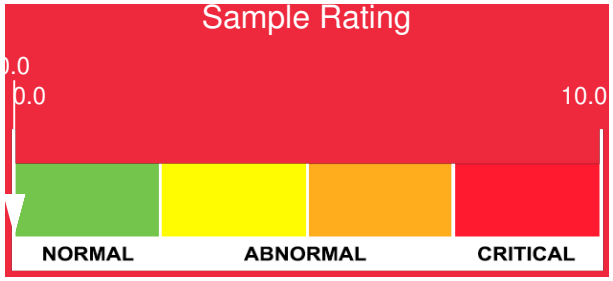
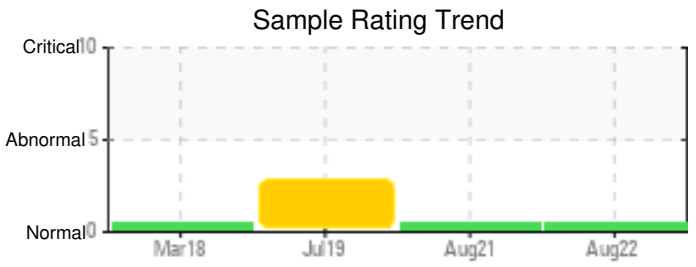




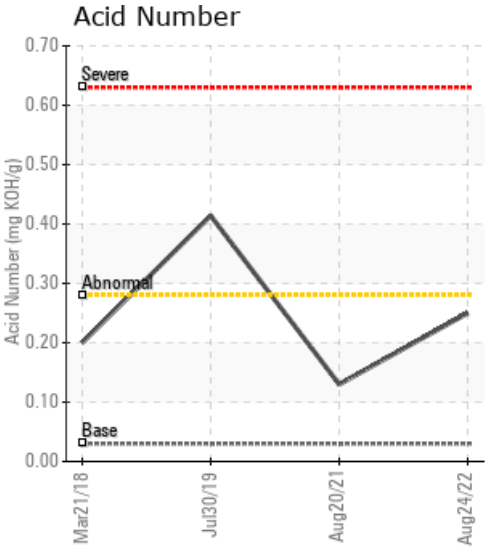
B6/B8 HOT OIL SYSTEM

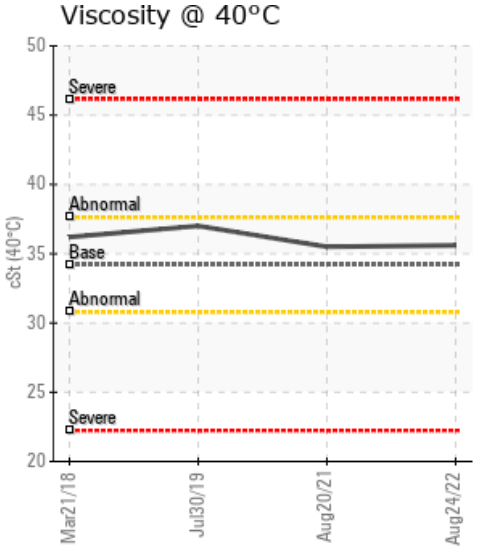
Customer: PTRHTF30052	System Information	Sample Information
I G MACHINES AND FIBER 87 ORENDA RD. BRAMPTON, ON L6W 1V7 Canada Attn: Alan Zhao Tel: (905)457-2880 E-Mail: alan.zhao@iko.com	System Volume: 16000 ltr Bulk Operating Temp: 392F / 200C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: IND. CUMBUSTION & EQ	Lab No: 02507265 Analyst: Yen Garcia Sample Date: 08/24/22 Received Date: 08/25/22 Completed: 08/29/22 Yen Garcia yen.garcia@hollyfrontier.com

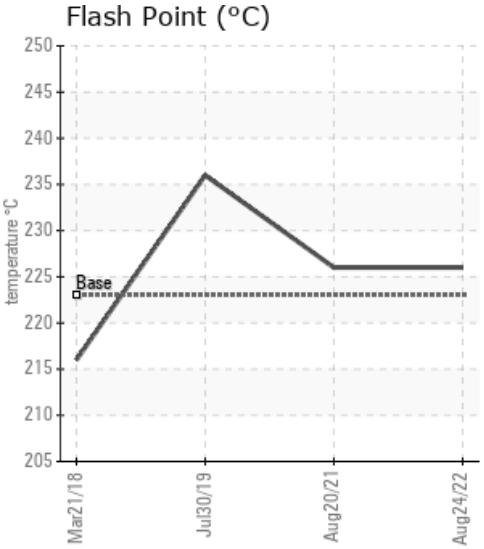
Recommendation: No action needed at this time.

Comments:

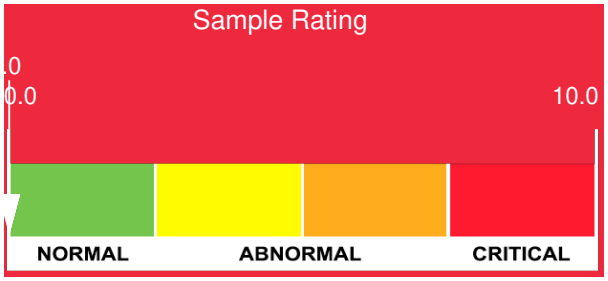
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/24/22	08/25/22	0.0y		439 / 226	10.8	35.6	0.25	0.092	732 / 389	816 / 436	910 / 488	0.78
08/20/21	08/24/21	0.0y		439 / 226	15.3	35.5	0.13	0.174	730 / 388	815 / 435	911 / 489	0.51
07/30/19	08/12/19	0.0y	PIPING	457 / 236	25.8	37.0	0.414	0.466	692 / 367	779 / 415	879 / 471	0.84
03/21/18	03/27/18	0.0y		421 / 216	18.4	36.2	0.20	0.041	704 / 373	800 / 427	905 / 485	1.95
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00

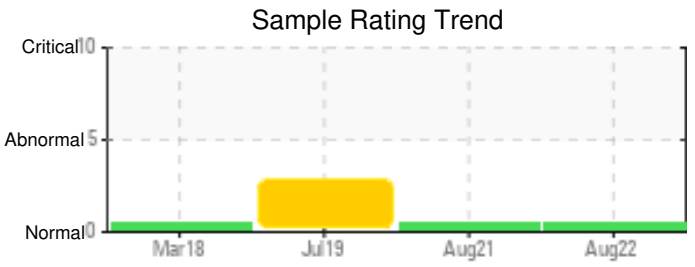






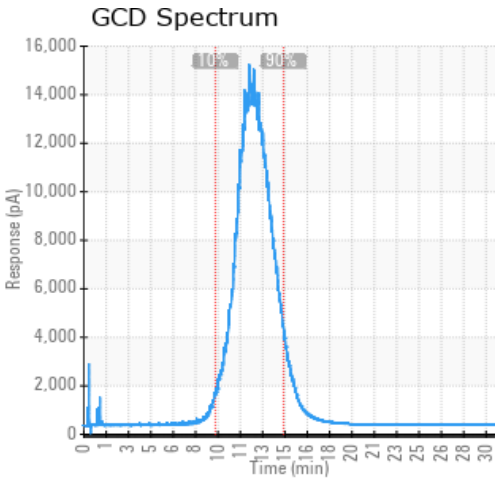
PETRO-CANADA LUBRICANTS

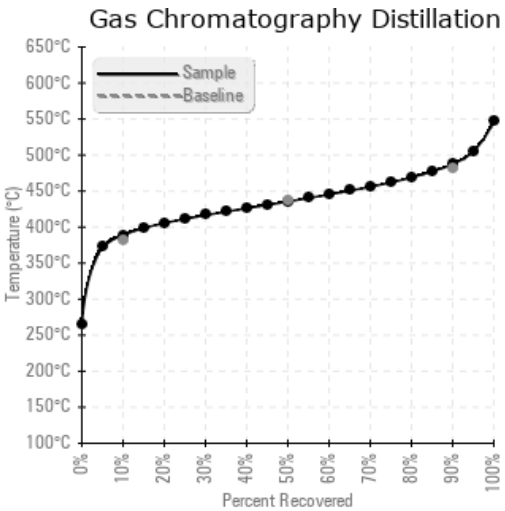


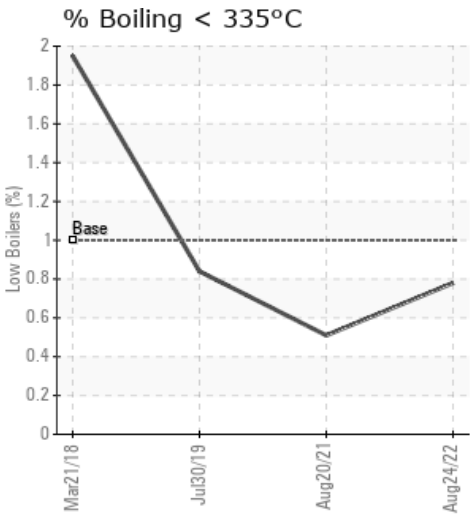


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
08/24/22	6	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08/20/21	8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/30/19	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03/21/18	3	0	0	0	0	0	0	0	0	0	0	0	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

08/20/21	Analysis indicates the fluid results are typical for Petro-Therm in service. GCD data is typical for Petro-Therm in service, no appreciable level of low boilers detected. Flash Point typical at 226°C. Pentane insolubles content is at 0.174, down from 0.466 and typical for fluid in service. Fluid is suitable for continued service. Sample at next yearly frequency.
07/30/19	The acid number has doubled since last test. Thus, more acidic components in your fluid. The pentane insolubles have drastically increased. The rise in acid number, and slight rise in viscosity and flash point indicates oxidation of the fluid. Filtration will assist in reducing solids in the fluid. The 90% GCD is also marginally on the low side. Would suggest a resample of this unit in 6 months time. Pentane Insolubles levels are abnormally high. Acid Number (AN) is abnormally high. (GCD) 90% Distillation Point is marginally low.
03/21/18	Fluid appears to be fine for continued service.