

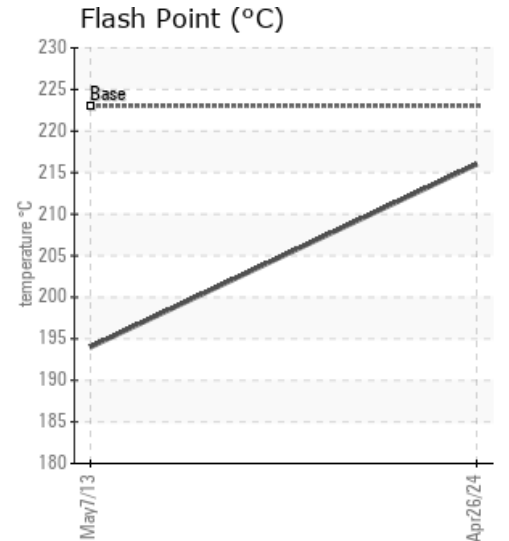
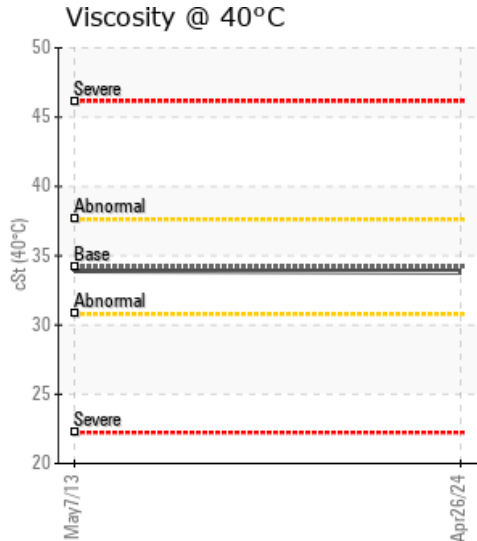
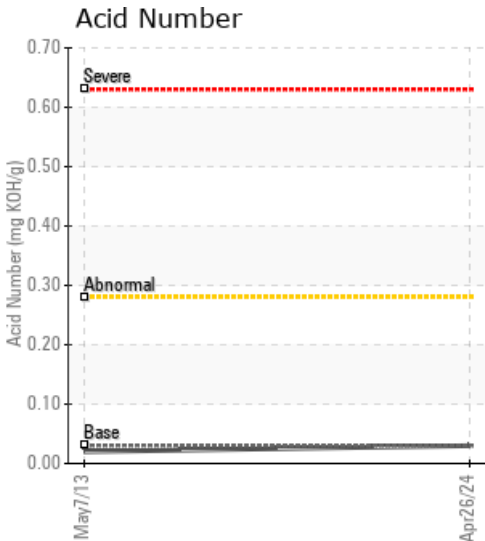
[1-24-052-20W5] H-500

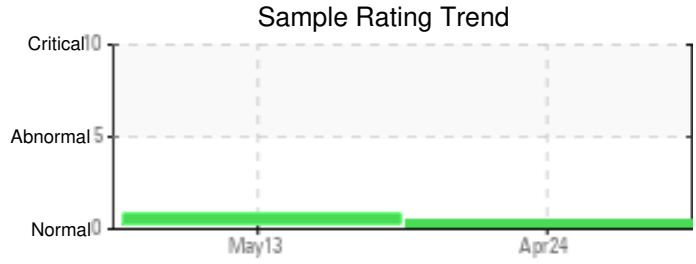
Customer: PTRHTF20103	System Information	Sample Information
CANADIAN NATURAL RESOURCES (CNRL) P.O. BOX 6808 EDSON, AB T7E 1L5 CA Attn: Rod Bailer Tel: E-Mail: rod.bailer@cnrl.com	System Volume: 0 ltr Bulk Operating Temp: 518F / 270C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02632628 Analyst: Clinton Buhler Sample Date: 04/26/24 Received Date: 05/01/24 Completed: 05/13/24 Clinton Buhler Clinton.Buhler@HFSinclair.com

Recommendation: Sample results indicate the fluid is in suitable condition for continued service. Please re-sample in 12 months

Comments:

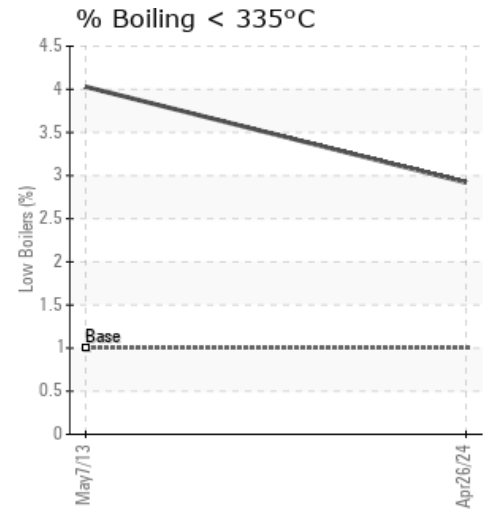
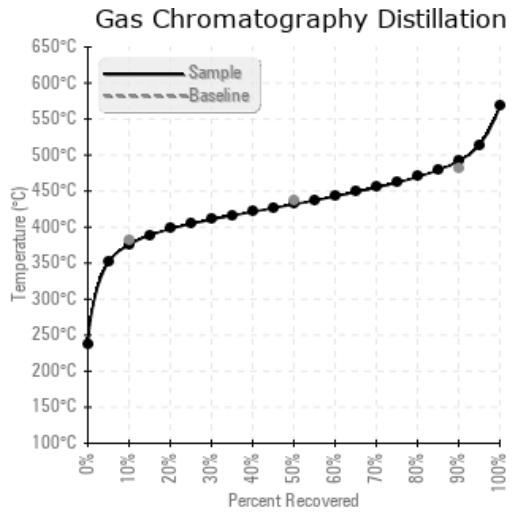
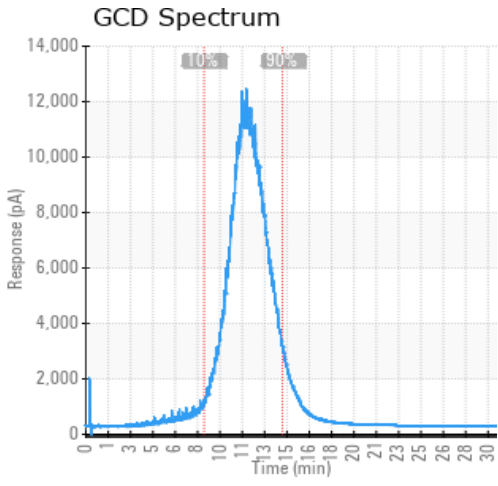
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/26/24	05/01/24	0.0y		421 / 216	65	33.8	0.03	0.141	708 / 376	809 / 432	917 / 492	2.92
05/07/13	05/22/13	0.0y	PUMP DISCHARGE	381 / 194	0.00	33.9	0.020	0.025	689 / 365	799 / 426	919 / 493	4.03
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
04/26/24	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
05/07/13	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8	0
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	
05/07/13	The fluid appears to be in good condition. The oil is beginning to show signs of thermal cracking and additive depletion. We recommend resampling in 9 months to monitor the condition of the oil. Please let me know the exact volume of the system so that I can update our records accordingly. (GCD) 90% Distillation Point is abnormally high.

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