

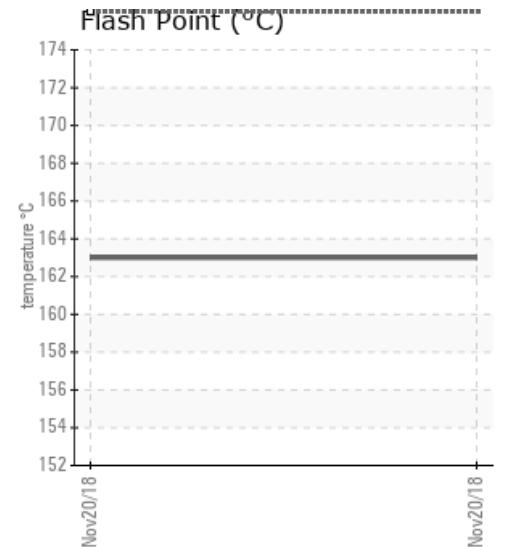
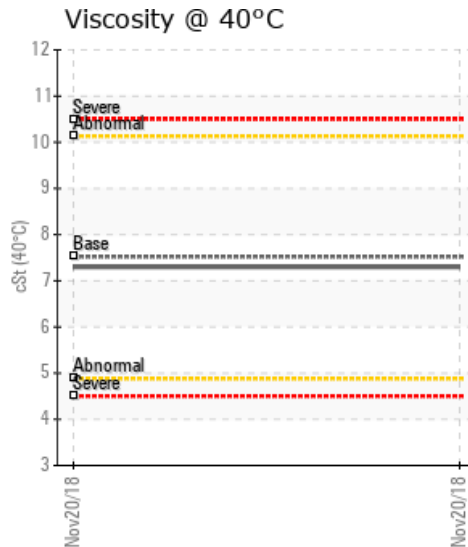
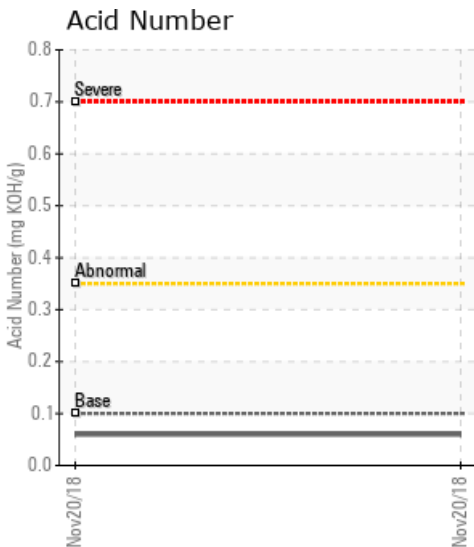
INOAC HOT OIL SIDE HOT OIL DRAIN

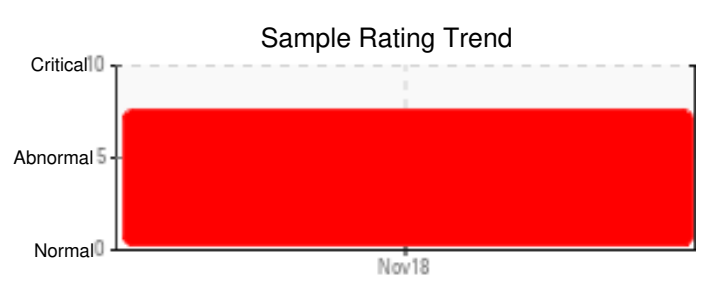
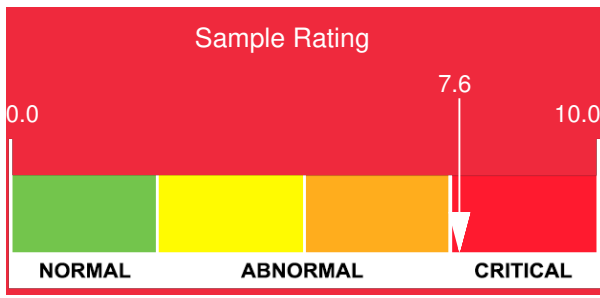
Customer: PTRHTF30023	System Information	Sample Information
INOAC INTERIOR SYSTEMS 575 JAMES STREET SOUTH ST MARYS, ON N4X 1B9 Canada Attn: Jeff Brown Tel: (519)808-2649 E-Mail: jbrown@inoacusa.com	System Volume: 14000 ltr Bulk Operating Temp: 500F / 260C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO LT Make: BP&R	Lab No: 02253655 Analyst: Adam Koscielak Sample Date: 11/20/18 Received Date: 11/26/18 Completed: 12/10/18

Recommendation: Appears to be some low boilers in the system. Flash point is reduced a little and the amount of material <335°C is elevated, 50% point is lowered, with the 90% Distillation point lower than normal. Please vent expansion tank for a day when the unit is at operating temperature, to release low boilers from system. Resample system after venting. All other parameters okay, viscosity is typical for Calflo LT, no water present, no appreciable amount of solids as Pentane insoluble level at 0.048%

Comments: (GCD) % < 335°C is severely high. (GCD) 90% Distillation Point is severely low. (GCD) 10% Distillation Point is marginally low. (GCD) 50% Distillation Point is marginally low.

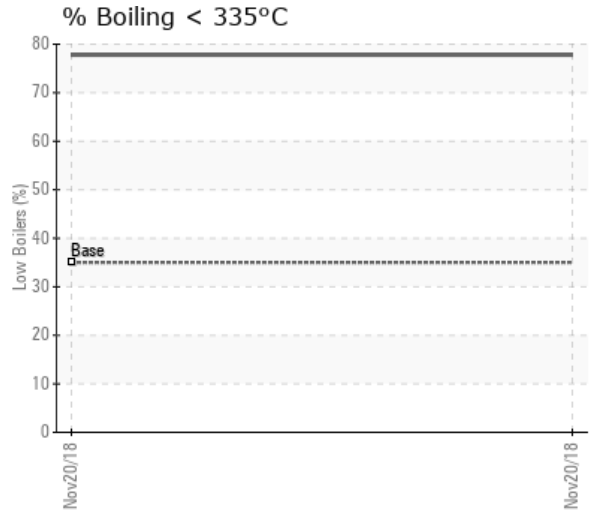
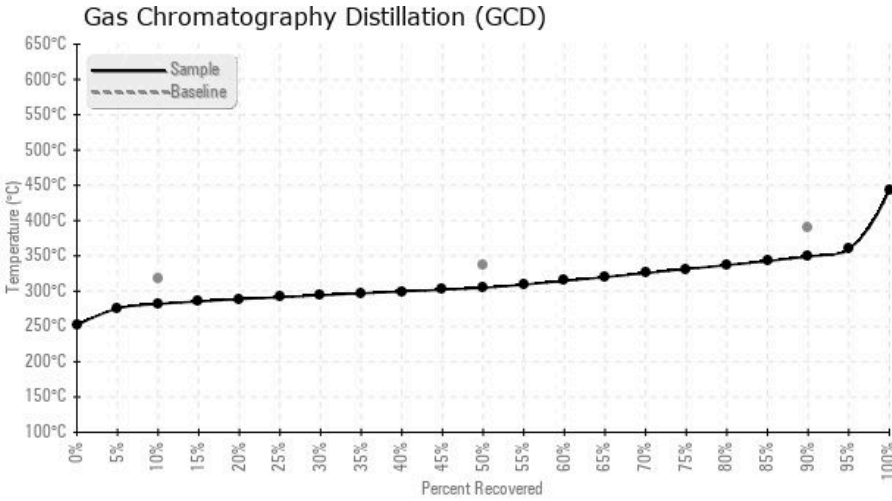
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/20/18	11/26/18	0d		325 / 163	10.3	7.3	0.06	0.043	539 / 282	581 / 305	661 / 349	77.82
Baseline Data				349 / 176		7.52	0.1		604 / 318	640 / 338	734 / 390	35.0





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	
11/20/18	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	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

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