

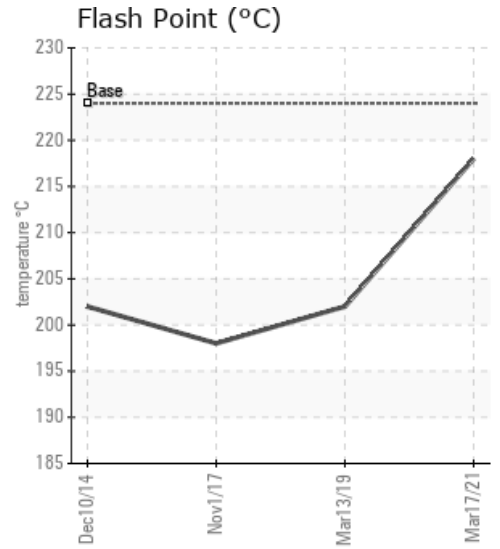
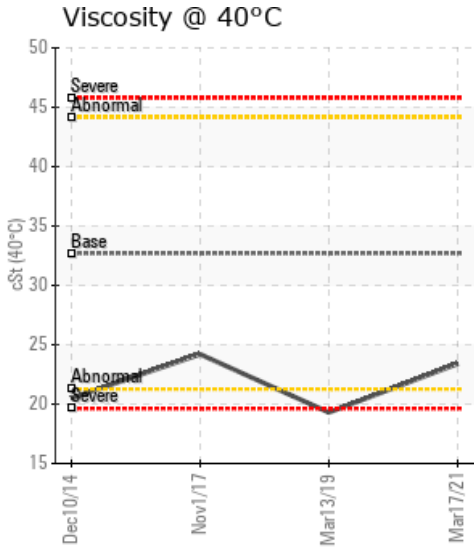
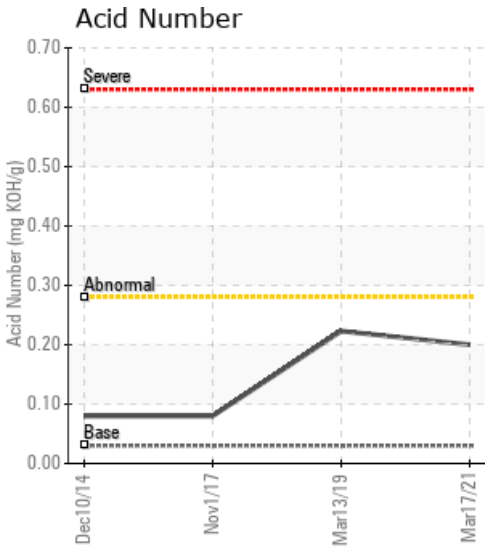
RF40 MANIFOLD B OIL BOILER

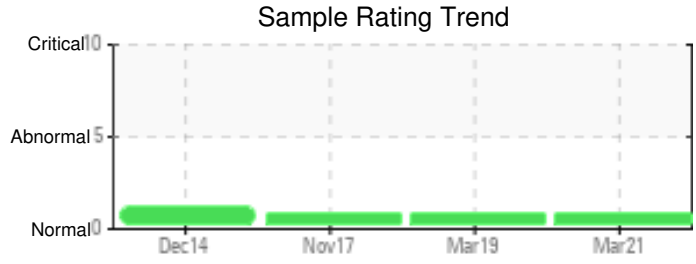
Customer: PTRHTF10057	System Information	Sample Information
PROPEX RINGGOLD PLANT 428 ROLLINS INDUSTRIAL BLVD RINGGOLD, GA 30736 USA Attn: MITCH HELTON Tel: (423)553-3723 E-Mail: MITCH.HELTON@PROPEXGLO BAL.COM	System Volume: 30 gal Bulk Operating Temp: 400F / 204C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make:	Lab No: 02413408 Analyst: Jake Finn Sample Date: 03/17/21 Received Date: 04/06/21 Completed: 04/19/21 Jake Finn jake.finn@hollyfrontier.com

Recommendation: This fluid is suitable for continued use, please resubmit for testing in one year.

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

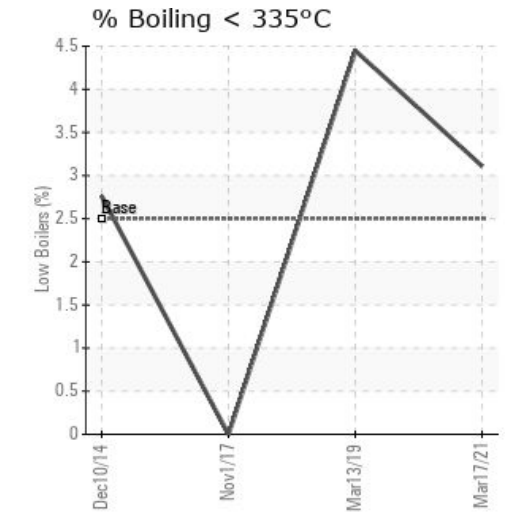
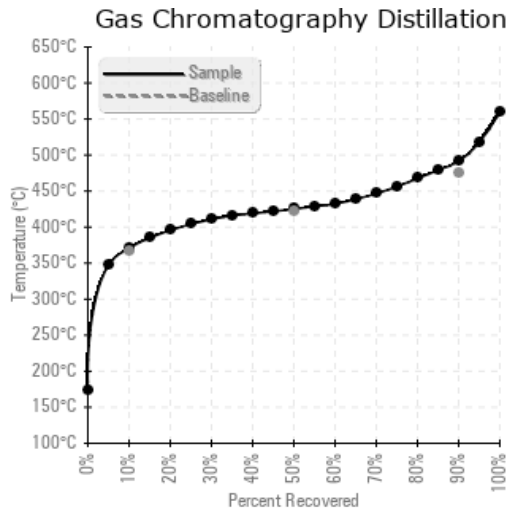
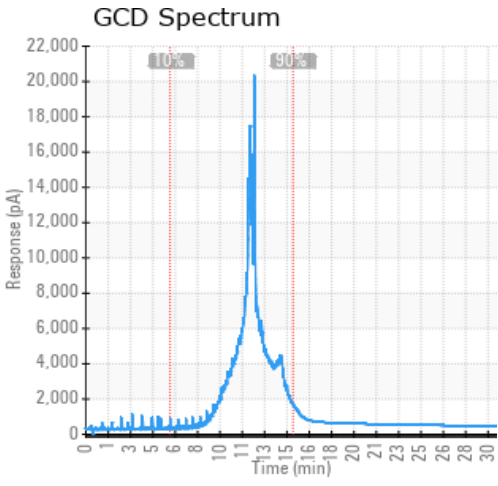
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/17/21	04/06/21	0.0d		424 / 218	72.3	23.4	0.20	0.119	700 / 371	797 / 425	916 / 491	3.11
03/13/19	03/27/19	0.0d		396 / 202	24.8	19.3	0.223	0.007	682 / 361	789 / 420	889 / 476	4.45
11/01/17	11/13/17	0.0d		388 / 198	12.0	24.2	0.08	0.078	722 / 384	799 / 426	888 / 476	0.00
12/10/14	01/07/15	0.0d		396 / 202	222.2	20.5	0.08	0.095	723 / 384	817 / 436	909 / 487	2.76
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	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	
03/13/19	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0
11/01/17	41	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	114	0
12/10/14	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	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	
03/13/19	Oil is suitable for continued use. Please re-submit sample in 1 year. Visc @ 40°C is severely low, please consider changing the system fluid due to viscosity being more than a viscosity grade lower than expected. Age of fluid may be reason for the drop in viscosity. Acid number remains low but has increased since the last sample submission in 2017, monitor at next 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 severely low.
11/01/17	Please filter system oil or change system filters (if any) during next appropriate shutdown. 'Venting' system may mitigate the 10% distillation point. Oil suitable for continued use. Please submit next sample in 1 year. Low Wear Metals; Low Contaminant Levels; Low water (12.0ppm); Very low acid numbers; 24.2 CsT @40oC Viscosity; 198oC Flash Point; (GCD) 10% Distillation Point is marginally high and was at similar levels during the Dec 2014 sample submitted; Low Pentane Insolubles; Low Pentane Insolubles; Light Silt & Debris visible in sample;
12/10/14	Visc @ 40°C is abnormally low. (GCD) 10% Distillation Point is marginally high. (GCD) 90% Distillation Point is marginally high. Wear metals, water, TAN and solids are in a very low and acceptable range. Please submit next oil sample during the scheduled interval.

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