

FREMONT RPG

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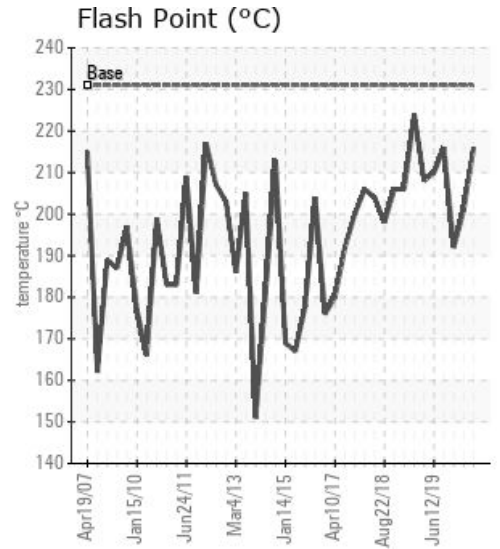
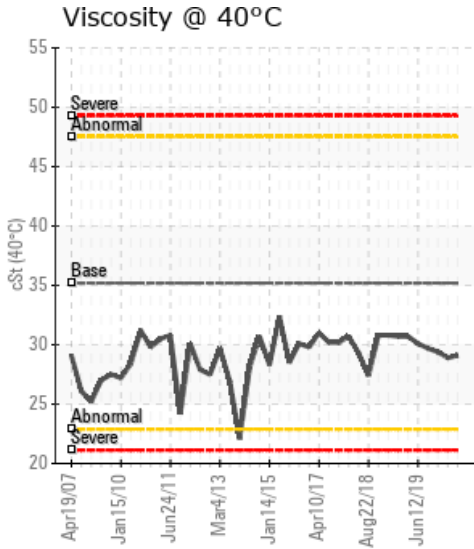
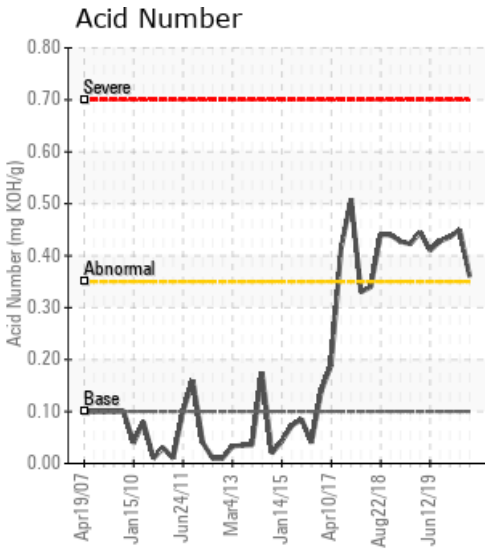
System Information
 System Volume: 5000 gal
 Bulk Operating Temp: 450F / 232C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA CALFLO HTF
 Make: FIRST THERMAL

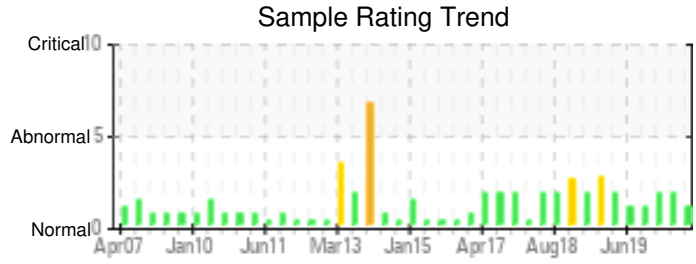
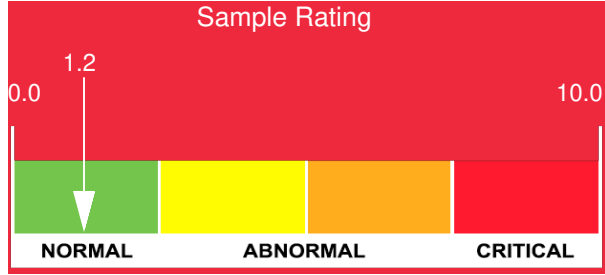
Sample Information
 Lab No: 02425247
 Analyst: Ron LeBlanc
 Sample Date: 05/21/21
 Received Date: 06/04/21
 Completed: 06/08/21
 Ron LeBlanc
 Ronald.LeBlancSr@HFSinclair.com

Recommendation: 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.

Comments: Acid Number (AN) is abnormally high.

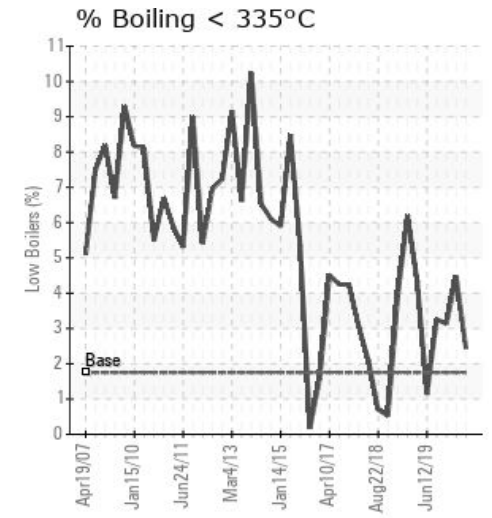
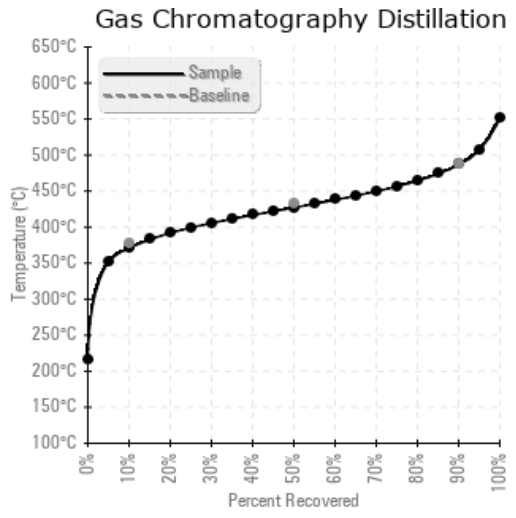
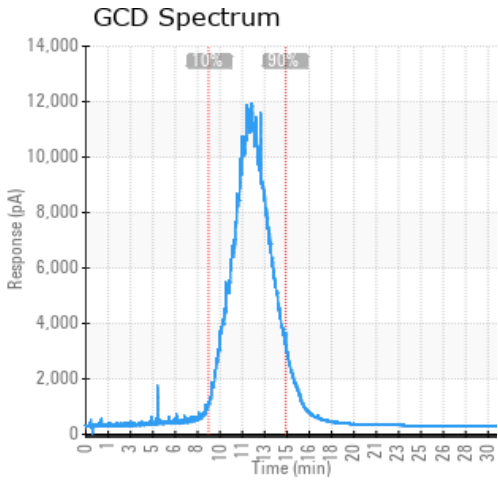
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/21/21	06/04/21	0.5m	Main loop valve	421 / 216	9.1	29.1	0.36	0.060	699 / 371	801 / 427	908 / 487	2.44
08/21/20	09/03/20	0.0m	MAIN LOOP VALVE	394 / 201	21.0	28.9	0.45	0.054	681 / 361	785 / 418	904 / 485	4.47
02/20/20	03/05/20	6.0m	MAIN LOOP VALVE	378 / 192	10.6	29.4	0.436	0.141	695 / 368	814 / 434	926 / 497	3.13
08/27/19	09/10/19	6.0m	MAIN LOOP VALVE	421 / 216	25.8	29.7	0.428	0.087	687 / 364	790 / 421	895 / 480	3.26
06/12/19	06/26/19	7.0m		410 / 210	13.6	30.1	0.410	0.110	698 / 370	794 / 423	903 / 484	1.14
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	
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	
08/21/20	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	71	0
02/20/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0
08/27/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	0
06/12/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	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	
08/21/20	While a bit high, the acid number (oxidation) level of the oil has remained stable. The small amount of low boilers can be vented out but the flash point is still strong at ~395F. No actions needed at this time. Keep sampling regularly. Acid Number (AN) is abnormally high. COC Flash Point is marginally low.
02/20/20	No changes since the last sample. No venting necessary at this time. The Acid Number is what we need to watch and it's stable. No evidence of contamination by asphalt, water or other substances. Resample at next scheduled interval. Acid Number (AN) is abnormally high. COC Flash Point is marginally low.
08/27/19	No changes since the last sample. As discussed no conference calls, venting is not necessary. The Acid Number is what we need to watch and it's stable. No evidence of contamination by asphalt, water or other substances. Re-sample at next scheduled interval. Acid Number (AN) is abnormally high.
06/12/19	The acid number is high. Otherwise the oil is in good condition. Recommend verifying nitrogen blanket is working properly and partial fluid replacement to reduce acid number. Acid Number (AN) is abnormally high.

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