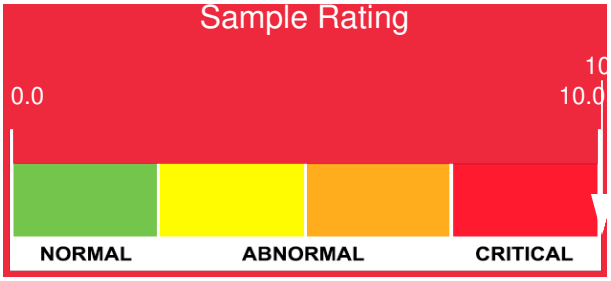
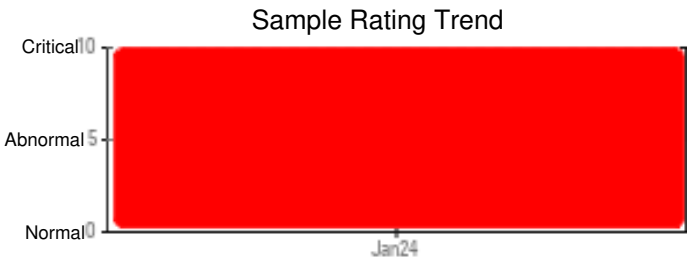




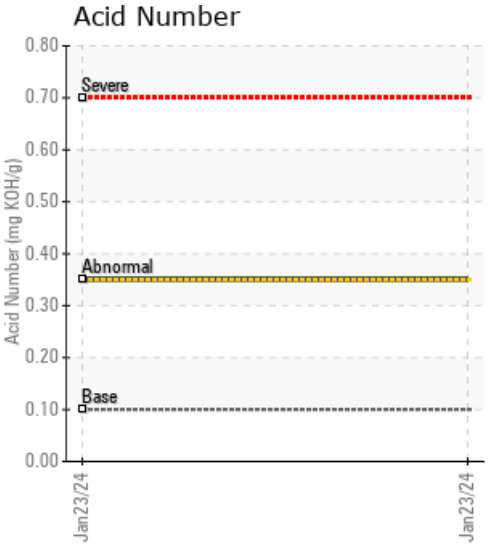
HOT OIL

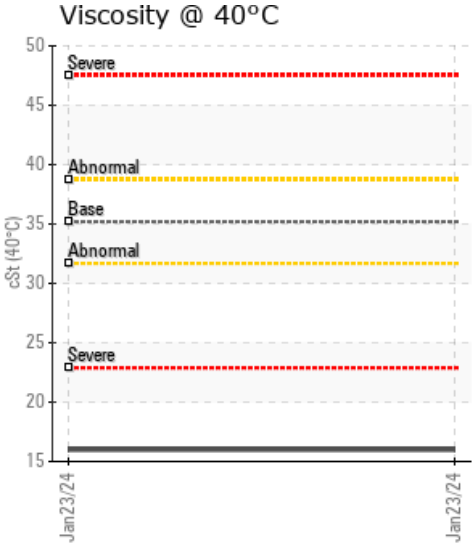
Customer: PTRHTF10166	System Information	Sample Information
ASCEND PERFORMANCE MATERIALS 1050 CHEMSTRAND AVE HWY 20 DECATUR, AL 35601 US Attn: Gil Olive Tel: (256)710-3415 E-Mail: golive@ascendmaterials.com	System Volume: 700 g Bulk Operating Temp: 500F / 260C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make: HEAT INC	Lab No: 02613837 Analyst: Jake Finn Sample Date: 01/23/24 Received Date: 02/06/24 Completed: 03/04/24 Jake Finn jake.finn@HFSinclair.com

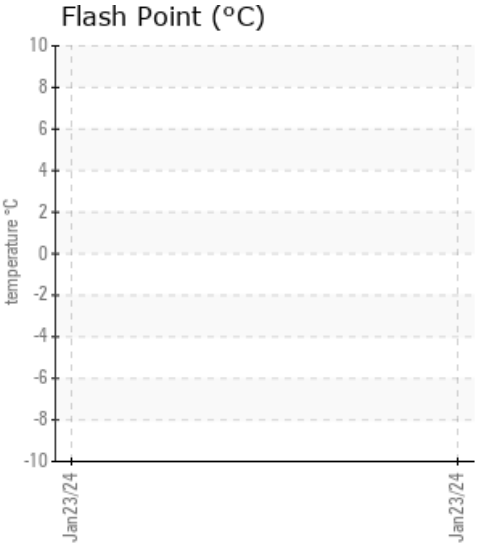
Recommendation: The elemental analysis did not match a typical sample of Calflo HTF, and the lab also noted that it didn't quite match. This could contribute to the theory of low boilers escaping the system, essentially as a light base oil. Keep in mind that the water contamination may have also impacted the results.

Comments: Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high. (GCD) 90% Distillation Point is severely low. Visc @ 40°C is severely low. (GCD) 10% Distillation Point is abnormally low. (GCD) 50% Distillation Point is abnormally low. (GCD) % < 335°C is marginally high.

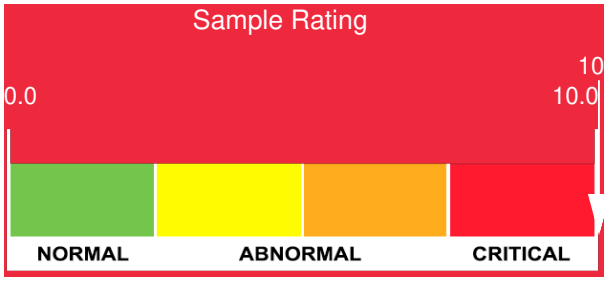
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/23/24	02/06/24	8.0m			1269	16.0	0.35		628 / 331	722 / 384	796 / 425	10.58
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75

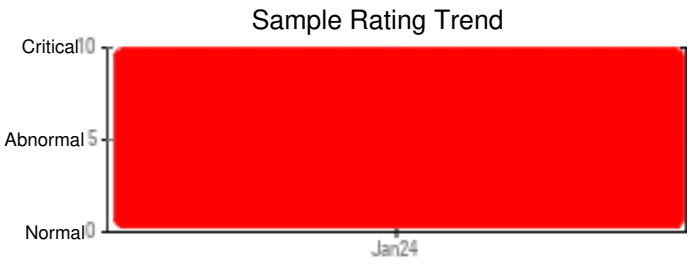






PETRO-CANADA LUBRICANTS

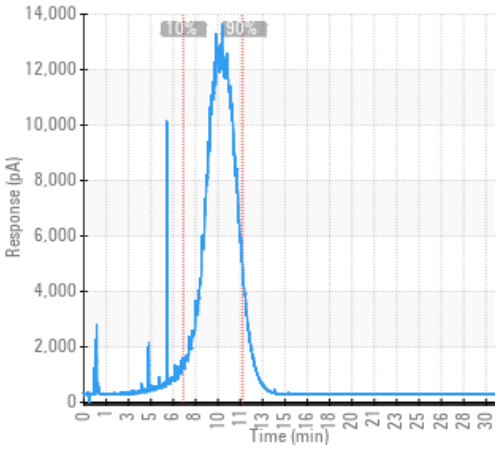




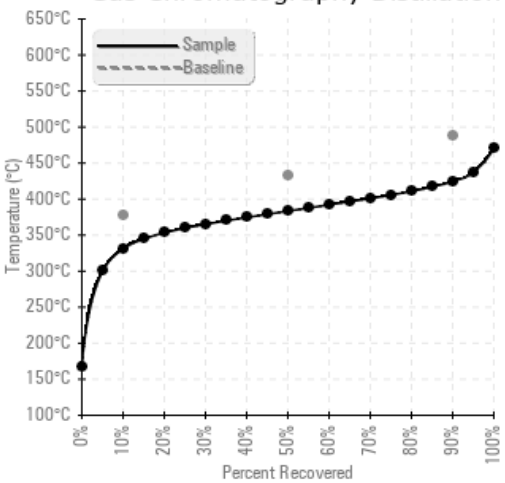
Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
01/23/24	16	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	10	0
Baseline Data			0	0						0			0	0				0	0				280	

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

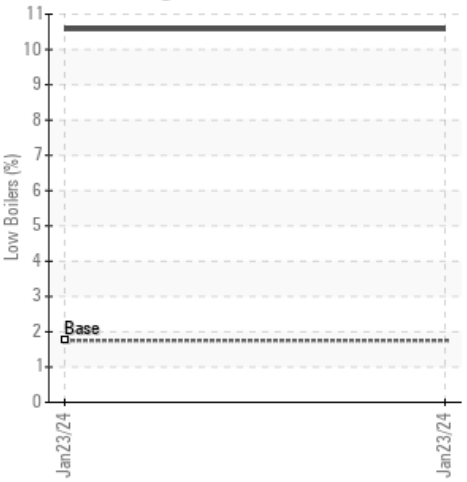
GCD Spectrum



Gas Chromatography Distillation



% Boiling < 335°C



Historical Comments
