

FREMONT RPG

Customer: PTRHTF10036
 CERTAINTEED - SAINT GOBAIN
 6400 STEVENSON BLVD
 FREMONT, CA 94538-2468 US
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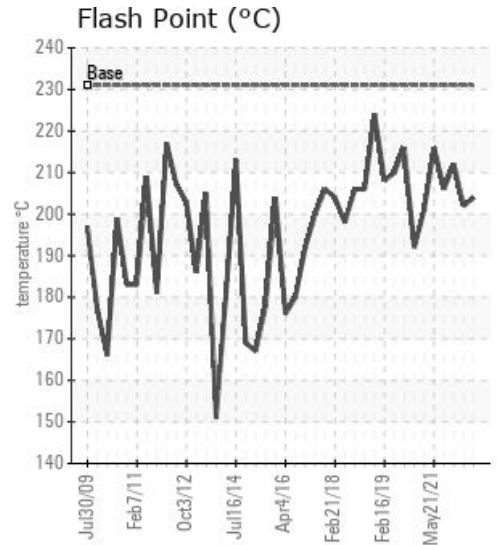
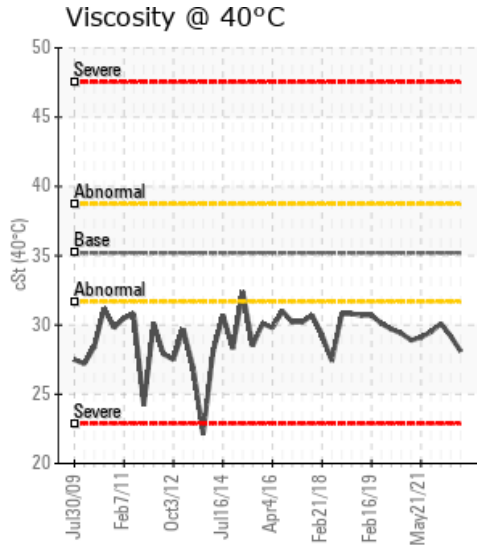
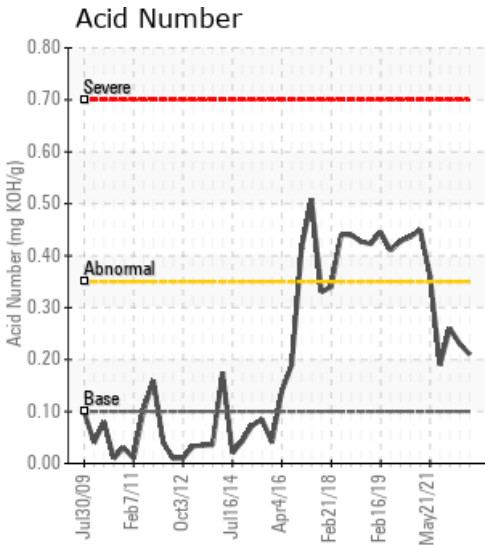
System Information
 System Volume: 5000 gal
 Bulk Operating Temp: 450F / 232C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA CALFLO HTF
 Make: FIRST THERMAL

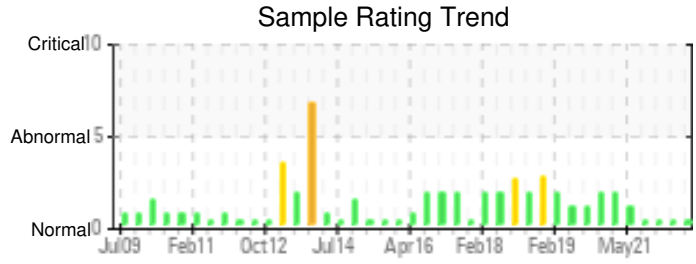
Sample Information
 Lab No: 02611332
 Analyst: Carlos Nazario
 Sample Date: 01/17/24
 Received Date: 01/25/24
 Completed: 01/31/24
 Carlos Nazario
 Carlos.Nazario@hfsinclair.com

Recommendation: Based on Oil test results; The Heat Transfer Fluid still in good conditions. Resample in 6 months to monitor it physical conditions.

Comments:

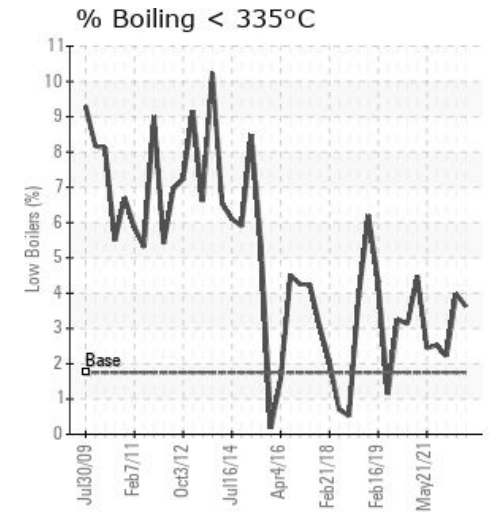
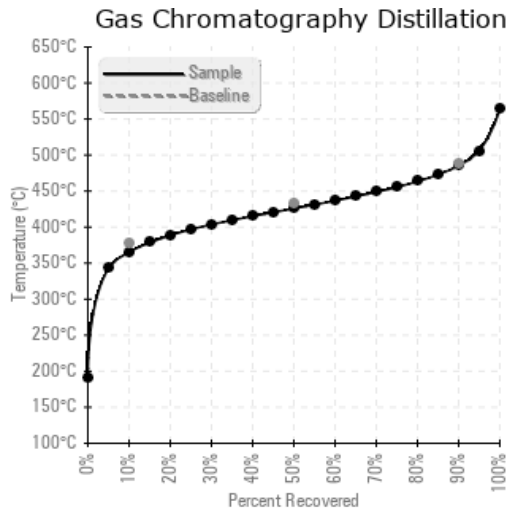
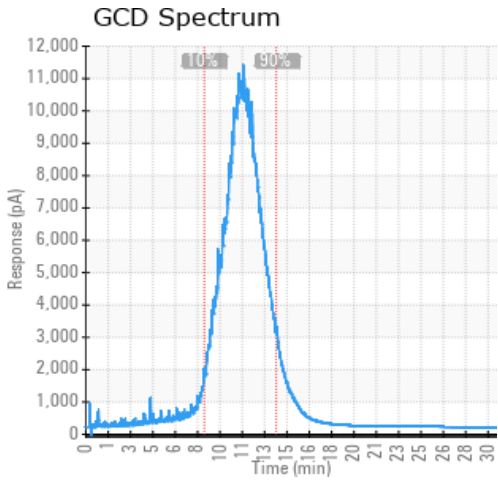
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/17/24	01/25/24	12.0m		399 / 204	21	28.1	0.21	0.059	690 / 365	799 / 426	906 / 485	3.62
03/16/23	03/27/23	4.0m	RETURN LINE	396 / 202	66.7	29.2	0.23	0.151	689 / 365	798 / 426	903 / 484	3.98
02/18/22	03/17/22	0.0m		414 / 212	12.3	30.1	0.26	0.078	699 / 370	800 / 427	904 / 484	2.22
08/19/21	09/07/21	0.0m	SIDE STREAM FILTER	403 / 206	15.8	29.5	0.19	0.120	697 / 369	800 / 427	906 / 486	2.53
05/21/21	06/04/21	0.5m	Main loop valve	421 / 216	9.1	29.1	0.36	0.060	699 / 371	801 / 427	908 / 487	2.44
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
01/17/24	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
03/16/23	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	70	0
02/18/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	0
08/19/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	60	0
05/21/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	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	
03/16/23	Test results shows that PCA HTF remains in good conditions and for its continues usage. Resample in 6 months or sooner, if significant changes are observed in the heat transfer system (Heat transfer system temperature sets vs process temperature).On next sample, please provide all pertinent information:Unit age, Comp age, time on filter.
02/18/22	Sample is within specifications. Resample in 6 months.
08/19/21	Sample appears to be normal. Take another sample in 3 months. If the system has a strainer or filter, check at time of taking samples if possible.
05/21/21	AN is elevated. AN came down from last sample. No action needed. Take sample in 6 months. Be sure to purge oil from port before taking sample in container. Acid Number (AN) is abnormally high.

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