

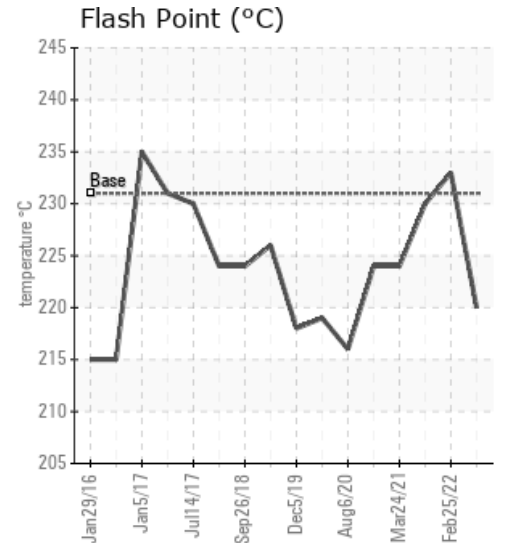
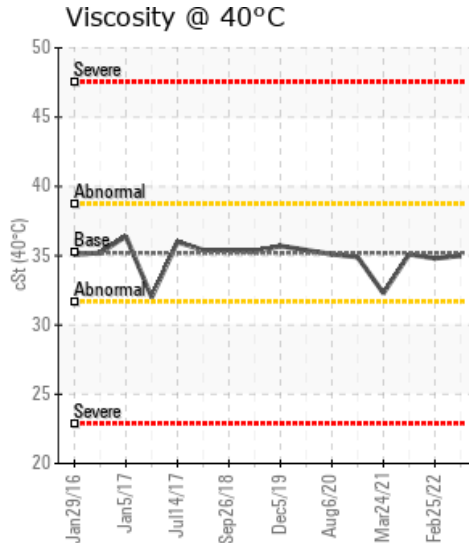
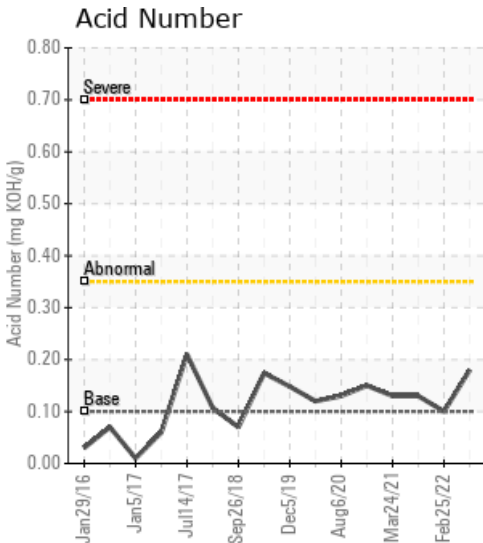
LN01 Filled Sealdown Hot Oil System

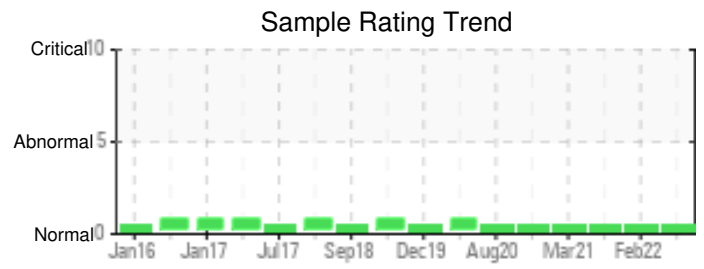
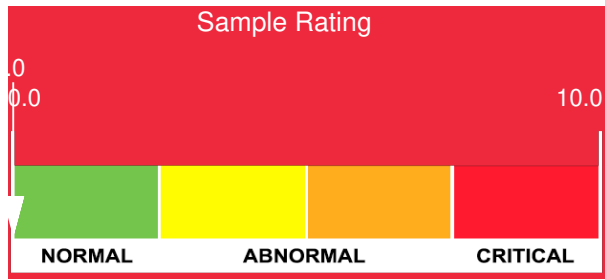
Customer: PTRHTF10141	System Information	Sample Information
TAMKO BUILDING PRODUCTS 2300 35TH ST TUSCALOOSA, AL 35401 USA Attn: Greg Colburn Tel: (205)752-3555 E-Mail: gregory_colburn@tamko.com	System Volume: 110 gal Bulk Operating Temp: 425F / 218C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make: Heat Exchanger And T	Lab No: 02507781 Analyst: Jake Finn Sample Date: 08/15/22 Received Date: 08/29/22 Completed: 09/06/22 Jake Finn jake.finn@hollyfrontier.com

Recommendation: The color of this sample is much darker than previous samples, however there is no sign of significant wear, contamination or fluid degradation at this time. This fluid is suitable for continued use, please resample and submit for testing in 12 months.

Comments: N/A

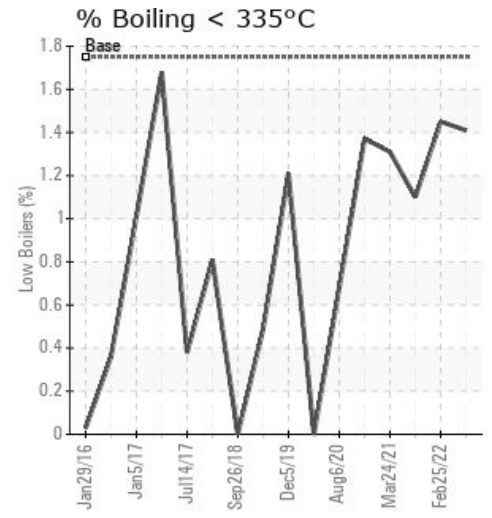
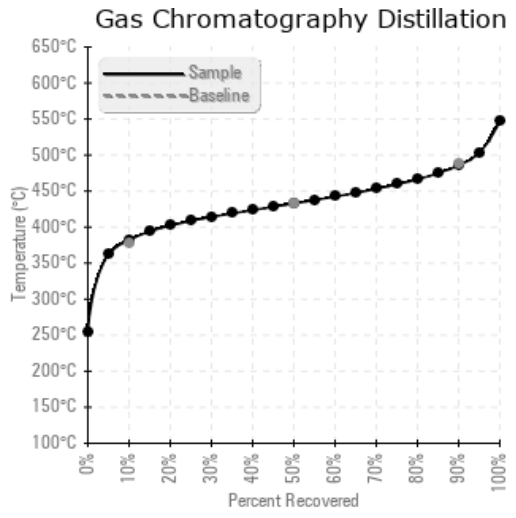
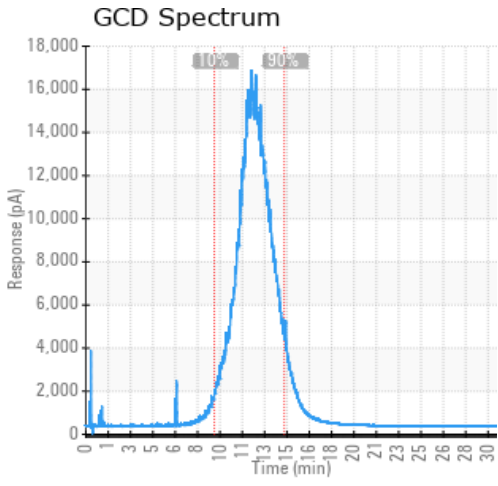
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/15/22	08/29/22	0.0y		428 / 220	85.2	35.0	0.18	0.035	720 / 382	811 / 433	906 / 486	1.41
02/25/22	03/07/22	0.0y		451 / 233	12.6	34.8	0.10	0.040	725 / 385	816 / 435	920 / 493	1.45
09/15/21	09/23/21	0.0y		446 / 230	15.6	35.1	0.13	0.065	728 / 387	814 / 435	916 / 491	1.10
03/24/21	03/31/21	0.0y		435 / 224	19.8	32.3	0.13	0.036	722 / 383	814 / 435	924 / 496	1.31
10/30/20	11/09/20	0.0y		435 / 224	3.6	34.9	0.15	0.199	728 / 387	815 / 435	916 / 491	1.37
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75





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	
08/15/22	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	0	
02/25/22	8	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	71	3
09/15/21	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	50	0
03/24/21	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	50	0
10/30/20	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Baseline Data			0	0						0			0	0				0	0					280	

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



Historical Comments	
02/25/22	Sample indicates no signs of wear, contamination or fluid degradation. This fluid is suitable for continued use, please resample and submit for testing in 12 months.N/A
09/15/21	Sample indicates no signs of wear, contamination or fluid degradation. This fluid is suitable for continued use, please resample and submit for testing in 12 months.N/A
03/24/21	Sample indicates no signs of wear, contamination or fluid degradation. This fluid is suitable for continued use, please resample and submit for testing in 12 months.N/A
10/30/20	Fluid appears to be in good condition and is suitable for continued use. Please resubmit for testing in 12 months.

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