

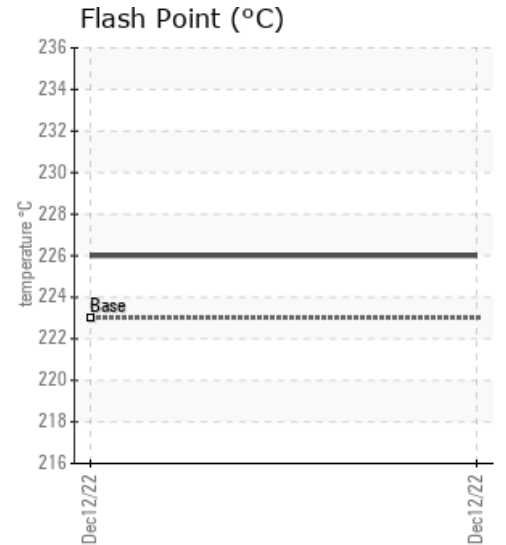
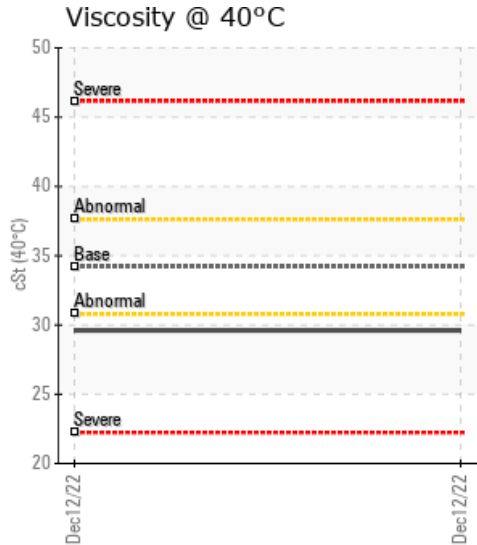
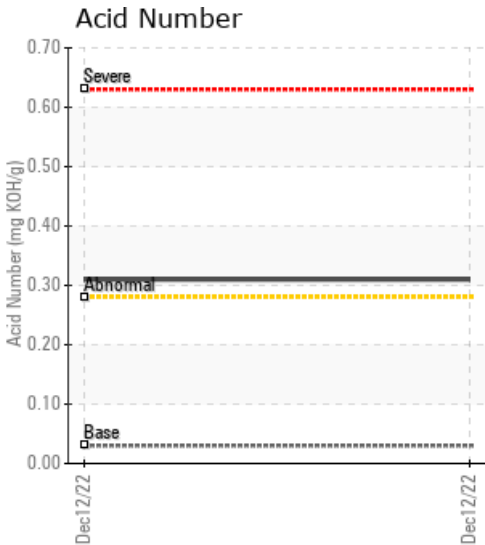
DOW CHEMICAL R-4

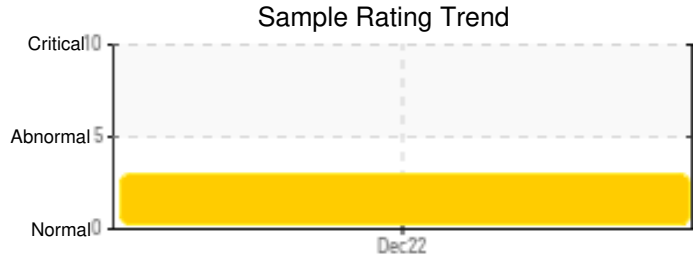
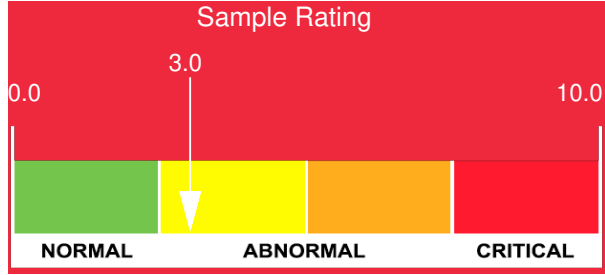
Customer: PTRHTF10262	System Information	Sample Information
J & A SALES 20W 267 101st Street Unit D Lemont, IL 40439 USA Attn: Kevin Fox Tel: (708)625-4841 E-Mail: kevin.fox40@yahoo.com	System Volume: 80 gal Bulk Operating Temp: 437F / 225C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: AMERICAN INDUSTRIAL	Lab No: 02533272 Analyst: Yvette Trzcinski Sample Date: 12/12/22 Received Date: 01/13/23 Completed: 01/20/23 Yvette Trzcinski yvette.trzcinski@HFSinclair.com

Recommendation: Acid number has increased due to oxidation of the fluid can lead to deposits and corrosion in the heat transfer system

Comments: Acid Number (AN) is abnormally high.

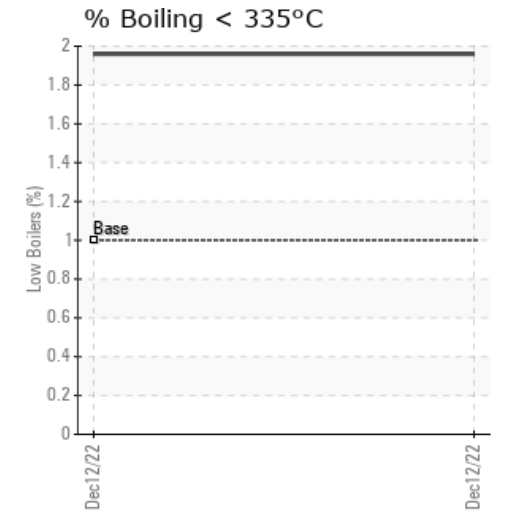
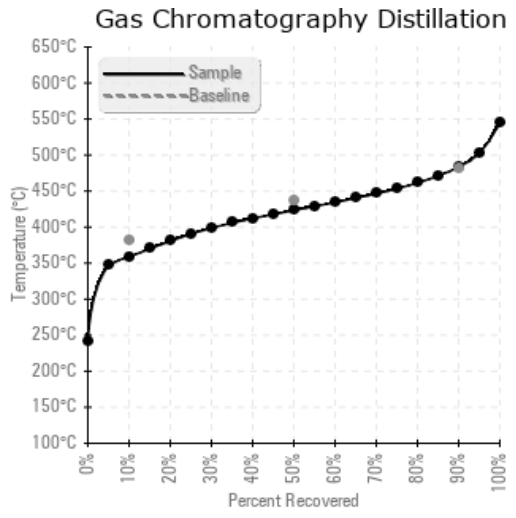
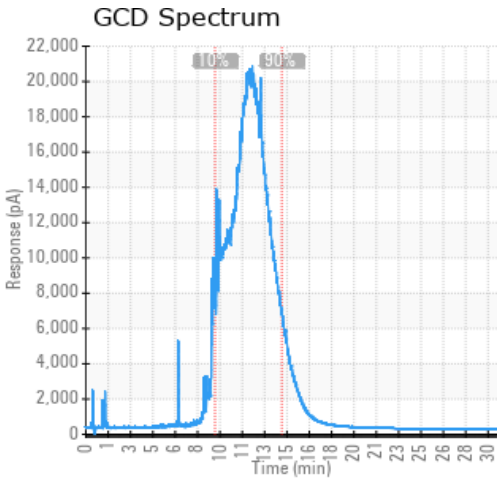
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/12/22	01/13/23	1.0y		439 / 226	8.6	29.6	0.31	0.026	677 / 359	794 / 423	902 / 484	1.96
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	
12/12/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	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

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