

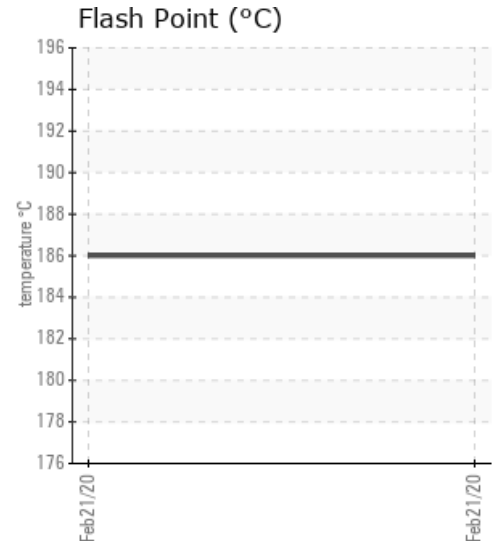
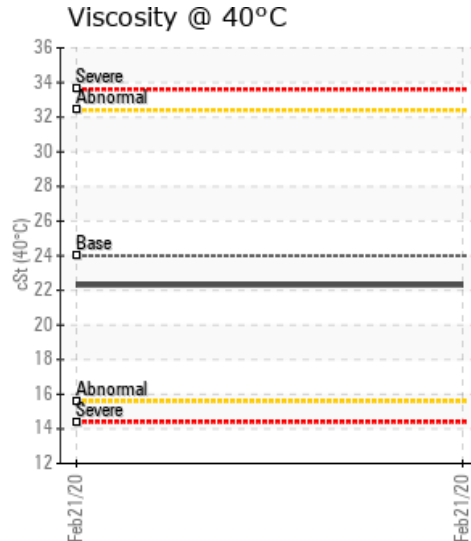
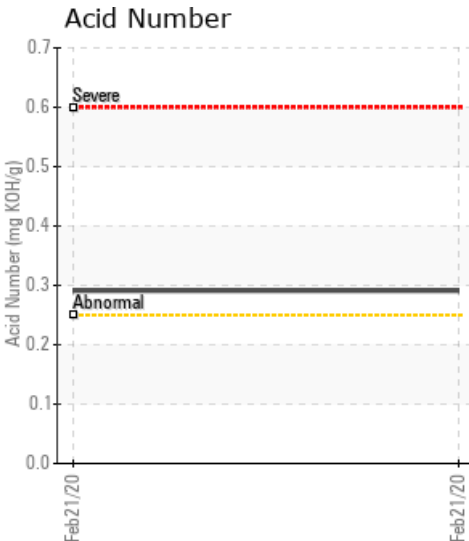
BURNER

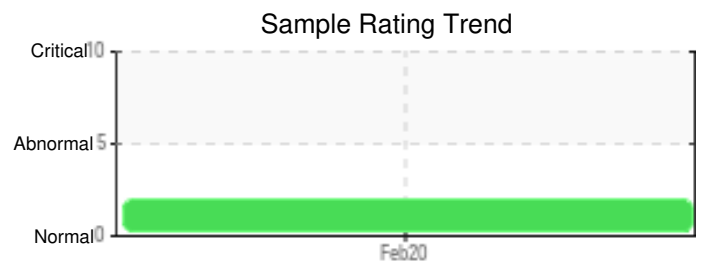
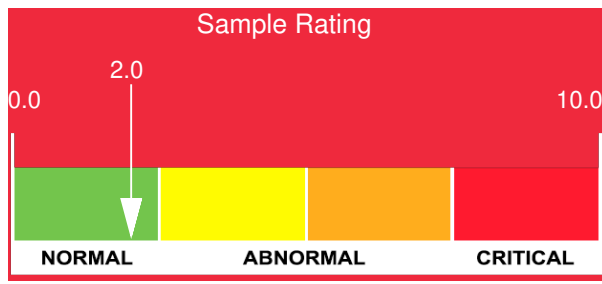
Customer: PTRHTF10170	System Information	Sample Information
TYREE OIL CO. INC. 2429 N. BORTHWICK AVE PORTLAND, OR 97227 USA Attn: Tom Taft Tel: (503)991-8708 E-Mail: tom@tyreeoil.com	System Volume: 0 gal Bulk Operating Temp: Not Specified Heating Source: Blanket: Fluid: CHEVRON HEAT TRANSFER OIL 22 Make:	Lab No: 02341648 Analyst: Ron LeBlanc Sample Date: 02/21/20 Received Date: 03/05/20 Completed: 03/13/20 Ron LeBlanc Ronald.LeBlancSr@petrocanadalsp.com

Recommendation: Acid Number (AN) is abnormally high. (GCD) 90% Distillation Point is marginally high. This is Chevron HTF. Hours of operation were not included to determine life of oil. Typically adding new oil to this used oil will bring the reported issues back in line. If the system oil is older and sludge is accumulated in the lower piping it might need to be cleaned, flushed and filled with new oil.

Comments: Acid Number (AN) is abnormally high. (GCD) 90% Distillation Point is marginally high.

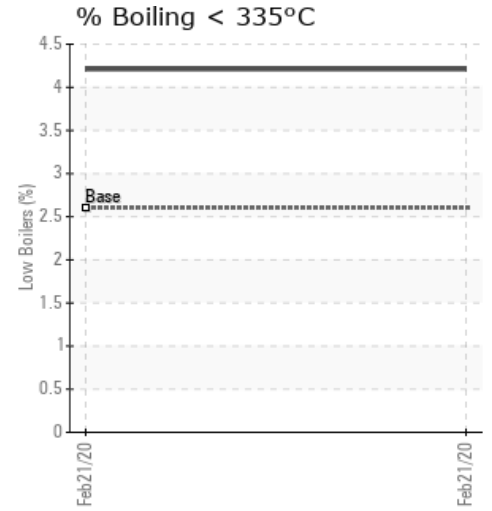
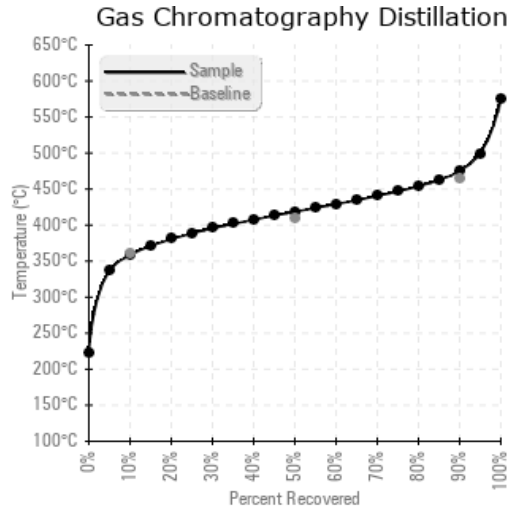
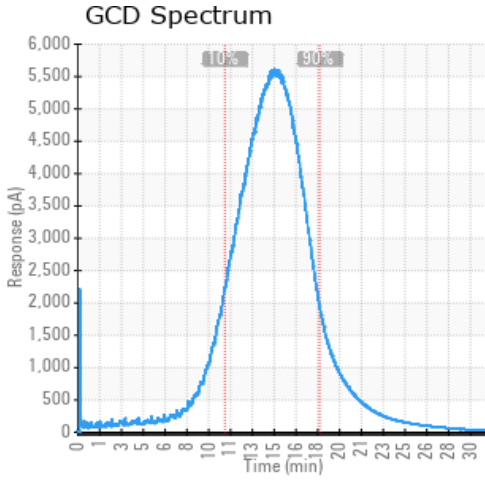
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/21/20	03/05/20	0h		367 / 186	1.7	22.3	0.291	0.178	677 / 359	785 / 419	887 / 475	4.21
Baseline Data				408 / 209		24			680 / 360	768 / 409	867 / 464	2.6





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
02/21/20	2	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
