

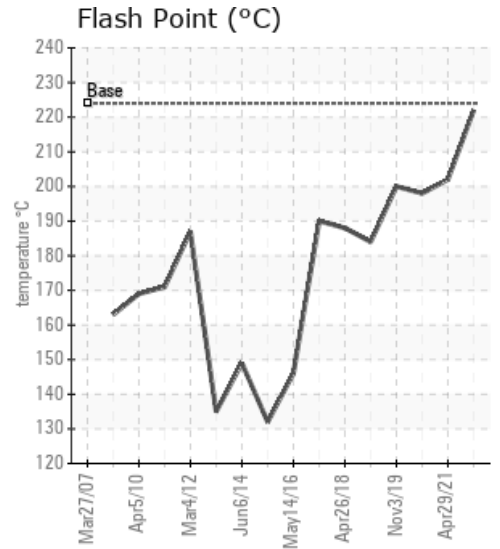
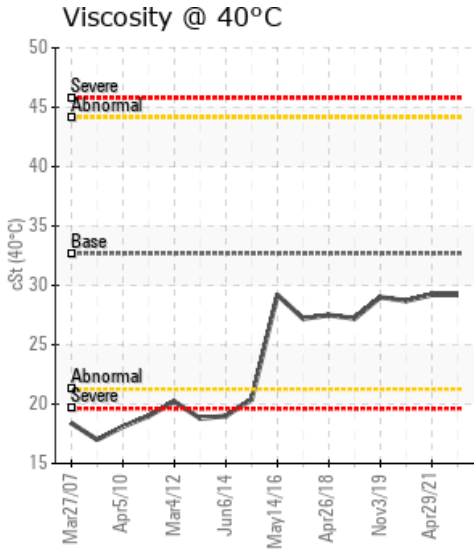
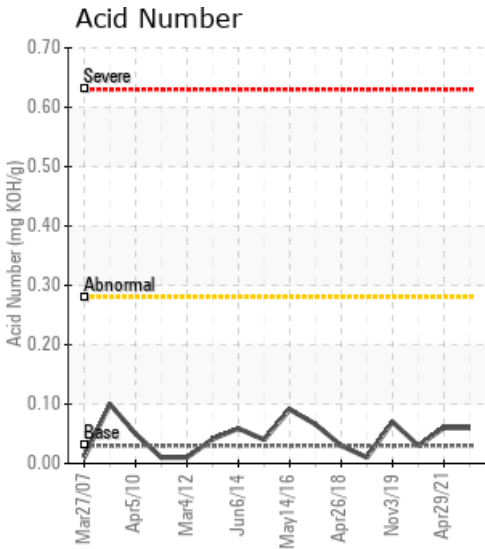
## LINE 2 FILLED COATING CHROMALOX

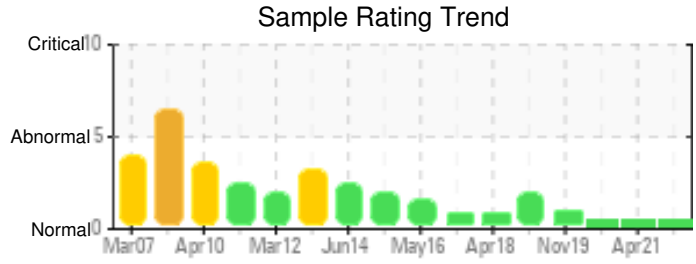
Customer: PTRHTF10069	System Information	Sample Information
CERTAITEED - SAINT GOBAIN 3303 EAST 4TH AVENUE SHAKOPEE, MN 55379 USA Attn: Alex Hanley Tel: E-Mail: Alex.J.Hanley@saint-gobain.com	System Volume: 1890 gal Bulk Operating Temp: 474F / 246C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: CHROMALOX	Lab No: 02487803 Analyst: Neil Buchanan Sample Date: 04/19/22 Received Date: 05/10/22 Completed: 05/16/22 Neil Buchanan neil.buchanan@hollyfrontier.com

Recommendation: Sample looks good. Resample next interval to monitor.

Comments:

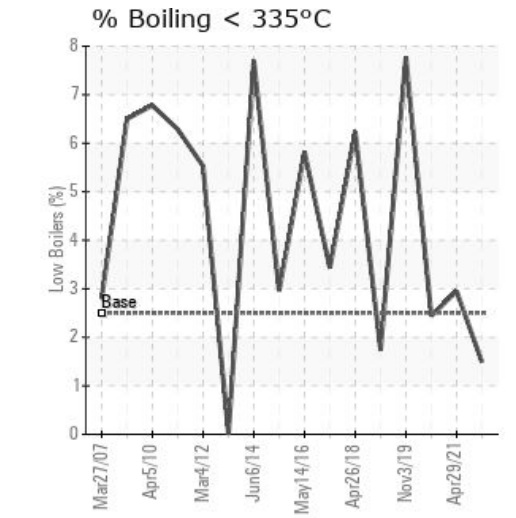
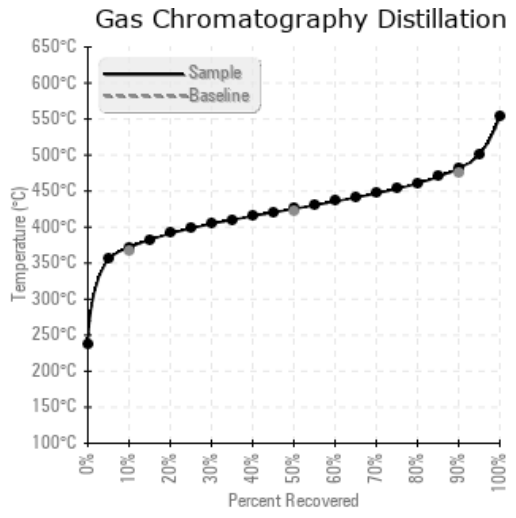
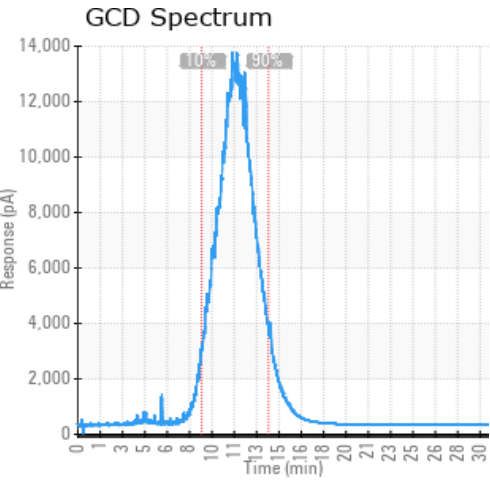
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/19/22	05/10/22	0.0y		432 / 222	6.9	29.2	0.06	0.022	701 / 372	798 / 425	899 / 482	1.49
04/29/21	05/11/21	10.0y		396 / 202	11.6	29.2	0.06	0.043	691 / 366	787 / 419	884 / 473	2.95
06/18/20	06/29/20	10.0y	mian system	388 / 198	5.1	28.7	0.03	0.185	697 / 370	796 / 425	897 / 481	2.44
11/03/19	12/13/19	10.0y	MAINSYSTEMFLOW	392 / 200	9.2	29.0	0.070	0.108	651 / 344	772 / 411	892 / 478	7.78
09/30/18	10/10/18	0.0y		363 / 184	13.0	27.2	0.01	0.028	691 / 366	789 / 421	887 / 475	1.74
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
04/19/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106	0
04/29/21	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124	0
06/18/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125	0
11/03/19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	131	0
09/30/18	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	0
<b>Baseline Data</b>			0	0						0			0	0					0				270	

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



**Historical Comments**

04/29/21	Sample looks good and is fit for further service. Resample next interval to monitor.
06/18/20	COC Flash Point is slightly low as it has been in previous samples but within ASTM D92 repeatability/reproducibility. GCD values and graph look good. Pentane Insolubles are trending upward to 0.185% so checking/replacing hot oil filter is suggested.
11/03/19	the rise in additives suggest an addition of fresh oil occurred. The flash point increased, viscosity increased, all properties are normal. Re-sample at next scheduled interval.
09/30/18	The flash point is a bit low because of the reduced viscosity but it remains stable from year to year. Re-sample at next scheduled interval. No trace of contamination by asphalt or the elements or fluid degradation. COC Flash Point is marginally low.

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