

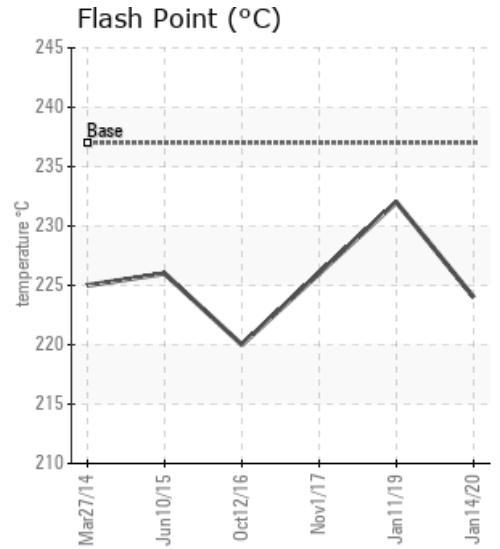
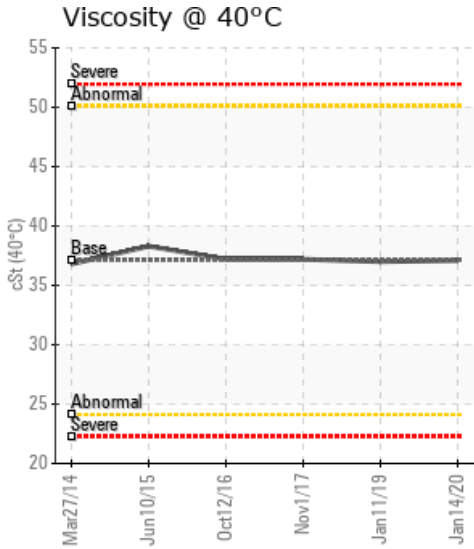
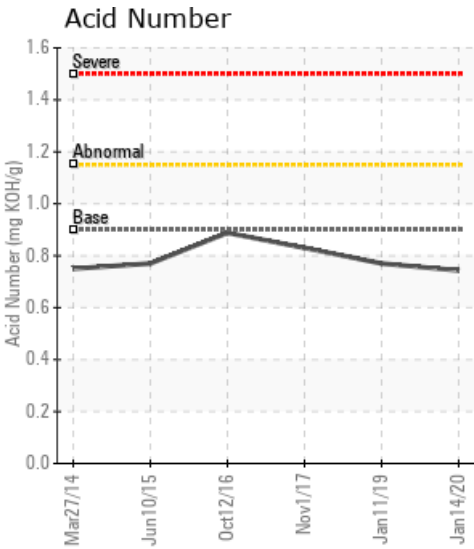
TPC1650LN

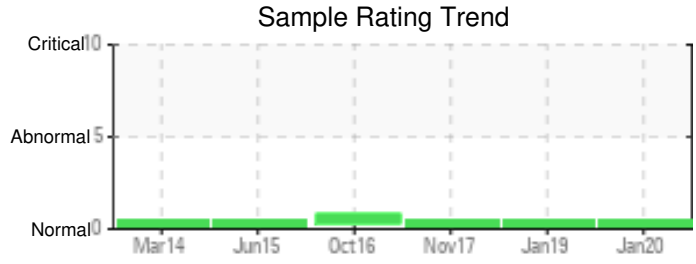
Customer: PTRHTF40111	System Information	Sample Information
CODRICO ROTTERDAM B.V RYNHAVEN 2.2.15 ROTTERDAM, 3072AJ Netherlands Attn: Wilbert Snijers Tel: E-Mail: w.snijers@klt.nl	System Volume: 3600 ltr Bulk Operating Temp: 392F / 200C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02332802 Analyst: Philip Riley Sample Date: 01/14/20 Received Date: 01/20/20 Completed: 01/26/20 Philip Riley philip.riley@petrocanadalsp.com

Recommendation: All parameters test within normal limits and fluid fit for further use. Note there is a low molecule peak evident but does not seem to affect the COC Flash Pt. Please resample in 12 months

Comments:

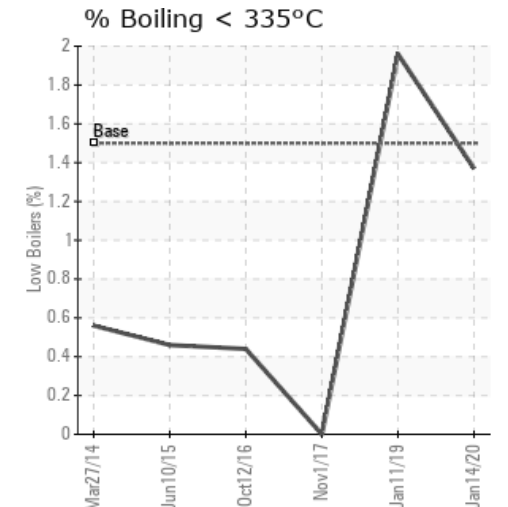
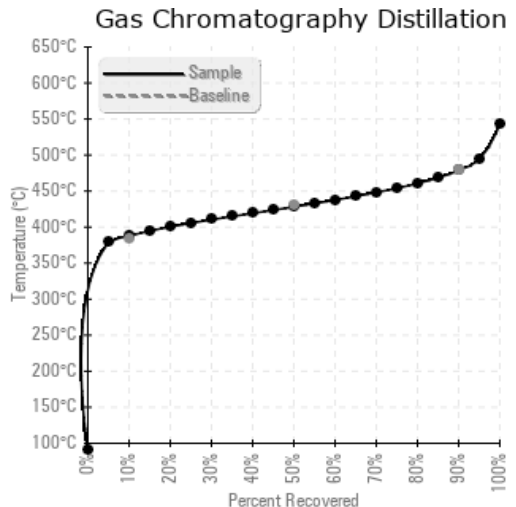
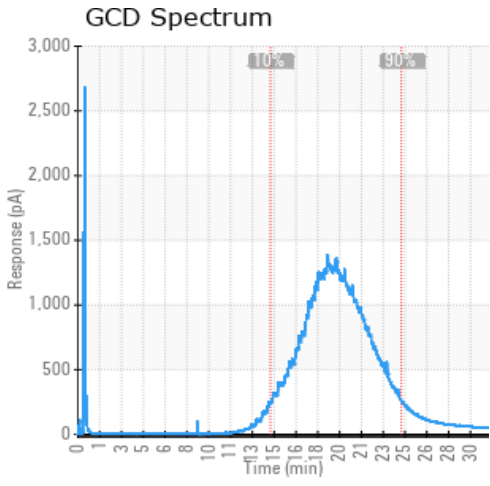
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/14/20	01/20/20	6y		435 / 224	14.0	37.1	0.743	0.077	730 / 388	803 / 428	893 / 479	1.37
01/11/19	01/22/19	0y		450 / 232	6.3	37.0	0.77	0.040	679 / 360	775 / 413	881 / 472	1.96
11/01/17	11/06/17	0y		439 / 226	9.4	37.2	0.830	0.032	737 / 392	807 / 431	902 / 484	0.00
10/12/16	10/24/16	3y	PTRHTF40111	428 / 220	11.1	37.2	0.888	0.037	719 / 382	815 / 435	914 / 490	0.44
06/10/15	10/27/15	2y		439 / 226	0.00	38.3	0.77	0.039	719 / 382	811 / 433	910 / 488	0.46
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5





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
01/14/20	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177	1
01/11/19	41	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	184	2
11/01/17	36	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	225	2
10/12/16	31	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	213	2
06/10/15	26	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	215	2
Baseline Data			0	0						0			0	0					0				230	

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



Historical Comments

01/11/19	Fluid is in good conditions fully suitable for farther operation.
11/01/17	Results are normal, the fluid good for farther use.
10/12/16	Oil appears to be in good condition and fit for further service. (GCD) 90% Distillation Point is marginally high.
06/10/15	Oil appears to be in good condition and fit for further service. Sample at next scheduled maintenance interval.

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