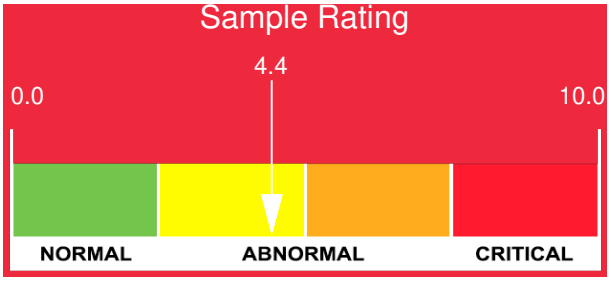
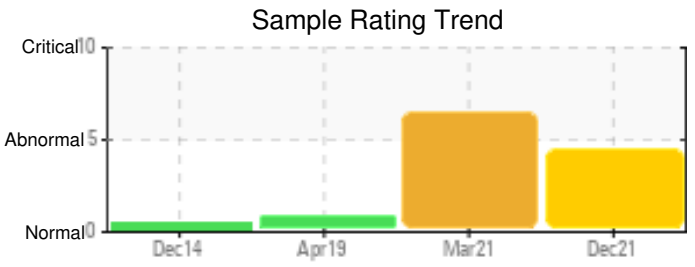




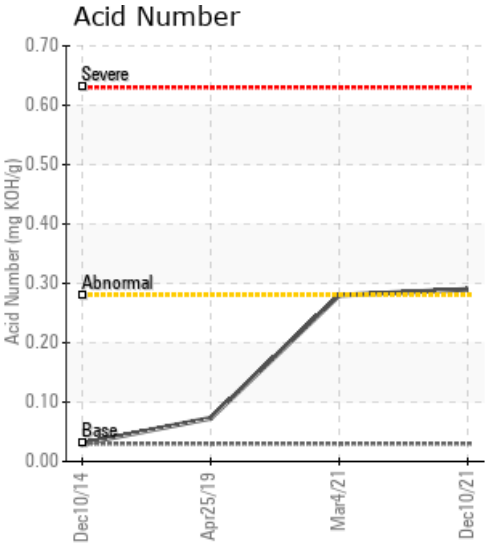
RF03 GODET 1A&1B OIL BOILER

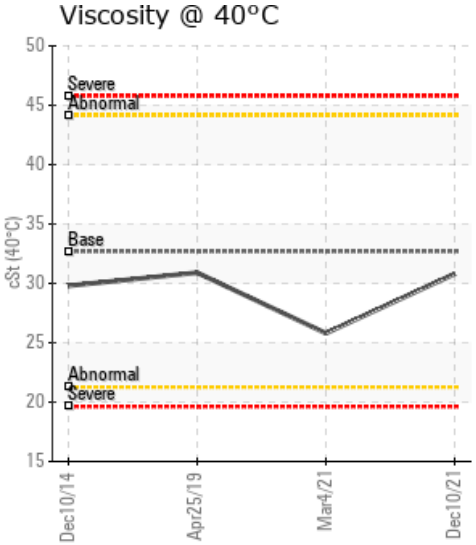
Customer: PTRHTF10057	System Information	Sample Information
PROPEX RINGGOLD PLANT 428 ROLLINS INDUSTRIAL BLVD RINGGOLD, GA 30736 USA Attn: MITCH HELTON Tel: (423)553-3723 E-Mail: MITCH.HELTON@PROPEXGLOBAL.COM	System Volume: 30 gal Bulk Operating Temp: 400F / 204C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make:	Lab No: 02463469 Analyst: Jake Finn Sample Date: 12/10/21 Received Date: 12/21/21 Completed: 12/28/21 Jake Finn jake.finn@hollyfrontier.com

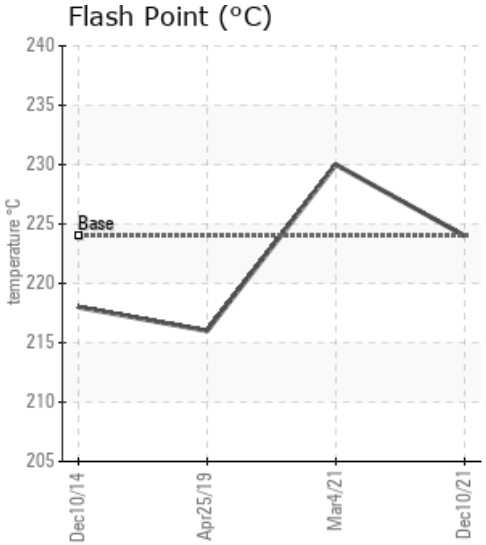
Recommendation: Acid number and Pentane Insolubles levels are elevated, viscosity has increased, and this sample indicates the fluid is also contaminated with water. There is no current indication of component wear in the system but if the fluid condition does not improve, the risk of sludge/varnish in the system will continue to increase. Consider changing this fluid, and cleaning the system if possible to remove any residual deposits. Once system is clean and filled with new Calflo AF, water can be removed by maintaining a temperature of 212F in the expansion tank if possible.

Comments: Pentane Insolubles levels are severely high. Water contamination levels are marginally high. Acid Number (AN) is abnormally high.

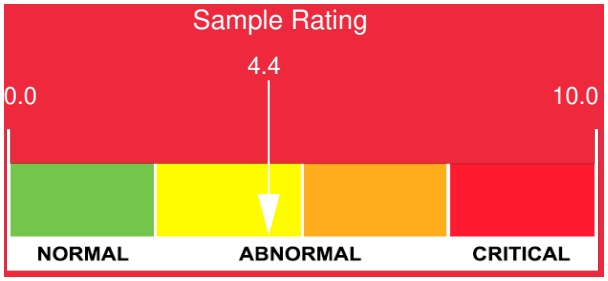
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/10/21	12/21/21	0.0d		435 / 224	493.6	30.8	0.29	0.790	706 / 374	799 / 426	898 / 481	1.02
03/04/21	03/16/21	0.0d		446 / 230	203.2	25.8	0.28	0.094	723 / 384	799 / 426	918 / 492	1.44
04/25/19	05/14/19	0.0d		421 / 216	18.5	30.9	0.073	0.029	704 / 373	802 / 428	909 / 487	0.84
12/10/14	01/07/15	0.0d		424 / 218	72.2	29.8	0.03	0.031	704 / 374	800 / 427	895 / 479	0.45
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5

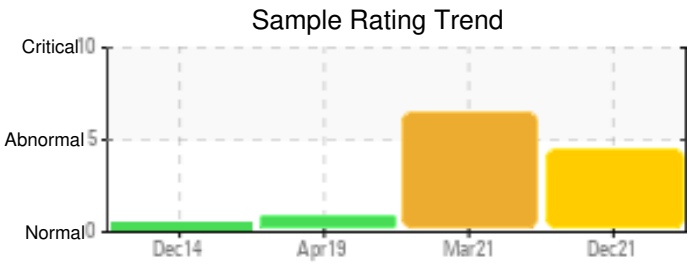






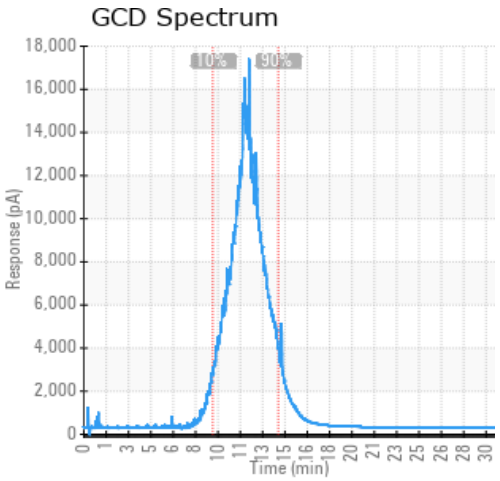
PETRO-CANADA LUBRICANTS

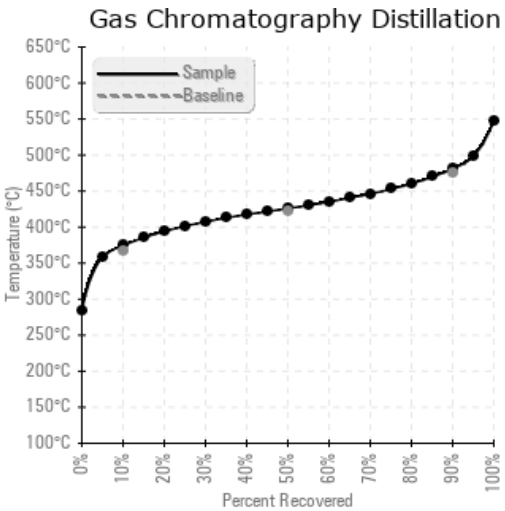


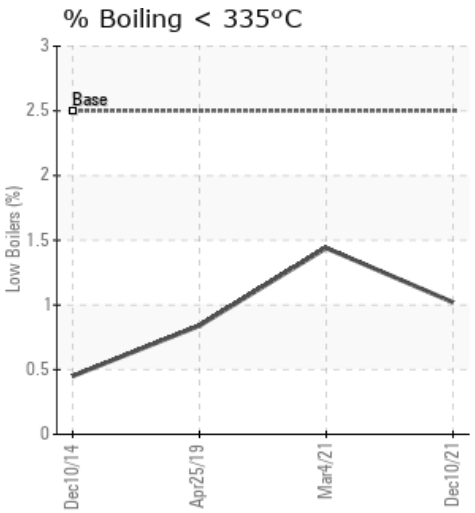


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
12/10/21	5	0	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	185	0
03/04/21	105	0	0	0	18	0	2	0	0	0	4	0	0	0	0	0	1	0	1	0	0	0	83	4
04/25/19	2	0	0	0	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	167	0
12/10/14	3	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	183	0
Baseline Data			0	0						0			0	0					0				270	

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







Historical Comments

03/04/21	Signs of iron and copper wear are present in this sample. These can accelerate oxidation in the fluid and should be removed to avoid further degradation. Acid number and GCD distillation points indicate the fluid is experiencing oxidation. We recommend to check filters to ensure they are working properly and investigate the source of copper and iron. A partial drain and refill may lower acid number to normal levels once the issue has been addressed, but a full system flush and refill is likely the best solution. Feel free to resubmit a new sample once fluid maintenance has been performed or new fluid is added to establish a new baseline. Copper ppm levels are abnormal. Iron ppm levels are marginal. Acid Number (AN) is severely high. (GCD) 90% Distillation Point is abnormally high. (GCD) 10% Distillation Point is marginally high.
04/25/19	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.(GCD) 90% Distillation Point is marginally high. (GCD) 90% Distillation Point is marginally high.
12/10/14	This used oil analysis is in very good condition. Low wear metals, Low TAN, Low Water count, low solids and the viscosity is perfect along with the COC Flash Point. Please submit next sample during the scheduled interval.