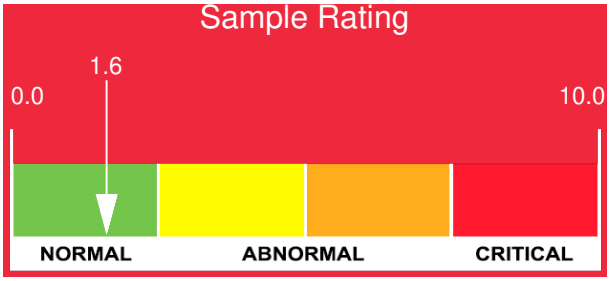
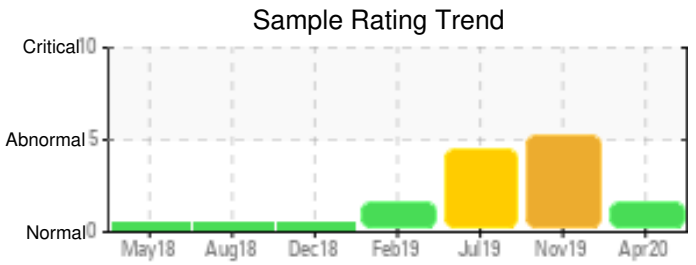




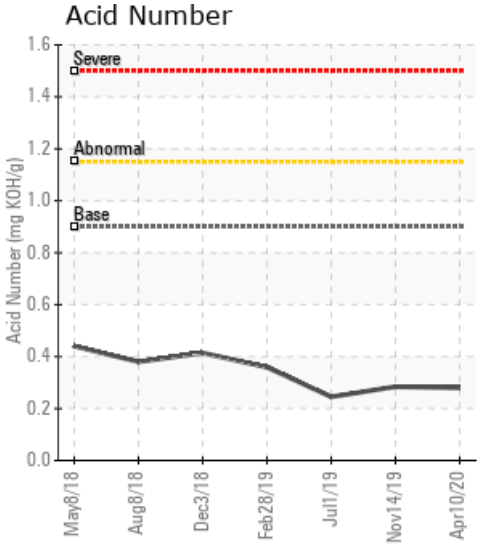
WANSON BH/INC 1200

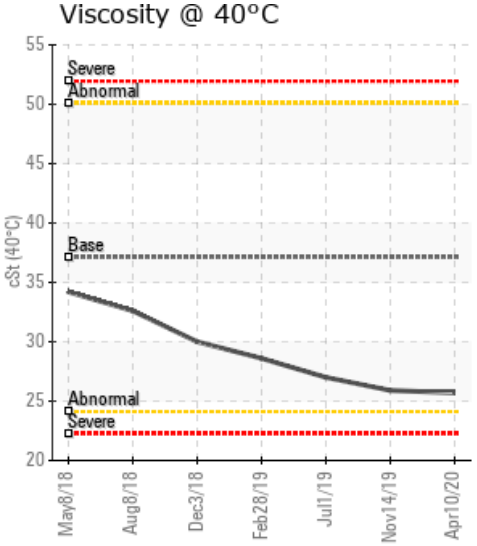
Customer: PTRHTF40127	System Information	Sample Information
Dalco Foods B.V Everdenberg 50 Oosterhout, 4902TT Netherlands Attn: Wilbert Snijers Tel: E-Mail: w.snijers@klt.nl	System Volume: 4200 gal Bulk Operating Temp: 518F / 270C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make: WANSON	Lab No: 02349443 Analyst: Matthias Voss Sample Date: 04/10/20 Received Date: 04/17/20 Completed: 05/07/20 Matthias Voss Matthias.Voss@petrocanadalsp.com

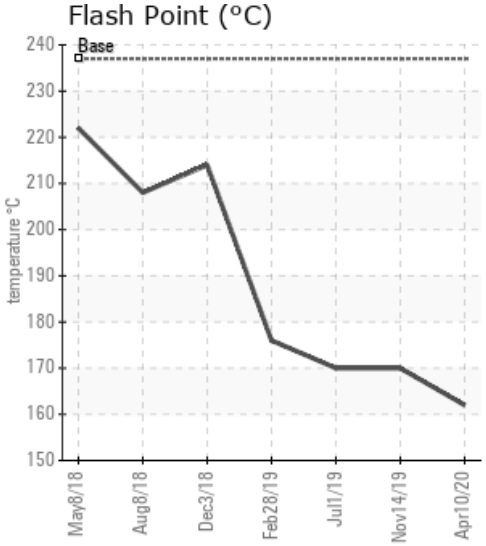
Recommendation: Whilst sample rating looks to have recovered, other parameters, namely Flash Point and viscosity continue to decline. Viscosity has decreased and evidence of cracking of the oil (shape of curve), also reducing flash point. Please try safe venting and check for recovery. Otherwise, operating at 270C is well above the current flash point which has reduced down to 162C. Several warnings now on flash point and if recovery attempts have failed, recommend to look towards change. Viscosity reduction is consistent and the value is distant from what we expect to see, it supports the theory of lower viscosity molecules being produced.

Comments: COC Flash Point is severely low.

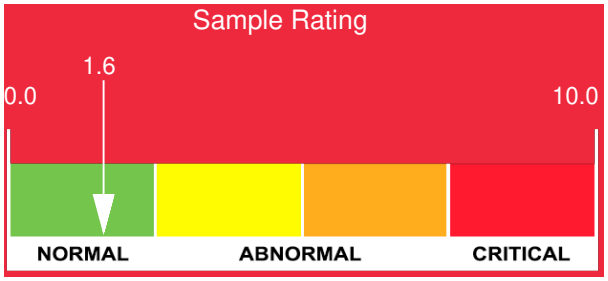
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/10/20	04/17/20	2y		324 / 162	19.3	25.7	0.28	0.065	677 / 358	800 / 427	898 / 481	6.44
11/14/19	11/26/19	2y		338 / 170	10.4	25.9	0.284	0.106	616 / 325	780 / 416	883 / 473	10.68
07/01/19	07/09/19	7y		338 / 170	25.6	27.0	0.245	0.079	640 / 338	782 / 417	886 / 475	9.18
02/28/19	03/06/19	9y		349 / 176	18.2	28.6	0.359	0.111	684 / 362	791 / 422	887 / 475	5.18
12/03/18	12/11/18	0y		417 / 214	17.5	30.0	0.414	0.067	702 / 372	801 / 427	897 / 481	3.65
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5

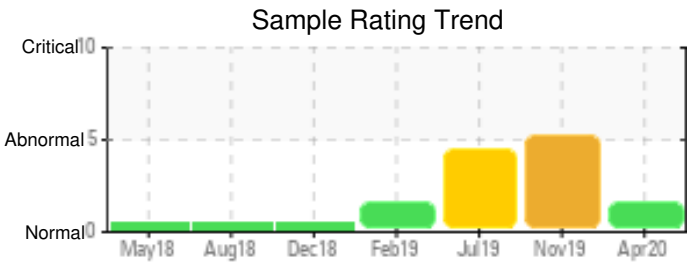






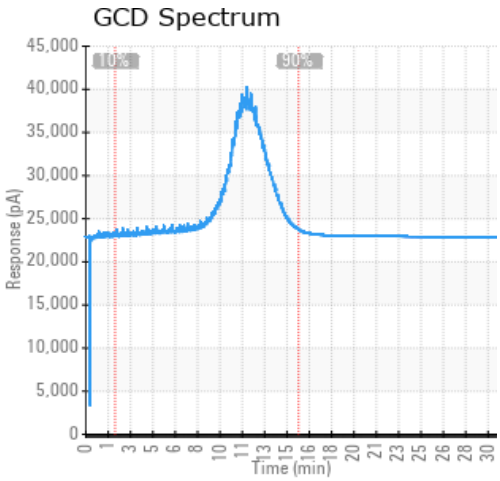
PETRO-CANADA LUBRICANTS

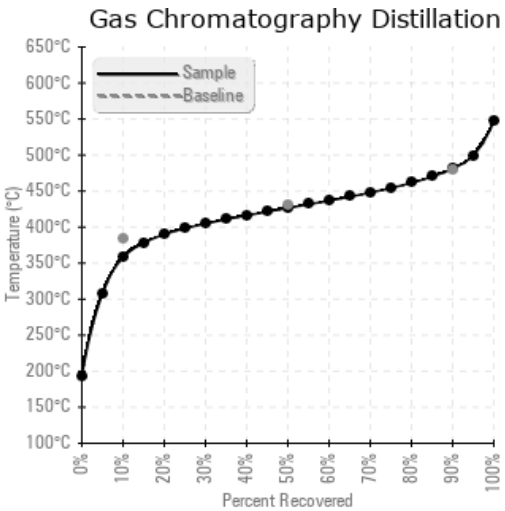


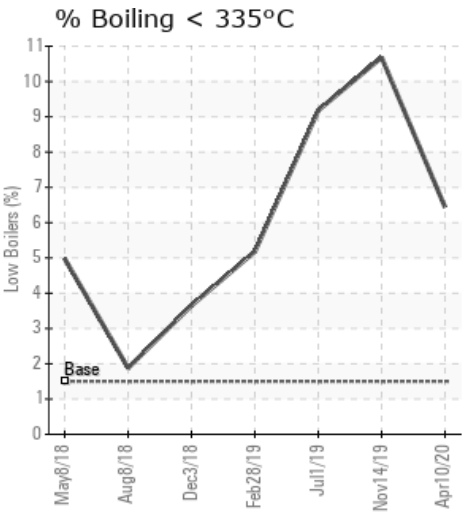


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
04/10/20	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
11/14/19	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0
07/01/19	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0
02/28/19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
12/03/18	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0
Baseline Data			0	0						0			0	0					0				230	

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







Historical Comments

11/14/19	Sample continues to deteriorate. How long has the system been running as there are inconsistent values of age input against previous samples. Viscosity has decreased and evidence of cracking of the oil (shape of curve), also reducing flash point and 10% distillation. Please try safe venting and check for recovery. Otherwise, operating at 270C is well above the current flash point which has reduced down to 170C. Recommned venting and re-sample to check recovery. If continues to deteriorate look towards a change. Please, again, clarify the actual operating time as the sequence does not make sense in previous samples (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. (GCD) % < 335°C is marginally high.
07/01/19	FLuid age look sot have reduced? Signs of low flash point and steadily reducing viscosity if trending correct with fluid ages. If the fluid can be safely vented it may recover the flash point, otherwise re-sample in 6 months to check on the fluid degradation COC Flash Point is severely low. (GCD) 10% Distillation Point is abnormally low. (GCD) % < 335°C is marginally high.
02/28/19	Flash Point (COC) is very low and off specification. Recommend venting the system if it is safe to do so and resample after venting to see how the oil charge has recovered flash point. COC Flash Point is severely low.
12/03/18	FLuid looks in good condition with respect to expected parameters. Some more clarity required on the unit age, time on oil etc as this is not consistent with previous samples. Based on result set the fluid is fit for further use and should be sampled at the next scheduled interval