

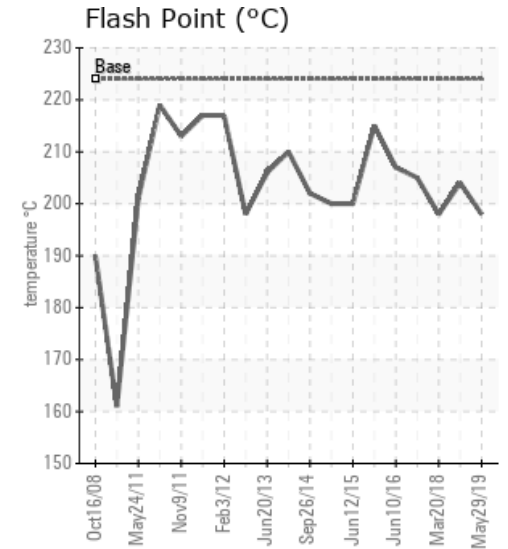
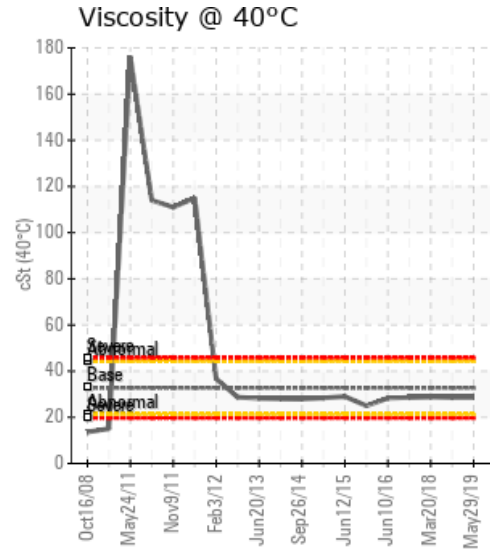
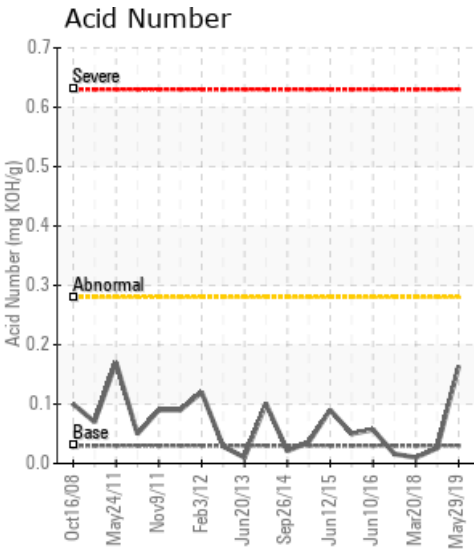
STILLYARD

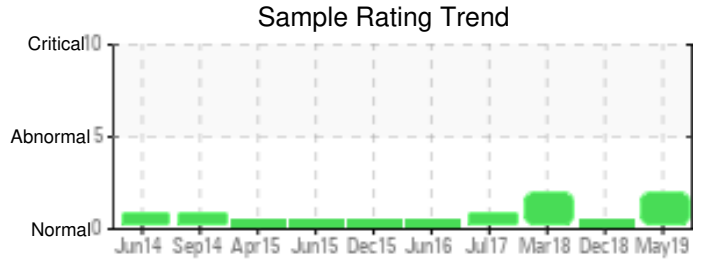
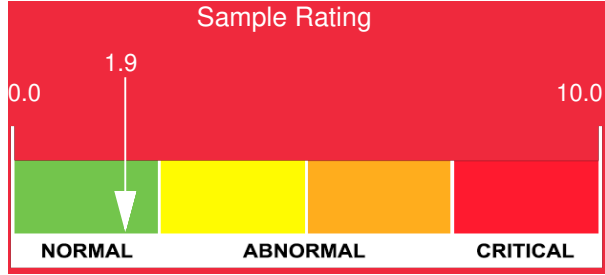
Customer: PTRHTF10068	System Information	Sample Information
Certainteed - Saint Gobain 1077 PLEASANT ST NORWOOD, MA 02062 USA Attn: David Fletcher Tel: (781)551-0656 E-Mail: david.r.fletcher@saint-gobain.com	System Volume: 3000 gal Bulk Operating Temp: 550F / 288C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: C.E. COOPER	Lab No: 02292075 Analyst: Gaston Arseneault Sample Date: 05/29/19 Received Date: 06/19/19 Completed: 06/24/19

Recommendation: Everything looks good and holding steady. flash point is strong, no visible signs of increased contamination by asphalt, moisture or other elements. Please re-sample at next scheduled interval.

Comments:

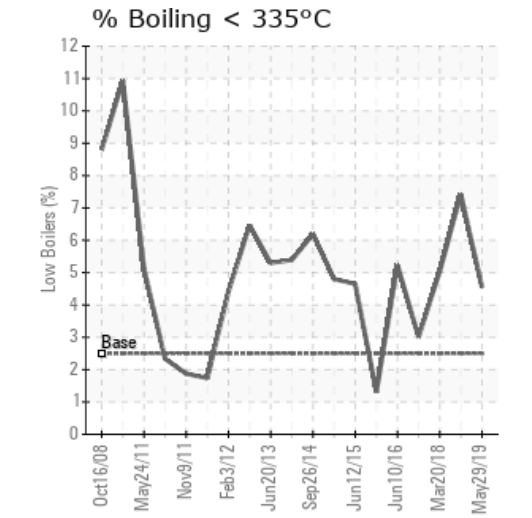
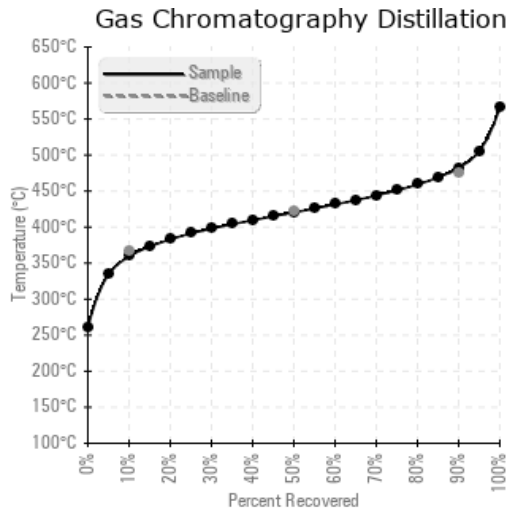
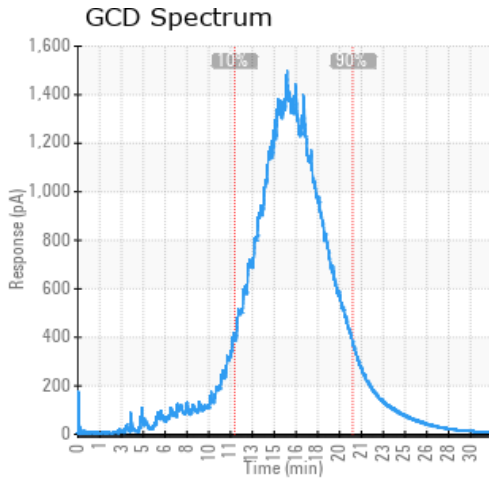
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/29/19	06/19/19	7y	SUCTION CIRC PUMP	388 / 198	13.0	28.5	0.164	0.276	679 / 360	789 / 420	900 / 482	4.55
12/14/18	01/10/19	6y		399 / 204	4.5	28.5	0.026	0.027	651 / 344	767 / 408	877 / 470	7.42
03/20/18	04/04/18	6y		388 / 198	3.1	28.8	0.01	0.031	674 / 357	785 / 419	896 / 480	5.04
07/19/17	08/08/17	5y	SUCTION TO CIRC PUMP	401 / 205	5.4	28.6	0.016	0.061	711 / 377	802 / 428	912 / 489	3.01
06/10/16	08/25/16	1y	STILLYARD	405 / 207	19.4	28.3	0.057	0.057	676 / 358	788 / 420	892 / 478	5.23
12/08/15	12/17/15	3y	SUCTION TO CIRC PUMP	419 / 215	2.1	25.0	0.05	0.101	701 / 371	795 / 424	898 / 481	1.31
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
05/29/19	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	26	0
12/14/18	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	22	0
03/20/18	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	27	0
07/19/17	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	20	0
06/10/16	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	19	0
12/08/15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	20	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	
12/14/18	Everything looks good and holding steady. flash point is strong, no visible signs of increased contamination by asphalt, moisture or other elements. Please re-sample at next scheduled interval.
03/20/18	Everything looks good and holding steady. flash point is strong, no visible signs of increased contamination by asphalt, moisture or other elements. Please re-sample at next scheduled interval.
07/19/17	Everything looks good and holding steady. flash point is strong, no visible signs of contamination by asphalt, moisture or other elements. Please re-sample at next scheduled interval. (GCD) 90% Distillation Point is marginally high.
06/10/16	Despite its dark appearance, the fact that barely any elements is detected and the solids content is extremely low, it appears the oil is relatively free of solids. Flash point is strong and oxidation is a non issue. No action needed at this time besides re-sampling at the next schedule interval. if for any reason the system performance does not reflect those good results pls contact us immediately.
12/08/15	Fluid is in excellent condition, please re-sample at the next scheduled interval.

Petro-Canada makes no representation or warranty of any kind, either express or implied, as to the accuracy or completeness of the analysis and assumes no responsibility and shall have no liability whatsoever with respect to such analysis, or a party's use of it. Petro-Canada is a division of HollyFrontier Corporation.