

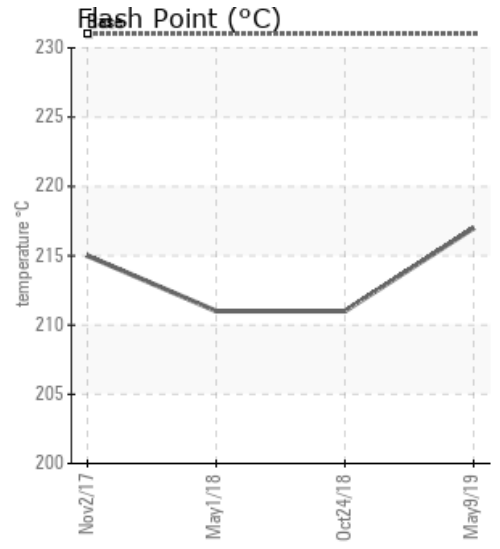
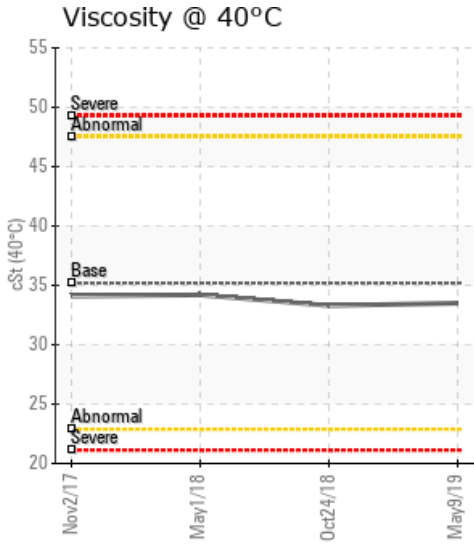
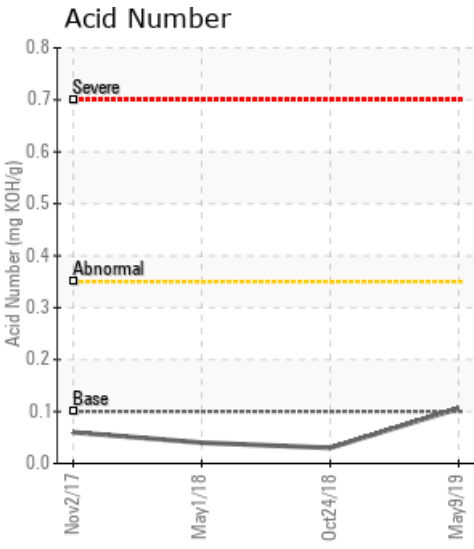
LN01 Laminator Hot Oil System

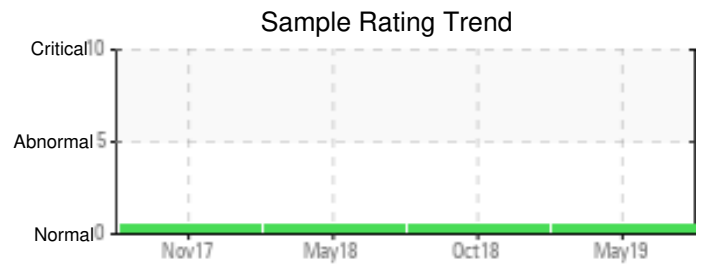
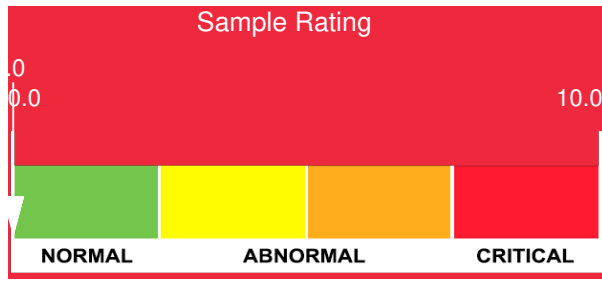
Customer: PTRHTF10141	System Information	Sample Information
TAMKO BUILDING PRODUCTS 2300 35TH ST TUSCALOOSA, AL 35401 USA Attn: Greg Colburn Tel: (205)752-3555 E-Mail: gregory_colburn@tamko.com	System Volume: 110 gal Bulk Operating Temp: 350F / 177C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make: Heat Exchanger And T	Lab No: 02285866 Analyst: Jake Finn Sample Date: 05/09/19 Received Date: 05/17/19 Completed: 05/22/19

Recommendation: Oil is suitable for continued use. Please re-submit sample in 1 year.

Comments: Acid number is normal, but has risen since the last sample, monitor at next test interval. Very light debris is noted by the lab.

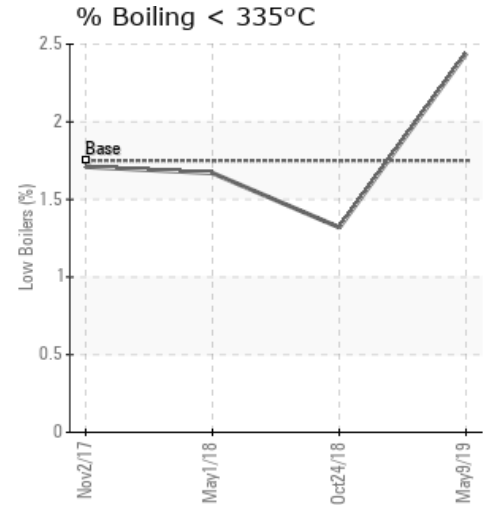
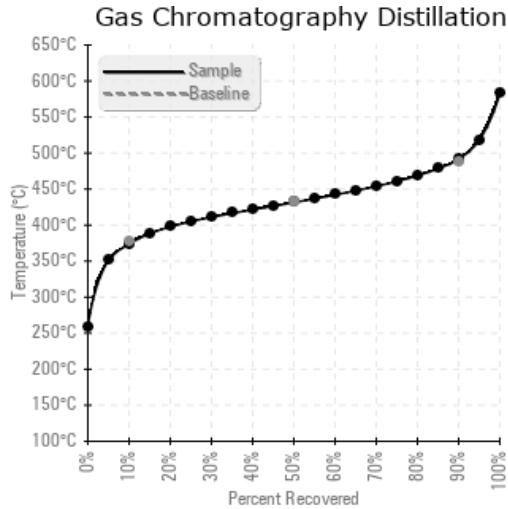
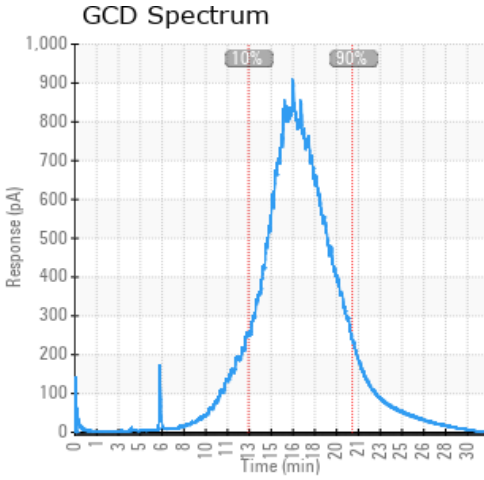
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/09/19	05/17/19	2y	PORT	423 / 217	32.4	33.5	0.106	0.026	705 / 374	809 / 432	917 / 491	2.44
10/24/18	11/02/18	0y		412 / 211	24.0	33.3	0.03	0.037	694 / 368	793 / 423	883 / 473	1.32
05/01/18	05/09/18	2y	PORT	412 / 211	7.5	34.2	0.04	0.019	710 / 376	809 / 432	902 / 484	1.67
11/02/17	11/13/17	10y		419 / 215	14.4	34.1	0.06	0.036	708 / 375	804 / 429	898 / 481	1.71
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75





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	
05/09/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	
10/24/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
05/01/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
11/02/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
Baseline Data			0	0						0			0	0					0					280	

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments

10/24/18	Fluid is suitable for continued use. Please re-submit annual sample in October 2019. Please include time on the unit and time on the fluid on next sample entry.
05/01/18	Fluid is suitable for continued use. Please submit sample on May 1, 2019 All parameters of the fluid look above satisfactory. There is some light visible debris that may be filtered out safely during any future shutdowns.
11/02/17	Oil is suitable for continued use. Please re-submit sample in 1-year for analysis Low Wear Metals and Contamination levels; 14.4 ppm water (Low); Acid number is low; 34.1 CsT @40oC Viscosity; COC Flash Point is 215oC - Excellent; Very Light Debris visible

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