

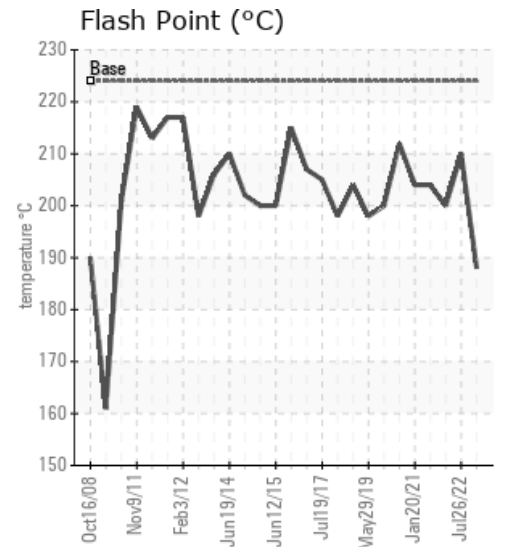
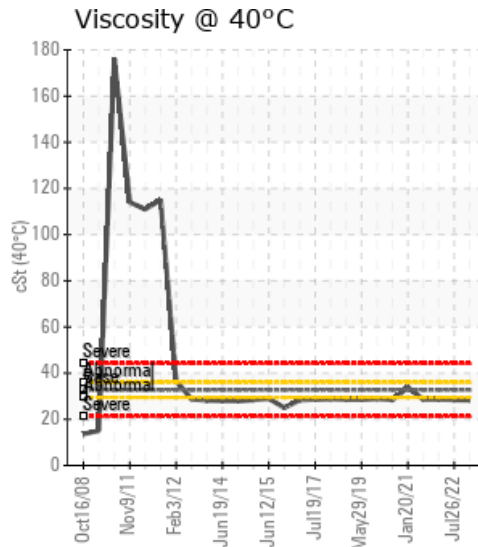
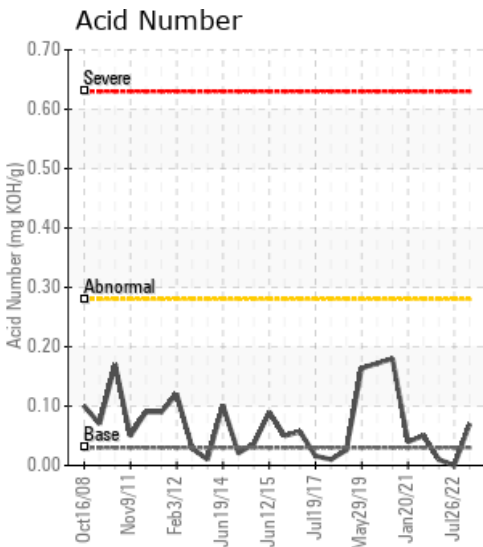
## STILLYARD

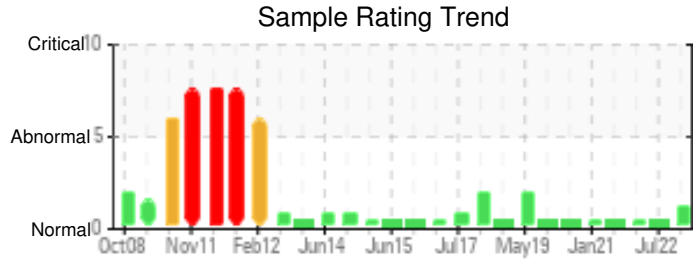
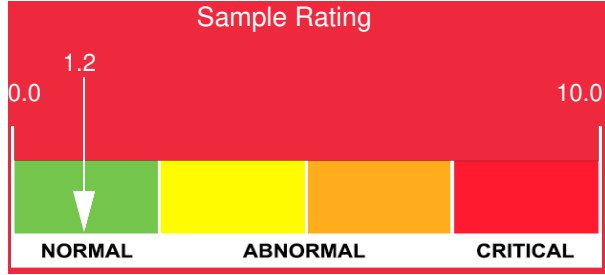
Customer: PTRHTF10068	System Information	Sample Information
Certainteed - Saint Gobain 1077 PLEASANT ST NORWOOD, MA 02062 USA Attn: Robert Jaruse Tel: E-Mail: robert.jaruse@saint-gobain.com	System Volume: 3000 gal Bulk Operating Temp: 550F / 288C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: C.E. COOPER	Lab No: 02509935 Analyst: Gregory Fernandez Sample Date: 08/30/22 Received Date: 09/09/22 Completed: 09/26/22 Gregory Fernandez gregory.fernandez@hfsinclair.com

Recommendation: Sample results for the Stillyard are representative of a fluid in good condition. Viscosity, Acid Number, COC Flash Point and GCD are all at good performance levels. Recommend to continue service with this fluid and to sample at next normal sample interval.

Comments: Visc @ 40°C is abnormally low. COC Flash Point is marginally low.

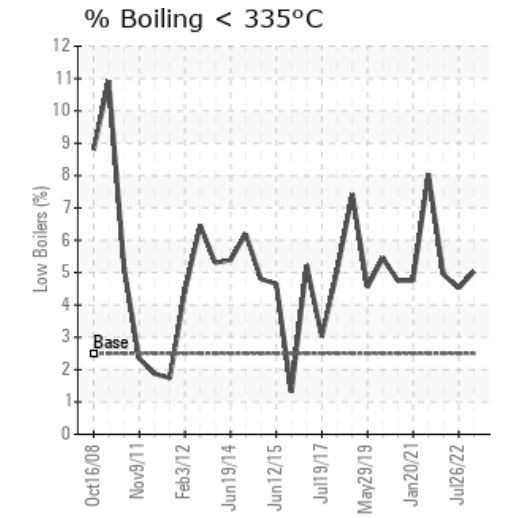
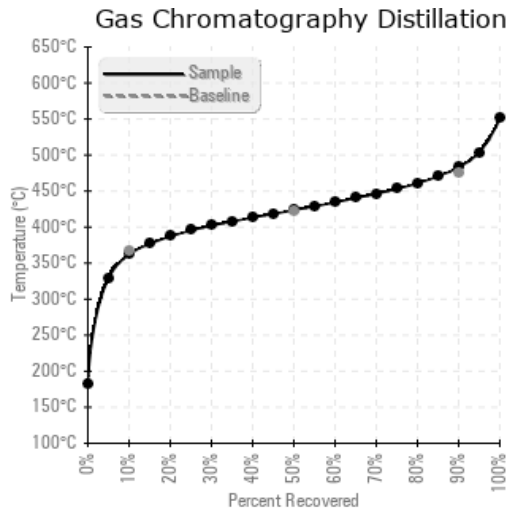
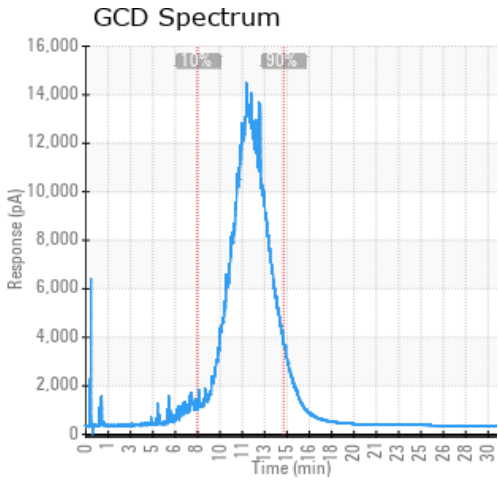
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/30/22	09/09/22	0.0y	suction to circ pump	370 / 188	14.6	28.3	0.07	0.077	684 / 362	794 / 424	902 / 483	5.03
07/26/22	08/04/22	10.0y	suct. to circ. pump	410 / 210	17.0	28.4	0.00	0.443	688 / 364	795 / 424	902 / 483	4.52
01/06/22	01/18/22	10.0y	suction to circ pump	392 / 200	13.9	28.6	0.01	0.089	684 / 362	793 / 423	901 / 483	4.94
08/30/21	09/10/21	9.0y	suction to circ pump	399 / 204	15.3	28.6	0.05	0.053	650 / 343	768 / 409	900 / 482	8.05
01/20/21	01/28/21	9.0y	Suction to pump	399 / 204	9.6	33.8	0.04	0.120	685 / 363	795 / 424	904 / 484	4.75
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
08/30/22	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	24	0
07/26/22	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	24	0
01/06/22	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	27	0
08/30/21	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	31	0
01/20/21	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	30	0
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	
07/26/22	Sample results look overall good for this system with no concerns for low boiler results. Pentane Insolubles have risen noticeably and could merit checking filtration to assure that it is functioning properly. In general, system is suitable for continued service until the next scheduled sample interval. Pentane Insolubles levels are abnormally high. Visc @ 40°C is abnormally low.
01/06/22	Sample looks good, no issues to address. Continue to use as normal and resample and next scheduled interval
08/30/21	Low boilers just over 8%. Continue and resample at next scheduled date. all other data is good.
01/20/21	Sample results for the Stillyard continue to be in line of a fluid in good condition. Viscosity, Acid number, COC Flash Point and GCD have remained constant. Continue to sample on a routine basis to assist in monitoring the fluid condition.

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