

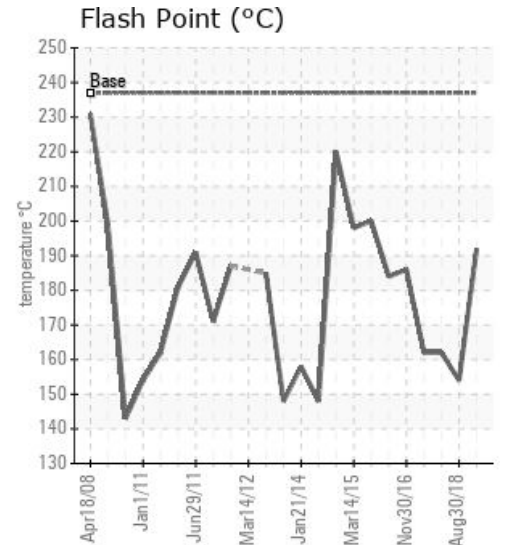
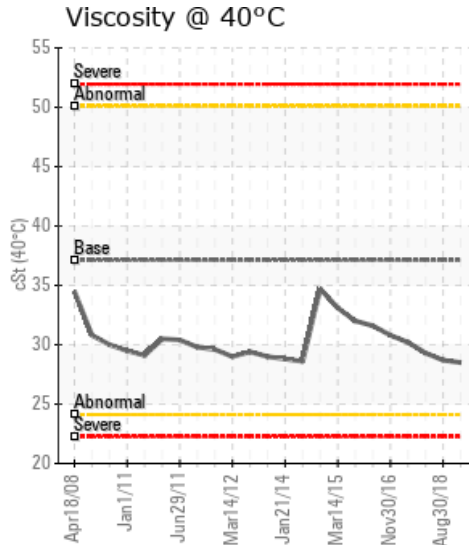
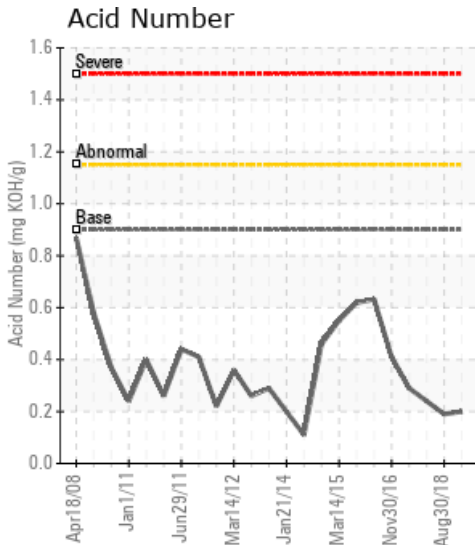
WANSON EPC 2500 ES

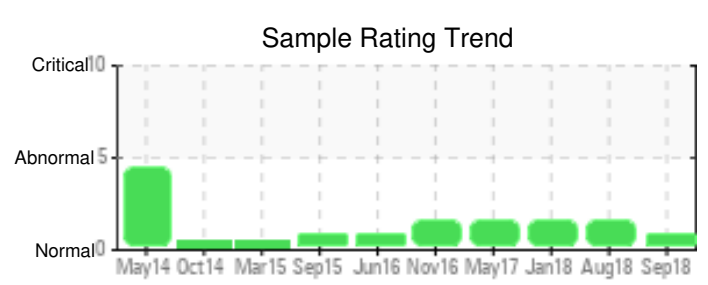
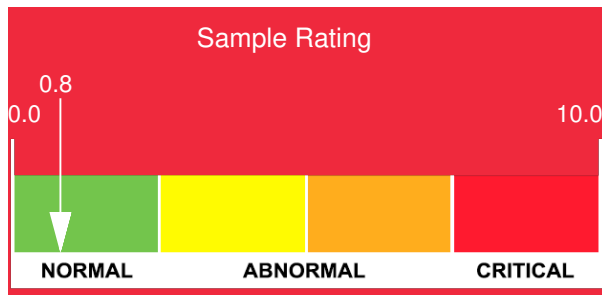
Customer: PTRHTF40020	System Information	Sample Information
LE DUC FINE FOOD BV MEESTER SNIJDERWEG 18 ZUID-HOLLAND STELLEN DAM, ZUI NETHERLANDS Attn: Wilbert Snijers Tel: E-Mail: w.snijers@klt.nl	System Volume: 1500 ltr Bulk Operating Temp: 265F / 129C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02243237 Analyst: Philip Riley Sample Date: 09/28/18 Received Date: 10/04/18 Completed: 10/05/18 To discuss this report contact Philip Riley at (440)124-4378171

Recommendation: Looks to have been changed from previous sample. COC Flash Point already low and if safe to do so recommend venting system if possible to remove light molecules that have potentially brought flash point down. All other parameters within allowable limits.

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	%
09/28/18	10/04/18	0y		378 / 192	23.8	28.5	0.20	0.236	699 / 370	796 / 425	889 / 476	3.58
08/30/18	09/04/18	4y		309 / 154	24.5	28.7	0.19	0.115	684 / 362	798 / 426	898 / 481	5.26
01/31/18	02/12/18	3y		324 / 162	19.3	29.3	0.24	0.037	732 / 389	814 / 434	905 / 485	0.07
05/31/17	06/02/17	0y		324 / 162	13.3	30.2	0.29	0.329	694 / 368	808 / 431	906 / 485	4.53
11/30/16	12/08/16	27y		367 / 186	20.8	30.8	0.41	0.316	703 / 373	811 / 433	914 / 490	3.57
06/24/16	07/05/16	18y	PTRHTF40020	363 / 184	21.6	31.6	0.632	0.093	712 / 378	814 / 434	909 / 487	2.49
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5

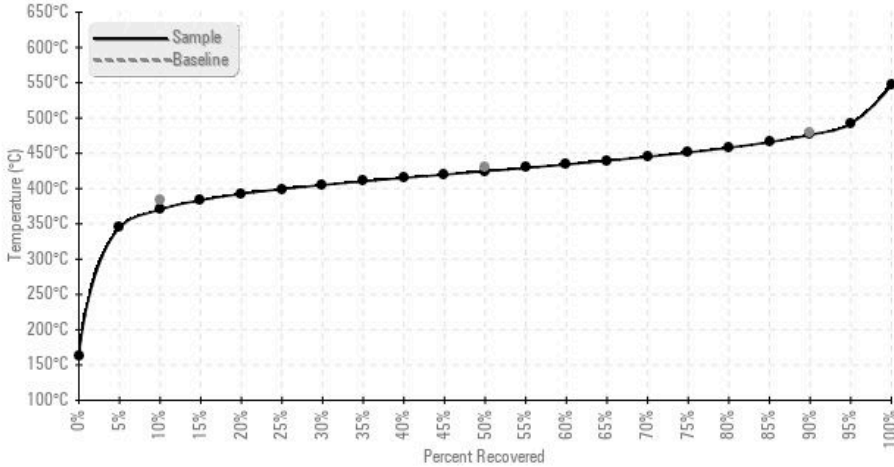




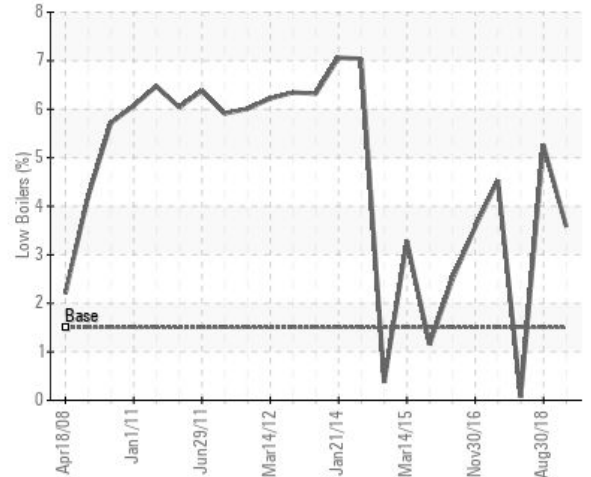
Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
09/28/18	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
08/30/18	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
01/31/18	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0
05/31/17	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0
11/30/16	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0
06/24/16	22	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0
Baseline Data			0	0						0			0	0					0				230	

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

Gas Chromatography Distillation (GCD)



% Boiling < 335°C



Historical Comments

08/30/18	COC Flash Point is very low indeed. Viscosity is trending slightly downwards also. Recommend the fluid is changed COC Flash Point is severely low.
01/31/18	COC Flash Point significantly lower than expected, confirming also previous result. Looking at the GCD the system has potentially been vented, there look to be fewer light end molecules. This has however had no impact on the COC Flash Point. All other parameters look to be improved from previous result. As this is a repeat result of the previous flash point, primary recommendation is for a system change out including a flush COC Flash Point is severely low.
05/31/17	Oil appears to be fit for further service. Suggest sample at next scheduled maintenance interval. COC Flash Point is severely low.
11/30/16	Oil appears to be fit for further service. Sample at next scheduled maintenance interval. COC Flash Point is abnormally low. (GCD) 90% Distillation Point is marginally high.
06/24/16	Oil appears to be in good condition and fit for further service. Suggest sample at next scheduled maintenance interval. COC Flash Point is abnormally low.

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