

[LSD 08-10-68-08-W6 Clairmont] HEAT MEDIUM

Customer: PTRHTF20245
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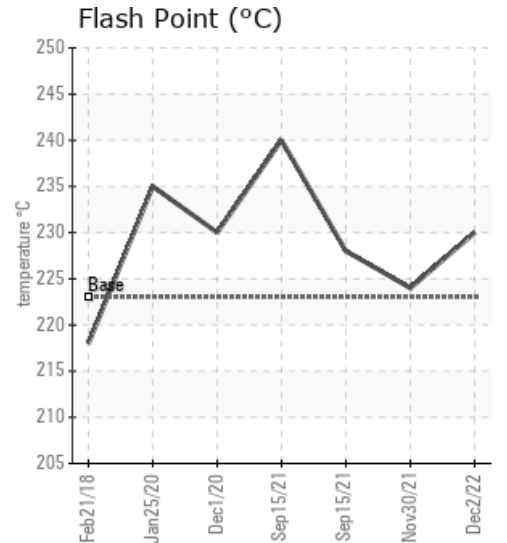
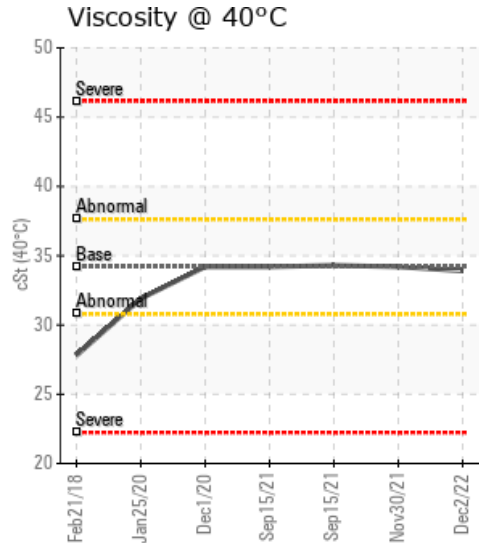
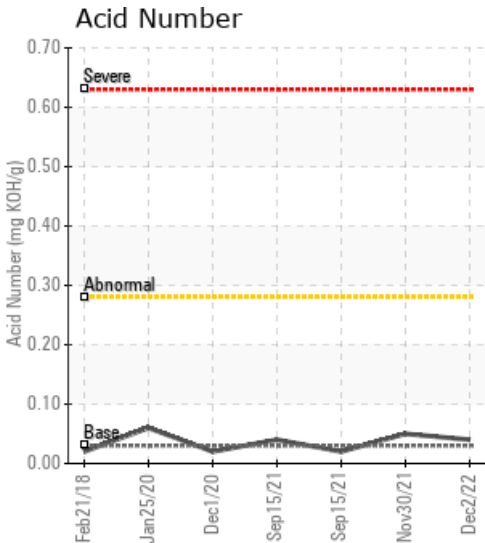
System Information
 System Volume: 4000 gal
 Bulk Operating Temp: 536F / 280C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PETRO-THERM
 Make: ALCO

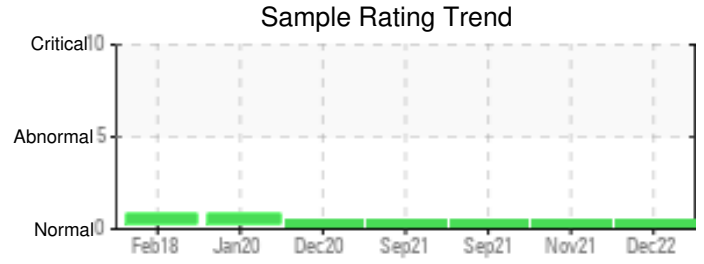
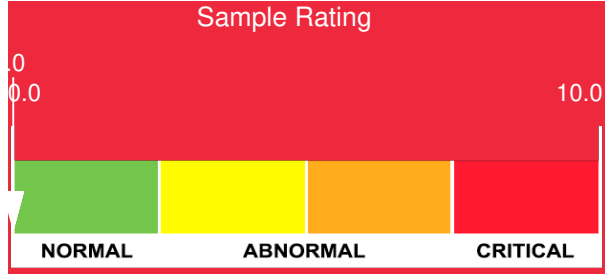
Sample Information
 Lab No: 02544411
 Analyst: Clinton Buhler
 Sample Date: 12/02/22
 Received Date: 03/10/23
 Completed: 03/13/23
 Clinton Buhler
 Clinton.Buhler@HFSinclair.com

Recommendation: Sample results indicate the fluid is in suitable condition for continued service. Please re-sample in 12 months.

Comments:

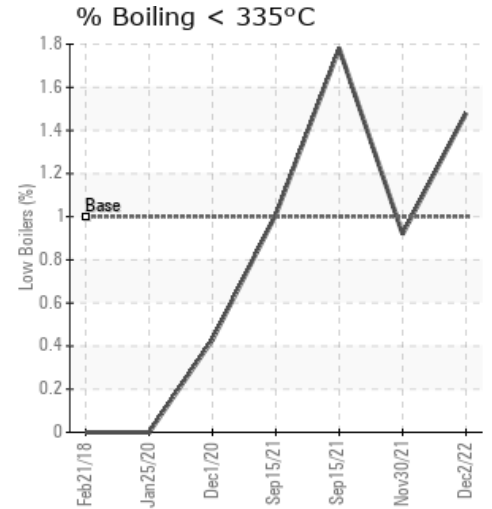
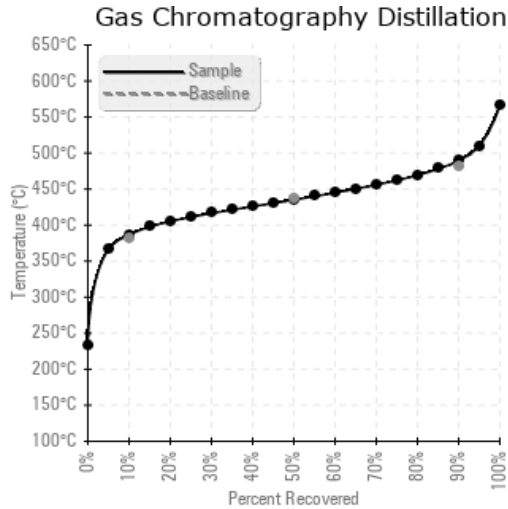
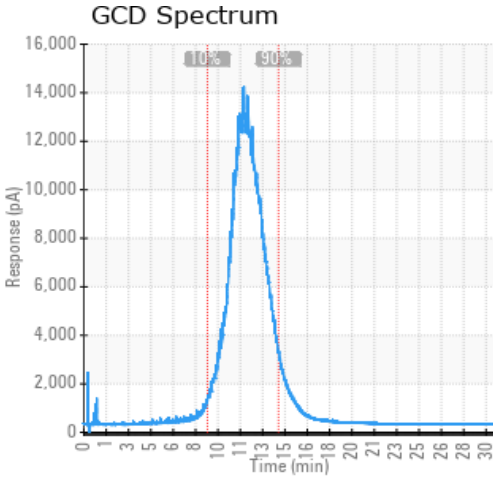
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/02/22	03/10/23	4.0y		446 / 230	13.9	33.9	0.04	0.068	728 / 387	815 / 435	913 / 489	1.48
11/30/21	01/06/22	0.0y	at pump	435 / 224	15.0	34.2	0.05	0.036	732 / 389	815 / 435	910 / 488	0.92
09/15/21	12/13/21	0.0y	RETURN LOOP	442 / 228	14.7	34.3	0.02	0.040	728 / 387	814 / 435	909 / 487	1.78
09/15/21	10/26/21	0.0y	return loop	464 / 240	7.2	34.2	0.04	0.037	732 / 389	815 / 435	909 / 487	1.01
12/01/20	01/14/21	6.0y	PUMP DISCHARGE	446 / 230	15.3	34.2	0.02	0.066	733 / 390	816 / 436	910 / 488	0.43
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





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
12/02/22	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/30/21	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
09/15/21	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09/15/21	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/01/20	2	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 analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments

11/30/21	Sample results indicate the fluid is in suitable condition for continued service. Please re-sample in 12 months
09/15/21	Sample results indicate that the fluid is in suitable condition for continued service. Please include time on oil for next analysis. Please re-sample in 12 months
09/15/21	Sample results indicate that the fluid is in suitable condition for continued service. Please re-sample in 12 months
12/01/20	Analysis results indicate that the heat transfer fluid is in suitable condition for continued service. Please re-sample in 12 months

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