

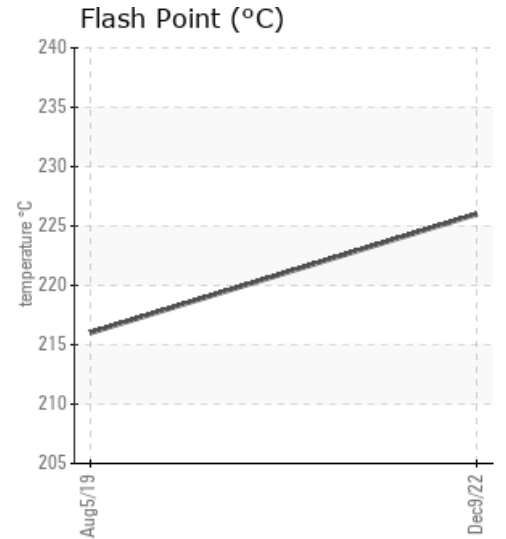
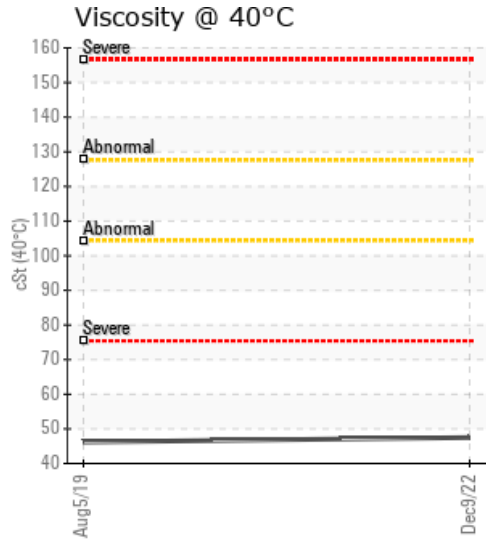
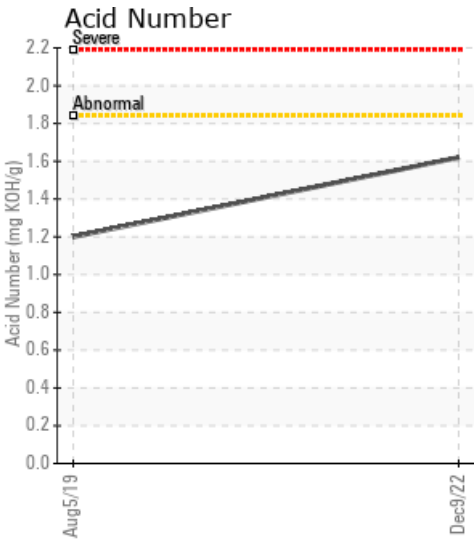
NEW HEATER

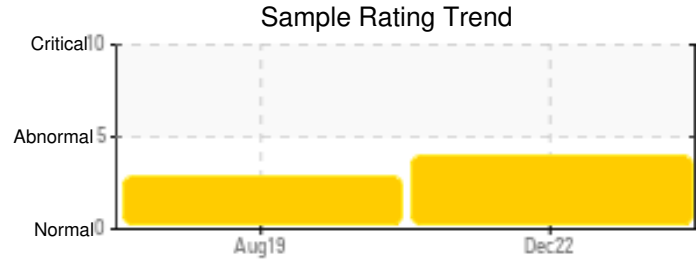
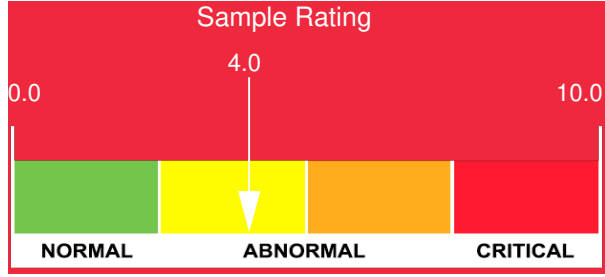
Customer: PTRHTF30137	System Information	Sample Information
McAsphalt Industries LTD 950 Boulevard Gérard-Cadieux Salaberry-de-Valleyfield, QC J6T 6L4 CA Attn: Dino Tsipsis Tel: (450)377-8420 E-Mail: dtsipsis@mcasphalt.com	System Volume: 10000 ltr Bulk Operating Temp: 380F / 193C Heating Source: Blanket: Fluid: N/A Make: HEATEC	Lab No: 02528512 Analyst: Jean Lacharite Sample Date: 12/09/22 Received Date: 12/13/22 Completed: 12/22/22 Jean Lacharite jean.lacharige@HFSinclair.com

Recommendation: The presence of wear metals is normal. The ppm or % of water is normal. The Acid Number (AN) is High: 1.62, High Pantene Insoluble, 2.14%. The Viscosity is high 47.5 cSt @ 40C. this is indications of oil oxidation. the oil acidity risk to corrode the piping and fittings with the risk of pinholes and leaks. should monitor the system and be ready to changeout to a HTF fluid.

Comments: Pentane Insoluble levels are very high with a level at 2.14%. increase the level of filtration to remove solids in the systems or schedule the cleaning cycle before replacement. Acid Number (AN) is abnormally high.

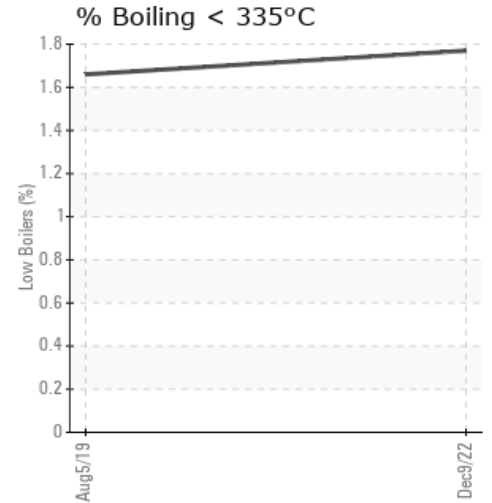
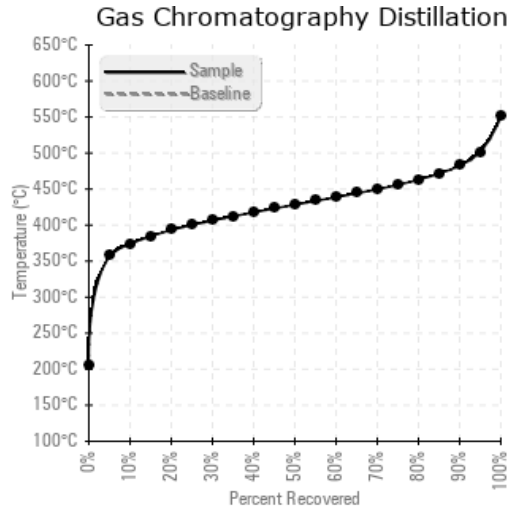
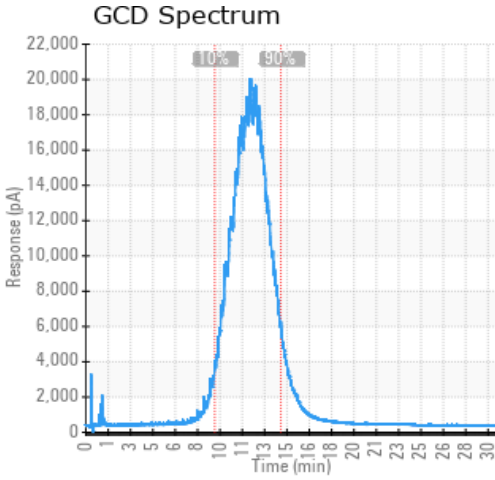
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/09/22	12/13/22	15.0y	PUMP 32 IN/OUT LOOP	439 / 226	106.4	47.5	1.62	2.14	705 / 374	803 / 428	901 / 483	1.77
08/05/19	08/06/19	0.0y		421 / 216	153.6	46.2	1.20	2.04	676 / 358	760 / 405	868 / 464	1.66
Baseline Data				32 / 0								





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
12/09/22	95	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
08/05/19	97	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Data												0						0				0		

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



Historical Comments

08/05/19	High TAN , High Pantene Insoluble, and high viscosity all indications of oil oxidation. the Esso Teresstic which is in the system is not a heat transfer oil. the oil acidity will corrode the piping and fittings with the risk of pinholes and leaks. should monitor the system and be ready to changeout to a HTF fluid. Pentane Insolubles levels are severely high. Acid Number (AN) is abnormally high.

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