

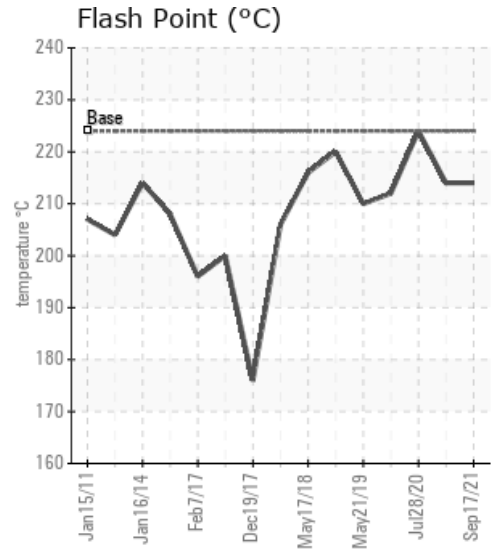
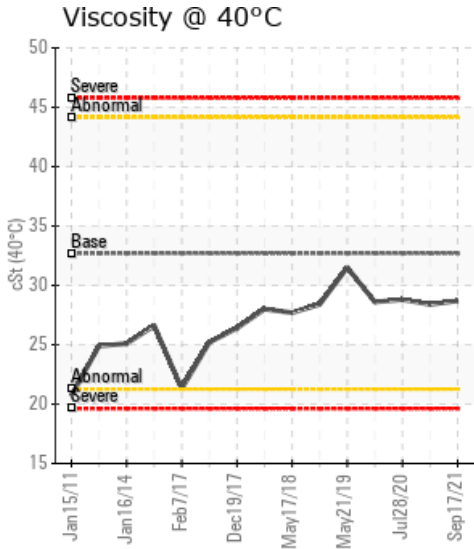
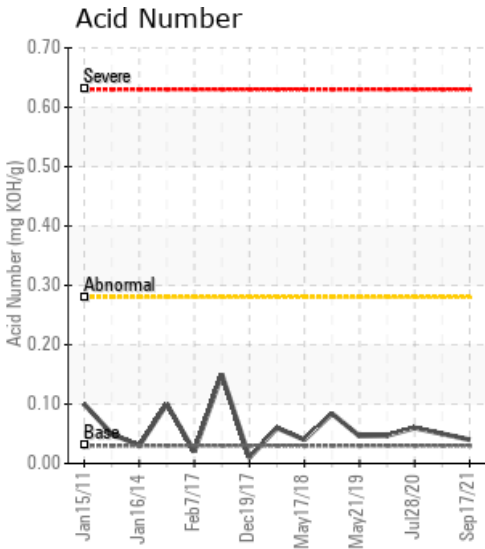
MODIFIED ROOM

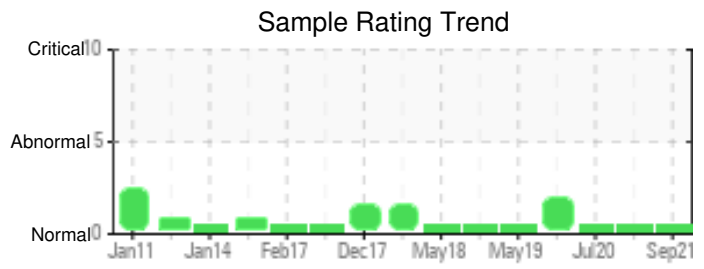
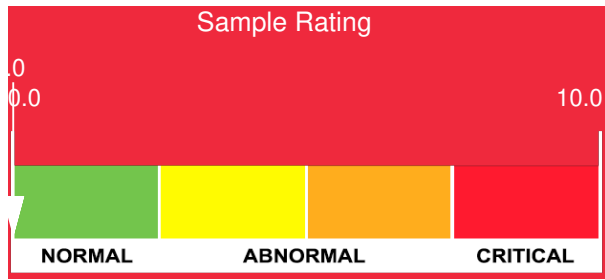
Customer: PTRHTF10059	System Information	Sample Information
CERTAINTEED - SAINT GOBAIN 11519 US RT 250 N MILAN, OH 44846 USA Attn: DAVE BLAKELY Tel: (419)541-0843 E-Mail: dave.l.blakely@saint-gobain.com	System Volume: 320 gal Bulk Operating Temp: 480F / 249C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: FIRST THERMOL	Lab No: 02448267 Analyst: Yvette Trzcinski Sample Date: 09/17/21 Received Date: 10/05/21 Completed: 10/08/21 Yvette Trzcinski yvette.trzcinski@hollyfrontier.com

Recommendation: Sample results indicate the fluid is acceptable for continued service the flash point, viscosity, acid number, solids and GCD boiling points are all at acceptable ranges and there has been very little change from the sample in January. Resample at your next interval 9 -12 months

Comments:

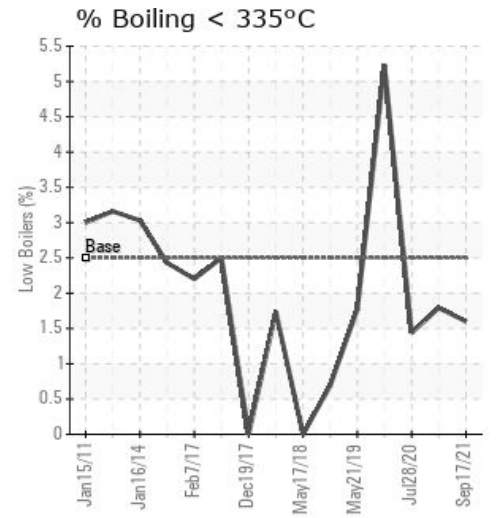
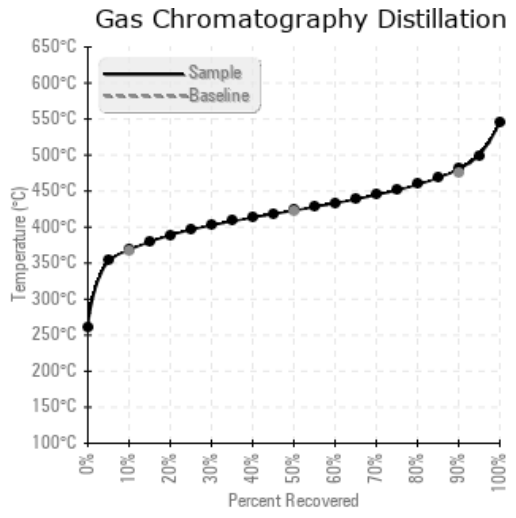
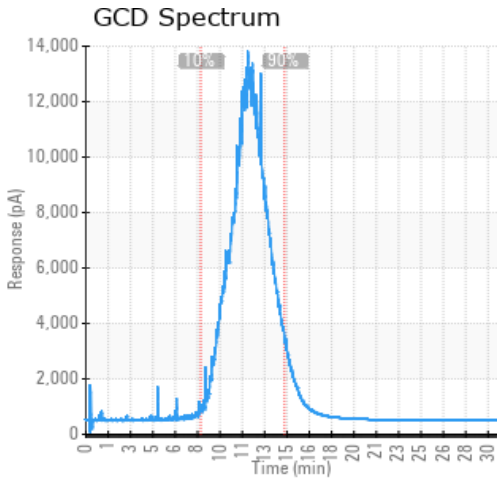
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
09/17/21	10/05/21	0.0h	SAMPLE PORT	417 / 214	25.2	28.7	0.04	0.097	695 / 368	793 / 423	897 / 481	1.60
01/04/21	01/19/21	0.0h	Sample Port	417 / 214	11.1	28.4	0.05	0.098	693 / 367	792 / 422	895 / 480	1.79
07/28/20	08/05/20	0.0h	FILTER DRAIN	435 / 224	20.9	28.8	0.06	0.030	696 / 369	793 / 423	895 / 479	1.44
01/09/20	01/17/20	3.0h		414 / 212	4.4	28.6	0.047	0.057	666 / 352	776 / 413	882 / 472	5.23
05/21/19	05/31/19	0.0h		410 / 210	9.2	31.5	0.046	0.008	687 / 364	790 / 421	898 / 481	1.77
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	
09/17/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	
01/04/21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0
07/28/20	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	25	0
01/09/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
05/21/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	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	
01/04/21	Viscosity, acid number and flash point all within specifications and water and contamination are low, resample at the next interval
07/28/20	Viscosity has remained constant from the last sample in January and the low boilers amount has decreased - flash point looks good, Resample at the next sampling interval
01/09/20	The oil condition overall is good, it still has that light and clear appearance. The viscosity has dropped a bit and low boilers gone up a bit too even though the flash point remains strong. Resample at the next scheduled interval and if the low boilers and viscosity keep on trending this way we will recommend to do a vent off and replace volume losses with fresh oil.
05/21/19	Everything looks good, the fluid condition is great and degradation and contamination are not detected.

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