

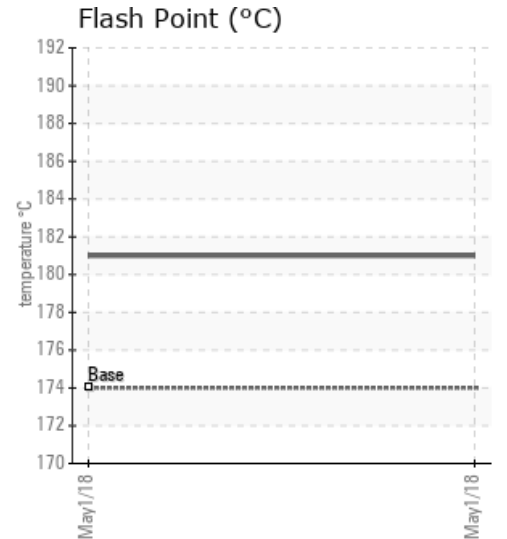
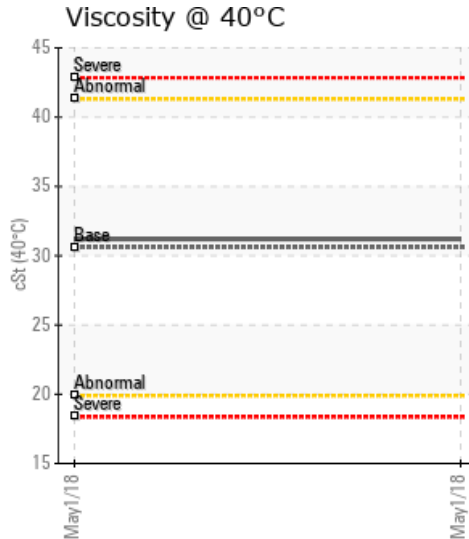
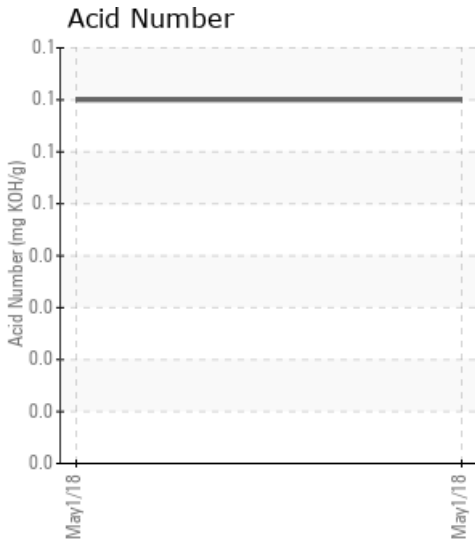
[HARDRIVES CRH 160] UMORE

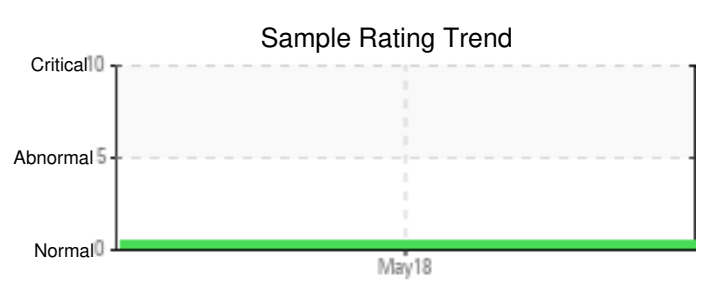
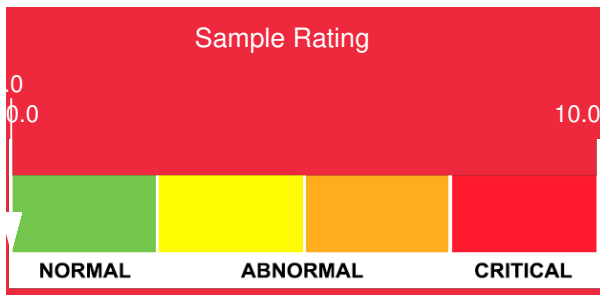
Customer: PTRHTF10192	System Information	Sample Information
HARDRIVES INC 502 S 33RD ST SAINT CLOUD, MN 56301 USA Attn: Chuck Theel Tel: (320)227-1681 E-Mail: ctheel@hardrivesinc.com	System Volume: 3000 gal Bulk Operating Temp: 400F / 204C Heating Source: Blanket: Fluid: BRENNTAG CHEMTHERM 550 Make: EXPANSION TANK	Lab No: 02215803 Analyst: Neil Buchanan Sample Date: 05/01/18 Received Date: 05/11/18 Completed: 05/16/18 To discuss this report contact Neil Buchanan at 612-619-6571

Recommendation: Sample looks good and is fit for further service. Resample next interval to monitor.

Comments:

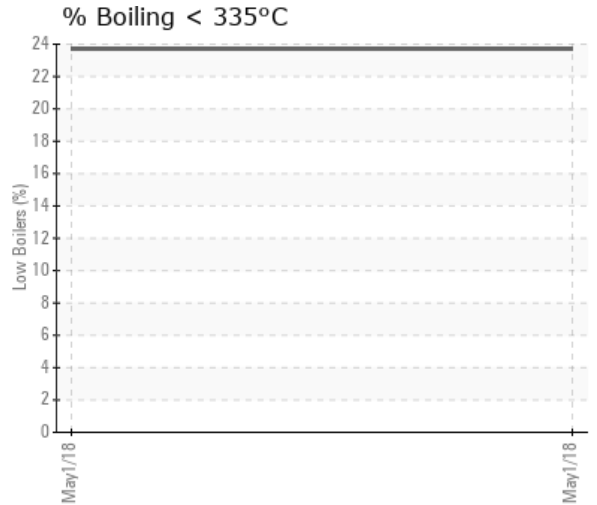
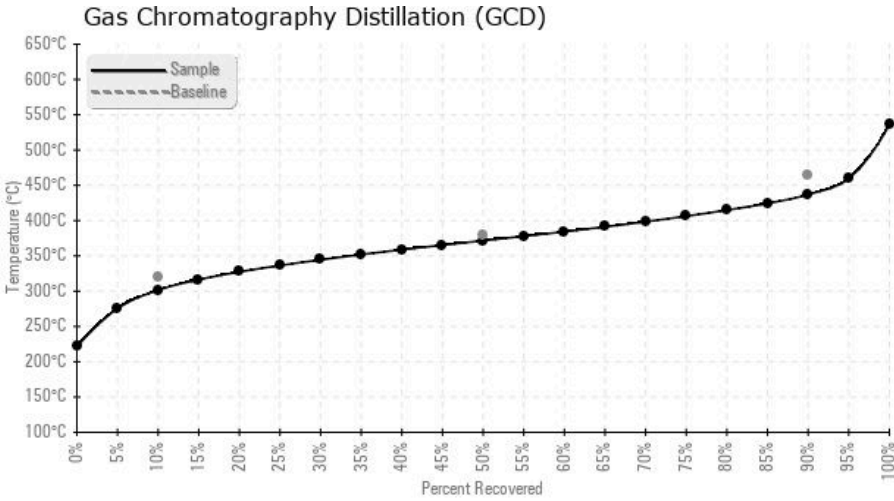
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/01/18	05/11/18	1y		358 / 181	34.8	31.2	0.07	0.131	575 / 301	701 / 372	819 / 437	23.72
Baseline Data				345 / 174		30.6			609 / 321	714 / 379	867 / 464	





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
05/01/18	4	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

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