

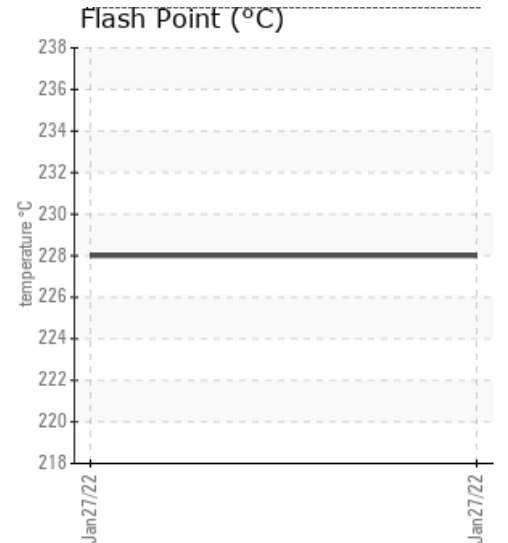
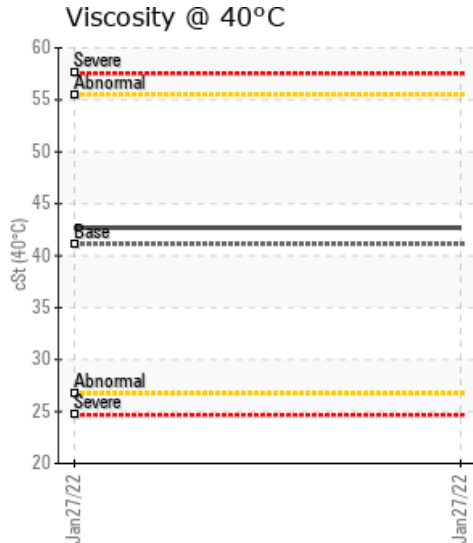
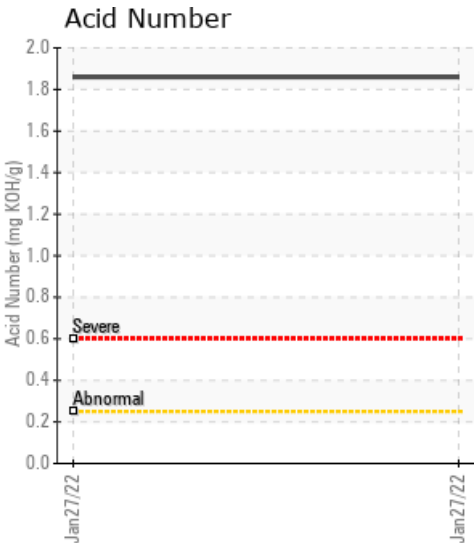
## [RIVER BEND MATERIALS] COBURG

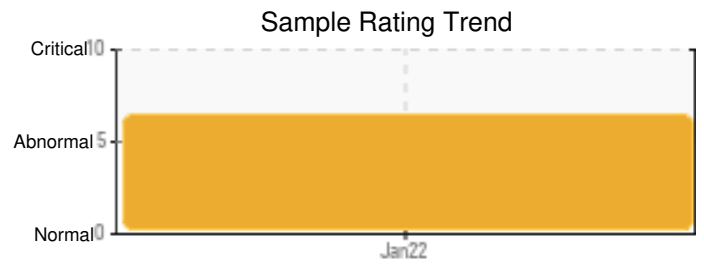
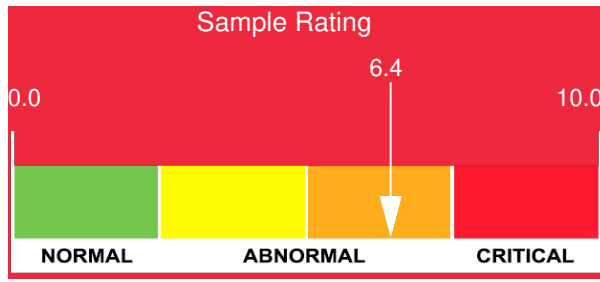
Customer: PTRHTF10252	System Information	Sample Information
RIVER BEND MATERIALS 90520 COBURG RD EUGENE, OR 97408 USA Attn: Josh Stanwood Tel: E-Mail: josh.stanwood@rbmaterials.com	System Volume: 600 gal Bulk Operating Temp: 350F / 177C Heating Source: Blanket: Fluid: CHEVRON HEAT TRANSFER OIL 46 Make:	Lab No: 02470027 Analyst: Ron LeBlanc Sample Date: 01/27/22 Received Date: 02/03/22 Completed: 02/09/22 Ron LeBlanc Ronald.LeBlancSr@hollyfrontier.com

Recommendation: It appears the oil is oxidized and carbon deposits are present. Zinc is present which indicates hydraulic oil or wear metals in the system. Acid number is high due to oxidation. Cleaning, flushing and refill with Petro-Therm.

Comments: Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. Calcium ppm levels are severely high. Zinc ppm levels are abnormally high.

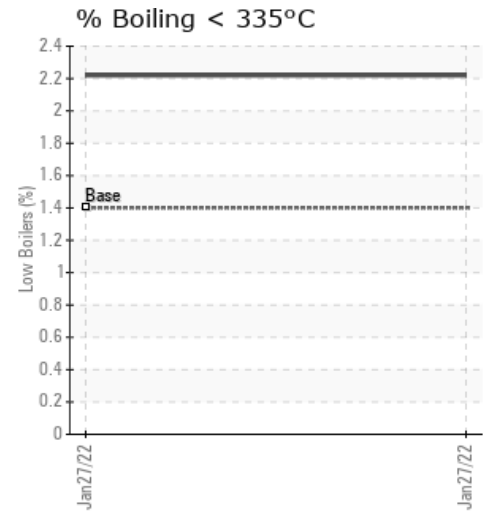
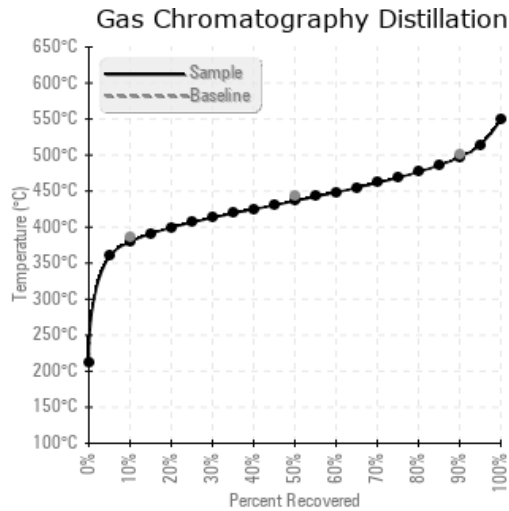
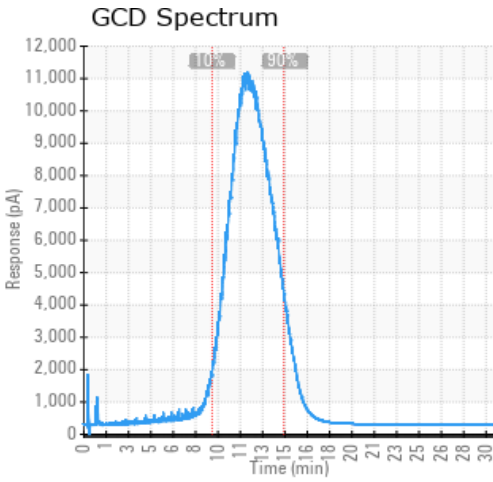
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/27/22	02/03/22	13.0y	RETURN LINE	442 / 228	86.3	42.7	1.86	3.75	715 / 379	817 / 436	927 / 497	2.22
Baseline Data				464 / 240		41.1			727 / 386	828 / 442	932 / 500	1.4





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
01/27/22	41	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	83	0	2	29
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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