

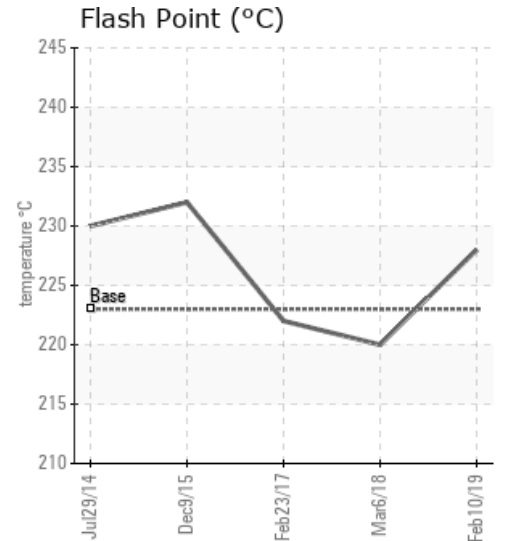
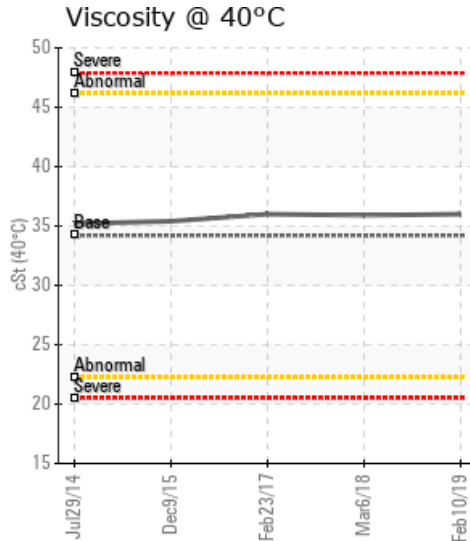
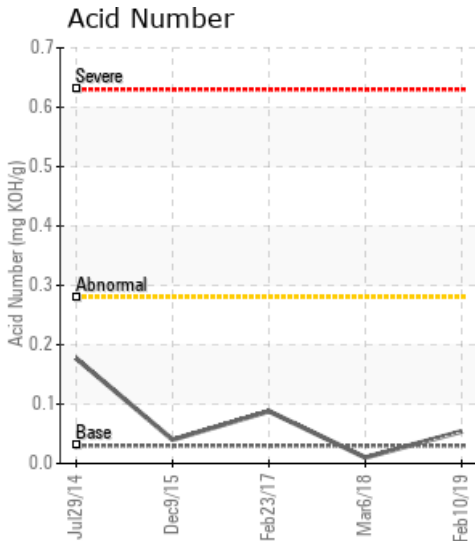
TOURMALINE BANSHEE H6600-1

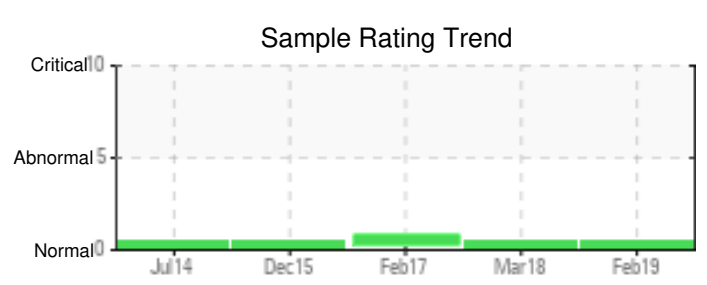
Customer: PTRHTF20046	System Information	Sample Information
QUADRA CHEMICALS 12925 146TH STREET EDMONTON, AB T5L 2H6 CANADA Attn: Quadra Samples Tel: E-Mail: quadra_samples@quadra.ca	System Volume: 0 gal Bulk Operating Temp: Not Specified Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02268424 Analyst: Peter Harteveld Sample Date: 02/10/19 Received Date: 02/19/19 Completed: 02/25/19

Recommendation: The fluid is in good condition and suitable for further use. Please re-sample in 12 months. When filling in the analysis request form please enter the fluid service life.

Comments:

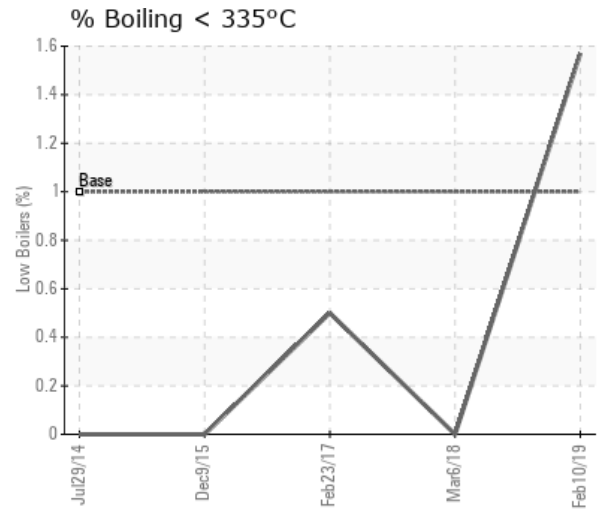
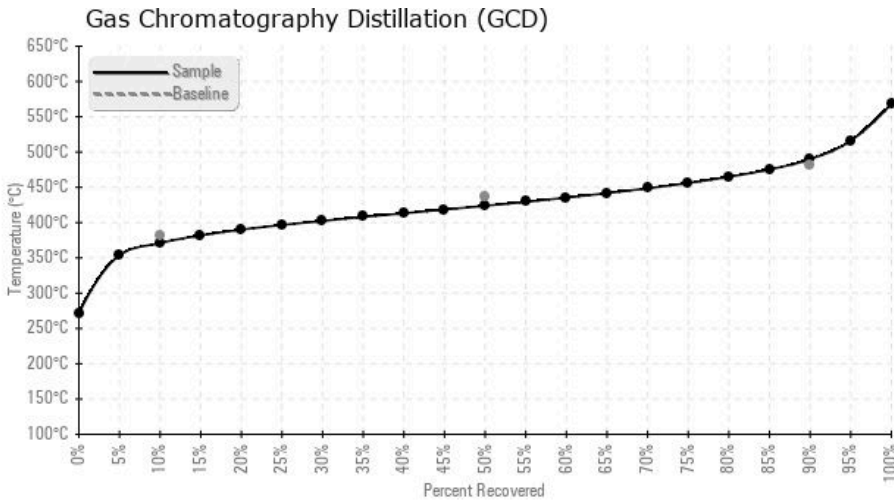
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/10/19	02/19/19	0y	15-12-50-21WS	442 / 228	13.2	36.0	0.054	0.036	700 / 371	795 / 424	914 / 490	1.57
03/06/18	03/13/18	5y		428 / 220	7.5	35.9	0.01	0.029	713 / 378	792 / 422	886 / 474	0.00
02/23/17	03/03/17	0y		432 / 222	11.0	36.0	0.088	0.077	715 / 379	804 / 429	925 / 496	0.50
12/09/15	12/14/15	1y		450 / 232	40.8	35.4	0.04	0.055	733 / 390	807 / 431	903 / 484	0.00
07/29/14	08/06/14	1y	15-12-50-21W5	446 / 230	38.0	35.2	0.177	0.068	736 / 391	811 / 433	916 / 491	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
02/10/19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/06/18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02/23/17	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
12/09/15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/29/14	4	0	0	0	0	0	0	0	0	0	15	1	0	0	0	0	0	0	0	0	1	0	1	1
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

03/06/18	The fluid is in excellent condition and suitable for further use. Please re-sample in 12 months. List system volume and operating temperature at that time.
02/23/17	Although the 90% GCD temperature is slightly high, the fluid is in good condition and suitable for further use. Please verify proper operation of the blanket gas system. This to prevent contact between the fluid and outside air and with that limit fluid oxidation. Please re-sample in 12 months. (GCD) 90% Distillation Point is marginally high.
12/09/15	The fluid is in excellent condition. Please re-sample in 12 months.
07/29/14	The fluid is in good condition. The 90% GCD temperature and TAN show a normal rate of fluid oxidation. Please re-sample in 6 months.

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