705 / 374 | 809 / 432 | 917 / 491 | 2.44 |
| 10/24/18 | 11/02/18 | 0.0y | | 412 / 211 | 24.0 | 33.3 | 0.03 | 0.037 | 694 / 368 | 793 / 423 | 883 / 473 | 1.32 |





| Historical Comments | | | | |
|---------------------|---|--|--|--|
| 06/10/20 | Fluid is suitable for continued use. Please resubmit for testing in one year. Very light white metal and debris noted by lab. Consider checking system filters and changing them if necessary. | | | |
| 12/05/19 | Oil is suitable for continued use. Remember to please include the time on oil when submitting oil samples for evaluation. Oil can be sent in for testing in one year.N/A | | | |
| 05/09/19 | Oil is suitable for continued use. Please re-submit sample in 1 year. Acid number is normal, but has risen since the last sample, monitor at next test interval. Very light debris is noted by the lab. | | | |
| 10/24/18 | Fluid is suitable for continued use. Please re-submit annual sample in October 2019. Please include time on the unit and time on the fluid on next sample entry. | | | |
| | | | | |

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