

HEAT TRANSFER

Customer: PTRHTF60084
 CRH Canada
 1453 WHISTLE BARE RD
 CAMBRIDGE, ON N1R 5S3 CA
 Attn: Michael Wilson
 Tel:
 E-Mail: michael.wilson@ca.crh.com

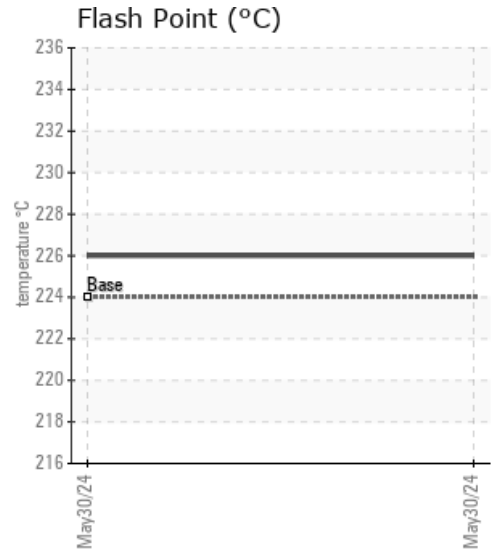
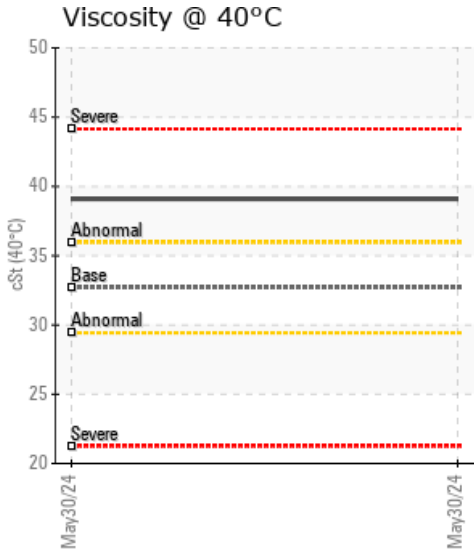
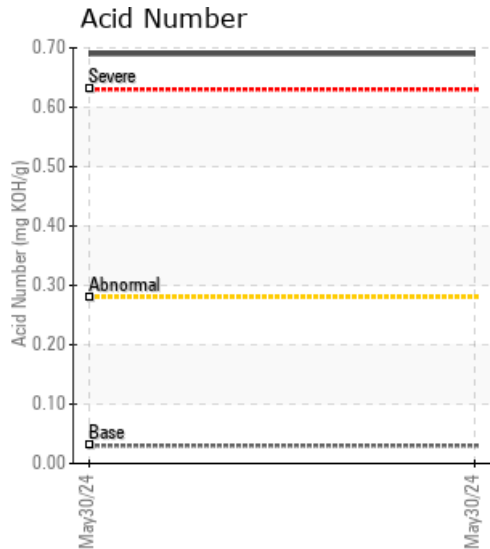
System Information
 System Volume: 0 gal
 Bulk Operating Temp: Not Specified
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA CALFLO AF
 Make:

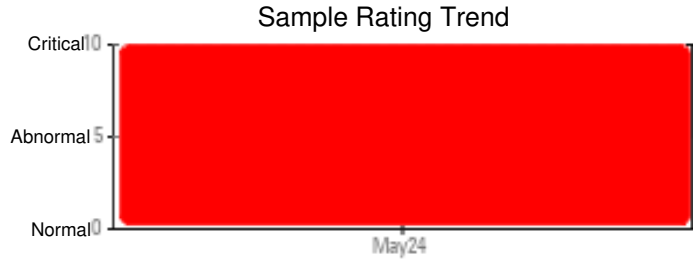
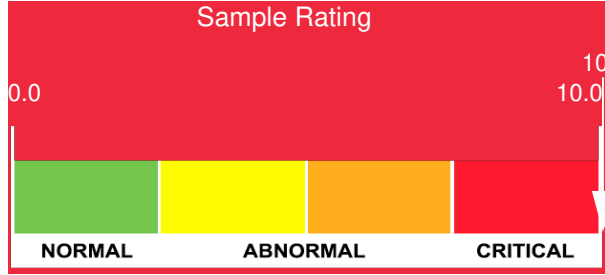
Sample Information
 Lab No: 02639300
 Analyst: Yen Garcia
 Sample Date: 05/30/24
 Received Date: 05/31/24
 Completed: 06/11/24
 Yen Garcia
 yen.garcia@HFSinclair.com

Recommendation: The Fluid is Petro-Therm. The sample results are abnormal for insolubles (2.26 %), AN (0.69) , and Sulfur (289 ppm = Asphalt contamination). For best results the system should be going through a Cleaning, Flushing and Refilling with new Petro-Therm procedure. There is also a high Iron content in the sample that may be coming from some of the moving parts due to corrosion since the fluid has an abnormal Acid Number AN. The customer has been informed of the test results and potential troubleshooting steps.

Comments: Iron ppm levels are abnormal. Pentane Insolubles levels are severely high. Water contamination levels are marginally high. ppm Water contamination levels are marginally high. Acid Number (AN) is severely high. (GCD) 90% Distillation Point is abnormally high. Visc @ 40°C is abnormally high. (GCD) 10% Distillation Point is marginally high.

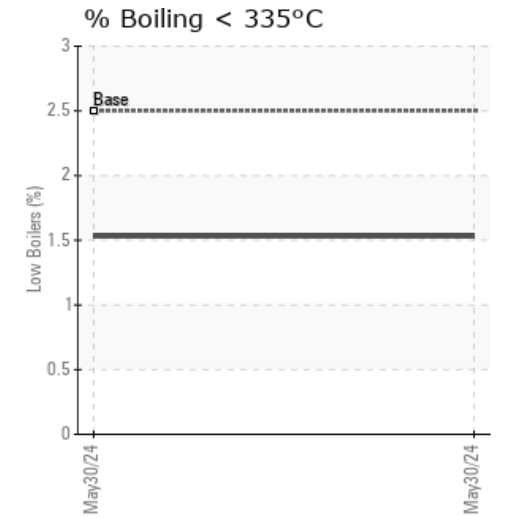
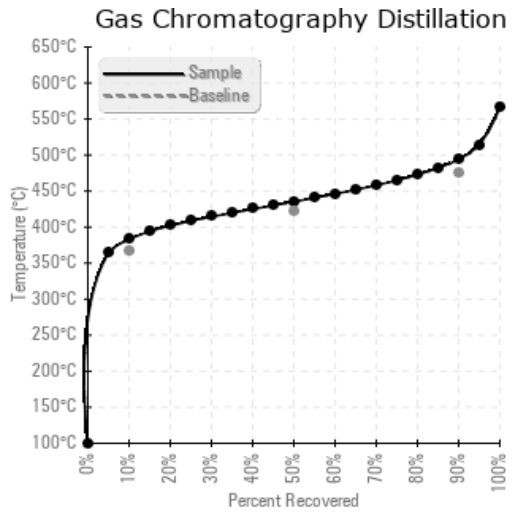
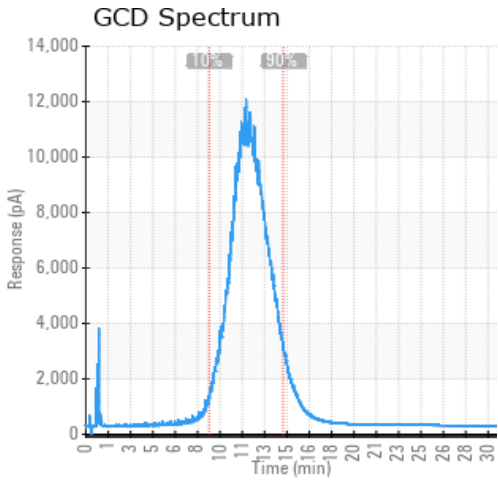
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/30/24	05/31/24	0.0h		439 / 226	432	39.1	0.69	2.26	721 / 383	816 / 435	921 / 494	1.53
05/30/24	05/31/24	0.0h										
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5





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
05/30/24	305	0	0	0	9	4	2	0	0	0	1	14	0	0	0	0	1	0	0	2	4	0	4	9
05/30/24	170	0	0	0	3	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	2	0	30	3
Baseline Data			0	0						0		0	0					0					270	

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



Historical Comments

05/30/24	

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