

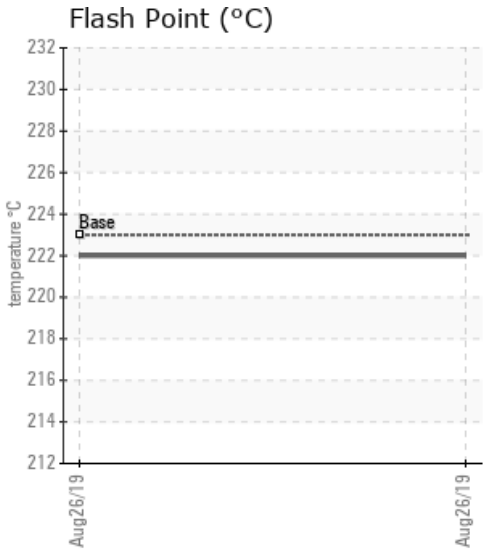
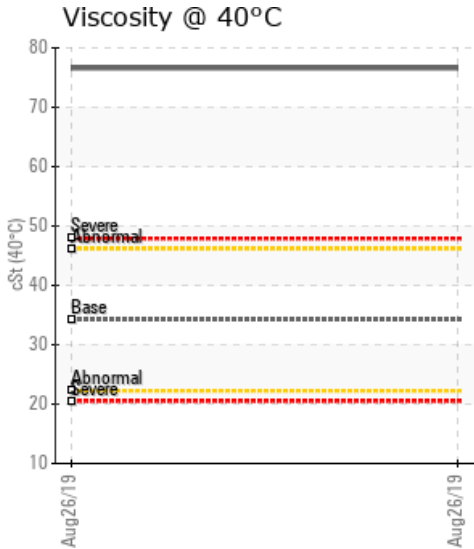
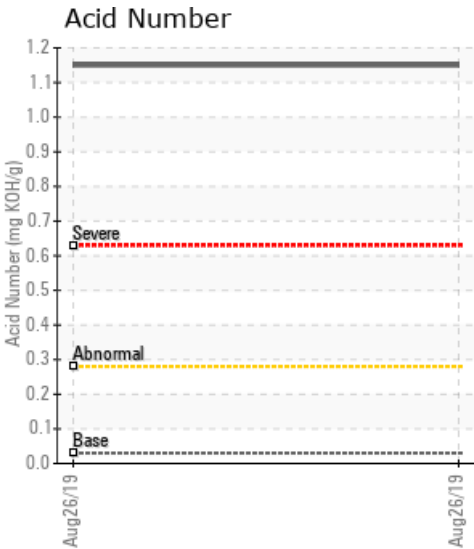
[INDOOR] 433-0010

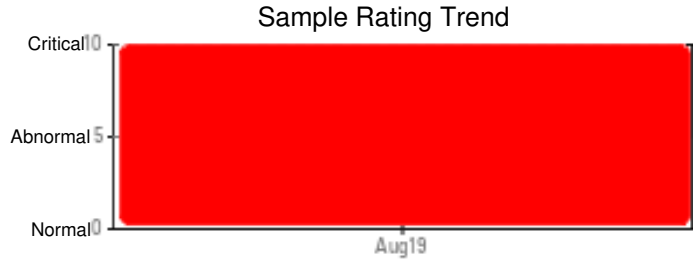
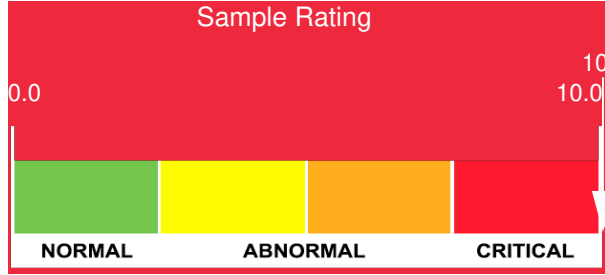
Customer: PTRHTF20221	System Information	Sample Information
McAsphalt Industries Ltd. 385 Softley Rd Winnipeg, MB R2J 0R7 Canada Attn: Eugene Langdon Tel: (204)233-1424 E-Mail: elangdon@mcasphalt.com	System Volume: 12000 ltr Bulk Operating Temp: 392F / 200C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: HEATEC	Lab No: 02305733 Analyst: Behshad Sabah Sample Date: 08/26/19 Received Date: 08/29/19 Completed: 09/04/19

Recommendation: High TAN, Pentane Insoluble, and oil viscosity are the indication of high oxidation. High Iron is the indication of the corrosion. there is a chance of pinholes and product leak. please change the oil

Comments: Iron ppm levels are severe. PQ levels are abnormal. Pentane Insolubles levels are severely high. Acid Number (AN) is severely high. Visc @ 40°C is severely high.

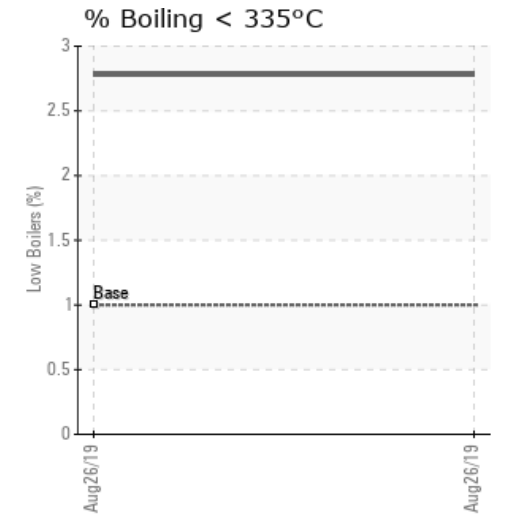
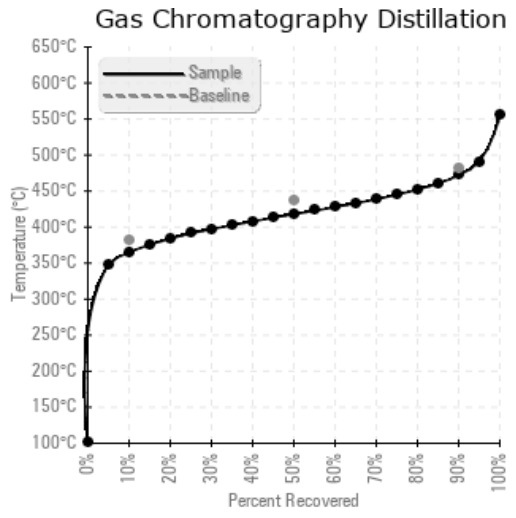
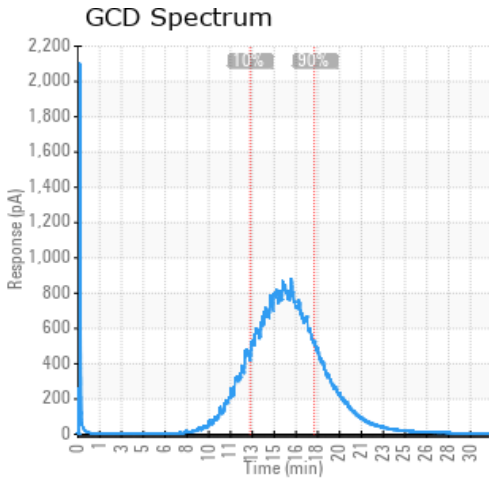
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
08/26/19	08/29/19	9y		432 / 222	51.9	76.6	1.15	1.73	689 / 365	784 / 418	882 / 472	2.78
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
08/26/19	896	0	0	0	0	0	0	0	0	0	2	20	3	0	0	0	8	0	0	0	1	0	190	1
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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