

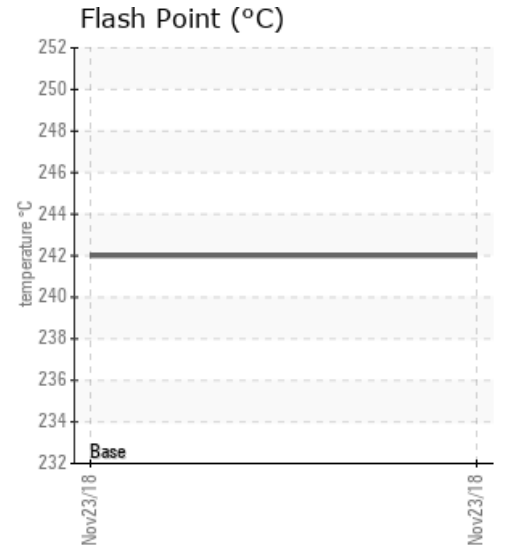
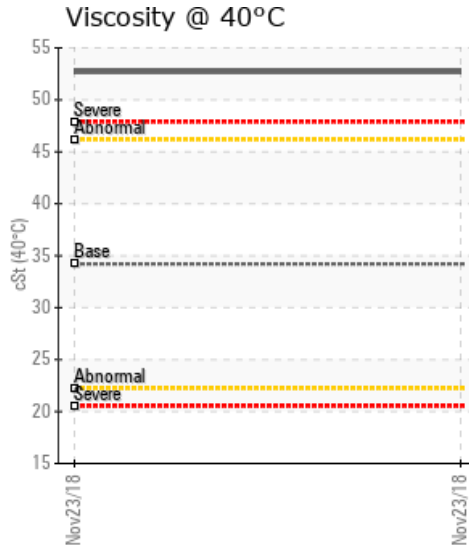
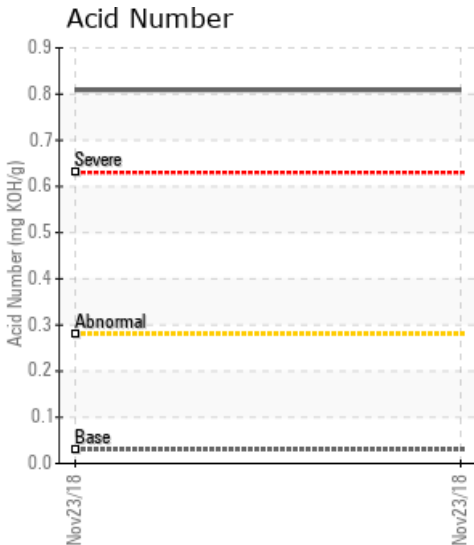
302.290

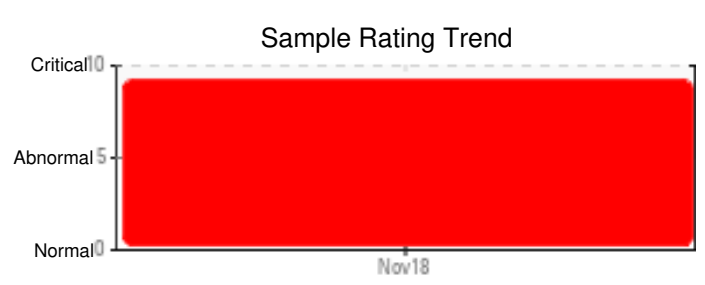
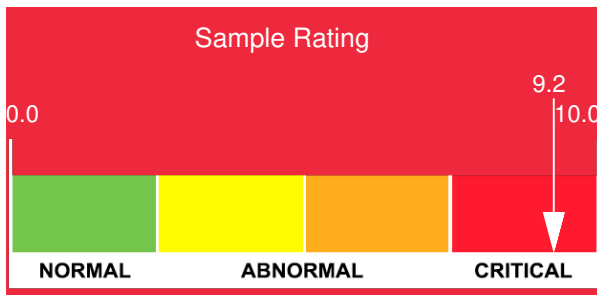
Customer: PTRHTF30122	System Information	Sample Information
SINTRA INC 17905 RUE GAUTHIER BECANCOUR, QC G9H 1C1 Canada Attn: Clement Milot Tel: (819)233-3459 E-Mail: clement.milot@sintra.ca	System Volume: 350 gal Bulk Operating Temp: 617F / 325C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: HEATEC	Lab No: 02255304 Analyst: Pierre Castagne Sample Date: 11/23/18 Received Date: 12/05/18 Completed: 01/16/19

Recommendation: La viscosité du fluide est élevée. On note une augmentation marquée des insolubles au pentane. Le taux d'acidité du fluide est très élevé, le taux de calcium est très élevé, le taux de zinc est élevé. Les fractions lourdes sont très élevé (GCD @90%). Les fractions lourdes augmentent la viscosité et favorise les dépôts de carbone. Le fluide n'est plus en mesure de faire une exchange thermique adéquate. Je recommande de vidanger, nettoyer, rincer et remettre une nouvel charge de PetroTherm 32.

Comments: Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. (GCD) 90% Distillation Point is severely high. Calcium ppm levels are severely high. Visc @ 40°C is severely high. Zinc ppm levels are abnormally high.

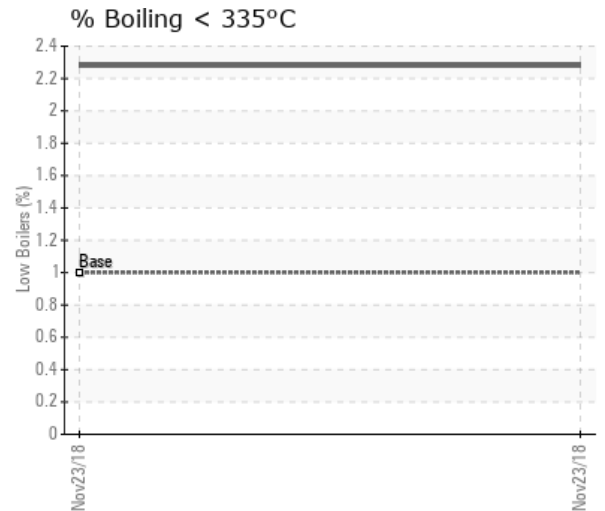
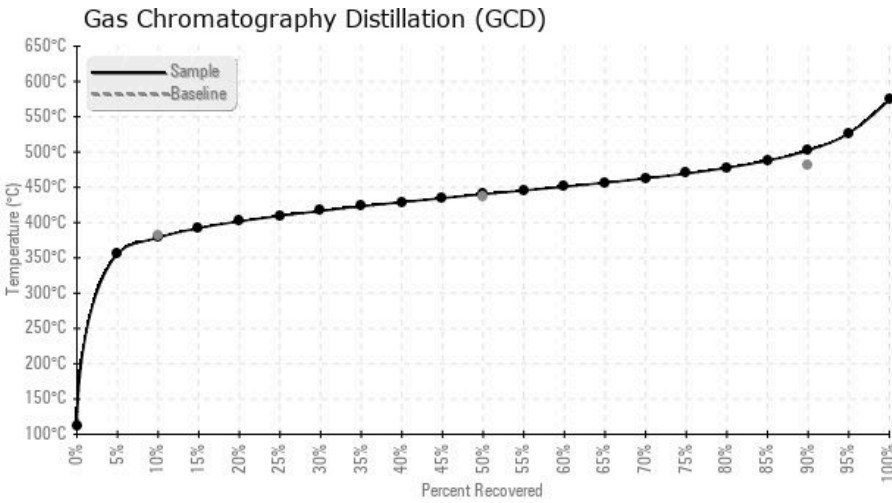
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/23/18	12/05/18	0y		468 / 242	45.3	52.7	0.809	0.813	713 / 379	824 / 440	936 / 502	2.28
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
11/23/18	60	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	0	0	0	83	0	31	25
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

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