

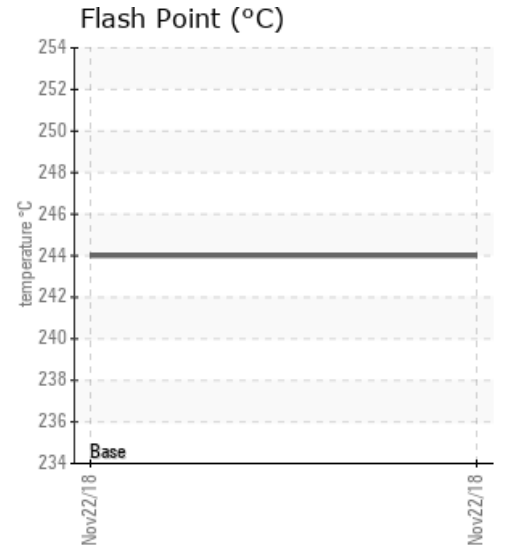
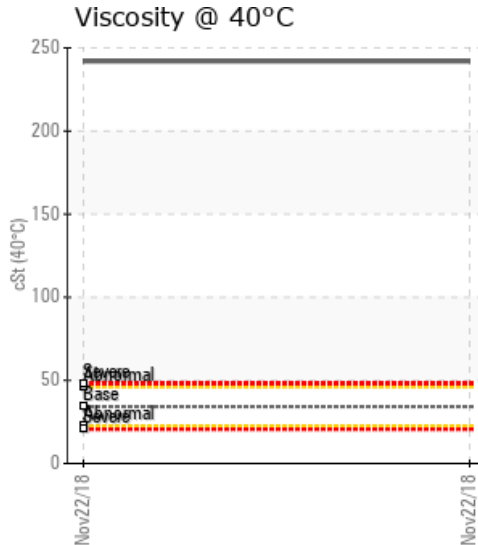
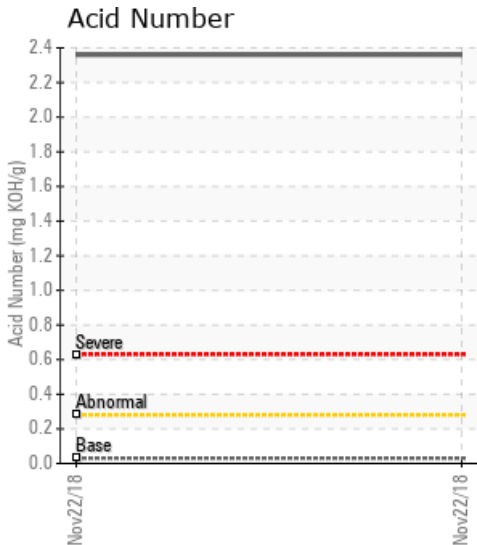
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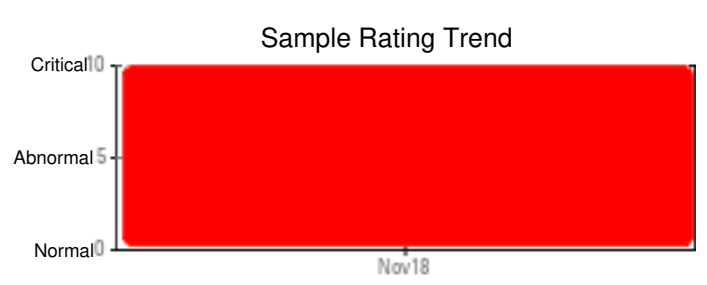
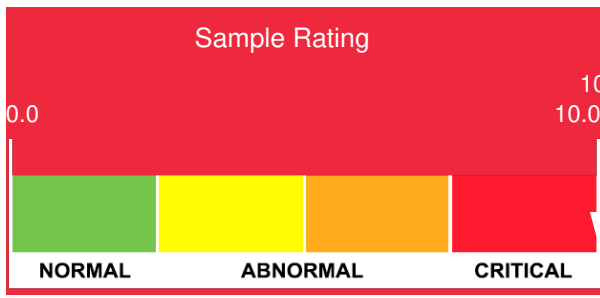
Customer: PTRHTF30122	System Information	Sample Information
SINTRA INC 17905 RUE GAUTHIER BECANCOUR, QC G9H 1C1 Canada Attn: Clement Milot Tel: (819)233-3459 E-Mail: clement.milot@sintra.ca	System Volume: 350 gal Bulk Operating Temp: 617F / 325C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: HEATEC	Lab No: 02255305 Analyst: Pierre Castagne Sample Date: 11/22/18 Received Date: 12/05/18 Completed: 01/17/19

Recommendation: Le taux d'acidité (AN), la viscosité à 40°C et 100°C, les insolubles au pentane ainsi que les fractions légères (GCD @10%) sont très élevés. Les fractions lourdes (GCD @90%) sont élevés. Les fractions légères abaisse le point éclair, augmente la pression de vapeur, abaisse la viscosité, les fractions lourdes augment la viscosité, et favorise les dépôts de carbone. Recommendation: le fluide thermique, n'est plus en mesure de faire une échange thermique adéquate, nous vous recommandons de vidanger, nettoyer, rincer et mettre une nouvel charge PetroTherm 32. ,

Comments: Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. (GCD) 10% Distillation Point is severely high. (GCD) 90% Distillation Point is severely high. Visc @ 40°C is severely high. Visc @ 100°C is abnormally high. (GCD) 50% Distillation Point is marginally high.

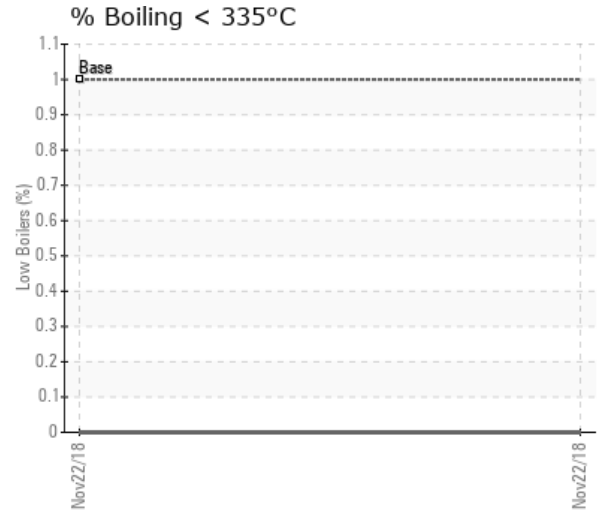
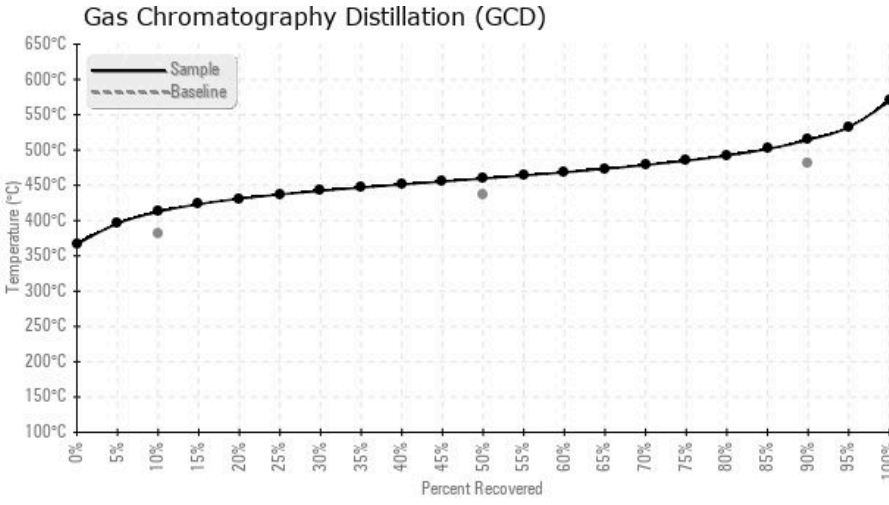
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/22/18	12/05/18	7h		471 / 244	56.0	242	2.36	1.25	774 / 412	859 / 460	958 / 514	0.00
Baseline 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
11/22/18	26	0	0	0	13	20	2	0	0	0	2	8	0	0	0	0	0	0	0	0	9	0	4	19
<b>Baseline Data</b>			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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