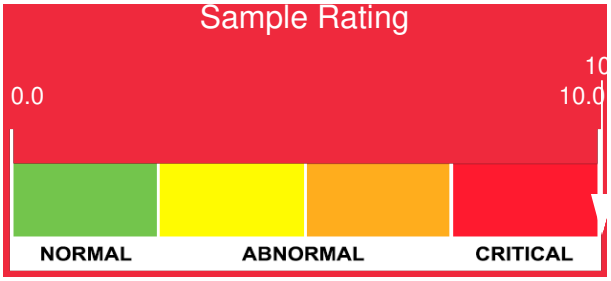
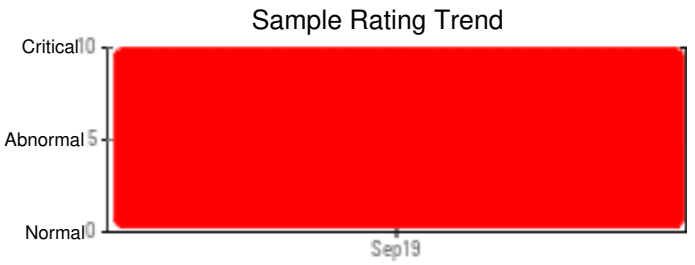




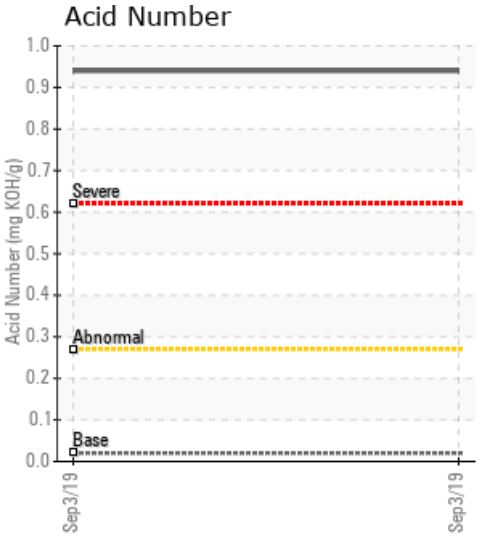
HEAT TRANSFER

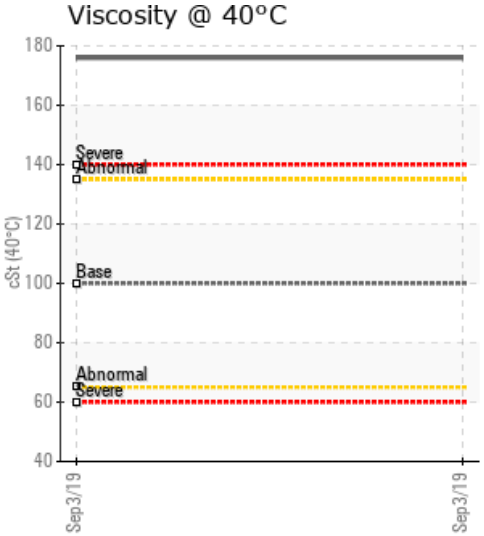
Customer: PTRHTF20222	System Information	Sample Information
McAsphalt Industries Ltd 19770 101 ave Langley, BC V1M 3G6 Canada Attn: Konrad Moskal Tel: (604)888-6262 E-Mail: kmoskal@mcasphalt.com	System Volume: 2500 ltr Bulk Operating Temp: 437F / 225C Heating Source: Blanket: Fluid: ESSO TERESSTIC ISO 100 Make: HEATEC	Lab No: 02306536 Analyst: Behshad Sabah Sample Date: 09/03/19 Received Date: 09/05/19 Completed: 09/20/19

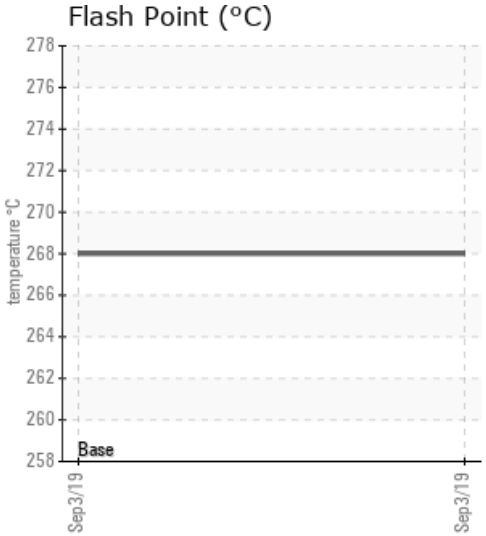
Recommendation: Very High TAN , Pentane insoluble and oil viscosity are the indication of sever oil oxidation and high iron PPM indicates the corrosion in the system. please plant to change the oil .

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

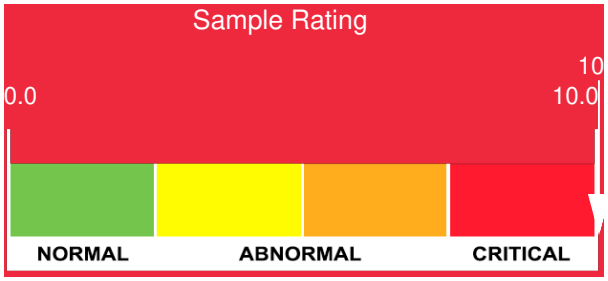
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
09/03/19	09/05/19	0h	BOILER CIRC PP DISCH	514 / 268	50.5	176	0.940	23.6	721 / 383	861 / 461	977 / 525	7.33
Baseline Data				486 / 252		100	0.02		720 / 382	860 / 460	975 / 524	7.3

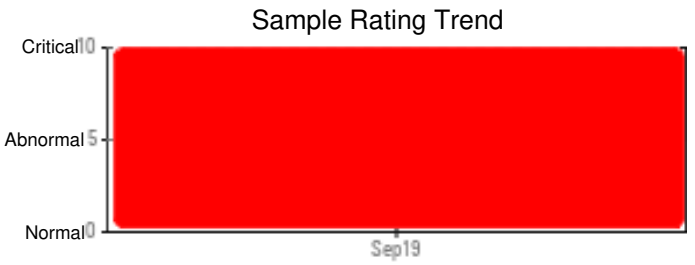






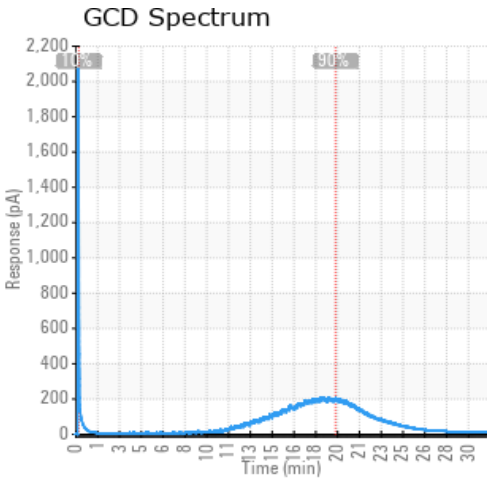
PETRO-CANADA LUBRICANTS

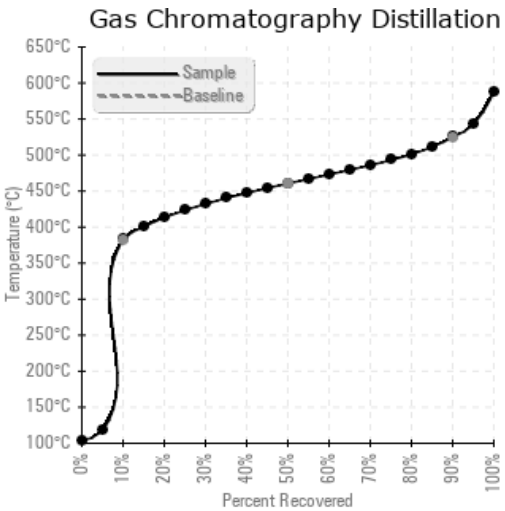


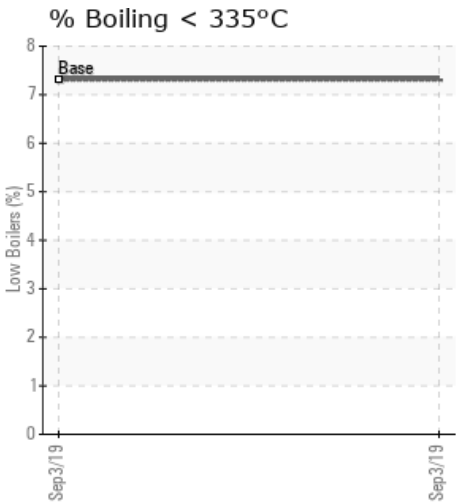


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
09/03/19	487	1	0	0	2	1	0	0	0	0	2	2	1	0	0	0	6	0	0	0	5	0	1	2
Baseline Data			0	0						0			0	0					0				2	

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







Historical Comments
