

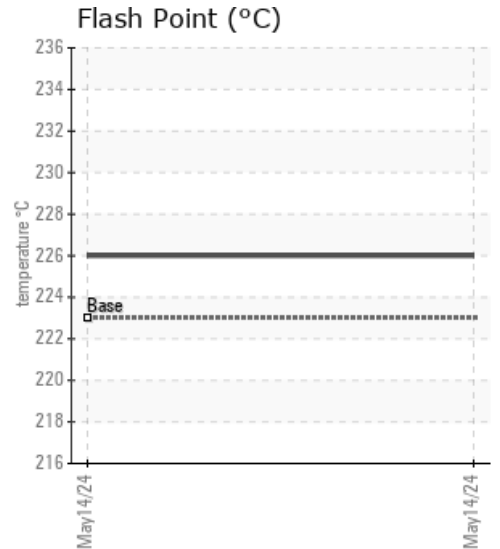
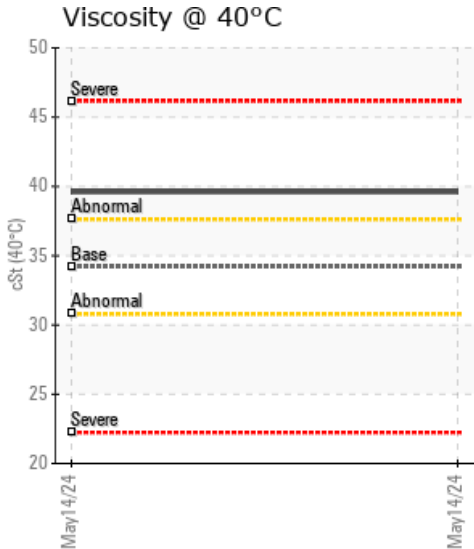
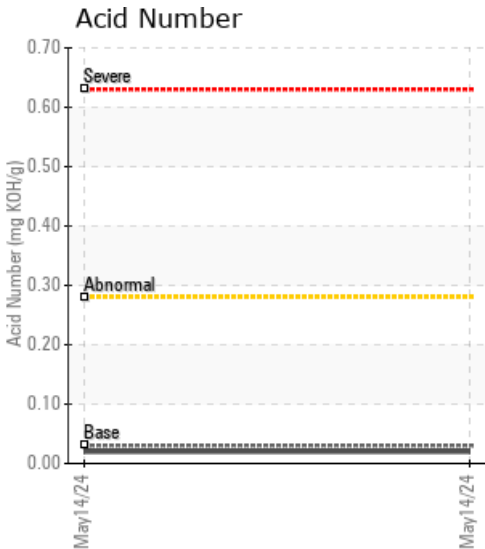
[3-6-39-11W5] TAQA

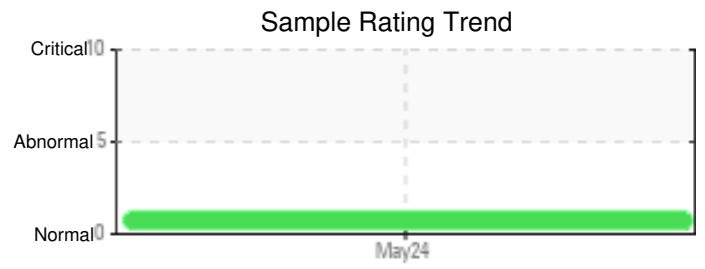
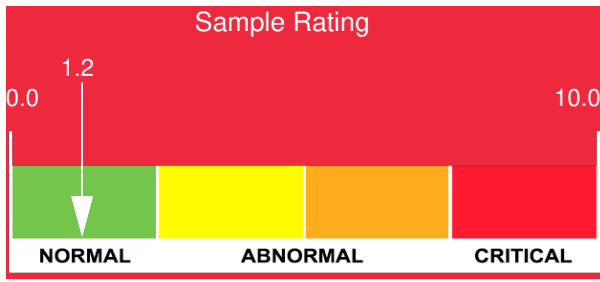
Customer: PTRHTF20072	System Information	Sample Information
TAQA NORTH 326 BEAR BERRY ROAD SUNDRE, AB T0M 1X0 CA Attn: Darren Foster Tel: (403)845-8093 E-Mail: Darren.foster@taqa.ca	System Volume: 8000 ltr Bulk Operating Temp: 383F / 195C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02637028 Analyst: Lyle Dach Sample Date: 05/14/24 Received Date: 05/22/24 Completed: 05/31/24 Lyle Dach lyle.dach@HFSinclair.com

Recommendation: The viscosity is higher than expected vs new fluid, likely causes would be oxidation or the addition of a different fluid; ensure blanket gas is functioning properly. As the fluid oxidizes we can expect an increase in viscosity, acid number, COC flash point, and rising GCD at 10% and 90%. Resample in 12 months.

Comments: (GCD) 90% Distillation Point is abnormally high. Visc @ 40°C is abnormally high.

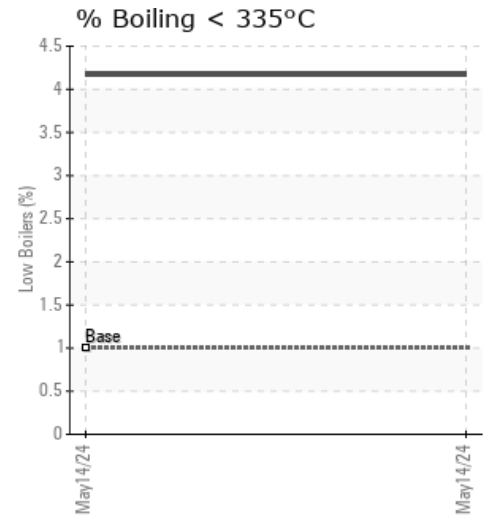
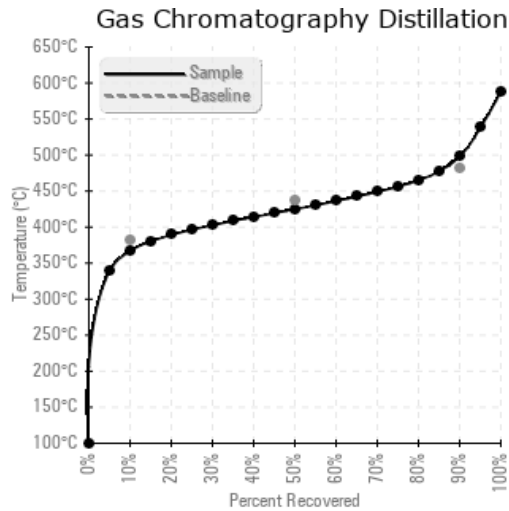
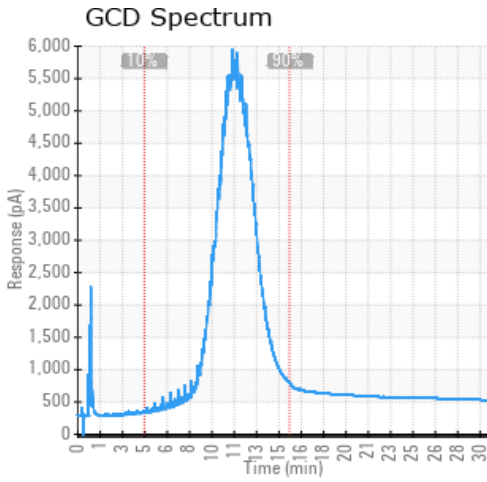
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/14/24	05/22/24	7.0y		439 / 226	24	39.6	0.02	0.028	693 / 367	797 / 425	928 / 498	4.17
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
05/14/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	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

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