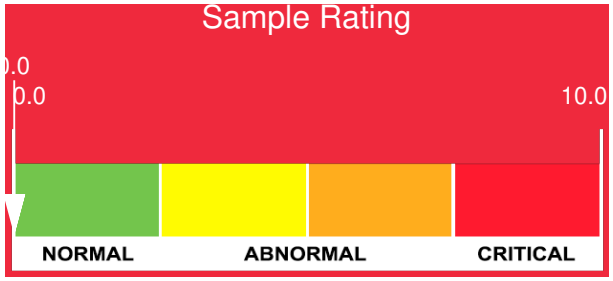
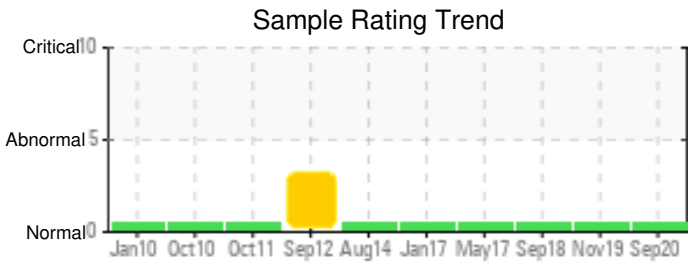




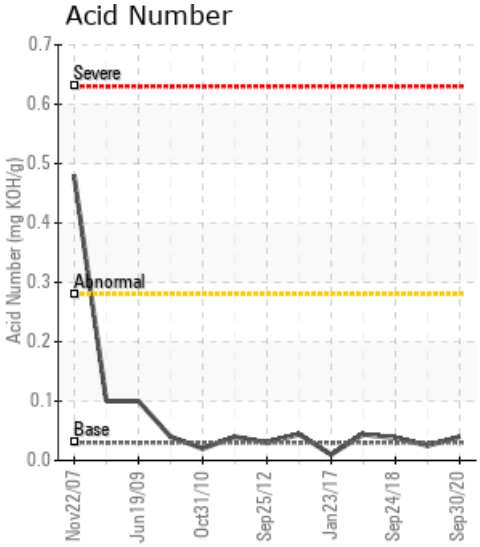
ENERGY PLANT

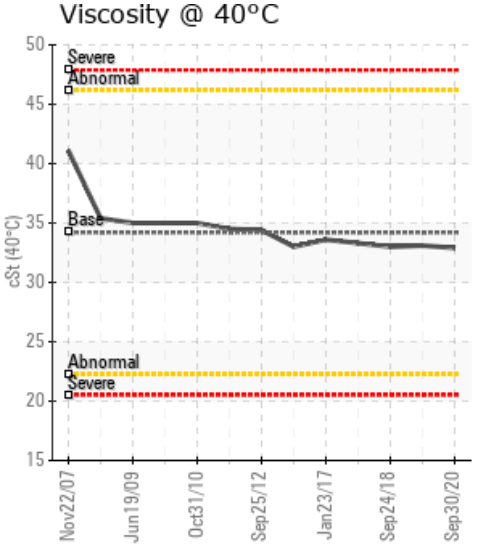
Customer: PTRHTF20080	System Information	Sample Information
WEST FRASER TIMBER CO LTD Hwy 584 Bag #1 SUNDRE, AB T0M 1X0 Canada Attn: BARRY BAY Tel: (403)638-1189 E-Mail: BARRY.BAY@WESTFRASER.COM	System Volume: 110000 ltr Bulk Operating Temp: 495F / 257C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: DELTECH	Lab No: 02380978 Analyst: Gordon Susinski Sample Date: 09/30/20 Received Date: 10/13/20 Completed: 10/15/20 Gordon Susinski gord.susinski@petrocanadalsp.com

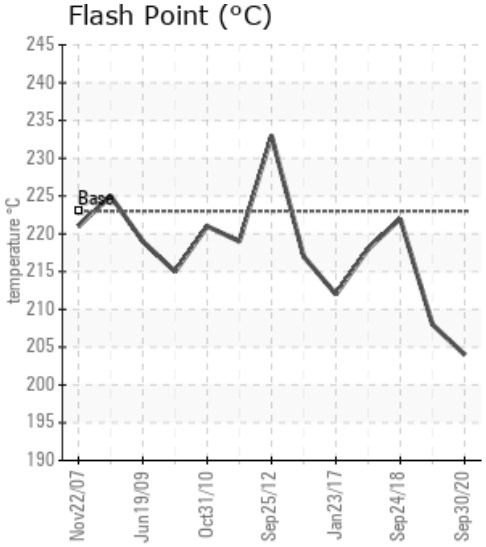
Recommendation: Although results are normal, note minor bump in the sulphur & the slight reduction in the initial boiling point. The gas chromatography results indicate the presence of a lighter hydrocarbon. Resample at the next sample period and continue to monitor the system.

Comments:

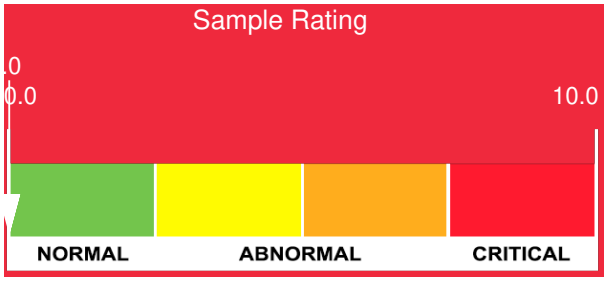
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
09/30/20	10/13/20	13y	OIL SAMPLE STATION	399 / 204	20.7	32.9	0.04	0.044	704 / 374	810 / 432	909 / 487	2.40
11/13/19	11/19/19	12y	SAMPLE STATION	406 / 208	14.9	33.1	0.025	0.050	681 / 361	792 / 422	892 / 478	3.89
09/24/18	10/02/18	11y		432 / 222	14.0	33.0	0.038	0.049	712 / 378	809 / 432	903 / 484	0.00
05/08/17	05/12/17	10y	SUCTION - BACKUP PMP	424 / 218	10.1	33.3	0.044	0.066	704 / 373	814 / 434	916 / 491	1.97
01/23/17	01/27/17	10y	FILL DRAIN LINE	414 / 212	27.6	33.6	0.01	0.033	706 / 375	809 / 431	907 / 486	1.01
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00

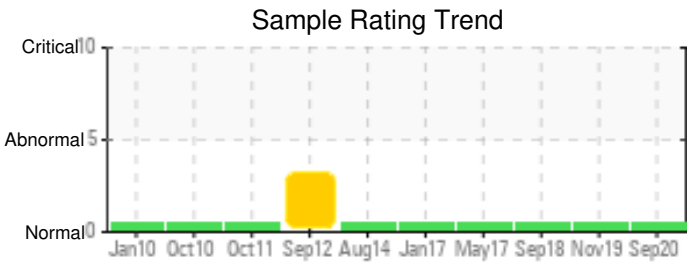






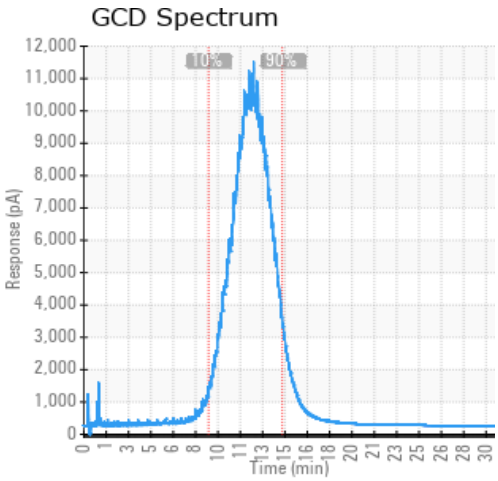
PETRO-CANADA LUBRICANTS

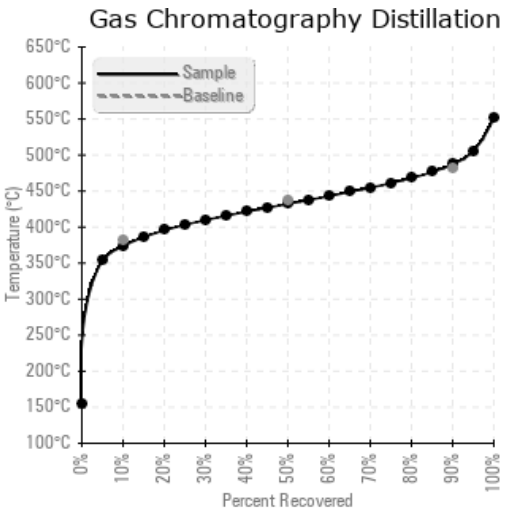


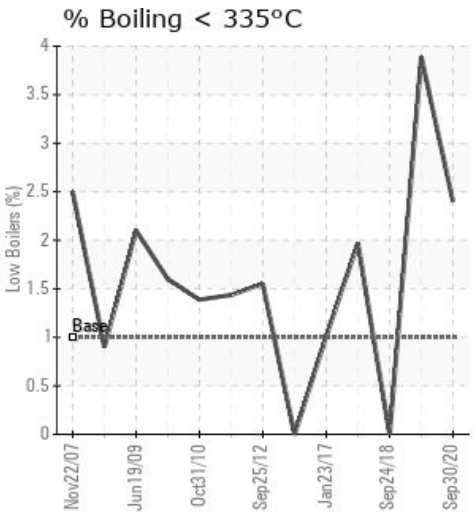


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
09/30/20	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/13/19	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/24/18	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05/08/17	12	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
01/23/17	13	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

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







Historical Comments

11/13/19	Results are normal. Resample at the next interval to monitor a reduction in the COC flash point, and the increase in the GCD % <335C.
09/24/18	Results are normal.
05/08/17	Note the initial boiling point reduction from previous samples. Although this result is within normal limits, the reduction in IBP should be noted.A lower initial boiling point indicates that low boilers maybe present in the sample. This condition is normally due to thermal degradation of the sample, however, there is no other analysis result to support that this degradation has taken place. This result can typically be corroborated by a lower flash point, which in this case it cannot. This leads us to believe that the result may be too small to measure by the flash point test, or perhaps the result may be due to some other deviation? This may also be interpreted as the beginning of thermal degradation process of the system.Low boilers can lead to pump cavitation.All other results are within normal guidelines.We suggest re sampling in 3 months' time to corroborate the reduced IBP result.
01/23/17	Results are normal. Resample at the next PM interval.