

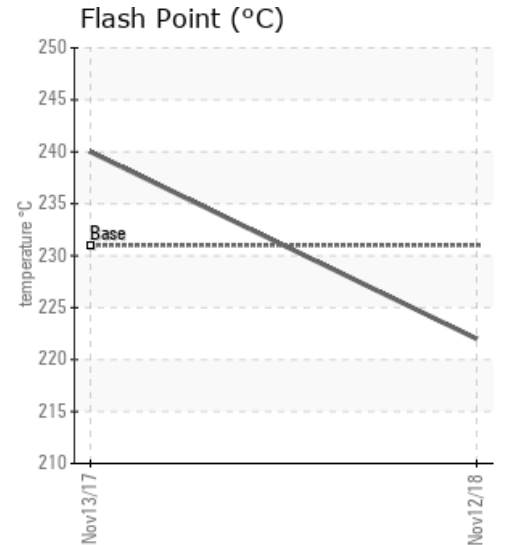
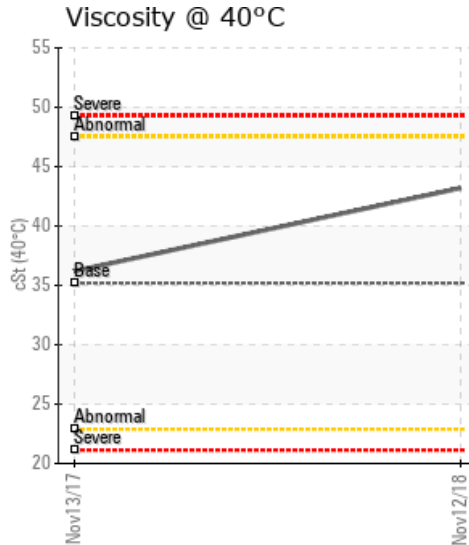
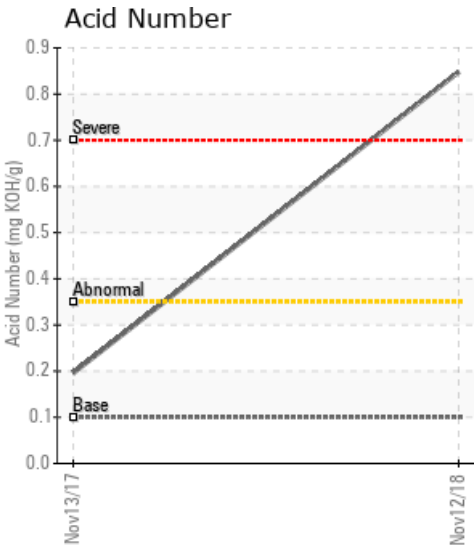
EUROFLOAT

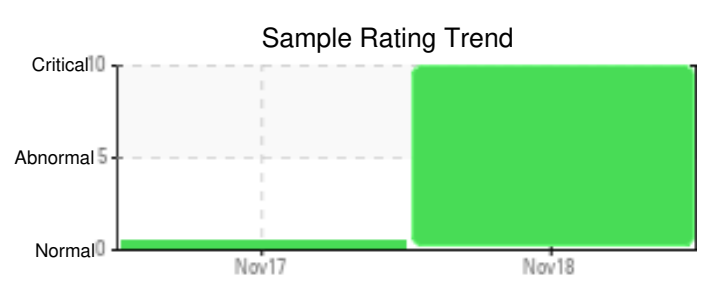
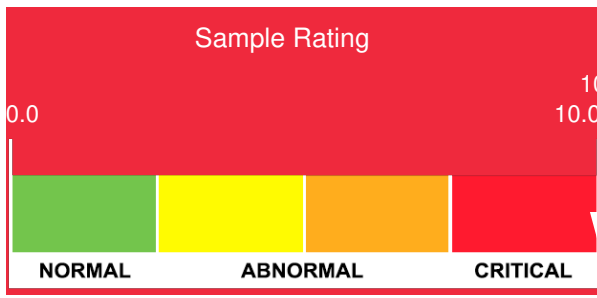
Customer: PTRHTF40084	System Information	Sample Information
IKV TRIBOLOGIE Z1 DE LA GARE ST DONAT SUR L HERBASSE, 26260 France Attn: EDDY AMET Tel: E-Mail: v.delhaie@ikv.fr	System Volume: 1000 ltr Bulk Operating Temp: 482F / 250C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make:	Lab No: 02253872 Analyst: Philip Riley Sample Date: 11/12/18 Received Date: 11/27/18 Completed: 11/29/18

Recommendation: Not logged as a P-C Fluid so unable to give a full diagnosis. Overall condition appears poor with acid number high, insoluble high and various high points on the GCD Distillation. I am unsure as to whether recovery is possible due to not being a P-C Fluid

Comments: PQ levels are abnormal. Iron ppm levels are abnormal. Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. (GCD) 90% Distillation Point is severely low. (GCD) 50% Distillation Point is abnormally low. (GCD) 10% Distillation Point is marginally low.

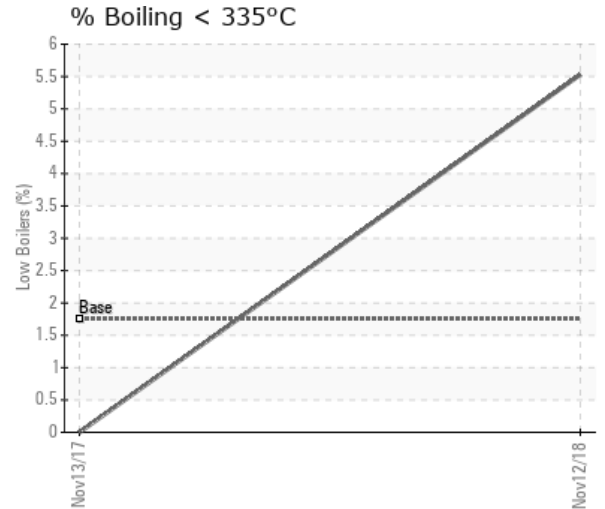
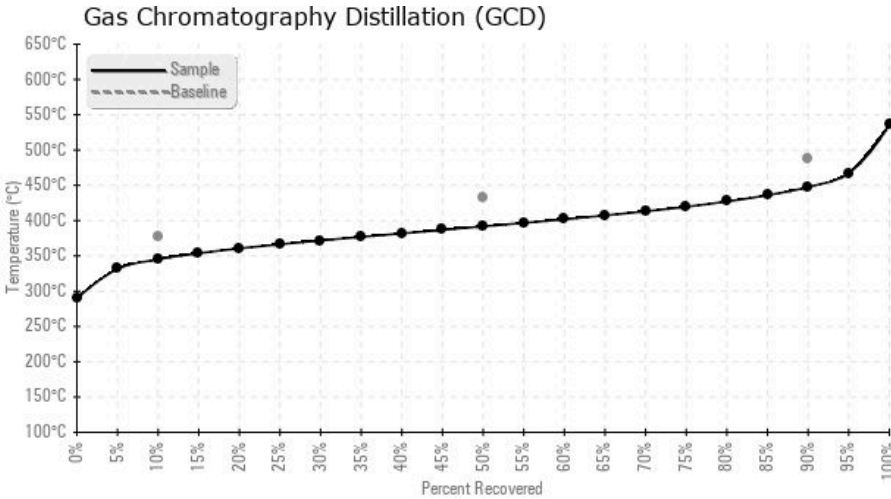
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/12/18	11/27/18	0h		432 / 222	77.8	43.2	0.848	0.929	653 / 345	737 / 392	838 / 448	5.53
11/13/17	11/21/17	0h		464 / 240	560.3	36.2	0.196	0.117	726 / 385	812 / 434	908 / 487	0.00
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
11/12/18	289	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	230	6
11/13/17	68	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	270	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	
11/13/17	All fluid parameters meet specification and expectations. Fit for further use according to this sample

Petro-Canada makes no representation or warranty of any kind, either express or implied, as to the accuracy or completeness of the analysis and assumes no responsibility and shall have no liability whatsoever with respect to such analysis, or a party's use of it. Petro-Canada is a division of HollyFrontier Corporation.