



[4-21-76-9W6] HEAT TRANSFER

Customer: PTRHTF20204	System Information	Sample Information
ADVANTAGE OIL AND GAS	System Volume: 20000 ltr	Lab No: 02624514
HYPHE, AB CA	Bulk Operating Temp: 419F / 215C	Analyst: Clinton Buhler
Attn: Sovke Rathamore	Heating Source:	Sample Date: 03/18/24
Tel: (780)518-9978	Blanket:	Received Date: 03/25/24
E-Mail: srathamore@advantageog.com	Fluid: PETRO CANADA PETRO-THERM	Completed: 04/02/24
	Make:	Clinton Buhler
		Clinton.Buhler@HFSinclair.com

Recommendation: Sample results show that the fluid viscosity, flash point and 10% GCD temperature are lower than expected for fresh Petro-Therm. That, along with 6.7% low boiling vapor content suggest that there has either been some cross contamination with process fluids or the expansion tank blanket gas pressure is set too high- both of which can impact these parameters. If possible, please lower blanket gas pressure (2-3 psi is ideal if pump NPSH allows). Vent expansion tank of low boiling vapors on a regular basis and then re-sample in 3 months time but only re-sample after venting has been performed and blanket gas pressure has been reduced.

Comments: COC Flash Point is abnormally low. Visc @ 40°C is abnormally 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	%
03/18/24	03/25/24	1.0y	PUMP DISCHARGE	338 / 170	31	28.5	0.02	0.053	683 / 362	795 / 424	896 / 480	6.70
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00



