

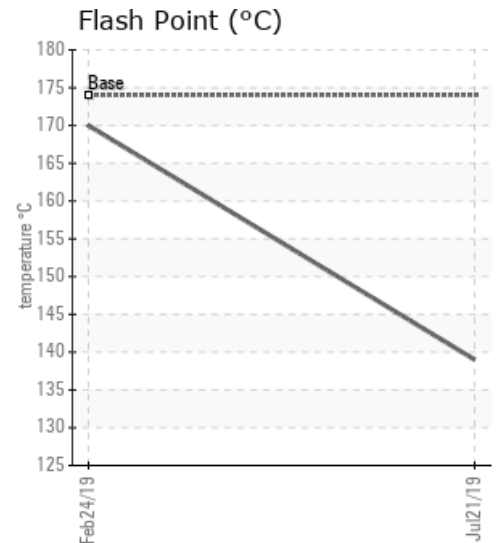
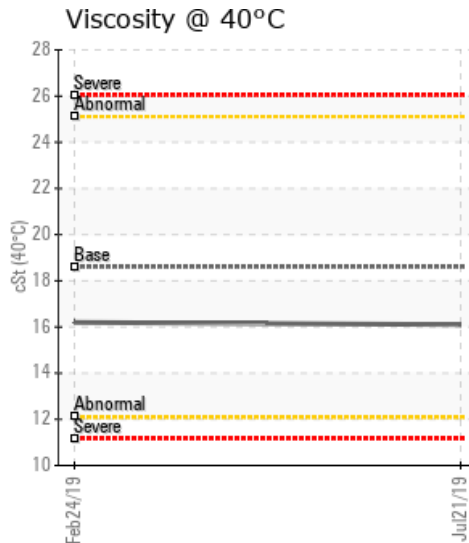
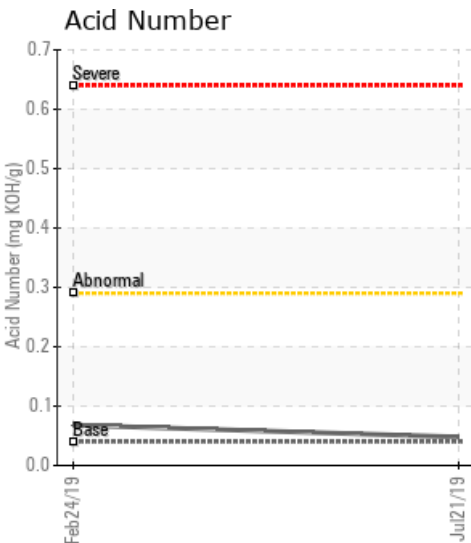
STEIN FULTON BOILER

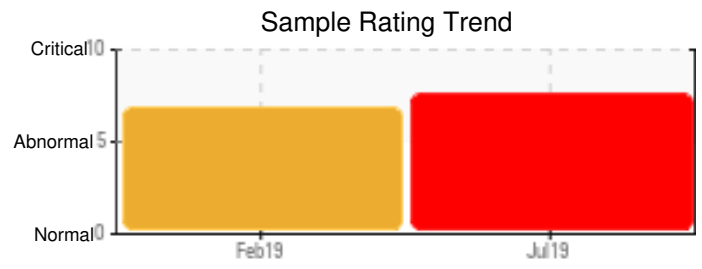
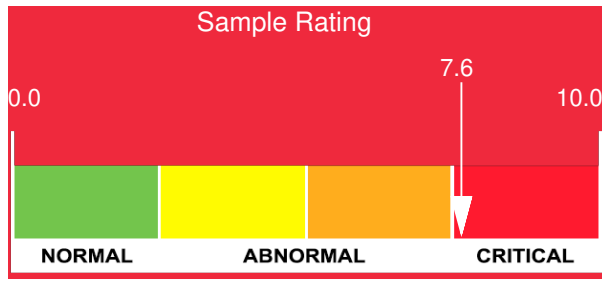
Customer: PTRHTF30126	System Information	Sample Information
MAPLE LEAF FOODS 333 COURTNEY PARK DR E MISSISSAUGA, ON L5T 2T6 Canada Attn: James Budan Hughes Tel: (905)565-9388 E-Mail: james.budanhughes@mapleleaf.com	System Volume: 0 ltr Bulk Operating Temp: 650F / 343C Heating Source: Blanket: Fluid: PARATHERM NF Make: FULTON THERMAL CORP	Lab No: 02298695 Analyst: Lynn Billings Sample Date: 07/21/19 Received Date: 07/23/19 Completed: 07/26/19

Recommendation: The flash point has dropped significantly from the sample in February 2019. (Went from 170C down to 139C). The insolubles have increased from 0.029% to 0.105%, thus possibly indicating more sludge/deposits in the system. The GCD definitely has picked up low boiling material so suspect thermal cracking as well as oxidation.

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

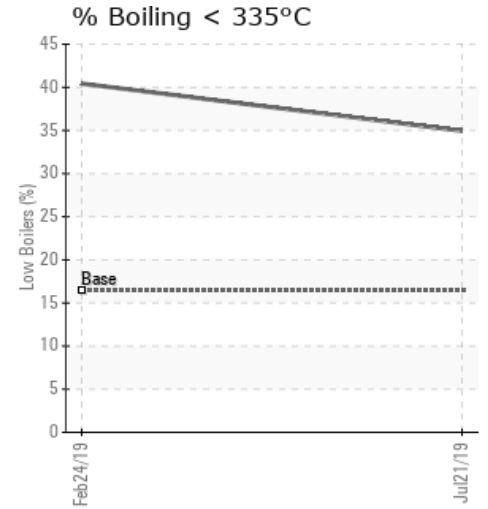
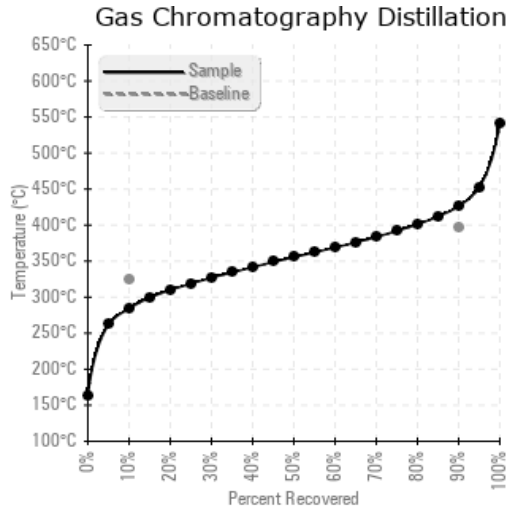
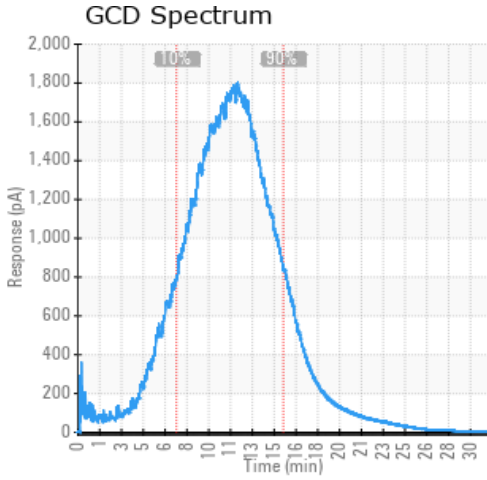
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
07/21/19	07/23/19	0y	Y STRAINER	282 / 139	24.2	16.1	0.048	0.105	544 / 284	672 / 356	799 / 426	34.95
02/24/19	02/28/19	10y	Y SUCTION STRAINER	338 / 170	1.8	16.2	0.068	0.029	541 / 283	656 / 347	787 / 420	40.43
Baseline Data				345 / 174		18.6	0.04		615 / 324		747 / 397	16.42





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
07/21/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02/24/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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

02/24/19	The GCD definitely has picked up low boiling material so suspect thermal cracking as well as oxidation. Oxidation will produce oil degradation which could deposit sludge and carbon within the system. (GCD) % < 335°C is severely high. (GCD) 90% Distillation Point is severely high. (GCD) 10% Distillation Point is abnormally low.
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