

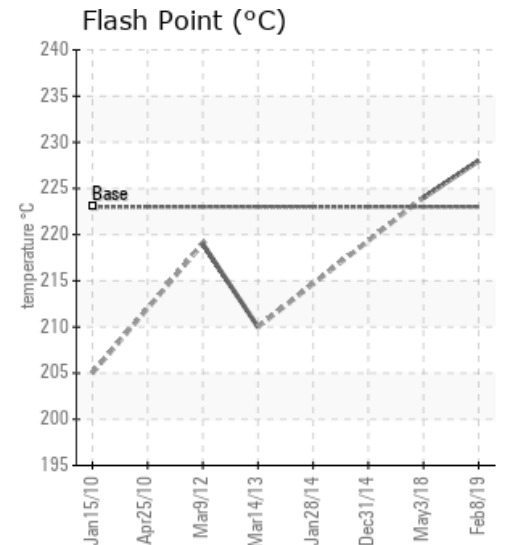
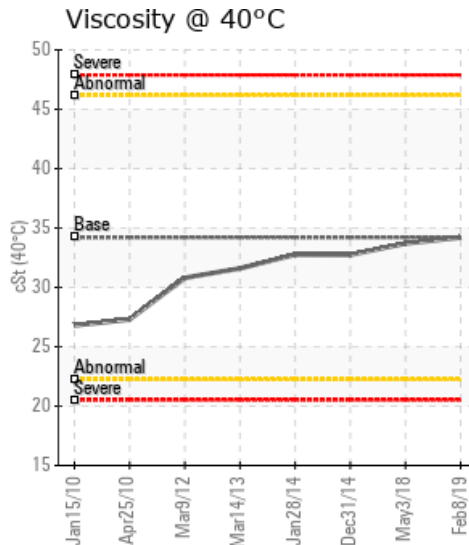
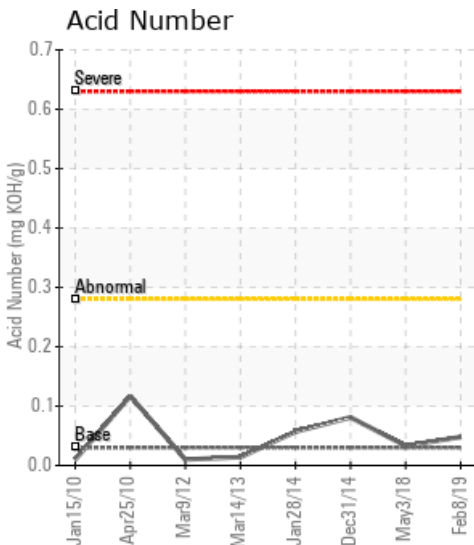
MODIFIED ROOM SYSTEM

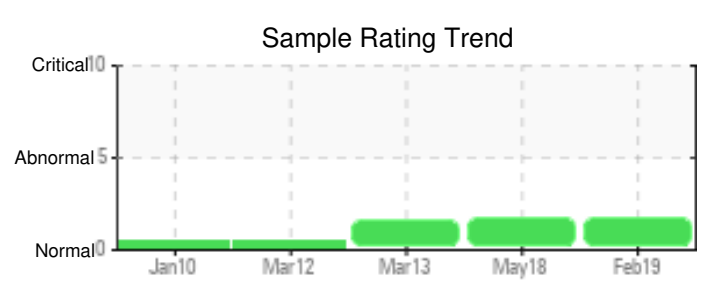
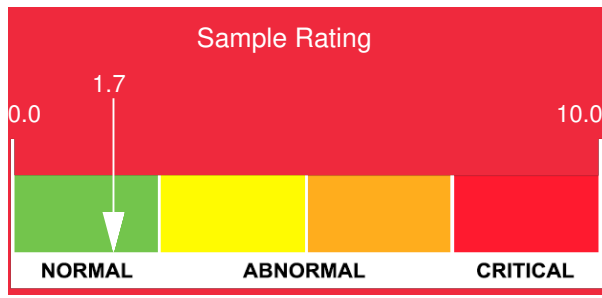
Customer: PTRHTF10094	System Information	Sample Information
CERTAINEED CORPORATION - OXFORD 200 CERTAINEED RD OXFORD, NC 27565 USA Attn: Andy Davis Tel: (919)693-1141 E-Mail: andy.j.davis@saint-gobain.com	System Volume: 0 gal Bulk Operating Temp: 0F / -18C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02270621 Analyst: Gaston Arseneault Sample Date: 02/08/19 Received Date: 02/28/19 Completed: 03/04/19

Recommendation: This sample appears to be in decent condition. No vanadium and normal viscosity so no reason to believe that asphalt is leaking. Based on the results of this analysis no action seems to be needed at this time, unless feedback from your own operations and monitoring of your process warrants it.

Comments:

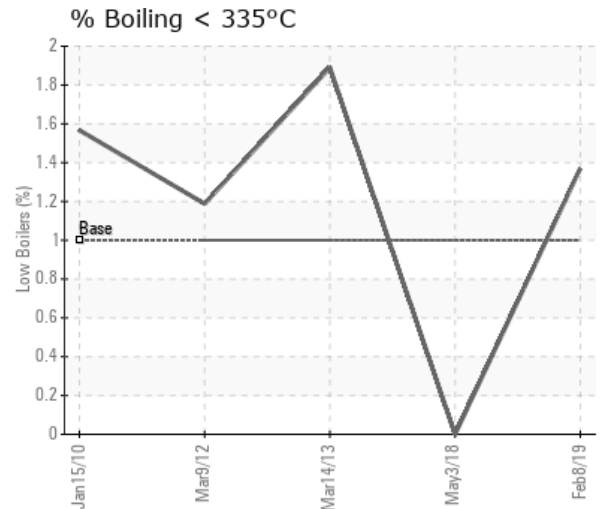
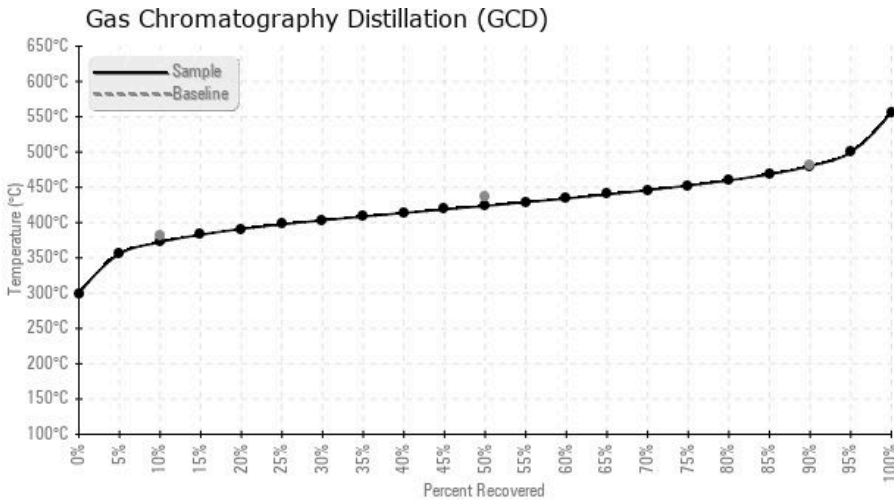
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/08/19	02/28/19	1y	AT HEATER	442 / 228	6.4	34.2	0.048	0.070	702 / 372	794 / 424	896 / 480	1.37
05/03/18	05/23/18	1y	MAIN SUPPLY LINE	435 / 224	15.7	33.7	0.033	0.017	706 / 375	785 / 418	878 / 470	0.00
12/31/14	01/05/15	0y				32.74	0.081					
01/28/14	01/31/14	0y				32.76	0.057					
03/14/13	03/15/13	0y	L1	410 / 210	0.00	31.6	0.014	0.107	697 / 370	795 / 424	897 / 480	1.89
03/09/12	03/12/12		NA	426 / 219	50	30.8	0.01	0.047	703 / 373	792 / 422	887 / 475	1.188
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





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
02/08/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/03/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/31/14	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01/28/14	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
03/14/13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	2
03/09/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	5	0	10	7
Baseline Data			0	0						0			0	0					0				0	

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



Historical Comments	
05/03/18	Some of the test results from the previous samples are blank because they were tested as normal industrial oils. This sample appears to be in decent condition. No vanadium and normal viscosity so no reason to believe that asphalt is leaking. Based on the results of this analysis no action seems to be needed at this time, unless feedback from your own operations and monitoring of your process warrants it. (GCD) 90% Distillation Point is marginally low.
12/31/14	Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.
01/28/14	Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The condition of oil is suitable for further service.
03/14/13	The fluid appears to be in excellent condition, in all aspects. Suitable for further use.
03/09/12	The oil condition appears to be most definitely suitable for further use based on these results. We will set reminders to sample every 6-9 months.

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