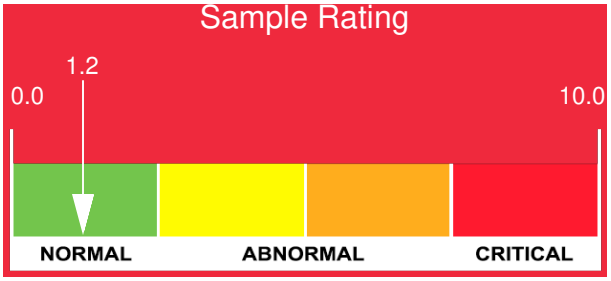
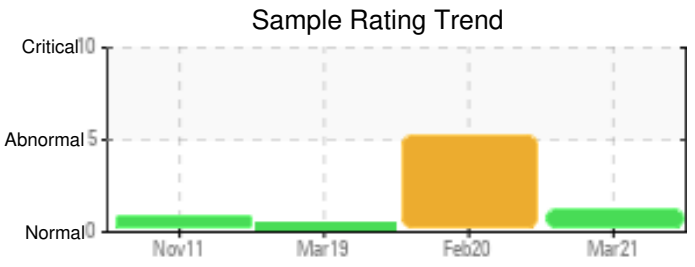




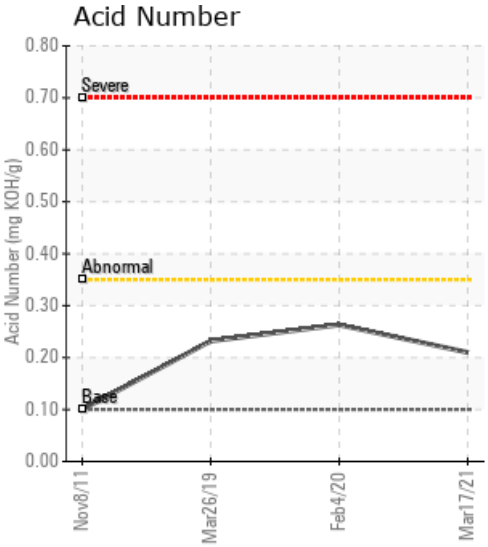
RF-04 SPIN OIL BOILER B

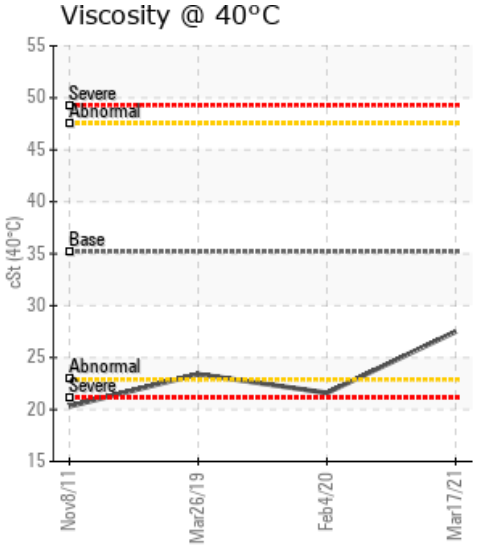
Customer: PTRHTF10057	System Information	Sample Information
PROPEX RINGGOLD PLANT 428 ROLLINS INDUSTRIAL BLVD RINGGOLD, GA 30736 USA Attn: MITCH HELTON Tel: (423)553-3723 E-Mail: MITCH.HELTON@PROPEXGLOBAL.COM	System Volume: 250 gal Bulk Operating Temp: 460F / 238C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make:	Lab No: 02413409 Analyst: Jake Finn Sample Date: 03/17/21 Received Date: 04/06/21 Completed: 04/19/21 Jake Finn jake.finn@hollyfrontier.com

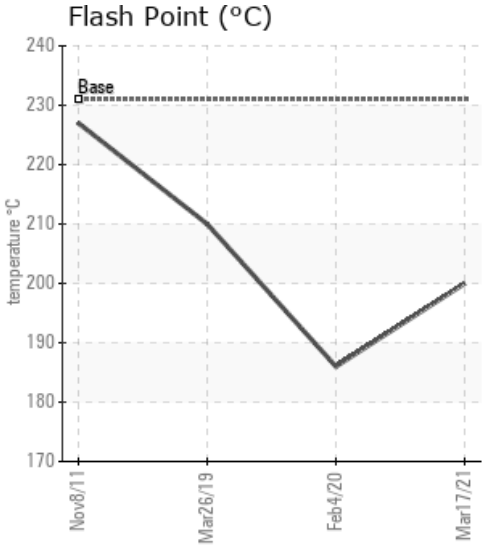
Recommendation: COC flash point is low, but has improved since last sampling. Fluid is otherwise suitable for continued use, please resubmit for testing in one year.

Comments: COC Flash Point is marginally low.

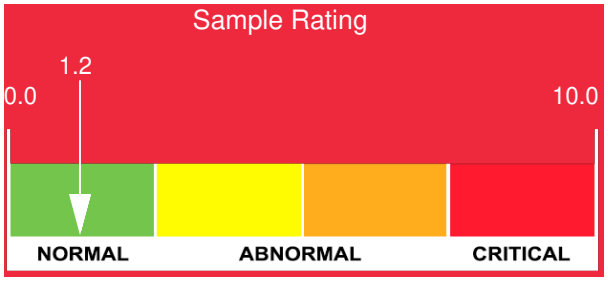
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/17/21	04/06/21	0.0h		392 / 200	109.0	27.5	0.21	0.313	697 / 370	796 / 425	917 / 492	3.24
02/04/20	02/21/20	0.0h		367 / 186	244.7	21.6	0.263	0.227	671 / 355	768 / 409	865 / 463	4.56
03/26/19	03/27/19	0.0h		410 / 210	83.1	23.4	0.232	0.051	697 / 370	796 / 424	895 / 479	2.95
11/08/11	11/15/11		BELOW PUMP	441 / 227	303	20.3	0.1	0.024	721 / 383	796 / 424	894 / 479	2.383
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75

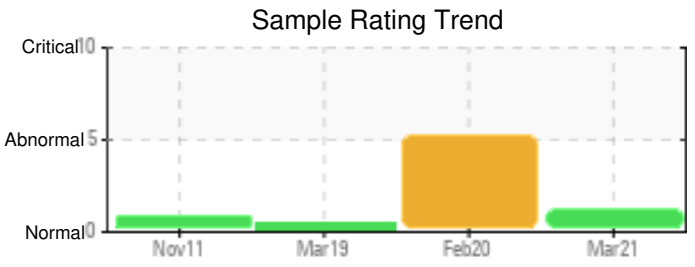






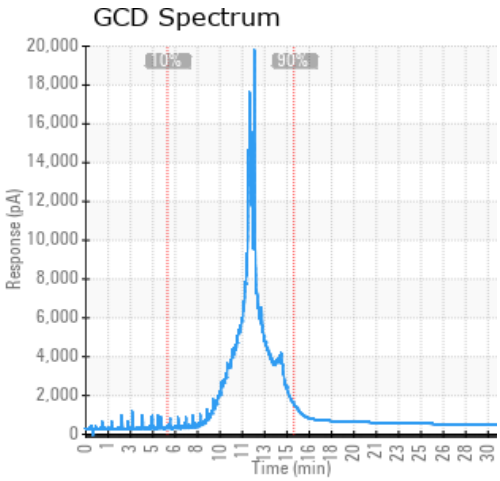
PETRO-CANADA LUBRICANTS

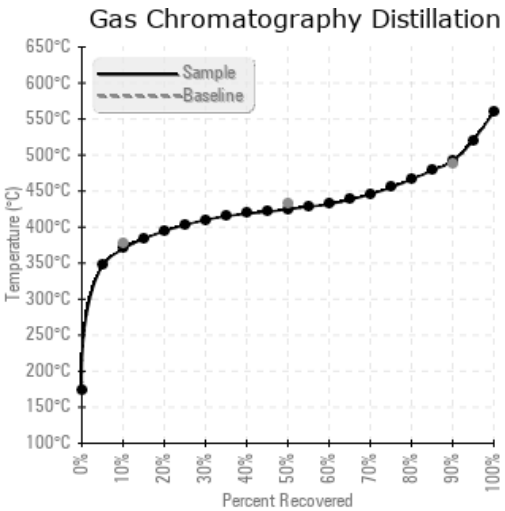


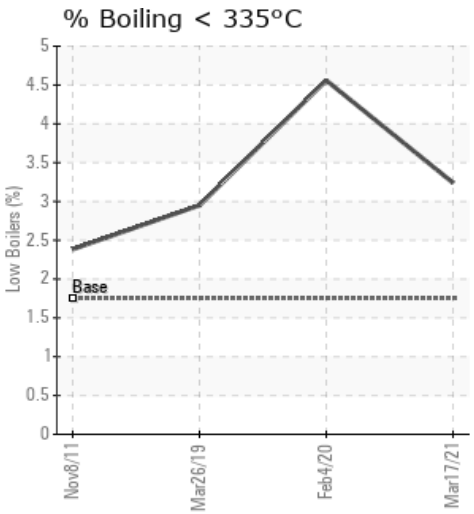


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
03/17/21	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0
02/04/20	243	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	85	1
03/26/19	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0
11/08/11	36	0	0	0	8	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	97	2
Baseline Data			0	0						0			0	0				0	0				280	

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







Historical Comments

02/04/20	Sample is showing signs that equipment may not be running properly. High levels of iron indicate premature wear. Consider kidney-loop filtering the fluid during shutdown periods to remove wear particles, or changeout fluid. Venting the system may help improve GCD 90% distillation point and flash point. Ensure that system filters are replaced after maintenance is performed. Iron ppm levels are abnormal. Light white metal and debris noted by lab. (GCD) 90% Distillation Point is severely low. COC Flash Point is abnormally low. Visc @ 40°C is abnormally low.
03/26/19	Results are normal and oil is suitable for continued use. Please re-submit sample in 1 year.Please remember to include hours of use on oil and age of hot oil system when submitting samples for testing.
11/08/11	The viscosity and flash point are flagged as low compared to Calflo but we believe it might be because the system once contained a lower viscosity fluid. Despite the low viscosity, the amount of low boilers as measured by the very accurate GC Distillation test is normal. The fluid appears to be suitable for further use based on the analysis results but if the system is experiencing fluid related issues we suggest that you work with Mike Smith at Whitfield Oil on a fluid replacement strategy.