

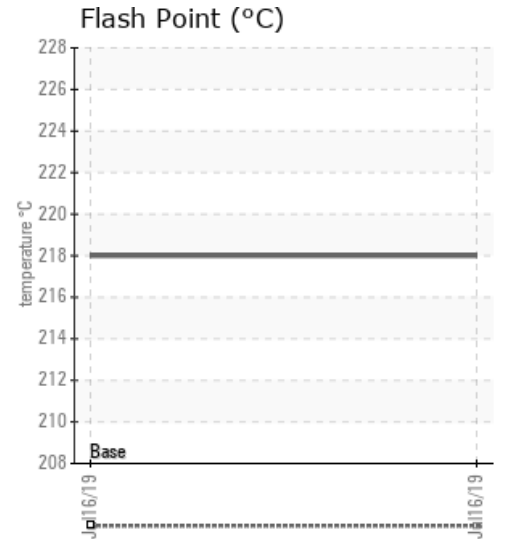
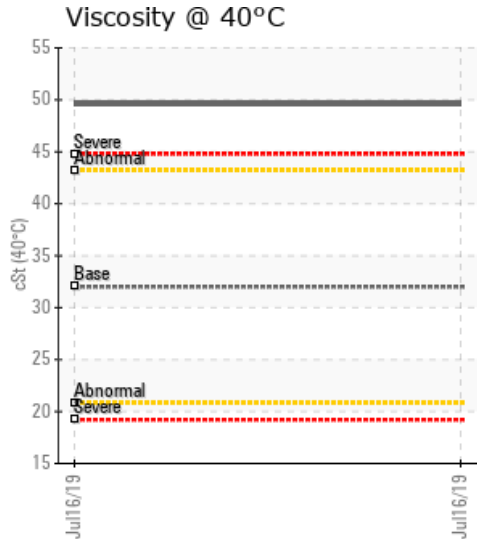
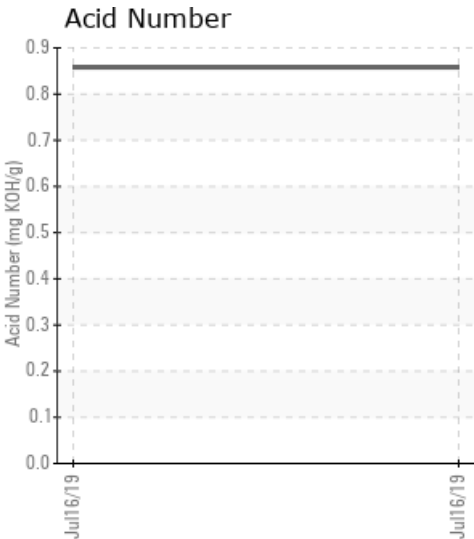
HEAT TRANSFER FLUID

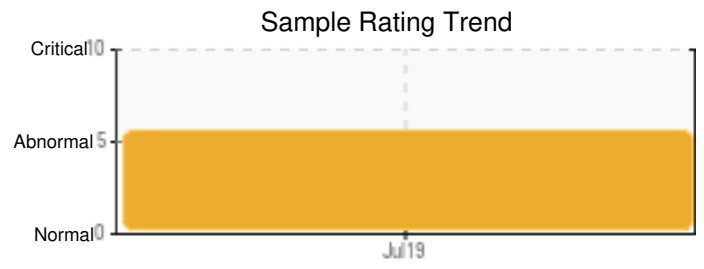
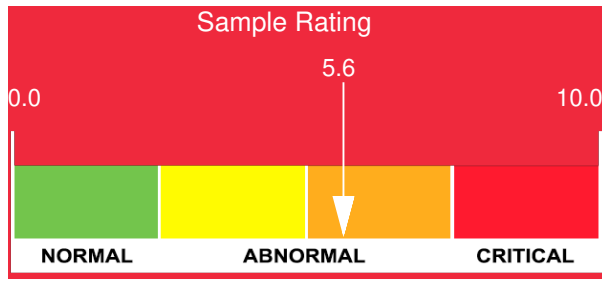
Customer: PTRHTF20214	System Information	Sample Information
McAsphalt Industries LTD 7404 30th Street SE Calgary, AB T2C 1M8 Canada Attn: Akinsanmi Akinduro Tel: (403)279-7229 E-Mail: aakinduro@mcasphalt.com	System Volume: 0 ltr Bulk Operating Temp: 350F / 177C Heating Source: Blanket: Fluid: MOBIL THERMOIL 32 Make: HEATEC	Lab No: 02297964 Analyst: Behshad Sabah Sample Date: 07/16/19 Received Date: 07/19/19 Completed: 08/12/19

Recommendation: High Viscosity at 40 C, High Pentane Insoluble, and close to high TAN all indicate the oil oxidation. the high viscosity will reduce the heat transfer capacity of the oil. please monitor the oil. very high distillation temperature at 90% indicates the high percentage of oil is cracked.

Comments: Pentane Insolubles levels are severely high. (GCD) 90% Distillation Point is severely high. Visc @ 40°C is severely high. Acid Number (AN) is abnormally high.

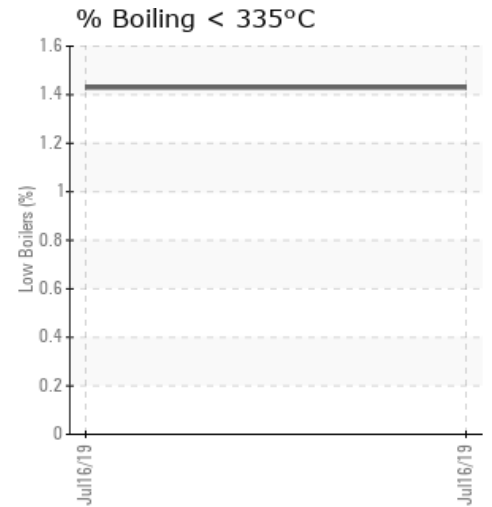
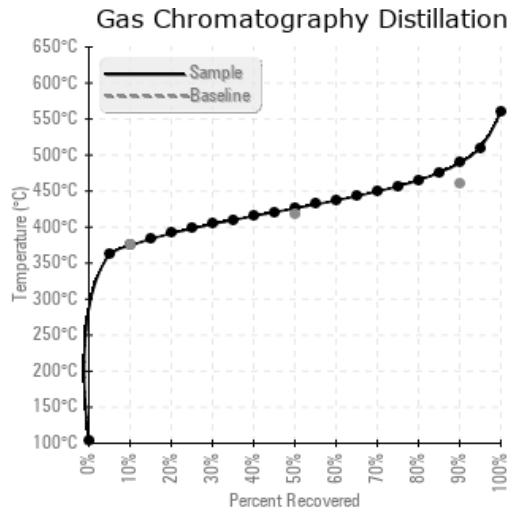
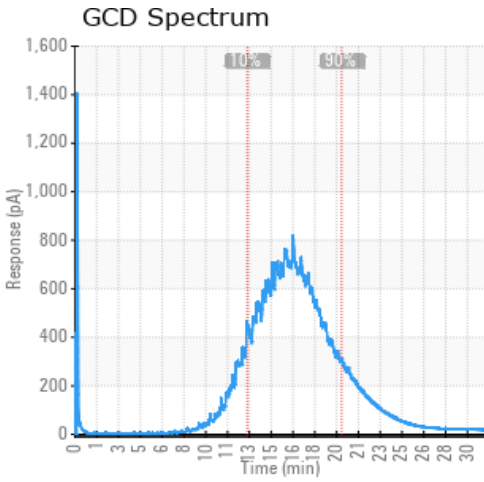
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
07/16/19	07/19/19	0m	VALVE ON PUMP DISCHA	424 / 218	69.0	49.6	0.858	1.66	705 / 374	799 / 426	912 / 489	1.43
Baseline Data				401 / 205		32			705 / 374	783 / 417	858 / 459	





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
07/16/19	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	4	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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