

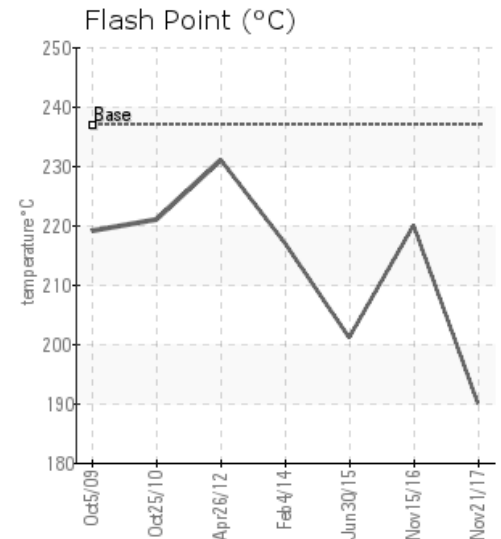
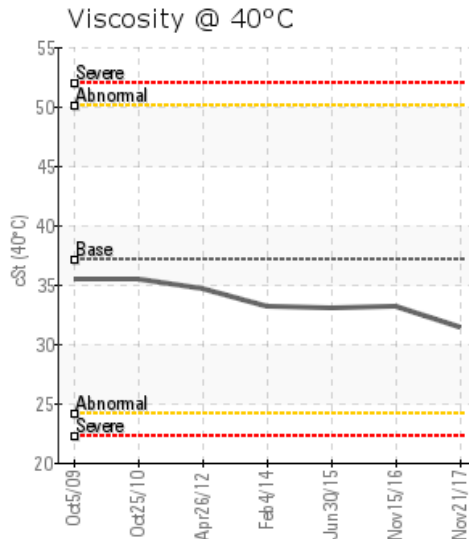
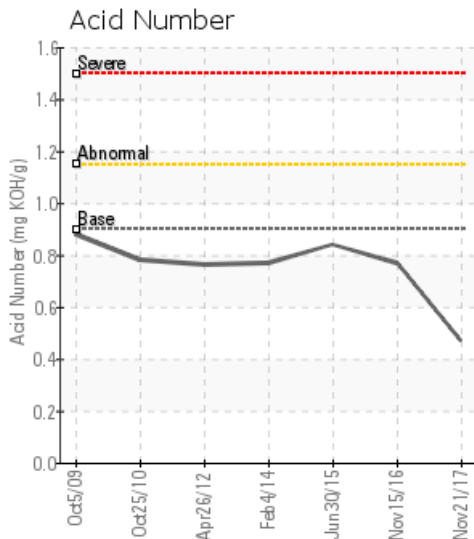
WANSON TPC-600HB

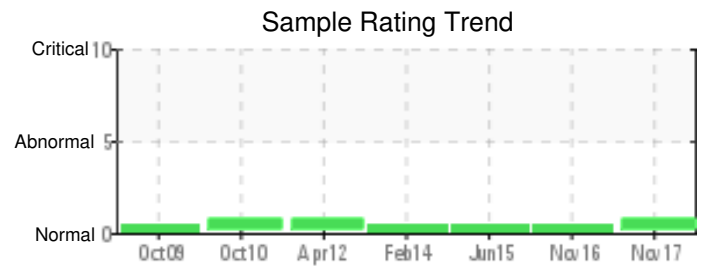
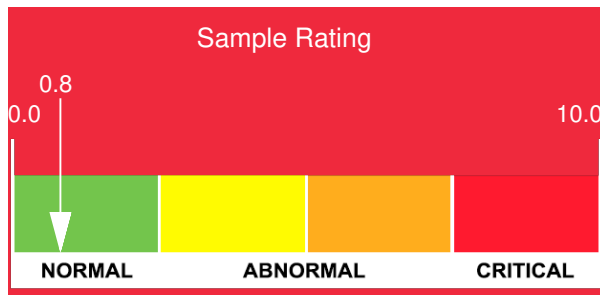
Customer: PTRHTF40071	System Information	Sample Information
ELBURG GLOBAL VEGETABLE OILS VAN KINSBERGENSTRAAT 5 ELBURG, 8081 CL NETHERLANDS Attn: Maintenance Manager Tel: E-Mail:	System Volume: 700 ltr Bulk Operating Temp: 260F / 127C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02184194 Analyst: Philip Riley Sample Date: 11/21/17 Received Date: 11/27/17 Completed: 11/29/17 To discuss this report contact Philip Riley at (440)124-4378171

Recommendation: COC Flash point borderline low. Very high level of light molecules, if there is a way to release these safely it should be explored, it may raise the flash point. Stepo change down from COC Flash last year so raises some concern, especially as the fluid is 9 years in system. Monitor closely and if not able to de-gas, consider fluid change at next convenient point with build up of light molecules. All other parameters are OK

Comments: COC Flash Point is abnormally low.

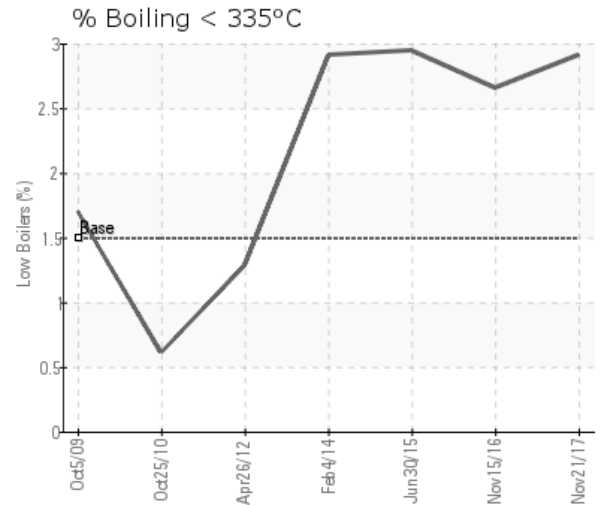
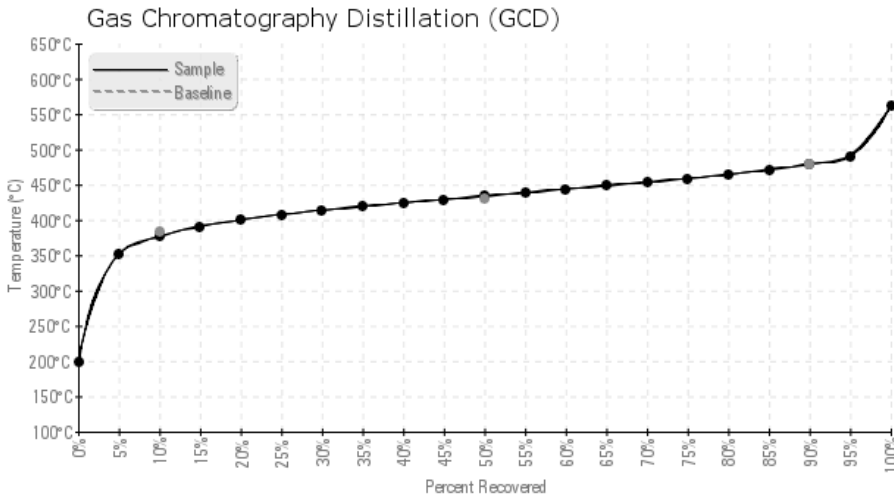
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/21/17	11/27/17	9y		374 / 190	11.8	31.4	0.47	0.052	710 / 377	813 / 434	894 / 479	2.91
11/15/16	11/24/16	7y		428 / 220	41.7	33.2	0.771	0.117	707 / 375	815 / 435	904 / 484	2.66
06/30/15	07/03/15	6y		394 / 201	0.00	33.0	0.84	0.056	706 / 374	820 / 438	914 / 490	2.95
02/04/14	02/07/14	6y	PTRHTF40071	423 / 217	47.7	33.2	0.77	0.049	706 / 374	815 / 435	898 / 481	2.91
04/26/12	05/14/12	4y	NA	448 / 231	42	34.6	0.76	0.011	721 / 383	815 / 435	902 / 483	1.287
10/25/10	11/22/10	2y		430 / 221	31	35.5	0.78	0.014	725 / 385	816 / 435	897 / 481	0.612
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
11/21/17	8	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	7
11/15/16	19	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	44	18
06/30/15	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	28	0
02/04/14	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	20	2
04/26/12	1	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	21	0
10/25/10	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	37	4
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

11/15/16	The oil is in good condition and fit for service. Suggest sample at next scheduled maintenance interval.
06/30/15	Oil appears to be in good condition and fit for further service. Sample at next scheduled maintenance interval.
02/04/14	Oil appears to be in very good condition. Sample at next scheduled maintenance service interval.
04/26/12	Oil is fit for further service
10/25/10	

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