

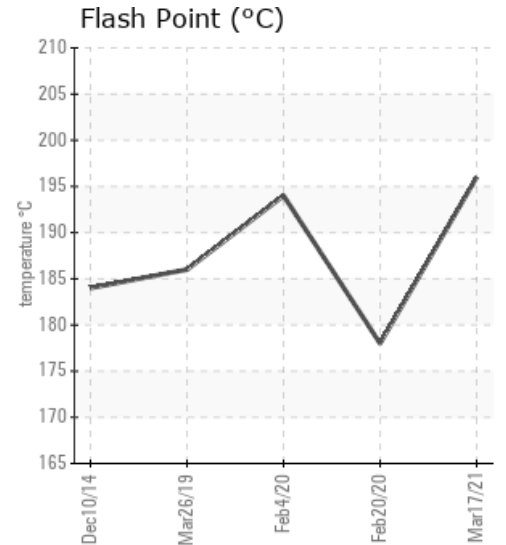
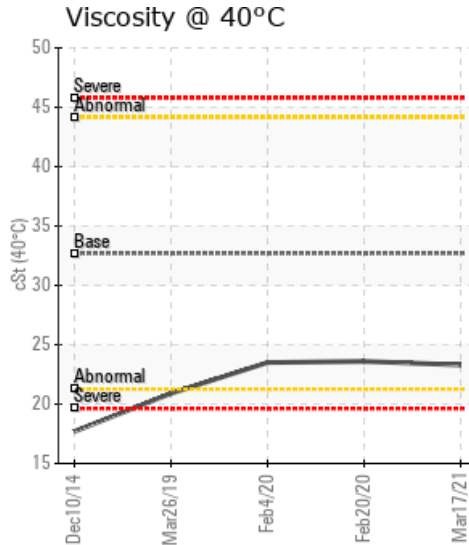
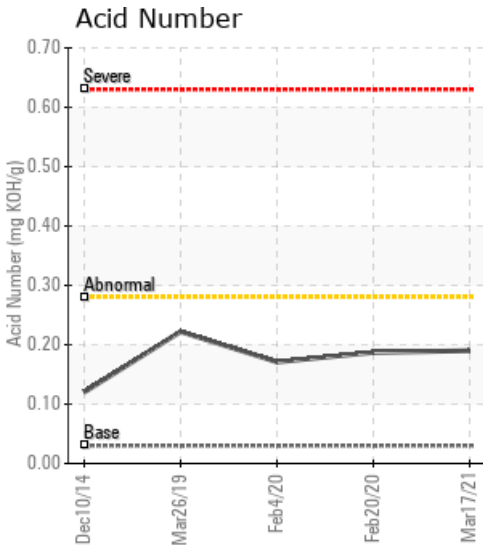
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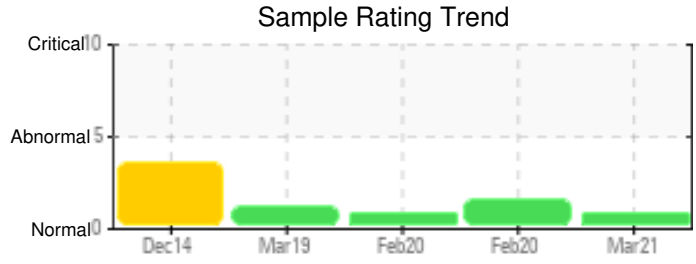
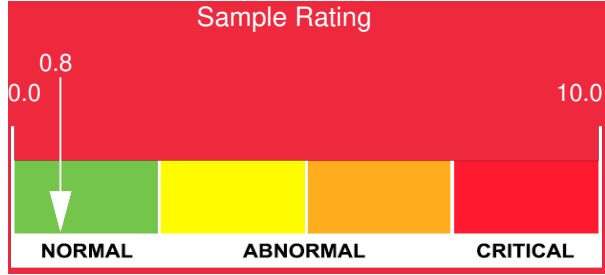
Customer: PTRHTF10057	System Information	Sample Information
PROPEX RINGGOLD PLANT 428 ROLLINS INDUSTRIAL BLVD RINGGOLD, GA 30736 USA Attn: MITCH HELTON Tel: (423)553-3723 E-Mail: MITCH.HELTON@PROPEXGLO BAL.COM	System Volume: 30 gal Bulk Operating Temp: 400F / 204C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make:	Lab No: 02413411 Analyst: Jake Finn Sample Date: 03/17/21 Received Date: 04/06/21 Completed: 04/19/21 Jake Finn jake.finn@hollyfrontier.com

Recommendation: Fluid is suitable for continued use. Please resubmit for testing in one year.

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

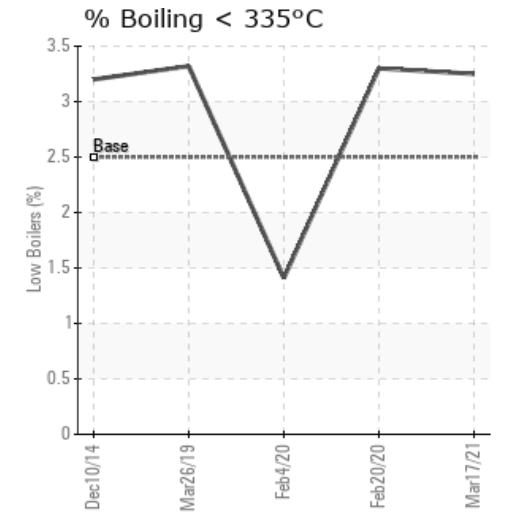
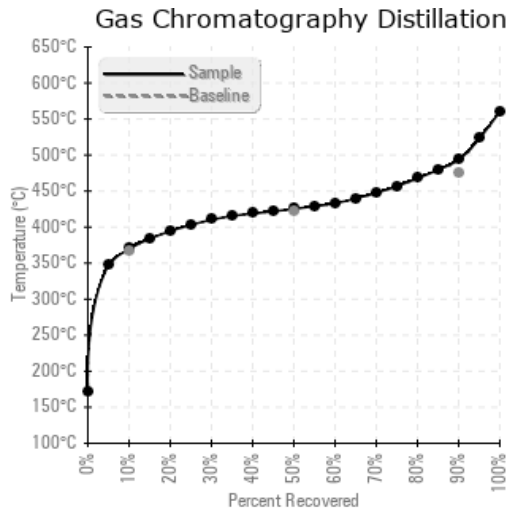
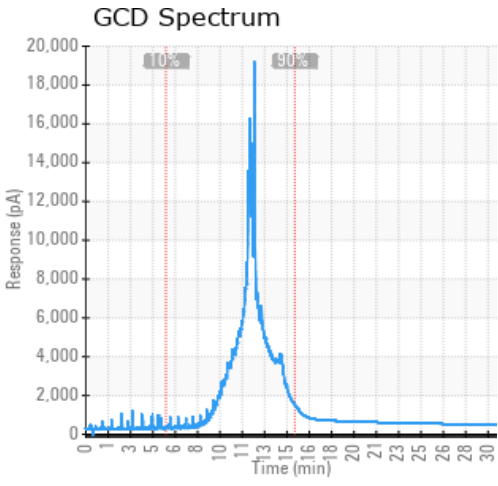
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/17/21	04/06/21	0.0h		385 / 196	15.1	23.3	0.19	0.127	697 / 370	798 / 425	920 / 493	3.25
02/20/20	02/21/20	0.0h		352 / 178	4.9	23.6	0.187	0.062	676 / 358	769 / 409	866 / 463	3.30
02/04/20	02/21/20	0.0h		381 / 194	0.00	23.5	0.171	0.042	707 / 375	803 / 428	901 / 483	1.41
03/26/19	03/27/19	0.0h		367 / 186	62.1	20.9	0.222	0.040	703 / 373	798 / 426	896 / 480	3.32
12/10/14	01/07/15	0.0h		363 / 184	124.4	17.7	0.12	0.062	735 / 390	819 / 437	912 / 489	3.20
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5





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
03/17/21	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0
02/20/20	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0
02/04/20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0
03/26/19	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
12/10/14	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Baseline Data			0	0						0			0	0					0				270	

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



Historical Comments	
02/20/20	Venting the system may improve flash point and GCD 90% distillation point. Fluid is otherwise suitable for continued use. Please resubmit for testing in one year. COC Flash Point is abnormally low. (GCD) 90% Distillation Point is marginally low.
02/04/20	Iron levels and viscosity have improved from last sample. Flash point is low but has slightly improved over the previous sample. Venting the system may help improve COC flash point. Fluid is otherwise suitable for continued use. Please resubmit for testing in one year. COC Flash Point is marginally low. Lite debris noted by lab.
03/26/19	Venting the system may improve flash point. Oil is otherwise suitable for continued use. Please re-submit sample in 1 year. Viscosity has improved but is moderately low; continue monitoring at next sample submission. Flash point has remained marginally low at 186 °C. Wear levels are good, but iron has increased to 73 ppm. Distillation points have improved from last sample submission. Please remember to include hours of use on oil and age of hot oil system when submitting samples for testing. Visc @ 40°C is abnormally low. COC Flash Point is marginally low.
12/10/14	Visc @ 40°C is severely low. (GCD) 10% Distillation Point is marginally high. (GCD) 50% Distillation Point is marginally high. (GCD) 90% Distillation Point is marginally high. COC Flash Point is marginally low, but not at a dangerous level. Please include the age of the oil in this 30 gallon system during the next routine analysis. Viscosity of the oil has dropped by ~50%. This could be due to a mix with a lighter grade heat transfer oil. This unit needs to be monitored closely. Need to understand the age of the oil. A newer oil charge (5 years) should not have numbers this low unless the oil has been cracked. Please provide next sample with the age listed on the label.

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