

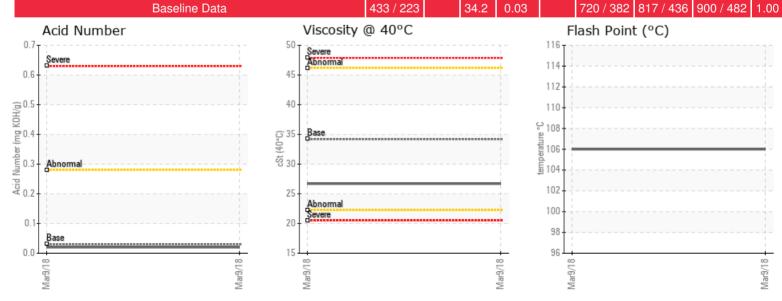
## H3750

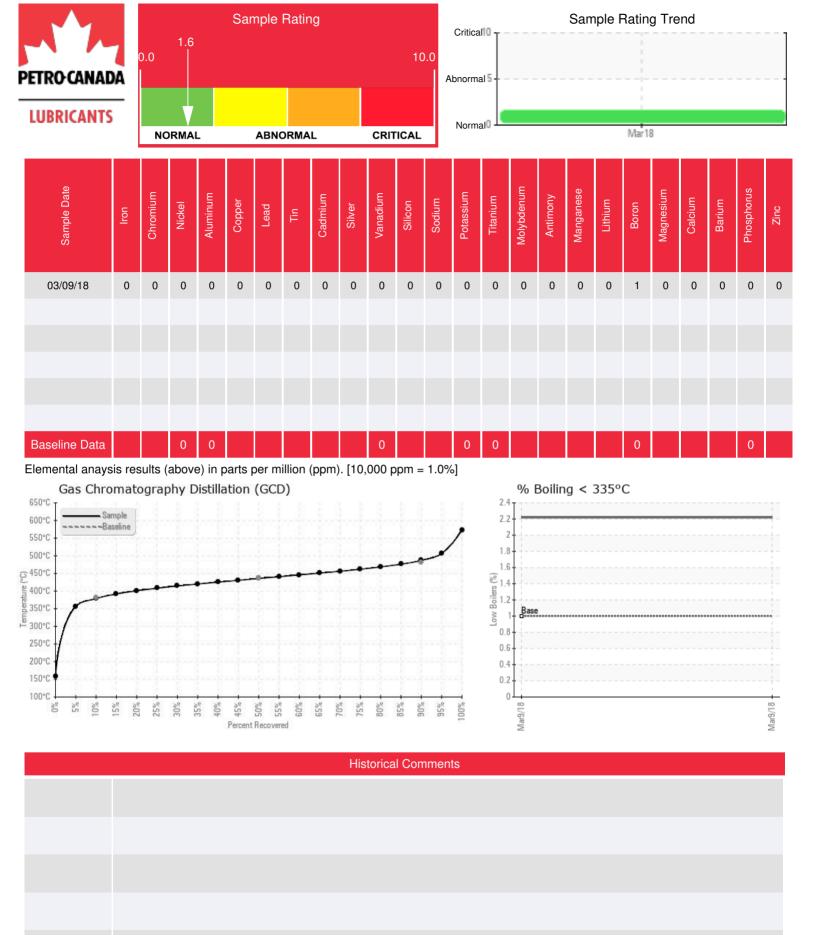
Customer: PTRHTF20058	System Information	Sample Information				
CNRL	System Volume: 3000 Itr	Lab No: 02213408				
LSD 14-23-58-26 W5	Bulk Operating Temp: 428F / 220C	Analyst: Clinton Buhler				
LELAND, AB Canada	Heating Source:	Sample Date: 03/09/18				
Attn: KEN SHAKOTKO	Blanket:	Received Date: 05/01/18				
Tel: (780)865-2742	Fluid: PETRO CANADA PETRO-THERM	Completed: 05/09/18				
E-Mail: ken.shakotko@dvn.com	Make: WIESLOCH					

Recommendation: Please note severely reduced flash point and reduced viscosity and 10% distillation point. % boil off less than 335C is 2x new fluid value. All of these values can be an indication of ongoing thermal degradation, too high of blanket gas pressure or contamination with another fluid. Thorough venting of the expansion tank is required to release the low boiling vapors from the fluid to help restore the properties noted above. During venting, please turn off blanket gas but turn back on in-between venting sessions. Ensure blanket gas pressure is between 2-3 psi. After very thorough venting, please re-sample in 6 monthsReduced flash point can be a safety concern

Comments: COC Flash Point was tested two times and is severely low (84°C and 106°C).

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	%
03/09/18	05/01/18	10y		223 / 106	42.9	26.7	0.02	0.061	714 / 379	816 / 436	908 / 487	2.22





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