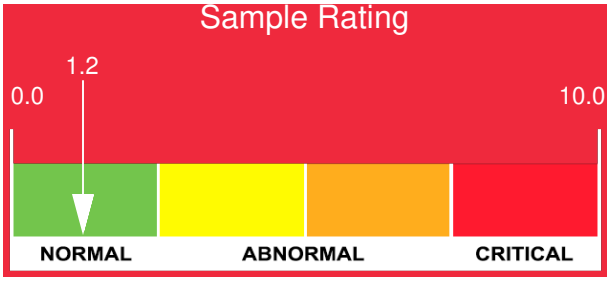
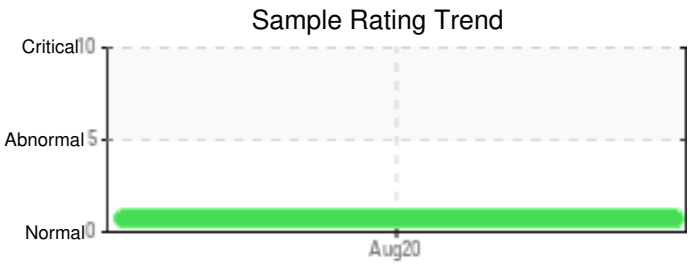




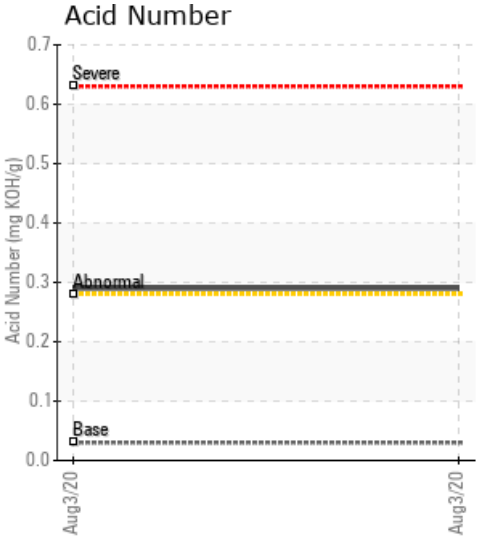
[PROCESSING ROOM] REACTOR 341

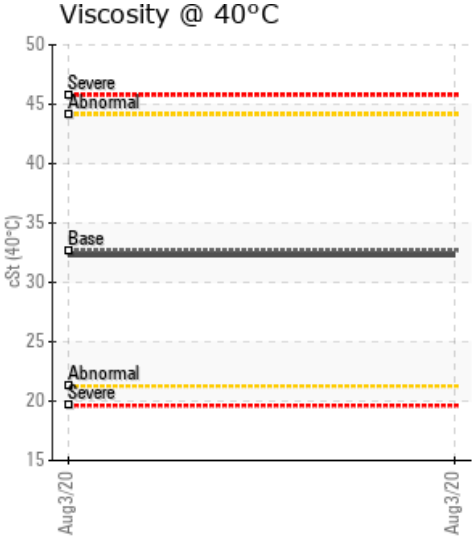
Customer: PTRHTF30155	System Information	Sample Information
HB Fuller (Royal Adhesive & Sealant... 266 Humberline Dr Toronto, ON M9W 5X1 Canada Attn: Rajesh Kumar Tel: (416)679-5676 E-Mail: rajesh.kumar@hbfuller.com	System Volume: 1500 g Bulk Operating Temp: 302F / 150C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: STERLCO	Lab No: 02367979 Analyst: Lynn Billings Sample Date: 08/03/20 Received Date: 07/31/20 Completed: 08/06/20 Lynn Billings lynn.billings@petrocanadalsp.com

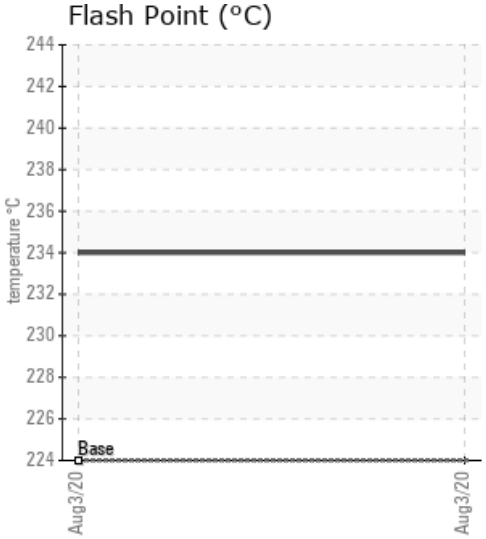
Recommendation: Recommendation: The sample shows a slightly high level of acids as shown with the acid number of 0.29. Oxidation causes the oil to form acids. Oil degrading by reacting with oxygen from air in the expansion tank without nitrogen blanketing (not sure whether you have nitrogen blanketing). Depending on the volume of the system, if the acid number continues to increase, a partial oil replacement (sweeten) is a possibility to reduce acid number, postpone fouling and costly shutdown. The GCD profile is consistent with Calflo AF, except for a few low boilers. The viscosity and water are consistent as well. Wear metals indicate some copper, iron and lead. The flash point is fine and there appears to be some pentane insolubles (0.086). Always ensure that the sample line is flushed thoroughly to remove any insolubles that may have accumulated over time, before the sample is taken. We recommend to re-sample in six months, to give us some additionally data since this system has been running for approximately six years, without any sample analysis.

Comments: Acid Number (AN) is abnormally high.

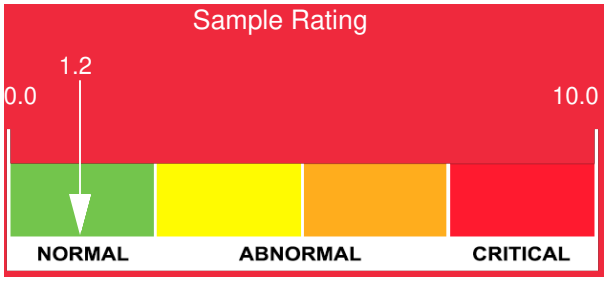
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/03/20	07/31/20	7y	REACTOR JACKET	453 / 234	2.6	32.3	0.29	0.086	705 / 374	802 / 428	902 / 483	1.22
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5

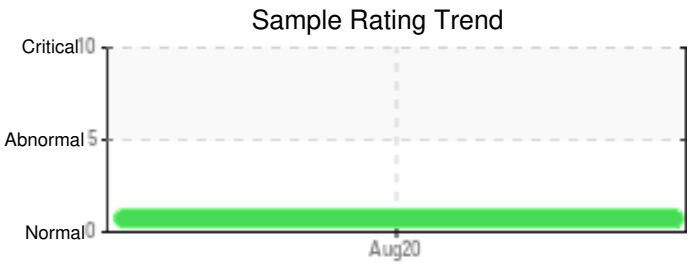






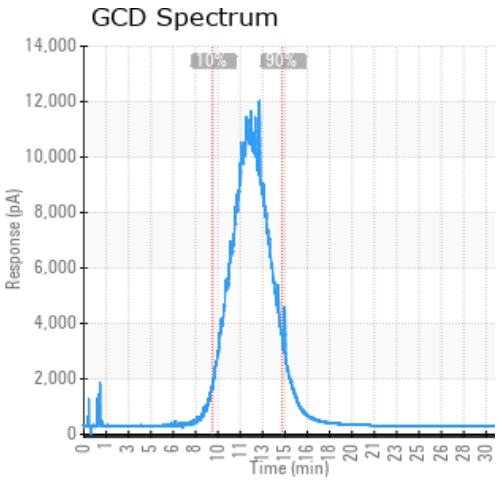
PETRO-CANADA LUBRICANTS

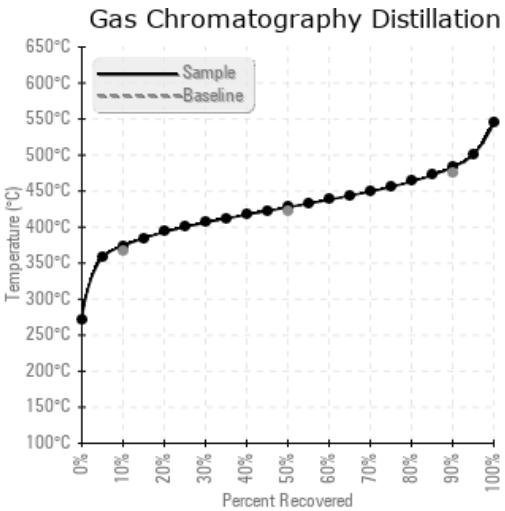


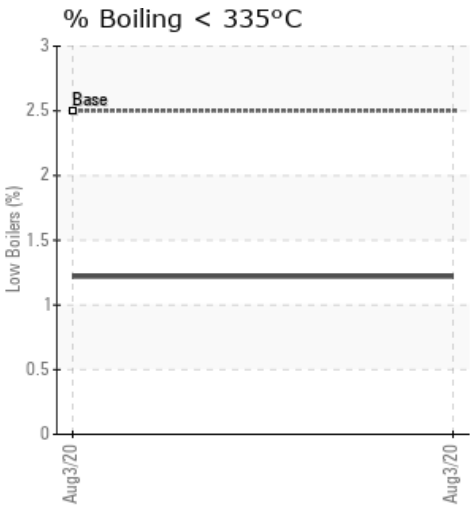


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
08/03/20	5	0	0	0	6	2	0	0	0	0	4	0	1	0	0	0	0	0	0	0	1	0	218	3
Baseline Data			0	0						0			0	0					0				270	

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







Historical Comments
