

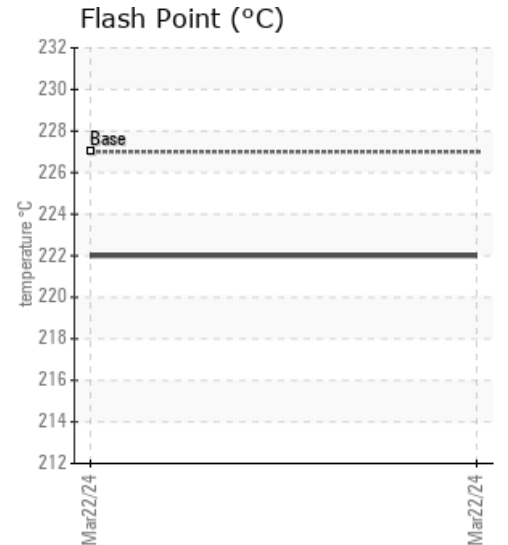
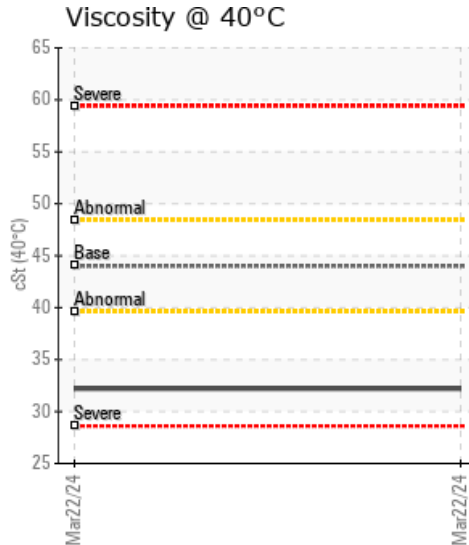
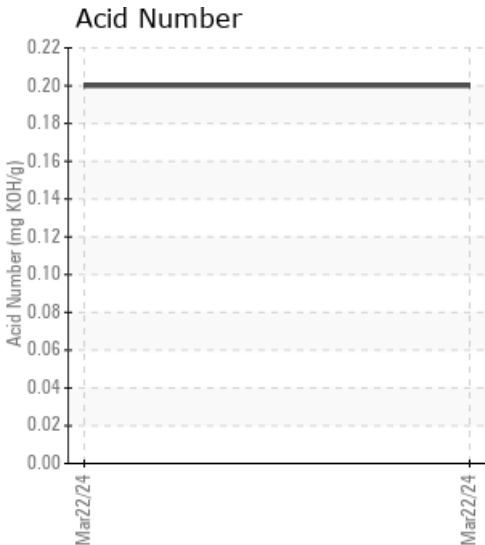
**211-001**

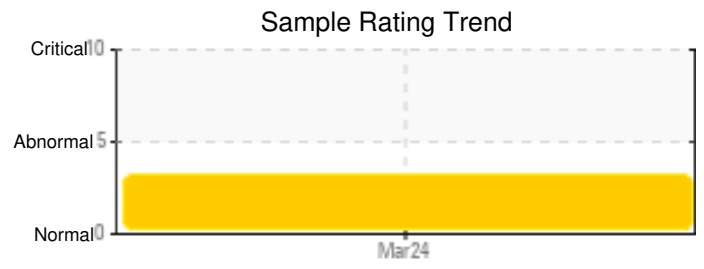
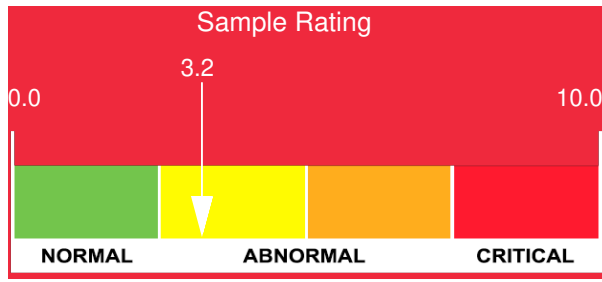
Customer: PTRHTF60067	System Information	Sample Information
Glenn O Hawbaker Inc. 165 Bedrock Ln. Bellefonte, PA 16823 US Attn: Ryan Fisher Tel: (814)574-3984 E-Mail: srs@goh-inc.com	System Volume: 500 gal Bulk Operating Temp: 380F / 193C Heating Source: Blanket: Fluid: MULTITHERM IG-4 Make: AMERICAN HEATER	Lab No: 02626807 Analyst: Greg Fernandez Sample Date: 03/22/24 Received Date: 04/04/24 Completed: 04/16/24 Greg Fernandez gregory.fernandez@hfsinclair.com

**Recommendation:** The sample submitted appears to be in generally good condition with no indications of contaminants or abnormal degradation. The fluid appears to be typical of an in-service fluid with some marginally elevated parameters that merit continued monitoring. As with other GOH samples, Calcium is high, likely due to airborne limestone in the localized environment. For future sampling and trending purposes, it is important to record system parameters such as Unit Age, Time on Oil, Fluid name/type if known, etc. when submitting samples.

**Comments:** Water contamination levels are marginally high. ppm Water contamination levels are marginally high. Calcium ppm levels are abnormally high. Visc @ 40°C is abnormally low. (GCD) 90% Distillation Point is marginally low.

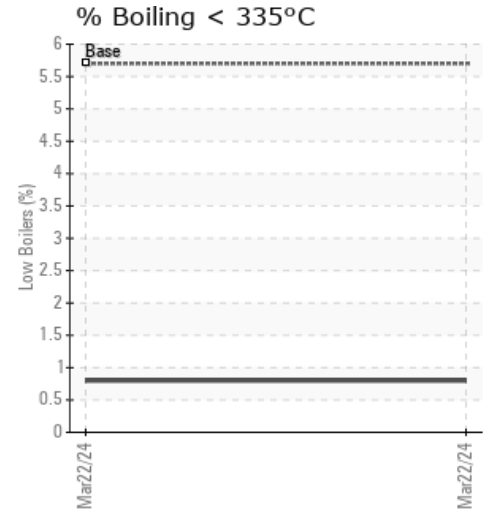
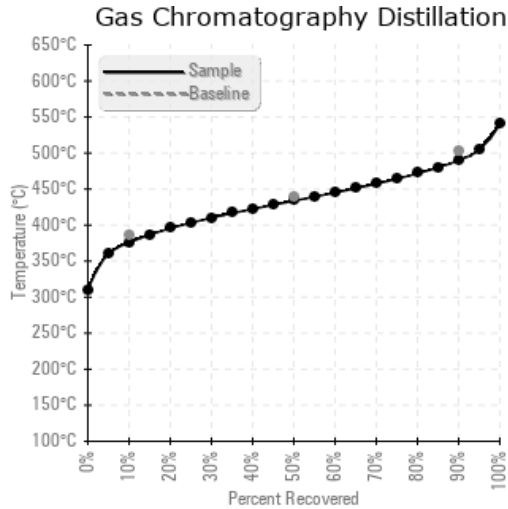
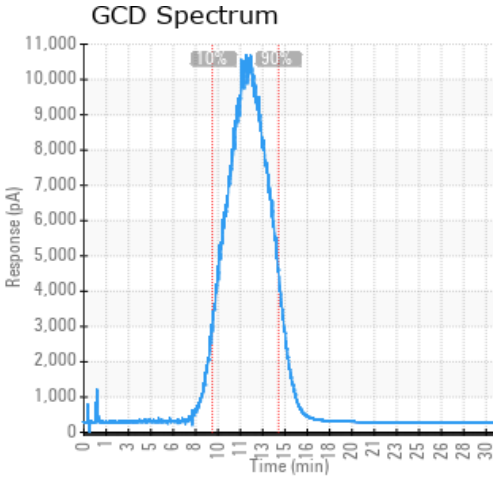
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/22/24	04/04/24	0.0y	#3 tank hose	432 / 222	387	32.2	0.20	0.107	708 / 376	813 / 434	914 / 490	0.80
<b>Baseline Data</b>				441 / 227		44.0			725 / 385	820 / 438	936 / 502	5.7





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
03/22/24	15	0	0	0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	0	0	34	0	2	3
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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