

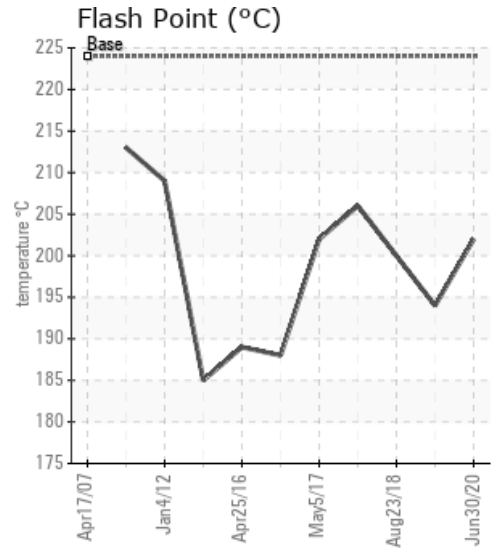
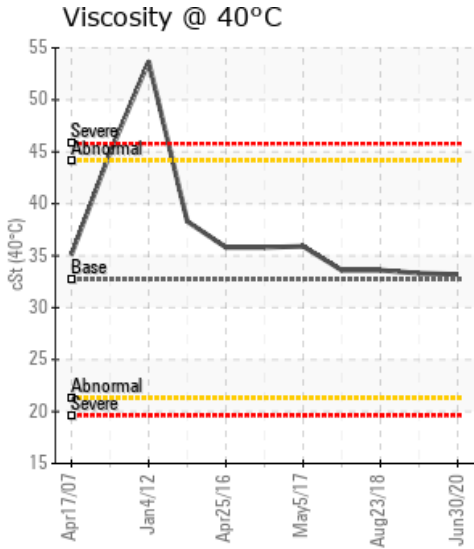
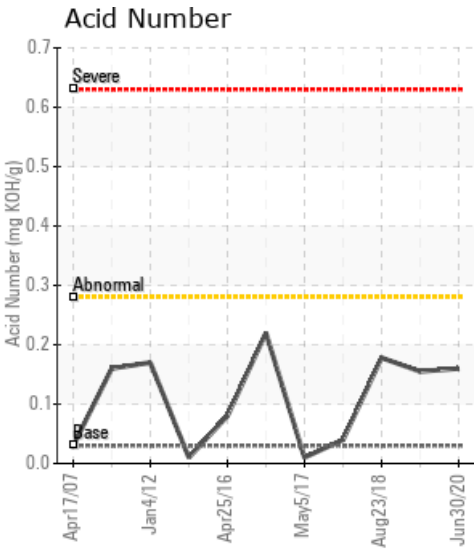
HOT OIL HEATER #1

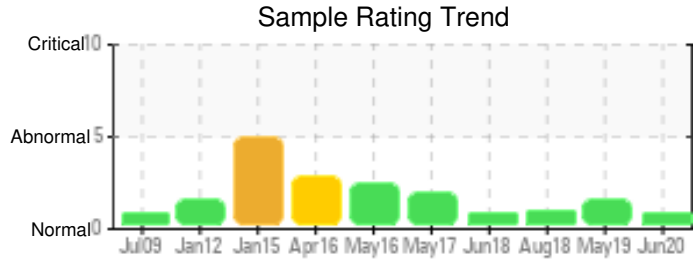
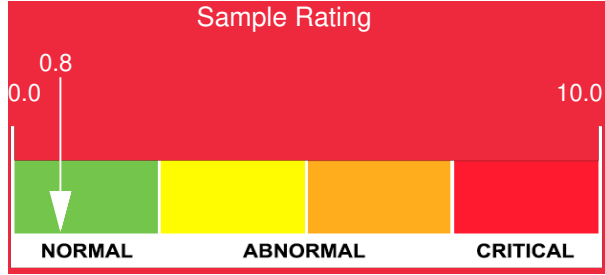
Customer: PTRHTF10070	System Information	Sample Information
CERTAINEED - SAINT GOBAIN 6350 NW FRONT AVE PORTLAND, OR 97210 USA Attn: Larry Larson Tel: E-Mail: Larry.S.Larson@saint-gobain.com	System Volume: 600 ltr Bulk Operating Temp: 525F / 274C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make:	Lab No: 02366167 Analyst: Gaston Arseneault Sample Date: 06/30/20 Received Date: 07/22/20 Completed: 07/27/20 Gaston Arseneault gaston.arseneault@petrocanadalsp.com

Recommendation: Virtually no change to the oil since the last sample. Flash point remains strong, no moisture or asphalt contamination. No action needed at this time. Keep up the sampling program and normal PMs around the system components.

Comments: (GCD) 90% Distillation Point is abnormally high.

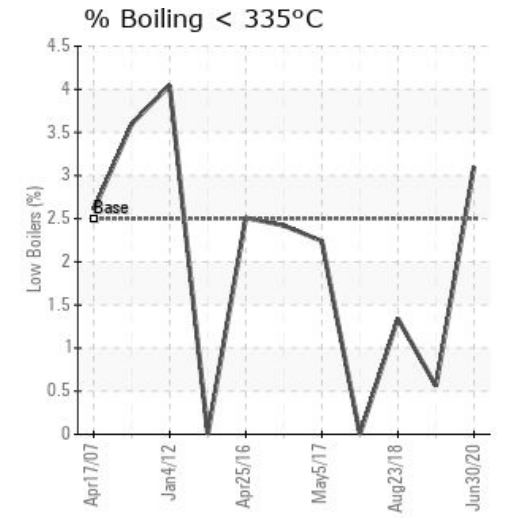
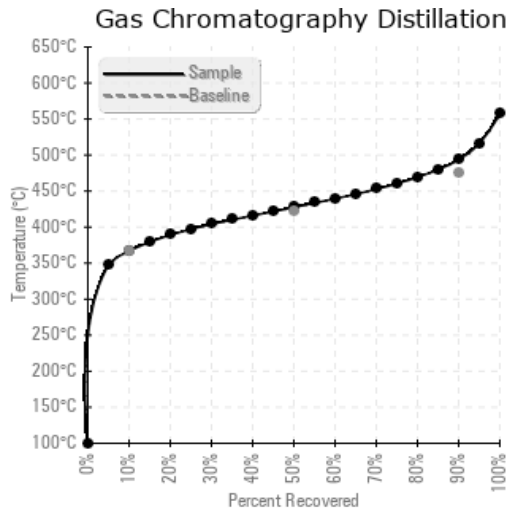
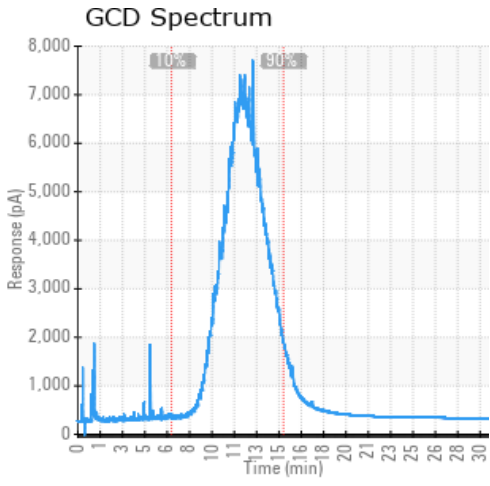
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
06/30/20	07/22/20	0m		396 / 202	11.6	33.2	0.16	0.116	692 / 367	801 / 427	920 / 494	3.10
05/28/19	06/10/19	0m		381 / 194	12.9	33.3	0.155	0.335	701 / 372	803 / 428	918 / 492	0.56
08/23/18	08/31/18	0m	PORT ON HEATER	392 / 200	10.7	33.6	0.178	0.311	702 / 372	808 / 431	922 / 494	1.34
06/24/18	07/12/18	0m	SAMPLE PORT	403 / 206	10.6	33.6	0.04	0.307	691 / 366	770 / 410	861 / 461	0.00
05/05/17	05/29/17	22m	COATER	396 / 202	22.0	35.9	0.01	0.238	698 / 370	812 / 434	933 / 501	2.24
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
06/30/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0
05/28/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0
08/23/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
06/24/18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0
05/05/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	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	
05/28/19	Resample in 1 month. Purge sample line before collecting oil. (GCD) 90% Distillation Point is abnormally high. COC Flash Point is marginally low.
08/23/18	The oil is in excellent condition as all properties are within normal limits. Resample in 1 year. (GCD) 90% Distillation Point is abnormally high.
06/24/18	Pentane insoluble are elevated along with (GCD) 90% Distillation Point. Suggest purging oil from sample point and resample to confirm. (GCD) 90% Distillation Point is marginally low.
05/05/17	Everything looks normal and consistent with previous results. Contamination or oil degradation is not a concern, flash point is strong. re-sample at next scheduled interval. (GCD) 90% Distillation Point is severely high.

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.